To All Concerned:

Enclosed is a copy of the Non-Engineering Request for Proposals (RFP) referenced above. All information necessary for the submission of your proposal is contained in the Best Value solicitation.

Any questions regarding this project or proposal shall be submitted in writing, directed to Ismet Apdiroglu, of the New York Metropolitan Transportation Council (NYMTC) via: iapdiroglu@dot.state.ny.us, and to Al Hasenkopf of NYSDOT Contract Management via: ahasenkopf@dot.state.ny.us

Please note the following dates and deadlines:

- **December 14, 2011**: Deadline for the submission of proposals on 2PM (Eastern Time)
- **November 29, 2011**: Deadline for questions about the RFP is 4:00 PM (Eastern Time)
- **November 4, 2011**: Pre-proposal conference at 10:30 AM
In addition to responding to questions (which are encouraged) to assist firms in preparing proposals in response to this solicitation, a **pre-proposal conference** will be held on November 4, 2011 in NYMTC’s Office at 199 Water Street, 22<sup>nd</sup> Floor at 10:30 AM (see page 41 for details). A general review of the solicitation will occur, and specific questions regarding the solicitation may be asked and answered.

If you are interested in developing a proposal in response to this solicitation, please complete the attached RFP Response Form.

A “Checklist for Proposal Submission” is included for reference purposes when submitting your proposal to NYMTC. *It also contains instructions for complying with the Procurement Lobbying Law (PLL) so that your proposal may be considered for contract award. NOTE: Failure to submit the required PLL forms with your proposal will result in elimination from consideration for contract award.*

The New York Metropolitan Transportation Council estimates that work for the successful consultant will commence on March 1, 2012 and continue for a period up to 36 months depending on performance.

The New York State Department of Transportation (NYSDOT) encourages the participation of certified Disadvantaged Business Enterprises (DBEs) in its solicitations. Please see the New York State Unified Certification Program (NYSUCP) DBE Directory for certified Disadvantaged Business Enterprises via: [http://biznet.nysucp.net/](http://biznet.nysucp.net/). For this solicitation, the NYSDOT has set a **DBE Participation Goal of 6%**. Only certified DBE prime consultants and certified subconsultants listed in the NYSUCP DBE Directory are eligible for credit in this procurement. Please see the RFP for more information

We look forward to the receipt of your proposal.

Sincerely,

Joel Ettinger
Executive Director,
NYMTC

Enclosures
RFP RESPONSE FORM

RFP RESPONSE FORM: DEVELOPMENT OF SOCIOECONOMIC and DEMOGRAPHIC MODELS, 2050 FORECASTS and ZONAL ALLOCATION PROGRAM, Contract #C000775

Please review this RFP. Please complete the following information and mail, e-mail or fax to the NYSDOT address shown below, by the earliest practical date. This RFP Response form must be submitted along with the two required Procurement Lobbying Law forms (see Attachment # 2) before questions or other communications with the Department regarding this solicitation can be initiated.

______________  WE DO INTEND TO SUBMIT A PROPOSAL

______________  WE DO NOT INTEND TO SUBMIT A PROPOSAL FOR THE FOLLOWING REASONS:

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

Name and Address of Organization (Include Zip Code):
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

Signature: ________________________________ Date: ________________

Type or Print Name and Title: ________________________________

Telephone: _______________________________ Fax: ___________________________

E-Mail Address: ________________________________

RFP Title: DEVELOPMENT OF SOCIOECONOMIC and DEMOGRAPHIC MODELS, 2050 FORECASTS and ZONAL ALLOCATION PROGRAM

Please send to the following two parties:

E-Mail: iapdiroglu@dot.state.ny.us  Copy: ahasenkopf@dot.state.ny.us

Regular Mail: NYMTC, 199 Water Street, 22nd Fl New York, NY 10038
ATTN: Ismet Apdiroglu, C000775

Fax: 212-383-2418

NYSDOT Contract Mgt 50 Wolf Rd, Suite 1CM Albany, NY 12232
ATTN: C000775 APH

Fax: 518-457-2875
SELECTED CONSULTANT INFORMATION

DEVELOPMENT OF SOCIOECONOMIC and DEMOGRAPHIC MODELS, 2050
FORECASTS and ZONAL ALLOCATION PROGRAM
Contract #C000775

Vendor Responsibility

____ Go to NYSDOT Web site (https://www.nysdot.gov/main/business-center/consultants/forms-publications-and-instructions) to review the vendor responsibility questionnaire your firm will be required to submit within 10 days of being notified of selection for contract award. If you are a successful offer, NYSDOT will not be able to begin negotiations with your firm if this questionnaire is not completed and electronically submitted as required.

Procurement Lobbying Law (*)

____ Go to NYSDOT Web site (https://www.nysdot.gov/main/business-center/consultants/forms-publications-and-instructions) to read NYSDOT Policy Summation Compliance Procurement Lobbying Law. Complete and file the two required forms (Offerer’s Affirmation of Understanding of and Agreement pursuant to State Finance Law §139-j (3) and §139-j (6) (b) and Offerer Disclosure of Prior Non-Responsibility Determinations) as instructed when submitting a proposal. This is mandatory in order to be considered for contract award. Note: Failure to submit the completed PLL forms with your proposal will result in elimination from consideration for contract award.

Contractor Tax Certification

____ All vendors selected for contracts in excess of $100,000 for the sale of goods or services must complete and submit two NYS Tax Department forms: Form ST-220-TD (Contractor Certification) and Form ST-220-CA (Contractor Certification to Covered Agency) during negotiation of a contract with State agencies. You should make yourself familiar with these forms by visiting the following Web sites:
http://www.tax.state.ny.us/pdf/2006/fillin/st/st220ca_606_fill_in.pdf (Form ST-220-CA)

Insurance Requirements of this Project

____ Please carefully read the terms and conditions of the draft Contract appended as Attachment # 3 of this RFP. Your attention is drawn to the insurance requirements for this Project that are contained in Article 10 (Worker’s Compensation and Liability Insurance) of the draft Contract. These insurances are mandatory for the firm(s) selected as a result of this solicitation and will not be waived.
Consultant Employment Disclosure Requirements of this Project

Go to OSC’s Web site (http://www.osc.state.ny.us/agencies/gbull/g-226.htm) to become familiar with Consultant Employment Disclosure requirements, which went into effect June 19, 2006. The Consultant selected for this solicitation shall be required to complete ‘State Consultant Services – Contractor’s Planned Employment’ (Form A, Attachment # 4) and submit when the contract is signed. For each contract year thereafter, the Consultant shall complete the “State Consultant Services Contractor’s Annual Employment Report” (Form B, Attachment # 4) and submit copies to the Office of the State Comptroller, the Department of Civil Service, and the Department of Transportation on or before May15th of each year the contract is in effect.

Consultant Responsibility When Proposing to Use a Former NYSDOT Employee

It is the Consultant’s responsibility to ensure they propose staff that is eligible to work on the subject project. Under the attached procedures, before the consultant proposes a former NYSDOT employee, the individual must obtain an opinion from the New York State Ethics Commission that approves their participation in the subject project. For an outline of the procedure that applies to this situation, see Attachment # 6.

Registration with NYSDOT

Should this solicitation lead to a designation; it is the Consultant’s responsibility to electronically register their firm, including all subconsultants, using the Consultant Selection System Web application (CSSWeb). Non-Architectural/Engineering consultant firms are required to create and register an account to: 1) Create and assign Consultant Identification Numbers (CINs) for each office registered by the firm; and 2) Provide general firm information including, but not limited to, legal firm name, Federal Identification Number (FEIN), ownership type, D/W/MBE status, firm principals and office(s) address information. All consultant firms participating in a potential agreement (negotiations) must be registered electronically with NYSDOT prior to that agreement being forwarded to the Office of the State Comptroller for approval. Registered firms are responsible for verifying and updating their registration information for the duration of the agreement. Section VI of this RFP provides more information.
REQUEST FOR PROPOSALS

DEVELOPMENT OF SOCIOECONOMIC and DEMOGRAPHIC MODELS, 2050 FORECASTS and ZONAL ALLOCATION PROGRAM

CONTRACT No.: C000775

Request for Proposals Release Date: October 25, 2011
Proposal Due Date: December 14, 2011
Proposal Delivery Location:
New York Metropolitan Transportation Council
199 Water Street, 22nd Floor
New York, NY 10038-3534
Attention: Mr. Iset Apdroyglu, C000775
Email: iapdroyglu@dot.state.ny.us

Second Proposal Delivery Location:
NYSDOT Contract Management
50 Wolf Road, Suite 1CM
Albany, New York 12232
Attention: Mr. Al Hasenkopf, C000775
Email: ahasenkopf@dot.state.ny.us
REQUEST FOR PROPOSALS
NEW YORK STATE DEPARTMENT OF TRANSPORTATION (on behalf of the)
NEW YORK METROPOLITAN TRANSPORTATION COUNCIL

DEVELOPMENT OF SOCIOECONOMIC and DEMOGRAPHIC MODELS, 2050 FORECASTS
and ZONAL ALLOCATION PROGRAM CONTRACT #C000775

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NEW YORK STATE DEPARTMENT OF TRANSPORTATION (on behalf of the)
NEW YORK METROPOLITAN TRANSPORTATION COUNCIL

REQUEST FOR PROPOSALS

DEVELOPMENT OF SOCIOECONOMIC and DEMOGRAPHIC MODELS, 2050
FORECASTS and ZONAL ALLOCATION PROGRAM

CONTRACT #C000775

I. INTRODUCTION

A. Purpose

The New York State Department of Transportation (NYSDOT), on behalf of the New York Metropolitan Transportation Council (NYMTC), is releasing this Request For Proposals (RFP) to seek proposals from responsive and responsible offerors to assist NYMTC to develop/update its 31-county regional socioeconomic and demographic (SED) forecasting model, to implement a program for allocating forecasts of population, households, employment, and labor force in the NYMTC region, and to produce the agency’s Socioeconomic and Demographic long-range forecasts beginning from base year 2012 through the year 2050 at five year intervals (2015, 2020, 2025, 2030, 2035, 2040, 2045 and 2050).

B. Introduction

The New York Metropolitan Transportation Council (NYMTC), via its host, NYSDOT, is requesting proposals to develop/update its 31-county regional socioeconomic and demographic (SED) forecasting model, to implement a program for allocating forecasts of population, households, employment, and labor force in the NYMTC region, and to produce the agency’s Socioeconomic and Demographic long-range forecasts beginning from base year 2012 through the year 2050 at five year intervals (2015, 2020, 2025, 2030, 2035, 2040, 2045, 2050). This project aims to produce regional, sub-regional, county, sub-county, and Transportation Analysis Zone (TAZ) level forecasts of population, employment, labor force, households and additional land use variables that conform to all applicable federal requirements and local needs.

Accurate and stable socioeconomic and demographic forecasts are critical requirements for the planning work conducted by NYMTC’s members and NYMTC’s central staff. The planning work supported by the regional forecasts includes: air quality conformity analyses, the development of capital investment strategies and plans, and the analysis of the benefits and costs of major capital investments.

The methodology must generate forecasts (and future updates of the forecasts) that are fundamentally stable, eliminating or significantly minimizing the influence of transient or cyclical fluctuations in the base year economic environment (e.g., unemployment rates) on the rate of growth between the base year and forecast years. The proposed model(s) should be capable of producing forecasts at the minimum to the year 2050 for upcoming planning studies. The desired model(s) must also be designed in a user-friendly fashion...
that facilitates NYMTC staff and member agencies to explore alternative growth scenarios, and to generate future updates of the forecasts and future forecasts beyond year 2050. Input from the region’s elected officials, planning directors, and other Metropolitan Planning Organizations (MPOs) must be incorporated into the forecasts throughout the development process.

A Zonal Allocation Program (ZAP) is expected to be developed as part of this project to realize the allocation of county level forecasts to TAZ level. The selected consultant(s) shall demonstrate understanding of available zonal allocation tools and capability of working with the stakeholders to identify their needs. The Consultant shall also specify and justify the proposed technical approach to address the above needs in terms of the program capabilities, requirements on resources, and needed customizing and improvements. The primary products of this component of the project will be a tool to allocate county level forecasts to TAZ levels for various variables, including population, households, employment, and labor force in the NYMTC region.

The proposed ZAP must provide required variables at TAZ level for input to the New York Best Practice Model (NYBPM). The SED model and ZAP also must be developed to permit “what if” alternate development analyses to be conducted, in an efficient and effective manner, by both NYMTC staff and NYMTC members. The desired ZAP would maintain explicit representation of land markets, enable direct input of land capacity constraints including redevelopment of land, read and write data directly from/to ESRI geo-databases, and provide visualization capabilities.

The project consists of the following major steps:

1. Data collection, analysis, and calibration of all existing data.

2. Development of detailed socioeconomic and demographic forecasting models and the zonal allocation program; integrate these models and link them to NYMTC’s and MTA’s transportation demand forecasting models, so that based on the best forecasting methodology available, it will allow the Metropolitan Planning Organization (MPO) and its members to generate its own forecasts--“what if” analyses-- specific to a particular study or scenario (the “what if” component must be designed so that a regular person can apply it with a minimum of training).

3. Preparation of a set of official county-level forecasts, to be approved by the Forecasting Working Group (FWG), and adopted by the Program, Finance and Administration Committee (PFAC), and a more detailed set of sub-county forecasts which will be applied as the latest data inputs to the NYBPM and Regional Transportation Plan (RTP), and which can be easily incorporated into the ridership models, such as the MTA’s Regional Transportation Forecasting Model (RTFM), used by NYMTC’s members.

4. Working with FWG members as well as with regional elected officials and planning directors throughout the development process.

Socioeconomic Demographic Forecasting History
Prior to 1983, the Tri-State Regional Planning Commission (TSRPC) was the planning entity responsible for developing socioeconomic demographic forecasts for the thirty one county urbanized area which included portions of New York State, New Jersey, and Connecticut. NYMTC assumed these SED forecasting responsibilities when it was designated the MPO after TSRPC’s collapse. NYMTC continues to develop these forecasts for the multi-state 31 counties in an inclusive way (through a working group) meeting with representatives from the tri-state region that forms the commuter shed for the New York metro region. Other NYS MPOs (OCTC & PDCTC) as well as North Jersey Transportation Authority (NJTPA) whose planning areas were part of TSRPC also participate in this process.

NYMTC has a FWG through which the multi-state, multi-agency stakeholders review work products resulting from staff and consultant efforts in developing the SED forecasts.

NYMTC staff is hosted by the New York State Department of Transportation. All contracts developed by NYMTC staff go through NYSDOT’s Contract Management Bureau and the New York State’s process for approval including reviews and approvals by the Attorney General and the Office of the State Comptroller.

NYSDOT has had a term agreement with Global Insight (GI) with options to provide demographic and business economic data, national drivers, forecasts for different geographic levels, standard forecast reports, custom data series and customized forecasts. NYSDOT endeavors to update its selection of forecasts periodically avoiding “peaks and troughs”.

This agreement provides NYSDOT with special pricing over the expanse of geography sought for these data for statewide and the New York Metro area planning. As NYMTC is hosted by NYSDOT, when this term agreement was renegotiated it was specifically extended at the request of their staff at that time to purchase both data and national drivers for NYMTC as input to its forecasting process. The unique relationship of NYSDOT as host of NYMTC clearly allows cost reduction and data sharing for this type of procurement. The Federal agencies welcomed this type of sharing as part of a collaborative planning process which ensured consistency with statewide forecasts.

In the past, NYMTC’s consultants obtained the necessary driver and related data through the NYSDOT agreement and used these data to develop a methodology to produce the regional forecasts and the resultant SED forecasts. This traditional approach of National drivers stepping down to a regional model has been used as input to NYMTC’s model, as changes in certain national-level policies impact regional growth they in turn may have significant implications at a local level with in the NYMTC region. Among national policies, immigration has a significantly strong influence on the regional and local forecasts.

The other components that are used as input to NYMTC’s regional model are demographic or business economic data from GI, or other Federal or state agencies such as: Census data, Census Transportation Planning Products (customized transportation census data summaries produced as part of the FHWA/AASHTO pooled fund effort) such as journey to work, workers by residence, net migration, fertility & mortality, household data, and housing stock preference (historical characteristics of size, type, and income). The SED models address a variety of socio-demographic and business economic variables forecast in five-year intervals and allocated to the zonal level using GIS with historical trends, existing land use, vacant available land, and projects underway.
C. What is NYMTC?

NYMTC is the federally mandated MPO for the downstate New York region. The NYMTC region includes New York City, Long Island, and the lower Hudson Valley. It encompasses an area of 2,440 square miles and a population of 11.3 million, approximately 65% of New York State's population. NYMTC consists of voting and advisory members:

**Voting Members**
- Counties of Nassau, Putnam, Rockland, Suffolk and Westchester
- Metropolitan Transportation Authority
- New York City Department of Planning
- New York City Department of Transportation
- New York State Department of Transportation

**Advisory Members**
- Federal Highway Administration
- Federal Transit Administration
- New Jersey Transit
- New York State Department of Environmental Conservation
- North Jersey Transportation Planning Authority
- Port Authority of New York & New Jersey
- U.S. Environmental Protection Agency

NYMTC’s members and Central Staff conduct comprehensive long-range transportation planning and annually oversee several billion dollars in transportation investments for the most dynamic and complex transportation system in the nation. NYMTC sponsors and conducts studies, assists member-planning agencies, and provides a forum for interagency cooperation and public input into funding decisions.

Forecasting future demographic and socioeconomic conditions is fundamental to planning. NYMTC’s forecasts support regional transportation plan development, corridor studies, subregional studies, and demonstrations of air quality conformity – the determination that the RTP and approved Transportation Improvement Program (TIP) projects conform to national air quality goals. Demographic forecasts are a major input to the region’s travel demand models, including the NYBPM and the MTA’s RTFM.

II. PROJECT OBJECTIVES AND CONTRACT OBJECTIVES

A. Project Objectives

The main objective of NYMTC’s project is to develop the demographic and socioeconomic models for 2050 forecasts and a ZAP to generate the 16 required input variables to NYBPM. Also, the SED model has to be structured in a way that can produce reasonable results beyond 2050.

The selected Consultant, under contract, shall develop and implement, through an interactive process, a plan containing recommendations for a new ZAP and SED model(s) for 31-county New York Metropolitan Region. The negotiated scope of
services may include work to initiate and complete project planning for this effort as well as provide recommendations regarding some conceptual design work.

The selected Consultant shall meet all of the software requirements specified for NYMTC’s SED Model(s) and ZAP project. The project must also meet all of the specifications contained in Task 3.1 Modeling Methodology.

Depending upon the proposed methodology, and the compatibility of proposed data used to generate SED forecasts, a consultant has the option to acquire national long term forecasts and related data from NYMTC via the historical collaborative relationship with NYSDOT. The NYSDOT has a contract with IHS-Global Insight to purchase such drivers and related data.

It is anticipated that the demographic forecasting and model development, including the ZAP, “what if” component, and extensive outreach with regional stakeholders, will be completed within two-and-a half years from its commencement. However, the Consultant is required to deliver final demographic and socioeconomic forecasts at the county and TAZ levels by the end of 2014. This means that county population and employment forecasts have to be adopted on or before May 2014.

B. Contract Objectives

1. **Term**: The term of this contract will be for up to 36 months commencing from the contract start date, with two twelve-month optional term extensions.

2. **Complexity**: The level of complexity for this project is moderately complex.

3. **Payment Method**: It is anticipated that this will be a lump sum milestone-type contract.

4. **Level of Effort**: For planning purposes, it is anticipated this contract may require the equivalent of seven (7) fully loaded staff years of effort to complete.

5. **Consultant Arrangements**: Only one (1) responsive and responsible Prime Consultant (or team of consultants) will be retained through this RFP solicitation. Subconsulting and teaming arrangements are encouraged. Joint ventures are not allowed.

6. **Meeting the 6 percent DBE contract goal.**

7. **Out-Year Rate Adjustments**: If the contract is extended for the optional years, and considering the normal behavior of the country’s economy and New York State’s economy, the Producer Price Index (PPI) as published by the U.S. Department of Labor, Bureau of Labor Statistics, or 1.5%, whichever is lower, will be used as a basis for adjusting hourly rates. In times of less then normal economic behavior, other basis for rate adjustments might be in order. The rate adjustment will be effective on January 1 and calculated using the previous October Index, using Series ID PCU5413--5413--(Architectural, engineering, and related services). If at any time the above Index Series ID is discontinued or becomes unavailable, the State reserves the right to implement a comparable Index.

C. RFP Minimum Responsiveness Requirements

Any responding Firm that does not provide all of the following by the RFP deadline may be determined to be non-responsive. Any proposal deemed to be non-responsive shall be removed from further consideration (prior to the technical and cost evaluation of proposals).
a. Part I of the Proposal – Technical and Management submission  
b. Part II of the Proposal – Cost and Contract submission, including all required, completed attachments  
c. Acceptable DBE submission  

**Proposals are required to use 11 point font or larger**, except where necessitated for readability of tables or special graphics. Twelve font is preferred. **Proposals which are substantively in smaller fonts will be rejected.**

**D. Disadvantaged Business Enterprise Participation**

While not indicative of a proposer’s individual merit (technical excellence, proposer’s ability, experience, etc.), NYSDOT encourages the participation of certified Disadvantaged Business Enterprises (DBE) in its solicitations. The level of DBE participation will be relevant to the process of selecting proposals that will best achieve the overall goals of the Department. Please visit the New York State Unified Certification Program (NYSUCP) DBE Directory for certified Disadvantaged Business Enterprises via: [http://biznet.nysucp.net/](http://biznet.nysucp.net/).

The New York State Department of Transportation has established a **DBE subconsultant participation contract goal of 6 percent** for this solicitation. While this is subconsulting goal, participation of prime consultants is allowed. The goal relates to the direct labor portion of the project budget (and direct non-salary expenses attributable to certified DBE participation). Meaningful participation by a prime consultant or subconsultant **who is certified** as a NYSUCP DBE would be counted toward the DBE participation goal. Meaningful participation is defined as providing commercially useful functions or services. These services should:

1. Result in a product or service distinguishable from the Prime Consultant’s product or service.  
2. Be for scope of service elements which can be and are completely performed, supervised and managed by the DBE consultant, and/or  
3. Perform significant tasks which can be considered commercially marketable.

Follow the proposal formatting instructions located in RFP Section IV and in Attachments #7 and #8, as applicable. Firms are advised to refer to RFP Section V (Pre-Screening) for the procedure NYSDOT/NYMTC will follow in evaluating a firm’s proposed DBE participation. Questions regarding DBE participation are encouraged.

NYSDOT has posted its final draft DBE Program Plan to its website (2010; subject to change). The draft plan provides background information regarding how the Department conducts its Federally-required DBE program, covering such subjects as contract-level goals, good faith efforts by consultants, DBE certifications, etc:  

**III. SCOPE OF SERVICES**
The scope of the contract will be in accordance with agreed-upon work. This contract is to develop, through an interactive process, a plan containing recommendations for a new ZAP and SED model(s) for 31-county New York Metropolitan Region. The New York Metropolitan Region consists of five subregions.

The five subregions comprise the following counties:
- **New York City**: Bronx, Kings, New York, Queens and Richmond;
- **Long Island**: Nassau and Suffolk;
- **Mid-Hudson**: Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester;
- **Connecticut**: Fairfield, Litchfield, and New Haven;

The negotiated scope of services may include work to initiate and complete project planning for this effort as well as provide recommendations regarding some conceptual design work.

The consultant will produce a region-wide employment forecast for the 31 county region. For variables other than employment, the consultant will produce forecast for only 26 counties in the region, excluding the five counties (boroughs) of New York City. The New York City Department of City Planning (NYCDCP) will be producing forecasts for all variables for the five counties of New York City.

The consultant and NYCDCP will work closely with NYMTC throughout the project. Employment forecasts produced by NYCDCP and the consultant will be reconciled through the FWG process. The consultant will be expected to participate in the FWG process as needed.

Progress meetings shall be scheduled regularly among all parties during the entire development process.

The selected consultant may offer an alternate task organization. The consultant’s proposal must include a task schedule with deadlines for each deliverable. In submitting cost proposals, budgets shall be detailed for each specific task.

NYMTC has the following software requirements for its SED Model(s) and ZAP:

- Each model and its subcomponents must be either in the public domain or NYMTC/NYSDOT shall be a joint owner of it.
- The source code shall be well documented and available for future inspection and modification.
- The model(s) shall use a graphical user interface (GUI) that incorporates all software features into a user-friendly operating environment.
- The model(s) shall provide results in a computationally consistent manner on a variety of geographic scales.
- The model(s) shall detect and report errors in a controlled environment. The
user’s manual shall document and explain all error messages.

**Task 1: Administrative Structure**

Within this task, NYMTC, NYCDCP and the selected Consultant will jointly develop the administrative structure for the project.

The Consultant shall:

1. Jointly develop the administrative structure of the project with NYMTC and NYCDCP Project Managers.
2. Conduct a kickoff meeting with NYMTC and NYCDCP staffs to discuss methods for progress reporting, makeup of the Steering Committee (SC) and Technical Advisory Committee (TAC), coordination with stakeholders, key elements of the work approach, and major issues involved in the project.
3. Arrange for payment of expenses incurred by up to three (3) experts with knowledge of regional economic and demographic trends, and/or expertise in developing and applying land use allocation tools. Those experts along with Forecasting Working Group members will form a Technical Advisory Committee (TAC). The TAC members will meet periodically in order to review and provide feedback to the Consultant and NYCDCP, as well as guide the overall direction of the project. Members of TAC will participate in critical decisions regarding the forecasts methodology, models design, and zonal allocation process approach. Members will participate by providing written comments and by attending project team meetings with the Consultant, NYMTC, and NYCDCP staff. For estimating purposes TAC members are expected to attend a total of 11 meetings (5 in person meetings and 6 conference call meetings). In addition to presentation materials and agendas, the Consultant shall prepare briefing packets for the TAC members to be reviewed prior to the meetings. These briefing packets might include the project scope, summary of previous discussions, conclusions, and new and unresolved technical issues.
4. Hold regular Steering Committee meetings. The SC shall consist of primary stakeholders proposed by the NYMTC project manager and shall meet on a monthly basis to review work progress and provide guidance.
5. Submit a monthly project progress report and hold biweekly progress meetings with NYMTC and NYCDCP staff. The progress report shall include status of the previous month’s work and any other information requested by NYMTC. Submit the progress report five (5) business days before the first biweekly progress meeting of the month is held.
6. Hold meetings near the end of each task with NYMTC and NYCDCP staff, and the SC to address findings and preliminary recommendations and to receive concurrence on project direction. The Consultant shall deliver these presentations in cooperation with NYMTC. The Consultant shall coordinate these meetings in advance with NYMTC staff, and develop agendas, presentation materials, and background material as needed.
7. Institute a Record of Decision Making Management System, to ensure continuity in the forecasting process due to staff changes within NYMTC or the Consultant team.
8. Present the final results of the project at a PFAC staff meeting and at a PFAC
public meeting.

**Deliverables**

a. Draft & Final Agendas and Notes or Minutes for each meeting  
b. Monthly Progress Reports  
c. Meeting Presentation Materials  
d. Record of Decision Making Management System

**Task 2: Data Collection and Analysis**

As part of this task, the selected Consultant and NYCDCP (for New York City forecast components) shall: 1) collect data to be used in developing the forecasts, 2) analyze the data in light of current conditions and historical trends to determine whether the current conditions are representative of a temporary or more fundamental change in the regional economy.

The selected Consultant and NYCDCP (for New York City forecast components) shall recommend the data collection needs required by the proposed SED model(s) that shall be used to generate 2050 forecasts. Data available from local agencies would be used as needed for model(s) development and support.

**Task 2.1 White Paper on Methodology**

The selected consultant shall produce a White Paper describing in detail the proposed methodology to be used in developing the forecasts. As long as all of the RFP’s objectives are met, Consultants have the option of recommending any reasonable forecasting methodology. NYMTC’s past methodologies are available for inspection by all interested parties. NYMTC’s goal is to examine as part of this scope of work the broadest range of viable forecasting methodologies, including variations of NYMTC’s past methodologies or entirely new SED forecasting methods if they are practicable and meet the RFP’s objectives.

NYCDCP’s draft approach is provided in Attachment 12. While the consultant may want to conduct a review of NYCDCP methods, the consultant’s methodological approach should not necessarily be limited by the methodologies proposed by NYCDCP.

The White Paper shall describe:

- How the methodology will generate forecasts and forecast updates that consider the influence of the current economic environment on future conditions, and structural changes in the economy that may be underway. In addition, the White Paper will describe other methodologies that will be used to ensure the stability of results from one forecast update to the next forecast update.
• How the forecasts will be linked to NYMTC’s NYBPM and MTA’s RTFM so that regional land use trends and the plans and policies of NYMTC’s members will be fully reflected in the population, employment and labor force components.
• How the forecasts will consider land use development restrictions including the Highlands and Pinelands land development restrictions in New Jersey as well as other planned land use development patterns.
• How input from the region’s elected officials and planners and other MPOs will be incorporated into the forecasts throughout the development process.
• How the consultant will work with NYCDCP to incorporate their forecasts while maintaining a regional approach to forecast development.
• How the recommended methodology addresses NYMTC’s current and past forecasting methods.

This overall methodology shall be approved by the FWG before work on the remaining tasks can proceed.

The selected Consultant and NYCDCP will coordinate closely with NYMTC staff through the biweekly Project Team meetings. The selected Consultant and NYCDCP shall follow the same timeline for the project.

Deliverables:
White Paper describing in detail the methodology to be used in developing the forecasts.

Five (5) bound copies and one unbound copy of DRAFT document, and five (5) bound copies and one unbound copy of FINAL document should be submitted to NYMTC. Both draft and final documents should be submitted on CD as well. The selected Consultant and NYCDCP will use the same format for the report. Format: PDF, Word.

Task 2.2 Data Collection

Based on the proposed methodology, the selected Consultant and NYCDCP (for New York City forecast components) shall recommend data needs. The selected Consultant and NYCDCP (for New York City forecast components) shall identify and acquire all needed data (either directly or with NYSDOT’s assistance if these data are available through NYSDOT’s term agreement). If data or national long term forecasts are required by the proposed methodology, cost of the drivers should be listed as a separate cost item. The latest available data shall be collected and compiled. This task shall be coordinated with Task 6.2, to reduce redundancy in data collection effort.

Consultants are instructed to review the forecasting methods and data used by NYMTC in its previous socioeconomic forecasting models. Some of the potential input data has been purchased by the NYSDOT for NYMTC’s use. The NYSDOT has a term agreement with IHS-Global Insight which affords NYMTC the opportunity to purchase any data series that is available from the Global Insight contract or to utilize the
contract’s consulting provisions to have a new data series modeled and then forecast for NYSDOT’s use.

This RFP requires the selected Consultant to recommend data. Should the data the Consultant recommends be available through NYSDOT’s term agreement, then purchase of this data will be coordinated between NYMTC and NYSDOT. For RFP response planning purposes, it is expected that at least one set of data shall be initially purchased, and it is anticipated that a second set of data may also be purchased. Furthermore, to anticipate any Consultant recommendations using the NYSDOT’s term agreement, NYMTC and NYSDOT have coordinated a separate, off-contract budget of $100,000 to cover all expected and anticipated purchase of data from the term agreement. The data purchased under NYSDOT’s term agreement for and shared with NYMTC is proprietary and all those who access this data must sign and abide by the terms of a non-disclosure agreement, including NYMTC staff, NYCDCP and the selected Consultant.

Consultants responding to this solicitation who recommend following NYMTC’s historical SED forecasting method should not assume the $100,000 cost for national long term forecasts in their cost proposals. Firms who recommend different SED forecasting methods should include the cost of purchasing data in their cost proposals.

NYMTC is in the process of developing a visitor model to capture non-resident trips within the region. To support the visitor model, the selected Consultant and the NYCDCP will be asked to provide required inputs once the visitor model specifications are finalized. Variables might include hotel rooms per zone, hotel occupancy rate, etc.

The selected Consultant and NYCDCP will coordinate closely with NYMTC staff through the biweekly Project Team meetings. The selected Consultant and NYCDCP shall follow the same timeline for the project.

Deliverables:
Technical memorandum (TM) describing all the forecast variables to be used in the proposed SED model(s), the data collection methodology, the data dictionary, and the electronic data in the pre-determined formats required by the proposed model(s).

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and five (5) bound copies and one unbound copy of FINAL TM with electronic media copies of the bookmarked reports and associated data files should be submitted to NYMTC. Both draft and final documents should be submitted on CD as well. The selected Consultant and NYCDCP will use the same format for the report. Format: PDF, Word, GIS and Excel or Access.

