

Metrolina Regional Travel Demand Model Memorandum of Agreement

1. Introduction

The Metrolina Regional Travel Demand Model, herein referred to as *the MRM*, was developed as the primary tool for evaluating existing and future travel in the region that encompasses the Cabarrus-Rowan Metropolitan Planning Organization (CRMPO), the Gaston Urban Area Metropolitan Planning Organization (GUAMPO), the Mecklenburg-Union Metropolitan Planning Organization (MUMPO), a portion of the Lake Norman Rural Planning Organization (LNRPO; including Iredell, Lincoln, Cleveland, and a portion of Gaston county), and a portion of the Rocky River Rural Planning Organization (RRRPO; including Stanly, Anson, and a portion of Union county) all within North Carolina; York County and a portion of Lancaster County within South Carolina, herein referred to as *the Metrolina Region*.

The purpose of the Memorandum of Agreement, herein referred to as the *MOA*, is to outline the roles and responsibilities of the various agencies involved, and to document the procedures for the continued development, modification, maintenance, and use of the MRM. The MOA replaces the *Model Governance for the Metrolina Regional Model*, dated June 30, 2003. This MOA shall supplement and support, but does not supersede the *Metrolina Regional Travel Demand Model Maintenance Reimbursement Agreement*, dated May 14, 2007, or the various Memoranda of Understanding (MOU) and Prospectuses that are required as part of the ongoing transportation planning process for each of the region's MPOs and RPOs.

The parties to this MOA are the: CRMPO, GUAMPO, LNRPO, MUMPO, the Rock Hill-Fort Mill Area Transportation Study (RFATS), RRRPO, North Carolina Department of Transportation (NCDOT) and South Carolina Department of Transportation (SCDOT).

2. Definitions

Annual Work Program is a plan developed annually by the Model Custodian which shall include detailed man-hour estimates and other information about work items recommended from the Five Year Work Plan, as well as anticipated work items required to maintain the MRM in order to meet the requirements of the Model Owners as well as federal planning requirements as defined under Title 23 of the U.S. Code. The MRM Annual Work Program shall be approved each year by the Executive Committee.

Base Year is the year for which the MRM is validated against approved performance measures. This may include data such as socioeconomic data, transportation network data, and travel surveys.

Comprehensive Transportation Plan (CTP) is the transportation plan required under NC General Statutes 136-66.2. The legislation enabling comprehensive planning under SC statutes is 6-29-310.

Consultant or Contractor means any for-hire engineering or planning firm using the MRM under the direction of one or more of the Model Owners.

Executive Committee consists of representatives of the signatory agencies to this MOA and is responsible for decision making related to all aspects of the MRM, which includes approving changes, updates, and modifications and resolving issues that cannot be resolved by the Planning and Applications Oversight Committee or the Model Team. See **Section 3.A.** for full details.

Five Year Work Plan is a multi-year plan which shall include, but is not limited to, anticipated model development tasks such as major model platform upgrades, regional traffic count data collection, and/or travel surveys that are anticipated to occur over a five year period. This Five Year Work Plan is intended to guide long range financial planning among the Model Owners and is not meant to provide detailed cost or man-hour estimates that may be present in the MRM Annual Work Program. The MRM Five Year Work Plan shall be developed and updated annually by the Model Custodian in cooperation with the Planning and Applications Oversight Committee.

Future Year(s) or Horizon Year(s) are any years after the base year for which the MRM has a transportation network, forecasted socioeconomic data, and a forecasted trip table. A model may have one or more future years, also known as horizon years. The last horizon year of a model is called the design year.

Lead Planning Agency (LPA) is the official recipient of Section 104(PL) funds designated under Title 23 of the United States Code and is the agency designated by the Governor for carrying out a comprehensive, continuing, and cooperative transportation planning process for the MPOs. In rural areas of North Carolina, the LPA is the official recipient of state grant funds and is responsible for assisting NCDOT in carrying out the rural transportation planning process.

Long Range Transportation Plan (LRTP) is the MPO's multimodal metropolitan long range transportation plan, covering a minimum of 20 years, including a financial plan, and meeting the requirements of 23 CFR Part 450.322.

Metrolina Regional Travel Demand Model (MRM) is the tool that estimates how people travel in and through an area. The MRM is used to forecast the travel patterns based upon projected household and employment data, projected transportation network data, and travel surveys. The Official Model Set includes all electronic data files that are needed to execute the MRM.

