SIDRA SOLUTIONS

SIDRA INTERSECTION 6
UPDATE HISTORY

Version 6.0.24.4877

Release Date: 7 August 2014

Enhancements:

- Significant improvements have been made to the Quick Guide and the Help system including an enhanced sections on gap acceptance data and pedestrians at signalised intersections.

- Network data and functions have now been included in the API.

- The *Number of Hours per Year* parameter has been added to the Network Data dialog.

- A new Network Annual Sums Excel Utility has been prepared and will be made available on the SIDRA SOLUTIONS website.

- A warning message has been added to alert users to cases where the Site or Network output in a Project was created using an earlier or more recent version of SIDRA INTERSECTION 6. In such a case, it is recommended that the user updates the software if necessary and reprocesses all Sites.

- Automatic changes to Lane Movement Flow Proportions are now restricted to lanes that are directly affected by a change to intersection geometry. This minimises the chance of user-specified Lane Movement Flow Proportions being reset after changes to other data items.

- A "Reset to Defaults" function has been added in the Gap Acceptance dialog. This can be used at all intersection types but is particularly useful for Two-Way Sign Control for adopting the new method for automatic adjustment of gap-acceptance parameters.

- A Quick Input facility has been introduced to allow setting of the same phase times for all Sites in a Project that have the same number of phases as the current Site.

- Some error checks for Pedestrian Timing Data have been changed to allow more flexibility in user specification of pedestrian minimum green times.

- The display of non-selected values in the Volumes dialog has been limited to two decimal places.

- Various improvements have been made to input dialogs.

- A dropdown list showing all open tabs has been added to the top right corner of the Display Pane. This will assist users to find the required display when there are many tabbed displays open.

- The Licence ID has been added to the Status Bar and to output reports to assist users who will need this information when contacting SIDRA SOLUTIONS for support.

- New *Approach and Exit Flows* and *Roundabout Circulating Flows* displays have been added under the Demand Flows command in the Site tab ribbon, and under the Arrival Flows command in the Network tab ribbon.

- Site Type icons and roundabout metering icons (when used) have been added to various intersection pictures throughout the program.

- Improvements have been made to the resolution of Phasing pictures which should make them sharper when printed.

- Various improvements have been made to reports, including the Detailed Output report, some other output reports, the Input Report and the Input Comparison.

- If a user specifies a user-given cycle time that is less than the minimum cycle time, the minimum cycle time will be used and reported as "Minimum Cycle Time" in output table headers.
- Updating of the "Last Modified" information for the Site and Project has been made consistent across various user actions such as cloning, importing and processing.
- Users are now prevented from editing the User Names shown in the Properties dialog. This information will always be obtained automatically from the computer.
- Old "LTR" Movement IDs have been removed from the user interface as these are not used anywhere in SIDRA INTERSECTION 6.

Bug Fixes:

- An API error that occurred with large Project files has been resolved.
- User-given Phase Time was not used in the final run of a Variable Phasing analysis when an Analysis Option other than "None" was selected in the Demand & Sensitivity dialog.
- Opposed movements were not treated correctly when a continuous movement was specified as opposing at a signalised intersection.
- Fixed some lane flow and capacity calculation problems in cases where continuous movements and normal movements were specified in a shared lane.
- Fixed a lane flow calculation problem in cases where very low flow values were specified as input.
- Fixed various automatic calculation problems in the Volumes input dialog.
- An error that occurred when using Input Comparison for sign-controlled Sites was fixed.
- A problem with importing models when importing Sites based on User Models was resolved.
- An error that occurred when opening the Geometric Delay Movement Display has been fixed.

Version 6.0.22.4722

Release Date: 14 May 2014

Enhancements:

- API (Application Programming Interface) is now available. API documentation will be available on our website at http://www.sidrasolutions.com/Software/Utilities/About and Excel utilities "Volumes" and "Annual Sums" will be released soon.
- Improvements to the Quick Guide to SIDRA INTERSECTION 6 including a new section on the API and Excel utilities.
- New option introduced for creating Roundabout Metering Signals (1-lane) Sites.
- Various user interface enhancements introduced to clarify the difference between the calibration parameters used for the SIDRA Standard and HCM 2010 roundabout capacity models.
- Effective Detection Zone Length can now be specified at all signalised intersections regardless of whether the Analysis Method is specified as Fixed Time/Pretimed or Actuated. This is particularly relevant to modelling of intersections running under the SCATS system.
- Upper range limits for gap-acceptance parameter input have been increased to accommodate the maximum values found in AUSTROADS Guides.
- Improvements have been made to the short lane capacity model in relation to cases with continuous movements, very short lane lengths and some signalised cases with two green periods.
- Various improvements have been introduced to Input Comparison and Output Comparison reports.
- Improvements have been made to Network Displays.

