



MINISTRY OF TRANSPORTATION

InRoads Preference and Standards Manual Power InRoads V8i (SELECTseries 2)

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Appendix A InRoads Symbologies for Planning and Design.

Appendix B InRoads Symbologies for Photogrammetry.

Appendix C InRoads Symbologies for Surveys and Plans.

Appendix D InRoads Styles for Planning and Design.

Appendix E InRoads Styles for Photogrammetry.

Appendix F InRoads Styles for Surveys and Plans.

1.0 Overview

This manual provides MTO standards for using Power InRoads V8i (SELECTseries 2). It documents the various settings (**Symbologies**), the intelligent display characteristics (**Styles**) of InRoads data, **Preferences** which are used by most of InRoads commands. The manual also includes the **Options** which define the working defaults of InRoads commands.

These settings will help to maintain consistency in projects deliverables including InRoads data, AutoCAD drawings and XML reports. It also will minimize the time required by each user to set up. The settings provided in this manual can be further customized to accommodate the specific project requirements and be saved under different name to be used for future similar projects.

These settings/standards are stored in InRoads Preference file namely **MTO_civil_SS2.xin**. These symbologies must be used with drawing template **MTO_InRoads_Template_SS2.dwg** which contains IESCAD layers and text size, and cell library **MTO_CellLibrary.cel** which contains blocks (cells) required by symbologies. The text size is given an initial value of 2.0/3.0 based on the text factor 1 for 1:1000 drawing scale (1 to 1 drawing unit). The text size may be changed by the user depending on the required size and drawing scale.

2.0 Symbologies

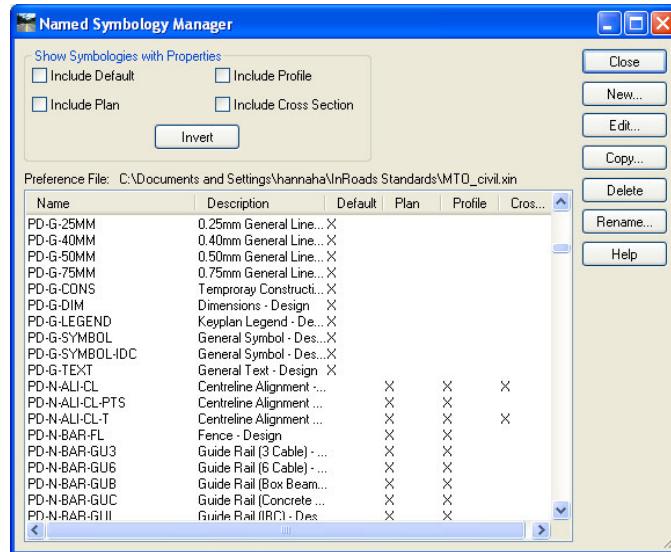
InRoads has no reliance on anything but its own programming relative to the calculation aspect of the software; however, the display side of InRoads depends on the input from the CAD platform. This is where the symbologies play critical part in displaying any data while using InRoads. Power InRoads incorporates MicroStation as its CAD platform.

The types of parameters stored in a named symbology include: color, layer/level, line weight, line style, text height, text justification, text font, rotation angle, and so on. These are the particulars relating to the appearance of a piece of graphics.

For example, a named symbology can specify that a line be green when displayed in profile but blue when displayed in a cross section and yellow when displayed in plan view. The same applies for displaying points or text.

When a symbology is used to display or annotate feature(s), alignment(s), profile(s) or cross section(s), the scale factor needs to be set to the appropriate scale. The text height and block scale for the symbology has been set to 1:1000 drawing scale (1:1 drawing unit). Refer to [Options - Factors](#) on how to set the **Global Scale Factors**.

The **Named Symbology Manager** is used to add, edit, delete, copy, and rename named symbologies and can be activated from InRoads pull down menu under Tools as shown in the next page:



InRoads symbology is defined based on MTO AutoCAD Standards Guide. All named symbologies are organized into groups and sub groups. For each layer in Planning and Design, Photogrammetry, and Surveys and Plans sections of IESCAD, there is a corresponding symbology named the same as the IESCAD layer name. All the symbologies are defined by using by-layer standard and grouped the same way as they appear in IESCAD.

In addition to IESCAD layer named symbologies, template points, template components (end areas) and surface symbologies have been defined for InRoads design as per MTO standards.

For general symbology, only default section has been defined which will apply to plan, profile and cross sections display (see below left). All the rest symbologies are defined separately for their plan, profile and cross section display (see below right).

| Edit Named Symbology | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------------------------|--|-----------|--|-----|-------|--------------|-----------|--------------|-----------|---------------|-----------------|-----------|-----------------|-----------|-----------------|------------|-----------------|--------------|-----------------|--------------|-----------------|---------------|-----------------|--------------------|-----------------|--------------------|-----------------|---------------------|-----------------|
| Name: | PD-G-40MM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Description: | 0.40mm General Lines - Design | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th colspan="2">Symbology</th> </tr> <tr> <th>Use</th> <th>Level</th> </tr> </thead> <tbody> <tr><td>Default Line</td><td>PD-G-40MM</td></tr> <tr><td>Default Text</td><td>PD-G-TEXT</td></tr> <tr><td>Default Point</td><td>Not Initialized</td></tr> <tr><td>Plan Line</td><td>Not Initialized</td></tr> <tr><td>Plan Text</td><td>Not Initialized</td></tr> <tr><td>Plan Point</td><td>Not Initialized</td></tr> <tr><td>Profile Line</td><td>Not Initialized</td></tr> <tr><td>Profile Text</td><td>Not Initialized</td></tr> <tr><td>Profile Point</td><td>Not Initialized</td></tr> <tr><td>Cross Section Line</td><td>Not Initialized</td></tr> <tr><td>Cross Section Text</td><td>Not Initialized</td></tr> <tr><td>Cross Section Point</td><td>Not Initialized</td></tr> </tbody> </table> | | | Symbology | | Use | Level | Default Line | PD-G-40MM | Default Text | PD-G-TEXT | Default Point | Not Initialized | Plan Line | Not Initialized | Plan Text | Not Initialized | Plan Point | Not Initialized | Profile Line | Not Initialized | Profile Text | Not Initialized | Profile Point | Not Initialized | Cross Section Line | Not Initialized | Cross Section Text | Not Initialized | Cross Section Point | Not Initialized |
| Symbology | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Use | Level | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Default Line | PD-G-40MM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Default Text | PD-G-TEXT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Default Point | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plan Line | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plan Text | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plan Point | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Profile Line | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Profile Text | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Profile Point | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cross Section Line | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cross Section Text | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cross Section Point | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="button" value="Apply"/> <input type="button" value="Close"/> <input type="button" value="< Previous"/> <input type="button" value="Next >"/> <input type="button" value="Delete"/> <input type="button" value="Copy..."/> <input type="button" value="Help"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="button" value="Uninitialize"/> <input type="button" value="Edit..."/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Edit Named Symbology | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---------------------------|--|-----------|--|-----|-------|--------------|-----------------|--------------|-----------------|---------------|-----------------|-----------|-------------|-----------|------------|------------|-----------------|--------------|-------------|--------------|------------|---------------|-----------------|--------------------|-------------|--------------------|-----------------|---------------------|-------------|
| Name: | PD-N-RDS-EP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Description: | Edge of Pavement - Design | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th colspan="2">Symbology</th> </tr> <tr> <th>Use</th> <th>Level</th> </tr> </thead> <tbody> <tr><td>Default Line</td><td>Not Initialized</td></tr> <tr><td>Default Text</td><td>Not Initialized</td></tr> <tr><td>Default Point</td><td>Not Initialized</td></tr> <tr><td>Plan Line</td><td>PD-N-RDS-EP</td></tr> <tr><td>Plan Text</td><td>PD-N-RDS-T</td></tr> <tr><td>Plan Point</td><td>Not Initialized</td></tr> <tr><td>Profile Line</td><td>PD-P-BED-EP</td></tr> <tr><td>Profile Text</td><td>PD-P-BED-T</td></tr> <tr><td>Profile Point</td><td>Not Initialized</td></tr> <tr><td>Cross Section Line</td><td>PD-N-RDS-EP</td></tr> <tr><td>Cross Section Text</td><td>Not Initialized</td></tr> <tr><td>Cross Section Point</td><td>PD-N-RDS-EP</td></tr> </tbody> </table> | | | Symbology | | Use | Level | Default Line | Not Initialized | Default Text | Not Initialized | Default Point | Not Initialized | Plan Line | PD-N-RDS-EP | Plan Text | PD-N-RDS-T | Plan Point | Not Initialized | Profile Line | PD-P-BED-EP | Profile Text | PD-P-BED-T | Profile Point | Not Initialized | Cross Section Line | PD-N-RDS-EP | Cross Section Text | Not Initialized | Cross Section Point | PD-N-RDS-EP |
| Symbology | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Use | Level | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Default Line | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Default Text | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Default Point | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plan Line | PD-N-RDS-EP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plan Text | PD-N-RDS-T | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plan Point | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Profile Line | PD-P-BED-EP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Profile Text | PD-P-BED-T | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Profile Point | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cross Section Line | PD-N-RDS-EP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cross Section Text | Not Initialized | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cross Section Point | PD-N-RDS-EP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="button" value="Apply"/> <input type="button" value="Close"/> <input type="button" value="< Previous"/> <input type="button" value="Next >"/> <input type="button" value="Delete"/> <input type="button" value="Copy..."/> <input type="button" value="Help"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="button" value="Uninitialize"/> <input type="button" value="Edit..."/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

For template points, the description column in appendix A only lists MTO standard point names such as EP, ES etc. (refer to section [Templates - Point name list](#) for a complete list

of point names as per HDS naming convention). For actual template design, the point name should include point layer, position and location information as described below:

Point naming convention:

1. The first component will identify which side of the centerline which needs to be set up using template options when creating templates.
2. The second component will indicate the layer/surface.
3. The third component will be the point feature name.

Example: for point edge of pavement, L-TP-EP, L-TA-EP, and L-TB-EP.

Where:

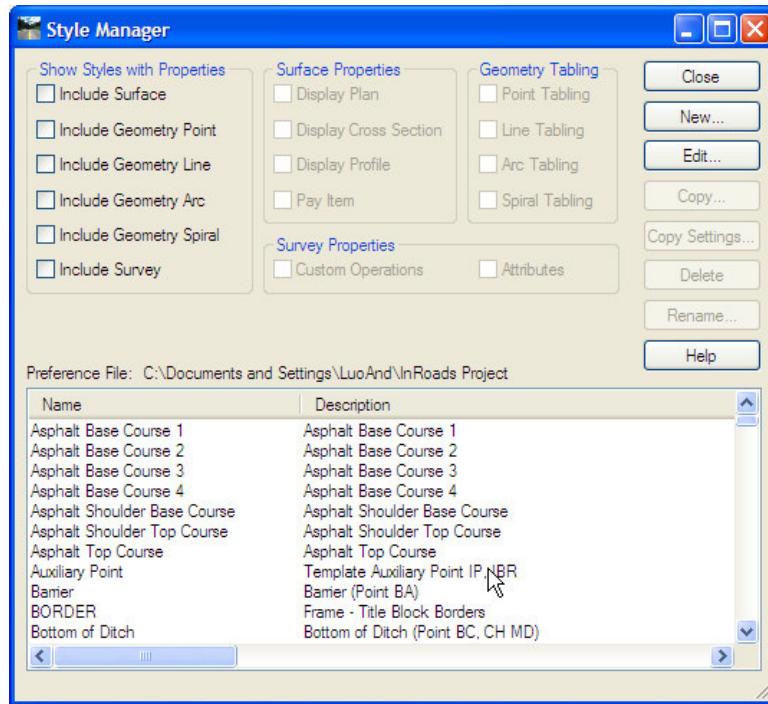
L identifies left of centerline.
TP, TA or TB identifies the layer and/or surface.
EP identifies the point feature name.

The named symbologies used for Planning and Design, Photogrammetry and Surveys and Plans are listed in Appendix A, B and C respectively.

3.0 Styles

InRoads has surface, geometric and survey features. A style is used to describe how and where a feature will be displayed. A feature style is assigned to individual features to determine whether points, line segments, or annotation for that feature can be displayed in plan view, in cross sections, or in profiles. Each feature style is linked to a named symbology. The named symbology defines a set of properties (such as layer/level, color and line style) used to display the feature.

The **Style Manager** is used to add, edit, copy, rename, and delete styles. When users select **Style Manager** from the Tools menu, all predefined styles in the active preference file are displayed as shown below:



MTO InRoads styles are based on IESCAD 2009 layering structure. The styles are organized into groups and sub groups. The styles include Planning and Design, Photogrammetry, and Surveys and Plans sections in IESCAD with additional styles for InRoads specific functions. Refer to the style's description to apply the style. Existing feature styles are used for survey and proposed feature styles are used for design. Design feature styles are assigned when creating templates. Using Point Name List in MTO standard Template Library from the Name field in the Point Properties dialog box will link the point name to a predefined feature style.

The styles used for Planning and Design, Photogrammetry, and Surveys and Plans are listed in Appendix D, E and F respectively.

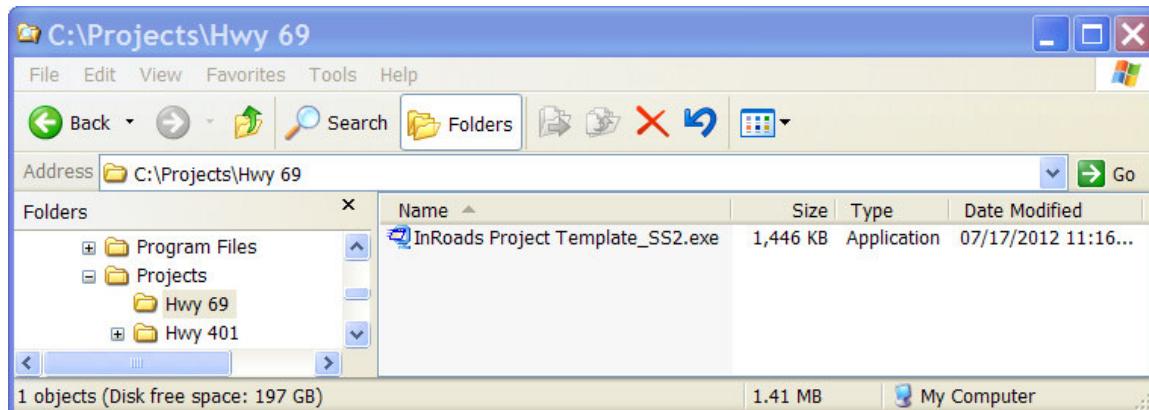
4.0 Power InRoads Configuration

Power InRoads incorporates MicroStation as its CAD platform but supports to open, reference, and read/write directly to Autodesk's DWG format. MTO Power InRoads XIN file and Template Library are customized based on MTO AutoCAD standards, and runs in DWG workmode to ensure compatibility with the DWG format. The design workflows and the project file format are the same as InRoads on AutoCAD.

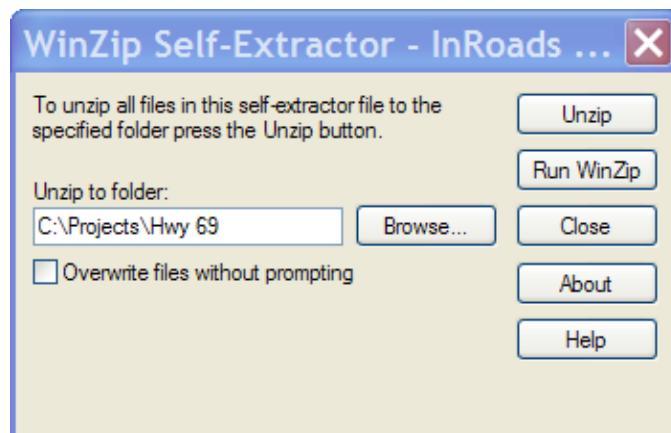
It is recommended to use MTO InRoads Project Template to create InRoads project with proper project directory structure and create a project configuration file as described in this section.

Download MTO's current InRoads Project Template from the following internet address:
<http://www.xfer.mto.gov.on.ca/PTASapps/index.htm>

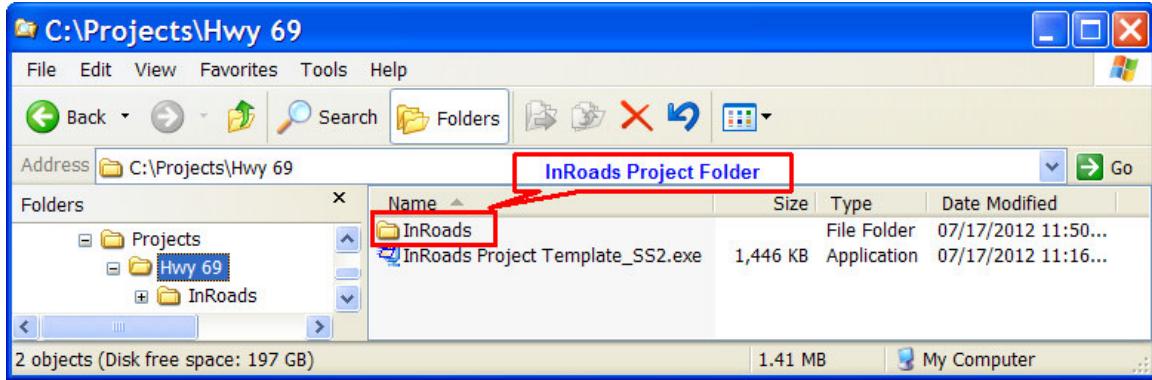
Select InRoads from the left side Menu list. On the right side, select InRoads Project Template_SS2.exe and save to hard drive in the project folder, for example c:\Projects\Hwy 69.



Double click on it to unzip all files in the template. By default, the “**Unzip To Folder**” is pointing to the project folder (current active folder). The self-extractor file will install all components to a default subfolder called **InRoads** within the project folder. You can change to a different folder using the **Browse** button.



Click **UnZip** button. The **InRoads** subfolder will be created if it does not exist. A prompting dialog will appear if the folder and file with the same name already exists. When it is finished, close the dialog.

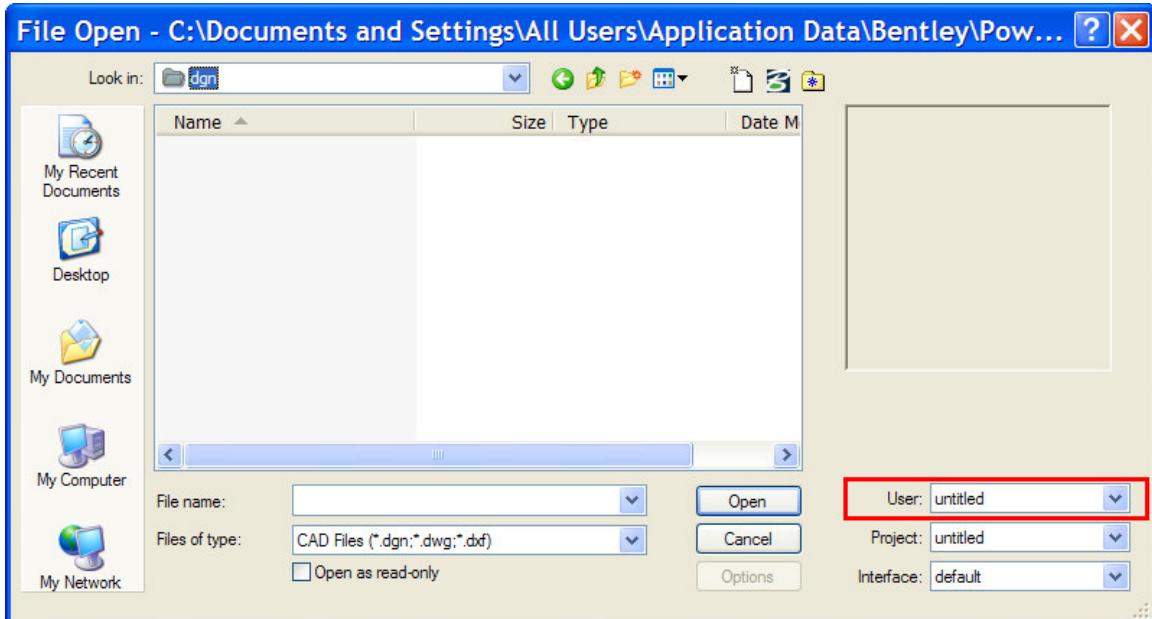


Locate the Project Configuration File (*.pcf) in the following folder:
.....\InRoads\Standards\pcf

Copy the file **PORJECTNAME.pcf** to the place where your project folder located and rename it to the same name as your project folder. For example, if a project folder **Hwy 69** is created in the folder C:\Projects, then copy the .pcf file to the folder **C:\Projects** and rename it to **Hwy 69.pcf**.

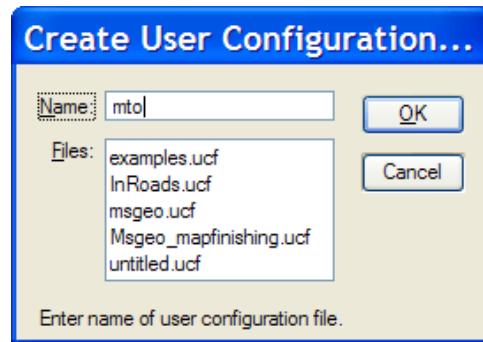
If a different project directory structure is used, modify the PROJECTNAME.pcf to point to proper folders. Refer to Power InRoads online help for details.

Start Power InRoads. On the File Open dialog of Power InRoads, locate the User list field at the bottom right of the dialog.

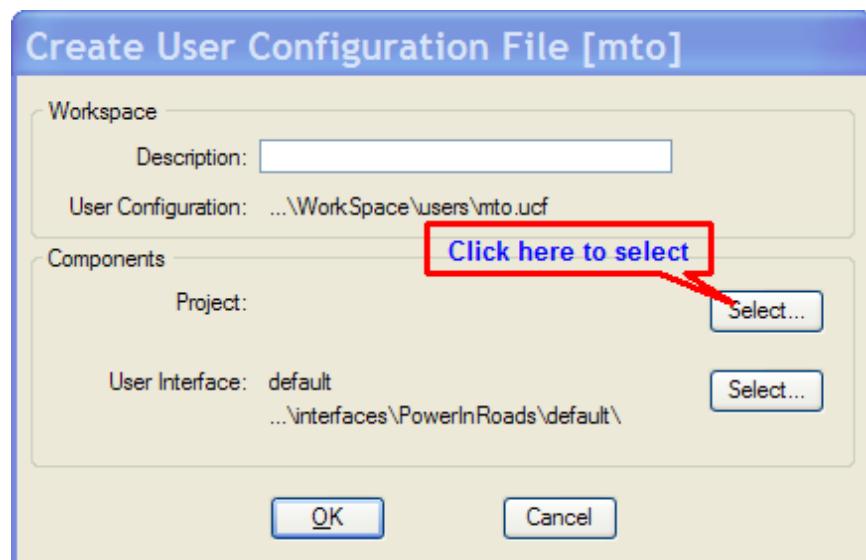


The User Configuration file is used to determine which workspace (project, user interface and user preference) is active. If you haven't created a user configuration file pointing to the project configuration file folder, click in the User field and select **New** from the list. If you have done so, select the user configuration file on the list, then click the Project field, the project created above will be shown on the project list.

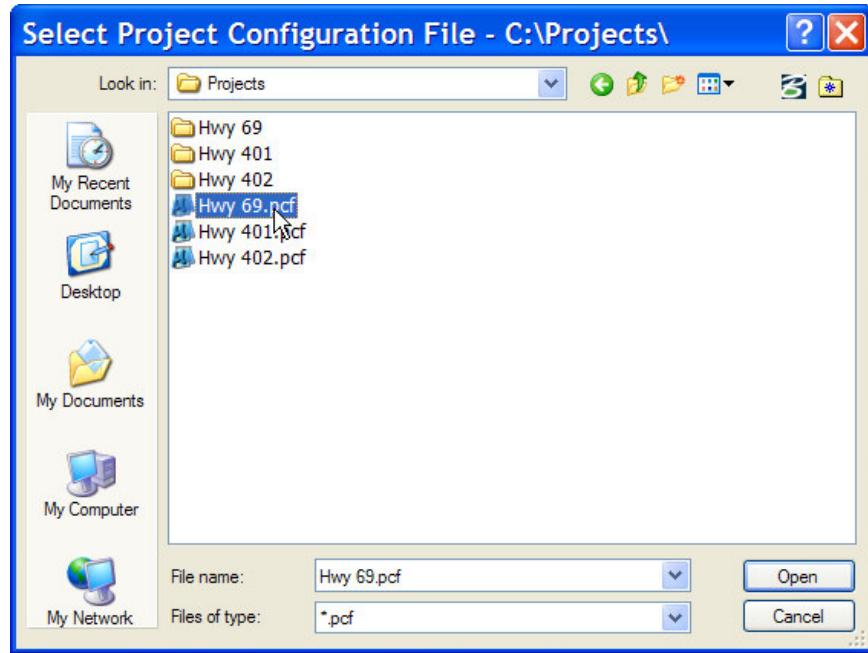
To create user configuration, select New from the User list, Create User Configuration dialog pops up. Type a name in the Name field on the dialog.



Click **OK**. Create User Configuration File dialog appears, type description in the Description field and click the **Select** button on the right side of the Project field.

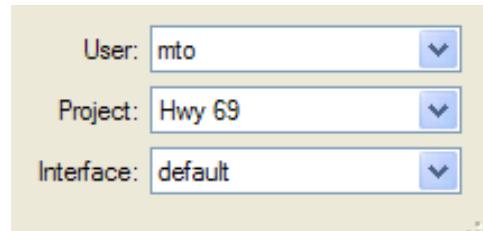


Browse to the folder where the project configuration file(s) located, for our example, **c:\\Projects**.

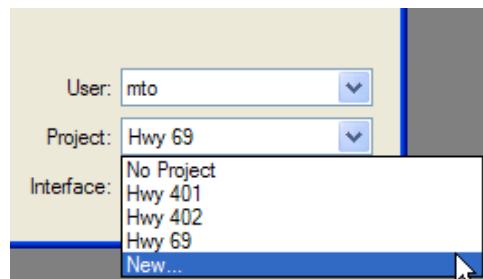


Select the project configuration file (.pcf) and click **Open**.

When return to the Create User Configuration File dialog, you can select a customized user interface or leave it with the default user interface. Click **OK** to close the dialog. The project configuration file you selected appears in the Project field.



You can use the Project list to select project available to you.



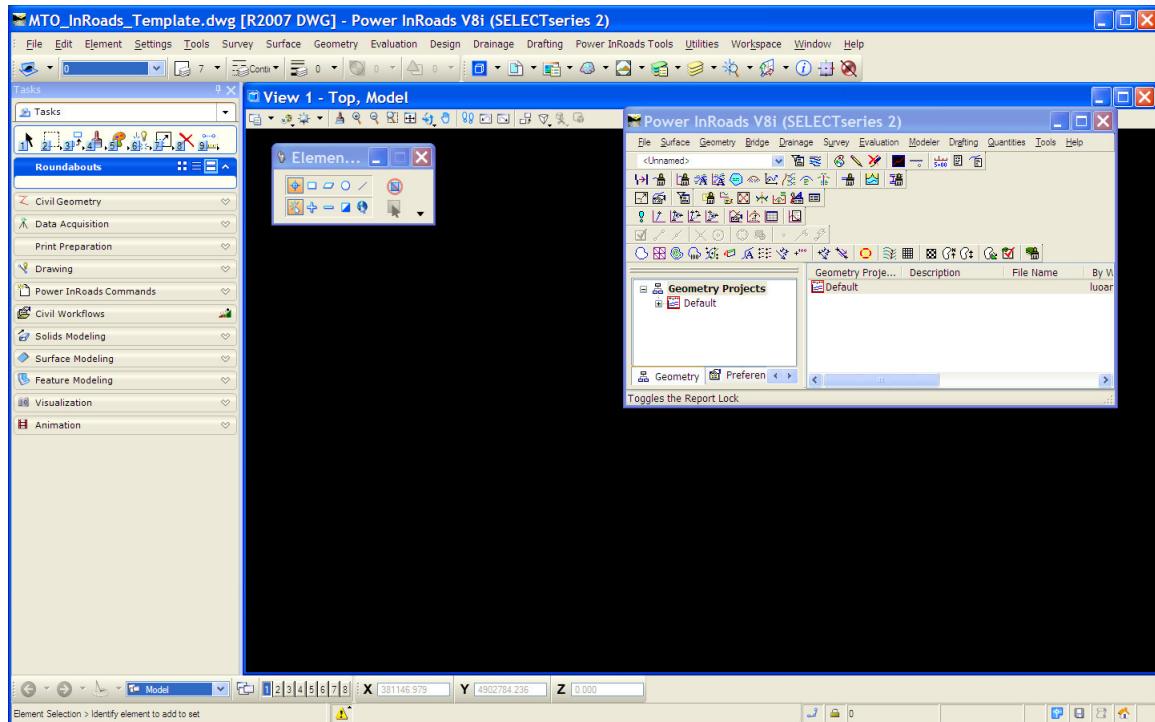
Open MTO InRoads drawing template **MTO_InRoads_Template_SS2.dwg** located in the following folder:

.....\InRoads\Standards

Click **File > Save as** from MicroStation main menu bar to save the drawing under a different name in desired location.

You can also set the template file as seed file then create a new drawing from it with the New file icon on the File Open dialog.

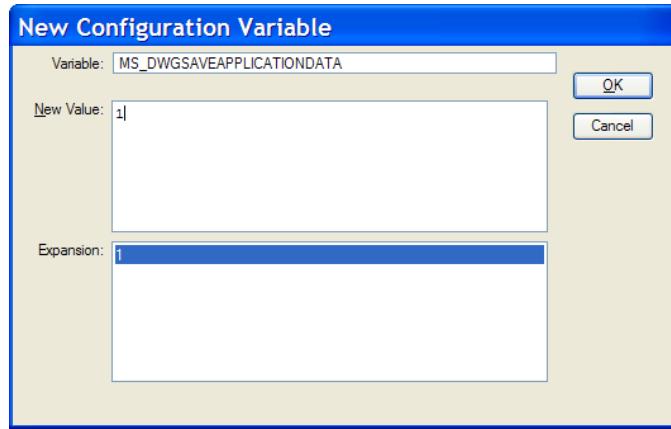
The DWG template is setup for using MTO InRoads preference file and to be used in DWG workmode to prevent creation of data that cannot be saved to DWG files.



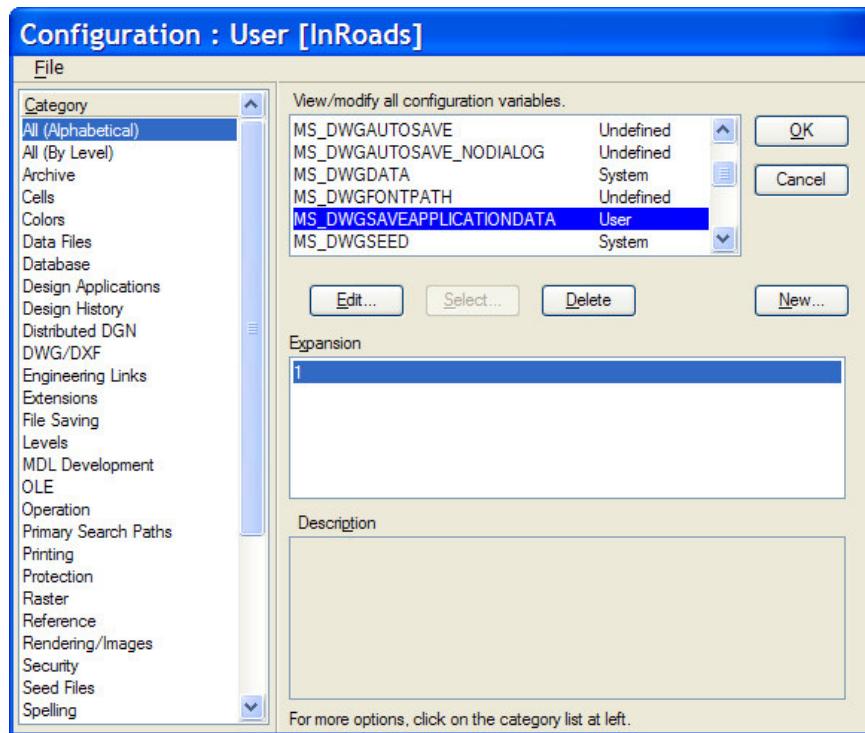
In order for InRoads to recognize the profiles or the cross sections created in DWG mode when the DWG is reopened, the value of the MicroStation configuration variable **MS_DWGSAVEAPPLICATIONDATA** must be set to 1 before creating profiles or cross sections.

Select **Workspace > Configuration** from MicroStation main menu bar. When the Configuration dialog shows up, select **All (Alphabetical)** from the *Category* list then look for variable **MS_DWGSAVEAPPLICATIONDATA** in the *View/modify all configuration variables* list. If this is the first time you set this variable, click the **New** button to add the variable to the list. If you have done so, make sure the value is set to 1.

To create the variable, click the **New** button to bring up the New Configuration Variable dialog. Type **MS_DWGSAVEAPPLICATIONDATA** in the *Variable* field then type **1** in the *New Value* field as shown below:



Click **OK** to close the dialog to return to the Configuration dialog. The variable created just now should be shown on the list now as shown below:

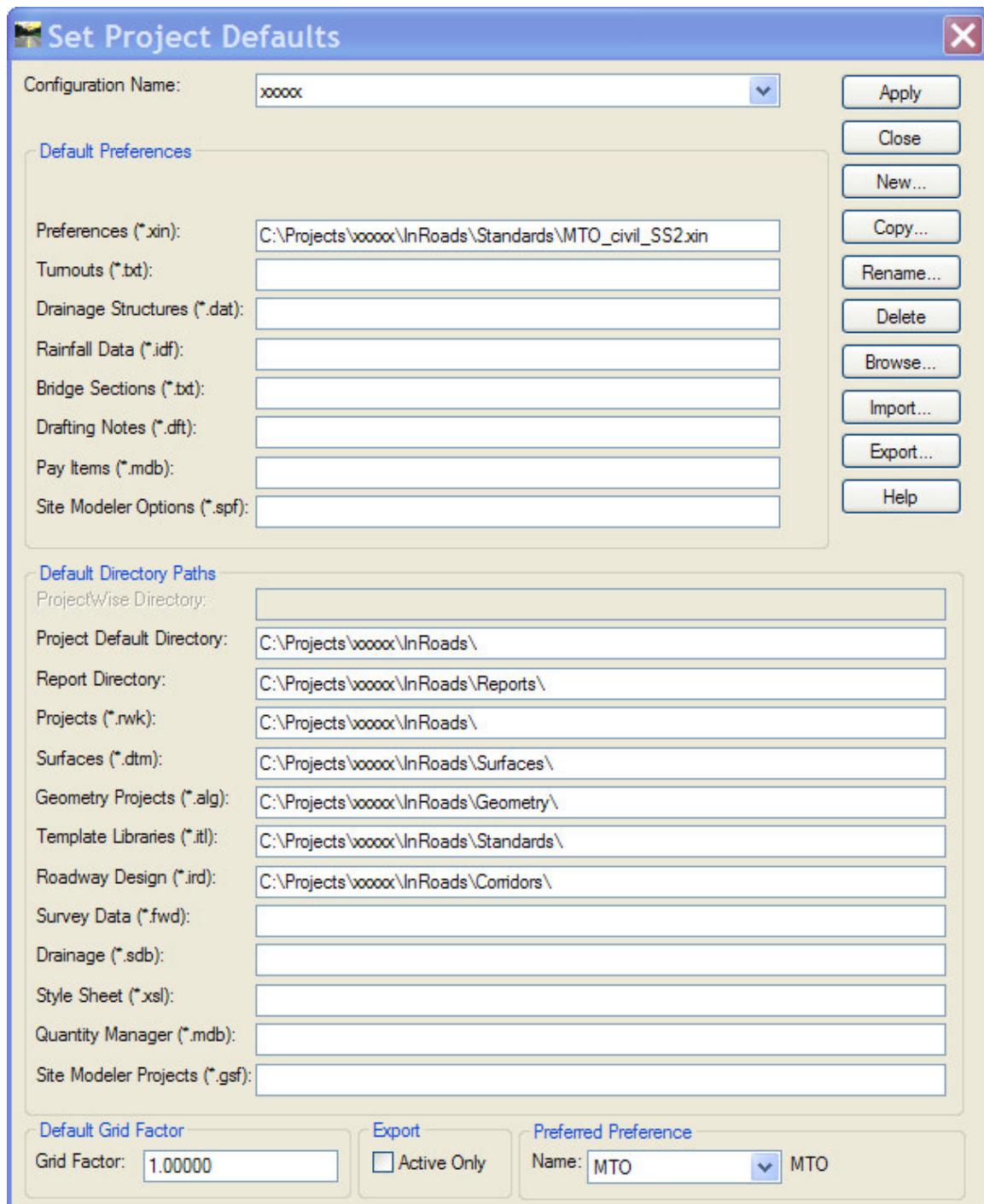


Power InRoads allows user to activate the InRoads Group commands from the CAD menu (main menu bar, contextual menus, tool icons, etc) directly. In this manual, the InRoads commands are accessed from the InRoads Explorer menu bar.

5.0 InRoads Project Defaults

It is recommended to create a project default name once the project directory structure has been created. The Set Project Defaults dialog is used to specify the initial location for loading/saving all files for a project.

Select **File > Project Defaults**. In this example, xxxx is the current project working directory.

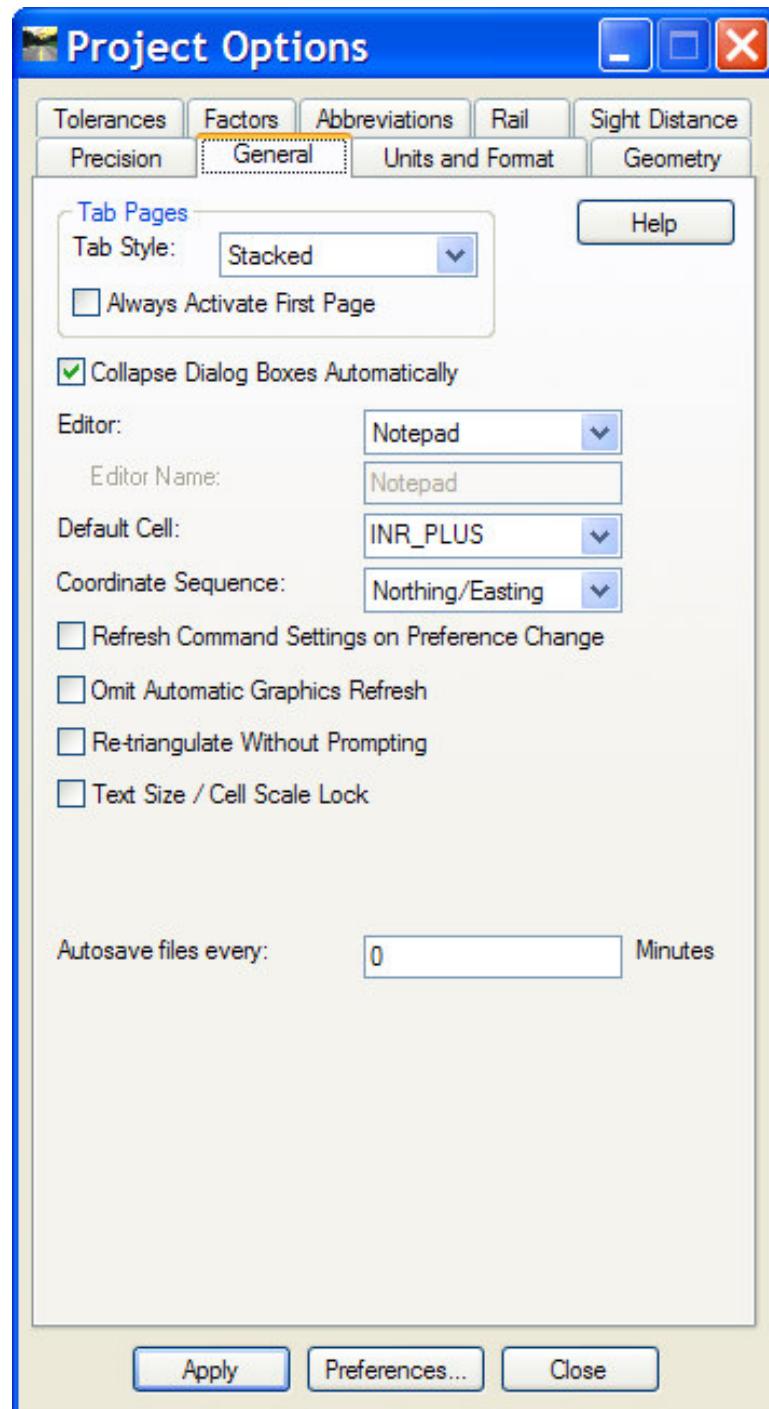


6.0 Project Options

The **Project Options** dialog box controls parameters that affect system-wide operation and can be activated from InRoads pull down menu under File.

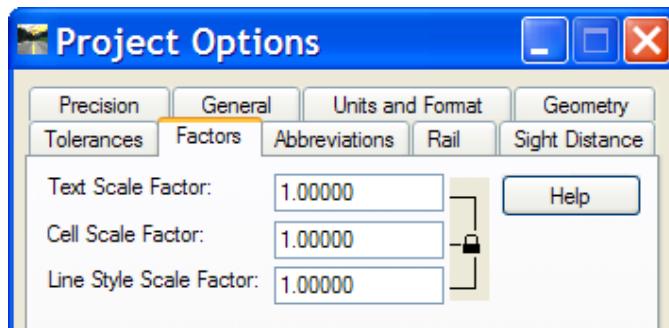
6.1 General

The **General** tab allows you to specify general parameters for settings.

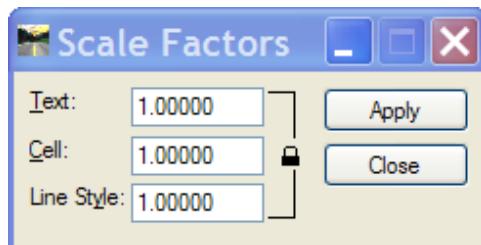


6.2 Factors

The **Factors** tab allows you to set the scaling factors applied to text, cell (block), and line style scale by InRoads display and annotation commands. The scale factors must be set to the appropriate drawing scale to display and annotate a feature with a defined symbology. The default value has been set to 1 for 1:1000 drawings to be plotted at 1=1. Set the factors to 0.5, 0.2, 0.1 etc for 1:500, 1:200 and 1:100 drawings respectively.

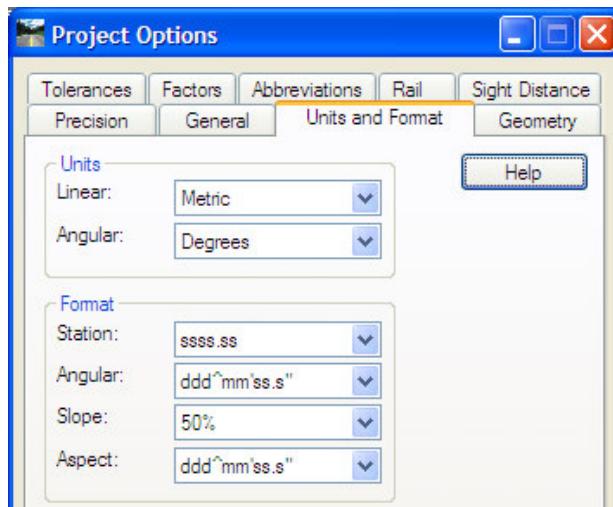


To set the Scale Factor go to **File > Project Options > Factors** or using **Tools > Global Scale Factors**. The global scale factors can be accessed from InRoads Application Add-Ins as shown below.



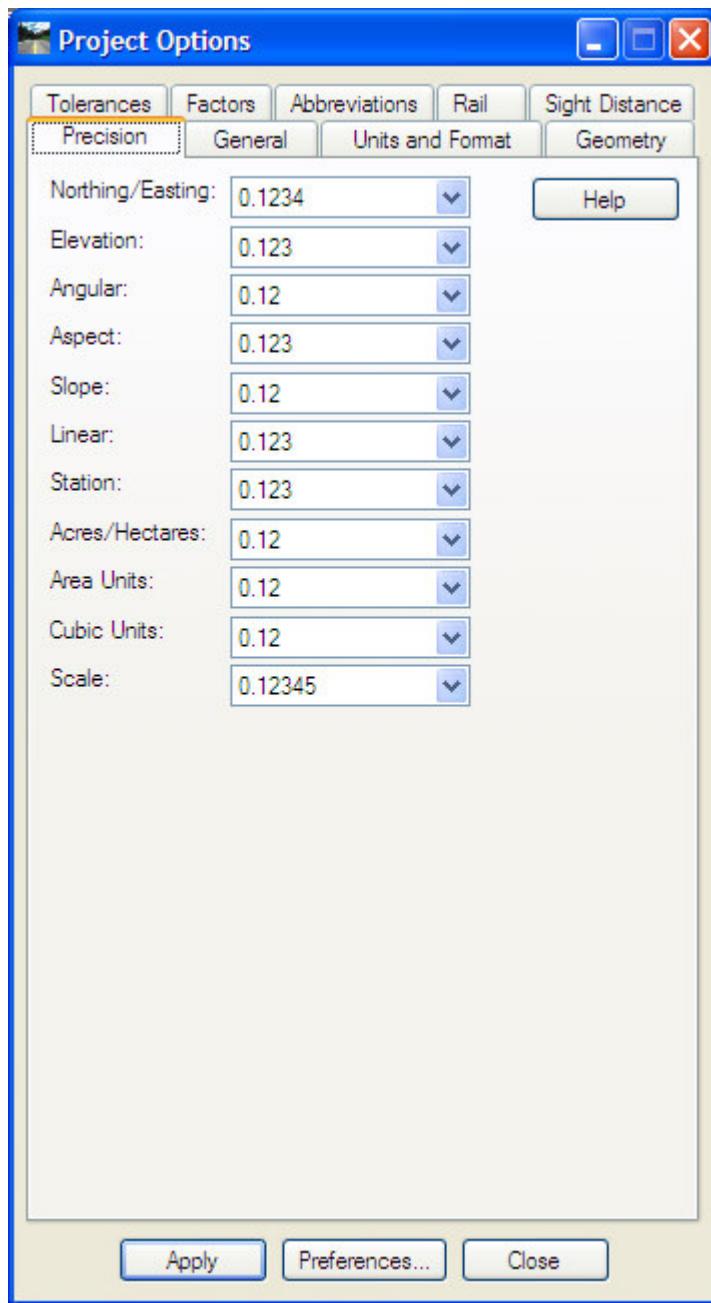
6.3 Units and Format

MTO uses metric units for highway design. The units and format are set as below.



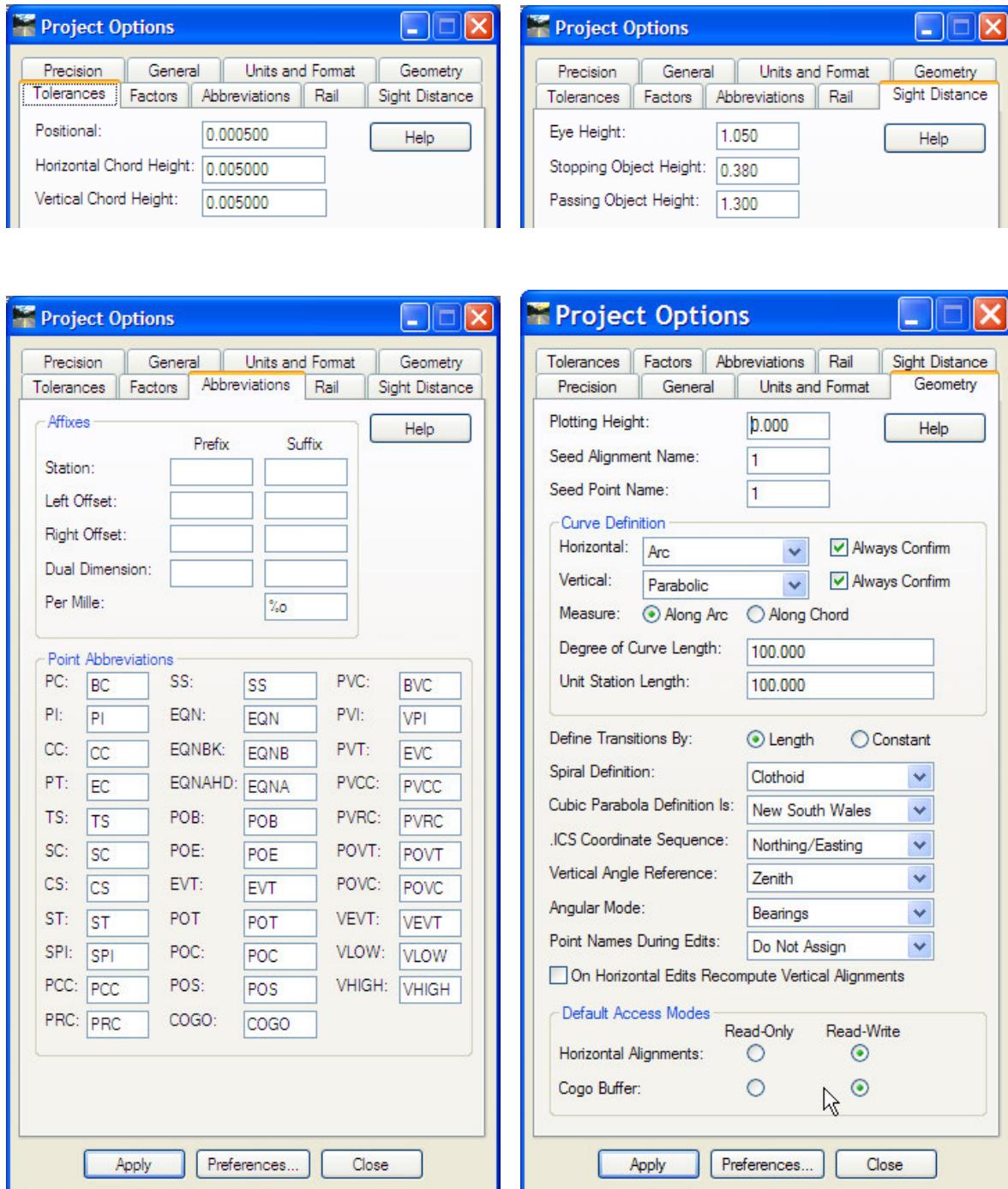
6.4 Precision

The Precision tab allows specification of the number of decimal places to display for various system parameters. The maximum precision for each parameter is seven decimal places except for the Scale parameter which is twelve decimal places. The settings on this tab are general. There are a few commands in InRoads need user to set decimal places within the commands to get appropriate display. The default values for this tab are shown as below.



6.5 Others

Other settings for MTO preference for this dialog have been setup as follow:



7.0 Preferences

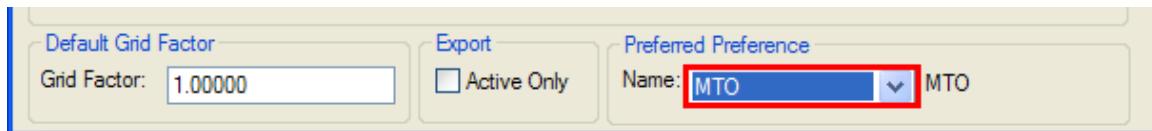
7.1 Preference Overview

A preference defines how an operation is to be performed for a given command within InRoads. User can save their preferred settings for a given command. More than one preference can be saved. Different commands can use same preference name as preference set.

The **Preference Manager** is the tool that allows adding, editing, and deleting preferences across the entire product, all from a single dialog box. Extra caution should be given when using the delete button. The delete button will delete all preferences with a given name for any command in InRoads – not just for a single command. To delete a particular preference from a single command, use the **Uninitialize** button.

The **MTO** preference is the Preferred Preference set in the **MTO_civil_SS2.xin** file. It has more initialized settings for commands than any other preference set. User may load a different preference set by clicking on the Preferences button on any dialog.

To set the Preferred Preference, select **File > Project Defaults**. In the Preferred Preference field to the bottom of the Set Project Defaults dialog, select **MTO** from the Name drop-down list. This allows users to use **MTO** as a system wide default preference when a command with a dialog box first time activated. Click **Apply** to save the change made to the configuration.



7.2 Surface

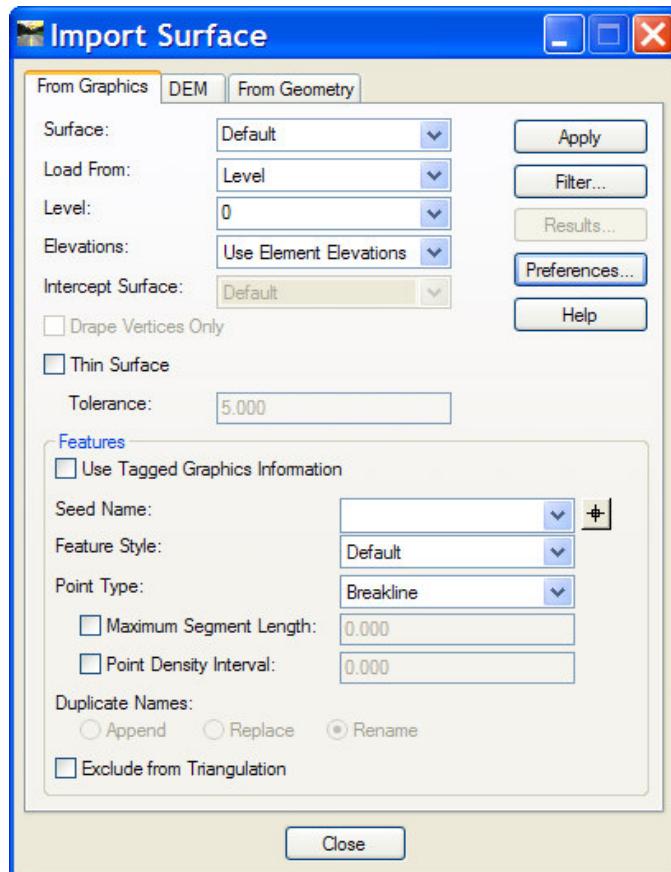
Surface contains all information related to a **Digital Terrain Model (DTM)**. Surface is made up of features. A feature is a single instance of a 3D geometric representation in the DTM. A feature can be one of five types, corresponding to the type of DTM points contained: random, breakline, exterior boundary, interior boundary, or contour. Features are essentially just groups of DTM points -- each group is given a name and assigned a feature style. Non-triangulated features can be stored in a surface along with triangulated features, and they can be used as design control, be displayed and annotated from the surface.

In InRoads, features can be created or imported into the surface. Feature data in the surface can be displayed in plan, profile and cross section view. The surface data is used for design analysis and computation. InRoads provides the tools for modifying, manipulating and displaying surfaces.

7.2.1 Import Surface from Graphic Element

Select **File > Import > Surface**

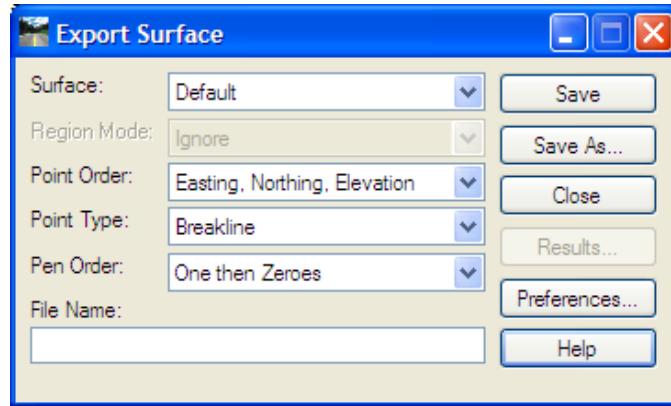
The graphics data must be in the drawing file that to be imported into the surface. To load the graphics into a surface, you must create a new surface first or have an existing surface opened.



7.2.2 Export Surface

Select **File > Export > Surface**

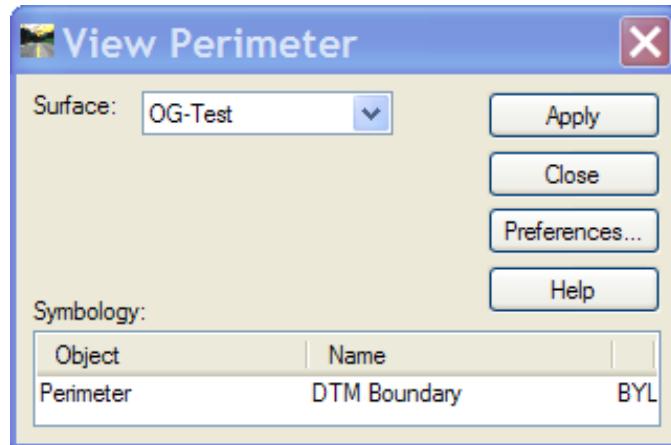
Generate an ASCII file containing data for a specified surface.



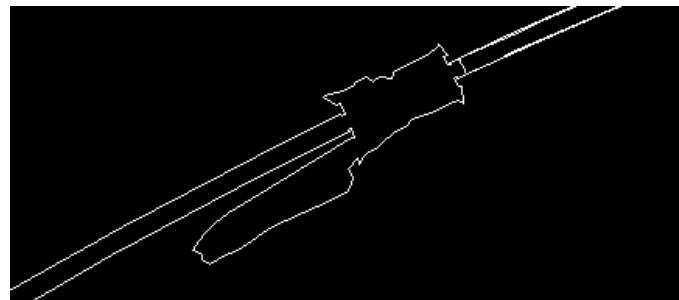
7.2.3 View Perimeter

Select **Surface > View Surface > Perimeter**

This command displays the outermost edge of a triangulated digital terrain model. This command is very helpful for visualizing the boundaries of the triangulated model and for fitting the surface to the viewing screen so that the results of subsequent commands can be seen.



Set the appropriate surface to active for example OG-Test and click the **Apply** button. The surface boundary showed as below.

