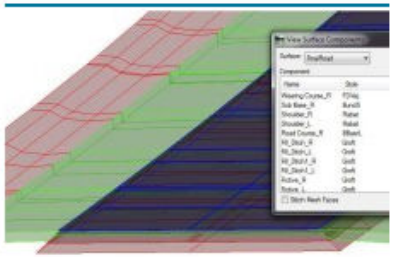
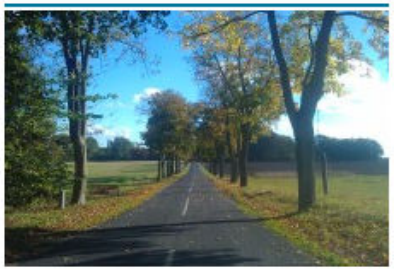
Nordic Civil User Conference 2018

E2 What is in the Danish workspace

Marianne Rask
MR@vex-consult.dk, Ph: +45 20 36 20 14

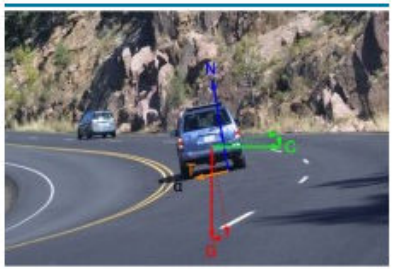


CAD STANDARD



TRAFIKSIKKERHED & TILGÆNGELIGHED

PROJEKTERING



VEJLEDNING & UNDERVISNING

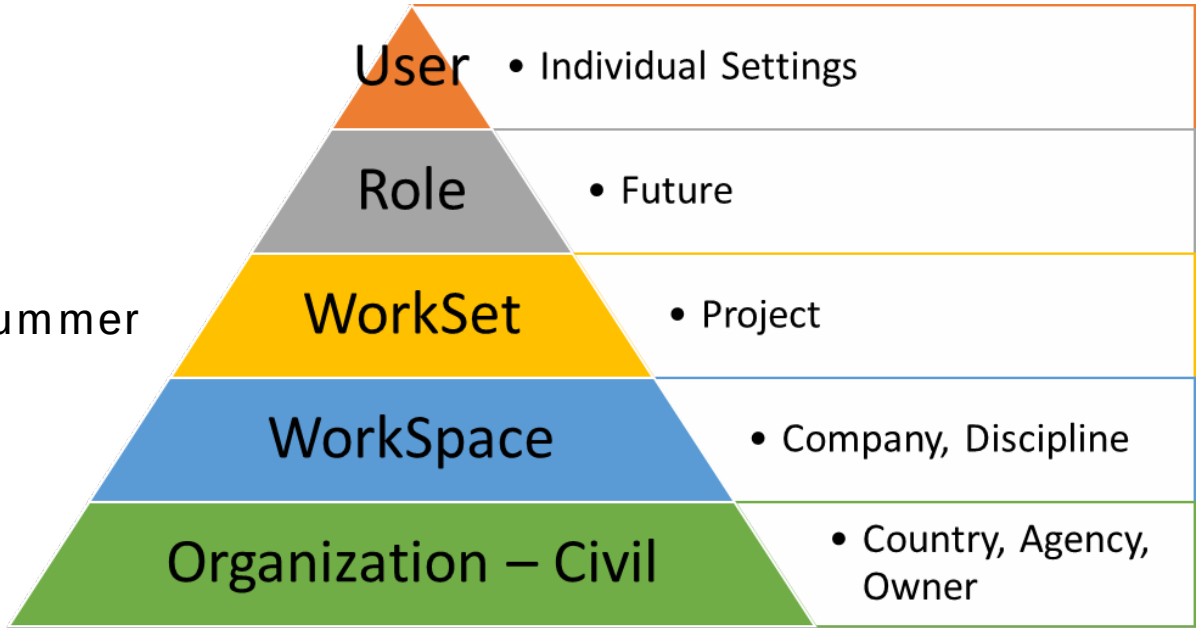
www.vex-consult.dk

What is in the Danish workspace?

- The Danish workspace for OpenRoads Designer contains configuration files, resource files, Civil standards and a large number of dgnlibs containing various settings.
- Everything is adjusted to use DDA-levels and the Danish road and rail design standards.
  Join this session to learn what each file type are used for and where you should add your own.

WorkSpace – Structure

- Workspace levels:
  - Bruger
  - Rolle
  - Projekt/Sagsnummer
  - Firma/Afdeling
  - Danmark

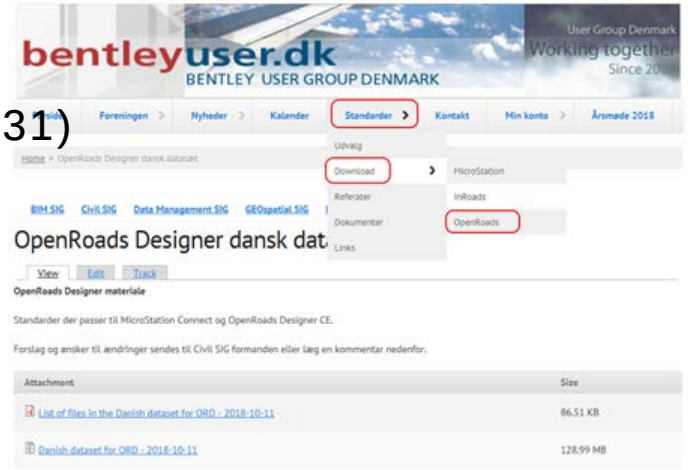


- Danish Country Kit for ORD:
  - ***Organization – Civil*** = Denmark Standards
  - ***WorkSpace*** = BentleyUserDK or <Company name>
  - ***WorkSet*** = your company standard for project naming/numbering

Which versions can be used?

- Bentley Software Downloads:
  - InRoads SS2 (unavailable for download)
  - PowerCivil SS4 V.08.11.07.614 (2013-02-01)
  - PowerRailTrack SS4 V.08.11.09.903 (2018-04-30)
  - OpenRoads Designer CE Update 5, V.10.05.00.30 (2018-10-02)
  - OpenRail Designer CE Update 5, V.10.05.00.30 (2018-10-03)

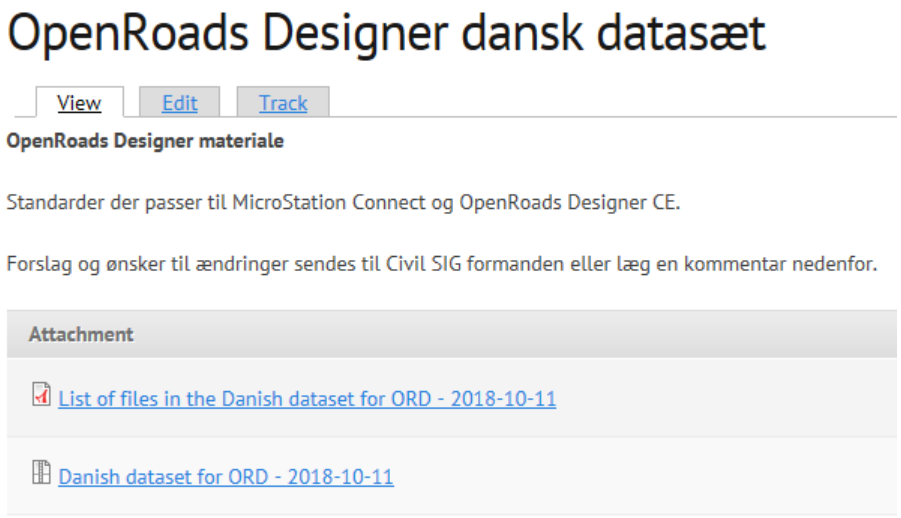
- Bentleyuser.dk > Standarder > Download:
  - Bentleyuser preference-package (2017-05-31) (turnout files on the way)
  - Danish dataset for ORD (2018-10-11)



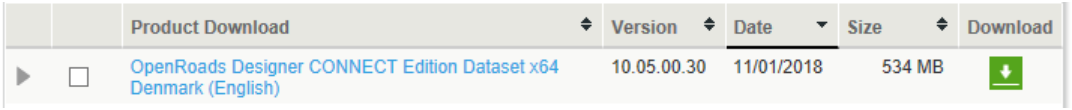
- Still missing:
  - Danish setup for SUE/SUDA & Rail