- The HCM Roundabout Model Extension option has been renamed to "Apply the SIDRA Model for Unbalanced Flow Conditions" in order to make the purpose of this option clearer.
- Use of a ".SIP6" file extension for project files is now enforced by the software to prevent subsequent problems during opening project files that had been saved with the wrong extension.
- Volume data specified in vehicles will be rounded to one decimal place and percentage values will be rounded to three decimal places.

Bug Fixes:

- A bug that prevented display of some slip lane movements in the Movement Timing Display when there was phase deletion has been resolved.
- A problem that caused Output Reports to disappear from the screen after being printed has been fixed.
- An "exception" message that appeared in some Network output reports when the corresponding Site output reports did not exist has been fixed.
- A lane green time calculation error in an unusual shared slip lane case has been resolved.
- A problem with the default setting of Lane Movement Flow Proportions at single-lane roundabouts has been fixed.

Version 6.0.20.4660
Release Date: 7 April 2014

Enhancements:

- The method for calculating Travel Time, Travel Distance, Average Speed and Geometric Delay has been significantly enhanced to provide parameter estimates more relevant to Network Analysis. Some related results will change in comparison with earlier versions. Users should refer to the Quick Guide to SIDRA INTERSECTION 6, Section 8.1 for detailed information about this change.
- Network Clone and Network Import functions have been included.
- New Network Displays for Blockage Probability and Capacity Reduction have been introduced.
- Short lane capacity calculations for approaches with multiple short lanes and for unsignalised cases have been improved.
- Popup messages related to Unsettled Results and data ranges for All-Way Stop Control Sites have been removed and messages about these conditions now appear in the footnotes below each Output Report to provide a permanent record. The Diagnostics section given at the end of the Detailed Output report has been significantly enhanced in relation to the reporting of these cases.
- A simple Queue Constraint method where the average back of queue value is reduced so as not to exceed the available storage space (consistent with the probability of blockage value) has been implemented. This applies only to full-length lanes on connected legs (internal approaches) in network analysis.
- The Network Timing input dialog has been introduced under the Network tab for the control of Network Cycle Time and Phase Times.
- The Network iteration method has been improved to ensure consistency of flow rates between upstream and downstream sites in conditions of upstream capacity constraint.
- Reporting of Network Model Accuracy Level has been simplified to a single percentage value.
- Significant enhancements have been made to many tables in the Detailed Output report for better reporting of parameters related to Network Analysis.
- When a lane is deleted in the Geometry dialog, the Lane Disciplines will be updated if necessary to ensure that every movement runs in at least one lane.

- Specification of slip lanes on the "wrong" side (e.g. a right-turn slip lane for driving on the left) is now allowed. This will assist with modelling of unusual intersection geometries such as continuous flow intersections and diverging diamond interchanges.

- Improved checking of slip lane cases in the Geometry dialog to prevent potential processing errors related to incorrect geometry specifications.

- Light Vehicle emission parameters for CO, HC and NOx have been revised as a result of re-evaluating one of the vehicle types that contributed to estimates for this vehicle class.

- To allow more flexibility in the setting of fuel and emission parameters using Quick Input, the Quick Input function will now apply to individual parameters and not to the entire group of parameters in the table.

- When importing an earlier version SIP file, if a vehicle movement has an opposing pedestrian movement but the Extra Start Loss value was set to zero in the earlier version, the "Opposing Peds (Signals)" parameter will be set to "None" rather than "St Loss" in the Gap Acceptance dialog, Gap Acceptance Data tab.

- The "% Lane Change to Left/Right" parameter has been removed from the data for Two-Segment lanes since the SIDRA Network Analysis method will determine these lane change values automatically.

- A broader range of "Percent Arriving During Green" is now allowed as user input and in program calculations as part of improved modelling of signal coordination.