Metrolina Regional Model User's Manual is the document that serves as a reference and user's guide specifying how to run the MRM, perform analyses, troubleshoot, and understand general concepts of the MRM.

Metropolitan Area Boundary (MAB) means the geographic area for which the MPO has agreed to carry out the metropolitan transportation planning process as required by 23 U.S.C. 134 and Section 8 of the Federal Transit Act.

Metropolitan Planning Organization (MPO) means the entity responsible for carrying out the cooperative transportation planning and decision-making process for each metropolitan planning area.

Model Custodian is the entity charged with the development, modification, enhancement, ongoing maintenance, and the distribution of the Official Model.

Model Owner is an agency that has joint decision making authority with the Executive Committee concerning model use and development. Each signatory party to this MOA is a Model Owner.

Model Platform is the software program that allows for the development of and use of the MRM.

Model Team is the entity charged with assisting the Model Custodian with technical aspects of development and maintenance of the MRM and consists of a selected group of technical staff representatives from appropriate signatory agencies to this MOA, as approved by the Executive Committee. The Model Team will assist with coordinating, scheduling, and developing work plans related to the development and maintenance of the MRM. See **Section 3.C.** for full details.

Model User is an entity allowed to use the MRM for one or more of the purposes defined in this MOA. Model users may include Model Owners, academia, consultants, or others providing modeling expertise to the Model Owners for transportation planning or educational purposes.

North Carolina Department of Transportation (NCDOT) unless otherwise specified means the Transportation Planning Branch of NCDOT.

Official Model is the latest version of the MRM that has been formally approved by the Executive Committee as described in **Section 3.A.**

Official Model Set is the Official Model in its entirety in electronic form. The Official Model Set shall include all socioeconomic data, transportation networks, trip tables, calibration factors and adjustments, and any other information necessary to run the MRM, including, but not limited to programming scripts. Additionally, model documentation will include a narrative description of the MRM development, assumptions, revisions and performance measures. The Model Custodian will maintain the Official Model Set and model documentation on a permanent, immutable medium, such as CD or DVD and will distribute it on CD, DVD, or other comparable portable medium such as an FTP site, and shall distribute one copy of the Official Model to each Model Owner according to **Section 4.E.** of this MOA. The Official Model Set shall be approved by the Executive Committee.

The Official Model Set maintained by the Model Custodian shall be the only model set used to support transportation related decisions (e.g., long range transportation plan development and amendments, project level traffic forecasts, and air quality conformity analyses) within the Metrolina Region.

Planning and Applications Oversight Committee is the entity charged with leading the land use, socioeconomic, and network data development and maintenance for the MRM and consists of representatives of each signatory agency to the MOA.

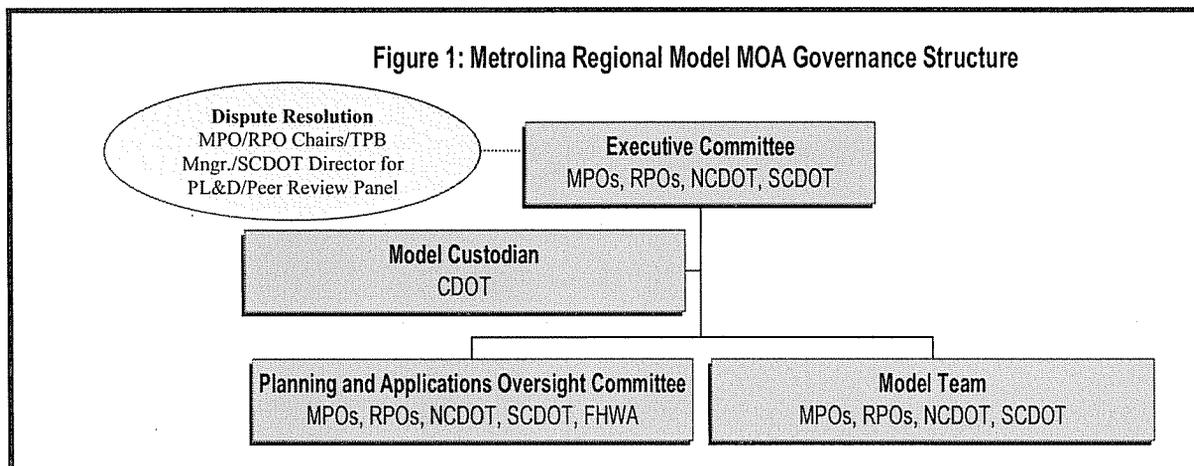
Signatories are the Model Owners who sign the MOA. This includes governing body chairs for CRMPO, GUAMPO, LNRPO, MUMPO, RFATS, and RRRPO; the Highway Administrator of the NCDOT and Director of Planning and Environmental of the SCDOT. Each of these signatories may at any time designate an official signee by notice of letter to each of the other signatories.

