Workflow IR 7 - Displaying Features in Cross Section and Profile

This document is a guide for displaying features in both cross sections and profiles. Two types of cell placement will be considered in this workflow. One type is based on true scale meaning that the feature has a measurable size. For example a 24" pipe. The other type of cell is the pictorial location of a crossing feature for example overhead electric line. In order to compensate for the two types each needs to be scaled differently. Feature Filters have been developed to display them at their appropriate scale.

Cross Section

Workflow Outline-

Creating Cross Sections - Cross sections are used to evaluate a design surface.

- ♦ Commands Used: **Global Scale Factor** - Used to set size for text and cells displayed by InRoads.
- ♦ **Create Cross Section** - Use to make the set of cross sections.

Displaying True Scale Cells - These are cells that represent actual design elements like drainage culverts and pipes. These items should be displayed at their actual size (allowing for vertical exaggeration).

- ♦ Commands Used: **Global Scale Factor** - Used to set size for text and cells displayed by InRoads. Use a cell factor of 1 when displaying True Scale Cells.
- ♦ **Feature Filter Lock** - Use to show only True Scale features in the dialog box. This will help to prevent the user from selecting the wrong feature
- ♦ Update **Cross Section > Crossing Features** - This command is used to display the feature points in the cross sections.

Displaying Plot Cell Scale Cells - These are informational cells that identify the location of linear features like right-of-ways, existing pavement edges, and utility lines.

- ♦ Commands Used: **Global Scale Factor** - Used to set size for text and cells displayed by InRoads. Use the same scale factor that was used when the cross sections were created.
- ♦ **Feature Filter Lock** - Use to show only Plot Scale features in the dialog box. This will help to prevent the user from selecting the wrong feature
- ♦ Update **Cross Section > Crossing Features** - This command is used to display the feature points in the cross sections.
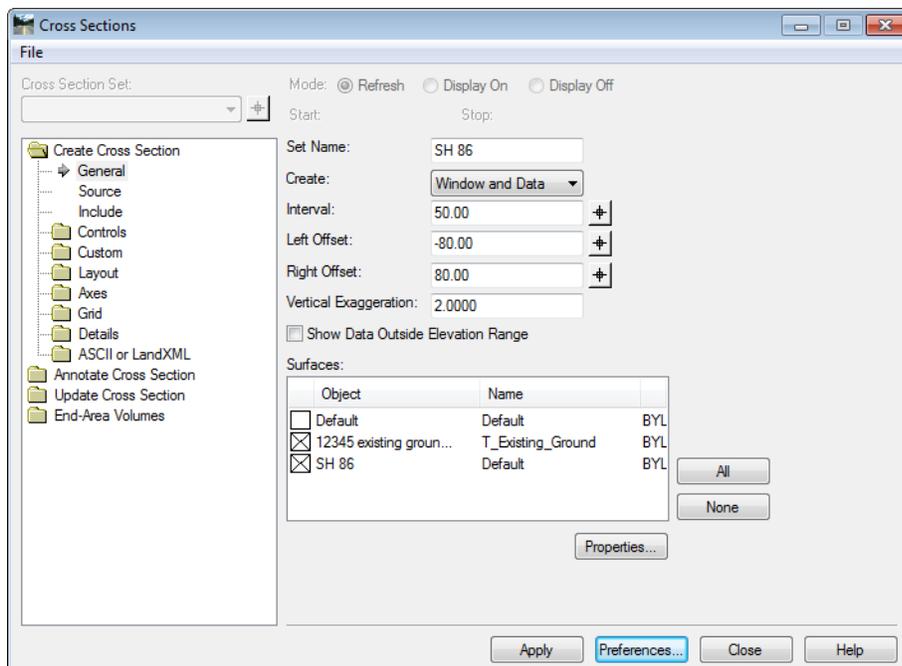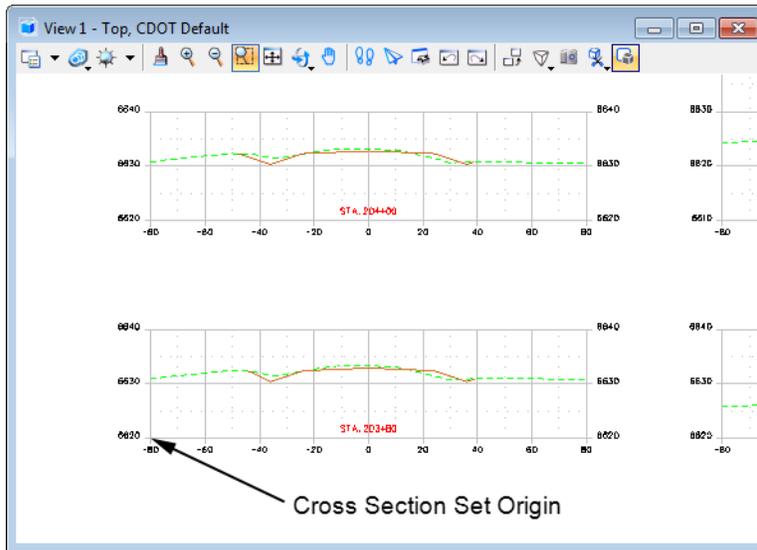
Displaying Features in Cross Sections
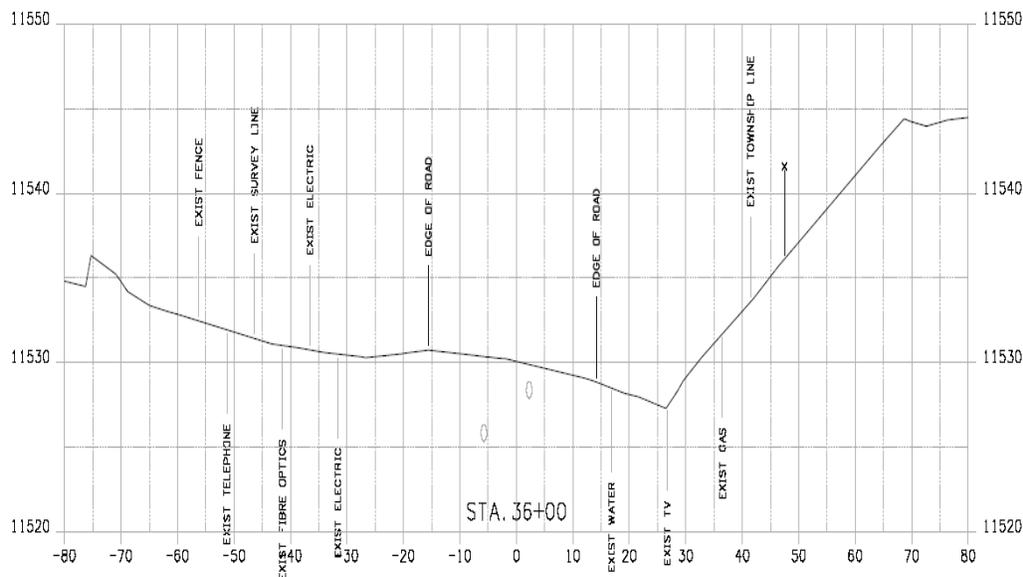
Note: Example Cross Section

