LAB 30 - End Conditions that Require Multiple Solutions

This lab demonstrates the construction of end conditions that require multiple solutions. The section will place a minimum 2-foot deep ditch, with a berm if necessary, when in cut. The section will also place a 4 to 1 fill slope when the embankment height is 10-feet or less and a 3 to 1 fill slope when over 10-feet in height. This section is constructed using the drag and drop method. Then, the end condition priorities are reset so that the section operates properly.

Chapter Objectives:

- Build an end condition section that tests for solutions based on priority
- Build an end condition section using existing components with the drag and drop method

Lab 30.1 - End Conditions that Require Multiple Solutions

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2. Select **File> Open** from the InRoads menu bar.
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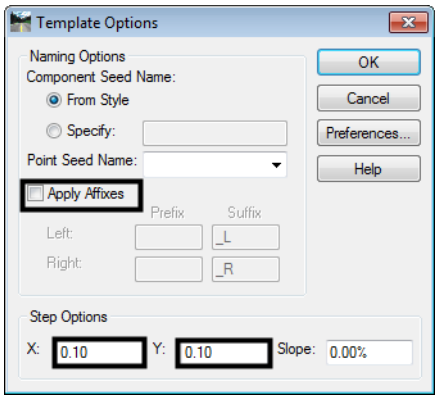
4. **<D> Open** then **<D> Cancel** to dismiss the ***Open*** dialog box.
5. Select **Modeler> Create Template** from the InRoads menu bar.
6. Select ***Tools> Options*** from the ***Create Template*** menu bar.
7. Make sure that **Apply Affixes** is toggled off and the **X** and **Y Step Options** are set to ***0.10***.



8. **<D>** the **OK** button.
9. **<D> <D>** on the root folder in the Template Library pane to expand the folder structure.

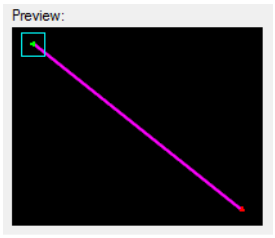
10. Expand the ***3 - Sections - End Conditions> Z-Slope End Conditions> High Speed End Conditions*** folder.

11. Create a new template in the ***High Speed End Conditions*** folder. Name it ***Z8_6_to_1_Ditch***.

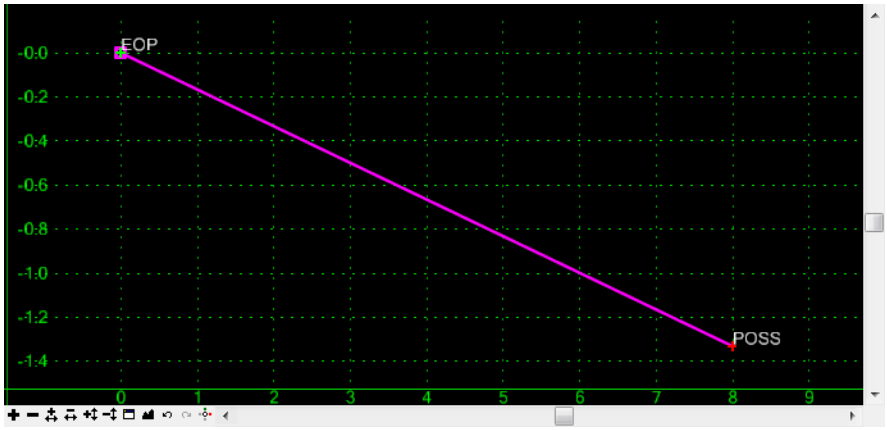
12. Expand ***4 - Components> End Conditions> Z-Slope Components > High Speed End Conditions*** folder.

13. **<D>** on the ***Z-Slope_8_6_to_1*** component. The component is displayed in the Preview window.

14. **<D> and hold** on component's origin (the green dot).



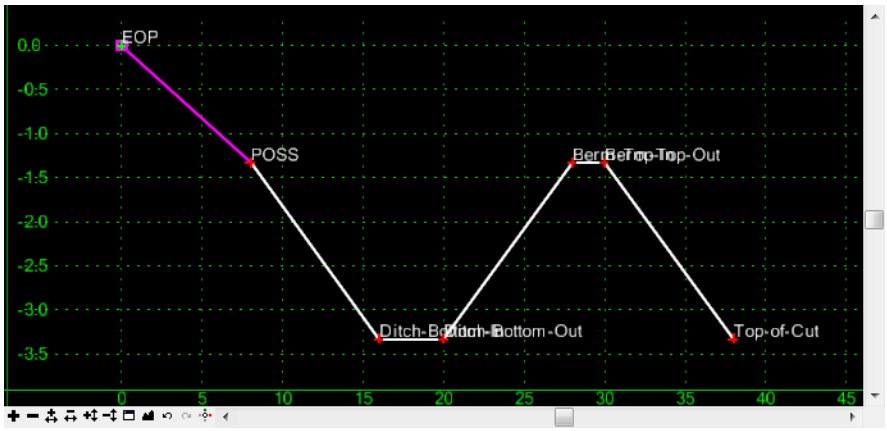
15. **Drag** the component into the Template View and **drop** (release the data button) it on the new section's origin.



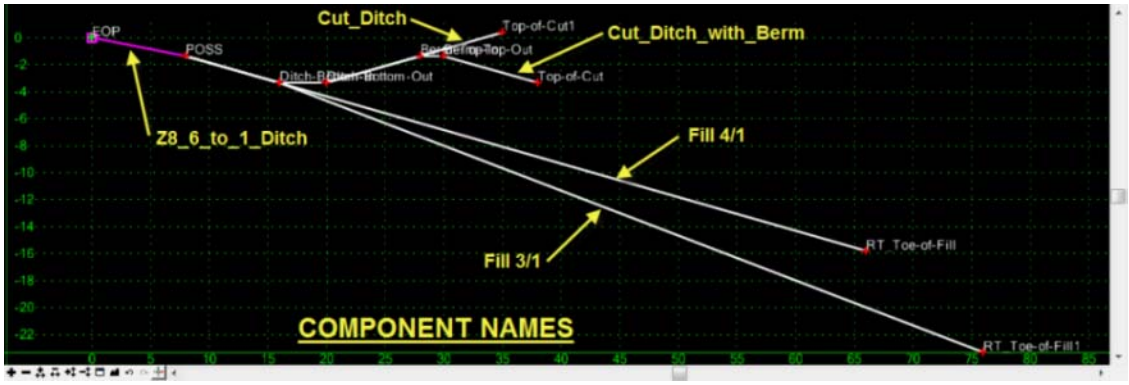
16. Expand ***4 - Components> End Conditions> Cut Slope Components*** folder.

17. **<D>** on the ***Cut_Ditch_with_Berm*** component.

18. **<D> and hold** on component's origin (the green dot).
19. **Drag** the component into the Template View and move the pointer on to the component point named ***POSS*** and **drop.** The "+" on the component point turns white when the pointer is on it.

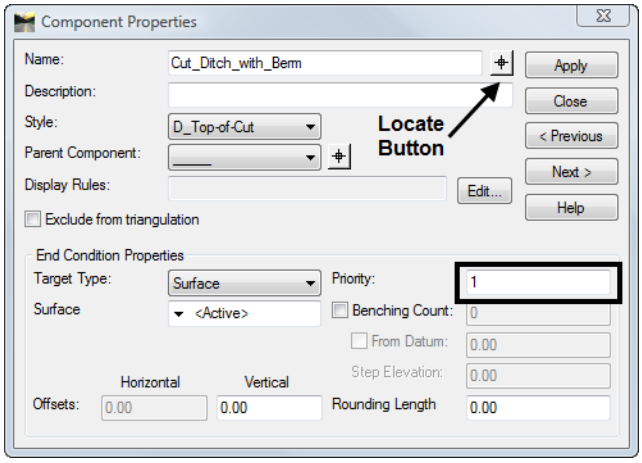


20. Repeat steps 16, 17 & 18 for the ***Cut_Ditch*** component.
21. Expand ***4 - Components> End Conditions> Fill Slope Components*** folder.Repeat steps 16, 17 & 18 for the ***Fill__4_to_1*** and ***Fill_3_to_1*** components.



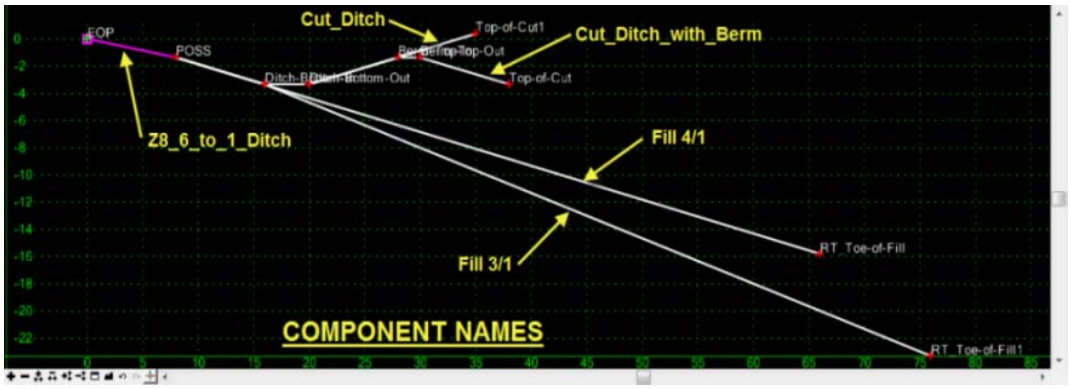
22. **<D> <D>** on the ***Cut_Ditch_with_Berm*** component.

23. Verify that the **Priority** is set to ***1***.



24. **<D>** on the ***Locate Button*** next to ***Name*** in the ***Component Properties*** dialog box.

25. **<D>** on the ***Cut_Ditch*** component in the Template View.



26. Verify that the **Priority** is set to ***2*** in the ***Component Properties*** dialog box.

27. Set the remaining End Condition Component priorities as follows:

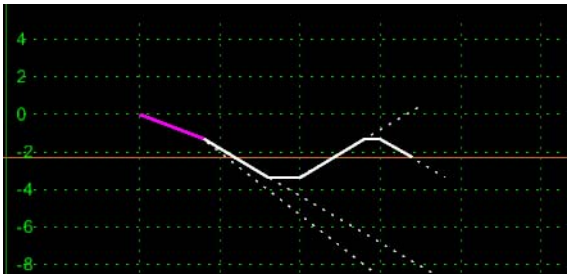
- ***Fill_4/1*** = ***3***
- ***Fill_3/1*** = ***4***

28. Be sure to **<D>** the **Apply** button if any Priority values were modified.

29. **<D>** the **Close** button in the Component Properties dialog box.

30. **<D>** the **Test** Button.

31. In the ***Test End Conditions*** dialog box, **<D> Draw** and notice how end conditions behave.



32. **<D> Close**.

Chapter Summary:

- When multiple end conditions are chained together, if one part of the chain fails then the whole chain fails.
- End condition components that share a common starting point are considered a single end condition.

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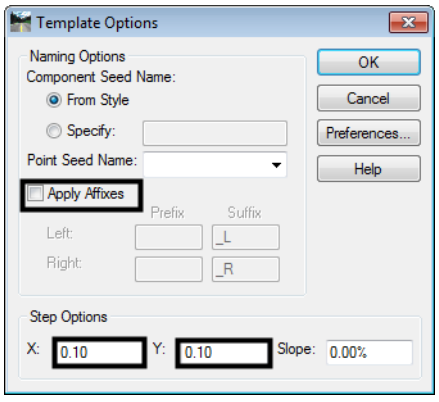
3. Select the ***C:\Projects\12345\Design\InRoads\ 12345DES_Template-End Cond Mult Sol.itl*** from the available files.
4. **<D> Open** then **<D> Cancel** to dismiss the ***Open*** dialog box.
5. Select **Modeler> Create Template** from the InRoads menu bar.
6. Select ***Tools> Options*** from the ***Create Template*** menu bar.
7. Make sure that **Apply Affixes** is toggled off and the **X** and **Y Step Options** are set to ***0.10***.



8. **<D>** the **OK** button.
9. **<D> <D>** on the root folder in the Template Library pane to expand the folder structure.

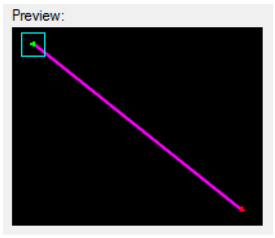
10. Expand the ***3 - Sections - End Conditions> Z-Slope End Conditions> High Speed End Conditions*** folder.

11. Create a new template in the ***High Speed End Conditions*** folder. Name it ***Z8_6_to_1_Ditch***.

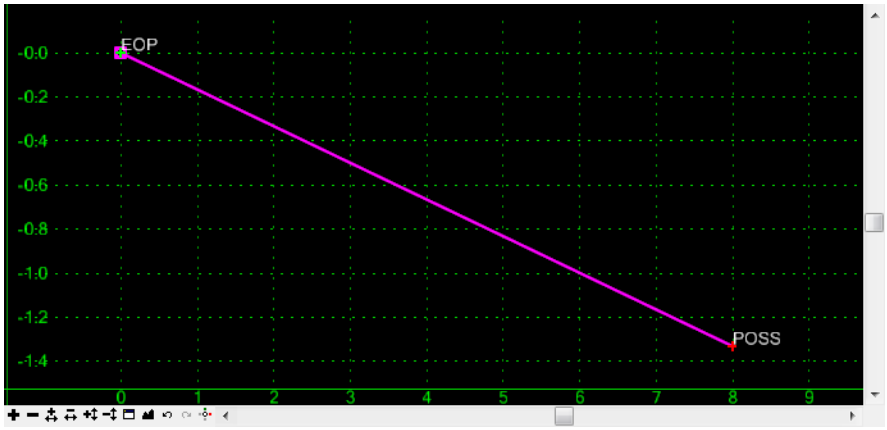
12. Expand ***4 - Components> End Conditions> Z-Slope Components > High Speed End Conditions*** folder.

13. **<D>** on the ***Z-Slope_8_6_to_1*** component. The component is displayed in the Preview window.

14. **<D> and hold** on component's origin (the green dot).



15. **Drag** the component into the Template View and **drop** (release the data button) it on the new section's origin.



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17. **<D>** on the ***Cut_Ditch_with_Berm*** component.

