

**PROSPECTUS**  
**For Continuing Transportation Planning**  
**For the**  
**Durham-Chapel Hill-Carrboro (DCHC)**  
**Metropolitan Planning Organization**  
**(MPO)**

Prepared by:

Lead Planning Agency (LPA) DCHC MPO  
North Carolina Department of Transportation (NCDOT)

In Cooperation with the:

Federal Highway Administration (FHWA)  
Federal Transit Administration (FTA)

Approved by the DCHC MPO Board  
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## **OVERVIEW**

The Unified Planning Work Program (UPWP) Prospectus outlines the scope of work to be undertaken annually by DCHC MPO. This Prospectus is intended to illustrate the relationship between adopted goals, objectives and program activities. It outlines the general nature of these program elements, which are summarized by general categories, and are referenced to specific projects by project number. Planning activities, products, and a budget are provided for each program element. It provides the agency structure, committee memberships, and key interagency agreements. Primarily a management tool for planning and coordination, it also provides the basis for cataloging and integrating DCHC MPO's activities into general categories. It delineates the programmatic and fiscal relationships essential for internal planning and programming. The current federal regulations that guide MPOs in developing an annual UPWP for the purpose of programming, scheduling, and managing metropolitan transportation planning activities for the program year are found in U.S.C. 23 134(a), and(f) as well as 49 U.S.C. 5303(a), (b). The primary federal regulations are 23 CFR 420.109, 23 CFR 450.308, 49 CFR 613 and 23 U.S.C. 150(c).

## **INTRODUCTION**

State and federal law establish the requirements for transportation planning in North Carolina. Federal funds, such as Section 104 (f) (PL) funds and Section 5303, are available for administering this transportation planning process in the MPOs. These funds are allocated on a reimbursement basis to the MPOs through a formula approved and administered by NCDOT. A Prospectus is a reference document that provides detailed descriptions of work tasks for which transportation planning funds may be expended. The Prospectus defines the work tasks, how they are to be done, and the roles and responsibilities of the supporting agencies. These work tasks are then referenced in the Planning Work Program (Work Program), which is an annual funding document that identifies the work tasks that are to be accomplished in the upcoming fiscal year. The last update to the Prospectus was approved by the MPO Transportation Advisory Committee (TAC), now known as the MPO Board.

The DCHC MPO and the North Carolina Department of Transportation, in cooperation with the various administrations within the U.S. Department of Transportation, participate in a continuing transportation planning process in the Durham-Chapel Hill-Carrboro Metropolitan Planning Area as required by Section 134 (a), Title 23, United States Code. A Memorandum of Understanding approved by the municipalities, the counties, and the North Carolina Department of Transportation establishes the general operating procedures and responsibilities by which short- range and long-range transportation plans are developed and continuously evaluated.

The Prospectus contained herein is primarily a reference document for the 3-C —or cooperative, continuous, and comprehensive — planning process. Its purpose is to provide sufficiently detailed descriptions of work tasks so that staff and agencies responsible for doing the work understand what needs to be done, how it is to be done, and who does it.

A secondary purpose of the Prospectus is to provide sufficient documentation of planning work tasks and the planning organization and procedures so that documentation is minimized

in a required annual Unified Planning Work Program (UPWP). The UPWP identifies the planning work tasks that are to be accomplished in the upcoming fiscal year and serves as a funding document for the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) of the U.S. Department of Transportation.

The Metropolitan Planning Organization (MPO) is responsible for carrying out the transportation planning process in the Durham-Chapel Hill-Carrboro Urban Area. The MPO is an organization consisting of the representatives of local government; the North Carolina Department of Transportation; a Transportation Board; a Technical Committee (TC); and the various agencies and units of local and State government participating in transportation planning for the area. The respective governing boards make policy decisions for local agencies of government. The Board of Transportation makes policy decisions for the North Carolina Department of Transportation. The municipal governing board and the N.C. Department of Transportation have implementation authority for construction, improvement, and maintenance of streets and highways.

The Memorandum of Understanding established a Transportation Advisory Committee (TAC) composed of representatives from the policy boards to provide policy direction for the planning process, and to improve communications and coordination between the several Policy Boards. The TAC is responsible for (1) review and approval of the PWP; (2) review and approval of the area's Metropolitan Transportation Improvement Program (MTIP) which ensures coordination between local and State programs; (3) review of the National Highway System, review and approval of changes to the Functional Classification Designation (as it pertains to the Surface Transportation Program) and review and approval of the Metropolitan Area Boundary; (4) endorsement, review, and approval of the Prospectus; (5) guidance on transportation goals and objectives; and (6) review and approval of changes to the adopted Long-Range Transportation Plan. As required by North Carolina General Statutes 136-66.2, revisions to the Thoroughfare Plan must be jointly approved by the local governing boards and the North Carolina Department of Transportation.

A Technical Committee (TC), also established by the Memorandum of Understanding, is responsible for supervision, guidance, and coordination of the continuing planning process, and for making recommendations to the local and State governmental agencies and the Transportation Board regarding any necessary action. The TC is also responsible for review of the National Highway System and for development, review, and recommendation for approval of the Prospectus, UPWP, TIP, Functional Classification Designation (as it pertains to the Surface Transportation Program), Metropolitan Area Boundary revisions, and reports of the transportation study. The membership of the TC consists of, but is not limited to, key staff from the North Carolina Department of Transportation, the Triangle J Council of Government, Federal Highway Administration, Duke University, North Carolina Central University, the University of North Carolina at Chapel Hill, the Research Triangle Park Foundation, Raleigh-Durham Airport Authority, GoTriangle (formerly the Triangle Transit Authority), the counties, transit operators, and the municipalities.

The City of Durham is designated as the Lead Planning Agency (LPA) and is primarily responsible for annual preparation of the Planning Work Program and Metropolitan

Transportation Improvement Program. The Triangle J Council of Governments serves as the E.O.12372 intergovernmental review agency.

Transportation planning work is divided into two elements in the Prospectus according to type of activity. Public participation is an important element of the transportation planning process and is achieved by making study documents and information available to the public and by actively seeking resident participation during the planning process. Involvement is sought through techniques such as goals and objective surveys, neighborhood forums, drop-in centers, workshops, seminars, and public hearings.

## **HISTORY – Legacy of Transportation Planning in the DCHC**

The history of transportation planning for the Durham-Chapel Hill-Carrboro (DCHC) Metropolitan Area must be looked from two lenses and described separately; Durham and Chapel Hill and Carrboro. This is because, prior to the 1980 Census, which added Chapel Hill and Carrboro to the Durham Urbanized Area (UZA), all transportation planning activities for these communities took place independently.

Transportation planning has been underway in both areas for quite some time. The first Durham plan, a “sketch” thoroughfare plan, was mutually adopted by the City of Durham on October 21, 1959, and by the State Highway Commission on May 25, 1960. It was based on historic traffic trends, current traffic volumes, and comprehensive field study of the existing transportation system.