The Danish dataset for ORD

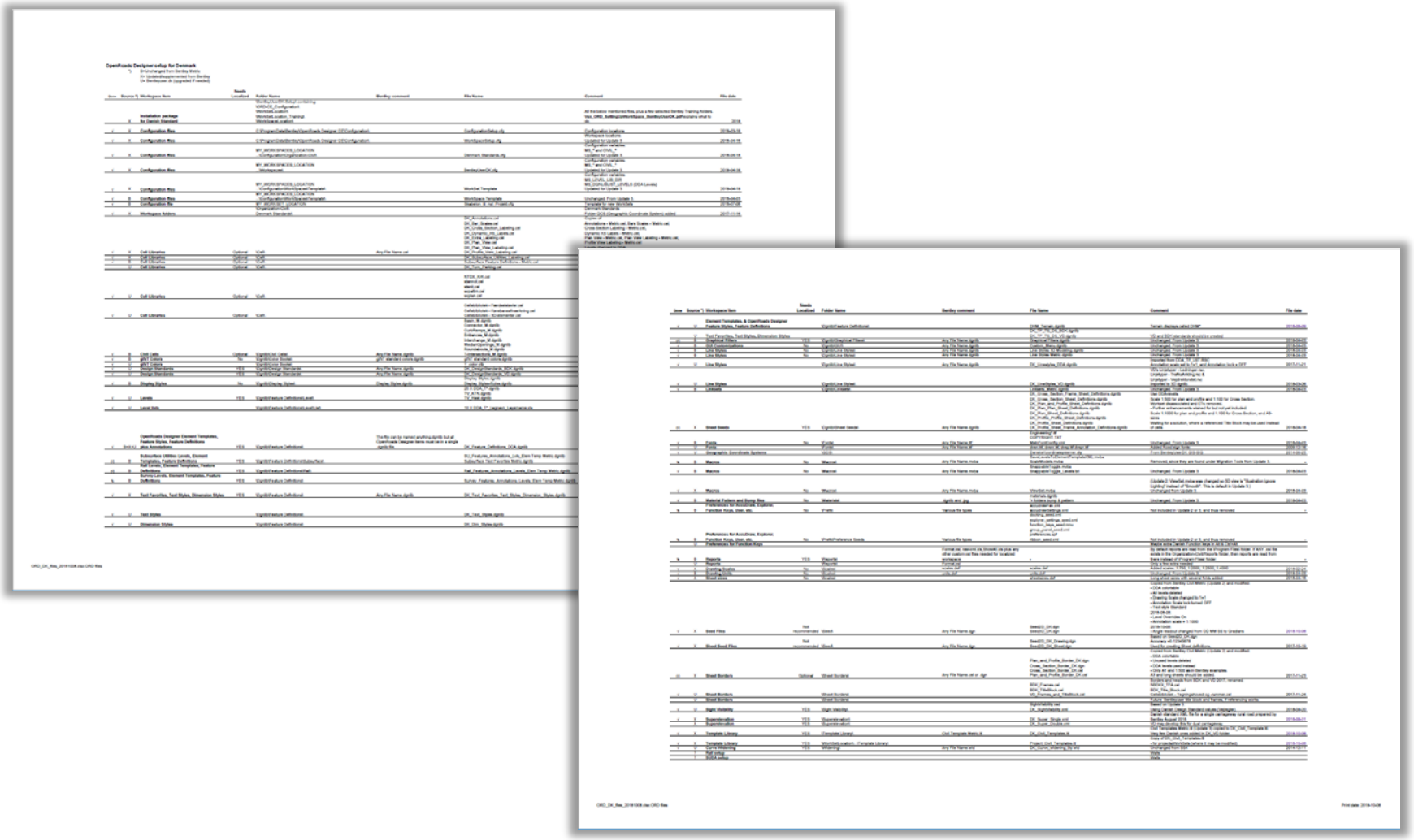
- BentleyUserDK members may log in and download from www.bentleyuser.dk > Standarder > Download > OpenRoads
  - A list and a zip-file (latest version)



- Or download from Bentley Software Downloads
  - A msi-file that extracts to ORD installation drive



List of files in the Danish dataset for ORD



Configuration files

- C:\ProgramData\Bentley\OpenRoads Designer CE\Configuration\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley

Source *)	Workspace Item	File Name	Comment	File date
X	**Configuration files**	ConfigurationSetup.cfg	Configuration locations	2018-03-16
X	**Configuration files**	WorkSpaceSetup.cfg	Workspace locations Updated for Update 3	2018-04-16
X	**Configuration files**	Denmark Standards.cfg	Configuration variables: MS_* and CIVIL_* Updated for Update 3.	2018-04-18
X	**Configuration files**	BentleyUserDK.cfg	Configuration variables: MS_* and CIVIL_* Updated for Update 3.	2018-04-16
X	**Configuration files**	WorkSet.Template	Configuration variables: MS_LEVEL_LIB_DIR MS_DGNLIBLIST_LEVELS (DDA Levels) Updated for Update 3.	2018-04-18
B	**Configuration files**	WorkSpace.Template	Unchanged. From Update 3.	2018-04-03
B	**Configuration file**	Skabelon_til_nyt_Projekt.cfg	Template for new WorkSets	2018-07-06

- 3 extra configuration variables. May be changed:

```
DK_PROJECTS              = C:/PROJEKTER/
DK_CONFIG                = $(_USTN_INSTALLED_CONFIGURATION)/
DK_CONFIG_ORG-CIV        = $(DK_CONFIG)Organization-Civil/
```

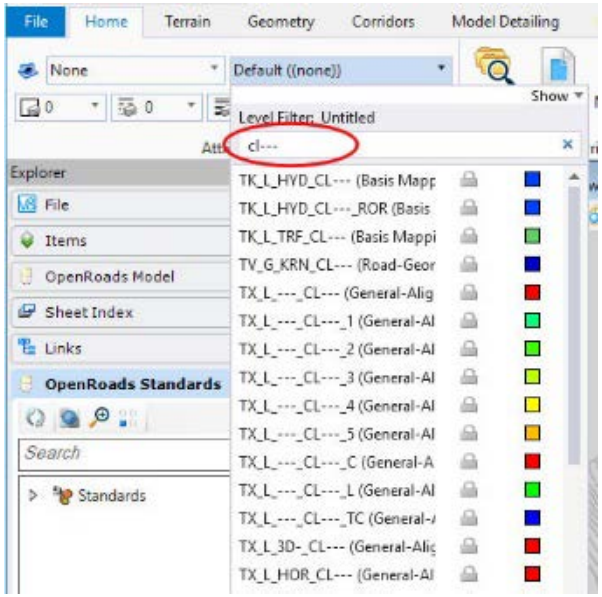
Levels

- \Dgnlib\Feature Definitions\Level\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley

Source *)	Workspace Item	File Name	Comment	File date
		20 X DDA_T*.dgnlib		
		TV_ATN.dgnlib	New folder containing	varies
U	**Levels**	TV_Hast.dgnlib	Danish standard DDA-levels DGNLibs	2014-2017
			New folder containing	varies
U	**Level lists**	10 X DDA_T*_Lagnavn_Layername.xls	Danish standard DDA-levels	2014-2017



