# Tennessee Travel Demand Model Standardization Guide

TN MUG 7/15/2013

# Goals

- To have a standard platform for all the TN SWM, MPO Models, and TDOT Roadway Database be able to communicate with each other.
- To provide a standard platform for the applications use MPO/TN TDM outputs as inputs
- Better Modeling Process

# Objectives

- Standard Inputs and outputs
  - Common File Names
  - Common Field Names
- Standard Peak Period
  - AM, MD, PM, OP
  - Time of Day Volume Calibration/check
  - Time of Day Speed Calibration/check
- Standard Post Processor
  - Forecast Traffic Volume
  - Travel Speed
  - Travel Time

# Standard Inputs and outputs

Objectives

- Air Quality Post Processor
- Integrating Model Results to a Uniform database platform (eg: TRIMS,EVE, ADAM)

# Standard File Names

- Standard File Names Examples
  - **Network:** <area>+"_Network_"+<year>+<scenario>
    eg: TN_Network_2040EC.dbd, Knox_Network_2040L.dbd
  - **TAZ:** <area>+"_Zones_"+<year>+<scenario>
    eg: TN_Zones_2010.dbd, Nash_Zones_2040BAU.dbd
  - **Transit Route File:** <area>+"_Transit_"+<year>+<scenario>
    eg: TN_Transit_ 2010.rts, Mem_Transit_2015EC.rts
  - **Assignment Result File:** <area>+"_assign_"+<year>+<scenario>
    eg: TN_Assign_2020EC.bin, Chatta_Assign_2020EC.bin

# Standard Folder Structure

- **Main Folder** – All the files are stored in the main folder
- **Reference Folder** – To store all the lookup tables, eg: Capacity Table, TOD tables.. Etc
- **Document Folder**
- **Model UI Folder**
- **Scenario Folder** – To Store all the Scenario Files
  - Inputs
  - Outputs
  - MOE (if any)

# Scenario Names for Submission

- Network
  - Base: Base Year Network
  - EC: Existing Plus Committed (identified construction funding in the TIP document, or 1st year of the work program)
  - L: Fiscally Constrained Build Scenario

- Socio-Economic Data (SE, TAZ)
  - Base: Base Year SE
  - BAU: Business As Usual Scenario