18. **<D> and hold** on component's origin (the green dot).
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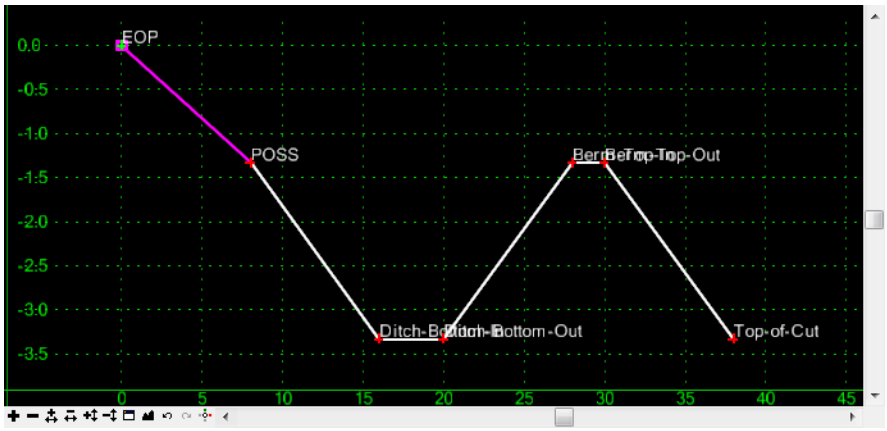

20. Repeat steps 16, 17 & 18 for the ***Cut_Ditch*** component.
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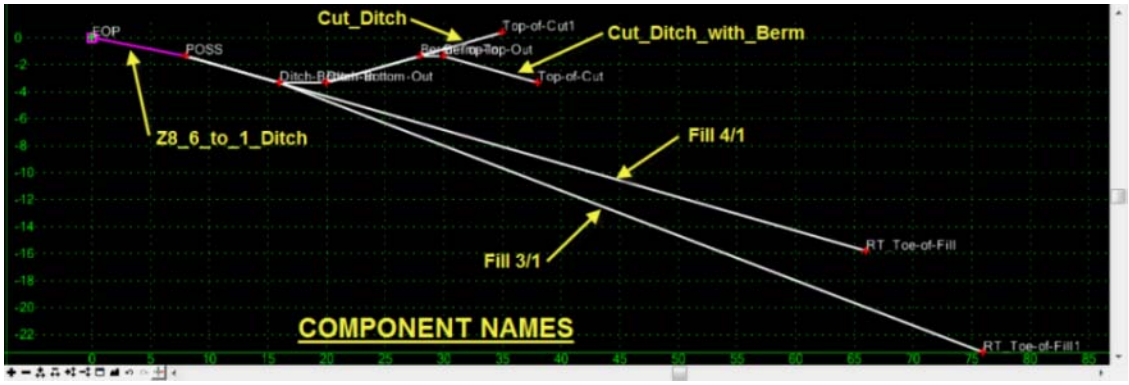
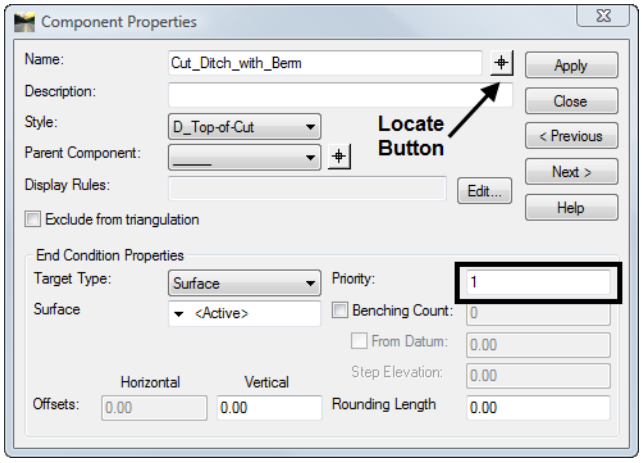


22. **<D> <D>** on the ***Cut_Ditch_with_Berm*** component.

23. Verify that the **Priority** is set to ***1***.



24. **<D>** on the ***Locate Button*** next to ***Name*** in the ***Component Properties*** dialog box.

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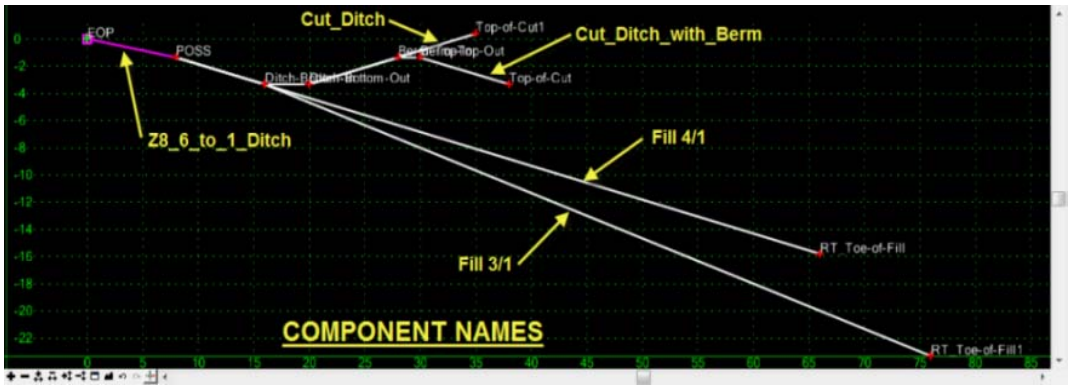

26. Verify that the **Priority** is set to ***2*** in the ***Component Properties*** dialog box.

27. Set the remaining End Condition Component priorities as follows:

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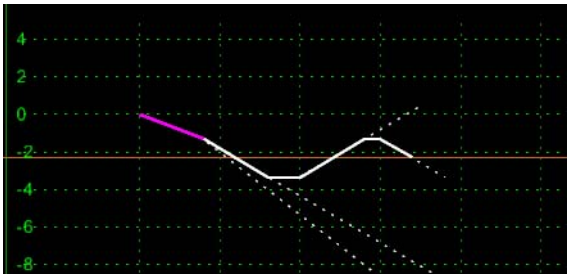

32. **<D> Close**.

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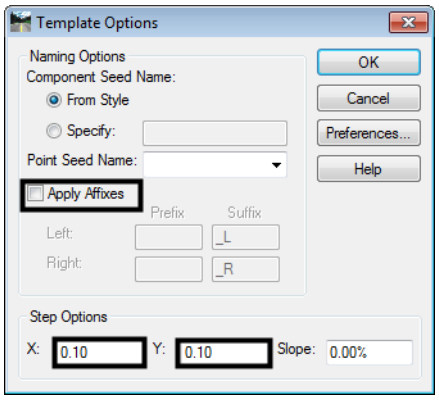


8. **<D>** the **OK** button.
9. **<D> <D>** on the root folder in the Template Library pane to expand the folder structure.

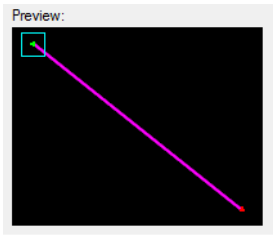
10. Expand the ***3 - Sections - End Conditions> Z-Slope End Conditions> High Speed End Conditions*** folder.

11. Create a new template in the ***High Speed End Conditions*** folder. Name it ***Z8_6_to_1_Ditch***.

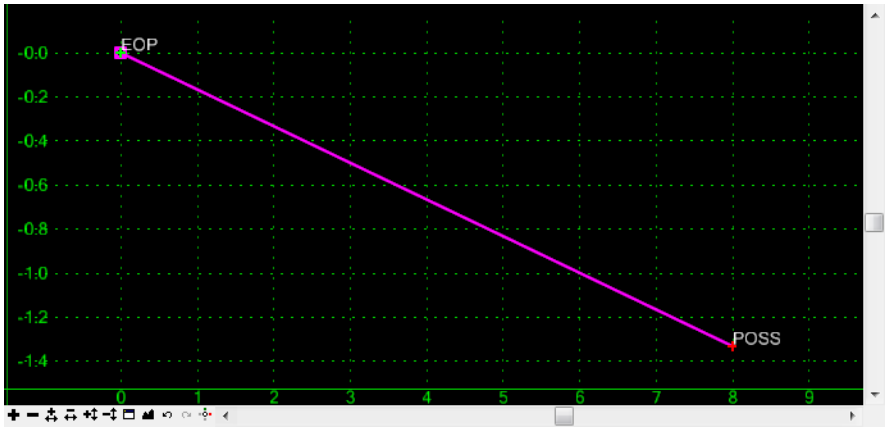
12. Expand ***4 - Components> End Conditions> Z-Slope Components > High Speed End Conditions*** folder.

13. **<D>** on the ***Z-Slope_8_6_to_1*** component. The component is displayed in the Preview window.

14. **<D> and hold** on component's origin (the green dot).



15. **Drag** the component into the Template View and **drop** (release the data button) it on the new section's origin.



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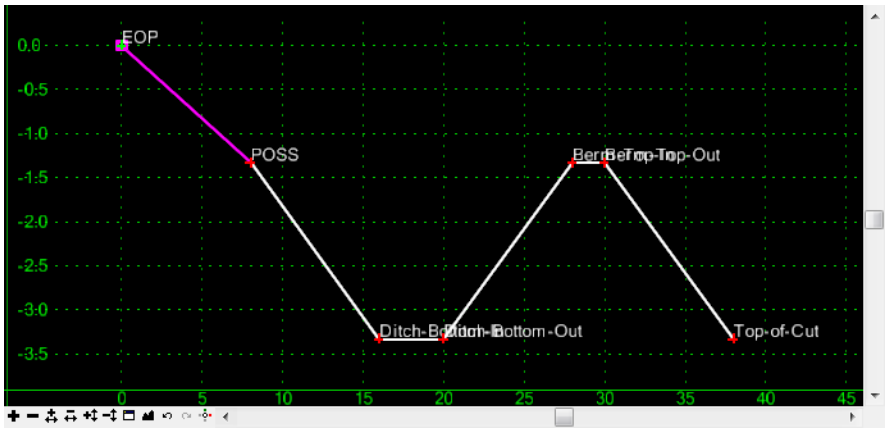

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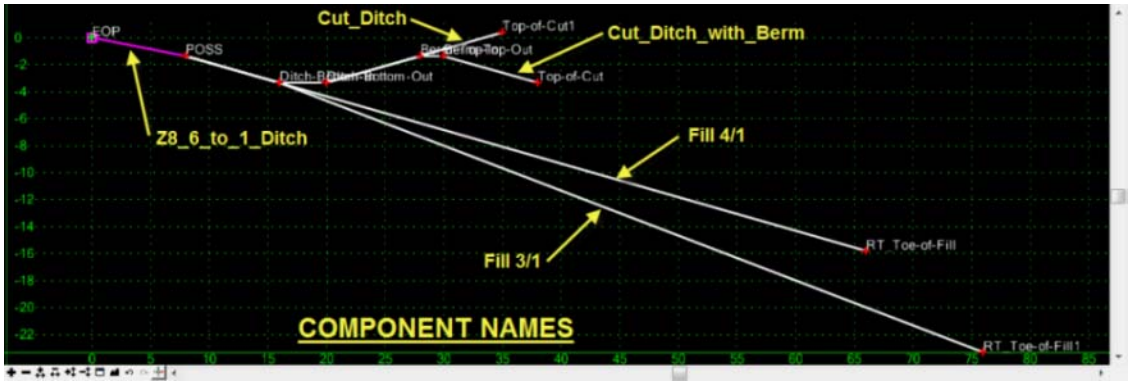

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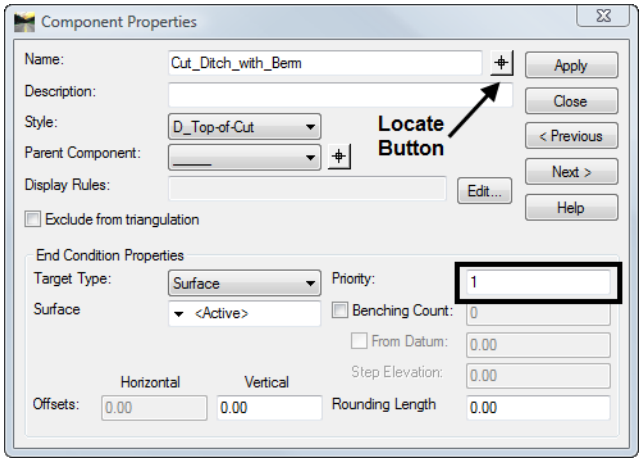
23. Verify that the **Priority** is set to ***1***.



24. **<D>** on the ***Locate Button*** next to ***Name*** in the ***Component Properties*** dialog box.

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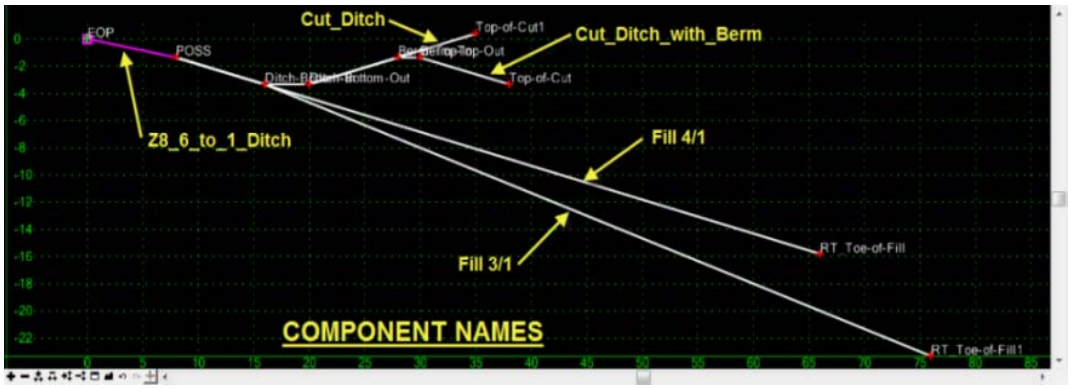

26. Verify that the **Priority** is set to ***2*** in the ***Component Properties*** dialog box.

27. Set the remaining End Condition Component priorities as follows:

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28. Be sure to **<D>** the **Apply** button if any Priority values were modified.