- Some improvements to Layout pictures.

- Some minor improvements have been made to the Input Report and the Input Comparison.

- Various improvements to display, copying, Print Preview and Printing, particularly in relation to large reports.

- Various minor enhancements to the user interface.

- Some reports did not reset correctly if a user closed a dialog using the Cancel button. This led to the reports not matching the input data.

- The Organisation name reported in the Project Properties and Site Properties is now obtained from the SIDRA INTERSECTION licence. Previously this was obtained from the computer on which SIDRA was installed and this often came as "Microsoft" or the computer manufacturer's name rather than the user's organisation.

- The User Guide and Help system improved to cover topics related to new enhancements.

Bug Fixes:

- A problem with the Network Flows display when used with a roundabout Site that had one-way legs has been fixed.

- Incorrect upstream and downstream flows were reported for some Networks with more than two Sites.

- The Network Layout was not updating correctly when the sites in the Network were moved or changed.

- A problem with calculation of lane green times in some shared lane cases has been resolved. In some cases this had led to results changing if the order of phases was changed.

- A problem with fuel and emission parameter values that led to underestimation of fuel and emissions has been resolved.

- A problem that led to zero Effective Intersection Capacity being reported for some unsignalised intersection sites with pedestrian movements has been fixed.

- An error with calculation of movement lost times for some opposed turn cases at signalised intersections has been fixed.

- Maximum Green Time Optimisation was using a fixed cycle time rather than calculating a cycle time.

- The phase sequence shown in the Phasing & Timing Dialog Sequence Editor tab did not always update correctly when a different Phase Sequence was selected.

- Some error checks of pedestrian timing parameters that were introduced in Version 6.0.18 were incorrectly reporting errors although the data was correct.

- An error with capacity and performance calculations for some Metered Roundabouts with slip lanes has been fixed.

- A case where incorrect capacity was reported for a Low Angle Slip Lane at a roundabout Site has been fixed.

- The "One-Way Major Road" Gap Acceptance Parameter Adjustment for Two-Way Sign Control was incorrectly applied to some two-way major road cases with unusual geometry.

- An error that occurred when converting a Site based on a User Model to a different Site type has been fixed.

- A case where the Level of Service reported in a Design Life Analysis did not match the Level of Service target in the Model Settings dialog has been fixed.

- A bug with Sensitivity Parameter settings that occurred when a roundabout was converted to another intersection type has been resolved.

- Some calculations of output parameters were using demand rather than arrival flow values leading to anomalies and incorrect values in Site outputs for some network cases.

- The "Upstream Lane Flow Rates at Entry to Approach" table in the Detailed Output wrongly included net inflow/outflow. This has been fixed.

- An exception that sometimes occurred when Graphs were open but the data was changed to a state where Graphs were not produced has been fixed.

- Some memory problems including "Out of Memory" and "Protected Memory" exceptions that occurred infrequently have been fixed.

- An error that occurred when importing a project file created by an earlier SIDRA version (SIP extension) that was set as read-only has been fixed.

- An error in the calculation of Occupancy Time in the SCATS Parameters table in the Detailed Output has been fixed.

Version 6.0.18.4502
Release Date: 17 January 2014

Enhancements:

- A number of improvements affecting output and displays have been made in cases where one of the Pedestrian options is selected under "Results For" in the Demand & Sensitivity Analysis dialog.

- The default value of Minimum Probability of Blockage for Network Analysis (Model Settings dialog, Model Parameters tab) has been changed from 5% to 0%. This applies to new Sites only and will not affect existing Site data. The new default value will give a better match between the capacity adjustment and probability of blockage values.

- Improvements have been introduced to the network model iterations method to achieve a better match between the capacity adjustment and probability of blockage values.

- Zooming and scrolling facilities have been added to the Network Displays.

- Various enhancements have been made to the Network Summary report including reporting of the number of iterations carried out by the network model.

- Messages related to the import and export of User Models (introduced in Version 6.0.17) have been enhanced to assist users when using this facility.

- Handling of licence upgrades from PLUS to NETWORK in the user interface has been improved.

- Improved error checking has been introduced for data in the Roundabouts and Pedestrians dialogs.

- Input data checking during SIDRA INTERSECTION processing has been enhanced.