Task 2.3 Summaries and Analysis of Existing Trends and Key Factors for Forecasting

Based on the data collected in the above task, the selected Consultant and NYCDCP (for New York City forecast components) shall review and analyze past and current trends. NYCDCP will produce forecasts for all variables for the five counties of New York City. The selected consultant will produce a region-wide employment forecast for 31 counties.
For variables other than employment, the selected consultant will produce a forecast for only 26 counties in the region, excluding the five counties of New York City. The analysis shall identify factors that may represent steady continuing trends, others that may be expected to exhibit cyclical behavior, and still others that may reflect unusual temporary fluctuations. New factors that may contribute to fundamental changes in the economy or demographic growth patterns shall also be explored. For example, the Consultant and NYCDCP (for New York City forecast components) shall identify recent household turnover trends due to the aging population and to what extent are older neighborhoods renewing them. The Consultant and NYCDCP (for New York City forecast components) will consider the impact of immigration and emigration to the extent feasible. The Consultant should also consider the impact of land use restrictions on future development in certain areas in New Jersey (e.g., the Highlands Planning Area restrictions).

The selected Consultant and NYCDCP will coordinate closely with NYMTC staff through the biweekly Project Team meetings. The selected Consultant and NYCDCP shall follow the same timeline for the project.

**Deliverable:**
Technical memorandum summarizing and analyzing existing trends and factors relevant for forecasting will be issued.

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and five (5) bound copies and one unbound copy of FINAL TM with electronic media copies of the bookmarked reports and associated data files should be submitted to NYMTC. Both draft and final documents should be submitted on CD as well. The selected Consultant and NYCDCP will use the same format for the report. Format: PDF, Word and Excel.

**Task 3: Modeling**

The selected Consultant and NYCDCP (for New York City forecast components) shall propose a state-of-the-practice model(s) to produce forecasts through the year 2050. Consequently, the new NYMTC’s SED Model(s) must produce outputs that meet the input requirements of NYMTC’s Best Practice Model and MTA’s Regional Transit Forecasting Model. This is further explained in Tasks 3.1 – 3.3. Some information on the MPO’s modeling is available on the NYMTC website, as well as full documentation of the NYMTC’s SED models. For reference purposes, a brief description of the current model is provided in Attachment 9.

**Task 3.1 Modeling Methodology**

The selected Consultant and NYCDCP (for New York City forecast components) must clearly demonstrate that the proposed model concept, structure, methodology, and final model form to be applied in the NYMTC forecast study area is consistent with standard demographic practices, as demonstrated in previous applications and in evaluation
research. NYCDCP will produce county level forecasts for New York City for all variables. The selected Consultant will produce a region-wide employment forecast, including New York City. While the consultant will not be responsible for non-employment forecasts in NYC, the modeling approach should be regional and be capable of reacting to the interrelationship between employment potential, labor force potential, and the land use constraints that might hinder the fulfillment of that potential. The model must produce forecasts at the five-year increments through the year 2050. However, the model has to have capability to generate forecasts for the years beyond 2050.

In addition, 2050 forecasts shall be developed in ranges, such as high, medium, and low. Medium will be the baseline and assumes the national economy will grow smoothly based on average long-term growth trends and average employment trends and that significant upward or downward swings on the economic cycle have no lasting impacts between now and 2050. The two other scenarios incorporate different demographic and economic assumptions from the baseline. The high projection is the optimistic scenario, in which economic growth proceeds smoothly but more rapidly than in the baseline. The low projection is the pessimistic scenario where growth proceeds smoothly, but more slowly than in the baseline, and productivity growth is weaker. The selected Consultant shall establish a bandwidth with only 10% likelihood that the economy's underlying path will be outside the high and low projections. The scenarios will provide NYMTC the flexibility to adjust the forecast under unexpected situations, such as the recession beginning in late 2007. Employment forecasts will consider the impact of the recent recession and current employment levels on establishing a base year benchmark from which forecasts will be made.

The selected Consultant and NYCDCP (for New York City forecast components) shall also be responsible for producing a white paper on the possible future enhancements that might be made to the model in the future, given additional budget and time.

The table below summarizes which counties the Consultant and NYCDCP will be preparing forecasts for. Essentially, NYCDCP will only be preparing a complete set of forecasts, including employment, for the 5 county New York City region. The Consultant will be preparing the employment forecasts for New York City, and will be preparing the complete set of forecasts for the rest of the counties in the NYMTC region.

<table>
<thead>
<tr>
<th>31 County Breakdown</th>
<th>Consultant</th>
<th>NYCDCP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5 New York City Counties</strong></td>
<td>Employment forecasts ONLY</td>
<td>Complete set of forecasts</td>
</tr>
<tr>
<td>NY, Queens, Bronx, Kings, Richmond</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>7 Additional New York Counties</strong></td>
<td>Complete set of forecasts (county and subregion)</td>
<td>N/A</td>
</tr>
<tr>
<td>Nassau, Suffolk, Westchester, Rockland, Putnam, Orange, Dutchess</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>19 Other Counties</strong></td>
<td>Complete set of forecasts (county and subregion)</td>
<td>N/A</td>
</tr>
<tr>
<td>Sullivan, Ulster, Bergen, Passaic, Hudson, Essex, Union, Morris, Somerset, Middlesex, Monmouth, Ocean, Hunterdon, Warren, Sussex, Mercer,</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The model must forecast the following variables (at a minimum), which are the necessary data inputs into the NYBPM:

**Regional and Subregional Levels**

- **Household Population**
  - by five-year age groups (with 85+ in one group), sex, and race/ethnicity, including in and out migration, births and deaths

- **Group Quarter Population**

- **School enrollment**
  - primary, secondary, and university

- **Employment**
  - payroll and proprietors; by major industrial sectors of the NAICS system (two digit), and occupation

- **Labor force**
  - by age groups, sex, and race/ethnicity, employed and unemployed

- **Households**
  - household population by race and ethnicity; households by size of household (1 to 7+) and race/ethnicity; households by tenure (owner and renter occupied by single family detached and attached, 2-4 unit 5-19 unit, and 20+ unit or mobile home) and race and ethnicity; by type of household (family: married couple, male and female householder, and non-family: single person and unrelated individuals) and race/ethnicity; households by age of householder and race/ethnicity; by average household size; and by housing stock, and vacancies

- **Earnings**
  - by industry, and per worker (at workplace)

- **Income**
  - mean household income (at place of residence), and households by income brackets and race/ethnicity

**Visitor Model Inputs**
- will be specified later.

**County Levels for 12 NY Counties** New York, Queens, Bronx, Kings, Richmond, Nassau, Suffolk, Westchester, Rockland, Putnam, Orange and Dutchess

- **Household Population**
  - by five-year age groups (with 85+ in one group), sex, and race/ethnicity, including in and out migration, births and deaths

- **Group Quarter Population**

- **Total Population**

- **Employment**
  - payroll and proprietors;
Labor force
- by age groups, sex, and race/ethnicity, employed and unemployed

School enrollment
- primary, secondary, and university

Households
- household population by race and ethnicity; households by size of household (1 to 7+) and race/ethnicity; households by tenure (owner and renter occupied by single family detached and attached, 2-4 unit 5-19 unit, and 20+ unit or mobile home) and race and ethnicity; by type of household (family: married couple, male and female householder, and non-family: single person and unrelated individuals) and race/ethnicity; households by age of householder and race/ethnicity; by average household size; and by housing stock, and vacancies

Household Size
Earnings
- by industry, and per worker (at workplace)

Income
- mean household income (at place of residence), and households by income brackets and race/ethnicity

Visitor Model Inputs
- will be specified later.

**County Level For the rest of 19 counties** Sullivan, Ulster, Bergen, Passaic, Hudson, Essex, Union, Morris, Somerset, Middlesex, Monmouth, Ocean, Hunterdon, Warren, Sussex, Mercer, Fairfield, New Haven, and Litchfield

Household Population
Group Quarter Population
Total Population
Employment
- payroll and proprietors;
Labor force
- employed and unemployed
School enrollment
- primary, secondary, and university
Households
Household Size
Earnings
Income
Visitor Model Inputs (will be specified later.)

The Consultant shall confirm Population, Employment, and Households forecasts with the relevant MPO and/or county government for each of these 19 counties.

**Deliverable:**
Technical Memorandum that describes in clear and concise language the theoretical basis...
is underlying the modeling method for each of the variables. It shall include all the formulas/algorithms and any relevant assumptions that underlie each of the models. Bibliography and supporting documentation of sources, techniques and methodologies used in constructing the models shall be included. The selected Consultant and NYCDCP will use the same agreed upon format for the report.

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and five (5) bound copies and one unbound copy of FINAL TM with electronic media copies of the bookmarked reports and associated data files should be submitted to NYMTC. Both draft and final documents should be submitted on CD as well. Format: PDF, Word, GIS and Excel or other format agreed upon by NYMTC.

Task 3.2 Model Development, Estimation, and Calibration

Following a review and approval of the proposed modeling methodology by the FWG members, the selected Consultant and NYCDCP (for New York City forecast components) shall make requested changes and shall develop a set of SED models with newly estimated coefficients. All SED models must be estimated and calibrated with data collected in Task 2.2. The development of each model shall include explicit assumptions for each variable together with the data sources upon which these assumptions were made.

The model application must be in a format that is easily accessible and operated on a Windows-based desktop computer, with run-times for the complete model not exceeding 8 hours. The software to be used for model development needs to be approved by NYMTC staff. Output shall be in a format to be agreed upon between the NYMTC staff and the selected Consultant. The model shall be easily linked to GIS programs, including TransCAD and ArcGIS, to generate GIS maps.

The selected Consultant and NYCDCP will coordinate closely with NYMTC staff through the biweekly project team meetings. The selected Consultant and NYCDCP shall follow the same timeline for the project.

Deliverables:
Technical memorandum describing in detail the development and operation of each model should be issued. Actual models with all source code and developed software. The selected Consultant and NYCDCP will use the same format for the report.

All technical memoranda, models, and associated data files shall also be provided electronically (on CD or DVD).

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and five (5) bound copies and one unbound copy of FINAL TM with electronic media copies of the bookmarked reports and associated data files should be submitted to NYMTC. Both draft and final documents should be submitted on CD as well. Format: PDF, Word, Excel or any other format.

Task 3.3 Model Validation, Testing, and Interoperability with GIS Interface and Databases
The selected Consultant and NYCDCP (for New York City forecast components) shall validate each model using a sample data set to determine if the model outputs are reasonable. The selected Consultant and NYCDCP (for New York City forecast components) shall also conduct sensitivity tests for each of the output variables. The sensitivity tests should identify key variables that have the greatest impact on the model outputs.

Each model shall have a clearly organized file/directory structure of its components, databases, and GIS layers. All model(s) shall have specific inputs, which shall be easy to update and/or change in order to test different alternatives or adjust model outputs. The databases shall be easily accessible at the various geographic levels for preparing tabulations and maps. GIS interface shall be convenient for mapping inputs and outputs.

The selected Consultant and NYCDCP will coordinate closely with NYMTC staff through the biweekly project team meetings. The selected Consultant and NYCDCP shall follow the same timeline of the project.

**Deliverables:**

Technical memorandum describing the methodology and results of the sensitivity tests shall be submitted. If necessary, the revision of the above tasks based on test findings should be issued.

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and five (5) bound copies and one unbound copy of FINAL TM with electronic media copies of the bookmarked reports and associated data files should be submitted on CD as well. Format: PDF, Word and Excel or other format agreed upon by NYMTC.

**Task 4: Forecasting and Analysis**

In this task, the selected Consultant and NYCDCP shall generate three forecasts (high, medium and low) through the year 2050 at five year intervals, based on the models and assumptions described in Task 3, provide an analysis of the forecasts, and compare the 2050 forecasts with other available forecasts as required by Task 4.2.

**Task 4.1 2050 Forecasts**

Forecasts shall be developed for the New York Metropolitan Region (31 counties) at the county and subregional levels. Forecasts begin from the base year 2012 through the year 2050 at five year intervals (2015, 2020, 2025, 2030, 2035, 2040, 2045, and 2050).

NYCDCP will produce forecasts for all variables for the five counties of New York City. The selected consultant will produce a region-wide employment forecast for 31 counties. For variables other than employment, the selected consultant will produce forecast for the 26 counties in the region, outside of New York City.

The five subregions comprise the following counties:
New York City: Bronx, Kings, New York, Queens and Richmond;
Long Island: Nassau and Suffolk;
Mid-Hudson: Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester;
Connecticut: Fairfield, Litchfield, and New Haven;

New York County shall be divided into the Manhattan Central Business District (south of 60th Street) and Upper Manhattan.

All files containing forecasts have to be linked to GIS software in order to produce maps at the different geographic levels. The databases shall be constructed in such a way that the user will be able to easily manipulate the data (for example: aggregation, disaggregation, conversion and vice versa).

The selected Consultant and NYCDCP will coordinate closely with NYMTC staff through the biweekly project team meetings. The selected Consultant and NYCDCP shall follow the same timeline for the project.

**Deliverables:**
Technical memorandum summarizing and analyzing the results of all forecasts for low, medium and high scenarios, including descriptions of the forecast data inputs should be issued. All forecasts shall be in a standard database format with standard geographic identifiers.

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and five (5) bound copies and one unbound copy of FINAL TM with electronic media copies of the bookmarked reports and associated data files should be submitted on CD as well. Format: PDF, Word, GIS and Excel or other format agreed upon by NYMTC.

**Task 4.2 Comparison with Other Forecasts**

The selected Consultant and NYCDCP (for New York City forecast components) shall compare the population, employment, labor force and household/housing projections with other forecasts for the New York Metropolitan Region (31 counties) prepared by federal, state, and local agencies, and to the extent possible, with forecasts prepared by private vendors. The selected Consultant shall also directly confirm their forecasts with MPOs and counties not directly represented in the FWG (Sullivan, Ulster, and Mercer). The selected Consultant shall explain the differences in forecast values that arise from differences in data series, methodologies, assumptions, and time periods.

**Deliverables:**
Technical memorandum summarizing the results of this analysis and presenting the other forecasts that are available for public release should be issued. The selected Consultant and NYCDCP will use the same agreed upon format for the report.

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and five (5) bound copies and one unbound copy of FINAL TM with electronic media copies of the bookmarked reports and associated data files should be submitted on CD as well. Format: PDF, Word and Excel or other format agreed upon by NYMTC.

**Task 5: Presentations and Consensus of Forecasts**

**Task 5.1 Meetings and Presentations**

The selected Consultant and NYCDCP shall meet with the NYMTC central and subregional staff, the FWG, and Regional Transportation Plan (RTP) Committees members, county executives and their staffs. The selected Consultant shall develop an outreach proposal (to be approved by the Steering Committee) no later than three weeks from the notice to proceed which lays out a plan to meet with the County Executives and/or their senior planning staff, staff from other MPOs in the NYBPM region, and senior NYC planning staff to discuss how County, MPO, and NYC development plans and policies will be incorporated into the forecast. These meetings shall occur no later than eight weeks after the notice to proceed is issued. NYMTC’s Central Staff and members are responsible for making all relevant information available to the selected Consultant and NYCDCP so that the forecast can be completed in a timely and efficient manner. The selected Consultant and NYCDCP shall meet with the Steering Committee on a monthly basis to report work progress. Up to twenty four half-day meetings shall be held with the FWG members. If necessary, the selected consultant shall be required to hold individual meetings with the above members/staffs.

The results of the project shall be presented to the FWG, as well as to the PFAC and county executives and their staffs. About ten presentations are estimated to take place for this purpose. Furthermore, the selected Consultant and NYCDCP shall give about three presentations during public meetings of the RTP. Public meetings shall be held as called for in the Council’s TIP/RTP public participation procedures. The selected consultant and NYCDCP shall prepare minutes or synopsis of all meetings and presentations, within ten days following a meeting or presentation.

The selected Consultant and NYCDCP will coordinate closely with NYMTC staff through the biweekly project team meetings. The selected Consultant and NYCDCP shall follow the same timeline for the project.

**Deliverables:**
The selected Consultant will coordinate with NYCDCP to develop an outreach plan and prepare for presentations and meetings with county executives and their staffs, and the staff from other MPOs in the forecast area. The selected Consultant and NYCDCP will meet with the NYMTC staff on a biweekly basis.

The selected Consultant and NYCDCP will also meet with the Steering Committee members on a monthly basis and with the FWG at the major project milestones. The Consultant’s attendance at RTP meetings and two PFAC meetings is also required. The Consultant shall prepare synopses of public meetings, minutes of meetings, presentation materials, and handouts, which shall be submitted to NYMTC.

**Task 5.2 Review and Consensus of Forecasts**

As stated in the above task, the selected Consultant and NYCDCP shall present to the FWG members methodologies, models, data inputs, and forecasts for their feedback. Preliminary forecasts (high, medium and low) will be distributed to the FWG members, and county executives’ staffs and planners for their review and comments. Meetings shall be scheduled with appropriate staff and members to discuss the forecasts. Based on feedback from the members, the selected Consultant and NYCDCP shall revise the preliminary forecasts. The selected Consultant shall work closely with the FWG and the staff of the NYCDCP, where applicable, in order to reach consensus on one set of 2050 forecasts that will be adopted by NYMTC for the Regional Transportation Plan.

Regional MPOs (e.g., NJTPA) have final approval on county-level forecasts for their region so the consultant (through the FWG) must work with members of those MPOs to gain that approval.

To help the members, and county executives’ staffs and planners assess the forecasts, the selected Consultant shall provide a Web based user-friendly tool (as described in detail in Task 8). It will allow NYMTC members and county and NYCDCP staff to view forecasts (at the county, census tract and TAZ levels) in table and map formats and make comments.

The selected Consultant and NYCDCP will coordinate closely with NYMTC staff through the biweekly project team meetings. The selected and NYCDCP shall follow the same timeline for the project.

**Deliverables**

Web based Tool for Forecast Review: software with documentation and user’s manual.

Thirty (30) bound copies and one unbound copy of User’s Manual on web application with electronic media copies of the bookmarked reports and associated data files and software should be issued.
**Task 6: Development of Zonal Allocation Program (ZAP)**

Under this task the selected Consultant will develop a tool to facilitate the allocation of county level SED data into TAZ level covering the following counties: Nassau, Suffolk, Dutchess, Orange, Putnam, Westchester, Fairfield, New Haven, Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union and Warren (hereafter is referred as County Group A). Other NYMTC counties including Bronx, Kings, New York, Queens, Richmond and Rockland (hereafter is referred as County Group B) will develop their own tools to conduct the allocation. The following subtasks 6.1-6.6 applies to County Group A, under which the selected Consultant has full responsibility of coordinating with the agencies, designing the tool, collecting data, developing and testing the tool, and generating forecasts. Subtask 6.7 applies to County Group B, under which the selected Consultant shall coordinate with the county agencies to ensure consistency of data outputs from the counties allocation procedure and to integrate the data outputs into the regional database for the project website and web application, while the county agencies are responsible for developing the tool and generating the forecasts. A brief guideline summarizing the responsibilities for County Group B is provided as Attachment 11.

**Task 6.1 Identify the Regional Needs and Specify the Technical Approach**

As part of this task, the selected Consultant shall arrange kick-off meeting and brainstorming sessions attended by consultant team, NYMTC staff, NYMTC member agencies, and any other participants that NYMTC wishes to invite. Coordination with other MPOs in this region, such as NJTPA and Connecticut MPOs, is expected. The selected Consultant shall provide a memorandum containing a specific list and assessment of regional needs in terms of the zonal allocation process. The ZAP shall be able to incorporate the following variables into the allocation process:

- Zoning regulations (minimal and maximum floor space permitted by land use type for each zone)
- Average household size
- Physical Characteristics of the area (existing land use for each zone, such as land area by land use type, floor space by land use type, vacant land, number of current dwelling units)
- Future Development Inventory (major projects in the pipeline)
- Planner Insights (experience of planners; local knowledge)

The selected Consultant shall work with NYMTC staff, NYMTC member agencies and local agencies to understand and define these constraints, and propose a mechanism to incorporate these constraints into the zonal allocation process.

The selected Consultant shall review available zonal allocation methods that other MPOs are using, and determine cost-effective means of meeting NYMTC’s ZAP needs as specified above. Both quantitative and qualitative approaches shall be evaluated. The
selected Consultant shall specify the proposed approach to address the regional needs including cost, data needs and collection method, required support from local planning agencies, and responsiveness to changes in local land use strategies.

The ZAP must be able to produce the following variables (at minimum), as required by NYBPM at TAZ level:

**Transportation Analysis Zone (TAZ) Level**

- Total Population
- Population in Households (Total non-Group Quarter Population)
- Total GQ Population
- GQ Population in Institutions
- GQ Population in (Homeless/Street Dwellers)
- GQ Remainder (Other: Colleges & Universities, Military, etc.)
- Number of Households
- Average Household Size
- Employed Labor Force (Workers at Residence)
- Mean Household Income (at Residence)
- Total Employment (at Workplace)
- Retail Employment
- Office Employment
- Mean Worker Earnings (at Workplace) by Land Use Category
- University Enrollment (at Institution)
- K-12 Enrollment (at School)
- Visitor Model Inputs

Besides TAZ level forecasts, the selected Consultant shall also propose the approach to provide sub-county level forecasts, including district, municipality, and neighborhood levels. Corresponding files shall be developed between 2010 Census tracts and the above mentioned geography, based on the 2010 Census Tract delineation.

**Deliverables:**

A technical memorandum describing all the needs and requirements of NYMTC region by various stakeholders and agencies as well as a technical memorandum that describes in clear and concise language the theoretical basis underlying the proposed method for each of the variables should be issued. It should include all the formulas / algorithms and any relevant assumptions that underlie the approach. Bibliography and supporting documentation of sources, techniques and methodologies used in the approach should be included.

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and twenty (20) bound copies and one unbound copy of FINAL TM with electronic media copies of the bookmarked reports and associated data files should be submitted on CD as well. Format: PDF, Word and Excel or other format agreed upon by NYMTC.
**Task 6.2 Data Collection**

Based on the methodology proposed in previous task, the selected Consultant shall identify data required to support the program development, available data sources, and data acquisition and processing methods. Data available from local agencies would be used as needed for program development and support. The selected Consultant shall work closely with NYMTC staff and local agencies to collect data regarding the constraints defined in Task 6.1.

The selected Consultant shall collect the additional data necessary at the model zone and/or TAZ levels for developing the ZAP. This task shall be closely coordinated with Task 2.2. The data collected from these two tasks shall be shared as needed. The selected Consultant shall work closely with local agencies to compile and collect land use data.

Extensive GIS based analysis and source checking will be required to accurately and consistently reflect land use by office, other commercial, industrial, institutional, and other non-residential, as well as residential patterns of development on a TAZ level basis.

**Deliverables:**

A technical memorandum that specifies data needs and processing methods, and clearly describes the collected data and data sources, and any adjustments or manipulation of the data should be issued. Supporting documentation of sources shall be included.

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and twenty (20) bound copies and one unbound copy of FINAL TM with electronic media copies of the bookmarked reports and associated data files should be submitted on CD as well. Format: PDF, Word and Excel, Access and GIS formats as required.

**Task 6.3 Provide Necessary Restraints to enable Policy Analysis with Given Inputs**

The purpose of this task is to provide necessary features and tools to the ZAP to be able to perform policy analysis with given input. The selected Consultant shall describe how the zonal level forecasts will be linked to the SED models so that regional land use trends and the plans and policies of NYMTC’s members could be fully reflected in the population, employment, and labor force components. Feedback relationships shall be established to appropriate components of the SED model, to adjust the long-term forecasts when capacity is no longer available under prevailing densities or alternative reasonable assumptions regarding redevelopment and rezoning. Available vacant space will be occupied and proposed developments will be taken into consideration.

The selected Consultant shall develop a methodology to permit “what if” alternative development analysis at the sub-county level that can be conducted in an efficient and
effective manner by both NYMTC staff and NYMTC members. This methodology shall be evaluated by the FWG and approved by NYMTC project manager before work on the remaining tasks can proceed.

The selected Consultant shall make every effort to ensure that the draft TAZ forecast deliverable is reasonable and reflect as closely as possible the input described above from the counties and localities. Any product requiring major revisions will not be acceptable. Accordingly, the ZAP shall be developed so that it can be applied using two important sets of constraints as follows:

- **County-Level Forecast** – County level forecasts are available for total population, household population, group quarter population, households, and employed labor force. The sum of the TAZs within a county should be consistent with the county level totals for each of the above listed variables. These County totals forecast could be a set of adopted forecasts that have been developed by NYMTC, but must, of course, be consistent with their respective regional totals.

- **The treatment of Zoning Regulations** – The ZAP will also be able to enforce several types of land use and zoning restrictions or inputs that can be specified by the user in any TAZ through a user interface. The types of restrictions include minimum and maximum developable land constraints, available vacant land, available re-developable land, etc. The selected Consultant shall also recommend other types of restrictions that are deemed important for this region.

**Deliverables:**

Technical memorandum describing the approach of linking the SED models and the ZAP, and methodology for policy analysis should be issued.

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and five (5) bound copies and one unbound copy of FINAL TM with electronic media copies of the bookmarked reports and associated data files should be submitted on CD as well. Format: PDF, Word and Excel or other format agreed upon by NYMTC.

**Task 6.4 Development of ZAP**

The purpose of this task is to define the ZAP framework in detail in responding to the requirements and assessments of NYMTC modeling needs developed in previous tasks. The selected Consultant shall develop a computerized program using data collected in Task 6.2 and Task 2.2. The focus is on correctly specifying the form of the program and determining the statistical significance of the variables. The development of the program shall include explicit assumptions for each variable, and the data sources upon which these assumptions were made.
The program application must be in a format that is easily accessible and operated on a Windows computer. Output shall be in a format to be agreed upon between the NYMTC staff and the selected Consultant. The program shall have a GIS component that supports mapping, querying, reporting, etc. The ZAP shall have specific inputs, which shall be easy to update and/or change in order to test different alternatives or adjust outputs. The program shall have a clearly organized file/directory structure of its databases. The database shall be easily accessible at the various geographic levels for preparing tabulations and maps. GIS interface shall be developed to facilitate data manipulation and mapping.

**Deliverables:**

Data file(s) shall be developed in the format needed by the estimation software as appropriate to the specific component of the model, as well as a complete set of model estimation reports. Technical memorandum describing in detail the development and operation of the ZAP should be submitted to NYMTC. Actual program will include all source code and developed software.

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and five (5) bound copies and one unbound copy of FINAL TM with electronic media copies of the bookmarked reports and associated data files should be submitted on CD as well. Format: PDF, Word, Excel, and other format agreed upon by NYMTC.

**Task 6.5 Testing and Validation**

The purpose of this task is to validate the ZAP using a sample of data set to determine if the program outputs are reasonable. The selected Consultant shall develop base year aggregate TAZ or zonal land use data - “calibration targets” for calibration. To improve the capability of the program to replicate reasonably well the observed land use data, the program shall be checked and refined as needed, and adjustments to the estimated model parameters can be made.

In addition, the purpose of this task is to test the ability of the ZAP to predict future behavior. The selected Consultant shall conduct, test and make necessary changes and adjustments to the ZAP for sensitivity analysis and assessing the reasonableness of the program outputs. The SED and ZAP shall be assessed as an entire system to make sure the entire system is adequately sensitive to policy concerns in the NYMTC region. This step involves checking the results against observed data and adjusting parameters until allocation results fall within an acceptable range of error and meets the validation criteria.

The selected Consultant shall provide detailed criteria and methodology for the testing and validation process in this task. The provided criteria and method should be reviewed and approved by NYMTC. Acceptance tests will be conducted by NYMTC staff before the selected Consultant can continue with the next tasks.
Deliverables:
A completed set of calibration data sets needed for model estimation work. Identification of data source(s) used, assessment of data quality, documentation of file formats and a complete set of model calibration process and reports. Technical memoranda (TM) describing in detail the methodology and results of sensitivity tests.

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and five (5) bound copies and one unbound copy of FINAL TM with electronic media copies of the bookmarked reports and associated data files should be submitted on CD as well. Format: PDF, Word, Excel, and other format agreed upon by NYMTC.

Task 6.6 Apply the new Zonal Allocation Program for Future Year Analysis from Base year to 2050

Forecasts shall be developed for the NYMTC region by five year intervals at the sub-county and TAZ levels for agreed-upon forecast only. Forecasts begin from the base year 2012 through the year 2050 at five year intervals (2015, 2020, 2025, 2030, 2035, 2040, 2045, and 2050).

The data shall be tabulated, and summarized by census tract, municipality, county, sub-region, the 10-county NYMTC area (New York, Queens, Bronx, Kings, Richmond, Nassau, Suffolk, Westchester, Rockland, Putnam), and the region.

All files containing forecasts shall be linked to GIS platform to produce maps at different geographic levels. The databases shall be constructed in such a way that the user will be able to easily manipulate the data (e.g. aggregation, disaggregation, conversion).

The selected Consultant shall also support the review of the zonal forecasts produced by the ZAP. To help the members, and county executives’ staffs and planners to assess the zonal allocations, the selected Consultant shall provide a Web based user-friendly tool (see Task 8). The tool will allow viewing forecasts in tabular and map formats and making comments. Based on the comments from the members the forecasts shall be adjusted.

Deliverables:
Technical memorandum (TM) summarizing the results of all forecasts in text, tables, charts, and maps shall be provided. Technical memorandum that clearly describes the data inputs, results and process for future years shall be provided. It shall include all formulas / algorithms and any relevant assumptions that underlie each of the variables. Supporting documentation of sources shall be included. The review process shall also be documented. All zonal output data in a standard database format with standard geographic identifiers shall be provided.

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and five (5) bound copies and one unbound copy of FINAL TM with
electronic media copies of the bookmarked reports and associated data files should be submitted on CD as well. Format: PDF, Word and Excel or other format agreed upon by NYMTC.

Task 6.7 Coordinate with certain NYMTC county agencies and ensure data consistency

Bronx, Kings, New York, Queens, Richmond and Rockland Counties are referred as County Group B.

For the counties (Group B) that are responsible for developing their own allocation procedures and tools, the selected Consultant shall provide guidance and documentation if necessary regarding the regional needs and technical approach as identified in Task 6.1 and ensure consistency of the zonal allocation procedure framework from the regional perspective. A brief guideline summarizes the responsibilities for County Group B; it is provided as a reference to the selected Consultant in Attachment 11.

The selected Consultant shall review the above mentioned counties’ allocation procedure and test their tools to ensure good quality and consistency from the regional perspective. The selected Consultant is also expected to attend meetings among county agencies and NYMTC if needed.

After the procedures are reviewed, tools are tested, and zonal forecasts are produced, the selected Consultant shall review the zonal data produced by Group B to ensure the reasonableness of the outputs. The selected Consultant shall also integrate the zonal data from all counties (including both Group A and Group B) into one consistent database as required for inputs to BPM, and also for project website and web application purposes.

Deliverables:
Technical memorandum (TM) summarizing the process and results of reviewing and testing in text, tables, charts, and maps shall be provided. Zonal forecasts covering all the 28 counties in a standard database format with standard geographic identifiers shall be provided.

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and five (5) bound copies and one unbound copy of FINAL TM with electronic media copies of the bookmarked reports and associated data files should be submitted on CD as well. Format: PDF, Word and Excel or other format agreed upon by NYMTC.


The selected Consultant and NYCDCP shall conduct technical training sessions with NYMTC central staff, and FWG members covering modeling methodology, operations, and forecasts. The selected Consultant and NYCDCP shall also be available for on-call support to deal with technical difficulties or problems experienced by any of the users.
The selected Consultant and NYCDCP shall repair all technical anomalies related to the models.

The selected Consultant and NYCDCP shall produce detailed final model report and a comprehensive user’s manual (modeling procedures, including interpreting results) for the reference of NYMTC staff and managers. The selected Consultant and NYCDCP shall also produce a detailed user’s manual, in language that can be understood by a regular user, which will allow for easy operation and interpretation of model results. It shall be prepared in a user friendly format. This modeling tool shall be used during all training. The report and user manual shall be organized in a systematic approach that facilitates future update of the documents when needs arises. An updating procedure shall also be provided. All the documents shall be available on-line.

The implementation documents describing the source code shall be provided to NYMTC for future model modification, improvement and enhancement.

**Deliverables:**

- On-screen/online help and assistance service shall be provided, as well as on-call basis technical support during project development and one year after acceptance by NYMTC.

- Training sessions, and/or model application seminar during projects development and one year after acceptance by NYMTC shall be provided.

- Complete program, installation package, source code, and all related and supporting programs with clear description of each program file and its functionality shall be included. A transmittal providing information on the contents of the CD and instructions for installation shall accompany all applicable installation packages. A complete final report, use’s manual, and technical documentation shall be provided. All deliverables shall be tested for acceptance by NYMTC.

- Five (5) bound copies and one unbound copy of DRAFT Manual, and thirty (30) bound copies and one unbound copy of FINAL Manual with electronic media copies of the reports and associated data files should be submitted on CD as well. Format: PDF, Word and Excel or other format agreed upon by NYMTC.

**Task 8: Project Website and Web Application**

**Task 8.1 Project website**

The purpose of this task is to provide capability to fully utilize available web technology as a platform for information exchange among the consultant, NYMTC staff, and other project participants as designated by NYMTC staff.

The selected Consultant shall develop a website that is consistent with NYMTC’s general website design and functional requirements. This web site shall be designed and made
available at the beginning of the project and be continuously updated throughout the course of the project. The website shall be organized to make access easy and user friendly for all project information, documentation and data files by designated project participants. The website shall have proper security design so that various levels of project information could be accessed by people with various levels of access rights. The website shall be able to allow participants to submit documents and make limited updates of certain web pages as needed.

