



NC Capital Area **Metropolitan Planning Organization**

CAPITAL AREA MPO

Executive Board Meeting

August 17, 2016

4:00 PM

1. Welcome and Introductions

2. Adjustments to the Agenda

3. Ethics Statement:

In accordance with the State Government Ethics Act, it is the duty of every Executive Board member to avoid conflicts of interest.

Does any Executive Board member have any known conflict of interest with respect to matters coming before the Executive Board today? If so, please identify the conflict and refrain from any participation in the particular matter involved.

4. Public Comments

This is an opportunity for comments by those in attendance. Please limit comments to three minutes for each speaker

5. Minutes

Attachment 5.1

- Minutes from the June 15, 2016 meeting

Requested Action:

Approve Minutes from June 15, 2016 meeting.

7. Public Hearing

End of Public Hearings

8. Regular Agenda

8.1 TIP PROJECT I-5710 – RAMP METERING on I-540

Presentation to CAMPO Executive Board
August 17, 2016

On-Ramp Signals – Informational Video



Introducing On-ramp Signals in North Carolina

- What are on-ramp signals?
- How do they work?
- How will they benefit you?

WATCH HERE:

<https://www.youtube.com/watch?v=xb01eN8tRiM#action=share>

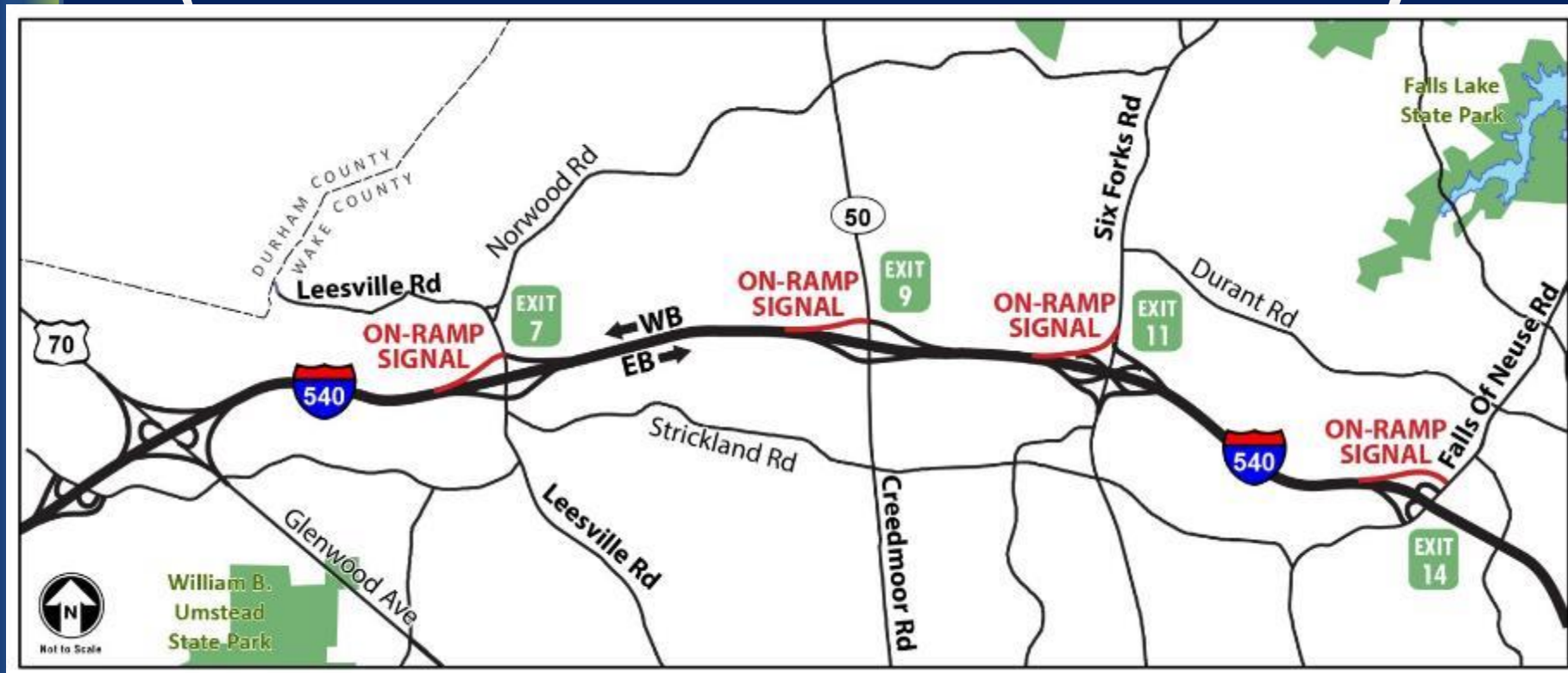


Project Overview



On-Ramp Signal Locations

(All locations westbound – toward RTP)



- Falls of Neuse Road (Exit 14)
- Six Forks Road (Exit 11)
- Creedmoor Road (Exit 9)
- Leesville Road (Exit 7)

Why Consider On-Ramp Signals for I-540?



