

What is SideSlopeAnnotations tool?

- This tool Adds slope indicator lines between two selected lines with 3 methods - Slope by elevations, Slope in Fill(2D), Slope in Cut(2D). User needs to select two features lines, has to define parameters for major and minor slope lines. This tool places major and minor slope lines using active line style defined in ORD.
- It is a C#.net based MDL Plug-In for OpenRoads Designer v10.x etc.
- It's a plug & play utility & needs no extra libraries or supporting file.

Prerequisites:

- OpenRoads Designer CE should be installed.
- OpenRoads Connect Edition SDK should be installed (Same version as Designer).

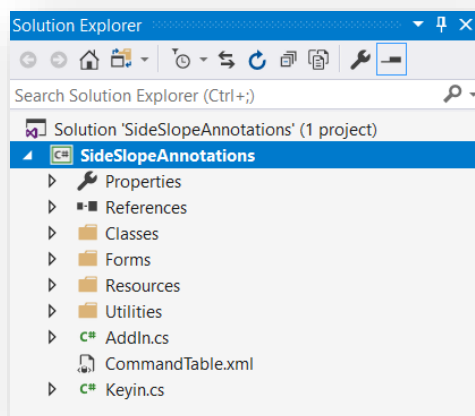
How to build this tool?

- Download the zip "SideSlopeAnnotations.zip" anywhere on the disk and extract.
- Run the "OpenRoads Designer Connect edition SDK" (Here used 10.11) in administrator mode to start the developer shell. This will open a command prompt window which serves as developer shell.
- Run command "devenv" to open the visual Studio editor.

```
Administrator: OpenRoads Designer CONNECT Edition SDK (v, Elevated User, 64-bit) [REQUIRES: Visual Studio 2017, .NET Framework 4.6.2]
[TIP] "Type 'SDKTIPS' to see this list of tips again"

C:\PROGRA~1\Bentley\OPENRO~1\examples>devenv
```

- Open the project solution file "SideSlopeAnnotations.sln" from extracted zip in Visual studio and build using Visual Studio build option. The below image shows the project structure from solution explorer.

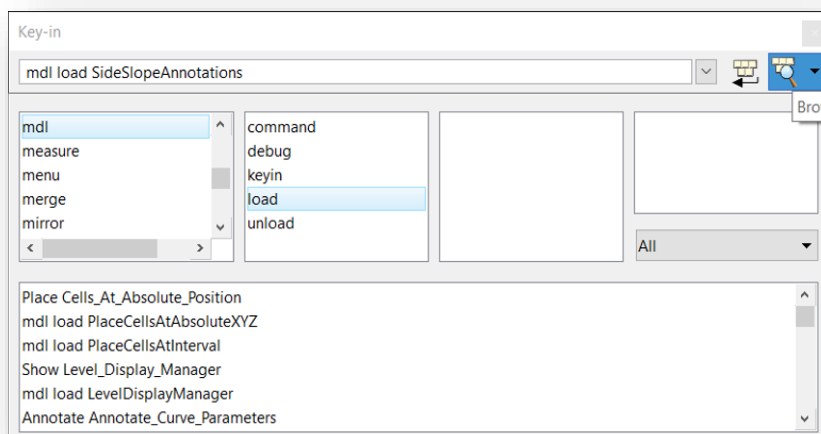


How to Use this tool if SDK is not installed (Optional)?

- Run Visual Studio in Administrator mode to open the solution.
- Replace variable “\$(ORD)” with “C:\Program Files\Bentley\OpenRoads Designer CE 10.11\OpenRoadsDesigner\” within “SideSlopeAnnotations.csproj” file.
- User needs to follow these above two steps if SDK is not installed.

How to run this tool (For default path)?

- After successful build, application should create “SideSlopeAnnotations.dll” in your MdlApps folder (Unless user changes the output directory path) under “C:\Program Files\Bentley\OpenRoads Designer CE 10.11\OpenRoadsDesigner\Mdlapps” path.
- Following the above procedure, user can now use this dll in OpenRoads designer key in .
- Open the OpenRoads Designer application, Under key in tab, run below keyin commands ,
`mdl load SideSlopeAnnotations`

