SHRP2 C20 – Maryland

Freight Modeling System Review

March 29, 2018
Overview

• **Project Goal**
  – Replace 2001 Truck Model in BMC Travel Demand Model with multimodal Freight Modeling System (FMS)
  – Use existing data sources and model components for quick implementation
  – Engage freight stakeholders throughout the process

• **Project Status**
  – Working model delivered in January 2018
  – BMC and MDOT SHA reviewing the FMS
  – Seeking feedback and application suggestions
Model Input Data

- **Business Data**
  - Establishment Survey: 2003 Ohio Statewide General Establishment Survey
  - Logistics Nodes: Intermodal facilities, warehouses and distribution center locations / Leonard’s Guide, Bureau of Transportation Statistics (BTS), Center for Transportation Analysis (CTA) & Maryland county planning departments
  - Employment: Longitudinal Employer-Household Dynamics (LEHD) / US Census

- **Freight Flow Data**
  - Goods Movement: 2012 Freight Analysis Framework (FAF) / FHWA & BTS

- **Modal Data**
  - Truck - Traffic Counts: SHA, MdTA & BMC
  - Truck - GPS: American Transportation Research Institute (ATRI)
  - Port: 2012 State and Port Cargo Movement Data / US Army Corps of Engineers
  - Air: 2012 Air Freight Data (T100) / BTS
Freight Modeling System Dashboard

**Base (2012) Dashboard:**

D:\FreightSystem\bmc_model_v0.1.7\scenarios\base\outputs\ReportDashboardBMCCounty.html

**2040 Dashboard:**

D:\FreightSystem\bmc_model_v0.1.7\scenarios\2040\outputs\ReportDashboardBMCCounty.html
Implementation

- **Passenger Model / Freight Modeling System Integration**
  - Replace 2001 Truck Model in BMC Travel Demand Model with 2017 Freight Modeling System

- **Validation/Scenario Testing**
  - Continue testing and comparing to 2001 Truck Model outputs
  - Develop a traffic count collection plan
  - Develop scenarios to test the 2017 Freight Modeling System including:
    - Brownfield Redevelopment
    - Port of Baltimore expansion
    - Other Applications?
Web Sites/Contact Information

**BMC’s website:**
www.baltometro.org

**SHA’s website:**
www.roads.maryland.gov

**Agency Contacts**

**BMC**
Brian Ryder
bryder@baltometro.org

**MD SHA**
Subrat Mahapatra
smahapatra@sha.state.md.us

**Consultant Team**

**RSG**
Colin Smith
Colin.Smith@rsginc.com