Project Planning Studies

Ramp Metering Feasibility Study for Durham and Wake Counties (March 2013)

- Screening/detailed study of freeways and arterials in the Raleigh/Durham area (I-40, I-440, I-540, US 1, US 15/501, and NC 147)
- Screening identified 77 candidate sites
- 34 sites carried forward for detailed analysis
- 21 sites identified suitable for ramp metering



Project Planning Studies

I-540 Westbound Ramp Metering Analysis (March 2014)

- Follow-up **operational** analysis to previous feasibility study
- In-depth analysis for four locations along I-540
- Pilot **implementation** sites in NC
- Specific improvements needed for implementation



Benefits of On-Ramp Signals



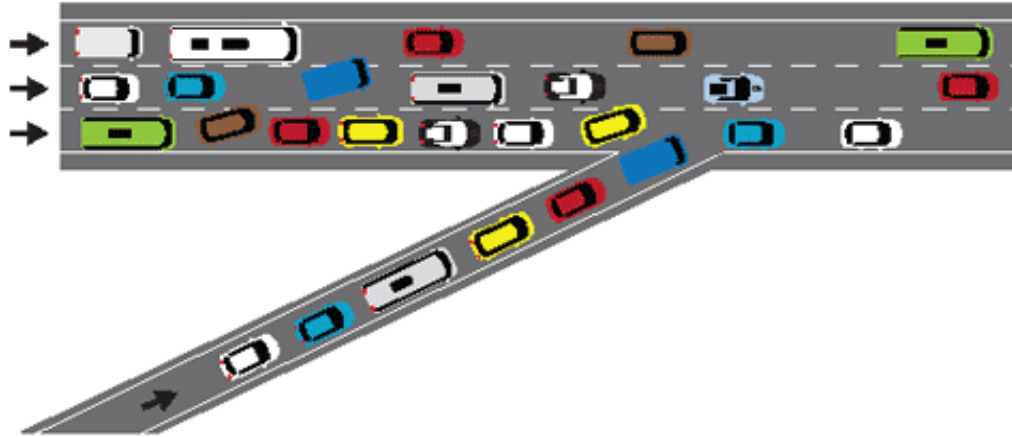
Benefits of On-Ramp Signals

- Benefits include:
 - More reliable travel times
 - Reduced congestion
 - Fewer collisions
 - Emission reduction

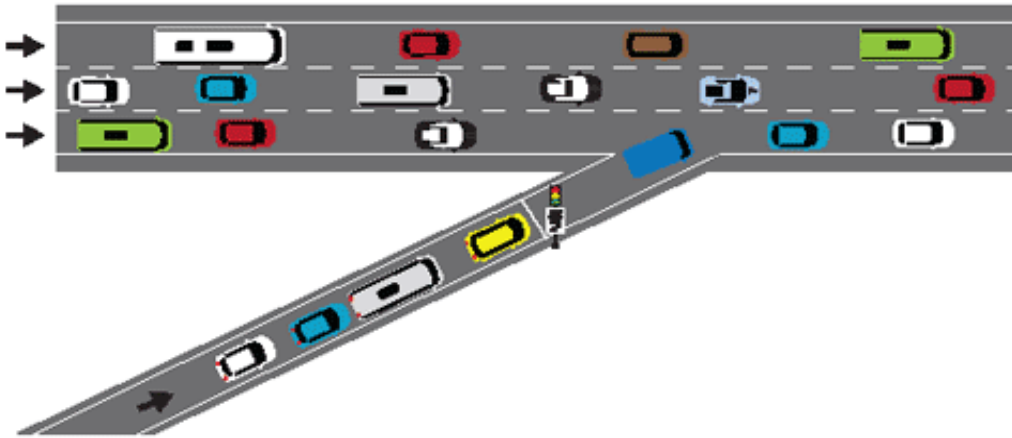


Benefits of On-Ramp Signals

Freeway Without Ramp Metering



Freeway With Ramp Metering



- Proven and cost-effective operational strategy all over the world
- Introduced to the USA in the 1960s and used in over two dozen cities

On-Ramp Signal in Atlanta



Reported benefits in other cities...