The second major transportation planning endeavor resulted in a mutually adopted 1967 Durham Urban Area Thoroughfare Plan. Harland Bartholomew and Associates, a private consultant, was retained by the State Highway Commission in cooperation with the City of Durham and the U. S. Bureau of Public Roads to determine the thoroughfare planning needs of the area. This study was based on external and internal origin and destination surveys, and in-depth analysis of socioeconomic trends of the area, a complete street system inventory, and comprehensive traffic volume counts. These trends and surveys were used to develop traffic models that, in turn, were used to develop and project 1985 travel on the existing highway system. The 1967 plan was developed from the study of these projected traffic problems

A third major transportation study began in 1974 and culminated in 1980 with the adoption of the 1980 Durham Thoroughfare Plan. This study utilized the Federal Highway Administration’s PLANPAC/BACKPAC battery of urban travel demand forecasting computer programs. During this effort, two series of public meetings were conducted to solicit the citizenry’s attitudes about rejected deficiencies and the recommended improvements. The 1980 Thoroughfare Plan was amended by the City and the State in 1985.

The history of transportation planning in the Chapel Hill/Carrboro area officially began in 1955 with the development of a “sketch” plan by W. F. Babcock, a private consultant (who later became the N. C. Highway Commission’s first administrator). This plan was revised

three times over the next six years.

In 1964, Carrboro and Chapel Hill contracted with the Research Triangle Planning Commission to prepare a thoroughfare plan using computer based forecasting techniques. The resulting plans were approved in 1965 by both towns and the N. C. State Highway Commission. A slightly revised version was readopted in 1968.

In 1971, the Towns contracted with the N. C. Department of Transportation to update the area's thoroughfare plan using the PLANPAC/BACKPAC methodology. The Department prepared a draft report around which considerable controversy ensued. This was due to the prevalent local opinion that the recommended plan was not reflective of local sensitivities and values. As such, no plan resulted from this particular study.

In 1979, the towns again contracted with the N. C. Department of Transportation to conduct another study, however, the specific methodology was modified by the local staff which also took the lead role in the development and analysis of alternatives, solicitation of resident input, and documentation of the study's findings. Mutual adoption of the resulting plan by both towns and the N. C. Department of Transportation took place in 1984.

In 1984, the development of the first combined thoroughfare plan for the Durham-Chapel Hill- Carrboro Urban Area began. The study was prepared by the Transportation Study Committee of the Technical Coordinating Committee. Existing system deficiencies were identified, and with the use of computer based travel forecasts, future deficiencies were identified for a 2010 planning horizon. After five years of public review and reevaluation, the first Durham-Chapel Hill-Carrboro Urban Area Thoroughfare Plan was approved by the Transportation Advisory Committee on October 2, 1991. The Durham County portion of the Urban Area Plan was approved by the Durham City Council on November 18, 1991, and by the N. C. Board of Transportation on January 10, 1992. The Orange County portion of the Urban Area Plan was approved by the Chapel Hill Town Council and the Carrboro Board of Alderman, but not by the N. C. Board of Transportation.

The development and adoption of a thoroughfare plan was provided for in North Carolina General Statutes 136-66 which were enacted by the State Legislature in 1959. These General Statutes require State-municipal cooperative development of a thoroughfare plan, provide for State-municipal adoption of the plan, require State-municipal agreement on street and highway system responsibilities, define State and municipal responsibilities, and provide for revision of the plan.

In 1962, Section 134 of Title 23 (i.e. 1962 Highway Act) was enacted by Congress which required the establishment of a continuing, cooperative, and comprehensive transportation planning process in urban areas over 50,000 populations, as a prerequisite for continued federal funding of highway projects. Regulations promulgated by the then Bureau of Public Roads (now the Federal Highway Administration) required State Highway Departments to carry out the transportation planning requirements of the 1962 Highway Act. Thus, the first formal Memorandum of Understanding (MOU) defining a transportation planning process for Durham was adopted by the City of Durham, Durham County and the State of Highway

Commission in June 1965. The 1965 MOU delineated responsibilities for maintaining a continuing planning process and established the Technical Coordination Committee (TCC) now the Technical Committee (TC) with the responsibility for general review, guidance, and coordination of the continuing process.

As a result of the Federal-Aid Highway Act of 1973, a revised Memorandum of Understanding was approved in 1975. The revised memorandum established a Transportation Advisory Committee (TAC) now known as the MPO Board of elected representatives from the governing boards to facilitate coordination and communications between the several policy boards. The TAC was given responsibility for assisting in the development of a coordinated multi-modal transportation capital improvements program for the planning area.

The 1980 Census resulted in the Durham Urbanized Area being expanded to include the Towns of Chapel Hill and Carrboro and a portion of Orange County as well as a significantly larger part of Durham County. Consequently, the MOU was revised again to include the additional member governments, the Triangle J Council of Governments, and the Research Triangle Foundation.

The 1990 Census did not significantly expand the Durham-Chapel Hill-Carrboro Urban Area boundary. However, the federal enactment of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and the Clean Air Act Amendments of 1990, the creation of a regional transit authority, and a general spirit of regionalism resulted in the mutual agreeable expansion of the planning area to include the Town of Hillsborough and surrounding area. Northwest Chatham County had previously been included in the Chapel Hill and the Durham-Chapel Hill- Carrboro Planning Areas, but Chatham County had not been a party to the MOU. The MOU was therefore revised to include the Town of Hillsborough and Chatham County in 1993.

Two pieces of watershed legislation, CAA and ISTEA altered the course of transportation planning and policy as well as integrated land-use and transportation, placed emphasis on multi-modalism and mandatory examination of air quality and environmental factors. Through ISTEA, congress empowered MPOs and gave them certain funding decision making (STP-DA).

In 1993, the first MPO staff was hired to implement ISTEA requirements and the birth of non-NCDOT, MPO-led planning was on the way.

# II-A: Data and Planning Support

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## II-A-1: Networks and Support Systems

This section covers data and processes used to support transportation planning related to transportation infrastructure. It includes (but is not limited to):

### *Traffic Volume Counts – NCDOT, DCHCMPO*

Traffic counts will be taken on a biennial schedule at specified locations. These summaries can also be calculated on an annual basis by TPD inside the transportation study area. Traffic data will be collected on weekdays for a minimum of 48 hours and converted to AADT counts. The respective municipal department is responsible for obtaining counts at specified locations on the municipal owned streets within the MPO region and for furnishing the raw daily traffic counts, count information, and location maps to the NCDOT Transportation Planning Division the first week of November for each scheduled collection year. The Transportation Planning Division is responsible for obtaining counts at specified locations on other segments of the major street system, for updating the count location map biennially to reflect any changes made in the major street system, for preparing the Annual Average Daily Traffic Volume Map, and for sending this information to the Lead Planning Agency. MPO counts will be available to the general public on the NCDOT web page in spring of each year. As a part of the required Congestion Management Process (CMP), the MPO may implement a Congestion Monitoring Program. Special counts may be taken during travel model updates or validations. These include counts at screen-line stations, external stations, major trip generators, and key intersections as needed. Traffic count types may include daily, hourly, vehicle classification, or turning movements. The Transportation Planning Division will coordinate traffic data collection for these special counts.

### *Vehicle Miles of Travel (VMT) – NCDOT TPD, DCHCMPO*

The MPO will continue to tabulate VMT by functional classification and County. As specified by the Metropolitan Transportation Plan (MTP) Goals and Objectives, Targets and annual VMT growth will be monitored and compared to MTP Targets. This information will help determine if the Plan targets are being met. In addition, VMT will be used in air quality planning, MPO climate change planning, Greenhouse Gas Plan update, evaluation of MPO “what-ifs” scenarios, Non-motorized trip analysis, B/C ration analysis, congestion management program monitoring, model validation, Travel Demand Management (TDM) monitoring and performance evaluation, MTP target measures of effectiveness, etc. Vehicle miles of travel are computed by multiplying the length of each link times the annual average daily traffic volume on that link. Vehicle miles of travel are tabulated annually by county and functional classification by NCDOT-TPD. MPO's may also choose to estimate VMT for the municipal limits in their urbanized area and/or the entire MAB on a regular basis.