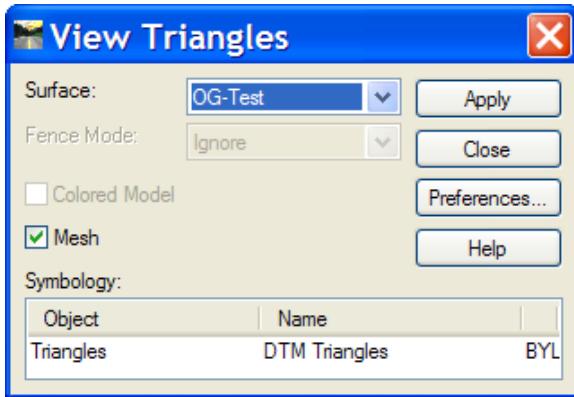


7.2.4 View Triangles

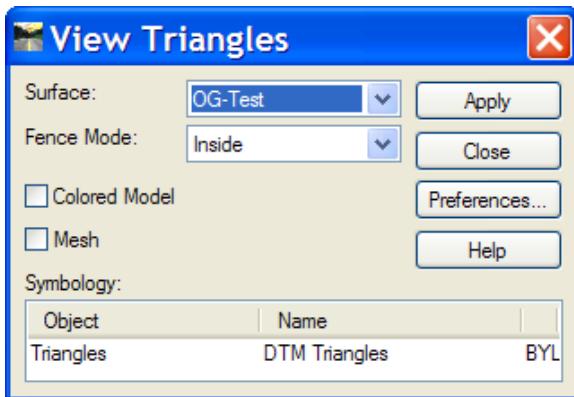
Select **Surface > View Surface > Triangles**

This command displays all or a portion of the triangles contained within the active surface. InRoads displays the triangles that are created when the model is triangulated.

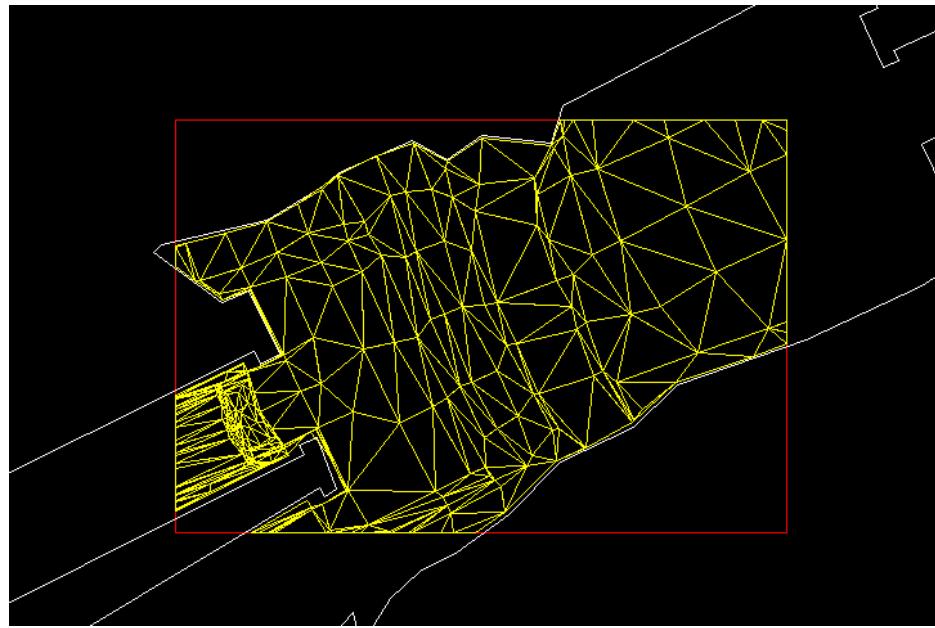
This command can be used to help evaluate the terrain model and pinpoint areas that either have too many points or too few points.



Select the surface for which you want to display triangles and click the **Apply** button.



If a **Region** has been placed in the drawing, the **Region Mode** on the dialog will be activated as shown above. Triangles can be shown within the selected area. The picture below show triangles with region placed.



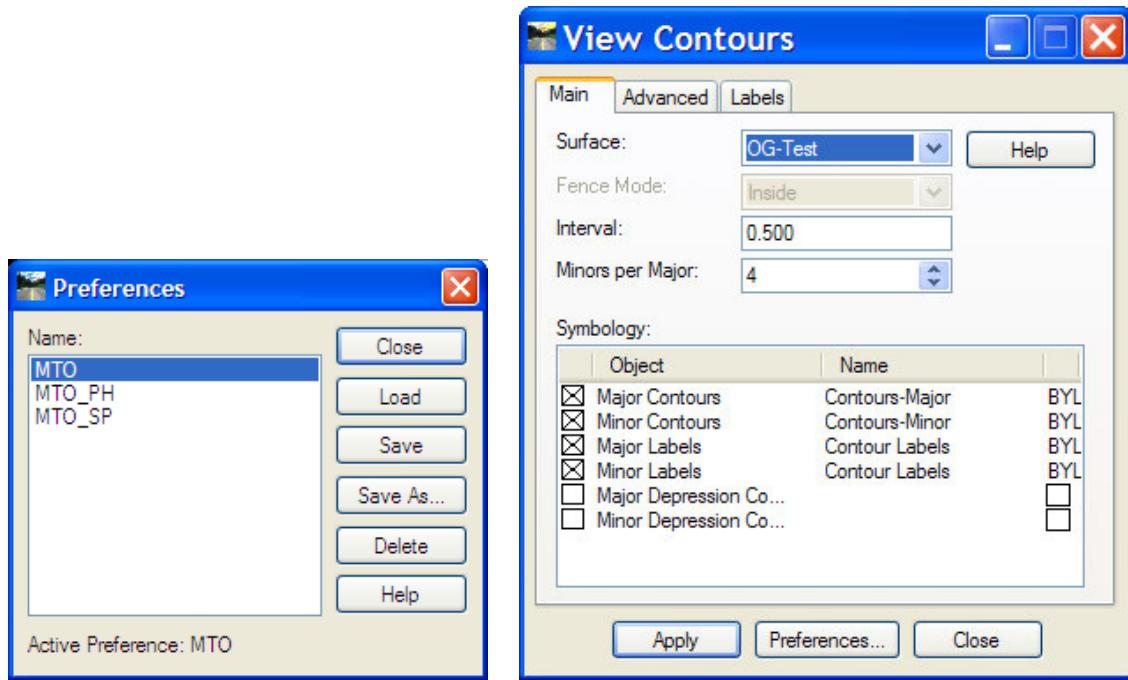
7.2.5 View Contours

Select **Surface> View Surface > Contours**

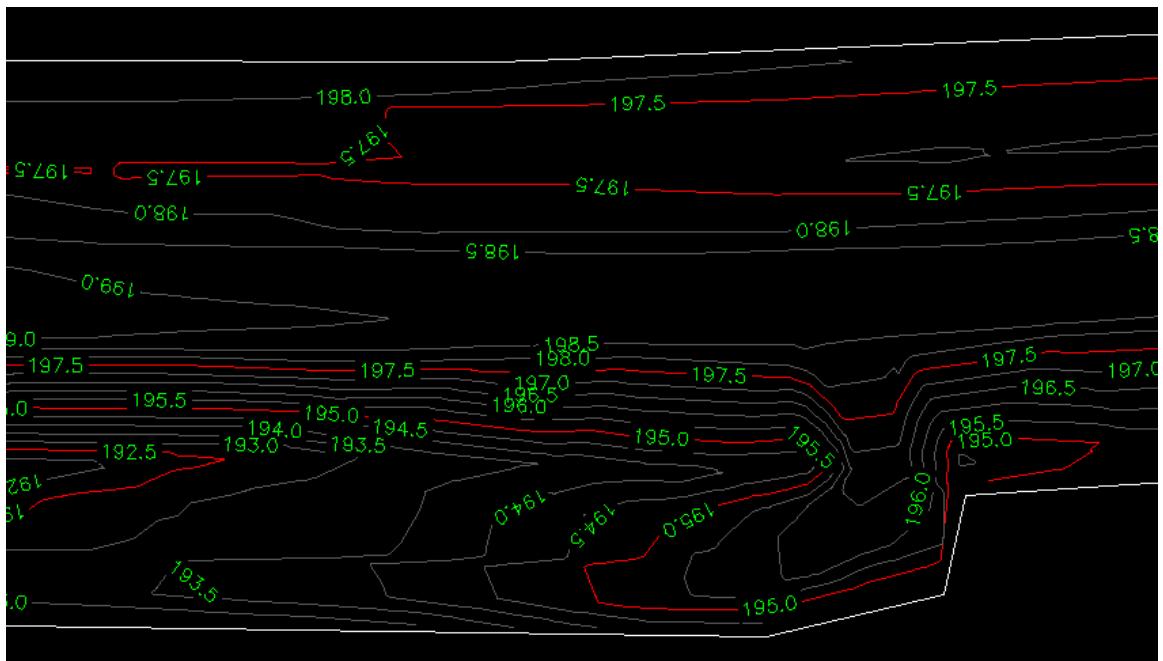
This command generates and displays elevation contours for the active surface. This command automatically generates major contours, minor contours, depression contours, and contour labels in the drawing.

Major contours are contour lines that display at an elevation interval you specify. Minor contours display a specified number of times between each major contour.

Before applying the command, set appropriate surface active and select a named preference. The **MTO** preference is the default setting. **MTO_PH** and **MTO_SP** are used to display the contour line and labels on **Photogrammetry** and **Surveys and Plans** layer respectively. To display a different scale for example 1:500, set the Global Scale Factors to 0.5.



Shown here is an example of contours drawn with preference MTO at 1:1000 scale.

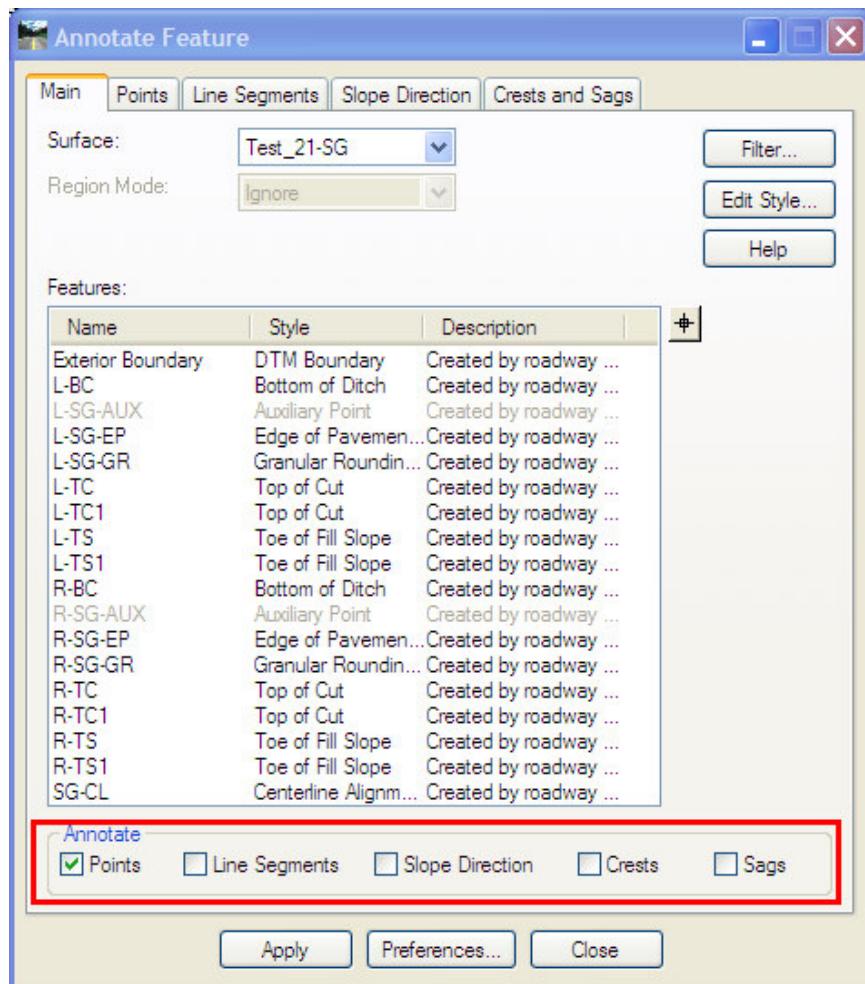


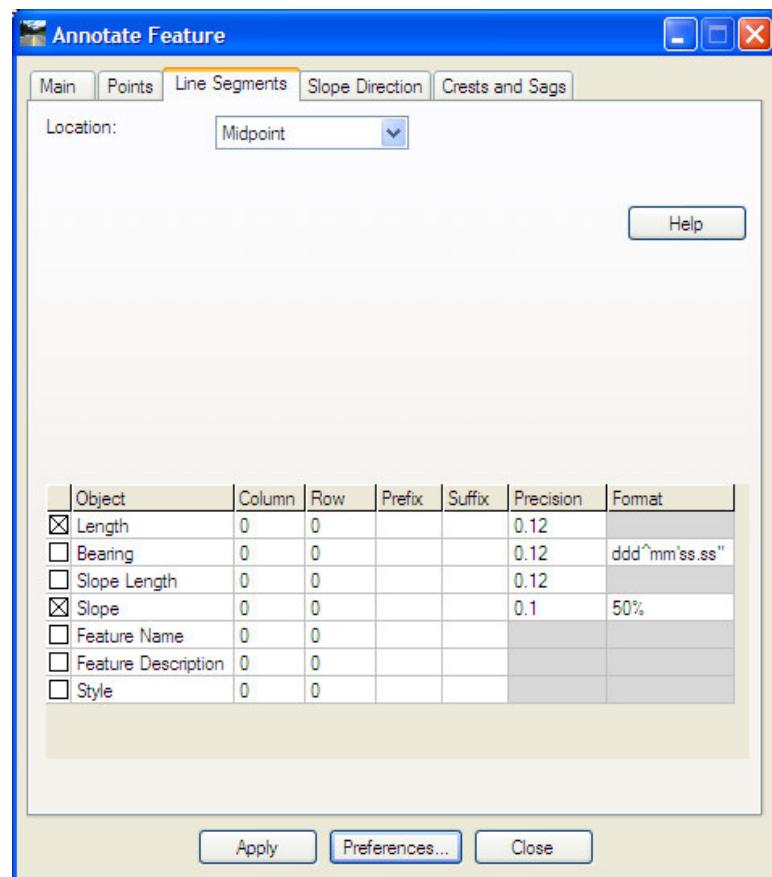
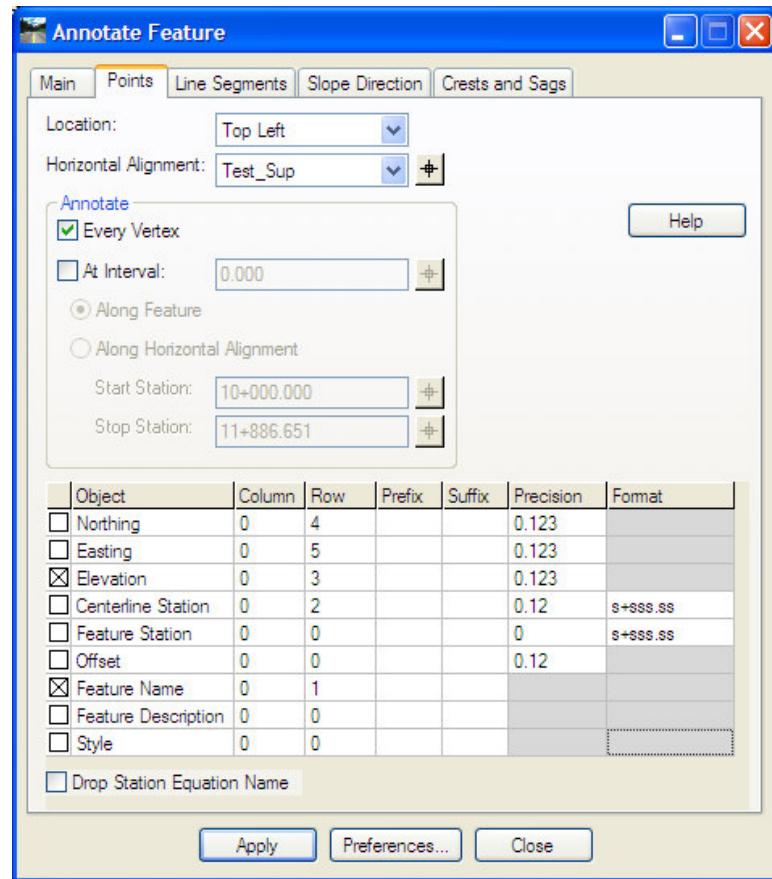
7.2.6 Annotate Feature

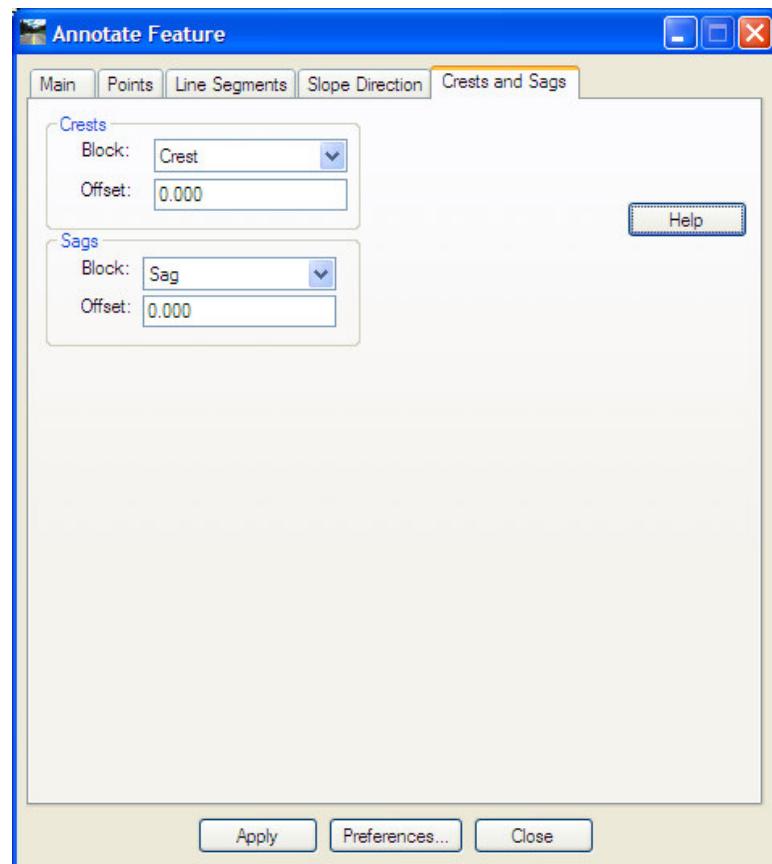
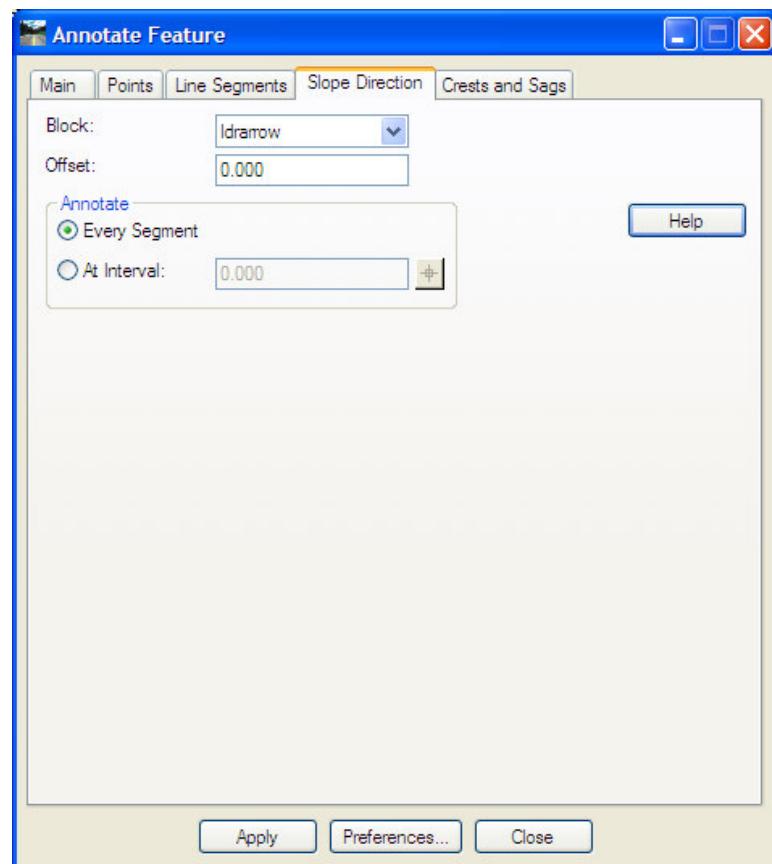
Select **Surface> View Surface > Annotate Feature**

This command places text describing characteristics and annotates slope direction of features in the active surface. It annotates whether points, line segments, slope direction, crests, sags, or all five.

The preference **MTO** provides initial settings for all five type annotations. You can select the type of information to annotate from the main tab and select any combination of data from the following tabs respectively. By default, the **Points** is selected with **Feature Name** and **Elevation** to be annotated. See below for settings for each tab.







7.3 Horizontal Alignment

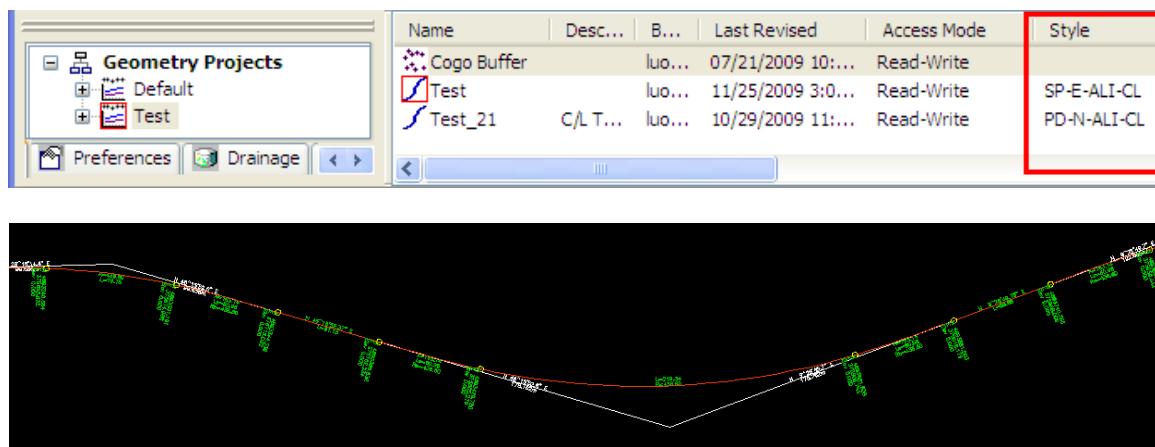
InRoads provides different tools to display and annotate horizontal alignments. Use both **Horizontal Annotation** and **Curve Set Annotation** commands for displaying in MTO format. Before viewing and annotating horizontal alignment, set the desired scale factor.

7.3.1 View Horizontal Annotation

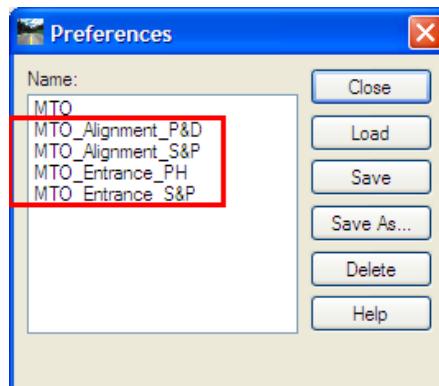
Select **Geometry > View Geometry > Horizontal Annotation**

This command displays and annotates multiple horizontal alignments at the same time. Preferences have been setup based on **IESCAD** layering standard for **Planning and Design, Surveys and Plans** and **Photogrammetry** alignment. The default setting **MTO** will use the alignment style assigned in the geometry project to display and annotate the selected alignment with the points and tangents information.

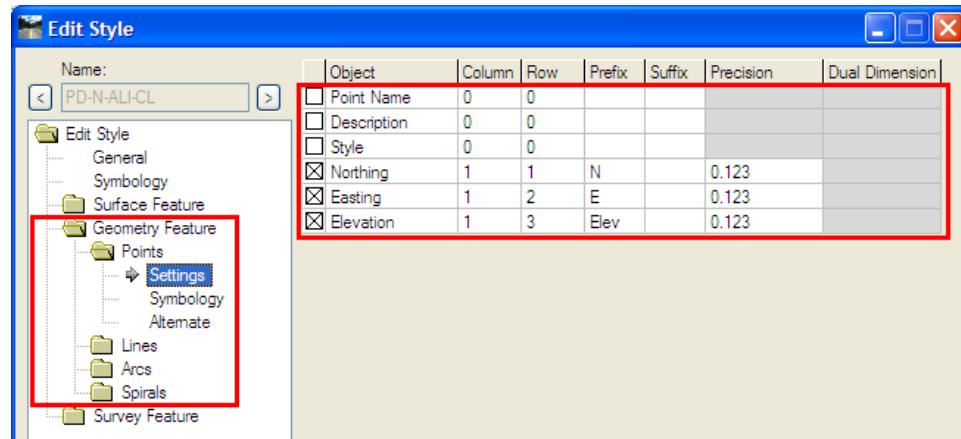
Shown below are alignments with different styles and an example illustrates the annotation with the default setting.



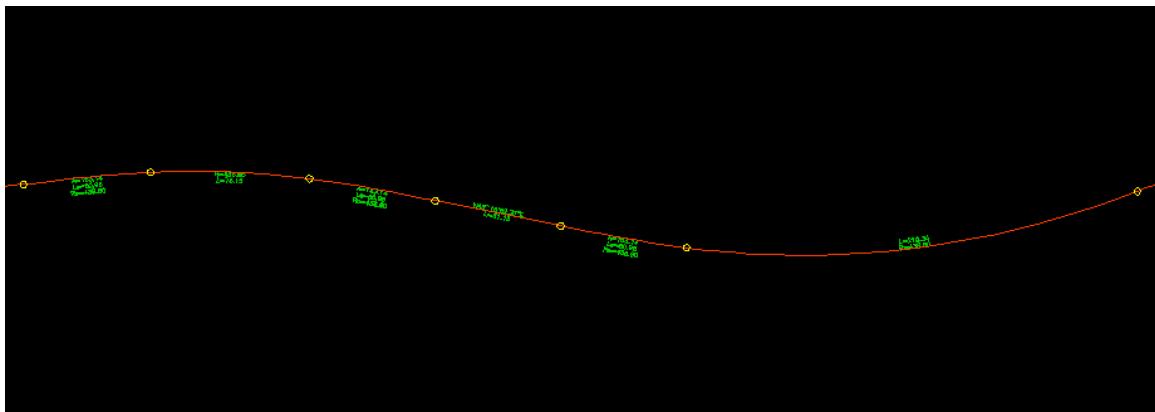
When selecting a preference other than the preference **MTO**, InRoads will ignore the alignment style assigned in the geometry project and use the style defined in the selected preference to display the alignment with the annotation.



The annotated information is controlled by toggling on/off the fields under **Geometry Feature** leaf in style editor. Select different fields for project specific requirements.



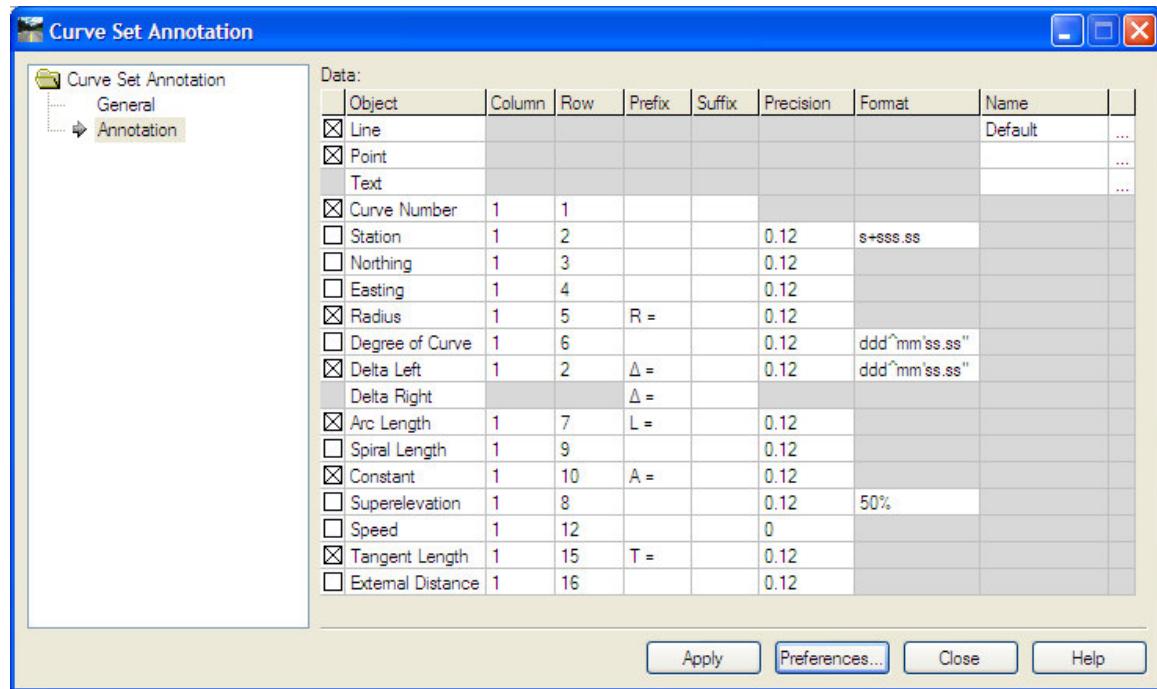
Select and load named preference **MTO_Alignment_S&P**. Select alignment(s) and click **Apply**. This preference displays the alignment and the element annotations. Then use Curve Set Annotation to display the PI symbol and short tangents.



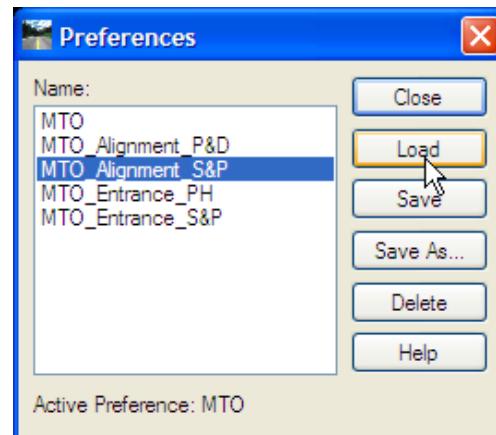
7.3.2 Curve Set Annotation

Select **Geometry > View Geometry > Curve Set Annotation**

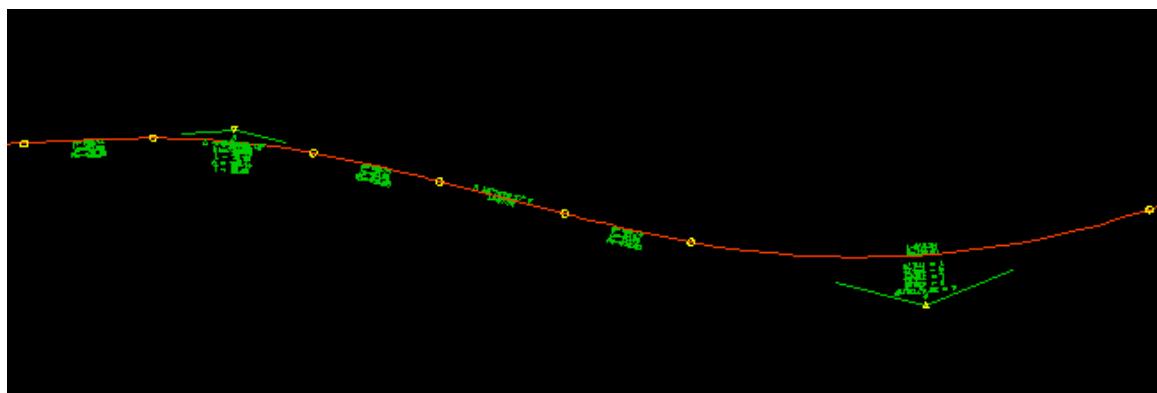
This command has the same set of preferences as the Horizontal Annotation command. Preferences have been setup for displaying the PI symbol, short tangents and curve information. All preferences have a few items selected for annotation by default. The annotated curve information is controlled by toggling on/off the annotation items below the **Text** field under **Annotation** leaf. Select different items for project specific requirements.



Click **Preferences** and load named preference MTO_Alignment_S&P.



Click **Apply**. The PI symbol, short tangent and curve information are added to the alignment as shown below.

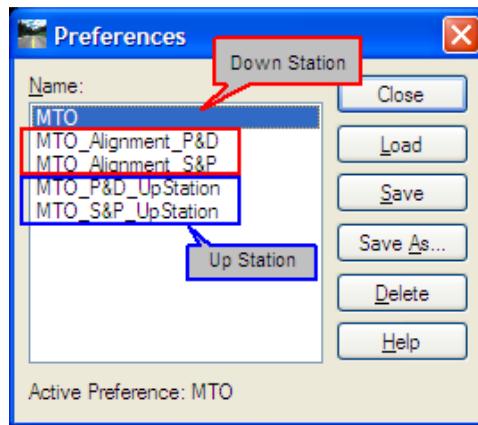


7.3.3 View Stationing

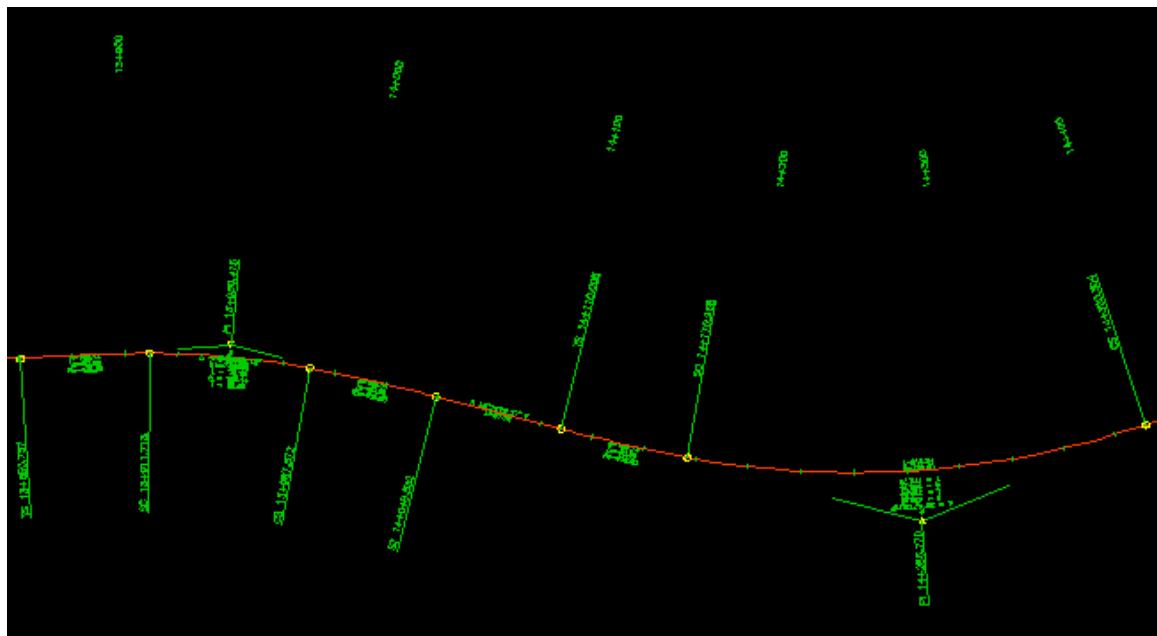
This command controls the display of station annotation text along the active horizontal alignment. You can place stations along a horizontal alignment at a specified interval.

Select **Geometry > View Geometry > Stationing**

There are different setups for station annotation including preferences for new (P&D) and existing (S&P) alignment stationing. Default preference **MTO** is similar as preference **MTO_Alignment_P&D** with different offsets from the center line. Both preferences **MTO_Alignment_P&D** and **MTO_Alignment_S&P** are set up **Down Station** (looking down the alignment). Options for **Up Station** (looking up the alignment) as the reference name indicated are also provided.



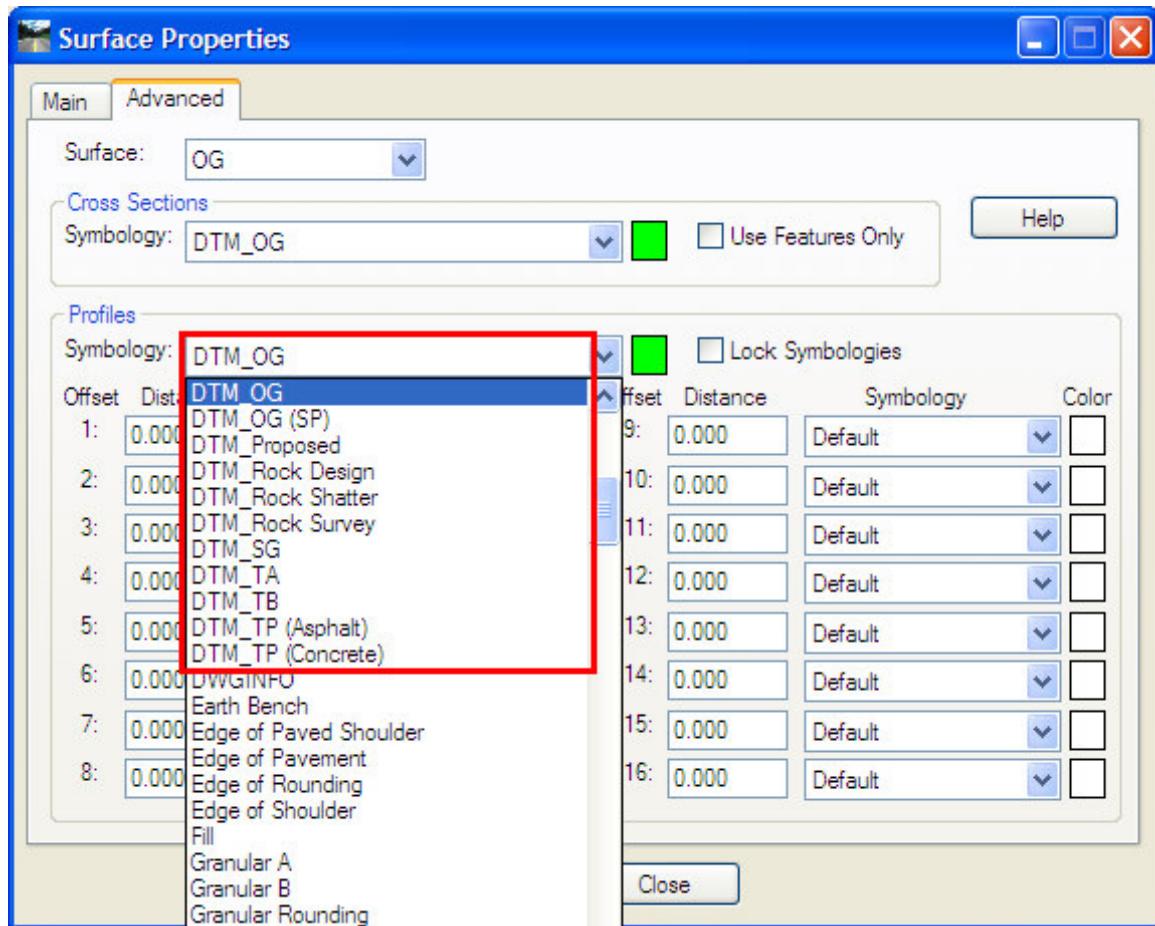
Select named preference **MTO_Alignment_S&P** and click **Load**. Click **Apply** and **Close**. Major stations, major ticks, minor ticks, PI stations and cardinal stations are displayed along the alignment as shown in the picture.



7.4 Profile

7.4.1 Create Profile

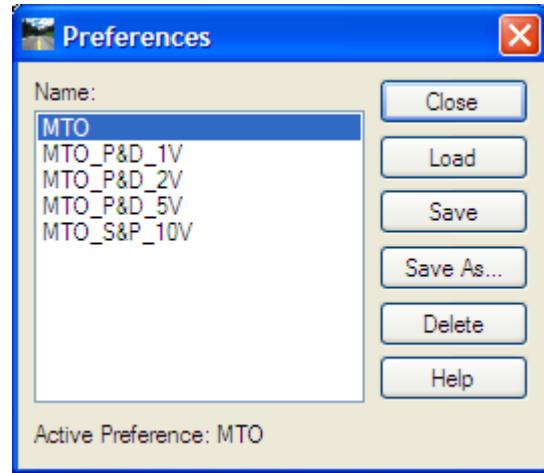
This command extracts and displays profiles along horizontal alignments or selected graphics strings. A profile displays elevation data extracted from selected surfaces along the defined path. Before starting, select a proper symbology for the surface to be extracted.



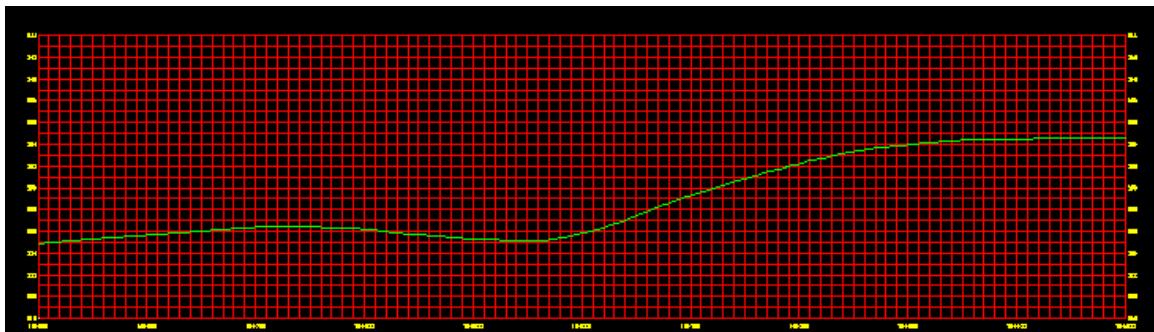
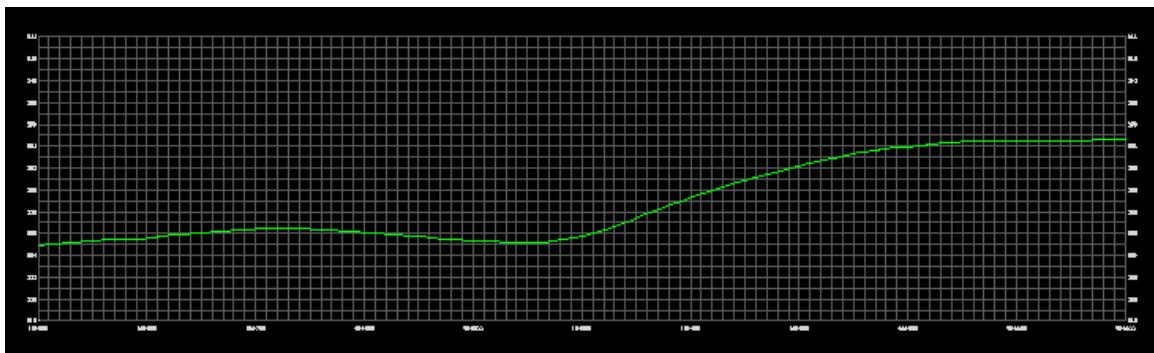
Select **Evaluation > Profile > Create Profile**

Preferences have been set up with different vertical exaggerations (1V, 2V, 5V and 10V) for new (P&D) profile and 1 vertical exaggeration (10V) for existing (S&P) profile. The default preference **MTO** is for P&D with vertical exaggeration 10.

See below for available preferences.



Shown below are examples for same profile created with 2 deferent preferences **MTO** (first) and **MTO_S&P_10V** (second).

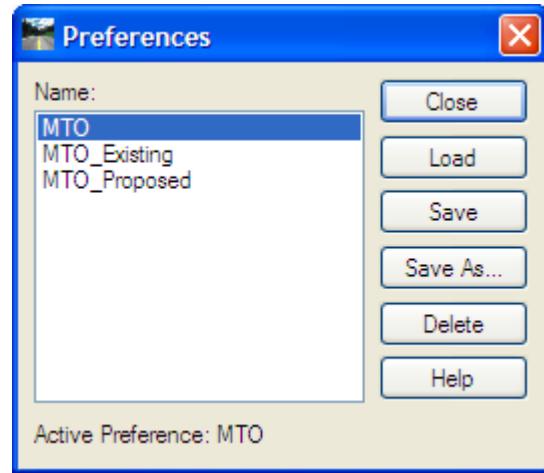


7.4.2 View Vertical Annotation

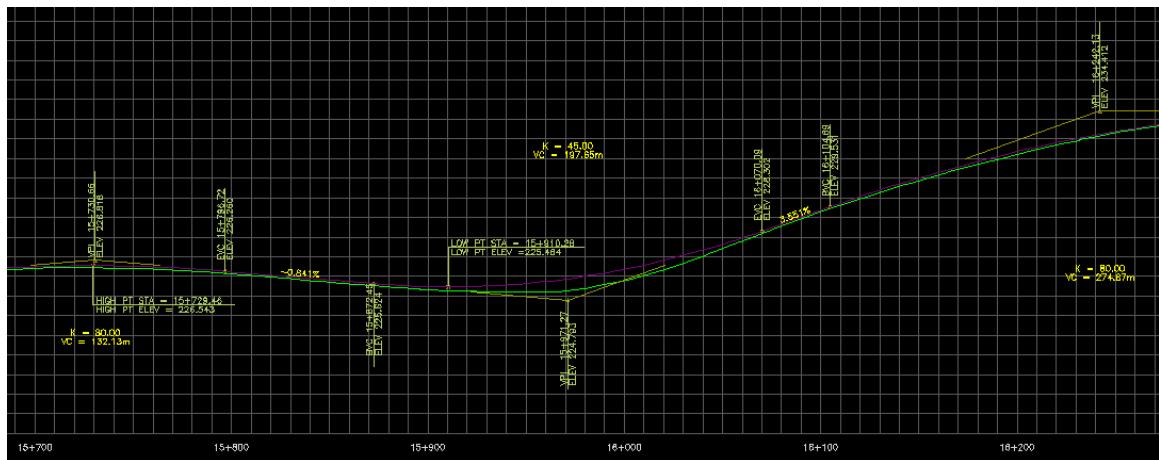
This command displays and annotates vertical point and alignment information, such as tangent grade and vertical curve information.

Select **Geometry > View Geometry > Vertical Annotation**

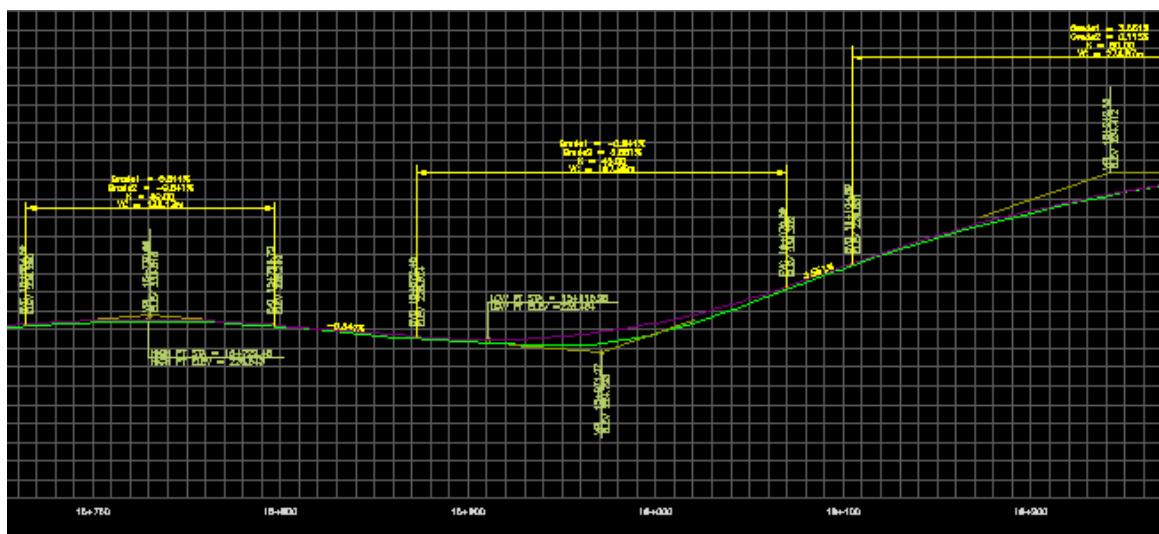
Click **Preferences** and load a named preference.



Default preference **MTO** is a simplified setup providing brief vertical alignment information on the P&D layers. See below.



The preference **MTO_Proposed** provides more detailed curve information for proposed vertical alignment as shown below.



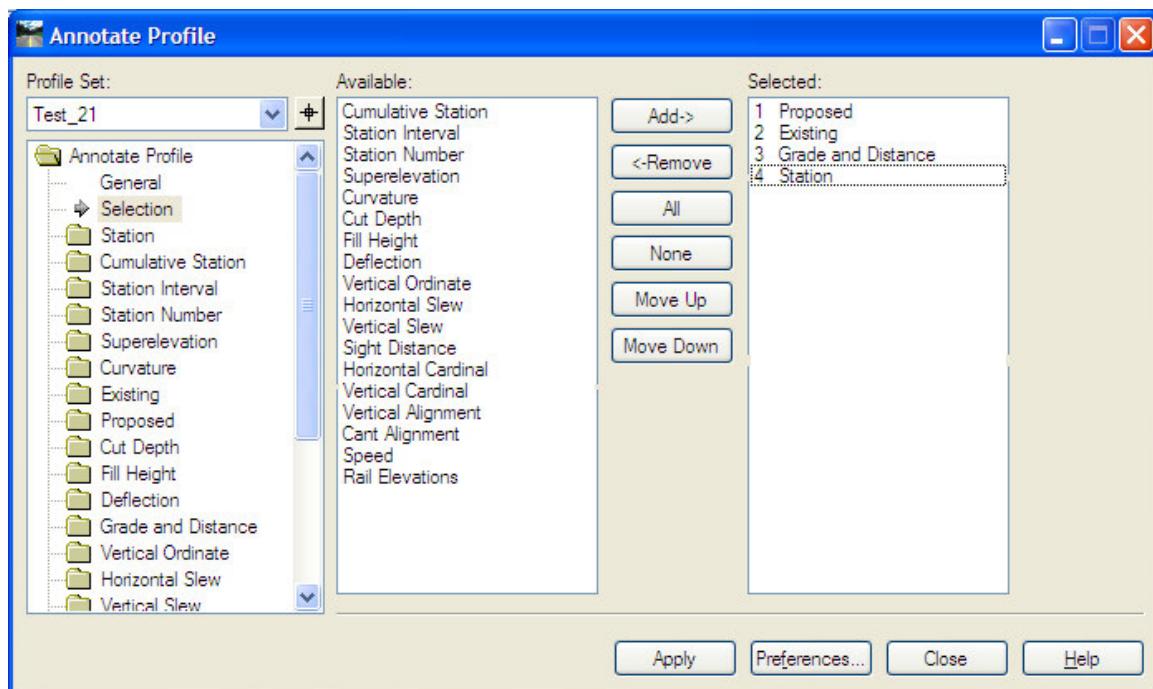
The preference **MTO_Existing** provides same information as the preference **MTO_Proposed** for existing vertical alignment using the S&P layers.

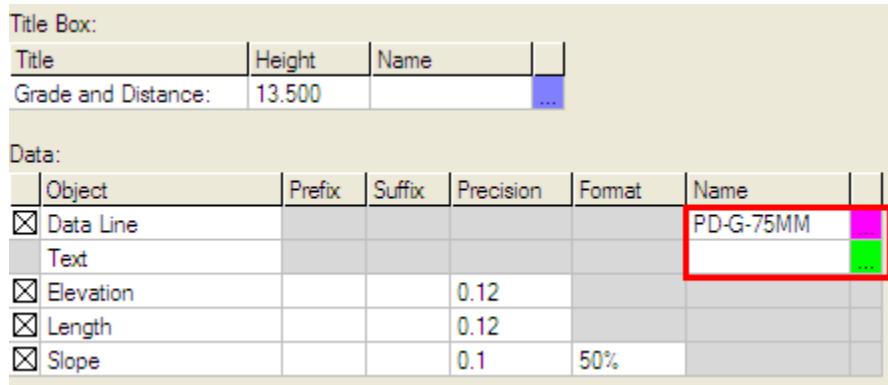
7.4.3 Annotate Profile

This command adds textual and graphical information to existing profiles. You can annotate various types of information such as stationing values, existing and proposed elevations, and superelevation and curvature diagrams in any combination.

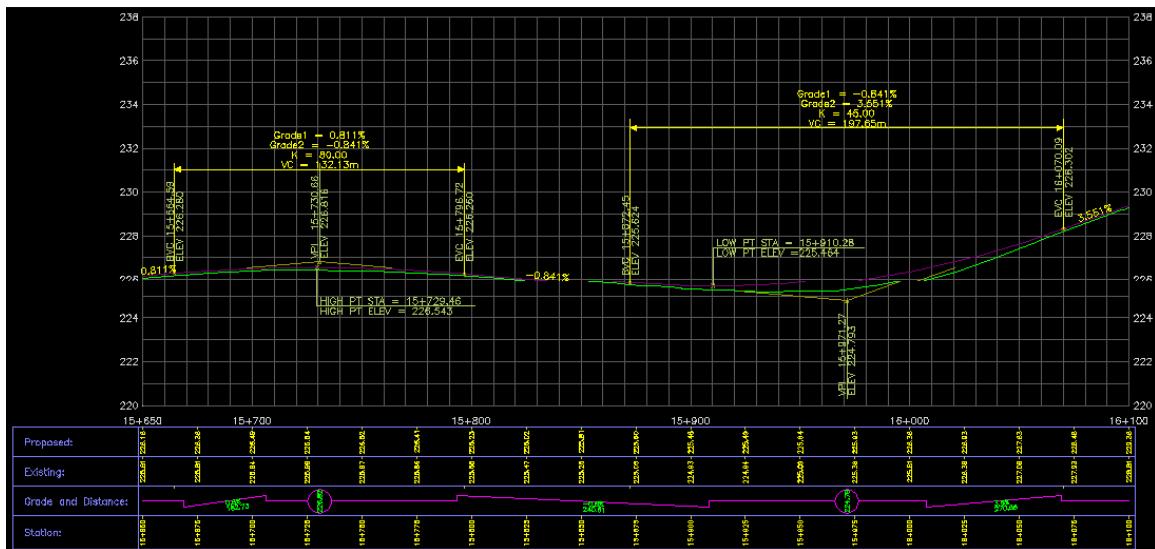
Select **Evaluation > Profile > Annotate Profile**

On the left of the dialog box is a list of available items that can be annotated. Default preference **MTO** provides parameter settings for each of the entries in the list using IESCAD layers and pre-defined symbologies. The MTO preference has a sample selection with four types of data (Proposed, Existing, Grade and Distance, and Station) selected for annotation. You can choose the type of information that is relevant to your project from the available list to display in the profile. See below the default selection list and a sample parameter setting(s).





The diagram below shows sample results of annotating the four types of data from the selection list.



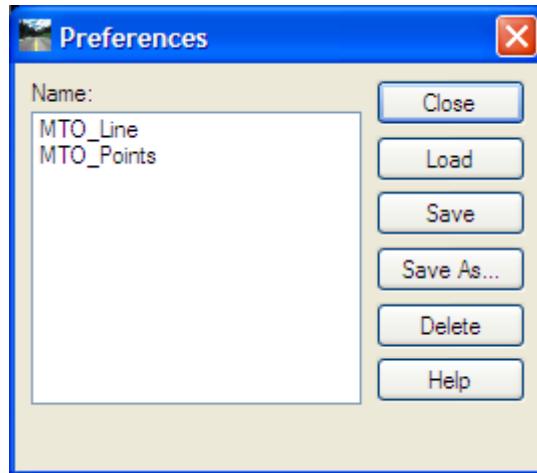
The data that this command displays is not automatically related to the profile that you are annotating. The data is derived from the active horizontal and vertical alignments, as well as the active surface and active roadway definition. To accurately annotate a profile, you must make sure that the alignments, surface, and roadway definition displayed are the ones that were used when the profile was extracted.

7.4.4 Annotate Feature in Profile

This command is used to annotate the features displayed in a profile. The command runs on a profile set, which you select. There is a surface list, which lists all the surfaces loaded. The feature list displays all the features in the specified surface. Use this list to select the features to be annotated. The two types of features displayed in profiles are projected features and crossing features. Projected features have endpoint components and a linear component. Crossing features only have a point component. You can select to annotate points, line segments, or both.

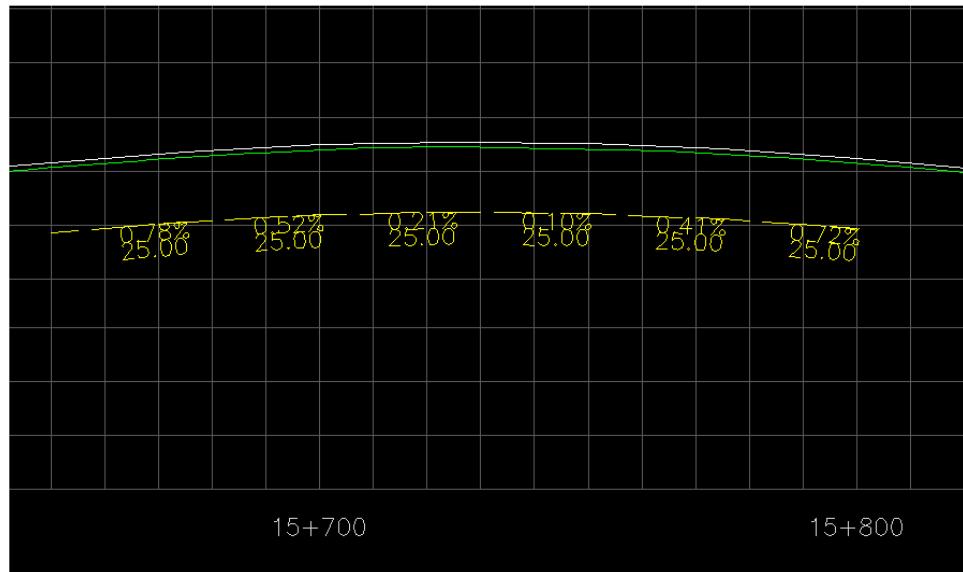
Select **Evaluation > Profile > Annotate Feature in Profile**

Click **Preferences** and load a named preference.