- Travel time (decrease in peak period)
 - 22 percent in Houston
 - 10 percent in Atlanta
 - 10 percent in Arlington
- Crash rates (decrease in peak period)
 - 16 percent in Phoenix
 - 15 percent in Milwaukee
- Travel speeds (increase in peak period)
 - 35 percent in Milwaukee
 - 155 percent in Portland
 - 8 percent in Detroit

I-540 Predicted Annual Reduction in Delay

- 10-20% annual reduction in delay (measured in vehicle-hours)
- Most states ~20% annual reduction in delay
- For I-540: 20% annual reduction in delay = 14,534 vehicle-hours
- Translates to \$311,000 annual financial benefit

Possible Concerns with On-Ramp Signals



On-Ramp Signal Concerns

- Possible issues:
 - Traffic backups on cross streets
 - Route diversion
 - Negative impact on travel time
- Potential solutions:
 - Design and system software selection
 - Signal timing
 - Siting and design

Project Activities and Timeframe



Proposed Project Activities

- Minor pavement widening and extension of existing ramps (within existing right-of-way)
- New guardrail or extension of existing
- Additional signing and pavement markings
- Installation of on-ramp signals and “ITS” elements (i.e. CCTV cameras)



Project Construction

- Project construction cost - \$2.1 million
- Construction to begin in December 2016
 - Anticipated duration - one year



What to expect during construction...

- Overnight ramp closures (~8pm-6am)
- Detour routes for closures
 - Directed to next interchange to enter WB I-540
 - Falls of Neuse Road detour route Strickland Road to Six Forks interchange
 - Weekend ramp closures
 - Creedmoor Road
 - Leesville Road
 - No weekend closures for Falls of Neuse, but shifting traffic pattern on the ramp (~3 months)



Questions?



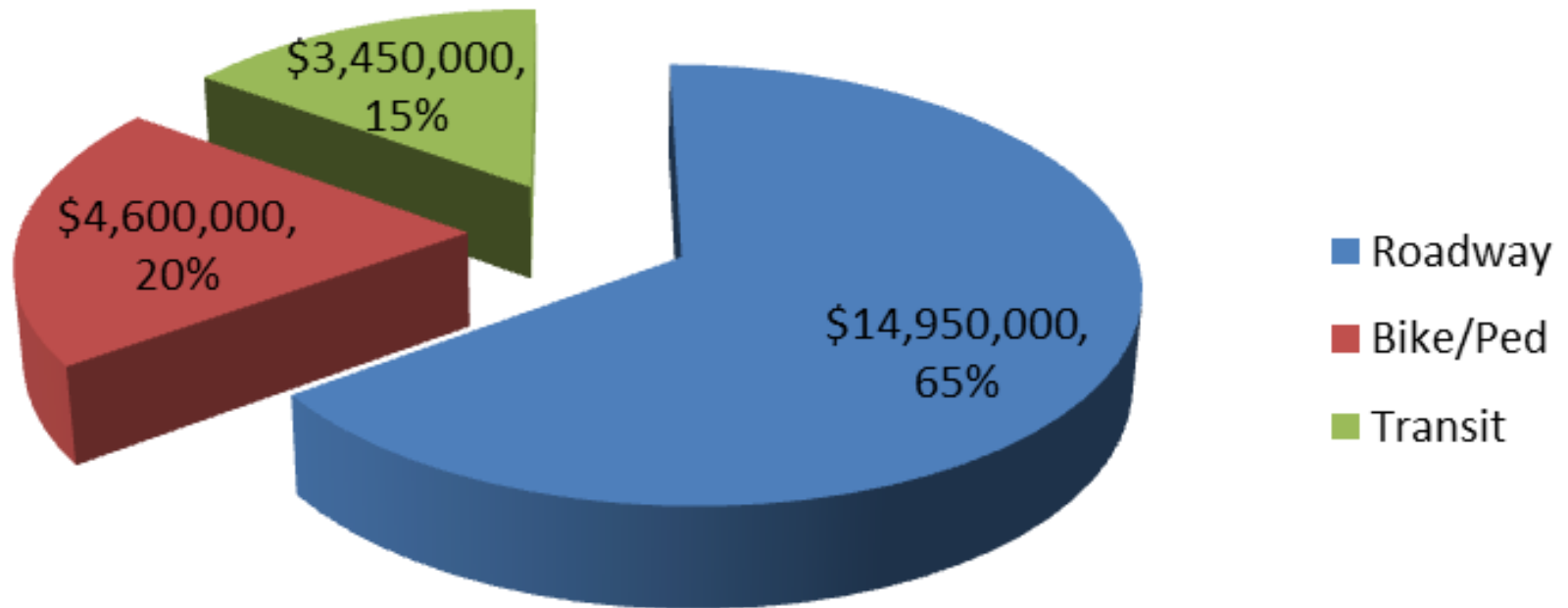
Requested Action:
Receive as information

8.2 FFY 2018 Locally Administered Projects Program

- FFY 2018 Target Modal Investment Mix and Recommended Changes to the FFY 2018 LAPP Program were released for public review and comment from June 17th through August 17th, 2016
- Public hearing scheduled at the regular Executive Board Meeting on August 17th, 2016 at 4:00pm. Based on Executive Board action at that meeting
- Call for Projects is anticipated to open on August 18th, 2016.