Socioeconomic Data is population, employment, housing, school enrollment, and/or demographic data in the area covered by the MRM.

Transportation Advisory Committee (TAC) or Policy Committee (PC) is the committee consisting of members from the policy boards for each member jurisdiction of the MPO/RPO that is charged with making decisions on technical, financial, and policy issues as defined in each area’s MOU, and has the decision making authority for the MPO/RPO.

Transportation Network Data are the physical descriptions of the transportation infrastructure needed for the MRM. This includes geographic representation of both roadway and transit networks and the related attribute information. Roadway network attributes include, but are not limited to speed limits, operating speeds, traffic control devices, roadway capacity, roadway classification, number of through lanes, number of turn bays, street names, etc. Transit network attributes include facility type (bus, rail, etc.), capacity, headways, route name, etc.

3. Roles and Responsibilities



3. A. Executive Committee

The Executive Committee shall be composed of one person from each of the member agencies as appointed by each MOA Signatory. This person will speak for the Signatory agency on matters of personnel, budget and resources. This person may designate an alternate member that may participate on the committee in the absence of the regular member. An Executive Committee member's designated alternate shall be appointed and transmitted to the Model Custodian prior to the first scheduled meeting of the calendar year, or prior to any meeting where the member will not be present. The Executive Committee shall oversee the development of an Annual Work Program and priorities for all aspects of the MRM, including the approval of the Official Model. Decisions of the Executive Committee shall be made by majority vote of its members, except as otherwise noted.

In addition, this group is responsible for resolving conflict and disputes related to aspects of the MRM, including, but not limited to, items associated with the work program, personnel, financial decisions, member agency commitments and priorities, Planning and Applications Oversight Committee issues, and technical problems that may arise in the development and maintenance of the MRM. This group shall meet quarterly or on a more frequent basis based upon the level of model use and activity, to be determined by committee consensus. It is also recommended that the group meet in person at least once per year.

The Model Custodian will serve as the Secretary for the Executive Committee meetings, and will be responsible for developing and transmitting meeting agendas, meeting minutes, updating members on the status of the Annual Work Program, relaying pertinent information from the Planning and Applications Oversight Committee and Model Team, and other status reports as necessary. The Executive Committee will review the qualifications and approve of individual staff members for the Model Team and Model Custodian.

Unless otherwise specified, each MPO's representative should be from the LPA, except as otherwise noted. Executive Committee membership will include the following:

- Business and Neighborhood Services Director, City of Concord (representing CRMPO)
- Planning Director, City of Gastonia (representing GUAMPO)
- Planning Director, Centralina Council of Governments (representing LNRPO)
- Director, City of Charlotte Department of Transportation (CDOT, representing MUMPO)
- Planning Manager, City of Rock Hill (representing RFATS)
- County Manager, Stanly County (representing RRRPO)
- Western Planning Unit Head, Transportation Planning Branch, NCDOT
- Director of Planning and Environmental, SCDOT

In addition, representatives from other agencies, such as the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), North Carolina Department of Environment and Natural Resources (NCDENR), South Carolina Department of Health and Environmental Control (SCDHEC), NCDOT and SCDOT Division Engineers, city and county planning directors, or other appropriate federal, state, or local government staff may be invited to participate in the Executive Committee in a non-voting advisory role.

3. B. Planning and Applications Oversight Committee

The role of the Planning and Applications Oversight Committee is to assure that model development and maintenance stays on schedule and meets the specifications as outlined and agreed upon by the Executive Committee and may be responsible for coordinating, scheduling, and developing work plans related to the development and maintenance of the MRM.

The primary responsibilities of the Planning and Applications Oversight Committee shall be oversight of the forecasting of socioeconomic data needed for application of the MRM in current and future years, regular updates of network data, ensuring that the MRM meets the requirements for regional air quality conformity determinations, following the development of an Annual Work Program for model maintenance, and collaboration among all agencies for special studies or activities that may be required to maintain the MRM. This will involve the review of regional socioeconomic data totals for the base year and future years, the monitoring of socioeconomic forecasts for each of the agreed upon future years, and the recommendation of forecast data to the individual MPOs/RPOs for approval.