- When a Site's Intersection dialog is accessed via the Network Configuration dialog, changes to leg configuration (one-way, two-way or leg deletion) are blocked to prevent resulting network configuration errors that could occur.

- Various improvements to the Site Layout pictures.

Bug Fixes:

- A problem with short lane capacity calculations at signalised intersections that was introduced in Version 6.0.17 has been fixed.

- Saturation speed for through movements was not calculated correctly at signalised pedestrian crossings and single point interchanges.

- Some cases of performance underestimation for non-metered legs at roundabouts with metering signals have been resolved.

- An error with the Network Flows diagram in cases where one-way legs were connected has been resolved.

Version 6.0.17.4466
Release Date: 23 December 2013

Enhancements:

- Major new features include Input Comparison, Output Comparison and Variable Run facilities (separate utility programs in previous versions), User Models and Network Displays.

- The Input Comparison facility enables comparison of input data for two Sites in a Project and comparison of input data with defaults.

- The Output Comparison facility enables comparison of Intersection Summary output for two Sites or comparison of Network Summary output for two Networks in a Project.

- The Variable Run facility provides Intersection Performance output for variable run results when a Design Life, Flow Scale, Sensitivity Analysis, Optimum Cycle Time or Optimum Maximum Green Settings option is used.

- Two User Models allow the user to create customised defaults to achieve calibration of SIDRA INTERSECTION for local conditions. Full model management facilities (Edit, Reset Defaults, Export, Import) are provided to facilitate deployment of User Models.

- Network Displays provide colour-coded displays of Network performance (Degree of Saturation, Speed Efficiency, Site Level of Service and Queue Storage Ratio).

- Improvements to All-Way Stop Control model including modification of the delay equation in line with HCM 2010 and better advice to users about capacity calibration.

- Various improvements have been made to the Network Configuration Dialog and the Network Layout display.

- Specific Movement Classes can now be selected in the Network Flows display.

- Separate Queue and Queue Storage Ratio Movement Displays and Network Displays have been introduced for average and percentile queue values. Colour codes shown in these displays have been made consistent with the queue type.

- Stopline Delay Movement Display has been introduced.

- Movement "Travel Time" has been added to the Intersection Negotiation Data table in the Detailed Output.

- Lane-based "Percent Arriving During Green" has been added to the Lane Delays, Lane Queues and Lane Stops tables in the Detailed Output report.

- Detailed Output Table "Progression and Actuated Signal Parameters" has been split into two tables: "Coordination Information" and "Actuated Signal Information", and extra output parameters have been added.

- Various minor improvements to Network and Site output reports.

- The number of title lines written in various output reports has been restricted in order to improve formatting when the reports are printed.

- The User Guide has been extended to cover the new features.

Bug Fixes:

- Site Layout and Input Volumes Display became distorted (squashed, stretched or very small size) in some cases when copied or printed.

- U-turn movements were missing from the Movement Timing Display in some cases.

- Delay and Queue estimates were too high for some cases of shared lanes with opposed and unopposed movements on major roads at sign-controlled intersections.

- Opposed turn lost time estimates were too high for some signalised intersection cases with unusual phasing arrangements.

- Maximum Power Acceleration adjustments for Heavy Vehicles have been limited in some extreme cases that led to very long downstream distance values.

- The Upper Limit output values were not reported in Flow Scale Analysis.

- Lane performance values were not calculated at roundabouts for some unusual cases where turn lanes were only used by non-LV (Light Vehicle) movement classes.

- Movement required times at signalised intersections were not always calculated correctly in cases where a movement ran only in lanes that were underutilised.

- Various problems related to specification of pedestrians on one-way legs at both roundabouts and signalised pedestrian crossing Sites have been resolved.

- Quick Input for Peak Flow Factor in the Volumes dialog did not always set pedestrian values correctly.

- The "Exclude Geometric Delay" setting was sometimes lost when exiting from the Model Settings dialog.

- Lane selection was sometimes lost in the Geometry dialog when a slip lane was deleted.

Version 6.0.15.4263
Release Date: 29 October 2013

Enhancements:

- Significant improvements have been made to the Network Flows display.

- A modification has been introduced to the delay equation for All-Way Stop Control in line with HCM 2010.

- Detailed Output headers related to All-Way Stop Control have been improved.