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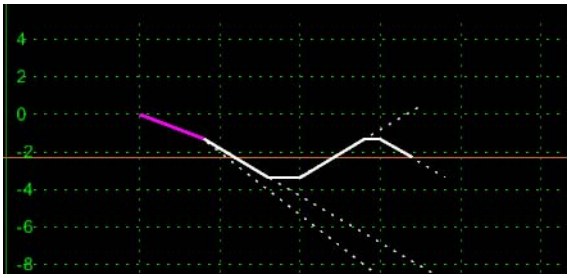

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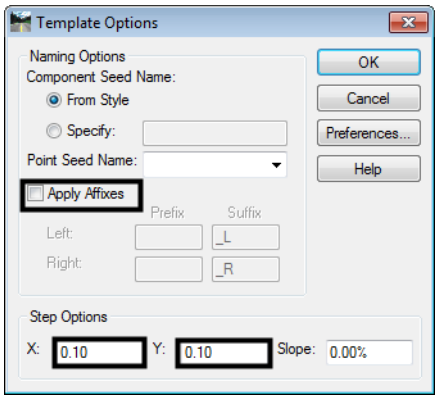


8. **<D>** the **OK** button.
9. **<D> <D>** on the root folder in the Template Library pane to expand the folder structure.

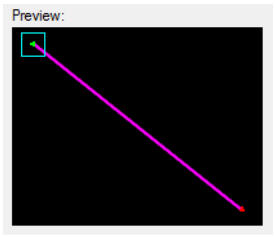
10. Expand the ***3 - Sections - End Conditions> Z-Slope End Conditions> High Speed End Conditions*** folder.

11. Create a new template in the ***High Speed End Conditions*** folder. Name it ***Z8_6_to_1_Ditch***.

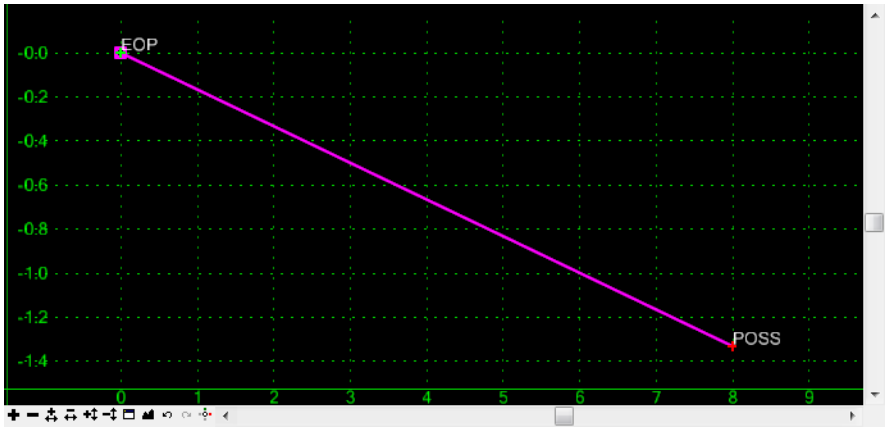
12. Expand ***4 - Components> End Conditions> Z-Slope Components > High Speed End Conditions*** folder.

13. **<D>** on the ***Z-Slope_8_6_to_1*** component. The component is displayed in the Preview window.

14. **<D> and hold** on component's origin (the green dot).



15. **Drag** the component into the Template View and **drop** (release the data button) it on the new section's origin.



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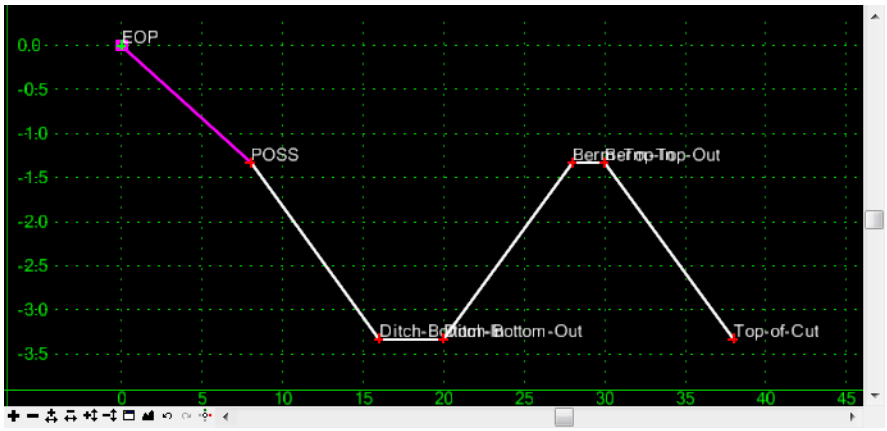

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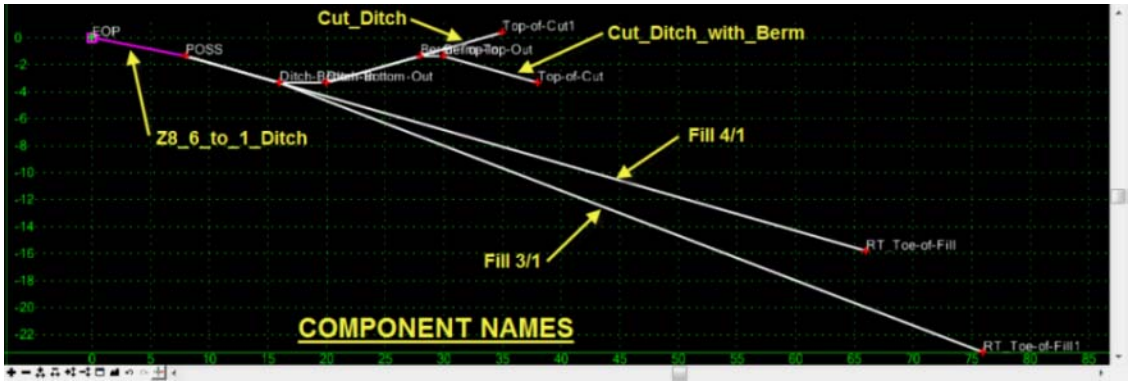
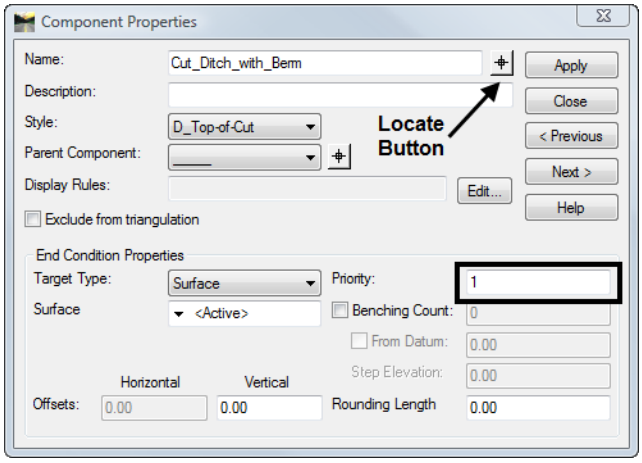


22. **<D> <D>** on the ***Cut_Ditch_with_Berm*** component.

23. Verify that the **Priority** is set to ***1***.



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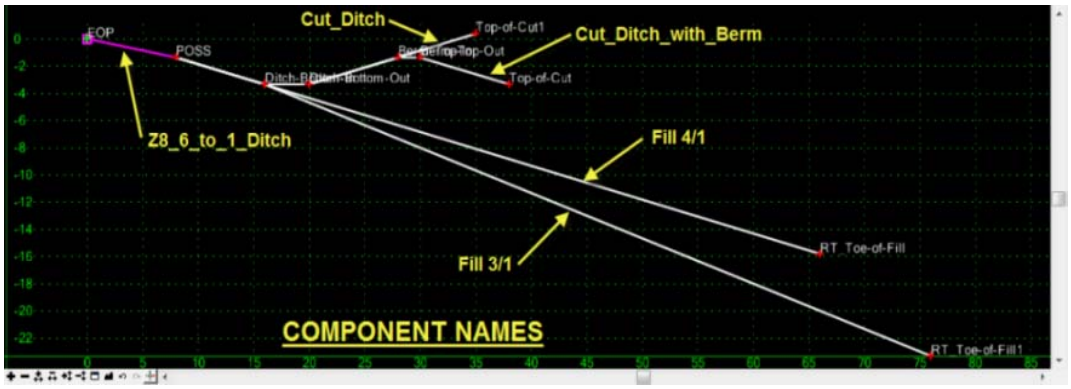


26. Verify that the **Priority** is set to ***2*** in the ***Component Properties*** dialog box.

27. Set the remaining End Condition Component priorities as follows:

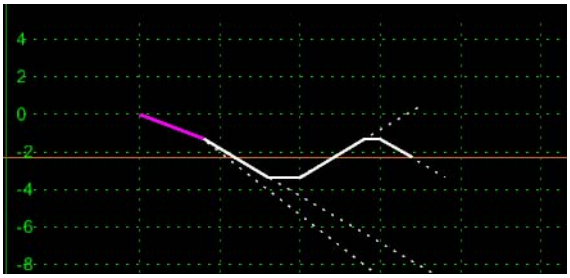
- ***Fill_4/1*** = ***3***
- ***Fill_3/1*** = ***4***

28. Be sure to **<D>** the **Apply** button if any Priority values were modified.

29. **<D>** the **Close** button in the Component Properties dialog box.

30. **<D>** the **Test** Button.

31. In the ***Test End Conditions*** dialog box, **<D> Draw** and notice how end conditions behave.



32. **<D> Close**.

Chapter Summary:

- When multiple end conditions are chained together, if one part of the chain fails then the whole chain fails.
- End condition components that share a common starting point are considered a single end condition.

LAB 30 - End Conditions that Require Multiple Solutions

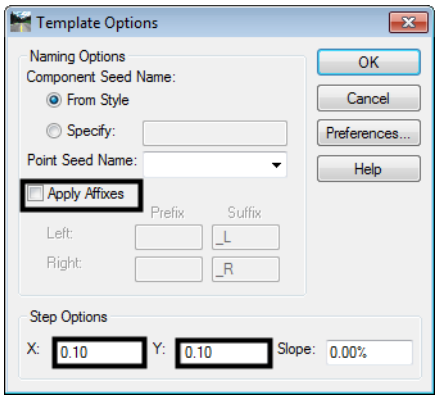
This lab demonstrates the construction of end conditions that require multiple solutions. The section will place a minimum 2-foot deep ditch, with a berm if necessary, when in cut. The section will also place a 4 to 1 fill slope when the embankment height is 10-feet or less and a 3 to 1 fill slope when over 10-feet in height. This section is constructed using the drag and drop method. Then, the end condition priorities are reset so that the section operates properly.

Chapter Objectives:

- Build an end condition section that tests for solutions based on priority
- Build an end condition section using existing components with the drag and drop method

Lab 30.1 - End Conditions that Require Multiple Solutions

1. Open MicroStation and InRoads using the ***12345DES_Model-End Cond Mult Sol.dgn*** file.
2. Select **File> Open** from the InRoads menu bar.
3. Select the ***C:\Projects\12345\Design\InRoads\ 12345DES_Template-End Cond Mult Sol.itl*** from the available files.
4. **<D> Open** then **<D> Cancel** to dismiss the ***Open*** dialog box.
5. Select **Modeler> Create Template** from the InRoads menu bar.
6. Select ***Tools> Options*** from the ***Create Template*** menu bar.
7. Make sure that **Apply Affixes** is toggled off and the **X** and **Y Step Options** are set to ***0.10***.



8. **<D>** the **OK** button.
9. **<D> <D>** on the root folder in the Template Library pane to expand the folder structure.

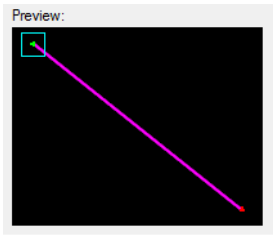
10. Expand the ***3 - Sections - End Conditions> Z-Slope End Conditions> High Speed End Conditions*** folder.

11. Create a new template in the ***High Speed End Conditions*** folder. Name it ***Z8_6_to_1_Ditch***.

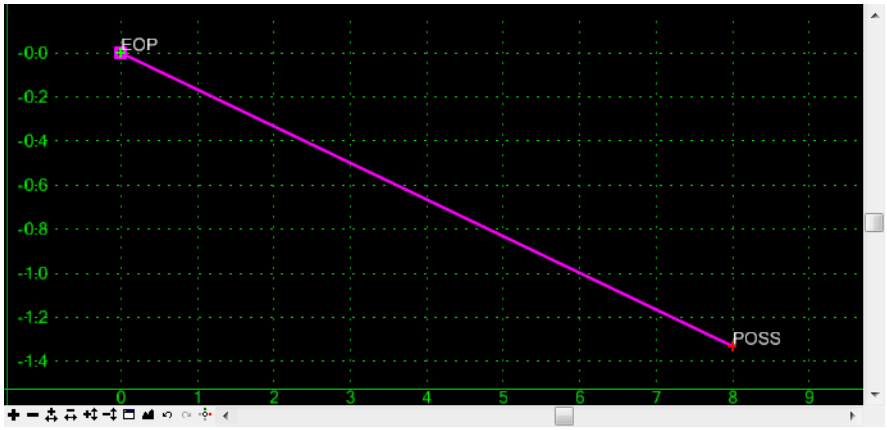
12. Expand ***4 - Components> End Conditions> Z-Slope Components > High Speed End Conditions*** folder.

13. **<D>** on the ***Z-Slope_8_6_to_1*** component. The component is displayed in the Preview window.

14. **<D> and hold** on component's origin (the green dot).



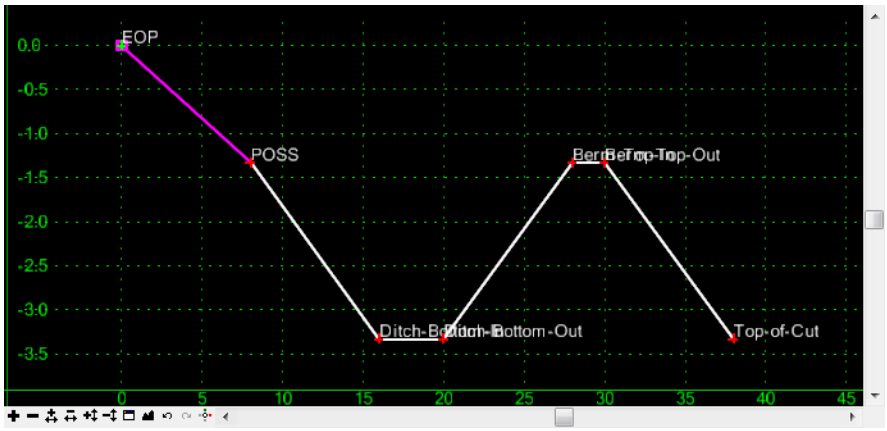
15. **Drag** the component into the Template View and **drop** (release the data button) it on the new section's origin.



