

## Synchro and SimTraffic for Traffic Studies (TE-65)

### Course Outline

#### SESSION ONE

8:00 AM to 8:15 AM

8:15 AM to 8:30 AM

8:30 AM to 9:00 AM

#### **Introduction**

#### **Energy Connectors**

#### **Background Information Presentation**

- What will we learn in the next two days
- What is the Highway Capacity Manual
- What is Synchro
- What is SimTraffic
- Synchro Traffic Impact Analysis (TIA) Module  
Trip Generation, Distribution and Assignment
- QA/QC of Synchro Traffic Studies (Day 1 and 2)
- QA/QC of SimTraffic Microsimulation Studies (Day 2)

9:00 AM to 10:00 AM

#### **Lab Session – Opening a Synchro Traffic Study**

- Synchro TIA Reports
- Highway Capacity Manual Reports
- Signalized Intersections Analysis
- Unsignalized Intersections Analysis
- Roundabout Analysis

10:00 AM to 10:15 AM

#### **Quiz #1**

10:15 AM to 10:30 AM

#### **BREAK**

10:30 AM to 11:30 AM

#### **Lab Session – Reviewing Traffic Study Parameters**

- Network Input (Links and Intersections)
- Lane Input (Geometry, Speeds and Names)
- Volume Input (Vehicles, Trucks, Pedestrians, Bicycles, and  
Peak Hour Factor)
- Signal Timing Input
  - Control Type
  - NEMA Phasing
  - Parameters

11:30 AM to 11:45 AM

#### **Quiz #2**

11:45 AM to -12:00 PM

#### **Wrap-up of Session One and Q&A**

## Synchro and SimTraffic for Traffic Studies (TE-65)

### Course Outline

#### SESSION TWO

8:00 AM to 8:30 AM

**Review What We Learned on Session One Presentation**

8:30 AM to 9:30 AM

**Lab Session - QA\QC of Traffic Study Results**

- Intersection Delay
  - Control Delay
  - Queue Delay
  - Total Delay
- Level of Service
  - Movement
  - Approach
  - Average Intersection
- Queue Lengths
  - Average and Maximum

9:30 AM to 9:45 AM

**Quiz #3**

9:45 AM to 10:00 AM

**BREAK**

10:00 AM to 10:30 AM

**SimTraffic Analysis Presentation**

- Why Use Microsimulation
- Simulation Setting
  - Lane Alignment
  - Enter Intersection
  - Median Width
- Calibration Parameters
  - Intervals and Volumes
  - Driver Population
  - Vehicles
- Multiple Runs

10:30 AM to 11:30 AM

**Lab Session – QA\QC of SimTraffic Results**

- Intersection Delay
  - Control Delay
  - Queue Delay
  - Total Delay
- Level of Service
  - Movement
  - Approach
  - Average Intersection
- Queue Lengths
  - Average and Maximum

11:30 AM to 11:45 AM

**Quiz #4**

11:45 AM to 12:00 PM

**Wrap-up of Session Two and Q&A**