- A warning message will be given if any non-connected Sites are identified at the end of a Network Configuration process.

- Some users were getting messages about the SIDRA INTERSECTION setup file being "unsafe" or that "The signature of this program is corrupt or invalid". This problem was determined to be caused by Windows update KB2870699 for Internet Explorer Versions 9 and 10. Unfortunately Microsoft is not planning to fix this problem. As it is not always feasible to ask users to remove the update or to use a different browser, a fix has been implemented for this issue.

Bug Fixes:

- Unsettled results occurred in some cases where capacity adjustment was used at All-Way Stop Control.

- Shared Slip lanes with "Include Slip/Bypass Lane in Entry Lane Count" unchecked in the Lane Data dialog were not included in the roundabout entry lane count.

- LOS Summary report image was too large in some cases, causing the report to print out over several pages.

- In some cases a single left-turn lane was incorrectly given a lane utilisation less than 100% due to downstream effects. This is now only applied if there are multiple lanes turning left.

- Some error cases where Error 509 (lane effective green time calculation problem) occurred have been fixed.

- Some inconsistencies in the reported values of lane effective red and green times in the Detailed Output have been fixed.

- The results from the Variable Signal Phasing table did not match other outputs (e.g. Lane Summary report) in some cases.

- When Site input dialogs were opened from the Network tab, sometimes the Site outline or background did not appear in the Approach Selector.

- When renaming a Site or Network in the Project Pane, the new name was not accepted when Site functions such as Clone or Convert were used.

Version 6.0.14.4193

Release Date: 26 September 2013

Enhancements:

- When adding a new roundabout Site, the user can now choose between a one-lane and a two-lane roundabout.

- New Timing Analysis report introduced.

- New Network Flows display introduced.

- The Floating Licence path can now be typed directly into the text box rather than having to browse the network for the server location.

- Some error messages related to licensing have been improved.

- Progress reporting of importing a Site from another project has been improved.

Bug Fixes:

- A bug introduced in the previous update which prevented lane colours from showing in the Site Layout picture has been fixed.

- In some roundabout and sign-control cases where a low-angle slip lane with a continuous control was shared with a movement subject to give-way (yield) or stop control, the capacity calculated for the lane was too high.

- Roundabout dominant lane selection has been made more consistent in cases where several entry lanes have equal flows.

- Some delay calculation issues related to specification of uphill exit grades have been resolved.

- Use of some special characters in user-defined Movement Class names caused a program error during processing.

- Some network-related output was not removed when Quick Input was used to change input values for all sites.

- Some minor problems in the Layout picture have been resolved.

Version 6.0.13.4101

Release Date: 23 August 2013

Enhancements:

- The Network Configuration dialog has been enhanced by introducing a warning about inconsistency of Approach Distance values for connected Sites and a legend showing colour codes used for connection errors and warnings.

- Tooltips have been introduced for function buttons in input dialogs.

- Various improvements have been made to Templates.

- The method of importing Extra Start Loss values for pedestrian effects from previous version files has been improved. Instead of increasing the start loss values of vehicle movements, Opposing Peds (Signals) parameters in the Gap Acceptance dialog are set to the St Loss option.

- The method of importing Heavy Vehicle Equivalent (Gap Acceptance) values from previous version files has been improved in the case of low Heavy Vehicle Equivalent values.

- The blue text message related to the Cycle Time Option in the Phasing and Timing dialog, Timing Options tab has been improved.

- Various improvements to the Demand Flows and Arrival Flows displays.

- Various improvements to the Detailed Output report.

Bug Fixes:

- A bug in the Pedestrian Crossing error check introduced in the last update has been fixed.

- A lane interaction (shared lane) calculation bug has been fixed.

- A problem with the Current Model selection drop-down box under the Options tab has been fixed.

- Performance targets have been corrected for some parameters in Sensitivity Analysis calculations.

Version 6.0.12.4072

Release Date: 19 August 2013

Enhancements:

- Templates have been introduced.

- The Input Comparison facility has been introduced for comparing input data with defaults.

- FLOATING Licensing has been implemented.

- Site Input dialogs can now be accessed by right-clicking the Site name in the Sites In Network section in the Project Pane under the Network tab and in the Sites In Network section of the Network Configuration dialog, or by right-clicking the simple Site layout picture in the right pane of the Network Configuration dialog.