The Planning and Applications Oversight Committee is also charged with reviewing the products of the Model Custodian and Model Team, working collectively with member agencies in development of the MRM, and relaying this information back to their respective technical committees and local policy boards. The Planning and Applications Oversight Committee is also responsible for providing recommendations to the Executive Committee on the development of the MRM to assure that the objectives of model development and maintenance are met.

Decisions of the Planning and Applications Oversight Committee shall be made by majority vote of its members. The Planning and Applications Oversight Committee may elevate an issue to the Executive Committee at any time, or the issue is automatically elevated if resolution can not be achieved on a topic within two (2) meetings of the Planning and Applications Oversight Committee (see **Section 4.F. Resolving Disputes**).

The Model Custodian will serve as the Secretary for the Planning and Applications Oversight Committee, and will be responsible for developing and transmitting meeting agendas, meeting minutes, updating members on the status of the annual work plan, relaying pertinent information from the Model Team, and other status reports as necessary.

The Planning and Applications Oversight Committee will be made up of one voting staff representative from each of the Model Owners, plus the FHWA:

- CRMPO
- GUAMPO
- LNRPO
- MUMPO
- RFATS
- RRRPO
- NCDOT

- SCDOT
- FHWA

3. C. Model Team

The Model Team will be comprised of the lead travel demand modelers from the Model Owners, as appropriate, and the group will be lead by the Model Custodian. A representative from each of the aforementioned agencies is not required to participate on the Model Team. The Model Team is intended to be a technically-oriented working group, where a high level of expertise in the field of travel demand modeling is required. Therefore, individual staff members of the Model Team must be approved by the Executive Committee based on review of their technical qualifications. The Model Team will be responsible for carrying out technical work required for development, maintenance and updates of the MRM as part of the work plan established by the Model Custodian and approved by the Executive Committee. This group shall meet as needed, but not less than quarterly. The Model Team will be responsible for making all detailed technical recommendations related to further development and enhancements of the MRM, work collaboratively with the Planning and Applications Oversight Committee, and will report to the Executive Committee through the Model Custodian.

The Model Custodian will lead the Model Team. However, the group shall work in a collaborative manner to develop, maintain, and recommend technical improvements to the MRM consistent with the goals and strategies set forth by the Executive Committee. Any conflicts or disputes of a technical nature that arise and cannot be resolved by the Model Team will be directed to the Executive Committee for resolution as shown in **Figure 1**, and described in **Section 4.F**.

3. D. Model Custodian

The Executive Committee will review the qualifications for this position and designate the Model Custodian. At this time, the Model Custodian shall be the CDOT. However, it is a desirable future goal that the staffing for the role of Model Custodian be an entity independent of any of the MPOs, RPOs or state DOTs in the Metrolina Region. While no present entity exists at this time to fill this role, steps may be pursued by the Model Owners to investigate or create such an organization in the future.

The technical responsibilities of the Model Custodian will include maintaining and updating the MRM at designated intervals, validating and documenting model updates, and distributing the Official Model Set to all model users following an updated version approved by the Executive Committee, and other work as included in the Annual Work Program. The Model Custodian will lead the Model Team, and serve as the Secretary and lead technical staff person for the Planning and Applications Oversight Committee and the Executive Committee.

The administrative responsibilities of the Model Custodian shall be to develop and transmit meeting agendas; to propose and set meeting dates, times, and locations; to prepare meeting minutes; to update members on the status of the Annual Work Program and Five Year Work Plan; to relay pertinent information from the Model Team; and to prepare other status reports as necessary. The Model Custodian will communicate any changes in staffing to the Model Owners within 30 days of the change of employment status.

3. E. Model Owner

The Model Owners are the Signatories of the MOA, and are the government agencies responsible for making transportation planning decisions in the Metrolina Region. Model Owners may distribute copies of the model set to consultants, contractors, academic institutions, or other entities that may be performing work for them. The Official Model Set and any enhancements to it made by the consultants remain property of the signatory parties. Contracts between consultants and the parties of this MOA shall specify that Official Model Sets and any modifications made to them revert to the Model Owner at completion of the contract.

3. F. Model User

Model Users are permitted to use and modify the MRM consistent with the MRM Protocol of this MOA and with the agreement of the Model Custodian. For these results to be accepted as a part of the Official Model, they must be reviewed and accepted by the Model Custodian and Model Team, and approved by the Executive Committee, as described in **Section 4**.

