KDOT CORRIDOR POINT NAMING CONVENTION GUIDANCE

KDOT ORD workspace standards are founded on the KDOT corridor point naming convention. Consistent naming of the corridor points in OpenRoads Designer (ORD) components and templates promotes efficiencies within ORD design processes.

Furthermore, corridor point names are the basis of the names of linear features produced by ORD corridors. Linear features are a valuable design deliverable for contractors' Automated Machine Guidance (AMG) surface model development workflows. In addition to the design efficiency benefits, consistent naming of corridor points also enables greater efficiencies in contractor's utilization of KDOT design models.

This article defines the format of KDOT's corridor point naming convention and provides examples of how the naming convention is applied to roadway features. More information on the KDOT corridor point naming convention is available in:

- the <KDOT Corridor Point Naming Convention> recorded presentation summary
- the point names used in the templates and components found in the ITL file packaged in KDOT's ORD workspace

Contents

CORRIDOR POINT NAME CONVENTION

000-111:222-333-444-555-666

Kansas DOT utilizes an ITL point naming convention containing 6 primary information fields referred to as identifiers. The six identifiers are delineated by hyphens " - ".

The 6 identifiers in the naming convention are:

000	= Surface Identifier	(value is required)
111:222	= Geometry Feature Identifier	
333	= Material Identifier	(value is optional)
444	= Travel Lane Identifier	(value is optional)
555	= Additional Identifier	(value is optional)
666	= Offset Identifier	(value is optional)

The Geometry Feature Identifier field is sub-divided into 2 categories delineated by a colon " : "

111	= Major Geometry Feature Identifier	(value is required)
222	= Minor Geometry Feature Identifier	(value is optional)

If a point name does not have a Minor Geometry Feature Identifier value, the colon delineator is dropped from the Geometry Feature Identifier.

The purpose of each identifier is described in the Identifiers section of this article, standardized identifier values are listed in the Identifiers section as well. Standard KDOT identifier values are established for each type of information field, these identifiers are the standard values for common types of features found in roadway designs. The KDOT standard identifiers listed in this document shall be used when appropriate to the situation, custom identifier usage is allowable for situations for which there is no appropriate standard identifier. Correct use of standard identifiers will help develop consistency in KDOT's digital design deliveries, promoting greater efficiencies in contractor utilization of models.

There is no established character limit for the ITL point name information fields. When developing custom identifiers for unique situations, usage of excess characters shall be minimized.

Some identifiers in the naming convention will always have a value, for other identifiers a value is optional. When a point name does not have a value for one or more identifier, an underscore is used as a placeholder to maintain the structure of the point name format. All corridor point names will have 5 hyphens that delineate the 6 identifiers.

STANDARD IDENTIFIER VALUES

This section describes the purpose of each identifier in KDOT's corridor point naming convention, and lists established standardized identifier values.

000 = Surface Identifier

000-111:222-333-444-555-666

The Surface Identifier indicates which of KDOT's primary surface model types are identified with the corridor point. Surface model types are defined in Figure 1.

The Surface Identifier must have a value. All corridor points in KDOT corridors shall have a value assigned in the Surface Identifier information field.