FFY18 Target Modal Investment Mix

Recommended FFY18 Target Modal Investment Mix



FFY18 LAPP Recommended Changes

Recommend beginning work with FHWA:

- Standardized Definition for Operational Improvements

Changes recommended for FFY18 include:

- Adopt Schedule Standard for Program-wide Achievement of Shovel Ready Projects
- Limit the Number of New Project Applications (effective August 2017 for FFY 19 applications?).
- Require designation of Project Managers (design), ROW Agents/Managers, and Construction Managers
- Amend the Proven Demand Definition
- Change Transit Scoring to accommodate Transit Plan Compliance Scoring Element

Adopt Schedules for Program-wide Achievement of Shovel Ready Standards

Shovel Ready projects include Design, NEPA, Right-of-way and Construction.

Shovel Ready Schedule Standards:

- Agreement is executed at least 15 days prior to the start of the federal fiscal year for the phase and year the project was awarded (September 15th).
- Final submittals are made to NCDOT prior to June 1 for all approvals required for authorization of the funded phase (the final funded phase if a multi-phase project).
- Authorization/Obligation of Funds at least 15 days prior to the end of the federal fiscal year for that funding round (September 15th).

Limit New Project Applications (effective August 2017 for FFY 19 applications?)

- Reduce the number of allowable new applications per agency per mode by the number of that agency's prior LAPP projects that did not meet authorization prior to the end of the federal fiscal year.

Project Managers (design), ROW Agents, and Construction Managers

- All LAPP Projects require designation of local agency Project Managers for Design, ROW Acquisition and Construction Contract Administration within two weeks of the funding announcement. All managers are required to attend the Project Management training prior to work on the project.

Amend the Proven Demand Definition

- Proven Demand – If the project improves access to transit services by being within ¼-mile of transit services, or if the project ~~sidewalk~~ serves an obvious pedestrian/~~foot~~bicycle path on a residential collector or higher, or if the project serves as an off-road pedestrian/bicycle parallel/alternate route to a residential collector or higher, the project will receive 5 points. To receive these points, transit service locations must be provided on the project map or photos of obvious pedestrian footpaths or user counts documenting the demand must be submitted with the application.

Section IV: Eligibility Requirements

C. Metropolitan Transportation Plan (MTP) Compliant

To be eligible for LAPP funding, a roadway project must be identified as an operational improvement, safety improvement, **2020 1st** horizon year project or **2030 2nd** horizon year project. A greenway/multi-use path or on-road bicycle project must be identified as a statewide, regional or local tier project on the **2040**-MTP. Sidewalk projects are included in the MTP programmatically, and are eligible. Safe Routes to Schools (SRTS) Infrastructure projects are eligible. This criterion for eligibility of Sidewalk and SRTS Infrastructure Projects is in place because the length of time required to amend the MTP to include a new project will not allow for the project to have funds obligated under the program deadlines. Transit projects, excluding transit vehicles, are eligible. **~~In future years, it is anticipated that a transit plan will be completed and approved for the metropolitan area.~~** Transit projects must be infrastructure projects that are necessary for operational, safety or security improvements to existing facilities, or new capital projects identified in the adopted MTP or in adopted components of the Wake Transit Work Plan.

Change Transit Scoring to accommodate Transit Plan Compliance Scoring Element

TRANSIT EFFECTIVENESS – Maximum 50 Points

Effectiveness scores will be comprised of **six five** elements, plus a multiplier.

- Safety & Security Concerns – 5 points (no change).
- Rider Experience – 5 points (no change).
- Connectivity – Maximum of 10 points (no change).
- Improves Facilities – **~~15~~ 10** points.
- Reliability Improvements – **~~15~~ 10** points.
- Transit Benefit / Cost - 10 points (included as a part of the Effectiveness score rather than a separate scoring element).