Features, Templates, Text, Dimensions …

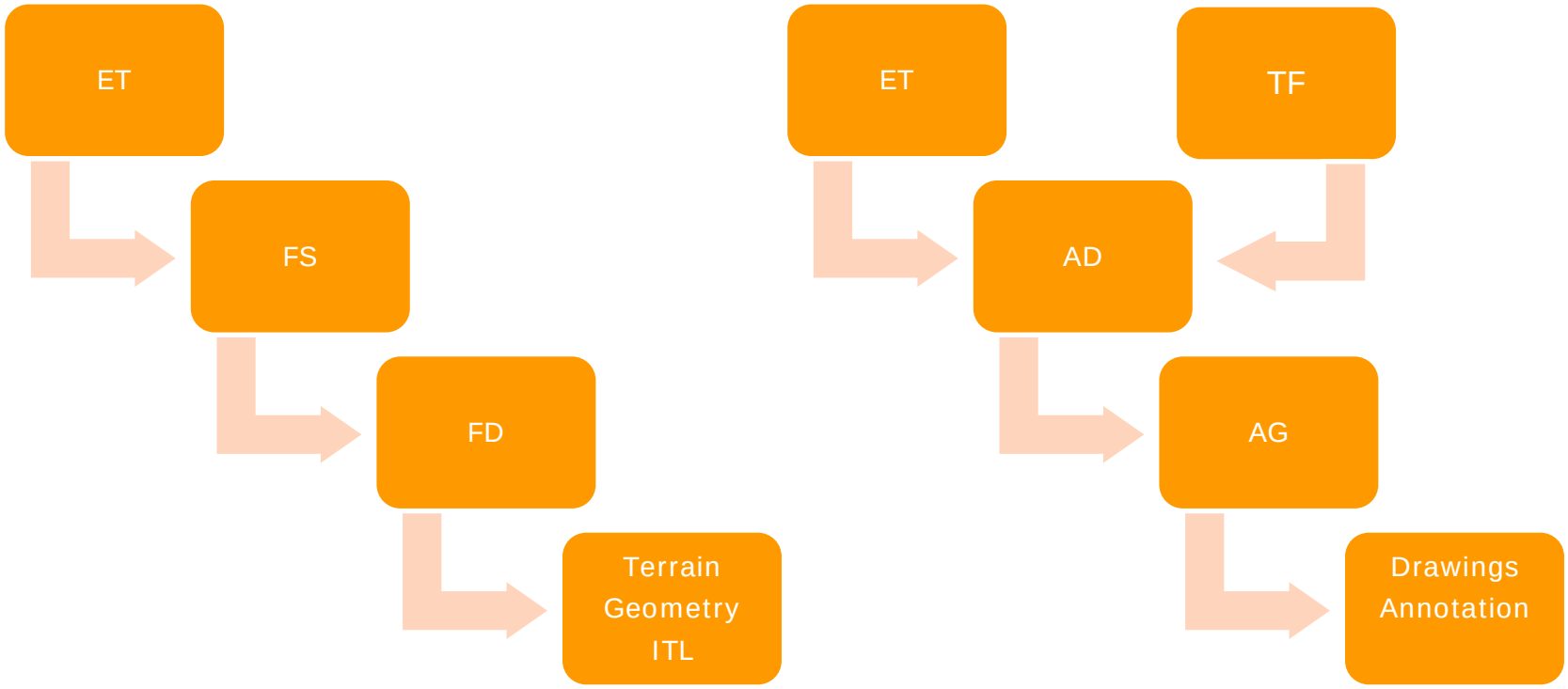
- \Dgnlib\Feature Definitions\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
B+X+U	**OpenRoads Designer Element Templates, Feature Styles, Feature Definitions plus Annotations**	DK_Feature_Definitions_DDA.dgnlib	New based on work from Nov 2017 - April 2018. (Update 3) Changed levels, colortable, scale. Added some FDs from Cowi & VD. Corridor colors changed. 2018-08-09: - More features for VD Templates - Linear Corridor Mesh - Some symbology changed	2018-08-23
B	**Subsurface Utilities Levels, Element Templates, Feature Definitions**	SU_Features_Annotations_Lvls_Elem Temp Metric.dgnlib Subsurface Text Favorites Metric.dgnlib	Bentleys files (Update 3) may be used until a later Country Kit where SUE is included. Moved to sub folder Subsurface	2018-04-03
B	**Rail Levels, Element Templates, Feature Definitions**	Rail_Features_Annotations_Levels_Elem Temp Metric.dgnlib	Bentleys files (Update 3) may be used until a Danish set is ready.	2018-04-03
B	**Survey Levels, Element Templates, Feature Definitions**	Survey_Features_Annotations_Levels_Elem Temp Metric.dgnlib	Survey will not be included	-
X	**Text Favorites, Text Styles, Dimension Styles**	DK_Text_Favorites_Text_Styles_Dimension_Styles.dgnlib	Copy of Text Favorites_Text Styles_Dimension Styles Metric.dgnlib (Update 3) 2 new Text Styles using per mille	2018-04-18
U	**Text Styles**	DK_Text_Styles.dgnlib	Copy of DK_TextStyles.dgnlib. - Unused fonts and symbol fonts removed 2018-08-09: - Text height and width added	2018-08-09
U	**Dimension Styles**	DK_Dim_Styles.dgnlib	Copy of DK_DimStyles.dgnlib - Unused fonts and symbol fonts removed	2018-03-26
U	**Element Templates, & OpenRoads Designer Feature Styles, Feature Definitions**	DHM_Terrain.dgnlib	Terrain displays called DHM*	2018-08-09
U	**Text Favorites, Text Styles, Dimension Styles**	DK_TF_TS_DS_BDK.dgnlib DK_TF_TS_DS_VD.dgnlib	VD and BDK standards should be created	

