

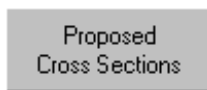
Exercise 15-2

1. Open the MicroStation file

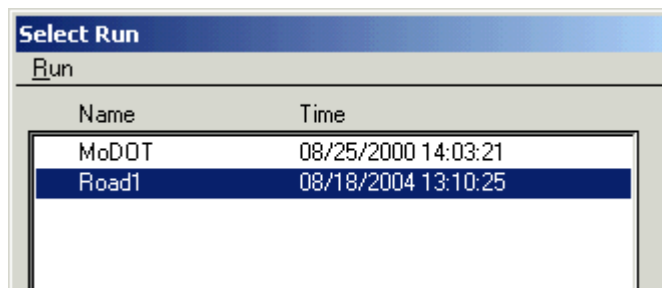
t:\de-proj\randolph\j2p0200\data\road1_xs_j2p0200.dgn.

2. In the project **t:\de-proj\randolph\j2p0200\project\j2p0200.prj** (Job: cu1 and User: ClsUser), select the **Road1** working alignment in the Road Project dialog.

3. Choose **Proposed Cross Sections** from the **Road Project** dialog.

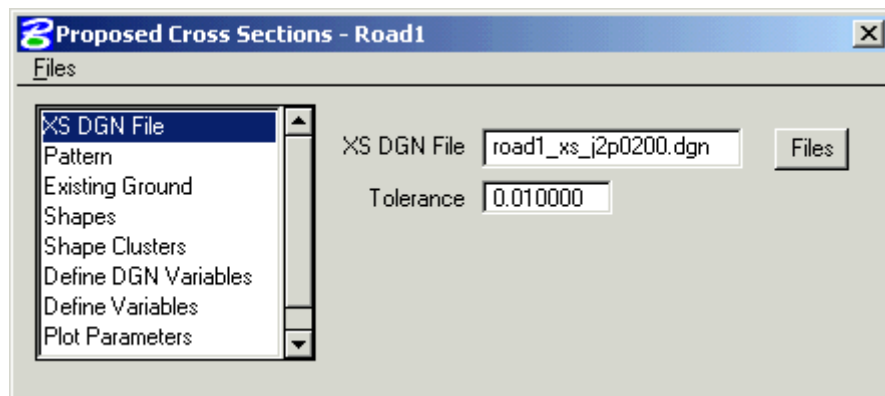


Copy the **MoDOT** run to **Road1**, and open the **Road1** run.

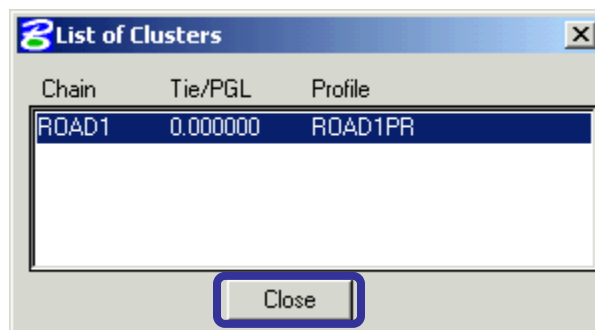
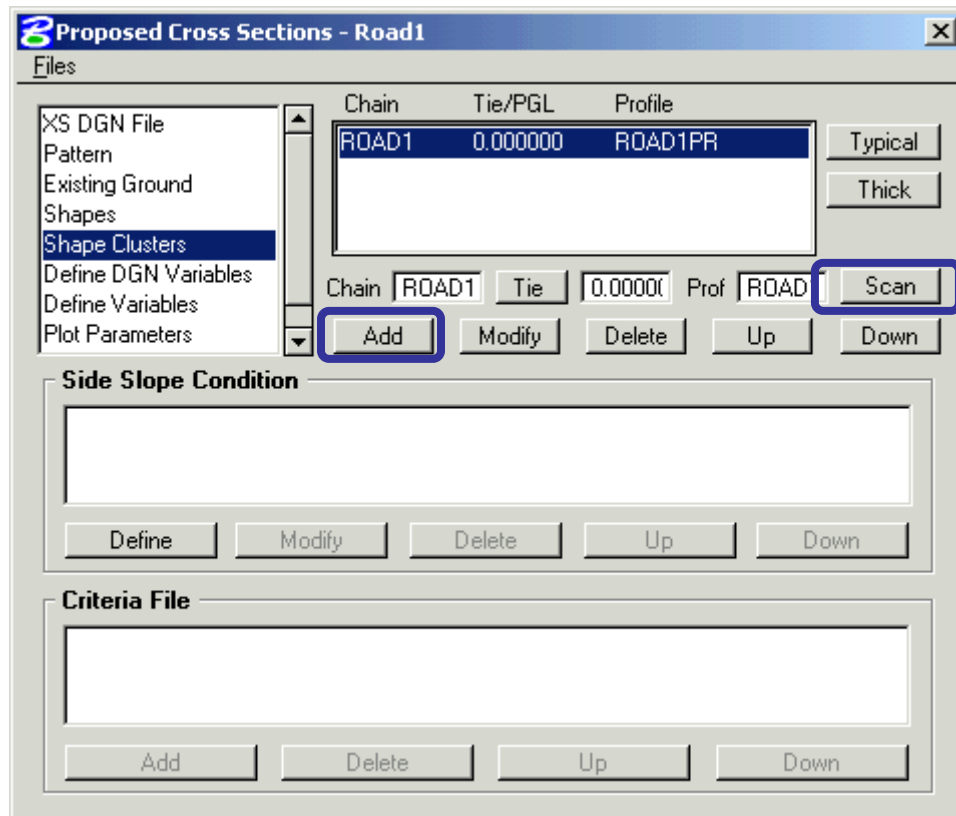