### *Street System Changes – NCDOT, DCHCMPO*

Records of improvements to the state highway system, whether planned, underway, or completed, are maintained by the Division Engineer of the NCDOT. Each municipality should maintain similar records for its municipal street system. The municipalities participating in the Powell Bill Program must certify city street mileage maintained annually. An inventory of the geometrics and signalization of the existing major street system for the planning area should be maintained by the MPO. Periodically or as changes or additions to the major street system occur, the inventory may be updated. This inventory will need to be current when the travel model is updated.

The MPO will continue to support land-use mapping activities such as aerial ortho-imagery, and street centerlines, names and addresses, maintained by cities and counties and integrated by the MPO and TRM Service Bureau to accurately geocode buildings and employers to Transportation Analysis Zones (TAZ) and other geographic areas. DCHC MPO will update local street centerline GIS data for all DCHC MPO counties and all counties immediately adjacent to the region. DCHC MPO counties will be updated as needed, with metadata verified or created; the old layer will be archived with a timestamp in the filename. Adjacent counties will follow the same protocol but be done on a bi-annual basis unless a higher frequency is required. The MPO will continue to update the inventory of improvements to municipal street systems and update the inventory of signalization on existing major streets, to provide accurate inputs for the Triangle Regional Model (TRM). The MPO will monitor changes in street mileage systems from previous years and summarize inventory by functional classification. The MPO will continue to update HERE (formerly NAVTEQ) street file and attribute data. The MPO municipalities (Town of Chapel Hill, the Town of Carrboro, and the City of Durham) will continue to gather, from the NCDOT Division 7 and 5 offices and compile in database, improvements to the state highway system, whether planned, underway, or completed. Each municipality will compile and maintain similar records for its municipal street system. The MPO municipalities participating in the Powell Bill Program will certify street mileage maintained during this fiscal year. The product of this task will feed into the MPO GIS and data management system. The objective is that, periodically or as changes or additions to the major street system occur, street inventory will be updated and be current through the proposed data automation and management system. These data will also feed into the MPO performance measures as required by federal regulation.

### ***Traffic Crashes – DCHCMPO, NCDOT***

North Carolina law requires that any traffic crash involving personal injury and/or property damage in excess of \$1000 be reported in detail to the Division of Motor Vehicles (DMV) of the NCDOT. The DMV also receives a detailed report on any crash investigated by a law officer.

Copies of all these reports are forwarded to the Transportation Mobility and Safety Section of NCDOT, where the information is summarized and stored. Annual analysis is produced in online maps and are used to identify short term improvements, and identify problem areas for future improvements. High Frequency Crash location maps are available on NCDOT's website.

The LPA will collect, tabulate and analyze route traffic crash data from NCDOT's traffic accident portal (TEAAS) and prepare a summary and analysis of high crash locations by mode as well as compare data analysis to previous years' results. Crash data will include auto, bike and pedestrian crashes for the latest three-year period within the MPO Metropolitan Planning Boundary. This task will align, build from, and support the safety work of the NCDOT as required by federal regulations. The task will feed into the MPO Congestion Management Process (CMP), MPO MTIP ranking and project prioritization, SPOT, mobility funds and urban loop funds prioritization, etc. The LPA will update the geo-spatial application that will map, manage and analyze crash data in a way that will allow planners, engineers and the public to better understand crashes within our region. The analytical tool will also allow the MPO to formulate public policy with other entities to reduce crashes and improve public safety.

### ***Transit System Data – DCHC Area Transit Agencies***

Items to be considered are transit patronage, route changes, service miles, load factor, routeridership changes, boarding and alighting counts, headways, frequency, and service hours.

The LPA will continue to undertake a comprehensive transit system data collection effort. Transit data will be collected for MPO transit providers including GoDurham, Chapel Hill Transit (CHT), GoTriangle, and Duke University Transit. This will include Automatic Passenger Count (APC) data to evaluate transit service performance, route productivity, and develop standards. Operators will identify strengths and weaknesses of service by route in order to assess service barriers and future options.

Information will be used to monitor service and meet FTA National Transit Database (NTD) reporting requirements. APC data will be summarized and tabulated for CHT, GoDurham, Duke, and GoTriangle as follows: stop level, trip level, time period (peak/nonpeak) level, segment by trip, segment by time period, spatial analysis (TAZ and census tract) and micro analysis (system level).

### ***Air Travel – RDU***

The MPO will continue to undertake routine collection of travel and passenger data at the Raleigh-Durham International Airport (RDU). Data to be monitored, collected and analyzed include, but are not limited to, number of daily flights, number of daily enplaned passengers, number of deplaned passengers, ground transportation, and tons of cargo activity. The purpose of the data collection and monitoring is to determine the influence of RDU as a generator on the regional transportation system and to identify need for additional services. Data may be collected and analyzed to determine influence of local air travel on the area's transportation system and identify needs for additional services. Airport enplanements/deplanements may help relate air travel to ground travel in future updates. A ground transportation survey will be done to coincide with other continuous On-Board transit travel behavior survey.

### ***Central Area Parking Inventory - DCHCMPO***

Inventories of both on and off street parking supply in the MPO central areas are maintained by the MPO. Periodic updates and inventories of other parking facilities in other areas will be performed as determined by the MPO through the development of the Planning Work Program.

The LPA will continue data collection and inventory of on- and off- street parking facilities in the Central Business Districts (CBD), major generators and universities. Parking data to be collected include number of spaces, parking fee rates (hourly, daily, and monthly), subsidy, duration, average weekday costs, and demand. Parking information collected will help in the calibration and maintenance of the travel model. The LPA will update the parking inventory and usage spatial geodatabase as well as Parking Area Study Analysis.

### ***Bicycle and Pedestrian Facilities & Counts Inventory (including Trails) - DCHCMPO***

An inventory of significant municipal, county and state, and bicycle and pedestrian transportation facilities shall be maintained. These systems shall be incorporated in the Metropolitan Transportation Plan update and analyzed in conjunction with other transportation performance measures. The LPA staff will continue to participate in bicycle and pedestrian planning in the region and provide technical assistance/coordination to other government units as needed. The MTP supports and encourages bicycle and pedestrian planning and staff continue to work toward achieving those goals. The primary activity in this task will be the further development of the bicycle system inventory using GIS online and Google Earth. The MPO will continue to conduct an inventory of bicycle and pedestrian facilities as part of the CMP and the development of performance measures. The proposed inventory will provide accurate inputs for the travel model update as well as help identify future sidewalk projects, guide pedestrian improvement planning, and to support specific projects, such as the Comprehensive Bicycle Plan, Comprehensive Pedestrian Plan, TIP/SPOT prioritization, development of Transportation Alternatives (TA) funding allocation criteria, etc.

### ***Collection of Network Data – NCDOT TPD and DCHCMPO***

Collection of the transportation network data is necessary to build a base network for the travel model and for other planning purposes. Data may include, but not be limited to: 1) posted speedlimit; 2) width / number of lanes; 3) segment length; 4) traffic signal locations. These items are generally the standard parameters required, but others may be needed as models become more sophisticated. The MPO will continue to update transportation/model network data. The proposed work activities will include collection and update of the following transportation network variables and attributes:

A-Highways: 1) posted speed limit; 2) number of lanes; 3) segment length; 4) turn pockets; 5) parking conditions; 6) traffic signal locations and stop conditions; 7) signal density; 8) access control and driveway conditions; 9) land use and area type; 10) free flow speeds; 11) Travel Time; 12) median condition; and 13) facility type and functional classification.