3. G. CRMPO

A member of the Planning and Applications Oversight Committee, and the Executive Committee, the CRMPO shall provide financial, staff and/or consultant resources toward the MRM development and maintenance, including the collection, review, and approval of base and future year socioeconomic data, and travel surveys. The City of Concord, as the LPA for the CRMPO, shall be a Model Owner and Model User, and will assist in successful development and maintenance of the MRM in concert with the other Model Owners; and is responsible for developing and maintaining the transportation network data, employment data, housing data, and public transit data within its MAB. This data shall be supplied to the Model Custodian. The City of Concord, as the Model Owner for CRMPO, will cooperatively support the MRM as specified in the MOA, and will participate on special studies and required updates to the MRM as necessary.

3. H. GUAMPO

A member of the Planning and Applications Oversight Committee, and the Executive Committee, the GUAMPO shall provide financial, staff and/or consultant resources toward the MRM development and maintenance, including the collection, review, and approval of base and future year socioeconomic data, and travel surveys. The City of Gastonia, as the LPA for the GUAMPO, shall be a Model Owner and Model User, and will assist in successful development and maintenance of the MRM in concert with the other Model Owners; and is responsible for developing and maintaining the transportation network data, employment data, housing data, and public transit data within its MAB. This data shall be supplied to the Model Custodian. The City of Gastonia, as the Model Owner for GUAMPO, will cooperatively support the MRM as specified in the MOA, and will participate on special studies and required updates to the MRM as necessary.

3. I. LNRPO

A member of the Planning and Applications Oversight Committee and the Executive Committee, the LNRPO shall provide staff resources towards the MRM development and maintenance, including the collection, review, and approval of base and future year socioeconomic data and

travel surveys. Centralina COG, as the LPA for the LNRPO, shall be a Model Owner and Model User, and will assist in successful development and maintenance of the MRM in concert with the other Model Owners; and is responsible for developing and maintaining the transportation network data, employment data, housing data, and public transit data within its jurisdiction. This data shall be supplied to the Model Custodian. Centralina COG, as the Model Owner for LNRPO, will cooperatively support the MRM as specified in the MOA, and will participate on special studies and required updates to the MRM as necessary.

3. J. MUMPO

A member of the Model Team, Planning and Applications Oversight Committee, and the Executive Committee, the MUMPO shall provide financial, staff and/or consultant resources toward the MRM development and maintenance, including the collection, review, and approval of base and future year socioeconomic data, and travel surveys. CDOT, as the signatory for the MUMPO (not the LPA in this case), shall be a Model Owner and Model User, and will assist in successful development and maintenance of the MRM in concert with the other Model Owners; and is responsible for developing and maintaining the transportation network data, employment data, housing data, and public transit data within its MAB. This data shall be supplied to the Model Custodian. CDOT will work closely with MUMPO and Charlotte Area Transit System (CATS) staff to coordinate various planning activities that require information from the MRM. CDOT, as the Model Owner for MUMPO, will cooperatively support the MRM as specified in the MOA, and will participate on special studies and required updates to the MRM as necessary.

3. K. RFATS

A member of the Planning and Applications Oversight Committee, and the Executive Committee, the RFATS shall provide financial, staff and/or consultant resources toward the MRM development and maintenance, including the collection, review, and approval of base and future year socioeconomic data, and travel surveys. RFATS shall be a Model Owner and Model User, and will assist in successful development and maintenance of the MRM in concert with the other Model Owners; and is responsible for developing and maintaining the transportation network data, employment data, housing data, and public transit data within its MAB. This data shall be supplied to the Model Custodian. RFATS will cooperatively support the MRM as specified in the MOA, and will participate on special studies and required updates to the MRM as necessary.

3. L. RRRPO

A member of the Planning and Applications Oversight Committee and the Executive Committee, the RRRPO shall provide staff resources towards the MRM development and maintenance, including the collection, review, and approval of base and future year socioeconomic data and travel surveys. Stanly County, as the LPA for the RRRPO, shall be a Model Owner and Model User, and will assist in successful development and maintenance of the MRM in concert with the other Model Owners; and is responsible for developing and maintaining the transportation network data, employment data, housing data, and public transit data within its jurisdiction. This data shall be supplied to the Model Custodian. Stanly County, as the Model Owner for RRRPO, will cooperatively support the MRM as specified in the MOA, and will participate on special studies and required updates to the MRM as necessary.