4. Be sure the following items are set in the given sections of the dialog:

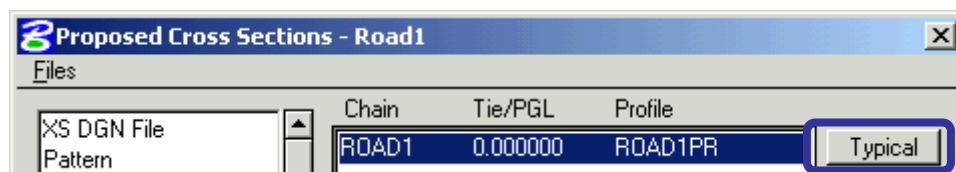
XS DGN File: **road1_xs_j2p0200.dgn** Tolerance **0.01**
 Pattern: **Use Working Alignment Definition**
 Existing Ground: **Use Working Alignment Definition**
 Shapes: **Use Working Alignment Definition**



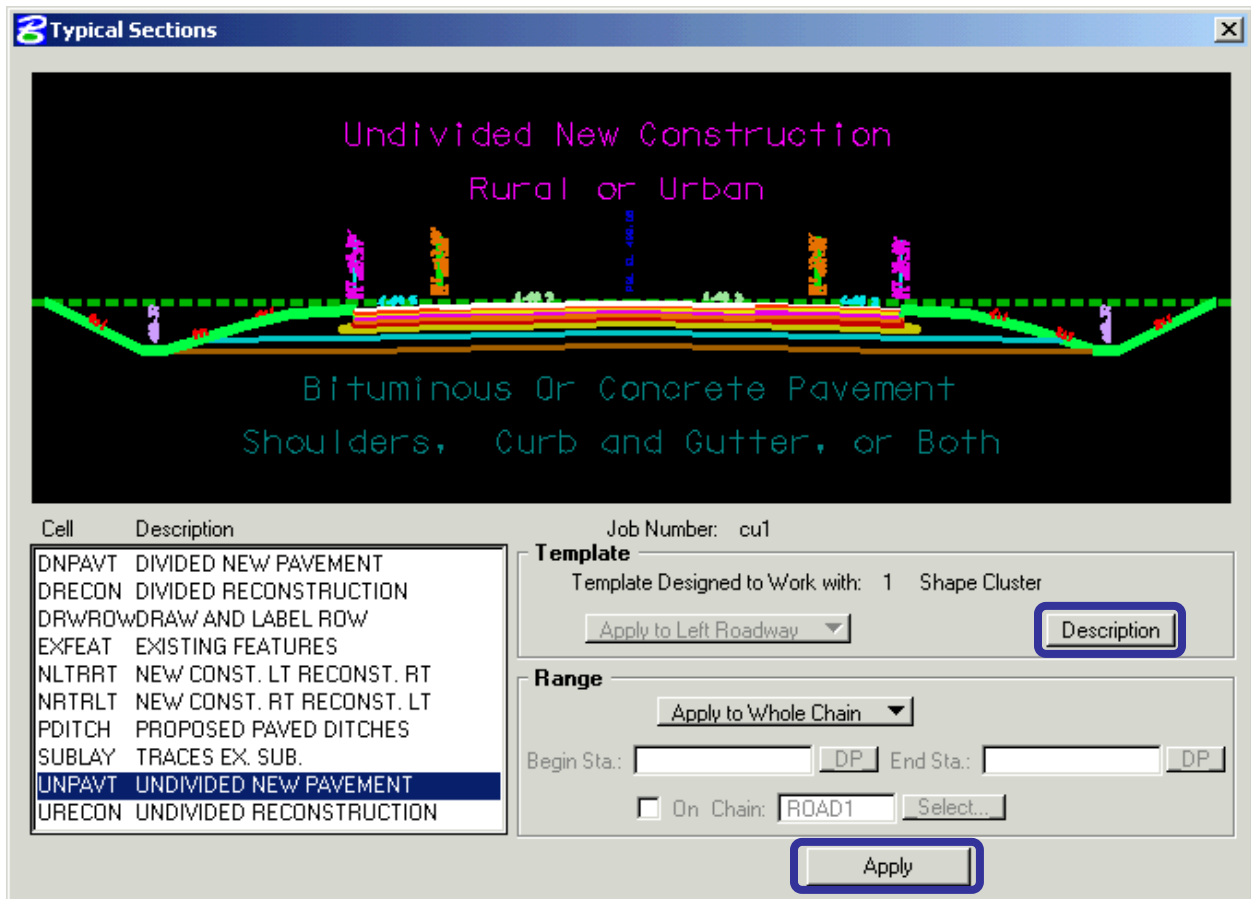
- In the **Shape Clusters** section of the dialog, choose the **Scan** button to open the **List of Clusters** dialog. Select the **ROAD1** shape cluster from the List of Clusters dialog, **close** the List of Clusters dialog, and click on the **Add** button in the Proposed Cross Sections dialog to place the cluster in the box in the top of the dialog. Click on the Road1 shape cluster to highlight it as shown below.



- With the Road1 cluster highlighted in the Proposed Cross Section dialog, select the **Typical** button.