B-Transit: 1) headways; 2) speed; 3) hours of operation; 4) services miles; 5) fare structure; 6) transfer information; 7) schedule information; and 8) route information and service characteristics for each route.

C-Bicycle and Pedestrian: 1) mileage; 2) activity density; 3) neighborhood characteristics; 4) environment/friendliness factors/indices; and 5) connectivity.

### ***Capacity Deficiency Analysis - NCDOT TPD and DCHCMPO***

A system planning level capacity deficiency analysis will be made to determine existing and projected street deficiencies. Link capacities will be calculated in accordance with procedures based on the latest edition of the HIGHWAY CAPACITY MANUAL and other resources. This task will include mode neutral capacity analysis such as Load factor for transit and throughput analysis.

## **II-A-2: Travelers and Behavior**

This section covers data and processes used to support transportation planning related to socio-economic data and conditions. It includes (but is not limited to):

### ***Dwelling Unit, Population, and Employment Changes - DCHCMPO***

The MPO will continue to support land-use mapping activities such as aerial orthoimagery, flown metro-wide every 2 years by the region's cities and counties to provide the basis for geographically accurate local land use data; parcel-level land use file, maintained by counties and integrated by MPO planning analyses, to provide current land use; planned land use, maintained by cities and counties and integrated by CommunityViz to represent the collective future imagined by area local governments; street centerlines, names and addresses, maintained by cities and counties and integrated by MPO and TRM Service Bureau to accurately geocode buildings and employers to Transportation Analysis Zones (TAZ) and other geographic areas; and economic and demographic data, maintained by a wide variety of federal, state and local agencies and aggregated by the MPO to monitor changing trends by location or characteristic. The LPA will continue to maintain inventory of dwelling units and population to track changes and to compare with assumptions used in the adopted MTP and CTP.

Changes in development will be used to determine needed changes in transportation services and how well developments compare to current and projected demands. The LPA continues to review developments to assess impacts to the Metropolitan Transportation Plan socio-economic and demographic data for the MTP update, the update of CommunityViz land-use scenario planning, the land-use model update, and transportation project development. Changes in dwelling units and employment within the MPO will be identified and evaluated to determine accuracy and consistency with the socio-economic forecast. The MPO will review and tabulate Census data, local parcel, zoning, tax data records, InfoUSA, and Employment Security Commission data as part of this monitoring task. The MPO will continue work on the update and enhancement of the MPO GIS enterprise and the Employment Analyst.

### ***Collection of Base Year Data - DCHCMPO***

Collection of the following variables for existing conditions, by traffic zone, is required: (1) population; (2) housing units; and (3) employment. It is expected that re-projection of travel patterns, including

transit, would require a re-tabulation of these factors used in developing the travel models. This task provides travel and socio-economic data for the modeling update. The data collection initiatives include processing and analysis of Census, American Community Survey (ACS) and employment/special generator data. These efforts will result in the creation of several travel modeling databases that will be used in the development and update of forecasting tools. The LPA will continue to update the socio-economic and demographic data for the base year model and Title VI demographic/ Minority and Low Income (MLI) profiles. Work activities will include update, estimation and tabulation of the following data elements; population, housing, income, auto ownership, Limited-English proficiency, linguistically isolated households, workers, head of household, environmental justice, linguistic demographic factors, ACS community patterns, school enrollment, etc. It is expected that these variables will be linked to the proposed data automation projects, and a GIS database and management system will be used to maintain the aforementioned socio-economic and land use information. An integral part of this task also will be continuous data verification, reconciliation, and quality and error checks.

### *Travel Surveys – DCHCMPO, TRM Service Bureau*

Travel surveys may be implemented to attain such items as origins and destinations, travel behavior, transit ridership, commercial vehicle usage, workplace commuting, freight movement, etc. Therefore, these surveys may be home interviews, cordon O/Ds, and on-board transit surveys to name a few. Rolling ACS style continuous travel behavior survey (household survey) and Transit Onboard survey tabulation and analysis will be conducted biannually. The survey is being managed by the TRM Service Bureau, however LPA staff will be involved in every facet of the survey and analysis.

### *Vehicle Occupancy Rates (Counts) - DCHCMPO*

Vehicle occupancy counts are collected across the service area to measure effectiveness of transportation investments and operations. Information will also be used to comply with the Clean Air Act and is useful in the trip generating process of modeling traffic during the travel modeling phase, as well as other parts of the Metropolitan Transportation Plan.

### *Travel Time Studies - DCHCMPO*

The MPO will continue to undertake BIG Data; travel time and speed data. HERE data, INRIX data and TREDIS will be the main source of travel time/speed data within the MPO. The big travel time data will supply information for CMP, Mobility Report Card, CTP, MTP, corridor studies, feasibility studies, etc. Also, they provide accurate inputs for applications such as the travel model update and the CMP. The MPO will continue evaluation and validation of the travel time field data collector using INRIX and other Bluetooth data. The LPA will collect highway/auto travel time and speed data along major and minor facilities. The MPO will continue to update the HERE travel time data and the MS2 travel time portal.

## **II-A-3: Transportation Modeling**

This section covers data and processes used to forecast future conditions for planning horizons.

### *Travel Model Updates – NCDOT TPD and DCHCMPO*

For each MTP update, a “Modeling Agreement” between the MPO and TPD will be adopted, and it will become a part of the Prospectus or a stand-alone document. There are different kinds of models applied at different scales; the right balance of model types will be agreed upon by MPO with TPD. The responsibility for building and applying the model will also be negotiated between each MPO and TPD as part of the Modeling Agreement.

The purpose of this task is to continue to review and analyze existing travel demand and air quality models in order to determine feasible enhancements to the modeling procedures that are used in the TRM. DCHC MPO will continue to perform air quality, regional travel demand, and micro-simulation model runs for existing and future projects as needed. Staff will continue to be involved in the development, enhancement and update of the Triangle Regional Model (TRM). Specifically, work will focus on the development, calibration, and development of the latest version of the model and preparatory work for next versions.

This element provides for maintenance, improvement, and support of travel models housed at the Service Bureau. These models provide analytical tools for various transportation analyses, policy testing, and public outreach. Improvement activities involve developing new tools and techniques to enhance travel model applications in various areas. Support activities involve maintenance of the software and hardware of the modeling system, documentation, staff training, and assisting consultants who are providing service to the regional projects. This element also provides for technical communication and participation at the State and Federal (FHWA &FTA) levels to ensure travel models are developed in a coordinated manner to meet future needs and expectations. Consultants and University partnership/ assistance will be utilized in undertaking work activities under this task.

The DCHC MPO, with CAMPO, NCDOT and GoTriangle, develops and maintains a regional travel demand model for predicting the impact of transportation investments and land-use policies on travel demand and air quality. The model is used by the MPO in development of the required MTP and CTP, by NCDOT in project development, SPOT/TIP prioritization, mobility funds ranking, by GoTriangle in New Starts and fixed guideway transit analysis, and by local and state agencies for development impacts analysis and scenario planning. Modeling activities essentially include but are not limited to:

- Monitor and understand changes in federal requirements as they affect MPO modeling.
- Continue to improve and enhance models and make them responsive to technical and policy questions the MPO seeks to answer.
- Research ways in which the state-of-the-practice is changing and develop modification and improvements in the modeling process to meet those standards.
- Acquire and process data so the work program can be accomplished to meet federal requirements.
- Estimate, calibrate, and validate current TRM as an on-going activity.
- Ensure that validation focuses on improvements to link level and route level performance.
- Ensure TRM base year and future years are ready for MTP evaluation two years before hand.
- Document TRM so it can be understood and replicated.
- Document the modeling process so that its capabilities and limitations can be understood by policy makers and lay person.

