

**New York Metropolitan Transportation Council
North Jersey Transportation Planning Authority**

2010-2011 Regional Household Travel Survey

Data User's Manual

Public Use Data Set



Revised November 2013

**DATA DISCLAIMER AND RESTRICTIONS ON INFORMATION USAGE
FOR THE 2010/2011 REGIONAL HOUSEHOLD TRAVEL SURVEY (RHTS)
PUBLIC USE DATA SET FILES**

The New York Metropolitan Transportation Council (NYMTC) and North Jersey Transportation Planning Authority (NJTPA) make no representation of any kind, including, but not limited to, warranties of merchantability or fitness for a particular purpose or use, nor are any such warranties to be implied with respect to the information, data or services furnished herein.

In no event shall NYMTC or NJTPA, nor its employees, officers or agents become liable to users of the data, information or services provided herein, or to any other party, for any loss or damage, consequential or otherwise, including but not limited to time, money or goodwill, arising from the use, operation or modification of the data or information, or for the failure to transmit a copy of any particular document.

This survey was designed and conducted for use in regional travel demand modeling. The sample size and frame is suitable for that purpose. Proper application of the analysis dataset is the responsibility of the user. In using the information or data, users assume the risk for relying on such data or information, and further agree to indemnify, defend, and hold harmless NYMTC and NJTPA, and its employees, officers and agents for any and all liability of any nature arising out of or resulting from the lack of accuracy or correctness of the information or data, or the use of the information or data. The user acknowledges that the use of this information or data may be subject to error and omission, and the accuracy of the information provided is not guaranteed or represented to be true, complete, nor correct.

No person, entity or user shall sell, give or receive for the purpose of selling or offering for sale, any portion of the information or data provided herein, nor may they use the information in a manner that is in violation of any federal, state or local law or regulation.

Information contained within this dataset is made available by NYMTC and NJTPA for non-commercial use only. Such use of Website materials, including images and text, is allowed provided that any copies or transmissions of this information keep intact all copyright, credits, and disclaimer information. Any other use of these materials requires written authorization by NYMTC and the NJTPA.

The preparation of this report has been financed through the U.S. Department of Transportation's Federal Transit Administration and Federal Highway Administration. This document is disseminated under the sponsorship of the New York Metropolitan Transportation Council and the North Jersey Transportation Planning Authority in the interest of information exchange. The contents do not necessarily reflect the official views or policies of the Federal Transit Administration, Federal Highway Administration or the State of New York. This report does not constitute a standard, specification or regulation.

Acknowledgments

The Regional Household Travel Survey was performed under NYSDOT/NYMTTC **Contract #C000780, PIN: PTCS08A01 and NJTPA Contract 11/205 Regional Household Travel Survey: NJTPA Component**. The project team consisted of:

Consultant Team:

- Jesse Casas, formerly of NuStats
- Mia Zmud, formerly of NuStats
- Lucia Lanini, formerly of NuStats
- Kim Hilsenbeck, formerly of NuStats
- Johanna Zmud, formerly of NuStats
- Jean Wolf, GeoStats
- Jeremy Wilhelm, GeoStats
- Marcelo Oliveria, GeoStats
- Bob Donnelly, Parsons Brinckerhoff

NYMTTC:

- Jorge Argote, P.E., Project Manager
- Kyeongsu Kim, Data Quality Analyst

NJTPA:

- Bob Diogo, Project Manager

Technical Advisory Committee:

- Elaine Murakami, FHWA
- Guy Rousseau, Atlanta Regional Commission
- Nancy McGuckin, Travel Behavior Consultant
- Arnim Meyburg, Cornell University
- Neil Kilgren, Puget Sound Regional Council

Steering Committee

- NYMTTC Voting Members: Counties of Nassau, Putnam, Rockland, Suffolk and Westchester; Metropolitan Transportation Authority (MTA); New York City Department of City Planning (NYCDCP); New York City Department of Transportation (NYCDOT); New York State Department of Transportation (NYSDOT)
- NYMTTC Advisory Members: New Jersey Transit (NJT); North Jersey Transportation Planning Authority (NJTPA); Port Authority of New York & New Jersey (PANY&NJ)
- Adjacent MPOs: South Western Regional Planning Agency (SWARPA); Greater Bridgeport Regional Planning Agency (GBRPA); Valley Council Of Governments (VCOG); Orange County Transportation Council; Poughkeepsie-Dutchess County Transportation Council Delaware Valley Regional Planning Commission;
- Other Government Agencies: New York City Department of Health & Mental Hygiene

Table of Contents

Glossary of Terms and Report Acronyms	6
Introduction	7
Description of Data Files	10
Relationship among the Files	10
Computed Variables	11
Data Processing, Quality Control, Imputing Procedures	12
Using the Data	16
Tabulating the Data	16
Control Numbers	17
Application of Weights	17
Appendix A: Sample Tables and Programming Code	19
Appendix B: Data Dictionary	23
Diary Data	23
Introduction	23
Household Data	23
Person Data	28
Vehicle Data	39
Place Data	40
Trip Data Files	50
UnlinkedTrips File	50
LinkedTrips File	65
Appendix C: Recruitment Questionnaire	86
Appendix D: Retrieval Questionnaire	113
Appendix E: Comparability of Data with Census, NHTS, & 1997-98 RT-HIS	136
Appendix F: Main Survey Response Rates	138
Appendix G: Quality Control Procedures for Travel Speed	140
Appendix H: Statistical Reliability of RHTS Estimates	142
Appendix I: Imputation Procedures and Quality Control Performed	150
Introduction	150
Key Variables	150
Editing and Imputation for Missing or Faulty Data	151
Special Note on Geocoding	152
Addressing Missing Items for Key Variables	152
Regional Household Travel Survey Editing Rules	154
RHTS Dataset: NYMTC & NJTPA Quality Control	160
Appendix J: ADJ County Code	161
Appendix K: LIFCYC Code	162

List of Tables and Figures

Table 1: Relationships among the Data Sets	10
Figure 1: Reference Fields: Data Records	11
Table 2: Summary of Data User Flags	14
Table 3: Household Income: Unweighted and Weighted	18
Table A-1: Counties within Each Sub-Region	21
Table A-2: Age by Sub-Region	22
Table F-1: Household File Comparison	136
Table E-2: Person File Comparison	136
Table E-3: Vehicle File Comparison	137
Table E-4: Place/Trip File Comparison	137
Table F-1: Response Rates by State and County	138
Table F-2: Response Rates by Recruitment Mode	139
Table G-1: RHTS Speed Check Legend	140
Table G-2: Speed Violation Flag	141
Table H-1 – Sampling Error of Household Income at the Regional level (95% confidence)	142
Table H-2– Sampling Error of Household Income at the County level (90% confidence)	142
Table H-3 – Sampling Error of Household Size at the Regional level (95% confidence)	143
Table H-4– Sampling Error of Household Size at the County level (90% confidence)	144
Table H-5 – Sampling Error of Typical Travel Mode to Work at the Regional level (95% confidence)	145
Table H-6– Sampling Error of Typical Travel Mode to Work at the County level (90% confidence)	145
Table H-7 – Sampling Error of Typical Travel Time to Work at the Regional level (95% confidence)	146
Table H-8– Sampling Error of Typical Travel Time to Work at the County level (90% confidence)	146
Table H-9 – Sampling Error of Household Vehicles at the Regional level (95% confidence)	147
Table H-10– Sampling Error of Household Vehicles at the County level (90% confidence)	147
Table H-11 – Sampling Error of Household Trips at the Regional level (95% confidence)	148
Table H-12– Sampling Error of Household Trips at the County level (90% confidence)	148

Glossary of Terms and Report Acronyms

MPO – Metropolitan Planning Organization

NJRTME – North Jersey Regional Travel Model - Enhanced

NJTPA – North Jersey Transportation Planning Authority

NYBPM – New York Best Practice Model

NYMTC – New York Metropolitan Transportation Council

RHTS – 2010/2011 Regional Household Travel Survey

RT-HIS – 1997/1998 Regional Travel Household Interview Survey

SPSS – Statistical Package for Social Scientists: an IBM Statistical Software Package chosen as the primary analytical tool for this project.

TB – Trip Builder: Google Map-based geocoding software during data retrieval phase.

TAZ – Traffic Analysis Zone (NYBPM)

Introduction

The 2010/2011 Regional Household Travel Survey (RHTS) was sponsored by the New York Metropolitan Transportation Council (NYMTC) and the North Jersey Transportation Planning Authority (NJTPA), two of the federally sanctioned Metropolitan Planning Organizations (MPOs) in the New York / New Jersey / Connecticut metropolitan area. The survey was conducted from September 2010 through November 2011 by NuStats of Austin, Texas. NuStats was assisted at various stages of the data collection effort by GeoStats and Parsons Brinckerhoff.

The RHTS data will be used primarily for the enhancement of the New York Best Practices Model (NYBPM) as well as for future update and improvements to the North Jersey Regional Travel Demand Model (NJRTME), and for transportation planning, analysis, research, and policy. The RHTS was needed to update the current profile of travel in the region, resulting from the changes that have occurred in the region during the 12 years since the last survey of its type was performed (1997/98 RT-HIS). Like the prior RT-HIS, this new survey provides information for gaining an in-depth understanding of activity patterns and all modes of travel behavior for households and individuals within the modeled area. The RHTS data will support the update and extension of the NYBPM, and specifically provide the basis for the estimation and calibration of new robust and rigorously developed set of activity/travel behavior model components. This regional travel database and the enhanced modeling tools it supports can be used to conduct policy analysis and forecast future travel behavior for a variety of planning scenarios.

The 2010/2011 RHTS, like all recent household travel surveys, relied on the willingness of area residents to complete diary records of their daily travel over a 24-hour period. Random recruitment of households was conducted by telephone through a "recruitment interview," in which respondents were informed of the survey, its purpose, and the need for the respondents to complete the travel diaries. Data on households and household members were also collected during the recruitment interview.

Participating households were assigned a specific "travel day" (typically 10 days after the recruitment interview) to record their travel. Each household member was asked to record travel information in a travel diary for the specified 24-hour period. Immediately following the assigned date, households were contacted by telephone to retrieve the diary information. In total, 31,156 households were recruited to participate in the survey. Of these, 18,965 households completed travel diaries. Travel information was retrieved from all household members, regardless of age.

The survey used a scientifically formulated sample design; industry-appropriate instruments for data collection; a package of written materials to communicate with survey respondents; a toll-free survey hotline; and data collection, processing, and reporting procedures consistent with standards of the Council of American Survey Research Organizations (CASRO).

This report is one in a series of three reports designed to disseminate the project results. Other reports include:

- **NYMTC/NJTPA RHTS Final Report** – comprehensive document that summarizes the essential information provided in the aforementioned reports and focuses on measures of travel activity patterns estimated for the geographic regions included in the survey.
- **NJTPA RHTS Executive Briefing and County Profiles Report** – a comprehensive report highlighting the households participating in the RHTS and residing within the NJTPA geographic region.

All households within the 28-counties constituting the New York / New Jersey / Connecticut metropolitan area were eligible for inclusion in the survey through a random sampling process. The study area comprises the following counties:

- **New York:** Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester
- **New Jersey:** Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, Warren
- **Connecticut:** Fairfield, New Haven

The definition of a household was one in which all members resided at the same location and shared the same phone number. As a result, members of the central family unit that were students away at school or military personnel on active duty were not considered as part of the household. The definition of a “completed household” was one for which 100 percent of household members provided complete and usable travel and activity information for a specified 24-hour period.

The contract also allowed for the inclusion of up to 750 “partial” households. The definition of a partial household was one for which person information was obtained for all (n) household members who were employed, in school or day care, and who provided complete travel and activity data for (n-1) members, where household size was four or more household members. The purpose of this definition was to provide a mechanism for retaining data from larger households in which a single person may not have reported travel/activity data. Forty-two households were included in the final data set and are flagged in both the household and person data tables. The resultant data set comprises 18,965 completed and partially-completed households.

The data set includes the following types of data:

- **Household File:** Demographic information about the household, including household size, household vehicles, housing type, dominant language, telephone ownership, and income. In addition, the data set includes summaries of the travel day (number of places visited, number of children in the household, and number of household workers), as well as the county of residence. Number of records: 18,965 households.
- **Person File:** Demographic information about the household members, including age, gender, relationship, employment status, student status, disability status, and licensed driver status. Student level information includes level of school; mode to school; travel time to school if primary mode to school is bicycle; and school address information including school name, address, city, and coordinates. Employment data are provided for up to two jobs and includes industry and occupation codes; mode to work; typical travel time to work; number of days worked and where; work start and end times; employer-provided transportation benefits; compressed work week information and work address information, including work name, address, city, and coordinates. Proxy reporting information is also included in this file. Number of records: 43,558 persons.
- **Vehicle File:** Information about the household vehicles, including year, make, model, body type, fuel type, and subscription status of an E-ZPass tag. Number of records: 29,043 vehicles.
- **Place File:** Information about all places visited during the specified 24-hour diary period by all members of completed households, including location type, activities, mode usage, and travel of other household members. Detailed location information is also contained in this file, including place name, address, city, and geocoding information for each location reported. Number of records: 231,715 places.
- **UnLinkedTrips:** Each record is an unlinked trip or trip segment, where either the From or To place may include a Change in Mode of travel (e.g. bus stop, train station, Park N’ Ride facility, etc). Number of records: 188,199 trip segments.
- **LinkedTrips:** Each record is a linked trip, where the From place represents a trip Origin and the To place a trip Destination. For trips involving multiple modes, an “aggregate” Trip Mode is defined, based on a prescribed hierarchy of modes (the decreasing order of hierarchy of modes is as follows: (1) School Bus, (2)Taxi, (3) Commuter Rail, (4) Express Bus, (5) Subway, LRT, Tram, PATH, Ferry, (6) Other Bus, (7) HOV, (8) Local Bus, (9) SOV, (10) Bike, (11) Walk, (12) Air Train

or Other, including the Trip Mode definitions for the travel measures enhancement (over-sampling) objectives established for the Sampling Plan. Number of records: 143,925 linked trips.

Description of Data Files

The RHTS data are contained in six files: Household, Person, Vehicle, and Place, UnlinkedTrips and LinkedTrips. The files are arranged hierarchically, with key field indicators to link the files together. A complete listing of all variables and associated codes is contained in Appendix B: Data Dictionary.

Relationship among the Files

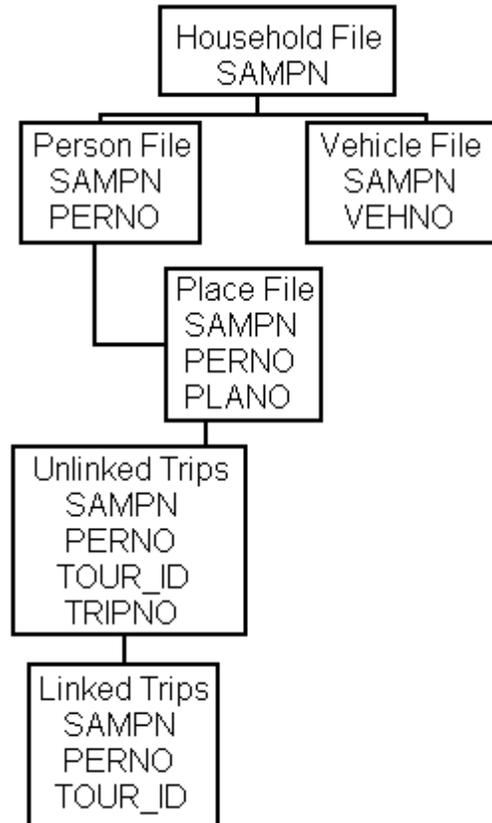
Table 1 shows the key data fields that link the data files. The sample number is the key link between the household, person, and place files.

Table 1: Relationships among the Data Sets

Data File	Description	# Records	Key Record Reference Fields
Household	One record for each household that provided complete and usable activity and travel information	18,965	SAMPN
Person	One record for each member of a completed household	43,558	SAMPN and PERNO
Vehicle	One record for each household vehicle (no records for zero-vehicle households)	29,043	SAMPN and VEHNO
Place*	One record for each place visited by household members on travel day. Non-traveling household members have one record.	231,715 places	SAMPN, PERNO, and PLANO
UnlinkedTrips	One record for each unlinked trip or trip segment, where either the From or To place may include a Change in Mode of travel (e.g. bus stop, train station, Park N' Ride facility, etc).	188,199	SAMPN, PERNO, , TRIPNO
LinkedTrips	One record for each linked trip, where the "from" place represents a trip Origin and the "to" place a trip Destination. For trips involving multiple modes, an "aggregate" Trip Mode is defined, based on a prescribed hierarchy of modes (the decreasing order of hierarchy of modes is as follows: (1) School Bus, (2)Taxi, (3) Commuter Rail, (4) Express Bus, (5) Subway, LRT, Tram, PATH, Ferry, (6) Other Bus, (7) HOV, (8) Local Bus, (9) SOV, (10) Bike, (11) Walk, (12) Air Train or Other, including the Trip Mode definitions for the travel measures enhancement (over-sampling) objectives established for the Sampling Plan.	143,925	SAMPN, PERNO, , LTRIPNO

**Place 1 (for all respondents) is an anchor indicating where the person began his or her travel day. A travel day began and ended at 3 a.m. Most respondents reported Place 1 to be home.*

The information in Table 1 is depicted graphically in Figure 1.

Figure 1: Reference Fields: Data Records

Computed Variables

Most of the data contained in the data sets were provided directly by respondents during the recruitment interview or retrieval interview. There were, however, some computed variables added to the data set for administrative and analysis purposes, including:

Household File

- STYPE: Type of sample based on the sampling frame from which the sample was drawn. The sample types are address based matched (including phone, name, and address); address based unmatched (including name and address); and targeted Hispanic surname (targeted to households with Hispanic surnames).
- CTFIP: County code assigned to household based on residential location of the household as defined by the geocoded coordinates.
- BIN: Sampling bin assigned to household based on residential location of the household as defined by the geocoded coordinates.
- RECMODE: Code assigned to household to indicate mode of recruitment (telephone or web).
- RETMODE: Code assigned to household to indicate mode of retrieval (telephone, web, or mail).
- GTYPE: Flag to indicate whether household was part of the GPS subsample or diary-only.
- ILANG: Coded language of recruitment and retrieval interviews.
- DOW: Corresponds to the day of week of the travel day assigned to the household.
- ASSN: Indicates specific 24-hour period in which household tracked travel (commonly referred to as a “travel day”).

- HHSTU: Sum of all household members reporting to be students.
- HHWRK: Sum of all household members reporting to be workers.
- HHLIC: Sum of all household members reporting having a valid driver's license.
- HHCHD: Sum of all household members age 16 or younger in the household.
- HTRIPS: Number of trips by all household members on the travel day. Calculated as the total number of household trip records in the linkedtrip file.
- HTRIPS_GPS: Number of trips by all household members on the travel day. Calculated as the total number of household trip records in the linkedtrip file (adjusted with GPS correction factor: TourFAC).
- PARTIAL: Flag to indicate that household was a valid partial household.

Person File

- PTRIPS: Number of trips by a household member on the travel day. Calculated as the total number of person trip records in the linkedtrip file.
- PTRIPS_GPS: Number of trips by a household member on the travel day. Calculated as the total number of person trip records in the linkedtrip file (adjusted with GPS correction factor: TourFAC).
- PARTIAL: Flag to indicate that person did not provide travel information and is part of a valid partial household.

Place File

- TOTTR: Total people traveling in travel party, including respondent. Calculated as PARTY+1.
- NONHH: number of non-household members in travel party. Calculates the difference between the total number in travel party (PARTY) and the total number of household members in travel party (HMEM).

Unlinked & Linked Trip Files

- Variables in these two files were generated from the household, person, vehicle and place files.

Data Processing, Quality Control, Imputing Procedures

Data processing took place on a daily basis throughout the survey, beginning with the release of sample for recruitment, to processing recruitment data for the respondent mail-out, to appending the retrieval data to the master tables, and to performing initial quality control measures on the data. A master control file tracked the progress of each household through the various survey stages, with codes to allow immediate identification of problem cases that were not progressing according to schedule, as well as confirmation that cleared cases moved along as appropriate. Data imputation procedures and logic checks performed are presented in Appendix J of this report. Routine data checks included the following:

- Data range checks to ensure data were inside the expected ranges for each variable and that there was agreement across data files (for example, if the household had four persons and two vehicles, there should be four records in the person file and two records in the vehicle file).
- If a person reported no travel, the household was flagged for manual review to confirm the reason for non-travel was appropriate based on the demographic characteristics of the household member. Those cases for which the reason for non-travel was suspect or did not make sense within the context of the available demographic information were flagged and returned to the Research Team for confirmation or replacement.

- Within the travel data itself, several items were checked. The following are examples of conditions researched within the trip data:
 - ✓ Did each trip begin and end at a different location? Loop trips (those that have the same origin and destination) might be neighborhood walks.
 - ✓ Did each person return home at the end of the travel day? If not, did the final recorded destination make sense within the context of the household and person characteristics?
 - ✓ For all instances where a respondent reported traveling with other household members, was the shared trip reported for all other household members?
 - ✓ For all trips with “auto-driver” as the reported mode, was the respondent a licensed driver?
 - ✓ For all trips reported as “auto-passenger”, did another household member report the same trip as an auto-driver? If not, did the passenger report riding in a non-household vehicle with at least one other person making the trip?

Physical research corrected data inconsistencies. All households included in the final data set have passed both the electronic edit check program, as well as the physical research process. During data review NYMTC and NJTPA staff, in collaboration with NuStats staff, identified some additional data inconsistencies resulting in the creation of a series Data Usage flags.

Detailed below, data usage flags provide a guide for data usage based on items identified during the post-processing data review period. A total of 37,701 records out of the 231,715 in the trip / place file (16 percent) have data usage flags associated with them, affecting 59 percent of the households. Most of the trip / place file records (84 percent) have no flags associated with them. The flags appear where a speed violation occurred, the respondent reported a long trip, some corrective action was taken, or the respondent-reported data are inconsistent with expectations of what the data set should contain. The data usage flags include the following:

- **Speed Violations** (SPEEDFLAG – 34,893 records flagged) with the following codes:
 - ✓ 1 Slow, Within Threshold
 - ✓ 2 Slow, Short Distance, Non-Motorized
 - ✓ 3 Slow, Short Distance, Auto
 - ✓ 4 Fast, Within Threshold
 - ✓ 5 Fast, Short Distance, Non-Motorized
 - ✓ 6 Fast, Short Distance, Auto
 - ✓ 7 Slow, Unresolved
 - ✓ 8 Fast, Unresolved
 - ✓ 9 Zero Speed, Confirmed Ok

Records with codes 1 through 6 fell either within an allowable speed threshold, or errors were attributed to respondent rounding due to very short reported travel distances. Records flagged as codes 7 or 8 were either too slow or too fast and could not be reconciled during the manual quality assurance process due to one of the following reasons: the household no longer had a working telephone number; the household was adamant in the reported data despite speed error being triggered; or the travel time and distance were so short (e.g., <5 minutes), that modifying the data would result in over-editing or rounding to a zero-duration travel time. Records with code 9 were reviewed and confirmed to be plausible zero-speed trips. Additional documentation on the speed quality control checks can be found in Appendix H.

- **Long Trip** (LONGTRIP – 337 records flagged) with the following codes:
 - ✓ 1 Trip Duration 2+ hours (walk trip)
 - ✓ 2 Trip Duration 3+ hours

Place records where long trip distance were reviewed manually and flagged as either a two or more hour walk trip, or a three or more hour non-walk trip.

- **Imputed Locations** (IMPUTED – 13 records flagged) with the following codes:
 - ✓ 9 Location Imputed by NYMTC/NJTPA

Some place records were identified by NYMTC and NJTPA as missing a known trip segment. In these cases, the place was imputed and added to the data file. These records are coded in the data file as IMPUTED=9.

- **Missing Transit Information** (MISSTRAN – 2,883 records flagged) with the following codes:
 - ✓ 1 Transit Trip: Mode and/or Service Updated
 - ✓ 2 Transit Trip: FARE and/or FAREC and/or BPFAR and/or FRBAS and/or BUSPS Updated
 - ✓ 3 Transit Trip: Bus Route and/or Route Updated
 - ✓ 4 Multiple Transit Information Fields Updated (combines 1, 2, and 3 above)
 - ✓ 5 Travel Information Suspected to be Incorrect
 - ✓ 6 Possible Missed Trip
 - ✓ 7 Possible Incorrect Location Name or Location Attributes
 - ✓ 8 Trip Purpose or Place Name or Location Attributes Updated
 - ✓ 9 One or more of the following fields were updated: FARE, FAREC, BPFAR, FRBAS, BUSPS, Bus Route, ROUTE, Trip Purpose, Place Name, Address Attributes
 - ✓ 10 Updated Mode and/or Service and/or Fare and/or FAREC and/or BPFAR and/or FRBAS and/or BUSPS, and Travel information suspected to be incorrect

Place records with MISSTRAN codes 1, 2, 3, 4, 8, or 9 were updated using feedback from NYMTC or NJTPA during post-processing review. Records flagged as codes 5, 6, or 7 were not updated, but had reported travel or transit information that was suspected to be incorrect. Records with code 10 were updated using feedback from NYMTC or NJTPA during post-processing review in addition to having some transit or travel information that was suspected to be incorrect.

- **NYMTC/NJTPA Note** (NOTE – 422 records flagged): Open-ended Text field specifying anything not captured in the MISSTRAN flag above.
- Record updated/changed flag (Y/N) (CHANGED – 2,643 records flagged)
 - ✓ 1 Record was changed (flagged as MISSTRAN=1, 2, 3, 4, 8, 9, 10 OR IMPUTED=9)

Table 2: Summary of Data User Flags

Data User Flag	# Records	% Records	# Households	%Households
SPEEDFLAG	34,893	15.1%	10,967	57.8%
LONGTRIP	337	0.1%	261	1.4%
IMPUTED	13	<0.1%	7	<0.1%
MISSTRAN	2,883	1.2%	1,218	6.4%
NOTE	422	0.2%	184	1.0%
CHANGED	2,643	1.1%	1,154	6.1%
<i>Total Flagged</i>	37,701	16.3%	11,262	59.4%

Geocoding Variables

One-hundred percent of locations collected during the survey were geocoded to WGS-84 projection within the Trip Builder (TB) software during the retrieval interview. Home locations are stored in the Household (HH) data table, and habitual locations (i.e., Work and School) are stored in the Person (PER) data table. In addition to respondent-provided travel details, the place file contains location information for all places visited during the travel day.

Respondent Reported Trip Information

During the interview process, respondents were asked for the place name, address, city, and zip code for all places visited. In addition, this information was collected for home, work, and school addresses.

The non-home, non-work, and non-school locations (or “other trip locations”) were not as accurate. Respondents typically were unable to report correct zip codes for commonly visited locations such as the mall or grocery store. These types of addresses primarily included cross streets, as compared to the exact addresses reported in the first type of addresses. In the daily conduct of life, exact addresses and zip codes were simply not important to respondents. For households that completed the survey via telephone, every effort was made to obtain as much information about each location as possible to aid in the geocoding process. This included probing for mid-block locations, as well as nearby landmarks.

Respondents were not always accurate in their reporting of location information. In addition, local names were often provided while the street coverage files contained only “official” geographic references. In anticipation of this, interviewers received local knowledge training, and the Trip Builder software contained landmark locations to aid in the collection of correct addresses. Despite the conflict between respondent perception and official designations, geographic coordinates were obtained, and correct location attributes reviewed for accuracy, for 100 percent of locations within the data set.

Using the Data

The purpose of this section is to review basic concepts associated with the analysis of the RHTS data. SPSS commands and menu options will be referenced, although the data can be analyzed using any number of software packages.

Tabulating the Data

The most common methods for analyzing the data are frequencies, cross tabulations, and means. Instructions for performing each of these steps are detailed below. Sample tables and associated programming code are included in Appendix A.

- To produce data frequencies using SPSS:
 - 1) Go to “ANALYZE” in the main menu.
 - 2) Select “DESCRIPTIVE STATISTICS”.
 - 3) Select “FREQUENCIES”.
 - 4) Using the mouse, highlight the desired variables in the list of variables to the left. By using the “Ctrl” key on the keyboard, users can select multiple variables.
 - 5) Click the right-pointing arrow to move the desired variables to the Variable box.
 - 6) To tailor the statistical output, click the “STATISTICS” button on the bottom of the screen.
 - 7) To produce charts, click the “CHARTS” button.
 - 8) To format the output, click the “FORMAT” button.
- To produce data cross tabulations using SPSS:
 - 1) Go to “ANALYZE” in the main menu.
 - 2) Select “DESCRIPTIVE STATISTICS”.
 - 3) Select “CROSSTABS”.
 - 4) Using the mouse, highlight the desired variable(s) in the list of variables to the left. By using the “Ctrl” key on the keyboard, users can select multiple variables.
 - 5) Click the right-pointing arrow to move the desired variables to the Row and Column variable boxes.
 - 6) To tailor the statistical output, click the “STATISTICS” button on the bottom of the screen.
 - 7) To tailor the output by choosing counts, row percent, column percent, or total percent, click the “CELLS” button.
 - 8) To format the order of the output (ascending versus descending); click the “FORMAT” button.
- To produce data means using SPSS:
 - 1) Go to “ANALYZE” in the main menu.
 - 2) Select “DESCRIPTIVE STATISTICS”.
 - 3) Select “DESCRIPTIVES”.
 - 4) Using the mouse, highlight the desired variable(s) in the list of variables to the left.
 - 5) Click the right-pointing arrow to move the desired variables to the variable box.
 - 6) To format the output, click the “OPTIONS” button.

Control Numbers

- The Household File contains data for 18,965 households. Of these, 10,132 reside in New York; 7,906 reside in New Jersey; and 927 reside in Connecticut. Any use of the file weights will adjust households for probability of selection, as detailed in the weighting section. When weighted, the data provides 7,841,848 weighted responses.
- The Person File contains data for 43,558 persons. Of these, 22,980 persons reported being employed and 10,310 reported being students, with some respondents reporting both.
- The Place File contains 231,715 place records. Place 1 for each person is an anchor point used only to pinpoint a starting point for the travel day. There is no travel information associated with Place 1.
- The Unlinkedtrip File contains 188,199 unlinked trips or trip segments, where either the From or To place may include a Change in Mode of travel (e.g. bus stop, train station, Park N' Ride facility, etc).
- The Linkedtrips File contains 143,925 linked trip records. Each record is a linked trip, where the from place represents a trip Origin and the to place a trip Destination. For trips involving multiple modes, an “aggregate” Trip Mode is defined, based on a prescribed hierarchy of modes (the decreasing order of hierarchy of modes is as follows: (1) School Bus, (2)Taxi, (3) Commuter Rail, (4) Express Bus, (5) Subway, LRT, Tram, PATH, Ferry, (6) Other Bus, (7) HOV, (8) Local Bus, (9) SOV, (10) Bike, (11) Walk, (12) Air Train or Other, including the Trip Mode definitions for the travel measures enhancement (over-sampling) objectives established for the Sampling Plan.

Application of Weights

There are three different weights available on the dataset.

1. HH_WHT2: an adjusted weight to reflect the different probabilities of selection of respondents. The factor accounts for the census population distribution in comparison to the sample distribution along with other characteristics such as income, household type and work trip travel patterns. (in All Datasets)
2. TourFAC: a factor that corrects the under-reporting of trips included in non-GPS sample, by comparing the tour and trip rates for GPS and non-GPS sample (segmented by person type, tour purpose, tour mode, and tour duration). This factor also corrects for the different number of stops between the GPS and non-GPS samples. This factor represents an adjusted weight for the trip and, when multiplied by the HH_WHT2 creates the WHT_FAC3 (in Unlinked Trip and Linked Trip files)
3. WHT_FAC3: a final weight that combines the two previous weights (HH_WHT2 & TOURFAC). It is used to estimate final trip rates and travel patterns in the region. (in Unlinked Trip and Linked Trip files)

The household weights (HH_WHT2) should be used to report on any statistics in the Household and Person Data files. The level 3 weights (WHT_FAC3) should be used to report on any statistics in the Unlinked and Linked Trip files.

The following steps can be used to weight the household data, for instance, using SPSS:

- 1) Go to “DATA” in the main menu.
- 2) Select “WEIGHT CASES”.
- 3) A user’s box will appear on the screen. Select the “Weight Cases by” option.
- 4) Select the weight variable (HH_WHT2) by highlighting it in the list of variables to the left.

- 5) Click the right-pointing arrow to move it into the “Frequency Variable” box.
- 6) Click “OK”.

It is also possible to weight the data through the use of an SPSS program. The following program was used to produce the data for Table 3.

```
FREQUENCIES
  VARIABLES=INCOM      *Note – produces unweighted frequency
  /ORDER ANALYSIS.
```

```
WEIGHT
  BY HH_WHT2.          *Note – weights data by final weight
```

```
FREQUENCIES
  VARIABLES=INCOM      *Note – produces weighted frequency
  /ORDER ANALYSIS.
```

If properly done, the “Weight On” message will appear in the lower right-hand corner of the data window. Once the data are weighted, proper application of the weight can be confirmed by running a frequency on any variable in the data set and confirming the total number of observations against the control numbers listed above. The following table is provided as an example of effects of weighting the variables.

Table 3: Household Income: Unweighted and Weighted

Household Income	Unweighted	Weighted
Less than \$15,000	8.1%	9.0%
\$15,000 - \$29,999	11.3%	14.7%
\$30,000 - \$49,999	13.3%	14.3%
\$50,000 - \$74,999	15.9%	15.3%
\$75,000 - \$99,999	12.2%	11.2%
\$100,000 - \$149,999	17.9%	14.2%
\$150,000 - \$199,999	7.0%	7.2%
\$200,000 or More	7.2%	7.1%
Refused Income	7.0%	6.9%
Total	18,965 / 100%	7,841,817 / 100%

Appendix A: Sample Tables and Programming Code

Merging Data Files and Adding Variables

Several tables included in the Regional Household Travel Survey Results report summarize the data at the sub-region level. The following SPSS code assists the data user in creating the classifications necessary to classify the data in similar groupings.

- To “merge” files in SPSS and bring variables from one table to another table, such as CTFIP (County) from the household table to the place table, use the following steps and syntax:
 - 1) Sort both Tables by SAMPN

```
SORT CASES BY
  SAMPN (A) .
EXECUTE.
```

- 2) Select the table where you want to add the new variable. The user will know the table is selected if the icon in the bottom task bar has a green plus sign.
 - 3) Go to “DATA” in the main menu.
 - 4) Select “MERGE FILES”, then “ADD VARIABLES”
 - 5) Select the open Household dataset
 - 6) In the “New Active Dataset” box, select all variables with a plus sign (+) except CTFIP, then click the left-pointing arrow to indicate that those variables will not be added to the Place table
 - 7) Select the check box labeled: “Match cases on key variables in sorted files” and below it, select the option “Non-active dataset is keyed table”
 - 8) In the variable box labeled “Excluded Variables:”, select “SAMPN(+)” then click the right-pointing arrow that is next to “Non-active dataset is keyed table”. User should see “SAMPN” in the box labeled “Key Variables”
 - 9) Select “OK” to proceed with merge. User will know that merge was successful if merged variable (in this case, CTFIP), is at the far right in Data View, or is at the bottom in Variable View”
- To compare the data by **geographic county of residence** use the following syntax:

```
SORT CASES BY CTFIP.
SPLIT FILE
  LAYERED BY CTFIP.
EXECUTE.
```

Creation of Sub-Region Flag and Example Table Code

Having “merged” files so that each data table includes the CTFIP (county) variable, and “split” the data file by county, the user can produce many of the tables in the Regional Travel Survey Results report. To analyze data by sub-region, or another county grouping, users can utilize the “Recode” function within SPSS.

In the Technical Memorandum on Sampling, Sub-Region is defined as:

- 1) New York City – 5 boroughs of Manhattan, Queens, Bronx, Kings, and Staten Island
 - 2) Long Island – 2 counties of Nassau and Suffolk
 - 3) Other New York – 5 counties of Westchester, Dutchess, Putnam, Rockland, and Orange
 - 4) New Jersey – 14 counties of Bergen, Passaic, Hudson, Essex, Union, Morris, Somerset, Middlesex, Monmouth, Ocean, Hunterdon, Warren, Sussex, and Mercer
 - 5) Connecticut – 2 counties of Fairfield and New Haven
- The following syntax will “recode” the CTFIP (county) variable into a new, Sub-Region variable.

```
RECODE
CTFIP
(36061=1) (36081=1) (36005=1) (36047=1) (36085=1) (36059=2) (36103=2) (36119=3)
(36027=3) (36079=3) (36087=3) (36071=3) (34003=4) (34031=4) (34017=4) (34013=4)
(34039=4) (34027=4) (34035=4) (34023=4) (34025=4) (34029=4) (34019=4) (34041=4)
(34037=4) (34021=4) (09001=5) (9001=5) (09009=5) (9009=5) INTO SUBREGION .
VARIABLE LABELS SUBREGION 'Sub Region'.
VALUE LABELS SUBREGION 1 'New York City' 2 'Long Island' 3 'Other New York' 4 'New
Jersey' 5 'Connecticut'.
EXECUTE .
```

Having “merged” files so that each data table includes the SUBREGION (sub region) variable, and “split” the data file by SUBREGION, the user can produce another major subset of the tables in the Regional Travel Survey Results report.