The procedure for displaying features in cross sections follows.

1.   Verify that the **Global Scale Factor** is set to the desired scale prior to creating the cross sections.

2.   From the InRoads, menu select **Evaluation > Cross Section > Cross Sections**. The ***Create Cross Section*** dialog box will appear. **<D> Preferences** to load the appropriate saved preferences. In this example the CDOT preferences will be used.
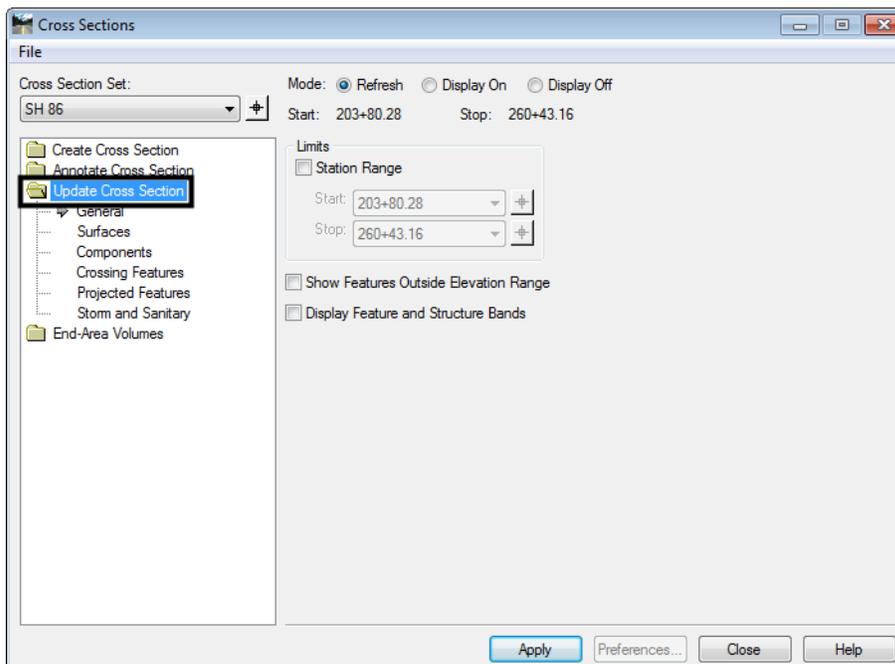
3. On the ***Include*** leaf in the ***Cross Sections*** dialog box, verify that **Crossing Features** and **Projected Features** are checked off.

