



**Date:** August 1, 2015

**To:** Thomas J. Bonfield, City Manager  
**Through:** Keith Chadwell, Deputy City Manager  
**From:** Mark D. Ahrendsen, Director of Transportation  
**Subject:** FY 2016 Agreement between the City of Durham and North Carolina State University (NCSU) for Support of the Triangle Regional Model (TRM) Development, Enhancement and Maintenance

### **Executive Summary**

The Triangle Regional Travel Demand Model (TRM) is a key tool in preparing long range transportation plans, individual project plans and establishing air quality conformity in order to have access to Federal funds. The TRM is a joint effort by four participating agencies: the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO); the Capital Area MPO (CAMPO); GoTriangle; and the North Carolina Department of Transportation (NCDOT). In order to improve the quality and timeliness of the model forecasts, these agencies, in 2002 agreed to centralize the technical work of model updates and enhancements at a Service Bureau housed at the Institute for Transportation Research and Education (ITRE) at N.C. State University, and to fund this Service Bureau by dividing the cost among agencies. The proposed Agreement between NCSU and the City of Durham, the Lead Planning Agency for the DCHC MPO, is to provide funds for the support of the TRM and enhancements associated with model updates as required by the US Department of Transportation. The funds and staffing necessary to meet this obligation are budgeted and approved by DCHC MPO and the City of Durham and the agreement specifies how these funds and staff resources are to be disbursed.

### **Recommendation**

That the City Council authorize the City Manager to execute an agreement with North Carolina State University to provide support for the Triangle Regional Travel Demand Model in an amount not to exceed \$218,591.00.

### **Background**

The City of Durham and the State of North Carolina must carry out a continuing, comprehensive and cooperative process of transportation planning to maintain eligibility for federal transportation funding. As part of this process, the City of Durham, in its capacity as Lead Planning Agency for the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO), has participated actively in the creation and maintenance of the Triangle Regional Model (TRM), an important travel demand forecasting tool.

The development and on-going maintenance of this model is a joint effort by four agencies: DCHC MPO, the Capital Area MPO (CAMPO), GoTriangle and the North Carolina

Department of Transportation (NCDOT). The model was first developed in response to federal Certification Review directives that called for the development of a single travel demand model for the region. Also, the model was developed because of the significant impact of regional travel on local air quality plans and to develop plans for new transportation facilities. The existing model has been used for the development of DCHC MPO long range transportation plans, GoTriangle regional rail New Starts modeling and technical analyses and demand forecasts for various studies and projects such as Alston Avenue widening, Infinity-Latta intersection improvement, I-40 widening, East End Connector, I-40 Managed lane feasibility study, US 15-501 widening environmental study, etc.

### **Issues and Analysis**

The City can accept or reject the proposed Agreement with NCSU to provide funding for the Triangle Regional Model Service Bureau by adopting or not adopting the attached resolution. Funds necessary to meet the requirements of this agreement will come from the annual transportation planning grant with appropriate City matching funds, 43% of which are reimbursed by MPO member governments. The Agreement may be terminated with 30 days written notice in the event that funds cease to be available, or for any other reason.

The Triangle Regional Model is an essential tool for preparing transportation plans and conformity reports that are required to establish eligibility for federal transportation funds. The TRM is also used to help ensure that limited transportation funds are effectively utilized. If the DCHC MPO does not participate with the other stakeholders in the update/enhancement of the TRM, the DCHC MPO will be obligated to develop a similar tool on their own and gather data for it, at substantially greater expense, and with no guarantee that a workable alternative can be developed in sufficient time to meet important upcoming federal reporting deadlines.

### **Alternatives**

- Authorize the City Manager to enter into an agreement with NCSU to support the Triangle Regional Model.
- Not authorize the City Manager to enter into an agreement with NCSU to support the Triangle Regional Model. If the City Council does not adopt the attached resolution, the DCHC MPO would cease to benefit from further update of the Triangle Regional Model, and a comparable model would have to be developed and data collected, at considerable expense, by MPO Lead Planning Agency (City) staff and consultants. In order for such a model to be acceptable in preparing air quality conformity reports and other plans and reports that are required for establishing eligibility for Federal transportation funding, the model will have to include data and forecasts for the rest of the Triangle region without the benefit of cooperative agreements with CAMPO, GoTriangle or NCDOT. The resulting delays could have serious adverse consequences with respect to funding schedules for necessary transportation improvements in the City of Durham and in the DCHC MPO.

### **Financial Impact**

The cost shall not exceed \$218,591.00 for FY 2016. Eighty percent (80%) of the funding has been allocated by the DCHC MPO from federal STP-DA funds . The remaining twenty percent – 20% (\$43,718.20) of the funding is provided by DCHC member governments.

**SDBE Summary**

Due to the nature of this project, an SDBE summary is not needed.

**Attachments:**

1. Attachment 1 – “FY 2016 Agreement To Support the Triangle Regional Model (TRM) Development Between North Carolina State University and the City of Durham.”
2. Attachment 2 – Exhibit A FY 2016 Project Scope of Work and Budget.
3. Attachment 3 - Exhibits A.1, A.2, B, C, D: exhibits to agreement.