- In order to confirm correct coding of the sub region variable, users can run a cross-tabulation on the two variables, CTFIP and SUBREGION using the following syntax, which produces the first table in the “Sample Tables” sub-section below:

```
CROSSTABS
/TABLES= CTFIP BY SUBREGION
/FORMAT= AVALUE TABLES
/CELLS= COLUMN
/COUNT ROUND CELL .
EXECUTE.
```

- The second table is a frequency of respondent age by sub region, using the person (PER) data table. To produce this table, the first step is to collapse ages down to ranges useful for analysis using the following syntax:

```
RECODE
AGE
(0 thru 20 = 1) (21 thru 24 = 2) (25 thru 54 = 3) (55 thru 64 = 4) (65 thru 997 = 5) (998 thru
Highest = 9) INTO AGE_R .
VARIABLE LABELS AGE_R 'Age (recoded)'.
```

```
VALUE LABELS AGE_R 1 '<20 years old' 2 '20-24 years' 3 '25-54 years' 4 '55-64 years'
'65 years and older' 9 'Refused Age'.
MISSING VALUES AGE_R (9)
EXECUTE .
```

- Next, the recoded variable is used to create the table:

```
CROSSTABS
/TABLES=AGE_R BY SUBREGION
/FORMAT= AVALUE TABLES
/CELLS= COLUMN
/COUNT ROUND CELL .
EXECUTE.
```

Sample Tables

Table A-1: Counties within Each Sub-Region

	Sub-Region									
	New York City		Long Island		Other New York		New Jersey		Connecticut	
	Count	%	Count	%	Count	%	Count	%	Count	%
Fairfield	0	.0%	0	.0%	0	.0%	0	.0%	324,696	49.6%
New Haven	0	.0%	0	.0%	0	.0%	0	.0%	329,829	50.4%
Bergen	0	.0%	0	.0%	0	.0%	334,103	13.4%	0	.0%
Essex	0	.0%	0	.0%	0	.0%	275,118	11.0%	0	.0%
Hudson	0	.0%	0	.0%	0	.0%	238,550	9.6%	0	.0%
Hunterdon	0	.0%	0	.0%	0	.0%	48,182	1.9%	0	.0%
Mercer	0	.0%	0	.0%	0	.0%	129,980	5.2%	0	.0%
Middlesex	0	.0%	0	.0%	0	.0%	282,015	11.3%	0	.0%
Monmouth	0	.0%	0	.0%	0	.0%	235,787	9.5%	0	.0%
Morris	0	.0%	0	.0%	0	.0%	174,195	7.0%	0	.0%
Ocean	0	.0%	0	.0%	0	.0%	219,901	8.8%	0	.0%
Passaic	0	.0%	0	.0%	0	.0%	160,272	6.4%	0	.0%
Somerset	0	.0%	0	.0%	0	.0%	113,268	4.5%	0	.0%
Sussex	0	.0%	0	.0%	0	.0%	54,705	2.2%	0	.0%
Union	0	.0%	0	.0%	0	.0%	184,078	7.4%	0	.0%
Warren	0	.0%	0	.0%	0	.0%	44,637	1.8%	0	.0%
Bronx	480,050	15.7%	0	.0%	0	.0%	0	.0%	0	.0%
Dutchess	0	.0%	0	.0%	106,996	15.1%	0	.0%	0	.0%
Brooklyn (Kings)	901,920	29.5%	0	.0%	0	.0%	0	.0%	0	.0%
Nassau	0	.0%	431,988	46.5%	0	.0%	0	.0%	0	.0%
Manhattan (New York)	710,363	23.3%	0	.0%	0	.0%	0	.0%	0	.0%
Orange	0	.0%	0	.0%	124,806	17.6%	0	.0%	0	.0%
Putnam	0	.0%	0	.0%	38,488	5.4%	0	.0%	0	.0%
Queens	797,020	26.1%	0	.0%	0	.0%	0	.0%	0	.0%
Staten Island (Richmond)	163,805	5.4%	0	.0%	0	.0%	0	.0%	0	.0%
Rockland	0	.0%	0	.0%	99,174	14.0%	0	.0%	0	.0%
Suffolk	0	.0%	497,435	53.5%	0	.0%	0	.0%	0	.0%
Westchester	0	.0%	0	.0%	340,488	48.0%	0	.0%	0	.0%
Total	3,053,159	100.0%	929,423	100.0%	709,952	100.0%	2,494,789	100.0%	654,525	100.0%

Table A-2: Age by Sub-Region

Age	Sub-Region									
	New York City		Long Island		Other New York		New Jersey		Connecticut	
	Count	%	Count	%	Count	%	Count	%	Count	%
Younger than 18	1,986	17.2%	1,072	19.9%	1,107	21.9%	3,997	21.3%	415	19.9%
18-24	691	6.0%	285	5.3%	242	4.8%	904	4.8%	106	5.1%
25-54	4,925	42.7%	2,104	39.0%	1,959	38.8%	7,544	40.3%	844	40.4%
55-64	2,447	21.2%	1,250	23.2%	1,114	22.1%	4,026	21.5%	469	22.4%
65+	1,475	12.8%	686	12.7%	625	12.4%	2,264	12.1%	256	12.2%
Total	11,524	100.0%	5,397	100.0%	5,047	100.0%	18,735	100.0%	2,090	100.0%

Appendix B: Data Dictionary

Diary Data

Introduction

The final survey data deliverable contains all processed household, person, vehicle, and place data collected for the NYTMC/NJTPA Regional Travel Survey from September 2010 through December 2011. Data were collected in 28 counties in New York, New Jersey and Connecticut. Standard Edit checks identified by NuStats were performed, and manual cross check of trip data among household members who traveled together were reviewed, and detected discrepancies were corrected. The quality assurance process yielded a total of 18,965 household completes. 100% of home addresses, work addresses, school addresses and trip places were geocoded.

The final dataset contains data for the 18,965 households, 43,558 persons, and 29,043 vehicles that completed both recruitment and retrieval. This data deliverable also contains 231,715 places visited on the assigned travel day by 18,965 households. 94% of the households made at least 1 trip on their assigned travel day; 6% made reported making zero trips on their assigned travel day. The final dataset is available in SPSS, Excel and CSV formats.

HH contains one record for each of the 18,965 households that completed both recruitment and retrieval. Household demographic characteristics and summary of household members and household trips is provided.

PER contains one record for each of the 43,558 persons from 18,965 households that completed the survey. Personal demographic data and summary of person trip information are provided.

VEH contains one record for each of 29,043 vehicles from 15,194 households that own at least one household vehicle.

PLACE contains all place records for the 231,715 places visited by 18,965 households on the assigned travel day for 24-hour period.

UnlinkedTrips contains one record for each unlinked trip or trip segment, where either the From or To place may include a Change in Mode of travel (e.g. bus stop, train station, Park N' Ride facility, etc). Total number of records: 188,199 trip segments.

LinkedTrips contains one record for each linked trip, where the From place represents a trip Origin and the To place a trip Destination. For trips involving multiple modes, an "aggregate" Trip Mode is defined, based on a prescribed hierarchy of modes (the decreasing order of hierarchy of modes is as follows: (1) School Bus, (2)Taxi, (3) Commuter Rail, (4) Express Bus, (5) Subway, LRT, Tram, PATH, Ferry, (6) Other Bus, (7) HOV, (8) Local Bus, (9) SOV, (10) Bike, (11) Walk, (12) Air Train or Other, including the Trip Mode definitions for the travel measures enhancement (over-sampling) objectives established for the Sampling Plan. Total number of records: 143,925 linked trips.

Household Data

Variable	Label	Values
SAMPN	Household Identifier: 7 digits wide	

RECMODE	Recruit Mode	1	WEB
		2	CATI
RETMODE	Retrieval Mode	1	WEB
		2	CATI
		3	Mail Back
CTFIP	County FIPS [COMPUTED]		
		09001	Fairfield
		09009	New Haven
		34003	Bergen
		34013	Essex
		34017	Hudson
		34019	Hunterdon
		34021	Mercer
		34023	Middlesex
		34025	Monmouth
		34027	Morris
		34029	Ocean
		34031	Passaic
		34035	Somerset
		34037	Sussex
		34039	Union
		34041	Warren
		36005	Bronx
		36027	Duchess
		36047	Brooklyn (Kings)
		36059	Nassau
		36061	Manhattan (New York)
		36071	Orange
		36079	Putnam
		36081	Queens
		36085	Staten Island (Richmond)
		36087	Rockland
		36103	Suffolk
		36119	Westchester
BIN	Sampling Bin [COMPUTED]		
GTYPE	GPS Type	1	GPS
		2	Diary
STYPE	Sample Type	1	Matched
		2	Unmatched
		3	Targeted Hispanic Surname
ILANG	Code Language of Interview	1	English
		2	Spanish
		3	Chinese
		4	Russian
RESTY	Residence Type		
		1	Single-family
		2	Multifamily
		3	Other
		8	DON'T KNOW
		9	REFUSED

HHSIZ	Household Size		
LTELE	Land-Based Telephone Service	1	Yes
		2	No
		8	DON'T KNOW
		9	REFUSED
HHLNG	Household Language	1	English
		2	Spanish
		3	Chinese
		4	Russian
		5	Polish
		6	Italian
		7	French/Haitian
		97	Other (Specify)
		99	REFUSED
O_HHLNG	[HHLNG=97] Other, Household Language		
INCOM	Household Income	1	Less than \$15,000
		2	\$15,000 to \$29,999
		3	\$30,000 to 49,999
		4	\$50,000 to \$74,999
		5	\$75,000 to \$99,999
		6	\$100,000 to \$149,999
		7	\$150,000 to \$199,999
		8	\$200,000 or more
		99	REFUSED
DOW	Day of Travel during the Week	1	Monday
		2	Tuesday
		3	Wednesday
		4	Thursday
		5	Friday
HHVEH	Number of Household Vehicles	0	Zero
		1	One
		2	Two
		3	Three
		4	Four
		5	Five
		6	Six
		7	Seven
		8	Eight or more
HHSTU	Number of Household Students [COMPUTED]		
HHWRK	Number of Household Workers [COMPUTED]		
HHLIC	Number of Household License Holders [COMPUTED]		
HHCHD	Number of Household Children [COMPUTED]		
HTRIPS	Total Number of Household Trips (without GPS correction factor) [COMPUTED]		

HTRIPS_GPS	Total Number of Household Trips (adjusted with GPS correction factor: TourFAC) [COMPUTED]	
PARTIAL	Flag for Partially Completed Households [COMPUTED]	
	1	Fully Completed Household
	2	Valid Partial (n-1) Household
HH1	DOMAIN – computed as the ratio of Census household count to the RHTS sample household count for each census tract. It accounts for the differential rates of sampling achieved in the RHTS according to the sampling plan design. [COMPUTED]	
HCITY	Home City (TB)	
HCITY_PL	Home City (Place Name) [COMPUTED]	
HCITY_MCD	Home City (MCD Place Name) [COMPUTED]	
HSTATE	Home State	
HZIP	Home Zip Code	
HTAZ	Home TAZ (NYMTC)	[COMPUTED]
HTRACT	Home Census Tract 2010 [COMPUTED]	
HH_WHT2	Level 2 Weights an adjusted weight to reflect the different probabilities of selection of respondents. The factor accounts for the census population distribution in comparison to the sample distribution along with other characteristics such as income, household type and work trip travel patterns. The household weights (level 2) can be used to report any of the household level statistics. Moreover, these weights can also be applied at tours and trips level. [COMPUTED]	
GEO_GROUP1	County Group: Level 1 (Home Location) [COMPUTED]	
	1	Manhattan
	2	Other NYC
	3	Long Island
	4	Mid-Hudson (NYMTC)
	5	Mid-Hudson (Other)
	6	Connecticut
	7	Bergen-Passaic
	8	Essex-Hudson-Union
	9	Middlesex-Morris-Somerset
	10	Monmouth-Ocean
	11	Hunterdon-Sussex-Warren
	12	Mercer
GEO_GROUP2	Regional Boundaries: Level 2 (Home Location) [COMPUTED]	
	1	New York City
	2	Long Island
	3	Mid-Hudson (All)
	4	Connecticut Counties
	5	NJTPA Counties
	6	Mercer
GEO_GROUP3	Political Boundaries: Level 3 (Home Location) [COMPUTED]	
	1	NYMTC Counties
	2	Other NY Counties
	3	Connecticut Counties
	4	NJTPA Counties

5 Mercer

HHSIZ_R	Household Size Range [COMPUTED]	1	1
		2	2
		3	3
		4	4+
INCOM_R	Household Income Range [COMPUTED]	1	Below \$30K
		2	\$30K - \$74.9K
		3	\$75K - \$99.9K
		4	\$100K +
		9	Did not provide
HHVEH_R	Household Vehicle Size Range [COMPUTED]	0	0
		1	1
		2	2
		3	3 +
HHSTRUC	Household Structure [COMPUTED]	1	2+ Workers with Child(s)
		2	2+ Workers no Children
		3	1 Worker with Child(s)
		4	1 Worker no Children
		5	No Workers with Child(s)
		6	No Workers no Children
HTRIPS_V	Number of Vehicle Trips by Household Members (without GPS correction factor); based on Linked trips [COMPUTED]		
HTRIPS_T	Number of Transit Trips by Household Members (without GPS correction factor); based on Linked trips [COMPUTED]		
HTRIPS_NM	Number of Walk/Non-Motorized Mode Trips by Household Members (without GPS correction factor); based on Linked trips [COMPUTED]		
HTRIPS_O	Number of Other Mode Trips by Household Members (without GPS correction factor); based on Linked trips [COMPUTED]		
HTRIPS_WP	Number of Work Trips by Household Members (without GPS correction factor); based on Linked trips [COMPUTED]		
HTRIPS_NWP	Number of Non-Work Trips by Household Members (without GPS correction factor); based on Linked trips [COMPUTED]		
HTRIPS_GPS_V	Number of Vehicle Trips by Household Members (adjusted with GPS correction factor); based on Linked trips [COMPUTED]		
HTRIPS_GPS_T	Number of Transit Trips by Household Members (adjusted with GPS correction factor); based on Linked trips [COMPUTED]		
HTRIPS_GPS_NM	Number of Walk/Non-Motorized Mode Trips by Household Members (adjusted with GPS correction factor); based on Linked trips [COMPUTED]		
HTRIPS_GPS_O	Number of Other Mode Trips by Household Members (adjusted with GPS correction factor); based on Linked trips [COMPUTED]		

HTRIPS_GPS_WP Number of Work Trips¹ by Household Members (adjusted with GPS correction factor); based on Linked trips [COMPUTED]

HTRIPS_GPS_NWP Number of Non-Work Trips by Household Members (adjusted with GPS correction factor); based on Linked trips [COMPUTED]

Person Data

Variable	Label	Values
PSAMP	Unique Person Identifier: 9 digits wide= SAMPN + PERNO	
SAMPN	Household Identifier: 7 digits wide	
PERNO	Person Identifier: 2 digits wide	
GENDER	Gender	1 Male
		2 Female
		9 REFUSED
AGE_R	Age Range [COMPUTED]	1 Younger than 16 years
		2 16-18 years
		3 19-24 years
		4 25-34 years
		5 35-54 years
		6 55-64 years
		7 65 years or older
9 Age not provided		
LIC	[AGE>15 and <998 OR AAGE=2] Valid Driver's License	1 Yes
		2 No
		8 Don't Know
		9 REFUSED
CTELE	Cellular Telephone	1 Yes
		2 No
		8 DON'T KNOW
		9 REFUSED
RELAT	Relationship	1 SELF
		2 SPOUSE/ PARTNER
		3 SON/DAUGHTER
		4 FATHER/MOTHER
		5 BROTHER/SISTER
		6 GRANDPARENT
		7 GRANDCHILD
		8 LIVE-IN HELP
		9 ROOM MATE/OTHER NON-RELATED
		10 OTHER RELATED
98 DON'T KNOW		
99 REFUSED		

¹ Work and Non-Work Trips were determined by "WORKTRIP" in the Linked Trip file.

HISP	Hispanic Origin	1	Yes
		2	No
		8	DON'T KNOW
		9	REFUSED
RACE	Race/Ethnicity	1	White
		2	African American, Black
		3	Asian
		4	American Indian, Alaskan Native
		5	Pacific Islander
		6	Multiracial
		7	Hispanic/Mexican
		97	Other (Specify)
		98	DON'T KNOW
99	REFUSED		
O_RACE	[RACE=97] Other, Race/Ethnicity		
DISAB	Disability	1	Yes
		2	No
		8	DON'T KNOW
		9	REFUSED
DTYPE1	[DISAB=1] Disability Type 1		
DTYPE2	[DISAB=1] Disability Type 2		
DTYPE3	[DISAB=1] Disability Type 3		
DTYPE4	[DISAB=1] Disability Type 4	1	Visually Impaired or Blind
		2	Hearing Impaired or Deaf
		3	Cane or Walker
		4	Wheelchair Non-Transferable
		5	Wheelchair Transferable
		6	Mentally or Emotionally Disabled
		7	Other (Specify)
		8	DON'T KNOW
		9	REFUSED
O_DTYPE	[DTYPE=7] Other, Disability Type		
EMPLY	[AGE>15 and <998 OR AAGE=2] Employed	1	Yes
		2	No
		8	DON'T KNOW
		9	REFUSED
VOLUN	[EMPLY>1] Volunteer	1	Yes
		2	No
		8	DON'T KNOW
		9	REFUSED
WORKS	[EMPLY OR VOLUN=1] Work Status [COMPUTED]	1	Works
		2	Not a Worker
WKSTAT	[WORKS=2] Unemployment Status	1	Retired
		2	Homemaker
		3	Unemployed but Looking for Work
		4	Unemployed, Not Seeking Employment

		5	Student (Part-time or Full-time)
		8	DON'T KNOW
		9	REFUSED
JOBS	[WORKS=1] Number of Jobs		
HRS1	[WORKS=1] Job #1 Hours	999	REFUSED
HRS2	[WORKS=1 AND JOBS>1] Job #2 Hours	999	REFUSED
HRS3	[WORKS=1 AND JOBS>2] Job #3 Hours	999	REFUSED
TCHRS	[WORKS=1] Telecommute Hours	98 99	DON'T KNOW REFUSED
WDAYS	[WORKS=1] Work Days	1 2 3 4 5 6 7 8 9	One Two Three Four Five Six Seven DON'T KNOW REFUSED
COMPR	[WORKS=1] Compressed Work Week	1 2 3 7 8 9	4/40 9/80 No Other (Specify) DON'T KNOW REFUSED
O_COMPR	[COMPR=7] Other, Compressed Work Week		
INDUS	[WORKS=1] Industry		
		11	AGRICULTURE, FORESTRY, FISHING AND HUNTING
		21	MINING, QUARRYING, AND OIL AND GAS EXTRACTION
		22	UTILITIES
		23	CONSTRUCTION
		31	MANUFACTURING
		42	WHOLESALE TRADE
		44	RETAIL TRADE
		48	TRANSPORTATION AND WAREHOUSING
		51	INFORMATION
		52	FINANCE AND INSURANCE
		53	REAL ESTATE, RENTAL AND LEASING
		54	PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES
		55	MANAGEMENT OF COMPANIES AND ENTERPRISES
		56	ADMINISTRATION AND SUPPORT AND WASTE MANAGEMENT AND REMEDIATION SERVICES
		61	EDUCATIONAL SERVICES
		62	HEALTH CARE AND SOCIAL ASSISTANCE
		71	ARTS, ENTERTAINMENT, AND RECREATION
		72	ACCOMODATION AND FOOD SERVICES

- 81 OTHER SERVICES (EXCEPT PUBLIC ADMINISTRATION)
- 92 PUBLIC ADMINISTRATION
- 97 OTHER (SPECIFY _____)
- 98 DON'T KNOW
- 99 REFUSED

O_INDUS [INDUS=97] Other, Industry

OCCUP [WORKS=1] Occupation

- 11 MANAGEMENT OCCUPATIONS
- 13 BUSINESS AND FINANCIAL OPERATIONS OCCUPATIONS
- 15 COMPUTER AND MATHEMATICAL OCCUPATIONS
- 17 ARCHITECTURE AND ENGINEERING OCCUPATIONS
- 19 LIFE, PHYSICAL, AND SOCIAL SCIENCE OCCUPATIONS
- 21 COMMUNITY AND SOCIAL SERVICES OCCUPATIONS
- 23 LEGAL OCCUPATIONS
- 25 EDUCATION, TRAINING, AND LIBRARY OCCUPATIONS
- 27 ARTS, DESIGN, ENTERTAINMENT, SPORTS, AND MEDIA OCCUPATIONS
- 29 HEALTHCARE PRACTITIONERS AND TECHNICAL OCCUPATIONS
- 31 HEALTHCARE SUPPORT OCCUPATIONS
- 33 PROTECTIVE SERVICE OCCUPATIONS
- 35 FOOD PREPARATION AND SERVING RELATED OCCUPATIONS
- 37 BUILDING AND GROUNDS CLEANING AND MAINTENANCE OCCUPATIONS
- 39 PERSONAL CARE AND SERVICE OCCUPATIONS
- 41 SALES AND RELATED OCCUPATIONS
- 43 OFFICE AND ADMINISTRATIVE SUPPORT OCCUPATIONS
- 45 FARMING, FISHING, AND FORESTRY OCCUPATIONS
- 47 CONSTRUCTION AND EXTRACTION OCCUPATIONS
- 49 INSTALLATION, MAINTENANCE, AND REPAIR OCCUPATIONS
- 51 PRODUCTION OCCUPATIONS
- 53 TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS
- 55 MILITARY SPECIFIC OCCUPATIONS
- 97 OTHER (SPECIFY _____)
- 98 DON'T KNOW
- 99 REFUSED

O_OCCUP [OCCUP=97] Other, Occupation

EMPLR [WORKS=1] Employer

- 1 A Private Company
- 2 Government
- 3 Non-Profit
- 4 Self-Employed
- 7 Other (Specify)
- 8 DON'T KNOW
- 9 REFUSED

O_EMPLR [EMPLR=7] Other, Employer

WLOC [WORKS=1] Work Location

- 1 Fixed
- 2 Home
- 3 Varies

WCITY [WLOC=1 or 3] Work City (TB)

WCITY_PL [WLOC=1 or 3] Work City (Place Name) [COMPUTED]

WCITY_MCD	[WLOC=1 or 3] Work City (MCD Place Name) [COMPUTED]
WSTATE	[WLOC=1 or 3] Work State
WZIP	[WLOC=1 or 3] Work Zip
WTAZ	[WLOC=1 or 3] Work Location TAZ (NYMTC) [COMPUTED] 0 Location Outside of NYBPM Area
WTRACT	[WLOC=1 or 3] Work Location Census Tract (2010) [COMPUTED] 0 Location Outside of NYBPM Area
WFIPS	[WLOC=1 or 3] Work Location County [COMPUTED] 09001 Fairfield 09009 New Haven 34003 Bergen 34013 Essex 34017 Hudson 34019 Hunterdon 34021 Mercer 34023 Middlesex 34025 Monmouth 34027 Morris 34029 Ocean 34031 Passaic 34035 Somerset 34037 Sussex 34039 Union 34041 Warren 36005 Bronx 36027 Dutchess 36047 Brooklyn (Kings) 36059 Nassau 36061 Manhattan (New York) 36071 Orange 36079 Putnam 36081 Queens 36085 Staten Island (Richmond) 36087 Rockland 36103 Suffolk 36119 Westchester 0 Location Outside of NYBPM Area
WMODE	[WLOC=1 or 3] Usual Mode of Transport to Work 1 Walk 2 Bike 3 Wheelchair/Mobility Scooter 4 Skates/Skateboard/Kick Scooter/Segway 5 Auto (Car or Small Truck) Driver 6 Auto (Car or Small Truck) Passenger 7 Carpool/Vanpool/Other Group Ride 8 Motorcycle/Moped/Motorized Scooter 9 Local Bus (Regular, Standard, City) 10 Express Bus (Suburban, Commuter, Inter-city) 11 School Bus 12 Charter Bus (Employer-provided or Other Contracted) 13 Shuttle Bus (Public or Employer-provided) 14 Paratransit Service (Access-a-ride, Dial-a-ride, etc.) 15 Subway (NYTCT, Staten Island Railway)

- 16 PATH Train
- 17 Railroad (LIRR, Metro North, NJ Transit, AMTRAK)
- 18 Light Rail/LRT (Newark, Hudson-Bergen, River line)
- 19 Ferry (Staten Island, NY Waterway, Water Taxi, Seastreak)
- 20 Taxi (Yellow, Medallion Cab)
- 21 For-Hire Van/Jitney/Gypsy Cab
- 22 Black Car Service/Limo
- 23 Roosevelt Island Tram
- 24 AIRTRAIN or Airport Bus
- 97 Other (Specify)
- 98 Don't Know
- 99 Refuse

O_WMODE [WMODE=97] Other, Mode of Transport to Work

FBKTW [WMODE=2] Frequency of Bike Travel

- 1 Once
- 2 2-3 Times
- 3 4 or more Times
- 8 DON'T KNOW
- 9 REFUSED

TTTWS [WORKS=1 AND WLOC=1 OR 3] Typical Travel Time to Work

- 999 REFUSED

CDRIV [WORKS=1 AND HHVEH>0] Commercial Driving – (As part of the job, does/do (he, she, you) drive a household vehicle from work site to work site?)

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

CVEH [CDRIV=1] Vehicle Number Driven Commercially

ESUB_1 All Employees [EXCEPT WLOC=2 & EMPLR=4] Employer-Transportation benefit1

ESUB_2 All Employees [EXCEPT WLOC=2 & EMPLR=4] Employer-Transportation benefit2

ESUB_3 All Employees [EXCEPT WLOC=2 & EMPLR=4] Employer-Transportation benefit3

- 1 Toll / EZ PASS Payment or Reimbursement
- 2 Public Transit Payment or Reimbursement
- 3 Free Parking or Reimbursement
- 4 Secure Bike Parking
- 5 I Do Not Use Any Employer-Provided Transportation Subsidies
- 7 Other Subsidies (Specify)
- 8 Don't know
- 9 Refused

O_ESUB [ESUB = 7] Other, Employer-Transportation Benefits

WSTRT [WORKS =1 AND WLOC<>2] Work Start Time

- 9999 DK/RF

WEND [WORKS =1 AND WLOC<>2] Work End Time

- 9999 DK/RF

SCHED [WORKS =1 AND WLOC<>2] Varied Work Schedule -

- 1 Yes
- 2 No

		8	DK
		9	RF
STRVR	[WORKS =1 AND WLOC<>2] Start Time Variation		
		1	Start Time Cannot Vary
		2	Within 15 Minutes or Less
		3	16 to 30 Minutes
		4	31 to 60 Minutes
		5	More than 1 Hour
		7	Or, Something Else (SPECIFY)
		8	DK
		9	RF
O_STRVR	[STRVR=7] Other, Start Time Variation		
ENDVR	[WORKS =1 AND WLOC<>2] End Time Variation		
		1	End Time Cannot Vary
		2	Within 15 Minutes or Less
		3	16 to 30 Minutes
		4	31 to 60 Minutes
		5	More than 1 Hour
		7	Or, Something Else (SPECIFY)
		8	DK
		9	RF
O_ENDVR	[ENDVR=7] Other, End Time Variation		
STUDE	Student Status		
		1	Yes - Full Time
		2	Yes - Part Time
		3	No
		8	DK
		9	RF
SCHOL	[STUDE=1 or 2] Level of School		
		1	Daycare
		2	Nursery/Pre-school
		3	Kindergarten to Grade 8
		4	Grade 9 to 12
		5	Vocational/Technical School
		6	2-Year College (Community College)
		7	4-Year College or University
		8	Graduate School/Professional
		97	Other (Specify)
		98	DK
		99	RF
O_SCHOL	[SCHOL=97] Other, Level of School		
SLOC	[STUDE=1 or 2 and SCHOL=1-4] School Location (Home Schooled)		
		1	Yes
		2	No
		8	DK
		9	RF
SCITY	[STUDE=1 or 2 and SLOC<>1] School City (TB)		
SCITY_PL	[STUDE=1 or 2 and SLOC<>1] School City (Place Name) [COMPUTED]		

SCITY_MCD	[STUDE=1 or 2 and SLOC<>1]	School City (MCD Place Name) [COMPUTED]
SSTAT	[STUDE=1 or 2 and SLOC<>1]	School State
SZIP	[STUDE=1 or 2 and SLOC<>1]	School Zip
STAZ	[STUDE=1 or 2 and SLOC<>1]	School Location TAZ (NYMTC) [COMPUTED]
	0	Location Outside of NYBPM Area
STRACT	[STUDE=1 or 2 and SLOC<>1]	School Location Census Tract 2010 [COMPUTED]
	0	Location Outside of NYBPM Area
SFIPS	[STUDE=1 or 2 and SLOC<>1]	School Location County [COMPUTED]
	09001	Fairfield
	09009	New Haven
	34003	Bergen
	34013	Essex
	34017	Hudson
	34019	Hunterdon
	34021	Mercer
	34023	Middlesex
	34025	Monmouth
	34027	Morris
	34029	Ocean
	34031	Passaic
	34035	Somerset
	34037	Sussex
	34039	Union
	34041	Warren
	36005	Bronx
	36027	Dutchess
	36047	Brooklyn (Kings)
	36059	Nassau
	36061	Manhattan (New York)
	36071	Orange
	36079	Putnam
	36081	Queens
	36085	Staten Island (Richmond)
	36087	Rockland
	36103	Suffolk
	36119	Westchester
	0	Location Outside of NYBPM Area
SMODE	[STUDE=1 or 2 and SLOC<>1]	Usual Mode of Transport to School
	1	Walk
	2	Bike
	3	Wheelchair/Mobility Scooter
	4	Skates/Skateboard/Kick Scooter/Segway
	5	Auto (Car or Small Truck) Driver
	6	Auto (Car or Small Truck) Passenger
	7	Carpool/Vanpool/Other Group Ride
	8	Motorcycle/Moped/Motorized Scooter
	9	Local Bus (Regular, Standard, City)
	10	Express Bus (Suburban, Commuter, Inter-city)
	11	School Bus
	12	Charter Bus (Employer-provided or Other Contracted)
	13	Shuttle Bus (Public or Employer-provided)
	14	Paratransit Service (Access-a-ride, Dial-a-ride, etc.)

15	Subway (NYTCT, Staten Island Railway)
16	PATH Train
17	Railroad (LIRR, Metro North, NJ Transit, AMTRAK)
18	Light Rail/LRT (Newark, Hudson-Bergen, River line)
19	Ferry (Staten Island, NY Waterway, Water Taxi, Seastreak)
20	Taxi (Yellow, Medallion Cab)
21	For-Hire Van/Jitney/Gypsy Cab
22	Black Car Service/Limo
23	Roosevelt Island Tram
24	AIRTRAIN or Airport Bus
97	Other (Specify)
98	Don't Know
99	Refuse

O_SMODE [SMODE=97] Other, Mode of Transport to School

FBKTS [SMODE=2] Frequency of Bike Travel

1	Once
2	2-3 Times
3	4 or more Times
8	DK
9	RF

TTSS [SMODE=2] Typical Travel Time to School

999	REFUSED
-----	---------

CMPLG Completed Diary [RETR]

1	Yes
2	No
3	Did Not Receive Materials
8	DK
9	RF

HVLOG [CMPLG=1] Have Completed Diary

1	Yes
2	No
9	REFUSED

PROXY Proxy Flag [RETR]

1	Informant
2	Proxy

INTRV [PROXY=2] Person Number Reporting Data [RETR]

PTRIPS Number of Person Trips (without GPS correction factor); based on Linked trips [COMPUTED]

PTRIPS_GPS Number of Person Trips adjusted with a GPS correction factor TourFAC; based on Linked trips [COMPUTED]

NOGO [PTRIPS=0] Reason for No Trips [RETR]

1	Personally Sick
2	Vacation or Personal Day
3	Caretaking Sick Children
4	Caretaking Sick Other
5	Home-bound Elderly or Disabled
6	Worked at Home for Pay
7	Not Scheduled to Work
8	Worked Around Home (Not for Pay)

- 9 Out of Area
- 96 Person Did not Complete Retrieval (n-1 household)
- 97 Other (Specify)
- 99 RF

O_NOGO [NOGO=97] Other, Reason for No Trips [RETR]

PARTIAL Flag for Partially Completed Persons

- 1 Person Completed Retrieval
- 2 Person did not Complete Retrieval (valid n-1 household)

HH1 DOMAIN – computed as the ratio of Census household count to the RHTS sample household count for each census tract. It accounts for the differential rates of sampling achieved in the RHTS according to the sampling plan design [COMPUTED]

HH_WHT2 Level 2 Weights - an adjusted weight to reflect the different probabilities of selection of respondents. The factor accounts for the census population distribution in comparison to the sample distribution along with other characteristics such as income, household type and work trip travel patterns. The household weights (level 2) can be used to report any of the household level statistics. Moreover, these weights can also be applied at tours and trips level. [COMPUTED]

GEO_GROUP1 County Group: Level 1 (Home Location) [COMPUTED]

- 1 Manhattan
- 2 Other NYC
- 3 Long Island
- 4 Mid-Hudson (NYMTC)
- 5 Mid-Hudson (Other)
- 6 Connecticut
- 7 Bergen-Passaic
- 8 Essex-Hudson-Union
- 9 Middlesex-Morris-Somerset
- 10 Monmouth-Ocean
- 11 Hunterdon-Sussex-Warren
- 12 Mercer

GEO_GROUP2 Regional Boundaries: Level 2 (Home Location) [COMPUTED]

- 1 New York City
- 2 Long Island
- 3 Mid-Hudson (All)
- 4 Connecticut Counties
- 5 NJTPA Counties
- 6 Mercer

GEO_GROUP3 Political Boundaries: Level 3 (Home Location) [COMPUTED]

- 1 NYMTC Counties
- 2 Other NY Counties
- 3 Connecticut Counties
- 4 NJTPA Counties
- 5 Mercer

HFIPS Home County FIPS (Home) [COMPUTED]

- 09001 Fairfield
- 09009 New Haven
- 34003 Bergen
- 34013 Essex
- 34017 Hudson
- 34019 Hunterdon
- 34021 Mercer

34023	Middlesex
34025	Monmouth
34027	Morris
34029	Ocean
34031	Passaic
34035	Somerset
34037	Sussex
34039	Union
34041	Warren
36005	Bronx
36027	Dutchess
36047	Brooklyn (Kings)
36059	Nassau
36061	Manhattan (New York)
36071	Orange
36079	Putnam
36081	Queens
36085	Staten Island (Richmond)
36087	Rockland
36103	Suffolk
36119	Westchester

LIFCYC	Life Cycle Status (created with multiple variables surveyed) ² [COMPUTED]
	1 Full-Time Employed
	2 Part-Time Employed
	3 Unemployed
	4 Homemaker
	5 Adult Student
	6 Retired
	7 School-Aged (5-17 years)
	8 Under 5 years
	9 Other

PTRIPS_V	Number of Vehicle Trips by Person (without GPS correction factor); based on Linked trips [COMPUTED]
PTRIPS_T	Number of Transit Trips by Person (without GPS correction factor); based on Linked trips [COMPUTED]
PTRIPS_NM	Number of Walk/Non-Motorized Mode Trips by Person (without GPS correction factor); based on Linked trips [COMPUTED]
PTRIPS_O	Number of Other Mode Trips by Person (without GPS correction factor); based on Linked trips [COMPUTED]
PTRIPS_WP	Number of Work Trips by Person (without GPS correction factor); based on Linked trips [COMPUTED]
PTRIPS_NWP	Number of Non-Work Trips by Person (without GPS correction factor); based on Linked trips [COMPUTED]
PTRIPS_GPS_V	Number of Vehicle Trips by Person (adjusted with GPS correction factor); based on Linked trips [COMPUTED]
PTRIPS_GPS_T	Number of Transit Trips by Person (adjusted with GPS correction factor); based on Linked trips [COMPUTED]

² See Appendix B for methodology and variables used.

PTRIPS_GPS_NM	Number of Walk/Non-Motorized Mode Trips by Person (adjusted with GPS correction factor); based on Linked trips [COMPUTED]
PTRIPS_GPS_O	Number of Other Mode Trips by Person (adjusted with GPS correction factor); based on Linked trips [COMPUTED]
PTRIPS_GPS_WP	Number of Work Trips ³ (Tour level) by Person (adjusted with GPS correction factor) [COMPUTED]
PTRIPS_GPS_NWP	Number of Non-Work Trips (Tour level) by Person (adjusted with GPS correction factor) [COMPUTED]

Vehicle Data

Variable	Label	Values
VSAMP	Vehicle Unique Identifier: 9 digits wide= SAMPN + VEHNO	
SAMPN	Household Identifier: 9 digits wide	
VEHNO	Vehicle Number: 2 digits wide	
YEAR	Year of Vehicle	9998 DK 9999 RF
BODY	Body of Vehicle	1 Passenger car (INCLUDES "CROSSOVERS") 2 Sport Utility Vehicle (SUV) 3 Van 4 Pick-up Truck 5 Truck 6 Recreational Vehicle 7 Motorcycle 8 Moped/Scooter (e.g., Vespa) 97 Other (Specify) 98 DK 99 RF
O_BODY	[BODY=97] Other, Body of Vehicle	
FUEL	Type of Fuel	1 Gas 2 Diesel 3 Hybrid 4 Flex Fuel 7 Other (Specify) 8 DK 9 RF
O_FUEL	[FUEL=7] Other, Type of Fuel	
EZPAS	E-ZPass Tag	

³ Work and Non-Work Trips were determined by "TOUR_PURP" in a Linked Trip file.