Relations


ET
FS
FD
Terrain
Geometry
ITL
ET
TF
AD
AG
Drawings
Annotation

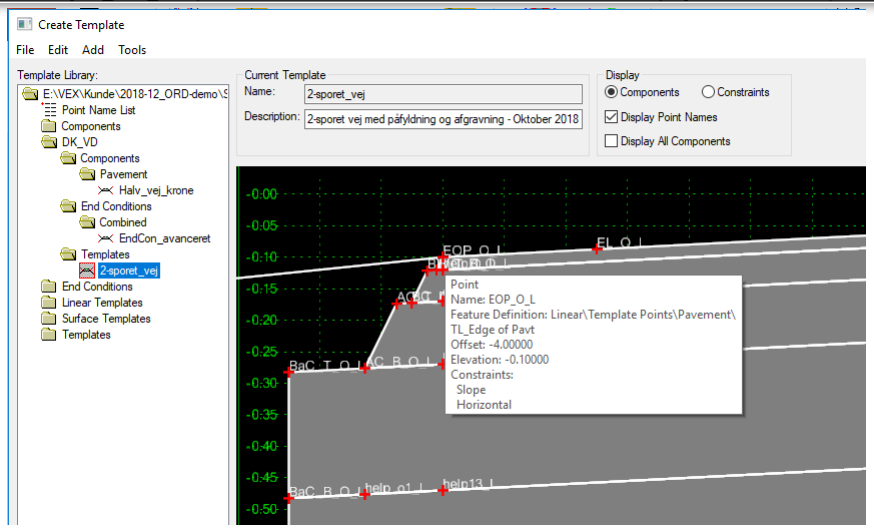
Templates

- \Template Library\
- \WorkSetLocation\...\Template Library\

OpenRoads Designer setup for Denmark

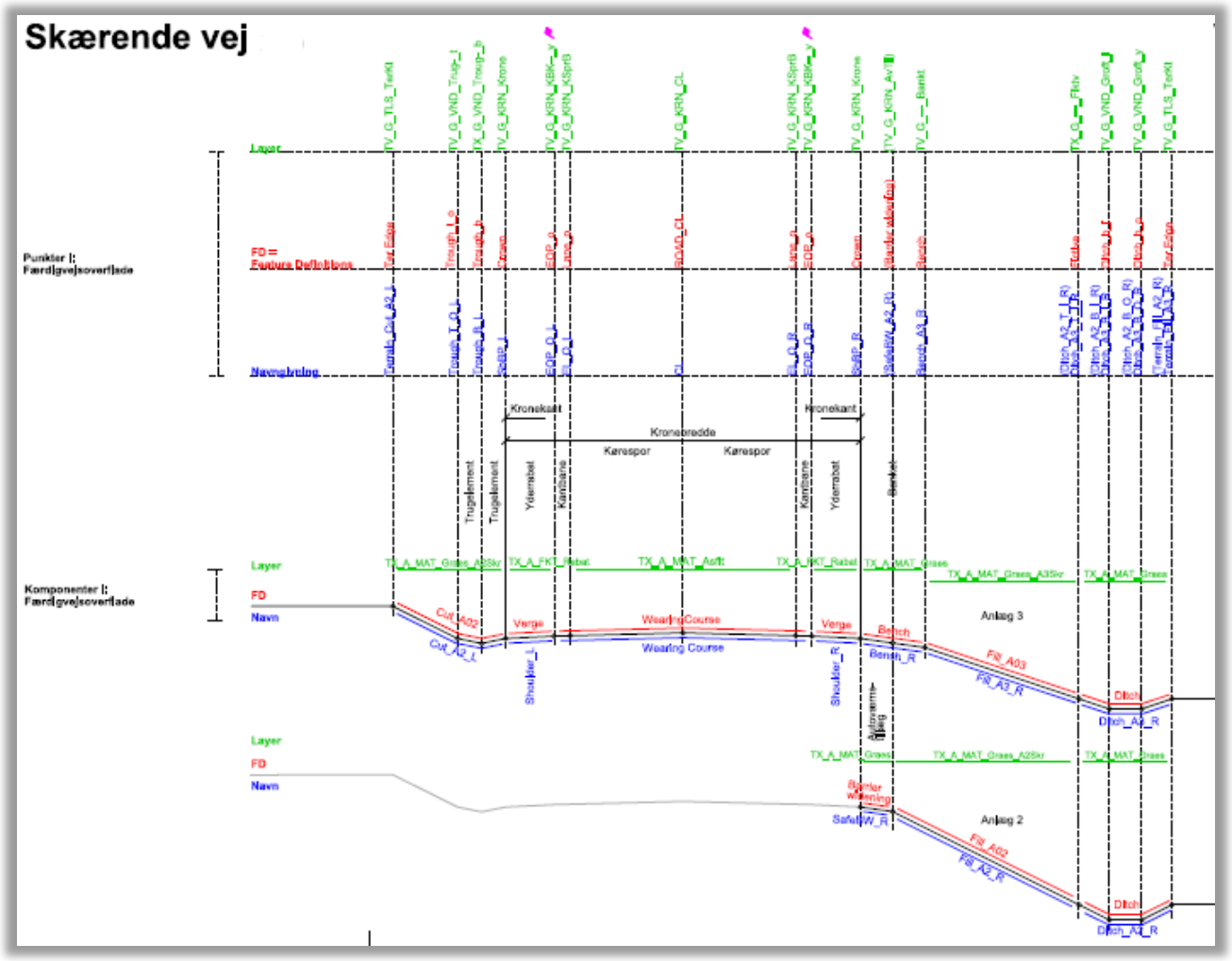
*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
X	**Template Library**	DK_Civil_Templates.itl	Civil Templates Metric.itl (Update 3) copied to DK_Civil_Template.itl. Very few Danish ones added in DK_VD folder.	2018-10-08
X	**Template Library**	Project_Civil_Templates.itl	Copy of DK_Civil_Templates.itl - for projects/WorkSets (where it may be modified).	2018-10-08



Feature Definitions in Templates

- VD



Cell libraries

- \Cell\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
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Source *)	Workspace Item	File Name	Comment	File date
		DK_Annotations.cel	Copies of	
		DK_Bar_Scales.cel	Annotations - Metric.cel, Bars Scales - Metric.cel,	
		DK_Cross_Section_Labeling.cel	Cross Section Labeling - Metric.cel,	
		DK_Dynamic_XS_Labels.cel	Dynamic XS Labels - Metric.cel,	
		DK_Extra_Labeling.cel	Plan View - Metric.cel, Plan View Labeling - Metric.cel,	
		DK_Plan_View.cel	Profile View Labeling - Metric.cel	
		DK_Plan_View_Labeling.cel	Levels changed to DDA	
X	**Cell Libraries**	DK_Profile_View_Labeling.cel	Extra cells in DK_Extra_Labeling.cel	2018-01-18
X	**Cell Libraries**	DK_Subsurface_Utilities_Labeling.cel	Labeling: Levels changed to DDA	2018-01-18
B	**Cell Libraries**	Subsurface Feature Definitions - Metric.cel	Unchanged. From Update 3.	2018-04-03
U	**Cell Libraries**	DK_Turn_Parking.cel	Turning areas & parking road marking (Vejregler)	2018-10-08
			(levels ought to be checked)	
		NTDX_KrK.cel	Selected area demand curves	
		stannot.cel	Annotation box for Cross Section	
		stsnit.cel	Cross Section items	
		sxpattrn.cel	Patterns	
U	**Cell Libraries**	sxplan.cel	Plan items	2003 - 2014
			(levels ought to be changed)	
		Cellebibliotek - Færdselstavler.cel	VD Street signs	
		Cellebibliotek - Kørebaneafmærkning.cel	VD Road marking symbols	
U	**Cell Libraries**	Cellebibliotek - 3D-elementer.cel	VD 3D elements	2017-09-18

Civil Cells

- \Dgnlib\Civil Cells\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
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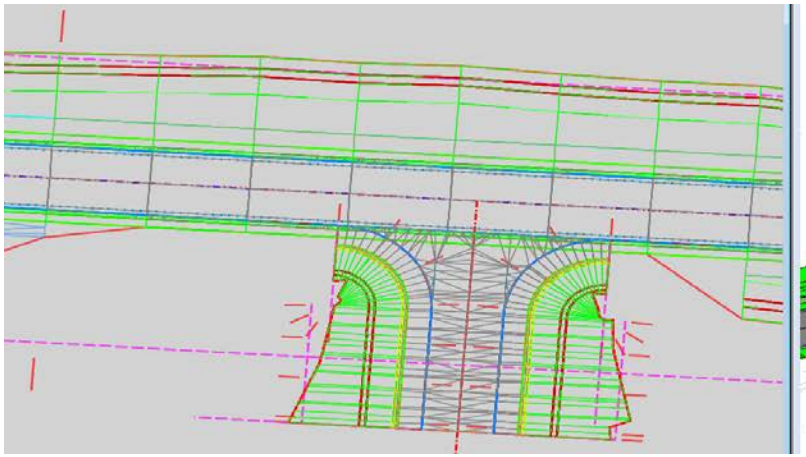
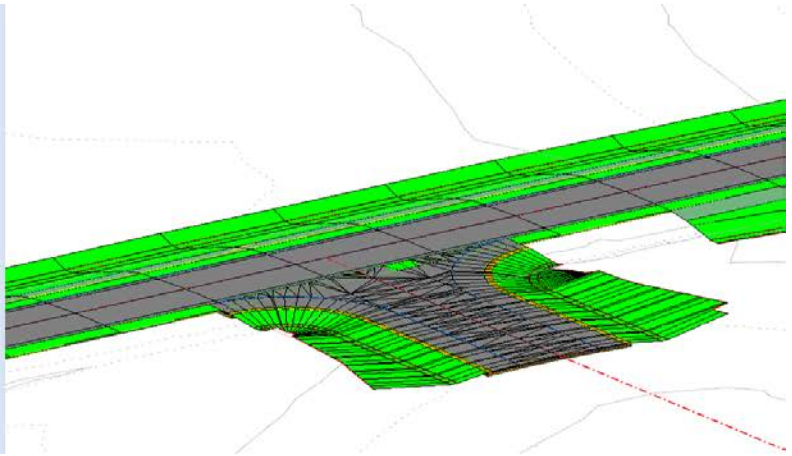
Source *)	Workspace Item	File Name	Comment	File date
		Basin_M.dgnlib		
		Connector_M.dgnlib		
		CurbRamps_M.dgnlib		
		Entrances_M.dgnlib		
		Interchange_M.dgnlib		
		MedianOpenings_M.dgnlib		
		Roundabouts_M.dgnlib		
B	**Civil Cells**	T-Intersections_M.dgnlib	Unchanged. From Update 4.	2018-07-17