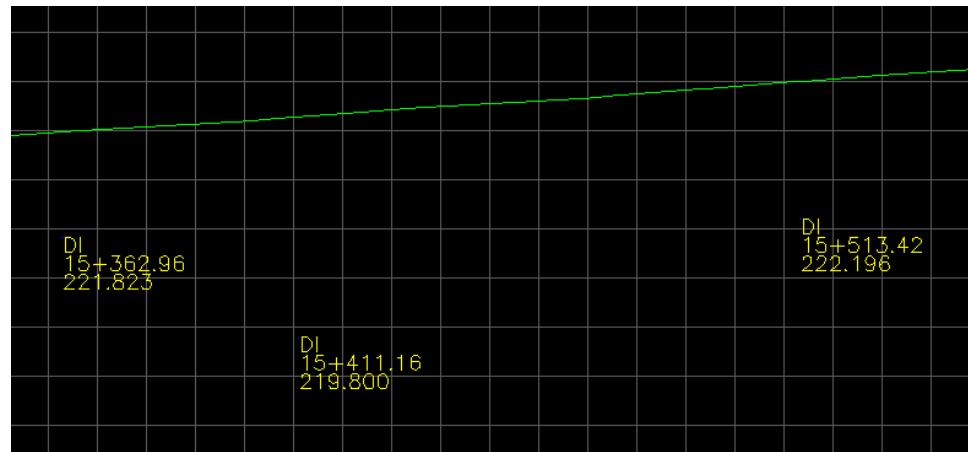


The references have been set for annotating line segments (**MTO_Line**) or points (**MTO_Points**).

When annotating line segments, you can specify a location for the text along the line: Midpoint, Start, or End. You can also display the absolute slope of the feature and use an alternate slope if the slope exceeds a given percentage. See below an example of projected line segments annotation.



When annotating points, you may choose to annotate the crossing points, projected points, or both. If projected points are being annotated, the text can be placed at every vertex and at a given interval. Shown below is an example of projected points annotation:



7.5 Cross Section

Cross sections are used to display and annotate surfaces features in a vertical plane. Cross sections are extracted at a specified interval across a horizontal alignment or some other linear feature. Cross sections can be extracted at a skewed angle, but they are typically perpendicular to the alignment.

Depending on the project, cross sections sets are drawn with vary scales, intervals, vertical exaggeration factors and the amount of annotations. This section will discuss how to use the MTO preferences to generate cross section set and cross section report.

The sample set is in 1:100 scale with OG, TP and SG surfaces annotated.

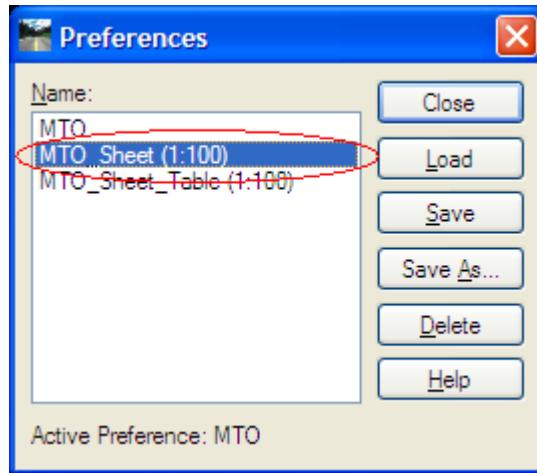
7.5.1 Create Cross Sections

Since the cross section scale is 1:100, set the **Global Scale Factors** to 0.1.

Select **Evaluation > Cross Section > Cross Sections**

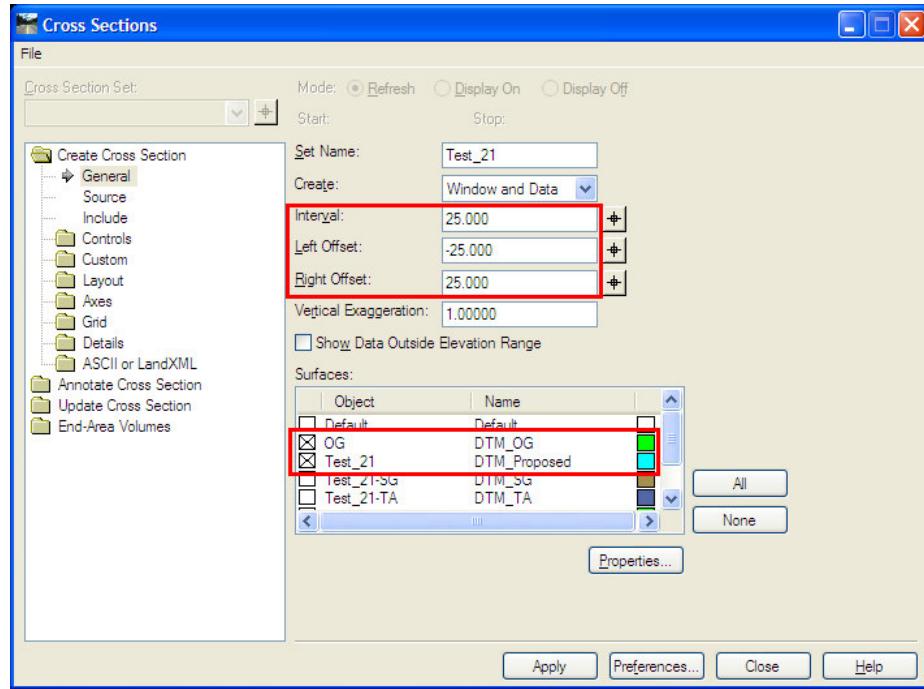
On the left side of Cross Sections dialog, select **Create Cross Section** folder.

Click **Preferences** and load named preference **MTO_Sheet(1:100)**.

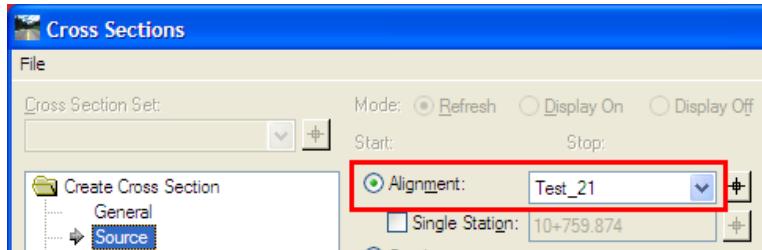


Go through each subfolder and leaf under Create Cross Section folder on the left panel of the dialog to make selections/changes for project specific requirements. The preference **MTO_Sheet_Table (1:100)** is set to create cross sections for annotating sections in table. See section [Annotate Cross Section in Table](#) for details.

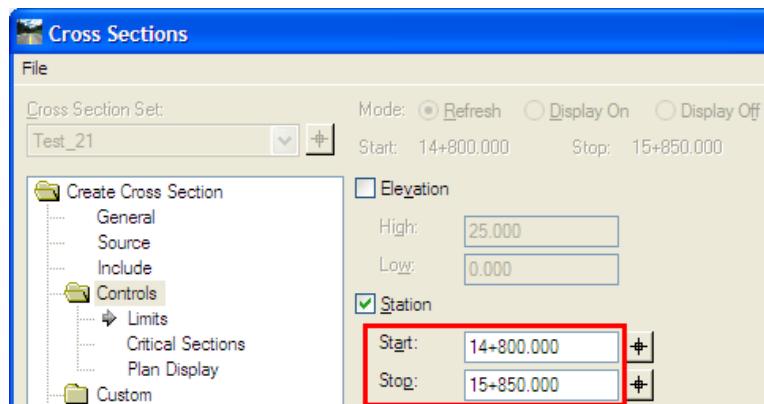
Click **General** leaf. Change the interval and offsets as project required. Select the surfaces you want to displace in the cross sections. You can save the settings under a different preference name for later use when you work on the same project.



Click **Source** and make sure the proper alignment is show in the alignment field.

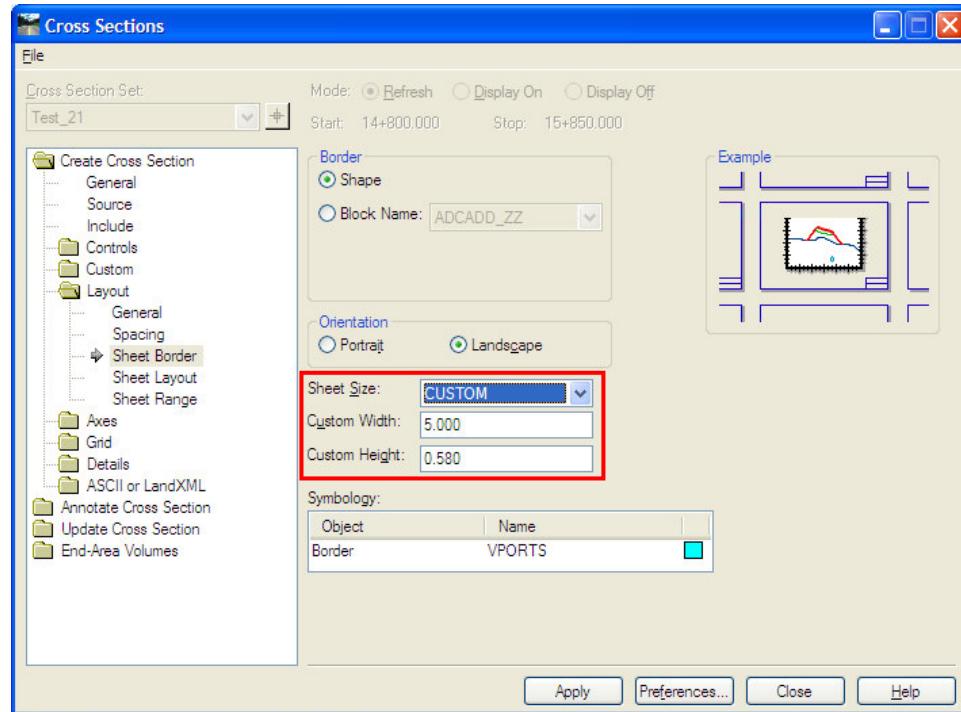


Click **Controls > Limits**. Give station range otherwise display whole project.

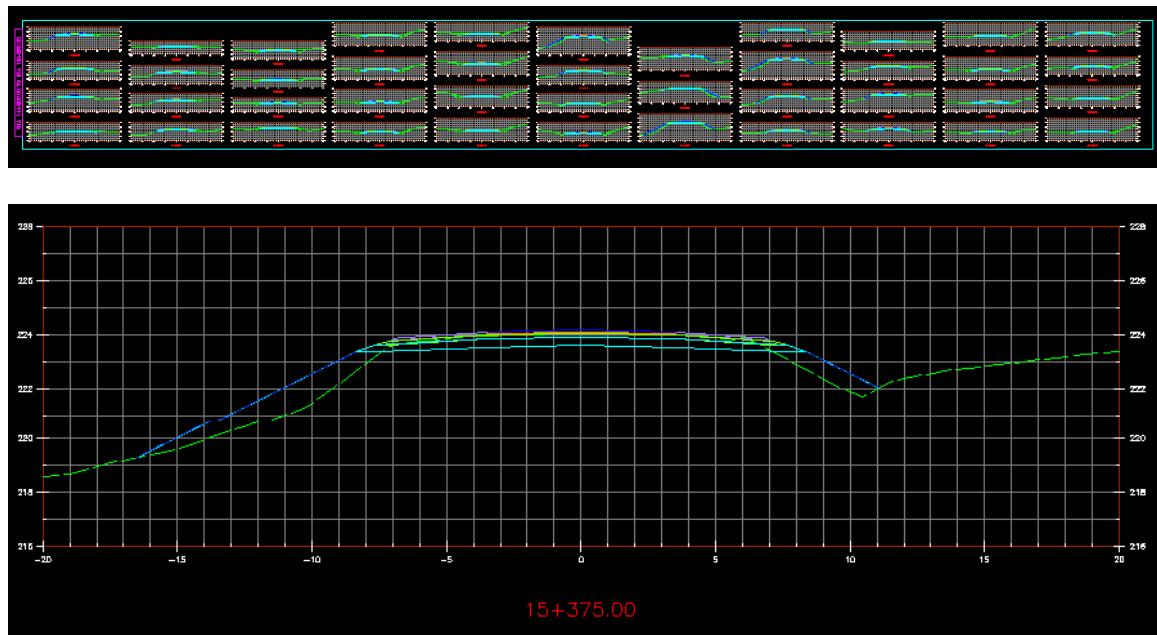


Click **Layout > Sheet Border**. Select standard paper size or customize the paper size. If you select the custom paper size, the value you input in the Width and Height filed is in

meter when you print the drawing at given scale. The default value for MTO_Sheet(1:100) is 5 for width and 0.58 for height which will generate a 5000x580mm roll drawing when plot at 1:100 scale.



Click **Apply**. Shown below is a set of sections and a single enlarged section.



7.5.2 Annotate Cross Sections

Cross section annotations typical include OG, TP & SG surface Point Offset & Elevation, and features names. For each of these surfaces, there are preferences named with the surface name and the scale in the parenthesis. For example **MTO_OG (1:100)** is the preference name for the OG surface annotation in 1:100 scale cross section set.

The annotation preferences are setup to work with the crossing features. Crossing features must be displayed in cross section to be annotated. User can choose to annotate surface instead of surface crossing features. However, some of the annotation texts may get overlapped. Select the **Update Cross Section** folder from the **Cross Sections** dialog to load the crossing features to the cross section set.

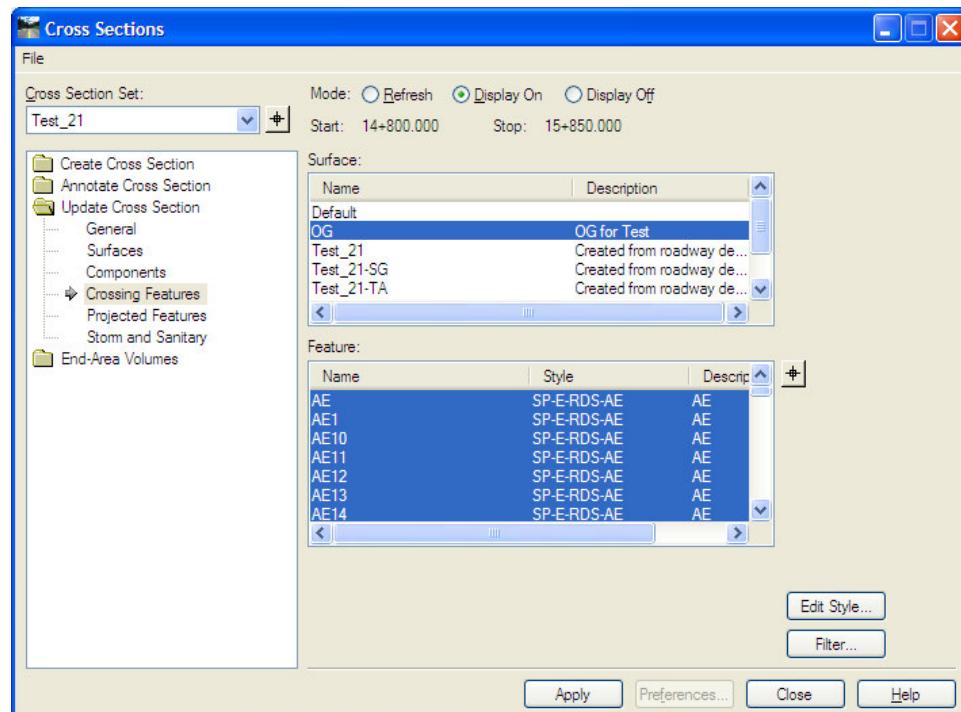
To annotate the 1:100 cross section set, set the **Global Scale Factors** to 0.1.

a) OG surface

Select **Evaluation > Cross Section > Cross Sections**

On the left side of Cross Sections dialog, select **Update Cross Section** folder.

Click **Crossing Features** leaf and toggle on the **Display On** option. Select OG surface and select all the features in the feature list window.



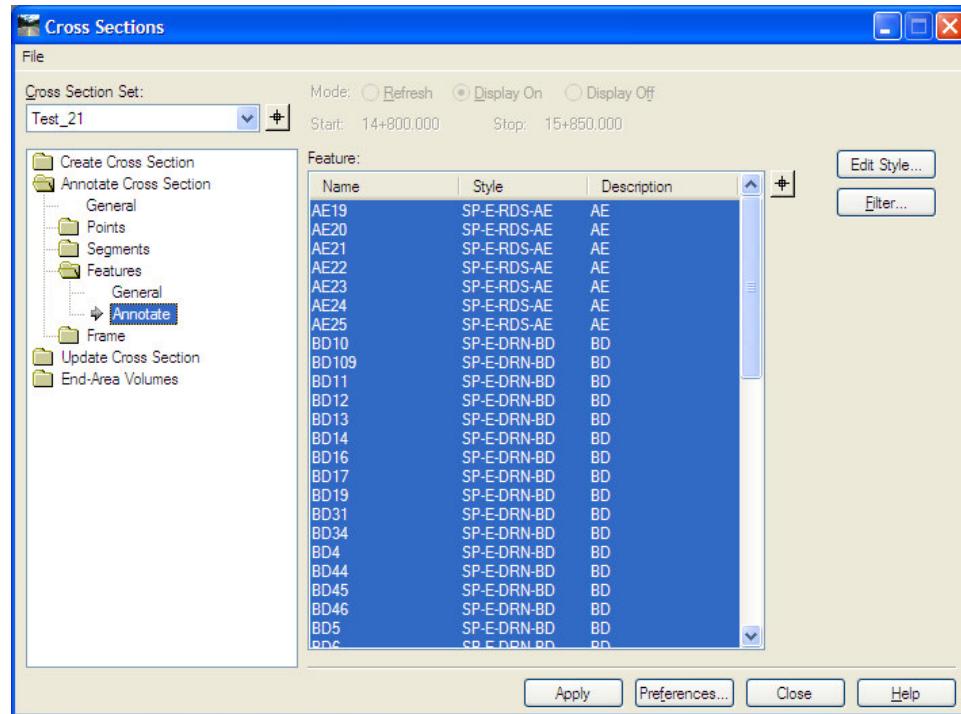
Click **Apply**, all selected features points are displayed in the cross section set.

On the left side of Cross Sections dialog, select **Annotate Cross Section** folder.

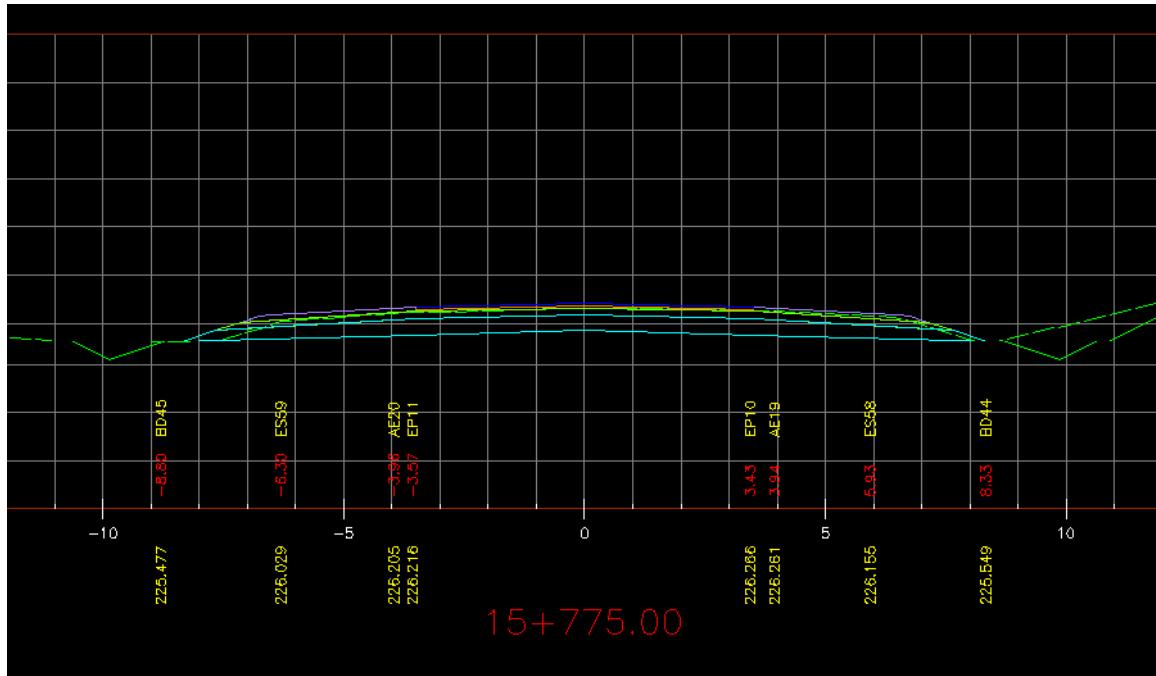
Click **Preferences** and load named preference MTO_OG (1:100).

Click **General** and select the OG surface.

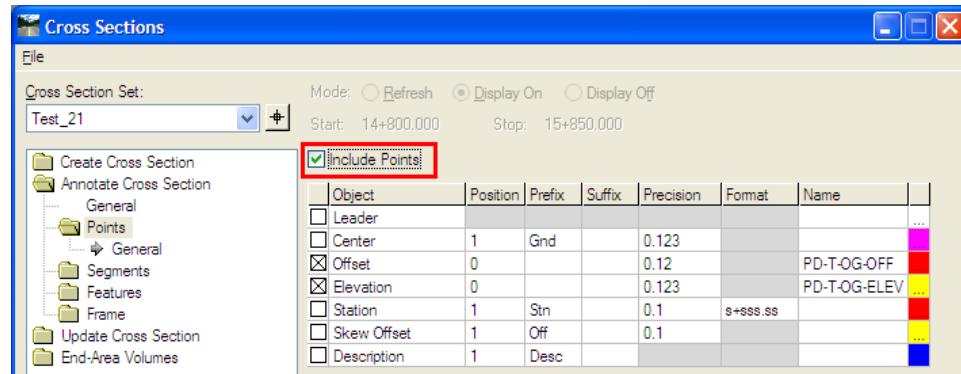
Click **Features > Annotate**. Select all the features from the feature list.



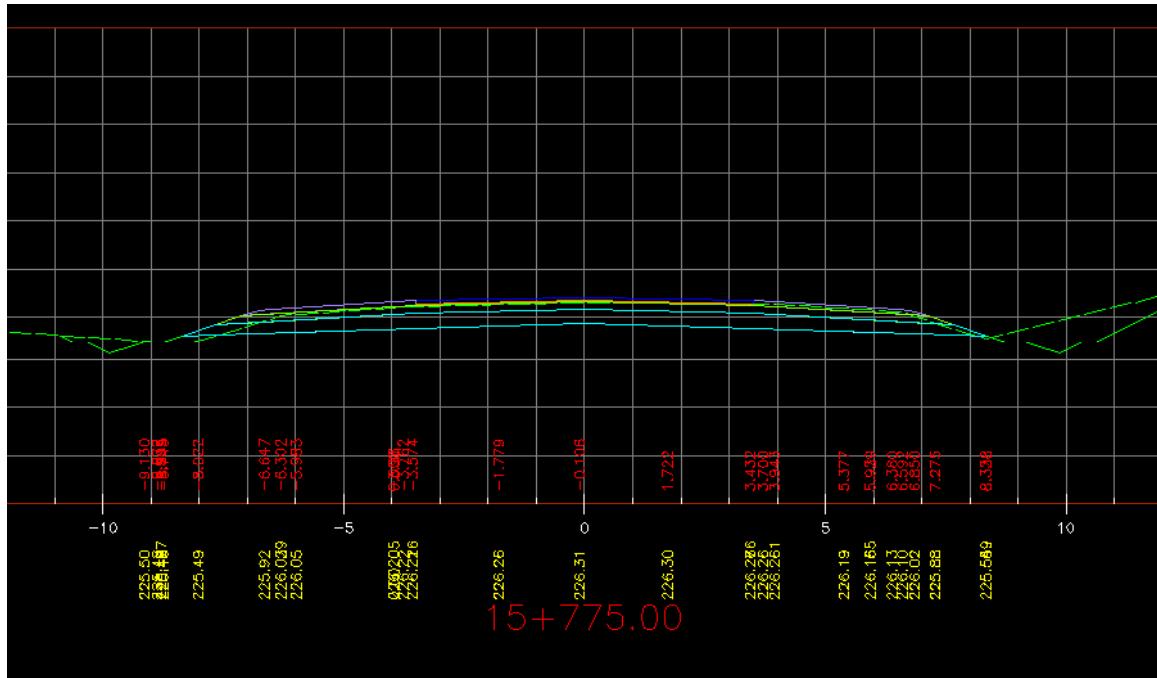
Click **Apply**. Show here is an image of OG surface annotated with the crossing features.



If the OG surface used in design doesn't have crossing features, click **Points** and check **Include Points** option.



The OG surface is annotated with some text overlapping.

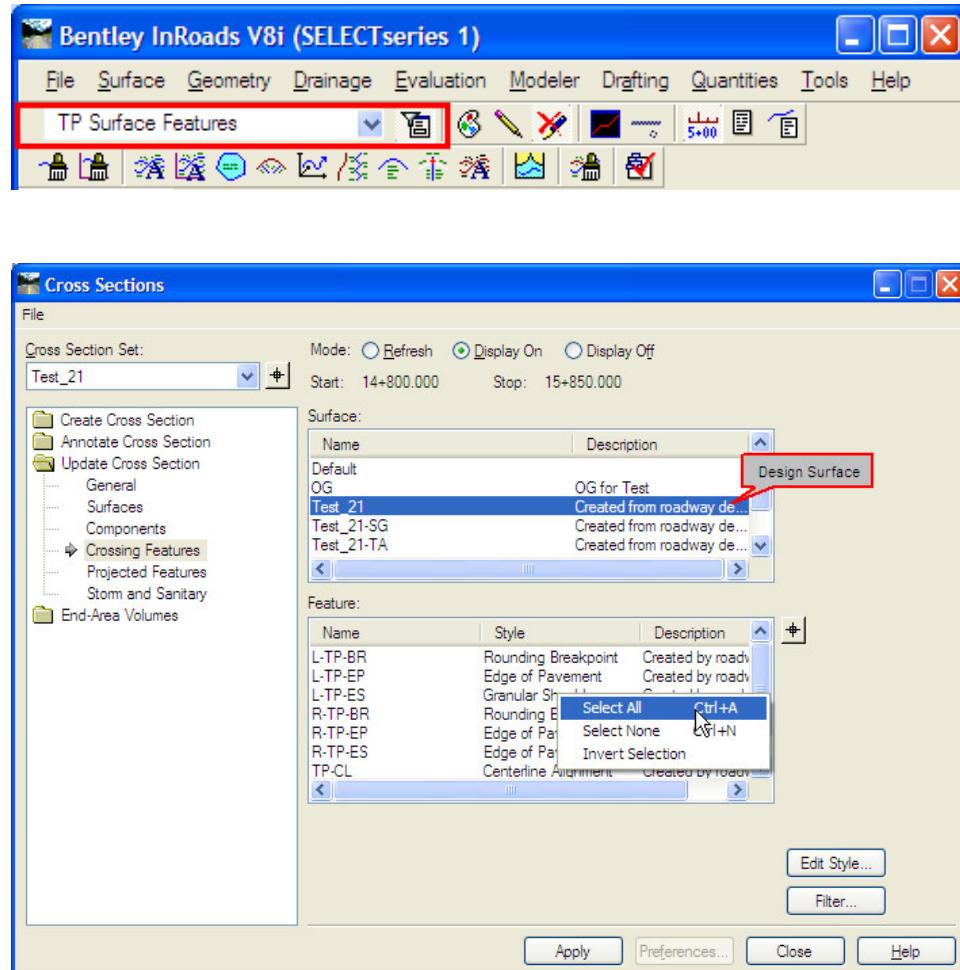


b) TP Surface.

Select **Evaluation > Cross Section > Cross Sections**

On the left side of Cross Sections dialog, select **Update Cross Section** folder.

Click **Crossing Features** leaf and toggle on the **Display On** option. Select design surface and select all the TP surface features in the feature list window. If the Feature Filter Lock is on and the proper filter is selected, then select all the features in the feature list window.



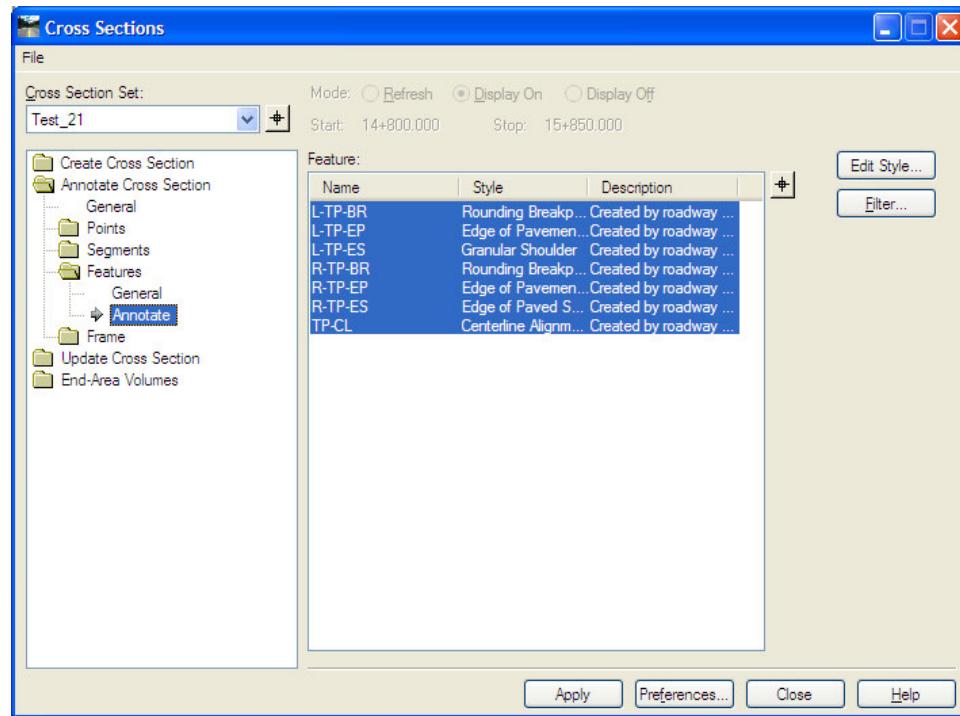
Click **Apply**, all selected TP surface features points are displayed in the cross section set.

On the left side of Cross Sections dialog, select **Annotate Cross Section** folder.

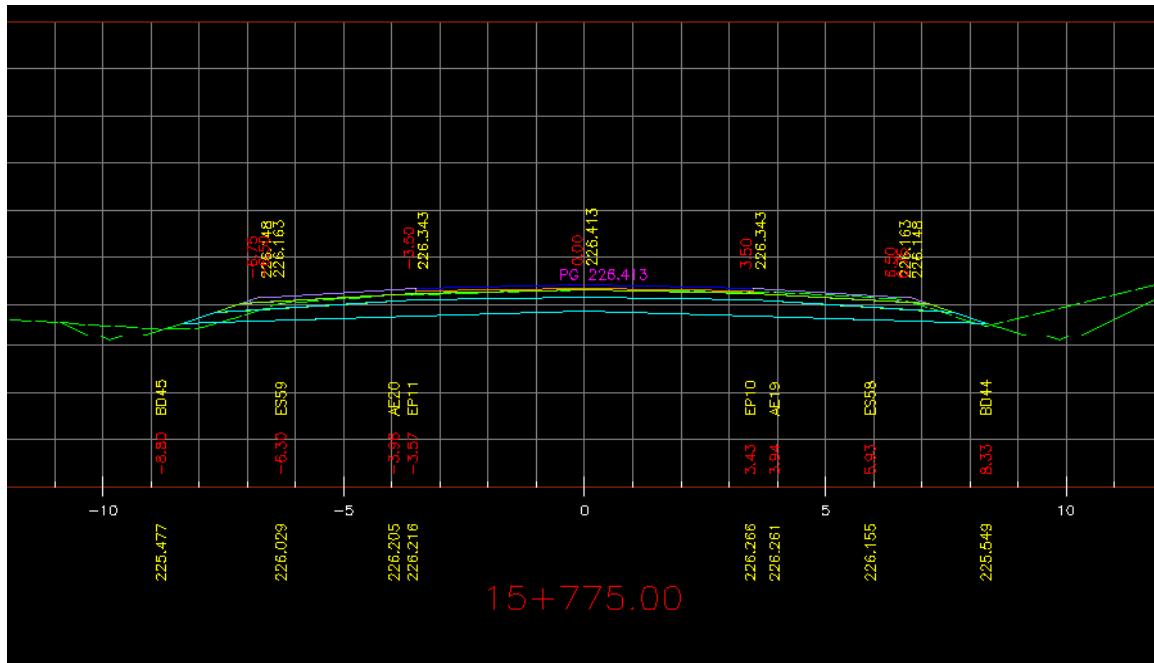
Click **Preferences** and load named preference **MTO_TP (1:100)**.

Click **General** and select the design surface (Test_21 for this example).

Click **Features > Annotate**. Select all the features from the feature list.



Click **Apply**. Now the TP surface is annotated with the crossing features.

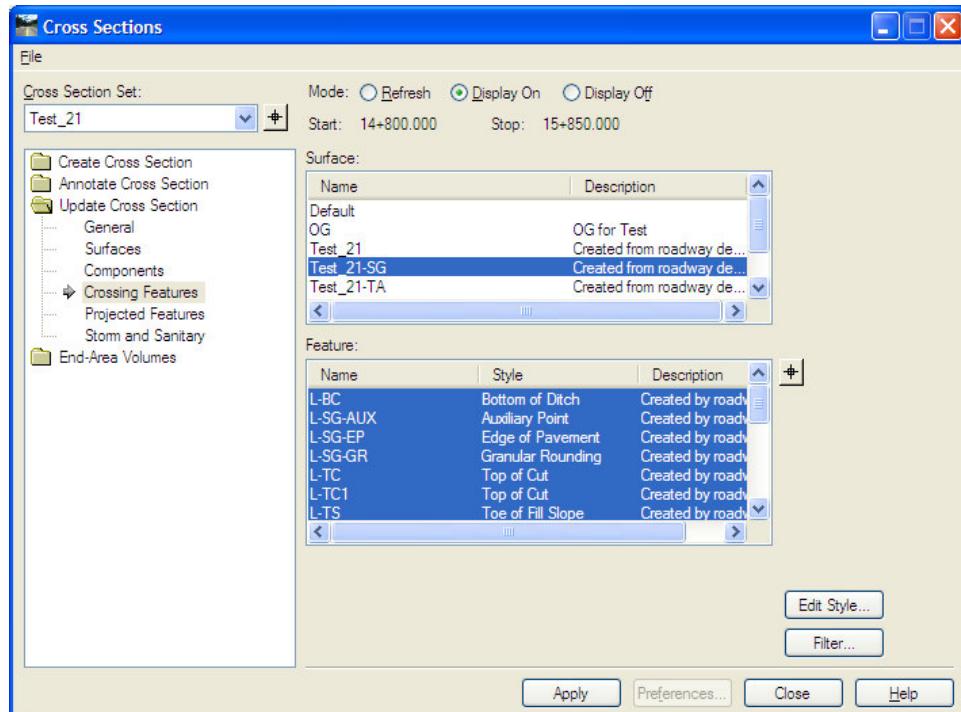


c) SG Surface.

Select **Evaluation > Cross Section > Cross Sections**

On the left side of Cross Sections dialog, select **Update Cross Section** folder.

Click **Crossing Features** leaf and toggle on **Display On** option. If SG surface has been created, then select SG surface and select all the features in the SG surface. If no SG surface has been created, use the design surface created from InRoads roadway designer. Select the design surface and then select the SG surface features from the feature list window. Use the filter to help the selection. It is recommended to create separated surfaces for each subsurface before updating/annotating cross sections set. These sub surfaces are also used to create the grade report.



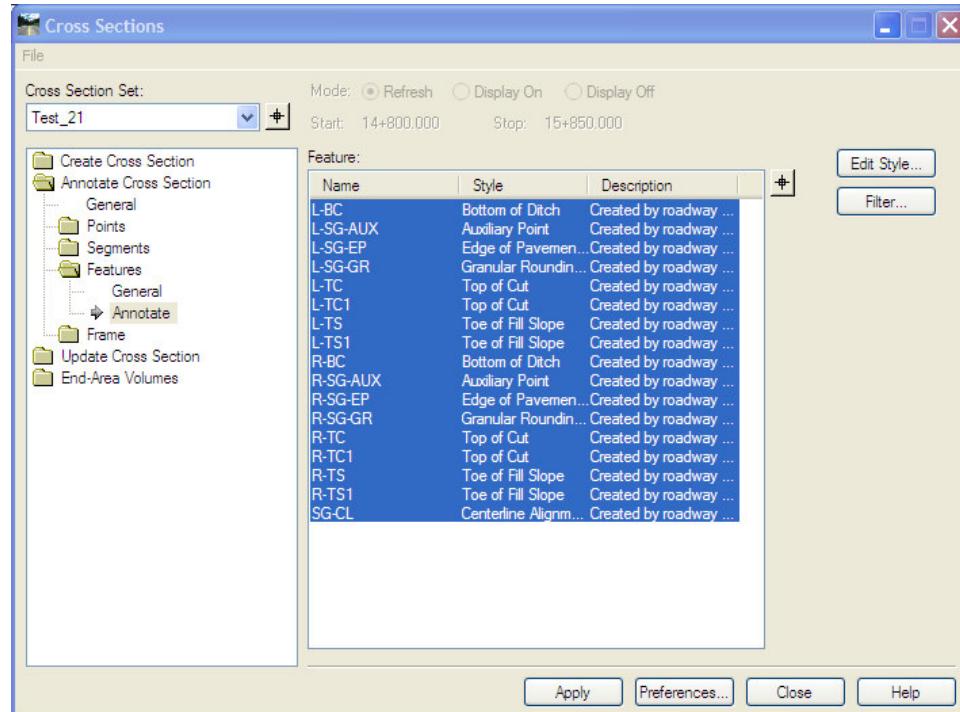
Click **Apply**, all selected SG surface features points are displayed in the cross section set.

On the left side of Cross Sections dialog, select **Annotate Cross Section** folder.

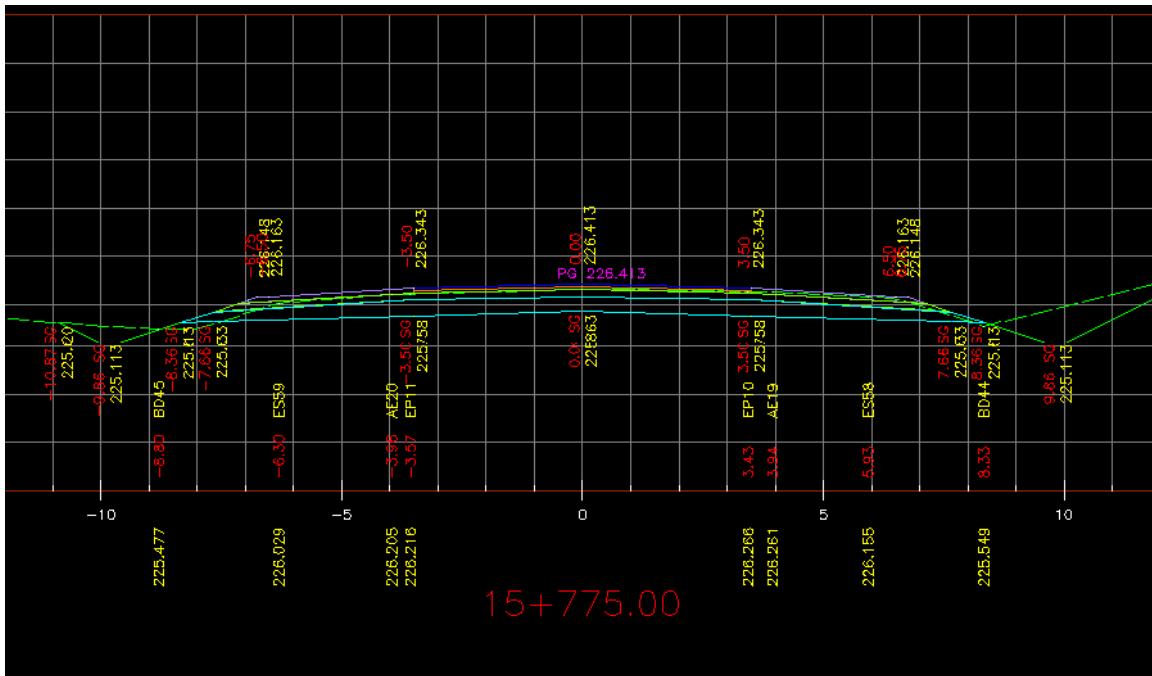
Click **Preferences** and load named preference **MTO_SG (1:100)**.

Click **General** and select the SG surface/design surface (depending on which surface is used for displaying the features).

Click **Features > Annotate**. Select all the features from the feature list.



Click **Apply**. Now the SG surface is annotated with the crossing features.



7.5.3 Annotate Cross Section in Table

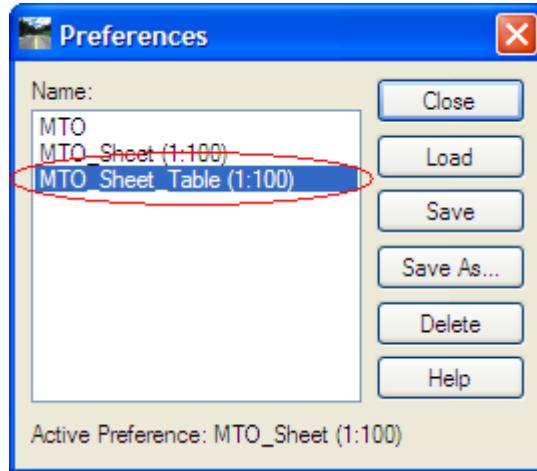
To annotate cross section in table style, you need to create the cross section set with more space below each section. Use the preference with “Table” in the preference name to create the cross section set then use the preferences also with the “Table” in the preference name for annotation.

Set the **Global Scale Factors** to 0.1.

Select **Evaluation > Cross Section > Cross Sections**

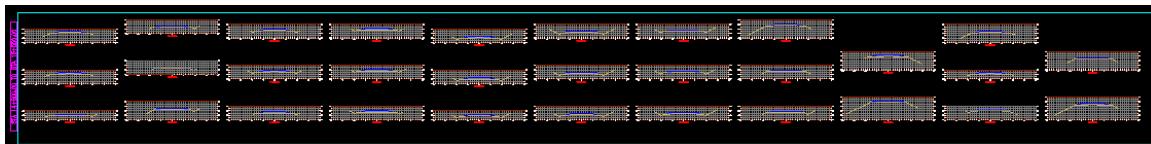
On the left side of Cross Sections dialog, select **Create Cross Section** folder.

Click **Preferences** and load named preference **MTO_Sheet_Table (1:100)**.



Go through each subfolder and leaf under Create Cross Section folder on the left panel of the dialog to make selections/changes for project specific requirements.

Click **Apply**. The cross section set will be created with more space between sections. See below.



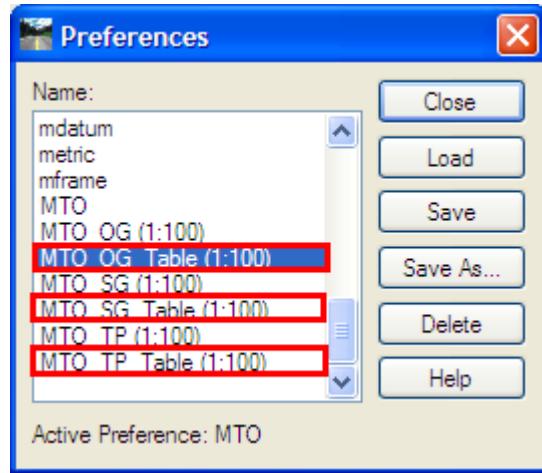
Select **Evaluation > Cross Section > Cross Sections**

On the left side of Cross Sections dialog, select **Update Cross Section** folder.

Refer to previous section to add features for each layer/surface (OG, TP, and SG).

On the left side of Cross Sections dialog, select **Annotate Cross Section** folder.

Click **Preferences** and load named preference with “_Table” in the preference name.

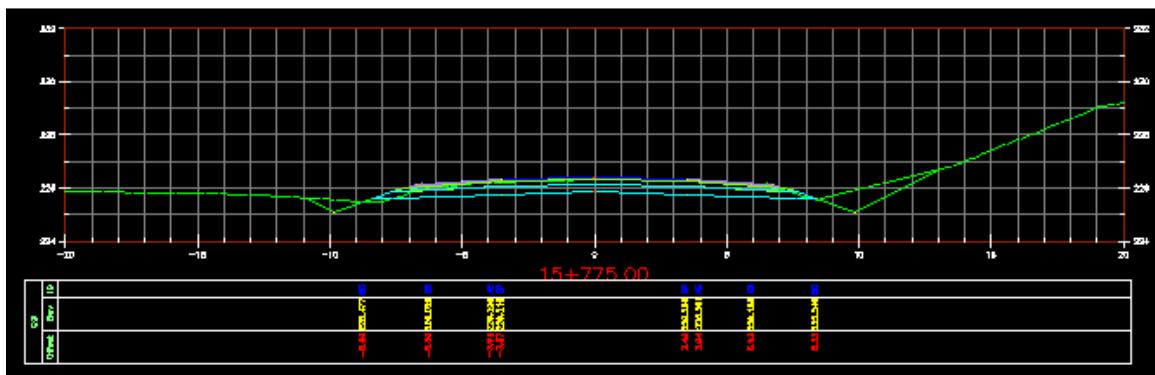


Load named preference **MTO_OG_Table (1:100)** for **OG** surface annotation.

Click **General** and select the **OG** surface.

Click **Features > Annotate**. Select all the features from the feature list.

Click **Apply**. Now the **OG** surface is annotated in the table below the section.

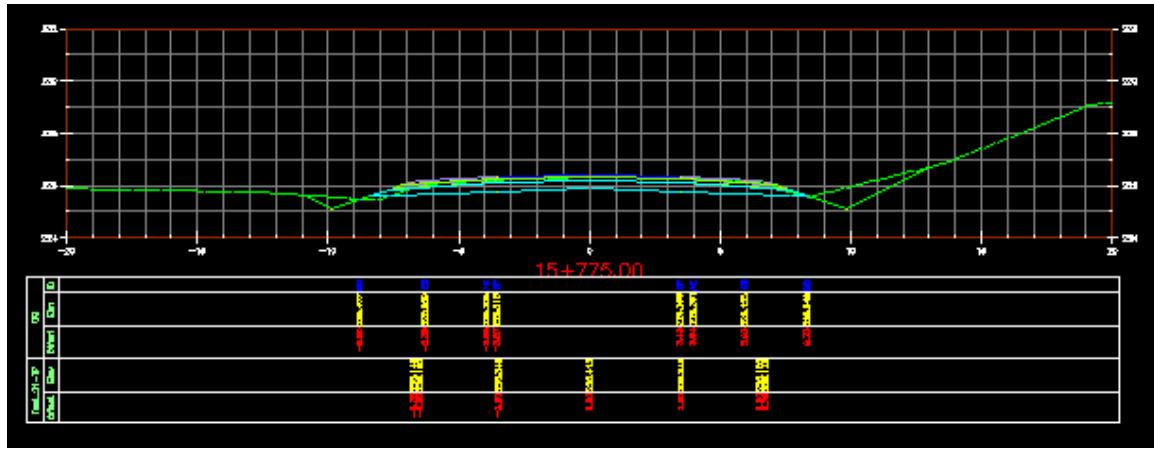


Load named preference **MTO_TP_Table (1:100)** for **TP** surface annotation.

Click **General** and select the **TP** surface.

Click **Features > Annotate**. Select all the features from the feature list.

Click **Apply**. Now the annotation for **TP** surface is added to the table after the **OG** surface annotation.

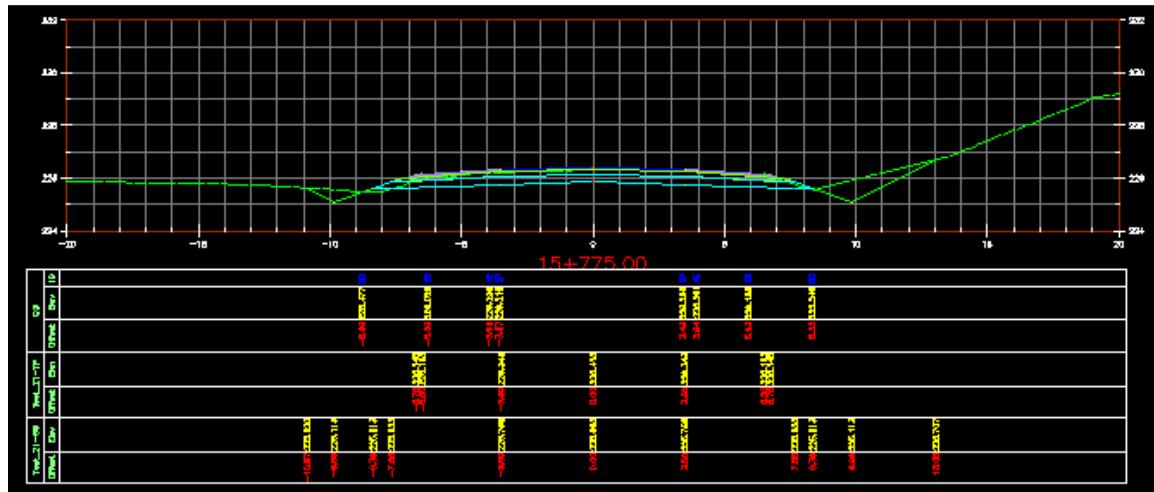


Load named preference **MTO_SG_Table (1:100)** for **SG** surface annotation.

Click **General** and select the **SG** surface.

Click **Features > Annotate**. Select all the features from the feature list.

Click **Apply**. Now the annotation for **SG** surface is added to the table below the **TP** surface annotation.

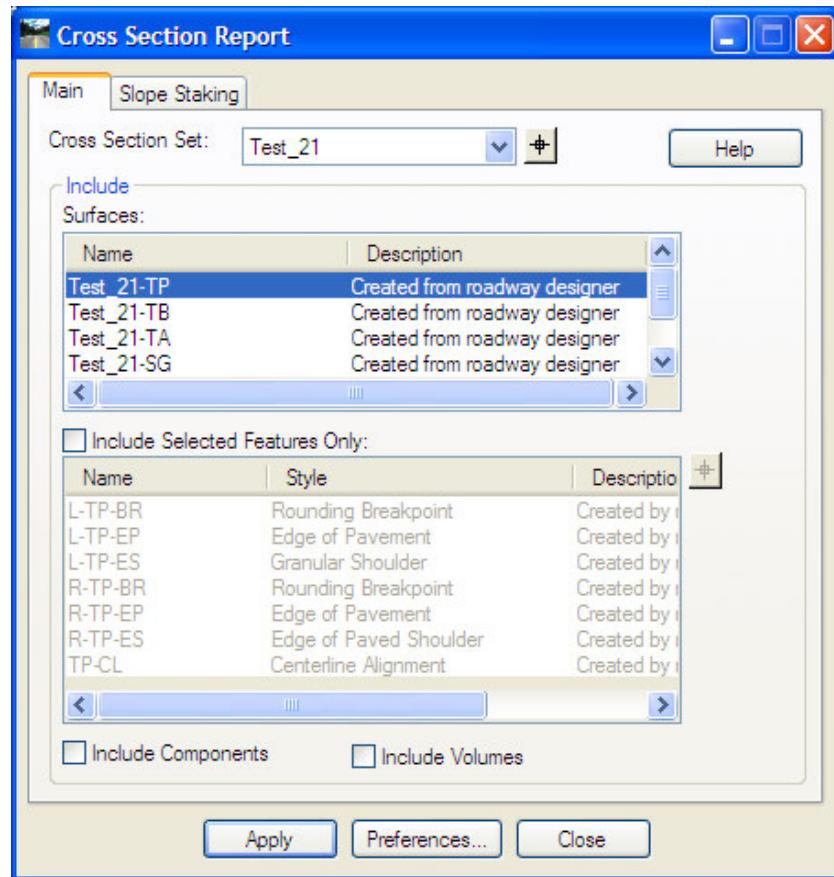


7.5.4 Cross Section Report

This command creates a station, offset, and elevation report for a specified cross section set. Before running the report, make sure that you display features, components, and all surfaces that you want in the report.

Select **Evaluation > Cross Section > Cross Section Report**.

Select surface and click **Apply**.



Select **Evaluation > CrossSectionGradebook.xls** (design surface) or **CrossSectionGradebookWide.xls** (subsurface).

The precision and formats can be set by selecting **Tools > Format Options**.

| Surface | Station | Elevation | Offset |
|------------|------------|---|---------------------------------------|
| Test_21-TP | 14+800.000 | 220.249 220.264 220.444 220.514 220.444 220.264 220.249 | -6.75 -6.50 -3.50 0.00 3.50 6.50 6.75 |
| Test_21-TB | 14+825.000 | 220.523 220.538 220.718 220.788 220.718 220.538 220.523 | -6.75 -6.50 -3.50 0.00 3.50 6.50 6.75 |
| Test_21-TA | 14+850.000 | 220.734 220.749 220.929 220.999 220.929 220.749 220.734 | -6.75 -6.50 -3.50 0.00 3.50 6.50 6.75 |

7.6 Volume

The Volumes commands calculate volumes between surfaces. They can compute the materials required for each layer in your roadway.

7.6.1 End-Area Volume

This command performs the traditional end-area volume calculation to compute cut, fill, and net volumes using a series of cross sections extracted along a previously defined alignment. You can also add unsuitable material to calculations and/or add volume exceptions. A complete report listing all computed quantities on a station-by-station basis can also be generated with this command.

The command requires cross sections created through InRoads with at least two displayed surfaces. The End-Area Volumes are based on the cross sections displayed in the CAD. You don't have to load the surfaces in order to compute End-Area Volume.

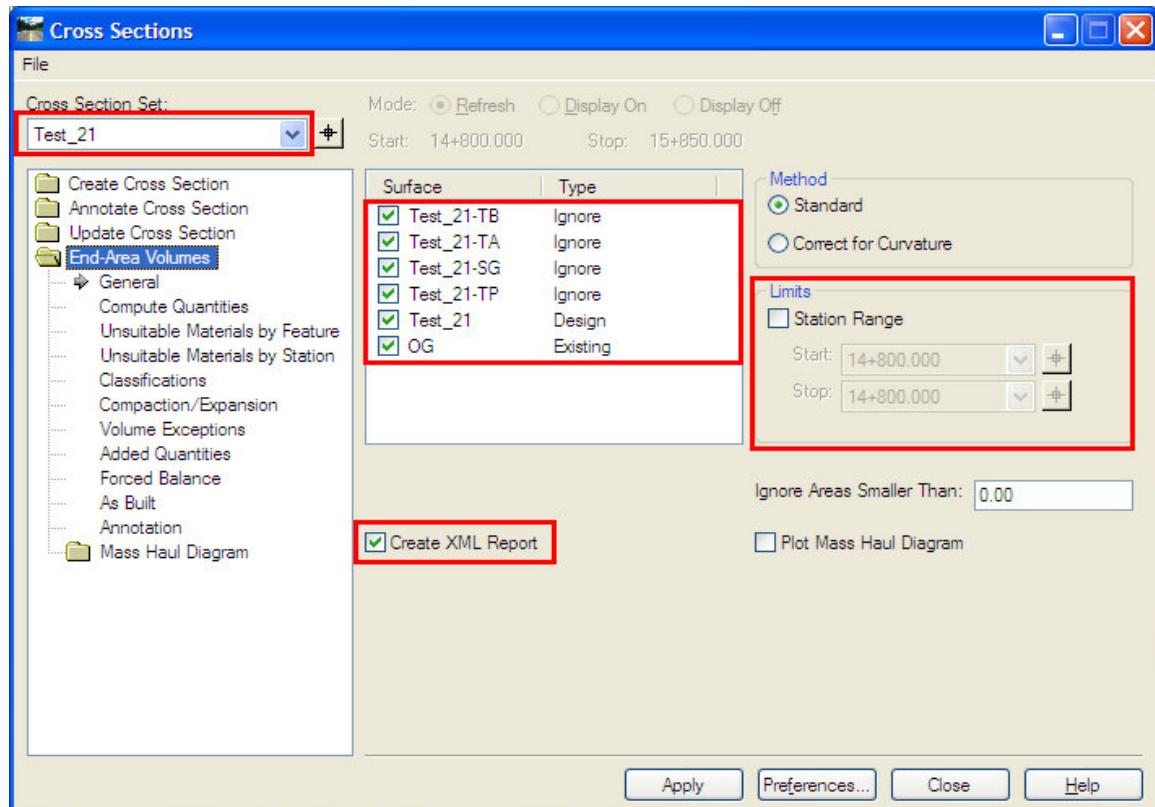
Select **Evaluation > Cross Section > Cross Sections**

On the left side of Cross Sections dialog, select **End-Area Volumes** folder.

