MONTANA
Department of Transportation

Project Development & Delivery - Digital Design and Modeling Services

Support Guide

Application/Tool(s):	MicroStation V8i SS10 / Power GEOPAK V8i SS10
Version(s):	08.11.09.916 / 08.11.09.918
Environment:	OpenRoads (Enhanced) Workspace
Released/Revised:	5/10/2022



SUPPORT
Open a Case

STRIPING LINE STYLES

ISSUE:

A variety of pavement marking (PM_) line styles were developed as an attempt to facilitate quantity take offs. Use of many of these line styles presents issues with printing clarity.

Potential adjustments to the configuration and workflow have been assessed. With application of different line style definition methods come advantages and disadvantages. No changes to the configuration will be pursued. This support document seeks to provide information for users to make an educated decision as to which of the different methods will best meet the needs for a given project.

SOLUTION:

The following provides background information breaking down the differences in the nature of the existing pavement marking line styles along with pros and cons to using each.

Undefined Width (PM_SkipStripe_Rural, PM_SkipStripe_Urban, PM_Turkey_Track)

Undefined width line styles have no true physical width for the line components with the spacing between multiple lines in a line style, such as a double solid, being set by file units. Dash/gap lengths may be physically defined or be "schematic" in nature. These are the simplest to develop.



Pros:

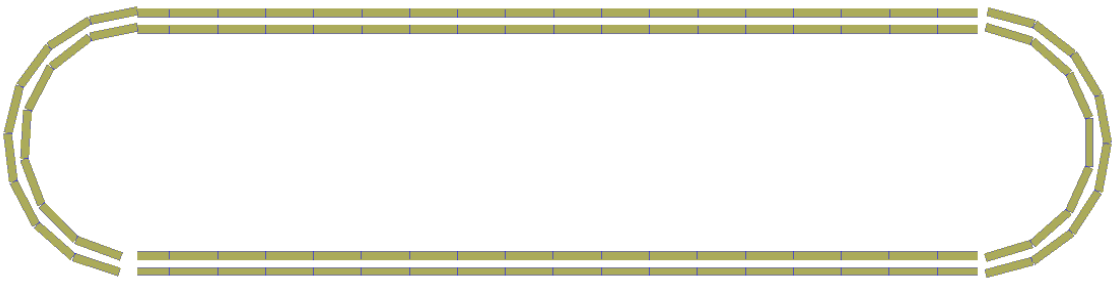
- Default line style method.
- Lines will print at specified weight regardless of print scale.
- Cleanest printed output.

Cons:

- Spacing between multiple lines is fixed which may cause lines to merge at some printed scales.
- Some limitations in leveraging these line styles for visualization/modeling.

Shape Driven (PM_Stripe_…)

Shape driven line styles consist of a series of predefined repeating shapes. They are highly versatile being capable of including nearly any geometry. The shapes are not modified when using the line style. Where a shape driven line style is applied along a curve, the repeating shapes rotate about the origin of the shape.



Pros:

- True physical width is represented.
- Well received in modeling/visualization workflows.

Cons:

- Truncation of shapes may not occur at exact termination of a line.
- Lines appear segmented in arcs/curves on screen and printed output.
- Lines are printed as raster content and don't always print clearly.
- Lines will blur and lose separation when printed at smaller scales or lower printing resolutions.

Defined Width (PM_...)

Defined Width line styles consist of a specified length, width and spacing. They are typically the most accurate representation of traffic lines.



Pros:

- Lines truncate at termination of a line.
- True physical width is represented allowing for dimensioning.
- Lines appear smooth on screen and printed output.

Cons:

- Lines are printed as raster content and don't print clearly.
- Lines will blur and lose separation when printed at smaller scales or lower printing resolutions.

Line styles should be used based on specific needs or anticipated plot scales. Geometric plans typically require a higher level of accuracy than do signing plans. Level overrides may be useful to address printing needs.

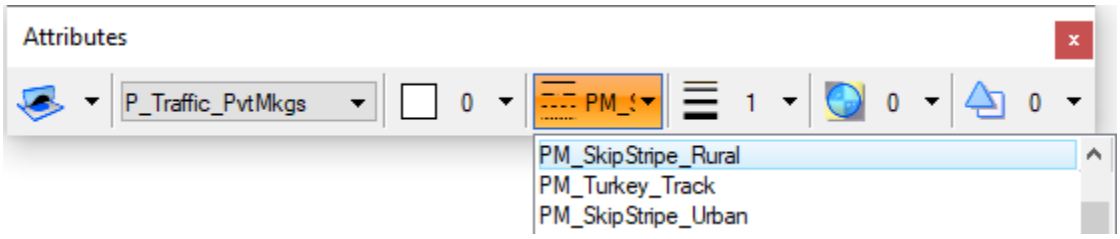
Shape Driven and Defined Width line style print quality can be improved by using higher DPI (precision) print settings for raster content.

PROCEDURE:

The procedure for using the striping custom line style types varies for each. The custom line styles may be accessed and used as follows:

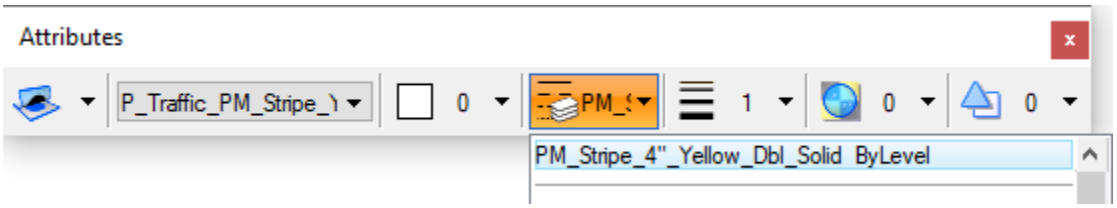
Undefined Width

Undefined Width striping custom line styles can be chosen from the **Attributes** toolbar. Single line styles would need to be combined to develop a dual line style, such as a double solid or dashed/solid striping line, using **style 0** where appropriate.



Shape Driven

Shape Driven striping custom line styles are assigned to the Geometric **P_Traffic_PM_...** levels as the **ByLevel** line style. Choosing the **ByLevel** line style option with the appropriate Geometric level from the **Attributes** toolbar will apply the shape driven custom line styles.



Defined Width

Defined Width striping custom line styles are assigned to the Signing **PM_Stripe_...** levels as the **ByLevel** line style. These can be leveraged by choosing the **ByLevel** line style option with the appropriate Signing level from the **Attributes** toolbar or with application of a **Feature Definition**.