Transit Effectiveness Multiplier – (No change):

Construction, Capital, Maintenance, Operations Phase...	100%
Right-of-Way or Land Acquisition Phase ...	50%
PE/NEPA Phase ...	10%

Change Transit Scoring to accommodate Transit Plan Compliance Scoring Element

PLANNING CONSISTENCY – *Maximum 10 Points Reserve Category for Future Use*

All new capital projects must be in the adopted Metropolitan Transportation Plan as 1st or 2nd decade projects or in the adopted components of the Wake Transit Work Plan. Transit infrastructure projects that are necessary for operational, safety or security improvements to existing facilities may be submitted. To further implementation of plan priorities, projects will be scored based on their horizon year in the document. The Transit Planning Consistency will be scored on the following scale:

2 nd Horizon Year MTP Project...	5 Points
1 st Horizon Year MTP Project / 1 st Ten Years of Wake Transit Work Plan...	10 Points

Transit Infrastructure projects to existing facilities that are necessary for operational, safety or security improvement will be scored as 1st Horizon year projects.

~~This category is reserved for next year, after regional and/or local plans are completed, to promote the implementation of local and regional transit planning efforts in FFY17 LAPP projects (and beyond).~~

8.2 FFY 2018 Locally Administered Projects Program

Requested Action

Conduct Public Hearing,
Adopt the FFY 2018 Target Modal Investment Mix
and Changes to the FFY 2018 LAPP Program,
Open the LAPP Call for Projects and UPWP Call for
Special Studies.

8.3 DRAFT MTP 2045 Goals, Objectives, and Performance Measures

Requested Action:
Receive as information

8.4 Information about the TRM Version 6 Model Update

Requested Action:
Receive as information

Triangle Regional Model

Version 6

The TRM Version 6 model update was completed and the new version contains the following major improvements:

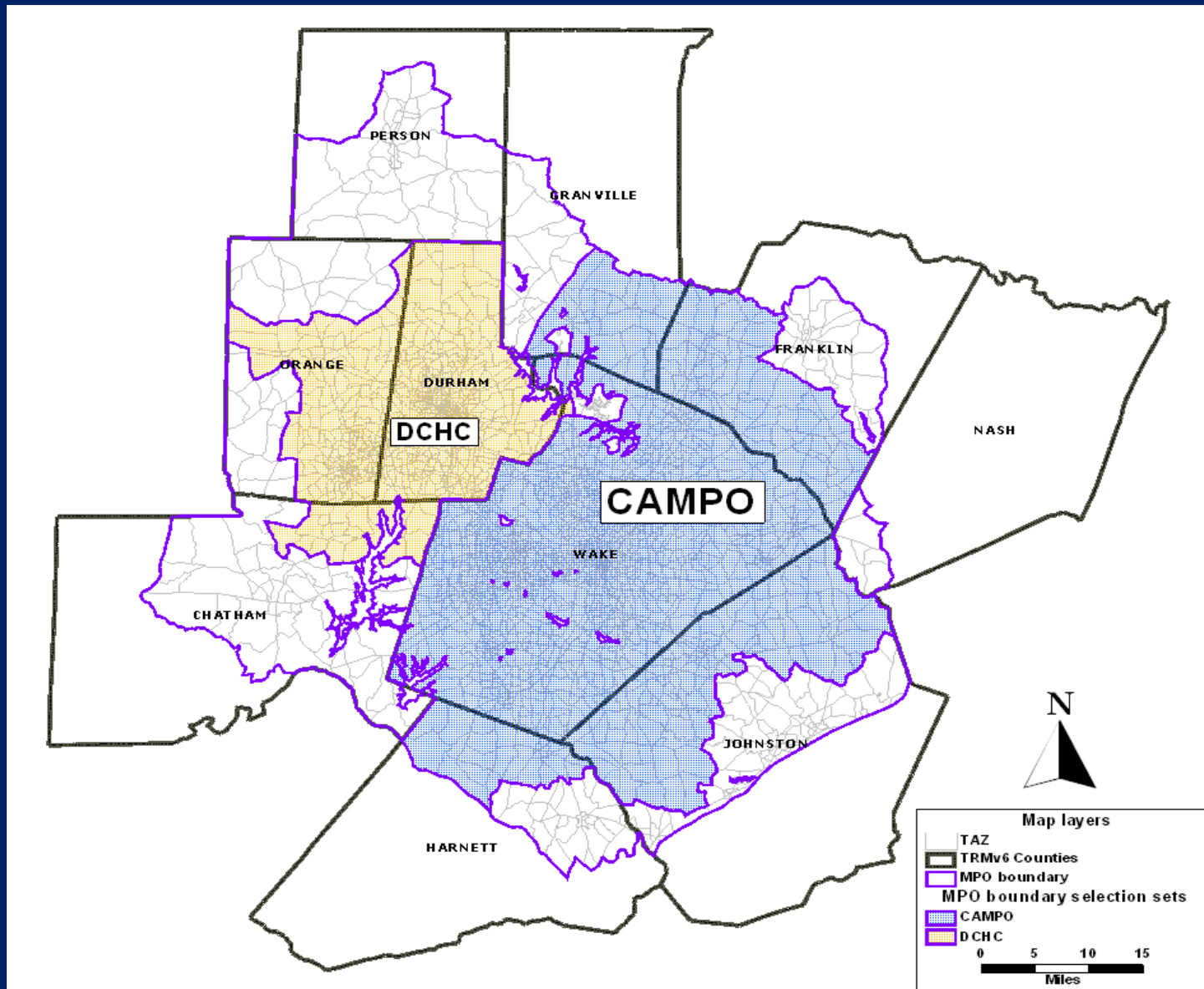
- new commercial vehicle model,
- new university student models to better represent on and off campus student travel,
- New and improved highway network procedures for free flow speeds and capacities based on the Highway Capacity Manual,
- new and improved employment types based on travel behavior analysis

