FLOW CHART FOR PROJECT LEVEL TRAFFIC FORECASTING

PHASE 1 – Receive / Initiate Forecast

Overview of Project Request:
- Review Database / files for any previous work
- Extent of project request / work effort required

Contact Forecast Requester:
- Finalize mutually agreed upon due date for project

Develop Project Work Maps:
- Municipal / USGS Quad / Internet mapping
- Aerial Photos / GIS Data

Request traffic counts as needed:
- Obtain past data as available
- Order 48 hour count(s)
- Order 48 hour classification count(s)
- Order 16 hour Turning Movement(s)

PHASE 2 – Collect Data

Develop Forecast Figures:
- Project Map – Create a Line Drawing for the Project
- Use NCDOT Standard Figure layouts

Initial Field Trip to Observe Travel Flows:
- Observe AM and PM peaks
- Review land uses and potential growth areas

Collect Historic Travel Data:
- Long Term Trends (10 and 20 years)

Collect Population & Employment Data (County Level):
- Long Term Trend (1980 - 2000 Census)
- Short Term Trend (2000 - present)
- Future Projections – Office of State Planning

PHASE 3 – Contacts

Make Local Contacts to assess growth potential:
- City / County Planning Staff
- MPO and / or RPO Contacts
- Regional Council of Governments (COG)
- Director of Economic Development or Development Recruiters
- DOT Division Staffs

Make Contact with Transportation Planning Engineer:
- Review Long Range Transportation Plan / Comprehensive Transportation Plan
- Review traffic estimates and growth assumptions used in system planning studies

PHASE 4 – Forecast Development and Analysis

Select appropriate travel forecasting technique / tool(s) and make preliminary forecast(s):
- Graphical Analysis
- Regression Analysis
- Simple – Interest Formula / Compound- Interest Formula
- Urban Travel Demand Models (forecasts are not direct model outputs)
- Judgmental growth rate estimate based on historic travel trends, economic activity, future growth potential and availability of alternate routes and modes*

Develop Design Factors:
- D – Directional Distribution factors
- DHV (K30) – Peak hour factor
- Truck factors (Duals and TTST) percentages

- Compare travel estimates to National / Statewide / Regional / County / Municipal trends
- Refine and balance traffic forecasts for all years / alternatives

PHASE 5 – Quality Control and Distribution

Quality Control
- Review by Forecaster's supervisor
- Formal review process by other TPB groups

Distribute Traffic Forecast:
- Use NCDOT TPB Standard format cover letter
- Send Hard copy and Electronic copy To Requester
- Send Electronic copy to other NCDOT Branches (per cover letter)

Documentation:
- Final Forecast and documentation to Forecast Files

March, 2009