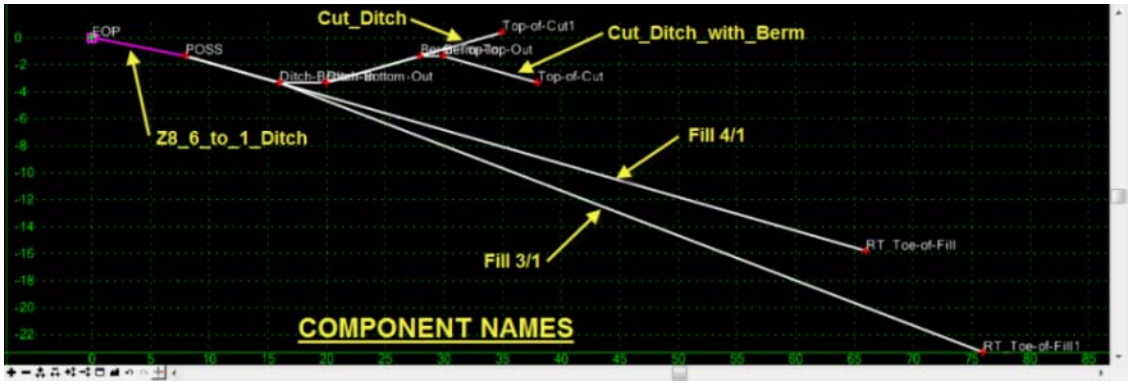
16. Expand ***4 - Components> End Conditions> Cut Slope Components*** folder.

17. **<D>** on the ***Cut_Ditch_with_Berm*** component.

18. **<D> and hold** on component's origin (the green dot).
19. **Drag** the component into the Template View and move the pointer on to the component point named ***POSS*** and **drop.** The "+" on the component point turns white when the pointer is on it.

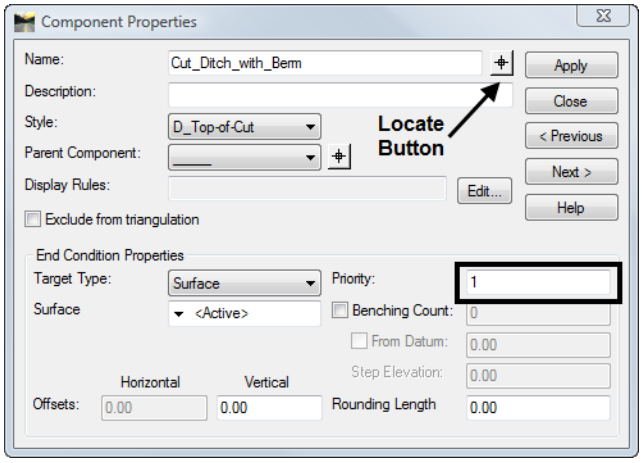


20. Repeat steps 16, 17 & 18 for the ***Cut_Ditch*** component.
21. Expand ***4 - Components> End Conditions> Fill Slope Components*** folder.Repeat steps 16, 17 & 18 for the ***Fill__4_to_1*** and ***Fill_3_to_1*** components.



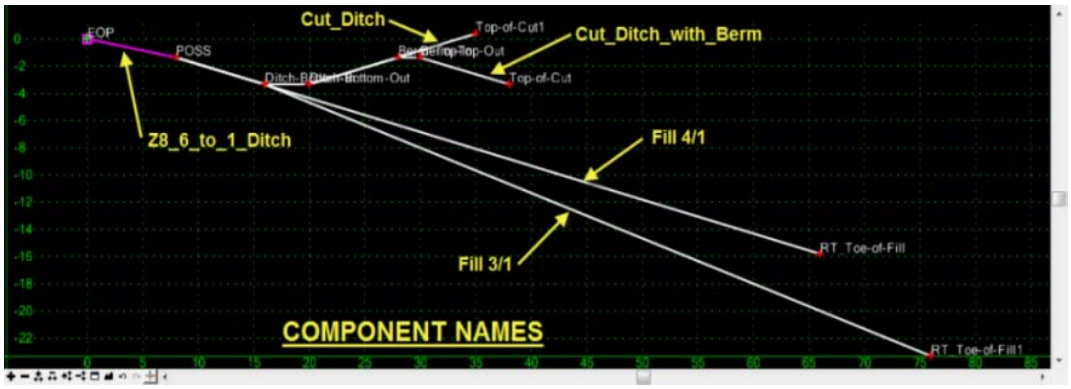
22. **<D> <D>** on the ***Cut_Ditch_with_Berm*** component.

23. Verify that the **Priority** is set to ***1***.



24. **<D>** on the ***Locate Button*** next to ***Name*** in the ***Component Properties*** dialog box.

25. **<D>** on the ***Cut_Ditch*** component in the Template View.



26. Verify that the **Priority** is set to ***2*** in the ***Component Properties*** dialog box.

27. Set the remaining End Condition Component priorities as follows:

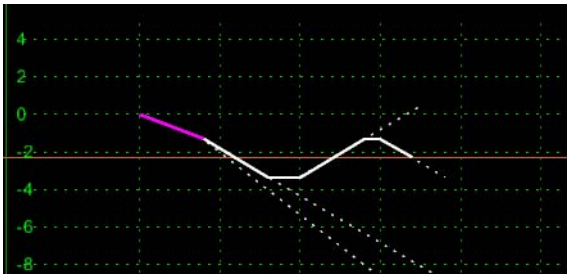
- ***Fill_4/1*** = ***3***
- ***Fill_3/1*** = ***4***

28. Be sure to **<D>** the **Apply** button if any Priority values were modified.

29. **<D>** the **Close** button in the Component Properties dialog box.

30. **<D>** the **Test** Button.

31. In the ***Test End Conditions*** dialog box, **<D> Draw** and notice how end conditions behave.



32. **<D> Close**.

Chapter Summary:

- When multiple end conditions are chained together, if one part of the chain fails then the whole chain fails.
- End condition components that share a common starting point are considered a single end condition.

LAB 30 - End Conditions that Require Multiple Solutions

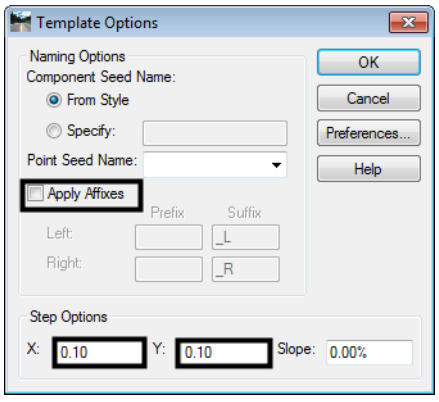
This lab demonstrates the construction of end conditions that require multiple solutions. The section will place a minimum 2-foot deep ditch, with a berm if necessary, when in cut. The section will also place a 4 to 1 fill slope when the embankment height is 10-feet or less and a 3 to 1 fill slope when over 10-feet in height. This section is constructed using the drag and drop method. Then, the end condition priorities are reset so that the section operates properly.

Chapter Objectives:

- Build an end condition section that tests for solutions based on priority
- Build an end condition section using existing components with the drag and drop method

Lab 30.1 - End Conditions that Require Multiple Solutions

1. Open MicroStation and InRoads using the ***12345DES_Model-End Cond Mult Sol.dgn*** file.
2. Select **File> Open** from the InRoads menu bar.
3. Select the ***C:\Projects\12345\Design\InRoads\ 12345DES_Template-End Cond Mult Sol.itl*** from the available files.
4. **<D> Open** then **<D> Cancel** to dismiss the ***Open*** dialog box.
5. Select **Modeler> Create Template** from the InRoads menu bar.
6. Select ***Tools> Options*** from the ***Create Template*** menu bar.
7. Make sure that **Apply Affixes** is toggled off and the **X** and **Y Step Options** are set to ***0.10***.



8. **<D>** the **OK** button.
9. **<D> <D>** on the root folder in the Template Library pane to expand the folder structure.

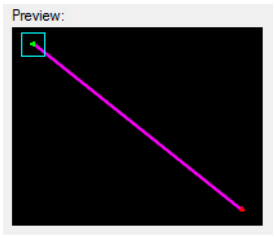
10. Expand the ***3 - Sections - End Conditions> Z-Slope End Conditions> High Speed End Conditions*** folder.

11. Create a new template in the ***High Speed End Conditions*** folder. Name it ***Z8_6_to_1_Ditch***.

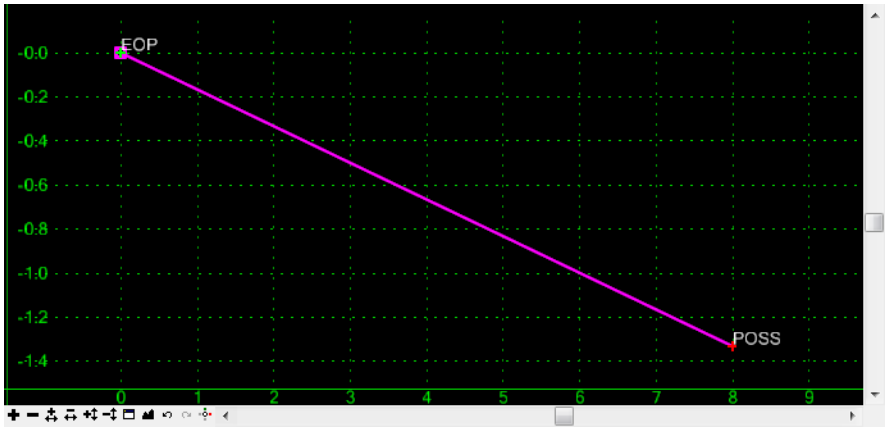
12. Expand ***4 - Components> End Conditions> Z-Slope Components > High Speed End Conditions*** folder.

13. **<D>** on the ***Z-Slope_8_6_to_1*** component. The component is displayed in the Preview window.

14. **<D> and hold** on component's origin (the green dot).



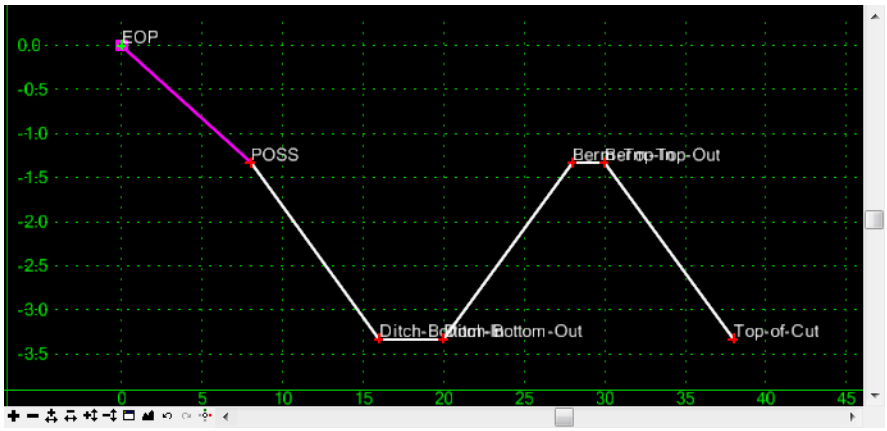
15. **Drag** the component into the Template View and **drop** (release the data button) it on the new section's origin.



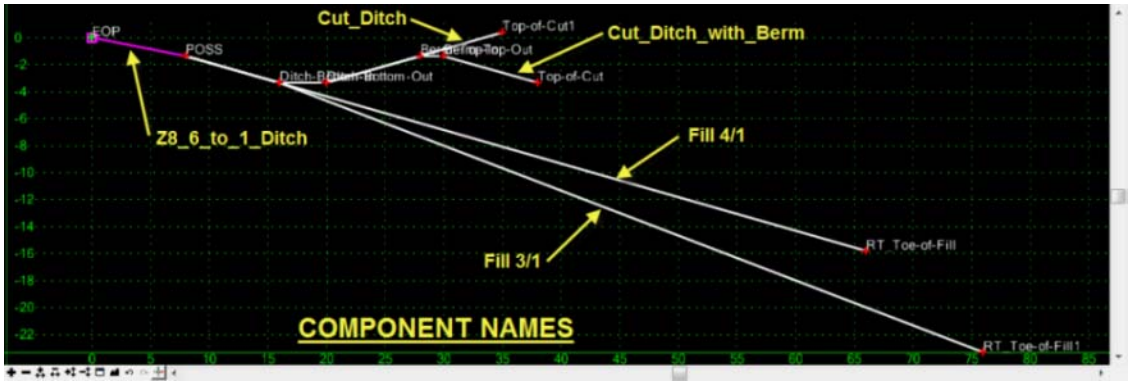
16. Expand ***4 - Components> End Conditions> Cut Slope Components*** folder.

17. **<D>** on the ***Cut_Ditch_with_Berm*** component.

18. **<D> and hold** on component's origin (the green dot).
19. **Drag** the component into the Template View and move the pointer on to the component point named ***POSS*** and **drop.** The "+" on the component point turns white when the pointer is on it.

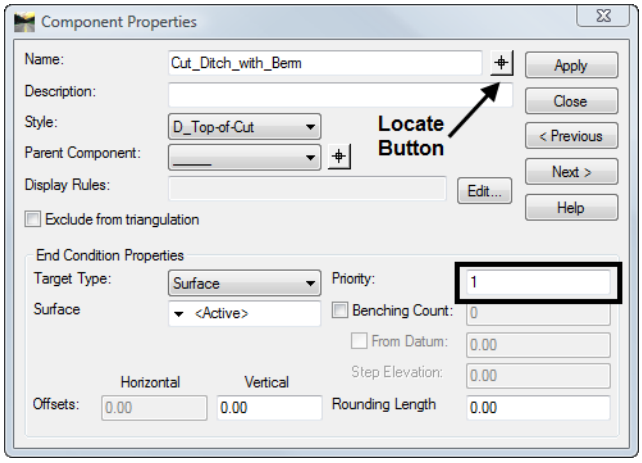


20. Repeat steps 16, 17 & 18 for the ***Cut_Ditch*** component.
21. Expand ***4 - Components> End Conditions> Fill Slope Components*** folder.Repeat steps 16, 17 & 18 for the ***Fill__4_to_1*** and ***Fill_3_to_1*** components.



22. **<D> <D>** on the ***Cut_Ditch_with_Berm*** component.

23. Verify that the **Priority** is set to ***1***.



24. **<D>** on the ***Locate Button*** next to ***Name*** in the ***Component Properties*** dialog box.