### ***Forecast of Data to Horizon Year - DCHCMPO***

The travel models determine what planning data must be projected to a new design year. In general, the procedure will be to project population and socio-economic factors independently on an area-wide basis, to cross check these projections and convert them to land use quantities if required, and to distribute the projected planning data to traffic zones on the basis of land capabilities, accessibility, and community

goals as implemented through land use controls. The MPO will provide the approved socioeconomic forecasts as well as continue to generate and update socio-economic and demographic projections and forecasts. CTP and MTP forecasts will continue to be re-evaluated and refined to be consistent with local land- use plans as well as State and regional land use policies.

### ***Forecasts of Future Travel Patterns - DCHCMPO***

The MPO will generate and update travel demand forecasts for future years included in the MTIP, SPOT, CMP, MRC, etc. The forecast of future travel patterns will result from using the forecasted planning data as input to the travel demand models. The models are sensitive to changes in trip generation, trip purpose, trip length, vehicle occupancy, travel mode, and patterns of daily travel. The forecast of travel patterns will include a review of these factors and a comparison to community goals and objectives to determine if changes in assumptions are warranted. The network development process is included in this task item.

### ***Financial Planning – NCDOT TPD and DCHCMPO***

As required by FHWA regulations, the MTP must have a financial plan. Project cost estimates, and revenue forecasts are required. Federal regulations allow flexibility in the methodologies used for analysis, but they must include estimates for maintenance and operations as well as construction. This item also covers identifying new and alternative funding sources, including new taxing strategies, impact fees, and public-private partnerships. This also includes a financial analysis for the TIP. Additionally, the MPO will continue to update and refine cost estimates and revenues for the regional transit initiatives and the MTPs. As part of this task, the MPO will examine financial options for funding proposed transportation projects and programs, including review of the financial planning assumptions/projections in the MTP and update of the Durham County and Orange County financial plans based on the latest half-cent sales tax revenue collection.

### ***FTA STOPS and CIG Technical Analysis & Planning – ITRE, DCHCMPO***

The MPO in conjunction with Go-Triangle, CAMPO and NCDOT will continue to work with ITRE, the TRM Service Bureau, for the update, maintenance, and enhancement of regional transit modeling software, which will be used for all FTA capital projects under the Capital Investment Grant (CIG). FTA New Starts and Small Starts planning activities will be done and carried out under this task.

# II-B: Planning Process

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## II-B-1: Targeted Planning

This section includes non-modal specific planning, and focuses on themes across modes. It can include (but is not limited to):

### *Air Quality Planning/Conformity Analysis – NCDOT TPD and DCHCMPO*

Official air quality conformity determinations on the MTP are not required of every NC MPO at this time. However, due to the interest of local and state governments in the quality of the environment, including air quality, an analysis on the MTP may be performed. In non-attainment and maintenance areas, the transportation sector is a key participant in the development and application of the State Implementation Plan (SIP) for air quality.

MPOs have the responsibility to make a determination as to whether or not the MTP and TIP conform to the intent of the State Implementation Plan (SIP). Elements involved in this task include:

- Participation in interagency consultation process as part of SIP development and conformity determination development
- Providing assistance to NCDENR in developing and maintaining mobile source emission inventories Participating in development of TCM's for the SIP; Implementation of TCM's as appropriate
- Performing analysis and approving conformity determination as required (the MPO must approve conformity determination)

### *Alternative Fuels/Vehicles - DCHCMPO*

MPOs can support transportation projects that reduce mobile source emissions and reduce vulnerability of fuel supplies and enhance fuel security in times of extreme weather events or other reasons for petroleum scarcity. Eligible activities include transit improvements, travel demand management strategies, traffic flow improvements, and public fleet conversions to cleaner fuels, among others. Alternative fuel projects for the public and private sector fleet can include coordination of education and incentive programs and/or planning for the provision of fueling or charging infrastructure and pipeline security.

### *Hazard Mitigation and Disaster Planning - DCHCMPO*

Conduct analysis in areas related to climate change and extreme weather adaptation such as assessments of transportation vulnerability to extreme weather events, or to develop options for improving resiliency of transportation facilities or systems related to climate changes and/or extreme weather events.

### *Congestion Management Strategies - DCHCMPO*

The 3-C Transportation Planning Process, as enhanced by MAP-21, stresses efficient system management and operations. Transportation Management Areas are required to develop a Congestion Management Process (CMP). Planning for congestion management strategies such as these are included in this item: Congestion Management System (CMP), Transportation Demand Management (TDM), Intelligent Transportation System (ITS), High Occupancy Vehicle lanes or priorities (HOV), Access Control and Management, Traffic Operations Improvements, Incident Management, Growth Management. This item covers the costs associated with planning for these items, coordination with public and private stakeholders, and marketing or public education.

### *Freight Movement/Mobility Planning - DCHCMPO*

As one of the MAP21's eight planning factors, emphasis is placed on increasing accessibility and mobility options available to people and freight. Tasks included in this category may be a survey of freight carriers, recommendations for improving truck mobility or train/truck intermodal movements, and identifying acceptable truck routes.

The MPO will continue to undertake tasks associated with urban goods movement, specifically freight accessibility and mobility. Tasks associated with the implementation of the Regional Freight Plan will continue. Other tasks to be undertaken include attending and staffing the Regional Freight Stakeholders meetings, survey of freight carriers, recommendations for improving truck mobility or train/truck intermodal movements, and identifying acceptable truck routes. The MPO will continue the management role to update the Triangle Regional Freight plan.

### *Planning and Implementation of Federally Required Planning Factors - DCHCMPO*

Federal transportation regulations require MPOs to consider specific planning factors when developing transportation plans and programs in the metropolitan area. Current legislation calls for MPOs to conduct planning that:

1. Supports the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increases the safety of the transportation system for motorized and non-motorized users;
3. Increases the security of the transportation system for motorized and non-motorized users;
4. Increases the accessibility and mobility of people and for freight;
5. Protects and enhances the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. Enhances the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promotes efficient system management and operation;
8. Emphasizes the preservation of the existing transportation system.
  
9. Improves the resiliency and reliability of the transportation system and reduces or mitigates stormwater impacts of surface transportation; and
  
10. Enhances travel and tourism

In addition, livability principles are to be considered in the metropolitan planning process activities. These principles are:

- Provide more transportation choices
- Promote equitable, affordable housing
- Enhance economic competitiveness
- Support existing communities

- Coordinate policies and leverage investments, and
- Value communities and neighborhoods.

### ***Climate Change Planning - DCHCMPO***

Planning task may involve Greenhouse Gas (GHG) mitigation efforts if federal and state regulations are re-enacted. Essentially this task will include carbon emission reduction and monitoring of performance planning. Technical tools & procedures to analyze carbon emissions are also included; specifically:

- 1) analyze climate change on MTP facilities
- 2) calculate baseline inventory of horizon year and intermediate years emissions produced directly or indirectly by MTP activities
- 3) calculate total emission per capita
- 4) compare climate change impacts of future MTP scenario ad current conditions
- 5) Create viable strategies to reduced total emissions.