3. M. NCDOT

A member of the Model Team, Planning and Applications Oversight Committee, and the Executive Committee, the NCDOT shall provide financial, staff and/or consultant resources toward the MRM development and maintenance, including the review of base and future year socioeconomic data, and travel surveys. In addition, NCDOT, in partnership with others, may provide staff services and/or fund the collection of special traffic counts and travel time studies that may be required for the MRM within the state of North Carolina. The NCDOT shall be a Model Owner and Model User, and will assist in successful development and maintenance of the MRM in concert with the other Model Owners. This data shall be supplied to the Model Custodian. The NCDOT will cooperatively support the MRM as specified in the MOA, and will participate on special studies and required updates to the MRM as necessary.

3. N. SCDOT

A member of the Model Team, Planning and Applications Oversight Committee, and the Executive Committee, the SCDOT shall provide financial, staff and/or consultant resources toward the MRM development and maintenance, including the review of base and future year socioeconomic data, and travel surveys. In addition, SCDOT shall provide staff services and/or fund the collection of special traffic counts and travel time studies that may be required for the MRM within the state of South Carolina. The SCDOT shall be a Model Owner and Model User, and will assist in successful development and maintenance of the MRM in concert with the other Model Owners; and is responsible for developing and maintaining the transportation network data, employment data and housing data through agreement with Catawba Council of Governments, and public transit data outside of the MPOs MABs. This data shall be supplied to the Model Custodian. The SCDOT will cooperatively support the MRM as specified in the MOA, and will participate on special studies and required updates to the MRM as necessary.

3. O. FHWA

As a member of the Planning and Applications Oversight Committee, the FHWA will represent the interests of the United States Department of Transportation (USDOT) and will provide guidance related to federal air quality, transportation planning legislation and other federal policies.

4. MRM Protocol

4. A. Model Platform

It is critical that each Model User be able to replicate modeling results from the MRM. All parties to the MOA shall use TransCAD as the model platform. The model platform is proprietary software and can only be distributed according to the terms of the license agreement with its vendor. No Model User may distribute the model platform to other groups outside the terms of that licensing agreement. NCDOT has offered one copy of the model platform software to the lead planning agency of each MPO within the Metrolina Region in North Carolina under NCDOT's license agreement. If other Model Owners wish additional copies of the model platform they may purchase them in accordance with the terms of NCDOT's licensing agreement

with the software vendor (if available) or they may also purchase copies of the model platform directly from the vendor.

Securing training in the use of the model platform is the responsibility of the individual Model Users. Model Users may request such training directly from the modeling software vendor. However, NCDOT may elect, at its sole discretion, to offer periodic training for users of the MRM.

4. B. Model Development and Maintenance

The Executive Committee shall review and approve both work plans prior to the beginning of the state fiscal year, July 1 of each year. Model Owners shall be responsible for reviewing the approved Five Year Work Plan and making preparations to fulfill their financial obligations, if any, as proposed in the plans and shall be responsible for making sure that their respective MPO or RPO's work programs are consistent with the MRM Five Year Work Plan.

The Planning and Applications Oversight Committee will provide input towards and follow the Annual Work Program as developed by the Model Custodian and approved by the Executive Committee. The Planning and Applications Oversight Committee should monitor the status of the MRM and serve as a forum for implementing the Annual Work Program relating to MRM development and maintenance. The Model Custodian will be responsible for coordinating the work of the Model Team and providing quarterly reports to the Executive Committee on the status of the MRM.

The Planning and Applications Oversight Committee shall be responsible for closely monitoring the status of the MRM and making recommendations to the Model Custodian and the Executive Committee, if necessary, that ensures the MRM meets the requirements of all appropriate state and federal review agencies, including, but not limited to, the FHWA, the NCDENR Division of Air Quality (DAQ), the SCDHEC Division of Air Quality, the Federal Transit Administration (FTA) and the Environmental Protection Agency (EPA).

Upon completion of the updates to the MRM based on performance measures detailed in the MRM *Specifications*, the Model Custodian, with guidance from the Planning and Applications Oversight Committee, will produce model documentation in the form of a report describing model development, major maintenance enhancements or updates, and assumptions built into the MRM. It is the responsibility of the Model Custodian to maintain and distribute the model documentation along with the Official Model Set (refer to **Section 4.E. Distributing the MRM**).

4. C. Model Use

All Model Users wishing to use the Model shall apply procedures outlined in the Metrolina Regional Model User's Manual. Any MRM changes, assumptions or alternative analyses must be documented to show deviations from the Official Model. Any agency or group that uses the MRM to support major transportation decisions shall use the most recently adopted version of the Official Model. For any specific data output requested by a federal or state agency which may require the use of any component of the MRM, the Model Owner or Custodian providing the information will notify the other Model Owners and/or Custodian within 30 days of the request.