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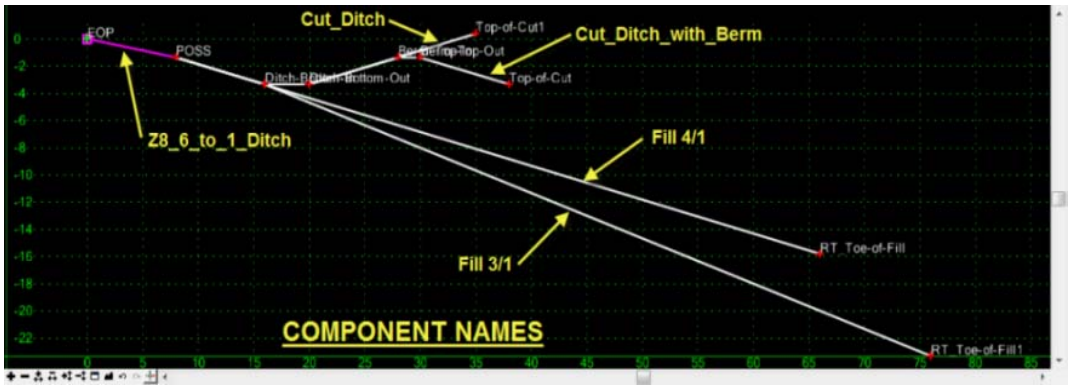

26. Verify that the **Priority** is set to ***2*** in the ***Component Properties*** dialog box.

27. Set the remaining End Condition Component priorities as follows:

- ***Fill_4/1*** = ***3***
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28. Be sure to **<D>** the **Apply** button if any Priority values were modified.

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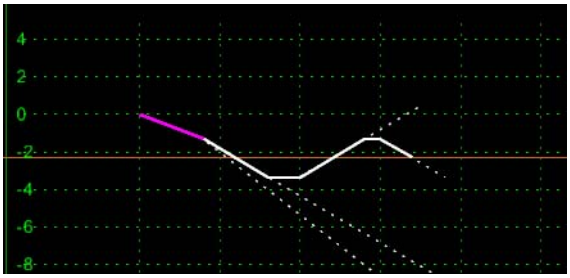

32. **<D> Close**.

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- When multiple end conditions are chained together, if one part of the chain fails then the whole chain fails.
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Chapter Objectives:

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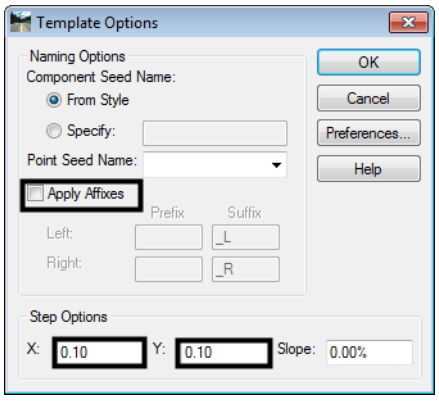


8. **<D>** the **OK** button.
9. **<D> <D>** on the root folder in the Template Library pane to expand the folder structure.

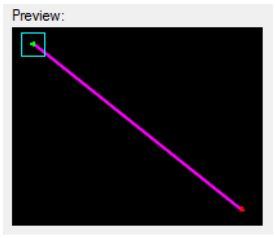
10. Expand the ***3 - Sections - End Conditions> Z-Slope End Conditions> High Speed End Conditions*** folder.

11. Create a new template in the ***High Speed End Conditions*** folder. Name it ***Z8_6_to_1_Ditch***.

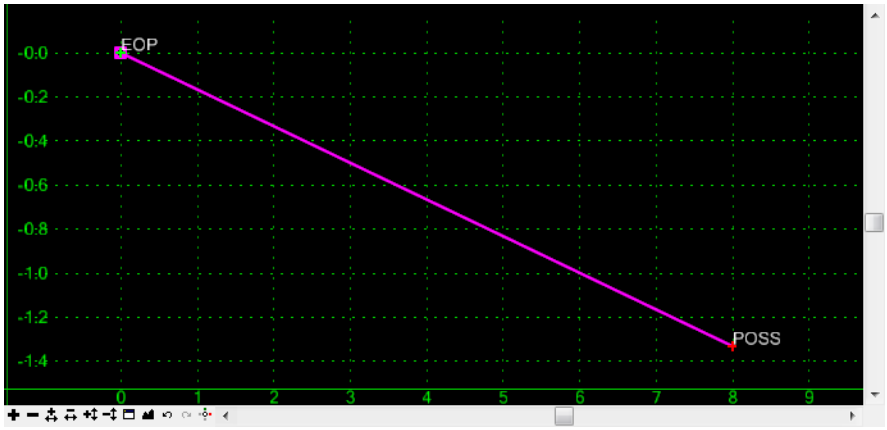
12. Expand ***4 - Components> End Conditions> Z-Slope Components > High Speed End Conditions*** folder.

13. **<D>** on the ***Z-Slope_8_6_to_1*** component. The component is displayed in the Preview window.

14. **<D> and hold** on component's origin (the green dot).



15. **Drag** the component into the Template View and **drop** (release the data button) it on the new section's origin.



16. Expand ***4 - Components> End Conditions> Cut Slope Components*** folder.

17. **<D>** on the ***Cut_Ditch_with_Berm*** component.

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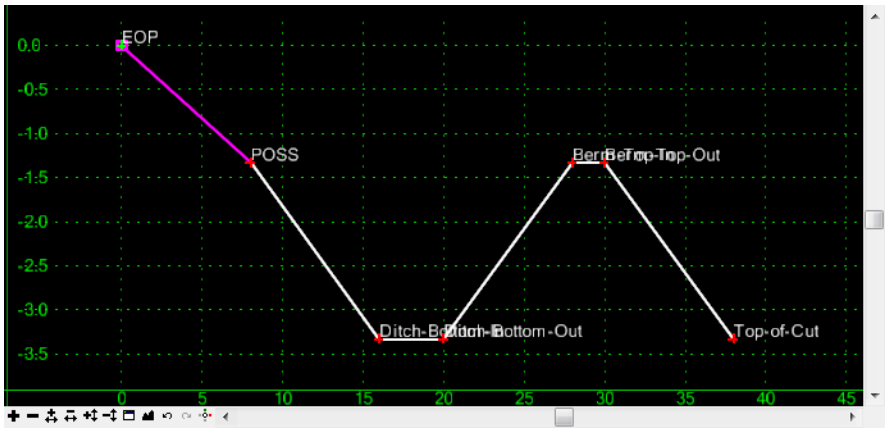

20. Repeat steps 16, 17 & 18 for the ***Cut_Ditch*** component.
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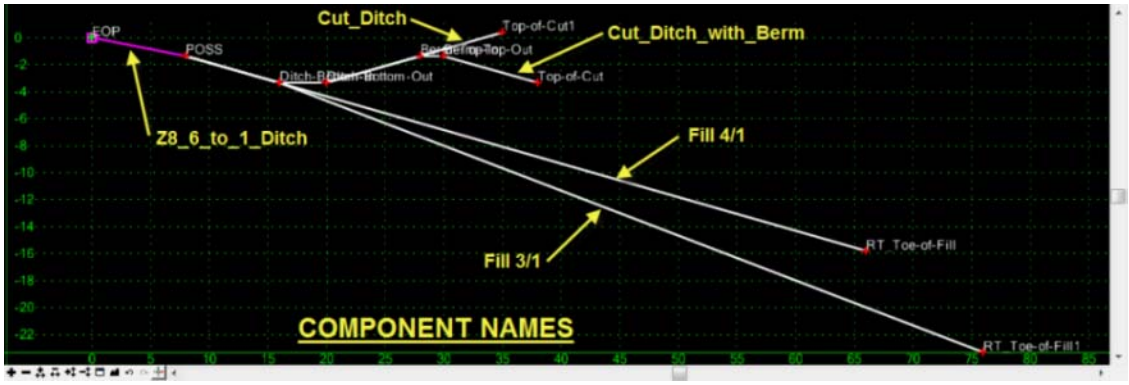

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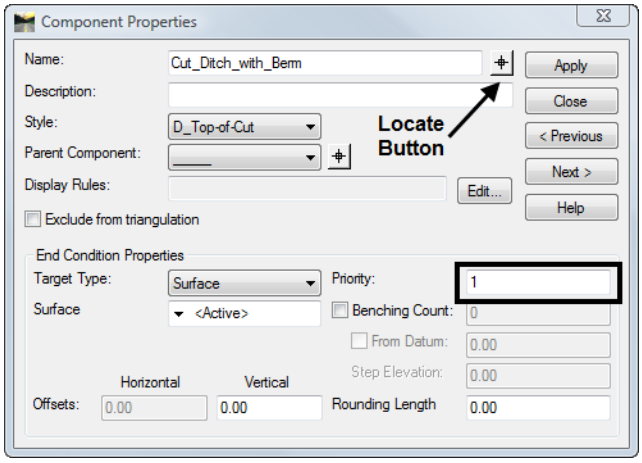
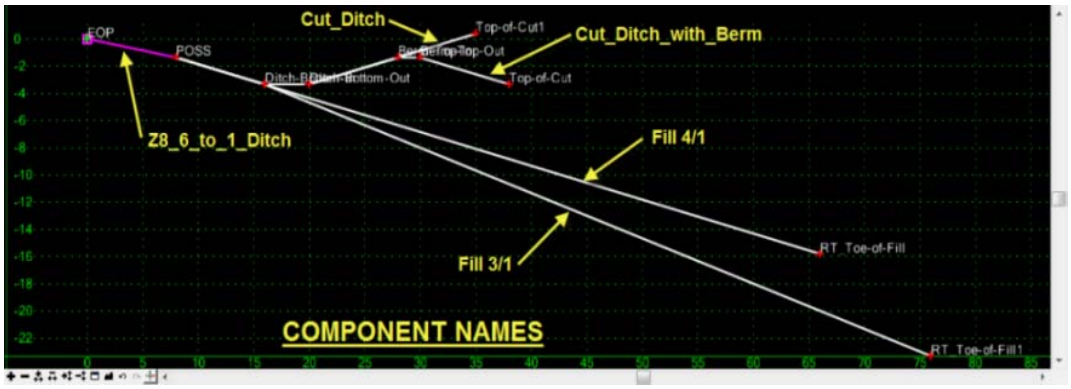
23. Verify that the **Priority** is set to ***1***.



24. **<D>** on the ***Locate Button*** next to ***Name*** in the ***Component Properties*** dialog box.

25. **<D>** on the ***Cut_Ditch*** component in the Template View.



26. Verify that the **Priority** is set to ***2*** in the ***Component Properties*** dialog box.

27. Set the remaining End Condition Component priorities as follows:

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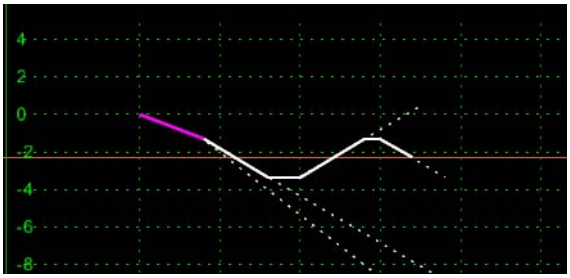

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Chapter Objectives:

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2. Select **File> Open** from the InRoads menu bar.
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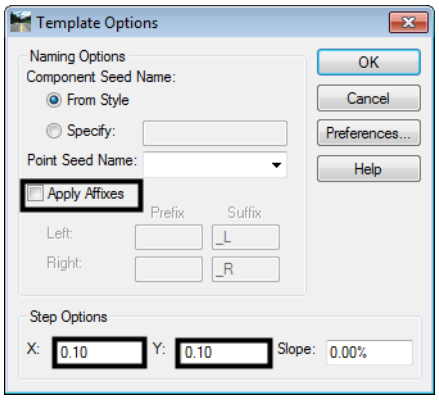


8. **<D>** the **OK** button.
9. **<D> <D>** on the root folder in the Template Library pane to expand the folder structure.

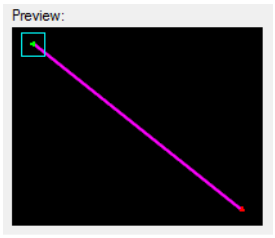
10. Expand the ***3 - Sections - End Conditions> Z-Slope End Conditions> High Speed End Conditions*** folder.

11. Create a new template in the ***High Speed End Conditions*** folder. Name it ***Z8_6_to_1_Ditch***.

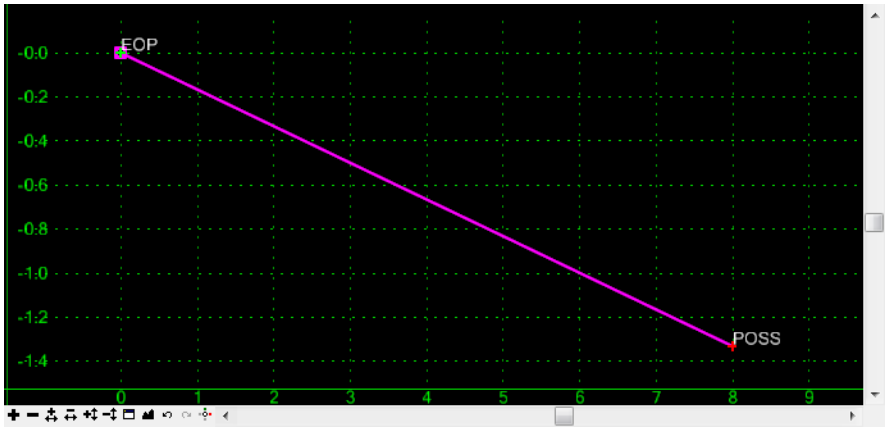
12. Expand ***4 - Components> End Conditions> Z-Slope Components > High Speed End Conditions*** folder.

13. **<D>** on the ***Z-Slope_8_6_to_1*** component. The component is displayed in the Preview window.

14. **<D> and hold** on component's origin (the green dot).



15. **Drag** the component into the Template View and **drop** (release the data button) it on the new section's origin.



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17. **<D>** on the ***Cut_Ditch_with_Berm*** component.