- 1 Yes, Vehicle has E-ZPass Tag
- 2 No, Vehicle does not have E-ZPass Tag
- 8 DK
- 9 RF

CNTV Vehicle Used [RETR]

- 1 Yes
- 2 No

O_CNTV [CNTV=2] Reason Not Used [RETR]

HH1 DOMAIN – computed as the ratio of Census household count to the RHTS sample household count for each census tract. It accounts for the differential rates of sampling achieved in the RHTS according to the sampling plan design [COMPUTED]

HH_WHT2 Level 2 Weights - an adjusted weight to reflect the different probabilities of selection of respondents. The factor accounts for the census population distribution in comparison to the sample distribution along with other characteristics such as income, household type and work trip travel patterns. The household weights (level 2) can be used to report any of the household level statistics. Moreover, these weights can also be applied at tours and trips level. [COMPUTED]

Place Data

Variable	Label	Values
PLSAM	Place Unique Identifier: 11 digits wide= SAMPN + PERNO + PLANO	
SAMPN	Household Identifier: 7 digits wide	
PERNO	Person Number: 2 digits wide	
PLANO	Place Number: 2 digits wide	
TPURP	Primary Trip Purpose [RETR] Refer to TPURP2 below for variable values	
TPUR2	Secondary Trip Purpose [RETR]	<ul style="list-style-type: none"> 1 Working at Home (For Pay or Volunteer) 2 Shopping (Online, Catalog or by Phone) 3 Any Other Activities at Home 4 Change Travel Mode/Transfer 5 Dropped off Passenger from Car 6 Picked up Passenger from Car 7 Get Gas 8 Drive Through (ATM, Bank, Fast Food, etc.) 9 Work/Doing my Job 10 Other Work-Related Activities at Work 11 Volunteer Work/Activities 12 Attending Class/Studying 13 All Other Activities at School 14 Work-Related 15 Service Private Vehicle 16 Grocery/Food Shopping 17 Other Routine Shopping 18 Shopping for Major Purchases or Specialty Items 19 Household Errands

20	Personal Business
21	Eat Meal Out at Restaurant/Diner
22	Health Care
23	Civic or Religious Activities
24	Outdoor Recreation
25	Indoor Recreation
26	Entertainment
27	Social/Visit Friends/Relatives
28	Airport - Business
29	Airport - Personal
96	Loop Trip
97	Other (Specify)

O_TPURP [TPURP or TPURP2 =97] Other, Trip Purpose [RETR]

MODE [PLANO>1] Transportation Mode [RETR]

1	Walk
2	Bike
3	Wheelchair/Mobility Scooter
4	Skates/Skateboard/Kick Scooter/Segway
5	Auto (Car or Small Truck) Driver
6	Auto (Car or Small Truck) Passenger
7	Carpool/Vanpool/Other Group Ride
8	Motorcycle/Moped/Motorized Scooter
9	Local Bus (Regular, Standard, City)
10	Express Bus (Suburban, Commuter, Inter-city)
11	School Bus
12	Charter Bus (Employer-provided or Other Contracted)
13	Shuttle Bus (Public or Employer-provided)
14	Paratransit Service (Access-a-ride, Dial-a-ride, etc.)
15	Subway (NYTCT, Staten Island Railway)
16	PATH Train
17	Railroad (LIRR, Metro North, NJ Transit, AMTRAK)
18	Light Rail/LRT (Newark, Hudson-Bergen, River line)
19	Ferry (Staten Island, NY Waterway, Water Taxi, Seastreak)
20	Taxi (Yellow, Medallion Cab)
21	For-Hire Van/Jitney/Gypsy Cab
22	Black Car Service/Limo
23	Roosevelt Island Tram
24	AIRTRAIN or Airport Bus
97	Other (Specify)

O_MODE [MODE=97] Other, Transportation Mode [RETR]

TOTTR [PLANO>1] Total number of Persons on the trip [RETR]

HHMEM [TOTTR>1] Household Members [RETR]

PER1 [HHMEM>0] Person Number on Trip [RETR]

PER2 [HHMEM>1] Person Number on Trip [RETR]

PER3 [HHMEM>2] Person Number on Trip [RETR]

PER4 [HHMEM>3] Person Number on Trip [RETR]

PER5 [HHMEM>4] Person Number on Trip [RETR]

NONHH [TOTTR>1] Non-Household Member [COMPUTED]

VEHNO	[MODE=5 or 6] Vehicle Number [RETR]	
DYGOV	[PNAME<>HOME and MODE=5 or 6] Exit Vehicle [RETR]	
		1 Yes
		2 No
PLOC	[MODE=5 and DYGOV=1] Parking Location [RETR]	
		1 At This Destination
		2 Off-Site
		9 DK/RF
PRKTY	[MODE=5 and DYGOV=1] Parking Description [RETR]	
		1 Parking Lot
		2 Parking Garage
		3 Street
		4 Driveway
		5 Residential Garage
		7 Other (Specify)
		8 DK
		9 RF
O_PRKTY	[PRKTY=7] Other, Parking Description [RETR]	
PAYPK	[DYGOV=1 and PRKTY<>4] Pay to Park [RETR]	
		1 Yes
		2 No
		9 DK/RF
PKAMT	[PAYPK =1] Pay to Park Amount [RETR]	
PKUNT	[PAYPK =1] Pay Unit [RETR]	
		1 Per Hour
		2 Per Day
		3 Per Week
		4 Per Month
		5 Per Semester
		6 Per Year
		8 DK
		9 RF
TOLFT	[MODE=5-8] Paid fee for a toll road or bridge/tunnel on your trip [RETR]	
		1 Yes, I paid a fee for a toll road or bridge/tunnel
		2 No, I didn't incur a toll on this trip
		3 Yes, I used E-ZPass
		9 DON'T KNOW/REFUSED
TLONB	[TOLFT=1 or 3] Number of Toll Facilities Used [RETR]	
TLFC1	[TLONB>0 and <9] Toll Road or Bridge/Tunnel [RETR]	
		1 Toll Road
		2 Bridge or Tunnel
		9 DON'T KNOW/REFUSED
TOPN1	[TLFC1=1 or 2] Name of Toll Facility [RETR]	
TOLE1	[TLFC1=1] Interchange Used to Enter Facility [RETR]	
TOLX1	[TLFC1=1] Interchange Used to Exit Facility [RETR]	

TLLC1 [TLFC1=1 or 2] Amount of Toll Fee Paid [RETR]
 999 DON'T KNOW/REFUSED

TLFR1 [TLFC1=1 or 2] Toll Payment Method [RETR]
 1 Cash
 2 E-ZPass
 7 Other (Specify)
 8 DK
 9 RF

O_TLFR1 [TLFR1=7] Other, Toll Payment Method [RETR]

TLFC2 [TLONB>1 and <9] Toll Road or Bridge/Tunnel [RETR]
 1 Toll Road
 2 Bridge or Tunnel
 9 DON'T KNOW/REFUSED

TOPN2 [TLFC2=1 or 2] Name of Toll Facility [RETR]

TOLE2 [TLFC2=1] Interchange Used to Enter Facility [RETR]

TOLX2 [TLFC2=1] Interchange Used to Exit Facility [RETR]

TLLC2 [TLFC2=1 or 2] Amount of Toll Fee Paid [RETR]
 999 DON'T KNOW/REFUSED

TLFR2 [TLFC2=1 or 2] Toll Payment Method [RETR]
 1 Cash
 2 E-ZPass
 7 Other (Specify)
 8 DK
 9 RF

O_TLFR2 [TLFR2=7] Other, Toll Payment Method [RETR]

TLFC3 [TLONB>2 and <9] Toll Road or Bridge/Tunnel [RETR]
 1 Toll Road
 2 Bridge or Tunnel
 9 DON'T KNOW/REFUSED

TOPN3 [TLFC3=1 or 2] Name of Toll Facility [RETR]

TOLE3 [TLFC3=1] Interchange Used to Enter Facility [RETR]

TOLX3 [TLFC3=1] Interchange Used to Exit Facility [RETR]

TLLC3 [TLFC3=1 or 2] Amount of Toll Fee Paid [RETR]
 999 DON'T KNOW/REFUSED

TLFR3 [TLFC3=1 or 2] Toll Payment Method [RETR]
 1 Cash
 2 E-ZPass
 7 Other (Specify)
 8 DK
 9 RF

O_TLFR3 [TLFR3=7] Other, Toll Payment Method [RETR]

ROUTE [IF MODE = 09, 10, 14-19, 23-24] Route/Line Number for Transit Trips [RETR]
DK/RF DON'T KNOW/REFUSED

SERVC [IF MODE = 09, 10, 14-19, 23-24] Transit Service [RETR]

1	New York City Transit (Bus/Subway)
2	Long Island RR
3	Metro North
4	Staten Island RR
5	Long Island Bus
6	Westchester Bee Line
7	New Jersey Transit
8	PATH Train
9	Amtrak
10	Hudson-Bergen LTR
11	Newark LTR
12	River Line LTR
13	Roosevelt Island Tram
14	Air Train
97	Other (Specify)
99	RF

O_SERVC [SERVC=97] Other, Transit Service [RETR]

FARE [IF MODE = 09, 10, 14-19, 23-24] Transit Fare Type [RETR]

1	Cash
2	Used Pass
8	DK
9	RF

FAREC [FARE =1] Transit Fare Cash [RETR]
999 DON'T KNOW/REFUSED

BUSPS [FARE =2] Transit Pass Type [RETR]

1	Unlimited Ride MetroCard
2	Regular Pay-per-Ride MetroCard
3	One Day Fun Pass
4	Seven Day Unlimited Ride MetroCard
5	Fourteen Day Unlimited Ride MetroCard
6	Thirty Day Unlimited Ride MetroCard
7	Seven Day Express Bus Plus MetroCard
11	Monthly
12	Weekly
13	Ten Trip Peak
14	Ten Trip Off-Peak
15	Ten Trip Senior/Disabled
21	Peak
22	Off-Peak
23	Peak Child
24	Off-Peak Child
25	Onboard Peak
26	Onboard Off-Peak
27	Onboard Peak Child
28	Onboard Off-Peak Child
29	Senior/Disabled
31	Monthly
32	Weekly
33	Peak One-Way
34	Off-Peak One Way
36	Monthly School Tickets

37	UniTickets
38	Group Tickets
39	Getaways/Packages
40	New York City Getaways
41	One Day Getaways/Packages
42	Belmont Package
43	Free Rail or Discount Offers
51	Monthly
52	Weekly
53	Ten Trip
54	Ten Trip Peak
55	Ten Trip Off-Peak
56	Ten Trip Senior/Disabled
57	Ten Trip Intermediate
58	One Way
59	One Way Peak
60	One Way Off-Peak
61	One Way Senior/Disabled
71	Pay-per-ride MetroCard
72	Unlimited Ride MetroCard
73	Easy Pay Express MetroCard
81	Pay-per-ride MetroCard
82	Unlimited Ride MetroCard
83	Easy Pay Express MetroCard
91	Coins
92	Senior/Disabled
93	Paper Transfers
94	Transfers with Pay-per-ride MetroCards
95	Pay-per-ride MetroCard
96	UniTicket
101	One-way Ticket
102	Weekly Passes
103	Monthly Passes
104	Ten Trip Tickets
105	Off-Peak Round Trip Ticket (ORT)
106	Children's Fares
107	Family Supersaver Fare
108	Business Pass
109	Patron Pass
110	Student Monthly Pass
111	Reduced Fare Program for Senior Citizens and Customers with Disabilities
112	Military Personnel and their Dependants
113	Intra-state Pass
114	Intra-commuter Pass
115	Ten-Trip Tickets
116	Children's Fares
117	Family Supersaver Fares
118	College Student Monthly Passes
119	Student Tickets (One-way and Transfers)
120	Weekly Passes
121	Via Secaucus Tickets
122	Exact Fare
123	Adult One-way
124	Reduced Fair One-way
125	Children's One-way
126	Adult Discount 10-Trip Ticket
127	Monthly Pass
128	Upgraded Rail Pass for use also on River Line

129	One Zone Ticket with Transfer
132	One Trip Smart Link/PATH Single Ride Ticket
133	Ten Trip Quick Card/Smart Link
134	Twenty Trip
135	Forty Trip
136	Senior Smart Link Card
137	Smart Link 1-Day Pass, Unlimited
138	Smart Link 7-Day Pass, Unlimited
139	Smart Link 30-Day Pass, Unlimited
140	Pay-per-ride MetroCard
141	Auto-train
142	Multi-city
143	Multi-ride
144	USA Rail Pass
151	Adult One-way
152	Reduced Fare
153	Children's One-way
154	10-Trip
155	Monthly Pass
156	Weekly Pass
157	Rail Pass
161	Adult One-way
162	Reduced Fare
163	Downtown Fare
164	Children's One-way
165	10-Trip
166	Monthly Pass
167	Weekly Pass
168	Rail Pass
169	Upgraded Rail Pass
170	One-Zone Ticket with Transfer
171	Adult One-Way Plus Bus to Philadelphia
172	Reduced Far Plus Bus to Philadelphia
173	Children's One-Way
174	10-Trip
175	Plus Bus to Philadelphia
176	Weekly Pass
177	Rail Pass
178	Upgraded Rail Pass
179	One-Zone Ticket with Transfer
181	One-Way
182	Round Trip
183	Reduced Fare
184	10-Trip
185	Monthly Pass
186	Weekly Pass
191	Pay-per-ride MetroCard
192	Monthly
193	Weekly
194	10-Trip
195	Per Year
201	Unlimited Ride MetroCard
202	Regular Pay-per-Ride MetroCard
203	One Day Fun Pass
204	Seven Day Unlimited Ride MetroCard
205	Fourteen Day Unlimited Ride MetroCard
206	Thirty Day Unlimited Ride MetroCard
207	Seven Day Express Bus Plus MetroCard
997	Other (Specify)

999 DK/RF

O_BUSPS [BUSPS=997] Other, Transit Pass Type [RETR]

MTABP [BUSPS=1] Type of Unlimited Ride Metrocard

- 1 One Day (Fun Pass)
- 2 Seven Day Unlimited Ride
- 3 Seven Day Express Bus Plus Unlimited Ride
- 4 Fourteen Day Unlimited Ride
- 5 Thirty Day Unlimited Ride
- 6 Annual Premium Transit Check
- 7 Other type of Unlimited MetroCard (specify)
- 9 REFUSED

O_MTABP [MTABP =7] Other, Type of MetroCard

BPFAR [FARE =2] Transit Pass Cost [RETR]

FRBAS [FARE =2] Transit Pass Unit [RETR]

- 1 Per Day
- 2 Per Week
- 3 Per Month
- 4 Per Semester
- 5 Per Year
- 7 Other (Specify)
- 8 DK
- 9 RF

O_FRBAS [FRBAS=7] Other, Transit Pass Unit [RETR]

ARR_HR Arrival Hour [RETR]

ARR_MIN Arrival Minute [RETR]

DEP_HR Departure Hour [RETR]

DEP_MIN Departure Minute [RETR]

ACTDUR Activity Duration [COMPUTED]

TRPDUR [PLANO>1] Trip Duration in Minutes [COMPUTED]

TRIPDIST [PLANO>1] Trip Distance in Miles: Calculated Euclidean distance (bird's flight). [COMPUTED]

CITY City (TB)

CITY_PL City (Place Name) [COMPUTED]

CITY_MCD City (MCD Place Name) [COMPUTED]

STATE State

ZIP Zip Code

SPEEDFLAG Speed Violations Flag [COMPUTED]

- 1 Slow, Within Threshold
- 2 Slow, Short Distance, Non-Motorized
- 3 Slow, Short Distance, Auto
- 4 Fast, Within Threshold

		5	Fast, Short Distance, Non-Motorized
		6	Fast, Short Distance, Auto
		7	Slow, Unresolved
		8	Fast, Unresolved
		9	Zero Speed, Confirmed Ok
LONGTRIP	Flag for Long Trip Duration [COMPUTED]		
		8	Trip Duration 2 or more hours (walk trip)
		9	Trip Duration 3 or more hours
IMPUTED	Location Imputed by NYMTC/NJTPA [COMPUTED]		
		9	Imputed Location
MISSTRAN	Missing Transit Information Flag [COMPUTED]		
		1	Transit Trip: Mode and/or Service Updated
		2	Transit Trip: FARE and/or FAREC and/or BPFAR and/or FRBAS and/or BUSPS Updated
		3	Transit Trip: Bus Route and/or Route Updated
		4	Multiple Transit Information Fields Updated (combines 1, 2, and 3 above)
		5	Travel Information Suspected to be Incorrect
		6	Possible Missed Trip
		7	Possible Incorrect Location Name or Location Attributes
		8	Trip Purpose or Place Name or Location Attributes Updated
		9	One or more of the following fields were updated: FARE, FAREC, BPFAR, FRBAS, BUSPS, Bus Route, ROUTE, Trip Purpose, Place Name, Address Attributes
		10	Updated Mode and/or Service and/or FARE and/or FAREC and/or BPFAR and/or FRBAS and/or BUSPS, and Travel information suspected to be incorrect
NOTE	Note from NYMTC/NJTPA Data Review [COMPUTED]		
CHANGED	Flag Indicating Record was changed during data QC [COMPUTED]		
		1	Record was Changed
HH1	DOMAIN – computed as the ratio of Census household count to the RHTS sample household count for each census tract. It accounts for the differential rates of sampling achieved in the RHTS according to the sampling plan design [COMPUTED]		
HH_WHT2	Level 2 Weights - an adjusted weight to reflect the different probabilities of selection of respondents. The factor accounts for the census population distribution in comparison to the sample distribution along with other characteristics such as income, household type and work trip travel patterns. The household weights (level 2) can be used to report any of the household level statistics. Moreover, these weights can also be applied at tours and trips level. [COMPUTED]		
GEO_GROUP1	County Group: Level 1 (Place Location) [COMPUTED]		
		1	Manhattan
		2	Other NYC
		3	Long Island
		4	Mid-Hudson (NYMTC)
		5	Mid-Hudson (Other)
		6	Connecticut
		7	Bergen-Passaic
		8	Essex-Hudson-Union
		9	Middlesex-Morris-Somerset
		10	Monmouth-Ocean
		11	Hunterdon-Sussex-Warren

		12	Mercer
		13	Out of Metro Area
GEO_GROUP2	Regional Boundaries: Level 2 (Place Location) [COMPUTED]		
		1	New York City
		2	Long Island
		3	Mid-Hudson (All)
		4	Connecticut Counties
		5	NJTPA Counties
		6	Mercer
		7	Out of Metro Area
GEO_GROUP3	Political Boundaries: Level 3 (Place Location) [COMPUTED]		
		1	NYMTC Counties
		2	Other NY Counties
		3	Connecticut Counties
		4	NJTPA Counties
		5	Mercer
		6	Out of Metro Area
CTFIP	County FIPS [COMPUTED]		
		09001	Fairfield
		09009	New Haven
		34003	Bergen
		34013	Essex
		34017	Hudson
		34019	Hunterdon
		34021	Mercer
		34023	Middlesex
		34025	Monmouth
		34027	Morris
		34029	Ocean
		34031	Passaic
		34035	Somerset
		34037	Sussex
		34039	Union
		34041	Warren
		36005	Bronx
		36027	Dutchess
		36047	Brooklyn (Kings)
		36059	Nassau
		36061	Manhattan (New York)
		36071	Orange
		36079	Putnam
		36081	Queens
		36085	Staten Island (Richmond)
		36087	Rockland
		36103	Suffolk
		36119	Westchester
		0	Location Outside of NYBPM Area
TAZ	Location TAZ (NYMTC) [COMPUTED]		
		0	Location Outside of NYBPM Area
TRACT	Location Census Tract, 2010 [COMPUTED]		
		0	Location Outside of NYBPM Area

Trip Data Files

- **UnLinkedTrips:** Each record is an unlinked trip or trip segment, where either the From or To place may include a Change in Mode of travel (e.g. bus stop, train station, Park N' Ride facility, etc). Number of records: 188,199 trip segments.
- **LinkedTrips:** Each record is a linked trip, where the From place represents a trip Origin and the To place a trip Destination. For trips involving multiple modes, an "aggregate" Trip Mode is defined, based on a prescribed hierarchy of modes (the decreasing order of hierarchy of modes is as follows: (1) School Bus, (2)Taxi, (3) Commuter Rail, (4) Express Bus, (5) Subway, LRT, Tram, PATH, Ferry, (6) Other Bus, (7) HOV, (8) Local Bus, (9) SOV, (10) Bike, (11) Walk, (12) Air Train or Other, including the Trip Mode definitions for the objectives established for the Sampling Plan. Number of records: 143,925 linked trips.

UnlinkedTrips File

Variable	Label	Values
PLSAM	Place Unique Identifier: 11 digits wide= SAMPN + PERNO+ PLANO	
SAMPN	Household Identifier: 7 digits wide	
PERNO	Person Number: 2 digits wide	
PLANO	Place Number: 2 digits wide	
ORIG_HOME	If Home Is Origin	0 No 1 Yes
GTYPE	GPS Record Type	1 GPS 2 Non-GPS
HHSIZE	Household Size	
DHOME	If Home is Destination	0 No 1 Yes
TRIPNO	Unlinked Trip Number (segment)	
LTRIPNO	Linked Trip Number	
LINKFLAG	Linked Trip Flag (1 if true)	
TOUR_ID	Tour ID	
DOW	Day of Travel during the Week	1 Monday 2 Tuesday 3 Wednesday 4 Thursday 5 Friday
HTAZ	Home TAZ (NYMTC)	

HTRACT	Home Census Tract (2010)	
OTAZ	Origin TAZ (NYMTC; WGS84)	0 Location Outside of NYBPM Area
DTAZ	Destination TAZ (NYMTC; WGS84)	0 Location Outside of NYBPM Area
NO_TAZ	No TAZ flag for origin and destination	0 TAZ in both origin and destination 1 TAZ in either origin or destination 2 No TAZ in both origin and destination
OTPURP	Origin Primary Trip Purpose [RETR]	1 Working at Home (For Pay or Volunteer) 2 Shopping (Online, Catalog or by Phone) 3 Any Other Activities at Home 4 Change Travel Mode/Transfer 5 Dropped off Passenger from Car 6 Picked up Passenger from Car 7 Get Gas 8 Drive Through (ATM, Bank, Fast Food, etc.) 9 Work/Doing my Job 10 Other Work-Related Activities at Work 11 Volunteer Work/Activities 12 Attending Class/Studying 13 All Other Activities at School 14 Work-Related 15 Service Private Vehicle 16 Grocery/Food Shopping 17 Other Routine Shopping 18 Shopping for Major Purchases or Specialty Items 19 Household Errands 20 Personal Business 21 Eat Meal Out at Restaurant/Diner 22 Health Care 23 Civic or Religious Activities 24 Outdoor Recreation 25 Indoor Recreation 26 Entertainment 27 Social/Visit Friends/Relatives 28 Airport - Business 29 Airport - Personal 96 Loop Trip 97 Other (Specify)
DTPURP	Destination Primary Trip Purpose [RETR]	1 Working at Home (For Pay or Volunteer) 2 Shopping (Online, Catalog or by Phone) 3 Any Other Activities at Home 4 Change Travel Mode/Transfer 5 Dropped off Passenger from Car 6 Picked up Passenger from Car 7 Get Gas 8 Drive Through (ATM, Bank, Fast Food, etc.) 9 Work/Doing my Job 10 Other Work-Related Activities at Work 11 Volunteer Work/Activities

12	Attending Class/Studying
13	All Other Activities at School
14	Work-Related
15	Service Private Vehicle
16	Grocery/Food Shopping
17	Other Routine Shopping
18	Shopping for Major Purchases or Specialty Items
19	Household Errands
20	Personal Business
21	Eat Meal Out at Restaurant/Diner
22	Health Care
23	Civic or Religious Activities
24	Outdoor Recreation
25	Indoor Recreation
26	Entertainment
27	Social/Visit Friends/Relatives
28	Airport - Business
29	Airport - Personal
96	Loop Trip
97	Other (Specify)

OTPURP_AGG Origin Primary Trip Purpose (Aggregate): Re-categorized variable based on OTPURP.

Home= (1) Working at Home (For Pay or Volunteer), (2) Shopping (Online, Catalog or by Phone), (3) Any Other Activities at Home;
Work= (9) Work/Doing my Job, (10) Other Work-Related Activities at Work, (14) Work-Related;
University= (12) Attending Class/Studying (in combination with age)
School= (12) Attending Class/Studying (in combination with age)
Escorting= (5) Dropped off Passenger from Car, (6) Picked up Passenger from Car;
Shopping= (16) Grocery/Food Shopping, (17) Other Routine Shopping, (18) Shopping for Major Purchases or Specialty Items;
Maintenance= (8) Drive Through (ATM, Bank, Fast Food, etc.), (15) Service Private Vehicle, (19) Household Errands, (20) Personal Business, (22) Health Care;
Eating Out= (21) Eat Meal Out at Restaurant/Diner;
Visiting= (27) Social/Visit Friends/Relatives
Discretionary= (11) Volunteer Work/Activities, (13) All Other Activities at School, (23) Civic or Religious Activities, (24) Outdoor Recreation, (25) Indoor Recreation, (26) Entertainment; in some cases, those purpose with (9, 10, 14) were assigned to Discretionary, for their person type are not employees but rather volunteer workers;
Change Mode= (4) Change Travel Mode/Transfer;
Loop= (96) Loop Trip;
Airport Trip= (28) Airport - Business; (29) Airport – Personal;
Other (specify) = (97) Other (Specify); and
Get Gas= (7) Get Gas

0	Home
1	Work
2	University
3	School
4	Escorting
5	Shopping
6	Maintenance
7	Eating Out
8	Visiting
9	Discretionary
10	Change Mode
11	Loop
12	Airport Trip
13	Other (specify)
14	Get Gas

DTPURP_AGG Destination Primary Trip Purpose (Aggregate). Re-categorized variable based on DTPURP. Refer to the OTPURP_AGG above for description of variable values.

- 0 Home
- 1 Work
- 2 University
- 3 School
- 4 Escorting
- 5 Shopping
- 6 Maintenance
- 7 Eating Out
- 8 Visiting
- 9 Discretionary
- 10 Change Mode
- 11 Loop
- 12 Airport Trip
- 13 Other (Specify)
- 14 Get Gas

DTPUR2 Secondary Destination Trip Purpose [RETR]

- 1 Working at Home (For Pay or Volunteer)
- 2 Shopping (Online, Catalog or by Phone)
- 3 Any Other Activities at Home
- 4 Change Travel Mode/Transfer
- 5 Dropped off Passenger from Car
- 6 Picked up Passenger from Car
- 7 Get Gas
- 8 Drive Through (ATM, Bank, Fast Food, etc.)
- 9 Work/Doing my Job
- 10 Other Work-Related Activities at Work
- 11 Volunteer Work/Activities
- 12 Attending Class/Studying
- 13 All Other Activities at School
- 14 Work-Related
- 15 Service Private Vehicle
- 16 Grocery/Food Shopping
- 17 Other Routine Shopping
- 18 Shopping for Major Purchases or Specialty Items
- 19 Household Errands
- 20 Personal Business
- 21 Eat Meal Out at Restaurant/Diner
- 22 Health Care
- 23 Civic or Religious Activities
- 24 Outdoor Recreation
- 25 Indoor Recreation
- 26 Entertainment
- 27 Social/Visit Friends/Relatives
- 28 Airport - Business
- 29 Airport - Personal
- 96 Loop Trip
- 97 Other (Specify)

ULTMODE [PLANO>1] Unlinked Trip Transportation Mode [RETR]

- 1 Walk
- 2 Bike
- 3 Wheelchair/Mobility Scooter
- 4 Skates/Skateboard/Kick Scooter/Segway

5	Auto (Car or Small Truck) Driver
6	Auto (Car or Small Truck) Passenger
7	Carpool/Vanpool/Other Group Ride
8	Motorcycle/Moped/Motorized Scooter
9	Local Bus (Regular, Standard, City)
10	Express Bus (Suburban, Commuter, Inter-city)
11	School Bus
12	Charter Bus (Employer-provided or Other Contracted)
13	Shuttle Bus (Public or Employer-provided)
14	Paratransit Service (Access-a-ride, Dial-a-ride, etc.)
15	Subway (NYTCT, Staten Island Railway)
16	PATH Train
17	Railroad (LIRR, Metro North, NJ Transit, AMTRAK)
18	Light Rail/LRT (Newark, Hudson-Bergen, River line)
19	Ferry (Staten Island, NY Waterway, Water Taxi, Seastreak)
20	Taxi (Yellow, Medallion Cab)
21	For-Hire Van/Jitney/Gypsy Cab
22	Black Car Service/Limo
23	Roosevelt Island Tram
24	AIRTRAIN or Airport Bus
25	AirPlane
97	Other (Specify)

LTMODE_AGG Aggregate Linked Trip Mode

1	SOV
2.1	HOV/Driver
2.2	HOV/Passenger
3	Local bus/walk
3.1	Local Bus/P&R*
3.2	Local Bus/K&R**
4	Local Bus/Walk
4.1	Other Bus/P&R
4.2	Other Bus/K&R
5	Express Bus/Walk
5.1	Express Bus/P&R
5.2	Express Bus/K&R
6	Subway, LRT, Ferry, PATH-walk
6.1	Subway, LRT, Ferry, PATH-P&R
6.2	Subway, LRT, Ferry, PATH-K&R
7	Rail/Walk
7.1	Rail/P&R
7.2	Rail/K&R
8.1	Walk
8.2	Bike
9	School Bus
10	Taxi
11	Airtrain or other

* P&R: It refers to Park and Ride i.e. Auto Mode to Transit Station

** K&R: It refers to Kiss and Ride i.e. escorted to transit station in auto mode

MODE_SAMP Linked Trip Mode Code (as used for sampling)

1	CR – Walk Access
1.1	CR – Drive Access
2	FRY – Walk Access
2.1	FRY – Drive Access
3	EBUS – Walk Access
3.1	EBUS – Drive Access
4	SUB – Walk Access
4.1	SUB – Drive Access

- 5 LRT – Walk Access
- 5.1 LRT – Drive Access
- 6 LBUS – Walk Access
- 6.1 LBUS – Drive Access
- 7 SCHBUS
- 8 TAXI
- 9 AUTO
- 10 NM
- 11 Walk

Note: CR=Commuter Rail; FRY=Ferry; EBUS=Express Bus; SUB=Subway; LRT=Light Rail Transit; LBUS=Local Bus; SCHBUS= School Bus

- TOTTR [PLANO>1] Total number of People in the trip [RETR]
- HHMEM [TOTTR>1] Household Members [RETR]
- PER1 [HHMEM>0] Person Number on Trip [RETR]
- PER2 [HHMEM>1] Person Number on Trip [RETR]
- PER3 [HHMEM>2] Person Number on Trip [RETR]
- PER4 [HHMEM>3] Person Number on Trip [RETR]
- PER5 [HHMEM>4] Person Number on Trip [RETR]
- NONHH [TOTTR>1] Non-Household Member [COMPUTED]
- VEHNO [MODE=5 or 6] Vehicle Number [RETR]
- DYGOV [PNAME<>HOME and MODE=5 or 6] Exit Vehicle [RETR]
 - 1 Yes
 - 2 No
- PLOC [MODE=5 and DYGOV=1] Parking Location [RETR]
 - 1 At This Destination
 - 2 Off-Site
 - 9 DK/RF
- PRKTY [MODE=5 and DYGOV=1] Parking Description [RETR]
 - 1 Parking Lot
 - 2 Parking Garage
 - 3 Street
 - 4 Driveway
 - 5 Residential Garage
 - 7 Other (Specify)
 - 8 DK
 - 9 RF
- PAYPK [DYGOV=1 and PRKTY<>4] Pay to Park [RETR]
 - 1 Yes
 - 2 No
 - 9 DK/RF
- PKAMT [PAYPK =1] Pay to Park Amount [RETR]
- PKUNT [PAYPK =1] Pay Unit [RETR]
 - 1 Per Hour
 - 2 Per Day

		3	Per Week
		4	Per Month
		5	Per Semester
		6	Per Year
		8	DK
		9	RF
TOLFT	[MODE=5-8] Paid fee for a toll road or bridge/tunnel on your trip [RETR]		
		1	Yes, I paid a fee for a toll road or bridge/tunnel
		2	No, I didn't incur a toll on this trip
		3	Yes, I used E-ZPass
		9	DON'T KNOW/REFUSED
TLONB	[TOLFT=1 or 3] Number of Toll Facilities Used [RETR]		
TLFC1	[TLONB>0 and <9] Toll Road or Bridge/Tunnel [RETR]		
		1	Toll Road
		2	Bridge or Tunnel
		9	DON'T KNOW/REFUSED
TOPN1	[TLFC1=1 or 2] Name of Toll Facility [RETR]		
TOLE1	[TLFC1=1] Interchange Used to Enter Facility [RETR]		
TOLX1	[TLFC1=1] Interchange Used to Exit Facility [RETR]		
TLLC1	[TLFC1=1 or 2] Amount of Toll Fee Paid [RETR]		
		999	DON'T KNOW/REFUSED
TLFR1	[TLFC1=1 or 2] Toll Payment Method [RETR]		
		1	Cash
		2	E-ZPass
		7	Other (Specify)
		8	DK
		9	RF
TLFC2	[TLONB>1 and <9] Toll Road or Bridge/Tunnel [RETR]		
		1	Toll Road
		2	Bridge or Tunnel
		9	DON'T KNOW/REFUSED
TOPN2	[TLFC2=1 or 2] Name of Toll Facility [RETR]		
TOLE2	[TLFC2=1] Interchange Used to Enter Facility [RETR]		
TOLX2	[TLFC2=1] Interchange Used to Exit Facility [RETR]		
TLLC2	[TLFC2=1 or 2] Amount of Toll Fee Paid [RETR]		
		999	DON'T KNOW/REFUSED
TLFR2	[TLFC2=1 or 2] Toll Payment Method [RETR]		
		1	Cash
		2	E-ZPass
		7	Other (Specify)
		8	DK
		9	RF
TLFC3	[TLONB>2 and <9] Toll Road or Bridge/Tunnel [RETR]		
		1	Toll Road

		2	Bridge or Tunnel
		9	DON'T KNOW/REFUSED
TOPN3	[TLFC3=1 or 2] Name of Toll Facility [RETR]		
TOLE3	[TLFC3=1] Interchange Used to Enter Facility [RETR]		
TOLX3	[TLFC3=1] Interchange Used to Exit Facility [RETR]		
TLLC3	[TLFC3=1 or 2] Amount of Toll Fee Paid [RETR]		
		999	DON'T KNOW/REFUSED
TLFR3	[TLFC3=1 or 2] Toll Payment Method [RETR]		
		1	Cash
		2	E-ZPass
		7	Other (Specify)
		8	DK
		9	RF
O_TLFR3	[TLFR3=7] Other, Toll Payment Method [RETR]		
ROUTE	[IF MODE = 09, 10, 14-19, 23-24] Route/Line Number for Transit Trips [RETR]		
		DK/RF	DON'T KNOW/REFUSED
SERVC	[IF MODE = 09, 10, 14-19, 23-24] Transit Service [RETR]		
		1	New York City Transit (Bus/Subway)
		2	Long Island RR
		3	Metro North
		4	Staten Island RR
		5	Long Island Bus
		6	Westchester Bee Line
		7	New Jersey Transit
		8	PATH Train
		9	Amtrak
		10	Hudson-Bergen LTR
		11	Newark LTR
		12	River Line LTR
		13	Roosevelt Island Tram
		14	Air Train
		97	Other (Specify)
		99	RF
FARE	[IF MODE = 09, 10, 14-19, 23-24] Transit Fare Type [RETR]		
		1	Cash
		2	Used Pass
		8	DK
		9	RF
FAREC	[FARE =1] Transit Fare Cash [RETR]		
		999	DON'T KNOW/REFUSED
BUSPS	[FARE =2] Transit Pass Type [RETR]		
		1	Unlimited Ride MetroCard
		2	Regular Pay-per-Ride MetroCard
		3	One Day Fun Pass
		4	Seven Day Unlimited Ride MetroCard
		5	Fourteen Day Unlimited Ride MetroCard
		6	Thirty Day Unlimited Ride MetroCard
		7	Seven Day Express Bus Plus MetroCard

11	Monthly
12	Weekly
13	Ten Trip Peak
14	Ten Trip Off-Peak
15	Ten Trip Senior/Disabled
21	Peak
22	Off-Peak
23	Peak Child
24	Off-Peak Child
25	Onboard Peak
26	Onboard Off-Peak
27	Onboard Peak Child
28	Onboard Off-Peak Child
29	Senior/Disabled
31	Monthly
32	Weekly
33	Peak One-Way
34	Off-Peak One Way
36	Monthly School Tickets
37	UniTickets
38	Group Tickets
39	Getaways/Packages
40	New York City Getaways
41	One Day Getaways/Packages
42	Belmont Package
43	Free Rail or Discount Offers
51	Monthly
52	Weekly
53	Ten Trip
54	Ten Trip Peak
55	Ten Trip Off-Peak
56	Ten Trip Senior/Disabled
57	Ten Trip Intermediate
58	One Way
59	One Way Peak
60	One Way Off-Peak
61	One Way Senior/Disabled
71	Pay-per-ride MetroCard
72	Unlimited Ride MetroCard
73	Easy Pay Express MetroCard
81	Pay-per-ride MetroCard
82	Unlimited Ride MetroCard
83	Easy Pay Express MetroCard
91	Coins
92	Senior/Disabled
93	Paper Transfers
94	Transfers with Pay-per-ride MetroCards
95	Pay-per-ride MetroCard
96	UniTicket
101	One-way Ticket
102	Weekly Passes
103	Monthly Passes
104	Ten Trip Tickets
105	Off-Peak Round Trip Ticket (ORT)
106	Children's Fares
107	Family Supersaver Fare
108	Business Pass
109	Patron Pass
110	Student Monthly Pass

- 111 Reduced Fare Program for Senior Citizens and Customers with Disabilities
- 112 Military Personnel and their Dependents
- 113 Intra-state Pass
- 114 Intra-commuter Pass
- 115 Ten-Trip Tickets
- 116 Children's Fares
- 117 Family Supersaver Fares
- 118 College Student Monthly Passes
- 119 Student Tickets (One-way and Transfers)
- 120 Weekly Passes
- 121 Via Secaucus Tickets
- 122 Exact Fare
- 123 Adult One-way
- 124 Reduced Fair One-way
- 125 Children's One-way
- 126 Adult Discount 10-Trip Ticket
- 127 Monthly Pass
- 128 Upgraded Rail Pass for use also on River Line
- 129 One Zone Ticket with Transfer
- 132 One Trip Smart Link/PATH Single Ride Ticket
- 133 Ten Trip Quick Card/Smart Link
- 134 Twenty Trip
- 135 Forty Trip
- 136 Senior Smart Link Card
- 137 Smart Link 1-Day Pass, Unlimited
- 138 Smart Link 7-Day Pass, Unlimited
- 139 Smart Link 30-Day Pass, Unlimited
- 140 Pay-per-ride MetroCard
- 141 Auto-train
- 142 Multi-city
- 143 Multi-ride
- 144 USA Rail Pass
- 151 Adult One-way
- 152 Reduced Fare
- 153 Children's One-way
- 154 10-Trip
- 155 Monthly Pass
- 156 Weekly Pass
- 157 Rail Pass
- 161 Adult One-way
- 162 Reduced Fare
- 163 Downtown Fare
- 164 Children's One-way
- 165 10-Trip
- 166 Monthly Pass
- 167 Weekly Pass
- 168 Rail Pass
- 169 Upgraded Rail Pass
- 170 One-Zone Ticket with Transfer
- 171 Adult One-Way Plus Bus to Philadelphia
- 172 Reduced Far Plus Bus to Philadelphia
- 173 Children's One-Way
- 174 10-Trip
- 175 Plus Bus to Philadelphia
- 176 Weekly Pass
- 177 Rail Pass
- 178 Upgraded Rail Pass
- 179 One-Zone Ticket with Transfer

- 181 One-Way
- 182 Round Trip
- 183 Reduced Fare
- 184 10-Trip
- 185 Monthly Pass
- 186 Weekly Pass
- 191 Pay-per-ride MetroCard
- 192 Monthly
- 193 Weekly
- 194 10-Trip
- 195 Per Year
- 201 Unlimited Ride MetroCard
- 202 Regular Pay-per-Ride MetroCard
- 203 One Day Fun Pass
- 204 Seven Day Unlimited Ride MetroCard
- 205 Fourteen Day Unlimited Ride MetroCard
- 206 Thirty Day Unlimited Ride MetroCard
- 207 Seven Day Express Bus Plus MetroCard
- 997 Other (Specify)
- 999 DK/RF

- MTABP [BUSPS=1] Type of Unlimited Ride Metrocard
- 1 One Day (Fun Pass)
 - 2 Seven Day Unlimited Ride
 - 3 Seven Day Express Bus Plus Unlimited Ride
 - 4 Fourteen Day Unlimited Ride
 - 5 Thirty Day Unlimited Ride
 - 6 Annual Premium Transit Check
 - 7 Other type of Unlimited MetroCard (specify)
 - 9 REFUSED

BPFAR [FARE =2] Transit Pass Cost [RETR]

- FRBAS [FARE =2] Transit Pass Unit [RETR]
- 1 Per Day
 - 2 Per Week
 - 3 Per Month
 - 4 Per Semester
 - 5 Per Year
 - 7 Other (Specify)
 - 8 DK
 - 9 RF

TRP_DEP_HR Trip Departure Hours, 1 and 2 represent 1 AM and 2 AM respectively

TRP_ARR_HR Trip Arrival Hours, 1 and 2 represent 1 AM and 2 AM respectively

TRP_DEP_MIN Trip Departure Minutes

TRP_ARR_MIN Trip Arrival Minutes

TRPDUR Trip Duration (minutes)

ACTDUR Activity Duration (minutes)

TRIPDIST [PLANO>1] Trip Distance in Miles: Calculated Euclidean distance (bird's flight). [COMPUTED]