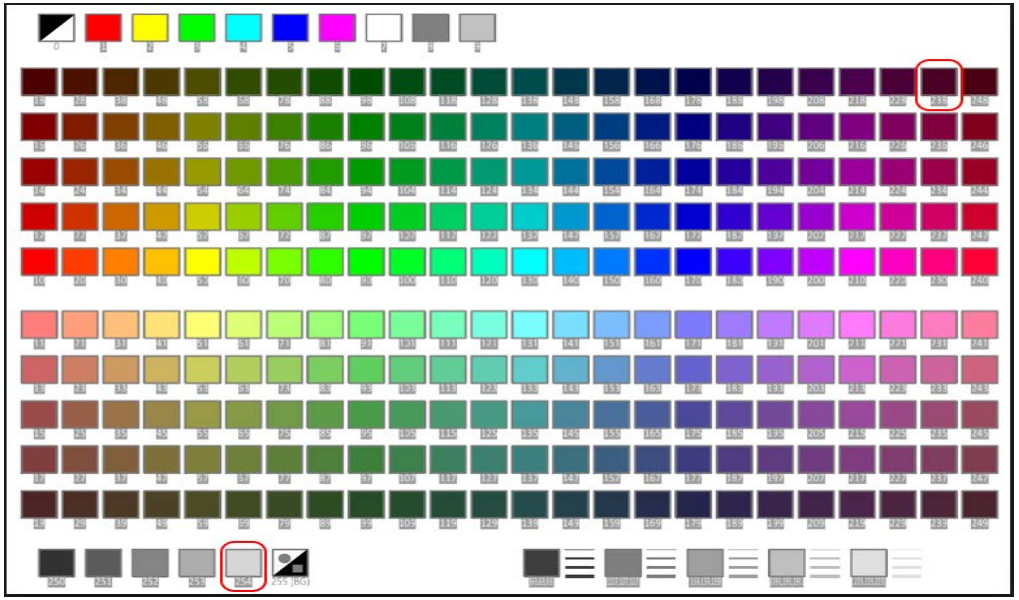
Color Books

- \Dgnlib\Color Books\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley

Source *)	Workspace Item	File Name	Comment	File date
B	**gINT Colors**	gINT standard colors.dgnlib	Unchanged. From Update 3.	2018-04-03
U	**gINT Colors**	Y_color.ctb	Danish colortable added	2011-05-04



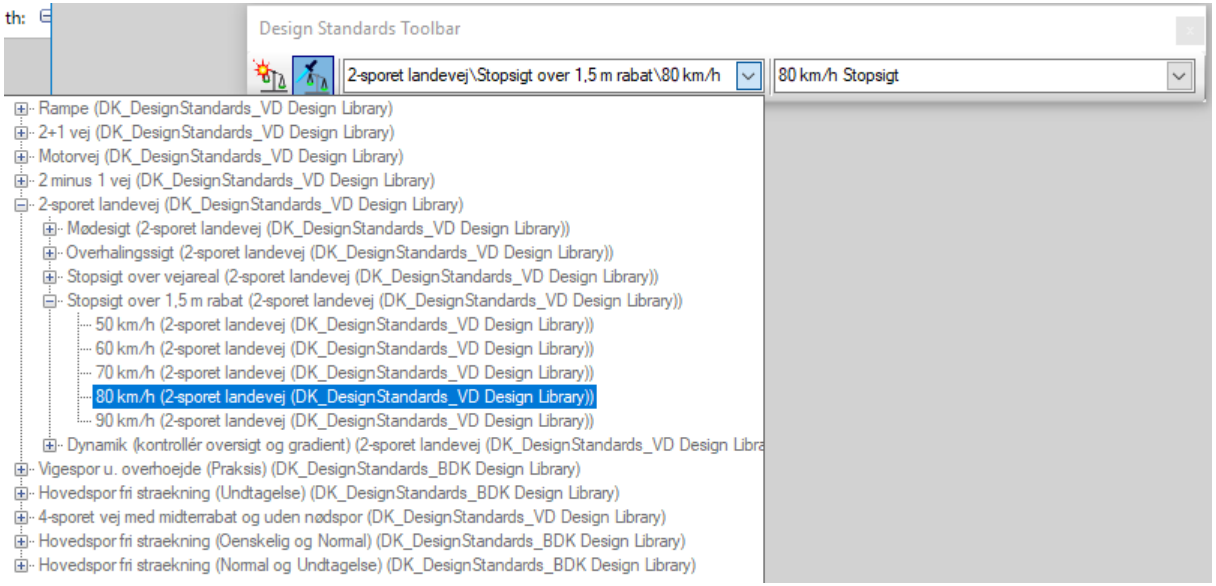
Design Standards

- \Dgnlib\Design Standards\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley

Source *)	Workspace Item	File Name	Comment	File date
U	**Design Standards**	DK_DesignStandards_BDK.dgnlib	Rail (BDK) upgraded from SS4. Fonts removed.	2018-01-10
U	**Design Standards**	DK_DesignStandards_VD.dgnlib	Roads (VD) upgraded from SS4	2018-01-12



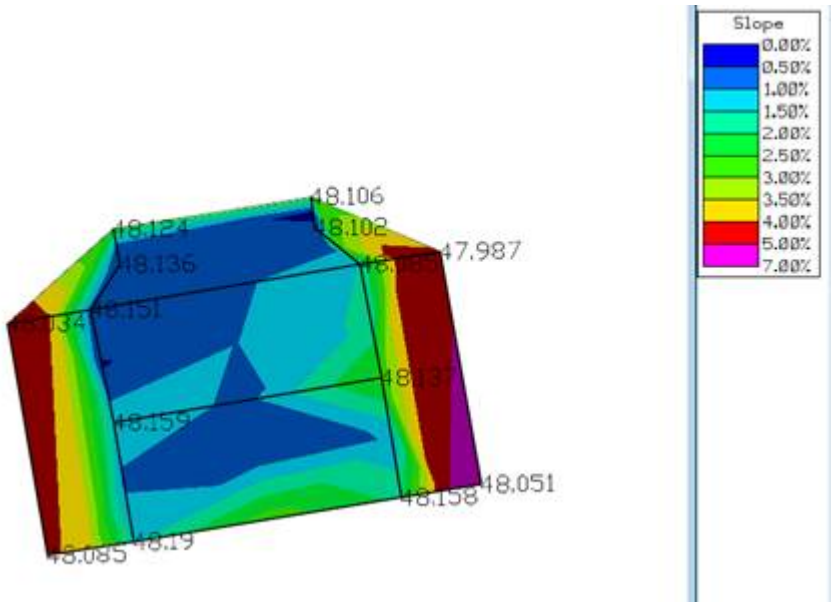
Display Styles

- \Dgnlib\Display Styles\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley

Source *)	Workspace Item	File Name	Comment	File date
		Display Styles.dgnlib		
B	**Display Styles**	Display Styles-Rules.dgnlib	Unchanged. From Update 3.	2018-04-03



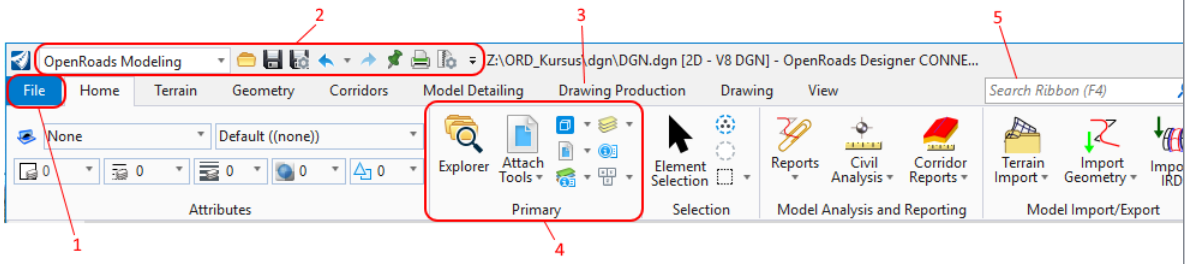
Graphical filters and Graphical User Interface