As described in various tasks in the scope, all web applications of this project, including but not limited to web tools for forecasts reviews, documentation archives, discussion forum, shall be integrated in the project website. All information shall be updated in a timely manner that could be used by the project participants effectively and efficiently.

**Deliverables**

A fully-designed web site and a technical memorandum that clearly describes the design, framework, layout and content of the website that is consistent with NYMTC’s general website design and functional requirements. It shall include a user manual and technical documentation of the web site delineating/describing its use, design, maintenance, and modifications.

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and five (5) bound copies and one unbound copy of FINAL TM with electronic media copies of bookmarked reports and associated web application programs should be submitted on CD as well. Format: PDF, Word and Excel or other format agreed upon by NYMTC.

**Task 8.2 Web Application**

Under this task, the selected Consultant shall develop a web application that shall provide model-based data to NYMTC members and/or the public through an interactive dynamic web server. The web application shall conform to NYMTC’s general website and TIG data warehouse design requirements (more information regarding the TIG can be find from Attachment 10). The selected Consultant shall design and implement a web application that shall provide input data and forecasts to NYMTC members and/or the public in a form that is easy to access. This shall include maps, charts, and tables that clearly illustrate the forecasts and permit querying, viewing and downloading of some key data of interest. All information shall be updated in a timely manner that could be used by the project participants effectively and efficiently. Through the web application the users can view, manipulate, analyze and download information/map/data through the website.

The selected Consultant shall provide a user’s manual describing the maintenance and updating procedures of the web applications and provide training to NYMTC staff and other users designated by the NYMTC (if necessary). A draft version of the web site shall be created and installed on the Consultant servers. This will enable NYMTC staff to test the application and suggest refinements before the software is finalized. The final version shall be delivered to NYMTC so it can be installed on a server of NYMTC’s
choice. The selected Consultant shall provide technical support for this installation.

**Deliverables**

The deliverables for this task shall include the WEB application software and data. The selected Consultant shall also provide instructions for installation of the application. The selected Consultant shall also provide technical support for this installation for 12 month after completion of the project. The support shall be provided on as-needed basis and available during normal business hours.

The selected Consultant, after consulting with NYMTC, shall propose appropriate acceptance testing procedures for the WEB application. NYMTC staff will review and test the WEB application software and provide comments within a reasonable time for modification before the final product is accepted. The final product must pass the acceptance test before it is accepted by NYMTC.

Five (5) bound copies and one unbound copy of DRAFT TM with electronic media copies of data files, and five (5) bound copies and one unbound copy of FINAL TM with electronic media copies of bookmarked reports and associated web application programs should be submitted on CD as well. Format: PDF, Word and Excel or other format agreed upon by NYMTC.

**IV. PROPOSAL FORMAT AND CONTENTS**

For the purpose of evaluation, each proposal must be submitted in two (2) parts. Part I shall consist of the Technical and Management submittal. Part II is the Cost and Contract submittal. Offerors must submit Part I and Part II in separate, sealed packages. Each part of the proposal must be complete in itself in order that the evaluation of both parts can be accomplished separately, independently and concurrently, and the Technical and Management submittal can be evaluated strictly on the basis of its merits. Cost information is **not** to be included in the Part I Technical & Management submittal, and Technical and Management information is **not** to be included in Part II Cost Proposal submittal, or your proposal may be deemed unresponsive. Offerors must submit Volume I and Volume II in separate sealed packages. Proposals may be submitted in three ring binders, stapled spiral, or cloth-bound. Clearly identify any attachment with the offeror’s name on a cover sheet that is firmly attached to the document. Clearly identify any unattached documents with the offeror’s name on each page of the document. Identify the solicitation name and contract number on every document. Each response section shall be separated by a labeled tab page.

**NOTE:** NYSDOT will protect confidential and proprietary information from disclosure to the extent permitted by the Freedom of Information Law (“FOIL”), Article 6 of the Public Officers Law. If an Offeror believes information included in their proposal is confidential and proprietary, they should identify those page(s) of their proposal which
contain such information as “confidential and proprietary”. Additionally, offerors need to explain the reason(s) why this information should be considered exempt from public disclosure under FOIL. The identification of pages and the reasons for exemption should be included in the Executive Summary of your proposal (see A.3. below).

**Do not submit the draft contract in your proposal.**

Your proposal should follow the format listed below:

A. **Part I: Technical and Management Submittal**

Please be as concise as possible.

| □ | Fourteen (14) Copies of Part I (Send 11 copies to NYMTC; send 3 reference copies to NYSDOT Contracts) |
| □ | Name, address and telephone number of proposer on cover page |
| □ | Name of person who prepared proposal |
| □ | Contact person, telephone number, e-mail address |

A complete Part I Technical and Management proposal shall contain the following:

1. **A Cover Letter featuring:**
   a. The signature of an official authorized to bind the offeror to all of its provisions,
   b. A statement that the offered named key personnel will be provided once NYMTC/NYSDOT issues a notice to proceed. NYMTC and NYSDOT do not allow unapproved substitutes, and
   c. Identification of any exceptions taken by the offeror from the RFP’s draft contract (Attachment 1).

2. **A Title Page indicating:**

Name, address and phone number of the proposer, including a contact person, and name of the person(s) who prepared the proposal.

OFFICIAL TITLE: Development Of Socioeconomic and Demographic Models 2050 Forecasts and Zonal Allocation Program (SED and ZAP) (Contract #C000775).

3. **A Table of Contents.** Use tabs to separate each section of your Part I and Part II proposals

4. **An Executive Summary**

Provide a brief description of the proposed approach and work effort. Confidential and proprietary information should also be identified and addressed in this section.

5. **A Narrative Description**

Provide a detailed discussion on the important issues involved in the implementation of this effort. Include enough substantive discussion to demonstrate an understanding of NYMTC’s/NYSDOT’s project and contract objectives and familiarity with applicable laws, rules, procedures, processes, etc. Discuss all assumptions made
during the preparation of Part I and Part II submissions. Demonstrate a sound management plan to ensure all subconsultant’s compliance with all project requirements and contract provisions

6. Approach, Scope of Services and Schedule
Describe the detailed approach for performing the work and accomplishing project objectives. Provide a detailed scope of services which describes by task what will be done. Provide additional supporting documentation supporting how each of the RFP’s specifications and requirements are addresses (provide previous examples, etc.). A general scope of services is outlined under RFP Section III. You may base your proposed scope of services on these tasks, or suggest alternative tasks which could improve the ability of the project to meet its objectives. NYMTC/NYSDOT wants to allow maximum flexibility for the ideas, initiative and creativity of the proposer. Alternative tasks and suggestions are encouraged and will be reviewed with interest within the framework of the stated objectives and scope of the project, using the proposal evaluation criteria in RFP Section V. Fully explain and justify your approach, especially if significant departures from the general scope are recommended. Include a schedule for completion of the project showing the duration of each task and all major milestones, and include a list of technical assumptions. Provide a DBE management plan, to ensure the DBE goal is managed and delivered over the life of the contract.

7. Organization and Staffing
Provide an organizational chart for the project showing the names of the project manager and all proposed key personnel. Depict all subconsultants and external role players and stakeholders. Include resumes for all proposed key personnel (including any subconsultants). Include an estimate of total effort hours contributed by each of the key personnel to each task and an estimate of total effort hours for each task. If subconsultants are to be used, explain the specific need for the expertise and describe the arrangements. Present a DBE participation plan. Discuss your plan for maintaining and phasing project personnel into the effort. Describe the level of interaction contemplated with NYMTC and its planning process.

8. Experience
NYMTC and NYSDOT requires substantial experience and expertise, and offerors must demonstrate that experience through past and present project attestations and successfully reachable, verifiable references. The qualifications and current/prior experience of the proposer are of great importance to NYMTC and NYSDOT. Direct, relevant, prior experience in software and model development, data base management, and GIS are highly desirable; present such experience with projects of similar scale and scope as the one proposed in this RFP. Provide a list of projects currently in progress and those completed within the last seven years which are relevant to this effort. Indicate proposed key personnel who are, or have worked, on
such projects. Include names, addresses and phone numbers of contact points with the listed clients.

The offeror’s proposed project team shall include key personnel with a minimum of 3 years experience with project management and demographics.

Provide three, reachable references for each proposed key personnel. Provide three, reachable references for each firm. NYMTC/NYSDOT reserve the right to request information from any source so named to verify all offered experience and work history, as well as request additional references. NYMTC/NYSDOT also reserve the right to request additional references and/or contact relevant references not named in a consultant’s proposal.

B. Part II: Cost and Contract Submittal

- Three (3) Copies of Part II (send 1 copy to NYMTC; 2 copies to NYSDOT Contracts)
- Required pricing information (complete and submit Attachment #5)
- Name, title, address and telephone number of person(s) with authority to negotiate, and who may be contacted during proposal evaluation
- Complete and submit Attachment #1 Consultant Information and Certifications (sign both Sections II and III)
- Complete and submit Attachment #2 Procurement Lobbying Law Compliance Forms (see below *) – These forms are required either with the RFP Response Form or if you do not submit an RFP Response Form than the PLL forms are required with the Proposal
- Complete and submit Attachment #7 DBE Participation Information Form
- Complete and submit (if applicable) Attachment #8 DBE Subconsultant Participation Solicitation Log AND Letter of Explanation of Non or Partial DBE Goal Attainment
- Complete and submit all future RFP Modification Acknowledgement Forms as instructed.

Part II of the proposal consists of two sections, (1) a Cost Proposal, which sets forth the total proposed lump sum cost for performing the work in the scope of services and (2) the Contract Section, which specifies the proposer’s acceptance of the Terms and Conditions contained in the draft Contract enclosed as Attachment #3, as well as house other administrative paperwork. Separate each Part II section with labeled tab pages. No Part I information shall be included in your Part II submission.

**Do not submit the draft contract in your proposal.**

Each Cost and Contract Proposal should contain the following elements:

1. Salaries Section

   A salary schedule will list descriptive job titles for all proposed key Consultant personnel and staff to be assigned to this project, the proposed hours and dollars by task, and each consultant’s personnel’s fully-loaded hourly rate (see Attachment 5) for each year of the contract’s base term. If additional titles are used but are not assigned, they should be listed and rates proposed. The schedule should be prepared
to distinguish anticipated assignment by project section/task. Present all subconsultants information on separate salary schedules.

2. Direct Non-Salary Costs
Estimates of all direct non-salary costs are required. Present a schedule of all direct non-salary (out-of-pocket) expenses by task number expected to be incurred in the performance of the project. Travel, meals and lodging reimbursements shall be limited to the prevailing maximum rates established by the State Comptroller. No Consultant commuting costs shall be reimbursed via expensed work (assumed to be part of a firm’s overhead). Only directed travel is eligible for reasonable reimbursement. Subconsultant costs (if any) should be separately shown in the schedule. On separate sheets, explain each item with all factors leading to the derivations of the cost. The latest state and nationwide reimbursement rates are available at the following Web site: [http://www.gsa.gov/](http://www.gsa.gov/)

3. Budget Summary
Present a final schedule which summarizes all proposed direct labor and direct non-salary costs by task and by Project for the entire base term of the contract. Payments are expected to be by milestone schedule.

4. Method of Payment
Based on the lump sum costs offered, provide a milestone payment schedule which sets forth a proposed percentage of the lump sum for each key deliverable for which payment would be requested. Partial deliverables, where appropriate, are allowed.

The last and final payment will become due and payable within thirty (30) days after delivery of the final deliverable(s) and a NYS FIN 421 payment request forms. Requests for milestone and final payments shall be made by the designated consultant on the basis of NYS FIN 421 payment request forms prepared and submitted by the consultant contractor together with the deliverable item for which the payment request is being made.

5. Contract Proposal Section
a. Acceptance of RFP Draft Contract’s Terms and Conditions

The Consultant shall specifically state its acceptance of all Terms and Conditions of the draft Agreement contained in [Attachment #3](#) of this Request for Proposals. Offerors should complete and submit the “Consultant Information and Certifications Form,” included as [Attachment #1](#) to this RFP, to indicate their acceptance of all of the terms and conditions contained in the draft Agreement. Altering this form without the prior expressed written approval of the New York State Department of Transportation is prohibited and will lead to the proposal being deemed non-responsive and subsequently dismissed. **Should any firm take an exception to any of the draft contract’s terms and conditions, the proper placement of such is in the firm’s cover letter.**
b. DBE Participation

In Part II of your firm’s proposal, provide the following: Complete and submit **Attachment #7 DBE Participation Information.** Show the percentage of effort (as measured in dollars) offered by the prime consultant and each subconsultant, including DBEs (please mention if any firm is also a certified MBE/WME). Provide the legal names of all certified DBE consultants (prime and/or subconsultant). If available, provide a copy of the firm’s DBE letter from a NYS UCP certifying partner with your Part II proposal. To count towards meeting the 6% DBE contract goal, an offered DBE must be currently certified and listed in the NYSUCP DBE Directory (http://biznet.nysucp.net/). Please advise if a proposed DBE is certified in another state and not in New York state (such firms may count if acceptable to NYSDOT).

For firms whose total offered DBE participation is less than the established contract goal of 6 percent (or where the prime consultants certified as a DBE proposes to meet the Department’s DBE participation goal via their meaningful participation), the firm must also complete and submit **Attachment #8: DBE Subconsultant Solicitation Log.** Additionally, if the firm does not meet the specified goal, the firm must include in its submission a **DBE Goal Attainment Explanation Letter** explaining why the firm was unable to meet the DBE goal (in full or if partially), which serves to substantiate the firm’s good faith effort. Submission of **DBE Goal Attainment Explanation Letter** shall be required for proposals with either partial goal attainment or no goal attainment at all. The letter should include sufficient justification as to why the goal was not met or was met partially and should at a minimum address the following factors:

1. The potential firm’s method of accomplishing the work
2. The subcontracting opportunities associated with the proposed approach and scope of services
3. The availability of certified firms for the work to be performed by either a prime consultant or via subcontract

Additionally, prime consultants certified as a DBE are not relieved from seeking participation of certified Disadvantaged Business Enterprises (DBEs) for subcontractable services in this solicitation. In these situations, it is expected that the prime consultant offer DBE subconsultant services to meet the contract goal and/or provide evidence of a good faith effort by completing **Attachment #8 DBE Subconsultant Participation Solicitation Log.**

The above forms and letter must be included in Part II: Cost and Contract submission. Firms are advised to refer to Section V.B for the procedure the Department will follow in evaluating a firm’s proposed DBE participation.

Offerors are encouraged to ask questions regarding this aspect of the solicitation.

c. RFP Modification Acknowledgement Forms (if any)
Included with any and all future Modifications to this RFP will be Acknowledgement forms. All respondents must have an authorized representative of the firm or organization acknowledge receipt and acceptance of each of the Modifications by including a signed copy of this/these form(s) with the Part II Cost and Contract Submission.

6. Consultant Identification Number (CIN)

All respondents to this solicitation must reference their Consultant Identification Number (CIN) in their Part II proposal.

If an offeror does not have a CIN and they are selected for contract award, they will be required to obtain one through the following NYSDOT Web site prior to negotiation of the contract: “How to Register a New Consultant Firm with NYSDOT” at: https://www.nysdot.gov/portal/page/portal/main/business-center/consultants/non-architectural-engineering

7. Procurement Lobbying Law

All proposers should visit the “Business Center” Web page on NYSDOT’s Web site to read the NYSDOT Policy Summation for the Procurement Lobbying Law of 2005. The web page is located at: https://www.nysdot.gov/main/business-center/consultants/forms-publications-and-instructions

Filing the two required forms (Offerer’s Affirmation of Understanding of and Agreement pursuant to State Finance Law §139-j (3) and §139-j (6) (b) and Offerer Disclosure of Prior Non-Responsibility Determinations) is mandatory for all consultants in order to be considered for contract award. Hard copies of the two required forms are included with this RFP (see Attachment #2). NOTE: Failure to submit the required PLL forms with your proposal will result in elimination from consideration for contract award.

Use Contract Number C000775 wherever requested in the forms. Please call or e-mail the person identified as the contact in the Administrative Specifications section (VI.G) of this RFP if you have any questions regarding how to complete this required form.

Per the Procurement/Lobbying Law of 2005, any person who wishes to contact NYSDOT regarding this project during the restricted period (i.e. from advertisement through designation), may only contact the person noted in the cover letter to this solicitation.
V. CRITERIA FOR EVALUATION OF PROPOSALS

A. General

Proposals shall be pre-screened to determine if they meet the minimum RFP responsiveness requirements (reference RFP Section II). Proposals which meet all RFP minimum responsiveness requirements shall be considered further; proposals which do not may be deemed non-responsive. Proposals deemed to be non-responsive shall be removed from further consideration.

Proposals which pass per-screening shall then be evaluated by NYMTC and NYSDOT using a Best Value Method evaluation process based on the technical and cost criteria described below. Technical considerations are of greater importance than pricing considerations; however, price is a significant factor in the evaluation of proposals. Technical and cost proposals will be evaluated and point scored based on the information provided by consultants via the instructions under RFP Section IV in accordance with the pre-established criteria listed below.

Technical proposal evaluation will be accomplished by a representative Technical Evaluation Committee comprised, as appropriate, of subject matter experts from technical, program and management backgrounds. Committee members will evaluate each proposal’s response to each RFP’s specification and requirement individually, documenting their findings and assigning numerical point scores. The Committee shall then meet as a group to discuss their findings and scores, and make adjustments based on group discussions. Evaluators will be allowed to revise scores on the basis of the committee discussions. NYSDOT and NYMTC shall then short list the field of proposals based solely on technical acceptance: Only proposals determined to be technically acceptable (greater than 39.00 points) will be considered further. Technically-acceptable proposals shall then be considered further for their susceptibility for contract award, and have their cost proposal included in the proposal evaluation process, leading to a list of firms in rank Initial Best Value score order – the top three initial best value firms, or those firms with initial best value scores within 10 points of the highest initial best value proposal (which ever is less) shall be invited to attend technical interviews, demonstrate their proposed solution and respond to further clarification questions. NYSDOT will publically post a list of firms with acceptable Initial Best Value score (subject to contract award) on its website.

Proposers responding to this RFP may be requested to clarify issues or to provide additional insights into their proposal through written clarifications and/or technical interviews. If written clarifications are required to complete the initial technical evaluation of proposals, evaluators will be allowed to revise their technical scores based on this additional information. Further, firms susceptible to contract award shall be invited to attend technical interviews, to complete the technical evaluation of proposals.
Up to a total of sixty points are eligible for Technical proposals. Sixty points shall be awarded to the written technical proposal which receives the highest initial raw technical score, after group discussion and possible initial clarifications. For those firms qualifying for Technical Interviews, up to a total of ten additional points are eligible.

Technical Interviews will be held at NYMTC’s offices located in 199 Water Street, 22nd Floor, New York, at a date and time to be determined by NYMTC (all qualifying firms will be notified).

NYMTC/NYSDOT reserves the right to ask clarifying questions regarding each cost proposal (Part II) and DBE participation as well. Furthermore, the Department reserves the right to request best and final offers from firms that are determined to be susceptible for tentative contract award.

A tentative contract award shall be made to the offeror whose proposal receives the highest total final best value score after considering all technical and cost evaluation factors.

Note: In the event two or more proposals are found to be “substantially equivalent”, the Department reserves the right to award the contract under the terms of State Finance Law §163 (10)(a).

At the conclusion of the evaluation process, an announcement of NYSDOT’s designation(s) will be posted on the NYSDOT Web site listed below. All non-designated firms shall be notified in writing regarding the results from the solicitation, and will be offered an opportunity to hold a debriefing. Further, it is expressly understood that this Request for Proposals does not commit NYSDOT to award a contract, pay any costs incurred in the preparation of a proposal to this request, or to procure or contract services or supplies. Further, NYSDOT shall have no obligation or liability whatsoever to the vendor selected as a result of this solicitation unless and until a contract satisfactory to NYSDOT is approved and executed by the vendor and all necessary State officials.


B. Pre-Screening of Proposals - Including DBE Participation

NYMTC/NYSDOT will conduct a pre-screening of each proposal received prior to the proposal due date to ensure all contents have been submitted in accordance with the minimum proposal responsiveness requirements as specified in the RFP. It is the sole responsibility of each proposer to assure that its proposal is received on time. Proposals which fail to meet the response deadline will not be opened nor considered.
further. RFP specifications include that it is NYMTC/NYSDOT’s sole discretionary determination as to whether a proposal is complete (reference “Minimum RFP Responsiveness” Section I, Part D). Proposals which do not meet the mandatory specifications in the Minimum RFP Responsiveness section will be deemed non-responsive by NYMTC/NYSDOT and will not be considered further.

As part of the pre-screening process, the proposed DBE participation percentages offered for NYSUCP certified prime consultants and/or NYSUCP certified subconsultants will be reviewed (Attachment #7 DBE Participation Information). To count towards the Department’s DBE participation goal, each firm must be currently listed in the NYSUCP Directory. If the proposed DBE participation is less than the established 6 percent goal (or where a prime consultants certified as a DBE proposes to meet the Department’s DBE participation goal via their meaningful participation), the firm’s evidence of a Good Faith Effort (Attachment #8 DBE Subconsultant Participation Solicitation Log) to achieve the goal will be reviewed, along with the firm’s letter of explanation (DBE Goal Attainment Explanation Letter) as to why it was unable to meet the goal. During the review process, which will include verification of a firm’s Good Faith Effort evidence, if it is determined by the Department that the firm did not provide an acceptable Good Faith Effort, then the proposal may be deemed non-responsive. Offerors whose proposals are deemed non-responsive will be notified, in writing, of their elimination.

C. Technical and Management

The Technical and Management proposal will be evaluated and point scored, and will represent 60% of the total available points. The major evaluation criteria are listed in descending order of importance. Sub-criteria within major evaluation factors are also in descending order of importance. Please be concise.

A proposal to be deemed technically acceptable and susceptible to contract award must receive an average raw committee score of 39.00 points or higher out of a total possible of 60.00 points assigned for evaluating written technical proposals.

1. Experience (up to 25 points)
   a. Quality, extent and relevance of experience, education and training of key personnel. (up to 15 points)
   b. Quality, extent and relevance of current and prior experience of the firm. (up to 10 points)

2. Approach, Scope of Services and Schedule (up to 12 points)
   a. Quality of approach and scope of services for accomplishing project objectives; initiative and creativity of proposer. (up to 6 points)
   b. Completeness and reasonableness of schedule. The schedule shall be prepared in a font that is reasonably legible. Please avoid print smaller than an 8 point font. You may assume an estimated start date 10 days after execution of the contract. (up to 4 points)
c. Quality and acceptability of proposed data. (up to 2 points)

3. Quality of Proposal (up to 12 points)
   a. Degree to which proposal reflects understanding and comprehension of project scope and objectives. (up to 7 points)
   b. Quality of proposer’s resources relative to the needs of the project. (up to 5 points)

4. Organization and Staffing (up to 11 points)
   a. Quality of project organization; reasonableness of staff/task allocations for each task and total effort (up to 4 points)
   b. Quality of plan for phasing key personnel into project (up to 3 points)
   c. Extent and quality of interaction with key participants (up to 2 points)
   d. Management Plan for DBE participation and maintenance of DBE participation effort. (up to 1 point)

D. Cost and Contract (up to 30 points)

The cost portion of the Cost and Contract proposal will be point scored and will represent 30% of the total score for a proposal. The calculation of a cost score will be determined by comparing the proposed total lump sum prices for each proposer. The proposer with the lowest total price will receive a perfected score of 30. Higher priced cost proposals will receive proportionally lower scores.

E. Technical Interviews (up to 10 points)

The Technical Interview portion of the Technical and Management proposal will be point scored. Up to 10 total points are available to evaluate a short-listed consultant’s performance during the technical interviews. The major evaluation criteria are listed below.

1. Ability of presenting consultant team to demonstrate their proposed solution and provide additional clarifications and insights into technical aspects of the firm’s proposal. (up to 5 points)
2. Ability of the presenting consultant team to address and answer the committee’s clarifying questions. (up to 3 points)
3. Consultant’s team chemistry, the team’s coordination and reporting approach. (up to 2 points)
VI. ADMINISTRATIVE SPECIFICATIONS

A. Proposal Submission

1. The proposal shall be signed by an official authorized to bind the offeror.

2. Proposers shall submit 14 Copies of Part I (Send 12 copies to NYMTC in sealed packages; send two reference copies to NYSDOT Contract Management in sealed packages) and shall submit three Copies of Part II (Send one copy to NYMTC in sealed packages; send two reference copies to NYSDOT Contract Management in sealed packages).

3. Your sealed proposal must be received by NYMTC by 2:00 PM on December 14, 2011. The proposal must be addressed to:
   
   NEW YORK METROPOLITAN TRANSPORTATION COUNCIL (NYMTC)
   199 Water Street, 22nd Floor
   New York, NY   10038
   ATTENTION: MR. ISMET APDIROGLU, C000775

   The fax number is (212) 383-2418.
   E-mail: iapdiroglu@dot.state.ny.us
   E-mail COPY TO: ahasenkopf@dot.state.ny.us

   Reference copies to:

   New York State Department of Transportation
   Contract Management
   50 Wolf Road, Suite 1CM
   Albany, NY 12232
   Attn:  Mr. Al Hasenkopf,  Contract C000775

B. Pre-Proposal Conference

To assist firms in preparing proposals in response to this solicitation, a pre-proposal conference will be held on November 4, 2011 in NYMTC’s Office at 199 Water Street, 22nd Fl., New York, NY at 10:30 AM. A general review of the solicitation will occur and specific questions regarding the solicitation may be answered. Interested firms are encouraged to attend.

If you plan to attend, please provide the names of attendees to the NYMTC receptionist at (212) 383-7200 or Ismet Apdiroglu, NYMTC, (212) 383-2414 by noon on November 2, 2011. Each proposer is requested to send no more than (5) representatives to the conference. An opportunity will be afforded for questions and answers during the conference. However, to assist us in preparing for the meeting, we wish to receive any questions you may have, in writing, by the close of business on September 4, 2009.
C. State’s Rights to Proposals

All proposals, upon submission to NYMTC/NYSDOT shall become its property for use as deemed appropriate. By submitting a proposal, the offeror covenants not to make any claim for or have any right to damages because of any misinterpretation or misunderstanding of the specification, or because of any misinformation or lack of information. NYMTC/NYSDOT has the following prerogatives with regard to proposals submitted:

- to accept or reject any or all proposals;
- to correct any arithmetic errors in any or all proposals;
- to change the proposal’s due date upon appropriate notification to interested firms;
- to eliminate any mandatory RFP specification unmet by all offerors in the evaluation of received proposals;
- to adopt any or all of a successful offeror’s proposal;
- to negotiate modifications to the scope, milestone payment schedule and total cost, and contract terms and conditions with the selected offeror prior to contract award only if it is in the best interest of the state to do so;
- To disqualify an offeror from receiving the award if such offeror, or anyone in the offeror’s employ, has previously failed to perform satisfactorily in connection with public bidding or contracts;
- To revise/amend any provision of this RFP by written notification to offerors, prior to proposal submission;
- To eliminate any requirement that is found to be unmet by all offerors;
- To make inquiries, by means it may choose, into the offeror’s background or statements made in the proposal to determine the truth and accuracy of all statements made therein;
- To select and award the contract to the offeror whose proposal represents the best value to NYSDOT;
- Should NYSDOT determine that the negotiations with the selected offeror will not result in a contract, to begin contract negotiations with the next-best-value offeror(s) responsive to this RFP — without again requesting proposals;
- If NYSDOT terminates the contract — without again requesting proposals, to begin contract negotiations with the next-best-value offeror; and
- Any contract entered into pursuant to an award of this solicitation shall contain a provision which grants the option to extend the terms and conditions of such contract to any other New York state agency. However, any response to this solicitation shall be based solely on the purpose of this solicitation and shall not factor in the possibility that this contract may, in the future, be applicable to other state agencies. Please be advised that any award made pursuant to this solicitation shall be based on the specific requirements of this solicitation only.

Any contract entered into pursuant to an award of this solicitation shall contain a provision which grants the option to extend the terms and conditions of such contract to any other New York state agency. However, any response to this solicitation shall be based solely on the purpose of this solicitation and shall not factor in the
possibility that this contract may, in the future, be applicable to other State agencies. Please be advised that any award made pursuant to this solicitation shall be based on the specific requirements of this solicitation only.

D. Vendor Responsibility

In accordance with the NYS Finance Law, NYSDOT will only make contract award to vendors that are determined to be responsive and responsible. All selected offerors of contracts valued at $100,000 or more will be required to provide vendor responsibility information through the DOT Web site before negotiation of a contract. Offerors must certify the accuracy of the information they provide in the questionnaire. You should make yourself familiar with this form by visiting the following Web site:  https://www.nysdot.gov/main/business-center/consultants/forms-publications-and-instructions

E. Registration with NYSDOT

Consultant firms entering into contracts with the New York State Department of Transportation (NYSDOT) as prime consultants, joint venture partners or subconsultants, are required to electronically register their firm using the Consultant Selection System web application (CSSWeb). All consultant firms entering into Non-Architectural/Non-Engineering agreements are required to create and register an account to: 1) Create and assign Consultant Identification Numbers (CINs) for each office registered by the firm; and 2) Provide general firm information including, but not limited to: legal firm name; Federal Identification Number (FEIN); ownership type; DBE, MBE and/or WBE status; firm principals; and office(s) address information. All consultant firms participating in a potential agreement (negotiations) must be registered electronically with NYSDOT prior to that agreement being forwarded to the Office of the State Comptroller for approval. Registered firms are responsible for verifying and updating their registration information for the duration of the agreement.

Consultant Firm Registration instructions are available at: https://www.nysdot.gov/main/business-center/consultants/consultants-repository/instructions_cssweb_firm.rtf


Consultant Firm Registration begins at: https://www.nysdot.gov/main/business-center/consultants/css-web
Questions regarding the CSSWeb application and firm registration should be directed to the CSSWeb Administrator by email at css@dot.state.ny.us or by telephone at 518-457-2600.

F. Contractor Tax Certification

Per Section 5-a of the NYS Tax Law, all vendors selected for contracts in excess of $100,000 for the sale of goods or services must complete and submit Forms ST-220-TD and ST-220-CA (Contractor Certifications) prior to negotiation of a contract with State agencies. You should make yourself familiar with these forms by visiting the following Web sites:


G. Inquiries and Information

All questions concerning this solicitation must be directed only to Mr. Ismet Apdiroglu, (212) 383-2414 or by e-mail at iapdiroglu@dot.state.ny.us. Copy to ahasenkopf@dot.state.ny.us. The last date to submit questions for this solicitation is: September 25, 2009. All inquiries should be addressed to:

NEW YORK METROPOLITAN TRANSPORTATION COUNCIL (NYMTC)
199 Water Street, 22nd Floor
New York, NY 10038
ATTENTION: ISMET APDIROGLU

The fax number is (212) 383-2418.
E-mail: iapdiroglu@dot.state.ny.us COPY TO: ahasenkopf@dot.state.ny.us

Responses to all questions of a substantive nature, as well as copies of the questions, will be given to all Consultants being solicited.

H. Protest Procedure

The New York State Department of Transportation (NYSDOT) has established a protest procedure to be utilized when an interested party challenges a Non-Engineering consultant designation by NYSDOT. The complete procedure can be accessed via: https://www.nysdot.gov/main/business-center/consultants/consultants-repository/misrep_protest.pdf. The protest procedure addresses FHWA’s DBE Administrative Reconsideration per 49 CFR Part 26.53(d).