- The Import button in the Site ribbon has been changed to a split button.

- Processing errors and user interface improvements including handling of pedestrian movements have been introduced for the case when all approach lanes are slip/bypass lanes.

- The Island Configuration Data Group is shown in the Lane Disciplines tab of the Lane Geometry Dialog.

- The default setting for the Pedestrian Walk Time Extension parameter has been changed to unchecked in both newly created Pedestrian Crossing Sites and Pedestrian Crossing Sites imported from earlier versions.

- The default value for the Stopping dx% parameter in the Network Data dialog has been changed to 1%.

- Dialog Tips have been added to the Properties tabs for Project, Site and Network.

- Various improvements to the Site Layout pictures.

- The User Guide has been extended to cover the new features including Templates.

Bug Fixes:

- Opposed movements were not labelled correctly in the Movement Timing table in the Detailed Output.

- Various problems with output reports and displays for Network Sites were fixed.

- "Insufficient memory" exception occurred when trying to print some Site Layouts.

- Ctrl + O was not working in Detailed Output.

- Detailed Output became blank if the function key F5 was pressed.

Version 6.0.11.3995
Release Date: 30 July 2013

Enhancements:

- The process of passing a short lane back of queue value to an adjacent lane has been removed. For network modelling purposes, probability of blockage values from short lanes will be passed to adjacent full length lanes where applicable.

- In Network Configuration, two one-way legs from separate Sites can be connected to a two-way leg of another Site. This is required for network modelling of freeway ramps.

- An additional condition of intersection average delay has been included in the process of choosing the Output Sequence in Variable Phase Sequence Analysis.

- Volume Data Settings now available in the Pedestrians dialog as well as the Volumes dialog. Vehicle Peak Flow Factor can be applied to pedestrians via Quick Input in the Volumes dialog if desired.

- Overlap movement cases where Phase Green Times are zero are now indicated with a special symbol and explanatory footnote in the Phasing Summary.

- Various improvements to Input Report and Output reports.

- Circulating Transition Line facility added to roundabout layout.

- Various improvements to the Layout picture.

- Default gap-acceptance values for major road movements have been revised and set to more appropriate values.
- Various error checks have been added for roundabout metering timing parameters.
- The method of setting default Lane Movement Flow Proportions has been improved, particularly in cases of lanes used by one Movement Class only (e.g. bus lanes).
- 1 PC licensing has been improved in some cases of unusual computer configurations.
- The method of Movement Class selection across various tabs in the Vehicle Movement Data dialog has been improved.

Bug Fixes:

- A lane data corruption problem related to the use of the Apply and Cancel buttons in the Lane Geometry dialog has been fixed.
- An error that occurred in shared lane calculations when very large Free Queue values were specified has been fixed.
- OD Movement Delays reported in output did not correctly include the effect of geometric delay.
- Detailed Output was not being updated correctly in Network cases.
- Network Layout was not being updated correctly when the status of a connection (valid or not) between two Sites changed.
- An error with the Network Arrival Flows display that occurred when individual Sites had not been processed has been resolved.
- Radio buttons in the Priorities dialog sometimes did not indicate selected status when the corresponding opposed movement was selected.
- When Lower Limit = Upper Limit is specified in the Demand and Sensitivity dialog for Flow Scales or Sensitivity Parameters, no Graphs are produced and an explanatory message is displayed when the Graphs item is clicked.
- Lane selection in the Demand and Sensitivity dialog was not kept in some cases.
- Errors related to Short Lanes, Two-Segment Lanes and Strip Islands have been resolved in the Lane Geometry dialog and Site Layout.
- The list of Phase names in the Sequence Tab was not updated when the Variable Phase checkbox selection was changed.

Version 6.0.9.3896
Release Date: 27 June 2013

Enhancements:

- Several improvements have been made to short lane modelling:
  - The short lane capacity model has been improved in cases where very low capacity values had been predicted due to the way blocking of entry to the short lane was modelled when there was low demand in the short lane.
  - If a short lane queue length exceeds the estimated back of queue value of the adjacent lane into which the short lane overflows, the back of queue value of the adjacent lane is set to the short lane back of queue value. This is important for network modelling cases where there are short lanes at a downstream intersection.
  - Some output reporting related to short lanes has been improved.
- Site and Network deletion warning messages now list the name of the Site or Network.