4. **<D> Apply**. The dialog box will minimize allowing the selection of the origin for the cross section set with a **<D>** in a MicroStation View.
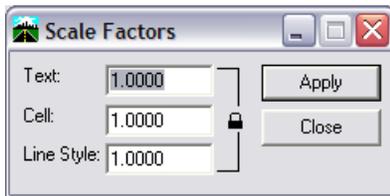

Display True Scale Cells

1. **<D>** the **Update Cross Section** folder in the dialog box explorer.

The first set of features to display will be the features that are defined to be true scale. These features have a defined size, such as pipes. In order to display these types of features, setting the scale factor and feature filter is required prior to displaying.

2. Change the InRoads *Scale Factor* to *1*.

    Note: Scale Factor should be 1:1 for true scale cells so that cells come in at actual scale.

3. From the *Locks* toolbar Select the *CELL_True-Scale* filter from the drop-down list and toggle on the *Feature Filter* lock button.

4. Verify the correct **Cross Section Set** selected.

5. **<D>** the **Crossing Features** Leaf.

6. Toggle on the **Display On** radio button.

7. From the *Surface* list box, select the surface name or names to display. The *Feature* list box will then populate with the list of features found in the highlighted surface(s). Use the *Ctrl* or *Shift* keys to select multiple names. Also, by right clicking in the *Feature* list displays a menu that can be used to select all of the features.
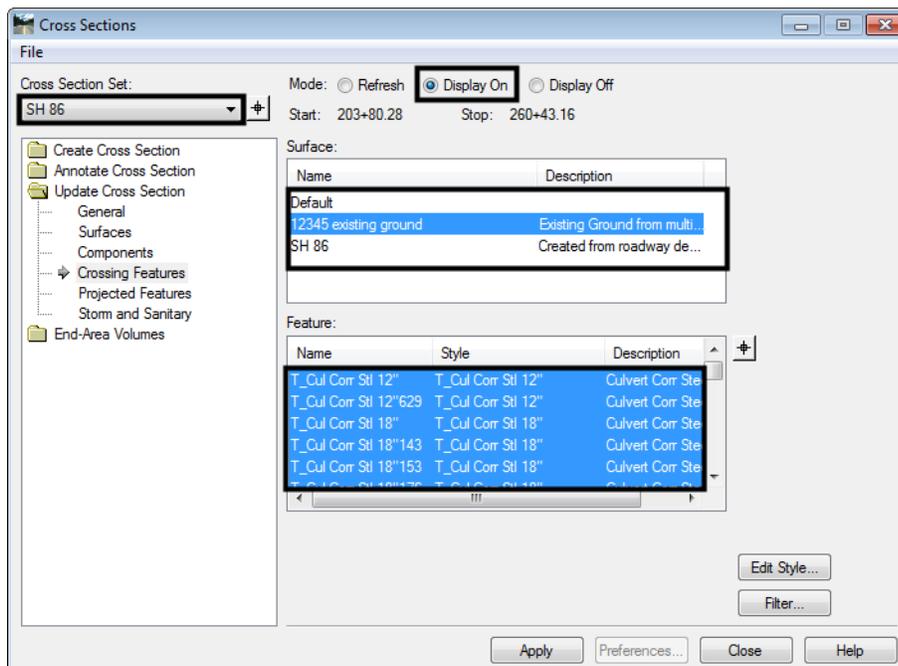
    Note: The feature names in bold are Feature Styles that can be displayed in cross sections. Any names that are dithered are not configured to be displayed in a cross section view.

