Chapter 7: Running Roadway Models

> Chapter Overview
> This chapter addresses the following major topics:
> > Roadway Libraries and Roadway Definitions
> > Transitioning Templates
> > CatchPoint Methods

Section 1 - Introducing the Roadway Modeler

Limitations of Express Modeler.

In the last chapter we learned the fundamentals of "Pushing Templates" using Express Modeler. Express modeler has the benefits of being simple and being available in InRoads Site, but has a number of limitations, including:

> Useful for only a single typical section
> No Superelevation
> Ties into target surface using only the cut and fill slopes defined in the template
> No Independent Horizontal or Vertical controls.
> No reporting capabilities.
> No template layer controls.

Roadway Modeler eliminates these limitations and provides many additional capabilities.
Compare the forms:
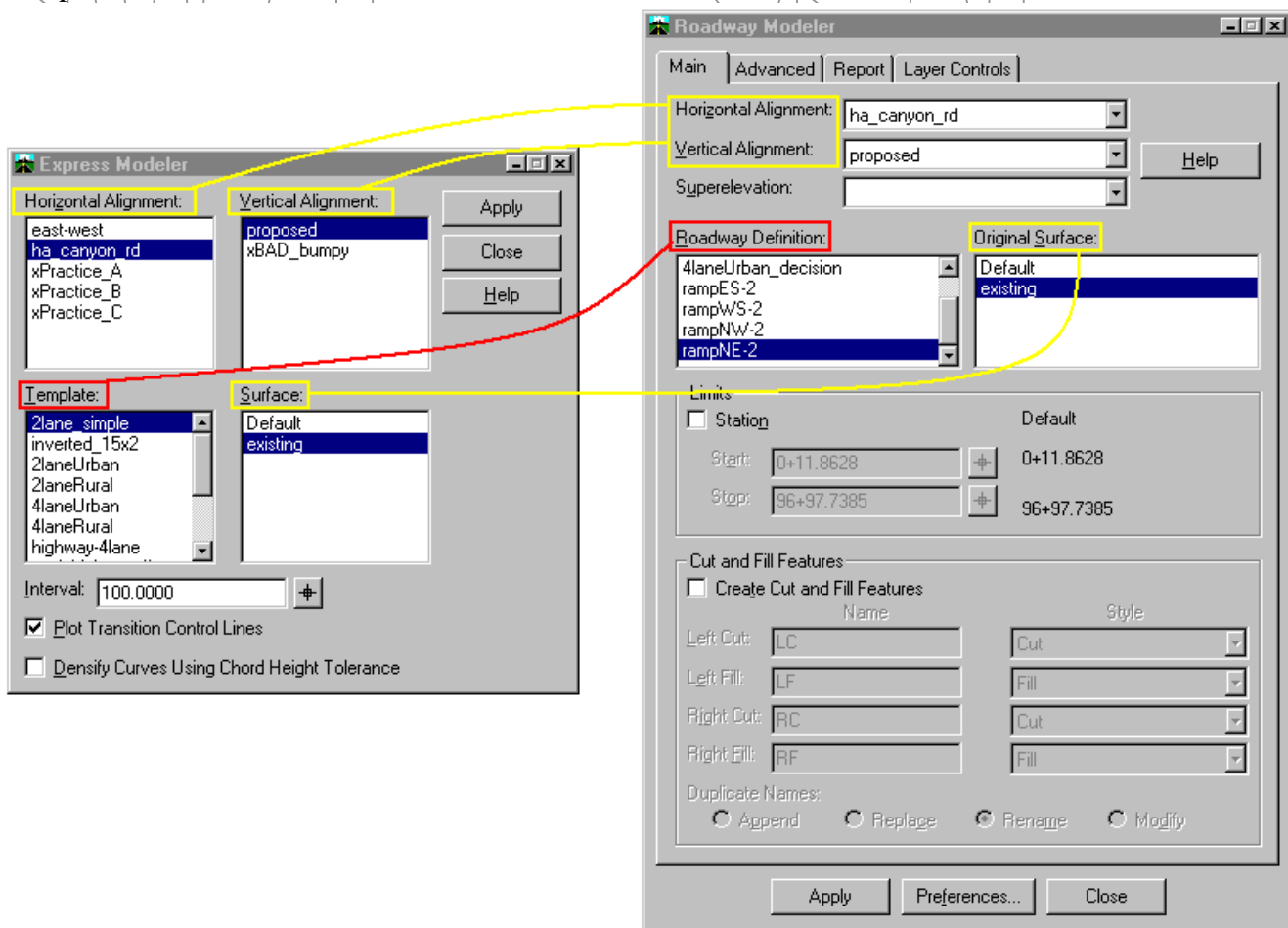
Express Model has only a few controls. Three correspond directly with controls on the Roadway Modeler form: Horizontal and Vertical Alignments and the Target Surface. The most significant difference is that in Express Modeler a single template can be selected. The analogue in Roadway Modeler is a Roadway Definition. In its simplest form a Roadway Definition is a list of what templates get dropped starting at which station. Roadway Definitions are stored in Roadway Libraries.