GHG Emission inventories will be used by the MPO to understand sources of emissions, develop strategies to reduce emissions, and track progress. Forecast of emissions, or estimates of future emissions, assist with the development of policies and actions that can be taken to establish reduction goals.

The MPO, in partnership with CAMPO and TJCOG, will undertake resilience assessment and monitoring on MTPs (. The FAST Act includes resilience as a Planning Factor which the MPO must address (23 US Code 134, 23 CFR Part 450). Also, the regulation requires that the MTP “include an assessment of capital investment and other strategies to reduce the vulnerability of the existing transportation infrastructure to natural disasters (23 CFR 450.324(f)(7)).

## **II-B-2: Regional Planning**

This element includes development and creation of both the Comprehensive Transportation Plan(NC Requirement) and Metropolitan Transportation Plan (MAP-21 Requirement). To be valid and useful for corridor protection and other uses, the CTP must be mutually adopted by both theMPO and NCDOT. Federal law and USDOT’s Metropolitan Planning Regulations require the MPO to have a Metropolitan Transportation Plan (MTP) that is: multi-modal, financially constrained, has a minimum 20-year horizon, adheres to the MPO’s adopted Public Involvement Policy (PIP), has growth forecasts consistent with latest planning assumptions and local land use plan, meets air quality conformity, and be approved by the MPO Board. The MTP must be updated and reaffirmed every 4 years. The DCHC will continue tasks associated with the update and reappraisal of the Comprehensive Transportation Plan as well as commence data collection preparation for the model base year. The MPO will continue to work on the preparatory work for timely and efficient development of MTPs.

### ***Community Goals and Objectives - DCHCMPO***

In the evaluation of community goals and objectives, the MPO will formulate policies ensuring local goals and objectives are discerned and addressed during the development and implementation of the Metropolitan Transportation Plan.

### ***Highway Element of the CTP/MTP - DCHCMPO***

The Comprehensive Transportation Plan (a subset of which is the highway element of the CTP/MTP) will be evaluated in terms of projected travel, capacity deficiencies, travel safety, physical conditions, costs, design, travel time, and possible disruption of people, businesses, neighborhoods, community facilities, and the environment. The evaluation will include an analysis of the MTP and the

interrelationship between alternative travel modes.

Recommendations should include adequate right-of-way for improvements consistent with the Bicycle & Pedestrian Plan, Transit Plan, and other intermodal connection facilities along logical corridors. If major deficiencies are found with the existing plan, alternative plans will be evaluated. In non-attainment areas, it should be noted that any regionally significant Metropolitan Transportation Plan revisions must be analyzed for conformity with the SIP in non-attainment/maintenance areas.

### ***Transit Element of the CTP/MTP - DCHCMPO***

Transit planning incorporates all vehicular modes other than trucks and the single occupant automobile, including (but not limited to) fixed-route bus service, ridesharing, fixed-guideway transit, and demand responsive transit. The transit plan describes existing transit service and unmet needs, and identifies any additional potential markets. New types, and areas of service may be recommended, supported by ridership forecasts and other analyses. Assumptions and implications related to land use, travel behavior, parking policies and other variables are clearly defined. Establishing objective measures of effectiveness is critical for evaluating transit alternatives. Measures of transit effectiveness include both the reduction of auto use and congestion, and the broadening mobility options.

The MPO will continue with the update and evaluation of transit elements of the Comprehensive Transportation Plan, the MTP, County transit plans, and the regional New Starts. Transit evaluation will include fixed-route bus service, fixed-guideway transit, high capacity transit and demand- response transit. Using travel behavior, ridership forecasts, and other analyses, evaluation of the transit element will look at unmet needs, new service areas and potential markets. Performance measures will routinely be established for evaluating transit alternatives.

The MPO will continue to coordinate with GoTriangle and other regional partners regarding the development of the regional commuter rail. Specifically, the MPO will conduct planning and studies for fixed guideway studies and high capacity transit and circulator transit (North-South BRT in Chapel Hill), and other planning work necessary for the preparation of the FTA Small-Start project. It is anticipated that this work will be accomplished with the help of consulting services.

### ***Bicycle and Pedestrian Element of CTP/MTP - DCHCMPO***

A bikeway and pedestrian plan is an essential part of the multi-modal CTP/MTP for an urban area. Any relevant current guidance pertaining to bicycle and pedestrian elements of CTPs, produced by the Transportation Planning Division, describes the essentials of this task. At a minimum, an update to the inventory of existing and proposed bicycle and pedestrian elements should be included in the CTP/MTP. The MPO will continue with the reappraisal and reevaluation of bicycle and pedestrian elements of the Comprehensive Transportation Plan and the MTP. The MPO and its member agencies will continue work on improving and enhancing bike and pedestrian investment within the MPO.

### ***Airport/Air Travel Element of CTP/MTP - DCHCMPO, RDU***

The MPO will continue with the evaluation of the airport/air travel element of the Metropolitan Transportation Plan, including inter-modal connection and access/ground transportation. This work task will include review of RDU plans, and comparison and integration as necessary with the MTP and CTP for consistency. The MPO will continue to routinely coordinate and collaborate the integration of aviation planning into the MTP update process as well as integrate aviation with other transportation modes. Also, the MPO will continue to facilitate an open, ongoing discussion of regional aviation issues among aviation professionals, regional elected leadership, and local, state, and federal officials; and effectively integrate aviation planning considerations into the overall metropolitan transportation planning process.

### ***Collector Street Element of CTP/MTP - DCHCMPO***

Collector street planning will be conducted as required to develop standards and preliminary locations for collector streets in advance of development. The objective of this planning activity is to ensure optimum traffic operations for the developing street system and transit accessibility to developing areas. Thus, the MPO will continue work on the update of the MPO Collector Street and Connectivity Plan. Work tasks will involve the identification of future collector street connectivity needs, provisions for local street connectivity, development of ordinance implementation provisions, additional local government consultation, and public involvement. The MPO will continue to involve CAMPO, City of Raleigh and Wake County regarding collector street and connectivity planning in Brier Creek and the east Durham area.

### ***Rail, Waterway, or Other Mode of the CTP/MTP – NCDOT Rail Division, DCHCMPO***

The MPO will continue to work with NCDOT Rail Division, GoTriangle, and CAMPO regarding rail transportation in the Triangle. Work includes survey of rail plans, relationship to the MPO Metropolitan Transportation Plan and Comprehensive Transportation Plan, programmatic impacts, etc. Also, this task will include planning associated with commuter rail efforts. The MPO will continue to play an active role in the next step of the commuter rail assessment study and project development.

### ***New Technologies/On-demand Transportation/ Micromobility - DCHCMPO***

The impact of emerging technologies on MPO transportation is frequently requested of staff by the public and decision makers. Under this task the MPO will conduct studies, analysis and planning associated with connected vehicles, transportation on-demand, micromobility, curbside management, etc. This includes other elements such as smart phones, apps, real-time information which help people get around using a multi-modal network of car-sharing, taxis, ride-sharing, and new modes such as micro transit and point-to-point trips.