OTRACT Origin Tract 2010 (WGS84)
0 Location Outside of NYBPM Area

DTRACT	Destination Tract 2010 (WGS84) 0 Location Outside of NYBPM Area
OMCD	Origin MCD
DMCD	Destination MCD
OZIP	Origin Zip
DZIP	Destination Zip
UNIQUEID1	UID for Unlinked Trips
UNIQUEID2	UID for LinkedTrips (use to merge with Linked Trip File)
HH1	DOMAIN – computed as the ratio of Census household count to the RHTS sample household count for each census tract. It accounts for the differential rates of sampling achieved in the RHTS according to the sampling plan design.
HH_WHT2	Level 2 Weights - an adjusted weight to reflect the different probabilities of selection of respondents. The factor accounts for the census population distribution in comparison to the sample distribution along with other characteristics such as income, household type and work trip travel patterns. The household weights (level 2) can be used to report any of the household level statistics. Moreover, these weights can also be applied at tours and trips level.
TOURFAC	Tour Correction Factors - a factor that corrects the under-reporting of trips included in non-GPS sample, by comparing the tour and trip rates for GPS and non-GPS sample (segmented by person type, tour purpose, tour mode, and tour duration). This factor also corrects for the different number of stops between the GPS and non-GPS samples. This factor represents an adjusted weight for the trip and, when multiplied by the HH_WHT2 creates the WHT_FAC3 (in Unlinked, Linked, Tour and Subtour files)
WHT_FAC3	Level 3 Weights - a final weight that combines the two previous weights (HH_WHT2 & TOURFAC). It is used to estimate final trip rates and travel patterns in the region (in Unlinked, Linked, Tour and Subtour files).
HCCOUNTY	Home County FIPS
	09001 Fairfield
	09009 New Haven
	34003 Bergen
	34013 Essex
	34017 Hudson
	34019 Hunterdon
	34021 Mercer
	34023 Middlesex
	34025 Monmouth
	34027 Morris
	34029 Ocean
	34031 Passaic
	34035 Somerset
	34037 Sussex
	34039 Union
	34041 Warren
	36005 Bronx
	36027 Dutchess
	36047 Brooklyn (Kings)
	36059 Nassau
	36061 Manhattan (New York)

36071	Orange
36079	Putnam
36081	Queens
36085	Staten Island (Richmond)
36087	Rockland
36103	Suffolk
36119	Westchester

HCITY_MCD Home MCD

HSTATE Home State

HZIP Home Zip

HNYC Home is in New York City
1 Yes

HMPO Home MPO
1 NYMTC
2 NJTPA
3 Other

ONYC Origin is in New York City
1 Yes

OMPO Origin MPO
1 NYMTC
2 NJTPA
3 Other

DNYC Destination is in New York City
1 Yes

DMPO Destination MPO
1 NYMTC
2 NJTPA
3 Other

GEO_GROUP1_O Origin County Group: Level 1
1 Manhattan
2 Other NYC
3 Long Island
4 Mid-Hudson (NYMTC)
5 Mid-Hudson (Other)
6 Connecticut
7 Bergen-Passaic
8 Essex-Hudson-Union
9 Middlesex-Morris-Somerset
10 Monmouth-Ocean
11 Hunterdon-Sussex-Warren
12 Mercer
13 Out of Metro Area

GEO_GROUP2_O Origin Regional Boundaries: Level 2
1 New York City
2 Long Island
3 Mid-Hudson (All)
4 Connecticut counties
5 NJTPA Counties
6 Mercer
7 Out of Metro Area

GEO_GROUP3_O	Origin Political Boundaries: Level 3	
		1 NYMTC Counties
		2 Other NY Counties
		3 Connecticut Counties
		4 NJTPA Counties
		5 Mercer
		6 Out of Metro Area
GEO_GROUP1_D	Destination County Group: Level 1	
		1 Manhattan
		2 Other NYC
		3 Long Island
		4 Mid-Hudson (NYMTC)
		5 Mid-Hudson (Other)
		6 Connecticut
		7 Bergen-Passaic
		8 Essex-Hudson-Union
		9 Middlesex-Morris-Somerset
		10 Monmouth-Ocean
		11 Hunterdon-Sussex-Warren
		12 Mercer
		13 Out of Metro Area
GEO_GROUP2_D	Destination Regional Boundaries: Level 2	
		1 New York City
		2 Long Island
		3 Mid-Hudson (All)
		4 Connecticut counties
		5 NJTPA Counties
		6 Mercer
		7 Out of Metro Area
GEO_GROUP3_D	Destination Political Boundaries: Level 3	
		1 NYMTC Counties
		2 Other NY Counties
		3 Connecticut Counties
		4 NJTPA Counties
		5 Mercer
		6 Out of Metro Area
ADJ_COUNTY	Trip Destination: county group (adjacent & non-adjacent counties)	
		1 Within County
		2 To Adjoining County (Not NYC)
		3 To Manhattan
		4 To Other NYC
		5 To Other NJTPA County
		6 To Other NYMTC County
		7 To Other in Metro Area
		8 Out of Metro Area
OCOUNTY	Origin County FIPS	
		09001 Fairfield
		09009 New Haven
		34003 Bergen
		34013 Essex
		34017 Hudson
		34019 Hunterdon
		34021 Mercer
		34023 Middlesex

34025	Monmouth
34027	Morris
34029	Ocean
34031	Passaic
34035	Somerset
34037	Sussex
34039	Union
34041	Warren
36005	Bronx
36027	Dutchess
36047	Brooklyn (Kings)
36059	Nassau
36061	Manhattan (New York)
36071	Orange
36079	Putnam
36081	Queens
36085	Staten Island (Richmond)
36087	Rockland
36103	Suffolk
36119	Westchester
0	Location Outside of NYBPM Area

DCOUNTY	Destination County FIPS
	09001 Fairfield
	09009 New Haven
	34003 Bergen
	34013 Essex
	34017 Hudson
	34019 Hunterdon
	34021 Mercer
	34023 Middlesex
	34025 Monmouth
	34027 Morris
	34029 Ocean
	34031 Passaic
	34035 Somerset
	34037 Sussex
	34039 Union
	34041 Warren
	36005 Bronx
	36027 Dutchess
	36047 Brooklyn (Kings)
	36059 Nassau
	36061 Manhattan (New York)
	36071 Orange
	36079 Putnam
	36081 Queens
	36085 Staten Island (Richmond)
	36087 Rockland
	36103 Suffolk
	36119 Westchester
	0 Location Outside of NYBPM Area

LinkedTrips File

Variable	Label	Values
PLSAM	Place Unique Identifier: 11 digits wide= SAMPN + PERNO+ PLANO	
SAMPN	Household Identifier: 7 digits wide	
PERNO	Person Number: 2 digits wide	
PLANO	Place Number: 2 digits wide	
PERTYPE	Person Type Code	1 Full Time Worker
		2 Part Time Worker
		3 University Student
		4 Non-Working Adult
		5 Retiree
		6 Driving Age School Child
		7 Pre-Driving Age School Child
		8 Preschool Child
ORIG_HOME	If Home Is Origin	0 No
		1 Yes
GTYPE	GPS Record Type	1 GPS
		2 Non-GPS
HHSIZE	Household Size	
DEST_HOME	If Home is Destination	0 No
		1 Yes
LTRIPNO	Linked Trip Number	
TOUR_ID	Tour ID	
SUBT_ID	Subtour ID	
DTYPE	Destination Type Code (This variable is used to prioritize the destination based on activity and distance; and select the most priority destination as primary destination)	1 Primary destination
		2 Outbound Stop
		2.1 First Priority Outbound Stop
		2.2 Second Priority Outbound Stop
		2.3 3 rd Priority Outbound Stop
		2.4 4 th Priority Outbound Stop
		3 Inbound Stop or Home
		3.1 1 st Priority Inbound Stop
		3.2 2 nd Priority Inbound Stop
		3.3 3 rd Priority Inbound Stop
		3.4 4 th Priority Inbound Stop
		11 Subtour Destination
		12 Outbound Stop on Subtour
12.1 1 st Priority Outbound Stop on Subtour		
12.2 2 nd Priority Outbound Stop on Subtour		

- 12.3 3rd Priority Outbound Stop on Subtour
- 12.4 4th Priority Outbound Stop on Subtour
- 13 Inbound Stop on Subtour
- 13.1 1st Priority Inbound Stop on Subtour
- 13.2 2nd Priority Inbound Stop on Subtour
- 13.3 3rd Priority Inbound Stop on Subtour
- 13.4 4th Priority Inbound Stop on Subtour

TOUR_PURP Tour Purpose

- 0 Home
- 1 Work
- 2 University
- 3 School
- 4 Escorting
- 5 Shopping
- 6 Maintenance
- 7 Eating Out
- 8 Visiting
- 9 Discretionary
- 10 Change Mode
- 11 Loop
- 12 Airport Trip
- 13 Other (Specify)
- 14 Get Gas

DOW Day of Week of Travel

- 1 Monday
- 2 Tuesday
- 3 Wednesday
- 4 Thursday
- 5 Friday

HTAZ Home TAZ (NYMTC)

HTRACT Home Census Tract (2010)

OTAZ Origin TAZ (NYMTC; WGS84)

- 0 Location Outside of NYBPM Area

DTAZ Destination TAZ (NYMTC; WGS84)

- 0 Location Outside of NYBPM Area

NO_TAZ No TAZ flag for origin and destination

- 0 TAZ in both origin and destination
- 1 TAZ in either origin or destination
- 2 No TAZ in both origin and destination

OTPURP Origin Primary Trip Purpose [RETR]

- 1 Working at Home (For Pay or Volunteer)
- 2 Shopping (Online, Catalog or by Phone)
- 3 Any Other Activities at Home
- 4 Change Travel Mode/Transfer
- 5 Dropped off Passenger from Car
- 6 Picked up Passenger from Car
- 7 Get Gas
- 8 Drive Through (ATM, Bank, Fast Food, etc.)
- 9 Work/Doing my Job
- 10 Other Work-Related Activities at Work
- 11 Volunteer Work/Activities
- 12 Attending Class/Studying

- 13 All Other Activities at School
- 14 Work-Related
- 15 Service Private Vehicle
- 16 Grocery/Food Shopping
- 17 Other Routine Shopping
- 18 Shopping for Major Purchases or Specialty Items
- 19 Household Errands
- 20 Personal Business
- 21 Eat Meal Out at Restaurant/Diner
- 22 Health Care
- 23 Civic or Religious Activities
- 24 Outdoor Recreation
- 25 Indoor Recreation
- 26 Entertainment
- 27 Social/Visit Friends/Relatives
- 28 Airport - Business
- 29 Airport - Personal
- 96 Loop Trip
- 97 Other (Specify)

DTPURP Destination Primary Trip Purpose [RETR]

- 1 Working at Home (For Pay or Volunteer)
- 2 Shopping (Online, Catalog or by Phone)
- 3 Any Other Activities at Home
- 4 Change Travel Mode/Transfer
- 5 Dropped off Passenger from Car
- 6 Picked up Passenger from Car
- 7 Get Gas
- 8 Drive Through (ATM, Bank, Fast Food, etc.)
- 9 Work/Doing my Job
- 10 Other Work-Related Activities at Work
- 11 Volunteer Work/Activities
- 12 Attending Class/Studying
- 13 All Other Activities at School
- 14 Work-Related
- 15 Service Private Vehicle
- 16 Grocery/Food Shopping
- 17 Other Routine Shopping
- 18 Shopping for Major Purchases or Specialty Items
- 19 Household Errands
- 20 Personal Business
- 21 Eat Meal Out at Restaurant/Diner
- 22 Health Care
- 23 Civic or Religious Activities
- 24 Outdoor Recreation
- 25 Indoor Recreation
- 26 Entertainment
- 27 Social/Visit Friends/Relatives
- 28 Airport - Business
- 29 Airport - Personal
- 96 Loop Trip
- 97 Other (Specify)

OTPURP_AGG Origin Primary Trip Purpose (Aggregate); Re-categorized variable based on OTPURP.

Home= (1) Working at Home (For Pay or Volunteer), (2) Shopping (Online, Catalog or by Phone), (3) Any Other Activities at Home;
Work= (9) Work/Doing my Job, (10) Other Work-Related Activities at Work, (14) Work-Related;
University= (12) Attending Class/Studying (combination with age)

School= (12) Attending Class/Studying (combination with age)
Escorting= (5) Dropped off Passenger from Car, (6) Picked up Passenger from Car;
Shopping= (16) Grocery/Food Shopping, (17) Other Routine Shopping, (18) Shopping for Major Purchases or Specialty Items;
Maintenance= (8) Drive Through (ATM, Bank, Fast Food, etc.), (15) Service Private Vehicle, (19) Household Errands, (20) Personal Business, (22) Health Care;
Eating Out= (21) Eat Meal Out at Restaurant/Diner;
Visiting= (27) Social/Visit Friends/Relatives
Discretionary= (11) Volunteer Work/Activities, (13) All Other Activities at School, (23) Civic or Religious Activities, (24) Outdoor Recreation, (25) Indoor Recreation, (26) Entertainment; in some cases, those purpose with (9, 10, 14) were assigned to Discretionary, for their person type are not employees but rather volunteer workers;
Change Mode= (4) Change Travel Mode/Transfer;
Loop= (96) Loop Trip;
Airport Trip= (28) Airport - Business; (29) Airport – Personal;
Other (specify) = (97) Other (Specify); and
Get Gas= (7) Get Gas

- 0 Home
- 1 Work
- 2 University
- 3 School
- 4 Escorting
- 5 Shopping
- 6 Maintenance
- 7 Eating Out
- 8 Visiting
- 9 Discretionary
- 10 Change Mode
- 11 Loop
- 12 Airport Trip
- 13 Other (specify)
- 14 Get Gas

DTPURP_AGG Destination Primary Trip Purpose (Aggregate): Re-categorized variable based on DTPURP. For description refer to OTPURP_AGG above.

- 0 Home
- 1 Work
- 2 University
- 3 School
- 4 Escorting
- 5 Shopping
- 6 Maintenance
- 7 Eating Out
- 8 Visiting
- 9 Discretionary
- 10 Change Mode
- 11 Loop
- 12 Airport Trip
- 13 Other (specify)
- 14 Get Gas

DTPUR2 Secondary Trip Purpose [RETR]

- 1 Working at Home (For Pay or Volunteer)
- 2 Shopping (Online, Catalog or by Phone)
- 3 Any Other Activities at Home
- 4 Change Travel Mode/Transfer
- 5 Dropped off Passenger from Car
- 6 Picked up Passenger from Car
- 7 Get Gas

- 8 Drive Through (ATM, Bank, Fast Food, etc.)
- 9 Work/Doing my Job
- 10 Other Work-Related Activities at Work
- 11 Volunteer Work/Activities
- 12 Attending Class/Studying
- 13 All Other Activities at School
- 14 Work-Related
- 15 Service Private Vehicle
- 16 Grocery/Food Shopping
- 17 Other Routine Shopping
- 18 Shopping for Major Purchases or Specialty Items
- 19 Household Errands
- 20 Personal Business
- 21 Eat Meal Out at Restaurant/Diner
- 22 Health Care
- 23 Civic or Religious Activities
- 24 Outdoor Recreation
- 25 Indoor Recreation
- 26 Entertainment
- 27 Social/Visit Friends/Relatives
- 28 Airport - Business
- 29 Airport - Personal
- 96 Loop Trip
- 97 Other (Specify)

LTMODE_AGG Aggregate Linked Trip Mode

- 1 SOV
- 2.1 HOV/Driver
- 2.2 HOV/Passenger
- 3 Local bus/walk
- 3.1 Local Bus/P&R*
- 3.2 Local Bus/K&R**
- 4 Local Bus/Walk
- 4.1 Other Bus/P&R
- 4.2 Other Bus/K&R
- 5 Express Bus/Walk
- 5.1 Express Bus/P&R
- 5.2 Express Bus/K&R
- 6 Subway, LRT, Ferry, PATH-walk
- 6.1 Subway, LRT, Ferry, PATH-P&R
- 6.2 Subway, LRT, Ferry, PATH-K&R
- 7 Rail/Walk
- 7.1 Rail/P&R
- 7.2 Rail/K&R
- 8.1 Walk
- 8.2 Bike
- 9 School Bus
- 10 Taxi
- 11 Airtrain or Other

*P&R: It refers to Park and Ride i.e. Auto Mode to Transit Station

**K&R: It refers to Kiss and Ride i.e. escorted to transit station in auto mode

MODE_SAMP Linked Trip Mode Code (as used for sampling)

- 0 Other
- 1 CR - Walk Access
- 1.1 CR - Ride Access
- 2 FRY - Walk Access
- 2.1 FRY - Ride Access
- 3 EBUS - Walk Access

- 3.1 EBUS - Ride Access
- 4 SUB - Walk Access
- 4.1 SUB - Ride Access
- 5 LRT - Walk Access
- 5.1 LRT - Ride Access
- 6 LBUS - Walk Access
- 6.1 LBUS - Ride Access
- 7 SCHBUS
- 8 TAXI
- 9 AUTO
- 10 NM
- 11 WALK

- TOTTR [PLANO>1] Total number of People in the trip [RETR]
- HHMEM [TOTTR>1] Household Members [RETR]
- PER1 [HHMEM>0] Person Number on Trip [RETR]
- PER2 [HHMEM>1] Person Number on Trip [RETR]
- PER3 [HHMEM>2] Person Number on Trip [RETR]
- PER4 [HHMEM>3] Person Number on Trip [RETR]
- PER5 [HHMEM>4] Person Number on Trip [RETR]
- NONHH [TOTTR>1] Non-Household Member [COMPUTED]
- VEHNO [MODE=5 or 6] Vehicle Number [RETR]
- DYGOV [PNAME<>HOME and MODE=5 or 6] Exit Vehicle [RETR]
- 1 Yes
 - 2 No
- PLOC [MODE=5 and DYGOV=1] Parking Location [RETR]
- 1 At This Destination
 - 2 Off-Site
 - 9 DK/RF
- PRKTY [MODE=5 and DYGOV=1] Parking Description [RETR]
- 1 Parking Lot
 - 2 Parking Garage
 - 3 Street
 - 4 Driveway
 - 5 Residential Garage
 - 7 Other (Specify)
 - 8 DK
 - 9 RF
- PAYPK [DYGOV=1 and PRKTY<>4] Pay to Park [RETR]
- 1 Yes
 - 2 No
 - 9 DK/RF
- PKAMT [PAYPK =1] Pay to Park Amount [RETR]
- PKUNT [PAYPK =1] Pay Unit [RETR]
- 1 Per Hour

		2	Per Day
		3	Per Week
		4	Per Month
		5	Per Semester
		6	Per Year
		8	DK
		9	RF
TOLFT	[MODE=5-8] Paid fee for a toll road or bridge/tunnel on your trip [RETR]		
		1	Yes, I paid a fee for a toll road or bridge/tunnel
		2	No, I didn't incur a toll on this trip
		3	Yes, I used E-ZPass
		9	DON'T KNOW/REFUSED
TLONB	[TOLFT=1 or 3] Number of Toll Facilities Used [RETR]		
TLFC1	[TLONB>0 and <9] Toll Road or Bridge/Tunnel [RETR]		
		1	Toll Road
		2	Bridge or Tunnel
		9	DON'T KNOW/REFUSED
TOPN1	[TLFC1=1 or 2] Name of Toll Facility [RETR]		
TOLE1	[TLFC1=1] Interchange Used to Enter Facility [RETR]		
TOLX1	[TLFC1=1] Interchange Used to Exit Facility [RETR]		
TLLC1	[TLFC1=1 or 2] Amount of Toll Fee Paid [RETR]		
		999	DON'T KNOW/REFUSED
TLFR1	[TLFC1=1 or 2] Toll Payment Method [RETR]		
		1	Cash
		2	E-ZPass
		7	Other (Specify)
		8	DK
		9	RF
TLFC2	[TLONB>1 and <9] Toll Road or Bridge/Tunnel [RETR]		
		1	Toll Road
		2	Bridge or Tunnel
		9	DON'T KNOW/REFUSED
TOPN2	[TLFC2=1 or 2] Name of Toll Facility [RETR]		
TOLE2	[TLFC2=1] Interchange Used to Enter Facility [RETR]		
TOLX2	[TLFC2=1] Interchange Used to Exit Facility [RETR]		
TLLC2	[TLFC2=1 or 2] Amount of Toll Fee Paid [RETR]		
		999	DON'T KNOW/REFUSED
TLFR2	[TLFC2=1 or 2] Toll Payment Method [RETR]		
		1	Cash
		2	E-ZPass
		7	Other (Specify)
		8	DK
		9	RF
TLFC3	[TLONB>2 and <9] Toll Road or Bridge/Tunnel [RETR]		

		1	Toll Road
		2	Bridge or Tunnel
		9	DON'T KNOW/REFUSED
TOPN3	[TLFC3=1 or 2] Name of Toll Facility [RETR]		
TOLE3	[TLFC3=1] Interchange Used to Enter Facility [RETR]		
TOLX3	[TLFC3=1] Interchange Used to Exit Facility [RETR]		
TLLC3	[TLFC3=1 or 2] Amount of Toll Fee Paid [RETR]	999	DON'T KNOW/REFUSED
TLFR3	[TLFC3=1 or 2] Toll Payment Method [RETR]	1	Cash
		2	E-ZPass
		7	Other (Specify)
		8	DK
		9	RF
O_TLFR3	[TLFR3=7] Other, Toll Payment Method [RETR]		
ROUTE	[IF MODE = 09, 10, 14-19, 23-24] Route/Line Number for Transit Trips [RETR]	DK/RF	DON'T KNOW/REFUSED
SERVC	[IF MODE = 09, 10, 14-19, 23-24] Transit Service [RETR]	1	New York City Transit (Bus/Subway)
		2	Long Island RR
		3	Metro North
		4	Staten Island RR
		5	Long Island Bus
		6	Westchester Bee Line
		7	New Jersey Transit
		8	PATH Train
		9	Amtrak
		10	Hudson-Bergen LTR
		11	Newark LTR
		12	River Line LTR
		13	Roosevelt Island Tram
		14	Air Train
		97	Other (Specify)
		99	RF
FARE	[IF MODE = 09, 10, 14-19, 23-24] Transit Fare Type [RETR]	1	Cash
		2	Used Pass
		8	DK
		9	RF
FAREC	[FARE =1] Transit Fare Cash [RETR]	999	DON'T KNOW/REFUSED
BUSPS	[FARE =2] Transit Pass Type [RETR]	1	Unlimited Ride MetroCard
		2	Regular Pay-per-Ride MetroCard
		3	One Day Fun Pass
		4	Seven Day Unlimited Ride MetroCard
		5	Fourteen Day Unlimited Ride MetroCard
		6	Thirty Day Unlimited Ride MetroCard

7	Seven Day Express Bus Plus MetroCard
11	Monthly
12	Weekly
13	Ten Trip Peak
14	Ten Trip Off-Peak
15	Ten Trip Senior/Disabled
21	Peak
22	Off-Peak
23	Peak Child
24	Off-Peak Child
25	Onboard Peak
26	Onboard Off-Peak
27	Onboard Peak Child
28	Onboard Off-Peak Child
29	Senior/Disabled
31	Monthly
32	Weekly
33	Peak One-Way
34	Off-Peak One Way
36	Monthly School Tickets
37	UniTickets
38	Group Tickets
39	Getaways/Packages
40	New York City Getaways
41	One Day Getaways/Packages
42	Belmont Package
43	Free Rail or Discount Offers
51	Monthly
52	Weekly
53	Ten Trip
54	Ten Trip Peak
55	Ten Trip Off-Peak
56	Ten Trip Senior/Disabled
57	Ten Trip Intermediate
58	One Way
59	One Way Peak
60	One Way Off-Peak
61	One Way Senior/Disabled
71	Pay-per-ride MetroCard
72	Unlimited Ride MetroCard
73	Easy Pay Express MetroCard
81	Pay-per-ride MetroCard
82	Unlimited Ride MetroCard
83	Easy Pay Express MetroCard
91	Coins
92	Senior/Disabled
93	Paper Transfers
94	Transfers with Pay-per-ride MetroCards
95	Pay-per-ride MetroCard
96	UniTicket
101	One-way Ticket
102	Weekly Passes
103	Monthly Passes
104	Ten Trip Tickets
105	Off-Peak Round Trip Ticket (ORT)
106	Children's Fares
107	Family Supersaver Fare
108	Business Pass
109	Patron Pass

- 110 Student Monthly Pass
- 111 Reduced Fare Program for Senior Citizens and Customers with Disabilities
- 112 Military Personnel and their Dependents
- 113 Intra-state Pass
- 114 Intra-commuter Pass
- 115 Ten-Trip Tickets
- 116 Children's Fares
- 117 Family Supersaver Fares
- 118 College Student Monthly Passes
- 119 Student Tickets (One-way and Transfers)
- 120 Weekly Passes
- 121 Via Secaucus Tickets
- 122 Exact Fare
- 123 Adult One-way
- 124 Reduced Fair One-way
- 125 Children's One-way
- 126 Adult Discount 10-Trip Ticket
- 127 Monthly Pass
- 128 Upgraded Rail Pass for use also on River Line
- 129 One Zone Ticket with Transfer
- 132 One Trip Smart Link/PATH Single Ride Ticket
- 133 Ten Trip Quick Card/Smart Link
- 134 Twenty Trip
- 135 Forty Trip
- 136 Senior Smart Link Card
- 137 Smart Link 1-Day Pass, Unlimited
- 138 Smart Link 7-Day Pass, Unlimited
- 139 Smart Link 30-Day Pass, Unlimited
- 140 Pay-per-ride MetroCard
- 141 Auto-train
- 142 Multi-city
- 143 Multi-ride
- 144 USA Rail Pass
- 151 Adult One-way
- 152 Reduced Fare
- 153 Children's One-way
- 154 10-Trip
- 155 Monthly Pass
- 156 Weekly Pass
- 157 Rail Pass
- 161 Adult One-way
- 162 Reduced Fare
- 163 Downtown Fare
- 164 Children's One-way
- 165 10-Trip
- 166 Monthly Pass
- 167 Weekly Pass
- 168 Rail Pass
- 169 Upgraded Rail Pass
- 170 One-Zone Ticket with Transfer
- 171 Adult One-Way Plus Bus to Philadelphia
- 172 Reduced Far Plus Bus to Philadelphia
- 173 Children's One-Way
- 174 10-Trip
- 175 Plus Bus to Philadelphia
- 176 Weekly Pass
- 177 Rail Pass
- 178 Upgraded Rail Pass

- 179 One-Zone Ticket with Transfer
- 181 One-Way
- 182 Round Trip
- 183 Reduced Fare
- 184 10-Trip
- 185 Monthly Pass
- 186 Weekly Pass
- 191 Pay-per-ride MetroCard
- 192 Monthly
- 193 Weekly
- 194 10-Trip
- 195 Per Year
- 201 Unlimited Ride MetroCard
- 202 Regular Pay-per-Ride MetroCard
- 203 One Day Fun Pass
- 204 Seven Day Unlimited Ride MetroCard
- 205 Fourteen Day Unlimited Ride MetroCard
- 206 Thirty Day Unlimited Ride MetroCard
- 207 Seven Day Express Bus Plus MetroCard
- 997 Other (Specify)
- 999 DK/RF

MTABP [BUSPS=1] Type of Unlimited Ride Metrocard

- 1 One Day (Fun Pass)
- 2 Seven Day Unlimited Ride
- 3 Seven Day Express Bus Plus Unlimited Ride
- 4 Fourteen Day Unlimited Ride
- 5 Thirty Day Unlimited Ride
- 6 Annual Premium Transit Check
- 7 Other type of Unlimited MetroCard (specify)
- 9 REFUSED

BPFAR [FARE =2] Transit Pass Cost [RETR]

FRBAS [FARE =2] Transit Pass Unit [RETR]

- 1 Per Day
- 2 Per Week
- 3 Per Month
- 4 Per Semester
- 5 Per Year
- 7 Other (Specify)
- 8 Don't Know
- 9 REFUSED

TRP_DEP_HR Trip Departure Hours, 1 and 2 represent 1 AM and 2 AM respectively

TRP_DEP_MIN Trip Departure Minutes

TRP_ARR_HR Trip Arrival Hours, 1 and 2 represent 1 AM and 2 AM respectively

TRP_ARR_MIN Trip Arrival Minutes

TRPDUR Trip Duration (minutes)

ACTDUR Activity Duration (minutes)

TRIPDIST Trip Distance in Miles: Calculated Euclidean distance (bird's flight). [COMPUTED]

TRPDIST_HN	Hwy Network Trip Distance (Miles) – Highway Network: based on the summing distances (between origin and destination TAZ centroid) of each unlinked trip along the NYBPM highway network (NYBPM 2005 base year midday best path highway network file). [COMPUTED]
TRPDUR_HN	Trip Duration (Minutes) – Highway Network: based on the summing distances (between origin and destination TAZ centroid) of each unlinked trip along the NYBPM highway network (NYBPM 2005 base year midday best path highway network file). [COMPUTED]
OTRACT	Origin Tract 2010 (WGS84) 0 Location Outside of NYBPM Area
DTRACT	Destination Tract 2010 (WGS84) 0 Location Outside of NYBPM Area
OMCD	Origin MCD
DMCD	Destination MCD
OZIP	Origin Zip
DZIP	Destination Zip
UNIQUEID2	UID for LinkedTrips (use to merge with Linked Trip File)
UNIQUEID3	UID for Tours (use to merge with Tour File)
UNIQUEID4	UID for Subtours (use to merge with Subtour File)
HH1	DOMAIN – computed as the ratio of Census household count to the RHTS sample household count for each census tract. It accounts for the differential rates of sampling achieved in the RHTS according to the sampling plan design.
HH_WHT2	Level 2 Weights - an adjusted weight to reflect the different probabilities of selection of respondents. The factor accounts for the census population distribution in comparison to the sample distribution along with other characteristics such as income, household type and work trip travel patterns. The household weights (level 2) can be used to report any of the household level statistics. Moreover, these weights can also be applied at tours and trips level.
TOURFAC	Tour Correction Factors - a factor that corrects the under-reporting of trips included in non-GPS sample, by comparing the tour and trip rates for GPS and non-GPS sample (segmented by person type, tour purpose, tour mode, and tour duration). This factor also corrects for the different number of stops between the GPS and non-GPS samples. This factor represents an adjusted weight for the trip and, when multiplied by the HH_WHT2 creates the WHT_FAC3 (in Unlinked, Linked, Tour and Subtour files).
WHT_FAC3	Level 3 Weights - a final weight that combines the two previous weights (HH_WHT2 & TOURFAC). It is used to estimate final trip rates and travel patterns in the region (in Unlinked, Linked, Tour and Subtour files).
WHT_FAC3_VOCC	Level 3 Weights (to be used only for Vehicle Occupancy analysis to avoid duplicate counting). $WHT_FAC3_VOCC = WHT_FAC3 / n + 1$; *n= number of passengers: TOTTR); n is applicable only if PMODE = Auto driver (17) or passenger (19).
HCCOUNTY	Home County FIPS 09001 Fairfield 09009 New Haven

34003	Bergen
34013	Essex
34017	Hudson
34019	Hunterdon
34021	Mercer
34023	Middlesex
34025	Monmouth
34027	Morris
34029	Ocean
34031	Passaic
34035	Somerset
34037	Sussex
34039	Union
34041	Warren
36005	Bronx
36027	Duchess
36047	Brooklyn (Kings)
36059	Nassau
36061	Manhattan (New York)
36071	Orange
36079	Putnam
36081	Queens
36085	Staten Island (Richmond)
36087	Rockland
36103	Suffolk
36119	Westchester

HCITY_MCD Home MCD

HSTATE Home State

HZIP Home Zip

HCITY_MCD Home MCD

1 Yes

HMPO Home MPO

1 NYMTC
6 NJTPA
7 Other

ONYC Origin is in New York City

1 Yes

OMPO Origin MPO

1 NYMTC
4 NJTPA
5 Other

DNYC Destination is in New York City

1 Yes

DMPO Destination MPO

1 NYMTC
4 NJTPA
5 Other

GEO_GROUP1 Home County Group: Level 1

1 Manhattan
2 Other NYC
3 Long Island
4 Mid-Hudson (NYMTC)

		5	Mid-Hudson (Other)
		6	Connecticut
		7	Bergen-Passaic
		8	Essex-Hudson-Union
		9	Middlesex-Morris-Somerset
		10	Monmouth-Ocean
		11	Hunterdon-Sussex-Warren
		12	Mercer
GEO_GROUP2	Home Regional Boundaries: Level 2		
		1	New York City
		2	Long Island
		3	Mid-Hudson (All)
		4	Connecticut counties
		5	NJTPA Counties
		6	Mercer
GEO_GROUP3	Home Political Boundaries: Level 3		
		1	NYMTC Counties
		2	Other NY Counties
		3	Connecticut Counties
		4	NJTPA Counties
		5	Mercer
GEO_GROUP1_O	Origin County Group: Level 1		
		1	Manhattan
		2	Other NYC
		3	Long Island
		4	Mid-Hudson (NYMTC)
		5	Mid-Hudson (Other)
		6	Connecticut
		7	Bergen-Passaic
		8	Essex-Hudson-Union
		9	Middlesex-Morris-Somerset
		10	Monmouth-Ocean
		11	Hunterdon-Sussex-Warren
		12	Mercer
		13	Out of Metro Area
GEO_GROUP2_O	Origin Regional Boundaries: Level 2		
		1	New York City
		2	Long Island
		3	Mid-Hudson (All)
		4	Connecticut counties
		5	NJTPA Counties
		6	Mercer
		7	Out of Metro Area
GEO_GROUP3_O	Origin Political Boundaries: Level 3		
		1	NYMTC Counties
		2	Other NY Counties
		3	Connecticut Counties
		4	NJTPA Counties
		5	Mercer
		6	Out of Metro Area
GEO_GROUP1_D	Destination County Group: Level 1		
		1	Manhattan
		2	Other NYC

- 3 Long Island
- 4 Mid-Hudson (NYMTC)
- 5 Mid-Hudson (Other)
- 6 Connecticut
- 7 Bergen-Passaic
- 8 Essex-Hudson-Union
- 9 Middlesex-Morris-Somerset
- 10 Monmouth-Ocean
- 11 Hunterdon-Sussex-Warren
- 12 Mercer
- 13 Out of Metro Area

GEO_GROUP2_D Destination Regional Boundaries: Level 2

- 1 New York City
- 2 Long Island
- 3 Mid-Hudson (All)
- 4 Connecticut counties
- 5 NJTPA Counties
- 6 Mercer
- 7 Out of Metro Area

GEO_GROUP3_D Destination Political Boundaries: Level 3

- 1 NYMTC Counties
- 2 Other NY Counties
- 3 Connecticut Counties
- 4 NJTPA Counties
- 5 Mercer
- 6 Out of Metro Area

ADJ_COUNTY Trip Destination: county group (adjacent & non-adjacent counties)

- 1 Within County
- 2 To Adjoining County (Not NYC)
- 3 To Manhattan
- 4 To Other NYC
- 5 To Other NJTPA County
- 6 To Other NYMTC County
- 7 To Other in Metro Area
- 8 Out of Metro Area

OCOUNTY Origin County FIPS

- 09001 Fairfield
- 09009 New Haven
- 34003 Bergen
- 34013 Essex
- 34017 Hudson
- 34019 Hunterdon
- 34021 Mercer
- 34023 Middlesex
- 34025 Monmouth
- 34027 Morris
- 34029 Ocean
- 34031 Passaic
- 34035 Somerset
- 34037 Sussex
- 34039 Union
- 34041 Warren
- 36005 Bronx
- 36027 Dutchess
- 36047 Brooklyn (Kings)
- 36059 Nassau

36061	Manhattan (New York)
36071	Orange
36079	Putnam
36081	Queens
36085	Staten Island (Richmond)
36087	Rockland
36103	Suffolk
36119	Westchester
0	Location Outside of NYBPM Area

DCOUNTY Destination County FIPS

09001	Fairfield
09009	New Haven
34003	Bergen
34013	Essex
34017	Hudson
34019	Hunterdon
34021	Mercer
34023	Middlesex
34025	Monmouth
34027	Morris
34029	Ocean
34031	Passaic
34035	Somerset
34037	Sussex
34039	Union
34041	Warren
36005	Bronx
36027	Dutchess
36047	Brooklyn (Kings)
36059	Nassau
36061	Manhattan (New York)
36071	Orange
36079	Putnam
36081	Queens
36085	Staten Island (Richmond)
36087	Rockland
36103	Suffolk
36119	Westchester
0	Location Outside of NYBPM Area

PMODE Primary Mode

1	School Bus
2	Paratransit Service (Access-a-ride, Dial-a-ride, etc.)
3	Black Car Service/Limo
4	For-Hire Van/Jitney/Gypsy Cab
5	Taxi (Yellow, Medallion Cab)
6	Railroad (LIRR, Metro North, NJ Transit, AMTRAK)
7	Express Bus (Suburban, Commuter, Inter-city)
8	Roosevelt Island Tram
9	Ferry (Staten Island, NY Waterway, Water Taxi, Seastreak)
10	Light Rail/LRT (Newark, Hudson-Bergen, River line)
11	PATH Train
12	Subway (NYTCT, Staten Island Railway)
13	Charter Bus (Employer-provided or Other Contracted)
14	Shuttle Bus (Public or Employer-provided)
15	Local Bus (Regular, Standard, City)
16	Carpool/Vanpool/Other Group Ride
17	Auto (Car or Small Truck) Passenger

- 18 Motorcycle/Moped/Motorized Scooter
- 19 Auto (Car or Small Truck) Driver
- 20 Wheelchair/Mobility Scooter
- 21 Skates/Skateboard/Kick Scooter/Segway
- 22 Bike
- 23 Walk
- 24 AIRTRAIN or Airport Bus
- 25 Air Plane
- 26 Other (Specify)

PMODE1 Primary Mode; **Short Version**; Re-categorized variable based on PMODE.

School Bus = (1) School Bus;

Taxi or Group Ride= (2) Paratransit Service (Access-a-ride, Dial-a-ride, etc.), (3) Black Car Service/Limo, (4) For-Hire Van/Jitney/Gypsy Cab, and (5) Taxi (Yellow, Medallion Cab);

Commuter Rail= (6) Railroad (LIRR, Metro North, NJ Transit, AMTRAK);

Express Bus = (7) Express Bus (Suburban, Commuter, Inter-city);

Ferry = (9) Ferry (Staten Island, NY Waterway, Water Taxi, Seastreak);

Light Rail/LRT = (10) Light Rail/LRT (Newark, Hudson-Bergen, River line);

Subway = (8) Roosevelt Island Tram, (11) PATH Train, and (12) Subway (NYTCT, Staten Island Railway);

Other Bus = (13) Charter Bus (Employer-provided or Other Contracted), and (14) Shuttle Bus (Public or Employer-provided);

Local Bus = (15) Local Bus (Regular, Standard, City);

Auto Passenger = (16) Carpool/Vanpool/Other Group Ride and (17) Auto (Car or Small Truck) Passenger;

Auto Driver = (18) Motorcycle/Moped/Motorized Scooter and (19) Auto (Car or Small Truck) Driver;

Bike = (20) Wheelchair/Mobility Scooter, (21) Skates/Skateboard/Kick Scooter/Segway, and (22) Bike;

Walk = (23) Walk;

Other = (24) AIRTRAIN or Airport Bus and (25) Air Plane.