Section 2 - Roadway Libraries and Roadway Definitions

While in its simplest form a Roadway Definition is a list of what templates get dropped starting at which station, roadway definitions include a great deal of information including

> The interval between template drops
> which of four Target Surface CatchPoint methods to use
> how to transition between different typical sections,

Lab Pre-requisites: the following files must be loaded:
> Building_InRoads_existing.dtm
> Building_InRoads.alg
> Building_InRoads.tml
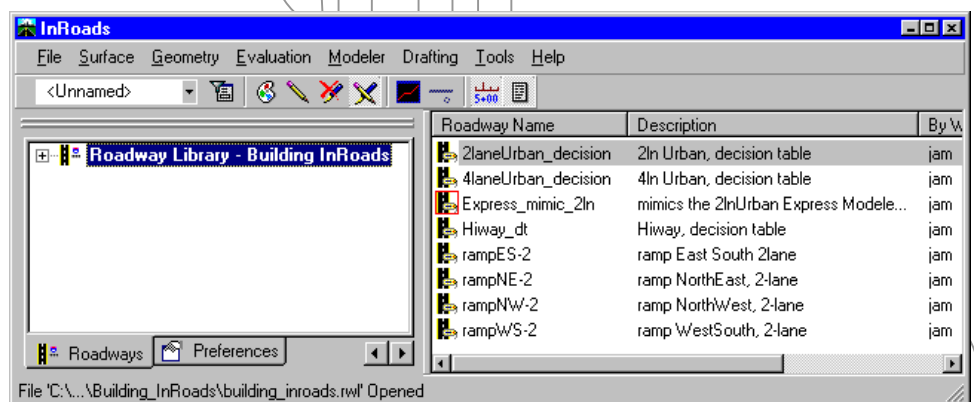
Let us Explore a Roadway Library.

1. To maximize feedback select the Roadways tab in the InRoads Explorer.
2. Right-click on the "Roadway Library" object.
3. Select "Open"

This invokes the standard windows "File Open" dialog box with the "File Type" set to "Roadway Library (*.rwl)".

4. Select `Building Inroads.rwl`
5. Hit the Open button.
6. Cancel the File Open form.

Notice the information displayed in the Explorer and the prompt indicating that the file has been opened.

There are a number of Roadway Definitions in the library.

Roadway Name	Description	By W
2laneUrban_decision	2ln Urban, decision table	jam
4laneUrban_decision	4ln Urban, decision table	jam
Express_mimic_2ln	mimics the 2lnUrban Express Modele...	jam
Hiway_dt	Hiway, decision table	jam
rampES-2	ramp East South 2lane	jam
rampNE-2	ramp NorthEast, 2-lane	jam
rampNW-2	ramp NorthWest, 2-lane	jam
rampWS-2	ramp WestSouth, 2-lane	jam

File 'C:\...\Building_InRoads\building_inroads.rwl' Opened

         ©2003 Civil XLR8

7. Select
InRoads>Modeler>Define Roadway
(or Right-click on the Explorer
Roadway Library object and select
Edit).

The Define Roadway form is
invoked.

8. Select "Express_mimic_2ln".

The Express_mimic_2ln roadway
definition mimics the Express
Modeler run we completed in the
previous chapter.

9. Double-click or hit the Edit
button.

The Edit Roadway form is invoked.

The Main tab lists every Roadway
Entry in the Roadway Definition,
echoing the two most important
features: the Station and the
Template at that station.

The other tabs are used to define
and edit Independent Horizontal
and Vertical Controls and a Right-
of-Way Control functionality.