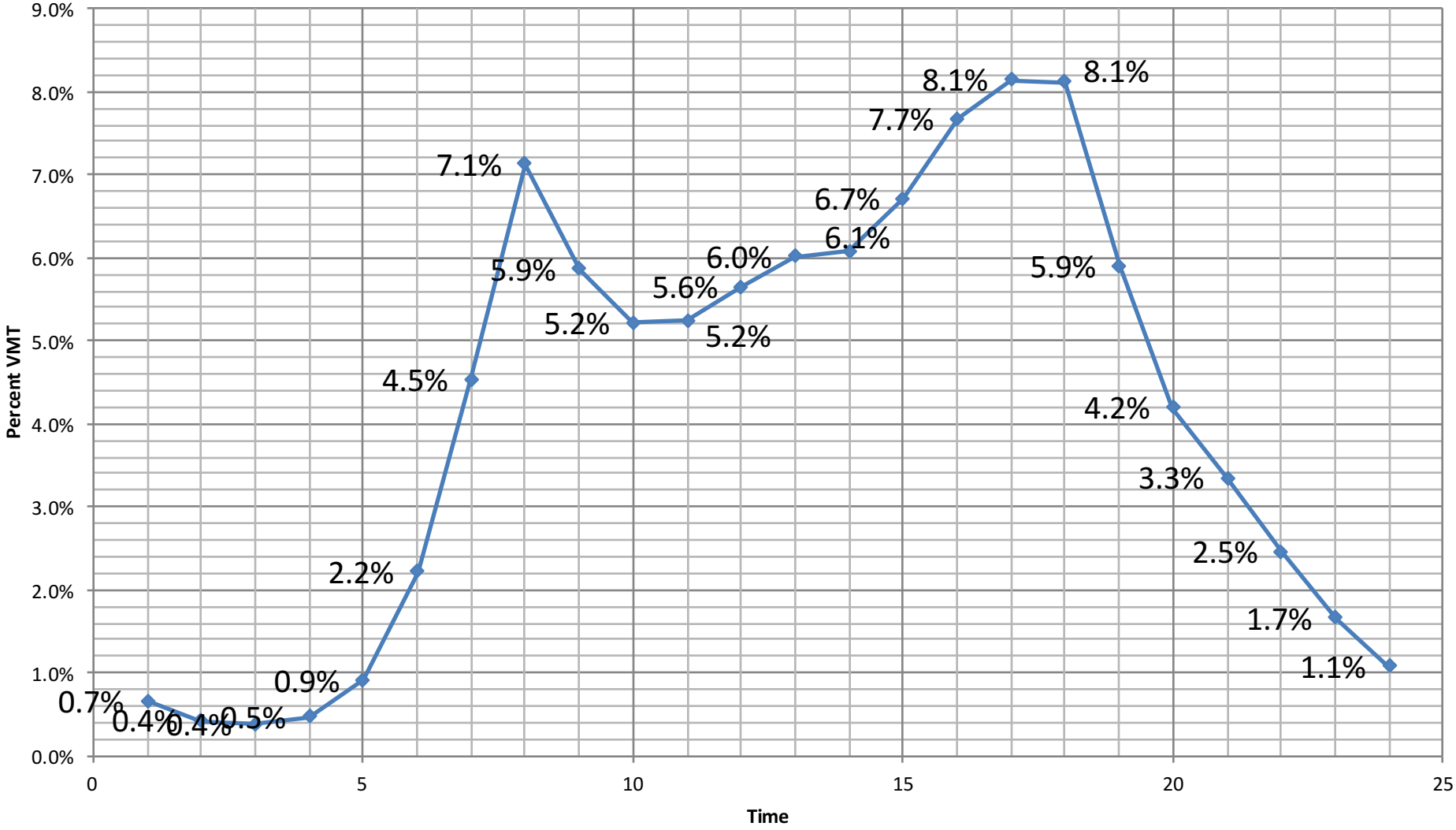
# Standard Network Field Names

TRIMS Dictionary: TRIMS Tables – in the end of the slides.