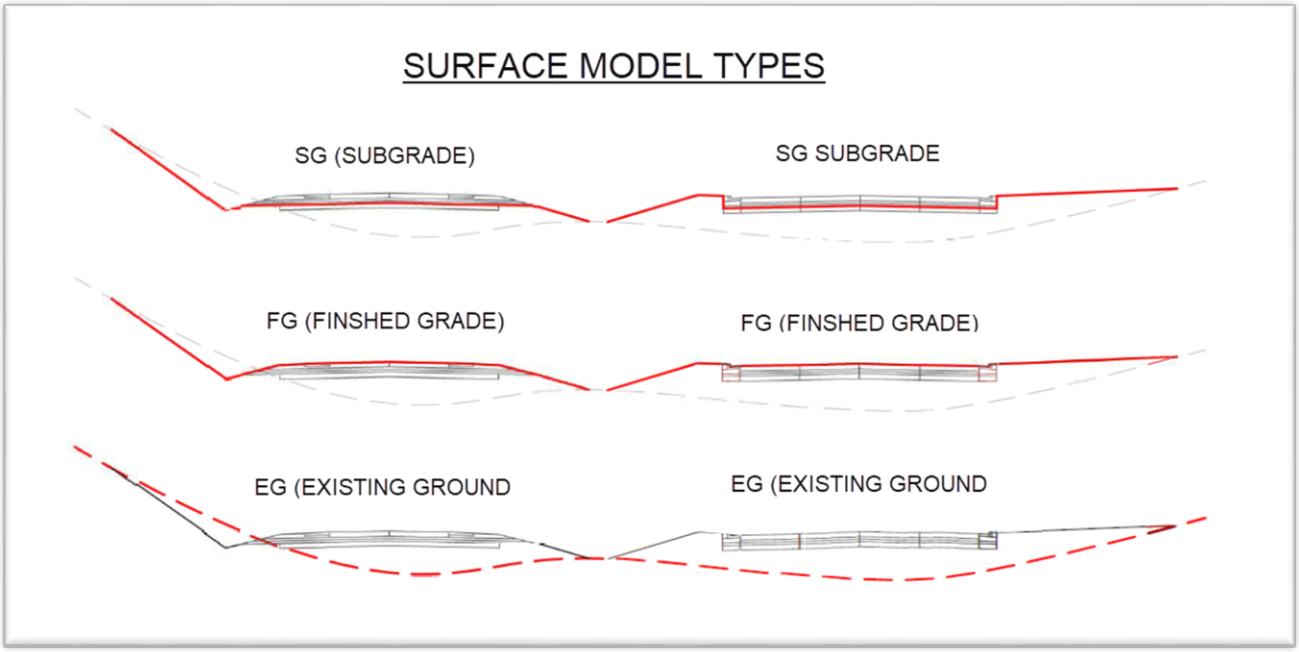
Use of non-standard values for the Surface Identifier should be avoided, custom values are to be used in rare situations only, and project teams should consult with KDOT CADD Support about the purpose of a custom Surface Identifier value.

There are 6 standard Surface Identifier values which are described in Table 1:

Table 1

STANDARD SURFACE IDENTIFIER VALUE	DESCRIPTION
FG	**= Finished Grade.** The FG surface model follows The top of pavement and other surface treatments within The width of The roadway subgrade, and follows The top of topsoil outside roadway subgrade.
SG	**= Subgrade**. The SG surface model is The Finished earthwork Grade. SG follows The Finished earthwork grade within The width of The roadway subgrade, and follows The top of topsoil outside roadway subgrade.
B	**= Both Finished Grade and Subgrade**. B is a commonly used surface identifier when a point outside the roadway subgrade and represents a top of topsoil feature.
EG	**= Existing Ground.** The EG surface model is also sometimes referred to as the Original Ground model, it represents the existing condition of terrain prior to the start of proposed work.
NS	**= No Surface.** The corridor point is not associated with FG, SG, or EG.
DNC	**= Do Not Construct.** The corridor point does not represent proposed work, it is a temporary construct within the corridor.

Figure 1: Surface Model Types Used In Surface Identifiers



111 = Major Geometry Feature Identifier

000-**111**:222-333-444-555-666

The Major Geometry Feature Identifier specifies the primary roadway feature with which a corridor point is identified.

The Major Geometry Feature Identifier must have a value. With the excetion of DNC (Do Not Construct) points, all corridor points in KDOT corridors shall have a value assigned in the Major Geometry Feature Identifier information field.

Several standard values for Major Geometry Feature Identifiers have been established, and are described in Table 2. The list of standard values is growing. Project teams should send KDOT CADD Support suggestions for additional standard Major Geometry Feature Identifiers values.