- 1 School Bus
- 2 Taxi or Group Ride
- 3 Commuter Rail
- 4 Express Bus
- 5 Ferry
- 6 Light Rail/LRT
- 7 Subway
- 8 Other Bus
- 9 Local Bus
- 10 Auto Passenger
- 11 Auto Driver
- 12 Bike
- 13 Walk
- 97 Other

PAMODE Primary Access Mode for Premium Transit* (Commuter Rail, Ferry, Express Bus).

- 1 Local Bus
- 2 Drive (or Auto Driver)
- 3 Auto Passenger
- 4 Walk or Others (Refer to PMODE1 categories above)

* Subway as a fixed route, rapid transit system, is classified as a "premium" transit system for the NYBPM. However, since subway is frequently used as an access mode for other premium transit modes it is excluded from being defined as a "Premium Transit Mode". This same definition has been used in the 97/98 survey.

PMODE_R Primary Mode Range; Re-categorized variable based on PMODE1.

Auto = (10) Auto Passenger and (11) Auto Driver;

Rail or Ferry = (3) Commuter Rail, (5) Ferry, (6) Light Rail/LRT, and (7) Subway;

Bus = (1) School Bus, (4) Express Bus, (8) Other Bus, and (9) Local Bus;

Shared Ride or Taxi = (2) Taxi or Group Ride;

Walk or Non-Motorized = (12) Bike and (13) Walk;

Other = (97) Other.

- 1 Auto
- 2 Rail or Ferry
- 3 Bus
- 4 Shared Ride or Taxi
- 5 Walk or Non-Motorized
- 97 Other

PMODE_R2 Primary Mode Range2; Re-categorized variable based on PMODE_R.

Vehicle Trip = (1) Auto and (4) Shared Ride or Taxi;
Transit Trip = (2) Rail or Ferry and (3) Bus;
Walk or Non-Motorized = (5) Walk or Non-Motorized;
Other = (97) Other.

- 1 Vehicle Trip
- 2 Transit Trip
- 3 Walk/Non-Motorized
- 97 Other

PMODE_R3 Primary Mode Range3; Re-categorized variable based on PMODE_R2.

Vehicle Trip = (1) Auto;
Transit Trip = (2) Rail or Ferry;
Other = (3) Walk/non-Motorized and (97) Other.

- 1 Vehicle Trip
- 2 Transit Trip
- 97 Other

WORK_PURP Tour Purpose; Work vs Non-Work. Based on TOUR_PURP

- 1 WORK
- 2 NON-WORK

DTPURP_R Destination Primary Trip Purpose (Aggregate). Based on DTPURP_AGG.

Home= (0) Home;
Work= (1) Work;
School= (2) University and (3) School;
Other= (4) Escorting, (5) Shopping, (6) Maintenance, (7) Eating Out, (8) Visiting, (9) Discretionary,
(10) Change Mode, (11) Loop, (12) Airport Trip, (13) Other, and (14) Get Gas.

- 0 HOME
- 1 WORK
- 2 SCHOOL
- 3 OTHER

ODTPURP Origin to Destination Primary Trip Purpose (Aggregate). Re-categorized variable based on the combination of OTPURP_AGG & DTPURP_AGG.

Home= (0) Home;
Work= (1) Work;
School= (2) University and (3) School;
Other= (4) Escorting, (5) Shopping, (6) Maintenance, (7) Eating Out, (8) Visiting, (9) Discretionary,
(10) Change Mode, (11) Loop, (12) Airport Trip, (13) Other, and (14) Get Gas.

- 1 Home to Work
- 2 Home to School
- 3 Home to Other
- 4 Work to Home
- 5 School to Home
- 6 Other to Home
- 7 Work to Other
- 8 School to Other
- 9 All other trips

ODTPURP1 Origin-Destination Primary Trip Purpose 1; (Two-way Aggregate); Re-categorized variable based on the combination of OTPURP_AGG & DTPURP_AGG.
Home= (0) Home
Work= (1) Work
School= (2) University and (3) School;
Social/Rec= (7) Eating Out, (8) Visiting, and (9) Discretionary;
Personal Business= (6) Maintenance and (14) Get Gas;
Shopping= (5) Shopping;
Serving Passengers= (4) Escorting
Other= (10) Change Mode, (11) Loop, (12) Airport Trip, and (13) Other (specify)
Work Related= both Origin and Destination are (1) Work
Between Work and Non-Work= trip purpose of Origin or Destination is (1) Work and the other end is not (0) Home or (1) Work.
Other Non-Home/Non-Work= trip purpose of Origin or Destination is not (1) Work or (0) Home.

- 1 Home to Work
- 2 Home to School
- 3 Home to Social/Rec
- 4 Home to Personal Business
- 5 Home to Shopping
- 6 Home to Serving Passengers
- 7 Home to Other
- 8 Work to Home
- 9 School to Home
- 10 Social/Rec to Home
- 11 Personal Business to Home
- 12 Shopping to Home
- 13 Serving Passengers to Home
- 14 Other to Home
- 15 Work Related
- 16 Between Work and Non-Work
- 17 Other Non-Home/Non-Work

ODTPURP2 Origin-Destination Primary Trip Purpose 2; (Two-way Aggregate). Re-categorized variable based on the combination of OTPURP_AGG & DTPURP_AGG. <Refer to ODTPURP1 above for explanation on the categories used.>

- 1 Between Home and Work
- 2 Work Related*
- 3 Between Work and Non-Work
- 4 Social/Rec
- 5 School
- 6 Personal Business
- 7 Shopping
- 8 Serving Passengers
- 9 Other Destinations

* both OTPURP_AGG & DTPURP_AGG = (1) Work

ODTPURP2_R Origin to Destination Primary Trip Purpose 2; (Two-way Aggregate); Re-categorized variable based on the combination of OTPURP_AGG & DTPURP_AGG.

Work= (1) Work;
School= (2) University and (3) School;
Social/Rec= (7) Eating Out, (8) Visiting, and (9) Discretionary;
Shopping= (5) Shopping;
Other= (4) Escorting, (6) Maintenance, (10) Change Mode, (11) Loop, (12) Airport Trip, and (13) Other (specify) and (14) Get Gas.

- 1 Work
- 2 School
- 3 Social/Rec
- 4 Shopping

	5	Other
WORKTRIP	Trip Purpose; Dummy for work trip; Re-categorized variable based on ODTPURP2_R. <i>Work= (1) Work;</i> <i>Non-Work= (2) School, (3) Social/rec, (4) Shopping, and (5) Other.</i>	
	1	WORK
	2	NON-WORK
TOD_R	Time of Departure Range	
	1	AM PEAK (6am - 10am)
	2	MIDDAY (10am - 4pm)
	3	PM PEAK (4pm - 8pm)
	4	EVENING (8pm - 12am)
	5	OWL (12am - 6am)
TOD_R1	Time of Departure Range 1; Short	
	1	6am - 10am
	2	10am - 4pm
	3	4am - 8pm
	4	8pm - 6am
TOD_PEAK	Time of Departure; Refer to TOD_R above for Non-Peak (Midday, Evening & Owl) & Peak (AM Peak & PM Peak) times.	
	0	NON-PEAK
	1	PEAK
TOTTR_R	Total Number of Persons in the Trip; Range	
	1	Single Occupant
	2	2-Persons
	3	3-Persons
	4	4+Persons
TRPDUR_R	Trip Duration Range (Miles)	
	1	< 10 minutes
	2	10 - < 20 minutes
	3	20 - < 45 minutes
	4	45 - < 90 minutes
	5	90+ minutes
TRIPDIST_R1	Trip Distance Range 1	
	1	< 1mile
	2	1 - < 3miles
	3	3 - < 5miles
	4	5 - < 10miles
	5	10 - < 20miles
	6	20+ miles
TRIPDIST_R2	Trip Distance Range 2	
	1	< .5mile
	2	.5 - < 1miles
	3	1 - < 3miles
	4	3 - < 5miles
	5	5 - < 10miles
	6	10+ miles
HHSIZ_R	Household Size Range [COMPUTED]	
	1	1
	2	2

3 3
4 4+

INCOM_R Household Income Range [COMPUTED]
 1 Below \$30K
 2 \$30K - \$74.9K
 3 \$75K - \$99.9K
 4 \$100K +
 9 Did not provide

HHVEH_R Number of Household Vehicles, Range [COMPUTED]
 1 0
 2 1
 3 2
 4 3 +

Appendix C: Recruitment Questionnaire

Overview of Questionnaire

Screening Script – All households receive advance letter

- S1: Have Respondent – Intro #1
- S2: Schedule Call Back
- S3: Study Overview
- S4: Household Size
- S5: Number of Vehicles Available
- S6a Age Verification Screener
- S6b Random Selection Generator for HH with no one <65
- S7: Primary Language Spoken in Home
- S8: Land-line phone service
- S9: Residence Type
- S10: Exit Interview Screener
- S11: Received Letter
- S12: Verify Address
- S13: Explain Letter - Matched Diary Sample
- S14: Explain Letter - Unmatched Diary Sample
- S15: Explain Letter - GPS Sample
- S16: Explain Letter - GPS Unmatched Sample
- S17: Refusal Type
- S18: Refusal Reason (Hard RF)
- S19: Refusal Reason (Soft RF)
- S20: Interview Language

1. Household and Vehicle Information

- 1.1. Year of Vehicles
- 1.2. Make of Vehicles
- 1.3. Model of Vehicles
- 1.4. Motor Vehicle Type
- 1.5. Fuel Type of Vehicles
- 1.6. Vehicle has E-Z Pass

2. Person Demographics

- 2.1. First Name or Identifier
- 2.2. Last Name
- 2.3. Gender
- 2.4. Exact Age (Person level/roster)
- 2.5. Age (± 16)
- 2.6. Driver's License
- 2.7. Personal Cell Phone
- 2.8. Relationship to Respondent
- 2.9. Disability
- 2.10. Disability Type

2.11. Hispanic Origin

2.12. Race

3. Work Information

3.1. Employed

3.2. Volunteer

3.3. Unemployment Type

3.4. Number of Jobs

3.5. Number of Hours Worked at Job 1

3.6. Number of Hours Worked at Job 2

3.7. Number of Hours Worked at Job 3

3.8. Telecommute Hours

3.9. Number of Days Worked

3.10. Compressed Work Week

3.11. Industry

3.12. Occupation

3.13. Employer Type

3.14. Work Location

3.15. Employer Name

3.16. Employer Address

3.17. Employer Cross-Streets

3.18. Usual Travel Mode to Work

3.19. IF BIKE: Frequency of Bike Travel Last Week (Work)– only for bike riders

3.20. Drive Personal Vehicle as Part of Job (Commercial Use)

3.21. Which HH Vehicle

3.22. Employer Subsidies Used

3.23. Work Start Time

3.24. Work End Time

3.25. Varied Work Schedule

3.26. Start Time Varies

3.27. End Time Varies

3.28. Usual Travel Time to Work (in minutes) ?

4. School Information

4.1. Student

4.2. School Level

4.3. School Location

4.4. School Name

4.5. School Address

4.6. School Cross-Streets

4.7. Travel Mode to School

4.8. IF BIKE: Frequency of Bike Travel Last Week (School)

4.9. Usual Travel Time to School (in minutes)

5. Finalizing Recruitment

- 5.1. Household Income
- 5.2. Diary Sample Travel Day Assignment
- 5.3. GPS Sample Travel Day Assignment
- 5.4. Incentive Diary Not Matched
- 5.5. Incentive GPS Matched
- 5.6. Incentive GPS Not Matched
- 5.7. Addressee for Survey Materials
- 5.8. Mailing Address
- 5.9. Language of Survey Materials
- 5.10. Travel Reporting Preference
- 5.11. Reminder Preference
- 5.12. Email
- 5.13. Mobile Number
- 5.14. Best Phone Number
- 5.15. Cell or Landline
- 5.16. Work or Home Phone
- 5.17. Best Day
- 5.18. Best Time
- 5.19. Retrieval Reminder
- 5.20. Best Proxy for Reports Under 16

NOTE: THE CONVENTION FOR THIS SCRIPT IS THAT ANY TEXT IN ALL CAPS WILL NOT BE READ BY THE INTERVIEWER; Text in upper and lower case will be read by the interviewer.

INTRODUCTION

UNIVERSE: ALL

HELLO

Universe: Someone answers the telephone or someone calls into the telephone center

INTRO 1

Universe: All

S1 IF INCOMING CALL: Thank you for calling in. My name is _____ with the Regional Travel Survey.
CONTINUE WITH S3

S1A IF OUTGOING CALL (INT01): Hi, my name is _____ and I'm calling to get your input on a transportation study we're conducting in <CTFIP> County. May I speak with an adult in your home?

ONCE THE RIGHT PERSON IS ON: We're conducting the Regional Travel Survey throughout <CTFIP> County. This important study is about people's transportation needs and will help regional planners decide on improvements to the transportation system that best meet your community's needs. **IF MATCHED NON GPS:** If you complete the travel portion of the study, your name will be entered into a monthly drawing to win \$250.

It's sponsored by <PNYNJ>. **IF NEEDED:** The <PNYNJ> is responsible for planning transportation in the region.

NOTE: PNYNJ = AGENCY BASED ON HSTATE: New York Metropolitan Transportation Council/ North Jersey Transportation Planning Authority/ transportation planning agencies in Connecticut

- 1 HAVE RESPONDENT
- 2 Respondent not available

- S2** When would be a better time to call to reach an adult?
- 1 ARRANGE CALLBACK
 - 2 NO RESPONDENT NOT AVAILABLE – TERMINATE, AUTO CALLBACK SCHEDULED

S3 (PRVIEW): We are doing a very important study about people's travel patterns and transportation needs. This study will update the last one in 1998; planning agencies in our region will use data collected to make decisions about how to improve the region's transportation system. As a participating study household, everyone who lives in your home record their travel for 24-hours in a special diary. All data is strictly confidential and will be used only for research purposes.

- S4** Before we begin the survey, we would like to ask you for some general information about your household. This information will help us make sure we are collecting a representative sample of the people living in your area.

How many people, including yourself, live in your home?

INTERVIEWER NOTE: PLEASE CLARIFY WITH RESPONDENT. DOES THIS NUMBER INCLUDE ALL PERSONS WHO LIVE AT THIS HOME? HH MEMBERS LIVE AND EAT SEPARATELY FROM ANY OTHER PERSONS IN THE BUILDING AND HAVE DIRECT ACCESS TO THEIR HOME FROM THE OUTSIDE OF THE BUILDING OR THROUGH A COMMON HALL. HH MEMBERS SHARE MEALS AND LIVING EXPENSES. HH MEMBERS MAY BE A SINGLE FAMILY, TWO OR MORE FAMILIES LIVING TOGETHER, OR ANY OTHER GROUP OF RELATED OR UNRELATED PERSONS WHO SHARE LIVING ARRANGEMENTS.

ENTER NUMBER [RANGE 1-15]

- S5** Including all cars, trucks, vans, motorcycles and recreational vehicles, whether owned or leased or provided by an employer, how many vehicles are presently available to the members of your household?
- 0 ZERO
 - 1 ONE
 - 2 TWO
 - 3 THREE
 - 4 FOUR
 - 5 FIVE
 - 6 SIX
 - 7 SEVEN
 - 8 EIGHT OR MORE

- S6a.** Is there at least one person in your household who is between 16 and 65 years of age?
- 1 Yes
 - 2 No
 - 8 DON'T KNOW
 - 9 REFUSED

HH_ADDR

Universe: All Respondents Who Remember Receiving Letter

- S12a.** Before we get started, I want to verify that your address is still [ADDRESS].
- 1 SAME ADDRESS
 - 2 MOVED, NOT SAME ADDRESS → THEN COLLECT THE MOVED ADDRESS
- S12b.** In what county do you currently live? IF RESIDE IN ONE OF THE 28 STUDY AREA COUNTIES, THEY ARE STILL ELIGIBLE

CTFIP COUNTY NAME	34039 UNION
09001 FAIRFIELD	34041 WARREN
09009 NEW HAVEN	36005 BRONX
34003 BERGEN	36027 DUTCHESS
34013 ESSEX	36047 BROOKLYN (KINGS)
34017 HUDSON	36059 NASSAU
34019 HUNTERDON	36061 MANHATTAN (NEW YORK)
34021 MERCER	36071 ORANGE
34023 MIDDLESEX	36079 PUTNAM
34025 MONMOUTH	36081 QUEENS
34027 MORRIS	36085 STATEN ISLAND (RICHMOND)
34029 OCEAN	36087 ROCKLAND
34031 PASSAIC	36103 SUFFOLK
34035 SOMERSET	36119 WESTCHESTER
34037 SUSSEX	

Primary Language Spoken: HHLNG

Universe: All

- S7** Is [LANGUAGE OF INTERVIEW] the primary language spoken in your home? IF NOT: What is the main language spoken in your home?
- 1 ENGLISH
 - 2 SPANISH
 - 3 CHINESE
 - 4 RUSSIAN
 - 5 POLISH
 - 6 ITALIAN
 - 7 FRENCH/HATIAN
 - 97 OTHER (SPECIFY)
 - 99 REFUSED

Landline Telephone Service: LTELE

Universe: ALL

- S8** Does your home have standard land-based telephone service?
- 1 YES
 - 2 NO
 - 8 DON'T KNOW
 - 9 REFUSED

Residence Type: RESTY

Universe: All

- S9** Do you live in a ...
- 1 Single-family detached house
 - 2 Single-family attached house
 - 3 Building with 2 or more apartments or condos, or duplex?
 - 4 Mobile home or trailer?
 - 5 BOAT, RV, VAN, ETC.
 - 6 DORM ROOM, FRAT OR SORORITY HOUSE

- 7 OTHER (SPECIFY) _____
- 8 DON'T KNOW
- 9 REFUSED

Disqualification after Household Data: DEMDQ- Universe: AAGE2 = 2

S10 Based on your responses, it appears we collected all of the necessary data from households similar to yours for this study. We appreciate your time and interest in improving transportation in the region. Have a good day. **EXIT THE INTERVIEW.**

ADVLT

Universe: All Adult Respondents

S11 OK, thanks. We recently sent a letter to your home to tell you about this very important project.

The New York Metropolitan Transportation Council is one of the survey sponsors OR

The North Jersey Transportation Planning Authority is one of the survey sponsors. OR

transportation planning agencies in Connecticut are sponsoring the survey.

This agency / These agencies is one / are one of several that are responsible for planning and improving transportation in the region.

INTRO 2 – Diary Sample - Matched

Universe: All matched non GPS samples

S13 The letter lets area residents know about a very important study of travel patterns and transportation needs. Everyone who lives in your home record their travel for 24-hours in a special diary. Your household will be entered in a monthly drawing to win \$250 if you provide this detailed travel information. As I mentioned earlier, all data is strictly confidential.

- 1 OK
- 9 REFUSED – READ NOTE BELOW

IF REFUSED SAY: The diaries are easy to fill out. You will write down the details of your travel for a single day. It is very important that households like yours participate. IF STILL REFUSE [SKIP TO S18]

INTRO 2 – Diary Sample – Not Matched

Universe: All unmatched non GPS samples

S14 The letter lets area residents know about a very important study of travel patterns and transportation needs. Everyone who lives in your home record their travel for 24-hours in a special diary. Your household will receive \$50 for providing this detailed travel information. As I mentioned earlier, all data is strictly confidential.

- 1 OK
- 9 REFUSED – READ NOTE BELOW

IF REFUSED SAY: The diaries are easy to fill out. You will write down the details of your travel for a single day. It is very important that all types of households participate so we collect data that reflects the region. IF STILL REFUSE [SKIP TO S18]

INTRO 2 – GPS Sample

Universe: All matched GPS samples

S15 The letter lets area residents know about a very important study of travel patterns and transportation needs. Everyone age 16 and older who lives in your household will wear a compact GPS device for

two-consecutive weekdays. Those under 16 and over 75 will complete travel diaries. Wearing this small GPS unit is an easy way for you to provide accurate travel data. If qualified for the study, your household will receive \$25 for carrying these devices. As I mentioned earlier, all data is strictly confidential.

- 1 OK
- 9 REFUSED

IF S15 = 9 OR TO ALL WHO ASK QUESTIONS, SEEM HESITANT, OR WHO ATTEMPT TO REFUSE; EXPLAIN GPS UNITS IN MORE DETAIL: The GPS units are small and easy to carry – they clip to your clothing just like a cell phone or pager – and they only need to be carried when you are outdoors. By using them, you will not need to record your travel in a paper diary. These GPS units are not tracking devices; they collect additional travel details including travel routes and congestion levels experienced on the transportation system. It is very important that households like yours participate so we can compile travel data from all types of area residents.

IF STILL REFUSE [SKIP TO S18]

INTRO 2 – GPS Sample Not Matched
Universe: All unmatched GPS samples

S16 The letter informs lets area residents know about a very important study of travel patterns and transportation needs. Everyone age 16 and older who lives in your household will wear a compact GPS device for two consecutive weekdays. Those under 16 and over 75 will complete travel diaries. Wearing this small GPS unit is an easy way for you to provide accurate travel data. If qualified for the study, your household will receive \$75 for carrying these devices. As I mentioned earlier, all data is strictly confidential.

- 1 OK
- 9 REFUSED

IF S16=9 OR TO ALL WHO ASK QUESTIONS, SEEM HESITANT, OR WHO ATTEMPT TO REFUSE, EXPLAIN GPS UNITS IN MORE DETAIL: The GPS units are small and easy to carry – they clip to your clothing just like a cell phone or pager – and they only need to be carried when you are outdoors. These GPS units are not tracking devices; they simply collect additional details including travel routes and congestion levels experienced on the transportation system. We will also include an easy to use Memory Jogger sheet to jot down the places you go while you are wearing the device to help with recalling when we call you back later to collect your travel data.

It is very important that households like yours participate so we can compile travel data from all types of area residents.

IF STILL REFUSE [SKIP TO S18]

Refused Interview: RFTYP
Universe: HELLO = Refused OR S13 = 9, S14 = 9, S15 = 9 or S16 = 9

S18 Code type of refusal

- 1 Hard
- 2 Soft

Reason for Refusal: RFWHY (HARD REFUSAL)
Universe: RFTYP = 1

S19 IF NECESSARY ASK: Would you please tell me the main reason you don't want to participate in this survey?

- 01 RESPONDENT YELLING
- 02 RESPONDENT USING PROFANITY

- 03 RESPONDENT THREATENING
- 04 INBOUND REFUSAL
- 05 RESPONDENT ASKED TO BE TAKEN OF LIST
- 06 NO KNOWN ADULTS IN HH
- 07 DO NOT WANT TO WEAR GPS DEVICE
- 08 DO NOT WANT MY TRAVEL DATA TRACKED
- 97 OTHER, RECORD VERBATIM
- 98 DON'T KNOW

Reason for Refusal: RFWHY2 (SOFT REFUSAL)

Universe: RFTYP = 2

- S20** IF NECESSARY ASK: Would you please tell me the main reason you don't want to participate in this survey?
- 1 TIRED OF DOING SURVEYS [TERMINATE INTERVIEW, RECORD OUTCOME]
 - 2 NOT INTERESTED IN TOPIC [TERMINATE INTERVIEW, RECORD OUTCOME]
 - 3 TOO BUSY, SURVEY TAKES TOO LONG [TERMINATE INTERVIEW, RECORD OUTCOME]
 - 4 TOPIC IS TOO PERSONAL/ NONE OF GOVERNMENT'S BUSINESS [TERMINATE INTERVIEW, RECORD OUTCOME]
 - 5 NOT A TRANSIT USER (ENCOURAGE TO PARTICIPATE)
 - 97 OTHER - SPECIFY [RECORD VERBATIM RESPONSE, TERMINATE INTERVIEW, RECORD OUTCOME]

Language of Interview: ILANG

Universe: All

- S21** CODE LANGUAGE OF INTERVIEW
- 1 ENGLISH
 - 2 SPANISH
 - 3 RUSSIAN
 - 4 CHINESE

1: HOUSEHOLD AND VEHICLE INFORMATION

Now I'd like to get some information about your vehicle(s).

Year of Vehicles: YEAR

Universe: HHVEH>0

- 1.1 What's the year of your vehicle? IF TWO OR MORE: "What's the year of vehicle number one, that is, the one that is driven the most", "vehicle number two" and so on.
- ENTER YEAR OF VEHICLE: ____ ____ ____ ____
- 9998 DON'T KNOW
 - 9999 REFUSED

Make of Vehicles: MAKE

Universe: HHVEH>0

1.2 What is the make of your vehicle? IF TWO OR MORE: "What's the make of vehicle number one, that is, the one used the most", "vehicle number two" and so on.

- | | | |
|--------------------|---------------|------------------|
| 11 ACURA | 27 INFINITI | 43 PORSCHE |
| 12 AUDI | 28 ISUZU | 44 RANGE ROVER |
| 13 BMW | 29 JAGUAR | 45 SAAB |
| 14 BUICK | 30 JEEP | 46 SATURN |
| 15 CADILLAC | 31 KAWASAKI | 47 SCION |
| 16 CHEVROLET | 32 KIA | 48 SUBARU |
| 17 CHRYSLER | 33 LEXUS | 49 SUZUKI |
| 18 DAEWOO | 34 LINCOLN | 50 TOYOTA |
| 19 DODGE | 35 MAZDA | 51 VOLKSWAGEN |
| 20 FORD | 36 MERCEDES | 52 VOLVO |
| 21 GEO | 37 MERCURY | 53 YAMAHA |
| 22 GMC | 38 MITSUBISHI | 97 OTHER Specify |
| 23 HARLEY DAVIDSON | 39 NISSAN | 98 DON'T KNOW |
| 24 HONDA | 40 OLDSMOBILE | 99 REFUSED |
| 25 HUMMER | 41 PLYMOUTH | |
| 26 HYUNDAI | 42 PONTIAC | |

Model of Vehicles: MODEL

Universe: HHVEH>0

1.3 What is the model of your vehicle? IF TWO OR MORE: What's the model of vehicle number one, that is, the one used the most, THEN COLLECT DATA ON VEHICLE TWO, AND SO ON

ENTER VERBATIM MODEL TYPE

Body of Vehicles: BODY

Universe: HHVEH>0

1.4 What type of vehicle is that? IF TWO OR MORE: What type of vehicle is the auto number one, that is, the one used the most, THEN COLLECT DATA ON VEHICLE TWO, AND SO ON

- 1 Passenger car (INCLUDES "CROSSOVERS")
- 2 Sport Utility Vehicle (SUV)
- 3 Van
- 4 Pick-up Truck
- 5 Truck
- 6 Recreational Vehicle
- 7 Motorcycle
- 8 Moped/scooter (e.g., Vespa)
- 97 OTHER (SPECIFY _____)
- 98 DON'T KNOW
- 99 REFUSED

Fuel Type of Vehicles: FUEL
Universe: HHVEH>0

- 1.5 What type of fuel does the vehicle use?
- 1 Gas
 - 2 Diesel
 - 3 Hybrid
 - 4 Flex Fuel
 - 7 Other, SPECIFY
 - 8 DON'T KNOW
 - 9 REFUSED

E-ZPass Tag on Vehicle: EZPASS
Universe: HHVEH>0

- 1.6 Does this vehicle have a working E-ZPass tag in it? [THE EZPASS SHOULD BE A CURRENT ACCOUNT IN GOOD STANDING, NOT AN OLD ACCOUNT THAT NO LONGER WORKS/DEDUCTS FUNDS]
- 1 Yes, vehicle has E-ZPass tag
 - 2 No, vehicle does not have E-ZPass tag
 - 8 DON'T KNOW
 - 9 REFUSED

VEHICLE ROSTER to be repeated for each vehicle, up to eight vehicles

2: PERSON INFORMATION – ALL MEMBERS OF HH

UNIVERSE: ALL

First Name: FNAME
Universe: All

- 2.1 We need some information about each person in your household so we can prepare individual diaries. Again, I want to assure you that this information is for research purposes only and will be kept strictly confidential. Earlier, you indicated there were/is {HHSIZ} persons in your household.

IF ONLY 2 PERSONS IN THE HOUSEHOLD, ASK: What is your first name THEN ASK: ? What is the other person's first name?

- 0 What is your first name?
- 1 What is the first name of this person? IF RELUCTANT: Initials are okay at this point.
- 2 What is the other person's name? IF RELUCTANT: Initials are okay at this point.
- 3 What is the first name of the next youngest person in the household? IF RELUCTANT: Initials are okay at this point.

Last Name: LNAME
Universe: All

- 2.2 What last name should we use for your household when mailing the materials?

ENTER THE LAST NAME:_____

FOLLOWING QUESTIONS ARE ASKED FOR EACH HOUSEHOLD MEMBER.

Gender: GENDER

Universe: All

2.3 And what is [NAME]'s gender? DO NOT ASK RESPONDENT ABOUT HIS/ HER GENDER

- 1 Male
- 2 Female
- 9 Refused

Exact Age: AGE

Universe: All

2.4 What is [his, her, your] age in years?

ENTER NUMBER [RANGE 1-99] JUST USE 99 FOR AGE > 99.

- 998 DON'T KNOW
- 999 REFUSED

Approx Age: AGEB

Universe: AGE = 999

2.5. Is [he, she, you] age 16 or older?

- 1 <16
- 2 16+
- 8 DON'T KNOW [IF GPS HOUSEHOLD, TERMINATE FROM GPS INTO DIARY]
- 9 REFUSED [IF GPS HOUSEHOLD, TERMINATE FROM GPS INTO DIARY]

Driver's License: LIC

Universe: AGE >15 or AAGE=2

2.6 {Does/Do} {he/she/you} have a valid driver's license?

- 1 YES
- 2 NO
- 8 DON'T KNOW
- 9 REFUSED

Cellular Telephone Service: CTELE

Universe: ALL

2.7 Does (he, she, you) personally have a cell phone?

- 1 YES
- 2 NO
- 8 DON'T KNOW
- 9 REFUSED

Relationship to Respondent: RELAT

Universe: All

2.8 What is this person's relationship to you? THIS IS ALWAYS SELF FOR RESPONDENT

- 1 SELF
- 2 SPOUSE/ PARTNER
- 3 SON/DAUGHTER
- 4 FATHER/MOTHER
- 5 BROTHER/SISTER
- 6 GRANDPARENT

- 7 GRANDCHILD
- 8 LIVE-IN HELP
- 9 ROOM MATE/OTHER NON-RELATED
- 10 OTHER RELATED
- 98 DON'T KNOW
- 99 REFUSED

Disability: DISAB

Universe: All

- 2.9 {Does/Do} {he/she/you} have a disability that limits the type of transportation {he/she/you} can use?
- 1 YES
 - 2 NO
 - 8 DON'T KNOW
 - 9 REFUSED

Type of Disability: DISAB_TYPE

Universe: DISAB = 1

- 2.10 What type of disability? MULTIPLE RESPONSE
- 1 VISUALLY IMPAIRED OR BLIND
 - 2 HEARING IMPAIRED OR DEAF
 - 3 CANE OR WALKER
 - 4 WHEELCHAIR NON-TRANSFERABLE
 - 5 WHEELCHAIR TRANSFERABLE
 - 6 MENTALLY OR EMOTIONALLY DISABLED
 - 7 OTHER, SPECIFY
 - 8 DON'T KNOW
 - 9 REFUSED

Hispanic Origin: HISP

Universe: All

- 2.11 Is/Are (he, she, you) of Hispanic, Latino, or Spanish origin?
- 1 YES
 - 2 NO
 - 8 DON'T KNOW
 - 9 REFUSED

Race: RACE

Universe: All

- 2.12 I'm going to read a list of races. [IF NECESSARY: In addition to being Hispanic], please tell me which best describes (his, her, your) race.
- 1 White
 - 2 African American, Black
 - 3 Asian
 - 4 American Indian, Alaskan Native
 - 5 Pacific Islander or Native Hawaiian
 - 6 MULTIRACIAL [NOT READ BY INTERVIEWER – ONLY USED IF RESPONDENT SAYS WITHOUT PROMPTING – TO HELP WITH POST PROCESSING]

- 7 HISPANIC/ MEXICAN
- 97 OTHER – SPECIFY
- 98 DON'T KNOW
- 99 REFUSED

3: WORK INFORMATION – ALL MEMBERS OF HH

UNIVERSE: AGE 16+; IF UNDER SKIP TO SCHOOL INFORMATION

Employed: EEMPLY

Universe: AGE > 15 and <99 or AAGE=2

- 3.1 {Is/Are} {he/she/you} employed either full-time or part-time? AS NEEDED CLARIFY THAT FOR THIS QUESTION WE ARE ONLY INTERESTED IN THEIR MAIN JOB
- 1 YES
 - 2 NO
 - 8 DON'T KNOW
 - 9 REFUSED

Volunteer: VOLUN

Universe: EEMPLY > 1

- 3.2 Does (he, she, you) do any type of volunteer work on a regular basis?
- 1 YES
 - 2 NO
 - 8 DON'T KNOW
 - 9 REFUSED

Unemployed: WSTAT

Universe: WORKS = 2

- 3.3 {Is/Are} {he/she/you} ...
- 1 Retired
 - 2 Homemaker
 - 3 Unemployed but looking for work
 - 4 Unemployed, not seeking employment
 - 5 Student (part time or full time)
 - 8 DON'T KNOW
 - 9 REFUSED

Number of Jobs: JOBS

Universe: WORKS = 1

- 3.4 How many jobs does (he, she, you) have?

_____ # JOBS MUST BE AT LEAST ONE CANNOT BE DK/RF [RANGE = 1-10]

Hours Job 1: HRS1
Universe: WORKS = 1

3.5 How many hours a week does (he, she, you) work at your primary job?
 _____# HOURS MUST BE AT LEAST ONE CANNOT BE DK/RF [RANGE = 1-100]

Hours Job 2: HRS2
Universe: WORKS = 1 and JOBS > 1

3.6 How many hours a week does (he, she, you) work at Job #2? [RANGE = 1-100]
 _____# HOURS MUST BE AT LEAST ONE CANNOT BE DK/RF

Hours Job 3: HRS3
Universe: WORKS = 1 and JOBS > 2

3.7 How many hours a week does (he, she, you) work at Job #3? [RANGE = 1-100]
 _____# HOURS MUST BE AT LEAST ONE CANNOT BE DK/RF

Now, I am going to ask some questions about {his/her/your} primary job, which is the one you said you work [RECALL HRS1] hours per week. (MAIN JOB IS DEFINED AS JOB WORKED FOR MOST HOURS).

FROM THIS POINT ON, QUESTIONS ARE ALL ABOUT PRIMARY JOB

Telecommute: TCHRS
Universe: WORKS = 1

3.8 Of the (PRIMARY JOB HOURS), how many does (he, she, you) work from home per week on a regular basis? IF NEEDED: This is often referred to as telecommuting.
 TCHRS MUST BE =<HOURS
 98 DON'T KNOW
 99 REFUSED

Work Days: WDAY5
Universe: WORKS = 1

3.9 On average, how many days per week {does/do} {he/she/you} work at this job regardless of location?
 1 1
 2 2
 3 3
 4 4
 5 5
 6 6
 7 7
 8 DON'T KNOW
 9 REFUSED

Compressed Work Week: COMPR
Universe: WORKS = 1

- 3.10 Does/Do (he, she, you) work a compressed work week, such as 40 hours in 4 days or 80 hours in 9 days?
- 1 4/40
 - 2 9/80
 - 3 NO
 - 7 OTHER: SPECIFY
 - 8 DON'T KNOW
 - 9 REFUSED

O_COMPR CAPTURES 7 FROM ABOVE

Industry: INDUS
Universe: WORKS = 1

- 3.11 What activity best describes {his/her/your} job?
- 11 AGRICULTURE, FORESTRY, FISHING AND HUNTING
 - 21 MINING, QUARRYING, AND OIL AND GAS EXTRACTION
 - 22 UTILITIES
 - 23 CONSTRUCTION
 - 31 MANUFACTURING
 - 42 WHOLESALE TRADE
 - 44 RETAIL TRADE
 - 48 TRANSPORTATION AND WAREHOUSING
 - 51 INFORMATION
 - 52 FINANCE AND INSURANCE
 - 53 REAL ESTATE, RENTAL AND LEASING
 - 54 PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES
 - 55 MANAGEMENT OF COMPANIES AND ENTERPRISES
 - 56 ADMINISTRATION AND SUPPORT AND WARE MANAGEMENT AND REMEDIATION SERVICES
 - 61 EDUCATIONAL SERVICES
 - 62 HEALTH CARE AND SOCIAL ASSISTANCE
 - 71 ARTS, ENTERTAINMENT, AND RECREATION
 - 72 ACCOMMODATION AND FOOD SERVICES
 - 81 OTHER SERVICES (EXCEPT PUBLIC ADMINISTRATION)
 - 92 PUBLIC ADMINISTRATION
 - 97 OTHER (SPECIFY _____)
 - 98 DON'T KNOW
 - 99 REFUSED

Occupation: OCCUP
Universe: WORKS = 1

- 3.12 How would you describe {his/her/your} occupation?
- 11 MANAGEMENT OCCUPATIONS
 - 13 BUSINESS AND FINANCIAL OPERATIONS OCCUPATIONS
 - 15 COMPUTER AND MATHEMATICAL OCCUPATIONS
 - 17 ARCHITECTURE AND ENGINEERING OCCUPATIONS
 - 19 LIFE, PHYSICAL, AND SOCIAL SCIENCE OCCUPATIONS
 - 21 COMMUNITY AND SOCIAL SERVICES OCCUPATIONS
 - 23 LEGAL OCCUPATIONS
 - 25 EDUCATION, TRAINING, AND LIBRARY OCCUPATIONS
 - 27 ARTS, DESIGN, ENTERTAINMENT, SPORTS, AND MEDIA OCCUPATIONS
 - 29 HEALTHCARE PRACTITIONERS AND TECHNICAL OCCUPATIONS
 - 31 HEALTHCARE SUPPORT OCCUPATIONS
 - 33 PROTECTIVE SERVICE OCCUPATIONS
 - 35 FOOD PREPARATION AND SERVING RELATED OCCUPATIONS
 - 37 BUILDING AND GROUNDS CLEANING AND MAINTENANCE OCCUPATIONS
 - 39 PERSONAL CARE AND SERVICE OCCUPATIONS
 - 41 SALES AND RELATED OCCUPATIONS
 - 43 OFFICE AND ADMINISTRATIVE SUPPORT OCCUPATIONS
 - 45 FARMING, FISHING, AND FORESTRY OCCUPATIONS
 - 47 CONSTRUCTION AND EXTRACTION OCCUPATIONS
 - 49 INSTALLATION, MAINTENANCE, AND REPAIR OCCUPATIONS
 - 51 PRODUCTION OCCUPATIONS
 - 53 TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS
 - 55 MILITARY SPECIFIC OCCUPATIONS
 - 97 OTHER (SPECIFY _____)
 - 98 DON'T KNOW
 - 99 REFUSED

Employer Type: EMPLR
Universe: WORKS = 1

- 3.13 Is {his/her/your} employer . . .
- 1 A Private Company,
 - 2 Government,
 - 3 Non-Profit
 - 4 Self-Employed
 - 7 Or, Something Else (SPECIFY _____)
 - 8 DON'T KNOW
 - 9 REFUSED

Work Location: WLOC

Universe: WORKS = 1

3.14 And is (his, her, your) work address fixed (IF NEEDED: typically travels to the same address for work), is it your home, or does it vary from day to day or week to week?