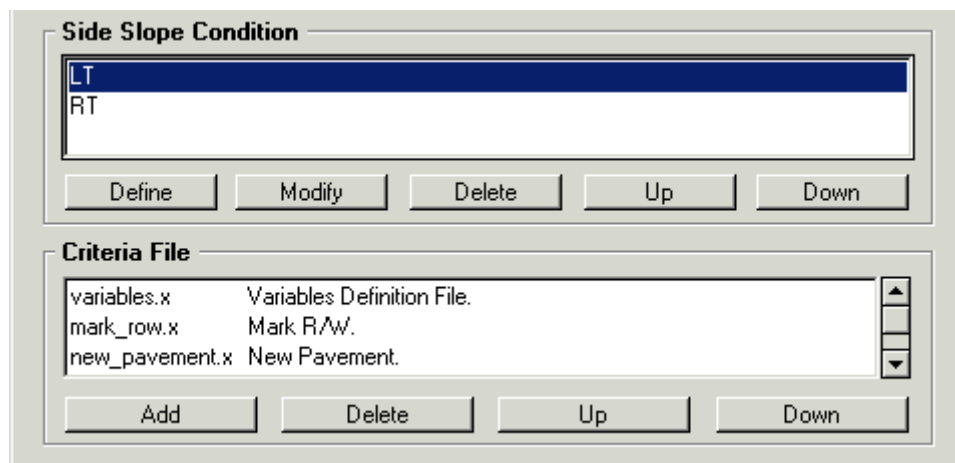


- From the list of Typical Sections select the **Undivided New Pavement**. (See the typical section for Road1 for details).



Select the **Description** Button to get an Overview of the Undivided New Pavement Typical.

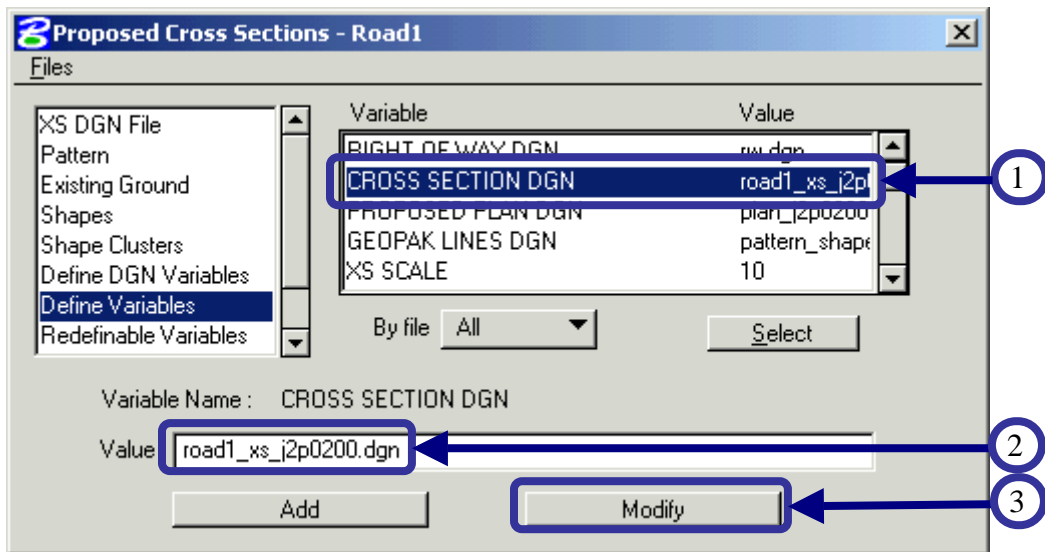
- When the “**Apply**” button is selected in the typical section generator, the side slope conditions are then populated with the correct criteria files for the chosen typical.



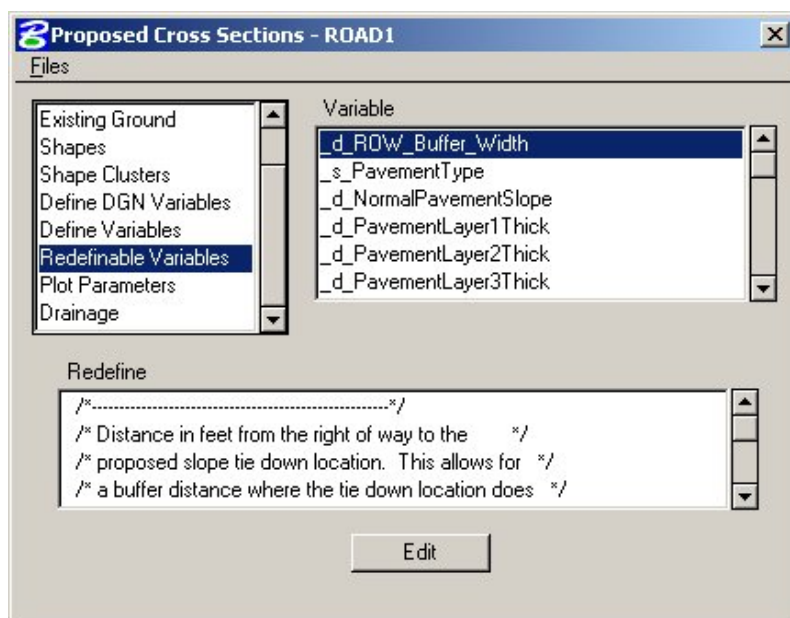
9. In the **Define Variables** Section set the following values by (1) highlighting the variable to be set, (2) make the change in the Value field, and (3) clicking on Modify to save the change:

CROSS SECTION DGN	road1_xs_j2p0200.dgn
PROPOSED PLAN DGN	plan_j2p0200.dgn
GEOPAK LINES DGN	pattern_shape_j2p0200.dgn
XS SCALE	10
PLAN VIEW FLOW ARROW SCALE	50

Leave the remaining Define Variables set to the defaults.