4. D. Revising the Official Model

Model Users may make changes to the model set needed to support local analysis needs or to evaluate major new transportation facilities. Changes to the Official Model include, but are not limited to, the following: changes to population and employment projections for one or more travel analysis zones (TAZs); changes to the future year trip tables; changes to the number of external stations or the trip factors at the external stations; or changes to the transportation networks for any base year or future year.

The Official Model shall only be changed as a result of approval of the Executive Committee in the following manner:

1. The Model Custodian must notify, in writing, the Executive Committee of any proposed changes to the Official Model thirty (30) calendar days before making the changes part of the Official Model;
2. If any member of the Executive Committee objects to proposed changes to the Official Model, they must notify the Model Custodian of their objection and invoke dispute resolution process within this thirty-day period. Changes to the Official Model will not occur until after the dispute resolution process is complete; and
3. If the Executive Committee rejects the proposed changes to the Official Model, the party proposing the changes must be notified and provided thirty calendar days to object the decision as described in **Subsection 4.D.2.**

The Model Custodian, under guidance from the Model Team and supervision of the Executive Committee, will be responsible for modification of the MRM. Modifications of the MRM include, but are not limited to, modifying model structure, updating data files, improving model inputs, correcting errors in the model and adding enhancements to the model structure. Model changes initiated by Model Users should be submitted in writing to the Model Custodian for review by the Model Team.

The Executive Committee shall collectively develop and maintain a mutually approved list of types of modifications to the Official Model that can be made by the approval of the following entities:

1. The Model Custodian, “minor” changes such as correcting network coding errors or modifying zonal centroid connectors;
2. The Executive Committee, “significant” changes such as modifying mode choice or trip assignment model parameters; and
3. The Signatories of the MOA, “major” changes to socio-economic assumptions, such as revisions to population and employment forecasts.

It shall be the goal of the Model Owners to maximize the decision-making authority of the Model Custodian, Planning and Applications Oversight Committee and the Executive Committee so that only the MRM modifications deemed to be most important to regional travel demand modeling require the direct review and approval of the signatory agencies. Regardless

of the type of approval needed, all modifications made to the Official Model shall be fully documented to the extent sufficient that all changes can be completely replicated or reversed.

4. E. Distributing the Official Model

The Model Custodian shall distribute one copy of the MRM to all Model Owners, at no cost, within 14 days of the final approval of the MRM for use. When changes are made to the Official Model, the Model Custodian will provide one revised copy of the Official Model to each Model Owner within 14 days of mutually agreed upon changes.

The Model Custodian shall distribute copies of the Official Model Set to consultants, contractors, or academic institutions upon the direction and approval of the Model Owners when work is performed for them. These model sets, and any enhancements to them made by the consultants or contractors, remain property of the Model Owner. Contracts between consultants and the parties of this MOA shall specify that model sets and any modifications made to them must revert to the Model Owner at completion of the contract.

Public interest groups and consultants not under contract to a Model Owner may obtain copies of the MRM by written request to the Model Custodian. The Model Custodian shall establish a reasonable fee schedule for providing copies of the MRM. The fee schedule should provide reasonable reimbursement for staff time, duplication, and electronic media only. The same fee schedule shall apply to consultants and public interest groups. The Model Custodian will notify the Executive Committee of any such requests and subsequent distributions of the MRM.

4. F. Resolving Disputes

Disputes among the Model Owners related to the development, maintenance, or use of the MRM shall be resolved using the following process:

1. If the Planning and Applications Oversight Committee agrees to elevate an issue, or the Model Team cannot reach an agreement regarding issues concerning the MRM within two (2) meetings, a meeting of the Executive Committee shall be convened to discuss the subject and reach a decision.
2. If the Executive Committee is not able to reach an agreement on the subject within 60 days of first convening on the matter, the issue shall be elevated to a Dispute Resolution Panel (DRP). The DRP will be formed from the governing body chairs of each MPO and RPO, the Transportation Planning Branch Manager of the NCDOT, and the Chief Engineer for Planning, Location and Design of the SCDOT, or their designees.
3. If the DRP is unable to reach an agreement, they may refer the matter to a Peer Review Panel (PRP) to be selected as follows:
 - The PRP shall be made up of eight (8) independent members with considerable technical or policy knowledge germane to the point of contention. The members of the DRP shall each select one (1) individual that will initially form the PRP. The PRP will select a chair to set the agenda and preside over its meetings. The remaining seven (7) members of the PRP shall then resolve the dispute in question by majority vote.