For this Roadway definition, there
is only one template for the entire
roadway.
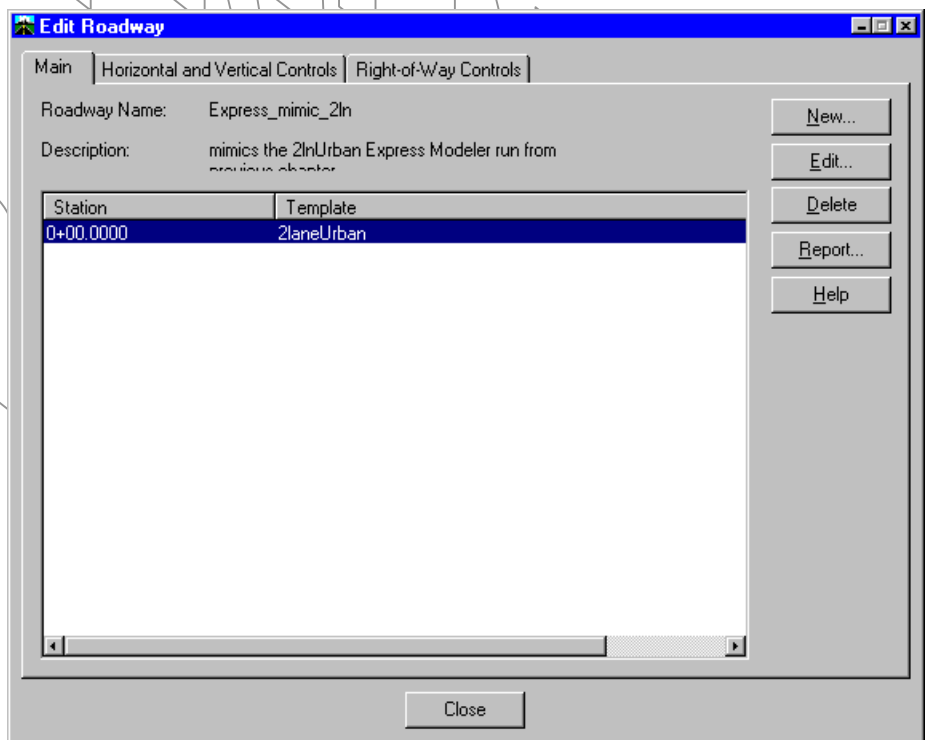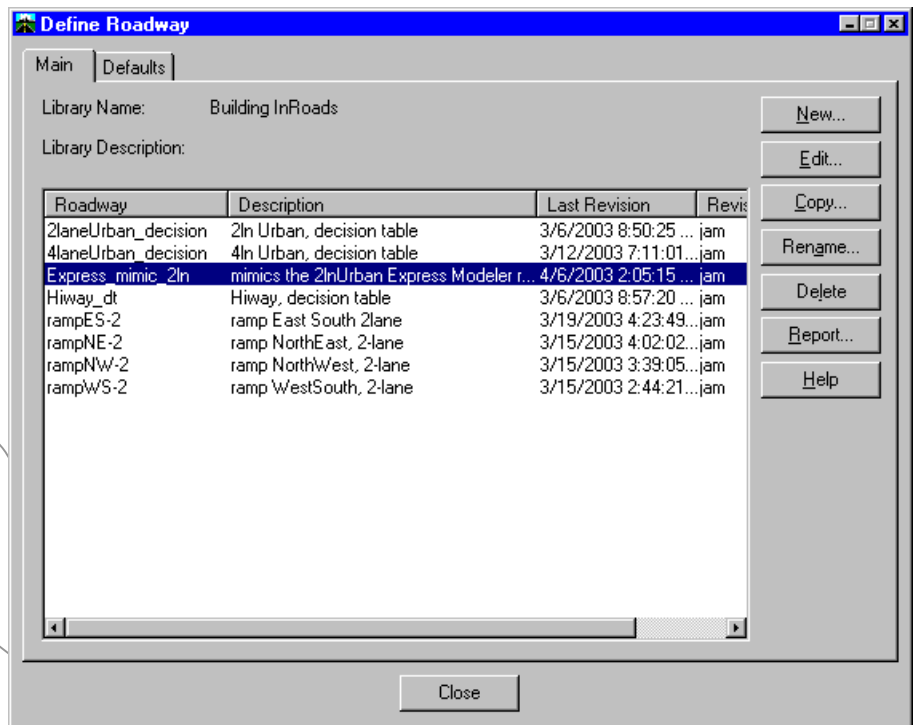
10. Select the 0+00 Roadway Entry.