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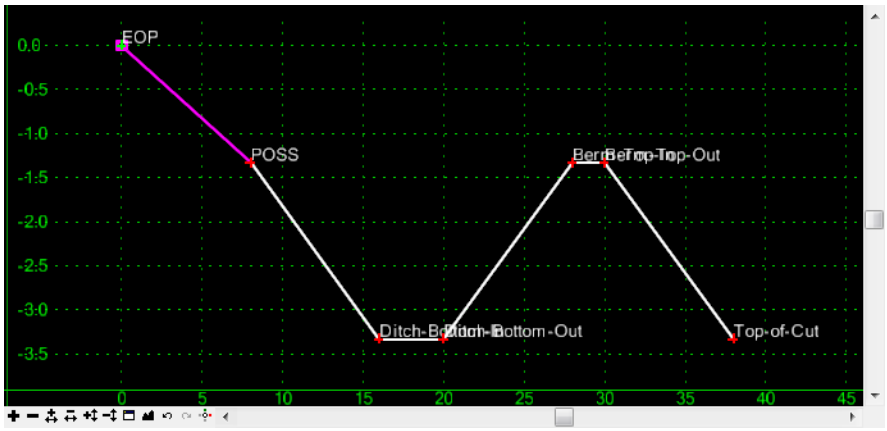

20. Repeat steps 16, 17 & 18 for the ***Cut_Ditch*** component.
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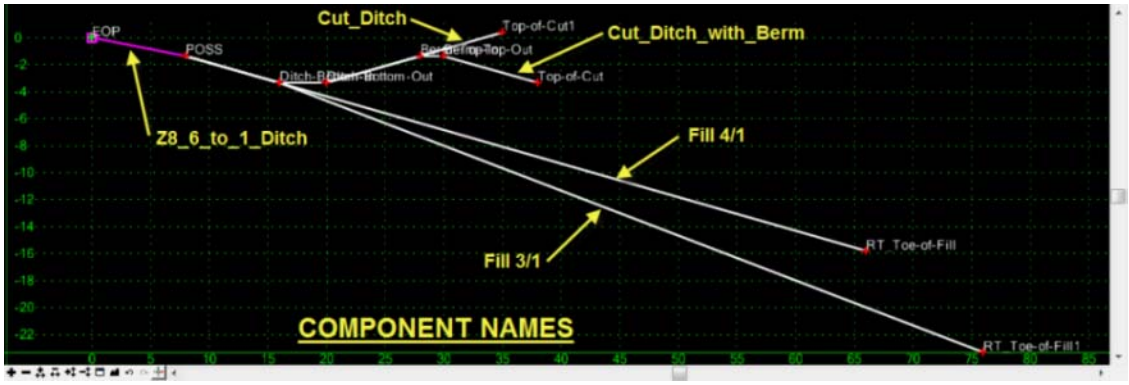
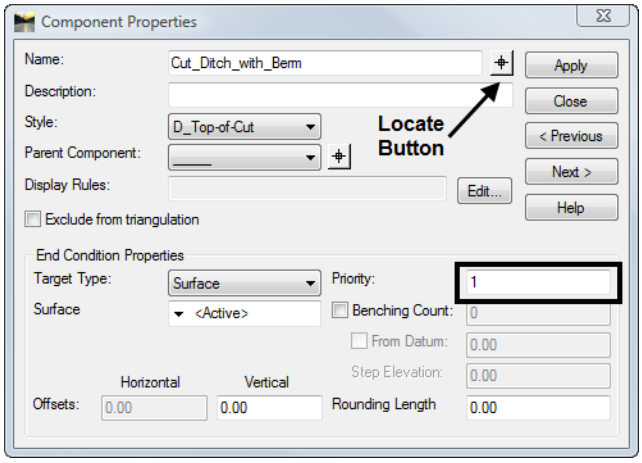


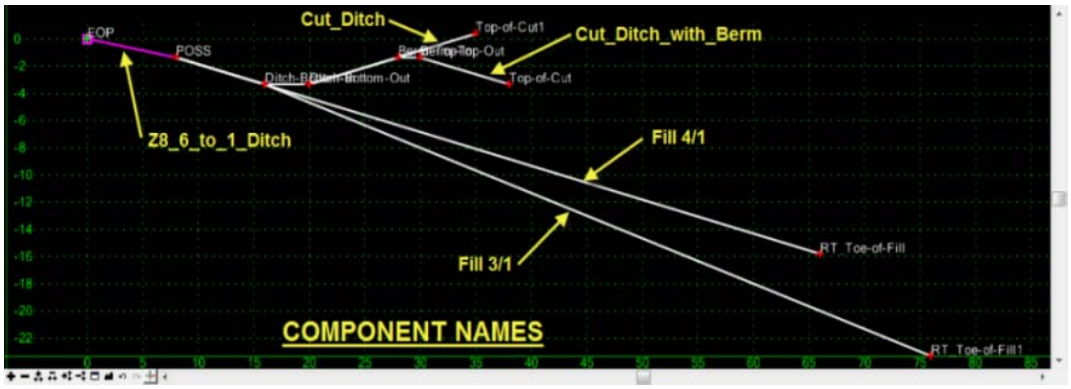
22. **<D> <D>** on the ***Cut_Ditch_with_Berm*** component.

23. Verify that the **Priority** is set to ***1***.



24. **<D>** on the ***Locate Button*** next to ***Name*** in the ***Component Properties*** dialog box.

25. **<D>** on the ***Cut_Ditch*** component in the Template View.



26. Verify that the **Priority** is set to ***2*** in the ***Component Properties*** dialog box.

27. Set the remaining End Condition Component priorities as follows:

- ***Fill_4/1*** = ***3***
- ***Fill_3/1*** = ***4***

28. Be sure to **<D>** the **Apply** button if any Priority values were modified.

29. **<D>** the **Close** button in the Component Properties dialog box.

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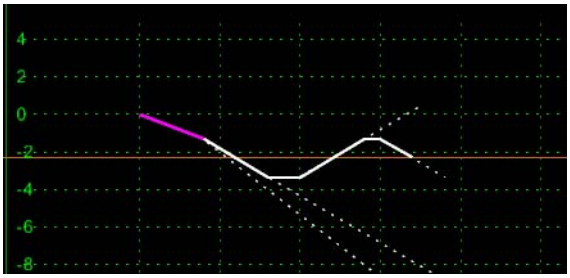
31. In the ***Test End Conditions*** dialog box, **<D> Draw** and notice how end conditions behave.



32. **<D> Close**.

Chapter Summary:

- When multiple end conditions are chained together, if one part of the chain fails then the whole chain fails.
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LAB 30 - End Conditions that Require Multiple Solutions

This lab demonstrates the construction of end conditions that require multiple solutions. The section will place a minimum 2-foot deep ditch, with a berm if necessary, when in cut. The section will also place a 4 to 1 fill slope when the embankment height is 10-feet or less and a 3 to 1 fill slope when over 10-feet in height. This section is constructed using the drag and drop method. Then, the end condition priorities are reset so that the section operates properly.

Chapter Objectives:

- Build an end condition section that tests for solutions based on priority
- Build an end condition section using existing components with the drag and drop method

Lab 30.1 - End Conditions that Require Multiple Solutions

1. Open MicroStation and InRoads using the ***12345DES_Model-End Cond Mult Sol.dgn*** file.
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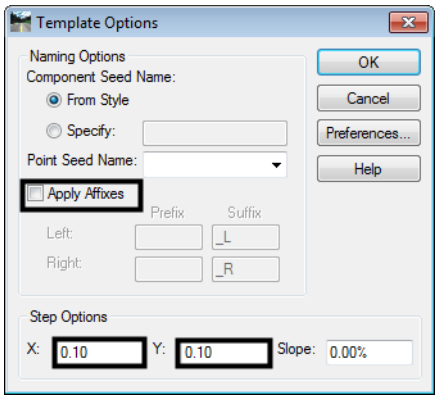
3. Select the ***C:\Projects\12345\Design\InRoads\ 12345DES_Template-End Cond Mult Sol.itl*** from the available files.
4. **<D> Open** then **<D> Cancel** to dismiss the ***Open*** dialog box.
5. Select **Modeler> Create Template** from the InRoads menu bar.
6. Select ***Tools> Options*** from the ***Create Template*** menu bar.
7. Make sure that **Apply Affixes** is toggled off and the **X** and **Y Step Options** are set to ***0.10***.



8. **<D>** the **OK** button.
9. **<D> <D>** on the root folder in the Template Library pane to expand the folder structure.

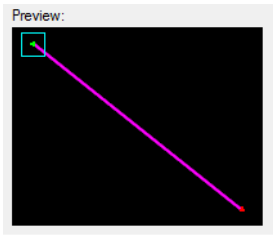
10. Expand the ***3 - Sections - End Conditions> Z-Slope End Conditions> High Speed End Conditions*** folder.

11. Create a new template in the ***High Speed End Conditions*** folder. Name it ***Z8_6_to_1_Ditch***.

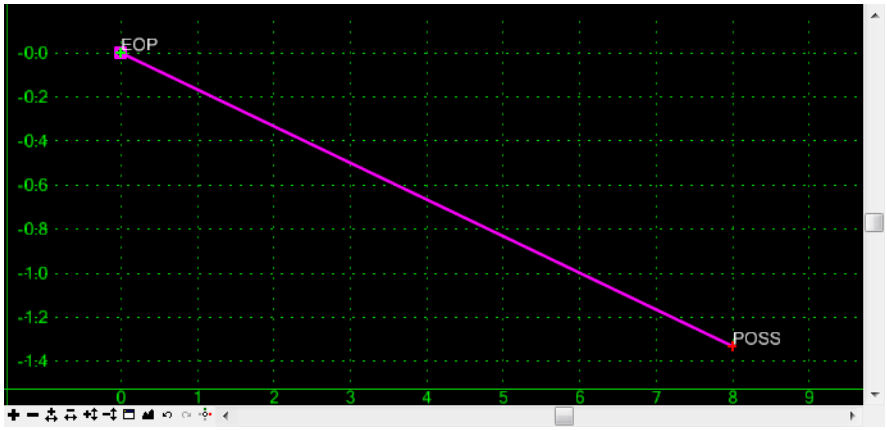
12. Expand ***4 - Components> End Conditions> Z-Slope Components > High Speed End Conditions*** folder.

13. **<D>** on the ***Z-Slope_8_6_to_1*** component. The component is displayed in the Preview window.

14. **<D> and hold** on component's origin (the green dot).



15. **Drag** the component into the Template View and **drop** (release the data button) it on the new section's origin.



16. Expand ***4 - Components> End Conditions> Cut Slope Components*** folder.

17. **<D>** on the ***Cut_Ditch_with_Berm*** component.

18. **<D> and hold** on component's origin (the green dot).
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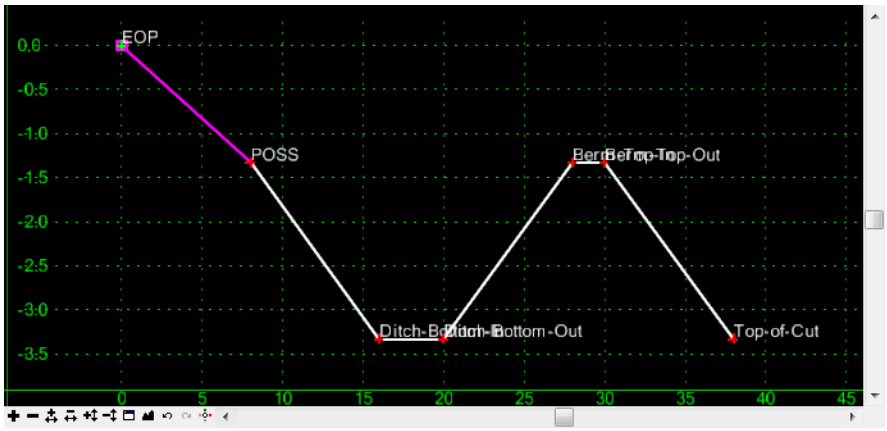
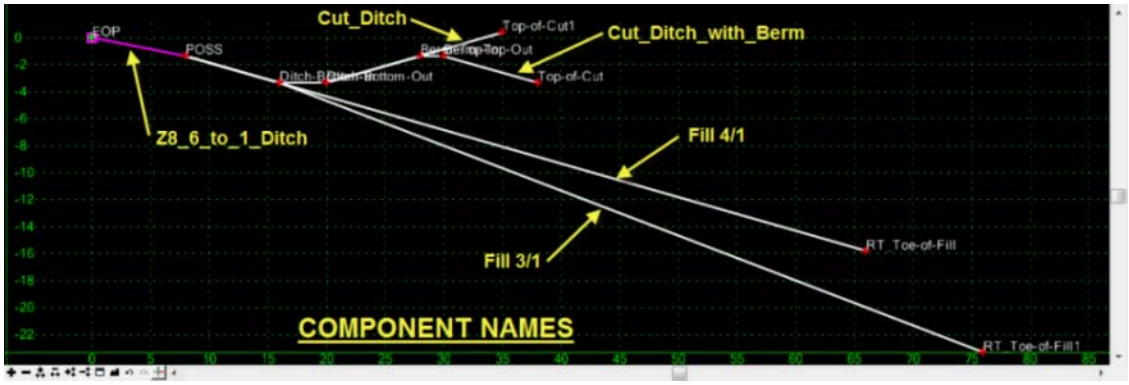
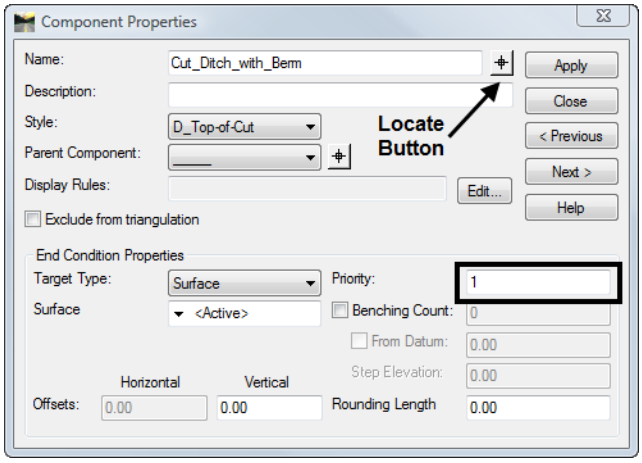


20. Repeat steps 16, 17 & 18 for the ***Cut_Ditch*** component.
21. Expand ***4 - Components> End Conditions> Fill Slope Components*** folder.Repeat steps 16, 17 & 18 for the ***Fill__4_to_1*** and ***Fill_3_to_1*** components.