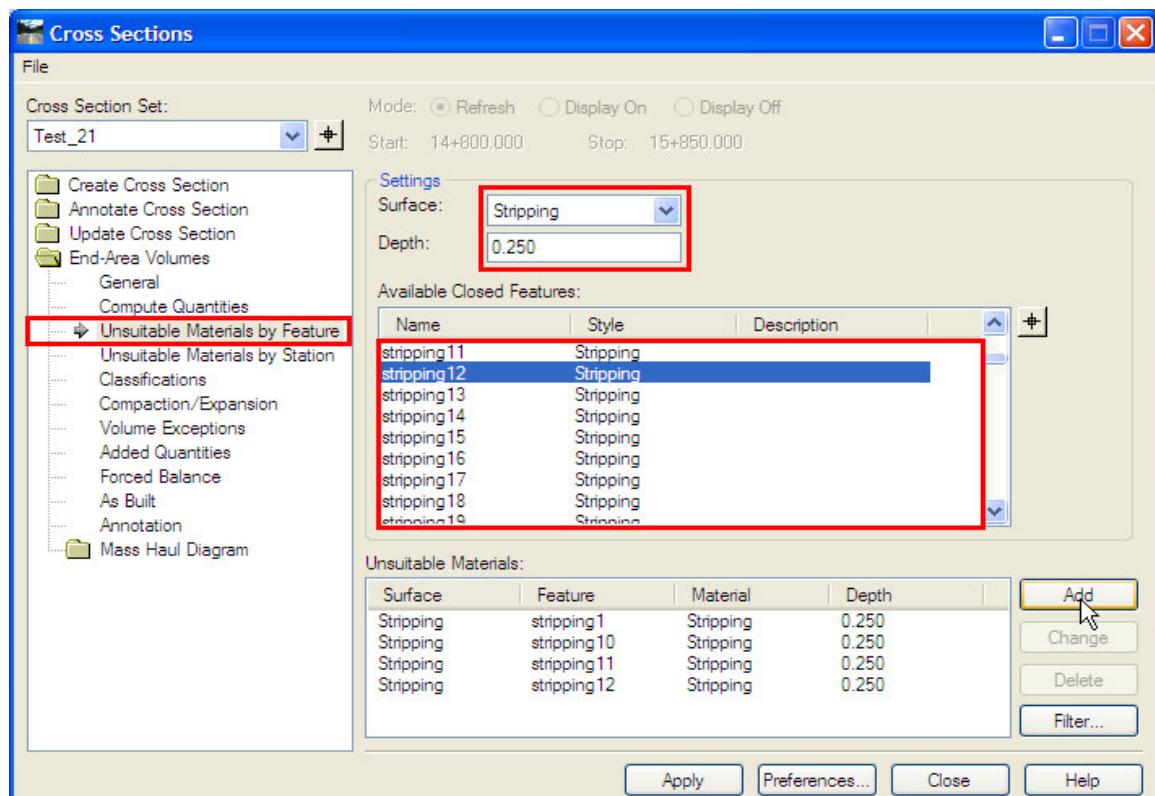
Click **Preferences** and load preferred preference. Default preference **MTO** has initial settings. User should go through each of the leaves under End-Area Volumes folder on the left panel of the dialog to make selections/changes for project specific requirements.

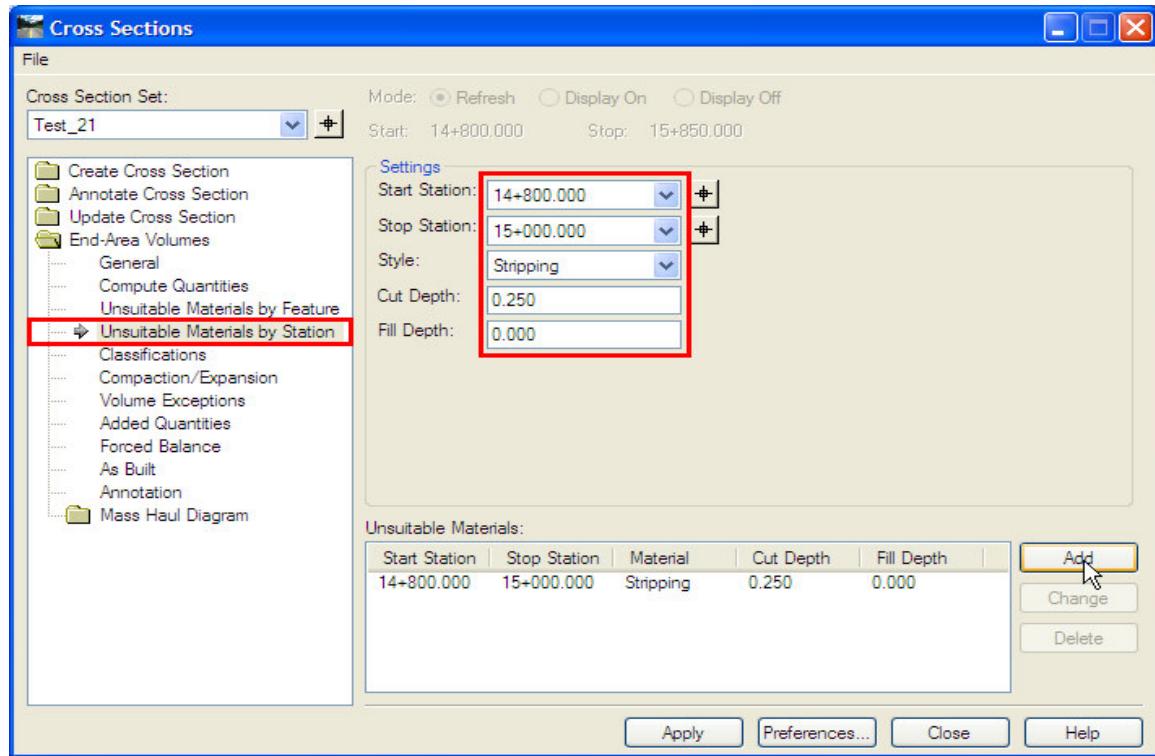
Select the desired cross section set from the **Cross Section Set** drop down list.

Click **General**, toggle on the desired surfaces. By default, the volume will be calculated for whole cross section set with **Create XML Report** option toggled on.

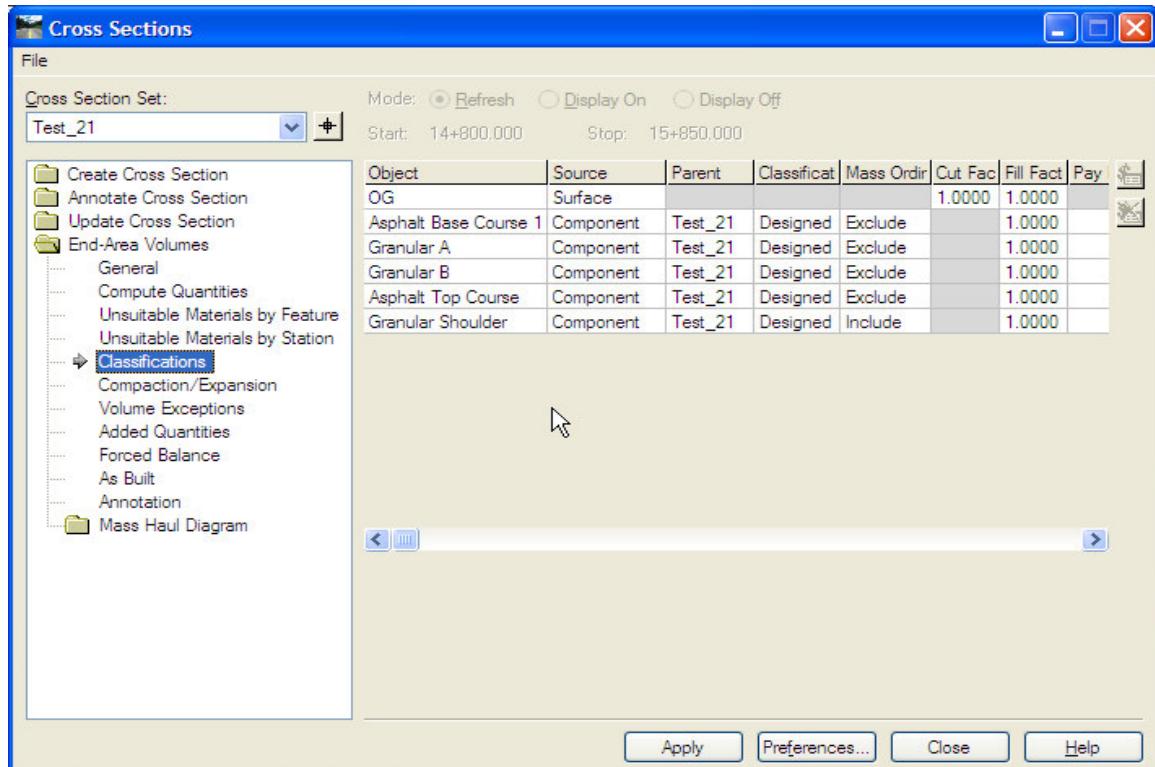


Click **Unsuitable Materials by Feature/ Station** to add unsuitable material to end area calculations (topsoil stripping and muck removal). If both options are used, the materials defined by the station range supersede any defined by the feature method.

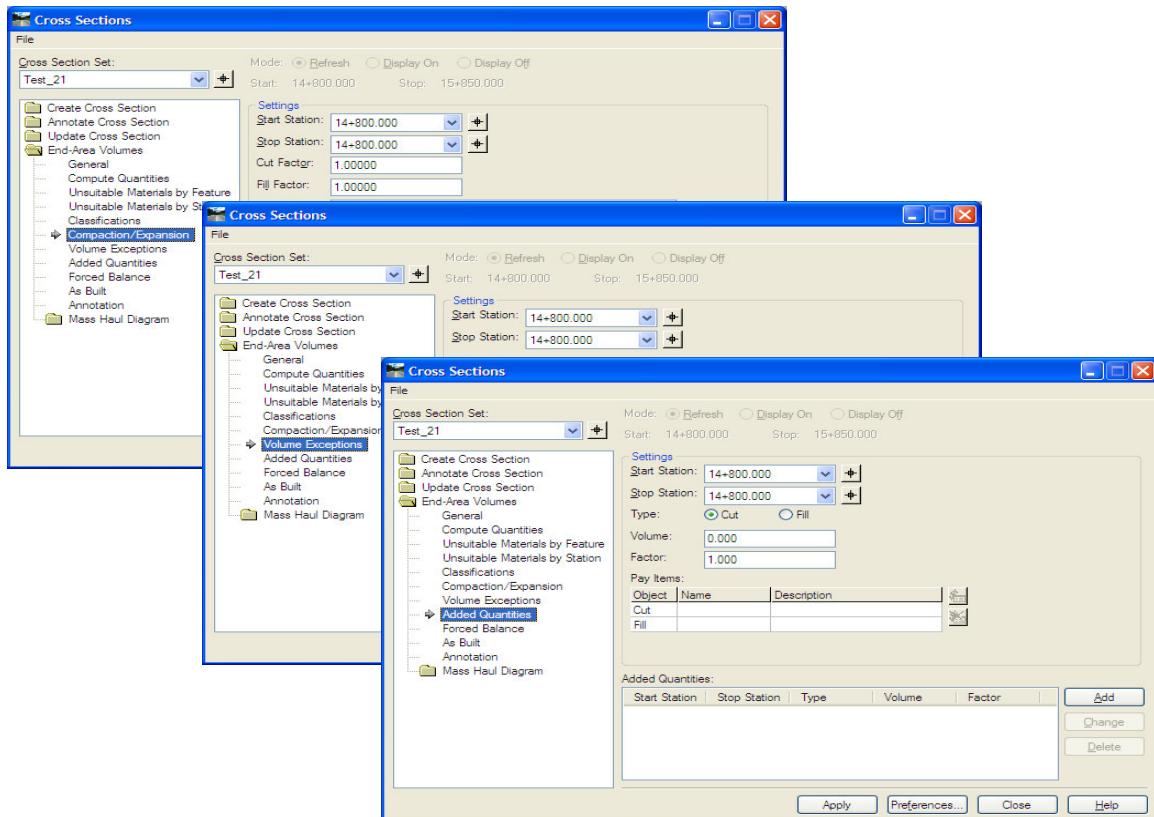




Click **Classification** leaf. Use this dialog to control how volumes are calculated and reported for individual materials. Individual materials are those not normally included in the unclassified cut and fill volumes. These include substrata materials, component materials, and materials calculated from the Material Features leaf.

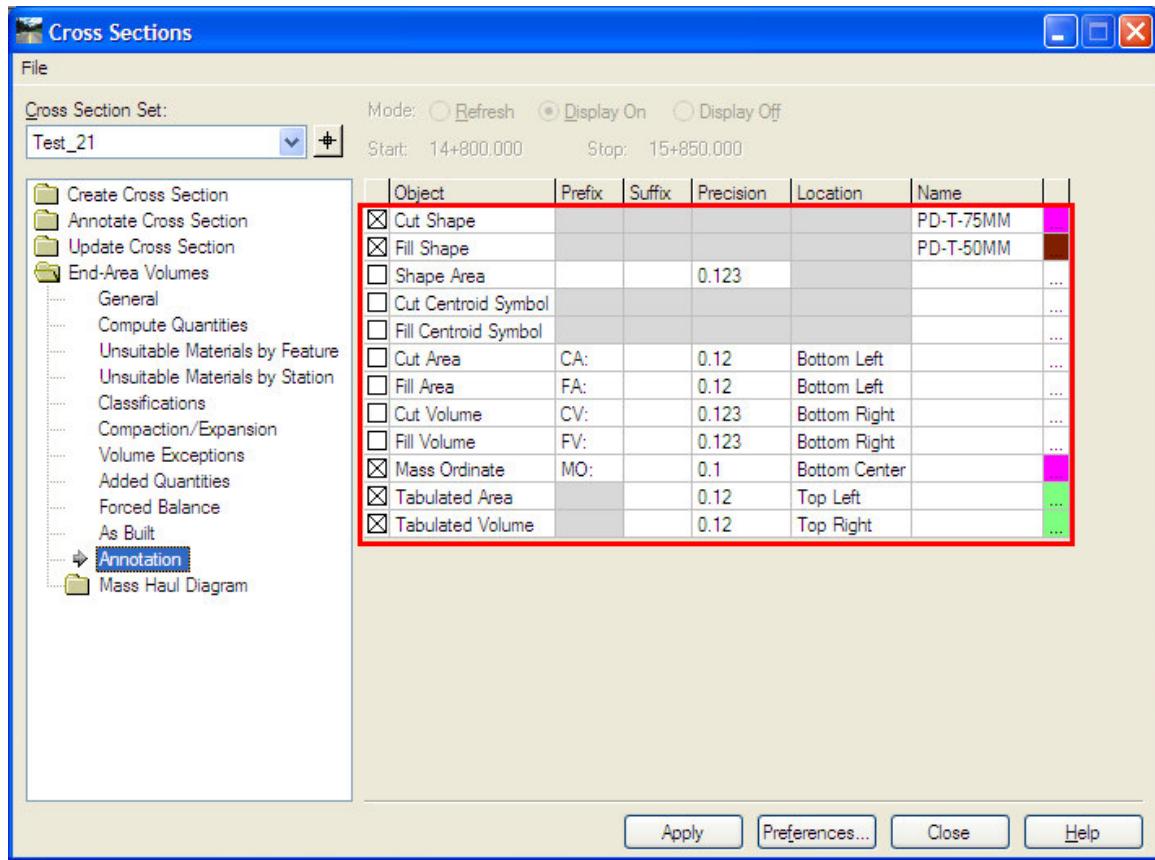


Click **Compaction/Expansion**, **Volume Exceptions**, or **Added Quantities** leaf to adjust end area calculations. Use **Cut/Fill Factor** to account for any swell or shrinkage that may occur when remove/place material. Use Volume Exceptions to ignore earthwork quantity in a given range (bridge).

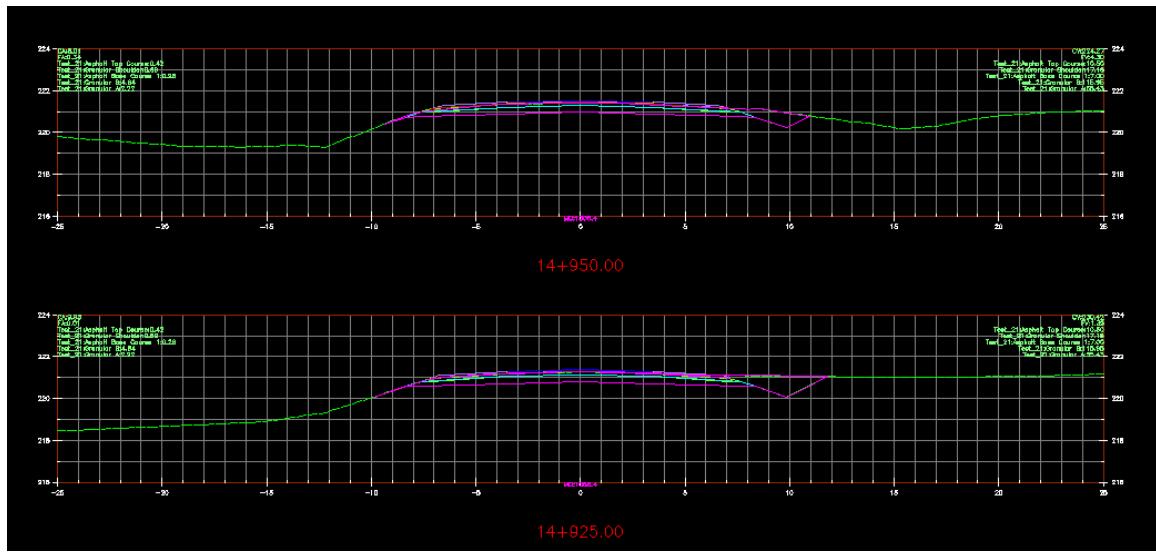


Click **File > Save or Save As** to save an End-Area Volume parameter file (*.eav) to store the parameters entered above.

Click **Annotation** leaf to select annotation options. Shown below are default settings. Change the options as you need. In order to show information properly, the **Global Scale Factors** need to be set to reflect the cross section set scale.



Click **Apply** to calculate the volumes. Below is an example of annotated cross section set.



With **Create XML Report** option toggled on, Bentley Civil Report Browser displayed. Select a report format from the style sheet list on the left panel of the browser. There are seven style sheets from the Evaluation folder can be used to view **End Area Volume** report.

The screenshot shows the Bentley Civil Report Browser interface. The title bar reads "Bentley Civil Report Browser - C:\DOCUMENTS\1LuoAnd\LOCALS\1Temp\RPTD1.xml". The menu bar includes "File", "Tools", and "Help". The left pane displays a tree view of XML files under "C:\Program Files\Bentley\InRoads Group V8.11\XML Data\". Several files are highlighted with red boxes, including "Evaluation", "BasicEndAreaVolumeBalanceStation.xls", "BasicVolume.xls", "CrossSection.xls", "CrossSectionAllFeatures.xls", "CrossSectionASCIIInputFormat.xls", "CrossSectionASCIIInputFormatFeature.xls", "CrossSectionDesignSurfaceFeatures.xls", "CrossSectionGradebook.xls", "CrossSectionGradebookNE.xls", "CrossSectionGradebookWide.xls", "CrossSectionPoints.xls", "CrossSectionPointsList.xls", "CrossSectionSlopeStakeListing.xls", "CrossSectionStaking.xls", "CrossSectionStakingTable.xls", "CrossSectionsToCSV.xls", "CrossSectionSurveyFormat.xls", "CrossSectionWide.xls", "CrossSectionXYZ.xls", "EarthworkQuantities.xls", "EndAreaVolume.xls", "EndAreaVolumePageTotals.xls", "EndAreaVolumeStationRange.xls", "MultipleMaterialVolumes.xls", "TriangleVolumes.xls", "TriangleVolumesSumShape.xls", "Volumes.xls", "VolumesToCSV.xls", "VolumesWithParentSurface.xls", "VolumesWithReplacedAddedToNormalFill.xls", and "Geometry". The right pane shows the "End Area Volume Report" with the following details:

Cross Section Set Name: Test_21
Alignment Name: Test_21
Report Created: 6/30/2011
Time: 3:45pm

Input Grid Factor: 1.000000 **Note:** All units in this report are in meters, square meters and cubic meters unless specified otherwise.

| Baseline Station | Station Quantities | | | | Added Quantities | | | | Mass Ordinate | | |
|------------------|--------------------|-------|--------|-----------------|------------------|--------|-----------------|--------|---------------|------|------|
| | Cut Factor | Area | Volume | Adjusted Factor | Area | Volume | Adjusted Factor | Volume | | | |
| 14+800.000 | 1.00 | 12.65 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| 14+825.000 | 1.00 | 7.96 | 257.64 | 257.64 | 1.00 | 0.33 | 4.18 | 4.18 | 1.00 | 0.00 | 0.00 |
| 14+850.000 | 1.00 | 7.11 | 188.46 | 188.46 | 1.00 | 1.15 | 18.54 | 18.54 | 1.00 | 0.00 | 0.00 |
| 14+875.000 | 1.00 | 9.11 | 202.80 | 202.80 | 1.00 | 0.41 | 19.51 | 19.51 | 1.00 | 0.00 | 0.00 |
| 14+900.000 | 1.00 | 8.20 | 216.37 | 216.37 | 1.00 | 0.07 | 6.08 | 6.08 | 1.00 | 0.00 | 0.00 |
| 14+925.000 | 1.00 | 9.65 | 223.13 | 223.13 | 1.00 | 0.00 | 0.93 | 0.93 | 1.00 | 0.00 | 0.00 |
| 14+950.000 | 1.00 | 8.01 | 220.74 | 220.74 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| 14+975.000 | 1.00 | 10.95 | 236.98 | 236.98 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| 15+000.000 | 1.00 | 9.76 | 258.88 | 258.88 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| 15+025.000 | 1.00 | 10.58 | 264.21 | 264.21 | 1.00 | 0.03 | 0.40 | 0.40 | 1.00 | 0.00 | 0.00 |
| 15+050.000 | 1.00 | 11.08 | 270.69 | 270.69 | 1.00 | 0.03 | 0.81 | 0.81 | 1.00 | 0.00 | 0.00 |
| 15+075.000 | 1.00 | 11.41 | 281.08 | 281.08 | 1.00 | 0.01 | 0.50 | 0.50 | 1.00 | 0.00 | 0.00 |
| 15+100.000 | 1.00 | 10.81 | 277.78 | 277.78 | 1.00 | 0.03 | 0.43 | 0.43 | 1.00 | 0.00 | 0.00 |
| 15+125.000 | 1.00 | 11.98 | 284.91 | 284.91 | 1.00 | 0.00 | 0.34 | 0.34 | 1.00 | 0.00 | 0.00 |
| 15+150.000 | 1.00 | 12.39 | 304.67 | 304.67 | 1.00 | 0.00 | 0.01 | 0.01 | 1.00 | 0.00 | 0.00 |
| 15+175.000 | 1.00 | 12.32 | 308.98 | 308.98 | 1.00 | 0.00 | 0.01 | 0.01 | 1.00 | 0.00 | 0.00 |
| 15+200.000 | 1.00 | 14.05 | 329.67 | 329.67 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |

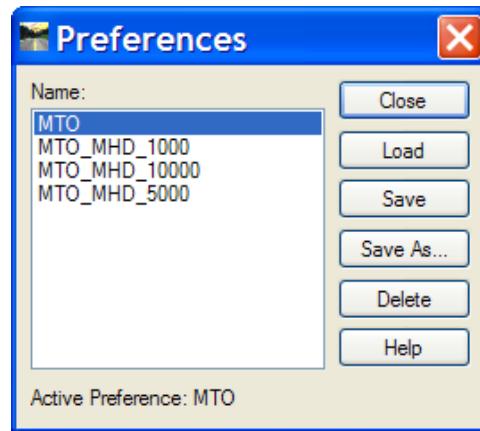
7.6.2 Mass-Haul Diagram

This command generates a Mass-Haul diagram for the specified range from the selected cross section set and displays it in the drawing file. A Mass-Haul diagram shows cumulative total of cut and fill volumes along a horizontal alignment. Before you generate a Mass-Haul diagram, you must have the cross section set displayed in the active drawing window.

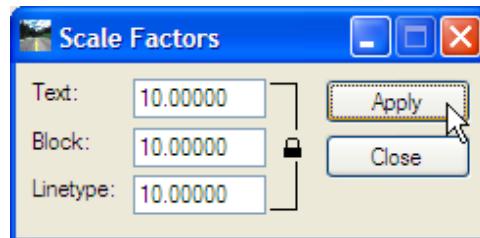
Select Evaluation > Cross Section > Cross Sections

On the left side of Cross Sections dialog, select **End-Area Volumes** folder then select **Mass-Haul Diagram** folder.

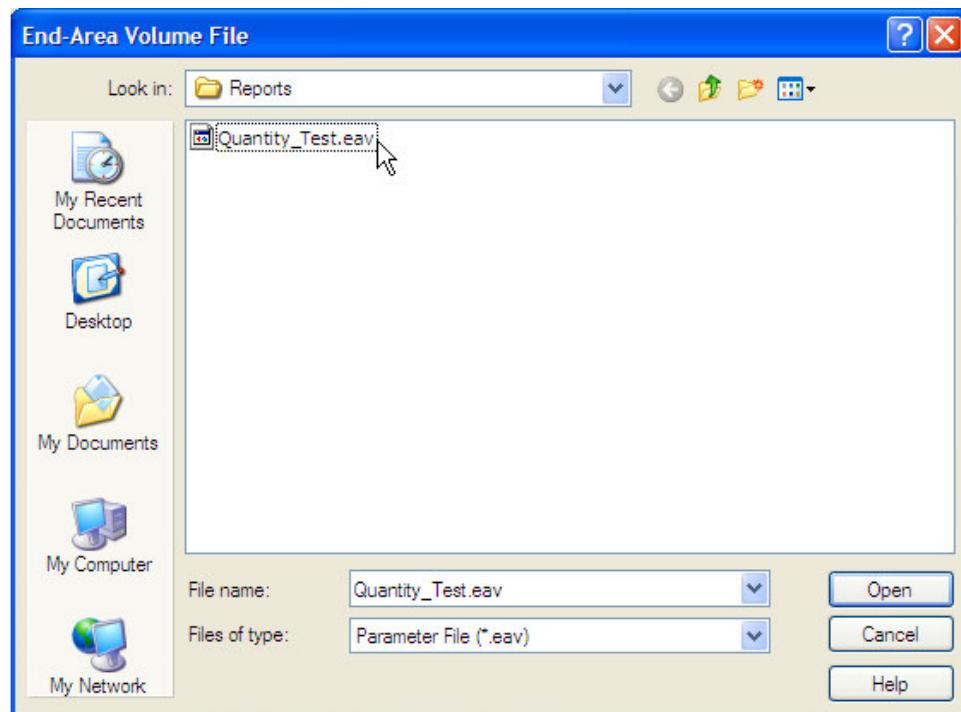
Click **Preferences** and load preferred preference. The preferences with “MTO_MHD_” in the preference name are set for Mass Haul Diagram. **MTO_MHD_1000** is set to 1000 m³ per major grid with a horizontal exaggeration of 1 and a vertical exaggeration of 0.01. Preference **MTO_MHD_5000** is set to 5000 m³ per major grid and **MTO_MHD_10000** is set to 10000 m³ per major grid. Select the named preference base on the earthwork volume of the project.



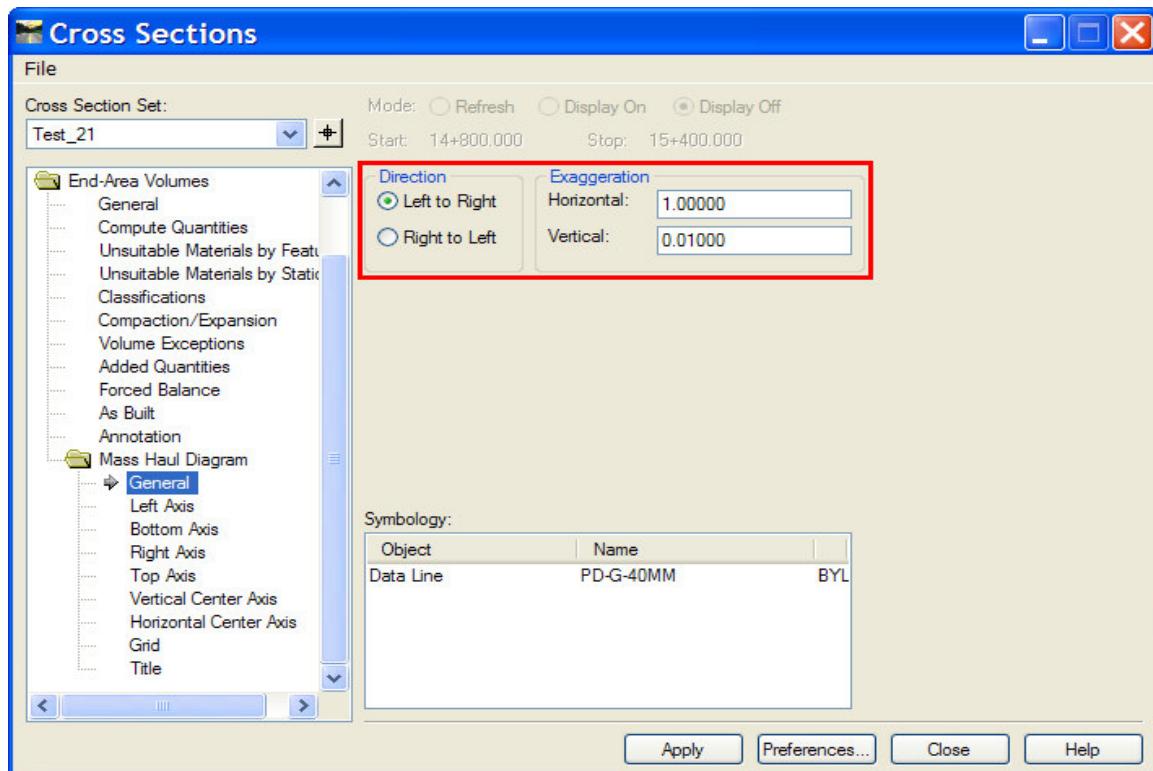
Change the **Global Scale Factors** for annotation to match the plot scale.



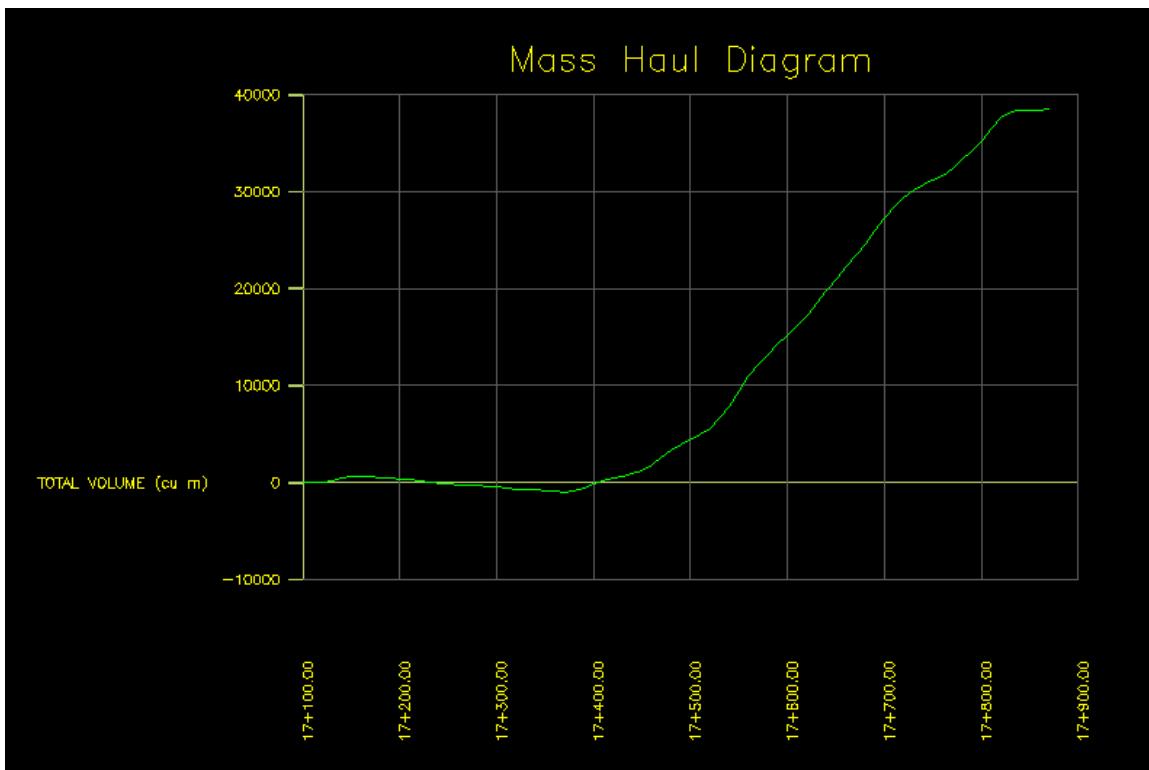
Go through each of the leaves under **End-Area Volumes** folder on the left panel of the dialog to make selections/changes for quantities to be included in Mass-Haul diagram. You can load the Parameter File from the End-Area Volume calculation if you have saved one.



Click **General** leaf under **Mass Haul Diagram** folder. You can change the mass haul diagram direction and horizontal and vertical exaggerations.



Shown below is an example of a mass-haul diagram.



7.7 Templates

A MTO standard template library **MTO_STD_Templates.itl** has been provided with **MTO InRoads Project Template**. This library contains several typical sections, components and end conditions with predefined point names that are associated with MTO standard styles and symbologies. It can be used to facilitate the creation of new components/templates on any project library.

7.7.1 Point name list

The standard template library contains a predefined point name list where point names are assigned style defined in MTO InRoads preference file **MTO_civil_SS2.xin**.



Employ the standard **Point Name List** and supplement as needed before creating project templates. Apply prefix, suffix and layer identifier to the point names and keep the points linked to predefined feature styles.

7.7.2 Parametric Constraints

Parametric constraints can be used to change one or more labeled constraint values of a template while the template is being processed in the **Roadway Designer**. This allows you to use only one template to handle a number of different conditions. When use **Parametric Constraints**, designers should consider the constraint types and the design features to assign descriptive names for the labels.

Typical label names are combinations of abbreviations such as:

Constraint Types:

| | |
|------------------------|-----------------------|
| Width | Horizontal Constraint |
| Depth/Thickness/Height | Vertical Constraint |
| Slope/Slp | Slope Constraint |

Design Features:

| | |
|--------|-------------|
| Rdwy | Roadway |
| Shld | Shoulder |
| SW | Sidewalk |
| Lane | Travel Lane |
| Blvd | Boulevard |
| Pavt | Pavement |
| Drive | Driveway |
| Curb | Curb |
| Ditch | Ditch |
| Median | Median |

Material/Surface Layer

| | |
|-------|----------------|
| Asph | Asphalt |
| Conc | Concrete |
| GranA | Granular A |
| GranB | Granular B |
| Sand | Sand |
| WC | Wearing Course |
| BC | Binder Course |
| Base | Base Course |
| SG | Subgrade |

Suffix

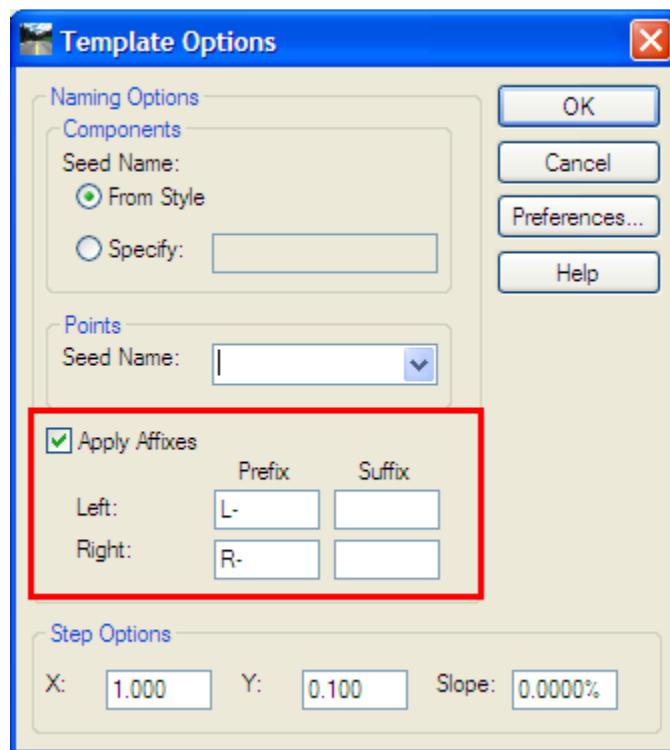
| | |
|----|-------|
| Lt | Left |
| Rt | Right |

Some Example Labels:

| | |
|--------------------|-----------------------------|
| Lt_Shld_Aspf_Depth | Left Shoulder Asphalt Depth |
| Rt_Shld_Slp | Right Shoulder Slope |
| Rt_Pavt_Width | Right Pavement Width |
| GranA_Depth | Granular A Depth |

7.7.3 Template Options

The template options have been set to “**Apply Affixes**” for default preference **MTO**. The affixes are prefixes L- and R-. The affixes will be applied to point names when the components are placed into the template.

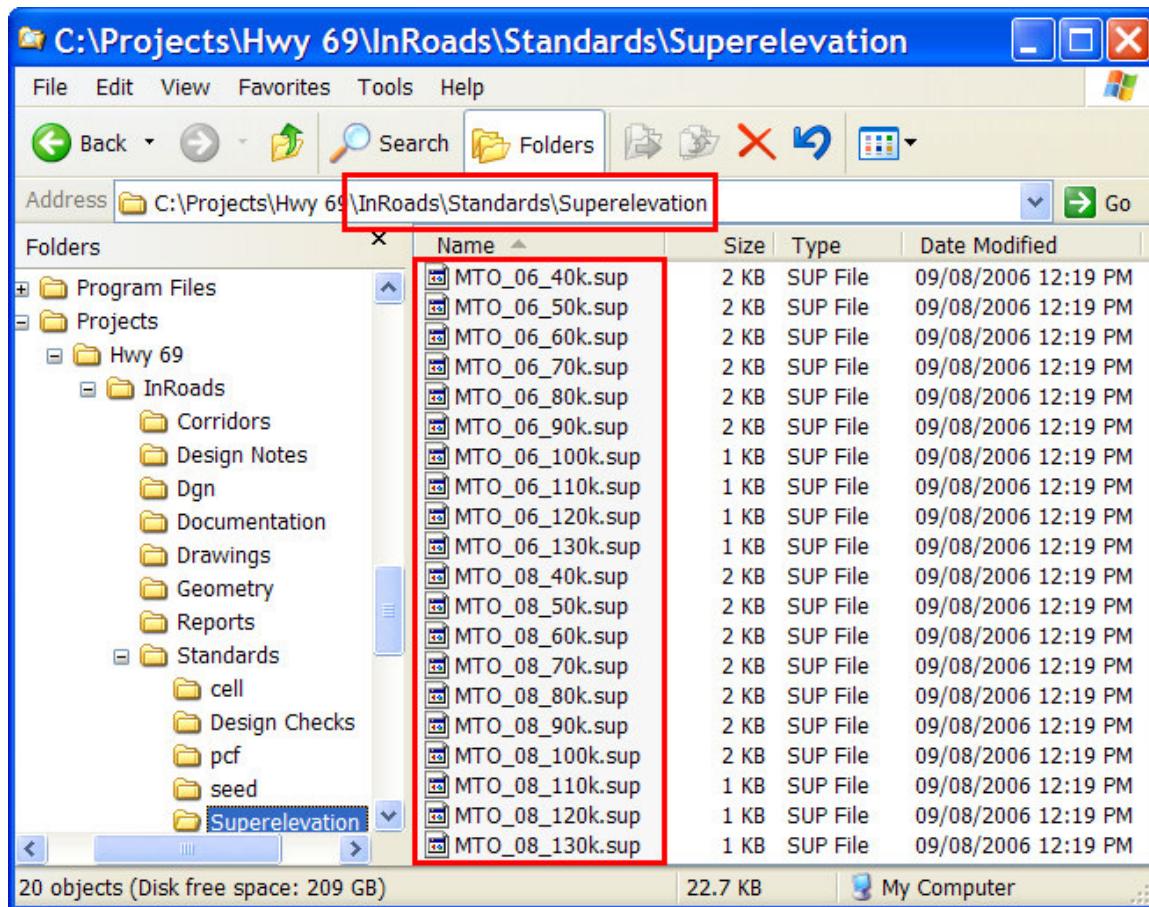


For more complicated templates, suffixes such as –L and –R or _L and _R can also be added to the point names.

7.8 Roadway Designer

7.8.1 Superelevation Wizard

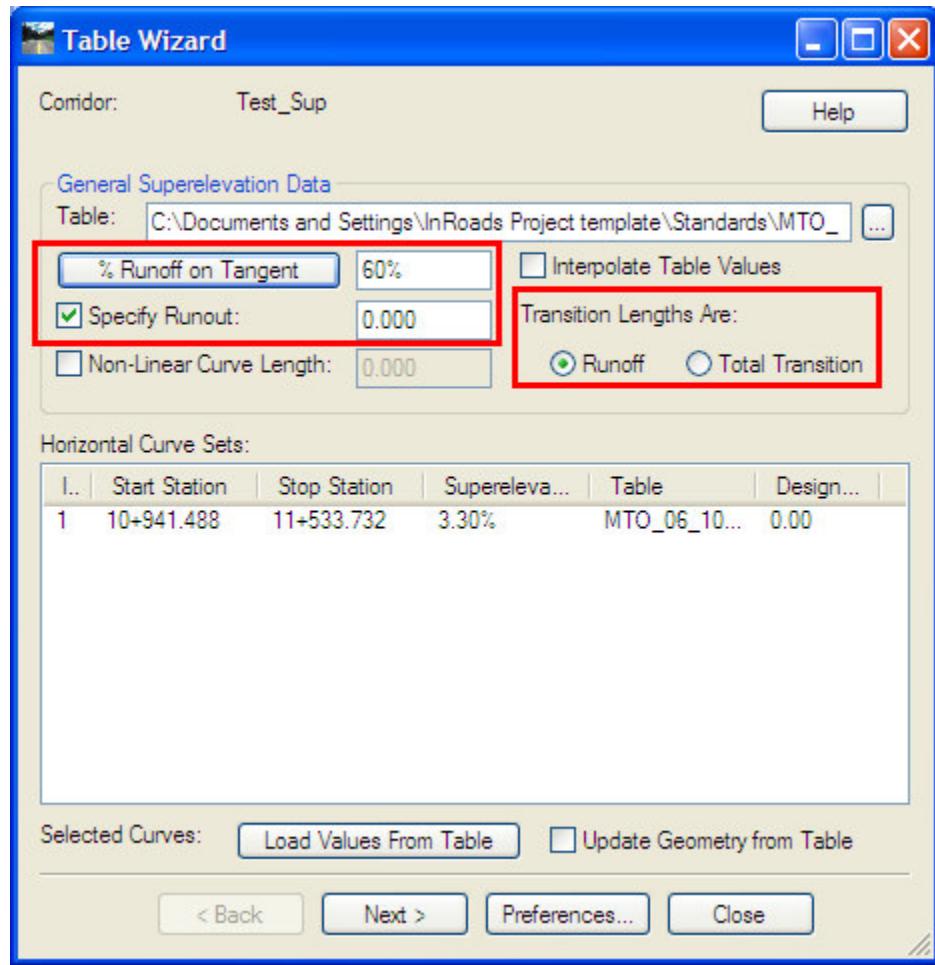
The superelevation wizard in Roadway Designer is used to create superelevation in the roadway design process. MTO uses the table method. The superelevation rate tables are found in MTO InRoads Project folder: ...\\InRoads\\Standards\\Superelevation



The MTO superelevation rate tables are ASCII files and named by maximum superelevation rate and design speed. For example, the table **MTO_06_100k.sup** is MTO standards for a maximum 6% superelevation rate at 100km/h design speed.

The default preference **MTO** sets 60% of the length of the transition section on the tangent and 40% on the circular curve. The cross-fall transition is set to start from 0 cross slope at the end of the tangent runout to full superelevation over the spiral length.

Select the desired superelevation table to load the **Transition Lengths**. The tangent runout must be calculated and input into the wizard. For more information on working with **Superelevation wizard**, refer to **MTO Customization Documentation**.



7.8.2 Create Design Surface

Once one or more corridors have been designed, this command is used to create the design surface or surfaces. You can either create a unified or merged surface out of all the corridors in the design, or create a separate surface for each corridor.

The default preference **MTO** has the following options toggled on.

New Surface for Each Corridor is on. Each surface created from this command is given the name of corresponding **Corridor**. When this option is toggled off, the name provided in the **Name** field becomes the name of the surface created, and the name of each corridor is prefixed to each of the features that are created. To use **Clipping** and **Aliasing** function, this option must be toggled off.

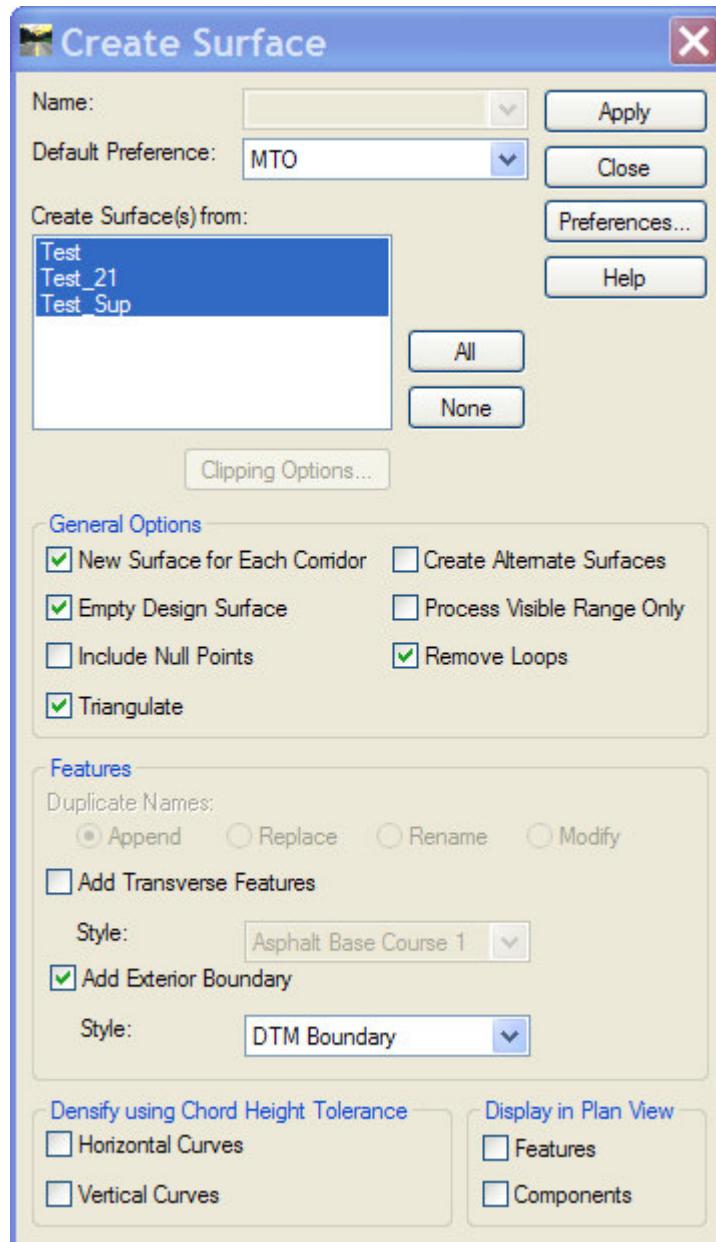
Empty Design Surface is on to ensure that the existing surface is emptied before re-creating it.

Triangulate Surface is on to automatically triangulate surface(s) when created.

Remove Loops is on to eliminate loops created in linear features as well as trim transverse features to prevent feature overlapping that may cause surface problems.

Add Exterior Boundary is on to automatically create an exterior boundary for the design surface(s).

See below the default setting.

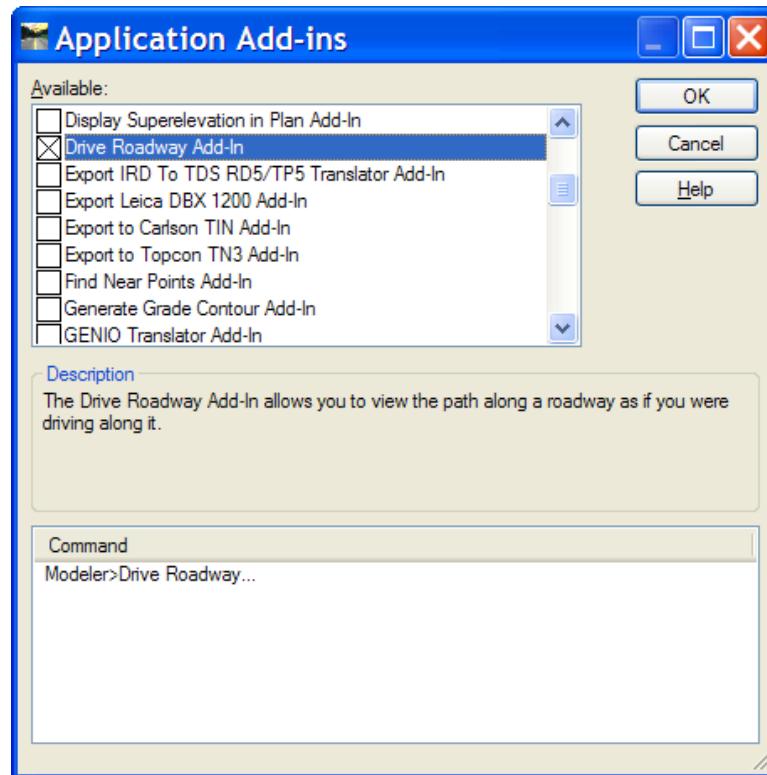


7.9 Drive Roadway

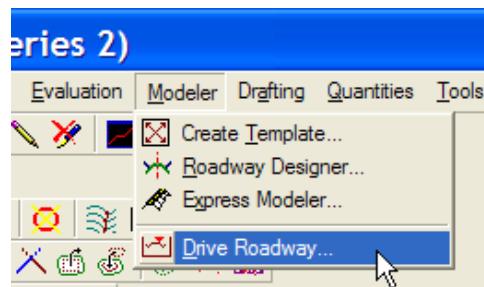
Power InRoads allows users to virtually drive through the designed 3D corridor model to see the impact of design plans, and to visualize the 3D model.

The Drive Roadway command is an Application Add-In with InRoads. To use it, toggle it on first in Application Add-Ins.

Select Tools > Application Add-Ins.



Close the dialog. The command now appears as an optional item of the Modeler pull down menu.



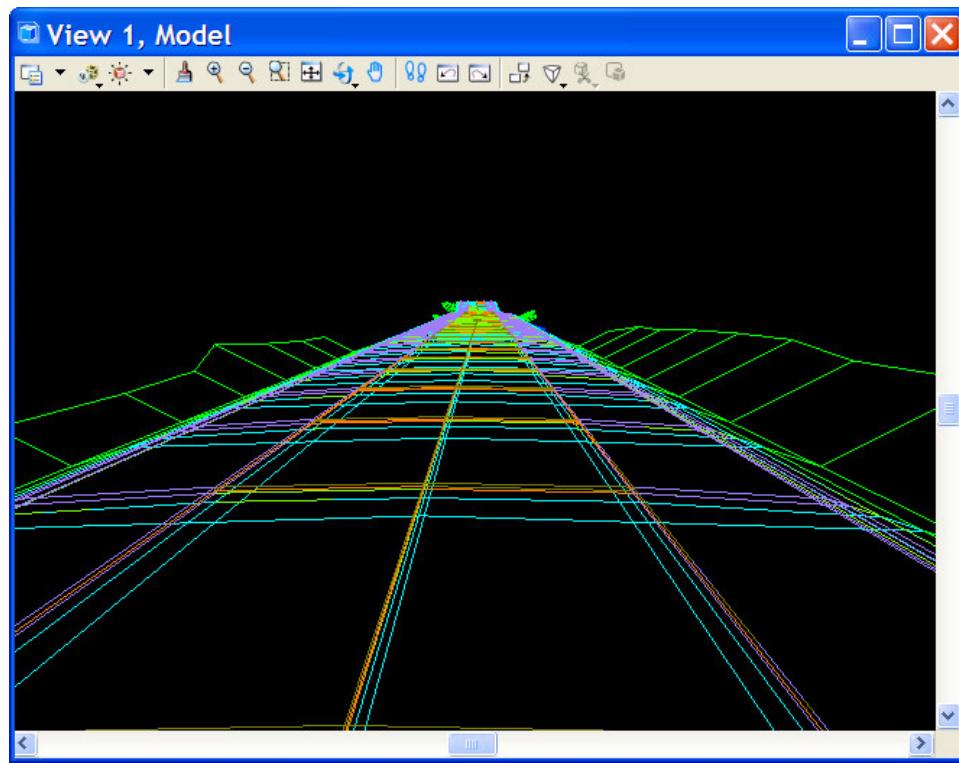
Select Modeler > Drive Roadway.

Shown below is the Drive Roadway dialog with the default settings.

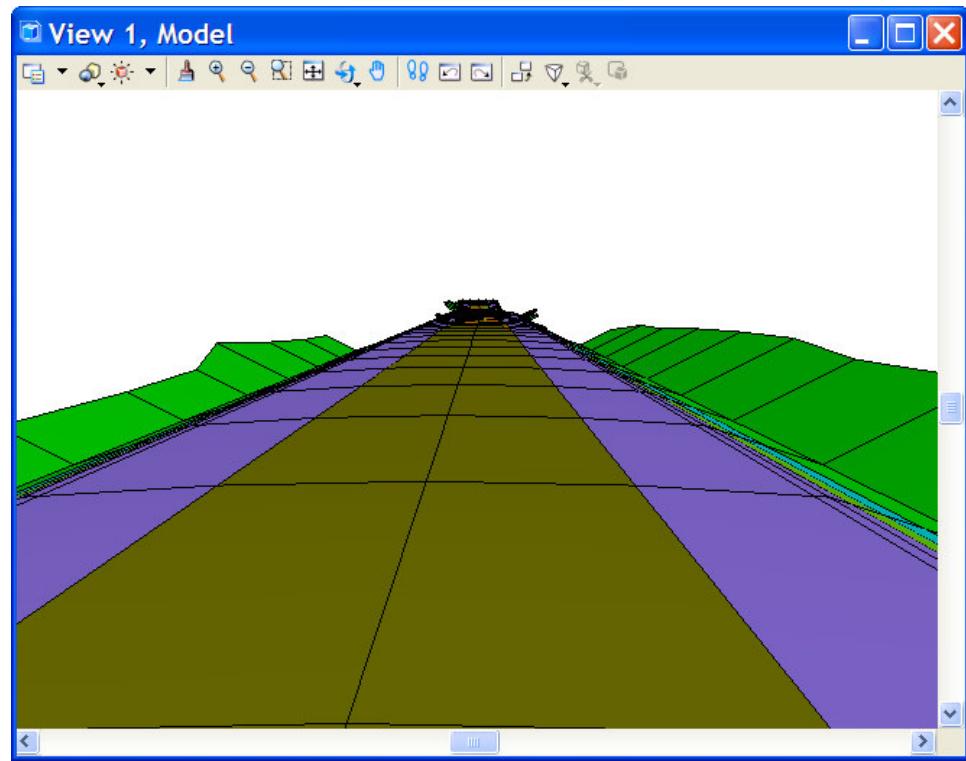


Before using this command, load a horizontal and a vertical alignment, and display the roadway in 3D. Specify different Horizontal/Vertical offset, Speed, Frames per Second, and Target Distance to see the difference in the Drive Roadway view.

Drive Roadway command provides a wireframe view. Shown below is a view of a designed roadway model.



Shown below is the same view displayed in a different style (using the Display Style of MicroStation).



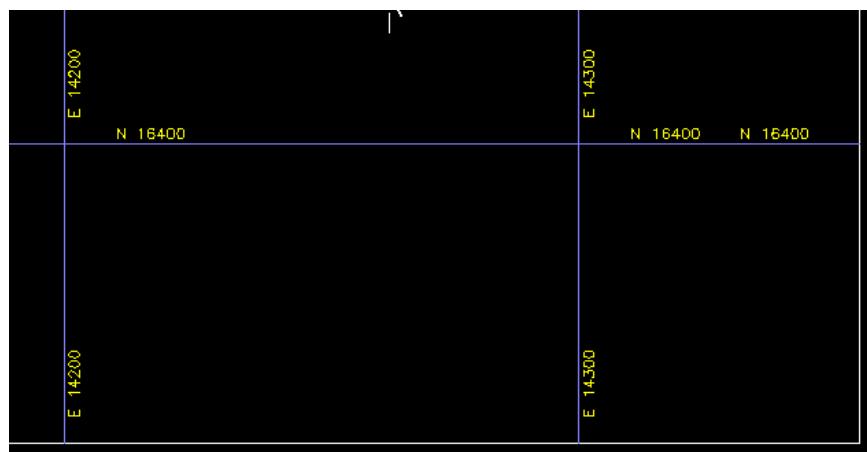
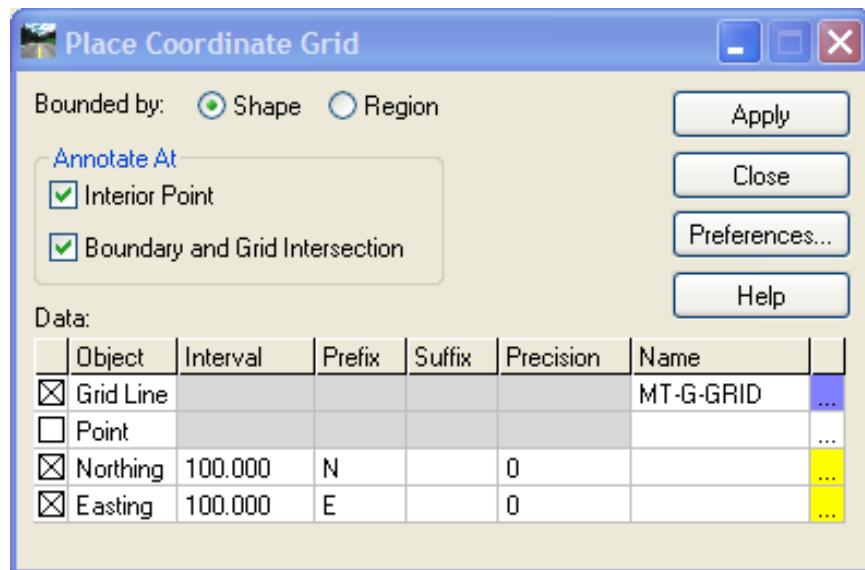
7.10 Drafting

7.10.1 Place Coordinate Grid

Use this command to display a coordinate grid based on the parameters that you define.