- Major Road selection options are removed when converting between Two-Way Stop and Give-Way/Yield. When converting Signals or Roundabouts to Two-Way Sign Control, the Major Road options that are not possible with the existing intersection geometry are blocked.

- After selecting "Input" from a "Program/Input" dropdown list, focus will be put onto the input data item to streamline the input process.

- Addition and deletion of approach lanes, exit lanes and strip islands can now be done in both the Lane Configuration and the Lane Disciplines tabs in the Lane Geometry dialog and these functions can be accessed via a mouse right-click menu. Operation of the lane addition and deletion buttons has been improved.

- Descriptions of Strip Islands and Roundabout Splitter Islands and their associated input parameters have been improved in the Lane Geometry dialog. Quick Input for these parameters has been improved.

- Short Lane and Lane Segment lengths are now updated automatically when the Approach Distance is changed.

- Some aspects of vehicle and pedestrian volume data settings have been enhanced.

- A different movement arrow symbol has been introduced to depict mixed running and stopped Movement Classes of an OD.

- Default phase sequence and pedestrian crossing settings have been improved at Single Point Interchange Sites.

- The upper limit on the value specified for Dummy Movement Minimum Green has been removed.

- Various improvements have been made to the Input Report.

- Site Type icons have been added to all output reports and displays.

- Capacity, Degree of Saturation and Lane Utilisation have been added to the Lane Flows output report, and the formatting of this report has been improved.

- The SCATS Parameters table has been reintroduced into the Detailed Output.

- Slip lanes are now described as "Slip/Bypass" to improve understanding of this lane type.

- More topics have been added to the Quick Guide.

Bug Fixes:

- Specification of "Full" pedestrian crossing option is now prevented at roundabout Sites.

- Network symbols were not removed from the Site list when a Network was deleted.

- The right-click option for rotating the intersection in the Intersection dialog has been removed as it did not always operate correctly (the buttons in the Approach Editor should be used for rotation).

- A problem with the Grade Separated parameter in the FHWA 2000 Roundabout Model data tab (optional) has been resolved.

- "Close All But This" option in Output tabs was giving an error.

- Closing Output tabs by clicking on the x symbol sometimes resulted in the wrong output being closed.

- Some phasing calculation problems that occurred when a slip / bypass lane was not used by all Movement Classes of an OD have been resolved.

- An error in calculations that occurred when a user-defined Movement Class was the only Movement Class present for a specific OD has been resolved.

- The Detailed Output - Upstream Lane Flow Rates at Entry to Approach table was empty.

- The header of the Variable Signal Phasing table in the Detailed Output report did not list the correct cycle time and cycle time option.

- "Critical Gap Distance" values were not reported in the Gap Acceptance Parameters table in the Detailed Output report (zero values were shown).

- Pedestrian performance values were not reported (zero values were shown) for Single Point Interchange Sites.

- In the Detailed Output report, coordination was wrongly reported as "Mixed" for continuous movements.

Version 6.0.7.3835
Release Date: 4 June 2013

Enhancements:

- The Movement Class "Trams" has been renamed to "Light Rail / Trams" with ID "LR".

- Undetected and Phase Transition settings can now be specified for pedestrian movements in the Advanced tab of the Phasing & Timing dialog.

- Pedestrian Crossing descriptions improved in various output tables.

- A new "Lane Flows" output report has been added. This table lists OD flows estimated by the program for each lane.

- Further tables have been added and some existing tables have been improved in the Detailed Output report.

- Improvements to the Input Volumes, Demand Flows and Arrival Flows displays including a facility to automatically display volumes using the same data method as specified in the Volumes dialog, listing of all movement classes in intersection totals regardless of the Volume Displays option settings, and display of asterisks for movements that do not exist.

- Further improvements to the Layout picture and some Movement Displays.

- The lower limit for stopping dx% for network calculations has been reduced to 0.1%. However it is recommended generally that this value should be set to 1% or higher.

- The dominant lane selection process during capacity calculation iterations has been improved to reduce the likelihood of unsettled results in oversaturated roundabout sites.