- 1 FIXED
- 2 HOME
- 3 VARIES

NOTE: DK/RF IS NOT AN OPTION FOR THIS QUESTION

Self-Employment: SEMPL

Universe: WLOC = 2

3.14b Are you self-employed?

- 1 YES
- 2 NO
- 8 DK/RF

Employer Name: WNAME

Universe: WLOC=1 or 3

3.15 Now, I'd like to know (his, her, your) employer's name and location. We're interested in this information only because travel to [work/volunteer] activity often affects other daily activities and travel. What is the name of this (his, her, your) [employer/volunteer location]?

NOTE FOR INTERVIEWERS: FOR EACH WORKPLACE, WE NEED TO KNOW WHAT TYPE OF PLACE IT IS (GROCERY STORE, BOOK STORE, MANUFACTURING PLANT, BANK, SCHOOL, ETC.). OBTAIN THE BEST PLACE NAME POSSIBLE. IF THE PLACE NAME IS NOT SELF-DESCRIPTIVE (I.E., SAFEWAY GROCERY STORE), THEN PROBE FOR TYPE OF PLACE AND ADD THAT TO THE PLACE NAME (EXAMPLE: FORMAL STORE NAME IS "TATTERED COVER", PROBE FOR AND ADD "BOOK STORE").

IF SELF-EMPLOYED, ENTER NAME OF COMPANY IF AVAILABLE, ELSE ENTER 'SELF-EMPLOYED' IN [WNAME]

Work Address: WADDR

Universe: WLOC=1 or 3

3.16 What is the address of your current or most recent workplace?

1 = COMPLETE STREET ADDRESS KNOWN [O_WADDR]

COLLECT: [WADDR] [WCITY][WSTAT] [WZIP]

2 = CROSS STREETS KNOWN

[INTERVIEWER NOTE: HABITUALS ARE REQUIRED FOR DATA DELIVERY]

8 = DON'T KNOW

9 = REFUSED

WADDR CAPTURES STREET ADDRESS

Work Cross Streets: WXSTR

Universe: WLOC=1 or 3 and WADDR = REFUSED

3.17 Can you tell me the nearest cross streets of this work location?

And what are the city, state and zip of those cross streets?

CITY _____

STATE _____

ZIP _____

INTERVIEWER NOTE: HABITUALS ARE REQUIRED FOR DATA DELIVERY.

Work Mode: WMODE

Universe: WLOC=1 or 3

3.18 How {did/do} {he/she/you} usually get to work last week? PROBE FOR MAIN MODE – ONE FOR MAJORITY OF TRIP.

- 1 WALK
- 2 BIKE
- 3 WHEELCHAIR/MOBILITY SCOOTER
- 4 SKATES/SKATEBOARD/KICK-SCOOTER/SEGWAY
- 5 AUTO DRIVER (CAR OR SMALL TRUCK)
- 6 AUTO PASSENGER (CAR OR SMALL TRUCK)
- 7 CARPOOL/VANPOOL/OTHER GROUP RIDE
- 8 MOTORCYCLE/MOPED/MOTORIZED SCOOTER
- 9 LOCAL BUS (REGULAR, STANDARD, CITY)
- 10 EXPRESS BUS (SUBURBAN, COMMUTER, INTER-CITY)
- 11 SCHOOL BUS
- 12 CHARTER BUS (INCLUDING EMPLOYER-PROVIDED/ OTHER CONTRACTED)
- 13 SHUTTLE BUS (PUBLIC OR EMPLOYER-PROVIDED)
- 14 PARATRANSIT SERVICE (ACCESS-A-RIDE, DIAL-A-RIDE, ETC.)
- 15 SUBWAY (NYCT, STATEN ISLAND RAILWAY)
- 16 PATH TRAIN
- 17 RAILROAD (LIRR, METRO NORTH, NJ TRANSIT, AMTRAK)
- 18 LIGHT RAIL /LRT (NEWARK, HUDSON-BERGEN, RIVER LINE)
- 19 FERRY (STATEN ISLAND, NY WATERWAY, WATER TAXI, SEASTREAK)
- 20 TAXI (YELLOW/MEDALLION CAB)
- 21 FOR-HIRE VAN /JITNEY/GYPSY CAB
- 22 BLACK CAR SERVICE/LIMO
- 23 ROOSEVELT ISLAND TRAM
- 24 AIRTRAIN OR AIRPORT BUS
- 97 OTHER (SPECIFY)
- 98 DON'T KNOW
- 99 REFUSED

Frequency or Bike Travel: FBKTW

Universe: WMODE = 2

- 3.19 How frequently did you travel to work last week by bike?
- 1 Once
 - 2 2-3 times
 - 3 4 or more times
 - 8 Don't Know

Commercial Driving: CDRIV

Universe: WORKS = 1 and HHVEH > 0

- 3.20 As part of the job, does/do (he, she, you) drive a household vehicle from work site to work site? [THIS COULD BE SALESPERSON, REAL ESTATE AGENT, DELIVERY PERSON USING PERSONAL VEHICLE, ETC.]
- 1 YES
 - 2 NO
 - 8 DON'T KNOW
 - 9 REFUSED

Vehicle for Commercial Driving: CVEH

Universe: CDRIV = 1

- 3.21 Which household vehicle is that? VEHICLE NUMBER

Employer Subsidy: ESUB

Universe: WORKS = 1 and WLOC <> 2 and EMPLR = 4

- 3.22 Which, if any, employer-provided transportation benefits do you use for traveling to and from work?
- 1 TOLL / E-ZPass PAYMENT OR REIMBURSEMENT
 - 2 PUBLIC TRANSIT PAYMENT OR REIMBURSEMENT
 - 3 FREE PARKING OR REIMBURSEMENT
 - 4 SECURE BIKE PARKING
 - 5 I DO NOT USE ANY EMPLOYER-PROVIDED TRANSPORTATION SUBSIDIES
 - 7 OTHER SUBSIDIES (SPECIFY)
 - 8 DON'T KNOW
 - 9 REFUSED

Work Start Time: WSTRT

Universe: WORK = 1 and WLOC <> 2

- 3.23 What time does {he/she/you} typically start work at {his/her/your} job?

___ ___ : ___ ___

[ENTER MILITARY TIME; HHMM 0000-MIDNIGHT, 1200-NOON, 2359-11:59PM, 0030-12:30AM

Work End Time: WEND

Universe: WORK = 1 and WLOC <> 2

- 3.24 What time does {he/she/you} typically end work at {his/her/your} job?

___ ___ : ___ ___

[ENTER MILITARY TIME: HHMM 0000-MIDNIGHT, 1200-NOON, 2359-11:59PM, 0030-12:30AM

Varied Work Schedule: SCHED

Universe: WORK = 1 and WLOC <> 2

3.25 Are {his/her/your} start and end times at this job about the same every day?

- 1 YES
- 2 NO
- 8 DON'T KNOW
- 9 REFUSED

Start Time Varies: STRVR

Universe: WORK = 1 and WLOC <> 2

3.26 How much can {his/her/your} job's start times vary from the usual start time?

- 1 START TIME CANNOT VARY
- 2 WITHIN 15 MINUTES OR LESS
- 3 16 TO 30 MINUTES
- 4 31 TO 60 MINUTES
- 5 MORE THAN 1 HOUR
- 7 OR, SOMETHING ELSE (SPECIFY _____)
- 8 DON'T KNOW
- 9 REFUSED

End Time Varies: ENDVR

Universe: WORK = 1 and WLOC <> 2

3.27 How much can {his/her/your} job's end time vary from the usual end time?

- 1 END TIME CANNOT VARY
- 2 WITHIN 15 MINUTES OR LESS
- 3 16 TO 30 MINUTES
- 4 31 TO 60 MINUTES
- 5 MORE THAN 1 HOUR
- 7 OR, SOMETHING ELSE (SPECIFY _____)
- 8 DON'T KNOW
- 9 REFUSED

Travel Time to Work: TTTWS

Universe: WORKS = 1 and WLOC <> 2

3.28 What is your typical travel time, in minutes, to work?

RECORD MINUTES

4: SCHOOL INFORMATION – ALL MEMBER OF HH

UNIVERSE: ALL

Student Status: STUDE

Universe: All

4.1 Is (he, she, you) currently enrolled in any type of school, including daycare, technical school, or university? IF AGE 18+, FOLLOW UP WITH: IS THAT FULL-TIME OR PART-TIME?

- 1 Yes – FULL TIME
- 2 YES – PART TIME
- 3 No
- 8 DON'T KNOW
- 9 REFUSED

School: SCHOL

Universe: STUDE < 3

INTERVIEWER NOTE: CHECK AGE OF PERSON WHEN ASKING

4.2 What school grade or level does this person attend? [SCHOL]

- 1 Daycare
- 2 Nursery school, pre-school
- 3 Kindergarten to Grade 8
- 4 Grade 9 to 12
- 5 Technical/Vocation School
- 6 2-year college (Community College)
- 7 4-year college or university
- 8 Graduate school/professional
- 97 OTHER, SPECIFY
- 98 DON'T KNOW
- 99 REFUSED

School Location: SLOC

Universe: STUDE < 3 and SCHOL = 1-4

4.3 And is (he, she, you) home schooled?

- 1 YES
- 2 NO
- 8 DON'T KNOW
- 9 REFUSED

School Name: SNAME

Universe: STUDE > 3 and SLOC <> 1

4.4 What is the name of YOUR school? [OPEN]

School Address: SADDR

Universe: STUDE > 3 and SLOC <> 1

4.5 What is the address of this school? [SADDR][SCITY][SSTAT][SZIP] [INTERVIEWER NOTE: HABITUALS ARE REQUIRED FOR DATA DELIVERY]

School Cross Streets: SXSTR

Universe: STUDE > 3 and SLOC <> 1 and SADDR = REFUSED

- 4.6 Can you tell me the nearest cross streets of this school? [SXSTR] city, state, zip [INTERVIEWER NOTE: HABITUALS ARE REQUIRED FOR DATA DELIVERY]

School Mode: SMODE

Universe: STUDE > 3 and SLOC <> 1

- 4.7 How {did/do} {he/she/you} usually get school last week? MODE USED FOR MAJORITY OF TRIP
- 1 WALK
 - 2 BIKE
 - 3 WHEELCHAIR/MOBILITY SCOOTER
 - 4 SKATES/SKATEBOARD/KICK-SCOOTER/SEGWAY
 - 5 AUTO DRIVER (CAR OR SMALL TRUCK)
 - 6 AUTO PASSENGER (CAR OR SMALL TRUCK)
 - 7 CARPOOL/VANPOOL/OTHER GROUP RIDE
 - 8 MOTORCYCLE/MOPED/MOTORIZED SCOOTER
 - 9 LOCAL BUS (REGULAR, STANDARD, CITY)
 - 10 EXPRESS BUS (SUBURBAN, COMMUTER, INTER-CITY)
 - 11 SCHOOL BUS
 - 12 CHARTER BUS (INCLUDING EMPLOYER-PROVIDED/ OTHER CONTRACTED)
 - 13 SHUTTLE BUS (PUBLIC OR EMPLOYER-PROVIDED)
 - 14 PARATRANSIT SERVICE (ACCESS-A-RIDE, DIAL-A-RIDE, ETC.)
 - 15 SUBWAY (NYCT, STATEN ISLAND RAILWAY)
 - 16 PATH TRAIN
 - 17 RAILROAD (LIRR, METRO NORTH, NJ TRANSIT, AMTRAK)
 - 18 LIGHT RAIL /LRT (NEWARK, HUDSON-BERGEN, RIVER LINE)
 - 19 FERRY (STATEN ISLAND, NY WATERWAY, WATER TAXI, SEASTREAK)
 - 20 TAXI (YELLOW/MEDALLION CAB)
 - 21 FOR-HIRE VAN /JITNEY/GYPSY CAB
 - 22 BLACK CAR SERVICE/LIMO
 - 23 ROOSEVELT ISLAND TRAM
 - 24 AIRTRAIN OR AIRPORT BUS
 - 97 OTHER (SPECIFY)
 - 98 DON'T KNOW
 - 99 REFUSED

Frequency or Bike Travel: FBKTS

Universe: SMODE = 2

- 4.8 How frequently did you travel to school last week by bike?
- 1 Once
 - 2 2-3 times
 - 3 4 or more times
 - 8 Don't Know

Travel Time to School: TTTSS

Universe: SMODE = 2

4.9 What is your typical travel time, in minutes, to school? RECORD MINUTES

5: FINALIZING RECRUITMENT

UNIVERSE: ALL

I have one last question for you.

Household Income: INCOM WE STILL NEED TO CONFIRM THE INCOME BANDS

Universe: ALL

5.1 To ensure our study is representative of all income groups in the region,

a. Please let me know if your household's total income last year was above or below \$30,000?

Below \$30,000 - 11

Above \$30,000 - 22

IF NECESSARY: Household income not only allows us to verify that we are including all types of households from the region, but also has been found to be related to the types of trips households make.

[IF BELOW \$30,000]

1 Less than \$15,000

2 \$15,000 to \$29,999

99 REFUSED

IF ABOVE \$30,000, ASK: And was it above or below \$100,000?

Below \$100,000 - 44

Above \$100,000 - 55

b. [IF BELOW \$100,000]

3 30,000 to \$49,999

4 50,000 to \$74,999

5 75,000 to \$99,999

99 REFUSED

c. [IF ABOVE \$100,000]

6 \$100,000 to \$149,999

7 \$150,000 to \$199,999

8 \$200,000 or more

99 REFUSED

IF REFUSED: I appreciate your concerns about providing this information, but I only need to properly identify your household as belonging to one of the following categories: GO BACK TO "a".

As I mentioned at the beginning of this interview, understanding your household's travel and activities is very important for improving transportation in your area.

NOTE: DIARY SAMPLE 5.2; GPS SAMPLE 5.3

Travel Day Assignment: ASSN
Universe: All Diary Sample

- 5.2 Thank you for your participation in this important study. We will send you a diary for each member of your household to keep track of your travel and activities for 24 hours on [DAY AND DATE].
- 1 YES
 - 2 NO – Well, let’s try a different time. How about [ALT DAY AND DATE].

ENTER ASSIGNMENT NUMBER [ASSN]

Travel Day Assignment: ASSN
Universe: All GPS Sample

- 5.3 Thank you for participating in this important study. Understanding your household’s travel and activities is very important for improving transportation in your area. We will send you a GPS Device for each member of your household age 16+ to keep track of your travel and activities for two consecutive days starting on [DAY AND DATE]. Persons under age 16 will be assigned diaries.
- 1 YES
 - 2 NO – Well, let’s try a different time. How about [ALT DAY AND DATE].

ENTER ASSIGNMENT NUMBER [ASSN]

Incentive Offer: INCNT1
Universe: All DIARY Not Matched

- 5.4 We are offering \$50 in appreciation of your efforts, but only if EVERYONE in your household completes a travel diary and reports your travel information by <[ASN10]>. Once all your travel information is complete and confirmed for EVERYONE in your household, we will mail you a check.

Incentive Offer: INCNT2

Universe: All GPS MATCHED

- 5.5 We are offering \$25 in appreciation of your efforts, but only if EVERYONE in your household carries the GPS device or completes a paper diary so that we have good travel information by <[ASN10]>. Once all your travel information is complete and confirmed for EVERYONE in your household, we will mail you a check.

Incentive Offer: INCNT3

Universe: All GPS NOT MATCHED

- 5.6 We are offering \$75 in appreciation of your efforts, but only if EVERYONE in your household carries the GPS device or completes a paper diary so that we have good travel information by <[ASN10]>. Once all your travel information is complete and confirmed for EVERYONE in your household, we will mail you a check.

Addressee: HHNME

Universe: All Households

- 5.7 To whom should we address the envelope? [IMPORT FNAME AND LNAME COLLECTED EARLIER AND CONFIRM LISTED NAME. IF NULL OR INCORRECT, OBTAIN NEW]
- FIRST NAME _____ LAST NAME _____
- 9 REFUSED --> INDICATE THAT INFORMATION IS NECESSARY, IF STILL REFUSE, TERMINATE

INTERVIEWER NOTE: CONFIRM SPELLING AND READ BACK

Mailing Address: MADDR

Universe: All Households

5.8 In order to mail the survey materials to you, I need your mailing address. IF SAME AS LOCATION ADDRESS REFER TO S12a.

****MAILING ADDRESS HERE****

GTYPE=1/The travel diaries and the GPS devices will be shipped to you within the next week. After your travel date, you can return the GPS devices by Fedex using the return envelope provided with the equipment.

Is your home address the best place for us to have these items delivered to you?

NOTE: PO BOXES ARE NOT VALID SHIPPING ADDRESSES FOR FEDEX.

GTYPE=2/Is this also your mailing address?

Survey Language: SLANG

Universe: All Households

In which language should I send your diary materials?

- 1 English
- 2 Spanish
- 3 Chinese
- 4 Russian

Retrieval MODE Preference: CATSI

Universe: All

5.10 After your travel day, we will ask you to report details about the places you visited. Would you prefer to report them by telephone interview or via the website?

1. Telephone Interview
2. Web Interview

Contact Collection: RMNEW

Universe: All Households

5.11 Please note that we will contact you to remind you about your travel date on the day before <ASSN> and to provide you with additional instructions during your participation. Reminders can be made by a telephone call, by text message, or by email

Reminder Email: RMEML

5.12 What is a valid the email address we can use for reminder messages? FORMAT EXAMPLE:
KHILSENBECK@NUSTATS.COM

NEED TO ADD REFUSAL OPTION OR DO NOT FORCE AN ENTRY

Reminder Text: RMTXT

5.13 What mobile number can we use for reminder text messages?

NEED TO ADD REFUSAL OPTION OR DO NOT FORCE AN ENTRY

Reminder Phone: RMPHN

- 5.14 What number can we call for reminder messages?
FORMAT: 999-999-9999

NEED TO ADD REFUSAL OPTION OR DO NOT FORCE AN ENTRY

REMNI

Your reminder can be made by a telephone call, by text message, or by email. Please choose the method(s) by which you would prefer to receive your reminder message (choose all that apply):

- 1 Email Message sent to: <RMEML>
- 2 Text Message sent to: <RMTXT>
- 3 Telephone Call made to: <RMPHN>

Cell or Landline: CPHNE

Universe: All Households

- 5.15 Is that a cell phone or landline?
- 1 CELL
 - 2 LANDLINE
 - 9 REFUSED

Best Day: BEDAY

Universe: All

- 5.17 What are the best day(s) to reach you at this number? SELECT ALL THAT APPLY
- 1 MONDAY
 - 2 TUESDAY
 - 3 WEDNESDAY
 - 4 THURSDAY
 - 5 FRIDAY
 - 6 SATURDAY
 - 7 SUNDAY
 - 9 REFUSED

Best Time: DECBT

Universe: All

- 5.18 What is the best time of day to reach you at this number?
- 1 Morning
 - 2 Afternoon
 - 3 Evening

REMNI

Do you have any preferences for how you would like to receive your reminder message? You may select more than one option. (CHOOSE ALL THAT APPLY):

- 1 Email Message sent to: <RMEML>
- 2 Text Message sent to: <RMTXT>
- 3 Telephone Call made to: <RMPHN>

CASI retrieval reminder Mode: REMN2

Universe: CATSI=2

5.19 After your travel is complete we will need to collect your travel details. We will contact you to remind you about providing these details <pronoun: if GTYPE=1 <after your GPS device is received and the data is processed>. We will use the same contact methods you specified above:

Telephone reminder: <RMPHN>

Text message: <RMTXT>

Email message: <RMEML>

0 All of the above forms of contact are okay.

2 Do not call

3 Do not text

4 Do not email

Best Proxy: PROXY

Universe: All

5.20 When we call back to collect your travel and activities, we will not ask to speak to anyone under 16 years old, but we would like to ask about their travel. Who would be the best person to give that information? ENTER PERSON NUMBER.

CONCLUSION

Thank you for participating in the Regional Travel Survey. Please tell the other members of your household how important their participation is for the success of the study. We look forward to talking with you again. If you have any questions or comments, I have a toll free phone number where you can reach us. Would you like that number? IF THEY WANT THE NUMBER: **888-223-6234**. Thank you and have a good day/night.

HOTLINE NUMBERS:

English: 1-888-223-6234

Spanish: 1-888-223-6234

Russian: 1-800-591-8862

Chinese: 1-800-591-8862

Appendix D: Retrieval Questionnaire

Reminder Call

Sample Number: «SAMPN» Telephone #: «PHONE» Preferred time: «PTIME»
 COUNTY:«COUNT» FIPSCODE:«FIPS» [PINNO]
 Project Website: www.regionaltravelsurvey.org

[INT01]: Hi, my name is _____ calling about the Regional Travel Survey. May I speak to <RESPF>
 <RESPL>?

[IF RESPONDENT ON PHONE] I was just calling to remind you that your household will be participating in the Regional Travel Survey and also to see if you had any questions about the study. Please keep in mind that we are asking each member of your household record all their trips on <ASSN>. This will help improve transportation in your area.

1	CONTINUE	RC→ Skip to PACKT
2	NO ANSWER	RN
3	BUSY	RZ
4	ANSWERING MACHINE	RA
5	LEFT MESSAGE	LM
6	COMPUTER/FAX MACHINE	IM
7	BUSINESS/GOVERNMENT	IG
8	DISCONNECT	ID
9	CALLER ID	PM
10	REMINDER REFUSAL	RR
11	HUNG UP (W/O A WORD)	RH
12	WRONG NUMBER (NEED TO RESEARCH)	WN
13	RESPONDENT HAS MOVED	WV
14	RESP WILL CM ONLINE	WC
15	RESCHEDULE, CALLBACK	RT
16	RESCHEDULE, REMAIL	RM

PRNGP – Variations:

1= Non-GPS (GTYPE=2 or 3)

2= All HHMEM between 16 and 75, GPS, no Diaries (GTYPE=1 and AAGE2=2 and AGE>16 or AGE16=1)

3= Some HHMEM under 16, over 75, and between 16 and 75, GPS (GTYPE=1 and AAGE2=1 or AGE<16 or AGE16=2)

[PACKT]

[IF PRNGP=1] Did your household receive the travel diaries packet that we sent to you?

NOTE: BEFORE YOU MOVE ON, ASK: Do you have any questions about the study or the diaries? WAIT TO SEE; ANSWER ANY QUESTIONS

Please remember to record exact times and exact location addresses. This helps us collect information that is very helpful to transportation planners.

[IF PRNGP=2] Did your household receive the packet with GPS devices and instructions that we sent?

NOTE: BEFORE YOU MOVE ON, ASK: Do you have any questions about the study or the GPS devices? WAIT TO SEE; ANSWER ANY QUESTIONS

When you receive the GPS packet, it will contain instructions. Please use the devices as instructed so we collect accurate travel information.

[IF PRNGP=3] Did your household receive the packet containing travel diaries and GPS devices that we sent to you?

NOTE: BEFORE YOU MOVE ON, ASK: Do you have any questions about the study, the diaries or the GPS devices? WAIT TO SEE; ANSWER ANY QUESTIONS

For household members using diaries, please ask them to record exact times and exact location addresses. This helps us collect information that is very helpful to transportation planners. For anyone using a GPS device, the packet will contain instructions for wearing/carrying the GPS unit. Please make sure to read the instructions and use the devices as indicated.

- 1 YES → Skip to ANYQU
- 2 NO

[INT04]: [IF PAKT=2] You can download your logs from www.regionaltravelsurvey.org.

IF NEEDED, RESCHEDULE. REMEMBER, ALL TRAVEL IS IMPORTANT!

RF: Let me assure you that your information is confidential and used only for research purposes. IF NEEDED: We would really like to include your household in this important project. Let me set up a new travel day for your home. SELECT "RM".

ADD NEW DISPOSITION CALLED RG – THESE ARE GEOSTATS RESCHEDULES.

- 1 CONTINUE (RC) → Skip to ANYQU
- 2 RESCHEDULE (RT)
- 3 CANNOT DOWNLOAD, REMAIL (RM) →VERIFY MADDR
- 4 GEOSTATS RESCHEDULE (RG) *
- 5 FINAL REFUSAL (RF)

TEXT FOR GPS FURTHER DETAILS: Someone from our GPS team will contact you in the next few days to reschedule your household's travel day. Thank you for your time and have a good day.

IF NEEDED: That team handles the GPS part of the study and has a different system for scheduling travel days. I apologize for the inconvenience.

PRN16 – Variations

1= Non-GPS (GTYPE==2 or 3)

2= All HHMEM between 16 and 75, GPS, no Diaries (GTYPE=1 and AAGE2=2 and AGE>16 or AGE16==1)

3= Some HHMEM under 16, over 75, GPS (GTYPE=1 and AAGE2=1 or AGE<16 or AGE16==2)

[ANYQU]

[IF PRN16=1] Do you have any questions about the diaries or what we're asking you to do?

Just to reiterate, we would like everyone in the household to record where they go on <ASSN>. Each person should have received a diary to enter the places they visit or stops they make,

including complete addresses, and accurate arrival and departure times, as well as how they got there and the purpose of the trip.

IF NEEDED: This information will be kept confidential and will only be used to improve transportation planning in the area.

IF PRN16=2 Do you have any questions about the GPS devices or what we're asking you to do?

Just to reiterate, we would like everyone who received a GPS device to carry or wear it throughout the day on <ASSN> and for <PRNDY> more complete days.

IF NEEDED: This information will be kept confidential and will be used to improve transportation planning in the area.

IF PRN16=3 Do you have any questions about the GPS devices or the travel diaries and what we're asking you to do?

Just to reiterate, we would like everyone who received a GPS device to carry or wear it throughout the day on <ASSN>. If the household has persons under the age of 16 or over the age of 75, then they should use the diaries on <ASSN> to enter the places they visit or stops they make, including complete addresses, and accurate arrival and departure times, as well as how they got there and the purpose of the trip.

IF NEEDED: This information will be kept confidential and will be used to improve transportation planning in the area.

[CATSI]: Once you have completed recording your travel details, you previously indicated you would prefer to do the final interview by <CATSI>. Is that still your preference?

1. Telephone Interview
2. Web Survey

[EMAIL]: Display and verify that we have an email address imported from recruit

The email address you provided is <RMEML>, is that correct?

IF NO: What is the correct e-mail address?

[MPHONRMPHN]: Display and verify that we have a correct mobile phone number imported from recruit

The cell phone number you provided is <RMPHN>, is that correct?

[RINCE] [IF INCEN=1] – Reminder Incentive

Just a reminder, your household is being offered \$<INAMT> if EVERYONE in the household completes the study with valid travel information, we will send your household \$<INAMT> in the next 8-10 weeks.

1 CONTINUE

PRNCB – Variations

1= [CATSI=1 and GTYPE=2 or 3] (diaries)

2= [CATSI=2 and GTYPE=2 or 3] (diaries)

3= [CATSI=1 and GTYPE=1 and AAGE2=1 and all household members are age between 16 and 75] (no diaries)

4= [CATSI=1 and GTYPE=1 and AAGE2=1 and at least one hh member is younger than 16 or older than 75] (diaries)

5= [CATSI=2 and GTYPE=1 and AAGE2=1 and all household members are age between 16 and 75] (no diaries)

6= [CATSI=2 and GTYPE=1 and AAGE2=1 and at least one hh member is younger than 16 or older than 75] (diaries)

[CALBC]

IF PRNCB=1 At this time, I would like to schedule a time to call back after your household records your travel information. Ideally, we would like to speak with you, but if not, we'd like to speak to someone age 18 or older. If possible, we would like to schedule a time on <BGDAT> . What time are you available on that day for us to call? [INTERVIEWER NOTE: SET UP CALLBACK THE DAY AFTER TRAVEL IF POSSIBLE]

Thank you very much for your participation in this important study. Please hang on to your survey materials INCLUDING THE TRAVEL DIARY until we call you to retrieve your travel information. Once we've collected them you may recycle or retain them for your records.

Have a great day/evening!

IF PRNCB=2 After your travel date is complete, you will need to log into the survey website to report your household travel information. Someone from your household, age 18 or older, should be available to log in and begin the survey. If possible, you should schedule a time on <BGDAT> to do this. Would you like me to provide the web address and your personal login number? IF YES: The web site address is www.regionaltravelsurvey.org and your personal ID number is [PINNO].

Thank you very much for your participation in this important study. Please hang on to your survey materials INCLUDING THE TRAVEL DIARY until the time when you log in to report your travel information. Once you have reported your data you may recycle or retain the materials for your records.

Have a great day/evening!

IF PRNCB=3 After you have participated in the study and returned the GPS equipment, we will contact you to confirm the details about your travel.

Thank you very much for your participation in this important study.

Have a great day/evening!

IF PRNCB=4 After you have participated in the study and returned your GPS equipment, we will call you to confirm the details about your travel.

Thank you very much for your participation in this important study. Please hang on to your diaries [IF GPS HH: and memory joggers] until we call you to retrieve your travel information. Once we've collected them you may recycle or retain them for your records.

Have a great day/evening!

IF PRNCB=5 After you have participated in the study and returned the GPS equipment, we [NOTE: THIS MEANS GEOSTATS FOR GPS HHs] will contact you <CONTC> with further instructions about logging onto the survey website to report your household travel information. Someone from your household, age 18 or older should be available to log in and begin the survey. We request that each adult age 16 or older enter his/her own travel information.

Thank you very much for your participation in this important study.

Have a great day/evening!

IF PRNCB=6 After you have participated in the study and returned the GPS equipment, we will contact you <CONTC> with further instructions about logging onto the survey website to report your household travel information. Someone from your household, age 18 or older should be available to log in and begin the survey. We request that each adult age 16 or older enter his/her own travel information.

Thank you very much for your participation in this important study. Please hang on to your survey materials INCLUDING THE TRAVEL DIARY to use when you log in to report your travel information. Once you have reported your data you may recycle or retain the materials for your records.

Have a great day/evening!

Retrieval Call

Sample Number: «SAMPN» Telephone #: «PHONE» Preferred time: «PTIME»
COUNTY:«COUNT» FIPSCODE:«FIPS» Add <<PINNO>>:
Project Website: www.regionaltravelsurvey.org

INTRODUCTION 1

UNIVERSE: ALL

HELLO

Universe: Someone answers the telephone.

INTRO 1

Universe: All

- 1.1 **[INT02]:** Hi, my name is_____ with [ONLY ONE DEPENDING ON STATE]:
[IF NY] the New York Metropolitan Transportation Council
[IF NJ] the North Jersey Transportation Planning Authority
[IF CT] Regional Travel Survey HH.

We recently spoke with «FIRSTNAME» «LASTNAME» and are calling back now to complete the interview. May I please speak with «FIRSTNAME»?

- 1 HAVE RESPONDENT [GO TO 1.4]
- 2 RESPONDENT NOT AVAILABLE [GO TO 1.3]

1.3 **[CALBK]** SCHEDULE CALL BACK

When would be a better time to reach «FIRSTNAME»?

- 1.4 Last week, we spoke with you about the travel survey and asked you to record your travel day on [ASSN]. We would like to collect your trip information today.

Just a reminder, your household is being offered <INAMT> to thank you for your participation in this study. If EVERYONE in the household completes the study with valid travel information, we will send your household <INAMT> in the next 8-10 weeks.

SCPT0 , If you are not , then select your name from the list.

Choices P1 <Name>
P2 <Name>
P3<Name>
ETC

SCPT1 Last week, we spoke with you about the travel survey and asked you to record your travel on . It is time to report details about your trips now.

First, please verify some information you provided before, about you and your household (particularly household size, household member characteristics, and household vehicle info).

Choices = OK to Continue

VADD: Lets start by verifying the address where you live. Our records show that your address is:

- 1 Yes address correct
- 2 No, Address needs to be updated

RECALL INFO FROM RECRUITMENT FOR INTERVIEWER TO REFERENCE

«ADDRESS»

«CITY», «STATE» «ZIP»

Travel Day: «TDAY»

Assignment #: «ASSIGN»

VERIFY ALL INFO BELOW EVEN IF COLLECTED IN RECRUITMENT, SO NOT JUST VERIFICATION

Household Size: HHSIZ

Universe: All

Our records show that there is/are <OHSIZ> person/people living in your household. Is this correct? ENTER A NEW NUMBER BELOW IF NEEDED

- 1 One
- 2 Two
- 3 Three
- 4 Four
- 5 Five
- 6 Six
- 7 Seven
- 8 Eight or more
- 98 DK
- 99 RF

HOUSEHOLD MEMBER CHARACTERISTICS VERIFICATION:

HOUSEHOLD MEMBER CHARACTERISTICS (AGE, WORKER STATUS, STUDENT STATUS),

Okay- now I'll confirm the name, age, gender, employment status, and student status we have for each household member. VERIFY PERSON INFORMATION BY CLICKING ON PERSON SUMMARY BUTTON. SELECT THE PERSON(S) YOU NEED TO MAKE CHANGES TO. <LKPER>

	NO CHANGES NEEDED THIS PERSON	EDIT THIS PERSON	ADD THIS PERSON	DELETE THIS PERSON
PERSON 1	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PERSON 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

WHATC: WHAT ARE YOU CHANGING

- 1 PERSONAL INFORMATION (NAME, AGE, LICENSE, ETC)
- 2 EMPLOYMENT INFORMATION STATUS
- 3 EMPLOYMENT ADDRESS
- 4 STUDENT INFORMATION (STATUS, EDUCATION, ETC)
- 5 GO TO LOG QUESTIONS

Completed Diary: CMPLG

Universe: All

Did complete their travel log?

- 1 YES (COMPLETED)
- 2 NO (NOT COMPLETED)
- 3 DID NOT RECEIVE MATERIALS
- 8 DK
- 9 RF

Have Completed Diary: HVLOG

Universe: CMPLG = 1

Do you have the completed diary to refer to? [IF NEEDED: I can wait while you get it.]

- 1 Yes
- 2 No
- 9 Refused

NOTE IF HH MEMBERS ARE ADDED IN BETWEEN REC AND RET, COLLECT THE FOLLOWING PERSON INFO (FROM REC SCRIPT) FOR THOSE NEW MEMBERS:

- Age
- Work Status
- Work Location
- School Status
- School Location

Household Vehicle: HHVEH

Universe: All

In terms of vehicles available to your household, we show that you have <HHVEH> available. Is that right?
(Make changes below by selecting the new number as needed)

- 1 One
- 2 Two
- 3 Three
- 4 Four
- 5 Five
- 6 Six
- 7 Seven
- 8 Eight or more
- 98 DK
- 99 RF

HOUSEHOLD VEHICLE INFORMATION (YEAR, MAKE, MODEL)

Thanks; now I'll confirm the year and body type we have for each household vehicle. VERIFY VEHICLE INFORMATION BY CLICKING ON VEHICLE SUMMARY BUTTON. <LKVEH>

***NOTE* IF HH VEHICLES ARE ADDED, COLLECT ALL VEHICLE DATA AS SEEN IN RECRUITMENT**

	NO CHANGES NEEDED THIS VEHICLE	EDIT THIS VEHICLE	ADD THIS VEHICLE	DELETE THIS VEHICLE
VEHICLE 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
VEHICLE 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

INCOME REFUSAL CONVERSION/VERIFICATION- ASK ONLY IF NOT COLLECTED IN RECRUITMENT

[INCOM]: And to make sure your household properly represents others in the region, please pick the option from the following categories which best represents your total household income for 2009: **IF NEEDED:** We understand if you feel uncomfortable answering this question. However, we only ask about income to ensure all households are equally represented in our survey. Income has been found to be related to the types of trips households make, and we need to make sure we get information for all types of trips and income levels.

- 1 Less than \$15,000
- 2 \$15,000 - \$24,999
- 3 \$25,000 - \$34,999
- 4 \$35,000 - \$39,999
- 5 \$40,000 - \$49,999
- 6 \$50,000 - \$59,999
- 7 \$60,000 - \$74,999
- 8 \$75,000 - \$99,999
- 9 \$100,000 - \$149,999
- 10 \$150,000 or More
- 98 DK
- 99 RF

VERIFY HABITUALS (HOME, WORK, SCHOOL). HABITUALS REQUIRED FOR DATA DELIVERY.

BEGIN PERSON ROSTER

Gather Trip Information 2

Universe: All

IN TRIP BUILDER

Thank you for recording your travel on your designated travel day.

The next step is to report your travel activity. This information helps transportation planners see patterns and know where to invest new transportation resources.

WHO ARE YOU SPEAKING WITH?

We will now use an interactive mapping tool to map your home, work, and school locations

Please search for your household's locations to place them on the map OR click the "Set Location" button to mark them on the map directly. Follow STEP 1 and STEP 2 for each location.

We will now use a similar tool to collect information about the PLACES you visited on your assigned travel day.

Referring to your diary, please specify information about each place, starting with where you were at 3 am.

[PROXY] QUESTION IN THIS LOCATION IS REMOVED.

Place Type: PTYPE

Universe: All

2.4 IF PLACE 1: Okay, where were you at 3 am on [ASSN]? COLLECT PLANO1 AND NOGO EVEN FOR ZERO-TRIP PERSON

OTHERWISE: Where did you go next?

- 1 Home
- 2 Primary Job
- 3 Second Job
- 4 School
- 5 Transit Stop
- 6 Other Place (Specify)

ADDRESS INFORMATION CAPTURED IN TRIPBUILDER

[INTERVIEWER NOTE: PLACE NAME SHOULD INCLUDE INFORMATION DESCRIBING THE PLACE IF IT IS UNCERTAIN. EXAMPLE: "TATTERED COVER" SHOULD BE "TATTERED COVER BOOKSTORE". ASK "WHAT TYPE OF PLACE IS THIS?" IF YOU DO NOT KNOW THE TYPE OF THE PLACE]

Place Name: PNAME

Universe: All

2.5 What was that place?

Address: ADDR

Universe: All

2.6 What is the street address of that place?

And the city? [CITY]

In what state is that address? [STATE]

Do you know the zip code? [ZIP]

2.8 **[STOPS] [IF PLANO>1]** Did you/NAME make any stops along your travel to [home/work/school/this place], such as a quick errand, to stop for fuel, pick up food, or to pick up drop off a friend or family member?