Select **Drafting > Place Coordinate Grid** to create a coordinate grid in current drawing.

Default preference MTO is set at 100 intervals for both Northing and Easting at which grid lines and annotation will be placed. Shown below are the preference settings and displayed grid.

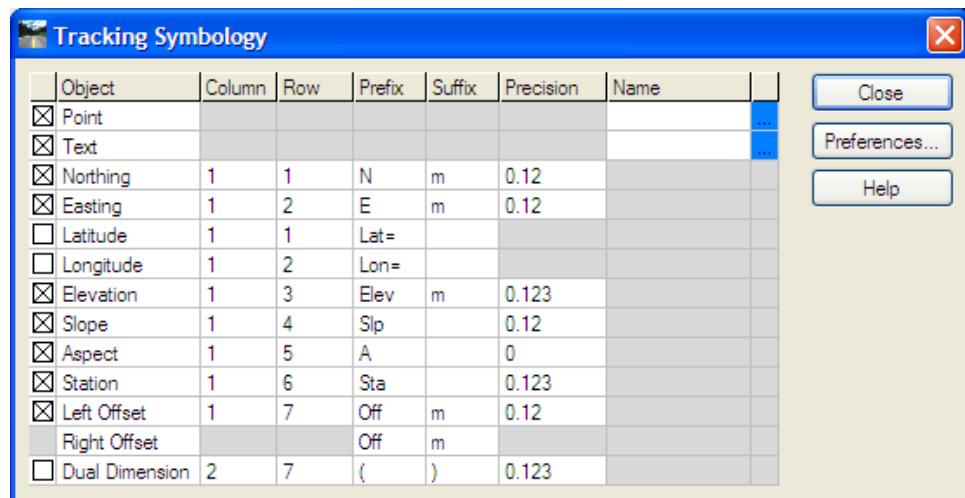


7.11 Tools

7.11.1 Tracking

Select **Tools > Tracking**

This command dynamically displays the northing and easting coordinates of the cursor location, as well as the surface elevation, slope, and aspect based on the active surface. The dialog box also dynamically reports the cursor location in terms of station and offset from the active horizontal alignment. All or part of the active surface information can be annotated in the drawing file by placing a data point and then edits can be made. The preference **MTO** has been set to display all the information on layer PD-N-MSC by default. To change the options to be annotated, click **Settings** from the **Tracking** dialog to open the **Tracking Symbology** dialog.



See below a sample output.



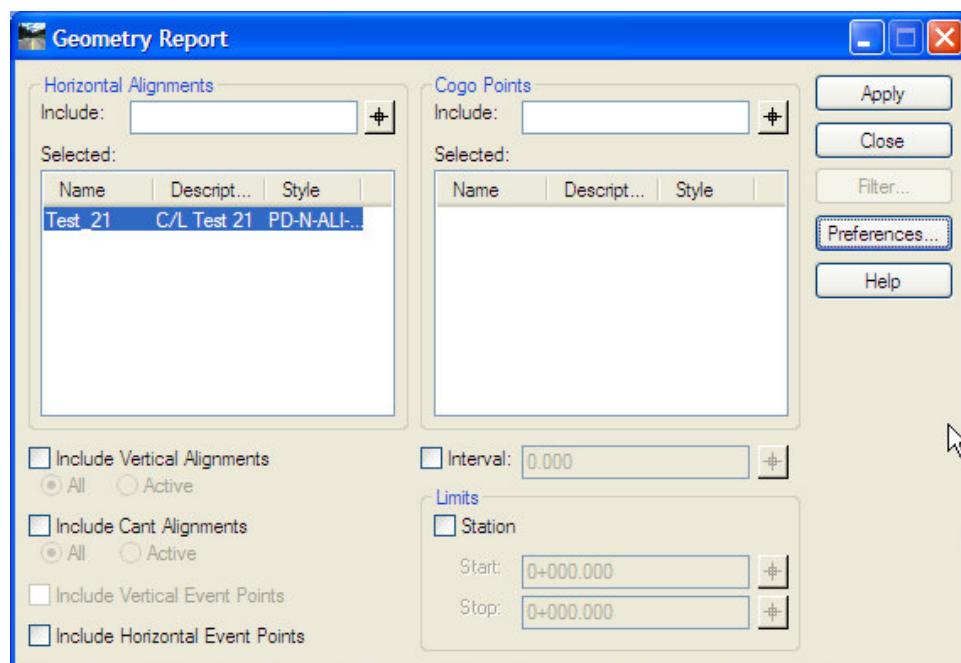
7.11.2 XML Reports

There are several commands that generate XML reports. The main location is **Tools > XML Reports**.

This command generates XML data files. The XML files are temporary files that contain raw or computed data. The XSL style sheets are used to transform the XML data to text or HTML format. The reports are displayed in the **Bentley Civil Report Browser**. The report format can be changed by selecting the style sheet from the style sheet list on the left side of the browser. Some of the more commonly used reports have been provided with initiate settings for MTO_civil_SS2.xin.

a) Geometry Report

The **Geometry Report** command provides options to specify groups of alignments and cogo points to be included in the report data file as well as vertical alignments, and horizontal and vertical event points. Each data file can be formatted into report with multiple style sheets to review alignment data, calculate areas, and produce geometry reports. By default, only horizontal alignment information will be included.



You must include at least one horizontal alignment in the **Include** field to generate a geometry report. Based on your project data, you can:

Specify one or more horizontal alignments to be included in the **Include** field of the **Horizontal Alignments** area. Use * to select all of the alignments in the geometry project.

Specify a group of cogo points to be included in the **Include** field of the **Cogo Points** area. Use * to select all of the cogo points in the geometry project.

Toggle on **Include Vertical Alignments** to include information about vertical alignment of the selected horizontal alignment(s).

Toggle on **Include Vertical Event Points** to include information about the vertical event points for all the vertical alignments associated with each selected horizontal alignment.

Toggle on **Include Horizontal Event Points** to include information about the horizontal event points associated with each selected horizontal alignment.

Toggle on **Interval** and key in a value greater than 0. Additional points, the computed event points will be added to the XML report data file along each selected alignment at specified interval.

Shown below is an example of **Horizontal Alignment Review Report**.

The screenshot shows the Bentley Civil Report Browser window. The title bar reads "Bentley Civil Report Browser - C:\DOCUMENTS\1\LuAnd\LOCALS\1\Temp\RPTA3.xml". The menu bar includes "File", "Tools", and "Help". The left pane displays a file tree under "C:\Program Files\Bentley\InRoads Group V8.11\": Custom, DataCollection, Evaluation, Geometry, Area.xsl, CogoPointsExtendedDescription.xsl, CogoPointsExtendedDescriptionOnly.xsl, CogoPointStylesCount.xsl, ControlLineData.xsl, CurveDataTable.xsl, HorizontalAlignmentAndEvents.xsl, HorizontalAlignmentCurveSetElement, HorizontalAlignmentCurveSetReview, HorizontalAlignmentData.xsl, HorizontalAlignmentLengths.xsl, HorizontalAlignmentReview.xsl, HorizontalAlignmentReviewASCII.xsl, HorizontalAlignmentReviewLatLong.xsl, HorizontalAlignmentReviewPDF.xsl, HorizontalAlignmentStylesSummary.xsl, HorizontalAlignmentSuperelevationReview, HorizontalAndVerticalAlignmentReview, HorizontalElementsTable.xsl, HorizontalElementsTableSimplified.xsl, HorizontalElementsXYZ.xsl, HorizontalEvents.xsl, HorizontalInterpolatedSlews.xsl, HorizontalInterpolatedSlewsNVersions.xsl, HorizontalRegressionPointsRadiusReview, HorizontalRegressionPointsReview.xsl, ListCoordinates.xsl, ListCoordinatesStation.xsl, ProfileStationElevation.xsl, ProfileStationElevationASCII.xsl, ProjectAlignmentListing.xsl, and ProjectAlignmentListingDetails.xls. The main pane displays the "Horizontal Alignment Review Report" with the following details:

Report Created: 8/3/2011
Time: 3:00pm

Project: Test
Description:

File Name: C:\Inroads Projects\Preference SS1\Geometry\Test.alg

Last Revised: Luand 08/03/2011 2:53:56 PM

Input Grid Factor: 1.0000000 **Note:** All units in this report are in meters unless specified otherwise.

Alignment Name: Test_21
Alignment: C/L Test 21
Description:

Alignment Style: PD-N-ALI-CL

| Station | Northing | Easting | | |
|---------|----------|------------|-------------|------------|
| POB | () | 10+759.874 | 4890467.082 | 374131.897 |
| PI | () | 12+300.036 | 4891823.918 | 374860.658 |

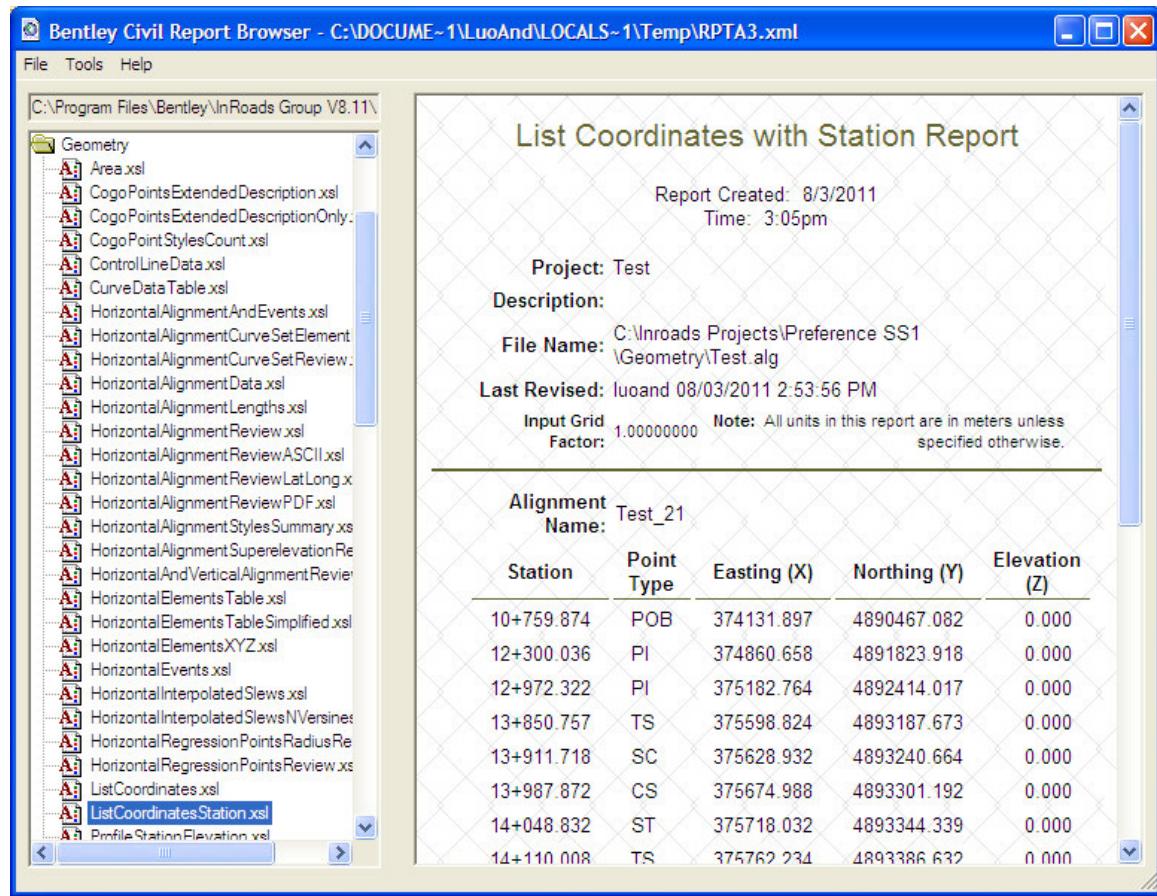
Tangential Direction: N 28°14'25.4" E
Tangential Length: 1540.16

Element: Linear

| PI | () | 12+300.036 | 4891823.918 | 374860.658 |
|----|-----|------------|-------------|------------|
| PI | () | 12+972.322 | 4892414.017 | 375182.764 |

Tangential Direction: N 28°37'40.6" E
Tangential Length: 672.29

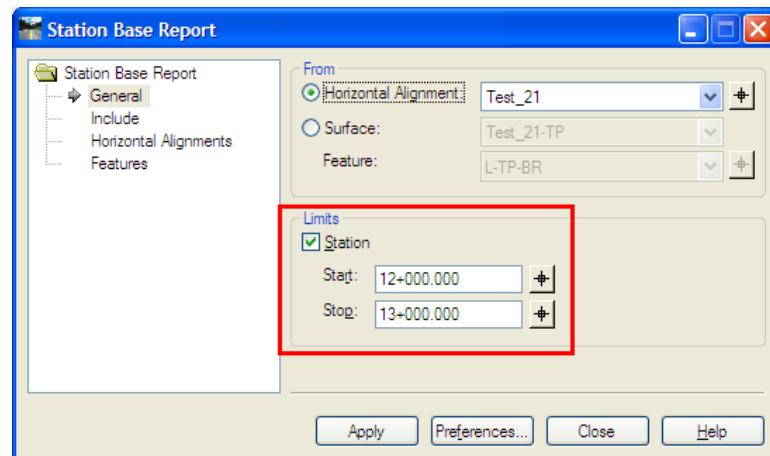
Same report data displayed with **List Coordinates with Station Report** style sheet.



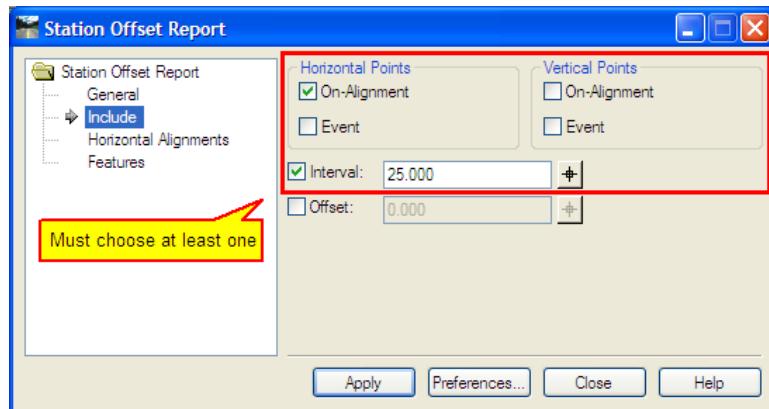
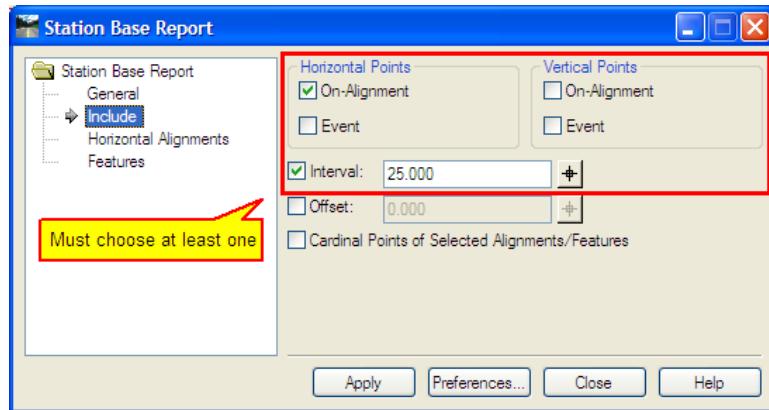
b) Station Base/Offset Report

Station Base Report and **Station Offset Report** are used to report alignments and/or surface features. Both commands have similar options and operation:

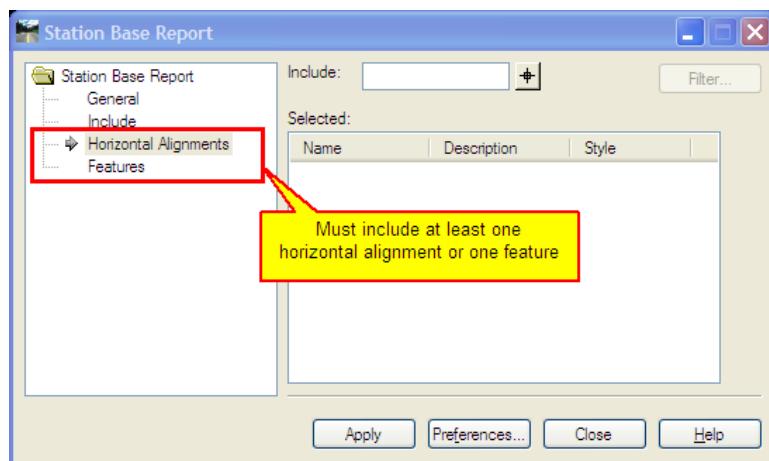
General leaf: At least one horizontal alignment or one feature in the **From** field must be included. For **Station Base Report** command, the **Station Limits** option can be used to limit the reported information based on the specified **Start** and **Stop** station values. But this option only applies to computed data such as event points by interval.



Include leaf: At least one option from **Horizontal On-Alignment Points**, **Horizontal Event Points**, **Vertical On-Alignment Points**, **Vertical Event Points**, or **Interval** must be toggled on. By default, both **Station Base Report** and **Station Offset Report** are set to include alignment cardinal points and feature points, and measurements at 25m intervals as shown below:



To generate the **Station Base** or **Station Offset** report, at least one horizontal alignment on the **Horizontal Alignments** leaf or one feature on the **Features** leaf must also be included.



Filter and wildcards can be used to specify groups of alignments. Key in * will select all of the alignments in the geometry project.

Shown below is a sample station base report:

The screenshot shows the Bentley Civil Report Browser window. The title bar reads "Bentley Civil Report Browser - C:\DOCUMENTS\1LuoAnd\LOCALS\1Temp\RPTAB.xml". The left pane is a file browser with a tree view of XML files under "C:\Program Files\Bentley\InRoads Group V8.11\XML Data\XML". The right pane displays a report titled "Profile Existing and Proposed Elevations Report".

Report Created: 8/3/2011
Time: 3:37pm

Project: Test
Description:
File Name: C:\Inroads Projects\Preference SS1\Geometry\Test.alg
Last Revised: luoand 08/03/2011 3:34:26 PM

Input Grid Factor: 1,0000000 Note: All units in this report are in meters unless specified otherwise.

Alignment Name: Test_21
Alignment Description: C/L Test 21
Alignment Style: PD-N-ALI-CL

| Station | Existing Elevation | Proposed Elevation | Cut/Fill Depth |
|------------|--------------------|--------------------|----------------|
| 14+825.000 | 220.739 | 220.788 | 0.048 F |
| 14+850.000 | 220.899 | 220.999 | 0.100 F |
| 14+875.000 | 221.045 | 221.147 | 0.102 F |
| 14+900.000 | 221.153 | 221.256 | 0.103 F |
| 14+925.000 | 221.266 | 221.367 | 0.101 F |
| 14+950.000 | 221.419 | 221.533 | 0.114 F |
| 14+975.000 | 221.584 | 221.699 | 0.115 F |
| 15+000.000 | 221.747 | 221.866 | 0.119 F |

8.0 InRoads Deliverables

MTO InRoads Project Template is to be used to organize all InRoads project files and data set. A document in **Word** or **ASCII** format shall be created in the **Design Notes** folder containing the following information:

- a. A brief description of the project.
- b. AutoCAD/InRoads Version used.
- c. Special software settings, customizations, and procedures.
- d. Problems encountered and work around solutions.
- e. Brief descriptions of InRoads project file(s).
- f. All other information necessary for the use of the data/files

The file should use a `ProjectName_IR` naming convention.

The complete InRoads design package consists of all the electronic data in the **InRoads Project Template** folder and its subfolder. It should include the InRoads design data and all supporting information necessary to reproduce the design (surfaces, drawings, reports etc.), and for a future designer to understand the design and use the data. The InRoads project data should be identical to the contents presented in the contract book. Unnecessary data should be deleted from the project folder prior to submission.

There are different InRoads data and files required to complete the InRoads design project. An InRoads project may contain some or all of the following data and files:

Project files (.rwk):

A project file is composed of surfaces, a template library, coordinate geometry projects, roadway designs, and a preference file related to a particular project. The .rwk files must be updated to contain all the files needed for the design of the project or subproject(s).

Preference files (.xin):

The preference files control the display of design information. The .xin file is required to get alignments, profiles, sections, and other design data properly displayed.

Surface Files (.dtm):

These files contain all the information related to the existing and proposed digital terrain model surface. **DTM** files include:

Existing surfaces: Existing ground and substratum surfaces

Proposed surfaces: Finish ground, material layers and subgrade surfaces

Other surfaces: Surfaces created for staging, non-triangulated features or any surface used to develop digital terrain modes, plans, profiles, cross sections, and quantities for the final design package.

Geometry Project Files (.alg):

An InRoads project may contain one or more geometry projects. The .alg file is used to store coordinate geometry information, superelevation, and alignment information for a

specific geometry project. The name of the highway should be part of the name. The description should be self descriptive with information such as the type and the limits of the alignment.

Template Library (.itl):

The template library file stores definitions for typical sections. All typical sections needed for the design of the project must be stored in one final design template library. All project related templates, components, and end conditions are organized in project template folder within the template library.

Roadway design (Library) (.ird):

A roadway library file stores roadway modeling definitions, design controls, and station and typical section information used by the **Roadway Modeler** command to create surface models along a horizontal alignment.

Custom Cross Section files (.xsc):

These files contain a list of stations and offsets for InRoads to display sections. They will contain constant intervals, special stations, and skewed sections.

Style sheet (.xsl):

Style sheet specifies what information to be retrieved from the XML file and how to format the data into a report. Any customized Style sheet shall be included.

Reports (.txt, .xml, .rpt, .dat, .html and others):

Reporting in InRoads is flexible and comprehensive. All engineering data created as a part of the project can be reported in InRoads. Such reports include:

- End area volume report (quantity),
- Cross section report (grade control),
- Geometry report,
- Superelevation report, and
- Any other reports generated during the design process

Drawings: (.dwg)

Original design cross section set used to produce the earthwork quantity report shall be included.

Appendix A
InRoads Symbologies for Planning and Design

| ItemName | Description | Default | | | | Profile | | | | Cross Section | | | | | | |
|------------------|------------------------------|------------|-------------|-------|-------------|-----------|-------|-------|-------|---------------|--------|-------|-------|-------|-------|--------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| General | | | | | | | | | | | | | | | | |
| Default | Default | 0 | 0 | 2.0 | | | | | | | | | | | | |
| Breaklines | Breaklines | BREAKLINES | PD-G-TEXT | 3.0 | | | | | | | | | | | | |
| INR_Circle | Point Circle | | 0 | 2.0 | 0 | Circle | | | | | | | | | | |
| INR_Triangle | Point Triangle | | 0 | 2.0 | 0 | Tranlgle | | | | | | | | | | |
| INR_Square | Point Square | | | | 0 | Square | | | | | | | | | | |
| INR_Plus Sign | Point Plus Sign | | | | 0 | Plus Sign | | | | | | | | | | |
| INR_Dumbbell | Point Dumbbell | | | | 0 | Dumbbell | | | | | | | | | | |
| INR_Cross | Point Cross | | | | 0 | Cross | | | | | | | | | | |
| INR_Target | Point Target | | | | 0 | Target | | | | | | | | | | |
| INR_Circle_SP_EN | Point Circle - S&P Entrance | | SP-E-LABELS | 2.0 | SP-E-ALI-E1 | Circle | | | | | | | | | | |
| INR_Circle_SP_SR | Point Circle - S&P Side Road | | SP-E-LABELS | 2.0 | SP-E-ALI-S1 | Circle | | | | | | | | | | |
| INR_Circle_PH_EN | Point Circle - PH Entrance | | PH-E-LABELS | 2.0 | PH-E-ALI-E1 | Circle | | | | | | | | | | |
| Random | Random Point | | PD-G-TEXT | 2.0 | RANDOM | Cross | | | | | | | | | | |
| BORDER | Frame - Title Block Borders | BORDER | BORDER | 3.0 | BORDER | Circle | | | | | | | | | | |
| DWGINFO | Drawing Info | DWGINFO | DWGINFO | 3.0 | DWGINFO | Circle | | | | | | | | | | |
| VPORTS | Viewports | VPORTS | VPORTS | 3.0 | VPORTS | Circle | | | | | | | | | | |
| MT-G-GRID | General Grid | MT-G-GRID | | | | | | | | | | | | | | |

Appendix A
InRoads Symbologies for Planning and Design

| ItemName | Description | Default | | | | | Profile | | | | | Cross Section | | | | |
|-----------------|---|-------------|-----------------|-------|-------------|-----------|-----------|-------------|-------|-----------|-----------|---------------|-------------|-------|-------|--------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| MT-G-GRID-T | General Grid Text | | MT-G-GRID-T | 3.0 | | | | | | | | | | | | |
| MT-P-GRID | Profile Grid | | | | | | MT-P-GRID | | | MT-P-GRID | Plus Sign | | | | | |
| MT-P-GRID-T | Profile Grid Text | | | | | | | MT-P-GRID-T | 3.0 | | | | | | | |
| MT-T-GRID | Cross Section Grid | | | | | | | | | | | MT-T-GRID | | | | |
| MT-T-GRID-T | Cross Section Grid Text | | | | | | | | | | | | MT-T-GRID-T | 0.4 | | |
| PD-G-CONS | Temporaray Construction Lines - Design | PD-G-CONS | PD-G-TEXT | 2.5 | | | | | | | | | | | | |
| PD-G-DIM | Dimensions - Design | PD-G-DIM | PD-G-DIM | 3.0 | PD-G-DIM | Plus Sign | | | | | | | | | | |
| PD-G-LEGEND | Keyplan Legend - Design | PD-G-LEGEND | PD-G-TEXT | 3.0 | | | | | | | | | | | | |
| PD-G-SYMBOL | General Symbol - Design | PD-G-SYMBOL | PD-G-SYMBOL-IDC | 3.0 | PD-G-SYMBOL | Plus Sign | | | | | | | | | | |
| PD-G-SYMBOL-IDC | General Symbol IDC - Design | | PD-G-SYMBOL-IDC | 3.0 | | | | | | | | | | | | |
| PD-G-25MM | 0.25mm General Lines - Design | PD-G-25MM | PD-G-TEXT | 3.0 | | | | | | | | | | | | |
| PD-G-40MM | 0.40mm General Lines - Design | PD-G-40MM | PD-G-TEXT | 3.0 | | | | | | | | | | | | |
| PD-G-50MM | 0.50mm General Lines - Design | PD-G-50MM | PD-G-TEXT | 3.0 | | | | | | | | | | | | |
| PD-G-75MM | 0.75mm General Lines - Design | PD-G-75MM | PD-G-TEXT | 3.0 | | | | | | | | | | | | |
| PD-G-TEXT | General Text - Design | | PD-G-TEXT | 2.0 | | | | | | | | | | | | |
| PD-N-LIMIT | Contract - Construction Limits - Design | PD-N-LIMIT | | | | | | | | | | | | | | |

Appendix A
InRoads Symbologies for Planning and Design

| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | | |
|------------------|--|---------------|---------------|-------|-----------------|----------|--------------|---------------|-------|---------------|--------|-------------|---------------|------------|--------------|-------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | |
| Alignment | | | | | | | | | | | | | | | | | |
| PD-N-ALI-CL | Centreline Alignment - Design | PD-N-ALI-CL | PD-N-ALI-CL-T | 2.0 | | | PD-P-BED-TP | | | | | PD-N-ALI-CL | | | PD-N-ALI-CL | Plus Sign | |
| PD-N-ALI-CL-T | Centreline Alignment Text - Design | PD-N-ALI-CL-T | PD-N-ALI-CL-T | 3.0 | PD-N-ALI-CL-T | Circle | | PD-N-ALI-CL-T | 3.0 | | | | PD-N-ALI-CL-T | 3.0 | | | |
| PD-N-ALI-CL-PTS | Centreline Alignment Points - Circle | | PD-N-ALI-CL-T | 2.0 | PD-N-ALI-CL-PTS | Circle | | | | | | | | | | | |
| PD-N-ALI-CL-PTST | Centreline Alignment Points - Triangle | | PD-N-ALI-CL-T | 2.0 | PD-N-ALI-CL-PTS | Tranlgle | | | | | | | | | | | |
| Barrier | | | | | | | | | | | | | | | | | |
| PD-N-BAR-FL | Fence - Design | PD-N-BAR-FL | PD-N-BAR-T | 3.0 | | | PD-N-BAR-FL | PD-N-BAR-T | 3.0 | | | | PD-N-BAR-T | 3.0 | PD-N-BAR-FL | Plus Sign | |
| PD-N-BAR-GU3 | Guide Rail (3 Cable) - Design | PD-N-BAR-GU3 | PD-N-BAR-T | 3.0 | | | PD-N-BAR-GU3 | PD-N-BAR-T | 3.0 | | | | PD-N-BAR-T | 3.0 | PD-N-BAR-GU3 | Plus Sign | |
| PD-N-BAR-GU6 | Guide Rail (6 Cable) - Design | PD-N-BAR-GU6 | PD-N-BAR-T | 3.0 | | | PD-N-BAR-GU6 | PD-N-BAR-T | 3.0 | | | | PD-N-BAR-T | 3.0 | PD-N-BAR-GU6 | Plus Sign | |
| PD-N-BAR-GUB | Guide Rail (Box Beam) - Design | PD-N-BAR-GUB | PD-N-BAR-T | 3.0 | | | PD-N-BAR-GUB | PD-N-BAR-T | 3.0 | | | | PD-N-BAR-T | 3.0 | PD-N-BAR-GUB | Plus Sign | |
| PD-N-BAR-GUC | Guide Rail (Concrete Barrier) - Design | PD-N-BAR-GUC | PD-N-BAR-T | 3.0 | | | PD-N-BAR-GUC | PD-N-BAR-T | 3.0 | | | | PD-N-BAR-T | 3.0 | PD-N-BAR-GUC | Plus Sign | |
| PD-N-BAR-GUI | Guide Rail (IBC) - Design | PD-N-BAR-GUI | PD-N-BAR-T | 3.0 | | | PD-N-BAR-GUI | PD-N-BAR-T | 3.0 | | | | PD-N-BAR-T | 3.0 | PD-N-BAR-GUI | Plus Sign | |
| PD-N-BAR-GUS | Guide Rail (Steel Beam) - Design | PD-N-BAR-GUS | PD-N-BAR-T | 3.0 | | | PD-N-BAR-GUS | PD-N-BAR-T | 3.0 | | | | PD-N-BAR-T | 3.0 | PD-N-BAR-GUS | Plus Sign | |
| PD-N-BAR-IBM | Intial Barrier Module (IBM) - Design | PD-N-BAR-IBM | PD-N-BAR-T | 3.0 | | | PD-N-BAR-IBM | PD-N-BAR-T | 3.0 | | | | | | | | |
| PD-N-BAR-JB | Jersey Barrier - Design | PD-N-BAR-JB | PD-N-BAR-T | 3.0 | | | PD-N-BAR-JB | PD-N-BAR-T | 3.0 | | | | PD-N-BAR-JB | PD-N-BAR-T | 3.0 | PD-N-BAR-JB | Plus Sign |
| PD-N-BAR-NB | Noise Barrier - Design | PD-N-BAR-NB | PD-N-BAR-T | 3.0 | | | PD-N-BAR-NB | PD-N-BAR-T | 3.0 | | | | PD-N-BAR-NB | PD-N-BAR-T | 3.0 | PD-N-BAR-NB | Plus Sign |
| PD-N-BAR-T | Barrier Text - Design | | PD-N-BAR-T | 3.0 | | | PD-N-BAR-T | PD-N-BAR-T | 3.0 | | | | PD-N-BAR-T | 3.0 | | | |
| Drainage | | | | | | | | | | | | | | | | | |
| PD-N-DRN-BD | Bottom of Ditch - Design | PD-N-DRN-BD | PD-N-DRN-T | 3.0 | | | PD-P-DRN-BD | PD-P-DRN-T | 3.0 | | | | PD-N-DRN-BD | PD-N-DRN-T | 3.0 | PD-N-DRN-BD | Cross |

Appendix A
InRoads Symbolologies for Planning and Design

| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | |
|----------------------|---|--------------|------------|-------|-------------|---------|--------------|------------|-------|---------------|-----------|--------------|------------|-------|--------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| PD-N-DRN-CB | Catch Bain - Design | | PD-N-DRN-T | 3.0 | PD-N-DRN-CB | PD_CB | PD-P-DRN-CB | PD-P-DRN-T | 3.0 | PD-P-DRN-CB | Plus Sign | | PD-N-DRN-T | 3.0 | PD-N-DRN-CB | Plus Sign |
| PD-N-DRN-CV | Culvert - Design | PD-N-DRN-CV | PD-N-DRN-T | 3.0 | | | PD-P-DRN-CV | PD-P-DRN-T | 3.0 | PD-P-DRN-CV | Cross | PD-N-DRN-CV | PD-N-DRN-T | 3.0 | PD-N-DRN-CV | Cross |
| PD-N-DRN-DI | Ditch Inlet - Design | PD-N-DRN-DI | PD-N-DRN-T | 3.0 | PD-N-DRN-DI | PD_DI | PD-P-DRN-DI | PD-P-DRN-T | 3.0 | PD-P-DRN-DI | Plus Sign | | PD-N-DRN-T | 3.0 | PD-N-DRN-DI | Plus Sign |
| PD-N-DRN-MH | Manhole - Design | PD-N-DRN-MH | PD-N-DRN-T | 3.0 | PD-N-DRN-MH | PD_MH | PD-P-DRN-MH | PD-P-DRN-T | 3.0 | PD-P-DRN-MH | Plus Sign | | PD-N-DRN-T | 3.0 | PD-N-DRN-MH | Plus Sign |
| PD-N-DRN-RR | Rip-Rap - Design | PD-N-DRN-RR | PD-N-DRN-T | 3.0 | | | | | | | | | | | | |
| PD-N-DRN-SAN | Sanitary Sewer Pipe - Design | PD-N-DRN-SAN | PD-N-DRN-T | 3.0 | | | PD-P-DRN-SAN | PD-P-DRN-T | 3.0 | PD-P-DRN-SAN | Cross | PD-N-DRN-SAN | PD-N-DRN-T | 3.0 | PD-N-DRN-SAN | Cross |
| PD-N-DRN-SEW | Storm Sewer Pipe - Design | PD-N-DRN-SEW | PD-N-DRN-T | 3.0 | | | PD-P-DRN-SEW | PD-P-DRN-T | 3.0 | PD-P-DRN-SEW | Cross | PD-N-DRN-SEW | PD-N-DRN-T | 3.0 | PD-N-DRN-SEW | Cross |
| PD-N-DRN-SUB | Sub Drain - Design | PD-N-DRN-SUB | PD-N-DRN-T | 3.0 | | | PD-P-DRN-SUB | PD-P-DRN-T | 3.0 | PD-P-DRN-SUB | Cross | PD-N-DRN-SUB | PD-N-DRN-T | 3.0 | PD-N-DRN-SUB | Cross |
| PD-N-DRN-WL | Water Level - Design | PD-N-DRN-WL | PD-N-DRN-T | 3.0 | | | PD-N-DRN-WL | PD-P-DRN-T | 3.0 | | | | | | | |
| PD-N-DRN-T | Drainage Text - Design | | PD-N-DRN-T | 3.0 | | | PD-P-DRN-T | PD-P-DRN-T | 3.0 | | | | PD-N-DRN-T | 3.0 | | |
| Miscellaneous | | | | | | | | | | | | | | | | |
| PD-N-MSC | Miscellaneous (Generic Items) - Design | PD-N-MSC | PD-N-MSC-T | 3.0 | PD-N-MSC | Cross | PD-P-MSC | PD-P-MSC-T | 3.0 | | | | | | | |
| PD-N-MSC-AS | Asphalt (Miscellaneous Paving) - Design | PD-N-MSC-AS | PD-N-MSC-T | 3.0 | | | PD-P-MSC-AS | PD-P-MSC-T | 3.0 | | | PD-N-MSC-AS | PD-N-MSC-T | 3.0 | PD-N-MSC-AS | Cross |
| PD-N-MSC-BN | Bull Nose - Design | PD-N-MSC-BN | PD-N-MSC-T | 3.0 | | | PD-P-MSC-BN | PD-P-MSC-T | 3.0 | | | | | | | |
| PD-N-MSC-CO | Concrete - Design | PD-N-MSC-CO | PD-N-MSC-T | 3.0 | | | PD-P-MSC-CO | PD-P-MSC-T | 3.0 | | | PD-N-MSC-CO | PD-N-MSC-T | 3.0 | PD-N-MSC-CO | Plus Sign |
| PD-N-MSC-COA | Concrete with Asphalt Surface - Design | PD-N-MSC-COA | PD-N-MSC-T | 3.0 | | | | | | | | | | | | |
| PD-N-MSC-EJ | Expansion Joint - Design | PD-N-MSC-EJ | PD-N-MSC-T | 3.0 | | | PD-N-MSC-EJ | PD-P-MSC-T | 3.0 | | | | | | | |
| PD-N-MSC-EX | Bottom of earth or rock Excavation - Design | PD-N-MSC-EX | PD-N-MSC-T | 3.0 | | | PD-P-MSC-EX | PD-P-MSC-T | 3.0 | | | PD-N-MSC-EX | PD-N-MSC-T | 3.0 | PD-N-MSC-EX | Plus Sign |
| PD-N-MSC-GAB | Gabion Baskets - Design | PD-N-MSC-GAB | PD-N-MSC-T | 3.0 | | | PD-P-MSC-GAB | PD-P-MSC-T | 3.0 | | | PD-N-MSC-GAB | PD-N-MSC-T | 3.0 | | |

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InRoads Symbolologies for Planning and Design

| ItemName | Description | Plan | | | | | Profile | | | | | Cross Section | | | | | |
|-------------------------|---------------------------------------|---------------|------------|-------|-------|--------|---------------|------------|-------|-------|--------|---------------|--------------|------------|---------------|--------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | |
| PD-N-MSC-RW | Retaining Wall - Design | PD-N-MSC-RW | PD-N-MSC-T | 3.0 | | | PD-P-MSC-RW | PD-P-MSC-T | 3.0 | | | PD-N-MSC-RW | PD-N-MSC-T | 3.0 | PD-N-MSC-RW | Plus Sign | |
| PD-N-MSC-SIGN | Sign Footing - Design | PD-N-MSC-SIGN | PD-N-MSC-T | 3.0 | | | PD-P-MSC-SIGN | PD-P-MSC-T | 3.0 | | | PD-N-MSC-SIGN | PD-N-MSC-T | 3.0 | PD-N-MSC-SIGN | Plus Sign | |
| PD-N-MSC-SWA | Sidewalk - Asphalt - Design | PD-N-MSC-SWA | PD-N-MSC-T | 3.0 | | | | | | | | PD-N-MSC-SWA | PD-N-MSC-T | 3.0 | PD-N-MSC-SWA | Plus Sign | |
| PD-N-MSC-SWC | Sidewalk Concrete - Design | PD-N-MSC-SWC | PD-N-MSC-T | 3.0 | | | | | | | | PD-N-MSC-SWC | PD-N-MSC-T | 3.0 | PD-N-MSC-SWC | Plus Sign | |
| PD-N-MSC-T | Miscellaneous Text - Design | | PD-N-MSC-T | 3.0 | | | PD-P-MSC-T | 3.0 | | | | PD-N-MSC-T | 3.0 | | | | |
| Pavement Marking | | | | | | | | | | | | | | | | | |
| PD-N-PMK | Pavement Marking - Design | PD-N-PMK | PD-N-PMK-T | 3.0 | | | PD-N-PMK | PD-N-PMK-T | 3.0 | | | | PD-N-PMK-T | 3.0 | PD-N-PMK | Cross | |
| PD-N-PMK-GORE | Pavement Marking - Gore Area - Design | PD-N-PMK-GORE | PD-N-PMK-T | 3.0 | | | PD-N-PMK-GORE | PD-N-PMK-T | 3.0 | | | | PD-N-PMK-T | 3.0 | PD-N-PMK-GORE | Cross | |
| PD-N-PMK-PMBW | Broken White Line - Design | PD-N-PMK-PMBW | PD-N-PMK-T | 3.0 | | | PD-N-PMK-PMBW | PD-N-PMK-T | 3.0 | | | | PD-N-PMK-T | 3.0 | PD-N-PMK-PMBW | Cross | |
| PD-N-PMK-PMBY | Broken Yellow Line - Design | PD-N-PMK-PMBY | PD-N-PMK-T | 3.0 | | | PD-N-PMK-PMBY | PD-N-PMK-T | 3.0 | | | | PD-N-PMK-T | 3.0 | PD-N-PMK-PMBY | Cross | |
| PD-N-PMK-PMSW | Solid White Line - Design | PD-N-PMK-PMSW | PD-N-PMK-T | 3.0 | | | PD-N-PMK-PMSW | PD-N-PMK-T | 3.0 | | | | PD-N-PMK-T | 3.0 | PD-N-PMK-PMSW | Cross | |
| PD-N-PMK-PMSY | Solid Yellow Line - Design | PD-N-PMK-PMSY | PD-N-PMK-T | 3.0 | | | PD-N-PMK-PMSY | PD-N-PMK-T | 3.0 | | | | PD-N-PMK-T | 3.0 | PD-N-PMK-PMSY | Cross | |
| PD-N-PMK-T | Pavement Marking Text - Design | | PD-N-PMK-T | 3.0 | | | PD-N-PMK-T | 3.0 | | | | PD-N-PMK-T | 3.0 | | | | |
| Roadway | | | | | | | | | | | | | | | | | |
| PD-N-RDS-CR | Crown of Road - New | PD-N-RDS-CR | PD-N-RDS-T | 3.0 | | | PD-N-RDS-CR | PD-P-G-T | 3.0 | | | | PD-N-RDS-CR | PD-N-RDS-T | 3.0 | | |
| PD-N-RDS-CGA | Curb and Gutter - Asphalt - Design | PD-N-RDS-CGA | PD-N-RDS-T | 3.0 | | | PD-N-RDS-CGA | PD-P-G-T | 3.0 | | | | PD-N-RDS-CGA | PD-N-RDS-T | 3.0 | PD-N-RDS-CGA | Cross |
| PD-N-RDS-CGC | Curb and Gutter - Concrete - Design | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | | PD-N-RDS-CGC | PD-P-G-T | 3.0 | | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | PD-N-RDS-CGC | Plus Sign |
| PD-N-RDS-EP | Edge of Pavement - Design | PD-N-RDS-EP | PD-N-RDS-T | 3.0 | | | PD-P-BED-EP | PD-P-BED-T | 3.0 | | | | PD-N-RDS-EP | | | PD-N-RDS-EP | Square |
| PD-N-RDS-EPS | Edge of Paved Shoulder - Design | PD-N-RDS-EPS | PD-N-RDS-T | 3.0 | | | PD-P-BED-EPS | PD-P-BED-T | 3.0 | | | | PD-N-RDS-EPS | | | PD-N-RDS-EPS | Cross |

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| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | |
|----------------------------------|---|--------------|------------|-------|-------|---------|-------------|--------------|-------|---------------|--------|--------------|------------|-------|--------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| PD-N-RDS-ES | Edge of Granular Shoulder - Design | PD-N-RDS-ES | PD-N-RDS-T | 3.0 | | | PD-N-RDS-ES | PD-P-G-T | 3.0 | | | PD-N-RDS-ES | | | PD-N-RDS-ES | Cross |
| PD-N-RDS-TC | Top of Cut - Design | PD-N-RDS-TC | PD-N-RDS-T | 3.0 | | | PD-P-BED-TC | PD-P-BED-T | 3.0 | | | PD-N-RDS-TC | | | PD-N-RDS-TC | Plus Sign |
| PD-N-RDS-TS | Toe of Fill Slope - Design | PD-N-RDS-TS | PD-N-RDS-T | 3.0 | | | PD-P-BED-TS | PD-P-BED-T | 3.0 | | | PD-N-RDS-TS | | | PD-N-RDS-TS | Plus Sign |
| PD-N-RDS-UR | Unpaved Road - Design | PD-N-RDS-UR | PD-N-RDS-T | 3.0 | | | PD-N-RDS-UR | PD-P-MSC-T | 3.0 | | | PD-N-RDS-T | | 3.0 | PD-N-RDS-UR | Cross |
| PD-N-RDS-T | Road Text - Design | | PD-N-RDS-T | 3.0 | | | PD-P-BED-T | 3.0 | | | | PD-N-RDS-T | | 3.0 | | |
| Property and Right of Way | | | | | | | | | | | | | | | | |
| PD-N-ROW-PLI | Limited Interest - Permanent - Design | PD-N-ROW-PLI | PD-N-ROW-T | 3.0 | | | | | | | | PD-N-ROW-PLI | PD-N-ROW-T | 3.0 | PD-N-ROW-PLI | ROW_Prop |
| PD-N-ROW-TLI | Limited Interest - Temporary - Design | PD-N-ROW-TLI | PD-N-ROW-T | 3.0 | | | | | | | | PD-N-ROW-TLI | PD-N-ROW-T | 3.0 | PD-N-ROW-TLI | ROW_Prop |
| PD-N-ROW-PRI | Property Required - Intermediate - Design | PD-N-ROW-PRI | PD-N-ROW-T | 3.0 | | | | | | | | PD-N-ROW-PRI | PD-N-ROW-T | 3.0 | PD-N-ROW-PRI | ROW_Prop |
| PD-N-ROW-PRU | Property Required - Ultimate - Design | PD-N-ROW-PRU | PD-N-ROW-T | 3.0 | | | | | | | | PD-N-ROW-PRU | PD-N-ROW-T | 3.0 | PD-N-ROW-PRU | ROW_Prop |
| PD-N-ROW-DEL | Property Deletion - Design | PD-N-ROW-DEL | PD-N-ROW-T | 3.0 | | | | | | | | | | | | |
| PD-N-ROW-T | Property and ROW Text - Design | | PD-N-ROW-T | 3.0 | | | | | | | | PD-N-ROW-T | | 3.0 | | |
| Vegetation | | | | | | | | | | | | | | | | |
| PD-N-VEG-SOD | Sod - Design | PD-N-VEG-SOD | PD-N-VEG-T | 3.0 | | | | | | | | | | | | |
| PD-N-VEG-WO | Vegetation Wood Outline - Design | PD-N-VEG-WO | PD-N-VEG-T | 3.0 | | | | | | | | | | | | |
| PD-N-VEG-T | Vegetation Text - Design | | PD-N-VEG-T | 3.0 | | | | | | | | | | | | |
| General Profile | | | | | | | | | | | | | | | | |
| PD-P-LIMIT | Profile Contract Construction Limits - Design | | | | | | PD-P-LIMIT | | | | | | | | | |
| PD-P-LIMIT-T | Profile Job Limits Text - Design | | | | | | | PD-P-LIMIT-T | 3.0 | | | | | | | |

Appendix A
InRoads Symbologies for Planning and Design

| ItemName | Description | Plan | | | | | Profile | | | | | Cross Section | | | | | |
|-------------------------|--|-------|-------|-------|-------|--------|----------------|----------------|-------|----------------|--------|---------------|-------|-------|-------|--------|--|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | |
| PD-P-G-T | General Text - Profile | | | | | | | PD-P-G-T | 3.0 | | | | | | | | |
| Road Bed Profile | | | | | | | | | | | | | | | | | |
| PD-P-BED-GRA | Top of Granular A - Profile - Design | | | | | | PD-P-BED-GRA | PD-P-BED-T | 3.0 | | | | | | | | |
| PD-P-BED-GRB | Top of Granular B - Profile - Design | | | | | | PD-P-BED-GRB | PD-P-BED-T | 3.0 | | | | | | | | |
| PD-P-BED-SG | Subgrade - Profile - Design | | | | | | PD-P-BED-SG | PD-P-BED-T | 3.0 | | | | | | | | |
| PD-P-BED-TCL | Top of Cut - Left Side - Profile - Design | | | | | | PD-P-BED-TCL | PD-P-BED-T | 3.0 | | | | | | | | |
| PD-P-BED-TCR | Top of Cut - Right Side - Profile - Design | | | | | | PD-P-BED-TCR | PD-P-BED-T | 3.0 | | | | | | | | |
| PD-P-BED-TF | Top of Filter Course - Profile - Design | | | | | | PD-P-BED-TF | PD-P-BED-T | 3.0 | | | | | | | | |
| PD-P-BED-TP | Top of Pavement - Profile - Design | | | | | | PD-P-BED-TP | PD-P-BED-T | 3.0 | | | | | | | | |
| PD-P-BED-TSL | Toe of Fill Slope - Left - Profile - Design | | | | | | PD-P-BED-TSL | PD-P-BED-T | 3.0 | | | | | | | | |
| PD-P-BED-TSR | Toe of Fill Slope - Right - Profile - Design | | | | | | PD-P-BED-TSR | PD-P-BED-T | 3.0 | | | | | | | | |
| PD-P-BED-VALBL | Vertical Align. Stations - Tables - Design | | | | | | | PD-P-BED-VALBL | 3.0 | | | | | | | | |
| PD-P-BED-VAPTS | Vertical Align. VPI - Tangents - Design | | | | | | PD-P-BED-VAPTS | | | PD-P-BED-VAPTS | Circle | | | | | | |
| PD-P-BED-T | Profile Roadbed Text - Design | | | | | | PD-P-BED-T | 3.0 | | | | | | | | | |
| Drainage Profile | | | | | | | | | | | | | | | | | |
| PD-P-DRN-BDL | Bottom of Ditch - Left - Profile - Design | | | | | | PD-P-DRN-BDL | PD-P-BED-T | 3.0 | | | | | | | | |
| PD-P-DRN-BDM | Bottom of Ditch Median - Profile - Design | | | | | | PD-P-DRN-BDM | PD-P-BED-T | 3.0 | | | | | | | | |
| PD-P-DRN-BDR | Bottom of Ditch - Right - Profile - Design | | | | | | PD-P-DRN-BDR | PD-P-BED-T | 3.0 | | | | | | | | |
| PD-P-DRN-CB | Catch Basin - Profile - Design | | | | | | PD-N-DRN-CB | PD-R-DRN-T | 3.0 | PD-N-DRN-CB | Cross | | | | | | |

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| ItemName | Description | Plan | | | | | Profile | | | | | Cross Section | | | | |
|------------------------------|---|-------|-------|-------|-------|--------|--------------|------------|-------|--------------|--------|---------------|-------|-------|-------|--------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| PD-P-DRN-CV | Culvert - Profile - Design | | | | | | PD-P-DRN-CV | PD-P-DRN-T | 3.0 | PD-P-DRN-CV | Cross | | | | | |
| PD-P-DRN-DI | Ditch Inlet - Profile - Design | | | | | | PD-P-DRN-DI | PD-P-DRN-T | 3.0 | PD-P-DRN-DI | Cross | | | | | |
| PD-P-DRN-MH | Manhole - Profile - Design | | | | | | PD-P-DRN-MH | PD-P-DRN-T | 3.0 | PD-P-DRN-MH | Cross | | | | | |
| PD-P-DRN-SAN | Sanitary Sewer Pipe - Profile - Design | | | | | | PD-P-DRN-SAN | PD-P-DRN-T | 3.0 | PD-P-DRN-SAN | Cross | | | | | |
| PD-P-DRN-SEW | Storm Sewer Pipe - Profile - Design | | | | | | PD-P-DRN-SEW | PD-P-DRN-T | 3.0 | PD-P-DRN-SEW | Cross | | | | | |
| PD-P-DRN-SUB | Sub Drain - Profile - Design | | | | | | PD-P-DRN-SUB | PD-P-DRN-T | 3.0 | PD-P-DRN-SUB | Cross | | | | | |
| PD-P-DRN-T | Profile Drainage Text - Design | | | | | | PD-P-DRN-T | PD-P-DRN-T | 3.0 | | | | | | | |
| Ground Profile | | | | | | | | | | | | | | | | |
| PD-P-GND-MUB | Bottom of Muskeg - Profile - Design | | | | | | PD-P-GND-MUB | PD-P-GND-T | 3.0 | | | | | | | |
| PD-P-GND-MUT | Top of Muskeg - Profile - Design | | | | | | PD-P-GND-MUT | PD-P-GND-T | 3.0 | | | | | | | |
| PD-P-GND-OG | Original Ground - Profile - Design | | | | | | PD-P-GND-OG | PD-P-GND-T | 3.0 | | | | | | | |
| PD-P-GND-RK | Top of Rock - Profile - Design | | | | | | PD-P-GND-RK | PD-P-GND-T | 3.0 | | | | | | | |
| PD-P-GND-T | Profile Ground Text - Design | | | | | | PD-P-GND-T | PD-P-GND-T | 3.0 | | | | | | | |
| Miscellaneous Profile | | | | | | | | | | | | | | | | |
| PD-P-MSC | Profile Miscellaneous lines - Design | | | | | | PD-P-MSC | PD-P-MSC-T | 3.0 | | | | | | | |
| PD-P-MSC-EF | Earl Fill - Profile - Design | | | | | | PD-P-MSC-EF | PD-P-MSC-T | 3.0 | | | | | | | |
| PD-P-MSC-EX | Bottom of earth or rock Excavation - Profile - Design | | | | | | PD-P-MSC-EX | PD-P-MSC-T | 3.0 | | | | | | | |
| PD-P-MSC-RF | Rock Fill - Profile - Design | | | | | | PD-P-MSC-RF | PD-P-MSC-T | 3.0 | | | | | | | |
| PD-P-MSC-SH | Shatter - Profile - Design | | | | | | PD-P-MSC-SH | PD-P-MSC-T | 3.0 | | | | | | | |

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| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | |
|----------------|---|--------------|------------|-------|-------------|-----------|-------|------------|-------|---------------|--------|-------|-------|-------|-------|--------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| PD-P-MSC-T | Profile Miscellaneous Text - Design | | | | | | | PD-P-MSC-T | 3.0 | | | | | | | |
| Removal | | | | | | | | | | | | | | | | |
| PD-R-BAR-FL | Fence - Removal | PD-R-BAR-FL | PD-R-BAR-T | 3.0 | | | | | | | | | | | | |
| PD-R-BAR-GU | Guide Rail - Removal | PD-R-BAR-GU | PD-R-BAR-T | 3.0 | | | | | | | | | | | | |
| PD-R-BAR-T | Removal Barrier Text | | PD-R-BAR-T | 3.0 | | | | | | | | | | | | |
| PD-R-DRN-CB | Catch Basin - Removal | PD-R-DRN-CB | PD-R-DRN-T | 3.0 | PD-R-DRN-CB | Plus Sign | | | | | | | | | | |
| PD-R-DRN-CV | Culvert - Removal | PD-R-DRN-CV | PD-R-DRN-T | 3.0 | | | | | | | | | | | | |
| PD-R-DRN-MH | Manhole - Removal | PD-R-DRN-MH | PD-R-DRN-T | 3.0 | PD-R-DRN-MH | Plus Sign | | | | | | | | | | |
| PD-R-DRN-SAN | Sanitary Sewer Pipe - Removal | PD-R-DRN-SAN | PD-R-DRN-T | 3.0 | | | | | | | | | | | | |
| PD-R-DRN-SEW | Storm Sewer Pipe - Removal | PD-R-DRN-SEW | PD-R-DRN-T | 3.0 | | | | | | | | | | | | |
| PD-R-DRN-SUB | Sub Drain - Removal | PD-R-DRN-SUB | PD-R-DRN-T | 3.0 | | | | | | | | | | | | |
| PD-R-DRN-T | Removal Drainage Text | | PD-R-DRN-T | 3.0 | | | | | | | | | | | | |
| PD-R-MSC | Miscellaneous items - Removal | PD-R-MSC | PD-R-MSC-T | 3.0 | | | | | | | | | | | | |
| PD-R-MSC-AS | Asphalt Pavement - Removal | PD-R-MSC-AS | PD-R-MSC-T | 3.0 | | | | | | | | | | | | |
| PD-R-MSC-CO | Concrete Pavement - Removal | PD-R-MSC-CO | PD-R-MSC-T | 3.0 | | | | | | | | | | | | |
| PD-R-MSC-COA | Concrete with Asphalt Surface - Removal | PD-R-MSC-COA | PD-R-MSC-T | 3.0 | | | | | | | | | | | | |
| PD-R-MSC-SWA | Sidewalk - Asphalt - Removal | PD-R-MSC-SWA | PD-R-MSC-T | 3.0 | | | | | | | | | | | | |
| PD-R-MSC-SWC | Sidewalk Concrete - Removal | PD-R-MSC-SWC | PD-R-MSC-T | 3.0 | | | | | | | | | | | | |
| PD-R-MSC-T | Removal Miscellaneous Text | | PD-R-MSC-T | 3.0 | | | | | | | | | | | | |