Table 2:

STANDARD MAJOR FEATURE IDENTIFIER VALUE	DESCRIPTION
BAR	**= Barrier.** BAR indicates a corridor point is part of the shape representation of barrier in templates and components.
CL	**= Centerline.** Indicating the point as at the offset location of the roadway centerline, but is not the PGL.
CURB	**= Curb.** CURB indicates a corridor point is part of the shape representation of curb in templates and components.
DECK	**= Bridge Deck.** Indicating the point is part of the shape representation of a bridge deck in roadway templates and components.
EL	**= Lane Edge.** Minor lane lines that are not on the edge of traveled way.
EOL	**= Edge of Lane.** Indicating the point as at the offset location of the edge of traveled way. Undivided roadways typically have two EOL locations, a left and a right EOL. Roadways divided by medians typically have four EOL locations, an inside and an outside EOL for the traveled way on each side of the median.
EOP	**= Edge of Pavement.** Indicating the point is at the offset location of the outer edge of the primary roadway pavement.
EOS	**= Edge of Shoulder.** Indicating the point is at the offset location of the full finished shoulder width.
EPS	**= Edge of Paved Shoulder.** Indicating the point is at the offset location of edge of paved shoulder.
RW	**= Retaining Wall.** RW indicates a corridor point is part of the shape representation of a retaining wall in templates and components

PGL	**= Profile Grade Line.** PGL is reserved for template points only. It indicates the location of the roadway design's baseline horizontal alignment and vertical profile.

222 = Minor Geometry Feature Identifier

000-111:**222**-333-444-555-666

The Minor Geometry Feature Identifier provides additional detail about the corridor point location within the Major Geometry Feature. See corridor naming point examples for further information about how Minor Geometry Feature Identifiers are used.

Minor Geometry Feature Identifier standard values can be combined when beneficial, but there should be no further use delineators. The use of the colon delineator is reserved for differentiation between Major Geometry Feature Identifier and Minor Geometry Feature Identifier values. Text from multiple Minor Geometry Feature Identifier standard values is joined in an additive manner.

Several standard values for Minor Geometry Feature Identifiers have been established and are described in Table 3. The list of standard values is growing. Project teams should send KDOT CADD Support suggestions for additional standard Minor Geometry Feature Identifiers values.

Table 3:

STANDARD MINOR FEATURE IDENTIFIER VALUE	DESCRIPTION
TOP	**= Top.** Indicates the corridor point is located at the top of the major feature
TOPB	**= Top Back.** Indicates the corridor point is located at the top of the major feature, on its back side
TOPF	**= Top Face.** Indicates the corridor point is located at the top of the major feature, on its front or face side.
BOT	**= Bottom.** Indicates the corridor point is located at the bottom of the major feature
BOTB	**= Bottom Back.** Indicates the corridor point is located at the bottom of the major feature, on its back side.
BOTF	**= Bottom Face.** Indicates the corridor point is located at the bottom of the major feature, on its front or face side.
LT	**= Left.** Indicating the point is on the left side of a double-sided feature. Not to be confused with the Left or Right offset designations used in the 666 Offset Identifier.
RT	**= Right.** Indicating the point is on the right side of a double-sided feature. Not to be confused with the Left or Right offset designations used in the 666 Offset Identifier.
CT	**= Center.** Indicating the point is at the center of a feature.

IN	**= Inside.** Indicating the point is at an "inside" location of a feature meaning it is closer to the PGL than related "outside" features. For example, a divided roadway with a single PGL at the center of median may have 4 curbs in its typical section, two curbs on the right and two curbs on the left. These curbs can be differentiated designating an IN (inside curb) and an OUT (outside curb) for each offset side of LT and RT. See corridor naming point examples for further information.
OUT	**= Outside.** Indicating the point is at an "outside" location of a feature meaning it is further from the PGL than related "inside" features. For example, a divided roadway with a single PGL at the center of median may have 4 curbs in its typical section, two curbs on the right and two curbs on the left. These curbs can be differentiated designating an IN (inside curb) and an OUT (outside curb) for each offset side of LT and RT. See corridor naming point examples for further information.
SGEXT	**= Subgrade Extension.** A designation used in curb, barrrier, and similar types of features the indicates the corridor point represents a portion of extended subgrade.
3to1	**= 3:1 slope**
4to1	**= 4:1 slope**

333 = Material Identifier

000-111:222-**333**-444-555-666

The Material Identifier specifies the material used to construct the proposed feature of which the corridor point is a part.

The Material Identifier is an optional information field.

Some standard values for Material Identifiers have been established and are described in Table 4. The list of standard values is growing. Project teams should send KDOT CADD Support suggestions for additional standard Material Identifiers values.