I. Tentative Schedule of Key Events

NYMTC/NYSDOT will attempt to adhere to the following schedule with regard to this solicitation:
RFP Release Date: October 25, 2011
Written Questions for Pre-Proposal Conference and names of proposed attendees, due: November 2, 2011
Pre-Proposal Conference: November 4, 2011
Question Submittal Deadline: November 29, 2011
Proposals Due: December 14, 2011
Recommendation & Designation: 1 to 2 months
Contract Negotiations: One Month
Contract Award: 6 to 8 weeks after completion of contract negotiations

VII. ATTACHMENTS

Attachment #1 Consultant Information And Certifications
Attachment #2 Procurement Lobbying Law Compliance
Attachment #3 Draft Contract, including Appendix “A”
Attachment #4 Consultant Employment Disclosure Legislation Form
Attachment #5 Sample Budget Schedule (Cost Submission)
Attachment #6 Consultant’s Responsibility when Proposing Former NYSDOT Employees
Attachment #7 DBE Participation Information
Attachment #8 DBE Subconsultant Participation Solicitation Log (Good Faith Effort Documentation)
Attachment #9 Brief Summary of Current NYMTC SED Model
Attachment #10 Brief Summary of NYMTC Transportation Information Gateway (TIG)
Attachment #11 Brief Summary of Guidelines for Counties to Develop the ZAP
Attachment #12 NYCDCP Draft Proposed Methodology
Attachment #1

Consultant Information And Certifications

CONSULTANT INFORMATION AND CERTIFICATIONS

(Please submit this with your Part II: Cost Proposal)

CONTRACT NUMBER:  C000775

PROJECT TITLE: DEVELOPMENT OF DEMOGRAPHIC and SOCIOECONOMIC MODELS, 2050 FORECASTS and ZONAL ALLOCATION PROGRAM (SED and ZAP)

I. CONSULTANT INFORMATION

FIRM NAME: ______________________________________________________________

ADDRESS:_________________________________________________________________

CITY:_________________________________________ STATE: ___________

ZIP CODE: __ __ __ __ __ - __ __ __ __

TELEPHONE : (_____) _____ - __________ FAX: (_____) _____ - __________

E-MAIL ADDRESS: _________________________________________________________

CONTACT PERSON:________________________________________________________

Consultant’s Federal Identification Number (FEIN):________________________

Consultant’s Consultant Identification Number (CIN): ____________________

• Please indicate below the name, title, address, and telephone/fax numbers of the person who prepared this proposal, as well as any other individual(s) with authority to negotiate and contractually bind the offeror and also who may be contacted during the period of proposal evaluation:

Preparer’s Name/Title:  _____________________________________________________

Address:  ___________________________________________________________________

Telephone : (_____) _____ - __________  FAX : (_____) _____ - ______

Other Authorized Individual(s):

Name/Title:________________________________________________________________

Address:__________________________________________________________________

Telephone : (_____) _____ - __________  FAX: (_____) _____ - ______
II. PROPOSER CERTIFICATIONS

By signing below, I, ________________________________, authorized individual of ______________________________ make the following certifications regarding the subject proposal:

• 365-Day Offer: This proposal is a firm offer for a 365-day (or more) period from the date of submission.
• The firm has read and will follow the procedure outlined in Attachment #6 if it proposes the services of a former NYSDOT employee(s).
• Vendor Responsibility: If selected for contract award, the firm will complete and submit the required Vendor Responsibility forms to NYSDOT within 10 days of notification of designation both electronically and in hard copy per the NYSDOT Web site. (https://www.nysdot.gov/portal/page/portal/main/business-center/consultants/forms-publications-and-instructions)
• ST-220: If selected for contract award greater that $100,000, the firm will complete and submit the required Forms ST-220-TD and 220-CA (Contractor Certifications) prior to negotiation with NYSDOT. You should make yourself familiar with these forms by visiting the following Web sites:
  http://www.tax.state.ny.us/pdf/2006/fillin/st/st220ca_606_fill_in.pdf (Form ST-220-CA)
• The firm is in compliance with the requirements of the Omnibus Procurement Act as described in EXHIBIT A which is found in the draft Contract attached to this RFP.

Signature: __________________________________________

III. ACCEPTANCE OF CONTRACT

By signing below, I, ________________________________, authorized individual of ______________________________ hereby certify that I have read and accept all Terms and Conditions contained in the draft Contract, including Appendix A, which is included as Attachment #3 correspond accordingly to this Request for Proposals.

Signature: __________________________________________

(Name of Acceptor)
**Attachment #2**

**Procurement Lobbying Law Compliance**

**NYS Procurement Lobbying Law Compliance for Contract #C000781**

**NYSDOT Policy Summation:**
Under the requirements of the State Procurement Act, all communications regarding advertised projects are to be channeled through the applicable Contract Management staff (*Designated NYSDOT Contract Management, or to the **NYMTC Designated Contracts). Until a contract is approved by the State Comptroller, contact with any other NYSDOT or NYMTC employee concerning this project should not be made unless otherwise directed by the NYSDOT Contract Management. Communications made contrary to this policy and deemed an attempt to influence the outcome, may result in disqualification.

**Required Forms:**
The consultant shall sign and e-mail/fax the following forms. These forms are part of and due with the consultants’ proposals.

- **Offerer’s Affirmation of Understanding of and Agreement pursuant to State Finance Law §139-j (3) and §139-j (6) (b)”**
- **Offerer Disclosure of Prior Non-Responsibility Determinations”**.

**NYSDOT Guidelines and Procedures:**
Under the requirements of the State Procurement Act all communications regarding advertised projects are to be channeled through applicable Contract Management staff (*Designated NYSDOT Contacts or to the **NYMTC Designated Contracts). Until a designation is made, communication with any other NYSDOT or NYMTC employee concerning this project that is determined to be an attempt to influence the procurement may result in disqualification.

Refer to “NYSDOT PROCUREMENT LOBBYING LAW GUIDELINES AND PROCEDURES” – see the following NYSDOT web site: [https://www.nysdot.gov/portal/page/portal/main/business-center/consultants/non-architectural-engineering/active-solicitations](https://www.nysdot.gov/portal/page/portal/main/business-center/consultants/non-architectural-engineering/active-solicitations)

**Contacts Prior To Designation:**
Any communications involving an attempt to influence the procurement are only permitted with the following Designated Contact Persons:

- The NYSDOT Contract Management designation analyst *
- The NYSDOT Contract Management designation analyst supervisor *
- The NYSDOT Contract Management Assistant Directors *
- The NYSDOT Contract Management Director *
- The NYMTC Contract Liaison and Assistant**
- The NYMTC Project Manager **

These are some communications exempted from this restriction:

- Participation in a pre-proposal conference
- Submittal of written questions when written responses will be provided to all offerers
- Protests, complaints of improper conduct or misrepresentation

If any other NYSDOT or NYMTC employee is contacted and they believe a reasonable person would infer that the communication was intended to influence the procurement, the contact must be reported by the NYSDOT/NYMTC employee. If the Department determines an impermissible contact was made, that offerer cannot be awarded the contract. A second violation would lead to a four-year bar on the award of public contracts to the offerer.
Contacts After Designation:
NYSDOT and NYMTC identify the primary negotiation contacts. The designated contacts include:

- The NYSDOT Contract Management negotiation analyst *
- The NYSDOT Contract Management negotiation analyst supervisor *
- The NYSDOT Contract Management Assistant Directors *
- The NYSDOT Contract Management Director *
- The Consultant Management Bureau consultant job manager *
- The Consultant Management Bureau consultant job manager’s immediate supervisor *
- The NYMTC Contract Liaison and Assistant **
- The NYMTC Project Manager **
- Individual(s) that the Department or NYMTC may identify at or after designation

The law does not limit who may be contacted during the negotiation process. However, if any NYSDOT or NYMTC employee is contacted and they believe a reasonable person would infer that the communication was intended to influence the procurement, the contact must be reported by the NYSDOT/NYMTC employee.

Information Required from Offerers that Contact NYSDOT/NYMTC staff, Prior to Contract Approval by the Office of the State Comptroller:
The individuals contacting NYSDOT or NYMTC should refer and shall be prepared to provide the following information, either by e-mail or fax as directed by NYSDOT or NYMTC.

Person’s name, firm person works for, address of employer, telephone number, occupation, firm they are representing, and whether owner, employee, retained by or designated by the firm to appear before or contact NYSDOT or NYMTC.

Applicability to an Executed Contract:
Restrictions similar to those described above apply to approval or denial of an assignment, amendment (other than amendments that are authorized and payable under the terms of the procurement contract as it was finally awarded or approved by the comptroller, as applicable), renewal or extension of a procurement contract, or any other material change in the procurement contract resulting in a financial benefit to the offerer. The staff noted above as well as the project manager and consultant manager are considered designated contact persons. The Department or NYMTC may identify other contact persons for each of these processes.

Rules and Regulations and For More Information on this Law, Please Visit:
http://www.ogs.state.ny.us/aboutogs/regulations/advisoryCouncil/Faq.htm (Advisory Council FAQs)
http://www.nylobby.state.ny.us/
http://www.nylobby.state.ny.us/lobbying.html (New York State Lobbying Act)
http://www.ogs.state.ny.us/aboutOgs/regulations/defaultAdvisoryCouncil.html

Official Contact Persons:

NYMTC: Mr. Ismet Apdiroglu at: 212.383.2414 or iapdiroglu@dot.state.ny.us
NYSDOT: Mr. Al Hasenkopf at: 518.457.1560 or ahasenkopf@dot.state.ny.us
Offerer’s Affirmation of Understanding of and Agreement pursuant to State Finance Law §139-j (3) and §139-j (6) (b)

Offerer affirms that it understands and agrees to comply with the procedures of the Government Entity relative to permissible Contacts as required by State Finance Law §139-j (3) and §139-j (6) (b).

Contract #C000775

By: _______________________________ Date: __________________

Name: ______________________________

Title: ______________________________

Contractor Name: _______________________________________________________

Contractor Address: _____________________________________________________
______________________________________________________________________
______________________________________________________________________
Offerer Disclosure of Prior Non-Responsibility Determinations

Name of Individual or Entity Seeking to Enter into the Procurement Contract: _______________________________

Address: _______________________________________________________________________________

Name and Title of Person Submitting this Form: _______________________________________________

Contract Procurement Number: _____C000775__________________________

Date: __________________________

1. Has any Governmental Entity made a finding of non-responsibility regarding the individual or entity seeking to enter
   into the Procurement Contract in the previous four years?

   (Please circle):  No  Yes

   If yes, please answer the next three questions:

2. Was the basis for the finding of non-responsibility due to a violation of State Finance Law §139-j (Please circle):

   No  Yes

3. Was the basis for the finding of non-responsibility due to the intentional provision of false or incomplete information to
   a Governmental Entity? (Please circle):  No  Yes

4. If you answered yes to any of the above questions, please provide details regarding the finding of non-responsibility
   below.

   Governmental Entity: ___________________________________________________________

   Date of Finding of Non-responsibility: _____________________________________________

   Basis of Finding of Non-Responsibility:

   _____________________________________________________________________________

   _____________________________________________________________________________

   _____________________________________________________________________________

   _____________________________________________________________________________

   (Add additional pages as necessary)

5. Has any Governmental Entity or other governmental agency terminated or withheld a Procurement Contract with the
   above-named individual or entity due to the intentional provision of false or incomplete information? (Please circle):

   No  Yes

6. If yes, please provide details below.

   Governmental Entity: ____________________________________________

   Date of Termination or Withholding of Contract: _____________________________

   Basis of Termination or Withholding:

   _____________________________________________________________________________

   _____________________________________________________________________________

   _____________________________________________________________________________

   _____________________________________________________________________________

   (Add additional pages as necessary)

Offerer certifies that all information provided to the Governmental Entity with respect to State Finance Law §139-k is
complete, true and accurate.

By: ____________________________________________  Date: _____________________________

   Signature

Name: ____________________________________________

Title: ____________________________________________
Attachment #3

DRAFT CONTRACT

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

F. A. NO.: ______________  P.I.N.: ____________

COMPTROLLER'S CONTRACT NO. C000775

PROJECT: DEVELOPMENT OF DEMOGRAPHIC and SOCIOECONOMIC MODELS, 2050 FORECASTS and ZONAL ALLOCATION PROGRAM (SED and ZAP)

This Agreement made this ___ day of ___________, 20__ pursuant to Section 14 of the Transportation Law, by and between THE PEOPLE OF THE STATE OF NEW YORK (hereinafter referred to as the "STATE") acting by and through the Department of Transportation (hereinafter referred to as "STATE") whose office is at 50 Wolf Road, in the County of Albany, State of New York 12232 and

(hereinafter referred to as "CONSULTANT")

WITNESSETH:

WHEREAS, the STATE desires the CONSULTANT because of its ability and reputation, to perform the services hereinafter mentioned upon the PROJECT which is fully described in SCHEDULE "A" and the CONSULTANT agrees to provide these services.

NOW, THEREFORE, the parties hereto, for the consideration hereinafter named, do agree as follows:

ARTICLE 1. PERFORMANCE OF WORK.

The CONSULTANT shall perform all of the work described in SCHEDULE "A" and cause such work to be performed in an efficient and expeditious manner and in accordance with all of the terms and provisions of this CONTRACT. The CONSULTANT shall perform the work in accordance with professional standards and with the diligence and skill expected of a company with extensive experience in the performance of work of the type described in SCHEDULE "A". The CONSULTANT shall furnish such personnel and shall procure such materials, machinery, supplies, tools, equipment and other items as may reasonably be necessary or appropriate to perform the work in accordance with this AGREEMENT. It is understood and agreed that ________________ shall serve as the CONSULTANT's Project Manager and as such shall have the responsibility for the overall supervision and conduct of the
work on behalf of the CONSULTANT and that the persons described in SCHEDULE "A" shall serve in the capacities described therein. Any change of key project personnel by the CONSULTANT shall be subject to the prior written approval of the STATE. The STATE reserves the option to extend the terms and conditions of this CONTRACT to any other state agency in New York subject to the approval of all necessary state officials.

The CONSULTANT will commence work no later than ten (10) days after receiving notice to proceed from the STATE.

ARTICLE 2. DOCUMENTS FORMING THE CONTRACT.

The contract documents shall be deemed to include this AGREEMENT, SCHEDULE "A" (including EXHIBITS), SCHEDULE "B" (including EXHIBITS), and the provisions required by law to be inserted in the AGREEMENT as set forth in APPENDIX A.

ARTICLE 3. INSPECTION.

The duly authorized representatives of the STATE, and on Federally aided projects, representatives of the Federal Highway Administration, shall have the right at all times to inspect the work of the CONSULTANT.

ARTICLE 4. TERM OF THE AGREEMENT.

The CONSULTANT agrees to complete all the work of this Agreement as required by this Contract during the 36 month period from ________________. Additionally, this AGREEMENT may be extended for up to one one-year period based on need and performance as determined by the STATE and approved by the Office of the State Comptroller., or within such extended periods as are agreed to by the STATE and approved by the Office of the State Comptroller and within the Lump Sum as shown in Item I, ARTICLE 5.

ARTICLE 5. PROVISION FOR PAYMENT.

Item I The STATE shall pay to the CONSULTANT and the CONSULTANT agrees to accept as full compensation for its services under this Agreement, a price of __________ unless there is a substantial change in the scope, complexity or character of the work to be performed.

Item II The CONSULTANT specifically agrees that the AGREEMENT shall be deemed executory only to the extent of the monies available, and no liability shall be incurred by the STATE beyond the monies available for the purpose. In no event, however, will monies be deleted from this Agreement except pursuant to ARTICLE 15 hereof, entitled Termination.

ARTICLE 6. MILESTONE PAYMENTS.

The CONSULTANT shall be paid in milestone progress payments based on a payment schedule established by the Project Director and the CONSULTANT, as follows:
The STATE will make payments to the CONSULTANT in accordance with Section 179(f) of the State Finance Law. Payments are subject to the approval of the STATE's Project Director, or their successor as identified by the STATE. Payments shall not be withheld unreasonably.

The CONSULTANT shall maintain and update once each month, if changes have taken place or are anticipated, the Project Schedule contained in SCHEDULE "A" hereto.

The CONSULTANT will not include any provisions in their subcontracts that would circumvent the intent of 49 CFR 26.29 to require the CONSULTANT to make partial payments to subcontractors and subconsultants within ten (10) days after receipt of payment from the STATE.

ARTICLE 7. CONTRACT PAYMENT.

The CONSULTANT shall provide complete and accurate billing invoices to the STATE in order to receive payment. Billing invoices submitted to the STATE must contain all information and supporting documentation required by the Contract, the STATE and the State Comptroller. Payment for invoices submitted by the CONSULTANT shall only be rendered electronically unless payment by paper check is expressly authorized by the New York State Department of Transportation Commissioner (hereinafter referred to as “COMMISSIONER”), in the COMMISSIONER'S sole discretion, due to extenuating circumstances. Such electronic payment shall be made in accordance with ordinary State procedures and practices. The CONSULTANT shall comply with the State Comptroller’s procedures to authorize electronic payments. Authorization forms are available at the State Comptroller’s website at www.osc.state.ny.us/epay/index.htm, by email at epunit@osc.state.ny.us, or by telephone at 518-474-4032. CONSULTANT acknowledges that it will not receive payment on any invoices submitted under this contract if it does not comply with the State Comptroller’s electronic payment procedures, except where the COMMISSIONER has expressly authorized payment by paper check as set forth above.

ARTICLE 8. PARTIAL PAYMENTS.

The CONSULTANT shall be paid in monthly progress payments based on actual allowable costs incurred during the period in accordance with ARTICLE 6 of this AGREEMENT. Bills are subject to the approval of the State's Project Director, or their successor as identified by the STATE. Payments shall not be withheld unreasonably.

The CONSULTANT shall inform the STATE and all Subcontractors and Subconsultants of the Consultants schedule for submitting monthly vouchers to the STATE, said schedule shall be strictly adhered to by the CONSULTANT.
All Subcontractor and Subconsultant vouchers received by the CONSULTANT at least ten (10) calendar days prior to a scheduled billing, shall be included in that billing, even if the CONSULTANT does not have other costs to be billed for that period. The CONSULTANT shall inform the Subcontractor or Subconsultant of the date the voucher was submitted to the STATE and the amount included for the Subcontractor or Subconsultant.

The CONSULTANT will not include any provisions in their subcontracts that would circumvent the intent of 49 CFR 26.29 to require the CONSULTANT to make partial payments to all Subcontractors and Subconsultants within ten (10) calendar days of receipt of payment from the STATE.

Accounts of the CONSULTANT shall clearly identify the costs of the work performed under this AGREEMENT and shall be subject to periodic and final audit by the STATE and, on Federally aided Projects, by the Federal Highway Administration. Such audit shall not be a condition of partial payment.

ARTICLE 9. FINAL PAYMENT.

a) Section 179 of the State Finance Law requires the STATE to make final payment within thirty (30) calendar days after receipt of an invoice which is properly prepared and submitted. The STATE in accordance with the provisions of the State Finance Law has determined that the STATE will require a 60 calendar day audit period for final payments at which time the 30 calendar day interest-free period will commence. The CONSULTANT is required to make final payment to all Subcontractors and Subconsultants within ten (10) calendar days of receipt of final payment from the STATE.

The CONSULTANT is required, if it is a "foreign" (Out of State) corporation or entity, to obtain and submit the required "Tax Clearance" certificate to the STATE to enable the processing of the final payment. It should be noted that any time taken to satisfy or furnish this Tax Clearance certificate shall extend the required payment date by an equal period of time.

The acceptance by the CONSULTANT of the final payment shall operate as and shall be a release to the STATE from all claims and liability to the CONSULTANT, its representatives and assigns for any and all things done, furnished for or relating to the services rendered by the CONSULTANT under or in connection with this Agreement or for any part thereof except as otherwise provided in ARTICLE 9(b).

b) The CONSULTANT shall maintain all books, documents, papers, accounting records and other evidence pertaining to cost incurred and make such materials available at its office at all reasonable times during the period of this Agreement and for the period of time specified in Clause No. 10, "Records" on page 3 of APPENDIX A, for inspection by the STATE, Federal Highway Administration, or any authorized representatives of the Federal Government and copies thereof shall be furnished if requested.

ARTICLE 10. EXTRA WORK.
a) If the CONSULTANT believes that any work is or may be beyond the scope of the Agreement (extra work), or that additional work is necessary, the CONSULTANT shall notify the STATE, in writing, of this fact prior to beginning any of the work. The notification shall include all information required by the Department. The STATE shall be the sole judge as to whether or not such work is in fact beyond the scope of this Agreement and constitutes extra work. No extra or additional work shall be started prior to written authorization from the STATE. The STATE shall be under no obligation to reimburse the CONSULTANT for any extra or additional work performed without the prescribed notification and authorization. The STATE will not allow fixed fee for any extra work undertaken without prescribed notification and authorization. In the event that the STATE determines that such work does constitute extra work, the STATE shall provide extra compensation to the CONSULTANT in a fair and equitable manner. If necessary, a Supplemental Agreement providing the compensation and describing the work authorized shall be issued by the STATE to the CONSULTANT for execution after approvals have been obtained from necessary State officials and if required, from the Federal Highway Administration.

b) In the event of any claims being made or any actions being brought in connection with the PROJECT, the CONSULTANT agrees to render to the STATE all assistance required by the STATE. Compensation for work performed and costs incurred in connection with this requirement shall be made in a fair and equitable manner. In all cases provided for in this AGREEMENT for the additional services above described, the STATE's directions shall be exercised by the issuance of a separate Agreement, if necessary.

ARTICLE 11. CONSULTANT LIABILITY.

The CONSULTANT shall be responsible for all damage to life and property due to negligent acts, errors or omissions of the CONSULTANT, its subcontractors, agents or employees, in the performance of its service under this AGREEMENT. Further, it is expressly understood that the CONSULTANT shall indemnify and save harmless the STATE from claims, suits, actions, damages and costs of every name and description, resulting from the negligent performance of the services of the CONSULTANT under this AGREEMENT, and such indemnity shall not be limited by reasons of enumeration of any insurance coverage herein provided. Negligent performance of service, within the meaning of this Article, shall include, in addition to negligence founded upon tort, negligence based upon the CONSULTANT's failure to meet professional standards and resulting in obvious or patent errors in the progression of his work. Nothing in this Article or in this Agreement shall create or give to third parties any claim or right of action against the CONSULTANT or the STATE beyond such as may legally exist irrespective of this Article or this Agreement.

ARTICLE 12. WORKER'S COMPENSATION AND LIABILITY INSURANCE.

The CONSULTANT agrees to procure and maintain without direct cost to the STATE except as noted, until final acceptance by the STATE, of the services covered by this
AGREEMENT, insurance of the kinds and in amounts hereinafter provided in insurance companies authorized to do business in the State of New York, covering all operations under this AGREEMENT whether performed by the CONSULTANT or its subcontractors. Before commencing the work, the CONSULTANT shall furnish to the STATE a certificate or certificates, in form satisfactory to the STATE, showing that they has complied with this Article, which certificate or certificates, shall provide that the policies shall not be changed or canceled until thirty (30) days written notice has been given to the STATE. The kinds and amounts of insurance required are as follows:

(a) policy covering the obligations of the CONSULTANT in accordance with the provisions of Chapter 41, Laws of 1914, as amended, known as the Worker's Compensation Law, and also by the provisions of ARTICLE 9 of the Worker's Compensation Law known as the Disability Benefits Law, and this AGREEMENT shall be void and of no effect unless the CONSULTANT procures such policy and maintains it until acceptance of the work;

(b) policies of bodily injury liability insurance of the types herein-after specified, each with limits of liability of not less than $100,000 for all damages arising out of bodily injury, including death at any time resulting there from, sustained by one person in any one accident and, subject to that limit for each person, not less than $300,000 for all damage arising out of bodily injury, including death at any time resulting there from, sustained by two or more persons in any one accident, and not less than $100,000 damages arising out of injury to or destruction of property in any one accident and, subject to that limit per accident, not less than $300,000 for all damages arising out of injury to or destruction of property during the policy period.

1) Professional liability insurance, if the CONSULTANT is a licensed professional, issued to and covering the liability of the CONSULTANT with respect to all work performed by him under this AGREEMENT.

2) Professional liability insurance issued to and covering the liability of each of the CONSULTANT'S licensed professional subcontractors with respect to all work performed by said subcontractors under this AGREEMENT.

3) Protective liability insurance issued to and covering the liability of the CONSULTANT with respect to all work under this AGREEMENT performed for the CONSULTANT by its subcontractors.

4) Protective liability insurance for the benefit of THE PEOPLE OF THE STATE OF NEW YORK and all employees of the DEPARTMENT OF TRANSPORTATION both officially and personally, with respect to all operations under this AGREEMENT by the CONSULTANT or by its subcontractors, including in such coverage any omissions and supervisory acts of the STATE, the DEPARTMENT and its employees. The insurance premium for this coverage will be reimbursable as a direct non-salary cost under this AGREEMENT.

ARTICLE 13. INTERCHANGE OF DATA.
All technical data in regard to the PROJECT existing in the office of the STATE or existing in the offices of the CONSULTANT shall be made available to the other party to this Agreement without expense to such other party.

**ARTICLE 14. DISPOSITION OF DATA.**

At the time of completion of the work, the CONSULTANT shall make available to the STATE all documents and data pertaining to the work or to the PROJECT which materials at all times shall be the property of the STATE. It is agreed that the CONSULTANT may maintain copies of all documents and data. Or in the event that this Agreement is terminated for any reason, then, within ten (10) days after such termination, the CONSULTANT shall make available to the STATE the aforementioned data and material.

**ARTICLE 15. DAMAGES AND DELAYS.**

The CONSULTANT agrees that no charges or claim for damages shall be made by them for any delays or hindrances from any cause whatsoever during the progress of any portion of the services specified in this AGREEMENT. Such delays or hindrances, if any, shall be compensated for by an extension of time for such reasonable period as the STATE may decide, it being understood however, that the permitting of the CONSULTANT to proceed to complete any services or any part of them after the date of completion or after the date to which the time of completion may have been extended, shall in no way operate as a waiver on the part of the STATE of any of its rights herein. Nothing in this ARTICLE will prevent the CONSULTANT from exercising its rights under ARTICLE 9 of this AGREEMENT.

**ARTICLE 16. NOTICE OF BANKRUPTCY, VENUE, AUDITS.**

If, prior to final audit, CONSULTANT files for relief pursuant to Title 11 of the United States Code under the Bankruptcy Laws or a successor statute, this contract shall be treated as an executory contract under 11 USC S365 of the Bankruptcy Laws or successor statute, and subject to assumption or rejection by the debtor within the time permitted by law.

The CONSULTANT must immediately send written notice to NYSDOT Contract Management at its main office in Albany and send all relevant pleading of the voluntary or involuntary filing of a Bankruptcy proceeding by the CONSULTANT, its subsidiary, its principals and officers or a related entity whether or not the CONSULTANT believes that any debt is owed to the State by final audit or otherwise.

The determination of any rights under this contract shall be adjudicated in a State or Federal Court with jurisdiction over the matter, and venue for the determination of such rights shall be in Albany, New York.

The CONSULTANT agrees that the automatic stay under 11 USC S362 or a successor statute shall be deemed inapplicable or that this agreement shall constitute consent to the
lifting of the stay with respect to the State's performance of or completion of any audit pursuant to the terms of this contract.

**ARTICLE 17. TERMINATION.**

The STATE shall have the absolute right to terminate this Agreement, and such action shall in no event be deemed a breach of contract:

(a) If a termination is brought about for the convenience of the STATE and not as a result of unsatisfactory performance on the part of the CONSULTANT, final payment shall be made based on the actual work performed by the CONSULTANT prior to termination including, but not limited to, the number of hours and other authorized costs audited in accordance with the terms of the AGREEMENT.

(b) If the termination is brought about as a result of the unsatisfactory performance on the part of the CONSULTANT, the value of the work performed by the CONSULTANT prior to termination shall be established by the STATE.

c) The STATE reserves the right to terminate this contract in the event it is found that the certification filed by the CONSULTANT in accordance with the requirements contained in State Finance Law §139-k was intentionally false or intentionally incomplete. Upon such finding, the STATE may exercise its termination right by providing written notification to the CONSULTANT in accordance with the written notification terms of the contract.

**ARTICLE 18. DEATH OR DISABILITY OF THE CONSULTANT.**

In case of the death or disability of one or more but not all the persons herein referred to as CONSULTANT, the rights and duties of the CONSULTANT shall devolve upon the survivors of them, who shall be obligated to perform the services required under this AGREEMENT, and the STATE shall make all payments due to them.

In case of the death or disability of all the persons herein referred to as CONSULTANT, all data and records pertaining to the PROJECT shall be delivered within (60) days to the STATE or their duly authorized representative. In case of the failure of the CONSULTANT'S successors or personal representatives to make such delivery on demand, then in that event the representatives of the CONSULTANT shall be liable to the STATE for any damages it may sustain by reason thereof. Upon the delivery of all such data to the STATE, the STATE will pay to the representatives of the CONSULTANT all amounts due the CONSULTANT, including retained percentages to the date of the death of the last survivor.

**ARTICLE 19. CODE OF ETHICS.**

The CONSULTANT specifically agrees that this AGREEMENT may be canceled or terminated if any work under this AGREEMENT is in conflict with the provisions of
Section 74 of the New York State Public Officer's Law, as amended, establishing a Code of Ethics for State officers and employees.

The CONSULTANT shall not engage, on a full or part-time or other basis any professional or technical personnel who are or have been at any time during the period of this AGREEMENT in the employ of the Federal Highway Administration or the highway organizations of any public employer, except regularly retired employees, without the consent of the public employer of such person.

**ARTICLE 20. INDEPENDENT CONTRACTOR.**

The CONSULTANT, in accordance with their status as an independent contractor, covenants and agrees that they will conduct themselves consistent with such status, that they will neither hold themselves out as, nor claim to be, an officer or employee of the STATE by reason hereof, and that they will not, be reason hereof, make any claim, demand or application to or for any right or privilege applicable to an officer or employee of the STATE, including but not limited to Worker's Compensation coverage, Unemployment Insurance benefits, Social Security coverage or Retirement membership or credit.

**ARTICLE 21. COVENANT AGAINST CONTINGENT FEES.**

The CONSULTANT warrants that they have not employed or retained any company or person, other than a bona fide employee working for the CONSULTANT, to solicit or secure this AGREEMENT, and that they have not paid or agreed to pay any company or person, other than a bona fide employee, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this AGREEMENT. For breach or violation of this warranty, the STATE shall have the right to annul this AGREEMENT without liability, or, in its discretion, to deduct from the AGREEMENT price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

**ARTICLE 22. TRANSFER OF AGREEMENT.**

The CONSULTANT specifically agrees, as required by the State Finance Law, Section 138, that they are prohibited by law from assigning, transferring, conveying, subletting or otherwise disposing of the AGREEMENT or of their right, title or interest therein, or their power to execute such AGREEMENT, to any other person, company or corporation, without the previous consent in writing of the STATE.

If this provision of the law be violated, the STATE shall revoke and annul the AGREEMENT and the STATE shall be relieved from any and all liability and obligations thereunder to the person, company or corporation to whom the CONSULTANT shall assign, transfer, convey, sublet or otherwise dispose of the AGREEMENT, and such transferee shall forfeit and lose all moneys therefore assigned under said AGREEMENT, except so much as may be required to pay his employees.
ARTICLE 23. PROPRIETARY RIGHTS.

The CONSULTANT agrees that if copyrights, patentable discoveries or inventions or rights in data should result from work described herein, all rights accruing from such discoveries or inventions shall be the sole property of the CONSULTANT. However, the CONSULTANT agrees to and does hereby grant to the United States Government and the State of New York an irrevocable, nonexclusive, nontransferable, paid-up license to reproduce, publish, make, use, and sell each subject invention throughout the world by and on behalf of the Government of the United States and States and domestic municipal governments, all in accordance with the provisions of 48 CFR 1-27, and other applicable Federal laws, rules and regulations.

ARTICLE 24. SUBCONTRACTORS/SUBCONSULTANTS.

All subcontractors and subconsultants performing work on this project shall be bound by the same required contract provisions as the prime consultant. All agreements between the prime consultant and a subcontractor or subconsultant shall include all standard required contract provisions, and such agreements shall be subject to review by the State.

ARTICLE 25. ORDER OF PRECEDENCE.

In the event of any inconsistency between or among the provisions and contents of this AGREEMENT, it is agreed that such inconsistency shall be resolved in the following descending order of precedence:

1. The provisions required by state and federal law to be inserted in the AGREEMENT as set forth in APPENDIX A, APPENDIX B, and Appendix C.
2. This AGREEMENT, including Signature Page, Notary Page and Exhibits.
3. SCHEDULE A (including Exhibits).
4. SCHEDULE B (including Exhibits).
5. The STATE’s Request for Proposals (RFP).
6. The CONSULTANT’s Proposal.


The signatory to this Agreement, being duly sworn, certifies that, EXCEPT AS NOTED BELOW, its company and any person associated therewith in the capacity of owner, partner, director, officer, or major stockholder (five percent or more ownership):

1) is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;
2) has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past three years;

3) does not have a proposed debarment pending; and

4) has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

EXCEPTIONS -

ARTICLE 27. CERTIFICATION FOR FEDERAL-AID CONTRACTS.

The prospective participant certifies, by signing this Agreement to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such subrecipients shall certify and disclose accordingly.

ARTICLE 28. RESPONSIBILITY OF THE CONSULTANT.

(a) The CONSULTANT shall be responsible for the professional quality, technical accuracy, and the coordination of all services furnished by the CONSULTANT
under this contract. The CONSULTANT shall, without additional compensation, correct or revise any errors or deficiencies in its services. However, the STATE may in certain circumstances, provide compensation for such work.

(b) Neither the STATE'S review, approval or acceptance of, nor payment for, the services required under this contract shall be construed to operate as a waiver of any rights under this contract or of any cause of action arising out of the performance of this contract, and the CONSULTANT shall be and remain liable to the STATE in accordance with applicable law for all damages to the STATE caused by the CONSULTANT’S negligent performance or breach of contract of any of the services furnished under this contract.

(c) The rights and remedies of the STATE provided for under this contract are in addition to any other rights and remedies provided by law.

