



NORTH CENTRAL SECTION

INSTITUTE OF TRANSPORTATION ENGINEERS

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## NCITE Simulation and Capacity Committee (SimCap)

Meeting Date: July 19th, 2016, 1 to 3 pm

Location: MnDOT Waters Edge, 1500 W County Road B, Roseville, MN

### Attendance:

Tyler Krage – Allient  
Ken Levin – Hennepin County  
Phillip Kulis – SRF Consulting  
Kevin Sommers – MnDOT  
Derek Lehrke – UMN (MTO)  
Haifeng Xiao – SEH  
Justin Sebens – Kimley-Horn – Remote via GoToMeeting  
Ben Hao – AECOM - **Chair**  
Joe DeVore – SRF Consulting - **Co-Chair**

### I. Introductions

### II. Presentation by Ben Hao (AECOM): VISSIM Modeling for Durham-Orange LRT Operations

- 17 mile corridor that was split into 2-3 mile segments for VISSIM analysis by several different companies.
  - VISSIM modeling methodology assumptions were necessary to keep consistency between different models.
  - Calibration requirements were also set on volume and speed results.
- Ben worked on the University Drive segment of the corridor modeling existing, no build, and 2 main alternatives with many iterations.
  - RBC signal controllers and VAP controlled gates were used.
- Traffic impact criteria was set for the project that identified where operations deteriorated.
  - Average Delay >25% compared to No Build
  - LOS Degrades 1 level
  - 95% queue > storage length
  - LOS D or better was acceptable
- Conclusions:
  - Most effective tool to model LRT operations and assessing LRT Impact
  - Traffic Impact Criteria and modeling assumptions are necessary for a large scale project
  - Used 3DS Max to create visualizations for the project

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**III. Task Group Updates:** The following updates were given on the different task groups.

- Update MnDOT Freeway Modeling Guidance: Freeway Calibration / Freeway Capacity / LOS Criteria / Transition Links / High Link Speeds (>80 mph):
  - Updated Freeway Modeling Guidance was based on the 2008 CORSIM modeling guidelines and included updated language on MOE reporting including lane by lane results.
- Mesoscopic/DTA modeling will have an update in September on the metro area model which includes all roadways inside the 494/694 beltway.

**IV. Round Robin/New Topics**

- MnDOT signal timing will soon be available online for all MnDOT controlled signals. This will be similar to the warrants database currently online.

**Next Meeting:**

Presentation: Jim McCarthy? -TBD  
Tuesday, September 20th, 2016  
1:00 pm – 3:00 pm at MnDOT Waters Edge