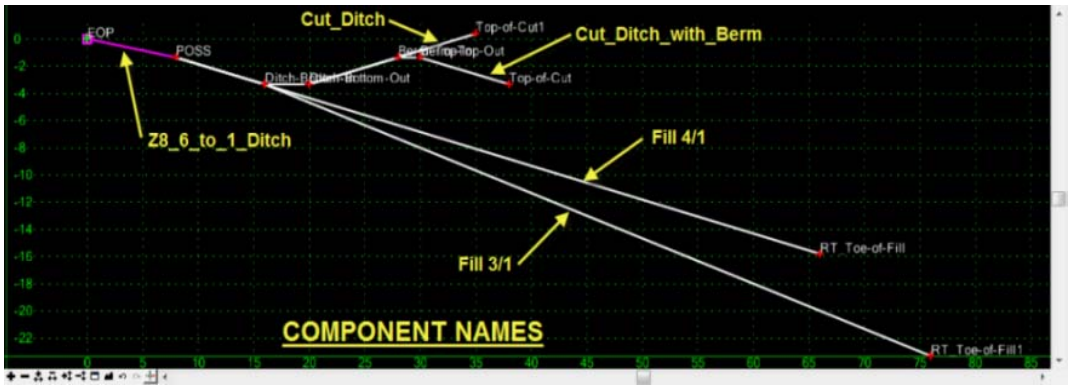
22. **<D> <D>** on the ***Cut_Ditch_with_Berm*** component.

23. Verify that the **Priority** is set to ***1***.



24. **<D>** on the ***Locate Button*** next to ***Name*** in the ***Component Properties*** dialog box.

25. **<D>** on the ***Cut_Ditch*** component in the Template View.



26. Verify that the **Priority** is set to ***2*** in the ***Component Properties*** dialog box.

27. Set the remaining End Condition Component priorities as follows:

- ***Fill_4/1*** = ***3***
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28. Be sure to **<D>** the **Apply** button if any Priority values were modified.

29. **<D>** the **Close** button in the Component Properties dialog box.

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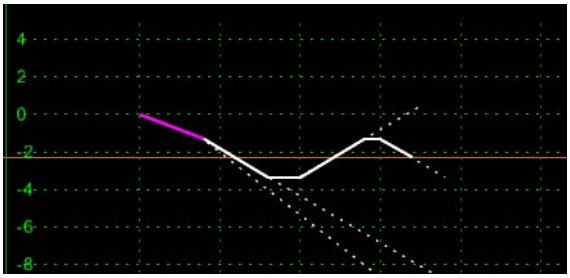

32. **<D> Close**.

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- When multiple end conditions are chained together, if one part of the chain fails then the whole chain fails.
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LAB 30 - End Conditions that Require Multiple Solutions

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Chapter Objectives:

- Build an end condition section that tests for solutions based on priority
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4. **<D> Open** then **<D> Cancel** to dismiss the ***Open*** dialog box.
5. Select **Modeler> Create Template** from the InRoads menu bar.
6. Select ***Tools> Options*** from the ***Create Template*** menu bar.
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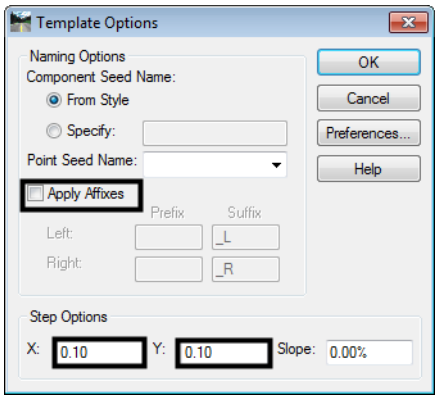

8. **<D>** the **OK** button.
9. **<D> <D>** on the root folder in the Template Library pane to expand the folder structure.

10. Expand the ***3 - Sections - End Conditions> Z-Slope End Conditions> High Speed End Conditions*** folder.

11. Create a new template in the ***High Speed End Conditions*** folder. Name it ***Z8_6_to_1_Ditch***.

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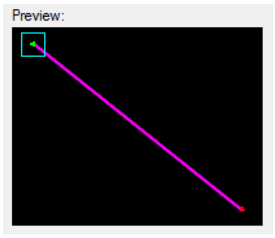
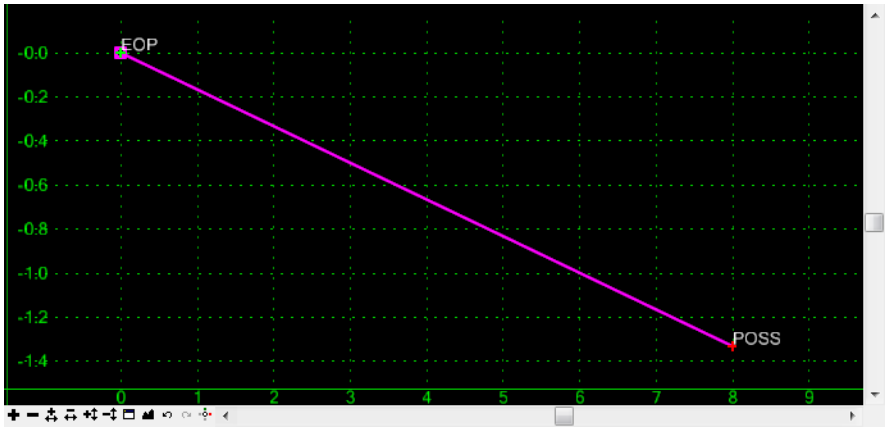
13. **<D>** on the ***Z-Slope_8_6_to_1*** component. The component is displayed in the Preview window.

14. **<D> and hold** on component's origin (the green dot).



15. **Drag** the component into the Template View and **drop** (release the data button) it on the new section's origin.



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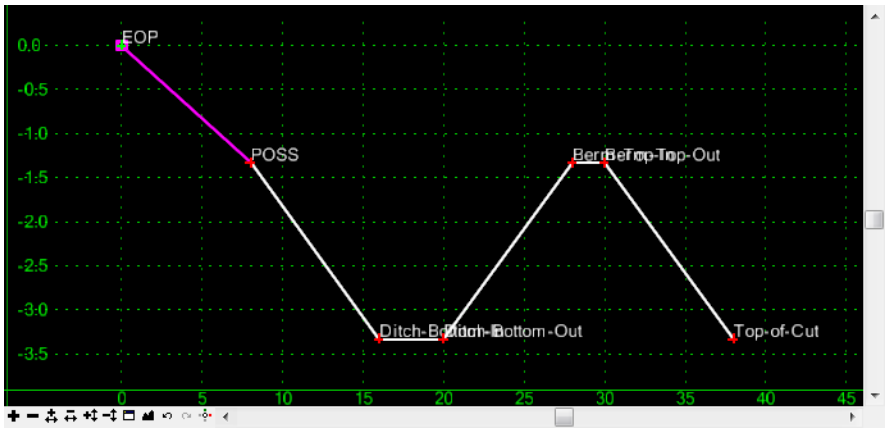

20. Repeat steps 16, 17 & 18 for the ***Cut_Ditch*** component.
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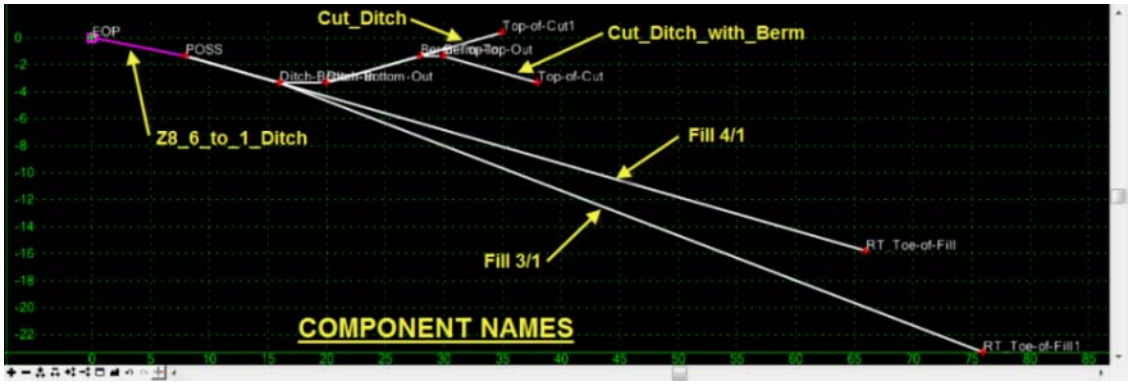

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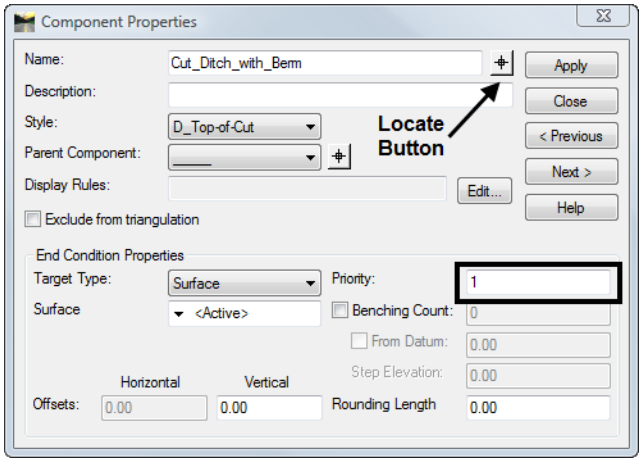
23. Verify that the **Priority** is set to ***1***.



24. **<D>** on the ***Locate Button*** next to ***Name*** in the ***Component Properties*** dialog box.

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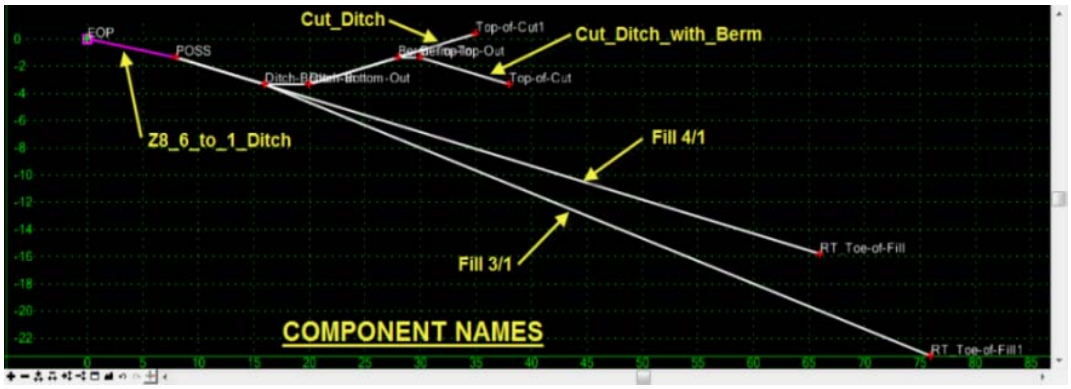

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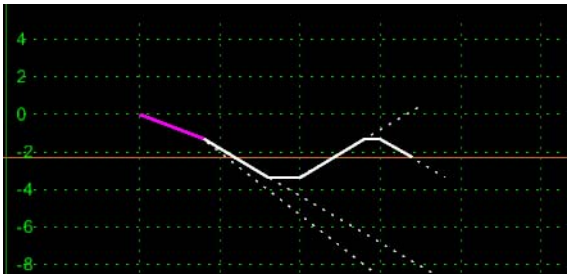

32. **<D> Close**.

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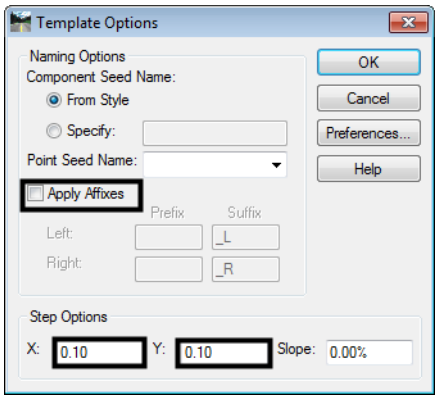

8. **<D>** the **OK** button.
9. **<D> <D>** on the root folder in the Template Library pane to expand the folder structure.

10. Expand the ***3 - Sections - End Conditions> Z-Slope End Conditions> High Speed End Conditions*** folder.

11. Create a new template in the ***High Speed End Conditions*** folder. Name it ***Z8_6_to_1_Ditch***.

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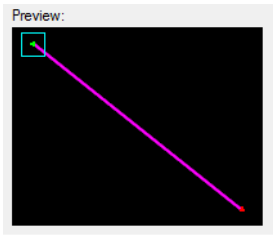
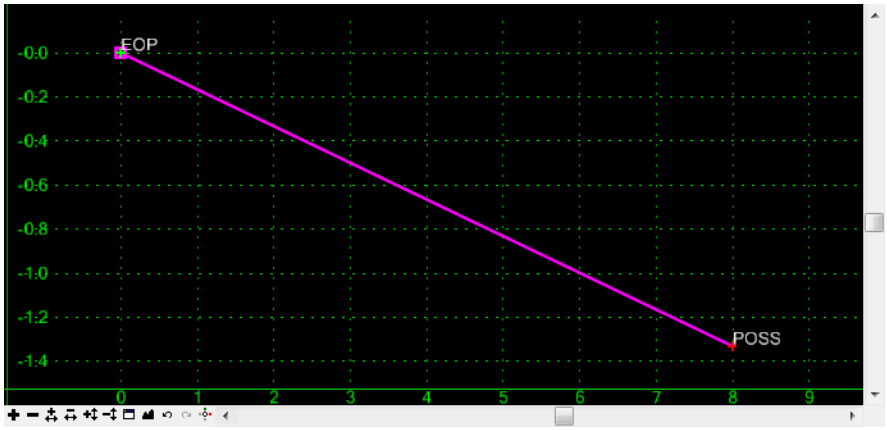


15. **Drag** the component into the Template View and **drop** (release the data button) it on the new section's origin.