(d) If the CONSULTANT is comprised of more than one legal entity or any group of partners or joint venturers associated for the purposes of undertaking this agreement, each such entity acknowledges and hereby affirmatively represents and agrees that each has the power to bind the CONSULTANT and each of the others hereunder; and as such, each acts both as principal and agent of the CONSULTANT and of each of the others hereunder. Each further acknowledges and agrees that all such entities, partners or joint venturers associated for the purposes of undertaking this agreement shall be jointly and severally liable to third parties, including but not limited to the STATE, for the acts or omissions of the CONSULTANT or any other entity, partner or joint venturer hereunder.

(e) If the CONSULTANT is comprised of more than one legal entity or any group of partners or joint venturers associated for the purposes of undertaking this agreement, each such entity acknowledges and hereby affirmatively represents and agrees that the respective rights, duties and liabilities of each hereunder shall be governed by the laws of the State of New York, including but not limited to the New York Partnership Law.

ARTICLE 29. SECURITY AND CONFIDENTIALITY OF INFORMATION.

Information received as part of this contract shall be considered Confidential Information. The CONSULTANT warrants that it will take the appropriate steps as to its personnel, agents, officers and any SUBCONTRACTOR/SUBCONSULTANTS regarding the obligations arising under this clause to insure such confidentiality. The CONSULTANT shall have written policies and/or business procedures in place which will protect Confidential Information from unauthorized disclosure, use, access, loss, alteration or destruction. The CONSULTANT may disclose to other parties, as authorized by the NYSDOT Project Manager, or as described in the scope of services, only the information necessary to perform services under this contract. However, the CONSULTANT shall in no circumstance, communicate with the public or news media without prior authorization from the States designee. Neither shall the CONSULTANT disclose information deemed confidential by the State nor shall the CONSULTANT disclose any other information
obtained or developed in the performance of services under this agreement without the written authorization of the State. This warranty shall survive termination of this Contract.

CONSULTANT shall comply with the provisions of the New York State Information Security Breach and Notification Act, including General Business Law Section §889-aa and State Technology Law §208 as enacted by such Act or subsequently amended. In the event of an information security breach resulting in the unauthorized disclosure of personal information, CONSULTANT shall be liable for the costs associated with such breach if caused by CONSULTANT’s negligent or willful acts or omissions, or the negligent or willful acts or omissions of the CONSULTANT’s agents, officers, employees or SUBCONSULTANTS.

ARTICLE 30. VENDOR RESPONSIBILITY.

The Department of Transportation has undertaken an affirmative review of the proposed consultant’s responsibility in accordance with the applicable standards outlined in Comptroller’s Bulletin No. G-221, and based upon such review, reasonable assurance that the proposed contractor is responsible has been determined.

ARTICLE 31. CONSULTANT DISCLOSURE LEGISLATION.

In accordance with Chapter 10 of the Laws of 2006, the CONSULTANT shall complete the “State Consultant Services Contractor’s Annual Employment Report” (Form B, Exhibit ___) and submit copies to the Office of the State Comptroller, the Department of Civil Service, and the Department of Transportation on or before May15th of each year the contract is in effect. The CONSULTANT shall provide information regarding all employees providing service under this contract, whether employed by the CONSULTANT or any subconsultant or subcontractor. Annual employment reports should be submitted to the following addresses. It is recommended, however, that consultants check the agency websites annually to confirm the addresses.

By mail:
NYS Office of the State Comptroller
Bureau of Contracts
110 State Street, 11th Floor
Albany, N. Y.  12236
Attn:  Consultant Reporting

NYS Department of Civil Service
Alfred E. Smith Building
Albany, N. Y.  12239
Attn: Chapter 10

NYS Department of Transportation
Submit electronically, preferably as a Word, Excel or pdf file via email to: tameche@dot.state.ny.us or his successor.
ARTICLE 32. NOTICES.

Item 1. All notices permitted or required hereunder shall be in writing and shall be transmitted either:
(a) via certified or registered United States mail, return receipt requested;
(b) by facsimile transmission;
(c) by personal delivery;
(d) by expedited delivery service; or
(e) by e-mail.

Such notices shall be addressed as follows or to such different addresses as the parties may from time-to-time designate:

New York State Department of Transportation:
Contact Person’s Name: William A. Howe, Contract #C000775
Title: Director
Address: NYSDOT Contract Management, 50 Wolf Rd/Suite 1CM, Albany, NY 12232
Telephone Number: 518-457-2600
Facsimile Number: 518-457-2875
E-Mail Address: whowe@dot.state.ny.us

Item 2. Any such notice shall be deemed to have been given either at the time of personal delivery or, in the case of expedited delivery service or certified or registered United States mail, as of the date of first attempted delivery at the address and in the manner provided herein, or in the case of facsimile transmission or email, upon receipt.

Item 3. The parties may, from time to time, specify any new or different address in the United States as their address for purpose of receiving notice under this Agreement by giving fifteen (15) days written notice to the other party sent in accordance herewith. The parties agree to mutually designate individuals as their respective representatives for the purposes of receiving notices under this Agreement.

ARTICLE 33. TITLE VI ASSURANCE.

During the performance of this contract, the consultant or contractor, for itself, its assignees and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:
(1) Compliance with Regulations: The contractor shall comply with the Regulation relative to nondiscrimination in Federally-assisted programs of the Department of Transportation of the United States, Title 49, Code of Federal Regulations, Part 21, and the Federal Highway Administration (hereinafter “FHWA”) Title 23, Code of Federal Regulations, Part 200 as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

(2) Nondiscrimination: The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin, sex, age, and disability/handicap in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR, section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

(3) Solicitations for Subcontractors, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin, sex, age, and disability/handicap.

(4) Information and Reports: The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by NYSDOT or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to NYSDOT’s Office of Civil Rights or FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, NYSDOT shall impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

(a.) withholding of payments to the contractor under the contract until the contractor complies, and/or
(b.) cancellation, termination or suspension of the contract, in whole or in part.

(6) Incorporation of Provisions: The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The contractor shall take such action with respect to any subcontract or procurement as NYSDOT or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes
involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request NYSDOT to enter into such litigation to protect the interests of NYSDOT, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.
IN WITNESS WHEREOF, this Contract No. C000775 has been executed by the STATE, acting by and through the Commissioner of Transportation, and the CONSULTANT has duly executed this Agreement effective the day and year first above written.

In addition to the acceptance of this Agreement, the Department also certifies that original copies of this signature page will be attached to all other exact copies of this Agreement.

RECOMMENDED BY FOR THE PEOPLE OF THE STATE OF NEW YORK

________________________________

By _____________________________________

ONTRACT MANAGEMENT DATE DEPARTMENT OF TRANSPORTATION DATE

NEW YORK METROPOLITAN TRANS. COUNCIL DATE

Consultant Certifications: I certify that all the information with respect to the “Vendor Responsibility Questionnaire” submitted by (CONSULTANT FIRM NAME) on the ___________ day of __________________________, 20_____ pursuant to the requirements set forth in OSC Bulletin G-221 is complete true and accurate. I additionally certify nothing has occurred since the date of that submission that would result in requiring a change or alteration to any of the answers provided on the “Vendor Responsibility Questionnaire” submitted that date.

I certify that all information provided to the STATE with respect to the requirements contained in State Finance Laws 139j & 139k is complete, true and accurate.

By ___________________________ Date: ___________________________

FIRM

DEVELOPMENT OF SOCIOECONOMIC and DEMOGRAPHIC MODELS, 2050 FORECASTS and ZONAL ALLOCATION PROGRAM (SED and ZAP)

APPROVALS

ATTORNEY GENERAL

THOMAS P. DíNAPOLI

STATE COMPTROLLER

By

______________________________

Date

______________________________
Acknowledgement for Contract #C000775

For contracts signed in New York State

State of New York  )

County of  ) ss.:  

On the______ day of __________ in the year 20__, before me the undersigned, personally appeared __________________, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

______________________________

NOTARY PUBLIC

My Commission Expires:

For contracts signed outside New York State

State of  )

County of  ) ss.:  

On the _____ day of __________ in the year 20__ before me, the undersigned, personally appeared __________________, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument, and that such individual made such appearance before the undersigned in ____________________________ (insert the city or other political subdivision and the state or country or other place the acknowledgement was taken).

______________________________

NOTARY PUBLIC

(Signature and office of individual taking acknowledgement.)

My Commission Expires:
EXHIBIT A

It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority and women-owned business enterprises as proposers, subcontractors and suppliers on its procurement contracts.

Information on the availability of New York State subcontractors and suppliers is available from:

NYS Department of Economic Development
Division for Small Business
30 South Pearl St -- 7th Floor
Albany, New York 12245
Telephone: 518-292-5220
Fax: 518-292-5884
http://www.empire.state.ny.us

A directory of certified minority and women-owned business enterprises is available from:

NYS Department of Economic Development
Division of Minority and Women's Business Development
30 South Pearl St -- 2nd Floor
Albany, New York 12245
Telephone: 518-292-5250
Fax: 518-292-5803
http://www.empire.state.ny.us

Proposers located in foreign countries are hereby notified that New York State may seek to obtain and assign or otherwise transfer offset credits created by this procurement contract to third parties located in New York State. The successful contractor shall agree to cooperate with the State in efforts to get foreign countries to recognize offset credits created by the procurement contract.

The Omnibus Procurement Act requires that by signing this bid proposal, contractors certify that whenever the total bid amount is greater than $1 million:

1. The successful contractor shall document efforts to encourage the participation of New York State Business Enterprises as suppliers and subcontractors on this project, and has retained the documentation of these efforts to be provided upon request to the State.

2. Documented efforts by a successful contractor shall consist of and be limited to showing that such contractor has:
   a. Solicited bids, in a timely and adequate manner, from New York State business enterprises including certified minority and women-owned business, or
   b. Contacted the New York State Department of Economic Development to obtain listings of New York State business enterprises, or
c. Placed notices for subcontractors and suppliers in newspapers, journals and other trade publications distributed in New York State, or

d. Participated in bidder outreach conferences.

e. If the contractor determines that New York State business enterprises are not available to participate on the contract as subcontractors or suppliers, the contractor shall provide a statement indicating the method by which such determination was made.

f. If the contractor does not intend to use subcontractors on the contract, the contractor shall provide a statement verifying such intent.

3. The contractor has complied with the Federal Equal Opportunity Act of 1972 (P.L. 92-261), as amended;

4. The contractor agrees to make reasonable efforts to provide notification to New York State residents of employment opportunities on this project through listing any such positions with the Community Services Division of the New York State Department of Labor, or providing such notification in such manner as is consistent with existing collective bargaining contracts or agreements. The contractor agrees to document these efforts and to provide said documentation to the State upon request.

Bidders are hereby notified that if their principal place of business is located in a state that penalizes New York State vendors, and if the goods or services they offer will be substantially produced or performed outside New York State, the Omnibus Procurement Act 1994 amendments (Chapter 684, Laws of 1994) require that they be denied placement on bidders mailing lists and contracts for which they would otherwise obtain. Bidders of construction services must be denied the award of a contract if their principal place of business is located in a state that discriminates or imposes a preference against New York State firms.

A current list of states which penalize New York State firms is available from the office letting this contract, or from the Procurement Assistance Unit, NYS Department of Economic Development, Albany NY (518-292-5224).

Last Updated: Monday, April 27, 2010
APPENDIX A

STANDARD CLAUSES FOR NEW YORK STATE CONTRACTS

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licensor, licensee, lessor, lessee or any other party):

1. **EXECUTORY CLAUSE.** In accordance with Section 41 of the State Finance Law, the State shall have no liability under this contract to the Contractor or to anyone else beyond funds appropriated and available for this contract.

2. **NON-ASSIGNMENT CLAUSE.** In accordance with Section 138 of the State Finance Law, this contract may not be assigned by the Contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or otherwise disposed of without the State’s previous written consent, and attempts to do so are null and void. Notwithstanding the foregoing, such prior written consent of an assignment of a contract let pursuant to Article XI of the State Finance Law may be waived at the discretion of the contracting agency and with the concurrence of the State Comptroller where the original contract was subject to the State Comptroller’s approval, where the assignment is due to a reorganization, merger or consolidation of the Contractor’s business entity or enterprise. The State retains its right to approve an assignment and to require that any Contractor demonstrate its responsibility to do business with the State. The Contractor may, however, assign its right to receive payments without the State’s prior written consent unless this contract concerns Certificates of Participation pursuant to Article 5-A of the State Finance Law.

3. **COMPTROLLER'S APPROVAL.** In accordance with Section 112 of the State Finance Law (or, if this contract is with the State University or City University of New York, Section 355 or Section 6218 of the Education Law), if this contract exceeds $50,000 (or the minimum thresholds agreed to by the Office of the State Comptroller for certain S.U.N.Y. and C.U.N.Y. contracts), or if this is an amendment for any amount to a contract which, as so amended, exceeds said statutory amount, or if, by this contract, the State agrees to give something other than money when the value or reasonably estimated value of such consideration exceeds $10,000, it shall not be valid, effective or binding upon the State until it has been approved by the State Comptroller and filed in his office. Comptroller's approval of contracts let by the Office of General Services is required when such contracts exceed $85,000 (State Finance Law Section 163.6.a).

4. **WORKERS' COMPENSATION BENEFITS.** In accordance with Section 142 of the State Finance Law, this contract shall be void and of no force and effect unless the Contractor shall provide and maintain coverage during the life of this contract for the
benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

5. NON-DISCRIMINATION REQUIREMENTS. To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, sexual orientation, age, disability, genetic predisposition or carrier status, or marital status. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex, or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its subcontractors shall by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of $50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

6. WAGE AND HOURS PROVISIONS. If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law. Additionally, effective April 28, 2008, if this is a public work contract covered by Article 8 of the Labor Law, the Contractor understands and agrees that the filing of payrolls in a manner consistent with Subdivision 3-a of Section 220 of the Labor Law shall be a condition precedent to payment by the State of any State approved sums due and owing for work done upon the project.

7. NON-COLLUSIVE BIDDING CERTIFICATION. In accordance with Section 139-d of the State Finance Law, if this contract was awarded based upon the submission of bids, Contractor affirms, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Contractor further affirms that, at the time Contractor submitted its bid, an authorized and responsible
person executed and delivered to the State a non-collusive bidding certification on Contractor's behalf.

8. INTERNATIONAL BOYCOTT PROHIBITION. In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law, if this contract exceeds $5,000, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the State Comptroller within five (5) business days of such conviction, determination or disposition of appeal (2NYCRR 105.4).

9. SET-OFF RIGHTS. The State shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the State's option to withhold for the purposes of set-off any moneys due to the Contractor under this contract up to any amounts due and owing to the State with regard to this contract, any other contract with any State department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Comptroller.

10. RECORDS. The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter, collectively, "the Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter. The State Comptroller, the Attorney General and any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying. The State shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate State official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified; and (iii) designation of said records as exempt under the Statute is reasonable. Nothing contained
herein shall diminish, or in any way adversely affect, the State's right to discovery in any pending or future litigation.

11. IDENTIFYING INFORMATION AND PRIVACY NOTIFICATION.
   (a) FEDERAL EMPLOYER IDENTIFICATION NUMBER and/or FEDERAL SOCIAL SECURITY NUMBER. All invoices or New York State standard vouchers submitted for payment for the sale of goods or services or the lease of real or personal property to a New York State agency must include the payee's identification number, i.e., the seller's or lessor's identification number. The number is either the payee's Federal employer identification number or Federal social security number, or both such numbers when the payee has both such numbers. Failure to include this number or numbers may delay payment. Where the payee does not have such number or numbers, the payee, on its invoice or New York State standard voucher, must give the reason or reasons why the payee does not have such number or numbers.

   (b) PRIVACY NOTIFICATION. (1) The authority to request the above personal information from a seller of goods or services or a lessor of real or personal property, and the authority to maintain such information, is found in Section 5 of the State Tax Law. Disclosure of this information by the seller or lessor to the State is mandatory. The principal purpose for which the information is collected is to enable the State to identify individuals, businesses and others who have been delinquent in filing tax returns or may have understated their tax liabilities and to generally identify persons affected by the taxes administered by the Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law. (2) The personal information is requested by the purchasing unit of the agency contracting to purchase the goods or services or lease the real or personal property covered by this contract or lease. The information is maintained in New York State's Central Accounting System by the Director of Accounting Operations, Office of the State Comptroller, 110 State Street, Albany, New York 12236.

12. EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITIES AND WOMEN. In accordance with Section 312 of the Executive Law, if this contract is: (i) a written agreement or purchase order instrument, providing for a total expenditure in excess of $25,000.00, whereby a contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the contracting agency; or (ii) a written agreement in excess of $100,000.00 whereby a contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; or (iii) a written agreement in excess of $100,000.00 whereby the owner of a State assisted housing project is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon for such project, then:
(a) The Contractor will not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status, and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. Affirmative action shall mean recruitment, employment, job assignment, promotion, upgradings, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation;

(b) At the request of the contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the contractor's obligations herein; and

(c) The Contractor shall state, in all solicitations or advertisements for employees, that, in the performance of the State contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

Contractor will include the provisions of "a", "b", and "c" above, in every subcontract over $25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section 312 does not apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State; or (iii) banking services, insurance policies or the sale of securities. The State shall consider compliance by a contractor or subcontractor with the requirements of any federal law concerning equal employment opportunity which effectuates the purpose of this section. The contracting agency shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such federal law and if such duplication or conflict exists, the contracting agency shall waive the applicability of Section 312 to the extent of such duplication or conflict. Contractor will comply with all duly promulgated and lawful rules and regulations of the Governor's Office of Minority and Women's Business Development pertaining hereto.

13. **CONFLICTING TERMS.** In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix A, the terms of this Appendix A shall control.

14. **GOVERNING LAW.** This contract shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.

15. **LATE PAYMENT.** Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Article 11-A of the State Finance Law to the extent required by law.
16. NO ARBITRATION. Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized), but must, instead, be heard in a court of competent jurisdiction of the State of New York.

17. SERVICE OF PROCESS. In addition to the methods of service allowed by the State Civil Practice Law & Rules ("CPLR"), Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Contractor's actual receipt of process or upon the State's receipt of the return thereof by the United States Postal Service as refused or undeliverable. Contractor must promptly notify the State, in writing, of each and every change of address to which service of process can be made. Service by the State to the last known address shall be sufficient. Contractor will have thirty (30) calendar days after service hereunder is complete in which to respond.

18. PROHIBITION ON PURCHASE OF TROPICAL HARDWOODS. The Contractor certifies and warrants that all wood products to be used under this contract award will be in accordance with, but not limited to, the specifications and provisions of Section 165 of the State Finance Law, (Use of Tropical Hardwoods) which prohibits purchase and use of tropical hardwoods, unless specifically exempted, by the State or any governmental agency or political subdivision or public benefit corporation. Qualification for an exemption under this law will be the responsibility of the contractor to establish to meet with the approval of the State.

In addition, when any portion of this contract involving the use of woods, whether supply or installation, is to be performed by any subcontractor, the prime Contractor will indicate and certify in the submitted bid proposal that the subcontractor has been informed and is in compliance with specifications and provisions regarding use of tropical hardwoods as detailed in §165 State Finance Law. Any such use must meet with the approval of the State; otherwise, the bid may not be considered responsive. Under bidder certifications, proof of qualification for exemption will be the responsibility of the Contractor to meet with the approval of the State.

19. MACBRIDE FAIR EMPLOYMENT PRINCIPLES. In accordance with the MacBride Fair Employment Principles (Chapter 807 of the Laws of 1992), the Contractor hereby stipulates that the Contractor either (a) has no business operations in Northern Ireland, or (b) shall take lawful steps in good faith to conduct any business operations in Northern Ireland in accordance with the MacBride Fair Employment Principles (as described in Section 165 of the New York State Finance Law), and shall permit independent monitoring of compliance with such principles.

20. OMNIBUS PROCUREMENT ACT OF 1992. It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority and women-owned business enterprises as bidders, subcontractors and suppliers on its procurement contracts.
Information on the availability of New York State subcontractors and suppliers is available from:

NYS Department of Economic Development
Division for Small Business
30 South Pearl St -- 7th Floor
Albany, New York 12245
Telephone: 518-292-5220
Fax: 518-292-5884
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A directory of certified minority and women-owned business enterprises is available from:

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30 South Pearl St -- 2nd Floor
Albany, New York 12245
Telephone: 518-292-5250
Fax: 518-292-5803
http://www.empire.state.ny.us

The Omnibus Procurement Act of 1992 requires that by signing this bid proposal or contract, as applicable, Contractors certify that whenever the total bid amount is greater than $1 million:

(a) The Contractor has made reasonable efforts to encourage the participation of New York State Business Enterprises as suppliers and subcontractors, including certified minority and women-owned business enterprises, on this project, and has retained the documentation of these efforts to be provided upon request to the State;

(b) The Contractor has complied with the Federal Equal Opportunity Act of 1972 (P.L. 92-261), as amended;

(c) The Contractor agrees to make reasonable efforts to provide notification to New York State residents of employment opportunities on this project through listing any such positions with the Job Service Division of the New York State Department of Labor, or providing such notification in such manner as is consistent with existing collective bargaining contracts or agreements. The Contractor agrees to document these efforts and to provide said documentation to the State upon request; and

(d) The Contractor acknowledges notice that the State may seek to obtain offset credits from foreign countries as a result of this contract and agrees to cooperate with the State in these efforts.

21. RECIPROCITY AND SANCTIONS PROVISIONS. Bidders are hereby notified that if their principal place of business is located in a country, nation, province, state or political subdivision that penalizes New York State vendors, and if the goods or services
they offer will be substantially produced or performed outside New York State, the Omnibus Procurement Act 1994 and 2000 amendments (Chapter 684 and Chapter 383, respectively) require that they be denied contracts which they would otherwise obtain. NOTE: As of May 15, 2002, the list of discriminatory jurisdictions subject to this provision includes the states of South Carolina, Alaska, West Virginia, Wyoming, Louisiana and Hawaii. Contact NYS Department of Economic Development for a current list of jurisdictions subject to this provision.

22. COMPLIANCE WITH NEW YORK STATE INFORMATION SECURITY BREACH AND NOTIFICATION ACT. Contractor shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law Section 899-aa; State Technology Law Section 208).

23. COMPLIANCE WITH CONSULTANT DISCLOSURE LAW. If this is a contract for consulting services, defined for purposes of this requirement to include analysis, evaluation, research, training, data processing, computer programming, engineering, environmental, health, and mental health services, accounting, auditing, paralegal, legal or similar services, then, in accordance with Section 163 (4-g) of the State Finance Law (as amended by Chapter 10 of the Laws of 2006), the Contractor shall timely, accurately and properly comply with the requirement to submit an annual employment report for the contract to the agency that awarded the contract, the Department of Civil Service and the State Comptroller.

24. PROCUREMENT LOBBYING. To the extent this agreement is a "procurement contract" as defined by State Finance Law Sections 139-j and 139-k, by signing this agreement the contractor certifies and affirms that all disclosures made in accordance with State Finance Law Sections 139-j and 139-k are complete, true and accurate. In the event such certification is found to be intentionally false or intentionally incomplete, the State may terminate the agreement by providing written notification to the Contractor in accordance with the terms of the agreement.

25. CERTIFICATION OF REGISTRATION TO COLLECT SALES AND COMPENSATING USE TAX BY CERTAIN STATE CONTRACTORS, AFFILIATES AND SUBCONTRACTORS. To the extent this agreement is a contract as defined by Tax Law Section 5-a, if the contractor fails to make the certification required by Tax Law Section 5-a or if during the term of the contract, the Department of Taxation and Finance or the covered agency, as defined by Tax Law 5-a, discovers that the certification, made under penalty of perjury, is false, then such failure to file or false certification shall be a material breach of this contract and this contract may be terminated, by providing written notification to the Contractor in accordance with the terms of the agreement, if the covered agency determines that such action is in the best interest of the State.
During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:

(1) **Compliance with Regulations:** The contractor shall comply with the Regulation relative to nondiscrimination in Federally-assisted programs of the Department of Transportation of the United States, Title 49, Code of Federal Regulations, Part 21, and the Federal Highway Administration (hereinafter “FHWA”) Title 23, Code of Federal Regulations, Part 200 as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

(2) **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin, sex, age, and disability/handicap in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR, section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

(3) **Solicitations for Subcontractors, Including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin, sex, age, and disability/handicap.

(4) **Information and Reports:** The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by NYSDOT or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to NYSDOT’s Office of Civil Rights or FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.
(5) **Sanctions for Noncompliance:** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, NYSDOT shall impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
   (a.) withholding of payments to the contractor under the contract until the contractor complies, and/or
   (b.) cancellation, termination or suspension of the contract, in whole or in part.

(6) **Incorporation of Provisions:** The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The contractor shall take such action with respect to any subcontract or procurement as NYSDOT or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request NYSDOT to enter into such litigation to protect the interests of NYSDOT, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.
APPENDIX B

REQUIREMENTS FOR FEDERALLY AIDED TRANSPORTATION PROJECTS

There is a substantial body of requirements attached to the use of Federal highway or transportation aid. These requirements create or overlay processes, procedures, documentation requirements, authorizations, approvals and certifications that may be substantially greater or different from those that are not funded with Federal-aid and proceed under applicable State and local laws, customs and practices. Under Title 23 of the United States Code, NYSDOT is responsible for the administration of transportation projects in New York State to which NYSDOT provides Federal highway or transportation-related aid. Through this Agreement, which provides or is associated with such funding, NYSDOT delegates various elements of project and funding administration as described elsewhere in this Agreement. In undertaking a Federally aided project, the Municipality/Sponsor, Authority or Project Manager designated under this Agreement with Federal-aid funding or project administration undertakes to proceed in compliance with all the applicable Federal-aid requirements.

NYSDOT has, in cooperation with FHWA, assembled the body of Federal-aid requirements, together with information, NYSDOT procedures and practices in its “Procedures for Locally Administered Federal-Aid Projects” (available through NYSDOT's web site at: https://www.nysdot.gov/divisions/operating/opdm/local-programs-bureau/locally-administered-federal-aid-projects). In addition, the Municipality/Sponsor, Authority or Project Manager designated under this Agreement with Federal-aid funding or project administration that enters Federally aided project construction contracts is required to physically incorporate into all its Federally aided construction contracts and subcontracts there under the provisions that are contained in Form FHWA-1273 (available from NYSDOT or electronically at: http://www.fhwa.dot.gov/programadmin/contracts/1273.htm).

In addition to the referenced requirements, the attention of Municipality/Sponsor hereunder is directed to the following requirements and information:

NON DISCRIMINATION/EEO/DBE REQUIREMENTS

The Municipality/Sponsor and its contractors agree to comply with Executive Order 11246, entitled "Equal Employment Opportunity" and Department of Transportation regulations (49CFR Parts 21, 23, 25, 26 and 27) and the following:

1. **NON DISCRIMINATION.** No person shall, on the ground of race, color, creed, national origin, sex, age or handicap, be excluded from participation in, or denied the benefits of, or be subject to, discrimination under the Project funded through this Agreement.

2. **EQUAL EMPLOYMENT OPPORTUNITY.** In connection with the execution of this Agreement, the Municipality/Sponsor's contractors or subcontractors shall not discriminate against any employee or applicant for employment because of
race, religion, age, color, sex or national origin. Such contractors shall take affirmative actions to ensure that applicants are employed, and that employees are treated during their employment, without regard to their race, religion, color, sex, national origin or age. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

3. **DISADVANTAGED BUSINESS ENTERPRISES.** In connection with the performance of this Agreement, the Municipality/Sponsor shall cause its contractors to cooperate with the State in meeting its commitments and goals with regard to the utilization of Disadvantaged Business Enterprises (DBEs) and will use its best efforts to ensure that DBEs will have opportunity to compete for subcontract work under this Agreement. Also, in this connection the Municipality or Sponsor shall cause its contractors to undertake such actions as may be necessary to comply with 49CFR Part 26.

**FEDERAL SINGLE AUDIT REQUIREMENTS**

Non-Federal entities that expend $500,000 or more in a year in Federal awards from all sources are required to comply with the Federal Single Audit Act provisions contained in U.S. Office of Management and Budget (OMB) Circular No. A-133, “Audits of States, Local Governments, and Non-Profit Organizations”. Non-Federal entities that expend Federal awards from a single source may provide a program specific audit, as defined in the Circular. Non-Federal entities that expend less than $500,000 in a year in Federal awards from all sources are exempt from Federal audit requirements for that year, except as noted in Sec. 215 (a) of OMB Circular A-133 Subpart B--Audits, records must be available for review or audit by appropriate officials of the cognizant Federal agency\(^1\) the New York State Department of Transportation, the New York State Comptroller's Office and the U.S. Governmental Accountability Office (GAO).

Non-Federal entities are required to submit a copy of all audits, as described above, within 30 days of issuance of audit report, but no later than 9 months after the end of the entity’s fiscal year, to the New York State Department of Transportation, Contract Audit Bureau, 50 Wolf Road, Albany, NY 12232. Unless a time extension has been granted by the cognizant Federal Agency and has been filed with the New York State Department of Transportation’s Contract Audit Bureau, failure to comply with the requirements of OMB Circular A-133 may result in suspension or termination of federal award payments.

**THE CATALOG OF FEDERAL DOMESTIC ASSISTANCE**

The Catalog of Federal Domestic Assistance (CFDA), is an on-line database of all Federally-aided programs available to State, and local governments (including the District of Columbia); federally -recognized Indian tribal governments; Territories (and possessions) of the United States; domestic public, quasi-public, and private profit and

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\(^{1}\) The designated cognizant agency for audit shall be the Federal awarding agency that provides the predominant amount of direct funding to a recipient unless OMB changes it.
nonprofit organizations and institutions; specialized groups; and individuals. The database is accessible at  [http://www.cfda.gov/](http://www.cfda.gov/).

**THE CFDA IDENTIFICATION NUMBER**

OMB Circular A-133 requires all Federal-aid recipients to identify and account for awards and expenditures by CFDA Number. The Municipality/Sponsor is required to identify in its accounts all Federal awards received and expended, and the Federal programs under which they were received. Federal program and award identification shall include, as applicable, the CFDA title and number, award number and year, name of the Federal agency, and name of the pass-through entity.

The most commonly used CFDA number for the Federal-aid Highway Planning and Construction program is 20.205. Additional CFDA numbers for other transportation and non-transportation related programs are:

- **20.215**, Highway Training and Education
- **20.219**, Recreational Trails Program
- **20.XXX**, Highway Planning and Construction - Highways for LIFE;
- **20.XXX**, Surface Transportation Research and Development;
- **20.500**, Federal Transit-Capital Investment Grants
- **20.505**, Federal Transit-Metropolitan Planning Grants
- **20.507**, Federal Transit-Formula Grants
- **20.509**, Formula Grants for Other Than Urbanized Areas
- **20.600**, State and Community Highway Safety
- **23.003**, Appalachian Development Highway System
- **23.008**, Appalachian Local Access Roads

**PROMPT PAYMENT MECHANISMS**

(a) You must establish, as part of your DBE program, a contract clause to require prime contractors to pay subcontractors for satisfactory performance of their contracts no later than 7 calendar days from receipt of each payment you make to the prime contractor.

(b) You must ensure prompt and full payment of retainage from the prime contractor to the subcontractor within 7 calendar days after the subcontractor's work is satisfactorily completed. You must use one of the following methods to comply with this requirement:

1. You may decline to hold retainage from prime contractors and prohibit prime contractors from holding retainage from subcontractors.

2. You may decline to hold retainage from prime contractors and require a contract clause obligating prime contractors to make prompt and full payment of any retainage kept by prime contractor to the subcontractor within 7 calendar days after the subcontractor's work is satisfactorily completed.

3. You may hold retainage from prime contractors and provide for prompt and regular incremental acceptances of portions of the prime contract, pay retainage to prime contractors based on these acceptances, and require a contract clause obligating the prime contractor to pay all retainage owed to the subcontractor for satisfactory
completion of the accepted work within 7 calendar days after your payment to the 
prime contractor.

(c) For purposes of this section, a subcontractor's work is satisfactorily completed 
when all the tasks called for in the subcontract have been accomplished and documented 
as required by the recipient. When a recipient has made an incremental acceptance of a 
portion of a prime contract, the work of a subcontractor covered by that acceptance is 
deemed to be satisfactorily completed.

(d) Your DBE program must provide appropriate means to enforce the requirements of 
this section. These means may include appropriate penalties for failure to comply, the 
terms and conditions of which you set. Your program may also provide that any delay or 
postponement of payment among the parties may take place only for good cause, with 
your prior written approval.

(e) You may also establish, as part of your DBE program, any of the following 
additional mechanisms to ensure prompt payment:

(1) A contract clause that requires prime contractors to include in their subcontracts 
language providing that prime contractors and subcontractors will use appropriate 
alternative dispute resolution mechanisms to resolve payment disputes. You may 
specify the nature of such mechanisms.

(2) A contract clause providing that the prime contractor will not be reimbursed for 
work performed by subcontractors unless and until the prime contractor ensures that 
the subcontractors are promptly paid for the work they have performed.