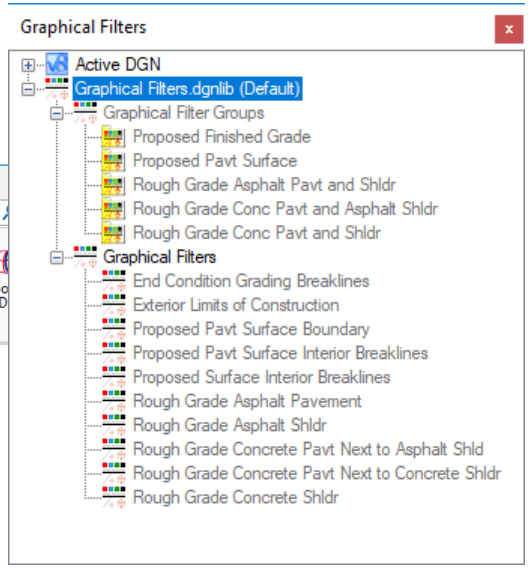
- \Dgnlib\GUI\
- \Dgnlib\Graphical Filters\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
B	**Graphical Filters**	Graphical Filters.dgnlib	Unchanged. From Update 3.	2018-04-03
B	**GUI Customizations**	Custom_Menu.dgnlib	Unchanged. From Update 3.	2018-04-03





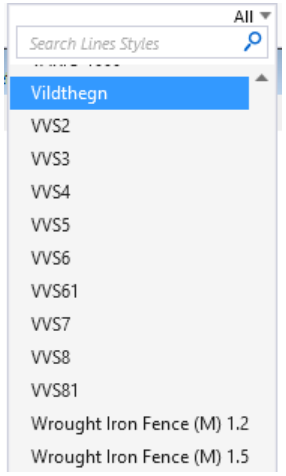
Line styles

- \Dgnlib\Line Styles\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
B	**Line Styles**	Line Styles 3D Modeling.dgnlib	Unchanged. From Update 3.	2018-04-03
B	**Line Styles**	Line Styles Metric.dgnlib	Unchanged. From Update 3.	2018-04-03
U	**Line Styles**	DK_Linestyles_DDA.dgnlib	Imported from DDA_TF_LST.RSC Annotation scale set to 1=1, and Annotation lock = OFF	2017-11-21
U	**Line Styles**	DK_LineStyles_VD.dgnlib	VD's Linjetyper - Ledninger.rsc, Linjetyper - Trafikafvikling.rsc & Linjetyper - Vejdirektoratet.rsc imported to 3D dgnlib.	2018-03-26



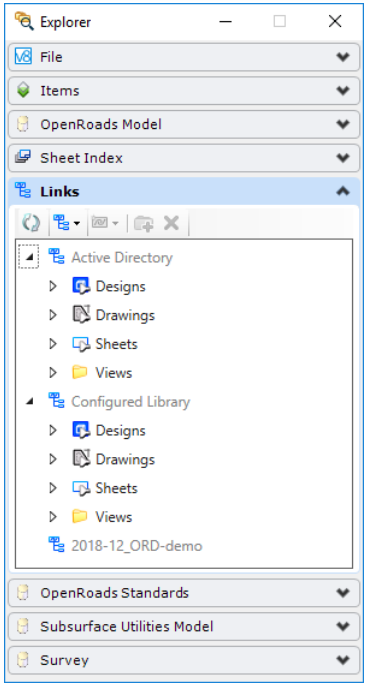
Linksets

- \Dgnlib\Linksets\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
B	**Linksets**	Linksets_Metric.dgnlib	Unchanged. From Update 3.	2018-04-03



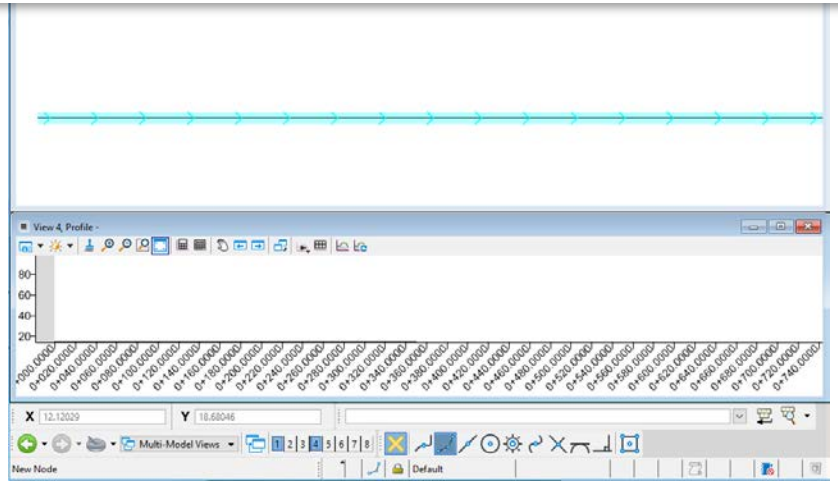
Sheet seeds

- \Dgnlib\Sheet Seeds\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
		DK_Cross_Section_Frame_Sheet_Definitions.dgnlib	Use DDA-levels.	
		DK_Cross_Section_Sheet_Definitions.dgnlib	Scale 1:500 for plan and profile and 1:100 for Cross	
		DK_Plan_and_Profile_Sheet_Definitions.dgnlib	Section.	
		DK_Plan_Plan_Sheet_Definitions.dgnlib	Workset disassociated and ETs removed.	
		DK_Plan_Sheet_Definitions.dgnlib	- Further enhancements wished for but not yet included:	
		DK_Profile_Profile_Sheet_Definitions.dgnlib	Scale 1:1000 for plan and profile and 1:100 for Cross	
		DK_Profile_Sheet_Definitions.dgnlib	Section, and A3-sizes	
X	**Sheet Seeds**	DK_Profile_Sheet_Frame_Annotation_Definitions.dgnlib	Waiting for a solution, where a referenced Title Block	2018-04-18



Fonts

- \Fonts\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
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U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
		Engineering*.ttf COPYRIGHT.TXT		
B	**Fonts**	MstnFontConfig.xml	Unchanged. From Update 3.	2018-04-03
U	**Fonts**	dvsn.ttf, dvsnr.ttf, dvsp.ttf dvspr.ttf	Added Road sign fonts	2009-12-16

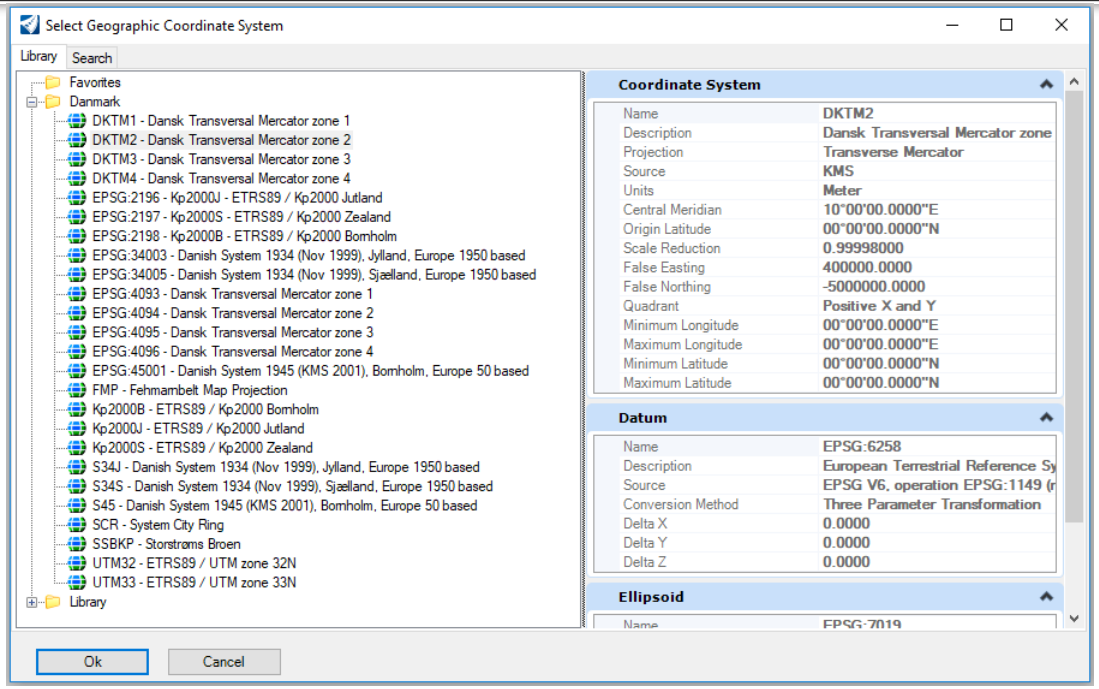
Geographic Coordinate Systems

- \GCS\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
U	**Geographis Coordinate Systems**	DanskeKoordinatsystemer.dty	From BentleyUserDK GIS-SIG	2014-06-25