- The definition of Geometric Delay was changed to include the acceleration, deceleration and cruise times applicable to Light Vehicles only. This prevents the reporting of very high geometric delays in cases where Heavy Vehicle acceleration rate is restricted due to maximum power limitations.

- "Exclude Geometric Delay" is now automatically unchecked when the HCM Delay Formula option is unchecked.

- The Basic Saturation Flow parameter in the Lane Data dialog is now blocked for all movements at roundabouts and sign control that are subject to gap-acceptance as it does not affect capacity for these movements.

- Blocking of various parts of the user interface is now done more consistently in cases where the software is not licensed.

Bug Fixes:

- Some input and output data errors that occurred in unusual circumstances have been fixed, and a new facility to recover the project file after a data error has been added.

- An installation problem affecting some Windows 8 64-bit machines has been fixed.

- The facility for automatic addition and removal of exit lanes on the next leg for low-angle slip / bypass lanes (when a low-angle slip / bypass lane is added to or removed from an approach) has been removed.

- Slip / bypass lane movements were not displayed correctly in the Advanced tab of the Phasing & Timing Dialog and were not listed in legends.

- Slip / bypass lane phasing was not set correctly in some cases where the slip / bypass lane was used only by a specific Movement Class.

- HCM Delay Formula option, SPUI Freeway Direction, Downstream Short Lane Model Parameters and some Roundabout Metering parameters were not being imported correctly from Version 5.1 projects.

- Some output problems related to diagonal pedestrian movements have been fixed.

- Problems with Movement Class selection in the Volume Factors tab of the Volumes dialog have been fixed.

- The Movement Timing report did not display specific Movement Classes separately when those Movement Classes had different timings.

- Priorities dialog had an error if the South leg was a one-way exit.

- The default merge direction for exit short lanes was not set correctly.

- The Phase Sequence display was not updated when a different sequence was selected in the Phasing & Timing dialog.

- The default value of Basic Saturation Flow has been corrected for HCM main models.

- The default values of Pedestrian Average Income have been corrected so that they match the average income values for vehicle occupants.

- Queue Storage Ratio values were not showing in Movement Displays.

- Colour codes related to movement performance were not being shown for opposed turns from the major road at two-way sign controlled intersections.

- Improvements made to variable phasing calculations to overcome some errors when sequences with large numbers of variable phases were specified.

- If a major road leg was changed to Stop or Give-way control at a two-way sign controlled intersection, zero values were allocated to gap-acceptance parameters rather than default values.

- Some minor interface issues related to Network processing using the Process button in the Network Data and Network Configuration dialogs have been fixed.

- Copy / Paste commands were not working for the Layout Picture and some Output Displays.

- Intersection ID was sometimes not shown correctly in volumes displays.

- A program error that occurred in some cases where Graph displays had been opened and were then closed automatically by the program due to data changes has been fixed.

- The Print and Print Preview options were blocked in some situations meaning that various reports could not be printed.

- A problem with printing in landscape mode has been resolved.

Version 6.0.2.3730
Release Date: 26 April 2013

Enhancements:

- User-defined Movement Class 2 now has a default Model Designation of "Heavy Vehicle".

- Several Detailed Output tables that were not included in the first release have been added. Improvements have been made to some Detailed Output tables.

- Improvements to the Layout picture.

Bug Fixes:

- The Extra Bunching parameter was not having any effect in two-way sign control cases.

- "Use Constant Number of Years" in Design Life Analysis and "Use Constant Factor" in Flow Scale Analysis were not working.

- Roundabout opposing flows were not reported correctly when "Percent Opposed by Nearest Lane Only" was used at sites with traffic driving on the right side of the road. Note that the analysis was using the correct opposing flow values.

- Errors that occurred in some cases when using Quick Input with the Layout picture open have been fixed.

- Missing values in some Detailed Output tables have been fixed.

- Zero performance values were shown for one-way exits in Movement Displays.

- Pedestrian performance outputs have been removed from the Detailed Output at two-way sign control sites.

- Site Output was not removed for all sites in some cases where Quick Input was used to apply an input change to all sites in a project.

- "Phase Reduction" was reported for Variable Phasing cases with no phase reduction.

- Road Name was blank when a new leg was added to a Site.

- The edge was cut off when a Layout Picture was printed.

Version 6.0.1.3703

Release Date: 9 April 2013

- First release. New features in the QUICK GUIDE document.