TRM v6 Update

Introduction – TRMv6

- Components were added to TRMv5 model, and many enhancements were made
- Produces performance metrics such as congestion and travel time, etc.
- Results used to determine the most effective long range plans
- Advanced trip based model in which all major steps are discrete choice models

TRM v6 Study Area



TRM v6 Update

Key Enhancements & Improvements

- New commercial vehicle model
- New university student models to better represent on and off campus student travel
- New and improved highway network procedures for free flow speeds and capacities based on the Highway Capacity Manual
- New and improved employment types based on travel behavior analysis

TRM v6 Update

Key Enhancements & Improvements (contd.)

- All sub models re-estimated with local survey data and validated to 2013 traffic counts & transit ridership
- Mid day and night now separate off peak periods
- External passenger & commercial vehicle travel now integrated with NC Statewide model
- Integrated with CommunityViz for households & employment

TRM v6 Update

More Information/Details

- New commercial vehicle model has 3 trip purposes: deliver goods, deliver services, other
- New university student models have four trip purposes for on and off campus students
- New employment categories combines employer establishment type and worker earning level to address difference in travel behavior
- Various sensitivity tests performed using 2040 scenarios
 - ✓ Model responded reasonably
 - ✓ Capable of performing policy tests

TRM v6 Update

TRMv6 2013 Performance

Model estimated volumes compared to traffic counts

Functional Class	Observed	Modeled	Target %Deviation	Modeled %Deviation
Freeway	10,329,000	10,431,000	5%	1.0%
Principal Arterial	12,222,000	11,369,000	8%	-7.0%
Minor Arterial	10,826,000	10,407,000	10%	-3.9%
Collector	4,361,000	4,200,000	15%	-3.7%
Local	2,844,000	2,808,000	15%	-1.3%
Total	40,582,000	39,219,000	5%	-3.0%

8.4 Information about the TRM Version 6 Model Update

Requested Action:
Receive as information

8.5 Connect 2045; Update on SE Data, future scenario development, and land use modeling

Requested Action:
Receive as information

8.6 Wake County Transit Financial Plan Status Update

Requested Action:
Receive as information

8.7 Wake Transit – Interlocal Agreement Setting Forth the Mutual Understanding of Parties as to the Scope and Content of Various Transit Financial Plans

Requested Action:

Consider approval of the Interlocal Agreement and authorize the CAMPO Executive Director to sign the Agreement.

8.8 Wake Transit – Interlocal Agreement for the Joint Multi-Jurisdictional Procurement of Transit Planning Services

Requested Action:

Consider approval of the Agreement and authorize the CAMPO Executive Director to sign the Agreement.

8.9 Notice of Proposed Rulemaking: MPO Coordination and Planning Area Reform

- Notice of proposed rule released on June 27
- Comments due by August 26
- Rule proposes revisions to planning regulations to improve regional planning by MPOs
- Proposes unified planning products – MTP and TIP and performance targets – if multiple MPOs are designated within one MPA





