

ADVANCED WORKSHOP

DAY 1 CONTENTS

Introduction to the Workshop

SIDRA INTERSECTION Introduction

Workshop objectives, software status.

Discussion

User Interface - Various. Network Connections. Lane Movements.

Network Configuration (Aligning Sites, Rotate Network).

Discussion

Network Model. Iterative Process. Network Analysis Settings. Paired (Compound) Intersections and Interchanges. Site and Network OD Movements. Special Movement Classes.

Using SIDRA INTERSECTION:

Example - Signalised Staggered T intersections

Special Movement Class input using Network OD volumes. Lane Changes report.

Network timing analysis. Signal Offset, Signal Coordination and Critical Movements reports and displays. Time-Distance displays. Timing analysis as a Common Control Group.

Network Design Life.

Discussion

Midblock Lane Changes and Midblock Flows.

Discussion

Signal Coordination. Signal platoon model and platoon dispersion. Stopline travel time.

Network Timing and Common Control Group (CCG) dialogs.

Using SIDRA INTERSECTION:

Example: Phase with No Green Time

Dummy movement to allocate fixed phase time.

Using SIDRA INTERSECTION:

Example: Lane Use at small intersection with short lanes

Lane use at a small signalised intersection with approach and exit short lanes and opposed turns in shared lanes.

Using SIDRA INTERSECTION:

Example - Staged Crossing at two-Way Sign Control

Full Crossing and Staged Crossing with Storage in the Median Area.

Staged Crossing with Acceleration and Merging.

Using SIDRA INTERSECTION

Tools Tab (Input and Output Comparison. Report Preparation.

User Reports (Define User Report, Open User Report). Print All.

Using SIDRA INTERSECTION:

Example - Annual Sums using Project Summary

Using Site Category parameter for Annual Sums.

Using SIDRA INTERSECTION:

Settings Tab (Output Options, Manage Software Setup, User Software Setups).

VOLUMES Utility.

Using SIDRA INTERSECTION:

Example - Two-Way Sign Control Between Two Signals

Extra Bunching. Excess Back of Queue for upstream continuous lanes.

Network Cycle Time and Offset calculations.

End of ADVANCED Workshop Day 1

ADVANCED WORKSHOP

DAY 2 CONTENTS

Introduction to Workshop Day 2

Using SIDRA INTERSECTION:

Example - Two-Site Network (Signals and Roundabout)

Compare results with User-Given Cycle Time and Practical Cycle Time options.

Using SIDRA INTERSECTION:

Example - Freeway Diamond Interchange (Signalised)

Compare signal timings when the interchange is treated as a Common Control Group and as a coordinated signal system of two separate controllers.

Using SIDRA INTERSECTION:

Example - Roundabout metering signals

Nepean Highway - McDonald Street Case Study

Using SIDRA INTERSECTION: Model Calibration

Examples - Saturation Flow Calibration. Roundabout Capacity and Demand Flow Calibration

Key parameters for model calibration. Queue Space. Saturation Flow Survey Method and SCATS MF. Saturation flow estimation in the iterative network analysis method.

Using SIDRA INTERSECTION:

Example adv8: Freeway Interchange Roundabout

Discuss Lane Changes on internal approaches.

Using SIDRA INTERSECTION:

Example - Phase Actuation

Use of Phase Actuation method. User-given phase time less than minimum phase time.

Using SIDRA INTERSECTION:

Example - Pedestrian Actuation

Pedestrian Actuation method. Effect on signal timings.

Discussion

Pedestrian Timings

Using SIDRA INTERSECTION:

Example - Pedestrian Crossings on Roundabout Legs

With a Signalised Pedestrian Crossing and a Zebra Crossing.

Inspect the Lane Changes report for the North approach of South signalised Site.

Using SIDRA INTERSECTION:

Example - Large Network

Network Configuration. Network Routes dialog. Network Summary and Network Displays By Routes. Network Cycle Time and Offset calculations.

Using SIDRA INTERSECTION:

Example - Roundabout Interchange

Compare with signalised diamond interchange.

Using SIDRA INTERSECTION:

Alternative Intersections and Interchanges

Diverging Diamond Interchange. Continuous Flow Intersection).

Using SIDRA INTERSECTION:

Example - Sign control with side road priority

Configure the geometry. Discuss gap-acceptance parameter estimates.

End of ADVANCED Workshop