Table 4:

STANDARD MATERIAL IDENTIFIER VALUE	DESCRIPTION
AB	**= Aggregate Base**
CONC	**= Concrete**
HMA	**= Hot Mix Asphalt**. Multiple courses of HMA pavement can be designated by HMA (surface layer), HMA1 (first binder layer below surface), HMA2 (second binder layer below surface, etc.
PCCP	**= Portland Cement Concrete Pavement**

444 = Travel Lane Identifier

000-111:222-333-**444**-555-666

The Travel Lane Identifier specifies which travel lane the corridor point is a part of within the roadway template.

The Travel Lane Identifier is an optional information field.

Some standard values for Travel Lane Identifiers have been established and are described in Table 5. Project teams should send KDOT CADD Support suggestions for additional standard Travel Lane Identifiers values.

Table 5:

STANDARD TRAVEL LANE IDENTIFIER VALUE	DESCRIPTION
NB	**= Northbound**
SB	**= Southbound**
EB	**= Eastbound**
WB	**= Westbound**
NB1, NB2, NB3	= **Northbound Lane X**. Used in multi-lane templates.
SB1, SB2, SB3	= **Southbound Lane X**. Used in multi-lane templates.
EB1, EB2, EB3	= **Eastbound Lane X**. Used in multi-lane templates.
WB1, WB2, WB3	**= Westbound Lane X**. Used in multi-lane templates.

Note there is another acceptable method of using the naming convention for travel lane identification can be used with 4 lane divided highways is:

FG-EL-PCCP-NB-_-IN = the northbound roadway inside lane (median side lane)

555 = Additional Identifier

000-111:222-333-444-**555**-666

The Additional Identifier is used for including additional information about a point or feature at the project team's discretion.

The Additional Identifier is an optional information field.

There are no standardized values for the Additional Identifier.

666 = Offset Identifier

000-111:222-333-444-555-**666**

The Offset Identifier communicates a point or features location in relation to the PGL.

The Offset Identifier is an optional information field.

Some standard values for Offset Identifiers have been established and are described in Table 6. Project teams should send KDOT CADD Support suggestions for additional standard Offset Identifiers values.

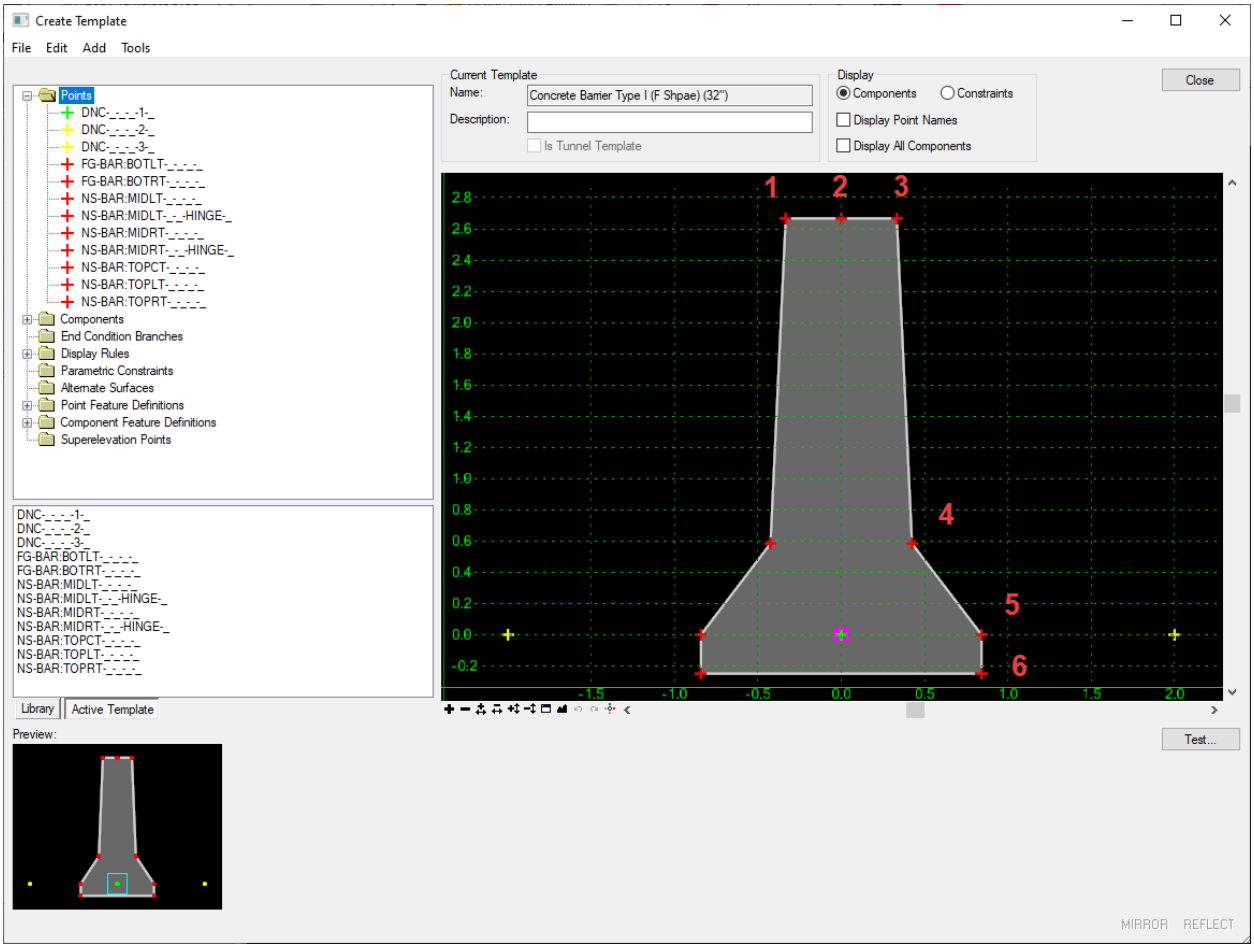
Table 6:

STANDARD OFFSET IDENTIFIER VALUE	DESCRIPTION
LT	**= Left.** Indicates the corridor point is to the left side of the PGL
RT	**= Right.** Indicates the corridor point is to the right side of the PGL
IN	**= Inside.** Indicates the corridor point is offset to the inside of the roadway centerline on a divided road, the median side
OUT	**= Outside.** Indicates the corridor point is offset to the outside of the roadway centerline on a divided road, the non-median side

Naming Convention Examples

Examples of correct application of the KDOT corridor point naming convention are shown below. Numerous other examples can be reviewed in KDOT's roadway design templates located in the ITL file of the KDOT ORD workspace.

Two-sided Barrier Example:



Point names:

Point 1 = NS-BAR:TOPLT-_-_-_-_

Point 2 = NS-BAR:TOPCT-_-_-_-_

Point 3 = NS-BAR:TOPRT-_-_-_-_

Point 4 = NS-BAR:MIDRT-_-_-_-_

Point 5 = -BAR:MIDRT-_-_-HINGE-_ (in this case "HINGE" is a term in the Additional Identifier that indicates the first breakpoint above finished pavement grade that is always a consistent height above finished pavement)

Point 6 = FG-BAR:BOTRT-_-_-_-_ (this is the point where the top of pavement meets the barrier, and therefor has a FG value for Surface Identifier)

If the barrier were used in a 4 lane divided roadway template and was located on the westbound roadway's outside shoulder, points 1 – 6 would be named like this:

Point 1 = NS-BAR:TOPLT-_-WB-_-OUT

Point 2 = NS-BAR:TOPCT-_-WB-_-OUT

Point 3 = NS-BAR:TOPRT-_-WB-_-OUT

Point 4 = NS-BAR:MIDRT-_-WB-_-OUT

Point 5 = -BAR:MIDRT-_-WB-HINGE-OUT

Point 6 = FG-BAR:BOTRT-_-WB-_-OUT

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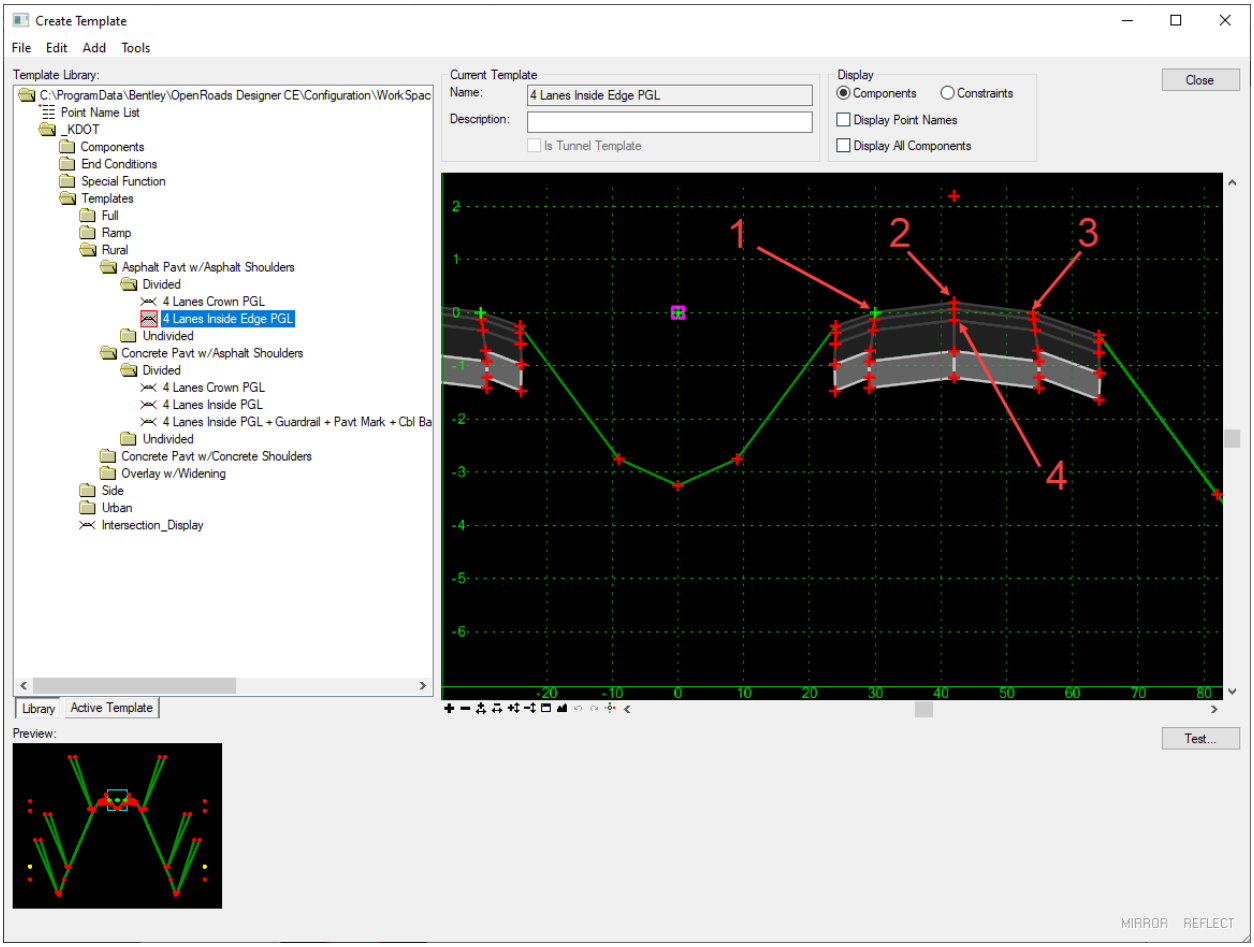
4-Lane Divided Asphalt Roadway Example:



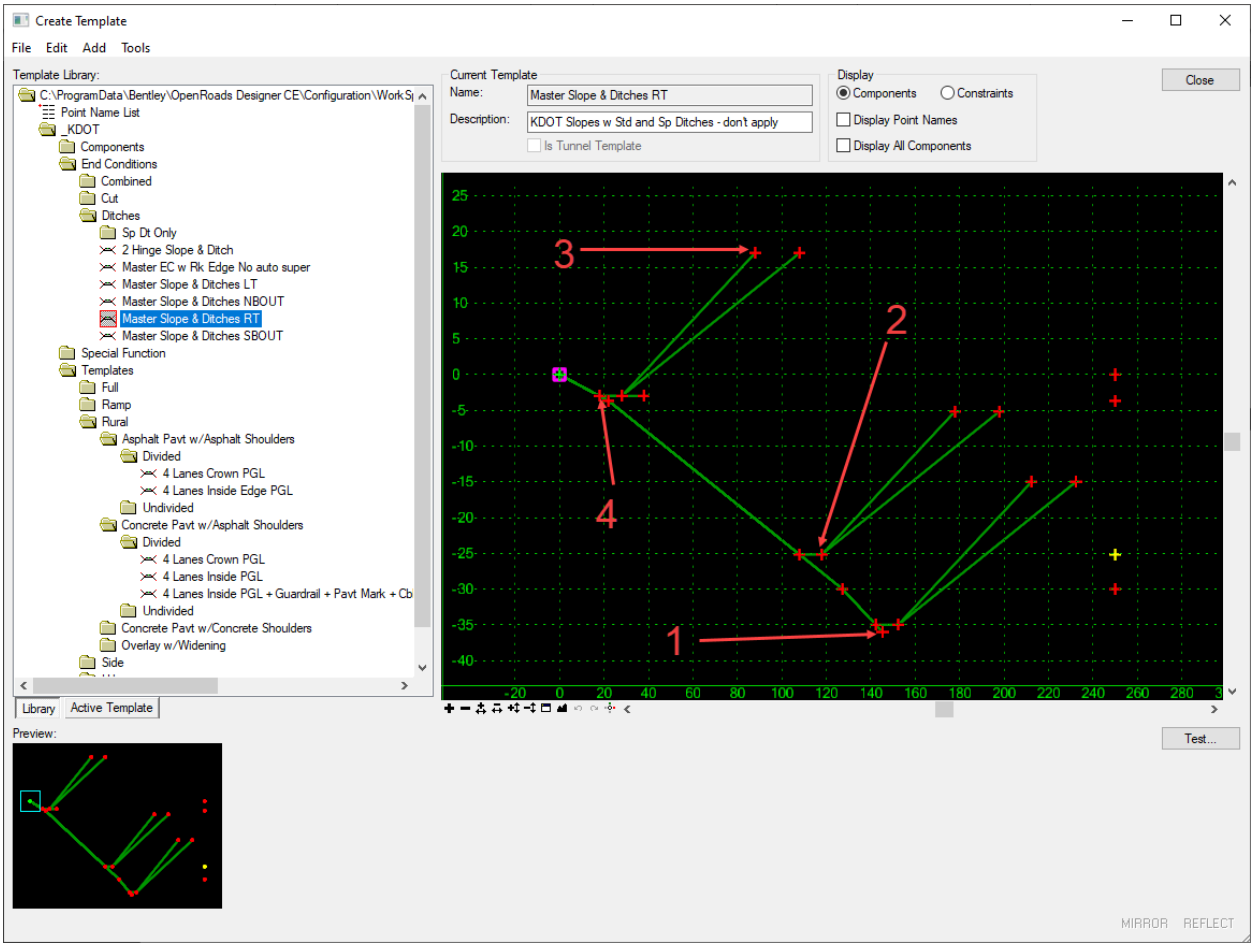
Point 1 = FG-PGL-HMA-NB-_-_

Point 2 = FG-CL-HMA-NB-_-_

Point 3 = FG-EOP-HMA-NB-_-OUT

Point 4 = NS-CL-HMA2-NB-_-_

Right Side End Condition Example:



Point 1 = B-FILL:3to1-_-_-_-RT

Point 2 = B-DFL:OUT-_-_-1SP-RT

(outside ditch flowline point, the “1SP” Additional Identifier value indicates this is the first priority end condition solution, and is a special ditch)

Point 3 = B-CUT:3to1-_-_-2SD-RT

(3:1 end condition solution, the “2SD” Additional Identifier value indicates this is the second priority end condition solution, and is a standard ditch)

Point 4 = B-DFL:IN-_-_-2SD-RT

(inside ditch flowline point, the “2SD” Additional Identifier value indicates this is the second priority end condition solution, and is a standard ditch)