(3) Other mechanisms, consistent with this part and applicable state and local law, 
to ensure that DBEs and other contractors are fully and promptly paid.
Specific Equal Employment Opportunity Responsibilities

1. GENERAL

   (a) Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity, as required by Federal Executive Order 11246, Federal Executive Order 11375, and NYS Executive Order 45, are set forth in required Contract Provisions (Form PR-1273 or 1316, as appropriate) and those Special Provisions which are imposed pursuant to Section 140 of Title 23, U.S.C., as established by Section 22 of the Federal-Aid Highway Act of 1968. Non-discrimination and affirmative action are also required by the State Labor Law, Section 220-e, as amended, and the Regulations of the NYS Department of Transportation relative to federally-assisted programs (Title 49, Code of Federal Regulations, Part 21 and Section 21.5), including employment practices when the agreement covers a program set forth in Appendix B of the Regulations. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for projects activities under this contract.

   (b) The CONSULTANT will work with the STATE and the Federal Government in carrying out equal employment opportunity obligations and in their review of their activities under this contract.

   (c) The CONSULTANT and all their sub-consultants and/or sub-contractors holding sub-contracts of $10,000 or more will comply with the following minimum specific requirements of equal employment opportunity: (The equal employment opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection 1 of the Federal-Aid Highway Program Manual, are applicable to contractors and sub-contractors.) The CONSULTANT will include these requirements in every sub-contract with such modification of language as is necessary to make them binding on the sub-contractor.

2. EQUAL EMPLOYMENT OPPORTUNITY POLICY

   The CONSULTANT, their sub-consultant and/or sub-contractor or any person acting on behalf of the CONSULTANT or sub-consultant and/or sub-contractor will accept as their operating policy the following statement which is designed to further the provision of equal employment opportunity to all persons without
regard to their race, color, religion, sex, national origin, age, disability or marital status, and to promote the full realization of equal employment opportunity through a positive continuing program.

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, or during consideration for employment, without regard to their race, religion, sex, or color, national origin, age, disability or marital status. Such non-discriminatory action shall include, but not be limited to: employment, job assignment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

3. EQUAL EMPLOYMENT OPPORTUNITY OFFICER

The CONSULTANT will designate and make known to the New York State Department of Transportation contracting officers an Equal Employment Opportunity Officer and a Minority Business Enterprise officer (hereinafter referred to as the EEO Officer and M.B.E. Officer) who will have the responsibility for and must be capable of effectively administering and promoting an active equal employment opportunity program and who must be assigned adequate authority and responsibility to do so.

4. DISSEMINATION OF POLICY

(a) All members of the CONSULTANT's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the CONSULTANT's equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. To insure that the above agreement will be met, the following actions will be taken as a minimum:

(1) Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less than once every six months, at which time the CONSULTANT's equal employment opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

(2) All new supervisory (first level of supervision and above) or personnel office employees will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official covering all major aspects of the
CONSULTANT's equal employment opportunity obligations within thirty days following their reporting for duty with the CONSULTANT.

(3) All personnel who are engaged in direct recruitment for the project will be instructed in the CONSULTANT's procedures for locating and hiring minority group employees by the EEO Officer or appropriate company official. (Minority group referred to herein shall mean Black, Hispanic, Asian/Pacific Islander, American Indian/Alaskan.)

(b) In order to make the CONSULTANT's equal employment opportunity policy known to all employees, prospective employees and potential sources or employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the CONSULTANT will take the following actions:

(1) Notices and posters setting forth the CONSULTANT'S equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

(2) The CONSULTANT's equal employment opportunity policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

(c) In all solicitations either by competitive bidding or negotiation made by the CONSULTANT for work to be performed under a sub-contract, including procurements of materials or equipment, each potential sub-contractor or supplier shall be notified by the CONSULTANT of the CONSULTANT's obligations under this agreement and the Regulations relative to non-discrimination.

5. RECRUITMENT

(a) When advertising for employees, the CONSULTANT will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived. These advertisements shall state that all qualified applicants will be afforded equal employment opportunity without regard to race, religion, sex, color, national origin, age, disability or marital status.

(b) The CONSULTANT will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants, including, but
not limited to, State employment agencies, schools, colleges and minority group organizations. To meet this requirement, the CONSULTANT's EEO Officer will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the CONSULTANT for employment consideration.

In the event the CONSULTANT has a valid bargaining agreement providing for exclusive hiring hall referrals, the CONSULTANT is expected to observe the provisions of that agreement to the extent that the system permits the CONSULTANT's compliance with equal employment opportunity contract provisions. (The U.S. Department of Labor has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the CONSULTANT to do the same, such implementation violates Executive Order 11246.

(c) The CONSULTANT will encourage present employees to refer minority group applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority group applicants will be discussed with employees.

6. PERSONNEL ACTIONS

Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age, disability or marital status. The following procedures shall be followed:

(a) The CONSULTANT will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

(b) The CONSULTANT will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory practices.

(c) The CONSULTANT will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the CONSULTANT will promptly take corrective action. If the review indicated that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

(d) The CONSULTANT will promptly investigate all complaints of alleged discrimination made in connection with obligations under this agreement, will
attempt to resolve such complaints, and will take appropriate corrective action within 15 days. All subsequent corrective actions or decisions will also be documented and forwarded to the NYS Department of Transportation Compliance Officer within 7 days after such action has taken place. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the CONSULTANT will inform every complainant of the results and all of their avenues of appeal should the complaint be denied.

7. TRAINING AND PROMOTION

(a) The CONSULTANT will assist in locating, qualifying and increasing the skills of minority group and women employees, and applicants for employment.

(b) Consistent with the CONSULTANT's work force requirements and as permissible under the Federal and State regulations, the CONSULTANT shall make full use of training programs; i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance. In the event the Training Special Provision is provided under this contract, this subparagraph is superseded thereby.

(c) The CONSULTANT will advise employees and applicants for employment of available training programs and entrance requirements for each.

(d) The CONSULTANT will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

8. UNIONS

If the CONSULTANT relies in whole or in part upon unions as a source of employees, the CONSULTANT will use their best effort to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and, to effect referrals by such unions of minority and female employees. The CONSULTANT will send to each labor union or representative of workers with which he has or is bound by a collective bargaining or other agreement or understanding, a notice to be provided by the State Division of Human Rights, advising such labor union or representative of the CONSULTANT's compliance and with the non-discrimination clauses. Actions by the CONSULTANT, either directly or through a CONSULTANT's association acting as agent, will include the procedures set forth below:
(a) The CONSULTANT will use their best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

(b) The CONSULTANT will use their best efforts to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age, disability or marital status.

(c) The CONSULTANT is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union, and such labor union refuses to furnish such information to the CONSULTANT. The CONSULTANT shall so certify to the STATE and shall set forth what efforts have been made to obtain such information. Further, if the CONSULTANT was directed to do so by the contracting agency as part of the bid or negotiations of this contract, the CONSULTANT shall request such labor union or representative to furnish him with a written statement that such labor union or representative accepts the non-discrimination clauses and will affirmatively cooperate, within the limits of its legal and contractual authority, in the implementation of the policy and provisions of these non-discrimination clauses or that it consents and agrees that recruitment, employment and the terms and conditions of employment under this contract shall be in accordance with the purposes and provisions of these non-discrimination clauses. If such labor union or representative fails or refuses to comply with such a request that it furnish such a statement, the CONSULTANT shall promptly notify the State Division of Human Rights and set forth what efforts have been made to obtain such information.

(d) In the event the union is unable to provide the CONSULTANT with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the CONSULTANT will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age, disability or marital status, making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The U.S. Department of Labor has held that it shall be no excuse that the union with which the CONSULTANT has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the CONSULTANT from meeting the obligations pursuant to Executive Order 11246, as amended, and these special
provisions, such CONSULTANT shall immediately notify the New York State Department of Transportation.

9. AFFIRMATIVE ACTION IN SUBCONTRACTING

(a) The CONSULTANT will not discriminate on the grounds of race, religion, sex, color, national origin, age, disability or marital status in the selection of subcontractors, including procurements and leases of equipment.

(b) If the CONSULTANT determines to use a subcontractor as part of this agreement, affirmative action shall be taken to increase the participation of minority business firms in that work. As part of that affirmative action, the CONSULTANT will identify and contact minority business firms and solicit proposals for the work to be subcontracted. The STATE will provide a list of names of minority business firms to the CONSULTANT. Another source that should be contacted for a list of minority business firms is the Governor's Office of Minority & Women's Business Development (GOMWBD).

(c) The CONSULTANT will document the affirmative action steps taken to comply with paragraph 9b. Such documentation will be provided at the time or submittal of a formal proposal to the State's Contracts Bureau.

(d) By execution of this agreement, the CONSULTANT certifies that the affirmative action steps in 9a, 9b & 9c above were taken when soliciting proposals for the work in this agreement indicated to be subcontracted and that these steps will be taken should any work be subcontracted in the future.

(e) The CONSULTANT will insure binding subcontractor and vendor compliance with their EEO obligations. The CONSULTANT will take such actions in enforcing such provisions of such subcontract or purchase order as the contracting agency may direct, including sanctions or remedies for non-compliance. If the CONSULTANT becomes involved in or is threatened with litigation with a subcontractor or a vendor as a result of such direction by the contracting agency, the CONSULTANT shall promptly so notify the Attorney General, requesting him to intervene and protect the interest of the State of New York.

10. RECORDS AND REPORTS

(a) The CONSULTANT will keep such records as are necessary to determine compliance with the CONSULTANT's equal employment opportunity obligations. The records kept by the CONSULTANT will be designed to indicate:
(1) The number of minority and non-minority group members and women employed in each work classification on the project, where required by the NYS D.O.T Compliance Officer.

(2) The progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to CONSULTANTS who rely in whole or in part on unions as a source of their work force).

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees.

(4) The progress and efforts being made in securing the services of minority group subcontractors or subcontractors with meaningful minority and female representation among their employees.

(5) Compliance with all other requirements in these provisions such as meetings, instructions, employment efforts, etc.

(b) The CONSULTANT will comply with Sections 291-299 of the Executive Law and Civil Rights Law and will provide all information and reports required by the Regulations, or orders and instructions issued pursuant thereto, and will permit access to its books, records, accounts other sources of information, and its facilities as may be determined by State or Federal officials to be pertinent to ascertain compliance with such Regulations, orders and instructions. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the State and the Federal Highway Administration.

(c) The CONSULTANT will submit to the New York State Department of Transportation, a monthly report Form (AAP-46) for the first three months after beginning work, thereafter upon request, indicating the number of minority, women and non-minority group employees currently engaged in each work classification required by the contract work.

(d) Failure to comply with these Special EEO Provisions may be considered unsatisfactory performance and may subject the agreement to termination under the termination article of this agreement. Non-compliance may result in the CONSULTANT's being declared ineligible for future agreements made by or on behalf of the STATE or a public authority or agency of the STATE, until he satisfies the State Commissioner of Human Rights that he has established and is carrying out a program in conformity with the provisions of these non-
discrimination clauses. Such finding shall be made by the State Commissioner of Human Rights after conciliation efforts by the State Division of Human Rights have failed to achieve compliance with these non-discrimination clauses and after a verified complaint has been filed with the State Division of Human Rights, notice thereof has been given to the CONSULTANT and an opportunity has been afforded them to be heard publicly before the State Commissioner of Human Rights or official designee. Such sanctions may be imposed and remedies invoked independently of or in addition to sanctions and remedies otherwise provided for by law. These may include, but are not limited to:

(1) withholding of payments to the CONSULTANT under the agreement until the CONSULTANT complies, and/or

(2) cancellation, termination or suspensions of the agreement in whole or in part.

11. TRAINING SPECIAL PROVISIONS

This Training Special Provision supersedes paragraph 7.b above and is in implementation of 23 CFR Subpart A, Section 230.111 & Executive Order 11246. As part of the CONSULTANT's equal employment opportunity affirmative action program, training shall be provided as follows:

(a) The CONSULTANT shall provide on-the-job training aimed at developing full competence in the job classification involved.

(b) The number of months of training to be provided under these special provisions is previously stated.

(c) In the event that the CONSULTANT subcontracts a portion of the contract work, it shall be determined how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the CONSULTANT shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The CONSULTANT shall also insure that this training special provision is made applicable to such subcontract.

(d) The number of trainees shall be distributed among the work classifications on the basis of the CONSULTANT's needs. Along with their proposal, the CONSULTANT shall submit to the New York State Department of Transportation for approval the proposed number of trainees to be trained in each selected classification, their estimated salaries and a training schedule. The salaries to be paid trainees shall not be less than 75 percent of the average
hourly rate approved in the agreement for the classification to be trained. During the period from the beginning of the project to its completion, the trainee shall receive reasonable salary increases commensurate to the abilities and effort exerted by the trainee. The training schedule required should indicate the start of work and appropriate incremental salary steps in accord with the above.

Training and upgrading the proficiency of minorities and women is a primary objective of this Training Special Provision. Accordingly, the CONSULTANT shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. The CONSULTANT will be responsible for demonstrating the steps that have been taken in pursuance thereof, prior to a determination as to whether the CONSULTANT is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training program or in a classification in which they have been employed. The CONSULTANT should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the CONSULTANT's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training schedule developed by the CONSULTANT and approved by the State and Federal Highway Administration. The State and the Federal Highway Administration shall approve a program if it reasonably calculated to meet the equal employment opportunity obligations of the CONSULTANT and to assist in qualifying the average trainee toward proficiency in the classification concerned by the end of the training period. Approval of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. Training is permissible in lower level management positions. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

The CONSULTANT will be reimbursed for the cost of any and all training under the payment terms of this agreement. This can include offsite training cost as discussed above. All offsite training must be defined in the training schedule.
All costs claimed or calculated for training must be directly related to the work defined in the scope of this agreement and/or added by supplemental agreement.

The CONSULTANT must demonstrate their best efforts and evidence good faith in hiring trainees for positions in the classification in which they have completed training.

The CONSULTANT shall furnish the trainee a copy of the program they will follow in the training. The CONSULTANT shall provide each trainee with a certification showing the type and length of training satisfactorily completed.

The CONSULTANT will provide for the maintenance of records and furnish periodic reports documenting their performance under this Training Special Provision.
**FORM A**

State Consultant Services – Contractor’s Planned Employment
From Contract Start Date Through The End Of The Contract Term

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Preparer's Signature:  
Date Prepared:   / /  

(Use additional pages, if necessary)
State Consultant Services
Contractor’s Annual Employment Report
Report Period: April 1, to March 31,

Contracting State Agency Name: NYSDOT  Agency Code: 17000
Contract Number: C000775
Contract Term: / /  
Contractor Name: 
Contractor Address: 
Description of Services Being Provided:

Scope of Contract (Choose one that best fits):
Analysis ☐  Evaluation ☐  Research ☐  Training ☐  
Data Processing ☐  Computer Programming ☐  Other IT consulting ☐  
Engineering ☐  Architect Services ☐  Surveying ☐  Environmental Services ☐  
Health Services ☐  Mental Health Services ☐  
Accounting ☐  Auditing ☐  Paralegal ☐  Legal ☐  Other Consulting ☒

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Grand Total

Name of person who prepared this report:
Preparer's Signature: ________________________________
Title: ________________________________ Phone #: ________________________________
Date Prepared: / / 

Use additional pages if necessary)
Attachment #5

Part II  Cost Proposal

Instructions

Part II of your proposal consists of a Cost Proposal which sets forth the lump sum total cost for performing all of the work in your proposed technical scope of services. Your Cost Proposal shall contain the following elements:

1. **Proposed Staffing/Rate Schedule.** Present a schedule which will include a descriptive job title for each employee assigned to this project, his/her current and projected hourly salary rate (regular time), the overhead rate and the consultant’s fee, for each year of the contract (for the base term of the contract). If additional titles are used but are not assigned, they must be listed. Offerors must present one Rate Schedule per firm in its team (prime consultant plus any sub-consultants that are being proposed), making multiple copies of the exhibit, as needed. Hourly rates for all sub-consultants must also be included.

2. **A Staffing Table by Task Without Rates/Costs.** Present a schedule which shall list all descriptive job titles for the staff to be assigned to this project and to which tasks they are assigned to, depicting the proposed number of hours to accomplish each task. No rate or cost information is to be presented in this schedule. The schedule shall be prepared to distinguish anticipated assignment by project section/task. A sample without rate schedule is included in the RFP for illustration purposes. THIS SCHEDULE MUST BE INCLUDED IN YOUR PART I TECHNICAL SUBMISSION – DO NOT INCLUDE THIS SCHEDULE IN YOUR PART II COST SUBMISSION.

3. **A Staffing Table by Task With Rates/Costs.** Present a schedule which shall list all descriptive job titles for the staff to be assigned to this project and to which tasks they are assigned to, depicting the proposed number of hours, their corresponding fully-loaded rates, and the resulting costs to accomplish each task. The schedule shall be prepared to distinguish anticipated assignment by project section/task. A sample with rate schedule is included in the RFP for illustration purposes.

4. **A Non-Salary Costs.** Present a direct non-salary cost schedule shall list by task number the items of direct non-salary costs (out-of-pocket expenses) expected to be incurred in the performance of the project. A sample non-salary cost schedule is included in the RFP for illustration purposes. Travel, meals and lodging reimbursements shall be limited to the prevailing maximum rates established by the NY State Comptroller. The latest state and nationwide rates are available at the following Web site: http://www.gsa.gov/.
Subconsultant costs (if any) should be shown in the schedule. On separate sheets, explain each item with all factors leading to the derivations of the costs attributable to subconsultants.

3. **Milestone Payment Schedule (Summary).** Present a final milestone payment schedule, which will summarize the direct labor; direct non-salary applied overhead costs, other direct non-personal costs and project-related fees for the Project in accordance with the technical schedule of service delivery. This RFP does not present a sample milestone payment schedule. Based on the lump sum prices and milestone payment schedule offered, present a proposed percentage of the lump sum for each key deliverable for which payment would be requested. It is suggested that, were commensurate with the proposed scope of services, that the offered milestone payment schedule be sub-divided to consider a firm’s cash flow requirements.
### Attachment 5

**Proposed Staffing/Rate Schedule**  
Contract #C000775

**Consultant Name:** __________________________

<table>
<thead>
<tr>
<th>TITLE</th>
<th>NAME</th>
<th>% of Labor</th>
<th>(a) YEAR ONE DIRECT LABOR</th>
<th>(b) OVER HEAD (%)</th>
<th>(c) FEE (%)</th>
<th>(a)+(b)+(c) YEAR ONE BILLING RATE</th>
<th>YEAR TWO BILLING RATE</th>
<th>YEAR THREE BILLING RATE</th>
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</thead>
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<tr>
<td>Project Manager</td>
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</tr>
</tbody>
</table>
## Staffing Table by Task Without Rates/Costs Schedule

**Attachment # 5**

**C000775**

**Consultant Name:** ABC Consultants, Inc.

<table>
<thead>
<tr>
<th>TASK ASSIGNMENT JOB TITLE</th>
<th>TASK 1.0</th>
<th>TASK 2.0</th>
<th>TASK 3.0</th>
<th>TASK 4.0</th>
<th>TASK 5.0</th>
<th>TASK 6.0</th>
<th>TASK 7.0</th>
<th>TOTAL HOURS</th>
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<tr>
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<td>18</td>
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<tr>
<td>Consultant Task Manager</td>
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<td></td>
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<tr>
<td>Transportation Analyst III</td>
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<tr>
<td>Technical Analyst I</td>
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</tr>
</tbody>
</table>

Date: ______________

Contract C000775
## Attachment #5

**Staffing Table by Task With Rates/Costs Schedule**

C000775

### TASK ASSIGNMENT STAFFING  
**TABLE 5-A-2 (With Rates)  
(Sample)**

**Consultant Name:** ABC Consultants, Inc.

<table>
<thead>
<tr>
<th>TASK ASSIGNMENT JOB TITLE</th>
<th>TASK 1.0</th>
<th>TASK 2.0</th>
<th>TASK 3.0</th>
<th>TASK 4.0</th>
<th>TASK 5.0</th>
<th>TASK 6.0</th>
<th>TASK 7.0</th>
<th>TOTAL HOURS</th>
<th>HOURLY RATE</th>
<th>DIRECT TECHNICAL LABOR</th>
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<td>Consultant Project Director</td>
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Date: ______________
Contract C000775
ATTACHMENT #5  
C000775  
Non-Salary Costs Schedule  

SUMMARY ESTIMATED BUDGET

John Doe Consultants  
Study for Study's Sake  

Item IA. Direct Technical Salaries (estimated) $52,467  
Item IB. Direct Technical Salaries Premium Portion $0  
Item II. Direct Non-Salary Cost (estimated) $3,500  
Item III. Overhead (estimated @ 150%) $78,701  
Item IV Fixed Fee (negotiated, assume 10%) $13,374  
(Sub-Consultant cost) $51,932  
Total Estimated Cost $199,974  

Estimated Budget is provided for information purposes only, for future contracting purposes on Lump Sum Contracts.
Consultant’s Responsibility When Proposing Former NYSDOT Employees

It is the consultant’s responsibility to ensure they propose staff that is eligible to work on the proposed project. It is an individual’s responsibility to comply with the Public Officer’s Law.

The following procedure applies if either of the following criteria is met.

- It is two years or less between the date that the individual is proposed and the individual’s date of separation from the State.

- The individual proposed has worked on the project while employed by NYSDOT regardless of how long ago they left NYSDOT.

Procedure

- Before the consultant proposes an individual, the individual must obtain an opinion from the New York State Ethics Commission that approves their participation in the project as they are proposed.

- A copy of this opinion must be on file in the consultant’s office and available for review by NYSDOT if requested.

- Failure to obtain New York State Ethics approval for an individual’s participation in a project may jeopardize the firm’s designation for that project.
Attachment #7

DBE Participation Information

Please complete the following table for the prime firm and all subconsultants (consultant team composition): please identify each firm’s legal name, checking if they are a certified DBE by utilizing the NYSUCP DBE Directory, and indicating each firm’s percentage of the total salary for the contract. Please keep in mind that only NYSUCP certified DBEs are eligible to count toward attainment of this federally-funded procurement with a DBE participation goal.

Further, participation by a certified DBE prime consultant DOES NOT count toward DBE participation goal attainment.

If the combined percentage of total salary for all proposed, certified DBEs is less than the DBE Participation Goal set for this contract, then the proposing prime firm is required to fill out and submit the DBE Participation Solicitation Log (Attachment 8), and the DBE Goal Attainment Explanation Letter. Further, prime consultants certified as a DBE are still required to either meet the Department’s DBE subconsultant participation goal via their meaningful participation, or are required to fill out and submit the DBE Subconsultant Participation Solicitation Log (Attachment #8) unless their outreach efforts results in proposed DBE subconsultant.

Please provide a copy of the firm’s DBE letter from a NYSUCP certifying partner with your Part II proposal.

<table>
<thead>
<tr>
<th>Firm Legal Name</th>
<th>NYSUCP Certified DBE</th>
<th>% of Total Salary</th>
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<td>None</td>
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<tr>
<td>A. Prime Consultant</td>
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<tr>
<td>B. Sub-Consultants</td>
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<tr>
<td>Total</td>
<td></td>
<td>100%</td>
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Attachment #8

DBE Subconsultant Participation Solicitation Log
(Good Faith Effort Documentation)

<table>
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<tr>
<th>CONTRACT NO. <strong>C000775</strong>________</th>
<th>DBE PARTICIPATION GOAL</th>
<th>PAGE NUMBER ___ OF ___</th>
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<tbody>
<tr>
<td></td>
<td>DBE % <strong>6</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>PRIME FIRM NAME/ADDRESS/ZIP CODE</th>
<th>CONTACT PERSON</th>
<th>TELEPHONE NUMBER (INCLUDE AREA CODE)</th>
<th>E-MAIL</th>
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</thead>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>SOLICITED COMPANY NAME AND CONTACT PERSON</th>
<th>TELEPHONE (WITH AREA CODE)</th>
<th>FEDERAL EMPLOYER ID #</th>
<th>WORK TYPES BEING SOLICITED</th>
<th>TYPES AND DATES OF CONTACTS</th>
<th>CONTACT RESULT(S)</th>
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</tbody>
</table>

Page 115
INSTRUCTIONS FOR COMPLETING Attachment #8
DBE Subconsultant Participation Solicitation Log
(Good Faith Effort Documentation)

To be deemed responsive to this solicitation, Consultants whose proposed DBE participation does not meet the established Disadvantaged Business Enterprises (DBE) participation goal must document and report their efforts to solicit participation by certified DBE in this Non-Architecture/Non-Engineering contract. The DBE Participation Solicitation Log is used for this purpose.

PLEASE NOTE: Only participation by NYSUCP certified DBE prime consultants as well as NYSUCP certified DBE subconsultants may count toward goal attainment.

Guidance concerning Good Faith Efforts in meeting DBE participation goals in Federally-funded contracts is located at the end of this section.

The log is to be filled out and submitted with the proposing firm’s Cost and Contract Proposal. In order for a proposal to be determined as responsive when the DBE participation goal is not attained at all or only partially attained, then the proposer must complete all sections of this form and submit a DBE Participation Solicitation Log, along with a DBE Goal Attainment Explanation Letter, documenting the firm’s Good Faith Effort.

*** DBE CERTIFICATION IS A FEDERAL PROGRAM CERTIFICATION. ***
IT IS SEPARATE AND DISTINCT FROM THE NEW YORK STATE MBE & WBE PROGRAM.
PLEAS DO NOT CONFUSE THE TWO. FIRMS WITH QUESTIONS REGARDING THESE PROGRAMS ARE ENCOURAGED TO SUBMIT WRITTEN QUESTIONS

CONTRACT NO: Enter NY State DOT contract number (Example: C012345).

DBE PARTICIPATION GOAL: Enter applicable DBE participation goal percentage as stated in the proposal.

PAGE NO.: Enter 1 of 1; or 1 of 2 and 2 of 2; etc. Use additional forms as needed.

PRIME NAME/ADDRESS/ZIP CODE: Enter name of the Prime Consultant, its address and zip code.

CONTACT PERSON: Enter the name of the person your firm has designated as the authorized contact person for this solicitation.

CONTACT PERSON TELEPHONE AND E-MAIL: Enter area code, phone number and e-mail address for the person your firm has designated as the authorized contact person for this solicitation.
DBE CONSULTANTS SOLICITED:

SOLICITED COMPANY NAME AND CONTACT PERSON: Enter name of solicited firm and name of the individual associated with the firm to whom the solicitation inquiry was sent.

TELEPHONE (With Area Code): Enter TELEPHONE number of the solicited firm.

FEDERAL EMPLOYER ID #: Enter the Federal Employer Identification Number of the solicited firm.

WORK TYPE(S) BEING SOLICITED: Enter the work type(s) or Commercial Useful Function for which this firm has been solicited in connection with the Scope of Services for this contract. (NOTE: Work type codes are provided for every certified firm listed in the DBE Registry (see RFP cover letter).

TYPES AND DATES OF CONTACT: Enter dates on which your firm contacted the solicited firm, either by mail (date solicitation sent), telephone (including date and time of call) or other person-to-person contacts. Identify the type of contact by prefacing each date with ‘M’ if a mail contact; “T” if a telephone call; and “D” if a direct meeting with the firm.

CONTACT RESULT(S): Enter the code(s) which indicates the result(s) of your solicitation.

*** USE ADDITIONAL PAGES AS NEEDED ***

A description of the codes to use is as follows:

CODE DESCRIPTION:

1 This firm is unavailable to participate in the contract for the reason(s) stated on the DBE Solicitation Response. (Attach explanation to the Log.)

2 This firm is no longer in business. (NOTE: If this action is checked, attach your explanation as to why the solicitation was sent to the firm and how evidence that it was no longer in business was obtained. Attach the returned envelope showing that it was undeliverable, for instance.

3 The soliciting Prime Consultant was unable to reach this firm after having a telephone conversation to follow-up on the DBE participation solicitation inquiry. (NOTE: Indicate In the Types and Dates of Contact column the dates and times at which follow-up was attempted.)

4 This firm did not respond to repeated telephone messages. (NOTE: Indicate in the Types and Dates of Contact column the dates and times at which messages were left.)
Guidance Concerning Good Faith Efforts
In Meeting DBE Participation Goals In Federally-Funded Contracts

The following is a list of types of actions that demonstrate good faith efforts in obtaining DBE participation for federally-funded contracts. This list is not exclusive or exhaustive. The bidder must show that it took all necessary and reasonable steps to achieve a DBE goal which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

- Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, utilizing the NYSUCP DBE Directory – http://biznt.nysucp.net) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

- Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the bidder might otherwise prefer to perform these work items with its own forces.

- Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

- Negotiating in good faith with interested DBEs – it is the bidder’s responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

- A bidder using good business judgment should consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm’s price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding a DBEs is not in itself sufficient reason for failure to meet the contract DBE goal. Also, the ability or desire to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts.

- Do not reject DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor’s standing within its industry, membership in specific groups, organizations, or associations and political or social
affiliations (for example union versus non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor’s efforts to meet the project goal.

- Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.
Under NYMTC’s current forecasting models the employment model drives the other models (population and labor force), and is not dependent on them. The population and labor force models are mutually interdependent and also dependent on the employment model. County level employment forecasts are used to drive forecasts of population and labor force. Therefore changes to employment model inputs affect the outputs of the population and labor force models, but the employment forecasts are not affected by changes to the other models. Employment forecasts are in turn driven by national forecasts developed by a commercial vendor. The households and housing stock model is not linked to the other three models. Figure 1 below presents a diagram shows the relationship among the models.

**Current Employment Model**

A long range employment model is used, which serves as a regional control for labor force forecasts. The model forecasts annual levels of employment by industry. It is also designed to forecast wage rates by industry, personal income, and unemployment rate. The employment model is based on historical data, as well as other data: national data provided by Global Insight (GI), and economic data from the Regional Economic Information System (REIS) CD-ROM produced by the Bureau of Economic Analysis (BEA).

The employment model is a standard econometric model. It is made up of 756 equations which produce forecasts at the county level. The model contains 31 individual sets of equations, composed of approximately 25 simultaneous equations each, with one set for each county and subregion, and one set for the region as a whole.

**Current Population Model**

A long range population model based on age-cohort survival model is used in developing population forecasts. According to this standard population forecasting methodology, the population is broken into separate age/sex-specific cohorts. A separate projection is made for every cohort for each time interval, based on the cohort’s population at the beginning of the interval, its forecasted survival rate during the interval, and any net in- or out- migration during the interval. Population growth, due to births for each interval, is calculated based on the projected age-specific fertility rates for the female population. The age-cohort method forecasts
population change due to natural increases and estimates effects of net migration. The model accounts for the net-migration component as a function of historical rates and the future demand of employment for labor force.

The population model generates population forecasts by sex and five-year age cohorts through 84 years of age, and for persons 85 years old and over. A separate model is run for each subregion. Within each subregional model, submodels generate separate outputs for each racial/ethnic group: non-Hispanic White, non-Hispanic Black, non-Hispanic Asian/Other, and Hispanic. All outputs are generated on a five year interval basis. A separate forecasting routine disaggregates the subregional population forecasts to the county level.

The model uses several data inputs. For example: historical population by racial/ethnic group, sex and by five year age-cohorts, historical and projected fertility and survival rates by racial/ethnic group and five year age cohorts, historical births and deaths by racial/ethnic group, and labor force net migration by racial/ethnic group, sex and age.

**Current Labor Force Model**

The labor force model is used in conjunction with other models in order to reflect the interactions between labor force supply, employment availability, and population. It depends on the population model for inputs of projected population (by sex, age and race/ethnicity), and on the employment model for inputs of projected nonagricultural employment and proprietors. In turn the labor force model adjusts the results of the population model.

The interaction between labor force supply, employment availability by location, and commutation flows is modeled in part by use of exogenous assumptions. These assumptions pertain to the scale of future in- and out-flows of the resident labor force on a subregional basis.

All outputs of the model are generated by sex and age-group for the population 16 years old and over. A separate model is run for each subregion. Within each subregional model, submodels generate outputs for each racial/ethnic group. A separate forecasting routine disaggregates the subregional labor force forecasts to the county level.
**Current Household Formation and Housing Stock Preference Model**

The model forecasts the following at the subregional and regional levels: the number of households by age of household head, the types (families, unrelated individuals, etc.) of households by size and income, and the housing preferences of households (tenure, structure type).

Using the county population forecasts and subregional household forecasts, the model generates the projected number of households at the county level, the demand for housing stock by type, including vacancies, and average cost for each of the following categories at the county level: single family, 2 to 4 units per structure, 5 to 9 units per structure, 10 to 49 units per structure, and 50 or more units per structure.

More complete documentation of the current SED model available on the NYMTC website ([http://www.nymtc.org/project/forecasting/sed_products.html](http://www.nymtc.org/project/forecasting/sed_products.html)).
Figure 1 Forecasting Model Relationships: Employment, Labor Force, Population, Households & Housing Units
NYMTC will create a Transportation Information Gateway using state-of-the-art tools with emerging technology to manage data and to provide timely integrated information for elected officials, principals, planners, engineers, transportation system operators, and other stakeholders. NYMTC utilizes data that are obtained from various sources in various forms and ways. Our sources include, but not limited to: various web-sites; governmental agencies such as New York State Department of Transportation (NYS DOT), TRANSCOM, NYC Department of City Planning, other New York City agencies, Metropolitan Transportation Authority; field collected data; and simulated data from NYMTC’s BPM Model and land Use Model. Our data categories include: Highway Data such as Traffic Counts, Congestion, and Accidents; Infrastructure/Assets Data such as Highway Attributes and Transit Equipments; Transit Data such as Subways, Buses, Rails, and Ferries; Socioeconomic Data such as Demographic, Socioeconomic, and Regional Development.