> ***Note:*** If no features are shown in the feature list box, there are no features that meet the criteria for the filter selected in step 5. It may be necessary to associate the correct feature styles to the desired features if this is the case. Feature styles can be re-associated by using the **Surface > Feature > Feature Properties** command. See CDOT Update InRoads Features.pdf for more information on the process involved.

8. **<D> All** (lower right corner of dialog box). The Features that ***can*** be displayed in cross section view will be highlighted.

9. **<D> Apply**. The dialog will minimize as the features are generated in the cross sections. When the process is finished, the dialog will reappear.
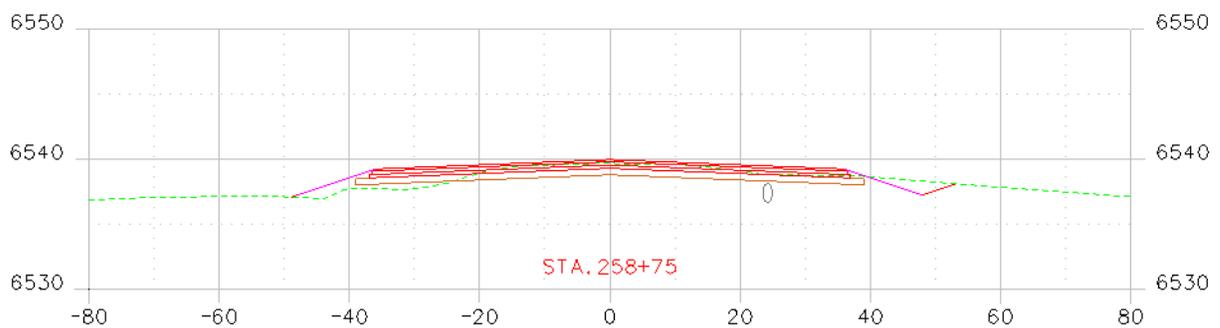
Displaying Plot Scale Cells

The second set of features to display is those that have *location only* defined with annotation. In order to display these types of features, the scale factor and the desired feature filter must be set prior to displaying.

1. Change the InRoads Scale Factor to ***20***.
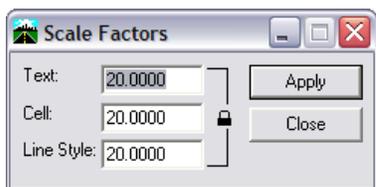
> ***Note:*** This is the desired plot scale for the set of Cross Sections we are working with. The scale should be changed accordingly to match the scale of the original cross sections.

2. From the ***Locks*** toolbar select the **CELL_Plot-Scale** filter from the pull down list. Verify that the feature filter is toggled on.


3. Verify that the correct **Cross Section Set** is selected.

4. **<D>** the **Crossing Features** Leaf.

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5. From the **Surface** list box, select the surface name or names to display. Once a surface or surfaces are selected, the **Feature** list box will populate with the list of features. Use the **Ctrl** and **Shift** keys to select multiple feature names. Also, by right clicking in the **Feature** list displays a menu that can be used to select all of the features.
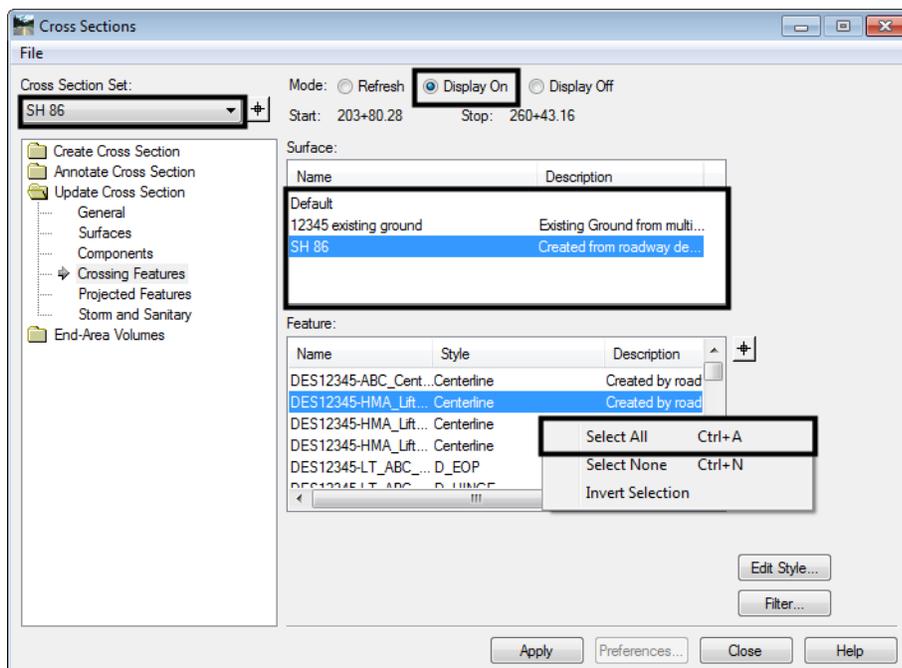