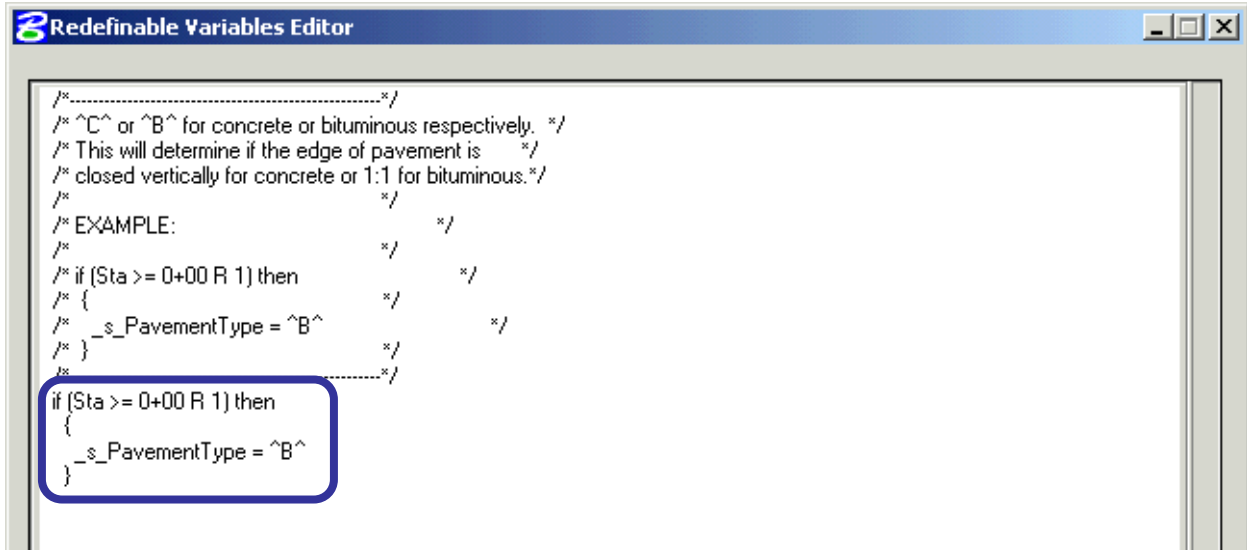


10. Switch to the **Redefinable Variables** section of Proposed Cross Sections. To set a Redefinable Variable, select the desired variable and click on the **Edit** button in the dialog.

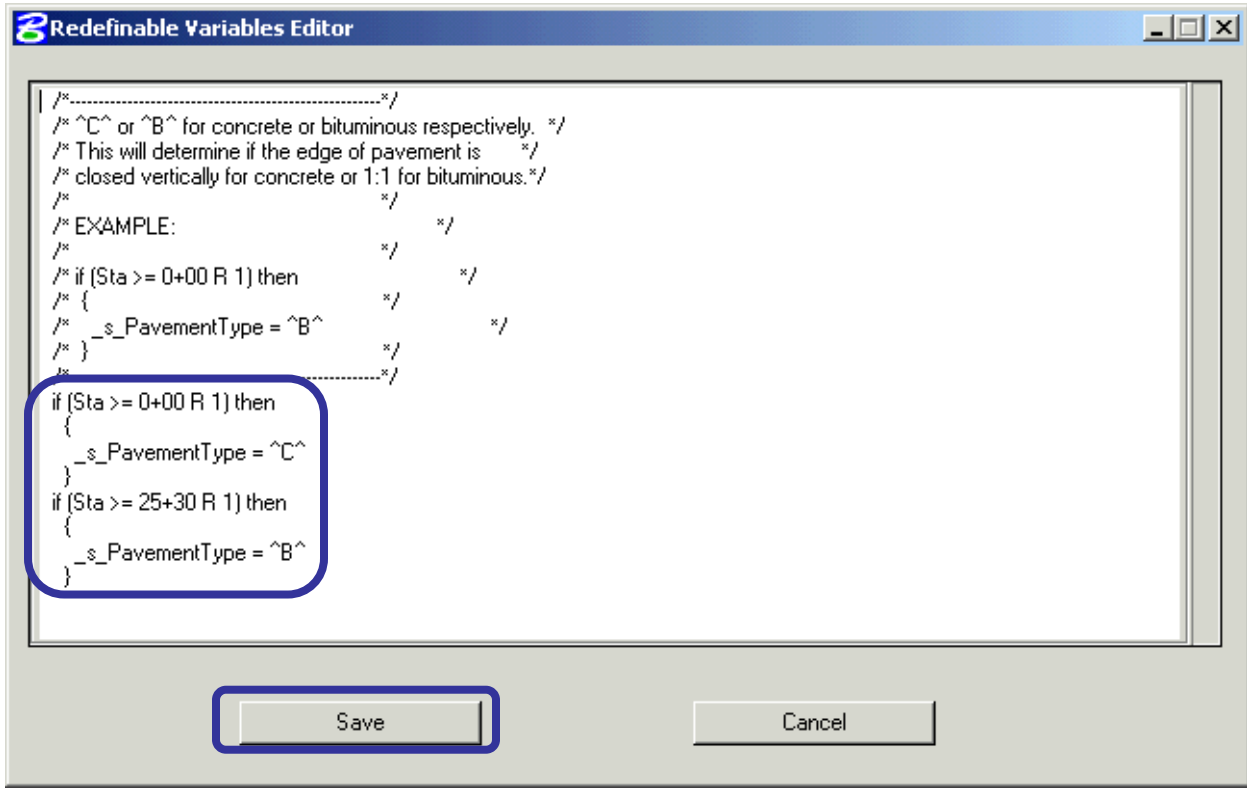


This will open the **Redefinable Variables Editor** shown in the next step.

- To have more than value for the Redefinable Variable value, select the lines in the editor showing the default value as shown below and **Copy** (Control C). Then move cursor to the bottom of the **Redefinable Variable**, start a new line by hitting the Enter key, and **Paste** (Shift Insert or Control V). Then type in the correct station range and value for the specific variable.



Once the variable value is edited, the dialog box will look like the one below, click on the **Save** button.