- The PRP shall provide recommendations to the Model Owners within six (6) months or sooner if directed by the DRP based on the urgency of the issue, and the parties of this MOA must abide by the final decisions of the PRP.

4. G. Amending and Dissolving the MOA

New Signatories to this MOA requires a unanimous vote of the Executive Committee and an amendment of the Agreement by all signatories. Any party to this MOA may withdraw from the MOA by giving 30 days written notice to the Executive Committee through the Model Custodian, its secretary.

Any Signatory to this MOA may propose modifications to this MOA through the Executive Committee. Revisions to this MOA will become effective when signed by all Signatories.

When a change to the MOA is approved, the Model Custodian shall distribute the revised document to all the other Signatories within 30 days.

5. Routine Annual Maintenance Requirements

Described below are tasks associated with the regular maintenance of the MRM. The tasks to be completed in a given year will be further detailed in the MRM Annual Work Program, to be developed by the Model Custodian, in cooperation with the Planning and Applications Oversight Committee, and approved by the Executive Committee.

Each signatory MPO/RPO or DOT shall include their contribution and ensure that specific model maintenance tasks are included in their annual U/PWP. The Model Custodian will complete and distribute monthly status reports and an annual report covering work completed between July 1 and June 30 of each fiscal year. The Model Custodian will be responsible for duties as specified in the annual MRM work plan, including, but not limited to:

- Compiling socioeconomic data from the MPOs, RPOs, and DOTs at least once every two years. This data would include collection of population data, school enrollment, and employment data on a regular basis. Each signatory MPO or RPO agrees to assist in establishing the protocol for distribution of data from local departments to the Model Custodian.
- Working with the MPOs and RPOs, area economic development corporations, chambers of commerce and other groups or agencies to track employment trends.
- Working with the MPOs, RPOs, NCDOT, and SCDOT for maintenance information related to the roadway network inventory (including completion of new facilities, changes to speeds and capacities to incorporate roadway improvements, signal coordination/timing, and speed limit changes).
- Working with CATS and other local transit providers, the MPOs and RPOs to collect changes to the transit network (including rapid transit project schedules, route changes, designated stops, pedestrian access points, fare structures, frequency of route services, and parking inventory and costs).

- Working with MPOs and RPOs to collect changes to the pedestrian network (including designated route changes and additions and connectivity to other modes).
- Working with the MPOs, RPOs, NCDOT, and SCDOT to collect changes to the intercity passenger rail network (including designated stops, access points, fare structure, frequency of service, parking inventory and costs).
- Working with MPOs and RPOs in review of land use characteristic changes that influence modeling assumptions.
- Providing “working model” output in either TransCAD or GIS following receipt of updated MPO/RPO socioeconomic and network input data. Output dbf datasets should include 24 hour volumes, volumes by time period, number of lanes, capacities by time period, speed limits, and capacity restrained speeds. Road networks should be provided as either a .dbf (TransCAD) or .shp (GIS) file. All output filenames should include the phrase “working model.”

6. Signatories

In witness whereof, the Signatories of this MOA have been authorized by appropriate and proper actions of the policy boards for their respective MPO or RPO, or the chief officer of their Department of Transportation to sign this MOA.


 Councilman Ken Geathers, TAC Chair
 Cabarrus-Rowan MPO

05/27/09
 Date


 Councilman Jim Long, TAC Chair
 Gaston Urban Area MPO

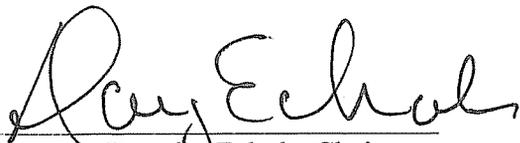
05/26/09
 Date


 Councilman Michael Johnson, TAC Chair
 Lake Norman RPO

06/08/09
 Date


 Mayor Lee Myers, Chair
 Mecklenburg-Union MPO

3/18/09
 Date



Mayor A. Douglas Echols, Chair
Rock Hill Fort Mill Area Transportation Study

6.26.09

Date



Councilman Harold Thompson, TAC Chair
Rocky River RPO

6-25-09

Date



Terry Gibson, P.E., Highway Administrator
North Carolina DOT

7/21/09

Date



Ronald K. Patton, Director of Planning and Environmental
South Carolina DOT

7/10/09

Date