> **Note:**   The names in bold are Feature Styles that can be displayed in cross sections. Any names that are dithered are not configured to be displayed in a cross section view.

6. **<D> Apply**. The **Update Cross Section** dialog box will minimize as the features are generated in the cross sections. When the process is finished, the dialog will reappear.
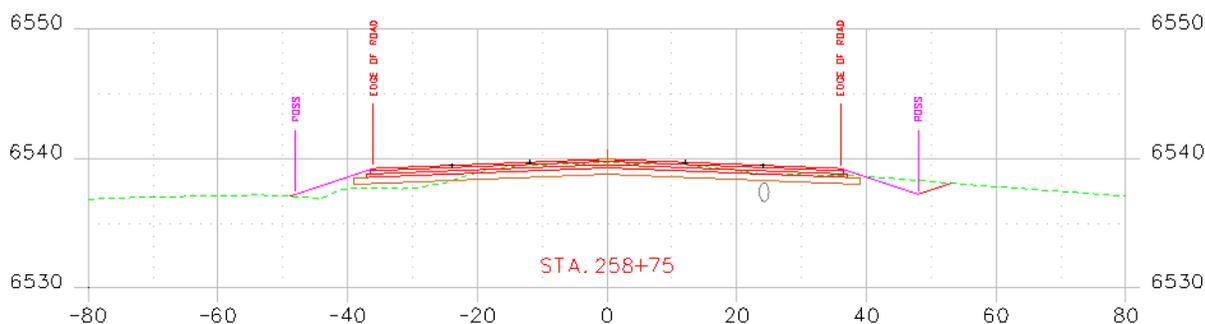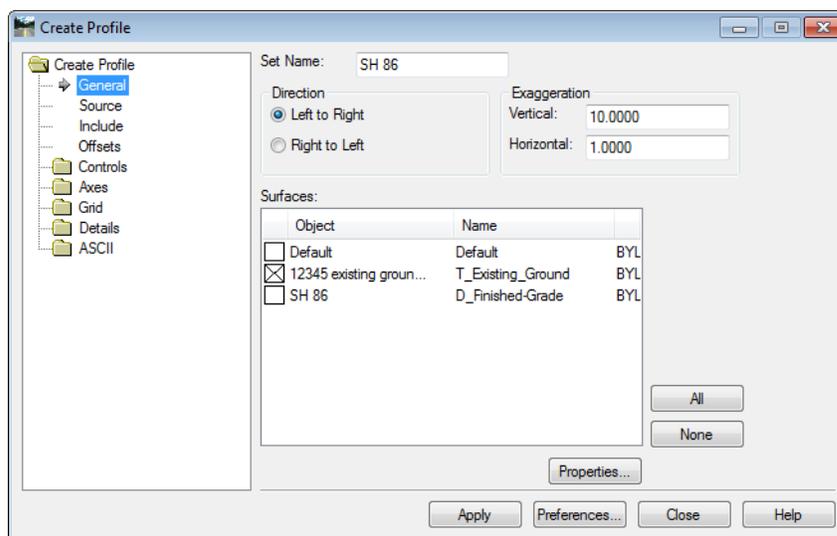
Profile