11. Double Click or hit the Edit button.

Note: if the Station that the initial template is dropped is less than the beginning station of the alignment, the
template is always dropped at beginning of the alignment. For example, if the Horizontal Alignment starts at
station 2+59.02, any Roadway Entry with a station below that number starts at the beginning. Thus,
dropping the first template at station 0+00 always works.
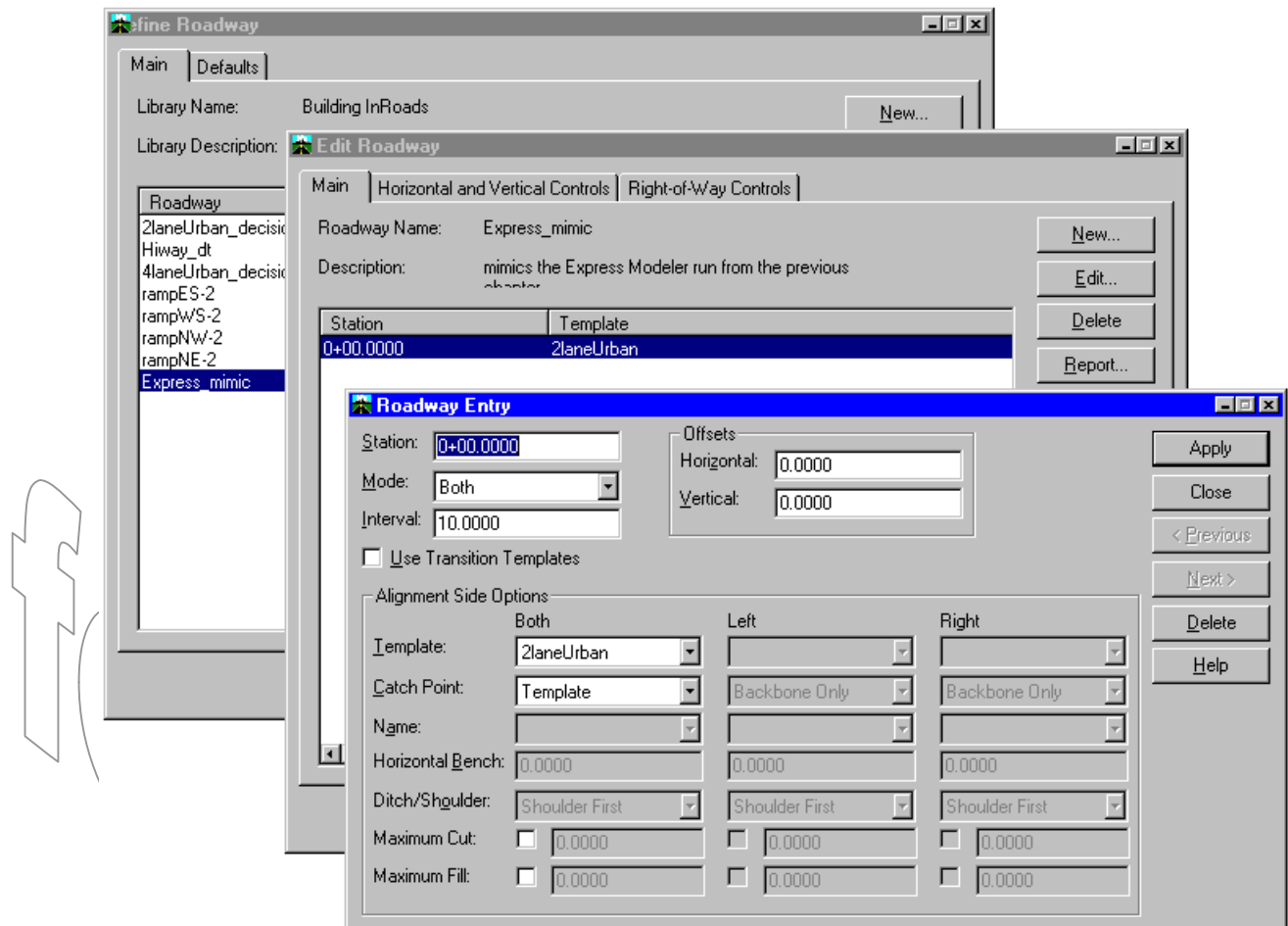
The Roadway Entry form is invoked.
The Station reads 0+00.
The Mode is used to specify which side of the road template to use.

Mode	Meaning
Left Right	Models only that side of the template, the opposite side of the template is not modeled. This is useful when adding lanes to existing roads or when tying ramps into main lines.
Both	Both sides of the road are modeled with the same conditions.
Left and Right	Models both sides of the Roadway. Settings for the sides can be independent. Allows mixing lane numbers (for instance, 2 lanes on the left, 3 on the right). Allows different Catch Point methods.

The Template list, allows the selection of any Typical Section in the Typical Section Library.
Catch Point allows the selection of the one of the five Catch Point methods, including Backbone Only.

We are not going to edit anything in this Roadway Definition just yet.

12. Close the three Roadway forms.

All Rights Reserved. Copies are Illegal.