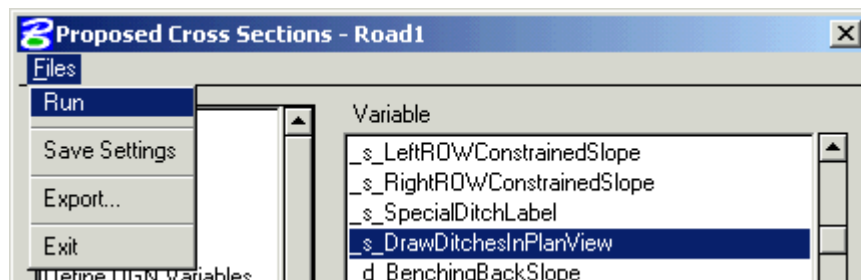


12. Set the redefinable variables as follow:

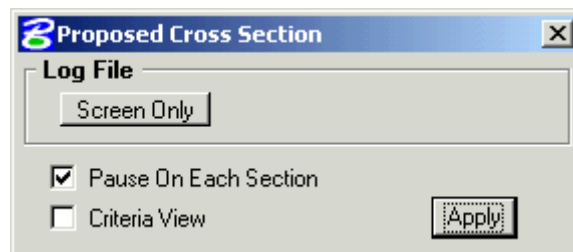
<u>VARIABLE</u>	<u>STATION RANGE</u>	<u>VALUE</u>
_s_PavementType	STA >=0+00 R1	^C^
	STA >=25+30 R1	^B^
_d_PavementLayer1Thick	STA >=0+00 R1	10/12
	STA >=25+30 R1	1.75/12
_d_PavementLayer2Thick	STA >=0+00 R1	0/12
	STA >=25+30 R1	10.25/12
_d_CurbSearchDistance	STA >=0+00 R1	3.5
_d_BermSlope_Left	STA >=0+00 R1	-2
_d_BermSlope_Right	STA >=0+00 R1	-3
_d_SidewalkSlope	STA >=0+00 R1	-2
_d_DitchForeSlope2_Left	STA >=0+00 R1	4:-1
_d_DitchForeSlope2_Right	STA >=0+00 R1	4:-1
_d_StandardDitchDepth_Left	STA >=0+00 R1	2
_d_StandardDitchDepth_Right	STA >=0+00 R1	2
_d_FillSlope1_Left	STA >=0+00 R1	4:-1
_d_FillSlope1_Right	STA >=0+00 R1	4:-1
_d_FillSlope1Width_Left	STA >=0+00 R1	8
_d_FillSlope1Width_Right	STA >=0+00 R1	8
_s_DrawDitchesInPlanView	STA >=0+00 R1	^Yes^

Leave other variables set to their default values.

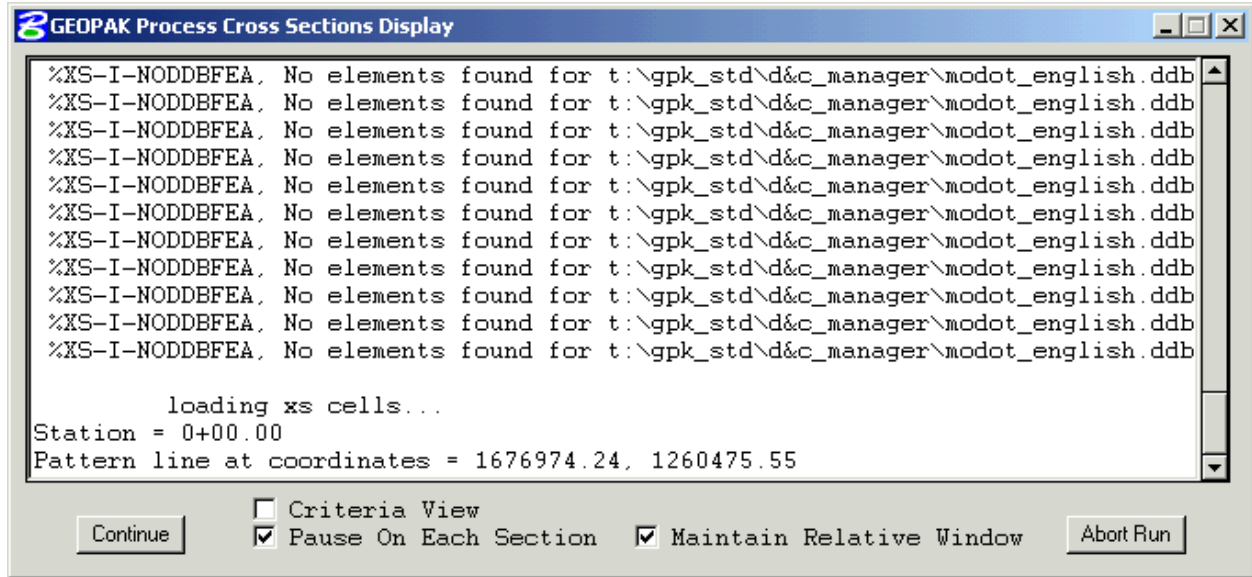
With all of the variables set, do a **File > Save Settings** followed by **File > Run**.



In the dialog that appears (shown below) set the Log File to **Screen Only** and toggle on **Pause On Each Section**. Click on Apply to process the cross sections.



13. When the first section is processed, you will get the following message. Press **Continue** to go on to the next section. If you wish, window in on the second section and toggle **Maintain Relative Window**. After you are satisfied that the section are processing correctly, toggle off **Pause on Each Section** and press the **Continue** button. The rest of the sections will process without interruption.