Displaying Features in Profile
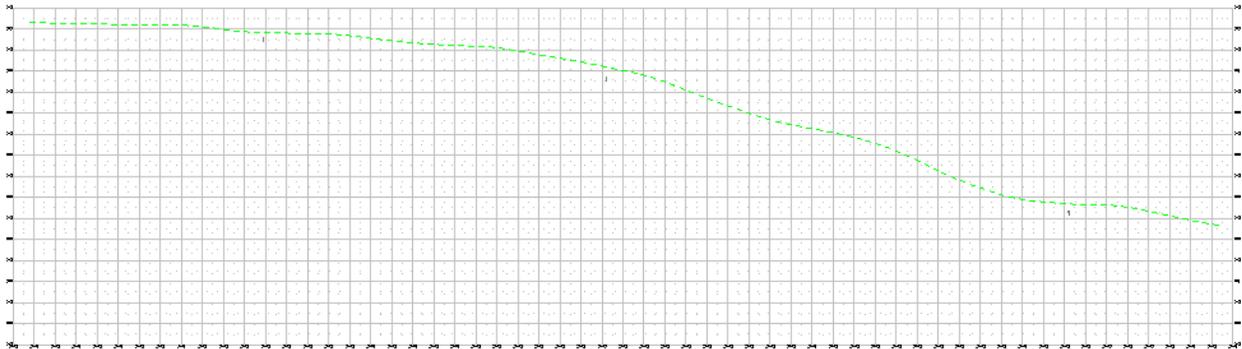

Note: Example Profile

The procedure for displaying features in profiles follows.

1. From the InRoads menu, select **Evaluation > Profile > Create Profile**. The ***Create Profile*** dialog box will appear. **<D> Preferences** to load the appropriate saved preferences. In this example the CDOT preferences will be used.

2. In the ***Create Profile*** dialog box, verify on the ***Include*** leaf that **Crossing Features** and **Projected Features** are checked off.

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3. **<D> Apply**. The *Create Profile* dialog box will minimize allowing the selection of the origin for the profile set. **<D>** in a MicroStation View to specify this location. After the profile is created **<D> Close**.
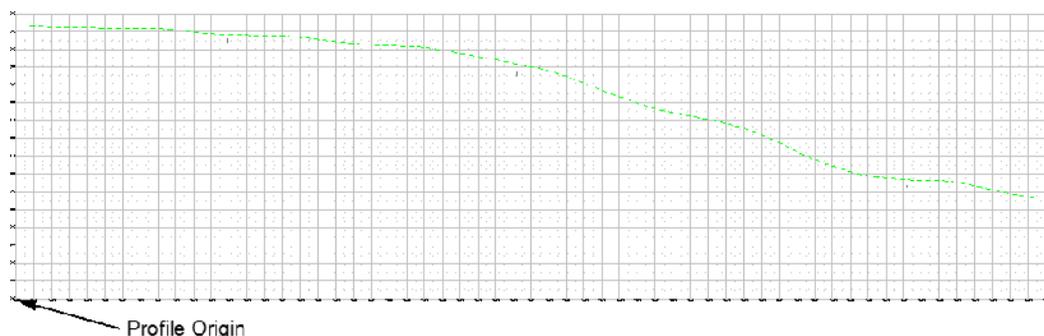
4. From the InRoads menu select **Evaluation > Profile > Update Profile**. The *Update Profile* dialog box will appear.

The first set of features to display will be the features that are defined to be true scale meaning the features have a defined size such as pipes. In order to display these types of features, set the scale factor and feature filter prior to displaying.

5. Change the InRoads *Scale Factor* to **1**.
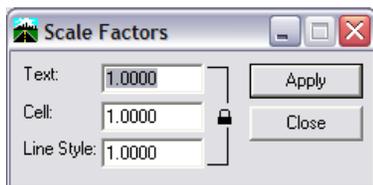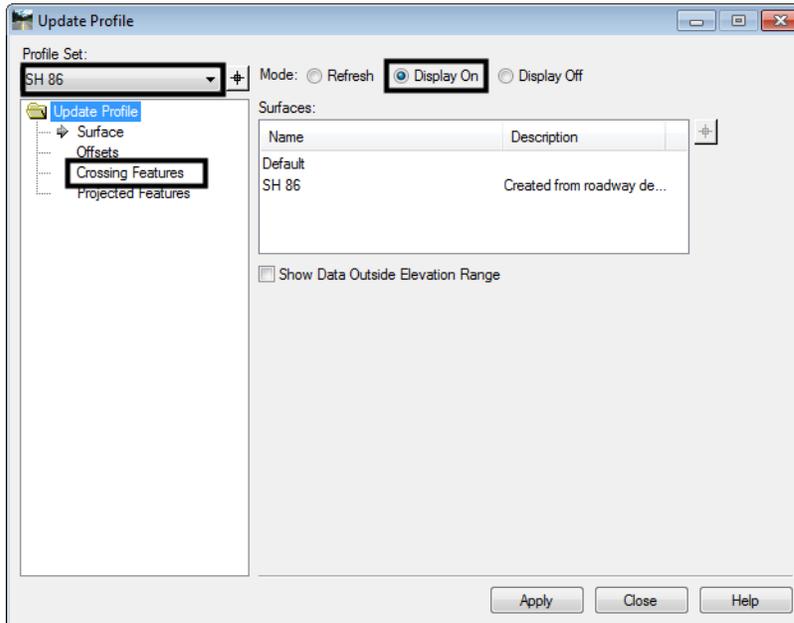

6. From the *Locks* toolbar select the **CELL_True-Scale** filter from the drop- down list and toggle on the **Feature Filter** lock.