- 1 Yes –collect unreported trip info.
- 2 No – CONTINUE COLLECTING CURRENT TRIP

Arrival Time: ARRTIME

Universe: All

2.9 What time did you arrive there? MILITARY TIME

Trip Duration: TRAVETIME

Universe: All

2.10 TRIP DURATION CALCULATED

Trip Mode: MODE

Universe: All

- 2.11 How did you get there?
- 1 WALK
 - 2 BICYCLE
 - 3 WHEELCHAIR/ MOBILITY SCOOTER
 - 4 SKATES, SKATE-BOARD, KICK-SCOOTER, SEGWAY
 - 5 AUTO (CAR OR SMALL TRUCK) DRIVER
 - 6 AUTO (CAR OR SMALL TRUCK) PASSENGER
 - 7 CARPOOL, VANPOOL, OTHER GROUP RIDE
 - 8 MOTORCYCLE, MOPED, MOTORIZED SCOOTER
 - 9 LOCAL BUS (REGULAR, STANDARD, CITY)
 - 10 EXPRESS BUS (SUBURBAN, COMMUTER, INTER-CITY)
 - 11 SCHOOL BUS
 - 12 CHARTER BUS (EMPLOYER-PROVIDED OR OTHER CONTRACTED)
 - 13 SHUTTLE BUS (PUBLIC OR EMPLOYER-PROVIDED)
 - 14 PARATRANSIT SERVICE (ACCESS-A-RIDE, DIAL-A-RIDE, ETC)
 - 15 SUBWAY (NYCT, STATEN ISLAND RAILWAY)
 - 16 PATH TRAIN
 - 17 RAILROAD (LIRR, METRO NORTH, NJ TRANSIT, AMTRAK)
 - 18 LIGHT RAIL / LRT (NEWARK, HUDSON-BERGEN, RIVER LINE)
 - 19 FERRY (STATEN ISLAND, NY WATERWAY, WATER TAXI, SEASTREAK)
 - 20 TAXI (YELLOW, MEDALLION CAB)
 - 21 FOR HIRE VAN, JITNEY, GYPSY CAB
 - 22 BLACK CAR SERVICE/LIMO
 - 23 ROOSEVELT ISLAND TRAM
 - 24 AIRTRAIN OR AIRPORT BUS
 - 97 OTHER, SPECIFY

Travel Party: PARTY

Universe: All

- 2.12 How many others traveled with<YOU2 >? NOT INCLUDING THIS RESPONDENT

Household Members: HHMEM

Universe: TOTTR > 1

- 2.13 Of these, how many were household members? NOT INCLUDING THIS RESPONDENT

Person Number on Trip: PERTP

Universe: HHMEM > 1

- 2.14 Who were the household members (enter ALL PERNO) NOT INCLUDING THIS RESPONDENT

COMPUTE [NONHH] NON-HH MEMBERS

COMPUTE [TOTTR] = [PARTY]-[HHMEM]

Vehicle Number: VEHNO
Universe: MODE = 5 or 6

2.15 Which vehicle did<YOU >use?

ENTER HH VEH NUMBER OR 97 FOR NON-HH VEHICLE

Exit Vehicle: DYGOV
Universe: MODE = 5 or 6 and PNAME<>HOME

- 2.16 Did you get out of your vehicle at this place?
- 1 YES
 - 2 NO [would be appropriate for dropping off / picking up passengers, getting food at a drive through, etc.]

Parking Location: PLOC
Universe: MODE = 5 and DYGOV = 1

- 2.17 Did you park at this destination or off-site?
- 1 AT THIS DESTINATION
 - 2 OFF SITE
 - 9 DK/RF

Parking Cross Streets: PXSTR
Universe: PLOC = 2

2.18 What are the nearest cross streets to this location? _____ and _____

Parking Description: PRKTY
Universe: MODE = 5 and DYGOV = 1

- 2.19 Which of the following best describes the place you parked?
- 1 Parking Lot
 - 2 Parking Garage
 - 3 Street
 - 4 Driveway
 - 5 Residential garage
 - 7 Or something else (SPECIFY)
 - 8 DON'T KNOW
 - 9 REFUSED

Pay to Park: PAYPK
Universe: DYGOV = 1 and PRKTY <> 4

- 2.20 Did you pay to park?
- 1 YES
 - 2 NO
 - 9 DK/RF

Pay to Park Amount: PKAMT

Universe: PAYPK = 1

2.21 How much did you pay to park? Add “[SET THE FORMAT TO 2 DECIMAL PLACES]”

\$ _____.

Pay Unit: PKUNT

Universe: PAYPK = 1

Amount per unit

- 1 Per Hour
- 2 Per Day
- 3 Per Week
- 4 Per Month
- 5 Per Semester
- 6 Per Year
- 8 DON'T KNOW
- 9 REFUSED

Paid fee for a Toll Road or Bridge/Tunnel on Trip: TOLFT

Universe: MODE=5-8

2.22 Did you pay a fee for a toll road or bridge/tunnel on your trip?

- 1 Yes, I paid a fee for a toll road or bridge/tunnel
- 2 No, I didn't incur a toll on this trip
- 3 Yes, I used E-ZPass

Number of Toll Facilities Used: TLONB

Universe: TOLFT = 1 or 3

2.22a How many toll facilities did you use

- 1 One
- 2 Two
- 3 Three
- 4 Four
- 5 Five

Toll Road or Bridge/Tunnel: TLFC1-5

Universe: TLONB > 0 and < 9

2.22aa For the <x> facility, was it a toll road or a bridge/tunnel?

- 1 Toll Road
- 2 Bridge or Tunnel
- 9 Don't Know/Refused

Name of Toll Facility: TOPN1-5

Universe: TLFC1-5 = 1 or 2

2.22ab What is the name of the toll facility?

Interchange Used to Enter Facility: TOLE1-5
Universe: TLFC1-5 = 1

2.22ac Which exit did you use to enter the facility? OPEN

Interchange Used to Exit Facility: TOLX1-5
Universe: TLFC1-5 = 1

2.22ad Which exit did you use to exit the facility? OPEN

Amount of Toll Fee Paid: TLLC1-5
Universe: TLFC1-5 = 1 or 2

2.23 How much did you pay for the toll?
RECORD OPEN RESPONSE ADD FORMAT 2.00; 3.50, 10.00, etc

Toll Payment Method: TLFR1-5
Universe: TLFC1-5 = 1 or 2

2.23a How did you pay for the toll?
1 Cash
2 EZ-Pass
7 Other (specify)
8 Don't know
9 Refused

BEGIN TRANSIT QUESTIONS

Route/Line Number for Transit Trips: ROUTE
Universe: MODE = 9, 10, 14-19, 23, 24

2.25 What was the route/line? (LIST)

For the first bus or rail you took, What was the route/line? (LIST)

Transit Service: SERVC
Universe: MODE = 9, 10, 14-19, 23, 24

2.26 And on what transit service was this route or line? For example: Long Island Rail Road, NYC Transit, MTA, Metro North, NJ transit.

- 1 NEW YORK CITY TRANSIT (BUS/SUBWAY)
- 2 LONG ISLAND RAILROAD
- 3 METRO NORTH RAILROAD
- 4 STATEN ISLAND RAILROAD
- 5 LONG ISLAND BUS
- 6 WESTCHESTER BEE LINE
- 7 NEW JERSEY TRANSIT
- 8 PATH TRAIN
- 9 AMTRAK
- 10 HUDSON-BERGEN LTR
- 11 NEWARK LTR
- 12 RIVER LINE LTR

- 13 ROOSEVELT ISLAND TRAM
- 14 AIRTRAIN
- 97 OTHER, SPECIFY
- 99 RF

Transit Fare Type: FARE

Universe: MODE = 9, 10, 14-19, 23, 24

- 2.27 Did you pay with cash or did you use a pass?
- 1 CASH
 - 2 USED PASS
 - 8 DON'T KNOW
 - 9 REFUSED

Transit Fare Cash: FAREC

Universe: FARE = 1

- 2.27a How much did <YOU> pay?
999 Don't Know/Refused

Transit Pass Type: BUSPS

Universe: FARE = 2

- 2.28 What type of pass is it? [BUSPS is a delivery variable name. In TB, it will be collected as BUSPS1~BUSPS15, depending on SERVC]

Transit Pass Type: BUSPS1

Universe: FARE = 2 and SERCV = 1

- 2.28a What type of pass is it?
- 1 Unlimited Ride MetroCard
 - 2 Regular Pay-per-Ride MetroCard
 - 3 One Day Fun Pass
 - 4 Seven Day Unlimited Ride MetroCard
 - 5 Fourteen Day Unlimited Ride MetroCard
 - 6 Thirty Day Unlimited Ride MetroCard
 - 7 Seven Day Express Bus Plus MetroCard
 - 997 Other (Specify)
 - 999DK/RF

Transit Pass Type: BUSPS2

Universe: FARE = 2 and SERCV = 2

- 2.28b What type of pass is it?
- 11 Monthly
 - 12 Weekly
 - 13 Ten Trip Peak
 - 14 Ten Trip Off-Peak
 - 15 Ten Trip Senior/Disabled
 - 21 Peak
 - 22 Off-Peak
 - 23 Peak Child

- 24 Off-Peak Child
- 25 Onboard Peak
- 26 Onboard Off-Peak
- 27 Onboard Peak Child
- 28 Onboard Off-Peak Child
- 29 Senior/Disabled
- 31 Monthly
- 32 Weekly
- 33 Peak One-Way
- 34 Off-Peak One Way
- 36 Monthly School Tickets
- 37 UniTickets
- 38 Group Tickets
- 39 Getaways/Packages
- 40 New York City Getaways
- 41 One Day Getaways/Packages
- 42 Belmont Package
- 43 Free Rail or Discount Offers
- 997 Other (Specify)
- 999DK/RF

Transit Pass Type: BUSPS3

Universe: FARE = 2 and SERCV = 3

- 2.28c What type of pass is it?
- 51 Monthly
 - 52 Weekly
 - 53 Ten Trip
 - 54 Ten Trip Peak
 - 55 Ten Trip Off-Peak
 - 56 Ten Trip Senior/Disabled
 - 57 Ten Trip Intermediate
 - 58 One Way
 - 59 One Way Peak
 - 60 One Way Off-Peak
 - 61 One Way Senior/Disabled
 - 997 Other (Specify)
 - 999DK/RF

Transit Pass Type: BUSPS4

Universe: FARE = 2 and SERCV = 4

- 2.28d What type of pass is it?
- 71 Pay-per-ride MetroCard
 - 72 Unlimited Ride MetroCard
 - 73 Easy Pay Express MetroCard
 - 997 Other (Specify)
 - 999DK/RF

Transit Pass Type: BUSPS5

Universe: FARE = 2 and SERCV = 5

- 2.28e What type of pass is it?
- 81 Pay-per-ride MetroCard
 - 82 Unlimited Ride MetroCard
 - 83 Easy Pay Express MetroCard
 - 997 Other (Specify)
 - 999DK/RF

Transit Pass Type: BUSPS6

Universe: FARE = 2 and SERCV = 6

- 2.28f What type of pass is it?
- 91 Coins
 - 92 Senior/Disabled
 - 93 Paper Transfers
 - 94 Transfers with Pay-per-ride MetroCards
 - 95 Pay-per-ride MetroCard
 - 96 UniTicket
 - 997 Other (Specify)
 - 999DK/RF

Transit Pass Type: BUSPS7

Universe: FARE = 2 and SERCV = 7

- 2.28g What type of pass is it?
- 101 One-way Ticket
 - 102 Weekly Passes
 - 103 Monthly Passes
 - 104 Ten Trip Tickets
 - 105 Off-Peak Round Trip Ticket (ORT)
 - 106 Children's Fares
 - 107 Family Supersaver Fare
 - 108 Business Pass
 - 109 Patron Pass
 - 110 Student Monthly Pass
 - 111 Reduced Fare Program for Senior Citizens and Customers with Disabilities
 - 112 Military Personnel and their Dependents
 - 113 Intra-state Pass
 - 114 Intra-commuter Pass
 - 115 Ten-Trip Tickets
 - 116 Children's Fares
 - 117 Family Supersaver Fares
 - 118 College Student Monthly Passes
 - 119 Student Tickets (One-way and Transfers)
 - 120 Weekly Passes
 - 121 Via Secaucus Tickets
 - 122 Exact Fare
 - 123 Adult One-way
 - 124 Reduced Far One-way
 - 125 Children's One-way
 - 126 Adult Discount 10-Trip Ticket
 - 127 Monthly Pass
 - 128 Upgraded Rail Pass for use also on River Line
 - 129 One Zone Ticket with Transfer
 - 997 Other (Specify)
 - 999DK/RF

Transit Pass Type: BUSPS8

Universe: FARE = 2 and SERCV = 8

- 2.28h What type of pass is it?
- 132 One Trip Smart Link/PATH Single Ride Ticket
 - 133 Ten Trip Quick Card/Smart Link
 - 134 Twenty Trip
 - 135 Forty Trip
 - 136 Senior Smart Link Card
 - 137 Smart Link 1-Day Pass, Unlimited
 - 138 Smart Link 7-Day Pass, Unlimited
 - 139 Smart Link 30-Day Pass, Unlimited
 - 140 Pay-per-ride MetroCard
 - 997 Other (Specify)
 - 999 DK/RF

Transit Pass Type: BUSPS9

Universe: FARE = 2 and SERCV = 9

- 2.28i What type of pass is it?
- 141 Auto-train
 - 142 Multi-city
 - 143 Multi-ride
 - 144 USA Rail Pass
 - 997 Other(Specify)
 - 999 DK/RF

Transit Pass Type: BUSPS10

Universe: FARE = 2 and SERCV = 10

- 2.28j What type of pass is it?
- 151 Adult One-way
 - 152 Reduced Fare
 - 153 Children's One-way
 - 154 10-Trip
 - 155 Monthly Pass
 - 156 Weekly Pass
 - 157 Rail Pass
 - 997 Other(Specify)
 - 999 DK/RF

Transit Pass Type: BUSPS11

Universe: FARE = 2 and SERCV = 11

- 2.28k What type of pass is it?
- 161 Adult One-way
 - 162 Reduced Fare
 - 163 Downtown Fare
 - 164 Children's One-way
 - 165 10-Trip

166 Monthly Pass
167 Weekly Pass
168 Rail Pass
169 Upgraded Rail Pass
170 One-Zone Ticket with Transfer
997 Other(Specify)
999 DK/RF

Transit Pass Type: BUSPS12

Universe: FARE = 2 and SERCV = 12

2.28l What type of pass is it?
171 Adult One-Way Plus Bus to Philadelphia
172 Reduced Far Plus Bus to Philadelphia
173 Children's One-Way
174 10-Trip
175 Plus Bus to Philadelphia
176 Weekly Pass
177 Rail Pass
178 Upgraded Rail Pass
179 One-Zone Ticket with Transfer
997 Other(Specify)
999 DK/RF

Transit Pass Type: BUSPS13

Universe: FARE = 2 and SERCV = 13

2.28m What type of pass is it?
181 One-Way
182 Round Trip
183 Reduced Fare
184 10-Trip
185 Monthly Pass
186 Weekly Pass
997 Other(Specify)
999 DK/RF

Transit Pass Type: BUSPS14

Universe: FARE = 2 and SERCV = 14

2.28n What type of pass is it?
191 Pay-per-ride MetroCard
192 Monthly
193 Weekly
194 10-Trip
195 Per Year
997 Other (Specify)
999 DK/RF

Transit Pass Type: BUSPS15

Universe: FARE = 2 and SERCV = 15

- 2.28o What type of pass is it?
- 201 Unlimited Ride MetroCard
 - 202 Regular Pay-per-Ride MetroCard
 - 203 One Day Fun Pass
 - 204 Seven Day Unlimited Ride MetroCard
 - 205 Fourteen Day Unlimited Ride MetroCard
 - 206 Thirty Day Unlimited Ride MetroCard
 - 207 Seven Day Express Bus Plus MetroCard
 - 997 Other (Specify)
 - 999 DK/RF

Type of Unlimited Ride Metrocard: MTABP

Universe: BUSPS = 1

What type of unlimited ride metrocard was it?

- 1 One Day (Fun Pass)
- 2 Seven Day Unlimited Ride
- 3 Seven Day Express Bus Plus Unlimited Ride
- 4 Fourteen Day Unlimited Ride
- 5 Thirty Day Unlimited Ride
- 6 Annual Premium TransitCheck
- 7 Other type of Unlimited MetroCard (specify)
- 9 REFUSED

Transit Pass Cost: BPFAR

Universe: FARE = 2

- 2.29 How much did you pay for that pass? \$ _____
FORMAT 2.00, 2.50, 10.00 etc

Transit Pass Unit: FRBAS

Universe: FARE = 2

- 2.29a Cost Per Unit
- 1 Per Day
 - 2 Per Week
 - 3 Per Month
 - 4 Per Semester
 - 5 Per Year
 - 7 OTHER SPECIFY
 - 8 DON'T KNOW
 - 9 REFUSED

END TRANSIT QUESTIONS

Primary/Secondary Trip Purpose: TPURP/TPUR2
Universe: All

2.30 What was<YOUR >your main activity there?

2.31 And what else did you do there?

Lists for TPURP and TPUR2

AT MY HOME:

- 1 WORKING AT HOME (FOR PAY OR VOLUNTEER)
- 2 SHOPPING (ON-LINE, CATELOG, OR BY PHONE)
- 3 ANY OTHER ACTIVITIES AT HOME

CHANGE MEANS OF TRAVEL/TRANSFER

- 4 CHANGE TRAVEL MODE/TRANSFER (FROM CAR TO BUS/TRAIN, WALK TO BUS/TRAIN, ETC)

QUICK TRIPS/STOPS

- 5 DROPPED OFF PASSENGER FROM CAR
- 6 PICKED UP PASSENGER FROM CAR
- 7 GET GAS
- 8 DRIVE THROUGH (ATM, BANK, FAST FOOD, ETC).

AT MY WORK/VOLUNTEER LOCATION:

- 9 WORK/DOING MY JOB
- 10 OTHER WORK-RELATED ACTIVITIES AT WORK
- 11 VOLUNTEER WORK/ACTIVITIES

AT MY SCHOOL, DAYCARE, AND COLLEGE:

- 12 ATTENDING CLASS/STUDYING
- 13 ALL OTHER ACTIVITIES AT SCHOOL (EAT LUNCH, RECREATIONAL, ETC)

AT OTHER PLACES

- 14 WORK RELATED (MEETING, SALES CALL, DELIVERY)
- 15 SERVICE PRIVATE VEHICLE (OIL, LUBE, REPAIRS)
- 16 GROCERY/FOOD SHOPPING
- 17 OTHER ROUTINE SHOPPING (CLOTHING, CONVENIENCE STORE, HOUSEHOLD MAINTENANCE)
- 18 SHOPPING FOR MAJOR PURCHASES OR SPECIALTY ITEMS (APPLIANCES, ELECTRONICS, NEW VEHICLE, MAJOR HH REPAIRS, ETC)
- 19 HOUSEHOLD ERRANDS (BANK, DRY CLEANING, ETC.)
- 20 PERSONAL BUSINESS (VISIT GOVERNMENT OFFICE, ATTORNEY, ACCOUNTANT)
- 21 EAT MEAL OUT AT RESAURANT/DINER
- 22 HEALTH CARE (DOCTOR, DENTIST, ETC)
- 23 CIVIC OR RELIGIOUS ACTIVITIES
- 24 OUTDOOR RECREATION (JOGGING, BIKING, WALKING)
- 25 INDOOR RECREATION (YOGA, GYM, ETC)
- 26 ENTERTAINMENT (MOVIES, SPECTATOR SPORTS, ETC)
- 27 SOCIAL/VISIT FRIENDS/RELATIVES

- 28 AIRPORT – BUSINESS
- 29 AIRPORT - PERSONAL
- 96 LOOP TRIP (for interviewer only – not listed in diary)
- 97 OTHER, SPECIFY

Departure Time: DEPTIME
Universe: All

- 2.32 IF LAST PLACE OF THE DAY, ENTER 0259. OTHERWISE: What time did <YOU> leave for the next place? ENTER IN MILITARY TIME

END OF TRIP ROSTER

Reason for No Trip: NOGO

Universe: PTRIPS = 0

- 2.33 So,<YOU >made no trips, including for work or school? [INTERVIEWER NOTE: REFER PARTICIPANT TO FRONT OF DIARY IF NEEDED]

IF TRUE: Why not? (USE LIST)

- 1 PERSONALLY SICK
- 2 VACATION OR PERSONAL DAY
- 3 CARETAKING SICK KIDS
- 4 CARETAKING SICK OTHER
- 5 HOME-BOUND ELDERLY OR DISABLED
- 6 WORKED AT HOME FOR PAY
- 7 NOT SCHEDULED TO WORK
- 8 WORKED AROUND HOME (NOT FOR PAY)
- 9 OUT OF AREA
- 96 PERSON DID NOT COMPLETE RETRIEVAL (N-1 HOUSEHOLD)
- 97 OTHER, SPECIFY
- 99 REFUSED [We just need to make a note about days when people don't travel. It would help if you would let me know the reason you didn't make any trips on your assigned travel day.]

IF FALSE OBTAIN TRAVEL

END OF PERSON ROSTER

Conclusion 3

AT END OF SURVEY, CHECK TO SEE IF ALL HH VEHICLES WERE USED. IF NOT:

Vehicle Used: CNTV

Universe: All

- 2.34 Did anyone drive the [VEHICLE YEAR, MAKE, MODEL] on TRAVEL DAY?
 - 1 YES
 - 2 NO – Why not? (Please Specify) [O_CNTV]

FOLLOW UP

Willingness to Participate in Future Surveys: FUTUR

Universe: All

3.1 Would you be interested in participating in future research activities?

- 1 YES
- 2 NO
- 9 REFUSED

UNIVERSE=ALL UNTIL QUOTA ACHIEVED

3.2 Some local media have expressed interest in speaking with local residents about their participation in this survey. Would you like to be interviewed by a local news reporter about your experience?

- 1 YES
- 2 NO
- 9 REFUSED

IF 3.2=1, VERIFY NAME OF PERSON AND BEST NUMBER TO REACH THIS PERSON

NYMTC will be coordinating interviews with local media; a reporter and /or camera crew may set up a time to visit respondents to share their experience with the survey.

CLOSING

3.2 [THANK]

IF MATCHED SAMPLE: Thank you very much for participating in the Regional Travel Survey. At this point I'd like to reiterate how important your participation was for the success of the study.

IF UNMATCHED SAMPLE: Thank you very much for participating in this survey. You should receive your \$50 check in the mail in about 8 weeks.

IF GPS SAMPLE: Thank you very much for participating in this survey. You should receive your \$25 [matched] / \$75 [unmatched] check in the mail in about 8 weeks.

3.3 [LEAVE] If you have any questions or comments, I have a phone number where you can reach us. Would you like that number? WAIT FOR THEM TO WRITE You can reach us at HOTLINE NUMBER. Thank you and have a good day/night.

HOTLINE NUMBERS:

English: 1-888-223-6234

Spanish: 1-888-223-6234

Russian: 1-800-591-8862

Chinese: 1-800-591-8862

Appendix E: Comparability of Data with Census, NHTS, & 1997-98 RT-HIS

The RHTS data set is a rich source of information about the travel patterns of residents in the 28-county study area. The purpose of this appendix is to provide information about how the contents of the RHTS data set compare with those of the 2010 Census, the 2009 NHTS, and the 1997-98 RT-HIS. The comparisons are arranged by RHTS data file and include three elements: 2010-11 RHTS variable, an indication of comparability with the 2010 Census variable, an indication of comparability with the 2009 NHTS variable, and an indication of comparability with the 1997-98 RT-HIS variable.

Table F-1: Household File Comparison

2010-11 RHTS Variable	2010 Census	2008-2010 ACS	2009 NHTS	1997-98 RT-HIS
Size (HHSIZ)	✓	✓	✓	✓
Vehicles (HHVEH)		✓	✓	✓
Dwelling Type (RESTY)	✓	✓	✓	✓
Language (HHLNG)		✓		✓
Income (INCOM)		✓*	✓	✓*
Household Workers (HHWRK)		✓	✓	✓

✓ = comparable

*some recoding required to allow comparison

Table E-2: Person File Comparison

2010-11 RHTS Variable	2010 Census	2008-2010 ACS	2009 NHTS	1997-98 RT-HIS
Gender (GENDER)	✓	✓	✓	✓
Age (AGE)	✓	✓	✓	✓
Relationship (RELATE)		✓	✓	✓
Cellular Phone (CTELE)			✓	
Driver's License Status (LIC)		✓	✓	✓
Disability (DISAB)		✓		✓
Hispanic (HISP)	✓	✓	✓	✓
Ethnicity (RACE)	✓*	✓*	✓	✓*
Student Status (STUDE)		✓	✓	✓
Level Attending (SCHOL)		✓		✓
Transportation Mode to School (SMODE)		✓*	✓	✓
Employment Status (WORKS)		✓	✓	✓
# Jobs (JOBS)		✓	✓*	✓
Employer Type (EMPLR)				✓
Occupation (OCCUP)		✓		✓
Industry (INDUS)		✓		✓
Transportation Mode to Work (WMODE)		✓*	✓	✓

✓ = comparable

*some recoding required to allow comparison

Table E-3: Vehicle File Comparison

2010-11 RHTS Variable	2009 NHTS	1997-98 RT-HIS
Vehicle year (YEAR)	✓	✓
Vehicle Make (MAKE)	✓*	
Vehicle Model (MODEL)	✓*	
Vehicle Body Type (BODY)	✓	✓
Fuel (FUEL)	✓	

✓ = comparable

*some recoding required to allow comparison

Table E-4: Place/Trip File Comparison

2010-11 RHTS Variable	2009 NHTS	1997-98 RT-HIS
Proxy Reporting (PROXY)	✓	✓
Diary Use (CMPLG)	✓	✓
Trip Departure Time (DEP_HR/DEP_MIN)	✓	✓
Trip Purpose (TPURP)	✓*	✓*
Mode (MODE)	✓*	✓*
HH Vehicle Used (VEHNO)	✓	✓
# HH on Trip (HHMEM)	✓	✓
# non-HH on Trip (NONHH)	✓	✓

✓ = comparable

*some recoding required to allow comparison

Appendix F: Main Survey Response Rates

Computation of Response Rates

In total, 711,551 households were invited to participate in the full study. The disposition of these households is categorized in Table 3-2. Of all address selected for inclusion in the study, 4.2 percent completed the recruitment interview. Just fewer than 44 percent were determined to be eligible to participate (meaning that they were a residential address within the metropolitan study area) but did not complete the recruitment interview. Two point three (2.3) percent of contacted sample were immediately determined to be ineligible to participate and were not contacted again. The remaining 49.8 percent of sample resulted in an “unknown” disposition.

Survey response is calculated in Table G-1 as number of retrieved households divided by number of recruited households. Response rates by state and county are below. Overall, the survey experienced a 60.9% retrieval response rate; meaning that just under 60% of recruited households completed the retrieval interview and provided verified and complete travel information.

Response Rate Comparisons

Response rates by state and county can be compared in Table G-1, below. The RHTS experienced a 60.9 percent overall response rate. Connecticut showed the highest participation levels, at 65.1 percent, while New Yorkers exhibited the lowest with 59.1 percent.

Table F-1: Response Rates by State and County

County	Total Recruited Households (count)	Total Retrieved Households (count)	Retrieval Response Rate*
Connecticut	1,425	927	65.1%
New Haven	750	465	62.0%
Fairfield	675	462	68.4%
New Jersey	12,591	7,903	62.8%
Bergen	1,485	972	65.5%
Essex	1,387	787	56.7%
Hudson	1,713	993	58.0%
Hunterdon	458	326	71.2%
Mercer	456	328	71.9%
Middlesex	1,205	757	62.8%
Monmouth	1,058	679	64.2%
Morris	777	540	69.5%
Ocean	962	574	59.7%
Passaic	758	439	57.9%
Somerset	484	332	68.6%
Sussex	501	340	67.9%
Union	922	546	59.2%
Warren	425	290	68.2%
New York	17,140	10,136	59.1%
Bronx	2,154	1,090	50.6%
Duchess	725	463	63.9%

Kings	2,409	1,350	56.0%
Nassau	1,784	1,050	58.9%
New York	2,369	1,575	66.5%
Orange	568	338	59.5%
Putnam	443	272	61.4%
Queens	2,320	1,297	55.9%
Richmond	842	454	53.9%
Rockland	518	315	60.8%
Suffolk	1,808	1,173	64.9%
Westchester	1,200	759	63.3%
Total	31,156	18,965	60.9%

Twelve-percent of all recruited households completed recruitment using the web survey. As summarized in Table 3-4, households completing recruitment using the web survey participated with a 72 percent retrieval response rate. This is compared with households completing recruitment over the telephone, who exhibited a 59.3 percent retrieval response rate.

Table F-2: Response Rates by Recruitment Mode

Recruitment Mode	Total Recruited Households (count)	Total Retrieved Households (count)	Retrieval Response Rate*
Phone (CATI)	27,386	16,253	59.3%
Web (CASI)	3,768	2,713	72.0%
Total	31,154	18,965	60.9%

*Response Rate: (# of Retrievals) / (# of Recruits)

Appendix G: Quality Control Procedures for Travel Speed

NuStats’ quality control procedures include checking the speed of all trip segments to ensure viable reported travel behavior. Trip segment speeds were determined using calculated trip duration and calculated Euclidean distance (bird’s flight).

The equation used for calculating speed was: (Trip Distance) / (Trip Duration) * 60.

If the speed of trip was within the minimum and maximum “reasonable” speeds shown in Table H-1 below, no error was flagged. If the speed of the trip segment fell within the additional threshold, an error was flagged as “allowable within threshold”.

If the speed of a trip segment fell either above or below the allowable additional speed thresholds, the record was flagged and additional manual research was conducted. These cases are flagged and manually researched for: time errors, mode errors, and/or Geocoding errors. Based on recommendations by the project team, table H-1 was implemented for the RHTS full survey.

Table G-1: RHTS Speed Check Legend

Mode Code	Description	Min. Reasonable Speed	Max. Reasonable Speed	Additional Threshold (flagged)
1	Walk	1 mph	5 mph	(0.3-0.99 mph and 5.01-6.25 mph)
2	Bicycle	3 mph	12 mph	(1-2.99 mph and 12.01-15 mph)
3	Wheelchair/Mobility Scooter	1 mph	5 mph	(0.3-0.99 mph and 5.01-6.25 mph)
4	Skates/ Skateboard/ Kick Scooter/ Segway	3 mph	12 mph	(1.5-2.99 mph and 12.01-15 mph)
5	Auto/Van/Truck Driver	5 mph	75 mph	(2.5-4.99 mph and 75.01-87.5 mph)
6	Auto/Van/Truck Passenger	5 mph	75 mph	(2.5-4.99 mph and 75.01-87.5 mph)
7	Vanpool	5 mph	75 mph	(2.5-4.99 mph and 75.01-87.5 mph)
8	Motorcycle/Scooter	5 mph	75 mph	(2.5-4.99 mph and 75.01-87.5 mph)
9	Local Bus	3 mph	35 mph	(1.5-2.99 mph and 35.01-47.5 mph)
10	Express Bus	5 mph	75 mph	(3-4.99 mph and 75.01-80.0 mph)
11	School Bus	3 mph	35 mph	(1.5-2.99 mph and 35.01-47.5 mph)
12	Charter Bus	3 mph	35 mph	(1.5-2.99 mph and 35.01-47.5 mph)
13	Shuttle Bus	3 mph	35 mph	(1.5-2.99 mph and 35.01-47.5 mph)
14	Paratransit Service	3 mph	35 mph	(1.5-2.99 mph and 35.01-47.5 mph)
15	Subway	5 mph	40 mph	(3.75-4.99 mph and 40.01-55 mph)
16	PATH Train	5 mph	40 mph	(3.75-4.99 mph and 40.01-52.5 mph)
17	Railroad	10 mph	60 mph	(7.0-9.99 mph and 60.1-75.0 mph)

Mode Code	Description	Min. Reasonable Speed	Max. Reasonable Speed	Additional Threshold (flagged)
18	Light Rail	3 mph	35 mph	(2.25-2.99 mph and 35.01-43.75 mph)
19	Ferry	5 mph	35 mph	(3.75-4.99 mph and 35.01-43.75 mph)
20	Taxi	5 mph	75 mph	(3.0-4.99 mph and 75.01-80.0 mph)
21	Gypsy Cab	5 mph	75 mph	(3.5-4.99 mph and 75.01-80.0 mph)
22	Limo	5 mph	75 mph	(3.0-4.99 mph and 75.01-80.0 mph)
23	Roosevelt Island Tram	5 mph	25 mph	(3.75-4.99 mph and 25.01-28.0 mph)
24	AIRTRAIN or Airport Bus	5 mph	40 mph	(3.75-4.99 mph and 40.01-52.5 mph)

During manual review of trip segments flagged with errors, as mentioned above, NuStats reviewed for accurate travel mode, travel times, and locations visited. “Loop Trips”, that is, trips made from one location to the same location, such as a walk trip originating and ending at home, were also reviewed for plausibility. Ultimately, any record with a speed violation contained in the final data set was flagged with one of the codes in Table G-2, below.

Table G-2: Speed Violation Flag

Speed Violation Flag <SPEEDFLAG>	Percent of Places Effected	Percent of Household Effected
1 – Slow, within threshold	10.4%	48.1%
2 – Slow, Short Distance (<1 mile), Non-Motorized	0.9%	6.7%
3 – Slow, Short Distance (<1 mile), Automobile	2.2%	14.4%
4 – Fast, Within Threshold	0.7%	5.9%
5 – Fast, Short Distance (<1 mile), Non-Motorized	0.6%	5.0%
6 – Fast, Short Distance (<8 miles), Automobile	0.0%	0.4%
7 – Slow Unresolved (due to respondent rounding or very short trip duration)	0.1%	0.6%
8 – Fast Unresolved (due to respondent rounding or very short trip duration)	0.0%	0.0%
9 – Zero Speed, Confirmed Ok (loop trip)	0.2%	1.4%
Not Flagged	84.9%	42.2%
Total	231,715 places	18,965 households

Appendix H: Statistical Reliability of RHTS Estimates

The purpose of this Appendix is to document the statistically significant ranges of specific survey results at the regional (95% confidence interval) and county (90% confidence interval) levels. For purposes of the regional analysis, the data were divided into three groups: New York and New Jersey Regions. The New Jersey region is comprised of all New Jersey households. The New York region is comprised of all New York and Connecticut households. The county analysis relies on the county of residence. All analyses were conducted using unweighted data. All tables show the sampling error associated with the survey results. The variables included in this analysis are:

1. Household Income (region and county) [Household file]
2. Household Size (region and county) [Household file]
3. Typical Travel mode to work (region and county) [Person file]
4. Typical Travel time to work (region and county) [Person file]
5. Household Vehicles (region and county) [Household file]
6. Total reported household trips (region and county) [Place file]

For Household Income and Typical Travel Mode to Work, the categorical variables, binomial distributions were created in order to calculate the associated sampling errors. The sampling error for each binomial distribution is expressed as a percentage. In all cases, the sampling errors were manually calculated based upon the sampling sizes and proportions within the respective binomial distributions.

For the continuous variables (Household Size, Typical travel time to work, Household Vehicles, and Total household trips), the sampling error was calculated based on the unweighted mean. The corresponding tables in this memo reflect sample size, mean, sampling error, and confidence intervals for each variable.