### ***Land-use Scenario Planning – DCHCMPO***

Federal regulations require the integration of land-use in transportation planning as well as in the development of Metropolitan Transportation Plans. The MPO scenario planning and Community analyses are developed under this task. To prepare for an increasingly uncertain future and a fast-growing region, DCHC MPO, CAMPO, and TJCOG use the Community-viz scenario planning tool to better understand and answer arising policy and “what-if” questions being posed by the public and decision makers. The MPO will continue to enhance and update Rapid Policy Analysis Tool (RPAT) and Vision-Eval, which are developed and maintained by FHWA.

## **II-B-3: Special Studies**

This element includes mode-specific plans and special studies that do not fall under Operational Planning

### ***Special Studies - DCHCMPO***

During the regular reevaluation of the Metropolitan Transportation Plan, there occasionally is a need to make a specific study of a transportation corridor to determine the best solution to a problem. While this may include development of a simple functional design for corridor protection, more detailed studies may include evaluations of alternative modes or alignments for cost, feasibility, environmental screening, and functional designs. In a similar manner, special problems may arise in relation to major land use changes when large-scale traffic generators (hospitals, regional malls, etc.) will either be developed or closed. These land use changes could significantly affect the regional distribution and/or amount of traffic that could require changes to the Metropolitan Transportation Plan to accommodate the newly

forecasted growth. The extent, responsibility, and cost for a corridor or sub-area study, which should be conducted within the work plan of the MPO, would be determined prior to its initiation.

# III-A Unified Planning Work Program

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## III-A-1: Unified Planning Work Program

### *Development of Unified Planning Work Program and Five-Year Plan - DCHCMPO*

A Unified Planning Work Program (PWP) will be prepared annually by the MPO in cooperation with other participating agencies and under the guidance of the Technical Coordinating Committee. The PWP will present the proposed planning work program for the next year and review the most recent accomplishments of the planning process. The PWP will be cross-referenced to the Prospectus to minimize repetitive documentation. The PWP will be reviewed and approved by the MPO Policy Board, the North Carolina Department of Transportation, and Federal agencies providing planning funds for continuing transportation planning. These Federal planning funds are provided by FHWA (Section 104(f)) and FTA (Section 5303). Preparation of a Section 5303 Grant application is also required in addition to the PWP to receive planning funds from FTA. The MPO must annually certify their 3-C Transportation Planning Process annually as part of the PWP adoption. This is used for the submittal of the STIP to FHWA. This should be a separate resolution that is then included in the PWP.

A 5-year plan that shows basic assumptions for work to be performed in future PWPs for the current year and subsequent 4 years should also be developed. This will reflect the high-level PWP categories and show the progression of projects that require more than one year to complete and ongoing maintenance tasks.

## III-A-2: Metrics and Performance Measures

### *Metrics & Performance Measures: - DCHCMPO*

The MPO will establish performance consistent with MAP-21 guidance and any subsequent federal regulations. Under this task, the MPO will collect data, analyze data and establish targets for the following measures: TP1, TP2, TP#, TAM and SOGR.

Each metropolitan planning organization shall establish performance targets and measures that address performance of the transportation system. MPOs shall coordinate with appropriate State and transit agencies in developing targets for the transportation system. The MPO shall integrate in the metropolitan planning process directly or by reference the goals, objectives performance measures and targets described in other State transportation plans and processes, as well as, any plans developed under chapter 53 of title 49 by providers of public transportation, required as part of a performance-based program.

# III-B: Transportation Improvement Program

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## III-B-1: Prioritization - *DCHCMPO*

The MPO list of projects to evaluate under NCGS § 136-18 (42) is developed biennially to communicate the MPO's priorities regarding the funding schedule on already programmed projects, the acceleration of long term projects into the program, and the addition of new projects to the STIP. The List may include cost estimates, purpose and need statements, and other supporting materials. A prioritization process is a key step in cooperative TIP development between the MPO, the transit operator, and NCDOT. Local processes for prioritization such as STP-DA, TA, or CMAQ projects should also be included here.

## III-B-2: Metropolitan TIP (TIP) – *DCHCMPO, NCDOT TPD*

Every 2 years, the MPO will prepare a metropolitan programming document (TIP) which is coordinated with the State Transportation Improvement Program (STIP). The local programming document is a short range, five to ten-year multi-modal program which identifies transportation improvements recommended for advancement during the program period, identifies priorities, groups improvements into staging periods, includes estimated costs and revenues, and is fiscally constrained.

As conditions change, it may be necessary to amend the TIP to ensure consistency with the STIP. The MPO will coordinate with NCDOT to keep the documents aligned and bring modifications/amendments before the MPO boards as needed.

The MPO will coordinate with local governments to include major non-NCDOT projects in the TIP, with a blanket local STIP identifier to be assigned by NCDOT. The MPO will develop criteria to define "major" along with NCDOT and federal partners.

## III-B-3: Merger and Project Development

The proposed Comprehensive Transportation Plan (CTP) and selected alternative plans will be evaluated based on criteria established by the goals and objectives reevaluation study and impact on the environment. The Airport Master Plan or other modal plan not included in the CTP should also be evaluated on these criteria. It is anticipated that the evaluation will be in the following areas: efficiency in serving travel demands; energy conservation; cost; and impact on the physical, social, and economic environment. The physical environmental evaluation will include air quality, water quality, soils and geology, wildlife and vegetation. The social environmental considerations will include housing and community cohesion, low-income and minority populations, noise, churches and educational facilities, parks and recreational facilities, historic sites, public health and safety, national defense, and aesthetics. Effects on business, employment and income, land development patterns, and public utilities will be studied as part of the economic environmental evaluation.

### *Merger Process – NCDOT, DCHCMPO*

Merger is a process to streamline the project development and permitting processes, agreed to by the USACE, NCDENR (DWQ, DCM), FHWA, and NCDOT and supported by other stakeholder agencies and local units of government. To this effect, the Merger process provides a forum for appropriate

agency representatives to discuss and reach consensus on ways to facilitate meeting the regulatory requirements of Section 404 of the Clean Water Act during the NEPA/SEPA decision-making phase of transportation projects.

Each project team will consist of appropriate primary signatory agencies and partnering signatory agencies. The composition of agencies on each project team will vary depending on the specific project's location and scope.

FHWA, USACE, NCDOT, and NCDENR are the primary signatories for the Merger Process agreement and are also known as the process owners or sponsors. The partnering agencies are as follows: U. S. Environmental Protection Agency; U. S. Fish and Wildlife Service; National Marine Fisheries Service; N. C. Wildlife Resources Commission; N. C. Department of Cultural Resources; U. S. Coast Guard, U. S. Forest Service; Tennessee Valley Authority; National Park Service; Metropolitan Planning Organizations (MPO's); and the Eastern Band of Cherokee Nation. Some of the partnering agencies will participate only when the project is in their respective geographic area of responsibility or statutory authority.

*Feasibility Studies – DCHCMPO, NCDOT*

MPOs will participate as needed in NCDOT-sponsored feasibility studies identified in the STIP/TIP.

# III-C: Civil Rights Compliance (Title VI) and Other Regulatory Requirements

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## Civil Rights Compliance (Title VI) and Other Regulatory Requirements

### **III-C-1: Title VI - DCHCMPO**

Provide update of Civil Rights statistics report for submittal to FTA to determine MPO compliance to civil rights provisions. Title VI states: The MPO shall comply with all the requirements imposed by Title VI of the Civil Rights Act of 1964 (78 Stat. 252), 49 U.S.C. 2000D TO 2000-D-4; the Regulations of DOT issued thereafter in the Code of Federal Regulations (commonly and herein referred to as CFR) Title 49, Subtitle A, Part 21), and the assurance by the MPO pursuant thereto.