7. Verify the correct *Profile Set* is selected in the *Update Profile* dialog box.

8. For the *Mode*, select the **Display On** radio button

9. <D> the Crossing Features leaf.

10. From the **Surfaces** list box, select the surface name or names to display. Once surfaces have been selected, the **Crossing Features** list box will populate with the list of features. Use the **Ctrl** or **Shift** keys when you want to select multiple Surface names.
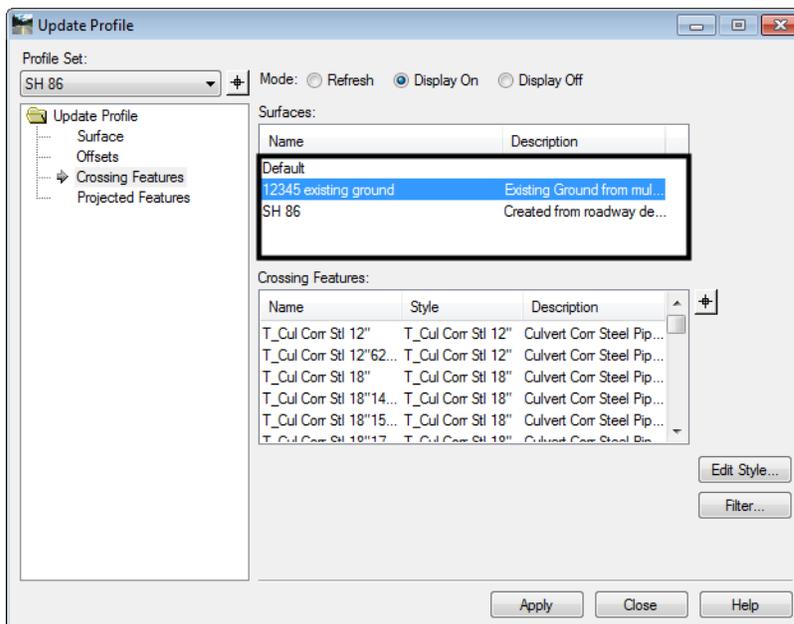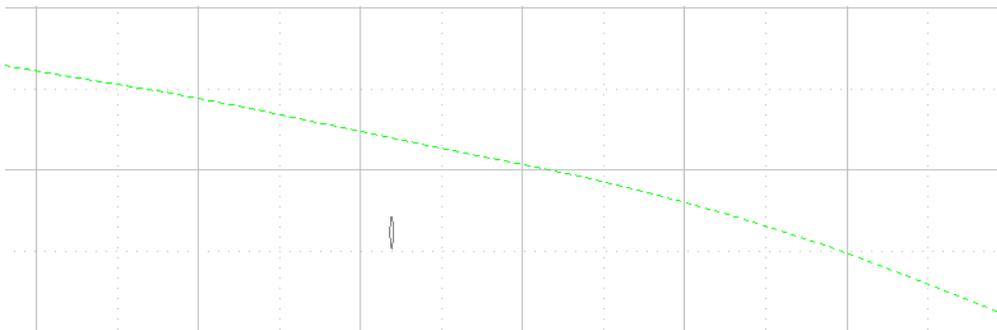

> **Note:** The names that are black are Feature Styles that can be displayed in profile. Any names that are dithered are not configured to be displayed in a profile view.