CAMPO - DCHC Metropolitan Planning Area



INSET NOT TO SCALE

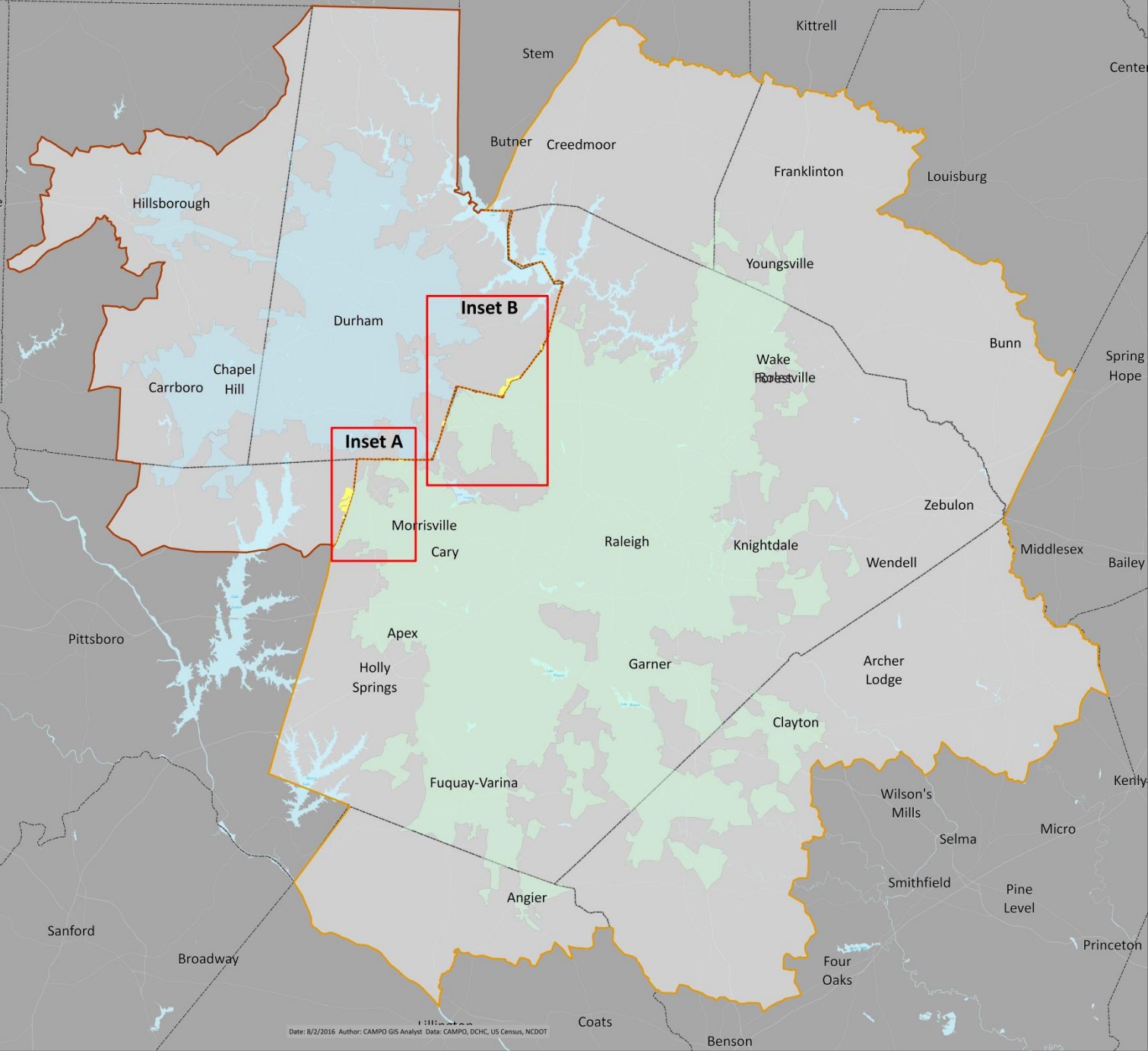
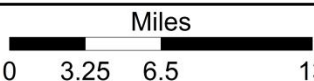