The objective of this project is to establish a comprehensive information management system that integrates data and information at all levels across organizational units, standardizes data processing procedures, facilitates information sharing, and supports information query for analytical tools and various applications. The project will be to create tools for aggregating and processing ITS and other collected data, to create a Repository for maintenance and transactions, to create a Warehouse for querying and analysis, and to create predefined browser based Geographic Information System (GIS) and other non-GIS applications.

The initial objective will be to identify the various data types utilized by NYMTC and its members in order to create standards and tools to enable the aggregation of this data. Additionally, the TIG Consultant shall develop an aggregated ITS dataset that can be utilized for planning purposes. The TIG shall create a Data Repository/Management System (DRMS) that will be designed for input, storage, archival, query, and output via browser based GIS and non-GIS applications. The non-GIS application will enable users to create dynamic tabular aggregations of stored data that will allow for different access privileges and output of data in multiple file formats. The TIG Consultant will be required to provide detailed user and technical documentation for the DRMS and all additional applications. The TIG Consultant shall supply NYMTC with fully commented source code or a Software Development Kit (SDK) that will permit future automations of tasks or modular additions.
Principles to Follow

- The agencies/counties have the flexibility of deciding the best approach for zonal allocation process under their jurisdiction. It’s important that there be consistency of approaches across the region. Each county, however, may have characteristics that require or justify some locally specific allocation rules. The counties should propose a methodology to carry out the allocation, with proper documentation detailing the methodology, the assumptions being used, and the associated data requirements and data sources.
- Zonal capacity must be incorporated in the allocation process. Zonal capacity is defined as the maximum population and employment each zone can accommodate. It should be derived from zoning regulation.
- In addition to zonal capacity, planners’ insight and development inventory should also be considered in the allocation process.
- The ZAP should be developed in such a way so that NYMTC or counties do not have to start from scratch for consequent updates (2055, 2060 …). ZAP should be delivered to NYMTC before the TAZ allocations are finalized so that NYMTC and/or designated consultant can test the process to ensure it’s working properly.
- The zonal numbers might be challenged by researchers, consultants, or other NYBPM users. The agencies/counties are responsible to come up with responses to address the concerns.
- No consultant shall be hired by the counties; otherwise it’s more reasonable for NYMTC to hire one consultant for all counties from both economic and technical perspective.
- The agencies/counties are responsible to collect and process all the input data for the ZAP that the agencies/counties will develop. NYMTC staff and the agencies/counties will share all data collected in the process.

Zonal Variable Requirements for ZAP

1. Each county has to submit the following variables at TAZ level at 5-year increment from the base year to 2050 as inputs to NYBPM.

   i. Residence-based variables
      1. Total Population
      2. Household Population
      3. Group Quarter Population
      4. Group Quarter Institutional
      5. Group Quarter Homeless
      6. Group Quarter Other
      7. Households
      8. Household size
      9. Household Income
      10. Employed Labor Force

   ii. Work-place based variables
      1. Total Employment
      2. Retail Employment
      3. Office Employment
      4. Worker’s Earnings
iii. School-location based variables
   1. K-12 Enrollment
   2. University Enrollment

VI. Visitor Model Inputs

2. The sum of all TAZs for the above variables within a county should comply with the county level forecast, where the county level forecast is available: including Total Population, Household Population, Group Quarter Population, Households, and Employed Labor Force.

3. Relationships among the variables are listed as following. Because of the relationships among the variables, an agency cannot submit partial data of the 16 variables. The residence based variables do not tie with the work-based variables.
   • Total Population = Household Population + Group Quarter Population
   • Group Quarter Population = Group Quarter Institutional + Group Quarter Homeless + Group Quarter Other
   • Household Population = Households * Household Size
   • Employed Labor Force < Total Population
   • Total Employment > Office Employment + Retail Employment

Deliverables

Data
   o Work program with milestones and schedule.
   o TM on methodology.
   o Zonal capacity file.
   o Input data should be submitted with data dictionary.
   o All 16 variables at zonal level as required by NYBPM at the timeline specified by NYMTC staff to meet the timeline for RTP, Conformity, and other analysis purposes.
   o Both input and output data should be submitted in standard database format

Process and Documentation
   o All relevant information should be submitted with proper supporting documentation (assumptions, constraints, process, input and output data, etc) so that NYMTC staff can take over the work seamlessly in case a agency/county have no resource to perform the zonal allocation in the future.

Scheduling
   o The agencies/counties should provide all required zonal allocations within two months after the adoption of the county level forecasts.
   o In order to meet the timeline requirement, the agencies/counties should start work on data collection and methodology starting April 2010. Collaboration with the NYMTC’s consultant is expected after the consultant is on board. In doing so, the
agencies/counties should be able to finish the ZAP development (including sufficient testing and validation) before the official county level forecasts are finalized.

**Project Management**

- NYMTC and the agencies/counties will have monthly progress meetings starting April 2010 and biweekly progress meetings after the forecasts are adopted to coordinate the work efficiently to ensure the progress of the project is on time.
Work Program for the Preparation of Population, Employment and Other Selected Indicators for Input into the Best Practices Model (BPM) for the five boroughs of New York City

Draft Scope of Work: Version 3

Submission by the New York City Department of City Planning to the NYMTC Forecasting Working Group

February 4, 2011

For information on this document, please contact Eric Kober ekober@planning.nyc.gov or Joseph Salvo at jsalvo@planning.nyc.gov.
A. Objective

To produce a series of projections of 16 Key Indicators as input into the NYMTC Best Practices Model (BPM) and to allocate key indicators related to population and employment to the Transportation Analysis Zone (TAZ) level for New York City.

Goals:

- Create projections that are informed by past trends that identify patterns and relationships in the data;
- Evaluate these patterns in the context of current information on population, employment, school enrollment, land use, and zoning to form reasonable assumptions about the future;
- Consult with members of the Forecasting Working Group (FWG) and the regional consultant to evaluate future scenarios from demographic, economic and planning perspectives;
- Apply assumptions using commonly accepted scientific techniques that allow for a cogent and transparent evaluation of results by the FWG.
- Apply assumptions regarding rates and ratios that can be regarded as “low,” “medium” and “high,” to create a range of projections

B. Projected Populations and Principal Methods (Number of BPM Variables)

1. Total and Household Population (2)
   - A cohort-component model, tied to a housing unit/planning method for corroboration

2. Households and Household Size (2)
   - Application of Occupancy Rates and Average Household Size from decennial census projected forward

3. Group Quarters Population (4)
   - Application of group quarters population, including the enumeration of persons in service-based locations from the 2010 Census and historical information from the 1990 and 2000 Censuses on group quarters

4. K-12 School Enrollment (1)
   - Department of Education administrative data and school enrollment projections and/or decennial census and ACS data on the population by age/sex

5. University Enrollment (1)
   - ACS, New York State Department of Education administrative data

6. Employment/labor force forecasts by selected industry for residents (5)

7. Employment forecasts by selected industry for in-commuters and out-commuters - combine with (6) above for Total Workers
   - Journey to Work data from the 1990, 2000 and most recent ACS files will be used to identify workflow patterns by origin and destination. The pattern of commuter flows will then be applied to the total number of workers to determine in-commuter and out-commuter flows.

8. Household Income (1)
   - ACS Income data along with assumptions about shifts in the distribution of income over time
C. Population and Employment Projections Overview

D. Total and Household Population (Items 1, 2, 3)

The objective of this analysis is to produce population projections by age and sex at five-year intervals for 2010 through 2050, for each of New York City’s boroughs. The projections will be created using a Cohort Component (CC) model. The CC model is based on the premise that the population can be broken down into three main components of change: births are added to the population, deaths subtracted, and migration can either be added or subtracted depending on whether there is overall positive or negative migration. Therefore:

$$Projected\ Population\ (P_t) = Base\ Population\ (P_0) + Births – Deaths + Net\ Migration$$

The power of the CC model is based on its use of age and sex cohorts\(^2\) as a starting point. Births, deaths, and migrants are all then used to move these cohorts forward through time,

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\(^2\) A cohort is simply a group of people sharing the same demographic characteristics, in this case age and sex (ex. 30-34 year old males). Those in the same cohort are subject to the same components of change, and will ultimately
creating a new age/sex distribution at each five year time point. A particular cohort’s ability to
grow or decline is dependent on how the components of change impact each age and sex group.
It is essentially an “accounting approach” to modeling population changes, one that applies birth,
death, and migration rates to these age and sex cohorts.

The CC Model is a widely used projection method because the components of change for each
cohort interact, providing a more realistic outcome. For example, if there were large numbers of
20-24 year old female in-migrants, the 20-24 year old female cohort would grow from the net
positive migration; but there would also be increased growth in the 0-4 cohort since these women
are in their prime child-bearing ages. These types of relationships within the model make it both
realistic and complex, because each of the components of change interacts with the others to
affect the age structure of the population.

The fundamental difficulty in applying the cohort component model rests in identifying
appropriate fertility, mortality, and migration rates to apply to persons of different ages. In
general, the starting point for most projections consists of shaping the future to be in line with
historical patterns. Such a baseline projection differs from a forecast. Forecasts alter the
historical or baseline projections using scenarios that demographers believe may be likely for the
future. For example, it is likely that increased longevity will become reality, as we move
forward in time, based on the opinions of medical experts. As a result, demographers may
decide to increase rates of survival for persons in the older ages, as part of a forecast. Similarly,
knowledge of new housing development may spur a planner to lower net migration losses,
keeping more people in a jurisdiction over time. Of course, no one can predict the future with
certainty, so the ultimate success of a projection depends upon the degree to which the
assumptions in the model hold. Therefore, three sets of rates and assumptions will be employed
throughout the analysis, yielding low, medium and high projections, which will create a range
throughout.

The analysis will produce population projections for the five boroughs and for 55 PUMAs in the
City of New York for 2050. While these 55 areas were designed to encompass many of the
neighborhoods of New York, they are not in any way intended to be definitive regarding
boundaries, nor is this neighborhood scheme intended to be comprehensive. These areas
represent the best compromise between available data, statistical geography, population size, and
known neighborhood designations.

With the cohort-component method, the starting point is an evaluation of change by age/sex for
1990 to 2010. Each age group is “survived” from 1990 to 2010 at regular intervals, and the
residual (“survived” population versus the population reported in the census) is derived for each
age group; normally the residual for each age group is an estimate of the effects of net migration.
While this method can be carried-out for the city, five boroughs and 55 PUMAs, it is complex

move through the projection together.
because it assumes that coverage of the population (i.e., census-taking) remains constant over time. For example, with higher coverage rates in 2000 and lower net census “error” as a result, it is likely that estimates of net migration by age will be distorted. We think, however, that it is possible to adjust the net migration rates for coverage change using data from the 1990 Census Post-Enumeration Survey, the basis for the proposed 1990 Census adjustment. For 2010, we await the results of the enumeration before making any judgments regarding any further adjustments that may be required for census errors.

**Housing Unit Method as a Source of Corroboration**

As discussed above, the cohort-component projections methodology is useful because it provides for the interaction of the components of population change by age/sex. However, it is a purely demographic method, meaning that it responds solely to changes in assumptions about fertility, mortality, and migration. In its basic form, it is devoid of information regarding conditions “on the ground,” such as the housing needed to accommodate projected population increases. Therefore, this methodology includes a housing component that is incorporated in two ways:

1. *Housing Unit-Based Population Projection* - A population “estimate/projection” for the 2015 and 2020 period, based on housing unit production for 1980-2010 and data on vacancy and household size from the 2010 Census, the New York City Housing and Vacancy Survey, and, perhaps, the ACS;

2. *Housing Units Needed to Support the Population Projection* - Estimates of the housing required to accommodate the CC demographic projections, using a model of changes in average household size, and assumptions about vacancy rates and group quarters population for the 2015 to 2050 period.

Both of these tasks will be driven by the housing unit estimates method for determining the total population:

\[
Population = (Occupied\ Housing\ Units \times \ Average\ Household\ Size) + Persons\ in\ Group\ Quarters
\]

Therefore:

\[
Occupied\ Housing\ Units = (Population-Persons\ in\ Group\ Quarters)/Average\ Household\ Size
\]

Item 1 above will be accomplished by creating a 2015 and 2020 population using separate estimates for the components of change -- net new construction, conversions, and average household size, beginning with a continuation of trends for 2005-2010. Certificates of occupancy for new housing along with permits for demolitions will be used as a base for estimating the effects of net new construction in the 2010 to 2015 period. In addition, housing units created through conversion derived for 2005-2010 as a residual will be used along with
2010 Census housing unit data as a basis for establishing the level of conversions for most neighborhoods. Since so much new construction took place in the previous decade, a decision will be made to carry forward only a portion of new construction. Average household size and vacancy rates will be derived for PUMAs/Census Tracts from the 2010 Census. Using data on change for 2010-2015, each component will then be projected to 2020. Finally, it is likely that the number of persons in group quarters will be held constant at 2010 levels, since an evaluation of changes to that population did not yield many large changes; however, an examination of major changes in facilities will be conducted so that any large changes in group quarters population could be incorporated into the projections model.

The group quarters population will be divided into institutional and non-institutional categories, based upon the 2010 Census and our evaluation of facilities over the near-term. While it is impossible to separate out the homeless population, it is possible to characterize group quarters population from the 2010 Census “service-based enumeration,” – those in places where the homeless go to access services, such as shelters and mobile food vans. These data could be used to allocate a portion of the non-institutional group quarters as “homeless.” We would like to engage the FWG members about the need for a homeless count as part of the BPM, especially given the fact that this is a truly elusive group to measure. In fact, the last time the Census Bureau undertook such an effort was in 1990, as part of the decennial count. As a result of the controversy surrounding that effort, the Census Bureau decided not to pursue a “homeless” count in 2000 or in 2010. Thus, it is important to recognize that the only benchmark available to us from the service-based enumeration will, by definition, understate the true size of this group.

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3 Conversions are housing units created by adding to or subdividing units in existing buildings. It includes dwelling units created in non-residential buildings, additional units created within existing occupied residential buildings, and units restored to the housing stock in vacant residential buildings by private investors without city assistance. The city’s building records provide more accurate data on new construction than on conversions, requiring that the number of these added units be estimated by indirect means (i.e., as a residual).

4 For previous projections, conversions in the 1990s were first multiplied by .475 to derive an initial estimate for the April 2000 to December 2004 period. The final number of conversions was set at 30 percent of this initial estimate. Estimates of conversions for the 1990s were set to zero in selected census tracts because they were usually indicative of anomalies or special circumstances, such as problems with the enumeration of public housing projects in 1990. After taking a look at the 2010 Census results and the results from our own administrative data files, a decision will be made on what the pattern might look like for 2010-2015.

5 Average household size was available for Public Use Microdata Areas (PUMAs) only. Changes at the PUMA level were applied across all neighborhoods within its boundaries. Citywide average household size was up slightly from 2.59 in 2000 to an estimated 2.66 persons per household in 2010.

6 Group Quarters population consists of persons who do not live in housing units, but in facilities, such as prisons, nursing homes, dormitories, group homes and other similar arrangements. In 2000, about 182,000 New Yorkers were classified as living in group quarters.
The housing unit method also will be used “in reverse,” to derive a current estimate of occupied housing units implied by the PUMA CC population projections for 2015, 2020, and each five-year period thereafter (item 2 above). While we will likely carry forward average household size for 2010 in the creation of the 2015 and 2020 projections, we may also employ a simple regression model of average household size changes which was used in our earlier projections work, along with data from the ACS. Our previous work found that the presence of immigrants was a useful predictor of average household size (along with previous household size). Given the fact that many of New York City’s neighborhoods continue to be important destinations for immigrants, they display trends that run counter to national trends of decreasing average household size. As such, we believe it important to include this factor in decisions regarding changes in average household size. More information is available in Appendix B.

**The Planning Method: Adding Capacity for Growth as an Evaluation Criterion**

Any method for projecting population is subject to error because the future is uncertain. So many variables can act to alter the population of New York City over the next few decades, including federal immigration policy; economic cycles; changes in transportation infrastructure and networks; shifts in the size of households; changes in patterns of domestic migration; changes in housing demolition and construction; local government priorities; and conditions in other parts of the nation and world. There is no definitive method for looking forward. The best that anyone can do is adopt a series of assumptions and then look forward employing some “tests of reasonability,” based on current conditions.

As part of the projections from 2010 to 2050, the planning method will start by constructing assumptions for the ten year period from 2010 to 2020 using a land use and zoning analysis, to test the reasonability of the population and housing unit projections. This will permit us to gauge how much potential there is for further development to support population growth through 2020 and beyond. Assumptions are then created based on alternate scenarios, aimed at high, medium and low levels of development. This provides upper and lower limits to growth going forward. Exactly what each scenario will look like will emanate from presentations made by DCP and debated within the FWG. Five-year period changes will then be evaluated, starting with historical changes back to 1980 up to the current zoning and land use configuration. An analysis by planners of the city’s capacity to create new housing units through new construction and the subdivision of existing units will be conducted.

PUMAs will be initially divided into three categories of growth – high, medium, and low. Second, we will evaluate the capacity of each area to accommodate the projected growth and move PUMAs into and out of these categories, based upon a parallel set of capacity considerations: 1) high growth - areas where the projected growth can be accommodated because of the availability of land with zoning capacity to build and/or impending planning actions aimed
at increasing an area’s housing capacity; 2) medium growth - areas where some degree of “background growth” can be expected to occur, based on the replacement of the existing stock of housing with higher density units; and 3) low growth - neighborhoods that are already built-out, with little room for expansion.

For a detailed discussion of the steps in executing the housing unit/planning corroboration, please see Appendix B.

E. School Enrollment K-12 (Item 3)

The New York City Department of Education (DOE) periodically issues school enrollment information, along with projections of future enrollment levels. This is done for New York City, the five boroughs, and for community school districts. In the past, we have been a partner with the Department of Education, helping them oversee the work of consultants in determining future enrollment levels. The most valuable data, however, will be current enrollment from the administrative data collected and compiled by the DOE. Public school enrollment by school can be geocoded and then allocated to PUMAs and TAZs. The main limitation, however, is that comparable data for private school enrollment are not available.

Previous work by the NYMTC consultant used information from the Public Use Microdata Sample (PUMS) data of the 2000 Census and 2005 American Community Survey. PUMS cross-tabulations of population by single year of age and enrollment status were created at the sub-regional level for years 2000 and 2005. Enrollees were estimated as a percent of all races for both sexes by five-year age groups, using the following age-grade equivalency:

- Under 5 years: Pre-K
- Ages 5-9: Kindergarten & Lower Elementary (Grades 1-4)
- Ages 10-14: Middle School or Upper Elementary (Grades 5-8)
- Ages 15-19: High School

Although the Population Model age cohorts do not strictly match school-going ages by grade level, without actual annual school enrollment data by grade for all public and private institutions, it is not possible to “age” enrollment or predict school “retention” levels. Therefore, future forecasts can be related to the age structure of the population and the coarse “retention” rates derived as a percent of population enrolled by age cohort in 2000 and 2005. The average or trended “retention” rates derived from 2000 and 2005 data could be applied to the population forecasts to estimate future enrollment from 2020 to 2050. For elementary and high school enrollment, the consultant made the assumption that enrollment forecasts by place of residence will be equal to enrollment by school location. This is likely a seriously flawed assumption, especially in this era of specialized magnet schools and the rise of the charter school movement.

Therefore, a discussion needs to occur with the FWG about the best choice among this set of limited alternatives. This should include an examination of the utility of this input into the
BPM, given the flawed nature of the data. Does inclusion of this input to the BPM model do more harm than good? Is the effort required to put the data together even warranted?

F. University Enrollment (Item 4)

University enrollment by school location will be determined from administrative data. The Department of City Planning Facilities Database along with data from the New York State Education Department Information Systems (ORIS) manages a comprehensive Higher Education Data System that collects and distributes information on the status of higher education in New York State.

The Facilities Database is accessible to City Planning staff members through the local area network (DCP-LAN) as ArcGIS mapping files and in Microsoft Access. Each university is geocoded for tax block, tax lot, 2000 census tract, city council, district, community district, school district, police precinct, health area, zip code, borough, and X and Y coordinates. The New York State ORIS institutional enrollment data are accessible through their website: http://eservices.nysed.gov/orisre/r_creditenrollment.jsp. Users can access enrollment reports from 1980-2010 on statewide and county levels. These geocoded facilities’ enrollment records will be tallied down to the Traffic Analysis Zone (TAZ) level.
G. Employment and Commuting (Items 6 & 7)

Employment

Employment levels will be determined two ways:

- A model that is driven off of the Cohort Component population projections and that uses labor force participation ratios and employment population ratios to drive resident labor force and employment respectively;

- An independent economic model, where total employment and labor force are determined as a function of selected economic variables, where population is not used as the primary input.

1. Determining Resident Employment Using Cohort Component Population Projections

For Residents in each age/sex group:

Labor Force Participation Ratio = Labor Force/Population*100

Thus:

\[ \text{Labor Force} = \left( \frac{\text{Participation Ratio}}{100} \right) \times \text{Population} \]

Employment/Population Ratio = Employment/Population *100

Thus:

\[ \text{Employment} = \left( \frac{E/P \text{ Ratio}}{100} \right) \times \text{Population} \]
The key feature in the determination of employment using the formulas above concerns assumptions about labor force participation and E/P ratios. Studying changes in these measures over time is therefore very important in the formation of assumptions about the future. Figure 1 shows participation rates over time, starting with 1970, by age/sex. For men, participation rates have been declining, with a fairly consistent pattern by age. The exception is for 2000, which we attribute to high levels of imputation resulting in poor data and erroneously low levels of labor force participation. Among women, participation ratios have increased with each decade, and the trough that was present in the childbearing ages in 1970 has all but disappeared from the age-specific ratios. Once again, we can see that 2000 ratios were an anomaly, the likely result of poor data on employment and labor force participation. All told, however, the patterns by age for both men and women reveal a picture that is more similar than different from 1980 on. And, it is this consistency that can help us to model participation rates with age and apply these ratios to the projected populations to produce the labor force. A similar process will be executed for persons who are employed using ratios to total population for each age group.
In addition to using history to guide our calculations, we will be using data from a number of sources to formulate assumptions about future participation rates. The Bureau of Labor Statistics of the U.S. Department of Labor does national analyses of participation ratios by age and has a regular program of projections that currently goes out to the year 2018. In addition, there is an extensive literature on expected changes in participation ratios, based on anticipated shortages of workers in selected occupations and industries, increased longevity, and an increasing proclivity among older workers to delay retirement because of reduced or nonexistent pension benefits, insufficient personal savings, and a lack of health care coverage. We expect to use this research, along with data for the city and region, to look forward and make informed judgments about the utility of using national rates to calibrate city-specific changes in participation ratios.

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7 See http://www.bls.gov/emp/emplab1.htm

Much of this will be based on an analysis of national ratios by age/sex compared to those in New York City, with its relatively larger share of immigrants. This exercise should provide us with upper and lower limits on the number of persons in the labor force and the number employed at the city, borough and PUMA levels, with an allocation routine designed to assign values to TAZs.

2. The Economic Model and Total Employment

Base Year Employment

Projected year estimates are a function of several factors including national and local area trends in employment by industry, population, personal income, and the statewide economic outlook. With the advice of the consultant and members of the FWG, City Planning will create total employment projections for the five boroughs of New York City independent of the resident employment/labor force projections based on the cohort-component population model.

While a separate method of generating employment is useful for corroboration purposes, the fact is that this method is instrumental in creating a total employment figure for the city. This is because the economic model generates total employment, which when compared to the resident employment produced from the population-driven method, will produce a residual number that can be equated with net commuters. Differences in the estimation methods, however, are also included in this residual (more on this below); therefore, we incorporate historical resident employed/commuter ratios into the analysis. The idea is to compare the residual net commuters with the number produced using these historical ratios, to arrive at the number of commuters. The application of resident worker/commuter ratios from the historical record can be adjusted as deemed appropriate by members of the FWG. Fortunately, the proportion of all workers in New York City who are commuters has remained consistent for decades (A detailed discussion of commuting is presented below.)

We intend to conduct simulations and sensitivity analyses to see what the likely level of commuters would be if the ratios of resident workers/commuters remained consistent or changed, by margins that would determine our upper and lower bounds for the city and boroughs. We have yet to fully work through exactly how estimates would be produced for PUMAs. It is likely that we would need to test several allocation methods (e.g. shift-share, share-of-growth, proportional allocation) to assign total employment to PUMAs for the economic model. Without looking at the data it is impossible to tell exactly which path we will take. What we are sure of is that the economic model provides us with a total employment number that can then be reality-tested against the number for residential employment produced by the population model.

There are several important points and caveats about the economic model that need to be noted. First, in addition to corroborating estimates of employment and commuters, the economic model
will provide important information on changes in employment by industry, allowing us to create the selected industry subdivisions (e.g. Office jobs) required for input to the BPM. Second, the economic model provides estimates of “employment” from the perspective of jobs, as is discussed below. The unit of analysis in the decennial censuses and in the ACS is employed persons, with those holding multiple jobs represented just once. The employment data focuses on jobs, thus allowing those with more than one job to be represented multiple times in the data. This means that the residual that exists between the economically-driven projection and the population-driven one involves some number of multiple job holders. In order to get a handle on what the ratio is of census employed persons to total employment from the economic model, we will need to examine ratios historically to create an adjustment factor that accounts for this difference. We expect to compare census employed persons to total employed from BEA to make this determination. Finally, after examining some of the patterns in the data (see charts below), it is likely that we will need to construct projections separately for government employment and self-employment, in addition to the private wage/salary workers. The trends beg for separate treatment, especially in light of projections for reduced government employment and a huge increase in self-employment.
Economic Model – Economic Variables and Total Employment

**Private Employment**
Current Employment Statistics (CES)

**Government Employment**
Bureau of Labor Statistics (BLS)

**Self-Employment**
Bureau of Economic Analysis (BEA)

**Land Use Analysis**
Firm-based analysis—Distribution of QCEW employment data by land use. Assign a land use code based on NAICS and land use type to derive an employment distribution

**Private Base-Year Employment**
Provides the distribution of jobs by industry/occupation

**Historical Trends Applied**
Incorporating New York City Private Employment, Government Employment, Self-Employment (BLS, BEA)

**Global Insight Industry Forecast**
Incorporating drivers regarding the future performance by industry

**Total Projected-Year Employment**
Provides the distribution of jobs by base industry for the projected year

**Jobs/Employed Persons Factor**
Figure 2: New York City Private Employment, 1990-2009

Above is a simple line graph showing the trend in total wage and salary private employment in NYC since 1990, and the five-year moving average since 1995, which smoothes the cyclical fluctuations. There is an obvious upward trend which likely correlates well with population growth. Source: BLS, Current Employment Survey (CES)

Figure 3: New York City Government Employment, 1990-2009

The above chart is for total government employment. Since 1997 the five-year moving average total government employment has fluctuated within a narrow range. Government employment per capita has fallen sharply. Source: BLS, CES
This last chart is proprietors’ (self-) employment. The trend is exponential, reflecting the changing structure of employment as more and more people are at least part-time freelancers. The trend is completely detached from the business cycle. Source: BEA, Local Area Personal Income, CA-04 series

In order to project private base year employment, City Planning will incorporate a land use analysis using QCEW data and the NYC PLUTO map. Under this process, City planning will assign land use values to individual firms which are located within the five boroughs of New York City. After assigning a land use value, employment will be aggregated based on how its land use value corresponds to the NAICS code associated with the individual firm. By doing this we will be able to identify the share of employees by NAICS and as well as what type of building the firm is located in.

As discussed above, Government Employment and Self-Employment will be projected separately based on historical employment data, which includes total New York City government employment from 1990 to 2009 and proprietor employment for New York City from 1969 to 2009. Government employment and self employment are projected separately because they operate independently from the business cycle, as well as from private employment. As a result, occupational staffing patterns or distributions will not be applied in these cases.
Reconciling the Population and Economic Models of Labor Force & Employment

**Population by Age/Sex**
- Output from Cohort Component Projections by Borough/PUMA
  - (Resident Population Only)

**Labor Force Participation Ratio**
- Historical LFP Ratios
  - (1970—Present)
  - (Labor Force/Population*100)

**Employment/Population Ratio**
- Historical E/P Ratios
  - (1970—Present)
  - (Employment/Population*100)

**Resident Labor Force**
- =Participation Ratio/100*Population

**Resident Employment**
- =E/P Ratio/100*Population

**Total Labor Force**
- (from economic model)

**Total Employment**
- (from economic model)

**Net Commuting**
- (Residual value estimate)

**Resident Employed/Commuter Ratio**
- Historical Comparison

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**Projected Year Employment**

Projected Year Employment will be derived from a combination of sources which include historical data by industry and earnings, incorporating regional and national trends in employment reported by NYS DOL, BLS, and research companies such as Global Insight. City Planning will also seek the advice of the consultant and FWG members to facilitate the projection process, by discussing the validity of our assumptions. Furthermore, as previously discussed, government and self employment will be projected independently from private employment and then added to private employment to derive the total projected-year employment.
In addition to applying historical trends to base-year employment, City Planning will also incorporate employment projections from the research consulting company, Global Insight. IHS Global Insight is a primary provider of economic, financial, and political coverage data to support planning and decision making. A leader in modeling and forecasting, IHS Global Insight has combined its analytical capabilities with the experience of industry professionals to provide projections of industry performance. Their analysis includes national, regional, as well as county level forecasts in all major industries including automotive, energy, agriculture, steel, telecommunications, trade, tourism, healthcare, construction, and many others.

Global Insight’s analytical system “provides the foundation for an expanding array of economic and market forecasting services, focused on the assessment of policy issues and business-related industry opportunities and risks.” Their expertise, information, and models analyze and project industry trends, as well as provide alternative trends that account for unexpected changes in the economy and/or financial markets.

There are many valuable resources that Global Insight provides its users, in order for them to gain a better understanding of the future performance of major industries. Global Insight’s US County Forecast will provide City Planning with projected growth rates for employment, income and wages, population by age cohorts and households by age cohorts for a 30-year projection period at the county level. Essentially, these are long-term economic projections that are broken down by major industry, and City Planning will incorporate these forecasts into its projected-year employment. The US County forecasts will further help us determine market strength and vulnerability by industry, as well as provide an independent economic and financial outlook by industry. Therefore, our approach to deriving projected-year employment will not only include a historical trend analysis, but also incorporate Global Insight’s US County economic forecasts. As a result, City Planning will be able to gain a better perspective regarding the future performance of major industries for the projected year.

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Commuting

Dividing Total Workers by Commuter Status

To determine patterns of in-commuter, out-commuter, and resident employment, City Planning will incorporate Journey-to-Work (JTW) data collected by the Census Bureau in the decennial census long form and, more recently, in the American Community Survey, through funding provided by the Federal Highway Administration (FHWA). Historic data are available through the 1980 Urban Transportation Planning Package (UTPP) and its successors, the 1990 and 2000 Census Transportation Planning Packages (CTPP). For more current worker data, City Planning will use Public Use Microdata Sample (PUMS) data from the 2006-2008 American Community Survey (ACS) to obtain comparable tabulations. CTPP tabulations utilizing the full ACS sample for the ACS 2006-2008 data is scheduled to be released in 2011 and these data may supersede use of City Planning-tabulated ACS PUMS data when they become available.

ACS 2006-2008 three-year estimate data will be used instead of more recent 2009 one-year estimate data to avoid problems associated with the rapidly changed and abnormal employment conditions following recent economic recession. In addition, the three-year data estimates also benefit from a larger sample than the one-year estimates. Finally, 2006-2008 estimates are
preferred given that a corresponding official release by FHWA of 2006-2008 data in standard CTPP form is anticipated in the near future.

From these data tabulations, City Planning will mainly make use of county-to-county worker flows to analyze subregional shares of regional employment by both subregional place of residence and subregional place of work. City Planning will evaluate changing patterns over the historical period from 1980-2008 to develop proportional shares of future city employment that can be attributed to resident, in-commuting, and out-commuting. Total citywide employment as calculated in the employment forecast will be allocated by county within New York City using resident employee and in-commuter shares, and the city-resident portions of subregional employment for all other subregions will be calculated using out-commuting shares. The New York City-resident portion can also be calculated at a more detailed level by county for the forecast region if required.