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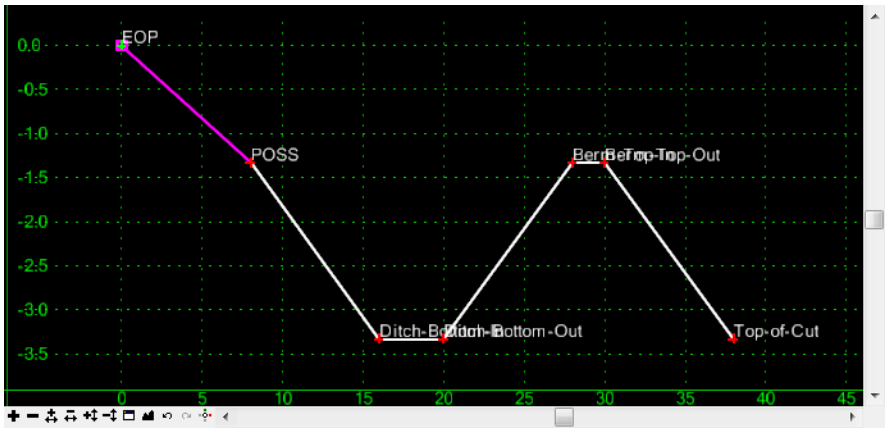

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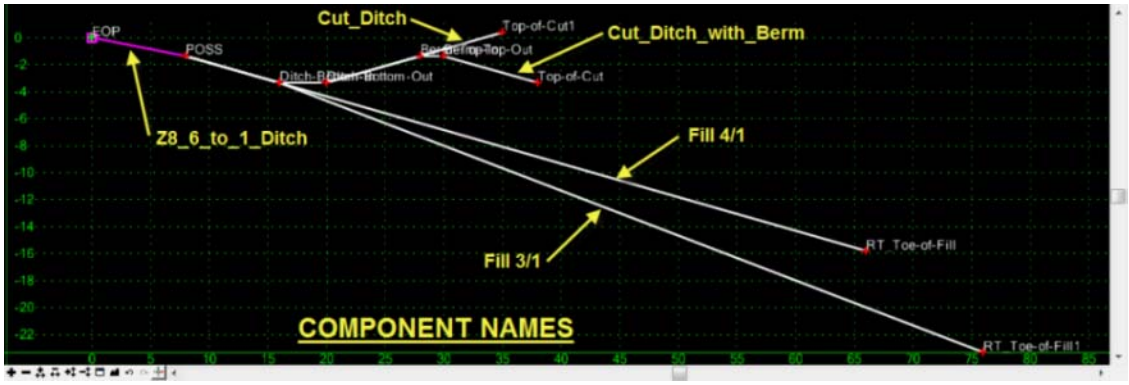

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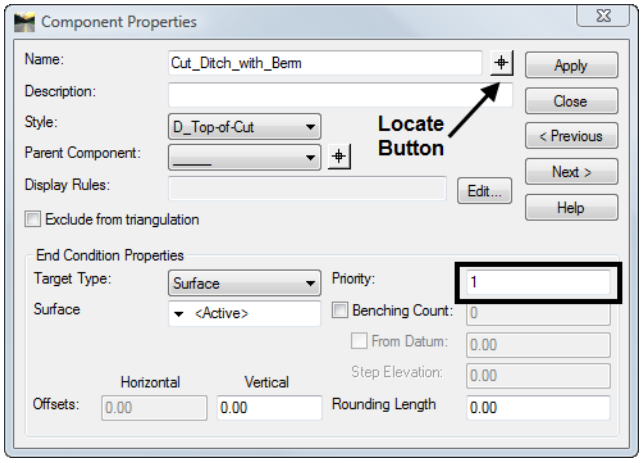

24. **<D>** on the ***Locate Button*** next to ***Name*** in the ***Component Properties*** dialog box.

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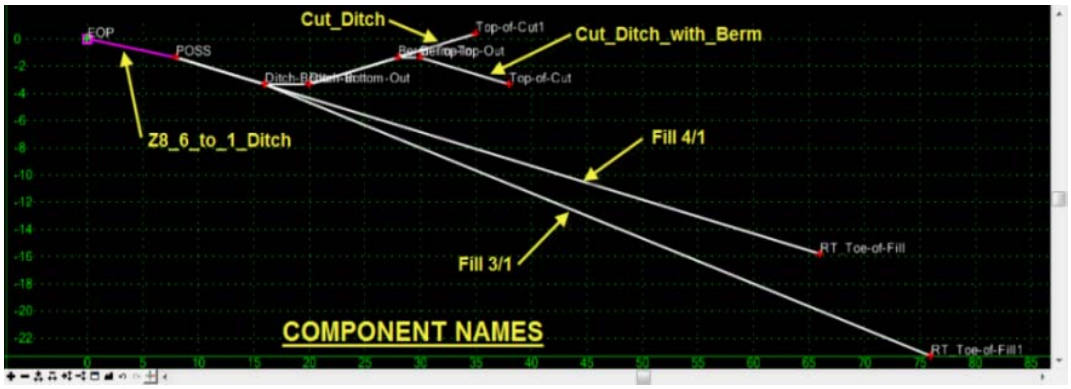

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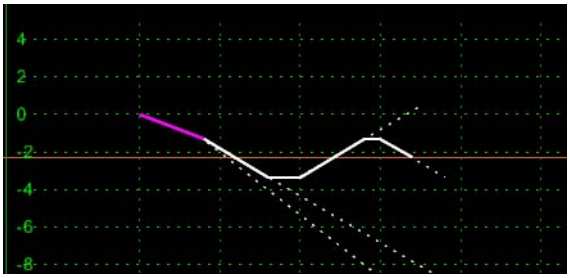

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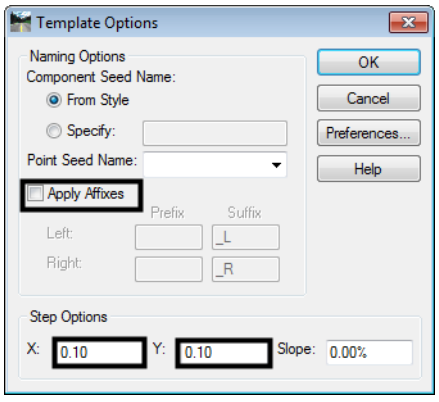


8. **<D>** the **OK** button.
9. **<D> <D>** on the root folder in the Template Library pane to expand the folder structure.

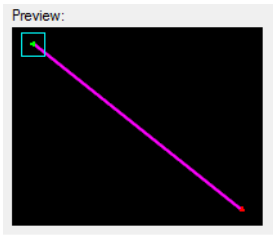
10. Expand the ***3 - Sections - End Conditions> Z-Slope End Conditions> High Speed End Conditions*** folder.

11. Create a new template in the ***High Speed End Conditions*** folder. Name it ***Z8_6_to_1_Ditch***.

12. Expand ***4 - Components> End Conditions> Z-Slope Components > High Speed End Conditions*** folder.

13. **<D>** on the ***Z-Slope_8_6_to_1*** component. The component is displayed in the Preview window.

14. **<D> and hold** on component's origin (the green dot).



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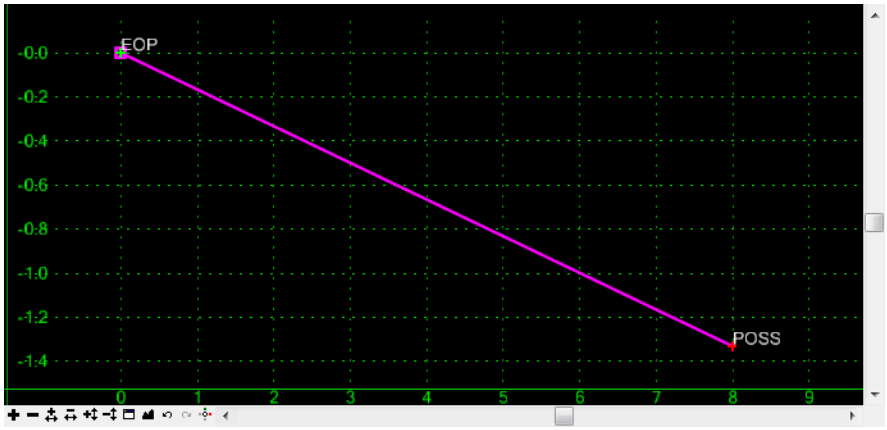

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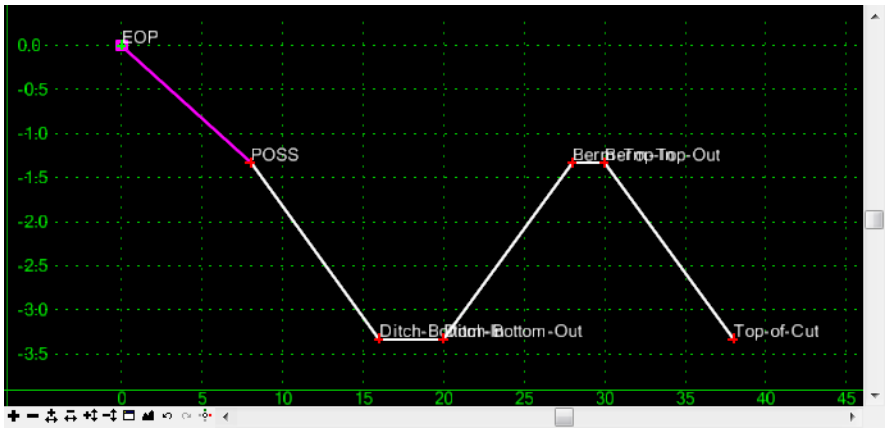
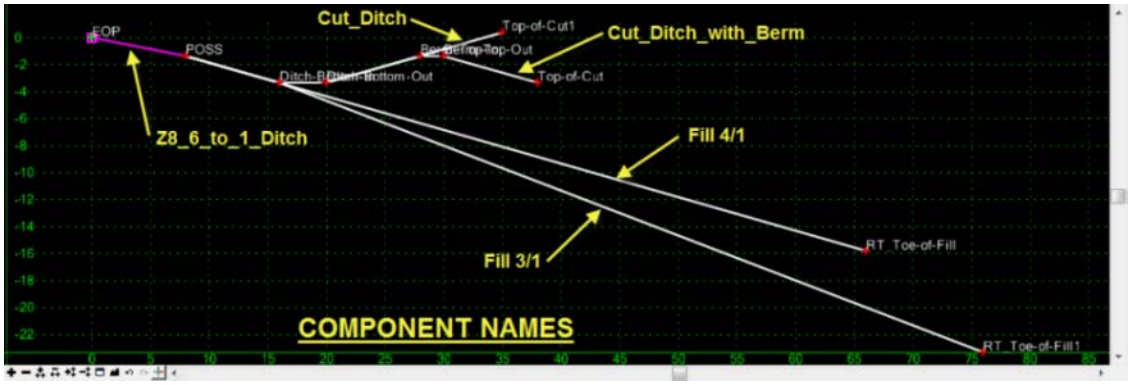
18. **<D> and hold** on component's origin (the green dot).
19. **Drag** the component into the Template View and move the pointer on to the component point named ***POSS*** and **drop.** The "+" on the component point turns white when the pointer is on it.

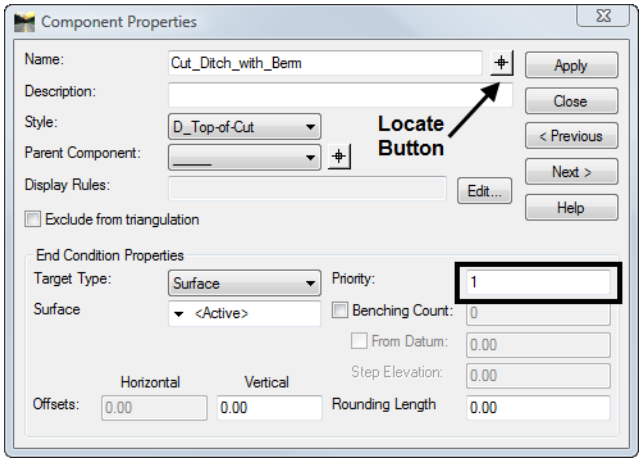


20. Repeat steps 16, 17 & 18 for the ***Cut_Ditch*** component.
21. Expand ***4 - Components> End Conditions> Fill Slope Components*** folder.Repeat steps 16, 17 & 18 for the ***Fill__4_to_1*** and ***Fill_3_to_1*** components.



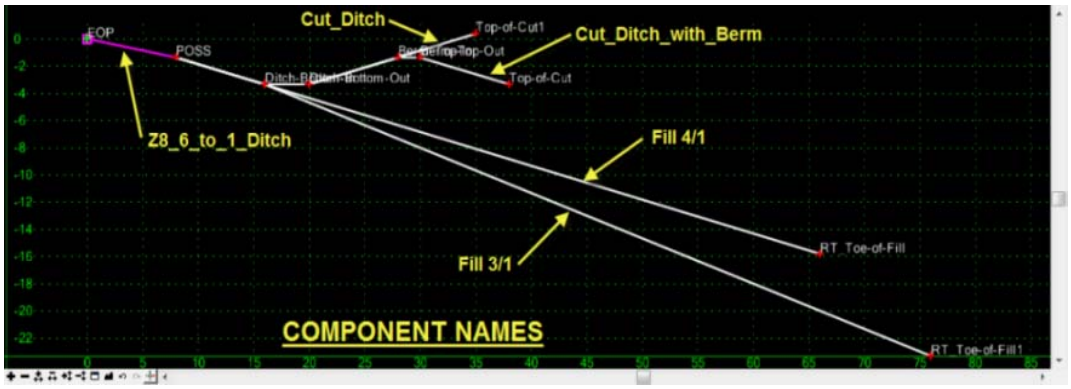
22. **<D> <D>** on the ***Cut_Ditch_with_Berm*** component.

23. Verify that the **Priority** is set to ***1***.



24. **<D>** on the ***Locate Button*** next to ***Name*** in the ***Component Properties*** dialog box.

25. **<D>** on the ***Cut_Ditch*** component in the Template View.



26. Verify that the **Priority** is set to ***2*** in the ***Component Properties*** dialog box.

27. Set the remaining End Condition Component priorities as follows:

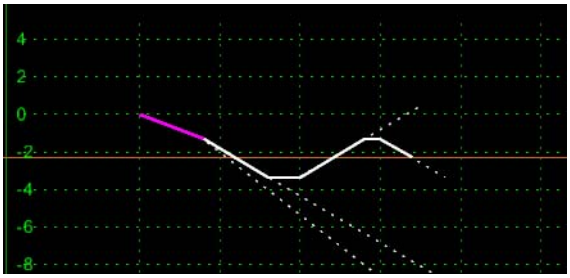
- ***Fill_4/1*** = ***3***
- ***Fill_3/1*** = ***4***

28. Be sure to **<D>** the **Apply** button if any Priority values were modified.

29. **<D>** the **Close** button in the Component Properties dialog box.

30. **<D>** the **Test** Button.

31. In the ***Test End Conditions*** dialog box, **<D> Draw** and notice how end conditions behave.



32. **<D> Close**.

Chapter Summary:

- When multiple end conditions are chained together, if one part of the chain fails then the whole chain fails.
- End condition components that share a common starting point are considered a single end condition.