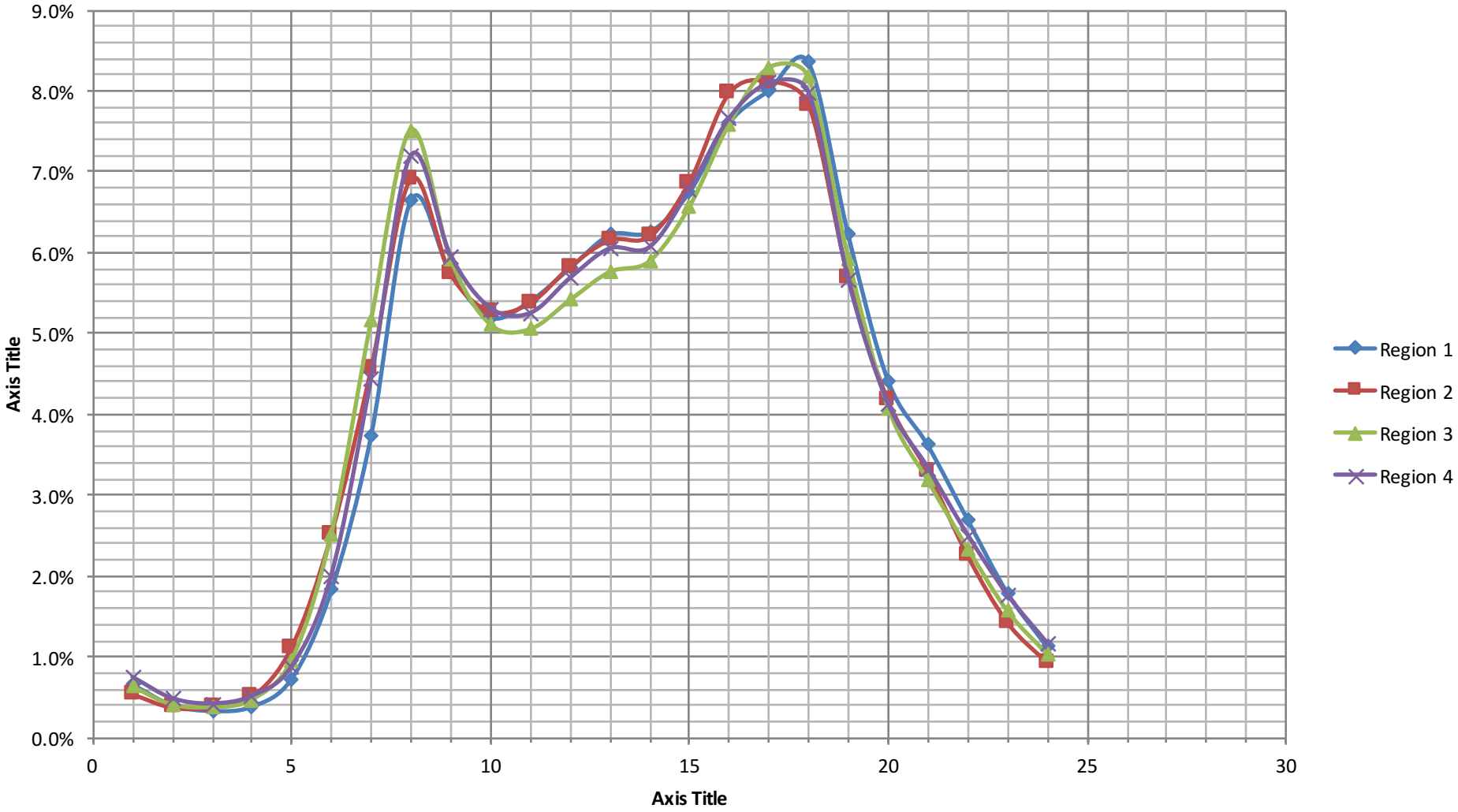
# Standard Peak Period

- Standard Practice
- Meaningful Comparisons
- 2014 Hourly and 15 min count data is available (Processed)
- Class counts data is available (incomplete)