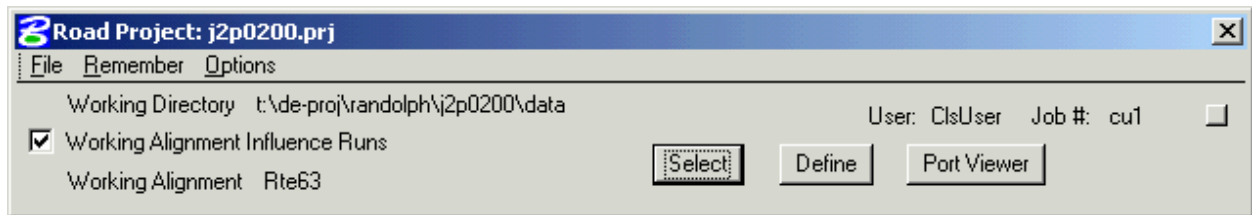


Use the **Cross Section Navigator** to view the cross sections.



Save changes to the MicroStation file and open the plan_j2p0200.dgn drawing to view how the ditches were drawn in the plan view.

14. Switch to the **Rte63 Working Alignment** in the Road Project Manager

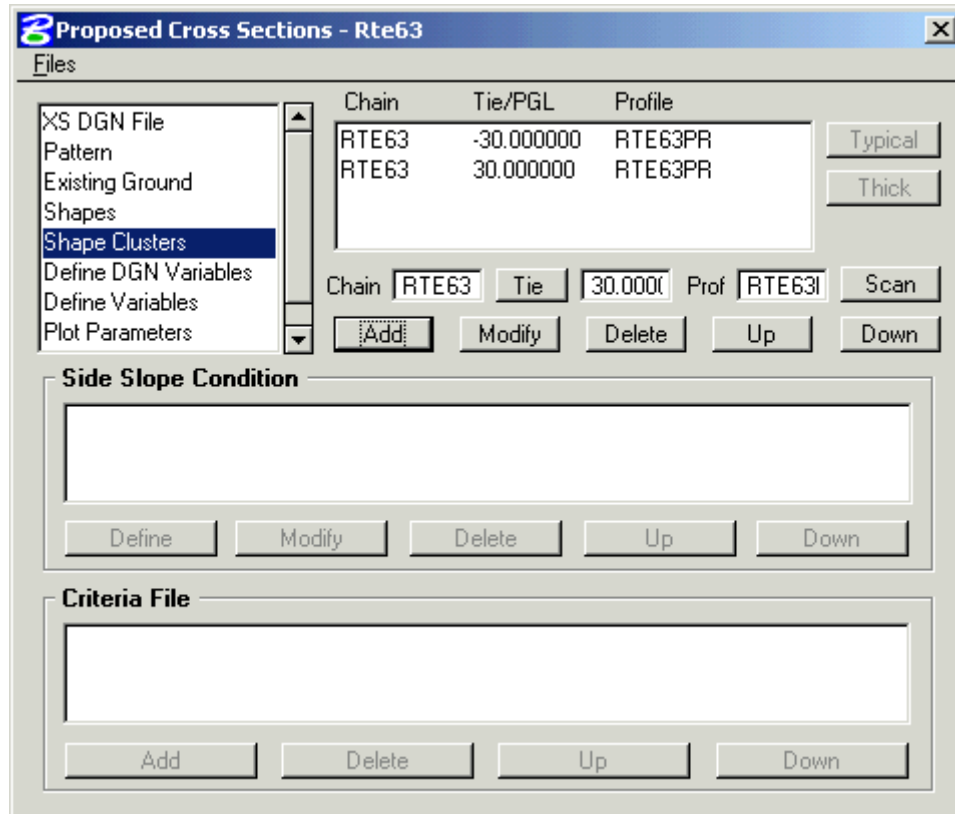
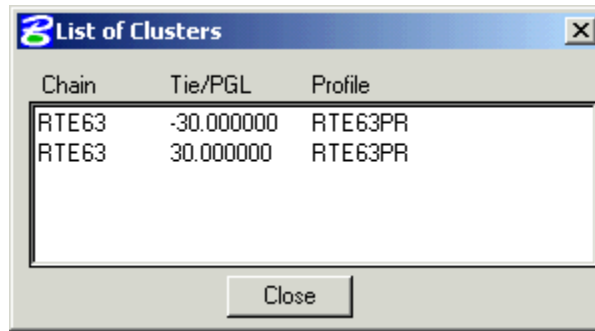


15. Open the MicroStation file

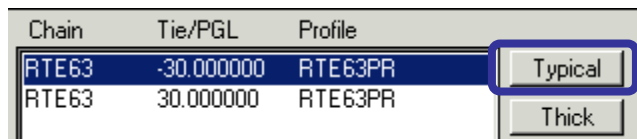
t:\de-proj\randolph\j2p0200\data\rte63_xs_j2p0200.dgn.

18. In the **Shape Clusters** section of the dialog, choose the scan button. Add the two shape clusters in the following order:

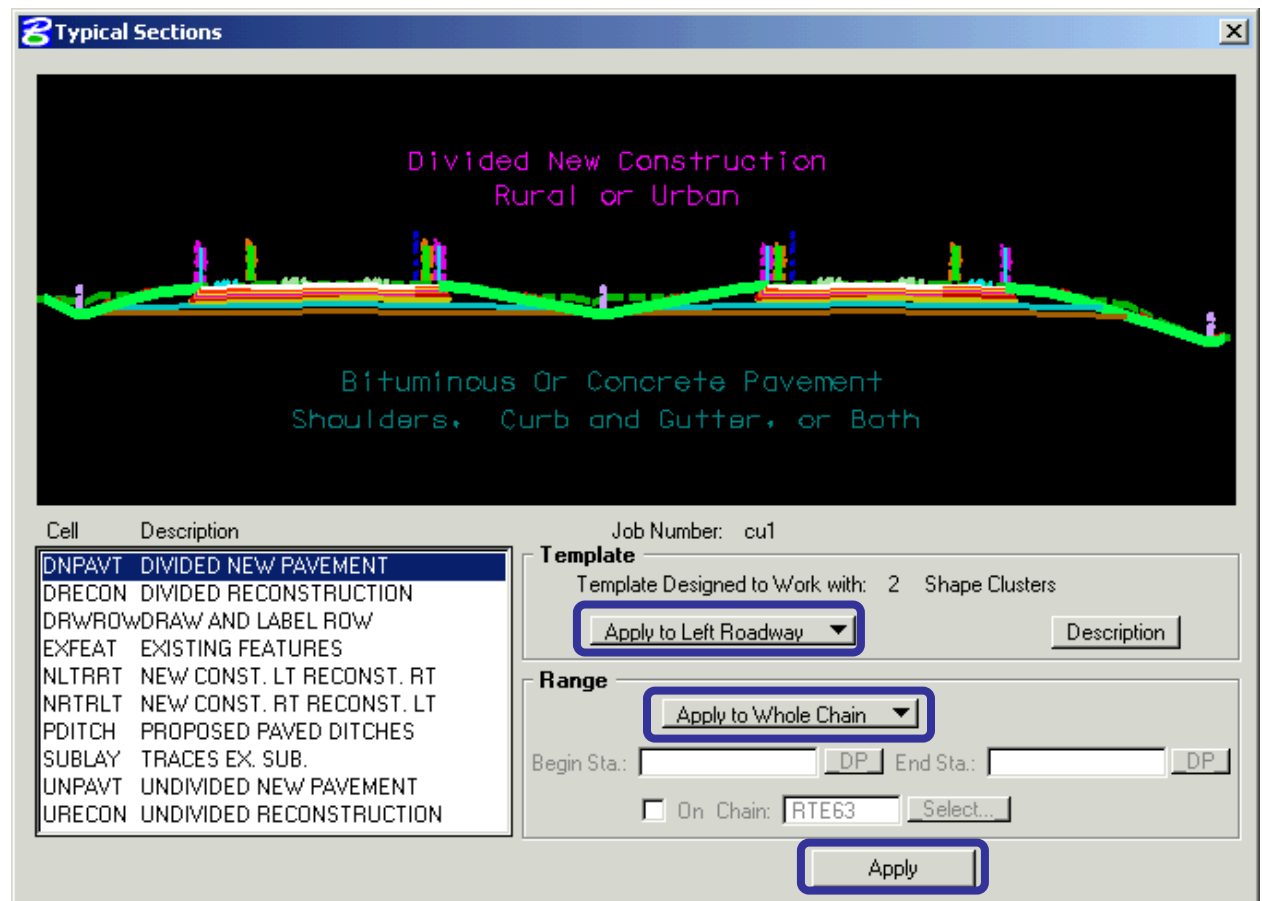
Chain	Tie	Profile
RTE63	-30	RTE63PR
RTE63	30	RTE63PR



19. Highlight the left cluster and click on the Typical button

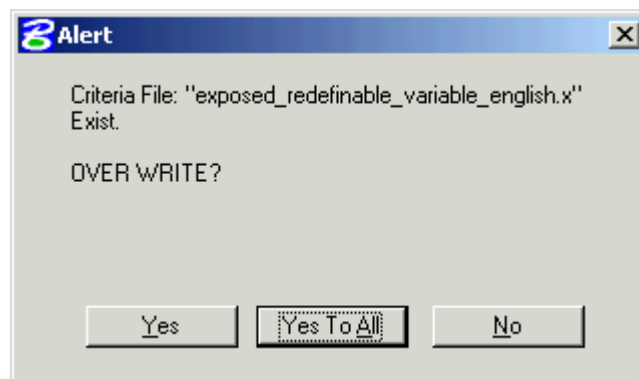


20. Select the **Divided New Pavement** template, **Apply to Left Roadway**, and **Apply to Whole Chain**.

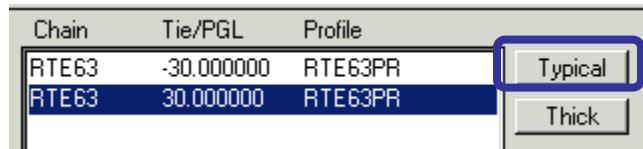


Click on the **Apply** button to fill the Side Slope Condition and Criteria File sections of the Proposed Cross Sections dialog for the left shape cluster.