### **III-C-2: Environmental Justice - DCHCMPO**

Executive Order (E. O.) 12898, Federal Actions to Address Environmental Justice in Minority Populations, requires all Federal agencies to identify and address Title VI and Environmental Justice requirements. Recipients of federal funds, including NCDOT and the MPOs, must assure compliance with these requirements. As mandated by the FHWA, planning activities should focus on complying with E. O. 12898 and the three basic principles of Environmental Justice as follows:

- a. ensure public involvement of low-income and minority groups in decision making
- b. prevent disproportionately high and adverse impacts to low-income and minority groups resulting from decisions made
- c. assure low-income and minority groups receive a proportionate share of benefits resulting from decisions made.

Specific tasks include mapping of populations, and businesses, conducting quantitative analysis of the benefits and burdens the transportation system/programs have on the MLI communities, etc.

### **III-C-3: Minority Business Enterprise Planning (MBE) - DCHCMPO**

There is a continuing need to address the Minority Business Enterprise (MBE) as a part of the planning and programming phases of project development. Areas are encouraged to give full consideration to the potential services that could be provided by MBE's in the development of transit plans and programs, and the provision of transit service. Transit properties with established MBE programs are encouraged to work with MPOs, utilizing transportation planning funds to update existing MBE programs as necessary.

### **III-C-4: Planning for the Elderly and Disabled - DCHCMPO**

The Americans with Disabilities Act of 1990 (ADA) ensures that persons with disabilities enjoy access to the mainstream of American life. The ADA expands on the Section 504 program to comprehensively address mobility needs of persons with disabilities. Joint FHWA and FTA regulations require that the urban transportation planning process include activities specifically emphasizing the planning, development, evaluation and reevaluation of transportation facilities and services for the elderly and disabled, consistent with ADA. This process should include an analysis of inventories of disabled persons, their locations, and special transportation services needed. These regulations emphasize estimation of travel needs through statistical analysis and a self-identification process. Both thoroughfare and transit planning activities should focus on complying with the key provisions of the ADA, and include special efforts to plan transportation facilities and services that can be effectively utilized by people with limited mobility, such as:

- a. Public transit authorities providing fixed route transit service must provide comparable level paratransit service to disabled individuals who cannot otherwise use the fixed route service
- b. Transit authorities providing elderly and disabled oriented demand responsive service must also buy or lease accessible vehicles unless it can be demonstrated that the system provides a level of service to the disabled equivalent to that provided to the general public
- c. New facilities built must be accessible and existing facilities with major alterations must be made accessible to the maximum extent feasible
- d. Planning for better mobility through such items as wheelchair curb cuts, longer pedestrian crosswalk times at certain intersections, and special parking spaces and rates for cars with one or more transportation disadvantaged occupant(s)

### **III-C-5: Safety/Drug Control Planning - DCHCMPO**

MPO's may pass planning funds through to transit operators for use in performing safety audits and in the resulting development of safety/ security improvement and in alcohol/drug control planning, programming, and implementation. Attention should be given to the development of policies and planning for the proper safety related maintenance of transit vehicles, fire safety, substance abuse where it affects employee performance in critical safety related jobs, emergency preparedness to improve the capability to respond to transit accidents/incidents, security to reduce theft and vandalism of transit property and to counter potential politically motivated terrorism directed against transit users, facilities, and equipment.

Additionally, two of the eight planning factors for metropolitan planning are to *increase the safety of the transportation system for motorized and non-motorized user*, and to *increase the security of the transportation system for motorized and non-motorized users*.

### **III-C-6: Public Participation - DCHCMPO**

An effective public involvement process provides for an open exchange of information and ideas between the public and transportation decision-makers. The overall objective of an area's public involvement process is that it be proactive, provide complete information, timely public notice, full public access to key decisions, and opportunities for early and continuing involvement (23CFR450.212(a) and 450.316(b)(1)). It also provides mechanisms for the agency or agencies to solicit public comments and ideas, identify circumstances and impacts which may not have been known or anticipated by public agencies, and, by doing so, to build support among the public who are stakeholders in transportation investments which affect their communities. The MPO should have a formalized, written, and adopted public participation process.

### **III-C-7: Private Sector Participation - DCHCMPO**

Federal regulations require that private operators be afforded the "maximum feasible opportunity" to participate in the planning and provision of local transportation services. The purpose of the private sector participation requirement is to give private operators the opportunity to initiate involvement. In an effort to more effectively address this requirement, the evaluation of private sector service alternatives has been incorporated into the transportation planning process. The general criteria for making public/private service decisions may include but is not limited to:

- a. comparative cost of private versus public services in similar situations
- b. .perceived quality and reliability of service
- c. local control of services
- d. . responsiveness and flexibility of operators
- e. e. private operator financial stability

## III-D: Statewide and Extra-Regional Planning

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This section covers planning and policy development outside the region and support of state and national user groups and organizations. Legislative issues also covered.

### *Statewide and Extra-Regional Planning – NCDOT, DCHCMPO*

Coordinate with state and federal agencies involved in transportation planning activities on the regional, state, and national levels. Examples of such activities include Functional Reclassification of roads, designation of Urban Area Boundaries, National Highway System coordination, participation in statewide planning such as the Vision Plan, Highway Performance Monitoring System activities, and regional transit coordination. Involvement could include, but is not limited to: collection and compilation of data; participation in related workshops, conferences, and meetings; and review and administrative approval or endorsement of documentation. Extra-regional plans might include corridor plans that span multiple region boundaries (US 70, US 17), large-area transit plans that span multiple areas, or similar bike/trail plans (ECG, MTST, Carolina Thread Trail)

### *Statewide and Federal Policy Development and Implementation – NCDOT, DCHCMPO*

Coordinate with state and federal agencies as a partner for developing policy direction and implementation. Examples include participation in SPOT, CMAQ or other NCDOT work groups to develop scoring criteria, provide technical expertise to AMPO, AASHTO, ITE or other organizations at the national and state level that provide policy development assistance; responding to requests from NCGA or individual legislators as needed.

## III-E: Board Support, Member Services, and Administration

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### *Board Support - DCHCMPO*

Support of advisory and governing bodies, including maintenance of membership and appointments, meeting planning, agenda preparation and posting, conducting meetings & hearings, minutes preparation, and compliance with Open Meetings & Public Records statutes.

### *Subcommittee Support - DCHCMPO*

Same as above for standing and ad-hoc subcommittees. Examples include Citizen's Advisory Committee, Complete Streets Subcommittee, Data and Modeling Subcommittee, and Bike/Pedestrian Subcommittee.

### ***Workgroup Support - DCHCMPO***

This includes support of staff-level committees that do not trigger Open Meetings/Public Records requirements. Examples include the Transit Operators' Workgroup and the Triangle's SEData Workgroup.

### ***Member Services - DCHCMPO***

This includes responding to specific members' needs not covered in other items. It includes presentations to local boards on MPO business and mission, assistance with transportation-related grant applications, and local staff technical assistance as examples.

### ***Administration - DCHCMPO***

This includes day-to-day operational necessities not directly related to the UPWP. Examples include filling out paperwork for finance departments, including timesheets, leave requests, expense reports, benefit forms, etc. Staff meetings may fall under this category, particularly if they include non-MPO staff. Updates to the MOU, Prospectus, funding agreements, and other tasks that do not have another category are also covered here.