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InRoads Symbologies for Planning and Design

| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | |
|------------------------|--------------------------------------|-----------------|------------|-------|-------|---------|-------|-------|-------|---------------|--------|----------------|-------|-------|-------|--------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| PD-R-RDS-CGA | Curb and Gutter - Asphalt - Removal | PD-R-RDS-CGA | PD-R-RDS-T | 3.0 | | | | | | | | | | | | |
| PD-R-RDS-CGC | Curb and Gutter - Concrete - Removal | PD-R-RDS-CGC | PD-R-RDS-T | 3.0 | | | | | | | | | | | | |
| PD-R-RDS-UR | Edge of Unpaved Road - Removal | PD-R-RDS-UR | PD-R-RDS-T | 3.0 | | | | | | | | | | | | |
| PD-R-RDS-T | Removal Road Text | | PD-R-RDS-T | 3.0 | | | | | | | | | | | | |
| PD-R-VEG-CLR | Cleared - Removal | PD-R-VEG-CLR | PD-R-VEG-T | 3.0 | | | | | | | | | | | | |
| PD-R-VEG-CLRCUT | Close Cut Cleared - Removal | PD-R-VEG-CLRCUT | PD-R-VEG-T | 3.0 | | | | | | | | | | | | |
| PD-R-VEG-CLRGRB | Cleared & Grubbed - Removal | PD-R-VEG-CLRGRB | PD-R-VEG-T | 3.0 | | | | | | | | | | | | |
| PD-R-VEG-GRB | Grubbed - Removal | PD-R-VEG-GRB | PD-R-VEG-T | 3.0 | | | | | | | | | | | | |
| PD-R-VEG-T | Removal Vegetation Text | | PD-R-VEG-T | 3.0 | | | | | | | | | | | | |
| Typical Section | | | | | | | | | | | | | | | | |
| PD-T-25MM | 0.25mm Line - Typical | | | | | | | | | | | PD-T-25MM | | | | |
| PD-T-25MM-P | 0.25mm Hatch - Typical | | | | | | | | | | | PD-T-25MM-P | | | | |
| PD-T-30MM | 0.30mm Line - Typical | | | | | | | | | | | PD-T-30MM | | | | |
| PD-T-30MM-P | 0.30mm Hatch - Typical | | | | | | | | | | | PD-T-30MM-P | | | | |
| PD-T-40MM | 0.40mm Line - Typical | | | | | | | | | | | PD-T-40MM | | | | |
| PD-T-40MM-DASH | 0.40mm Dashed Line - Typical | | | | | | | | | | | PD-T-40MM-DASH | | | | |
| PD-T-50MM | 0.50mm Line - Typical | | | | | | | | | | | PD-T-50MM | | | | |
| PD-T-50MM-P | 0.50mm Hatch - Typical | | | | | | | | | | | PD-T-50MM-P | | | | |
| PD-T-75MM | 0.75mm Line - Typical | | | | | | | | | | | PD-T-75MM | | | | |

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| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | |
|--------------|---|-------|-------|-------|-------|---------|-------|-------|-------|---------------|--------|--------------|-------|-------|-------|--------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| PD-T-CL | Centreline - Typical | | | | | | | | | | | PD-T-CL | | | | |
| PD-T-DIM | Dimensions - Typical | | | | | | | | | | | PD-T-DIM | 3.0 | | | |
| PD-T-OG | Original Ground - Typical | | | | | | | | | | | PD-T-OG | | | | |
| PD-T-OG-ELEV | Cross Section Annotation - OG Elevation | | | | | | | | | | | PD-T-OG-ELEV | 2.0 | | | |
| PD-T-OG-OFF | Cross Section Annotation - OG Offset | | | | | | | | | | | PD-T-OG-OFF | 2.0 | | | |
| PD-T-NOTE-T | General Notes - Typical | | | | | | | | | | | PD-T-NOTE-T | 3.0 | | | |
| PD-T-TEXT | All Text for Typicals | | | | | | | | | | | PD-T-TEXT | 2.0 | | | |
| PD-T-TP-OFF | Cross Section Annotation - TP Offset | | | | | | | | | | | PD-T-TP-OFF | 2.0 | | | |
| PD-T-TP-ELEV | Cross Section Annotation - TP Elevation | | | | | | | | | | | PD-T-TP-ELEV | 2.0 | | | |
| PD-T-SG-ELEV | Cross Section Annotation - SG Elevation | | | | | | | | | | | PD-T-SG-ELEV | 2.0 | | | |
| PD-T-SG-OFF | Cross Section Annotation - SG Offset | | | | | | | | | | | PD-T-SG-OFF | 2.0 | | | |

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| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | |
|----------------------------|--|--------------|---------------|-------|-------|---------|--------------|------------|-------|---------------|--------|--------------|------------|-------|--------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| Template Points | | | | | | | | | | | | | | | | |
| Auxiliary Point | Template Auxiliary Point IP, IBR | PD-N-MSC | | | | | | | | | | PD-N-MSC | PD-N-RDS-T | 2.0 | PD-N-MSC | Plus Sign |
| Centerline Alignment | Centerline Alignment (Point CL) | PD-N-ALI-CL | PD-N-ALI-CL-T | 3.0 | | | | | | | | PD-N-ALI-CL | PD-N-RDS-T | 2.0 | PD-N-ALI-CL | Circle |
| Curb and Gutter (Asphalt) | Asphalt Curb and Gutter (Point CU & GU) | PD-N-RDS-CGA | PD-N-RDS-T | 3.0 | | | PD-N-RDS-CGA | PD-P-G-T | 3.0 | | | PD-N-RDS-CGA | PD-N-RDS-T | 3.0 | PD-N-RDS-CGA | * |
| Curb and Gutter (Concrete) | Concrete Curb and Gutter (Point CU & GU) | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | | PD-N-RDS-CGC | PD-P-G-T | 3.0 | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | PD-N-RDS-CGC | * |
| Edge of Pavement | Edge of Pavement (Point EP) | PD-N-RDS-EP | PD-N-RDS-T | 3.0 | | | PD-P-BED-EP | PD-P-BED-T | 3.0 | | | PD-N-RDS-EP | | | PD-N-RDS-EP | Square |
| Edge of Shoulder | Edge of Shoulder (Point ES) | PD-N-RDS-ES | PD-N-RDS-T | 3.0 | | | PD-P-BED-ES | PD-P-BED-T | 3.0 | | | PD-N-RDS-ES | | | PD-N-RDS-ES | Cross |
| Edge of Paved Shoulder | Edge of Paved Shoulder (Point EPS) | PD-N-RDS-EPS | PD-N-RDS-T | 3.0 | | | PD-P-BED-EPS | PD-P-BED-T | 3.0 | | | PD-N-RDS-EPS | | | PD-N-RDS-EPS | Cross |
| Edge of Rounding | Edge of Rounding (Point ER) | PD-N-RDS-ER | PD-N-RDS-T | 3.0 | | | | | | | | PD-N-RDS-ER | | | PD-N-RDS-ER | Cross |
| Rounding Breakpoint | Rounding Point (Point BR) | PD-N-RDS-BR | | | | | | | | | | PD-N-RDS-BR | | | PD-N-RDS-BR | Plus Sign |
| Granular Rounding | Granular Rounding (Point GR) | PD-N-RDS-GR | PD-N-RDS-T | 3.0 | | | | | | | | PD-N-RDS-GR | | | PD-N-RDS-GR | Plus Sign |
| Granular Shoulder | Granular Shoulder (Point GS) | PD-N-RDS-GS | PD-N-RDS-T | 3.0 | | | | | | | | PD-N-RDS-GS | | | PD-N-RDS-GS | Plus Sign |
| Bottom of Ditch | Bottom of Ditch (Point BC, CH, MD, DI, DO) | PD-N-DRN-BD | PD-N-DRN-T | 3.0 | | | PD-N-DRN-BD | PD-P-DRN-T | 3.0 | | | PD-N-DRN-BD | | | PD-N-DRN-BD | Cross |
| Bottom of Ditch - Lt | Bottom of Ditch, Left - Design | PD-N-DRN-BD | PD-N-DRN-T | 3.0 | | | PD-P-DRN-BDL | PD-P-DRN-T | 3.0 | | | PD-N-DRN-BD | PD-N-DRN-T | 3.0 | PD-N-DRN-BD | Cross |
| Bottom of Ditch - MD | Bottom of Ditch, Median - Design | PD-N-DRN-BD | PD-N-DRN-T | 3.0 | | | PD-P-DRN-BDM | PD-P-DRN-T | 3.0 | | | PD-N-DRN-BD | PD-N-DRN-T | 3.0 | PD-N-DRN-BD | Cross |
| Bottom of Ditch - Rt | Bottom of Ditch, Right - Design | PD-N-DRN-BD | PD-N-DRN-T | 3.0 | | | PD-P-DRN-BDR | PD-P-DRN-T | 3.0 | | | PD-N-DRN-BD | PD-N-DRN-T | 3.0 | PD-N-DRN-BD | Cross |
| Rock | Rock (Point RFT, RFB, BRK, RBI) | PD-N-RDS-RK | PD-N-RDS-T | 3.0 | | | PD-P-GND-RK | PD-P-GND-T | 3.0 | | | PD-N-RDS-RK | PD-N-RDS-T | 3.0 | PD-N-RDS-RK | Cross |
| Rock Shatter | Rock Shatter (Point SH, IB) | PD-N-RDS-SH | PD-N-RDS-T | 3.0 | | | PD-P-MSC-SH | PD-P-MSC-T | 3.0 | | | PD-N-RDS-SH | PD-N-RDS-T | 3.0 | PD-N-RDS-SH | Cross |
| Earth Bench | Earth Bench (Point EBI, EBO, OB) | PD-N-RDS-EB | | | | | | | | | | PD-N-RDS-EB | | | PD-N-RDS-EB | Cross |

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|----------------------------|---------------------------------|--------------|------------|-------|-------|--------|--------------|------------|-------|--------------|--------|---------------|------------|-------|--------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| Subdrain | Subdrain (Point SD) | PD-N-DRN-SUB | PD-N-DRN-T | 3.0 | | | PD-P-DRN-SUB | PD-P-DRN-T | 3.0 | PD-P-DRN-SUB | Cross | PD-N-DRN-SUB | PD-N-DRN-T | 3.0 | PD-N-DRN-SUB | Cross |
| Top of Cut | Top of Cut (Point TC) | PD-N-RDS-TC | PD-N-RDS-T | 3.0 | | | PD-P-BED-TC | PD-P-BED-T | 3.0 | | | PD-N-RDS-TC | | | PD-N-RDS-TC | Plus Sign |
| Top of Cut - Lt | Top of Cut (Point TC) - Left | PD-N-RDS-TC | PD-N-RDS-T | 3.0 | | | PD-P-BED-TCL | PD-P-BED-T | 3.0 | | | PD-N-RDS-TC | | | PD-N-RDS-TC | Plus Sign |
| Top of Cut - Rt | Top of Cut (Point TC) - Right | PD-N-RDS-TC | PD-N-RDS-T | 3.0 | | | PD-P-BED-TCR | PD-P-BED-T | 3.0 | | | PD-N-RDS-TC | | | PD-N-RDS-TC | Plus Sign |
| Toe of Fill Slope | Toe of Slope (Point TS) | PD-N-RDS-TS | PD-N-RDS-T | 3.0 | | | PD-P-BED-TS | PD-P-BED-T | 3.0 | | | PD-N-RDS-TS | | | PD-N-RDS-TS | Plus Sign |
| Toe of Fill Slope - Lt | Toe of Slope (Point TS) - Left | PD-N-RDS-TS | PD-N-RDS-T | 3.0 | | | PD-P-BED-TSL | PD-P-BED-T | 3.0 | | | PD-N-RDS-TS | | | PD-N-RDS-TS | Plus Sign |
| Toe of Fill Slope - Rt | Toe of Slope (Point TS) - Right | PD-N-RDS-TS | PD-N-RDS-T | 3.0 | | | PD-P-BED-TSR | PD-P-BED-T | 3.0 | | | PD-N-RDS-TS | | | PD-N-RDS-TS | Plus Sign |
| Raised Berm | Raised Berm (Point RB) | PD-N-RDS-RB | | | | | | | | | | PD-N-RDS-RB | | | PD-N-RDS-RB | Cross |
| Retaining Wall | Retaining Wall (Point RW) | PD-N-MSC-RW | PD-N-MSC-T | 3.0 | | | PD-P-MSC-RW | PD-P-MSC-T | 3.0 | | | PD-N-MSC-RW | PD-N-MSC-T | 3.0 | PD-N-MSC-RW | Plus Sign |
| Sidewalk (Asphalt) | Asphalt Sidewalk (Point SW) | PD-N-MSC-SWA | PD-N-MSC-T | 3.0 | | | | | | | | PD-N-MSC-SWA | PD-N-MSC-T | 3.0 | PD-N-MSC-SWA | Cross |
| Sidewalk (Concrete) | Concrete Sidewalk (Point SW) | PD-N-MSC-SWC | PD-N-MSC-T | 3.0 | | | | | | | | PD-N-MSC-SWC | PD-N-MSC-T | 3.0 | PD-N-MSC-SWA | Cross |
| Muskeg | Muskeg (Point MU) | PD-N-RDS-ME | PD-N-RDS-T | 3.0 | | | PD-P-GND-MUT | PD-P-GND-T | 3.0 | | | PD-N-RDS-ME | | | PD-N-RDS-ME | Plus Sign |
| Barrier | Barrier (Point BA) | PD-N-RDS-BAR | PD-N-RDS-T | 3.0 | | | PD-N-RDS-BAR | PD-P-G-T | 3.0 | | | PD-N-RDS-BAR | | | PD-N-RDS-BAR | Plus Sign |
| Jersey Barrier | Jersey Barrier (Point JB) | PD-N-BAR-JB | PD-N-BAR-T | 3.0 | | | PD-N-BAR-JB | PD-P-G-T | 3.0 | | | PD-N-BAR-JB | | | PD-N-BAR-JB | Plus Sign |
| Template Components | | | | | | | | | | | | | | | | |
| Asphalt Top Course | Asphalt Top Course | PD-N-RDS-ATC | | | | | | | | | | PD-N-RDS-ATC | PD-N-RDS-T | 3.0 | | |
| Asphalt Base Course 1 | Asphalt Base Course 1 | PD-N-RDS-A1 | | | | | | | | | | PD-N-RDS-A1 | PD-N-RDS-T | 3.0 | | |
| Asphalt Base Course 2 | Asphalt Base Course 2 | PD-N-RDS-A2 | | | | | | | | | | PD-N-RDS-A2 | PD-N-RDS-T | 3.0 | | |
| Asphalt Base Course 3 | Asphalt Base Course 3 | PD-N-RDS-A3 | | | | | | | | | | PD-N-RDS-A3 | PD-N-RDS-T | 3.0 | | |

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| ItemName | Description | Plan | | | | | Profile | | | | | Cross Section | | | | |
|------------------------------|--|--------------|------------|-------|-------|--------|--------------|----------|-------|-------|--------|---------------|------------|-------|--------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| Asphalt Base Course 4 | Asphalt Base Course 4 | PD-N-RDS-A4 | | | | | | | | | | PD-N-RDS-A4 | PD-N-RDS-T | 3.0 | | |
| Asphalt Shoulder Top Course | Asphalt Shoulder Top Course | PD-N-RDS-AS1 | | | | | | | | | | PD-N-RDS-AS1 | PD-N-RDS-T | 3.0 | | |
| Asphalt Shoulder Base Course | Asphalt Shoulder Base Course | PD-N-RDS-AS2 | | | | | | | | | | PD-N-RDS-AS2 | PD-N-RDS-T | 3.0 | | |
| Concrete Pavement | Concrete Pavement | PD-N-MSC-CO | | | | | | | | | | PD-N-MSC-CO | PD-N-MSC-T | 3.0 | | |
| Curb and Gutter (Asphalt) | Asphalt Curb and Gutter (Point CU & GU) | PD-N-RDS-CGA | PD-N-RDS-T | 3.0 | | | PD-N-RDS-CGA | PD-P-G-T | 3.0 | | | PD-N-RDS-CGA | PD-N-RDS-T | 3.0 | PD-N-RDS-CGA | * |
| Curb and Gutter (Concrete) | Concrete Curb and Gutter (Point CU & GU) | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | | PD-N-RDS-CGC | PD-P-G-T | 3.0 | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | PD-N-RDS-CGC | * |
| Granular A | Granular A | PD-N-RDS-GU | | | | | | | | | | PD-N-RDS-GU | PD-N-RDS-T | 3.0 | | |
| Granular B | Granular B | PD-N-RDS-GL | | | | | | | | | | PD-N-RDS-GL | PD-N-RDS-T | 3.0 | | |
| Granular Shoulder | Granular Shoulder (Point GS) | PD-N-RDS-GS | PD-N-RDS-T | 3.0 | | | | | | | | PD-N-RDS-GS | | | PD-N-RDS-GS | Plus Sign |
| Jersey Barrier | Jersey Barrier (Point JB) | PD-N-BAR-JB | PD-N-BAR-T | 3.0 | | | PD-N-BAR-JB | PD-P-G-T | 3.0 | | | PD-N-BAR-JB | | | PD-N-BAR-JB | Plus Sign |
| Curb & Gutter OPSD 600.010 | Curb & Gutter OPSD 600.010 | PD-N-RDS-CGC | | | | | | | | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | |
| Curb & Gutter OPSD 600.020 | Curb & Gutter OPSD 600.020 | PD-N-RDS-CGC | | | | | | | | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | |
| Curb & Gutter OPSD 600.030 | Curb & Gutter OPSD 600.030 | PD-N-RDS-CGC | | | | | | | | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | |
| Curb & Gutter OPSD 600.040 | Curb & Gutter OPSD 600.040 | PD-N-RDS-CGC | | | | | | | | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | |
| Curb & Gutter OPSD 600.050 | Curb & Gutter OPSD 600.050 | PD-N-RDS-CGC | | | | | | | | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | |
| Curb & Gutter OPSD 600.060 | Curb & Gutter OPSD 600.060 | PD-N-RDS-CGC | | | | | | | | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | |
| Curb & Gutter OPSD 600.070 | Curb & Gutter OPSD 600.070 | PD-N-RDS-CGC | | | | | | | | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | |
| Curb & Gutter OPSD 600.080 | Curb & Gutter OPSD 600.080 | PD-N-RDS-CGC | | | | | | | | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | |
| Curb & Gutter OPSD 600.090 | Curb & Gutter OPSD 600.090 | PD-N-RDS-CGC | | | | | | | | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | |

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|----------------------------|--------------------------------------|--------------------|------------|-------|-------|--------|--------------|-------------|------------|--------------|--------|--------------------|------------|-----------|--------------------|---------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | |
| Curb & Gutter OPSD 600.100 | Curb & Gutter OPSD 600.100 | PD-N-RDS-CGC | | | | | | | | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | | |
| Curb & Gutter OPSD 600.110 | Curb & Gutter OPSD 600.110 | PD-N-RDS-CGC | | | | | | | | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | | |
| Curb & Gutter OPSD 601.010 | Curb & Gutter OPSD 601.010 | PD-N-RDS-CGC | | | | | | | | | | PD-N-RDS-CGC | PD-N-RDS-T | 3.0 | | | |
| Muskeg Backfill | Muskeg Backfill | | | | | | | | | | | PD-N-RDS-MB | PD-N-RDS-T | 3.0 | | | |
| Muskeg Excavation | Muskeg Excavation | | | | | | | | | | | PD-N-RDS-ME | PD-N-RDS-T | 3.0 | | | |
| Cut | Cut | PD-N-RDS-TC | | | | | | | | | | PD-N-RDS-TC | PD-N-RDS-T | 2.0 | | | |
| Fill | Fill | PD-N-RDS-TS | | | | | | | | | | PD-N-RDS-TS | PD-N-RDS-T | 2.0 | | | |
| Milling | Milling | PD-N-MSC-MI | PD-N-MSC-T | 3.0 | | | | | | | | PD-N-MSC-MI | PD-N-MSC-T | 3.0 | | | |
| Rock Cut | Rock Cut | PD-N-RDS-RC | | | | | | | | | | PD-N-RDS-RC | PD-N-RDS-T | 3.0 | | | |
| Rock Fill | Rock Fill | PD-N-RDS-RK | | | | | | | | | | PD-N-RDS-RK | PD-N-RDS-T | 3.0 | | | |
| Rock Shatter | Rock Shatter (Point SH, IB) | PD-N-RDS-SH | PD-N-RDS-T | 3.0 | | | PD-P-MSC-SH | PD-P-MSC-T | 3.0 | | | PD-N-RDS-SH | PD-N-RDS-T | 3.0 | PD-N-RDS-SH | Cross | |
| Rock Shatter (Partial) | Rock Shatter (Partial for deduction) | PD-N-RDS-SH | | | | | | | | | | PD-N-RDS-SH | PD-N-RDS-T | 3.0 | | | |
| Sidewalk (Asphalt) | Asphalt Sidewalk (Point SW) | PD-N-MSC-SWA | PD-N-MSC-T | 3.0 | | | | | | | | PD-N-MSC-SWA | PD-N-MSC-T | 3.0 | PD-N-MSC-SWA | Cross | |
| Sidewalk (Concrete) | Concrete Sidewalk (Point SW) | PD-N-MSC-SWC | PD-N-MSC-T | 3.0 | | | | | | | | PD-N-MSC-SWC | PD-N-MSC-T | 3.0 | PD-N-MSC-SWA | Cross | |
| Stripping | Stripping | PD-N-MSC-Stripping | PD-N-MSC-T | 3.0 | | | | | | | | PD-N-MSC-Stripping | PD-N-MSC-T | 3.0 | PD-N-MSC-Stripping | Cross | |
| Subdrain | Subdrain (Point SD) | PD-N-DRN-SUB | PD-N-DRN-T | 3.0 | | | PD-P-DRN-SUB | PD-P-DRN-T | 3.0 | PD-P-DRN-SUB | Cross | PD-N-DRN-SUB | PD-N-DRN-T | 3.0 | PD-N-DRN-SUB | Cross | |
| V Median Ditch | Median Ditch | PD-N-RDS-MED | | | | | | | | | | PD-N-RDS-MED | | | | | |
| DTM | | | | | | | | | | | | | | | | | |
| DTM_OG | Original Ground - Existing | | | | | | | PD-P-GND-OG | PD-P-GND-T | 3.0 | | | PD-T-OG | PD-T-OG-T | 3.0 | PD-T-OG | Plus Sign |

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|-------------------|------------------------------------|-----------------|-------------|-------|-------|-------|---------|--------------|------------|-------|-------|---------------|--------------|------------|-------|--------------|-----------|
| | | Line | | Text | | Point | | Line | | Text | | Point | | Line | | Text | |
| | | Layer | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Layer |
| DTM_OG (SP) | Original Ground - S&P | | | | | | | SP-P-ALI-CL | SP-G-TEXT | 3.0 | | | SP-G-40MM | SP-G-TEXT | 3.0 | SP-G-40MM | Plus Sign |
| DTM_Proposed | Proposed Surface | | | | | | | PD-P-BED-TP | PD-P-BED-T | 3.0 | | | PD-T-TP | PD-T-TEXT | 3.0 | PD-T-TP | Plus Sign |
| DTM_TP (Asphalt) | Top of Designed Surface - Asphalt | | | | | | | PD-P-BED-TP | PD-P-BED-T | 3.0 | | | PD-N-SF-AP | PD-N-RDS-T | 3.0 | PD-N-SF-AP | Cross |
| DTM_TP (Concrete) | Top of Designed Surface - Concrete | | | | | | | PD-P-BED-TP | PD-P-BED-T | 3.0 | | | PD-N-SF-CO | PD-N-RDS-T | 3.0 | PD-N-SF-CO | Cross |
| DTM_TA | Top of Granular A Surface | | | | | | | PD-P-BED-GRA | PD-P-BED-T | 3.0 | | | PD-N-SF-TA | PD-N-RDS-T | 3.0 | PD-N-SF-TA | Circle |
| DTM_TB | Top of Granular B Surface | | | | | | | PD-P-BED-GRB | PD-P-BED-T | 3.0 | | | PD-N-SF-TB | PD-N-RDS-T | 3.0 | PD-N-SF-TB | Plus Sign |
| DTM_SG | Subgrade Surface | | | | | | | PD-P-BED-SG | PD-P-BED-T | 3.0 | | | PD-N-SF-SG | PD-N-RDS-T | 3.0 | PD-N-SF-SG | Plus Sign |
| DTM_Rock Shatter | Rock Shatter Surface | | | | | | | PD-P-MSC-SH | PD-P-G-T | 3.0 | | | PD-N-SF-SH | PD-N-RDS-T | 3.0 | PD-N-SF-SH | Cross |
| DTM_Rock Survey | Rock Survey Surface | | | | | | | SP-E-GND-RKS | PD-P-BED-T | 3.0 | | | SP-E-GND-RKS | PD-N-RDS-T | 3.0 | SP-E-GND-RKS | Cross |
| DTM_Rock Design | Rock Design Surface | | | | | | | PD-P-GND-RK | PD-P-BED-T | 3.0 | | | PD-N-SF-RK | PD-N-RDS-T | 3.0 | PD-N-SF-RK | Cross |
| DTM_Muskeg Survey | Muskeg Survey Surface | | | | | | | SP-E-GND-MU | PD-P-BED-T | 3.0 | | | SP-E-GND-MU | PD-N-RDS-T | 3.0 | SP-E-GND-MU | Cross |
| DTM Boundary | Surface Boundary | PD-SF-BOUNDARY | PD-G-TEXT | 3.0 | | | | | | | | | | | | | |
| DTM Triangles | DTM Triangles | PD-SF-TRIANGLES | PD-G-TEXT | 3.0 | | | | | | | | | | | | | |
| Contours-Major | Contours | CONT-MJR | CONT-LABELS | 2.5 | | | | | | | | | | | | | |
| Contours-Minor | Contours | CONT-MNR | CONT-LABELS | 2.5 | | | | | | | | | | | | | |
| Contour Labels | Contour Labels | | CONT-LABELS | 2.0 | | | | | | | | | | | | | |

Appendix B
InRoads Symbologies for Photogrammetry

| ItemName | Description | Default | | | | Profile | | | | Cross Section | | | | | | | |
|-------------------------------|-------------------------------|--------------|-------------|-------|--------------|-----------|-------|-------------|-------|---------------|--------|-------|-------|-------|-------|--------|--|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | |
| Photogrammetry General | | | | | | | | | | | | | | | | | |
| PH-G-25MM | 0.25mm Line - Existing | PH-G-25MM | PH-G-TEXT | 3.0 | | | | | | | | | | | | | |
| PH-G-40MM | 0.40mm Line - Existing | PH-G-40MM | PH-G-TEXT | 3.0 | | | | | | | | | | | | | |
| PH-G-50MM | 0.50mm Line - Existing | PH-G-50MM | PH-G-TEXT | 3.0 | | | | | | | | | | | | | |
| PH-G-75MM | 0.75mm Line - Existing | PH-G-75MM | PH-G-TEXT | 3.0 | | | | | | | | | | | | | |
| PH-G-TEXT | General Text - Existing | | PH-G-TEXT | 3.0 | | | | | | | | | | | | | |
| PH-E-SCANNED | Scanned Images - Existing | PH-E-SCANNED | PH-G-TEXT | 3.0 | PH-E-SCANNED | Plus Sign | | | | | | | | | | | |
| PH-G-SYMBOLS | Symbols - Existing | PH-G-SYMBOLS | PH-G-TEXT | 3.0 | PH-G-SYMBOLS | Plus Sign | | | | | | | | | | | |
| PH-E-LABELS | String Labels - Existing | | | | | | | PH-E-LABELS | 3.0 | | | | | | | | |
| Survey Monument | | | | | | | | | | | | | | | | | |
| PH-E-MON | Horizontal Control - Existing | PH-E-MON | PH-E-MON | 3.0 | PH-E-MON | Circle | | | | | | | | | | | |
| PH-E-MON-BM | Vertical Control - Existing | PH-E-MON-BM | PH-E-MON-BM | 3.0 | PH-E-MON-BM | Circle | | | | | | | | | | | |

Appendix B
InRoads Symbologies for Photogrammetry

| ItemName | Description | Plan | | | | | Profile | | | | | Cross Section | | | | |
|------------------|--------------------------------------|--------------|-------------|-------|--------------|--------|--------------|------------|-------|---------------|-----------|---------------|------------|-------|--------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| Alignment | | | | | | | | | | | | | | | | |
| PH-E-ALI-E1 | Entrance Alignment - Existing | PH-E-ALI-E1 | PH-E-LABELS | 2.0 | PH-E-ALI-E1 | Circle | PH-E-ALI-E1 | | | | | PH-E-ALI-E1 | | | PH-E-ALI-E1 | Plus Sign |
| Barrier | | | | | | | | | | | | | | | | |
| PH-E-BAR-BB | Barrier Concrete (Bottom) - Existing | PH-E-BAR-BB | PH-E-BAR-T | 3.0 | | | PH-E-BAR-BB | | | | | | | | PH-E-BAR-BB | Plus Sign |
| PH-E-BAR-BT | Barrier Concrete (Top) - Existing | PH-E-BAR-BT | PH-E-BAR-T | 3.0 | | | PH-E-BAR-BT | | | | | | | | PH-E-BAR-BT | Plus Sign |
| PH-E-BAR-FL | Fence (Top) - Existing | PH-E-BAR-FL | PH-E-BAR-T | 3.0 | | | PH-E-BAR-FL | | | | | | | | PH-E-BAR-FL | Plus Sign |
| PH-E-BAR-GAT | Gate - Existing | PH-E-BAR-GAT | PH-E-BAR-T | 3.0 | | | PH-E-BAR-GAT | | | | | | | | PH-E-BAR-GAT | Plus Sign |
| PH-E-BAR-GU | Guide Rail - Existing | PH-E-BAR-GU | PH-E-BAR-T | 3.0 | | | PH-E-BAR-GU | | | | | | | | PH-E-BAR-GU | Plus Sign |
| PH-E-BAR-NB | Noise Barrier (Top) - Existing | PH-E-BAR-NB | PH-E-BAR-T | 3.0 | | | PH-E-BAR-NB | | | | | | | | PH-E-BAR-NB | Plus Sign |
| PH-E-BAR-T | Barrier Text - Existing | | PH-E-BAR-T | 3.0 | | | PH-E-BAR-T | 3.0 | | | | PH-E-BAR-T | 3.0 | | | |
| Contour | | | | | | | | | | | | | | | | |
| PH-E-CTR-C1 | Contour (Primary) - Existing | PH-E-CTR-C1 | PH-E-CTR-T | 3.0 | | | | | | | | | | | | |
| PH-E-CTR-C2 | Contour (Secondary) - Existing | PH-E-CTR-C2 | PH-E-CTR-T | 3.0 | | | | | | | | | | | | |
| PH-E-CTR-T | Contour Text - Existing | | PH-E-CTR-T | 3.0 | | | | | | | | | | | | |
| Drainage | | | | | | | | | | | | | | | | |
| PH-E-DRN-BD | Bottom of Ditch - Existing | PH-E-DRN-BD | PH-E-DRN-T | 3.0 | | | PH-E-DRN-BD | PH-E-DRN-T | 3.0 | | | PH-E-DRN-BD | PH-E-DRN-T | 3.0 | PH-E-DRN-BD | Plus Sign |
| PH-E-DRN-CB | Catch Basin - Existing | | PH-E-DRN-T | 3.0 | PH-E-DRN-CB | SP_CB | | PH-E-DRN-T | 3.0 | PH-E-DRN-CB | Plus Sign | | | | | |
| PH-E-DRN-CVP | Culvert (One End) - Existing | | PH-E-DRN-T | 3.0 | PH-E-DRN-CVP | SP_CVP | | PH-E-DRN-T | 3.0 | PH-E-DRN-CV-P | Plus Sign | | | | | |

Appendix B
InRoads Symbologies for Photogrammetry

| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | |
|-----------------------|-------------------------------------|---------------|------------|-------|-------------|---------|---------------|------------|-------|---------------|-----------|---------------|------------|-------|-------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| PH-E-DRN-CV-P | Culvert Outline - Existing | PH-E-DRN-CV-P | PH-E-DRN-T | 3.0 | | | PH-E-DRN-CV-P | PH-E-DRN-T | 3.0 | | | PH-E-DRN-CV-P | PH-E-DRN-T | 3.0 | | |
| PH-E-DRN-CVT | Culvert Centreline (Top) - Existing | PH-E-DRN-CVT | PH-E-DRN-T | 3.0 | | | PH-E-DRN-CVT | PH-E-DRN-T | 3.0 | | | PH-E-DRN-CVT | PH-E-DRN-T | 3.0 | | |
| PH-E-DRN-DI | Ditch Inlet - Existing | | PH-E-DRN-T | 3.0 | PH-E-DRN-DI | SP_DI | | PH-E-DRN-T | 3.0 | PH-E-DRN-DI | Plus Sign | | | | | |
| PH-E-DRN-EM | Edge of Muskeg - Existing | PH-E-DRN-EM | PH-E-DRN-T | 3.0 | | | PH-E-DRN-EM | PH-E-DRN-T | 3.0 | | | PH-E-DRN-EM | PH-E-DRN-T | 3.0 | PH-E-DRN-EM | Plus Sign |
| PH-E-DRN-EM-P | Muskeg Pattern - Existing | PH-E-DRN-EM-P | PH-E-DRN-T | 3.0 | | | | | | | | | | | | |
| PH-E-DRN-EW | Edge of Water - Existing | PH-E-DRN-EW | PH-E-DRN-T | 3.0 | | | PH-E-DRN-EW | PH-E-DRN-T | 3.0 | | | | PH-E-DRN-T | 3.0 | PH-E-DRN-EW | Plus Sign |
| PH-E-DRN-MH | Manhole - Existing | | PH-E-DRN-T | 3.0 | PH-E-DRN-MH | SP_MH | | PH-E-DRN-T | 3.0 | PH-E-DRN-MH | Plus Sign | | | | | |
| PH-E-DRN-RR | Rip-Rap - Existing | PH-E-DRN-RR | PH-E-DRN-T | 3.0 | | | | | | | | | | | | |
| PH-E-DRN-T | Drainage Text - Existing | | PH-E-DRN-T | 3.0 | | | PH-E-DRN-T | 3.0 | | | | PH-E-DRN-T | 3.0 | | | |
| Ground Feature | | | | | | | | | | | | | | | | |
| PH-E-GND-AO | Asphalt Outline - Existing | PH-E-GND-AO | PH-E-GND-T | 3.0 | | | PH-E-GND-AO | | | | | | | | PH-E-GND-AO | Plus Sign |
| PH-E-GND-AS | Asphalt Shots - Existing | PH-E-GND-AS | PH-E-GND-T | 3.0 | | | PH-E-GND-AS | | | | | | | | PH-E-GND-AS | Plus Sign |
| PH-E-GND-BA | Bank of River or Stream - Existing | PH-E-GND-BA | PH-E-GND-T | 3.0 | | | PH-E-GND-BA | | | | | | | | PH-E-GND-BA | Plus Sign |
| PH-E-GND-BC | Bottom of Rock Cut - Existing | PH-E-GND-BC | PH-E-GND-T | 3.0 | | | PH-E-GND-BC | | | | | | | | PH-E-GND-BC | Plus Sign |
| PH-E-GND-CO | Concrete Outline - Existing | PH-E-GND-CO | PH-E-GND-T | 3.0 | | | PH-E-GND-CO | | | | | | | | PH-E-GND-CO | Plus Sign |
| PH-E-GND-CS | Concrete Shots - Existing | PH-E-GND-CS | PH-E-GND-T | 3.0 | | | PH-E-GND-CS | | | | | | | | PH-E-GND-CS | Plus Sign |
| PH-E-GND-EC | Entrance Centreline - Existing | PH-E-GND-EC | PH-E-GND-T | 3.0 | | | PH-E-GND-EC | | | PH-E-GND-EC | Plus Sign | PH-E-GND-EC | | | PH-E-GND-EC | Plus Sign |
| PH-E-GND-GO | Gravel Outline - Existing | PH-E-GND-GO | PH-E-GND-T | 3.0 | | | PH-E-GND-GO | | | | | | | | PH-E-GND-GO | Plus Sign |

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InRoads Symbologies for Photogrammetry

| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | |
|----------------------|---|---------------|------------|-------|-------|---------|--------------|------------|-------|---------------|--------|-------------|-------|-------|--------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| PH-E-GND-GS | Gravel Shots - Existing | PH-E-GND-GS | PH-E-GND-T | 3.0 | | | PH-E-GND-GS | | | | | | | | PH-E-GND-GS | Plus Sign |
| PH-E-GND-GX | Original Ground (Approximate) - Existing | PH-E-GND-GX | PH-E-GND-T | 3.0 | | | PH-E-GND-GX | | | | | | | | PH-E-GND-GX | Plus Sign |
| PH-E-GND-OG | Original Ground Fault - Existing | PH-E-GND-OG | PH-E-GND-T | 3.0 | | | PH-E-GND-OG | | | | | PH-E-GND-OG | | | PH-E-GND-OG | Plus Sign |
| PH-E-GND-RBE | Railway Ballast Edge - Existing | PH-E-GND-RBE | PH-E-GND-T | 3.0 | | | PH-E-GND-RBE | | | | | | | | PH-E-GND-RBE | Plus Sign |
| PH-E-GND-RBT | Railway Ballast Top - Existing | PH-E-GND-RBT | PH-E-GND-T | 3.0 | | | PH-E-GND-RBT | | | | | | | | PH-E-GND-RBT | Plus Sign |
| PH-E-GND-RKO | Rock Outline - Existing | PH-E-GND-RKO | PH-E-GND-T | 3.0 | | | PH-E-GND-RKO | | | | | | | | PH-E-GND-RKO | Plus Sign |
| PH-E-GND-RKS | Rock Shots - Existing | PH-E-GND-RKS | PH-E-GND-T | 3.0 | | | PH-E-GND-RKS | | | | | | | | PH-E-GND-RKS | Plus Sign |
| PH-E-GND-SP | Stock Piles - Existing | PH-E-GND-SP | PH-E-GND-T | 3.0 | | | PH-E-GND-SP | | | | | | | | PH-E-GND-SP | Plus Sign |
| PH-E-GND-TC | Top of Rock Cut - Existing | PH-E-GND-TC | PH-E-GND-T | 3.0 | | | PH-E-GND-TC | | | | | | | | PH-E-GND-TC | Plus Sign |
| PH-E-GND-XX | Original Ground Estimated - Existing | PH-E-GND-XX | PH-E-GND-T | 3.0 | | | PH-E-GND-XX | | | | | | | | PH-E-GND-XX | Plus Sign |
| PH-E-GND-P | Ground Patterning (Cut and Fill) - Existing | PH-E-GND-P | PH-E-GND-T | 3.0 | | | PH-E-GND-P | PH-E-GND-T | 3.0 | | | | | | | |
| PH-E-GND-T | Ground Features Text | | PH-E-GND-T | 3.0 | | | PH-E-GND-T | PH-E-GND-T | 3.0 | | | | | | | |
| Miscellaneous | | | | | | | | | | | | | | | | |
| PH-Q-MSC-AU | Audit Line - Existing | PH-Q-MSC-AU | PH-E-MSC-T | 3.0 | | | | | | | | | | | | |
| PH-E-MSC-AX | Excluded Area - Existing | PH-E-MSC-AX | PH-E-MSC-T | 3.0 | | | PH-E-MSC-AX | | | | | | | | | |
| PH-E-MSC-AX-P | Excluded Area Pattern - Existing | PH-E-MSC-AX-P | PH-E-MSC-T | 3.0 | | | | | | | | | | | | |
| PH-E-MSC-BLF | Building Foundations Ruins - Existing | PH-E-MSC-BLF | PH-E-MSC-T | 3.0 | | | PH-E-MSC-BLF | | | | | | | | PH-E-MSC-BLF | Plus Sign |
| PH-E-MSC-BLR | Building Roofline - Existing | PH-E-MSC-BLR | PH-E-MSC-T | 3.0 | | | PH-E-MSC-BLR | | | | | | | | PH-E-MSC-BLR | Plus Sign |

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| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | |
|----------------|----------------------------------|--------------|---------------|-------|---------------|----------|--------------|---------------|-------|---------------|----------|-------------|---------------|-------|---------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| PH-E-MSC-BS | Building Surround - Existing | PH-E-MSC-BS | PH-E-MSC-T | 3.0 | | | PH-E-MSC-BS | | | | | | | | PH-E-MSC-BS | Plus Sign |
| PH-E-MSC-BY | Segment Boundary - Existing | PH-E-MSC-BY | PH-E-MSC-T | 3.0 | | | PH-E-MSC-BY | | | | | | | | PH-E-MSC-BY | Plus Sign |
| PH-E-MSC-CE | Cemetery - Existing | PH-E-MSC-CE | PH-E-MSC-T | 3.0 | | | PH-E-MSC-CE | | | | | | | | PH-E-MSC-CE | Plus Sign |
| PH-E-MSC-DK | Wooden Decks or Docks - Existing | PH-E-MSC-DK | PH-E-MSC-T | 3.0 | | | PH-E-MSC-DK | | | | | | | | PH-E-MSC-DK | Plus Sign |
| PH-E-MSC-EJ | Expansion Joint - Existing | PH-E-MSC-EJ | PH-E-MSC-T | 3.0 | | | PH-E-MSC-EJ | | | | | | | | | |
| PH-E-MSC-EV-Z | Miscellaneous Elevations | | PH-E-MSC-EV-Z | 3.0 | PH-E-MSC-EV-Z | SP_MSC_Z | | PH-E-MSC-EV-Z | 3.0 | PH-E-MSC-EV-Z | SP_MSC_Z | | PH-E-MSC-EV-Z | 3.0 | PH-E-MSC-EV-Z | SP_MSC_Z |
| PH-E-MSC-GAB | Gabion Baskets - Existing | PH-E-MSC-GAB | PH-E-MSC-T | 3.0 | | | PH-E-MSC-GAB | | | | | | | | | |
| PH-E-MSC-GC | Golf Course - Existing | PH-E-MSC-GC | PH-E-MSC-T | 3.0 | | | | | | | | | | | PH-E-MSC-GC | Plus Sign |
| PH-E-MSC-HR | Bridge Hand Rails - Existing | PH-E-MSC-HR | PH-E-MSC-T | 3.0 | | | PH-E-MSC-HR | | | | | | | | PH-E-MSC-HR | Plus Sign |
| PH-E-MSC-OR | Orchard - Existing | PH-E-MSC-OR | PH-E-MSC-T | 3.0 | | | PH-E-MSC-OR | | | | | | | | PH-E-MSC-OR | Plus Sign |
| PH-E-MSC-OS | Overhead Sign - Existing | PH-E-MSC-OS | PH-E-MSC-T | 3.0 | PH-E-MSC-OS | SP_OS | PH-E-MSC-OS | | | | | PH-E-MSC-OS | | | PH-E-MSC-OS | Plus Sign |
| PH-E-MSC-RLT | Railway Top of Rail - Existing | PH-E-MSC-RLT | PH-E-MSC-T | 3.0 | | | PH-E-MSC-RLT | | | | | | | | PH-E-MSC-RLT | Plus Sign |
| PH-E-MSC-RW | Top of Retaining Wall - Existing | PH-E-MSC-RW | PH-E-MSC-T | 3.0 | | | PH-E-MSC-RW | | | | | | | | PH-E-MSC-RW | Plus Sign |
| PH-E-MSC-SW | Sidewalk - Existing | PH-E-MSC-SW | PH-E-MSC-T | 3.0 | | | PH-E-MSC-SW | | | | | | | | PH-E-MSC-SW | Plus Sign |
| PH-E-MSC-VI | Vineyard - Existing | PH-E-MSC-VI | PH-E-MSC-T | 3.0 | | | | | | | | | | | PH-E-MSC-VI | Plus Sign |
| PH-E-MSC-WW | Walkway-Trails-Paths - Existing | PH-E-MSC-WW | PH-E-MSC-T | 3.0 | | | PH-E-MSC-WW | | | | | | | | PH-E-MSC-WW | Plus Sign |
| PH-E-MSC-T | Miscellaneous Text | | PH-E-MSC-T | 3.0 | | | | PH-E-MSC-T | 3.0 | | | | PH-E-MSC-T | 3.0 | | |
| Roadway | | | | | | | | | | | | | | | | |

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InRoads Symbologies for Photogrammetry

| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | |
|----------------|---|--------------|------------|-------|-------------|---------|--------------|------------|-------|---------------|--------|-------|------------|-------|--------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| PH-E-RDS-AE | Asphalt Edge - Existing | PH-E-RDS-AE | PH-E-RDS-T | 3.0 | | | PH-E-RDS-AE | | | | | | | | PH-E-RDS-AE | Plus Sign |
| PH-E-RDS-BRD | Bridge Deck - Existing | PH-E-RDS-BRD | PH-E-RDS-T | 3.0 | | | PH-E-RDS-BRD | | | | | | | | PH-E-RDS-BRD | Plus Sign |
| PH-E-RDS-CR | Crown of Road - Existing | PH-E-RDS-CR | PH-E-RDS-T | 3.0 | | | PH-E-RDS-CR | | | | | | | | PH-E-RDS-CR | Plus Sign |
| PH-E-RDS-CU | Curbs - Existing | PH-E-RDS-CU | PH-E-RDS-T | 3.0 | | | PH-E-RDS-CU | | | | | | | | PH-E-RDS-CU | Plus Sign |
| PH-E-RDS-EG | Edge of Gutter - Existing | PH-E-RDS-EG | PH-E-RDS-T | 3.0 | | | PH-E-RDS-EG | | | | | | | | PH-E-RDS-EG | Plus Sign |
| PH-E-RDS-EN | Entrance - Uncertain Surface - Existing | PH-E-RDS-EN | PH-E-RDS-T | 3.0 | | | PH-E-RDS-EN | | | | | | | | PH-E-RDS-EN | Plus Sign |
| PH-E-RDS-EP | Edge of Pavement - Existing | PH-E-RDS-EP | PH-E-RDS-T | 3.0 | | | PH-E-RDS-EP | | | | | | | | PH-E-RDS-EP | Square |
| PH-E-RDS-ES | Edge of Shoulder - Existing | PH-E-RDS-ES | PH-E-RDS-T | 3.0 | | | PH-E-RDS-ES | | | | | | | | PH-E-RDS-ES | Plus Sign |
| PH-E-RDS-NG | Gravel Entrance - Existing | PH-E-RDS-NG | PH-E-RDS-T | 3.0 | | | PH-E-RDS-NG | | | | | | | | PH-E-RDS-NG | Plus Sign |
| PH-E-RDS-NP | Paved Entrance - Existing | PH-E-RDS-NP | PH-E-RDS-T | 3.0 | | | PH-E-RDS-NP | | | | | | | | PH-E-RDS-NP | Plus Sign |
| PH-E-RDS-RD | Roads of Uncertain Material - Existing | PH-E-RDS-RD | PH-E-RDS-T | 3.0 | | | PH-E-RDS-RD | | | | | | | | PH-E-RDS-RD | Plus Sign |
| PH-E-RDS-UR | Gravel Sideroads - Existing | PH-E-RDS-UR | PH-E-RDS-T | 3.0 | | | PH-E-RDS-UR | | | | | | | | PH-E-RDS-UR | Plus Sign |
| PH-E-RDS-T | Roadway Text - Existing | | PH-E-RDS-T | 3.0 | | | | PH-E-RDS-T | 3.0 | | | | PH-E-RDS-T | 3.0 | | |
| Utility | | | | | | | | | | | | | | | | |
| PH-E-UTL-AN | Anchor for Guy Wire - Existing | | PH-E-UTL-T | 2.0 | PH-E-UTL-AN | SP_AN | | | | | | | | | PH-E-UTL-AN | Cross |
| PH-E-UTL-BH | Bell Hydro Pole - Existing | | PH-E-UTL-T | 2.0 | PH-E-UTL-BH | SP_BH | | | | | | | | | PH-E-UTL-BH | Cross |
| PH-E-UTL-BP | Bell Pole - Existing | | PH-E-UTL-T | 2.0 | PH-E-UTL-BP | SP_BP | | | | | | | | | PH-E-UTL-BP | Cross |
| PH-E-UTL-FH | Fire Hydrant - Existing | | PH-E-UTL-T | 2.0 | PH-E-UTL-FH | SP_FH | | | | | | | | | PH-E-UTL-FH | Cross |

Appendix B
InRoads Symbologies for Photogrammetry

| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | |
|-------------------|----------------------------|-------------|------------|-------|-------------|---------|------------|-------|-------|---------------|----------|------------|-------|-------|-------------|--------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| PH-E-UTL-HP | Hydro Pole - Existing | | PH-E-UTL-T | 2.0 | PH-E-UTL-HP | SP_HP | | | | | | | | | PH-E-UTL-HP | Cross |
| PH-E-UTL-HT | Hydro Tower - Existing | | PH-E-UTL-T | 2.0 | PH-E-UTL-HT | Circle | | | | | | | | | PH-E-UTL-HT | Cross |
| PH-E-UTL-LS | Light Standard - Existing | | PH-E-UTL-T | 2.0 | PH-E-UTL-LS | SP_LS | | | | | | | | | PH-E-UTL-LS | Cross |
| PH-E-UTL-PW | Pole Well - Existing | | PH-E-UTL-T | 2.0 | PH-E-UTL-PW | SP_PW | | | | | | | | | PH-E-UTL-PW | Cross |
| PH-E-UTL-PO | Pole Other - Existing | | PH-E-UTL-T | 2.0 | PH-E-UTL-PO | SP_PO | | | | | | | | | PH-E-UTL-PO | Cross |
| PH-E-UTL-WE | Well - Existing | | PH-E-UTL-T | 2.0 | PH-E-UTL-WE | SP_WE | | | | PH-E-UTL-WE | INR_PT16 | | | | PH-E-UTL-WE | Cross |
| PH-E-UTL-T | Utilities Text - Existing | | PH-E-UTL-T | 2.0 | | | PH-E-UTL-T | 2.0 | | | | PH-E-UTL-T | 2.0 | | | |
| Vegetation | | | | | | | | | | | | | | | | |
| PH-E-VEG-HE | Hedge - Existing | PH-E-VEG-HE | PH-E-VEG-T | 3.0 | PH-E-VEG-HE | Circle | | | | | | | | | PH-E-VEG-HE | Cross |
| PH-E-VEG-TR | Trees - Existing | | PH-E-VEG-T | 3.0 | PH-E-VEG-TR | SP_TREE | | | | | | | | | PH-E-VEG-TR | Cross |
| PH-E-VEG-WD | Woods Details - Existing | PH-E-VEG-WD | PH-E-VEG-T | 3.0 | PH-E-VEG-WD | Circle | | | | | | | | | | |
| PH-E-VEG-T | Vegetation Text - Existing | | PH-E-VEG-T | 3.0 | | | PH-E-VEG-T | 3.0 | | | | PH-E-VEG-T | 3.0 | | | |

Appendix C
InRoads Symbolologies for Surveys and Plans

| ItemName | Description | Default | | | | Profile | | | | Cross Section | | | | | | |
|------------------------------------|-------------------------------|--------------|------------|-------|--------------|-----------|-------|-------------|-------|---------------|--------|-------|-------|-------|-------|--------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| Surveys & Plans General | | | | | | | | | | | | | | | | |
| SP-G-CONS | Construction Lines - Existing | SP-G-CONS | SP-G-TEXT | 3.0 | | | | | | | | | | | | |
| SP-G-25MM | 0.25mm Line - Existing | SP-G-25MM | SP-G-TEXT | 3.0 | | | | | | | | | | | | |
| SP-G-40MM | 0.40mm Line - Existing | SP-G-40MM | SP-G-TEXT | 3.0 | | | | | | | | | | | | |
| SP-G-50MM | 0.50mm Line - Existing | SP-G-50MM | SP-G-TEXT | 3.0 | | | | | | | | | | | | |
| SP-G-75MM | 0.75mm Line - Existing | SP-G-75MM | SP-G-TEXT | 3.0 | | | | | | | | | | | | |
| SP-G-TEXT | General Text - Existing | | SP-G-TEXT | 3.0 | | | | | | | | | | | | |
| SP-G-SYMBOLS | Symbols - Existing | SP-G-SYMBOLS | SP-G-TEXT | 3.0 | SP-G-SYMBOLS | Plus Sign | | | | | | | | | | |
| SP-E-LABELS | String Labels - Existing | | | | | | | SP-E-LABELS | 3.0 | | | | | | | |
| SP-E-SCANNED | Scanned Images - Existing | SP-E-SCANNED | SP-G-TEXT | 3.0 | SP-E-SCANNED | Plus Sign | | | | | | | | | | |
| Survey Monument | | | | | | | | | | | | | | | | |
| SP-E-MON | Survey Monuments - Existing | SP-E-MON | SP-G-MON-T | 3.0 | SP-E-MON | Circle | | | | | | | | | | |
| SP-E-MON-BM | Survey Monuments - Existing | SP-E-MON-BM | SP-G-MON-T | 3.0 | SP-E-MON-BM | Circle | | | | | | | | | | |
| SP-G-MON-T | Monument Text - Existing | | SP-G-MON-T | 2.5 | | | | | | | | | | | | |

Appendix C
InRoads Symbolologies for Surveys and Plans

| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | |
|------------------|--|---------------|---------------|-------|-----------------|----------|--------------|---------------|-------|---------------|--------|-------------|---------------|-------|--------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| Alignment | | | | | | | | | | | | | | | | |
| SP-E-ALI | Misc Alignment - Existing | SP-E-ALI | SP-E-LABELS | 2.0 | SP-E-ALI | Circle | SP-E-ALI | | | | | SP-E-ALI | | | SP-E-ALI | Plus Sign |
| SP-E-ALI-CL | Centerline Alignment - Existing | SP-E-ALI-CL | SP-E-ALI-CL-T | 2.0 | | | SP-P-ALI-CL | | | | | SP-E-ALI-CL | | | SP-E-ALI-CL | Plus Sign |
| SP-E-ALI-CL-C | Centreline Alignment Chainage - Existing | SP-E-ALI-CL-C | SP-E-ALI-CL-C | 3.0 | | | | SP-E-ALI-CL-C | 3.0 | | | | | | | |
| SP-E-ALI-CL-PTS | Centreline Alignment Points - Circle | | SP-E-ALI-CL-T | 2.0 | SP-E-ALI-CL-PTS | Circle | | | | | | | | | | |
| SP-E-ALI-CL-PTST | Centreline Alignment Points - Triangle | | SP-E-ALI-CL-T | 2.0 | SP-E-ALI-CL-PTS | Tranlgle | | | | | | | | | | |
| SP-E-ALI-CL-T | Centreline Alignment Text - Existing | | SP-E-ALI-CL-T | 3.0 | | | | SP-E-ALI-CL-T | 3.0 | | | | SP-E-ALI-CL-T | 3.0 | | |
| SP-E-ALI-D1 | Drainage Alignment - Existing | SP-E-ALI-D1 | SP-E-ALI-D1 | 2.0 | SP-E-ALI-D1 | Circle | SP-E-ALI-D1 | | | | | SP-E-ALI-D1 | | | SP-E-ALI-D1 | Cross |
| SP-E-ALI-E1 | Entrance Alignment - Existing | SP-E-ALI-E1 | SP-E-LABELS | 2.0 | | | SP-E-ALI-E1 | | | | | SP-E-ALI-E1 | | | SP-E-ALI-E1 | Plus Sign |
| SP-E-ALI-R1 | Align Revision - Ramp | SP-E-ALI-R1 | SP-E-LABELS | 2.0 | SP-E-ALI-R1 | Circle | SP-E-ALI-R1 | | | | | SP-E-ALI-R1 | | | SP-E-ALI-R1 | Plus Sign |
| SP-E-ALI-S1 | Sideroad Alignment - Existing | SP-E-ALI-S1 | SP-E-LABELS | 2.0 | | | SP-E-ALI-S1 | | | | | SP-E-ALI-S1 | | | SP-E-ALI-S1 | Plus Sign |
| Barrier | | | | | | | | | | | | | | | | |
| SP-E-BAR-BB | Barrier Concrete (Bottom) - Existing | SP-E-BAR-BB | SP-E-BAR-T | 3.0 | | | SP-E-BAR-BB | | | | | | | | SP-E-BAR-BB | Plus Sign |
| SP-E-BAR-BT | Barrier Concrete (Top) - Existing | SP-E-BAR-BT | SP-E-BAR-T | 3.0 | | | SP-E-BAR-BT | | | | | | | | SP-E-BAR-BT | Plus Sign |
| SP-E-BAR-FB | Fitch Barrier - Existing | SP-E-BAR-FB | SP-E-BAR-T | 3.0 | | | SP-E-BAR-FB | | | | | | | | SP-E-BAR-FB | Plus Sign |
| SP-E-BAR-FL | Fence Line (Ground) - Existing | SP-E-BAR-FL | SP-E-BAR-T | 3.0 | | | SP-E-BAR-FL | | | | | | | | SP-E-BAR-FL | Plus Sign |
| SP-E-BAR-FN | Fence Line - Existing | SP-E-BAR-FN | SP-E-BAR-T | 3.0 | | | SP-E-BAR-FN | | | | | | | | SP-E-BAR-FN | Plus Sign |
| SP-E-BAR-GAT | Gate - Existing | SP-E-BAR-GAT | SP-E-BAR-T | 3.0 | | | SP-E-BAR-GAT | | | | | | | | SP-E-BAR-GAT | Plus Sign |