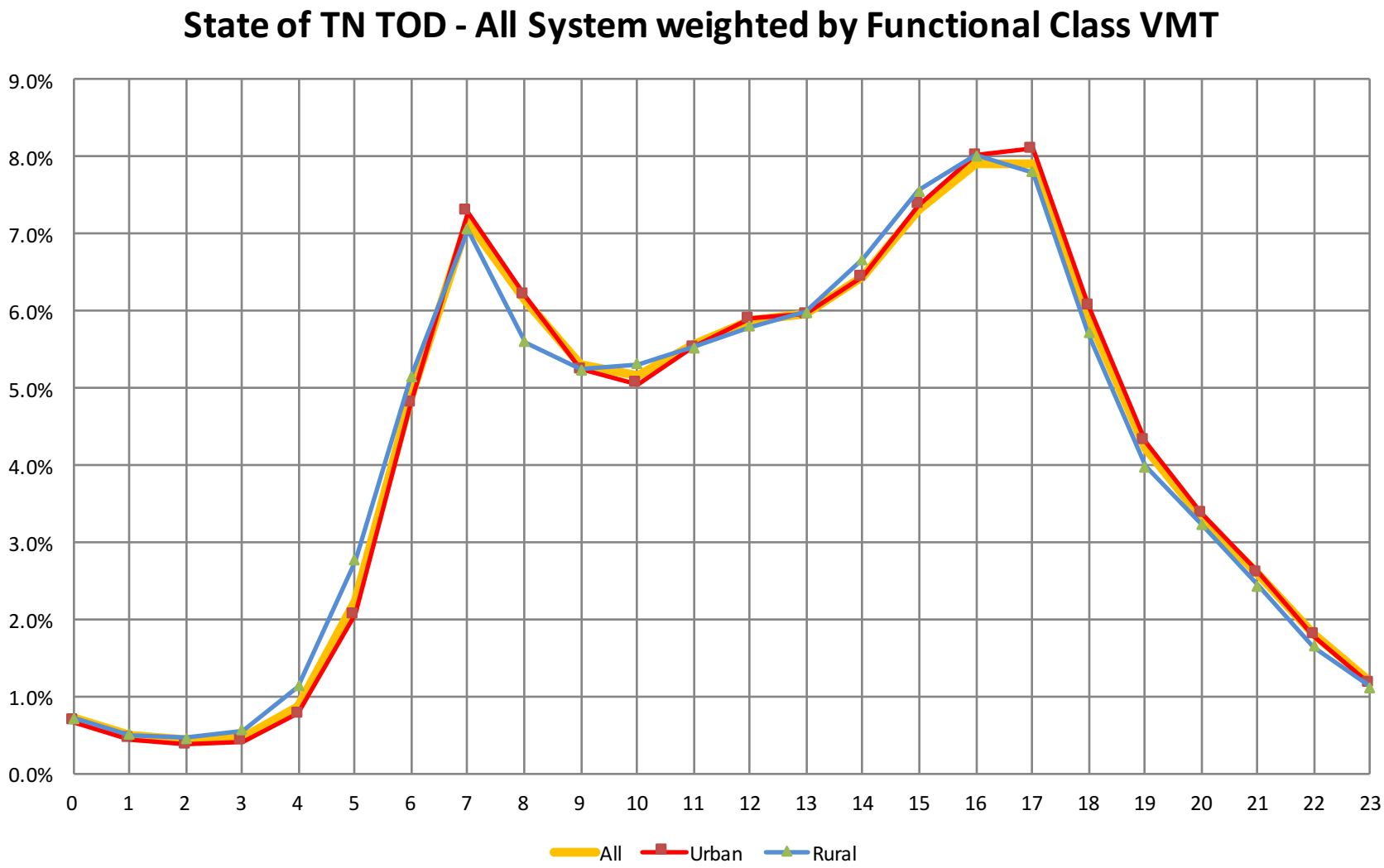
# Hourly Traffic - TN



# Hourly Traffic – TDOT Regions



# Hourly Traffic – Urban/Rural



# Standard Peak Period

- Four Time Periods
  - AM 6am to 9am (06:00-09:00)
  - Mid Day 9am to 3pm (09:00-15:00)
  - PM 3pm to 6pm (15:00-18:00)
  - OP the rest
- Directional Traffic Check

# Standard Post Processor

Directional Time of Day Post Processing

- Traffic Volume
- Travel Speed
- Travel Time

Daily Post Processing

- Total Traffic Volume, Pass, SU, MU

# TRIMS Reference Table

Double Click on the table, CTRL+A to select all, CTRL+C to copy all, open word document, CTRL+V to paste it in Word.

| Source Table | Original Seq | Used | Description | Database Field Name | Note |
|---|---|---|---|---|---|
| Route Feature (TRIMS_UP.RTE_FEAT) | 1 | | County | COUNTY | TDOT County ID: 1- 95 |
| Route Feature (TRIMS_UP.RTE_FEAT) | 2 | | Route | | |
| Route Feature (TRIMS_UP.RTE_FEAT) | 3 | | Sp Case | | |
| Route Feature (TRIMS_UP.RTE_FEAT) | 4 | | Co. Seq | | |
| Route Feature (TRIMS_UP.RTE_FEAT) | 5 | * | Log Mile | RF_LOG_MLE | LRS Mile |
| Route Feature (TRIMS_UP.RTE_FEAT) | 6 | | I.C. Order | | |
| Route Feature (TRIMS_UP.RTE_FEAT) | 7 | * | Item Code | CDE_ITM | To Identify Intersections, control type, and signs...etc |
| Route Feature (TRIMS_UP.RTE_FEAT) | 8 | * | Route Feature Desc | RTE_FEAT_DESCR | Detail Description of the Code at the location: eg: 4way stop, traffic signal... Etc. |
| Route Feature (TRIMS_UP.RTE_FEAT) | 9 | | Description Code | | |
| Route Feature (TRIMS_UP.RTE_FEAT) | 10 | | Mile Post | | |
| Route Feature (TRIMS_UP.RTE_FEAT) | 11 | | Mile Post Suffix | | |
| Route Feature (TRIMS_UP.RTE_FEAT) | 12 | | Sub Route | | |

# Extra -2014 Functional Class Changes and HPMS VMT

- Functional class system is being revamped. There are a lot of changes in the past year.
- Few things should be noted
  - Use the HPMS Fclass when comparing the model VMT to the HPMS VMT
  - New Functional Classes were created in TRIMS: 18