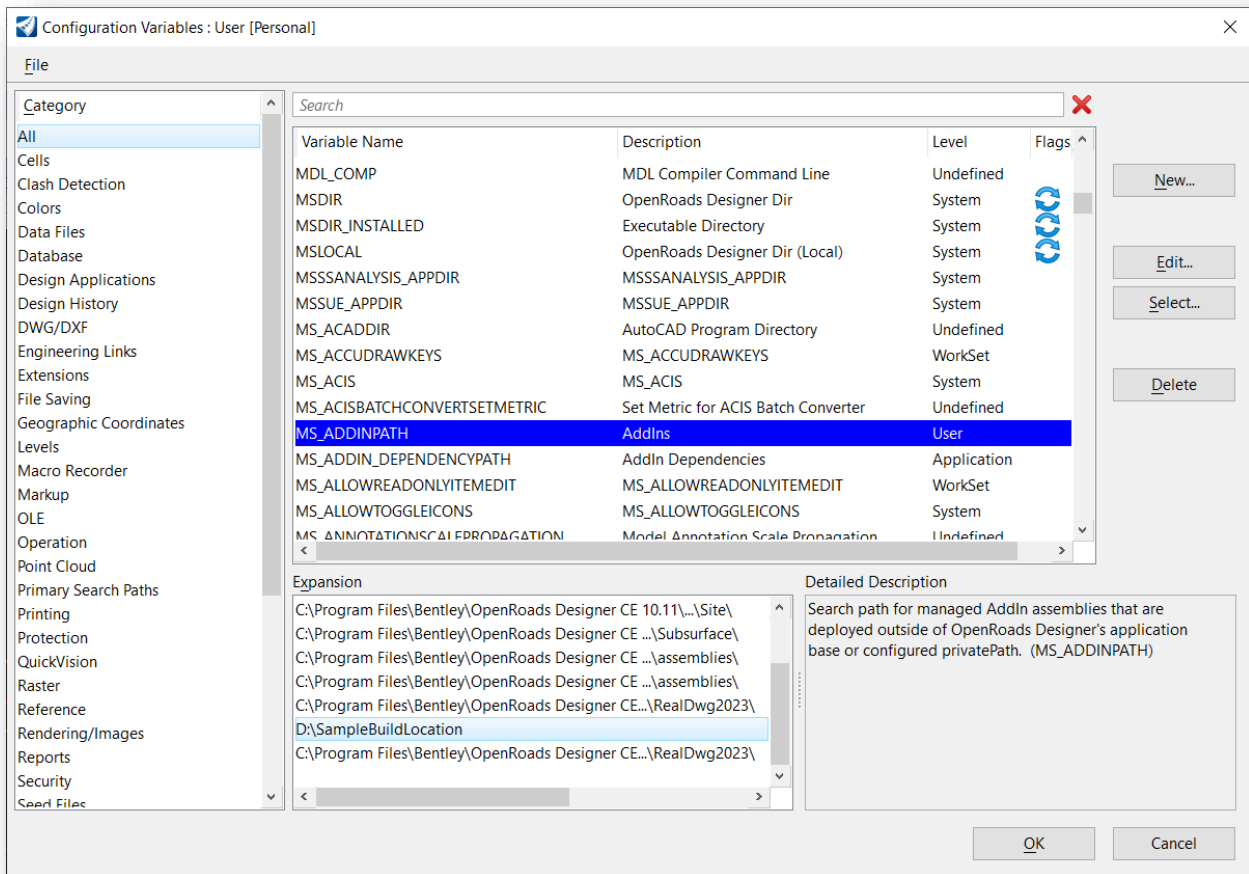


- After loading dll successfully, run this key in to launch the annotate side slope command,
`Annotate Annotate_Side_Slope`
- This will now launch dialog for side slope annotation.

How to run this tool (For custom output directory path)

- If output directory location is other than “C:\Program Files\Bentley\OpenRoads Designer CE 10.11\OpenRoadsDesigner\Mdlapps”, In this case user need to add the output directory path to the Configuration variables.
- To add it, Open the OpenRoads Designer exe, Go to File-> Settings -> Configurations ->Configurations Variable -> MS_ADDINPATH , Edit this variable.

- In the below dialog image, User has to set the path into MS_ADDINPATH variable for the custom dll path “D:\SampleBuildLocation”



- The rest of the procedure to run the commands is same as mentioned above. Use the below commands to run the application.

```
mdl load SideSlopeAnnotations
```

```
Annotate Annotate_Side_Slope
```

Variables Used:

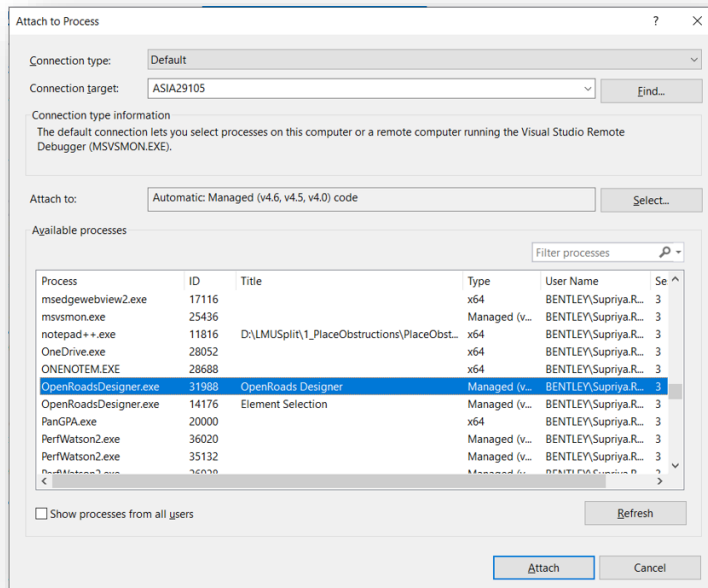
There are some path variables used in the SDK environment.

ORD= C:\Program Files\Bentley\OpenRoads Designer CE 10.11\OpenRoadsDesigner\

ORDE = C:\Program Files\Bentley\OpenRoadsDesignerCONNECTSDK\

How to Debug this tool?

- Open the OpenRoads Designer exe.
- Go to Visual studio where application SideSlopeAnnotations is opened. Go to Debug -> Attach to process -> Attach OpenRoadsDesigner.exe. The ORD is now linked to this tool, User can now debug the application.



Sample Annotate Side Slope video link: [Side Slope Annotations](#)

Annotate Side Slope :