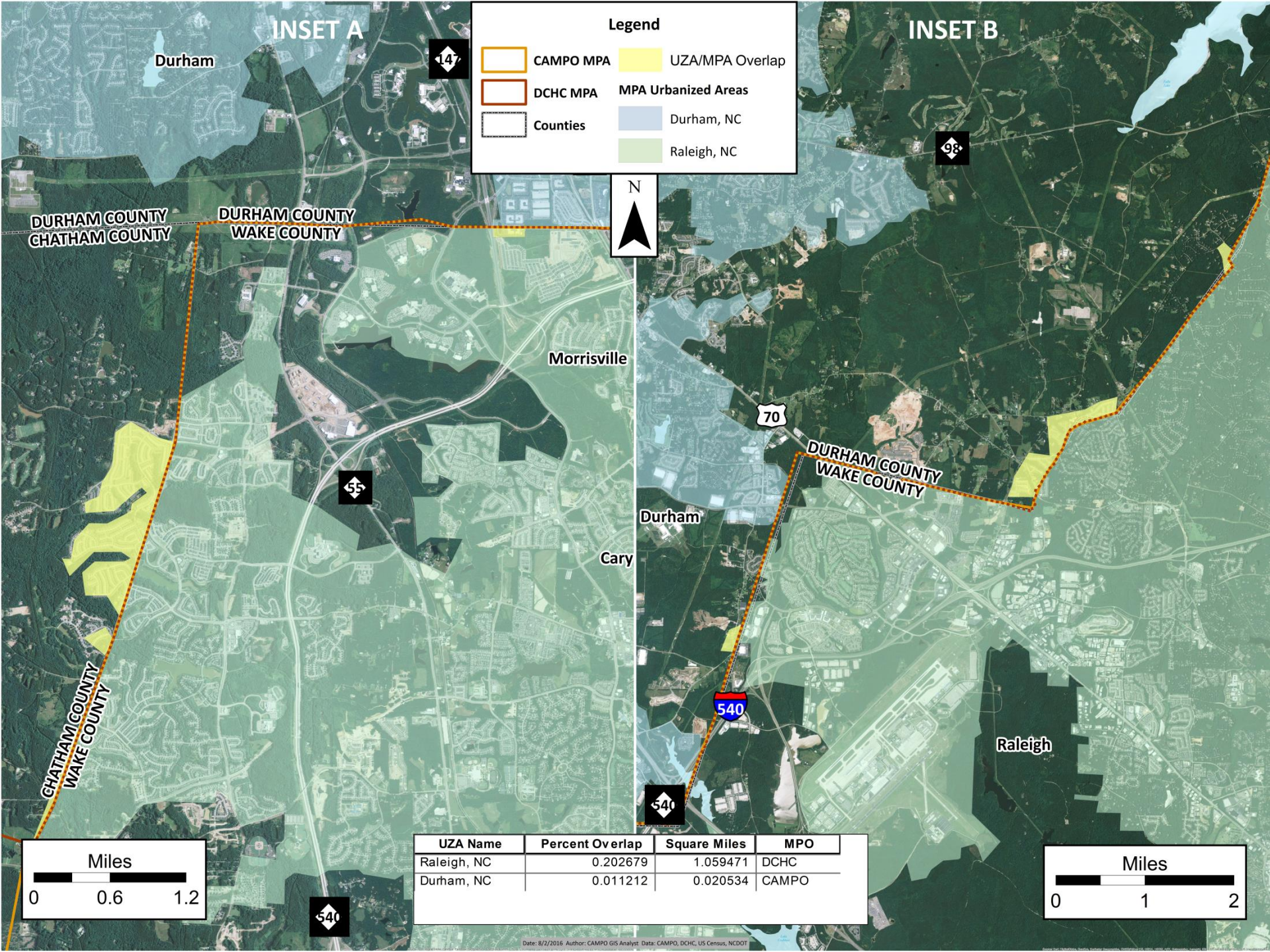
Legend

-  CAMPO MPA
-  DCHC MPA
-  Counties
-  UZA/MPA Overlap

MPA Urbanized Areas


-  Durham, NC
-  Raleigh, NC








INSET A


INSET B


 CAMPO MPA


 DCHC MPA

 Counties

 UZA/MPA Overlap

 MPA Urbanized Areas

 Durham, NC

 Raleigh, NC

UZA Name	Percent Overlap	Square Miles	MPO
Raleigh, NC	0.202679	1.059471	DCHC
Durham, NC	0.011212	0.020534	CAMPO

8.9 Notice of Proposed Rulemaking: MPO Coordination and Planning Area Reform

CAMPO Staff comments:

- Requirement for joint products should be implemented on a scaled basis that reflects proportion of actual overlap of planning areas with a minimum threshold established (e.g. 10 percent)
- Unclear how or if a larger planning area covered under a single MPO would “enable individuals within that region to better engage in the planning process”, or meet the identified goals of the proposed rules.
- There should be no mandatory merger requirement for adjacent MPOs
- Rules should recognize effort in joint planning already underway by CAMPO and DCHC

Requested Action:
Receive as information; discussion

10. Budget Informational Items

10.1: Operating Budget 2016

10.2: FY 16 Member Shares

Requested Action: Receive as information

11. Information Item: Project Updates

11.1 Project Updates

- Hot Spot Program
- NC 54 & More
- Transit Systems Planning
- Southeast Area Study
- Regional Freight Plan Study
- LAPP Program
- (SRTS) John Rex Endowment Grant Award Update
- NC Non- Motorized Volume Data Program –
Phase II Region Roll-out
- Triangle Tolling Study
- NC 98 Corridor Study

Requested Action: Receive as information

12. Information Item: Staff Reports

- MPO Executive Director, Chris Lukasina
- TCC Chair
- NCDOT Transportation Planning Branch
- NCDOT Division 4
- NCDOT Division 5
- NCDOT Division 6
- NCDOT Rail Division
- NC Turnpike Authority
- **Requested Action: Receive as information**

Upcoming Events

Date	Event
Sept. 1, 2016	TCC
Sept 21, 2016	Executive Board
Oct. 6, 2016	TCC
Oct. 19, 2016	Executive Board

ADJOURN