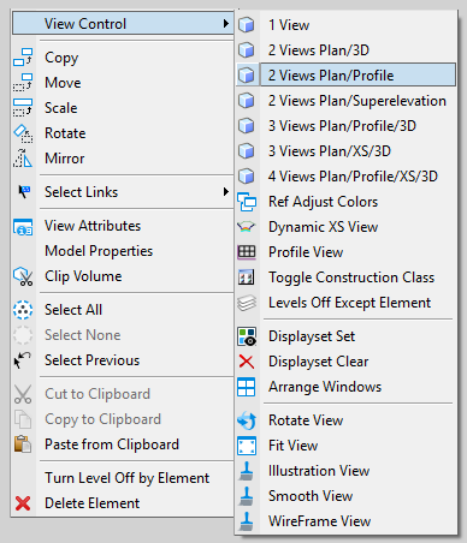
Macros

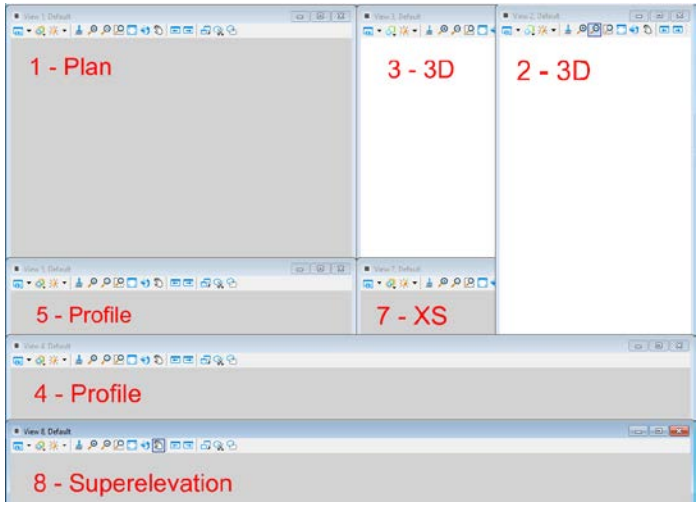
- \Macros\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
B	**Macros**	SnappableToggle.mvba SnappableToggle_Levels.txt	Unchanged. From Update 3.	2018-04-03
X	**Macros**	ViewSet.mvba	(Update 2: ViewSet.mvba was changed so 3D view is "Illustration:Ignore Lighting" instead of "Smooth". This is default in Update 3.) Unchanged from Update 3.	2018-04-03





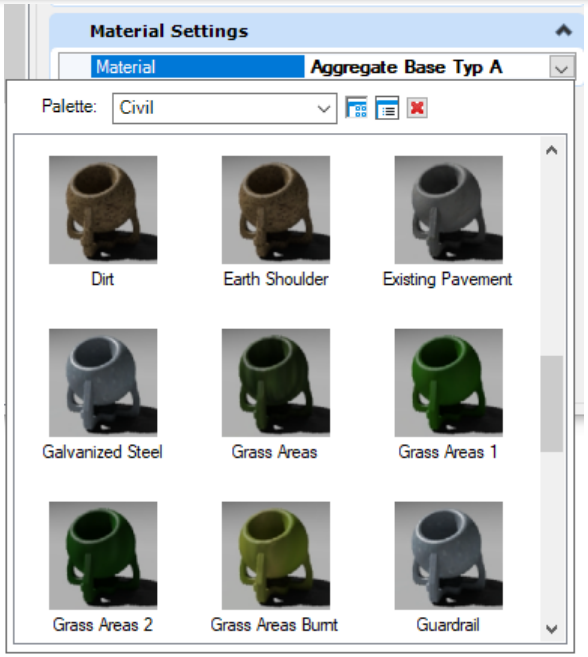
Materials

- \Materials\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
B	**Material Pattern and Bump files**	materials.dgnlib '+ folders bump & pattern	Unchanged. From Update 3.	2018-04-03



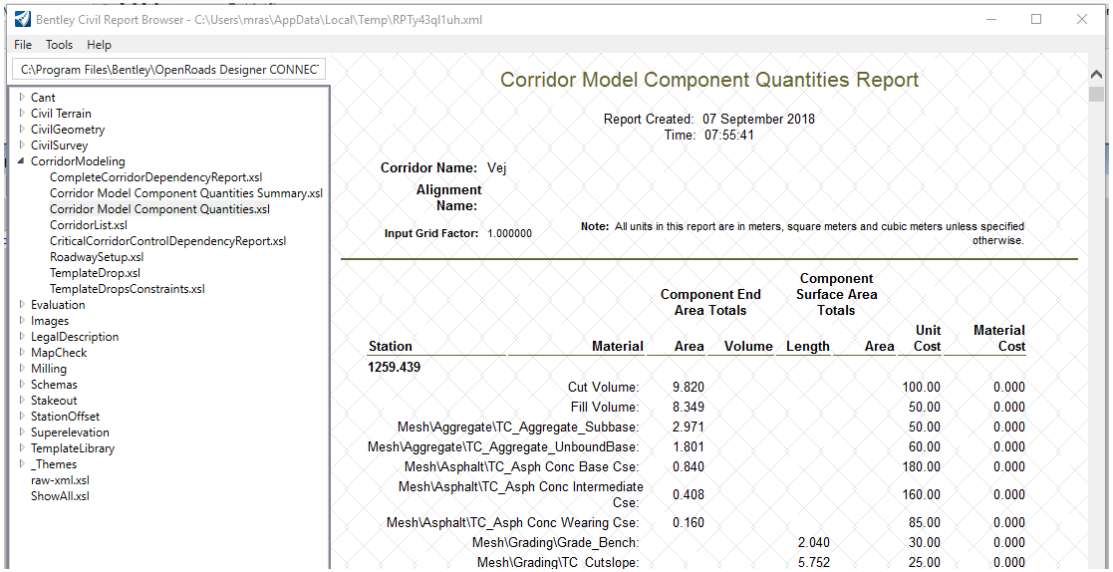
Reports

- \Reports\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
B	**Reports**	-	By default reports are read from the \Program Files\ folder. If ANY .xsl file exists in the Organization-Civil/Reports folder, then reports are read from there instead of \Program Files\ folder.	-
U	**Reports**		Only a few extra needed	



Scales & sizes

- \Scales\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
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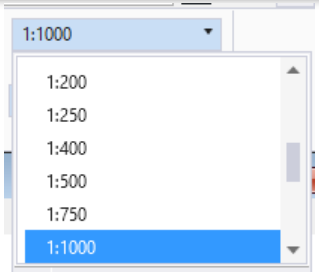
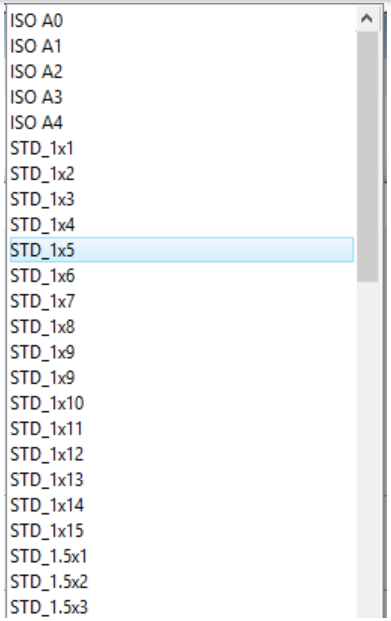
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
X	**Drawing Scales**	scales.def	Added scales: 1:750, 1:2000, 1:2500, 1:4000	2018-02-24
B	**Drawing Units**	units.def	Unchanged. From Update 3.	2018-04-03
X	**Sheet sizes**	sheetsizes.def	Long sheet sizes with several folds added	2018-04-16





