HCM 6th Edition and HCS7

The Transportation Research Board (TRB) is planning to publish the 6th Edition of the Highway Capacity Manual (HCM6E) this summer. Several significant research projects have been completed to provide advances and expansions to these methodologies that further the breadth and accuracy of their applications by practitioners. McTrans will implement the additions and changes in the Highway Capacity Software (HCS7) planned for release soon after the new HCM is published.

One of the most important HCM6E changes is the addition of Travel Time Reliability (TTR) procedures for urban streets and freeway facilities to model the effects of demand variations, weather, incidents, special events and work zones over an extended period of time. The generation of hundreds of scenarios to produce a distribution of results toward computing performance measures like travel time index and reliability rating is aimed at quantifying the variability of these circumstances over time. The inclusion of Active Transportation and Demand Management (ATDM) to this process generates an expanded method to estimate the effects of strategies on appropriate measures of effectiveness for these facilities.

Another quite significant HCM6E addition is the modeling of alternative intersections and interchanges, including Diverging Diamond Interchanges (DDI), Displaced Left-Turn (DLT) intersections, Restricted Crossing U-Turn (RCUT) intersections, and Median U-Turn (MUT) intersections. The ability to analyze these designs for direct comparisons with conventional intersections with regard to delay, queue and level of service will provide excellent tools for quantifying the results for decision makers.

Other major additions planned for the new HCM6E include: managed lanes and work zone analysis on freeways; speed and capacity adjustment factors for weather and incidents on freeway segments; updated truck procedures including a mixed-flow model for freeway segments and multilane highways; mid-segment blockage and sustained queue spillback on urban streets; auxiliary through lanes and unsignalized movements for signalized intersections; updated capacity equations and corridors for roundabouts; and planning method definitions for all analyses.

A MESSAGE FROM BILL SAMPSON

We are really excited about the upcoming release of the HCM6E with so many timely and innovative changes and additions included. We are looking forward to getting HCS7 in users hands and supporting all the new applications. HCS7 will be made available automatically to users with current subscriptions, so please check with us to confirm or reinstate yours before HCS7 is released. Stop by our booth at the ITE Annual Meeting in Anaheim on August 14-17!

Bill Sampson, Director
NEW FEATURES IN HCS7

TRAVEL TIME RELIABILITY

ALTERNATIVE INTERSECTIONS

McTrans is excited to announce that our newly rebranded website has officially gone live.

Check it out today!
Highway Capacity Analysis Webinar Series

Including Detailed Information on HCM 6th Edition and HCS7

This webinar series presents lectures, software demonstrations and application examples on the Highway Capacity Manual (HCM) procedures – including updates coming in the 6th Edition. Step-by-step instructions of the HCM methodologies will be provided for each analytical chapter. The Highway Capacity Software (HCS) implements and automates the HCM procedures. Each lecture will be followed by working example problems and a software demonstration using the HCS7 prototype. A comprehensive workbook is provided to include all slides. Registration is provided in four sections (Streets, Unsignal, Freeways and Highways) with the Overview included with any registration and a discount for the entire series.

The series is organized as follows with all presented from 10:30 AM to 12:00 PM EDT. Detailed course descriptions and registration can be found at mctrans.ce.ufl.edu/training.

### Overview
**August 9**
HCM and HCS Overview, Major Changes, Principles, Concepts

### Streets
**August 10, 11, 12**
- Signalized Intersections (NEMA, Phase Duration, Multiple-Period Analysis)
- Urban Streets (Flow Profile, Access Points, Travel Time Reliability, ATDM)
- Ramp Terminals and Alternative Intersections (DDI, DLT, RCUT, MUT)

### Unsignal
**August 16**
Unsignalized Intersections (TWSC, AWSC, Roundabouts, Corridors)

### Freeways
**August 17, 18**
- Freeway Segments (Basic, Weaving, Merge & Diverge)
- Freeway Facilities (Travel Time Reliability, ATDM)

### Highways
**August 19**
Highway Segments (Multilane Highways, Two-Lane Highways)

**HCM 6th Edition Webinar Video**
The Highway Capacity Manual (HCM) is now being finalized to produce the 6th Edition of the HCM. This ninety-minute video provides an overview of the changes as compared with the current HCM 2010, including some methodological details and a preview of the implementation in the Highway Capacity Software (HCS7) – check our training page for availability at mctrans.ce.ufl.edu/training

**Overview of the new HCM and Comparisons with HCM 2010 Major Changes**
- Basic Freeway, Freeway Weaving and Freeway Merge & Diverge Segments (Speed-Flow Curves, Managed Lanes, Weather, Incidents, Calibration, Trucks)
- Freeway Facilities, Multilane Highways and Two-Lane Highways (Travel Time Reliability, ATDM, Managed Lanes, Weather, Incidents, Trucks)
- Unsignalized Intersections including TWSC, AWSC and Roundabouts
- Signalized Intersections (Unsignalized Movements, HV & Grade, Planning)
- Urban Streets Segments and Facilities including Reliability and ATDM (Roundabout Corridors, Sustained Spillback, Lane Blockage, RTOR, LOS)
- Ramp Terminals and Alternative Intersections (DDI, DLT, RCUT, MUT) (Experienced Travel Time, Extra Distance Travel Time, U-Turn Crossovers)
- HCS7 Demonstration of Ongoing HCM6E Implementation Progress.

**HOW TO SET UP A TRAINING SESSION**
Scheduling a training course is easy and risk free. McTrans can arrange everything with your help only on the venue and some local promotion, or we can provide the instruction and course materials for your meeting or conference – we are very flexible. We can present live courses in your area or for your organization, or set up a webinar series to cover the material remotely – saving time and travel for all participants. Workbooks are always provided, as are certificates to document PDH credit. Just let us know what you need and we will work with you to make it happen.