11. **<R>** in the ***Crossing Features*** list box and choose **Select All** from the menu.
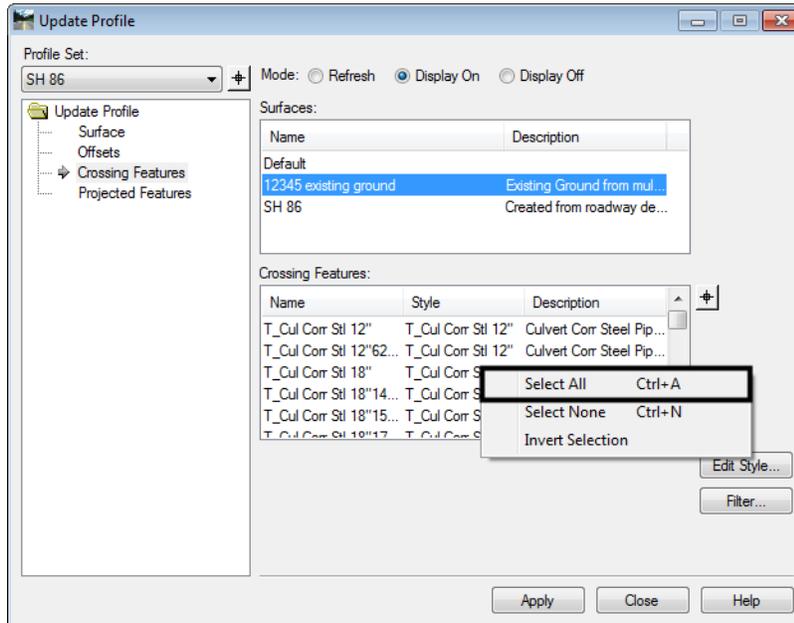

12. **<D> Apply**. The dialog will minimize as the features are drawn in the profile. When the process is finished the dialog will reappear.

Displaying Plot Scale Cells

The second set of features to be displayed is those that have *location only* defined with annotation. In order to display these types of features, set the scale factor and the desired feature filter prior to displaying.

1.   Change the InRoads ***Scale Factor*** to ***20***.
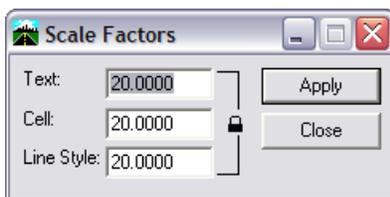
Note: This is the desired plot scale; change accordingly.

2. From the *Locks* toolbar select the **CELL_Plot-Scale** filter from the pull down list and toggle on the **Feature Filter** lock.

3. Verify the correct **Profile Set** is selected in the *Update Profile* dialog box.

4. **<D>** the **Crossing Features** leaf.

5. For the *Mode*, select the **Display On** radio button.

6. From the *Surfaces* list box, select the surface name or names to display. Use the *Ctrl* or *Shift* keys when you want to select multiple Surface names.

7. **<R>** in the *Crossing Features* list box and choose **Select All** from the menu.
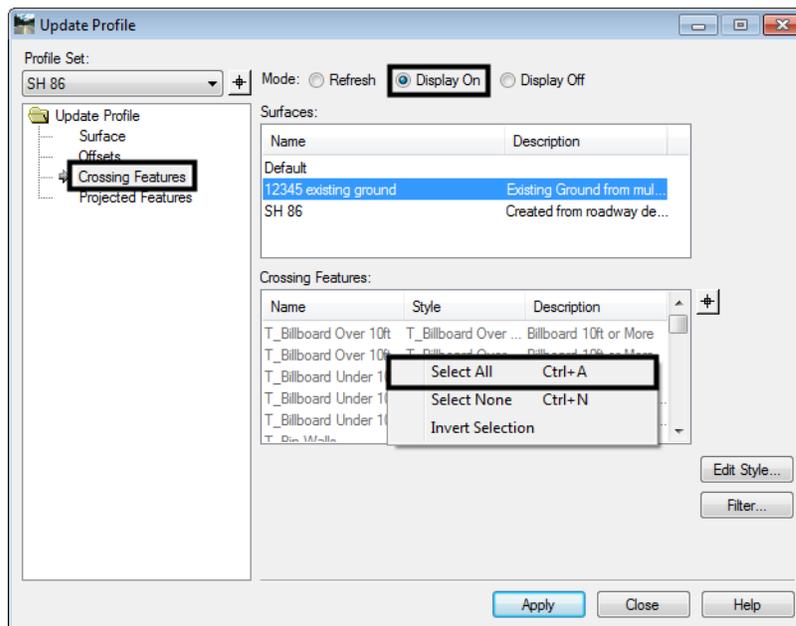
Note: The feature names that are black are Feature Styles that can be displayed in profile. Any names that are dithered are not configured to be displayed in a profile view.

8. **<D> Apply**. The ***Update Profile*** dialog box will minimize as the features are generated in the profile. When the process has completed the dialog will reappear.