Appendix C

InRoads Symbolologies for Surveys and Plans

| ItemName | Description | Plan | | | | | Profile | | | | | Cross Section | | | | |
|-----------------|---|---------------|---------------|-------|---------------|-----------|---------------|---------------|-------|---------------|-----------|---------------|---------------|-------|---------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| SP-E-BAR-GP-Z | Guide Rail (Top of Post) - Existing | SP-E-BAR-GP-Z | SP-E-BAR-T | 3.0 | | | SP-E-BAR-GP-Z | | | | | | | | SP-E-BAR-GP-Z | Plus Sign |
| SP-E-BAR-GU | Guide Rail (Ground) - Existing | SP-E-BAR-GU | SP-E-BAR-T | 3.0 | | | SP-E-BAR-GU | | | | | | | | SP-E-BAR-GU | Plus Sign |
| SP-E-BAR-GW-Z | Guide Rail (Top of Wire) - Existing | SP-E-BAR-GW-Z | SP-E-BAR-T | 3.0 | | | SP-E-BAR-GW-Z | | | | | | | | SP-E-BAR-GW-Z | Plus Sign |
| SP-E-BAR-NB | Noise Barrier (Ground) - Existing | SP-E-BAR-NB | SP-E-BAR-T | 3.0 | | | SP-E-BAR-NB | | | | | | | | SP-E-BAR-NB | Plus Sign |
| SP-E-BAR-T | Barrier Text - Existing | | SP-E-BAR-T | 3.0 | | | | SP-E-BAR-T | 3.0 | | | | SP-E-BAR-T | 3.0 | | |
| Contour | | | | | | | | | | | | | | | | |
| SP-E-CTR-C1 | Contour (Primary) - Existing | SP-E-CTR-C1 | SP-E-CTR-T | 3.0 | | | | | | | | | | | | |
| SP-E-CTR-C2 | Contour (Secondary) - Existing | SP-E-CTR-C2 | SP-E-CTR-T | 3.0 | | | | | | | | | | | | |
| SP-E-CTR-T | Contour Text - Existing | | SP-E-CTR-T | 3.0 | | | | | | | | | | | | |
| Drainage | | | | | | | | | | | | | | | | |
| SP-E-DRN-BD | Bottom of Ditch - Existing | SP-E-DRN-BD | SP-E-DRN-T | 3.0 | | | SP-E-DRN-BD | SP-E-DRN-T | 3.0 | | | SP-E-DRN-BD | SP-E-DRN-T | 3.0 | SP-E-DRN-BD | Plus Sign |
| SP-E-DRN-CB | Catch Basin - Existing | | SP-E-DRN-T | 3.0 | SP-E-DRN-CB | SP_CB | | SP-E-DRN-T | 3.0 | SP-E-DRN-CB | Plus Sign | | | | | |
| SP-E-DRN-CVP | Culvert (One End) - Existing | | SP-E-DRN-T | 3.0 | SP-E-DRN-CVP | SP_CVP | | SP-E-DRN-T | 2.0 | SP-E-DRN-CVP | Plus Sign | | | | | |
| SP-E-DRN-CV-P | Culvert Symbolology - Existing | SP-E-DRN-CV-P | SP-E-DRN-T | 3.0 | | | SP-E-DRN-CV-P | SP-E-DRN-T | 3.0 | | | SP-E-DRN-CV-P | SP-E-DRN-T | 3.0 | | |
| SP-E-DRN-CVT | Culvert Centreline (Top) - Existing | SP-E-DRN-CVT | SP-E-DRN-T | 3.0 | | | SP-E-DRN-CVT | SP-E-DRN-T | 3.0 | | | SP-E-DRN-CVT | SP-E-DRN-T | 3.0 | | |
| SP-E-DRN-CV-Z | Culvert Elevation - Existing | | SP-E-DRN-CV-Z | 3.0 | SP-E-DRN-CV-Z | Plus Sign | | SP-E-DRN-CV-Z | 3.0 | SP-E-DRN-CV-Z | Plus Sign | | SP-E-DRN-CV-Z | 3.0 | SP-E-DRN-CV-Z | Plus Sign |
| SP-E-DRN-DB-Z | Ditch Inlet (Bottom Elevation) - Existing | | SP-E-DRN-DB-Z | 3.0 | SP-E-DRN-DB-Z | Plus Sign | | SP-E-DRN-DB-Z | 3.0 | SP-E-DRN-DB-Z | Plus Sign | | SP-E-DRN-DB-Z | 3.0 | SP-E-DRN-DB-Z | Plus Sign |
| SP-E-DRN-DC | Ditch Centreline - Existing | SP-E-DRN-DC | SP-E-DRN-T | 3.0 | | | SP-E-DRN-DC | SP-E-DRN-T | 3.0 | | | SP-E-DRN-DC | SP-E-DRN-T | 3.0 | SP-E-DRN-DC | Cross |

Appendix C
InRoads Symbolologies for Surveys and Plans

| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | |
|-----------------------|--|---------------|---------------|-------|---------------|-----------|--------------|---------------|-------|---------------|-----------|--------------|---------------|-------|---------------|-----------|
| | | Line | Text | | Point | Line | Text | | Point | Line | Text | | Point | | | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| SP-E-DRN-DI | Ditch Inlet - Existing | | SP-E-DRN-T | 3.0 | SP-E-DRN-DI | SP_DI | | SP-E-DRN-T | 3.0 | SP-E-DRN-DI | Plus Sign | | | | | |
| SP-E-DRN-DT-Z | Culvert Inlet (Top Elevation) - Existing | | SP-E-DRN-DT-Z | 3.0 | SP-E-DRN-DT-Z | Plus Sign | | SP-E-DRN-DT-Z | 3.0 | SP-E-DRN-DT-Z | Plus Sign | | SP-E-DRN-DT-Z | 3.0 | SP-E-DRN-DT-Z | Plus Sign |
| SP-E-DRN-EM | Edge of Muskeg - Existing | SP-E-DRN-EM | SP-E-DRN-T | 3.0 | | | SP-E-DRN-EM | SP-E-DRN-T | 3.0 | | | SP-E-DRN-EM | SP-E-DRN-T | 3.0 | SP-E-DRN-EM | Plus Sign |
| SP-E-DRN-EM-P | Muskeg Pattern - Existing | SP-E-DRN-EM-P | SP-E-DRN-T | 3.0 | | | | | | | | | | | | |
| SP-E-DRN-EW | Edge of Water - Existing | SP-E-DRN-EW | SP-E-DRN-T | 3.0 | | | SP-E-DRN-EW | SP-E-DRN-T | 3.0 | | | | SP-E-DRN-T | 3.0 | SP-E-DRN-EW | Plus Sign |
| SP-E-DRN-FR-Z | Frustum Elevation - Existing | | SP-E-DRN-FR-Z | 3.0 | SP-E-DRN-FR-Z | Plus Sign | | SP-E-DRN-FR-Z | 3.0 | SP-E-DRN-FR-Z | Plus Sign | | SP-E-DRN-FR-Z | 3.0 | SP-E-DRN-FR-Z | Plus Sign |
| SP-E-DRN-MH | Manhole - Existing | | SP-E-DRN-T | 3.0 | SP-E-DRN-MH | SP_MH | | SP-E-DRN-T | 3.0 | SP-E-DRN-MH | Plus Sign | | | | | |
| SP-E-DRN-RR | Rip-Pap - Existing | SP-E-DRN-RR | SP-E-DRN-T | 3.0 | | | | | | | | | | | | |
| SP-E-DRN-SAN | Sanitary Sewer Pipe - Existing | SP-E-DRN-SAN | SP-E-DRN-T | 3.0 | | | SP-E-DRN-SAN | SP-E-DRN-T | 3.0 | SP-E-DRN-SAN | Cross | SP-E-DRN-SAN | SP-E-DRN-T | 3.0 | SP-E-DRN-SAN | Cross |
| SP-E-DRN-SEW | Storm Sewer Pipe - Existing | SP-E-DRN-SEW | SP-E-DRN-T | 3.0 | | | SP-E-DRN-SEW | SP-E-DRN-T | 3.0 | SP-E-DRN-SEW | Cross | SP-E-DRN-SEW | SP-E-DRN-T | 3.0 | SP-E-DRN-SEW | Cross |
| SP-E-DRN-SU-Z | Sump Elevation - Existing | | SP-E-DRN-SU-Z | 3.0 | SP-E-DRN-SU-Z | Plus Sign | | SP-E-DRN-SU-Z | 3.0 | SP-E-DRN-SU-Z | Plus Sign | | SP-E-DRN-SU-Z | 3.0 | SP-E-DRN-SU-Z | Plus Sign |
| SP-E-DRN-WM | Water Mark - Existing | SP-E-DRN-WM | SP-E-DRN-T | 3.0 | SP-E-DRN-WM | Cross | | SP-E-DRN-T | 3.0 | SP-E-DRN-WM | Plus Sign | | SP-E-DRN-T | 3.0 | SP-E-DRN-WM | Plus Sign |
| SP-E-DRN-T | Drainage Text - Existing | | SP-E-DRN-T | 3.0 | | | SP-E-DRN-T | 3.0 | | | | | | | | |
| Ground Feature | | | | | | | | | | | | | | | | |
| SP-E-GND-AO | Asphalt Outline - Existing | SP-E-GND-AO | SP-E-GND-T | 3.0 | | | SP-E-GND-AO | | | | | | | | SP-E-GND-AO | Plus Sign |
| SP-E-GND-AS | Asphalt Shots - Existing | SP-E-GND-AS | SP-E-GND-T | 3.0 | | | SP-E-GND-AS | | | | | | | | SP-E-GND-AS | Plus Sign |
| SP-E-GND-BA | Bank of River or Stream - Existing | SP-E-GND-BA | SP-E-GND-T | 3.0 | | | SP-E-GND-BA | | | | | | | | SP-E-GND-BA | Plus Sign |
| SP-E-GND-BC | Bottom of Rock Cut - Existing | SP-E-GND-BC | SP-E-GND-T | 3.0 | | | SP-E-GND-BC | | | | | | | | SP-E-GND-BC | Plus Sign |

Appendix C
InRoads Symbolologies for Surveys and Plans

| ItemName | Description | Plan | | | | | Profile | | | | | Cross Section | | | | |
|----------------------|---|--------------|-------------|-------|-------|--------|--------------|------------|-------|-------------|-----------|---------------|-------|-------|--------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| SP-E-GND-CO | Concrete Outline - Existing | SP-E-GND-CO | SP-E-GND-T | 3.0 | | | SP-E-GND-CO | | | | | | | | SP-E-GND-CO | Plus Sign |
| SP-E-GND-CS | Concrete Shots - Existing | SP-E-GND-CS | SP-E-GND-T | 3.0 | | | SP-E-GND-CS | | | | | | | | SP-E-GND-CS | Plus Sign |
| SP-E-GND-DS | Door Sill - Existing | SP-E-GND-DS | SP-E-GND-T | 3.0 | | | SP-E-GND-DS | | | | | | | | SP-E-GND-DS | Plus Sign |
| SP-E-GND-EC | Entrance Centreline - Existing | SP-E-GND-EC | SP-E-GND-EC | 2.0 | | | SP-E-GND-EC | | | SP-E-GND-EC | Plus Sign | SP-E-GND-EC | | | SP-E-GND-EC | Plus Sign |
| SP-E-GND-GO | Gravel Outline - Existing | SP-E-GND-GO | SP-E-GND-T | 3.0 | | | SP-E-GND-GO | | | | | | | | SP-E-GND-GO | Plus Sign |
| SP-E-GND-GS | Gravel Shots - Existing | SP-E-GND-GS | SP-E-GND-T | 3.0 | | | SP-E-GND-GS | | | | | | | | SP-E-GND-GS | Plus Sign |
| SP-E-GND-OG | Original Ground Fault - Existing | SP-E-GND-OG | SP-E-GND-T | 3.0 | | | SP-E-GND-OG | | | | | SP-E-GND-OG | | | SP-E-GND-OG | Plus Sign |
| SP-E-GND-RBE | Railway Ballast Edge - Existing | SP-E-GND-RBE | SP-E-GND-T | 3.0 | | | SP-E-GND-RBE | | | | | | | | SP-E-GND-RBE | Plus Sign |
| SP-E-GND-RBT | Railway Ballast Top - Existing | SP-E-GND-RBT | SP-E-GND-T | 3.0 | | | SP-E-GND-RBT | | | | | | | | SP-E-GND-RBT | Plus Sign |
| SP-E-GND-RKO | Rock Outline - Existing | SP-E-GND-RKO | SP-E-GND-T | 3.0 | | | SP-E-GND-RKO | | | | | | | | SP-E-GND-RKO | Plus Sign |
| SP-E-GND-RKS | Rock Shots - Existing | SP-E-GND-RKS | SP-E-GND-T | 3.0 | | | SP-E-GND-RKS | | | | | | | | SP-E-GND-RKS | Plus Sign |
| SP-E-GND-SB | River or Stream Bed - Existing | SP-E-GND-SB | SP-E-GND-T | 3.0 | | | SP-E-GND-SB | | | | | SP-E-GND-SB | | | SP-E-GND-SB | Plus Sign |
| SP-E-GND-SP | Stock Piles/Gravel Pits - Existing | SP-E-GND-SP | SP-E-GND-T | 3.0 | | | SP-E-GND-SP | | | | | | | | SP-E-GND-SP | Plus Sign |
| SP-E-GND-TC | Top of Rock Cut - Existing | SP-E-GND-TC | SP-E-GND-T | 3.0 | | | SP-E-GND-TC | | | | | | | | SP-E-GND-TC | Plus Sign |
| SP-E-GND-TS | Toe of Slope - Existing | SP-E-GND-TS | SP-E-GND-T | 3.0 | | | SP-E-GND-TS | | | | | | | | SP-E-GND-TS | Plus Sign |
| SP-E-GND-P | Ground Patterning (Cut-Fill) - Existing | SP-E-GND-P | SP-E-GND-T | 3.0 | | | SP-E-GND-P | SP-E-GND-T | 3.0 | | | | | | | |
| SP-E-GND-T | Ground Feature Text - Existing | | SP-E-GND-T | 3.0 | | | SP-E-GND-T | SP-E-GND-T | 3.0 | | | | | | | |
| Miscellaneous | | | | | | | | | | | | | | | | |

Appendix C
InRoads Symbolologies for Surveys and Plans

| ItemName | Description | Plan | | | | | Profile | | | | | Cross Section | | | | |
|---------------|-------------------------------------|--------------|---------------|-------|---------------|-----------|--------------|---------------|-------|---------------|----------|---------------|---------------|--------------|---------------|----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| SP-Q-MSC-AU | Audit Line - Existing | SP-Q-MSC-AU | SP-Q-MSC-AU | 3.0 | | | | | | | | | | | | |
| SP-E-MSC-BLO | Building Outline(Bottom) - Existing | SP-E-MSC-BLO | SP-E-MSC-T | 3.0 | | | SP-E-MSC-BLO | | | | | | | SP-E-MSC-BLO | Cross | |
| SP-E-MSC-BN | Centre of Bull Nose - Existing | SP-E-MSC-BN | SP-E-MSC-T | 3.0 | | | SP-E-MSC-BN | | | | | | | | | |
| SP-E-MSC-BRP | Bridge Pillar - Existing | SP-E-MSC-BRP | SP-E-MSC-T | 3.0 | SP-E-MSC-BRP | Cross | SP-E-MSC-BRP | | | SP-E-MSC-BRP | Cross | | | SP-E-MSC-BRP | Cross | |
| SP-E-MSC-BY | Segment Boundary - Existing | SP-E-MSC-BY | SP-E-MSC-T | 3.0 | | | SP-E-MSC-BY | | | | | | | SP-E-MSC-BY | Cross | |
| SP-E-MSC-CE | Cemetery - Existing | SP-E-MSC-CE | SP-E-MSC-T | 3.0 | | | SP-E-MSC-CE | | | | | | | SP-E-MSC-CE | Cross | |
| SP-E-MSC-DD | Deck Drain - Existing | SP-E-MSC-DD | SP-E-MSC-T | 3.0 | | | SP-E-MSC-DD | | | | | | | SP-E-MSC-DD | Cross | |
| SP-E-MSC-DK | Wooden Decks or Docks - Existing | SP-E-MSC-DK | SP-E-MSC-T | 3.0 | | | SP-E-MSC-DK | | | | | | | SP-E-MSC-DK | Cross | |
| SP-E-MSC-EJ | Expansion Joint - Existing | SP-E-MSC-EJ | SP-E-MSC-T | 3.0 | | | SP-E-MSC-EJ | | | | | | | | | |
| SP-E-MSC-EV-Z | Miscellaneous Elevations - Existing | | SP-E-MSC-EV-Z | 3.0 | SP-E-MSC-EV-Z | SP_MSC_Z | | SP-E-MSC-EV-Z | 3.0 | SP-E-MSC-EV-Z | SP_MSC_Z | | SP-E-MSC-EV-Z | 3.0 | SP-E-MSC-EV-Z | SP_MSC_Z |
| SP-E-MSC-GAB | Gabion Baskets - Existing | SP-E-MSC-GAB | SP-E-MSC-T | 3.0 | | | SP-E-MSC-GAB | | | | | | | | | |
| SP-E-MSC-GFL | Gate with Flashing Light - Existing | SP-E-MSC-GFL | SP-E-MSC-T | 3.0 | | | SP-E-MSC-GFL | | | | | | | | | |
| SP-E-MSC-HR | Bridge Hand Rails - Existing | SP-E-MSC-HR | SP-E-MSC-T | 3.0 | | | SP-E-MSC-HR | | | | | | | SP-E-MSC-HR | Cross | |
| SP-E-MSC-OS | Overhead Sign - Existing | SP-E-MSC-OS | SP-E-MSC-T | 3.0 | SP-E-MSC-OS | SP_OS | SP-E-MSC-OS | | | | | SP-E-MSC-OS | | | SP-E-MSC-OS | Cross |
| SP-E-MSC-RCS | Railway Crossing Sign - Existing | SP-E-MSC-RCS | SP-E-MSC-T | 3.0 | SP-E-MSC-RCS | Plus Sign | SP-E-MSC-RCS | | | | | | | | | |
| SP-E-MSC-RLS | Railway Sign - Existing | SP-E-MSC-RLS | SP-E-MSC-T | 3.0 | SP-E-MSC-RLS | Plus Sign | SP-E-MSC-RLS | | | | | | | | | |
| SP-E-MSC-RLT | Railway/Top of Rail - Existing | SP-E-MSC-RLT | SP-E-MSC-T | 3.0 | | | SP-E-MSC-RLT | | | | | | | SP-E-MSC-RLT | Cross | |
| SP-E-MSC-RW | Bottom of Retaining Wall - Existing | SP-E-MSC-RW | SP-E-MSC-T | 3.0 | | | SP-E-MSC-RW | | | | | | | SP-E-MSC-RW | Cross | |

Appendix C
InRoads Symbolologies for Surveys and Plans

| ItemName | Description | Plan | | | | Profile | | | | Cross Section | | | | | | |
|--------------------------|---|---------------|------------|-------|-------|---------|--------------|------------|-------|---------------|--------|--------------|------------|-------|---------------|-----------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| SP-E-MSC-SW | Sidewalk - Existing | SP-E-MSC-SW | SP-E-MSC-T | 3.0 | | | SP-E-MSC-SW | | | | | | | | SP-E-MSC-SW | Cross |
| SP-E-MSC-WW | Walkways/Trails/Paths - Existing | SP-E-MSC-WW | SP-E-MSC-T | 3.0 | | | SP-E-MSC-WW | | | | | | | | SP-E-MSC-WW | Cross |
| SP-E-MSC-T | Miscellaneous Text - Existing | | SP-E-MSC-T | 3.0 | | | | SP-E-MSC-T | 3.0 | | | | SP-E-MSC-T | 3.0 | | |
| Property Boundary | | | | | | | | | | | | | | | | |
| SP-E-BDY-CITY | City Boundary - Existing | SP-E-BDY-CITY | SP-E-BDY-T | 3.0 | | | | | | | | | | | SP-E-BDY-CITY | Plus Sign |
| SP-E-BDY-LIN | General Property Boundary Line - Existing | SP-E-BDY-LIN | SP-E-BDY-T | 3.0 | | | | | | | | | | | SP-E-BDY-LIN | Plus Sign |
| SP-E-BDY-LLS | Lot Line Subdivision Boundary - Existing | SP-E-BDY-LLS | SP-E-BDY-T | 3.0 | | | | | | | | | | | SP-E-BDY-LLS | Plus Sign |
| SP-E-BDY-LLC | Lot Line Concession Boundary - Existing | SP-E-BDY-LLC | SP-E-BDY-T | 3.0 | | | | | | | | | | | SP-E-BDY-LLC | Plus Sign |
| SP-E-BDY-T | Property Boundary Text - Existing | | SP-E-BDY-T | 3.0 | | | SP-E-BDY-T | 3.0 | | | | SP-E-BDY-T | 3.0 | | | |
| Right of Way | | | | | | | | | | | | | | | | |
| SP-E-ROW-MTO | Existing MTO Property | SP-E-ROW-MTO | | | | | SP-E-ROW-MTO | | | | | SP-E-ROW-MTO | SP-E-ROW-T | 3.0 | SP-E-ROW-MTO | ROW_Ex |
| SP-E-ROW-T | Right of Way Text - Existing | | SP-E-ROW-T | 3.0 | | | SP-E-ROW-T | 3.0 | | | | SP-E-ROW-T | 3.0 | | | |
| Roadway | | | | | | | | | | | | | | | | |
| SP-E-RDS-AE | Asphalt Edge - Existing | SP-E-RDS-AE | SP-E-RDS-T | 3.0 | | | SP-E-RDS-AE | | | | | | | | SP-E-RDS-AE | Plus Sign |
| SP-E-RDS-BRD | Bridge Deck - Existing | SP-E-RDS-BRD | SP-E-RDS-T | 3.0 | | | SP-E-RDS-BRD | | | | | | | | SP-E-RDS-BRD | Plus Sign |
| SP-E-RDS-CR | Crown of Road - Existing | SP-E-RDS-CR | SP-E-RDS-T | 3.0 | | | SP-E-RDS-CR | | | | | | | | SP-E-RDS-CR | Plus Sign |
| SP-E-RDS-CU | Curbs - Existing | SP-E-RDS-CU | SP-E-RDS-T | 3.0 | | | SP-E-RDS-CU | | | | | | | | SP-E-RDS-CU | Plus Sign |
| SP-E-RDS-DL | Driving Lane Edge - Existing | SP-E-RDS-DL | SP-E-RDS-T | 3.0 | | | SP-E-RDS-DL | | | | | | | | SP-E-RDS-DL | Plus Sign |

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| | | Plan | | | | | Profile | | | | | Cross Section | | | | |
|----------------|---|-------------|----------------|-------|----------------|-----------|-------------|----------------|-------|----------------|-----------|---------------|-------|-------|----------------|-----------|
| ItemName | Description | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| SP-E-RDS-EG | Edge of Gutter - Existing | SP-E-RDS-EG | SP-E-RDS-T | 3.0 | | | SP-E-RDS-EG | | | | | | | | SP-E-RDS-EG | Plus Sign |
| SP-E-RDS-EP | Edge of Pavement - Existing | SP-E-RDS-EP | SP-E-RDS-T | 3.0 | | | SP-E-RDS-EP | | | | | | | | SP-E-RDS-EP | Square |
| SP-E-RDS-ES | Wdge of Shoulder - Existing | SP-E-RDS-ES | SP-E-RDS-T | 3.0 | | | SP-E-RDS-ES | | | | | | | | SP-E-RDS-ES | Plus Sign |
| SP-E-RDS-NG | Gravel Entrance - Existing | SP-E-RDS-NG | SP-E-RDS-T | 3.0 | | | SP-E-RDS-NG | | | | | | | | SP-E-RDS-NG | Plus Sign |
| SP-E-RDS-NP | Paved Entrance - Existing | SP-E-RDS-NP | SP-E-RDS-T | 3.0 | | | SP-E-RDS-NP | | | | | | | | SP-E-RDS-NP | Plus Sign |
| SP-E-RDS-RS | Ripple Strip - Existing | SP-E-RDS-RS | SP-E-RDS-T | 3.0 | | | | | | | | | | | SP-E-RDS-RS | Plus Sign |
| SP-E-RDS-SR | Sideroad Paved - Existing | SP-E-RDS-SR | SP-E-RDS-T | 3.0 | | | SP-E-RDS-SR | | | | | | | | SP-E-RDS-SR | Plus Sign |
| SP-E-RDS-UR | Gravel Sideroad - Existing | SP-E-RDS-UR | SP-E-ROW-T | 3.0 | | | SP-E-RDS-UR | | | | | | | | SP-E-RDS-UR | Plus Sign |
| SP-E-RDS-T | Roadway Text - Existing | | SP-E-RDS-T | 3.0 | | | SP-E-RDS-T | SP-E-RDS-T | 3.0 | | | | | | | |
| Utility | | | | | | | | | | | | | | | | |
| SP-E-UTL-AN | Anchor - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-AN | SP_AN | | | | | | | | | SP-E-UTL-AN | Cross |
| SP-E-UTL-BH | Bell Hydro Pole - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-BH | SP_BH | | | | | | | | | SP-E-UTL-BH | Cross |
| SP-E-UTL-BP | Bell Pole - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-BP | SP_BP | | | | | | | | | SP-E-UTL-BP | Cross |
| SP-E-UTL-FH | Fire Hydrant - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-FH | SP_FH | | | | | | | | | SP-E-UTL-FH | Cross |
| SP-E-UTL-GV | Gas Valve - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-GV | SP_GV | | | | | | | | | SP-E-UTL-GV | Cross |
| SP-E-UTL-HCG-Z | Hydro Crossing Ground Elevations - Existing | | SP-E-UTL-HCG-Z | 2.0 | SP-E-UTL-HCG-Z | Plus Sign | | SP-E-UTL-HCG-Z | 2.0 | SP-E-UTL-HCG-Z | Plus Sign | | | | SP-E-UTL-HCG-Z | Plus Sign |
| SP-E-UTL-HCW-Z | Hydro Crossing Wire Elevations - Existing | | SP-E-UTL-HCW-Z | 2.0 | SP-E-UTL-HCW-Z | Plus Sign | | SP-E-UTL-HCW-Z | 2.0 | SP-E-UTL-HCW-Z | Plus Sign | | | | SP-E-UTL-HCW-Z | Plus Sign |
| SP-E-UTL-HP | Hydro Pole - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-HP | SP_HP | | | | | | | | | SP-E-UTL-HP | Cross |

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| ItemName | Description | Plan | | | | | Profile | | | | | Cross Section | | | | |
|-------------------|--|--------------|------------|-------|-------------|--------|--------------|------------|-------|--------------|----------|---------------|-------|-------|--------------|--------|
| | | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| SP-E-UTL-HT | Hydro Tower - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-HT | Circle | | | | | | | | | SP-E-UTL-HT | Cross |
| SP-E-UTL-LS | Light Standard - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-LS | SP_LS | | | | | | | | | SP-E-UTL-LS | Cross |
| SP-E-UTL-PL | Pipeline - Existing | SP-E-UTL-PL | SP-E-UTL-T | 2.0 | | | SP-E-UTL-PL | | | | | | | | SP-E-UTL-PL | Cross |
| SP-E-UTL-PO | Pole - Other - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-PO | SP_PO | | | | | | | | | SP-E-UTL-PO | Cross |
| SP-E-UTL-PW | Pole Well - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-PW | SP_PW | | | | | | | | | SP-E-UTL-PW | Cross |
| SP-E-UTL-TB | Utility Terminal Box - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-TB | SP_TB | | | | SP-E-UTL-TB | Cross | | | | SP-E-UTL-TB | Cross |
| SP-E-UTL-UB | Underground Bell - Existing | SP-E-UTL-UB | SP-E-UTL-T | 2.0 | | | SP-E-UTL-UB | | | SP-E-UTL-UB | Circle | | | | SP-E-UTL-UB | Circle |
| SP-E-UTL-UG | Underground Gas - Existing | SP-E-UTL-UG | SP-E-UTL-T | 2.0 | | | SP-E-UTL-UG | | | SP-E-UTL-UG | Circle | | | | SP-E-UTL-UG | Circle |
| SP-E-UTL-UH | Underground Hydro - Existing | SP-E-UTL-UH | SP-E-UTL-T | 2.0 | | | SP-E-UTL-UH | | | SP-E-UTL-UH | Circle | | | | SP-E-UTL-UH | Circle |
| SP-E-UTL-UM | Underground Utility Marker - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-UM | SP_UM | | | | | | | | | SP-E-UTL-UM | Cross |
| SP-E-UTL-UT | Underground Utility - Other - Existing | SP-E-UTL-UT | SP-E-UTL-T | 2.0 | SP-E-UTL-UT | Cross | SP-E-UTL-UT | | | SP-E-UTL-UT | Cross | | | | SP-E-UTL-UT | Cross |
| SP-E-UTL-UTV | Underground Cable TV - Existing | SP-E-UTL-UTV | SP-E-UTL-T | 2.0 | | | SP-E-UTL-UTV | | | SP-E-UTL-UTV | Circle | | | | SP-E-UTL-UTV | Circle |
| SP-E-UTL-UW | Underground Watermain - Existing | SP-E-UTL-UW | SP-E-UTL-T | 2.0 | | | SP-E-UTL-UW | | | SP-E-UTL-UW | Circle | | | | SP-E-UTL-UW | Circle |
| SP-E-UTL-VE | Vent - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-VE | SP_VE | | | | | | | | | SP-E-UTL-VE | Cross |
| SP-E-UTL-WE | Well - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-WE | SP_WE | | | | SP-E-UTL-WE | INR_PT16 | | | | SP-E-UTL-WE | Cross |
| SP-E-UTL-WV | Water Valve - Existing | | SP-E-UTL-T | 2.0 | SP-E-UTL-WV | SP_WV | | | | SP-E-UTL-WV | Cross | | | | SP-E-UTL-WV | Cross |
| SP-E-UTL-T | Utilities Text - Existing | | SP-E-UTL-T | 2.0 | | | | SP-E-UTL-T | 2.0 | | | SP-E-UTL-T | 2.0 | | | |
| Vegetation | | | | | | | | | | | | | | | | |

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| | | Plan | | | | | Profile | | | | | Cross Section | | | | |
|----------------------|---|-----------------|------------|-------|-------------|---------|---------------|-----------------|-------|--------------|-----------|---------------|-------|-------|-------------|-----------|
| ItemName | Description | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| SP-E-VEG-HE | Hedge - Existing | SP-E-VEG-HE | SP-E-VEG-T | 3.0 | SP-E-VEG-HE | Circle | | | | | | | | | SP-E-VEG-HE | Cross |
| SP-E-VEG-P | Bush Symbology - Existing | SP-E-VEG-P | SP-E-VEG-T | 2.0 | | | SP-E-VEG-P | | | | | | | | | |
| SP-E-VEG-TR | Trees - Existing | | SP-E-VEG-T | 3.0 | SP-E-VEG-TR | SP_TREE | | | | | | | | | SP-E-VEG-TR | Plus Sign |
| SP-E-VEG-WD | Woods Detail - Existing | SP-E-VEG-WD | SP-E-VEG-T | 3.0 | | | SP-E-VEG-WD | | | | | | | | | |
| SP-E-VEG-WO | Woods Overhang - Existing | SP-E-VEG-WO | SP-E-VEG-T | 3.0 | | | SP-E-VEG-WO | | | | | | | | | |
| SP-E-VEG-WT | Woods Turnline - Existing | SP-E-VEG-WT | SP-E-VEG-T | 3.0 | | | SP-E-VEG-WT | | | | | | | | | |
| SP-E-VEG-T | Vegetation Text - Existing | | SP-E-VEG-T | 3.0 | | | SP-E-VEG-T | 3.0 | | | | SP-E-VEG-T | 3.0 | | | |
| Profile | | | | | | | | | | | | | | | | |
| SP-P-ALI-CL | Profile Information - Existing | | | | | | SP-P-ALI-CL | SP-P-ALI-CL | 3.0 | SP-P-ALI-CL | Circle | | | | | |
| SP-P-ALI-DRN | Profile Drainage Information - Existing | | | | | | SP-P-ALI-DRN | SP-P-ALI-DRN-T | 3.0 | SP-P-ALI-DRN | Plus Sign | | | | | |
| SP-P-ALI-DRN-T | Profile Text - Existing | | | | | | | SP-P-ALI-DRN-T | 3.0 | | | | | | | |
| SP-P-ALI-GRID | Profile Grid - Existing | | | | | | SP-P-ALI-GRID | | | | | | | | | |
| SP-P-ALI-GRID-T | Profile Chainage - Existing | | | | | | | SP-P-ALI-GRID-T | 3.0 | | | | | | | |
| LEGAL SURVEYS | | | | | | | | | | | | | | | | |
| SP-L-MON | Horizontal Control Points - Legal | | SP-L-TEXT | 3.0 | SP-L-MON | Circle | | | | | | | | | | |
| SP-L-MON-BM | Bench Marks - Legal | | SP-L-TEXT | 3.0 | SP-L-MON-BM | Circle | | | | | | | | | | |
| SP-L-25MM | 0.25mm Line - Legal | SP-L-25MM | SP-L-TEXT | 3.0 | | | | | | | | | | | | |
| SP-L-25MM-SDASH | 0.25mm Short Dashed Line - Legal | SP-L-25MM-SDASH | SP-L-TEXT | 3.0 | | | | | | | | | | | | |

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InRoads Symbolologies for Surveys and Plans

| | | Plan | | | | | Profile | | | | | Cross Section | | | | |
|-------------------|---------------------------------|-------------------|------------------|-------|--------------|--------|---------|-------|-------|-------|--------|---------------|-------|-------|-------|--------|
| ItemName | Description | Line | Text | | Point | | Line | Text | | Point | | Line | Text | | Point | |
| | | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol | Layer | Layer | Hight | Layer | Symbol |
| SP-L-25MM-LDASH | 0.25mm Long Dashed Line - Legal | SP-L-25MM-LDASH | SP-L-TEXT | 3.0 | | | | | | | | | | | | |
| SP-L-40MM | 0.40mm Line - Legal | SP-L-40MM | SP-L-TEXT | 3.0 | | | | | | | | | | | | |
| SP-L-40MM-LDASH | 0.40mm Long Dashed Line - Legal | SP-L-40MM-LDASH | SP-L-TEXT | 3.0 | | | | | | | | | | | | |
| SP-L-50MM | 0.50mm Line - Legal | SP-L-50MM | SP-L-TEXT | 3.0 | | | | | | | | | | | | |
| SP-L-FABRIC LINES | Fabric Lines - Legal | SP-L-FABRIC LINES | SP-L-FABRIC TEXT | 3.0 | | | | | | | | | | | | |
| SP-L-FABRIC TEXT | Fabric Text - Legal | | SP-L-FABRIC TEXT | 3.0 | | | | | | | | | | | | |
| SP-L-PARCEL | Parcel - Legal | SP-L-PARCEL | SP-L-TEXT | 3.0 | | | | | | | | | | | | |
| SP-L-PART LINES | Part Lines - Legal | SP-L-PART LINES | SP-L-PART TEXT | 3.0 | | | | | | | | | | | | |
| SP-L-PART TEXT | Part Text - Legal | | SP-L-PART TEXT | 3.0 | | | | | | | | | | | | |
| SP-L-TEXT | Legal Text | | SP-L-TEXT | 3.0 | | | | | | | | | | | | |
| SP-L-SYMBOLS | Legal Symbols - Legal | | SP-L-TEXT | 3.0 | SP-L-SYMBOLS | Circle | | | | | | | | | | |

Appendix D

InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Symbology Name | Geometry Feature | Survey Feature | |
|-----------------|---------------------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|-----------------|------------------|----------------|--|
| | | | Plan | | | Cross Section | | | | Profile | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| General | | | | | | | | | | | | | | | | | | |
| BORDER | Frame - Title Block Borders | | x | | x | | x | | x | | x | | | x | BORDER | | | |
| DWGINFO | DWGINFO | | x | | x | | x | | x | | x | | | x | DWGINFO | | | |
| VPORTS | VPORTS | | x | x | x | x | | | x | | x | | | x | VPORTS | | | |
| MT-G-GRID | MTO General Grid | | x | | | | | | | | | | | | | MT-G-GRID | | |
| MT-G-GRID-T | MTO General Grid Text | | | | x | | | | x | | | | | x | MT-G-GRID-T | | | |
| MT-P-GRID | MTO Profile Grid | | | | | | | | | | | x | | | | MT-P-GRID | | |
| MT-P-GRID-T | MTO Profile Grid Text | | | | | | | | | | | | | x | MT-P-GRID-T | | | |
| PD-G-CONS | Temproray Construction Lines - Design | | x | | x | | x | | x | | x | | | x | PD-G-CONS | | | |
| PD-G-DIM | General Dimensions - Design | | x | | x | | | | x | | | | | x | PD-G-DIM | | | |
| PD-G-LEGEND | Keyplan Legend - Design | | x | | x | | | | x | | | | | x | PD-G-LEGEND | | | |
| PD-G-SYMBOL | General Syumbols - Design | | x | x | x | x | x | x | x | | x | x | x | x | PD-G-SYMBOL | | | |
| PD-G-SYMBOL-IDC | General Symbol IDC - Design | | | | x | | | | x | | | | | x | PD-G-SYMBOL-IDC | | | |
| PD-G-25MM | 0.25 mm General Line - Design | | x | | x | | x | | x | | x | | | x | PD-G-25MM | | | |
| PD-G-40MM | 0.40 mm General Line - Design | | x | | x | | x | | x | | x | | | x | PD-G-40MM | | | |
| PD-G-50MM | 0.50 mm General Line - Design | | x | | x | x | x | | | | x | | | x | PD-G-50MM | | | |

Appendix D

InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Symbology Name | Geometry Feature | Survey Feature | | | |
|------------------|--|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|----------------|------------------|----------------|--|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | | | |
| PD-G-75MM | 0.75 mm General Line - Design | | x | | x | x | x | | | | x | | | x | PD-G-75MM | | | | | |
| PD-G-TEXT | General Text - Design | | | | x | | | | x | | | | | x | PD-G-TEXT | | | | | |
| PD-N-LIMIT | Contract Construction Limits - Design | | x | | x | x | | | x | | x | | | x | PD-N-LIMIT | | | | | |
| Alignment | | | | | | | | | | | | | | | | | | | | |
| PD-N-ALI-CL | Centreline Alignment - Design | | | x | | | x | x | | | x | | | | PD-N-ALI-CL | | x | | | |
| PD-N-ALI-CL-T | Centreline Alignment Text - Design | | | | | x | | | x | | | | | x | PD-N-ALI-CL-T | | | | | |
| PD-N-ALI-CL-PTS | Centreline Alignment Points - Design | | | | | | | | | | | | | | | | x | | | |
| PD-N-ALI-CL-PTST | Centreline Alignment Point Symbol - Triangle | | | | | | | | | | | | | | | | x | | | |
| Barrier | | | | | | | | | | | | | | | | | | | | |
| PD-N-BAR-FL | Fence - Design | | | x | | x | x | | | x | | x | | | x | PD-N-BAR-FL | | | | |
| PD-N-BAR-GU3 | Guide Rail (3 Cable) - Design | | | x | | x | x | | | x | | x | | | x | PD-N-BAR-GU3 | | | | |
| PD-N-BAR-GU6 | Guide Rail (6 Cable) - Design | | | x | | x | x | | | x | | x | | | x | PD-N-BAR-GU3 | | | | |
| PD-N-BAR-GUB | Guide Rail (Box Beam) - Design | | | x | | x | x | | | x | | x | | | x | PD-N-BAR-GUB | | | | |
| PD-N-BAR-GUC | Guide Rail (Concrete Barrier) - Design | | | x | | x | x | | | x | | x | | | x | PD-N-BAR-GUC | | | | |
| PD-N-BAR-GUI | Guide Rail (IBC) - Design | | | x | | x | x | | | x | | x | | | x | PD-N-BAR-GUI | | | | |
| PD-N-BAR-GUS | Guide Rail (Steel Beam) - Design | | | x | | x | x | | | x | | x | | | x | PD-N-BAR-GUS | | | | |

Appendix D

InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Symbology Name | Geometry Feature | Survey Feature | | | |
|-----------------|---|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|----------------|------------------|----------------|--|--|--|
| | | | Plan | | | Cross Section | | | | Profile | | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | | | |
| PD-N-BAR-IBM | Interial Barrier Modules (IBM) - Design | | x | | x | | | | | | x | | | x | PD-N-BAR-IBM | | | | | |
| PD-N-BAR-JB | Jersey Barrier - Design | | x | | x | x | | | x | x | x | | | x | PD-N-BAR-JB | | | | | |
| PD-N-BAR-NB | Noise Barrier - Design | | x | | x | x | | | x | x | x | | | x | PD-N-BAR-NB | | | | | |
| PD-N-BAR-T | Barrier Text - Design | | | | x | | | | x | | | | | x | PD-N-BAR-T | | | | | |
| Drainage | | | | | | | | | | | | | | | | | | | | |
| PD-N-DRN-BD | Bottom of Ditch - Design | | x | | x | x | | | x | x | x | | | x | PD-N-DRN-BD | | | | | |
| PD-N-DRN-CB | Cathc Basin - Design | | | x | x | x | | | x | | x | x | | x | PD-N-DRN-CB | | | | | |
| PD-N-DRN-CV | Culvert - Design | | x | | x | x | x | | x | | x | | x | x | PD-N-DRN-CV | | | | | |
| PD-N-DRN-DI | Ditch Inlet - Design | | | x | x | x | | | x | | x | x | | x | PD-N-DRN-DI | | | | | |
| PD-N-DRN-MH | Manhole - Design | | | x | x | x | | | x | | x | x | | x | PD-N-DRN-MH | | | | | |
| PD-N-DRN-RR | Rip-Rap - Design | | x | | x | | | | | | | | | | PD-N-DRN-RR | | | | | |
| PD-N-DRN-SAN | Sanitary Sewer Pipe - Design | | x | | x | x | x | | x | | x | | x | x | PD-N-DRN-SAN | | | | | |
| PD-N-DRN-SEW | Storm Sewer Pipe - Design | | x | | x | x | x | | x | | x | | x | x | PD-N-DRN-SEW | | | | | |
| PD-N-DRN-SUB | Sub Drain - Design | | x | | x | x | x | | x | x | x | | x | x | PD-N-DRN-SUB | | | | | |
| PD-N-DRN-WL | Water Level - Design | | x | | x | | | | | | x | | | x | PD-N-DRN-WL | | | | | |
| PD-N-DRN-T | Drainage Text - Design | | | | x | | | | x | | | | | x | PD-N-DRN-T | | | | | |

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InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Symbology Name | Geometry Feature | Survey Feature | | | |
|-------------------------|---|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|----------------|------------------|----------------|--|--|--|
| | | | Plan | | | Cross Section | | | | Profile | | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | | | |
| Miscellaneous | | | | | | | | | | | | | | | | | | | | |
| PD-N-MSC | Miscellaneous (Generic Items) - Design | | x | | x | | | | | | x | | | | x | PD-N-MSC | | | | |
| PD-N-MSC-AS | Asphalt (Miscellaneous Paving) - Design | | x | | x | x | | | x | x | x | | | | x | PD-N-MSC-AS | | | | |
| PD-N-MSC-BN | Bull Nose - Design | | x | | x | | | | | | x | | | | x | PD-N-MSC-BN | | | | |
| PD-N-MSC-CO | Concrete - Design | | x | | x | x | | | x | x | x | | | | x | PD-N-MSC-CO | | | | |
| PD-N-MSC-COA | Concrete With Asphalt Surface - Design | | x | | x | | | | | | | | | | | PD-N-MSC-COA | | | | |
| PD-N-MSC-EJ | Expansion Joint - Design | | x | | x | | | | | | x | | | | x | PD-N-MSC-EJ | | | | |
| PD-N-MSC-EX | Bottom of Earth Excavation Profile - Design | | x | | x | x | | | x | x | x | | | | x | PD-P-MSC-EX | | | | |
| PD-N-MSC-GAB | Gabion Baskets - Design | | x | | x | | x | | x | x | x | | | | x | PD-N-MSC-GAB | | | | |
| PD-N-MSC-RW | Retaining Wall - Design | | x | | x | x | | | x | x | x | | | | x | PD-N-MSC-RW | | | | |
| PD-N-MSC-SIGN | Sign Footing - Design | | x | | x | x | | | x | x | x | | | | x | PD-N-MSC-SIGN | | | | |
| PD-N-MSC-SWA | Asphalt Sidewalk - Design | | x | | x | x | | | x | x | | | | | | PD-N-MSC-SWA | | | | |
| PD-N-MSC-SWC | Concrete Sidewalk - Design | | x | | x | x | | | x | x | | | | | | PD-N-MSC-SWC | | | | |
| PD-N-MSC-T | Miscellaneous Text - Design | | | | x | | | | x | | | | | | x | PD-N-MSC-T | | | | |
| Pavement Marking | | | | | | | | | | | | | | | | | | | | |
| PD-N-PMK | Pavement Markings - Design | | x | | x | x | | | x | | x | | | | x | PD-N-PMK | | | | |

Appendix D

InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Symbology Name | Geometry Feature | Survey Feature | | | |
|----------------|--|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|----------------|------------------|----------------|--|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | | | |
| PD-N-PMK-GORE | Gore Area - Design | | x | | x | x | | | x | | x | | | x | PD-N-PMK-GORE | | | | | |
| PD-N-PMK-PMBW | Pavement Marking - Broken White Line - Design | | x | | x | x | | | x | | x | | | x | PD-N-PMK-PMBW | | | | | |
| PD-N-PMK-PMBY | Pavement Marking - Broken Yellow Line - Design | | x | | x | x | | | x | | x | | | x | PD-N-PMK-PMBY | | | | | |
| PD-N-PMK-PMSW | Pavement Marking - Solid White Line - Design | | x | | x | x | | | x | | x | | | x | PD-N-PMK-PMSW | | | | | |
| PD-N-PMK-PMSY | Pavement Marking - Solid Yellow Line - Design | | x | | x | x | | | x | | x | | | x | PD-N-PMK-PMSY | | | | | |
| PD-N-PMK-T | Pavement Marking Text - Design | | | | x | | | | x | | | | | x | PD-N-PMK-T | | | | | |
| Roadway | | | | | | | | | | | | | | | | | | | | |
| PD-N-RDS-CR | Crown of Road - Design | | x | | x | | x | | x | | x | | | x | PD-N-RDS-CR | | | | | |
| PD-N-RDS-CGA | Asphalt Curb and Gutter - Design | | x | | x | x | | | x | x | x | | | x | PD-N-RDS-CGA | | | | | |
| PD-N-RDS-CGC | Concrete Curb and Gutter - Design | | x | | x | x | | | x | x | x | | | x | PD-N-RDS-CGC | | | | | |
| PD-N-RDS-EP | New Edge of Pavement - Design | | x | | x | x | x | | x | | x | | | x | PD-N-RDS-EP | | | | | |
| PD-N-RDS-EPS | New Edge of Paved Shoulder - Design | | x | | x | x | x | | x | | x | | | x | PD-N-RDS-EPS | | | | | |
| PD-N-RDS-ES | New Edge of Shoulder - Design | | x | | x | x | x | | x | | x | | | x | PD-N-RDS-ES | | | | | |
| PD-N-RDS-TC | Top of Cut - Design | | x | | x | x | | | x | | x | | | x | PD-N-RDS-TC | | | | | |
| PD-N-RDS-TS | Toe of Fill Slope - Design | | x | | x | x | | | x | | x | | | x | PD-N-RDS-TS | | | | | |
| PD-N-RDS-UR | Unpaved Road - Design | | x | | x | x | | | x | | x | | | x | PD-N-RDS-UR | | | | | |

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InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | Symbology Name | Geometry Feature | Survey Feature | |
|----------------------------------|---|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------------|----------------|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | |
| PD-N-RDS-T | Roadway Text - Design | | x | | x | | | | x | | | | x | PD-N-RDS-T | | |
| Property and Right of Way | | | | | | | | | | | | | | | | |
| PD-N-ROW-PLI | Limited Interest (Permanent) - Design | | | x | | x | x | x | | x | | | | | PD-N-ROW-PLI | |
| PD-N-ROW-TLI | Limited Interest (Temporary) - Design | | x | | x | x | x | | x | | | | | | PD-N-ROW-TLI | |
| PD-N-ROW-PRI | Property Required (Intermediate) - Design | | x | | x | x | x | | x | | | | | | PD-N-ROW-PRI | |
| PD-N-ROW-PRU | Property Required (Ultimate) - Design | | x | | x | x | x | | x | | | | | | PD-N-ROW-PRU | |
| PD-N-ROW-DEL | Property Deletion - Design | | x | | x | | | | | | | | | | PD-N-ROW-DEL | |
| PD-N-ROW-T | Property and ROW Text - Design | | x | | x | | | | x | | | | | | PD-N-ROW-T | |
| Vegetation | | | | | | | | | | | | | | | | |
| PD-N-VEG-SOD | Sod - Design | | | x | | x | | | | | | | | | PD-N-VEG-SOD | |
| PD-N-VEG-WO | Vegetation Wood Outline - Design | | x | | x | | | | | | | | | | PD-N-VEG-WO | |
| PD-N-VEG-T | Vegetation Text - Design | | x | | x | | | | x | | x | | | | PD-N-VEG-T | |
| General Profile | | | | | | | | | | | | | | | | |
| PD-P-LIMIT | Profile Contract Construction Limits - Design | | | | | | | | | | x | | | x | PD-P-LIMIT | |
| PD-P-LIMIT-T | Profile Job Limits Text - Design | | | | | | | | | | x | | | x | PD-P-LIMIT-T | |
| PD-P-G-T | General Text - Profile | | | | | | | | | | | | | x | PD-P-G-T | |

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InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Symbology Name | Geometry Feature | Survey Feature | | | |
|-------------------------|---|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|----------------|------------------|----------------|--|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | | | |
| Road Bed Profile | | | | | | | | | | | | | | | | | | | | |
| PD-P-BED-GRA | Top of Granular A Profile - Design | | | | | | | | | | x | | | x | PD-P-BED-GRA | | | | | |
| PD-P-BED-GRB | Top of Granular B Profile - Design | | | | | | | | | | x | | | x | PD-P-BED-GRB | | | | | |
| PD-P-BED-SG | Subgrade Profile - Design | | | | | | | | | | x | | | x | PD-P-BED-SG | | | | | |
| PD-P-BED-TCL | Left Top of Cut Profile - Design | | | | | | | | | | x | | | x | PD-P-BED-TCL | | | | | |
| PD-P-BED-TCR | Right Top of Cut Profile - Design | | | | | | | | | | x | | | x | PD-P-BED-TCR | | | | | |
| PD-P-BED-TF | Top of Filter Course Profile - Design | | | | | | | | | | x | | | x | PD-P-BED-TF | | | | | |
| PD-P-BED-TP | Top of Pavement Profile - Design | | | | | | | | | | x | | | x | PD-P-BED-TP | | | | | |
| PD-P-BED-TSL | Left Toe of Fill Slope Profile - Design | | | | | | | | | | x | | | x | PD-P-BED-TSL | | | | | |
| PD-P-BED-TSR | Right Toe of Fill Slope Profile - Design | | | | | | | | | | x | | | x | PD-P-BED-TSR | | | | | |
| PD-P-BED-VALBL | Vertical Alignment Stations Tables - Design | | | | | | | | x | | x | | | x | PD-P-BED-VALBL | | | | | |
| PD-P-BED-VAPTS | Vertical Alignment VPI Tangents - Design | | x | x | x | | | | x | | x | | | x | PD-P-BED-VAPTS | | | | | |
| PD-P-BED-T | Profile Roadbed Text - Design | | | | | | | | | | x | | | x | PD-P-BED-T | | | | | |
| Drainage Profile | | | | | | | | | | | | | | | | | | | | |
| PD-P-DRN-BDL | Left Bottom of Ditch Profile - Design | | | | | | | | | | x | | | x | PD-P-DRN-BDL | | | | | |
| PD-P-DRN-BDM | Median Bottom of Ditch Profile - Design | | | | | | | | | x | | x | | x | PD-P-DRN-BDM | | | | | |

Appendix D

InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | Symbology Name | Geometry Feature | Survey Feature | | |
|------------------------------|--|-----------|-----------------|-------|------------|---------------|----------------|-----------------|-----------|----------------|-----------------|----------------|----------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| PD-P-DRN-BDR | Right Bottom of Ditch Profile - Design | | | | | | | | | x | | | x | PD-P-DRN-BDR | | | |
| PD-P-DRN-CB | Catch Basin Profile - Design | | | | | | | | | x | x | x | x | PD-P-DRN-CB | | | |
| PD-P-DRN-CV | Culvert Profile - Design | | | | | | | | | x | x | x | x | PD-P-DRN-CV | | | |
| PD-P-DRN-DI | Ditch Inlet - Profile - Design | | | | | | | | | x | x | x | x | PD-P-DRN-DI | | | |
| PD-P-DRN-MH | Manhole Profile - Design | | | | | | | | | x | x | x | x | PD-P-DRN-MH | | | |
| PD-P-DRN-SAN | Sanitary Sewer Pipe Profile - Design | | | | | | | | | x | | x | x | PD-P-DRN-SAN | | | |
| PD-P-DRN-SEW | Storm Sewer Pipe Profile - Design | | | | | | | | | x | | x | x | PD-P-DRN-SEW | | | |
| PD-P-DRN-SUB | Sub Drain Profile - Design | | | | | | | | | x | | x | x | PD-P-DRN-SUB | | | |
| PD-P-DRN-T | Profile Drainage Text - Design | | | | | | | | | x | | | x | PD-P-DRN-T | | | |
| Ground Profile | | | | | | | | | | | | | | | | | |
| PD-P-GND-MUB | Bottom of Muskeg Profile - Design | | | | | | | | | x | | | x | PD-P-GND-MUB | | | |
| PD-P-GND-MUT | Top of Muskeg Profile - Design | | | | | | | | | x | | | x | PD-P-GND-MUT | | | |
| PD-P-GND-OG | Orginial Ground Profile - Design | | | | | | | | | x | | | x | PD-P-GND-OG | | | |
| PD-P-GND-RK | Top of Rock Profile - Design | | | | | | | | | x | | | x | PD-P-GND-RK | | | |
| PD-P-GND-T | Profile Ground Text - Design | | | | | | | | | x | | | x | PD-P-GND-T | | | |
| Miscellaneous Profile | | | | | | | | | | | | | | | | | |

Appendix D
InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | Symbology Name | Geometry Feature | Survey Feature | |
|----------------|---|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------------|----------------|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | |
| PD-P-MSC | Miscellaneous Profile Items - Design | | | | | | | | | | x | | | x | PD-P-MSC | |
| PD-P-MSC-EF | Earth Fill Profile - Design | | | | | | | | | | x | | | x | PD-P-MSC-EF | |
| PD-P-MSC-EX | Bottom of Earth Excavation Profile - Design | | | | | | | | | | x | | | x | PD-P-MSC-EX | |
| PD-P-MSC-RF | Rock Fill Profile - Design | | | | | | | | | | x | | | x | PD-P-MSC-RF | |
| PD-P-MSC-SH | Shatter Profile - Design | | | | | | | | | | x | | | x | PD-P-MSC-SH | |
| PD-P-MSC-T | Profile Miscellaneous Text - Design | | | | | | | | | | x | | | x | PD-P-MSC-T | |
| Removal | | | | | | | | | | | | | | | | |
| PD-R-BAR-FL | Fence Removal | | x | | x | | | | | | | | | | PD-R-BAR-FL | |
| PD-R-BAR-GU | Guide Rail Removal | | x | | x | | | | | | | | | | PD-R-BAR-GU | |
| PD-R-BAR-T | Removal Barrier Text | | x | | x | | | | | | | | | | PD-R-BAR-T | |
| PD-R-DRN-CB | Cathc Basin Removal | | x | x | x | | | | | | | | | | PD-R-DRN-CB | |
| PD-R-DRN-CV | Culvert Removal | | x | | x | | | | | | | | | | PD-R-DRN-CV | |
| PD-R-DRN-MH | Manhole Removal | | x | x | x | | | | | | | | | | PD-R-DRN-MH | |
| PD-R-DRN-SAN | Sanitary Sewer Pipe Removal | | x | | x | | | | | | | | | | PD-R-DRN-SAN | |
| PD-R-DRN-SEW | Storm Sewer Pipe Removal | | x | | x | | | | | | | | | | PD-R-DRN-SEW | |
| PD-R-DRN-SUB | Sub Drain Removal | | x | | x | | | | | | | | | | PD-R-DRN-SUB | |

Appendix D
InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | Symbology Name | Geometry Feature | Survey Feature | |
|-----------------|---------------------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------------|-----------------|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | |
| PD-R-DRN-T | Removal Drainage Text | | | | x | | | | | | | | | | PD-R-DRN-T | |
| PD-R-MSC | Removal Miscellaneous Items | | x | | x | | | | | | | | | | PD-R-MSC | |
| PD-R-MSC-AS | Asphalt Pavement Removal | | x | | x | | | | | | | | | | PD-R-MSC-AS | |
| PD-R-MSC-CO | Concrete Pavement Removal | | x | | x | | | | | | | | | | PD-R-MSC-CO | |
| PD-R-MSC-COA | Concrete with Asphalt Surface Removal | | x | | x | | | | | | | | | | PD-R-MSC-COA | |
| PD-R-MSC-SWA | Asphalt Sidewalk Removal | | x | | x | | | | | | | | | | PD-R-MSC-SWA | |
| PD-R-MSC-SWC | Concrete Sidewalk Removal | | x | | x | | | | | | | | | | PD-R-MSC-SWC | |
| PD-R-MSC-T | Removal Miscellaneous Text | | | | x | | | | | | | | | | PD-R-MSC-T | |
| PD-R-RDS-CGA | Asphalt Curb and Gutter Removal | | x | | x | | | | | | | | | | PD-R-RDS-CGA | |
| PD-R-RDS-CGC | Concrete Curb and Gutter Removal | | x | | x | | | | | | | | | | PD-R-RDS-CGC | |
| PD-R-RDS-UR | Edge of Unpaved Road Removal | | x | | x | | | | | | | | | | PD-R-RDS-UR | |
| PD-R-RDS-T | Removal Road Text | | | | x | | | | | | | | | | PD-R-RDS-T | |
| PD-R-VEG-CLR | Cleared Removal | | x | | x | | | | | | | | | | PD-R-VEG-CLR | |
| PD-R-VEG-CLRCUT | Close Cut Cleared Removal | | x | | x | | | | | | | | | | PD-R-VEG-CLRCUT | |
| PD-R-VEG-CLRGRB | Cleared and Grubbed Removal | | x | | x | | | | | | | | | | PD-R-VEG-CLRGRB | |
| PD-R-VEG-GRB | Grubbed Removal | | x | | x | | | | | | | | | | PD-R-VEG-GRB | |