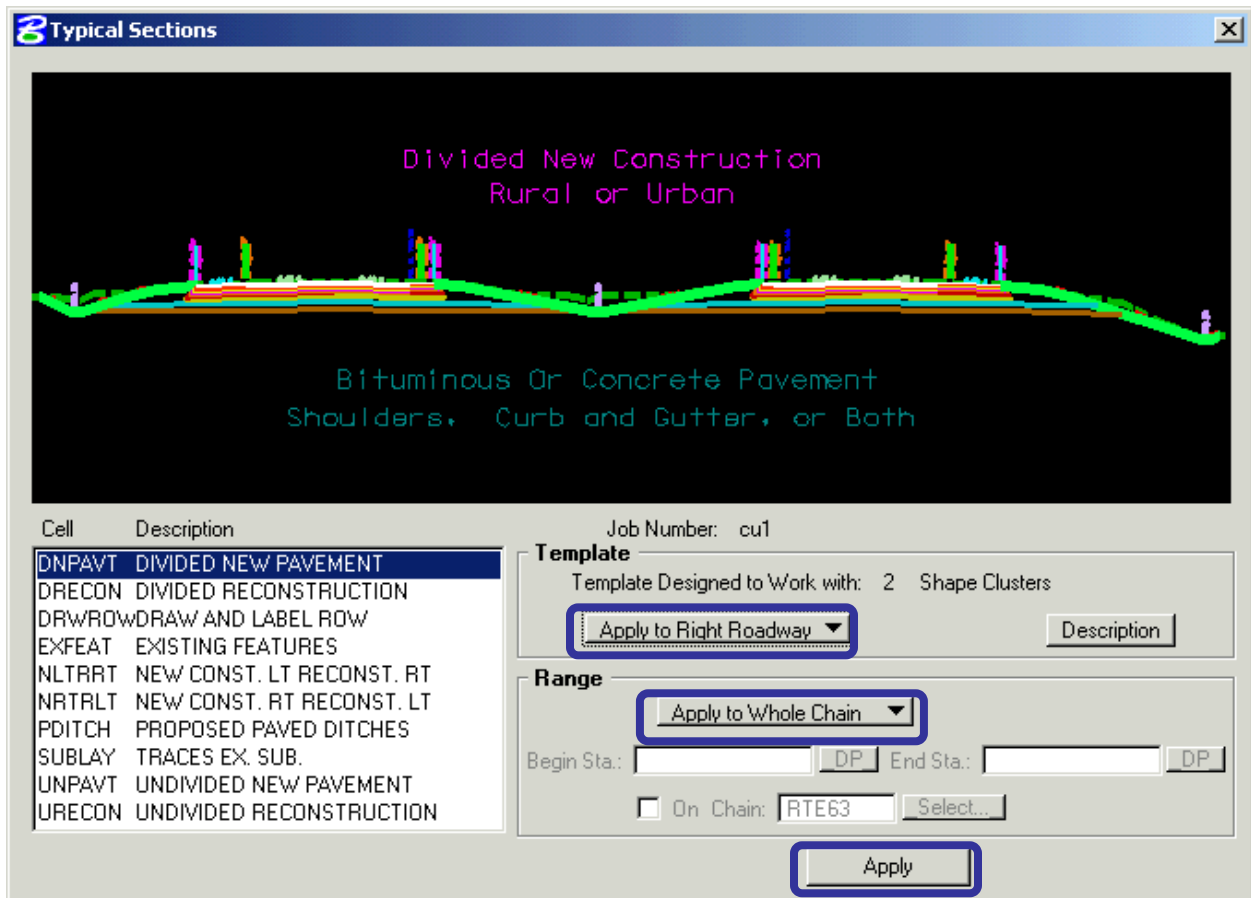
Say **Yes to All** if asked to OVER WRITE.



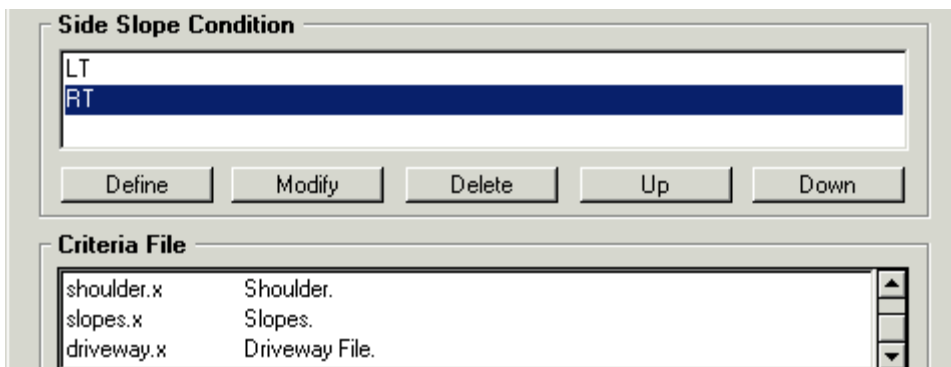
21. Highlight the right shape cluster and click on the **Typical** button.



22. Select the **Divided New Pavement** template, **Apply to Right Roadway**, and **Apply to Whole Chain**.



Click on the **Apply** button to fill the Side Slope Condition and Criteria File sections of the Proposed Cross Sections dialog for the left shape cluster. Say **Yes to All** if asked to OVERWRITE.



23. In the **Define Variables** Section set the following values by (1) highlighting the variable to be set, (2) make the change in the Value field, and (3) clicking on Modify to save the change:

CROSS SECTION DGN	rte63_xs_j2p0200.dgn
PROPOSED PLAN DGN	plan_j2p0200.dgn
GEOPAK LINES DGN	pattern_shape_j2p0200.dgn
XS SCALE	10
PLAN VIEW FLOW ARROW SCALE	50

Leave the remaining Define Variables set to the defaults.

24. In the **Redefinable Variables** set the following values for the given variables.

_s_PavementType	STA >=0+00 R1	^C^
_d_PavementLayer1Thick	STA >=0+00 R1	10/12
_d_NormalOutsideShoulderSlope	STA >=0+00 R1	-2
_d_ShoulderLayer1Thick	STA >=0+00 R1	10/12
_d_BermSlope_Left	STA >=0+00 R1	-2
_d_BermSlope_Right	STA >=0+00 R1	-2
_d_BermWidth_Left	STA >=0+00 R1	0
	STA >=13+90 R1	6
	STA >=16+10	0
_d_DitchBackSlope_Left	STA >=0+00 R1	2:1
	STA >=13+90 R1	6:1
	STA >=16+10	2:1
_d_DitchBackSlope_Right	STA >=0+00 R1	2:1
_d_FillSlope2_Left	STA >=0+00 R1	2:-1
_d_FillSlope2_Right	STA >=0+00 R1	2:-1
_s_DrawDitchesInPlanView	STA>=0+00 R1	^Yes^

Leave all other variables to their default values.

With all of the variables set, do a **File > Save Settings** followed by **File > Run**.

When the proposed cross sections are complete, save changes to the MicroStation file and open the plan_j2p0200.dgn drawing to view how the ditches were drawn in the plan view.