Table H-1 – Sampling Error of Household Income at the Regional level (95% confidence)

Region	N	<\$50k	\$50k+	Sampling Error
New York	10,303	38.5%	61.5%	1.0%
New Jersey	7,333	30.6%	69.4%	1.1%

Table H-2– Sampling Error of Household Income at the County level (90% confidence)

FIPS Code	County	N	<\$50k	\$50k+	Sampling Error
9001	Fairfield	420	27.6%	72.4%	4.0%
9009	New Haven	436	38.3%	61.7%	3.9%
34003	Bergen	888	22.9%	77.1%	2.8%
34013	Essex	724	36.2%	63.8%	3.1%
34017	Hudson	936	45.6%	54.4%	2.7%
34019	Hunterdon	291	17.5%	82.5%	4.8%
34021	Mercer	304	23.0%	77.0%	4.7%

FIPS Code	County	N	<\$50k	\$50k+	Sampling Error
34023	Middlesex	691	26.8%	73.2%	3.1%
34025	Monmouth	630	26.3%	73.7%	3.3%
34027	Morris	497	21.1%	78.9%	3.7%
34029	Ocean	549	44.4%	55.6%	3.5%
34031	Passaic	423	35.2%	64.8%	4.0%
34035	Somerset	306	21.6%	78.4%	4.7%
34037	Sussex	316	22.2%	77.8%	4.6%
34039	Union	502	28.3%	71.7%	3.7%
34041	Warren	272	37.1%	62.9%	5.0%
36005	Bronx	1,041	65.4%	34.6%	2.5%
36027	Dutchess	422	30.8%	69.2%	4.0%
36047	Brooklyn (Kings)	1,277	51.7%	48.3%	2.3%
36059	Nassau	958	20.0%	80.0%	2.7%
36061	Manhattan (New York)	1,454	41.6%	58.4%	2.2%
36071	Orange	318	39.3%	60.7%	4.6%
36079	Putnam	246	23.6%	76.4%	5.2%
36081	Queens	1,221	43.6%	56.4%	2.4%
36085	Staten Island (Richmond)	426	34.5%	65.5%	4.0%
36087	Rockland	292	25.0%	75.0%	4.8%
36103	Suffolk	1,101	26.1%	73.9%	2.5%
36119	Westchester	695	27.9%	72.1%	3.1%

Table H-3 – Sampling Error of Household Size at the Regional level (95% confidence)

Region	N	Mean	Confidence Level Factor	Standard Error of the Mean	Sampling Error	Confidence Interval	
						Lower Bound	Upper Bound
New York	11,063	2.2	1.96	0.012	0.9	2.176	2.224
New Jersey	7,903	2.4	1.96	0.014	1.1	2.373	2.427

Table H-4– Sampling Error of Household Size at the County level (90% confidence)

FIPS Code	County	N	Mean	Confidence Level Factor	Standard Error of the Mean	Sampling Error	Confidence Interval	
							Lower Bound	Upper Bound
9001	Fairfield	462	2.4	1.645	.058	3.8%	2.305	2.495
9009	New Haven	465	2.2	1.645	.057	3.8%	2.106	2.294
34003	Bergen	972	2.4	1.645	.040	2.6%	2.334	2.466
34013	Essex	787	2.4	1.645	.044	2.9%	2.328	2.472
34017	Hudson	993	2.1	1.645	.037	2.6%	2.039	2.161
34019	Hunterdon	326	2.5	1.645	.064	4.5%	2.395	2.605
34021	Mercer	328	2.5	1.645	.068	4.5%	2.388	2.612
34023	Middlesex	757	2.4	1.645	.045	3.0%	2.326	2.474
34025	Monmouth	679	2.5	1.645	.049	3.2%	2.419	2.581
34027	Morris	540	2.4	1.645	.052	3.5%	2.314	2.486
34029	Ocean	574	2.5	1.645	.060	3.4%	2.401	2.599
34031	Passaic	439	2.4	1.645	.065	3.9%	2.293	2.507
34035	Somerset	332	2.5	1.645	.068	4.5%	2.388	2.612
34037	Sussex	340	2.6	1.645	.065	4.4%	2.493	2.707
34039	Union	546	2.5	1.645	.052	3.5%	2.414	2.586
34041	Warren	290	2.3	1.645	.069	4.8%	2.186	2.414
36005	Bronx	1,090	2.0	1.645	.036	2.5%	1.941	2.059
36027	Dutchess	463	2.3	1.645	.056	3.8%	2.208	2.392
36047	Brooklyn (Kings)	1,350	2.2	1.645	.036	2.2%	2.141	2.259
36059	Nassau	1,050	2.6	1.645	.039	2.5%	2.536	2.664
36061	Manhattan (New York)	1,575	1.8	1.645	.025	2.1%	1.759	1.841
36071	Orange	338	2.4	1.645	.073	4.5%	2.280	2.520
36079	Putnam	272	2.4	1.645	.068	5.0%	2.288	2.512
36081	Queens	1,297	2.1	1.645	.033	2.3%	2.046	2.154
36085	Staten Island (Richmond)	454	2.4	1.645	.058	3.9%	2.305	2.495
36087	Rockland	315	2.6	1.645	.078	4.6%	2.472	2.728
36103	Suffolk	1,173	2.4	1.645	.036	2.4%	2.341	2.459
36119	Westchester	759	2.4	1.645	.045	3.0%	2.326	2.474

Table H-5 – Sampling Error of Typical Travel Mode to Work at the Regional level (95% confidence)

Region	N	Auto	Non-Auto	Sampling Error
New York	11,647	59.0%	40.1%	0.9
New Jersey	9,075	82.1%	17.9%	1.0

Table H-6– Sampling Error of Typical Travel Mode to Work at the County level (90% confidence)

FIPS Code	County	N	Auto	Non-Auto	Sampling Error
9001	Fairfield	526	87.8%	12.2%	3.6%
9009	New Haven	545	89.5%	10.5%	3.5%
34003	Bergen	1140	82.3%	17.7%	2.4%
34013	Essex	837	74.0%	26.0%	2.8%
34017	Hudson	989	43.6%	56.4%	2.6%
34019	Hunterdon	424	95.8%	4.2%	3.9%
34021	Mercer	380	84.7%	15.3%	4.2%
34023	Middlesex	920	85.9%	14.1%	2.7%
34025	Monmouth	828	86.4%	13.6%	2.8%
34027	Morris	668	94.0%	6.0%	3.2%
34029	Ocean	583	95.4%	4.6%	3.4%
34031	Passaic	504	88.7%	11.3%	3.7%
34035	Somerset	414	92.0%	8.0%	4.0%
34037	Sussex	416	96.2%	3.8%	4.0%
34039	Union	666	79.3%	20.7%	3.2%
34041	Warren	306	95.8%	4.2%	4.6%
36005	Bronx	813	35.3%	64.7%	2.9%
36027	Dutchess	508	92.1%	7.9%	3.6%
36047	Brooklyn (Kings)	1300	24.5%	75.5%	2.3%
36059	Nassau	1351	78.9%	21.1%	2.2%
36061	Manhattan (New York)	1441	8.6%	91.4%	2.2%
36071	Orange	394	90.1%	9.9%	4.1%
36079	Putnam	320	88.4%	11.6%	4.5%
36081	Queens	1331	41.6%	58.4%	2.3%
36085	Staten Island (Richmond)	496	63.1%	36.9%	3.7%
36087	Rockland	384	84.4%	15.6%	4.2%
36103	Suffolk	1384	90.5%	9.5%	2.2%

FIPS Code	County	N	Auto	Non-Auto	Sampling Error
36119	Westchester	854	68.5%	31.5%	2.8%

Table H-7 – Sampling Error of Typical Travel Time to Work at the Regional level (95% confidence)

Region	N	Mean	Confidence Level Factor	Standard Error of the Mean	Sampling Error	Confidence Interval	
						Lower Bound	Upper Bound
New York	11,649	36.8	1.96	.275	0.9	36.261	37.339
New Jersey	9,069	34.0	1.96	.291	1.0	33.430	34.570

Table H-8– Sampling Error of Typical Travel Time to Work at the County level (90% confidence)

FIPS Code	County	N	Mean	Confidence Level Factor	Standard Error of the Mean	Sampling Error	Confidence Interval	
							Lower Bound	Upper Bound
9001	Fairfield	526	30.5	1.645	1.143	3.6%	28.620	32.380
9009	New Haven	545	26.2	1.645	0.969	3.5%	24.606	27.794
34003	Bergen	1140	32.4	1.645	0.768	2.4%	31.137	33.663
34013	Essex	832	35.0	1.645	0.914	2.8%	33.496	36.504
34017	Hudson	990	36.6	1.645	0.812	2.6%	35.264	37.936
34019	Hunterdon	423	35.6	1.645	1.377	3.9%	33.335	37.865
34021	Mercer	380	32.4	1.645	1.716	4.2%	29.577	35.223
34023	Middlesex	920	35.2	1.645	0.943	2.7%	33.649	36.751
34025	Monmouth	824	36.4	1.645	1.065	2.8%	34.648	38.152
34027	Morris	671	29.2	1.645	0.870	3.2%	27.769	30.631
34029	Ocean	580	29.9	1.645	1.106	3.4%	28.081	31.719
34031	Passaic	505	29.9	1.645	1.275	3.6%	27.803	31.997
34035	Somerset	415	32.7	1.645	1.375	4.0%	30.438	34.962
34037	Sussex	418	40.2	1.645	1.543	4.0%	37.662	42.738
34039	Union	665	34.4	1.645	1.010	3.2%	32.739	36.061
34041	Warren	306	36.0	1.645	1.697	4.6%	33.208	38.792
36005	Bronx	813	43.6	1.645	1.004	2.9%	41.948	45.252
36027	Dutchess	506	29.5	1.645	1.202	3.6%	27.523	31.477
36047	Brooklyn (Kings)	1300	41.8	1.645	0.660	2.3%	40.714	42.886
36059	Nassau	1350	35.4	1.645	0.742	2.2%	34.179	36.621
36061	Manhattan (New York)	1445	34.1	1.645	0.581	2.2%	33.144	35.056

FIPS Code	County	N	Mean	Confidence Level Factor	Standard Error of the Mean	Sampling Error	Confidence Interval	
							Lower Bound	Upper Bound
36071	Orange	393	34.4	1.645	1.645	4.1%	31.694	37.106
36079	Putnam	319	38.0	1.645	1.636	4.5%	35.309	40.691
36081	Queens	1329	44.3	1.645	1.030	2.3%	42.606	45.994
36085	Staten Island (Richmond)	498	42.5	1.645	1.394	3.7%	40.207	44.793
36087	Rockland	382	36.2	1.645	1.568	4.2%	33.621	38.779
36103	Suffolk	1386	32.5	1.645	0.803	2.2%	31.179	33.821
36119	Westchester	857	38.0	1.645	1.282	2.8%	35.891	40.109

Table H-9 – Sampling Error of Household Vehicles at the Regional level (95% confidence)

Region	N	Mean	Confidence Level Factor	Standard Error of the Mean	Sampling Error	Confidence Interval	
						Lower Bound	Upper Bound
New York	11,063	1.3	1.96	.011	0.9	1.278	1.322
New Jersey	7,903	1.8	1.96	.012	1.1	1.776	1.824

Table H-10– Sampling Error of Household Vehicles at the County level (90% confidence)

FIPS Code	County	N	Mean	Confidence Level Factor	Standard Error of the Mean	Sampling Error	Confidence Interval	
							Lower Bound	Upper Bound
9001	Fairfield	462	1.9	1.645	.049	3.8%	1.819	1.981
9009	New Haven	465	1.8	1.645	.055	3.8%	1.710	1.890
34003	Bergen	972	1.9	1.645	.034	2.6%	1.844	1.956
34013	Essex	787	1.6	1.645	.035	2.9%	1.542	1.658
34017	Hudson	993	1.0	1.645	.028	2.6%	0.954	1.046
34019	Hunterdon	326	2.3	1.645	.059	4.5%	2.203	2.397
34021	Mercer	328	1.9	1.645	.062	4.5%	1.798	2.002
34023	Middlesex	757	2.0	1.645	.037	3.0%	1.939	2.061
34025	Monmouth	679	2.1	1.645	.039	3.2%	2.036	2.164
34027	Morris	540	2.2	1.645	.047	3.5%	2.123	2.277
34029	Ocean	574	1.9	1.645	.043	3.4%	1.829	1.971
34031	Passaic	439	1.8	1.645	.054	3.9%	1.711	1.889
34035	Somerset	332	2.2	1.645	.060	4.5%	2.101	2.299
34037	Sussex	340	2.3	1.645	.059	4.4%	2.203	2.397
34039	Union	546	1.9	1.645	.048	3.5%	1.821	1.979
34041	Warren	290	2.0	1.645	.063	4.8%	1.896	2.104

FIPS Code	County	N	Mean	Confidence Level Factor	Standard Error of the Mean	Sampling Error	Confidence Interval	
							Lower Bound	Upper Bound
36005	Bronx	1,090	.6	1.645	.023	2.5%	0.562	0.638
36027	Duchess	463	2.0	1.645	.055	3.8%	1.910	2.090
36047	Brooklyn (Kings)	1,350	.6	1.645	.020	2.2%	0.567	0.633
36059	Nassau	1,050	2.0	1.645	.030	2.5%	1.951	2.049
36061	Manhattan (New York)	1,575	.4	1.645	.016	2.1%	0.374	0.426
36071	Orange	338	2.0	1.645	.059	4.5%	1.903	2.097
36079	Putnam	272	2.2	1.645	.071	5.0%	2.083	2.317
36081	Queens	1,297	1.0	1.645	.025	2.3%	0.959	1.041
36085	Staten Island (Richmond)	454	1.6	1.645	.045	3.9%	1.526	1.674
36087	Rockland	315	2.0	1.645	.058	4.6%	1.905	2.095
36103	Suffolk	1,173	2.0	1.645	.028	2.4%	1.954	2.046
36119	Westchester	759	1.7	1.645	.038	3.0%	1.637	1.763

Table H-11 – Sampling Error of Household Trips at the Regional level (95% confidence)

Region	N	Mean	Confidence Level Factor	Standard Error of the Mean	Sampling Error	Confidence Interval	
						Lower Bound	Upper Bound
New York	113,042	10.2	1.96	.076	0.3	10.051	10.349
New Jersey	75,149	9.5	1.96	.084	0.4	9.335	9.665

Table H-12– Sampling Error of Household Trips at the County level (90% confidence)

FIPS Code	County	N	Mean	Confidence Level Factor	Standard Error of the Mean	Sampling Error	Confidence Interval	
							Lower Bound	Upper Bound
9001	Fairfield	4,323	9.36	1.645	.365	1.3%	8.760	9.960
9009	New Haven	3,944	8.48	1.645	.313	1.3%	7.965	8.995
34003	Bergen	9,813	10.10	1.645	.252	0.8%	9.685	10.515
34013	Essex	7,972	10.13	1.645	.267	0.9%	9.691	10.569
34017	Hudson	9,657	9.73	1.645	.234	0.8%	9.345	10.115
34019	Hunterdon	2,774	8.51	1.645	.391	1.6%	7.867	9.153
34021	Mercer	3,174	9.68	1.645	.405	1.5%	9.014	10.346
34023	Middlesex	6,807	8.99	1.645	.264	1.0%	8.556	9.424
34025	Monmouth	6,831	10.06	1.645	.288	1.0%	9.586	10.534
34027	Morris	4,942	9.15	1.645	.323	1.2%	8.619	9.681
34029	Ocean	5,253	9.15	1.645	.338	1.1%	8.594	9.706
34031	Passaic	4,194	9.55	1.645	.331	1.3%	9.006	10.094

FIPS Code	County	N	Mean	Confidence Level Factor	Standard Error of the Mean	Sampling Error	Confidence Interval	
							Lower Bound	Upper Bound
34035	Somerset	3,006	9.05	1.645	.363	1.5%	8.453	9.647
34037	Sussex	3,014	8.86	1.645	.369	1.5%	8.253	9.467
34039	Union	5,670	10.38	1.645	.327	1.1%	9.842	10.918
34041	Warren	2,042	7.04	1.645	.374	1.8%	6.425	7.655
36005	Bronx	11,062	10.15	1.645	.257	0.8%	9.727	10.573
36027	Dutchess	3,777	8.16	1.645	.301	1.3%	7.665	8.655
36047	Brooklyn (Kings)	15,332	11.36	1.645	.232	0.7%	10.978	11.742
36059	Nassau	11,019	10.49	1.645	.255	0.8%	10.071	10.909
36061	Manhattan (New York)	17,380	11.03	1.645	.200	0.6%	10.701	11.359
36071	Orange	2,883	8.53	1.645	.367	1.5%	7.926	9.134
36079	Putnam	2,492	9.16	1.645	.444	1.6%	8.430	9.890
36081	Queens	13,927	10.74	1.645	.224	0.7%	10.372	11.108
36085	Staten Island (Richmond)	4,679	10.31	1.645	.373	1.2%	9.696	10.924
36087	Rockland	3,045	9.67	1.645	.432	1.5%	8.959	10.381
36103	Suffolk	11,386	9.71	1.645	.223	0.8%	9.343	10.077
36119	Westchester	7,793	10.27	1.645	.280	0.9%	9.809	10.731

Appendix I: Imputation Procedures and Quality Control Performed

Introduction

Nonresponse comes in two forms: Unit and item nonresponse. The plan for Nonresponse Mitigation, Analysis, and Follow-up (Task 3.1.10) addressed unit nonresponse. This technical memo presents a plan to address item nonresponse.

Item nonresponse is defined as missing items in an otherwise “completed” interview or questionnaire. The data could be missing because the respondent refused to answer, the interviewer failed to ask the question, or the respondent simply missed the question or did not have the required information to answer it. Such item nonresponse leads to the creation of missing values in the resulting data, and may require that responses containing missing items be excluded from some parts of the analysis of the resulting data. This effectively reduces the sample size for some of the analysis, and may also lead to larger than anticipated sampling error in some of the results from the survey. This technical memo documents a plan for addressing these issues by identifying key survey variables for which missing data would be extremely problematic and then specifies the procedures that will be used to address the missing values for them.

Key Variables

Key variables are those that have little or no tolerance for missing data, and so must be repaired or imputed. Key variables in a household travel survey are defined as those variables that are (1) key inputs to statistical estimation of choice models, (2) used for data weighting or expansion, and (3) required for the calibration or validation of the travel demand forecast model. There are other important variables for the survey but to meet the modeling requirements, the variables noted below are “key”.

For the NYMTC survey, NuStats has identified key variables as:

Household Data File

- Home Address
- County
- Sampling Bin (area type, transit accessibility, rare modes)
- Number of Household (HH) Members
- Number of HH Vehicles
- Household Income
- Number of HH Workers
- Number of Children in HH

Person Data File

- Age
- Employment Status
- Occupation
- Work Location

- Usual Mode to Work
- Student Status
- School Location

Activity / Trip Data File

- Number of Person Trips
- Mode of Travel for Each Trip
- Trip Purpose (conventional travel model classification)
- Origin of Trip (Geocoded)
- Destination of Trip (Geocoded)
- Travel Start and End Times

Editing and Imputation for Missing or Faulty Data

Editing is the process of applying standard rules to the data. The final section in this Appendix presents NuStats' standard rules. Corrective action was taken when items failed to follow the rules. The right corrective action was determined through re-contact with the respondent or manually studying the microdata in context. When all the data had been edited using the applied rules and a file was still found to have missing data, then imputation was done as a separate step. It should be noted that for purposes of this survey, "don't know" and "refused" were legitimate responses.

Imputation is the substitution of values for missing or faulty data items. Missing data – whether as a result of a respondent refusal, an indication that the respondent does not know the answer, interviewer error, or a legitimate skip of the question – received a coded numeric value. Data items were faulty if they were not feasible (e.g., a 5-year old with a driver's license) or were inconsistent with other information known of an individual or their household. When missing or faulty data were detected after the editing process, missing or incomplete data fields were imputed or replaced with appropriate values. There were several approaches that NuStats considered when imputing data.

- Substitution relies on the availability of comparable data. Imputed data might be extracted from other survey files for the same respondent or household.
- Estimator uses information derived through mathematical operations to derive a plausible value for the missing or incorrect field. The simplest estimator method is the mean imputation. With this approach, a missing field is filled with the average value from the responding units with the same set of predetermined characteristics.
- Hot deck uses other records as "donors" in order to answer the questions that need imputation. When applying hot deck imputation, NuStats will use the nearest neighbor method. In this method, a criteria will be developed to determine which responding unit is most like the unit with the missing value in accordance with the predetermined criteria. The closest unit to the missing value is then used as the donor.

When imputation is used, the original data was retained in a raw data file made available to NYMTC and NJTPA. The imputed data was delivered in the final data. This provided an audit trail for evaluation purposes.

Special Note on Geocoding

It is theoretically possible to geocode 100% of all trip ends but in practice this is difficult, if not impossible. The technical memo on survey design indicated minimum match rates to be achieved. These were:

- 100% of home addresses
- 95% of work and school addresses
- 91% of all other locations.

By match rates, we mean that the locations are geocoded to latitude/ longitude. Because the travel information is collected using TripBuilder software, geocoding is done in real-time. This should result in meeting or exceeding the minimum match rates identified above. But there may be a few locations that cannot be geocoded to latitude/ longitude, and these locations were referenced to a TAZ.

All data that are compiled into the place file were reviewed for consistency and accuracy among the locations. Once the final place file was compiled, a final review was made on the complete file. In addition to typical edit checks, NuStats conducted rigorous speed checks as a geocoding quality control check. For each trip, a rate of speed was calculated and compared to a predetermined range of speeds deemed appropriate (through consultation with NYMTC and NJTPA) for each mode of travel. The rate of speed calculations were based on the division of calculated miles traveled (straight-line distance) by reported travel durations. All trips falling outside of the designated range for a given mode were reviewed for accuracy in reporting and geocoding.

Addressing Missing Items for Key Variables

The manner in which missing items for each of the key variables identified in Section 2 of this memo is identified below. In general, the consultant monitored all item nonresponse patterns and discussed them with NYMTC and NJTPA.

Household Data File

- Home Address: This variable was not imputed. Home address must have been present and geocoded to latitude/ longitude. Otherwise case was not delivered.
- County: This variable was present if home address was geocoded. Consistency checks were run to ensure that it was correct.
- Sampling Bin (area type, transit accessibility, rare modes): This variable was not imputed. It was drawn from the sampling frame. Consistency checks were run to ensure that it was correct and matched the respondent-confirmed home address.
- Number of Household (HH) Members: If this variable was missing, it was derived from the person data file. Inconsistencies were addressed by communicating directly with the respondent. If inconsistencies were not addressed, the case was not delivered.
- Number of HH Vehicles: If this variable was missing, it was derived from the vehicle data file. Inconsistencies were addressed by communicating directly with the respondent. If inconsistencies were not addressed, the case was not delivered.
- Number of HH Workers: This variable was derived from the person data file. Inconsistencies were addressed by communicating directly with the respondent. If inconsistencies were not addressed, the case was not delivered.
- Number of Children in HH: This variable was derived from the person data file. Inconsistencies were addressed by communicating directly with the respondent. If inconsistencies were not addressed, the case was not delivered.

Person Data File

- Age: If exact age was missing, approximate age (<16, 16+) must have been present; otherwise case were not delivered.
- Employment Status: This variable was not imputed. If missing, respondent must have been re-contacted; otherwise case could not be delivered.
- Occupation: This variable was not imputed. If missing, respondent must have been re-contacted; otherwise case could not be delivered.
- Work Location: This variable was not imputed. If missing, respondent must have been re-contacted; otherwise case could not be delivered.
- Usual Mode to Work: This variable was not imputed. If missing, respondent must have been re-contacted; otherwise case could not be delivered.
- Student Status: This variable was not imputed. If missing, respondent must have been re-contacted; otherwise case could not be delivered.
- School Location: This variable was not imputed. If missing, respondent must have been re-contacted; otherwise case could not be delivered.

Activity/ Trip Data File

- Number of Person Trips: Each person must have a number of person trips identified.⁴ Trips for the 24-hours period must have starting location and ending location identified, and the travel must be consistent for the individual and among household members. Inconsistencies were addressed by communicating directly with the respondent. If inconsistencies were not addressed, the case was not delivered.
- Mode of Travel for Each Trip: Each trip must have a mode associated. Modes must pass the speed check. Inconsistencies were addressed by communicating directly with the respondent. If inconsistencies were not addressed, the case was not delivered.
- Trip Purpose: This variable was not imputed. If missing, respondent must have been re-contacted; otherwise case could not be delivered.
- Origin/ Destination of Trip: This variable was not imputed. If missing, respondent must have been re-contacted; otherwise case could not be delivered.
- Travel Start and End Times: This variable was not imputed. If missing, respondent must have been re-contacted; otherwise case could not be delivered.

⁴ There is an agreed-upon definition of an “acceptable, deliverable partial” record for n-1 household members. This definition of an acceptable, deliverable partial record was applied only to households with four or more members. No more than 5% of the total completed records were allowed to be “partial”. NuStats monitored the pattern of partials closely to ensure that no single county’s sample is overly inundated with partial records. Households containing partials were flagged and persons that were part of a valid-partial household were flagged in the final data file.

Regional Household Travel Survey Editing Rules

ACRONYMS

DK/RF	Don't Know/ Refused response category
TRPDU	Trip Duration
ACTDU	Activity Duration
PLANO	Place Number (PLANO=1 is the starting location)
LOCNO	Location Number
RET	Retrieval Interview
PER	Person file
HH	Household file
HHSIZ	Summary Variable for Total Members of Household
HHVEH	Summary Variable for Total Vehicles in Household
HHWRK	Summary Variable for Total Workers in Household
NOGO	Variable Name for Reason for No Travel
EMPLY	Variable Name for Employed Person
HTRIPS	Summary Variable for Total Household Trips
INCOM	Variable Name for Total Household Income
REC	Recruitment Interview
ASSN	Assigned Travel Day
OWN	Variable Name for Household Tenure (owner or renter)
RESTY	Variable Name for Residence Type (single family, multifamily)
HHSTU	Summary Variable for Total Students in Household
SAMPN	Variable Name for Household Sample Number (identifier)
PTYPE	Variable Name for Place Type (home, school, primary job)
ACT	Activity
PTRIPS	Summary Variable for Total Trips by Person
MODE	Variable Name for Mode of Travel

YEAR	Variable Name for Year of Vehicle
VEH	Vehicle file
PERNO	Person Number in Person File

Definitions

Loop Trip	Trip that begins and ends at exact same location
Null	Empty field in database

General Data Checks

Two types of data editing were conducted on the NYMTC household travel survey data: (1) General and (2) Specific household travel survey checks. The bullets below list the general checks that was run on all data files (household, vehicle, person, and travel).

- No blanks. All data fields must contain alphanumeric data.
- Missing data coded to “99” for refused and “98” for don’t know.
- All skip patterns (meaning, a question should be skipped) were followed.
- All variables have values that are in range.
- If (and only if) a variable has an “other, specify” value, there are data in the corresponding “O_ “ field in the data structure.
- All open-end variables were spell-checked and post-coded when possible.
- Any non-essential null variables were updated to the “DK/RF” value.
- Verify use and treatment of loop trips (flagged in data), zero-trip persons. In all person records the count of number of places reported by the individual should be present. A count of 0 should be used only to indicate that the person did not travel on the diary day. If the trip information was refused a “99” should be used, or not known a “98” should be used.
- Confirm that “completed” records meet the agreed-upon definition of a completed survey (see Tech Memo on Survey Design for definition). Necessary items are present across all of the files.

Household Travel Survey Specific Checks

Table 1 presents the specific edit code checks that were run on the NYMTC data. These checks were based on pre-programmed checks that NuStats has determined are necessary for clean, quality travel survey data. Each edit check is identified by:

- Identification number,
- Query name,
- Error message that appears when the check is run,
- Standard treatment, and
- File that is affected.

Table 1: Standard Edit checks

EDITC ODE	QUERY_NAME	MESSAGE	TREATMENT	FILE
1	Arrival before Departure	Arrival before departure	Check to see if TRPDU ⁵ is >0, If not there is a time error between this row and the previous row	TRIP
2	Departure before Arrival	Departure before arrival	Check to see if ACTDU is >0, If not there is a time error between ARRIVAL and DEPARTURE	TRIP
3	Place 1 does not start at 3am	First place does not start at 3am	Check the ARRIVAL time of PLANO=1, it should be 300, if not maybe the first trip is missing or there is a reporting error	TRIP
4	Last place is not at 259am	Last place does not end at 2:59am	Check the DEPARTURE time of the last trip, it should be 259, if not maybe there is a numbering error between trips or the last trip has a reporting error	TRIP
5	Last place not home	Last place not home- confirm	Confirm with last place description	TRIP
6	Need Location information	Need location information (LOCNO=0 or is NULL)	Look for shared trips among household members, look in RET data	TRIP
7	Find Time Totals 1	Day Time Totals <> 1439	One of the TRPDU/ACTDU's is false	TRIP
8	Need reason for no travel	Need reason for no travel/filled in and should not be	Check NOGO/TRAVL	PER
9	HHSIZ not equal to person count	HHSIZ in HH file not equal to person count in PER file	Check PER data to see if everyone is a valid person, then modify HHSIZ	HH / PER
10	HHVEH not equal to vehicle count	HHVEH in HH file not equal to vehicle count in VEH file	Check VEH data to see if vehicle is a valid vehicle, then modify HHVEH	HH / VEH
11	HHWRK not equal to workers count	HHWRK in HH file in not equal to workers count in PER file	Check PER data to see if everyone >15 has a valid EEMPLY code, then modify HHWRK	HH / PER
12	HTRIPS incorrect	HTRIPS in HH file does not match number of household trips in TRIP file	Make sure only valid HH members have trip data	HH / TRIP
13	INCOM is missing or Range Error	INCOM is missing or is out of range	Check INCOM, look in REC data	HH
14	ASSN	ASSN is missing or invalid	Check ASSN, make sure it is a valid number, look in REC data	HH
15	Check OWN	OWN missing or is out of range (includes "other" responses)	Check OWN, look in REC data	HH

⁵ Text in ALL CAPS designates variable names. TRPDU is the variable name for Trip Duration; also see the Data Items Matrix (deliverable 2.3.2) for variable names.

EDITC ODE	QUERY_NAME	MESSAGE	TREATMENT	FILE
16	Check RESTY	RESTY missing or is out of range (Includes "other" responses)	Check RESTY, look in REC data	HH
17	HHSTU incorrect	HHSTU in HH file does not match number of HHSTU in PER File	Check Person Roster. If needed, remove person from Person file	HH / PER
18	Person without driver's license is driving	Person without Drivers License Driving	Check Person Roster	PER / TRIP
19	Person Traveling not in Per File	Person Making Trips not in PER file	Check Trip file or Person Roster for inconsistency	PER / TRIP
20	Person is not in trip file	Person is missing from trip file	This person is missing from the trip file, look in RET data and if unresolved send to research (this person may have been deleted RET)	PER / TRIP
21	Persons traveling together wrong	Person traveling together	Check Person Roster	PER / TRIP
23	Check PERSON SAMPN	PERSON not in HH file	There is no HH in the HH table for this PERSON, check REC and RET or send to RESEARCH	HH / PER
24	Unemployed person working	Unemployed person working or work related on travel day	Check to see if work is valid activity, if no work is in PER, update PER with WORK information (add person)	PER/TRIP
26	PTYPE-ACT	Activities do not match PTYPE	Check PER data and before and after TRIP data / send back to DataSource for Research	PER / TRIP
27	TRPDU out of range or null	TRPDU is out of range or does not agree with PLANO	Check Arrival time of current place and departure time of previous place, PLANO=1 should have a null TRPDU	TRIP
28	Have trip no person	Travel in Trip file does not correspond to a person in PER file	Extra TRIP data, this person is not in PER. Check to see if PERNO's changed in RET (add PER and delete PER)	PER / TRIP
29	PTRIPS incorrect	PTRIPS in PER file does not match number of person trips in TRIP file	Rerun preclean check after review of trip data for the person	PER / TRIP

EDITC ODE	QUERY_NAME	MESSAGE	TREATMENT	FILE
30	Check MODE	MODE does not agree with PLANO or is a refusal	PLANO 1 should not have a mode, there should be a MODE for all other PLANO's	TRIP
31	Non-student doing school activities	Non-student doing school activities on travel day	Check ACT1/ACT2 in TRIP, Check AGE, if a student add student variables to PER, if not, change activity to match place	PER / TRIP
32	HHMEM is larger than HHSIZ	Number of household members traveling together in Trip file is larger than household size in HH file	Check HHMEM in TRIP if it is larger than HHSIZ	HH / TRIP
33	ACTDUR=0	ACTIVITY DURATION =0	Check RET data	TRIP
34	LOOPCHECK	LOOPTRIP	Check activity, origin and destination, and flag	TRIP
35	YEAR	VEH YEAR is missing or is out of range	Check REC data	VEH
36	GENDER IS NULL	Gender is missing	Check First Name	PER
37	Zero Trip Household	Zero-trip household	Obtain travel info or reason no trips were made	TRIP
38	School-aged STUDE=3	School-aged person not a student	Obtain school information, or reason not in school	PER
39	TRIP-Passenger riding alone	Auto passenger riding alone	Include driver in PARTY or change to driver	TRIP
40	DISTANCE-SpeedCheck Failed	Speed of Trip is too fast for mode		TRIPS
41	Work info missing	Employment Verification	Check REC data for EMPLOY, VOLUN, WORKS, TCHRS; send to DataSource for Research	PER
42	School info missing	Student Verification	Check REC data for SCHOL, STUDE, SMODE, SLOC; send to DataSource for Research	PER
43	AGE is NULL	Age is missing	If AGE is missing, AAGE must be present	PER
44	AAGE is NOT NULL	AAGE is NOT NULL	Must be present if AGE is DK/ RF	PER

EDITCODE	QUERY_NAME	MESSAGE	TREATMENT	FILE
45	HADDR is NULL	HH Address is missing	Must be present, check sample file	HH
46	COUNT is NULL	COUNTY is missing	Must be present, check sample file	HH
47	SBIN is NULL	Sampling Bin in missing	Must be present, check sample file	HH
48	HHSIZ is NULL	Household Size is missing	Must be present, check PER file; send back to DataSource for research	HH
49	HHVEH is NULL	Household Vehicles is missing	Must be present, check VEH file; send back to DataSource for research	HH
50	INCOM is NULL	Household Income is missing	Must be present, Impute creating new income variable – INCO2	HH
51	HHWRK is NULL	Number of household workers is missing	Must be present, check PER file; send back to DataSource for research	HH
53	HHCHD is NULL	Number of children in household is missing	Must be present, check PER file; send back to Data Collection for research	HH

RHTS Dataset: NYMTC & NJTPA Quality Control

In addition to NuStats' effort for quality assurance and quality control (QA/QC), NYMTC and NJTPA staff conducted additional QA/QC during the various stages in the development of the survey dataset.

Interim Dataset

For the place data file NYMTC and NJTPA staff checked for 1) speed violations and 2) validation of long trips information (for more detailed description, refer to pages 13 and 14 of the Data Processing, Quality Control, and Imputing Procedures section in TM 9.2). Systematic checks of Transit Mode (i.e., Commuter rail, Subway, and PATH) and Service providers (i.e., NJ Transit, MTA Long Island Railroad and Metro North, and Port Authority NYNJ) were implemented by looking into municipality level of origin and destination together with transit mode and service availability. With the aid of ArcGIS, relevant geographies for trip locations were obtained, and were compared with available transit mode and service providers for the area in question. NYMTC staff further executed manual data checks to assure high quality travel data; non-auto trips (i.e., bus, bike, walk, etc.) were particularly targeted due to relatively smaller but important assets for development of a travel demand model. At the end, sixty seven percent of unlinked trip records (including all public transportation-related trips) were reviewed and those updated were flagged accordingly (TM 9.2 for the frequency of each case).

Trip Files

During the post-processing of the survey dataset by PB to develop the survey trip files NYMTC and NJTPA found incorrect geographic boundary information (names and/or IDs for different levels of geography) in trip data deliverables. The problem resulted from: 1) implementation of different geographical coordinate system (default format in PB's NYBPM TransCAD network vs. GCS_North_American_1983) and the use of different GIS platforms (TransCAD vs. ArcGIS) by PB and others (NYMTC, NuStats and GeoStats); and 2) mis-aligned NYBPM TAZ layer in TransCAD⁶. NYMTC staff resolved these issues with the recreation of a new TAZ layer, aligned with pertinent 2000 Census Tract, Block (and Groups) and MCD layers, followed by application of the appropriate coordinate system and obtainment of new geographic boundary information. The corrected information was delivered to PB to implement in the unlinked, linked, tour and subtour files accordingly.

Final Data deliverables

A couple of additional issues were identified in a final trip dataset. These included: 1) missing different aggregate levels of geography, 2) missing Origin and Destination county info, 3) wrongly-assigned TAZ, Tracts, other geography, and Transit-related variables in post-processed (unlinked, linked, tour, and subtour) files, 4) inconsistent geography boundary codes, 5) missing or ambiguous labels for either variable or value, 6) coexistence of lower- and upper-case letter variables names, 7) missing trip departure and arrival hours, 8) different total number of subtours in subtour and tour files, and 9) inconsistent representation between N/A and 0 value. NYMTC requested relevant updates and revision, and advised to revisit macro scripts for data transformation to check possible errors in coding. Frequent communication between NYMTC staff and consultant teams helped resolve the issues. One minor issue regarding an incorrect person ID for one record (in a tour file) was identified in the final post-process data review and resolved by NuStats staff.

⁶ PB created TAZ layer for current version of BPM network based on 2000 Census Boundaries but the mis-alignment issue between Census and TAZ layers was well-recognized among NYMTC BPM users.

Appendix J: ADJ County Code

1: Within County, 2: To Adjoining County (Not NYC), 3: To Manhattan, 4: To Other NYC, 5: To Other NJTPA County, 6: To Other NYMTC County, 7: To Other in Metro Area, 8: Out of Metro Area

	Manhattan	Queens	Bronx	Brooklyn	Staten Island	Nassau	Suffolk	Westchester	Rockland	Putnam	Orange	Dutchess	Fairfield	New Haven	Bergen	Essex	Hudson	Hunterdon	Middlesex	Monmouth	Morris	Ocean	Passaic	Somerset	Sussex	Union	Warren	Mercer	
Manhattan	1	4	4	4	4	6	6	6	6	6	7	7	7	7	5	5	5	5	5	5	5	5	5	5	5	5	5	7	
Queens	3	1	4	4	4	2	6	6	6	6	7	7	7	7	5	5	5	5	5	5	5	5	5	5	5	5	5	7	
Bronx	3	4	1	4	4	6	6	2	6	6	7	7	7	7	5	5	5	5	5	5	5	5	5	5	5	5	5	7	
Brooklyn	3	4	4	1	4	6	6	6	6	6	7	7	7	7	5	5	5	5	5	5	5	5	5	5	5	5	5	7	
Staten Island	3	4	4	4	1	6	6	6	6	6	7	7	7	7	5	5	5	5	5	5	5	5	5	5	5	5	5	7	
Nassau	3	4	4	4	4	1	2	6	6	6	7	7	7	7	5	5	5	5	5	5	5	5	5	5	5	5	5	7	
Suffolk	3	4	4	4	4	2	1	6	6	6	7	7	7	7	5	5	5	5	5	5	5	5	5	5	5	5	5	7	
Westchester	3	4	4	4	4	6	6	1	2	2	7	7	2	7	5	5	5	5	5	5	5	5	5	5	5	5	5	7	
Rockland	3	4	4	4	4	6	6	2	1	6	2	7	7	7	2	5	5	5	5	5	5	5	2	5	5	5	5	7	
Putnam	3	4	4	4	4	6	6	2	6	1	6	2	2	7	5	5	5	5	5	5	5	5	5	5	5	5	5	7	
Orange	3	4	4	4	4	6	6	6	2	6	1	2	7	7	5	5	5	5	5	5	5	5	2	5	2	5	5	7	
Dutchess	3	4	4	4	4	6	6	6	6	2	2	1	2	7	5	5	5	5	5	5	5	5	5	5	5	5	5	7	
Fairfield	3	4	4	4	4	6	6	2	6	2	7	2	1	2	5	5	5	5	5	5	5	5	5	5	5	5	5	7	
New Haven	3	4	4	4	4	6	6	6	6	6	7	7	2	1	5	5	5	5	5	5	5	5	5	5	5	5	5	7	
Bergen	3	4	4	4	4	6	6	6	2	6	7	7	7	7	1	2	2	5	5	5	5	5	2	5	5	5	5	7	
Essex	3	4	4	4	4	6	6	6	6	6	7	7	7	7	2	1	2	5	5	5	2	5	5	5	5	2	5	7	
Hudson	3	4	4	4	4	6	6	6	6	6	7	7	7	7	2	2	1	5	5	5	5	5	5	5	5	5	5	7	
Hunterdon	3	4	4	4	4	6	6	6	6	6	7	7	7	7	5	5	5	1	5	5	2	5	5	2	5	5	2	2	
Middlesex	3	4	4	4	4	6	6	6	6	6	7	7	7	7	5	5	5	5	1	2	5	5	5	2	5	2	5	2	
Monmouth	3	4	4	4	4	6	6	6	6	6	7	7	7	7	5	5	5	5	2	1	5	2	5	5	5	5	5	2	
Morris	3	4	4	4	4	6	6	6	6	6	7	7	7	7	5	2	5	2	5	5	1	5	2	2	2	2	2	7	
Ocean	3	4	4	4	4	6	6	6	6	6	7	7	7	7	5	5	5	5	5	2	5	1	5	5	5	5	5	7	
Passaic	3	4	4	4	4	6	6	6	2	6	2	7	7	7	2	2	5	5	5	5	2	5	1	5	2	5	5	7	
Somerset	3	4	4	4	4	6	6	6	6	6	7	7	7	7	5	5	5	2	2	5	2	5	5	1	5	2	5	2	
Sussex	3	4	4	4	4	6	6	6	6	6	2	7	7	7	5	5	5	5	5	5	2	5	5	5	2	5	2	7	
Union	3	4	4	4	4	6	6	6	6	6	7	7	7	7	5	2	5	5	2	5	2	5	5	5	2	5	1	5	7
Warren	3	4	4	4	4	6	6	6	6	6	7	7	7	7	5	5	5	2	5	5	2	5	5	5	2	5	1	7	
Mercer	3	4	4	4	4	6	6	6	6	6	7	7	7	7	5	5	5	2	2	2	5	5	5	2	5	5	5	1	

Appendix K: LIFCYC Code

LIFCYC was created by a combination of variables listed below and the pertinent assumption suggested by NYMTC/NJTPA

LIFCYC	Labels	Description
1	Full-Time Employed	WORKS = 1 & (HRS1 + HRS2 + HRS3) > 34
2	Part-Time Employed	WORKS = 1 & (HRS1 + HRS2 + HRS3) < 35
3	Unemployed	WKSTAT = 3 or WKSTAT = 4
4	Homemaker	WKSTAT = 2
5	Adult Student	AGE >= 18 & WKSTAT = 5
6	Retired	WKSTAT = 1
7	School-Aged (5-17 years)	AGE >= 5 & AGE <= 17
8	Under 5 years	AGE < 5
9	Other	System Missing