Appendix D

InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | Symbology Name | Geometry Feature | Survey Feature | |
|------------------------|--|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------------|----------------|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | |
| PD-R-VEG-T | Removal Vegetation Text | | | | x | | | | | | | | | PD-R-VEG-T | | |
| Typical Section | | | | | | | | | | | | | | | | |
| PD-T-25MM | 0.25 mm Line for Typical sections | | | | | | x | | x | | | | | PD-T-25MM | | |
| PD-T-25MM-P | 0.25 mm Hatch for Typical sections | | | | | | x | | x | | | | | PD-T-25MM-P | | |
| PD-T-30MM | 0.30 mm Line for Typical sections | | | | | | x | | x | | | | | PD-T-30MM | | |
| PD-T-30MM-P | 0.30 mm Hatch for Typical sections | | | | | | x | | x | | | | | PD-T-30MM-P | | |
| PD-T-40MM | 0.40 mm Line for Typical sections | | | | | | x | | x | | | | | PD-T-40MM | | |
| PD-T-40MM-DASH | 0.40 mm Dashed Line for Typical sections | | | | | | x | | x | | | | | PD-T-40MM-DASH | | |
| PD-T-50MM | 0.50 mm Line for Typical sections | | | | | | x | | x | | | | | PD-T-50MM | | |
| PD-T-50MM-P | 0.50 mm Hatch for Typical sections | | | | | | x | | x | | | | | PD-T-50MM-P | | |
| PD-T-75MM | 0.75 mm Line for Typical sections | | | | | | x | | x | | | | | PD-T-75MM | | |
| PD-T-CL | Centreline Text for Typical sections | | | | | | x | | x | | | | | PD-T-CL | | |
| PD-T-DIM | Dimensions for Typical sections | | | | | | x | | x | | | | | PD-T-DIM | | |
| PD-T-OG | Goriginal Ground for Typical sections | | | | | | x | | x | | | | | PD-T-OG | | |
| PD-T-NOTE-T | General Notes for Typical sections | | | | | | | | x | | | | | PD-T-NOTE-T | | |
| PD-T-TEXT | All Text for Typical sections | | | | | | | | x | | | | | PD-T-TEXT | | |

Appendix D

InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature |
|------------------------|--------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|------------------|----------------|
| | | | Plan | | | Cross Section | | | | Profile | | | Symbology Name | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | |
| InRoads General | | | | | | | | | | | | | | | | |
| Default | catchall | | x | | x | | x | | x | | x | | x | | Default | x |
| Breaklines | Surface Breakline | | x | | x | | x | | x | | x | | x | | Breaklines | |
| Random | Random Point | | | x | x | x | | x | x | | | x | x | x | Random | |
| INR_Circle | Point Symbol - Circle | | | x | | x | | x | | | | x | x | | INR_Circle | x |
| INR_Cross | Point Symbol - Cross | | | x | | x | | x | | | | x | x | | INR_Cross | x |
| INR_Dumbbell | Point Symbol - Dumbbell | | | x | | x | | x | | | | x | x | | INR_Dumbbell | x |
| INR_Plus Sign | Point Symbol - Plus Sign | | | x | | x | | x | | | | x | x | | INR_Plus Sign | x |
| INR_Square | Point Symbol - Square | | | x | | x | | x | | | | x | x | | INR_Square | x |
| INR_Target | Point Symbol - Target | | | x | | x | | x | | | | x | x | | INR_Target | x |
| INR_Triangle | Point Symbol - Triangle | | | x | | x | | x | | | | x | x | | INR_Triangle | x |
| Contours-Major | Contours | | x | | x | | | | | | | | | | Contours-Major | |
| Contours-Minor | Contours | | x | | x | | | | | | | | | | Contours-Minor | |
| DTM Boundary | Surfave Boundary | | x | | x | | | | | | | | | | DTM Boundary | |
| DTM Triangles | DTM Triangles | | x | | x | | | | | | | | | | DTM Triangles | |

Appendix D

InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|----------------------------|---|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|----------------------------|---------------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| Template Points | | | | | | | | | | | | | | | | | | |
| Auxiliary Point | Template Auxiliary Point IP, IBR | | x | | | x | x | | x | | | | | | Auxiliary Point | | | |
| Centerline Alignment | Centerline Alignment (Point CL) | | x | | x | x | x | | x | | x | | | x | Centerline Alignment | | | |
| Curb and Gutter (Asphalt) | Asphalt Curb and Gutter (Point CU & GU) | | x | | x | x | | | x | x | x | | | x | Curb and Gutter (Asphalt) | | | |
| Curb and Gutter (Concrete) | Concrete Curb and Gutter (Point CU & GU) | | x | | x | x | | | x | x | x | | | x | Curb and Gutter (Concrete) | | | |
| Edge of Pavement | Edge of Pavement (Point EP) | | x | | x | x | x | | x | | x | | | x | Edge of Pavement | | | |
| Edge of Shoulder | Edge of Shoulder (Point ES) | | x | | x | x | x | | x | | x | | | x | Edge of Shoulder | | | |
| Edge of Paved Shoulder | Edge of Paved Shoulder (Point EPS) | | x | | x | x | x | | x | | x | | | x | Edge of Paved Shoulder | | | |
| Edge of Rounding | Edge of Rounding (Point ER) | | x | | x | x | | | x | | | | | | Edge of Rounding | | | |
| Rounding Breakpoint | Rounding Point (Point BR) | | x | | | x | | | x | | | | | | | Rounding Breakpoint | | |
| Granular Rounding | Granular Rounding (Point GR) | | x | | x | x | | | x | | | | | | | Granular Rounding | | |
| Granular Shoulder | Granular Shoulder (Point GS) | | x | | x | x | x | | x | x | | | | | | Granular Shoulder | | |
| Bottom of Ditch | Bottom of Ditch (Point BC, CH MD, DI, DO) | | x | | x | x | x | | x | | x | | | x | Bottom of Ditch | | | |
| Bottom of Ditch - Lt | Bottom of Ditch, Left - Design | | x | | x | x | | | x | x | x | | | x | Bottom of Ditch - Lt | | | |
| Bottom of Ditch - MD | Bottom of Ditch, Median - Design | | x | | x | x | | | x | x | x | | | x | Bottom of Ditch - MD | | | |
| Bottom of Ditch - Rt | Bottom of Ditch, Right - Design | | x | | x | x | | | x | x | x | | | x | Bottom of Ditch - Rt | | | |

Appendix D

InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|------------------------|----------------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|------------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | Symbology Name | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| Rock | Rock (Point RFT, RFB, BRK, RBI) | | x | | x | x | | | x | x | x | | | x | Rock | | | |
| Rock Shatter | Rock Shatter (Point SH, IB) | | x | | x | x | | | x | x | x | | | x | Rock Shatter | | | |
| Earth Bench | Earth Bench (Point EBI, EBO, OB) | | x | | | x | | | x | x | | | | | Earth Bench | | | |
| Subdrain | Subdrain (Point SD) | | x | | x | x | x | | x | x | x | | x | x | Subdrain | | | |
| Top of Cut | Top of Cut (Point TC) | | x | | x | x | | | x | | x | | | x | Top of Cut | | | |
| Top of Cut - Lt | Top of Cut (Point TC) - Left | | x | | x | x | | | x | | x | | | x | Top of Cut - Lt | | | |
| Top of Cut - Rt | Top of Cut (Point TC) - Right | | x | | x | x | | | x | | x | | | x | Top of Cut - Rt | | | |
| Toe of Fill Slope | Toe of Slope (Point TS) | | x | | x | x | | | x | | x | | | x | Toe of Fill Slope | | | |
| Toe of Fill Slope - Lt | Toe of Slope (Point TS) - Left | | x | | x | x | | | x | | x | | | x | Toe of Fill Slope - Lt | | | |
| Toe of Fill Slope - Rt | Toe of Slope (Point TS) - Right | | x | | x | x | | | x | | x | | | x | Toe of Fill Slope - Rt | | | |
| Raised Berm | Raised Berm (Point RB) | | x | | | x | x | | x | x | | | | | Raised Berm | | | |
| Retaining Wall | Retaining Wall (Point RW) | | x | | x | x | | | x | x | x | | | x | Retaining Wall | | | |
| Sidewalk (Asphalt) | Asphalt Sidewalk (Point SW) | | x | | x | x | | | x | x | | | | | Sidewalk (Asphalt) | | | |
| Sidewalk (Concrete) | Concrete Sidewalk (Point SW) | | x | | x | x | | | x | x | | | | | Sidewalk (Concrete) | | | |
| Muskeg | Muskeg (Point MU) | | x | | x | x | | | x | x | x | | | x | Muskeg | | | |
| Barrier | Barrier (Point BA) | | x | | x | x | | | x | x | x | | | x | Barrier | | | |

Appendix D

InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Symbology Name | Geometry Feature | Survey Feature | | | |
|------------------------------|--|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|------------------------------|------------------|----------------|--|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | | | |
| Jersey Barrier | Jersey Barrier (Point JB) | | x | | x | x | | | x | x | x | | | x | Jersey Barrier | | | | | |
| Template Components | | | | | | | | | | | | | | | | | | | | |
| Asphalt Top Course | Asphalt Top Course | | x | | | | | | x | x | | | | | Asphalt Top Course | | | | | |
| Asphalt Base Course 1 | Asphalt Base Course 1 | | x | | | | | | x | x | | | | | Asphalt Base Course 1 | | | | | |
| Asphalt Base Course 2 | Asphalt Base Course 2 | | x | | | | | | x | x | | | | | Asphalt Base Course 2 | | | | | |
| Asphalt Base Course 3 | Asphalt Base Course 3 | | x | | | | | | x | x | | | | | Asphalt Base Course 3 | | | | | |
| Asphalt Base Course 4 | Asphalt Base Course 4 | | x | | | | | | x | x | | | | | Asphalt Base Course 4 | | | | | |
| Asphalt Shoulder Top Course | Asphalt Shoulder Top Course | | x | | | | | | x | x | | | | | Asphalt Shoulder Top Course | | | | | |
| Asphalt Shoulder Base Course | Asphalt Shoulder Base Course | | x | | | | | | x | x | | | | | Asphalt Shoulder Base Course | | | | | |
| Concrete Pavement | Plain Concrete | | x | | | | | | x | x | | | | | Concrete Pavement | | | | | |
| Curb and Gutter (Asphalt) | Asphalt Curb and Gutter (Point CU & GU) | | x | | x | x | | | x | x | x | | | x | Curb and Gutter (Asphalt) | | | | | |
| Curb and Gutter (Concrete) | Concrete Curb and Gutter (Point CU & GU) | | x | | x | x | | | x | x | x | | | x | Curb and Gutter (Concrete) | | | | | |
| Granular A | Granular A | | x | | | | | | x | x | | | | | Granular A | | | | | |
| Granular B | Granular B | | x | | | | | | x | x | | | | | Granular B | | | | | |
| Granular Shoulder | Granular Shoulder (Point GS) | | x | | x | x | x | | x | x | | | | | Granular Shoulder | | | | | |
| Jersey Barrier | Jersey Barrier (Point JB) | | x | | x | x | | | x | x | x | | | x | Jersey Barrier | | | | | |

Appendix D
InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|----------------------------|----------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|----------------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | Symbology Name | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| Curb & Gutter OPSD 600.010 | Curb & Gutter OPSD 600.010 | | x | | | | | | x | x | | | | | Curb & Gutter OPSD 600.010 | | | |
| Curb & Gutter OPSD 600.020 | Curb & Gutter OPSD 600.020 | | x | | | | | | x | x | | | | | Curb & Gutter OPSD 600.020 | | | |
| Curb & Gutter OPSD 600.030 | Curb & Gutter OPSD 600.030 | | x | | | | | | x | x | | | | | Curb & Gutter OPSD 600.030 | | | |
| Curb & Gutter OPSD 600.040 | Curb & Gutter OPSD 600.040 | | x | | | | | | x | x | | | | | Curb & Gutter OPSD 600.040 | | | |
| Curb & Gutter OPSD 600.050 | Curb & Gutter OPSD 600.050 | | x | | | | | | x | x | | | | | Curb & Gutter OPSD 600.050 | | | |
| Curb & Gutter OPSD 600.060 | Curb & Gutter OPSD 600.060 | | x | | | | | | x | x | | | | | Curb & Gutter OPSD 600.060 | | | |
| Curb & Gutter OPSD 600.070 | Curb & Gutter OPSD 600.070 | | x | | | | | | x | x | | | | | Curb & Gutter OPSD 600.070 | | | |
| Curb & Gutter OPSD 600.080 | Curb & Gutter OPSD 600.080 | | x | | | | | | x | x | | | | | Curb & Gutter OPSD 600.080 | | | |
| Curb & Gutter OPSD 600.090 | Curb & Gutter OPSD 600.090 | | x | | | | | | x | x | | | | | Curb & Gutter OPSD 600.090 | | | |
| Curb & Gutter OPSD 600.100 | Curb & Gutter OPSD 600.100 | | x | | | | | | x | x | | | | | Curb & Gutter OPSD 600.100 | | | |
| Curb & Gutter OPSD 600.110 | Curb & Gutter OPSD 600.110 | | x | | | | | | x | x | | | | | Curb & Gutter OPSD 600.110 | | | |
| Curb & Gutter OPSD 601.010 | Curb & Gutter OPSD 601.010 | | x | | | | | | x | x | | | | | Curb & Gutter OPSD 601.010 | | | |
| Muskeg Backfill | Muskeg Backfill | | | | | | | | x | x | | | | | Muskeg Backfill | | | |
| Muskeg Excavation | Muskeg Excavation | | | | | | | | x | x | | | | | Muskeg Excavation | | | |
| Cut | Cut | | x | | | | | | x | x | | | | | Cut | | | |
| Fill | Fill | | x | | | | | | x | x | | | | | Fill | | | |

Appendix D
InRoads Styles for Planning and Design

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | |
|------------------------|--------------------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|------------------------|----------------|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | Symbology Name | | |
| Milling | Milling | | x | | x | | | | x | x | | | | | Milling | | |
| Rock Cut | Rock Cut | | x | | | | | | x | x | | | | | Rock Cut | | |
| Rock Fill | Rock Fill | | x | | | | | | x | x | | | | | Rock Fill | | |
| Rock Embankment | Rock Embankment | | x | | | | | | x | x | | | | | Rock Fill | | |
| Rock Shatter | Rock Shatter (Point SH, IB) | | x | | x | x | | | x | x | x | | | x | Rock Shatter | | |
| Rock Shatter (Partial) | Rock Shatter Partial (for deduction) | | x | | | | | | x | x | | | | | Rock Shatter (Partial) | | |
| Sidewalk (Asphalt) | Asphalt Sidewalk (Point SW) | | x | | x | x | | | x | x | | | | | Sidewalk (Asphalt) | | |
| Sidewalk (Concrete) | Concrete Sidewalk (Point SW) | | x | | x | x | | | x | x | | | | | Sidewalk (Concrete) | | |
| Stripping | Stripping | | x | | x | x | x | | x | x | | | | | Stripping | | |
| Subdrain | Subdrain (Point SD) | | x | | x | x | x | | x | x | x | | x | x | Subdrain | | |
| V Median Ditch | V Median Ditch | | x | | | | | | x | x | | | | | V Median Ditch | | |

Appendix E

InRoads Styles for Photogrammetry

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|-------------------------------|---------------------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| Photogrammetry General | | | | | | | | | | | | | | | | | | |
| PH-G-25MM | 0.25 mm Line - Existing | | x | | x | | x | | x | | x | | | x | PH-G-25MM | | | |
| PH-G-40MM | 0.40 mm Line - Existing | | x | | x | | x | | x | | x | | | x | PH-G-40MM | | | |
| PH-G-50MM | 0.50 mm Line - Existing | | x | | x | | x | | x | | x | | | x | PH-G-50MM | | | |
| PH-G-75MM | 0.75 mm Line - Existing | | x | | x | | x | | x | | x | | | x | PH-G-75MM | | | |
| PH-G-TEXT | General Text - Existing | | | | x | | | | x | | | | | x | PH-G-TEXT | | | |
| PH-E-SCANNED | Scanned Image - Existing | | x | | x | x | | | x | | x | | | x | PH-E-SCANNED | | | |
| PH-G-SYMBOLS | Symbols - Existing | | x | x | x | x | | x | x | | x | x | | x | PH-G-SYMBOLS | | | |
| PH-E-LABELS | String Labels - Existing | | | | x | | | | x | | | | | x | PH-E-LABELS | | | |
| Survey Monument | | | | | | | | | | | | | | | | | | |
| PH-E-MON | Horizontal Control - Existing | | x | x | x | x | | x | x | | | | x | x | PH-E-MON | | | |
| PH-E-MON-BM | Vertical Control - Existing | | x | x | x | x | | x | x | | | | x | x | PH-E-MON-BM | | | |
| Alignment | | | | | | | | | | | | | | | | | | |
| PH-E-ALI-E1 | Entrance Alignment - Existing | | x | | x | x | x | | | | x | | | | PH-E-ALI-E1 | x | | |
| Barrier | | | | | | | | | | | | | | | | | | |
| PH-E-BAR-BB | Bottom of Barrier Concrete - Existing | | x | | x | x | | | x | | x | | | x | PH-E-BAR-BB | | | |

Appendix E

InRoads Styles for Photogrammetry

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|-----------------|------------------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|------------------|----------------|------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | Symbolology Name | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| PH-E-BAR-BT | Top of Concrete Barrier - Existing | | x | | x | x | | | x | | x | | | x | PH-E-BAR-BT | | | |
| PH-E-BAR-FL | Top of Fence - Existing | | x | | x | x | | | x | | x | | | x | PH-E-BAR-FL | | | |
| PH-E-BAR-GAT | Gate - Existing | | x | | x | x | | | x | | x | | | x | PH-E-BAR-GAT | | | |
| PH-E-BAR-GU | Guide Rail (Plan Only) - Existing | | x | | x | x | | | x | | x | | | x | PH-E-BAR-GU | | | |
| PH-E-BAR-NB | Top of Noise Barrier - Existing | | x | | x | x | | | x | | x | | | x | PH-E-BAR-NB | | | |
| PH-E-BAR-T | Brier Text - Existing | | x | | x | | | | x | | | | | x | PH-E-BAR-T | | | |
| Contour | | | | | | | | | | | | | | | | | | |
| PH-E-CTR-C1 | Contours (Primary) - Existing | | x | | x | | | | | | | | | | PH-E-CTR-C1 | | | |
| PH-E-CTR-C2 | Contours (Secondry) - Existing | | x | | x | | | | | | | | | | PH-E-CTR-C2 | | | |
| PH-E-CTR-T | Contour Text - Existing | | x | | x | | | | | | | | | | PH-E-CTR-T | | | |
| Drainage | | | | | | | | | | | | | | | | | | |
| PH-E-DRN-BD | Bottom of Ditch - Existing | | x | | x | x | x | x | x | x | x | | | x | PH-E-DRN-BD | | | |
| PH-E-DRN-CB | Catch Basin - Existing | | | x | x | | | | | | | x | | x | PH-E-DRN-CB | | | |
| PH-E-DRN-CVP | Culvert (One End) - Existing | | | x | x | | | | | | | x | | x | PH-E-DRN-CVP | | | |
| PH-E-DRN-CV-P | Culvert Outline - Existing | | x | | x | | x | | x | | x | | | x | PH-E-DRN-CV-P | | | |
| PH-E-DRN-CVT | Top Culvert Centreline - Existing | | x | | x | | x | | x | | x | | | x | PH-E-DRN-CVT | | | |

Appendix E

InRoads Styles for Photogrammetry

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|-----------------------|---------------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|------------------|-------------|---------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | Symbolology Name | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | | | | | | | |
| PH-E-DRN-DI | Ditch Inlet - Existing | | | x | x | | | | | | x | x | PH-E-DRN-DI | | | | | |
| PH-E-DRN-EM | Edge of Muskeg - Existing | | x | | x | x | x | | x | | x | | x | PH-E-DRN-EM | | | | |
| PH-E-DRN-EM-P | Muskeg Pattern - Existing | | x | | x | | | | | | | | | PH-E-DRN-EM-P | | | | |
| PH-E-DRN-EW | Edge of Water - Existing | | x | | x | x | | | x | | x | | x | PH-E-DRN-EW | | | | |
| PH-E-DRN-MH | Manhole - Existing | | | x | x | | | | | | | x | | x | PH-E-DRN-MH | | | |
| PH-E-DRN-RR | Rip_Rap - Existing | | x | | x | | | | | | | | | PH-E-DRN-RR | | | | |
| PH-E-DRN-T | Drainage Text - Existing | | | | x | | | | x | | | | x | PH-E-DRN-T | | | | |
| Ground Feature | | | | | | | | | | | | | | | | | | |
| PH-E-GND-AO | Asphalt Outling - Existing | | | x | | x | x | | | x | | x | | x | PH-E-GND-AO | | | |
| PH-E-GND-AS | Asphalt Shots - Existing | | x | | x | x | | | x | | x | | | x | PH-E-GND-AS | | | |
| PH-E-GND-BA | Bank River or Stream - Existing | | x | | x | x | | | x | | x | | | x | PH-E-GND-BA | | | |
| PH-E-GND-BC | Bottom of Rock Cut - Existing | | x | | x | x | | | x | | x | | | x | PH-E-GND-BC | | | |
| PH-E-GND-CO | Concrete Outline - Existing | | x | | x | | | | | | x | | | x | PH-E-GND-CO | | | |
| PH-E-GND-CS | Concrete Shots - Existing | | x | | x | x | | | x | | x | | | x | PH-E-GND-CS | | | |
| PH-E-GND-EC | Entrance Centreline - Existing | | x | | x | x | x | x | x | | x | x | x | x | PH-E-GND-EC | | | |
| PH-E-GND-GO | Gravel Outline - Existing | | x | | x | x | | | x | | x | | | x | PH-E-GND-GO | | | |

Appendix E

InRoads Styles for Photogrammetry

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|----------------------|---|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|------------------|----------------|------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | Symbolology Name | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| PH-E-GND-GS | Gravel Shots - Existing | | x | | x | x | | | x | | x | | | x | PH-E-GND-GS | | | |
| PH-E-GND-GX | Original Ground (Approximate) - Existing | | x | | x | x | | | x | | x | | | x | PH-E-GND-GX | | | |
| PH-E-GND-OG | Original Ground Fault - Existing | | x | | x | x | x | x | x | | x | | | x | PH-E-GND-OG | | | |
| PH-E-GND-RBE | Railway Ballast Edge - Existing | | x | | x | x | | | x | | x | | | x | PH-E-GND-RBE | | | |
| PH-E-GND-RBT | Railway Ballast Top - Existing | | x | | x | x | | | x | | x | | | x | PH-E-GND-RBT | | | |
| PH-E-GND-RKO | Rock Outline - Existing | | x | | x | x | | | x | | x | | | x | PH-E-GND-RKO | | | |
| PH-E-GND-RKS | Rock Shots - Existing | | x | | x | x | | | x | | x | | | x | PH-E-GND-RKS | | | |
| PH-E-GND-SP | Stock Piles - Existing | | x | | x | x | | | x | | x | | | x | PH-E-GND-SP | | | |
| PH-E-GND-TC | Top of Rock Cut - Existing | | x | | x | x | | | x | | x | | | x | PH-E-GND-TC | | | |
| PH-E-GND-XX | Original Ground (Estimated) - Existing | | x | | x | x | | | x | | x | | | x | PH-E-GND-XX | | | |
| PH-E-GND-P | Ground Patterning (Cut and Fill) - Existing | | x | | x | | | | | | x | | | x | PH-E-GND-P | | | |
| PH-E-GND-T | Ground Feature Text - Existing | | | | x | | | | x | | | | | x | PH-E-GND-T | | | |
| Miscellaneous | | | | | | | | | | | | | | | | | | |
| PH-Q-MSC-AU | Audit Line for Quality Assurance - Existing | | x | | x | | | | | | | | | | Default | | | |
| PH-E-MSC-AX | Excluded Area - Existing | | x | | x | | | | | | x | | | x | PH-E-MSC-AX | | | |
| PH-E-MSC-AX-P | Excluded Area Pattern - Existing | | x | | x | | | | | | | | | | PH-E-MSC-AX-P | | | |

Appendix E

InRoads Styles for Photogrammetry

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|---------------|--|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|------------------|---|---------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | Symbolology Name | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | | | | | | | |
| PH-E-MSC-BLF | Building Foundation Ruins - Existing | | x | | x | x | | | x | | x | | x | PH-E-MSC-BLF | | | | |
| PH-E-MSC-BLR | Building Roofline Rectangular - Existing | | x | | x | x | | | x | | x | | x | PH-E-MSC-BLR | | | | |
| PH-E-MSC-BS | Building Surround - Existing | | x | | x | x | | | x | | x | | x | PH-E-MSC-BS | | | | |
| PH-E-MSC-BY | Segment Boundary - Existing | | x | | x | x | | | x | | x | | x | PH-E-MSC-BY | | | | |
| PH-E-MSC-CE | Cemetery - Existing | | x | | x | x | | | x | | x | | x | PH-E-MSC-CE | | | | |
| PH-E-MSC-DK | Wooden Decks or Docks - Existing | | x | | x | x | | | x | | x | | x | PH-E-MSC-DK | | | | |
| PH-E-MSC-EJ | Expansion Joint - Existing | | x | | x | | | | | | x | | x | PH-E-MSC-EJ | | | | |
| PH-E-MSC-EV-Z | Miscellaneous Elevations - Existing | | | x | x | | | x | x | | | x | | PH-E-MSC-EV-Z | | | | |
| PH-E-MSC-GAB | Gabion Baskets - Existing | | x | | x | | | | | | x | | x | PH-E-MSC-GAB | | | | |
| PH-E-MSC-GC | Golf Course - Existing | | x | | x | x | | | x | | | | | PH-E-MSC-GC | | | | |
| PH-E-MSC-HR | Bridge Hand Rails - Existing | | x | | x | x | | | x | | x | | x | PH-E-MSC-HR | | | | |
| PH-E-MSC-OR | Orchard - Existing | | x | | x | x | | | x | | x | | x | PH-E-MSC-OR | | | | |
| PH-E-MSC-OS | Overhead Sign - Existing | | x | x | x | x | x | x | x | | x | x | x | PH-E-MSC-OS | | | | |
| PH-E-MSC-RLT | Railway - Top of Rail - Existing | | x | | x | x | | | x | | x | | x | PH-E-MSC-RLT | | | | |
| PH-E-MSC-RW | Retaining Wall - Top - Existing | | x | | x | x | | | x | | x | | x | PH-E-MSC-RW | | | | |
| PH-E-MSC-SW | Sidewalk - Existing | | x | | x | x | | | x | | x | | x | PH-E-MSC-SW | | | | |

Appendix E

InRoads Styles for Photogrammetry

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|----------------|--------------------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| PH-E-MSC-VI | Vineyard - Existing | | x | | x | x | | | x | | | | | | PH-E-MSC-VI | | | |
| PH-E-MSC-WW | Walkways - Trails - Paths - Existing | | x | | x | x | | | x | | x | | x | | PH-E-MSC-WW | | | |
| PH-E-MSC-T | Miscellaneous Text - Existing | | | | x | | | | x | | | | x | | PH-E-MSC-T | | | |
| Roadway | | | | | | | | | | | | | | | | | | |
| PH-E-RDS-AE | Asphalt Edges - Existing | | x | x | x | x | | | x | | x | | | x | PH-E-RDS-AE | | | |
| PH-E-RDS-BRD | Bridge Deck - Existing | | x | | x | x | | | x | | x | | | x | PH-E-RDS-BRD | | | |
| PH-E-RDS-CR | Crown of Road - Existing | | x | | x | x | | | x | | x | | | x | PH-E-RDS-CR | | | |
| PH-E-RDS-CU | Curbs - Existing | | x | | x | x | | | x | | x | | | x | PH-E-RDS-CU | | | |
| PH-E-RDS-EG | Edge of Gutter - Existing | | x | | x | x | | | x | | x | | | x | PH-E-RDS-EG | | | |
| PH-E-RDS-EN | Entrance - Uncertain Surface | | x | | x | x | | | x | | x | | | x | PH-E-RDS-EN | | | |
| PH-E-RDS-EP | Edge of Pavement - Existing | | x | | x | x | | | x | | x | | | x | PH-E-RDS-EP | | | |
| PH-E-RDS-ES | Edge of Shoulder - Existing | | x | | x | x | | | x | | x | | | x | PH-E-RDS-ES | | | |
| PH-E-RDS-NG | Gravel Entrance - Existing | | x | | x | x | | | x | | x | | | x | PH-E-RDS-NG | | | |
| PH-E-RDS-NP | Paved Entrance - Existing | | x | | x | x | | | x | | x | | | x | PH-E-RDS-NP | | | |
| PH-E-RDS-RD | Roads - Uncertain Material | | x | | x | x | | | x | | x | | | x | PH-E-RDS-RD | | | |
| PH-E-RDS-UR | Gravel Sideroads - Existing | | x | | x | x | | | x | | x | | | x | PH-E-RDS-UR | | | |

Appendix E

InRoads Styles for Photogrammetry

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|-------------------|----------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| PH-E-RDS-T | Roadway Text - Existing | | | | x | | | | x | | | | x | PH-E-RDS-T | | | | |
| Utility | | | | | | | | | | | | | | | | | | |
| PH-E-UTL-AN | Anchaor for Guy Wire | | | x | x | | | x | x | | | | | | PH-E-UTL-AN | | | |
| PH-E-UTL-BH | Bell Hydro Pole - Existing | | | x | x | | | x | x | | | | | | PH-E-UTL-BH | | | |
| PH-E-UTL-BP | Bell Pole - Existing | | | x | x | | | x | x | | | | | | PH-E-UTL-BP | | | |
| PH-E-UTL-FH | Fire Hydrant - Existing | | | x | x | | | x | x | | | | | | PH-E-UTL-FH | | | |
| PH-E-UTL-HP | Hydro Pole - Existing | | | x | x | | | x | x | | | | | | PH-E-UTL-HP | | | |
| PH-E-UTL-HT | Hydro Tower - Existing | | | x | x | | | x | x | | | | | | PH-E-UTL-HT | | | |
| PH-E-UTL-LS | Light Standard - Existing | | | x | x | | | x | x | | | | | | PH-E-UTL-LS | | | |
| PH-E-UTL-PW | Pole Well - Existing | | | x | x | | | x | x | | | | | | PH-E-UTL-PW | | | |
| PH-E-UTL-PO | Pole - Other - Existing | | | x | x | | | x | x | | | | | | PH-E-UTL-PO | | | |
| PH-E-UTL-WE | Well - Existing | | | x | x | | | x | x | | | x | | x | PH-E-UTL-WE | | | |
| PH-E-UTL-T | Utilities Text - Existing | | | | x | | | | x | | | | | x | PH-E-UTL-T | | | |
| Vegetation | | | | | | | | | | | | | | | | | | |
| PH-E-VEG-HE | Hedge - Existing | | x | x | x | x | | | x | | | | | | PH-E-VEG-HE | | | |
| PH-E-VEG-TR | Trees - Existing | | | x | x | x | | | x | | | | | | PH-E-VEG-TR | | | |

Appendix E
InRoads Styles for Photogrammetry

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Symbology Name | Geometry Feature | Survey Feature | | | |
|-------------|----------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|----------------|------------------|----------------|--|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | | | |
| PH-E-VEG-WD | Woods Detail - Existing | | x | | x | | | | | | | | | | PH-E-VEG-WD | | | | | |
| PH-E-VEG-T | Vegetation Text - Existing | | | | x | | | | x | | | | x | PH-E-VEG-T | | | | | | |

Appendix F

InRoads Styles for Surveys and Plans

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|------------------------------------|-------------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| Surveys & Plans General | | | | | | | | | | | | | | | | | | |
| SP-G-CONS | Construction Lines - Existing | | x | | x | | x | | x | | x | | | x | SP-G-CONS | | | |
| SP-G-25MM | 0.25 mm Line - Existing | | x | | x | | x | | x | | x | | | x | SP-G-25MM | | | |
| SP-G-40MM | 0.40 mm Line - Existing | | x | | x | | x | | x | | x | | | x | SP-G-40MM | | | |
| SP-G-50MM | 0.50 mm Line - Existing | | x | | x | | x | | x | | x | | | x | SP-G-50MM | | | |
| SP-G-75MM | 0.75 mm Line - Existing | | x | | x | | x | | x | | x | | | x | SP-G-75MM | | | |
| SP-G-TEXT | General Text - Existing | | | | x | | | | x | | | | | x | SP-G-TEXT | | | |
| SP-G-SYMBOLS | Symbols - Existing | | x | x | x | | | x | x | | | x | | x | SP-G-SYMBOLS | | | |
| SP-E-LABELS | String Labels - Existing | | | | x | | | | x | | | | | x | SP-E-LABELS | | | |
| SP-E-SCANNED | Scanned Image - Existing | | x | | x | x | | | x | | x | | | x | SP-E-SCANNED | | | |
| Survey Monument | | | | | | | | | | | | | | | | | | |
| SP-E-MON | Survey Monuments - Existing | | x | x | x | x | | x | x | | | x | x | x | SP-E-MON | | | |
| SP-E-MON-BM | Bench Marks | | x | x | x | x | | x | x | | | x | x | x | SP-E-MON-BM | | | |
| SP-G-MON-T | Monument Text - Existing | | | | x | | | x | | | | | x | Default | | | | |
| Alignment | | | | | | | | | | | | | | | | | | |
| SP-E-ALI | Misc Alignment - Existing | | x | x | x | x | | | x | | x | | | | SP-E-ALI | x | | |

Appendix F

InRoads Styles for Surveys and Plans

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|------------------|--|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|------------------|---|---------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | Symbolology Name | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | | | | | | | |
| SP-E-ALI-CL | Centreline Alignment - Existing | | x | | x | x | x | | | | x | | | SP-E-ALI-CL | x | | | |
| SP-E-ALI-CL-C | Centreline Alignment Chainage - Existing | | x | | x | | | | | | | x | | SP-E-ALI-CL-C | | | | |
| SP-E-ALI-CL-PTS | Centreline Alignment Points - Existing | | | | | | | | | | | | | | x | | | |
| SP-E-ALI-CL-PTST | Centreline Alignment Point Symbol - Triangle | | | | | | | | | | | | | | x | | | |
| SP-E-ALI-CL-T | Centreline Alignment Text - Existing | | x | | x | x | | | x | | x | | x | SP-E-ALI-CL-T | | | | |
| SP-E-ALI-D1 | Drainage Alignment - Existing | | x | x | x | x | | | x | | x | | | SP-E-ALI-D1 | x | | | |
| SP-E-ALI-E1 | Entrance Alignment - Existing | | x | | x | x | | | x | | x | | | SP-E-ALI-E1 | x | | | |
| SP-E-ALI-R1 | Align Revision - Ramp | | x | x | x | x | | | x | | x | | | SP-E-ALI-R1 | x | | | |
| SP-E-ALI-S1 | Sideroad Alignment - Existing | | x | | x | x | | | x | | x | | | SP-E-ALI-S1 | x | | | |
| Barrier | | | | | | | | | | | | | | | | | | |
| SP-E-BAR-BB | Bottom Concrete Barrier - Existing | | x | | x | x | | | x | | x | | | SP-E-BAR-BB | | | | |
| SP-E-BAR-BT | Top of Concrete Barrier - Existing | | x | | x | x | | | x | | x | | | SP-E-BAR-BT | | | | |
| SP-E-BAR-FB | Fitch Barrier - Existing | | x | | x | x | | | x | | x | | | SP-E-BAR-FB | | | | |
| SP-E-BAR-FL | Fence Line (Ground) - Existing | | x | | x | x | | | x | | x | | | SP-E-BAR-FL | | | | |
| SP-E-BAR-FN | Fence Line - Existing | | x | | x | x | | | x | | x | | | SP-E-BAR-FN | | | | |
| SP-E-BAR-GAT | Gate - Existing | | x | | x | x | | | x | | x | | x | SP-E-BAR-GAT | | | | |

Appendix F
InRoads Styles for Surveys and Plans

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|-----------------|-------------------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| SP-E-BAR-GP-Z | Guide Rail (Top of Post) - Existing | | x | | x | x | | | x | | x | | | x | SP-E-BAR-GP-Z | | | |
| SP-E-BAR-GU | Guide Rail (Ground) - Existing | | x | | x | x | | | x | | x | | | x | SP-E-BAR-GU | | | |
| SP-E-BAR-GW-Z | Guide Rail (Top of Wire) - Existing | | x | | x | x | | | x | | x | | | x | SP-E-BAR-GW-Z | | | |
| SP-E-BAR-NB | Noise Barrier (Ground) - Existing | | x | | x | x | | | x | | x | | | x | SP-E-BAR-NB | | | |
| SP-E-BAR-T | Brier Text - Existing | | x | | x | | | | x | | | | | x | SP-E-BAR-T | | | |
| Contour | | | | | | | | | | | | | | | | | | |
| SP-E-CTR-C1 | Contours (Primary) - Existing | | | x | | x | | | | | | | | | SP-E-CTR-C1 | | | |
| SP-E-CTR-C2 | Contours (Secondry) - Existing | | | x | | x | | | | | | | | | SP-E-CTR-C2 | | | |
| SP-E-CTR-T | Contour Text - Existing | | | x | | x | | | | | | | | | SP-E-CTR-T | | | |
| Drainage | | | | | | | | | | | | | | | | | | |
| SP-E-DRN-BD | Bottom of Ditch - Existing | | | x | | x | x | x | x | x | | x | | x | SP-E-DRN-BD | | | |
| SP-E-DRN-CB | Catch Basin- Existing | | | | x | x | | | | | | x | | x | SP-E-DRN-CB | | | |
| SP-E-DRN-CVP | Culvert (One End) - Existing | | | | x | x | | | | | | x | | x | SP-E-DRN-CVP | | | |
| SP-E-DRN-CV-P | Culvert Symbology - Existing | | | x | | x | | x | | x | | x | | x | SP-E-DRN-CV-P | | | |
| SP-E-DRN-CVT | Top Culvert Centreline - Existing | | | x | | x | | x | | x | | x | | x | SP-E-DRN-CVT | | | |
| SP-E-DRN-CV-Z | Culvert Elevation - Existing | | | | x | x | | | x | x | | x | | x | SP-E-DRN-CV-Z | | | |

Appendix F
InRoads Styles for Surveys and Plans

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|-----------------------|---|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| SP-E-DRN-DB-Z | Ditch Inlet (Bottom Elevation) - Existing | | | x | x | | | x | x | | | x | | x | SP-E-DRN-DB-Z | | | |
| SP-E-DRN-DC | Ditch Centreline - Existing | | x | | x | x | x | x | x | | x | | | x | SP-E-DRN-DC | | | |
| SP-E-DRN-DI | Ditch Inlet - Existing | | | x | x | | | | | | | x | | x | SP-E-DRN-DI | | | |
| SP-E-DRN-DT-Z | Ditch Inlet (Top Elevation) - Existing | | | x | x | | | x | x | | | x | | x | SP-E-DRN-DT-Z | | | |
| SP-E-DRN-EM | Edge of Muskeg - Existing | | x | | x | x | x | | x | | x | | | x | SP-E-DRN-EM | | | |
| SP-E-DRN-EM-P | Muskeg Pattern - Existing | | x | | x | | | | | | | | | | SP-E-DRN-EM-P | | | |
| SP-E-DRN-EW | Edge of Water - Existing | | x | | x | x | | | x | | x | | | x | SP-E-DRN-EW | | | |
| SP-E-DRN-FR-Z | Frustum Elevation - Existing | | | x | x | | | x | x | | | x | | x | SP-E-DRN-FR-Z | | | |
| SP-E-DRN-MH | Manhole - Existing | | | x | x | | | | | | | x | | x | SP-E-DRN-MH | | | |
| SP-E-DRN-RR | Rip_Rap - Existing | | x | | x | | | | | | | | | | SP-E-DRN-RR | | | |
| SP-E-DRN-SAN | Sanitary Sewer Pipe - Existing | | x | | x | x | x | | x | | x | | x | x | SP-E-DRN-SAN | | | |
| SP-E-DRN-SEW | Storm Sewer Pipe - Existing | | x | | x | x | x | | x | | x | | x | x | SP-E-DRN-SEW | | | |
| SP-E-DRN-SU-Z | Sump Elevation - Existing | | | x | x | | | x | x | | | x | | x | SP-E-DRN-SU-Z | | | |
| SP-E-DRN-WM | Water Mark - Existing | | x | x | x | | | x | x | | | x | | x | SP-E-DRN-WM | | | |
| SP-E-DRN-T | Drainage Text - Existing | | | | x | | | | x | | | | | x | PH-E-DRN-T | | | |
| Ground Feature | | | | | | | | | | | | | | | | | | |

Appendix F
InRoads Styles for Surveys and Plans

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|--------------|------------------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|----------------|---|--------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | Symbology Name | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | | | | | | | |
| SP-E-GND-AO | Asphalt Outline - Existing | | x | | x | x | | | x | | x | | x | SP-E-GND-AO | | | | |
| SP-E-GND-AS | Asphalt Shots - Existing | | x | | x | x | | | x | | x | | x | SP-E-GND-AS | | | | |
| SP-E-GND-BA | Bank of River or Stream - Existing | | x | | x | x | | | x | | x | | x | SP-E-GND-BA | | | | |
| SP-E-GND-BC | Bottom of Rock Cut - Existing | | x | | x | x | | | x | | x | | x | SP-E-GND-BC | | | | |
| SP-E-GND-CO | Concrete Outline - Existing | | x | | x | x | | | x | | x | | x | SP-E-GND-CO | | | | |
| SP-E-GND-CS | Concrete Shots - Existing | | x | | x | x | | | x | | x | | x | SP-E-GND-CS | | | | |
| SP-E-GND-DS | Door Sill - Existing | | x | | x | x | | | x | | x | | x | SP-E-GND-DS | | | | |
| SP-E-GND-EC | Entrance Centreline - Existing | | x | | x | x | x | x | x | | x | x | x | SP-E-GND-EC | | | | |
| SP-E-GND-GO | Gravel Outline - Existing | | x | | x | x | | | x | | x | | x | SP-E-GND-GO | | | | |
| SP-E-GND-GS | Gravel Shots - Existing | | x | | x | x | | | x | | x | | x | SP-E-GND-GS | | | | |
| SP-E-GND-OG | Original Ground Fault - Existing | | x | | x | x | x | x | x | | x | | x | SP-E-GND-OG | | | | |
| SP-E-GND-RBE | Railway Ballast Edge - Existing | | x | | x | x | | | x | | x | | x | SP-E-GND-RBE | | | | |
| SP-E-GND-RBT | Railway Ballast Top - Existing | | x | | x | x | | | x | | x | | x | SP-E-GND-RBT | | | | |
| SP-E-GND-RKO | Rock Outline - Existing | | x | | x | x | | | x | | x | | x | SP-E-GND-RKO | | | | |
| SP-E-GND-RKS | Rock Shots - Existing | | x | | x | x | | | x | | x | | x | SP-E-GND-RKS | | | | |
| SP-E-GND-SB | River or Stream Bed - Existing | | x | | x | x | | | x | | x | | x | SP-E-GND-SB | | | | |

Appendix F
InRoads Styles for Surveys and Plans

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|----------------------|---|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | Symbology Name | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| SP-E-GND-SP | Stock Piles/Gravel Pits - Existing | | x | | x | x | | | x | | x | | | x | SP-E-GND-SP | | | |
| SP-E-GND-TC | Top of Rock Cut - Existing | | x | | x | x | | | x | | x | | | x | SP-E-GND-TC | | | |
| SP-E-GND-TS | Toe of Slope - Existing | | x | | x | x | | | x | | x | | | x | SP-E-GND-TS | | | |
| SP-E-GND-P | Ground Patterning (Cut-Fill) - Existing | | x | | x | | | | | | x | | | x | SP-E-GND-P | | | |
| SP-E-GND-T | Ground Feature Text - Existing | | | | x | | | | x | | | | | x | SP-E-GND-T | | | |
| Miscellaneous | | | | | | | | | | | | | | | | | | |
| SP-Q-MSC-AU | Audit Line - Existing | | x | | x | | | | | | | | | | SP-Q-MSC-AU | | | |
| SP-E-MSC-BLO | Building Outline (Bottom) - Existing | | x | | x | x | | | x | | x | | | x | SP-E-MSC-BLO | | | |
| SP-E-MSC-BN | Centre of Bull Nose - Existing | | x | | x | | | | | | x | | | x | SP-E-MSC-BN | | | |
| SP-E-MSC-BRP | Bridge Pillar - Existing | | x | x | x | x | | x | x | | x | x | x | x | SP-E-MSC-BRP | | | |
| SP-E-MSC-BY | Segment Boundary - Existing | | x | | x | x | | | x | | x | | | x | SP-E-MSC-BY | | | |
| SP-E-MSC-CE | Cemetery - Existing | | x | | x | x | | | x | | x | | | x | SP-E-MSC-CE | | | |
| SP-E-MSC-DD | Deck Drain - Existing | | x | | x | x | | | x | | x | | | x | SP-E-MSC-DD | | | |
| SP-E-MSC-DK | Wooden Decks or Docks - Existing | | x | | x | x | | | x | | x | | | x | SP-E-MSC-DK | | | |
| SP-E-MSC-EJ | Expansion Joint - Existing | | x | | x | | | | | | x | | | x | SP-E-MSC-EJ | | | |
| SP-E-MSC-EV-Z | Miscellaneous Elevation - Existing | | | x | x | | | x | x | | | x | | x | SP-E-MSC-EV-Z | | | |

Appendix F
InRoads Styles for Surveys and Plans

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|--------------------------|-------------------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | Symbology Name | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| SP-E-MSC-GAB | Gabion Baskets - Existing | | x | | x | | | | | | x | | | x | SP-E-MSC-GAB | | | |
| SP-E-MSC-GFL | Gate with Flashing Light - Existing | | x | | x | | | | | | x | | | x | SP-E-MSC-GFL | | | |
| SP-E-MSC-HR | Bridge Hand Rails - Existing | | x | | x | x | | | x | | x | | | x | SP-E-MSC-HR | | | |
| SP-E-MSC-OS | Overhead Sign - Existing | | x | x | x | x | x | x | x | | x | x | | x | SP-E-MSC-OS | | | |
| SP-E-MSC-RCS | Railway Crossing Sign - Existing | | x | x | x | | | | | | x | | | x | SP-E-MSC-RCS | | | |
| SP-E-MSC-RLS | Railway Sign - Existing | | x | x | x | x | | | | | x | | | x | SP-E-MSC-RLS | | | |
| SP-E-MSC-RLT | Railway - Top of Rail - Existing | | x | | x | x | | | x | | x | | | x | SP-E-MSC-RLT | | | |
| SP-E-MSC-RW | Retaining Wall - Bottom - Existing | | x | | x | x | | | x | | x | | | x | SP-E-MSC-RW | | | |
| SP-E-MSC-SW | Sidewalk - Existing | | x | | x | x | | | x | | x | | | x | SP-E-MSC-SW | | | |
| SP-E-MSC-WW | Walkways/Trails/Paths - Existing | | x | | x | x | | | x | | x | | | x | SP-E-MSC-WW | | | |
| SP-E-MSC-T | Miscellaneous Text - Existing | | | | x | | | | x | | | | | x | SP-E-MSC-T | | | |
| Property Boundary | | | | | | | | | | | | | | | | | | |
| SP-E-BDY-CITY | City Boundary | | x | | x | x | | | x | | | | | | SP-E-BDY-CITY | | | |
| SP-E-BDY-LIN | General Propert Boundary Line | | x | | x | x | | | x | | | | | | SP-E-BDY-LIN | | | |
| SP-E-BDY-LLS | Lot Line - Subdivision Boundary | | x | | x | x | | | x | | | | | | SP-E-BDY-LLS | | | |
| SP-E-BDY-LLC | Lot Line - Concession Boundary | | x | | x | x | | | x | | | | | | SP-E-BDY-LLC | | | |

Appendix F
InRoads Styles for Surveys and Plans

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|---------------------|------------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|--------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| SP-E-BDY-T | Property Boundary Text | | x | | x | | | | x | | | | x | SP-E-BDY-T | | | | |
| Right of Way | | | | | | | | | | | | | | | | | | |
| SP-E-ROW-MTO | Existing MTO Property | | | x | | x | x | | x | | x | | x | SP-E-ROW-MTO | | | | |
| SP-E-ROW-T | Right of Way Text - Existing | | | | x | | | | x | | | | x | SP-E-ROW-T | | | | |
| Roadway | | | | | | | | | | | | | | | | | | |
| SP-E-RDS-AE | Asphalt Edge - Existing | | | x | | x | x | | | x | | x | | x | SP-E-RDS-AE | | | |
| SP-E-RDS-BRD | Bridge Deck - Existing | | | x | | x | x | | | x | | x | | x | SP-E-RDS-BRD | | | |
| SP-E-RDS-CR | Crown of Road - Existing | | | x | | x | x | | | x | | x | | x | SP-E-RDS-CR | | | |
| SP-E-RDS-CU | Curbs - Existing | | | x | | x | x | | | x | | x | | x | SP-E-RDS-CU | | | |
| SP-E-RDS-DL | Driving Lane Edge - Existing | | | x | | x | x | | | x | | x | | x | SP-E-RDS-DL | | | |
| SP-E-RDS-EG | Edge of Gutter - Existing | | | x | | x | x | | | x | | x | | x | SP-E-RDS-EG | | | |
| SP-E-RDS-EP | Edge of Pavement - Existing | | | x | | x | x | | | x | | x | | x | SP-E-RDS-EP | | | |
| SP-E-RDS-ES | Wedge of Shoulder - Existing | | | x | | x | x | | | x | | x | | x | SP-E-RDS-ES | | | |
| SP-E-RDS-NG | Gravel Entrance - Existing | | | x | | x | x | | | x | | x | | x | SP-E-RDS-NG | | | |
| SP-E-RDS-NP | Paved Entrance - Existing | | | x | | x | x | | | x | | x | | x | SP-E-RDS-NP | | | |
| SP-E-RDS-RS | Ripple Strip - Existing | | | x | | x | x | | | x | | | | | SP-E-RDS-RS | | | |

Appendix F
InRoads Styles for Surveys and Plans

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | Geometry Feature | Survey Feature |
|----------------|--|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|------------------|----------------|
| | | | Plan | | | Cross Section | | | Profile | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation |
| SP-E-RDS-SR | Sideroad Paved - Existing | | x | | x | x | | | x | | x | | x | SP-E-RDS-SR |
| SP-E-RDS-UR | Gravel Sideroad - Existing | | x | | x | x | | | x | | x | | x | SP-E-RDS-UR |
| SP-E-RDS-T | Roadway Text - Existing | | | | x | | | | x | | | | x | SP-E-RDS-T |
| Utility | | | | | | | | | | | | | | |
| SP-E-UTL-AN | Anchor - Existing | | | | x | x | | | x | x | | | | SP-E-UTL-AN |
| SP-E-UTL-BH | Bell - Hydro Pole - Existing | | | | x | x | | | x | x | | | | SP-E-UTL-BH |
| SP-E-UTL-BP | Bell Pole - Existing | | | | x | x | | | x | x | | | | SP-E-UTL-BP |
| SP-E-UTL-FH | Fire Hydrant - Existing | | | | x | x | | | x | x | | | | SP-E-UTL-FH |
| SP-E-UTL-GV | Gas Valve - Existing | | | | x | x | | | x | x | | | | SP-E-UTL-GV |
| SP-E-UTL-HCG-Z | Hydro Crossing Ground Elevation - Existing | | | | x | x | | | x | x | | x | x | SP-E-UTL-HCG-Z |
| SP-E-UTL-HCW-Z | Hydro Crossing Wire Elevation - Existing | | | | x | x | | | x | x | | x | x | SP-E-UTL-HCW-Z |
| SP-E-UTL-HP | Hydro Ploe - Existing | | | | x | x | | | x | x | | | | SP-E-UTL-HP |
| SP-E-UTL-HT | Hydro Tower - Existing | | | | x | x | | | x | x | | | | SP-E-UTL-HT |
| SP-E-UTL-LS | Light Standard - Existing | | | | x | x | | | x | x | | | | SP-E-UTL-LS |
| SP-E-UTL-PL | Pipeline - Existing | | x | | x | x | | | x | x | x | | x | SP-E-UTL-PL |
| SP-E-UTL-PO | Pole - Other - Existing | | | x | x | | | x | x | | | | | SP-E-UTL-PO |

Appendix F
InRoads Styles for Surveys and Plans

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|-------------------|--|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| SP-E-UTL-PW | Pole Well - Existing | | | x | x | | | x | x | | | | | | SP-E-UTL-PW | | | |
| SP-E-UTL-TB | Utility Terminal Box - Existing | | | x | x | | | x | x | | | x | x | | SP-E-UTL-TB | | | |
| SP-E-UTL-UB | Underground Bell - Existing | | x | | x | x | | | x | | x | | x | x | SP-E-UTL-UB | | | |
| SP-E-UTL-UG | Underground Gas - Existing | | x | | x | x | | | x | | x | | x | x | SP-E-UTL-UG | | | |
| SP-E-UTL-UH | Underground Hydro - Existing | | x | | x | x | | | x | | x | | x | x | SP-E-UTL-UH | | | |
| SP-E-UTL-UM | Underground Utility Marker - Existing | | | x | x | | | x | x | | | | | | SP-E-UTL-UM | | | |
| SP-E-UTL-UT | Underground Utility - Other - Existing | | x | x | x | x | | x | x | | x | x | | x | SP-E-UTL-UT | | | |
| SP-E-UTL-UTV | Underground Cable TV - Existing | | x | | x | x | | | x | | x | | x | x | SP-E-UTL-UTV | | | |
| SP-E-UTL-UW | Underground Watermain - Existing | | x | | x | x | | | x | | x | | x | x | SP-E-UTL-UW | | | |
| SP-E-UTL-VE | Vent - Existing | | | x | x | | | x | x | | | | | | SP-E-UTL-VE | | | |
| SP-E-UTL-WE | Well - Existing | | | x | x | | | x | x | | | x | | x | SP-E-UTL-WE | | | |
| SP-E-UTL-WV | Water Valve - Existing | | | x | x | | | x | x | | | x | | x | SP-E-UTL-WV | | | |
| SP-E-UTL-T | Utility Text - Existing | | | | x | | | | x | | | | | x | SP-E-UTL-T | | | |
| Vegetation | | | | | | | | | | | | | | | | | | |
| SP-E-VEG-HE | Hedge - Existing | | | x | x | x | x | | x | | | | | | SP-E-VEG-HE | | | |
| SP-E-VEG-P | Bush Symbology - Existing | | | x | | x | | | | | x | | x | x | SP-E-VEG-P | | | |

Appendix F
InRoads Styles for Surveys and Plans

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|----------------------|---|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | Symbol Name | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| SP-E-VEG-TR | Trees - Existing | | | x | x | | | x | x | | | | | | SP-E-VEG-TR | | | |
| SP-E-VEG-WD | Woods Detail - Existing | | x | | x | | | | | | x | | x | | SP-E-VEG-WD | | | |
| SP-E-VEG-WO | Woods Overhang (Ground) - Existing | | x | | x | | | | | | x | | x | | SP-E-VEG-WO | | | |
| SP-E-VEG-WT | Woods Trunkline - Existing | | x | | x | | | | | | x | | x | | SP-E-VEG-WT | | | |
| SP-E-VEG-T | Vegetation Text - Existing | | | | x | | | | x | | | | x | | SP-E-VEG-T | | | |
| Profile | | | | | | | | | | | | | | | | | | |
| SP-P-ALI-CL | Profile Information - Existing | | | | | | | | | | x | x | x | x | SP-P-ALI-CL | | | |
| SP-P-ALI-DRN | Profile Drainage Information - Existing | | | | | | | | | | x | x | x | x | SP-P-ALI-DRN | | | |
| SP-P-ALI-DRN-T | Profile Text - Existing | | | | | | | | | | | | x | | SP-P-ALI-DRN-T | | | |
| SP-P-ALI-GRID | Profile Grid - Existing | | | | | | | | | | x | | x | | SP-P-ALI-GRID | | | |
| SP-P-ALI-GRID-T | Profile Chainage - Existing | | | | | | | | | | | | x | | SP-P-ALI-GRID-T | | | |
| LEGAL SURVEYS | | | | | | | | | | | | | | | | | | |
| SP-L-MON | Horizontal Control Points - Legal | | | | x | x | | | | | | | | | SP-L-MON | | | |
| SP-L-MON-BM | Bench Marks - Legal | | | x | x | | | | | | | | | | SP-L-MON-BM | | | |
| SP-L-25MM | Legal Survey 0.25 mm Line | | x | | x | | | | | | | | | | SP-L-25MM | | | |
| SP-L-25MM-SDASH | Legal Survey - 0.25 mm Short Dash Line | | x | | x | | | | | | | | | | SP-L-25MM-SDASH | | | |

Appendix F
InRoads Styles for Surveys and Plans

| Style Name | Description | Item Code | Surface Feature | | | | | | | | | | | | Geometry Feature | Survey Feature | | |
|-------------------|---------------------------------------|-----------|-----------------|-------|------------|---------------|----------------|-----------------|------------|-----------|----------------|-----------------|----------------|------------|-------------------|----------------|--|--|
| | | | Plan | | | Cross Section | | | Profile | | | Symbology Name | | | | | | |
| | | | Line | Point | Annotation | Point | Projected Line | Projected Point | Annotation | Component | Projected Line | Projected Point | Crossing Point | Annotation | | | | |
| SP-L-25MM-LDASH | Legal Survey - 0.25 mm Long Dash Line | | x | | x | | | | | | | | | | SP-L-25MM-LDASH | | | |
| SP-L-40MM | Legal Survey - 0.40 mm Line | | x | | x | | | | | | | | | | SP-L-40MM | | | |
| SP-L-40MM-LDASH | Legal Survey - 0.40 Long Dash Line | | x | | x | | | | | | | | | | SP-L-40MM-LDASH | | | |
| SP-L-50MM | Legal Survey - 0.50 mm Line | | x | | x | | | | | | | | | | SP-L-50MM | | | |
| SP-L-FABRIC LINES | Fabric Lines - Legal | | x | | x | | | | | | | | | | SP-L-FABRIC LINES | | | |
| SP-L-FABRIC TEXT | Fabric Text - Legal | | | | x | | | | | | | | | | SP-L-FABRIC TEXT | | | |
| SP-L-PARCEL | Parcel - Legal | | x | | x | | | | | | | | | | SP-L-PARCEL | | | |
| SP-L-PART LINES | Part Lines - Legal | | x | | x | | | | | | | | | | SP-L-PART LINES | | | |
| SP-L-PART TEXT | Part Text - Legal | | | | x | | | | | | | | | | SP-L-PART TEXT | | | |
| SP-L-TEXT | Legal Text | | | | x | | | | | | | | | | SP-L-TEXT | | | |
| SP-L-SYMBOLS | Legal Symbols | | | x | x | | | | | | | | | | SP-L-SYMBOLS | | | |