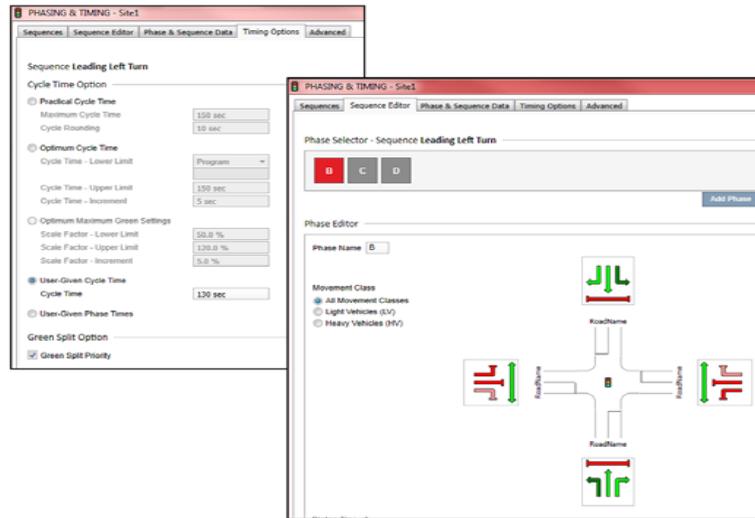


Sequence Data

To compare a roundabout to a signal, the optimum phasing sequence should be developed using an approved signal timing software and the results put into Sidra as User-Given data.

To use the signal comparison, open “Phasing & Timing” in the Site Input Menu and input cycle length, phasing and split time in the necessary tabs to manually match the optimum phasing sequence already developed. See below:



Demand & Sensitivity

Analysis shall be for the design year, so choose the Design Life option for the proposed intersection improvement.

Use the following options:

Design Life Analysis Objective: Capacity (v/c ratio = 1)

Growth Model: Compound

Number of years: <design year> (e.g., 20, 25, etc.)

Results for: Intersection - Vehicles

Tables

In addition to standard reports, Sidra analysis submittals shall include comparison tables of intersection improvement options that include at least the following parameters:

- ⇒ Delay (AM and PM Peak)
- ⇒ V/C ratio [FOR each approach or movement?]
- ⇒ 95% Queue
- ⇒ Degree of Saturation
- ⇒ Practical Spare Capacity
- ⇒ Year improvement reaches capacity



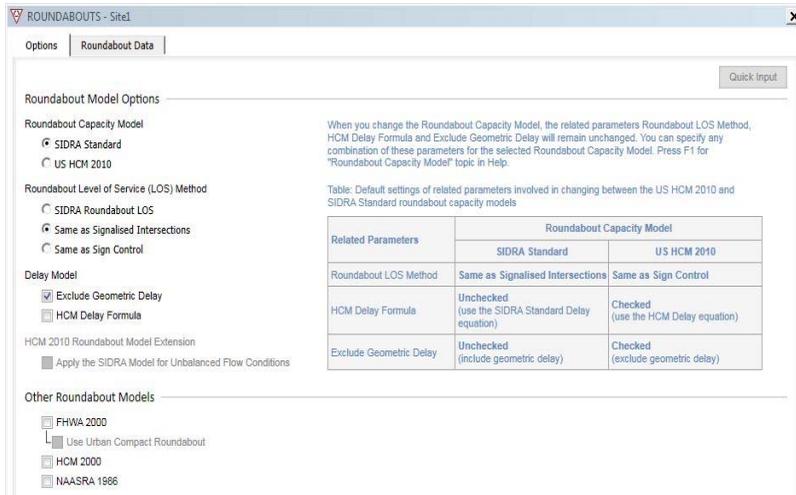
LOUISIANA DEPARTMENT OF
TRANSPORTATION & DEVELOPMENT

Roundabout Analysis: LA DOTD required settings and standards for Sidra Intersection 6.1

-  This Brochure provides a reference guide for the required settings needed to complete a Sidra 6.1 analysis for LA DOTD Roundabout projects.

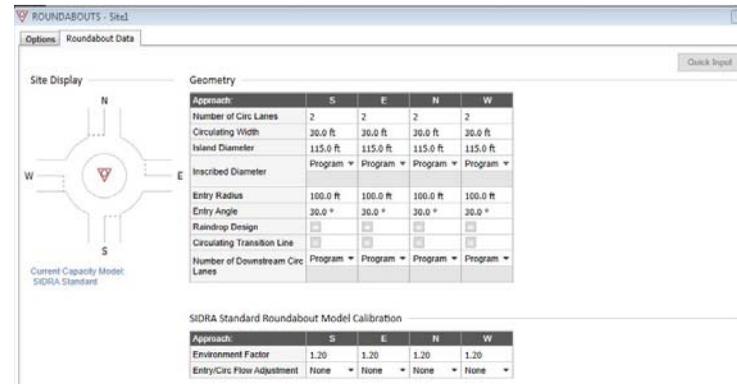
Model Settings

Under the Site Input Menu, select “Roundabouts” and select settings as shown below:



Make sure to read and follow the instructions for the default settings when using SIDRA Standard. As a default in this window, the HCM Delay Formula and Exclude Geometric Delay will be checked. The instructions on the right side of the parameters will prompt you to make the appropriate changes.

Geometric Parameters



Single Lane Roundabout:
(Based on 110 ft Inscribed Circle per EDSM)

Circulating Width = 20 Ft
Minimum Island Diameter = 70 Ft
Inscribed Diameter = Program
Entry Radius = 100 Ft
Entry Angle = Default

Double Lane Roundabout:
(Based on 175 ft. Inscribed Circle per EDSM)

Circulating Width = 30 Ft – 32 Ft
Minimum Island Diameter = 115 Ft
Inscribed Diameter = Program
Entry Radius = 100 Ft
Entry Angle = Default

* Geometric Parameters are only “rule of thumb.” Engineering analysis is required to verify that roundabout geometry can accommodate design vehicles.

Select Environment Factor of **1.2** for Build Year Design and **1.1** for Design Year.

Model Settings

Under the same Site Input Menu, select “Model Settings” and under the “Model Parameters Tab” click on the box to Exclude Geometric Delay as shown below:

Note: Designer should verify that this box is checked each time the analysis is processed to ensure that the results are correct. At the time this publication was created, the program would default to include geometric default each time a roundabout analysis was processed.

The default values for all other parameters under each tab of the Model Settings Menu can remain.