A look at historical data on commuting between the region and New York City shows a pattern of remarkable stability. Since 1980, the percentage of all workers in New York City who are residents has remained in the range of 70 to 80 percent.\footnote{1980 UTPP, 1990 CTPP, 2000 CTPP, 2006-2008 ACS PUMS} Figure 5 through Figure 8 show employment by county of residence from 1980 through 2006-2008. Pie charts show changes in absolute employment, as well as change in resident and out-commuting shares of employment by subregion of workplace. Overall, resident and out-commuting shares remain fairly steady, with most noticeable changes occurring between 1980 and 1990. From 1980 to 2006-2008, the Mid-Hudson subregion has seen a slight shift of workers from that subregion to the adjacent subregions of Connecticut and New Jersey. This shift is most prevalent in counties directly abutting those subregions (e.g., Rockland and Orange Counties shifting toward more workers in New Jersey). Also notable is a small shift in Long Island toward a greater share of resident employment over time. Throughout the region, the relative share of New York City’s workers who have come from other points in the region has not changed to any appreciable degree, in spite of increases in overall employment. Figure 9 summarizes the trends in workplace shares by subregional place of residence over the period 1970 to 2006-2008.
Figure 5: 1980 Regional Workers

Source: 1980 UTPP

Figure 6: 1990 Regional Workers

Source: 1990 CTPP
Scope of Work—NYMTC Best Practices Model Inputs for NYC Boroughs DRAFT 1-7-2011
NYC Department of City Planning

Figure 7: 2000 Regional Workers

Source: 2000 CTPP

Figure 8: 2006-2008 Regional Workers

Source: 2006-2008 ACS PUMS
Figure 9: Subregion-to-Subregion Commuter Flows, 1970 to 2006-2008

Source: BEA/CTPP, ACS 2006-2008 PUMS

Figure 10 and Figure 11 show annual workplace employment by subregion for the years 1969-2008. Figure 10 shows employment in absolute numbers, with total regional employment change made up of component change in each of the five subregions. Figure 11 shows subregional employment change converted into percentages of total regional employment. According to this figure, New York City’s share of total regional employment declined through the 1970s and the 1980s, leveling off around the early 1990s. Subregional shares of regional employment have remained at relatively stable levels since that time.
Source: BEA REIS

Figure 10: Subregional Shares of Total Regional Employment, 1989-2008

Source: BEA REIS

Figure 11: Subregional Percentage of Total Regional Employment, 1969-2008

Source: BEA REIS
In working with the consultant, preparing forecasts for the other subregions of the NYMTC forecast region, comparisons can be made between calculated in-commuter and out-commuter figures for the New York City subregion as prepared by City Planning and the chosen consultant.

**H. Household Income (Item 8)**

This last item needs to be explored further before a definitive determination can be made on how to proceed. There are a number of ways to form assumptions about the distribution of income for households, which is required for the determination of the appropriate rate of increase in median household income. The general goal will be to use several different sources to calibrate change by constructing assumptions to drive the projected distributions. Reports by the Social Security Administration -- [http://www.socialsecurity.gov/OACT/TR/2010/V_economic.html](http://www.socialsecurity.gov/OACT/TR/2010/V_economic.html) -- and the Fiscal Policy Institute -- [http://www.fiscalpolicy.org/FPI_GrowTogetherOrPullFurtherApart_20101213.pdf](http://www.fiscalpolicy.org/FPI_GrowTogetherOrPullFurtherApart_20101213.pdf) -- and the City University of New York’ Center for Urban Research Center -- [http://www.urbanresearch.org/resources/new-yorks-changing-middle-class](http://www.urbanresearch.org/resources/new-yorks-changing-middle-class) -- will all be part of a thorough review that needs to take place. The goal will be to look at the distribution of income over time for all households in New York City by borough and PUMA for allocation to TAZs, where required. The idea is to construct a model of how the increase in median household income is distributed by borough and PUMA, so that appropriate rates of increase are constructed for these subdivisions of the city as well. A close look at the data will help us determine how we would apply changes over time. For example, we may opt to weight increases based on the distribution of income quintiles, so that the more affluent parts of the city would get a bigger percentage increase and the poorer areas a smaller one. Since we would not want to assume that income distribution gets more unequal ad infinitum, we would likely take the quintiles for 2020 and use the same levels going forward.
Applicability to Other Counties in the New York Region

We believe that the consultant that is retained to prepare forecasts for the non-New York City portion of the region should adopt, to the maximum extent possible, a similar methodology. The methods just described utilize data that would be available to the other counties in the Region. The only exception would be the classification of QCEW employment data by land use type to derive office-based employment. In this instance, the consultant would need to develop an alternate method. Of course, it is expected that a consultant for the region may need to tailor the data analysis for individual counties in ways that take into account unique local factors, such as land use regulation, planned developments, and demographic and social trends that influence perspectives on future population and employment patterns.

A regional scope of work should require the regional consultant to work closely with DCP in an effort to reconcile the economic model’s employment numbers for the counties in the region with those from DCP for New York City. While we would certainly encourage a consultant to offer data for the purposes of corroborating our projections, it is expected that the work of the regional consultant will not duplicate the efforts of DCP staff. This will require a high level of interaction between DCP and the regional consultant on data and methods utilized. Close interaction will occur over issues that may emerge involving commuting, changes in population and employment in NYC and the rest of the region, and the implications for labor force participation and employment/population ratios among the region’s counties. The collaborative work products from DCP and the consultant will need to be discussed by members of the FWG to create an effective and mutually acceptable consensus on the best set of projections.

Status of Current Work and Timeframe

In 2010, staff training, review of methodological alternatives, and preparations for receipt of the 2010 Census data steered our work program. For 2011, the focus will turn to evaluating the methods and assumptions used in our 2010 projections, using the 2010 census as the “gold standard,” re-benchmarking our projections, and then implementing the methodological alternatives just discussed, to produce the borough and PUMA projections out to 2050 at five-year intervals.

As we pursue the sub-county projections, a land use analysis of the city will begin in 2011, to determine the potential for growth in communities throughout the city. Starting in late 2011, we will begin analysis of worker-flows, using the American Community Survey (ACS) Public Use Microdata Sample (PUMS) files. These data will provide a base for the worker portion of the BPM inputs. (In 2012, more data will become available from the ACS Journey-to-work data products.) Similar analyses will start for school enrollment in late 2011, provided consultation with the FWG produces an acceptable alternative.
The training of two staff members in demographic methods occurred in 2010 and will need to continue through 2011, as we enter new phases of the projections process. In 2010, training began on the demographic methods necessary to complete the projections. This included working closely with staff and with the Chief Demographer at the New York State Data Center. Training included the fundamentals of the cohort-component model; types of data sources and the creation of vital rates; creation of rates in the presence of changes in census coverage; life table survival rates; and net migration patterns. Instruction on the use of special demographic projections software began and continues.

In 2011 two additional Population Division staff members will prepare data from the 2010 and prior decennial censuses, various ACS data, and other data sources for the evaluation of our projection methodology. Comparisons are being prepared by age/sex at the city, borough and PUMA levels. Mean absolute percent errors (MAPE) and Mean algebraic percent errors (MALPE) are just two of the many statistics used to characterize the accuracy of the projections. This will become the basis of evaluating the assumptions made in our 2010 and 2030 projections that used 2000 as a base. This will likely result in adjustment of assumptions in the new model, with 2010 as the launch point.

Joseph Salvo and Peter Lobo have been, and will continue, supervising the preparation of all projections. This includes working closely with staff on the two items mentioned above. In addition, an examination continues of data sets that can be used to track employment change, such as aggregate data on insured employment, data from the Bureau of Economic Analysis (BEA), the Bureau of Labor Statistics, and other administrative records. Projections of employment-based variables will involve one planner from our Housing, Economic and Infrastructure (HEIP) Division. When added to the historical data about labor force changes over time, current data can be very useful in an effort to understand patterns of both resident employment and commuting.

Input to the Census Bureau on 2000 census geography has resulted in 400 census tracts with population in New York City that will change in 2010 through splits and/or combinations; in addition, another 400 or so census tracts without population will be changing boundaries, mostly a result of subdividing the city’s shoreline in a more logical fashion. (A special effort was made to hold 2000 census tract boundaries constant using block groups). These new tracts will be the building blocks for the new TAZs to be used with 2010 data, so we will be changing our systems here at City Planning to accommodate the new geography.

In 2011 and thereafter, at least one planner in each of the Department’s borough offices will need to be assigned to work with us to determine the potential for population growth in the city’s communities. While preliminary meetings have taken place on zoning and development potential, we expect this part of the project to increase with time.
Appendix A

DETAILED DISCUSSION OF METHODS

Step 1- Creating the Baseline

As previously mentioned, changes to the population can be separated into three components:

a) **Fertility** — in order to predict births in the future, age-specific fertility rates are used for the 2008-2010 period.\(^{11}\) The age-specific fertility rates determine how births are distributed by age group. For example, residents of Manhattan exhibited a pattern of delayed fertility with relatively higher rates in the older age groups, which suggests higher age-specific fertility rates at the older child-bearing ages. These age-specific rates can be summed to produce an overall measure of fertility for women in each borough, called the Total Fertility Rate (TFR). The TFR permits us to change overall rates for all women, while the age-specific fertility rates permit us to alter fertility levels for particular groups.

b) **Mortality** – rates of survival were created for each five-year period. These rates represent the percentage of persons who are likely to survive to the next five-year time point. Survival rates for each age group are multiplied to yield the number of persons who survive five years later\(^{12}\). Naturally, younger age groups have much higher survival rates than older ones, but no age group is immune from death over a five year period.

c) **Migration**- Because there is typically more available and accurate data for births and deaths, migration is the most volatile component of the projection\(^{13}\). It is almost always more desirable to incorporate gross migration data (in migrants and out-migrants) into the model, but it is extremely rare that such data are available. Instead, net migration analysis was performed\(^{14}\), which is just a total measure of positive or negative migration.

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\(^{11}\) Age specific fertility rates are based on five year age groups beginning with 15-19 year olds and ending with 45-49 year olds. All these age groups represent the “child-bearing” population. In order to calculate the actual rates, the number of births an age group produced is divided by that age group’s female population. For this projection, births were based on a three year average (2008, 2009, and 2010) so that the yearly estimate of births is not subject to any one-year anomalies. All the age specific fertility rates are summed, then multiplied by five to determine a total fertility rate for the five-year projection interval.

\(^{12}\) Survival rates are not precisely the proportion surviving to the next age group. Instead, they are calculated through a life table, which determines survival in terms of life expectancy and person years lived within an interval against all remaining intervals. This is because each age group is not subject to the exact same chances of dying, since people are distributed evenly throughout the age group. For instance, the 0-4 year old age group is not merely comprised of infants at the beginning of the projection. Rather, it includes infants, 1, 2, 3, and 4 year olds alike. This is why a simple proportion cannot be applied to each age group- people are moving to the next age group before the five year period has concluded and are subsequently subject to a different chance of dying.

\(^{13}\) Although the Census does keep track of where individuals were located five years ago, there is no definitive source for migration data.

\(^{14}\) Net migration analysis is the process of comparing what the population would be adjusting only for survival and
by age group. While each age specific net migration rate calculated determines the
distribution of migrants, the crude migration rate\textsuperscript{15} determines the total level of net
migration within the population of interest.

There were two problems with the population input that had to be controlled for before the
component rates were ever established.

**Adjusting for Undercount in 1990** - As far back as the first “modern” census in 1940, the
census has been unable to count the entire population. Steadily, the census has worked to reduce
this phenomenon in their decennial estimates using methods such as the post-enumeration
survey, but it was estimated that the undercount in 1990 was 4.86 million for the nation, or 1.86
percent, in a 1991 census report. In 2000, there have been a number of estimates from newly
implemented Accuracy and Coverage Evaluation (A.C.E), but all show the 2000 population with
negligible levels of undercount\textsuperscript{16}. Ultimately, the Census Bureau made no adjustments to the
1990 and 2000 population counts; the former for political reasons, the latter because the count
was considered accurate\textsuperscript{17}.

Using the 1990 and 2000 populations as starting and ending points for calculating component
rates will produce inconsistent results. This is because they are invariably two different
measures of the New York City population. Since the 1990 census population is actually much
lower than it really is, the overall growth that is observed in the 1990’s will appear much more
significant than it really is. Thus, fertility rates will seem higher, survival rates will seem better,
and migration rates will seem more positive. This effect will project a population that is
increasing at a greater rate than the “real” components would suggest. In order to determine
these “real” components, it is necessary to adjust the 1990 population to correct for the under-
enumeration of nearly 250,000 people in New York City\textsuperscript{18}. For the 2000 to 2010 period,

\textsuperscript{15} The crude migration rate (CMR) is calculated differently than the total fertility rate. Instead of summing all the
age specific net migration rates, the CMR is figured by adding the estimated number of net migrants in the first
portion of the relevant historical period to the net migrants in the second portion of the period, dividing by two, then
dividing that figure by the mid year population of the same period. For example, if the observed period of migration
is 2000-2010, then the 2000-2005 net migrants would be added to the 2005-2010 net migrants, then divided by two,
then divided once again by the 2005 population.

\textsuperscript{16} Among the A.C.E., the A.C.E. II, and a revised Demographic Analysis approach that accounted for a better
measurement of immigration, the total undercount rates were 1.15%, -0.48%, and 0.12% respectively.

\textsuperscript{17} As far as the projection is concerned, the 2000 count is correct. Although it is believed that there are some
inconsistencies by race within the 2000 count, this is acceptable since the projection only evaluates the population
by age and sex.

\textsuperscript{18} The undercount was adjusted by the age and sex rates in 1990 PL-471 file (revised 1999) that was based in
methods of Demographic Analysis, not by the Post-Enumeration Survey. All age groups with any overcount were
demographic analysis estimates of coverage will be available starting in December of 2010 and will provide an idea of what adjustments may be needed to the 2010 Census in order gauge actual change by removing the component for change in coverage.

**Group Quarters Exclusion**- When considering those that live in a dormitory, nursing home, or even a prison, it is obvious that their mortality, fertility, and migration patterns are entirely different with respect to the general population. It is a common practice to remove group quarters from the general population, and place them back into the population figures after the projection is completed. This method allows for those in group quarters to be included into the forecast, but under completely constant conditions. That is, the group quarters population remains the same from base year to final projection because it is subtracted from the population before the projection, and added to the population after the projection, which makes them independent of any components of change.¹⁹

**Choosing the Best Baseline Rates**

There are a number of scenarios that can be manufactured to produce different population results that all depend on what years are observed to calculate the components. If a fertility rate was abnormally high from 1975-1980, one might go out of the way to use these to calculate a fertility component, if it is desirable to produce a bigger population. However, rates should be incorporated based on their relevance, not their outcome.

**Fertility** – Like many places across the United States, New York City has experienced a fairly steady decline in fertility since the baby boom ended in the 1960s. Using a great deal of historical data would inflate the numbers, and too many births would be projected. The 2000 fertility data is most representative of what is likely to happen in the future and the observed births from 2000-2005 are quite similar to the 2000 rates. The 1990 TFR was higher for all boroughs compared to 2000 and considerably higher in the Bronx, Brooklyn, and Manhattan. It is not reasonable to assume that fertility will ever revert back to trends that occurred back from 1980-1990. Although fertility has been on a fairly steady decline, we are not likely to adjust levels downward for any future time interval for two reasons. First, we think that fertility rates have leveled off significantly in the most recent years, and second, fertility rates must at least be maintained in order to correspond with the long-term sustainability planning and future vision of the city. The availability of 2010 denominators in 2011 will provide us with an opportunity to add to our historical series of fertility rates and discuss whether to alter future levels.

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¹⁹ There are circumstances when one should consider an increase in group quarters through a projection, which mainly involve the possibility of plans to expand or create group facilities in a given area.
Mortality/Survival – In most developed nations, survival rates have continued to improve for all ages, and life expectancy has jumped by dozens of years just in the past century. Like fertility, it is naturally prudent to incorporate the most recent mortality data into the projection. Otherwise, obsolete survival rates would not be able to account for the large number of persons that are living longer. Accordingly, the 2000 survival data were used in the baseline, and the 1990 data ignored. This is intuitive, since the 1990 data has higher mortality for all age groups. Unlike fertility however, it was essential to improve survival in later time periods of the projection. Therefore, we anticipate incorporating an incremental change in survival, starting with our first projection for 2015 and continuing thereafter. This will be done by applying anticipated, age-specific improvement to the rates of each age group. The same adjusted rates will then be carried out to 2045-2050.

Migration – The differences between migration patterns from 1980-1990, 1990-2000, and 2000-2010 are quite substantial not only in terms of crude migration, but equally in terms of age-specific migration patterns. New York City migration trends are constantly evolving, and it is necessary to use a 1980-2010 migration rate average for both the CMR and the age-specific rates in order to create a more encompassing historical base. This twenty-year average will be more likely to represent future migration than the most recent ten year data due to the extremely volatile nature of migration in the city.

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20 The 1980-2010 migration rate average will have to be calculated separately by decade, and then averaged “after the fact.” This was because there were two separate 1990 populations. For 1980-1990, the 1990 population remained unadjusted because it was assumed that the 1980 enumeration was “equally as miserable.” However, the 1990-2000 rates used the 1990 population that is adjusted for undercount. Because two separate populations for 1990 had to be used, two separate migration components needed to be calculated for each decade in question, and only then could they be averaged together. We have yet to see what the estimates of coverage will look like for the 2010 Census.
Appendix B

DETAILED DISCUSSION OF CORROBORATION USING THE HOUSING UNIT AND PLANNING METHODS

Step 1 – Estimating the Level of New Construction and Conversions for 1990-2010

Change in the number of housing units was separated into the following components:

a) New construction – certificates of occupancy for units created by way of new residential construction issued by the New York City Department of Buildings;

b) Gut rehabilitation of abandoned structures – number of units in earlier abandoned buildings that were rehabilitated under a special program coordinated by the New York City Department of Housing, Preservation and Development;

c) Demolitions – estimate of the number of units in structures that were demolished, from the New York City Department of Buildings; and

d) Conversions – estimate of the net change in number of housing units due to subdivisions and consolidations, derived as a residual.

After extracting components a, b, and c from the total change, what remains represents housing units created through conversions of existing buildings. For parts of Manhattan, this method will not work, because of an undercount that existed in the 2000 Census, which resulted in negative estimates of conversions. This was not a problem because, as discussed below, actual data on units created through conversion and alteration for these areas were available through administrative records.

The 2000 Census was relatively complete in most neighborhoods. An unprecedented level of paid outreach and the development of partnerships with local governments led to a more accurate enumeration in 2000. For the first time, the Census Bureau was permitted to share their address lists with local governments in the Local Update of Census Addresses (LUCA) program. More elaborate outreach and improvements in the census address list resulted in improvements in census-taking, referred to as “coverage improvement,” between 1990 and 2000. While the value of improved coverage has obvious political and program benefits, it does pose a demographic dilemma; part of the change between 1990 and 2000 was not “real,” in the sense that it occurred

21 The City of New York submitted some 369,000 addresses to the Census Bureau that were not on their initial address lists through the LUCA program. It was later determined by the Census Bureau that 149,000 housing units enumerated in the 2000 Census and contributed by the City of New York were “unique,” in that no census process detected the existence of these housing units. It is believed that the effect of these improvements was negligible in a large portion of Manhattan, because of the way the Census Bureau compiled its address list.
because of an improvement in the capacity to capture housing in 2000. Part of the change in housing units consists of units that were actually present in 1990 but counted for the first time in 2000. Therefore, we had to estimate the level of “real change,” by extracting out that portion of the change having to do with improved census-taking; change between 1990 and 2000 net of the effects of coverage improvement.

We did this by creating a 1990 Census adjusted population, using estimates of undercount at the census tract level from the 1990 Census coverage evaluation program’s Post Enumeration Survey (PES). The 1990 PES estimated the number of persons who were missed in the 1990 Census by revisiting a sample of blocks to determine whether people were or were not counted, with the resulting data used as a basis for creating rates of adjustment for several hundred subgroups of the population. Some persons missed were in households that were counted, while others were part of households that were missed. Our goal was to estimate the number of households missed using a series of assumptions about the relationship between persons missed and households missed, thus allowing us to use the 1990 PES data to determine households that were omitted.

Since the effects of new construction, gut rehabs and demolitions are, by definition, post-1990 events, the number of households in the four boroughs missed in 1990 was subtracted from the total number of conversions, derived using the residual method.

Thus, the real change in occupied housing units between 1990 and 2000 was about 161,400 units. Net new construction and rehabilitation of abandoned structures accounted for 64,100 and 36,400 units, respectively, resulting in about 61,000 units created through conversion. Since the adjusted 1990 population was adjusted to include the effect of conversions missed in the 1990

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22 The PES sample was about 172,000 housing units. Results from the PES were also compared with a sample of households enumerated in the census to determine the number of erroneous enumerations.

23 There are two key limitations to this logic, however. One is the assumption that the 1990 PES actually did a good job of capturing people who were missed in that census; people who evaded the census will also may have evaded the PES interviewers. And, the second is the assumption that missed persons can be matched to missed households. Regarding limitation one, sometimes referred to as “correlation bias,” no acceptable method has ever been created to take this problem into account. Therefore, the Census Bureau estimate of approximately 244,000 persons missed in New York City is the only number available. Regarding missed people and missed households, (limitation two), some published estimates for the nation are available to discern the relative amount of the undercount that can be associated with “whole household misses,” as opposed to “persons missed in existing households” (Hogan, 1993). For the nation, one-third of the undercount was clearly associated with whole household misses; however, there are cases where buildings were included in the census, but where households therein were omitted, a “gray area” that is indicative of missed units. After careful scrutiny of the options, we adopted an assumption that just over one-half of the 1990 undercount for each community district could be associated with missed households. Taking this number and dividing by the average household size for each CD in 1990 yielded an estimate of units missed in 1990. (This further assumes that the average household size for missed households in a community district is similar to that of enumerated households from the census.)
census, we can conclude that these 61,000 conversions occurred in the post-1990 period. Thus, 38 percent of housing unit change in the 1990s was the result of conversions. The neighborhood distribution of these 61,000 units was used as a basis for determining the relative effect of this component in successive time periods.

In contrast, 2000-2010 was a period of high housing growth through new construction. The city had a net increase of more than 180,000 housing units through new construction and through the conversion of commercial/industrial buildings to residential use. In addition, there was some number of units added to the housing stock through the subdivision of existing buildings. This was the reverse of the situation in the 1990s, where very few units were created through new construction. At the same time, we suspect that there has been an increase in average household size in New York City of almost one-tenth of a person, from 2.59 to 2.68, which will add to the city’s population. At present, we do not know how well the decennial census measured the city’s population. Estimates of coverage -- undercount and overcount -- will not be known until 2012, so we will likely have to make assumptions about coverage error directly from our read of the census data products released in 2011.

**Step 2 – Independent Estimate of Population for January 2020 Using Housing Units**

The population projection for 2020 will be created using a method that includes separate estimates for the components of change -- net new construction, conversions and average household size for 2015, as a continuation, in attenuated fashion, of trends for 2005-2010. Certificates of occupancy for new housing along with permits for demolitions will be used as a base for estimating the effects of net new construction in the 2010 to 2015 period. In addition, housing units created through conversions derived for 2005-2010 as a residual will be used along with 2010 Census housing unit data as a basis for establishing the level of conversions for most neighborhoods. Since so much new construction took place in the previous decade, a decision was made to carry over only a portion of new construction.\(^{24}\) Average household size and vacancy rates will be derived for Census tracts from the 2010 Census and from a regression model that uses changes in immigration to predict household size.\(^{25}\) Using data on change for 2010-2015, each component was then projected for 2020. Finally, the number of persons in

\(^{24}\) For previous projections, conversions in the 1990s were first multiplied by .475 to derive an initial estimate for the April 2000 to December 2004 period. The final number of conversions was set at 30 percent of this initial estimate. Estimates of conversions for the 1990s were set to zero in selected census tracts because they were usually indicative of anomalies or special circumstances, such as problems with the enumeration of public housing projects in 1990. After taking a look at the 2010 Census results and the results from our own administrative data files, a decision will be made on what the pattern might look like for 2010-2015.

\(^{25}\) We are grateful to Warren Brown of the Cornell Institute for Social and Economic Research (CISER) for working with us to construct projections of average household size in cooperation with the Department of City Planning.
group quarters is likely to be held constant at 2010 levels, although an evaluation of changes to that population in the way of new facilities may yield some changes.  

**Step 3 – Corroborating the Population Projections for 2020-2050**

**Planning Analysis of Capacity for Growth**

The determination of capacity constraints was a major input to the model for the post-2010 period. Existing housing, land use, zoning and impending initiatives along these lines all affect how much an area can grow.  

For each borough, shorter-term planning and zoning initiatives were examined, sites available for development (i.e., “soft-sites”) were identified, and measures of the capacity for growth were calculated based on space available for housing development. This capacity was expressed as housing units that could be created. This was compared to the level of housing needed to accommodate the increase in population.

The population forecast to 2050 needs to be considered in the framework of potential site “capacity,” defined as sufficient available sites and residential floor area to accommodate projected growth. Given the lack of a model to accurately forecast changes in the supply of potential housing sites or market conditions over such a long period of time it is clear that a forecast to 2050 requires assumptions.

The analysis involved two basic tasks: (1) preparing a comprehensive list of sites with a reasonable expectation that they could be developed or redeveloped with housing, and (2) evaluating the propensity for sellers and buyers of sites in all the various land uses to effect transactions that would produce additional housing.

Two principal criteria guide the selection of sites for further consideration: (1) sites must have residential use currently allowed, and (2) sites must be vacant or underutilized. Although zoning changes are likely to be made that would modify projected capacity, it is too speculative to make large-scale assumptions about such changes or their net effect, so none are made.

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26 The NYC Department of City Planning added about 128,000 housing units to the Census Bureau’s address list as part of the 2010 Census Local Update of Census Addresses (LUCA) Program (2008-2009) and the New Construction Program (2009-2010). This should improve the census enumeration by reducing the incidence of undercount as a result of the omission of housing units from the address list.

27 We do recognize that shifts in household size can affect population change independently of the considerations described above and is a limitation of the model.

28 The terms “sites”, “lots” and “floor area” are sometimes used interchangeably even though, technically, capacity is defined as additional floor area regardless of the number of sites or lots.

29 All lots with allowed residential use are considered in this analysis regardless of the zoning district. Current bulk regulations that govern the size of buildings are unchanged. Conversely, residential buildings in zoning districts that do not allow housing (non-conforming uses) are excluded.

30 “Underutilized” is defined as total building or floor area less than 50% of that allowed under zoning.
Potential capacity on vacant and underutilized sites was the central focus of the analysis.\(^{31}\) The selection of underutilized lots is predicated on two related assumptions. Transactions for development on underutilized sites are assumed to be more likely because higher bids could generally be offered based on the unused development rights. Conversely, it is assumed that properties built to 50 percent or more of the maximum allowed floor area would generally be valued and priced more on continued use of the property.\(^{32}\)

For all lots meeting the designated criteria, a net developable floor area (capacity) was computed. In each case, the gross developable floor area was computed simply by multiplying the lot area times the Floor Area Ratio allowed under the current zoning.\(^{33}\) On developed lots, the entire building area was subtracted from the gross to arrive at the net developable floor area.\(^{34}\)

Applying all of these assumptions and constraints produces a total of more than 46,400 lots that would yield almost 690 million square feet of Net Developable Floor Area or 690,000 housing units under current zoning if all vacant and underutilized lots were to be redeveloped to the maximum.\(^{35}\)

This scenario is obviously very unrealistic; the question is how much of the maximum theoretical capacity might be realized by 2050? The approach to the answer recognizes different

\(^{31}\) Moreover, net additional capacity from highly-utilized sites would yield only marginally higher capacity due to prior higher site utilization.

\(^{32}\) As a starting point in the analysis, relevant characteristics of all tax lots in the 2005 Department of Finance database were filtered by the residential use and vacant land/underutilized criteria to yield a subset examined under three additional sets of criteria. These are: (1) Regulatory or related criteria, (2) Type of building or land use in order to exclude properties deemed less likely to be redeveloped and (3) Other non-regulatory considerations that presumably constrain developability. Undoubtedly, building use can change over the long term but a more conservative assumption was used: the tenancy might well change but the basic use type would presumably be continued. In the first category are buildings that are landmarked, located in a historic district or situated in a designated wetlands district. Also in this category are residential buildings with six or more units which generally are covered by Rent Stabilization rules that inhibit the likelihood of assemblage and redevelopment. (This constraint was relaxed for specific projected Manhattan avenue assemblages as explained below.) In the second group are properties such as hospitals, nursing homes, museums, utility-owned property, churches, parks and playgrounds, cemeteries, etc., excluded due to a lower probability of redevelopment. In the third group are properties considered too small individually to be developed economically under normal market conditions; a minimum lot size of 5,000 sq. ft. was specified except for 2,500 sq. ft. in Manhattan. The minimum lot size in Manhattan was waived only for specific avenue frontages deemed likely to be assembled in the future. Also waived was the 6-unit limit in view of high Manhattan land values that presumably could yield Rent Stabilized tenants sufficiently high incentives to relocate from these sites.

\(^{33}\) For all residential and commercial zones that allow residential use, there is a residential floor area ratio specified for the zoning that governs each tax lot.

\(^{34}\) This procedure yields a conservative projected capacity because non-residential buildings have non-residential uses according to current assessment records. However, many such buildings in fact have residential occupants, legally or not. Differentiating non-residential and residential use reliably at the building level is often difficult if not impossible. The entire building area is always subtracted, therefore, as if it were in residential use.

\(^{35}\) Assuming 1,000 square feet per housing unit. No housing unit vacancy allowance is included due to the “order-of-magnitude” nature of this projection; technically, a 3% to 5% allowance could be added.
propensities of potential sellers in various land use categories and situations. Clearly, the large majority of vacant sites and those currently used as parking lots or garages can be considered as most available for development, as can many industrial and warehouse properties. The capacity in all of these categories though amounts to 56 percent, thus leaving a substantial amount of projected capacity where the probability of redevelopment would be less assured.

Almost 20 percent of capacity is accounted for by one- and two-family houses, most of which presumably are owner-occupied. The responsiveness of potential sellers in this group to developers’ bids may not be based solely or even largely on financial gain. Many homeowners might decline even a high bid because they would be required to vacate and relocate or have other personal, non-economic reasons. Second, another 19 percent of capacity represents store buildings that are physically underutilized in terms of site development. Some proprietors who own their store may prefer to run a familiar sufficiently remunerative business to having to relocate in much the same way as homeowners.

Third, for sites that presumably would be sold purely on an economic or financial basis, there is uncertainty that redevelopment would be residential, especially in commercial zoning districts. Most commercial zones offer the option of office, retail or residential use. In the early 1990s, for example, a number of office buildings in Lower Manhattan were in play for either office or residential conversion as the market changed and both types of conversions took place over a short period. In addition, the “highest and best use” in financial terms for individual properties depends not only on market conditions but also the perceptions and preferences of the developer.

Finally, although it may be readily assumed that all vacant sites would be developed with housing, on closer examination some limitations on the capacity forecast appear in order. A substantial amount of vacant land is owned by the Federal or State government or the Port Authority, or by a City agency that is currently holding it for police, fire or educational use. These factors would tend to inhibit residential use.

An analysis was conducted to see how the number of units needed to accommodate the increase in population compares with those that could be created under the current and impending land use and zoning policies. It must be stressed that these calculations are based on the theoretical limits of current zoning and land use policies, with modifications to take into account key actions or initiatives over the short term. Theoretical limits to current zoning, for example, may not be a good indication of the upward bounds for future development. Over the course of three decades much can happen that will alter the scenario for further development of the city.

Using the considerations mentioned above, we will be evaluating the PUMAs and the neighborhoods within, as a way of classifying their growth potential:

**Examples from Previous Research**
Level of growth: High. Areas where special initiatives are expected to produce big increases in population and where, by the nature of their location, subway transit access is good (within one-half mile of a subway line).

Group 1 – Subway transit access: good
(Examples: Dumbo/Vinegar Hill/Downtown Brooklyn/Boerum Hill, Brooklyn)

Level of growth: High/Moderate
Group 2 – capacity for growth: yes
subway transit access: good
Example: Highbridge, Bronx

Group 3 – capacity for growth: yes
subway transit access: poor
Example: Canarsie, Brooklyn

Group 4 – capacity for growth: no
subway transit access: good
Example: Woodhaven, Queens

Group 5 – capacity for growth: no
subway transit access: poor
Example: Queens Village, Queens

Level of growth: Low
Group 6 – capacity for growth: no
subway transit access: good
Example: Sunset Park East, Brooklyn

Group 7 – capacity for growth: no
subway transit access: poor
Example: Cambria Heights, Queens

Group 8 – capacity for growth: yes
Subway transit access: good
Example: Greenpoint, Brooklyn

Group 9 – capacity for growth: yes
Subway transit access: poor
Example: Westerly, Staten Island

We expect that some of these categories will not hold up when more carefully scrutinized. For example, while there are a few exceptions, most areas characterized by high density settlement with little capacity for growth, are not likely to be located far away from subway lines; so Group 7 may not be too useful. We may decide to add a “catch-all” residual category for groups that include only a small number of neighborhoods. In addition, we are trying to determine whether it is useful to divide the three variables already in use (level of growth, capacity and transit
access) by the components of change in the model: new housing (including units created through alteration); household size; blend of the two. This variable is more complex than the others because the components of change for the housing unit method vary so much by borough.