Seeds

- \Seed\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
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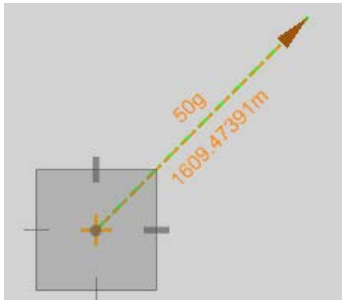
Source *)	Workspace Item	File Name	Comment	File date
			Copied from Bentley Civil Metric (Update 2) and modified: - DDA colortable - All levels deleted - Drawing Scale changed to 1=1 - Annotation Scale lock turned OFF - Text style Standard 2018-08-08: - Level Overrides On - Annotation scale = 1:1000	
X	**Seed Files**	Seed2D_DK.dgn Seed3D_DK.dgn	2018-10-08: - Angle readout changed from DD MM SS to Gradians	2018-10-08
X	**Sheet Seed Files**	Seed2D_DK_Drawing.dgn Seed2D_DK_Sheet.dgn	Based on Seed2D_DK.dgn Accuracy =0.12345678 Used for creating Sheet definitions.	2017-10-19



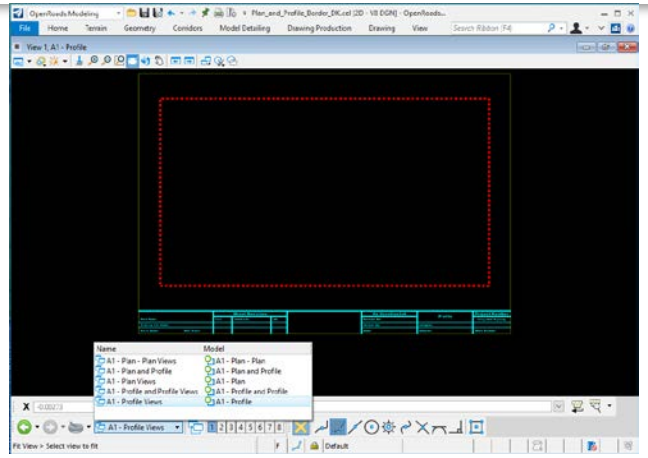
Sheets

- \Sheet Borders\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
			Copied from Bentley Civil Metric (Update 2) and modified:	
		Plan_and_Profile_Border_DK.dgn	- DDA colortable	
		Cross_Section_Border_DK.dgn	- Unused levels deleted	
		Cross_Section_Border_DK.cel	- DDA levels used instead	
X	**Sheet Borders**	Plan_and_Profile_Border_DK.cel	- Only A1 and 1:500 as in Bentley examples.	2017-11-23
			Borders and heads from BDK and VD 2017, renamed:	
		BDK_Frames.cel	NBDKX_TFA.cel	
		BDK_TitleBlock.cel	BDK_Title_Block.cel	
U	**Sheet Borders**	VD_Frames_and_TitleBlock.cel	Cellebibliotek - Tegningshoved og -rammer.cel	2017-11-24
U	**Sheet Borders**		Future: Bentleyuser title block and frames, if referencing	



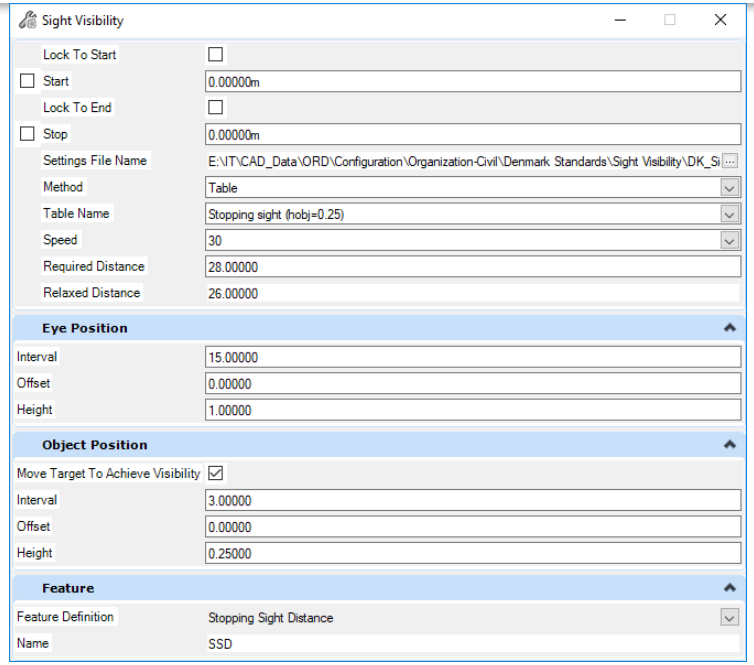
Sight Visibility

- \Sight Visibility\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
		SightVisibility.xsd	Based on Update 3.	
U	**Sight Visibility**	DK_SightVisibility.xml	Using Danish Design Standard values (Vejregler).	2018-04-20



Superelevation

- \Superelevation\

OpenRoads Designer setup for Denmark

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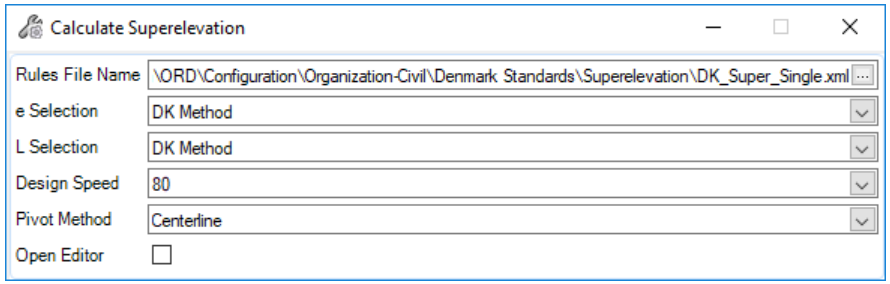
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
X	**Superelevation**	DK_Super_Single.xml	Danish standard XML file for a single carriageway rural road prepared by Bentley August 2018.	2018-08-31
X	**Superelevation**	DK_Super_Double.xml	VD may develop this for dual carriageway.	



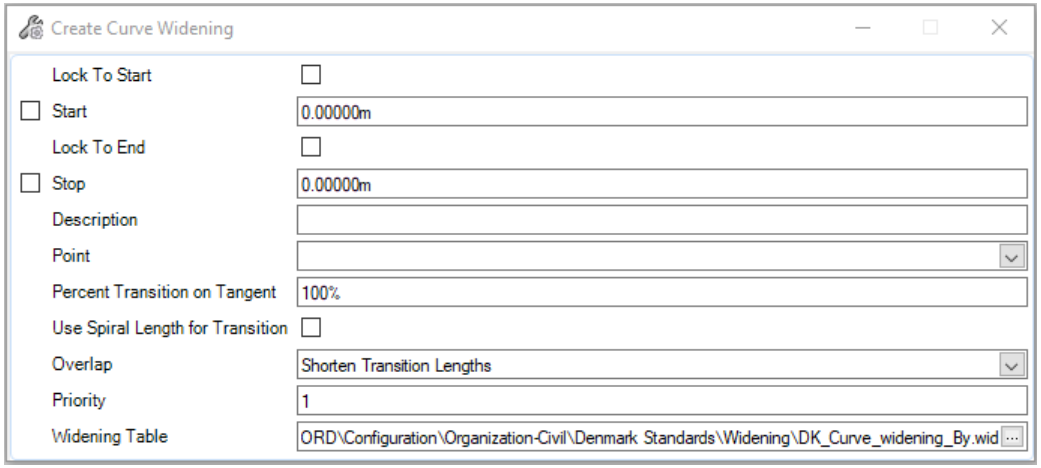
Curve Widening

- \Widening\

OpenRoads Designer setup for Denmark

*) B=Unchanged from Bentley Metric
X= Updated/supplemented from Bentley
U= Bentleyuser.dk (upgraded if needed)

Source *)	Workspace Item	File Name	Comment	File date
U	**Curve Widening**	DK_Curve_widening_By.wid	Unchanged from SS4	2014-12-11



What is NOT in the Danish workspace (yet)

- Rail
- SUE/SUDA

Maintaining standards

- Use the Danish workspace and SUPPLEMENT with your own standards
- E.g.
  - Feature Definitions
  - Template Library
  - Seeds
  - Sheets
  - Sheet seeds
  - Report Style sheets
  - Graphical Filters
  - Cells
  - Civil Cells