Application Name:	ODOT_XSSheetManager.mvba
Tested MicroStation Version:	MicroStation V8i (SELECTseries 3)
Tested GEOPAK/OpenRoads Version:	Not Applicable

Application Description

The January 16, 2015 update to ODOT's CADD standards includes an update to the ODOT_Sheets.cel cell library. The data entry regions in the title block portion of each sheet cell were removed and replaced with MicroStation Tag elements. The value of these Tag elements can edited to update the text that is displayed for each Tag element in the sheet title block by using MicroStation's **Edit Tags** command. These Tags can also be reviewed and edited using the **ODOT_SheetManager.mvba** and the **ODOT_XSSheetManager.mvba** MicroStation Visual Basic applications.
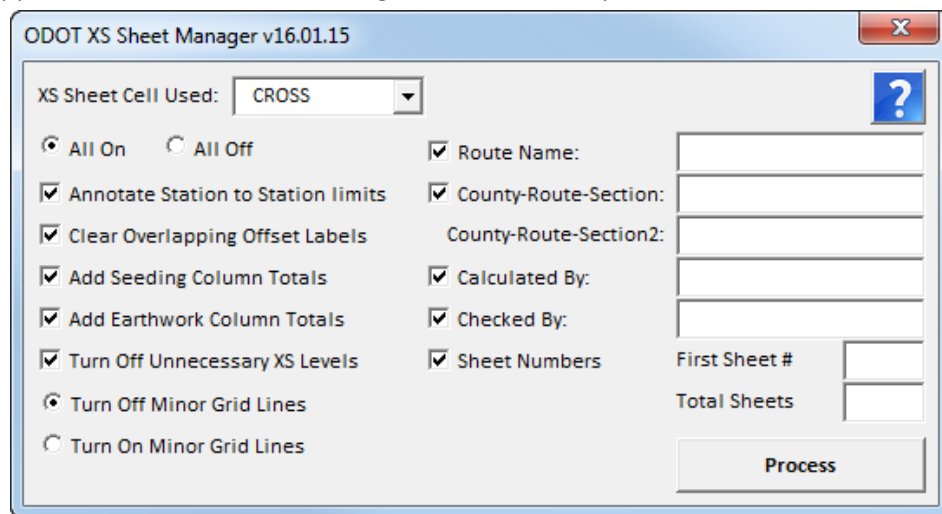
The title sheet data can be managed using the ODOT_SheetManager application; however, the ODOT_XS_SheetLables application offers additional functionality specific to cross section sheets.

The application will scan all of the sheet models in the active design file in order to update the cross section sheets. Only one sheet per model is supported. It is assumed that the cross section sheets were assembled using GEOPAK's Cross Section sheet application and that each cross sections is a reference attachment within the sheet. The **One Sheet Per Model** option should be used when processing cross sections sheets for ODOT projects.

The ODOT_XSSheetManager application can be accessed from the MicroStation pull-down menu by selecting **ODOT > Sheet Management > XS Sheet Manager**. The application can also be accessed with the following key-in command:

vba load ODOT_XSSheetManager.mvba; vba run modMain.runXSSheetManager

When the application is accessed, the dialog shown below is opened.

Application Operation

The dialog has the following functions:

XS Sheet Cell Used

Select the ODOT sheet border cell that was used to generate the cross section sheets. The following standard ODOT sheet cells are supported by the application:

> CROSS
> CROSS_SPLIT
> CROSSV
> GT_XSEC

Note: The sheet cells cannot be dropped. The application looks for intact sheet cells only.

All On/All Off

These options are used to turn on/off all the dialog options.

Annotate Station to Station Limits

The application finds all the reference attachments within the limits of the cross section sheet cut line. The first attachment is assumed to be the lowest cross section station contained on the sheet. The last attachment found is assumed to be the highest cross section station on the sheet. The application reads the value of the station from the GEOPAK Cross Section cell for the first and last reference attachment found within the sheet cut line boundary to determine the station values that are annotated for each sheet.

The Station to Station Limits are calculated based on the following assumptions:
- Each cross section is attached as a reference file.
- The area for each reference attachment is contained within the area of the sheet cut line.
- Each cross section has an associated GEOPAK Cross Section cell.

Clear Overlapping Offset Labels

When cross section sheets are clipped with GEOPAK using one of the "Extended Width" options defined in ODOT.xssl, the offset labels extend into the seeding and earthwork quantity total areas as show below. If **Clear Overlapping Offset Labels** is toggled on, any text found within or overlapping the Seeding and Earthwork total areas will be deleted. This included totals previously placed using the **Add Seeding Column Totals** and the **Add Earthwork Column Totals** options.

Add Seeding Column Totals/Add Earthwork Column Totals

Any numeric text strings that are found in the seeding column is added to place the total at the bottom of the column.

Any numeric text strings that are found in the Earthowork column is added to place the total at the bottom of the column.

If the Earthwork and Seeding totals need to be updated, the application can be processed with only these two options toggled on. The application will automatically delete any previously placed earthwork and seeding totals in the file.

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Turn Off Unnecessary XS Levels

The **Turn Off Unnecessary XS Levels** option turns off the Global Display of the following levels in all reference attachments:

- GK_Cells
- XS_P_Boundary
- XS_P_Earthwork_Shapes
- XS_P_Finished_Grade_Seeded
- XS_P_Pavt_Layers
- XS_P_Pavt_Surface
- XS_P_Shoulder_Layers
- XS_P_Shoulder_Surface
- XS_P_Text_Info
- XS_P_Text_MarkedPoint

Turn Off Minor Grid Lines

The level **SH_Minor_Grid_Line** is turned off in each sheet model of the active design file.

Route Name

The **Route Name** is appended to the text "CROSS SECTIONS" in the sheet title.

County-Route-Section

The value entered here is used to populate the County-Route-Section portion of the cross section sheet. With the January 15th 2016 update sheet cells now have two new tags for a two line county route section. If a value is entered in this box and these new tags are found in the sheet cell and a value is entered in the county route section2 box (below) then this value will be placed on the first line of the country route section. If the sheet cell does not have the new tags or the county route section2 box (below) is empty then any value entered in this box will be placed as a single line county route section on the sheet cell.

County-Route-Section2

With the January 15th 2016 update sheet cells now have two new tags for a two line county route section. If a value is entered in this box and these new tags are found in the sheet cell then this value will be placed on the second line of the country route section. If the sheet cell does not have the new tags then any value entered in this box will be appended to the end of the value in the county route section box (above) and will be placed on one line in the sheet cell.

Calculated By

The value entered here is used to populate the Calculated portion of the cross section sheet.

Checked By

The value entered here is used to populate the Checked portion of the cross section sheet.

Sheet Numbers

The **First Sheet #** entered here is assigned to the cross section sheet border found in the first sheet model of the design file. The number is incremented for subsequent sheet models.

The **Total Sheets** value is assigned to the sheet cells as the models are processed.

Contacts

If you have any questions, suggestions, or problem with this application please contact the ODOT Office of CADD and Mapping Services by use of the following form on the ODOT website:

http://www.dot.state.oh.us/Divisions/Engineering/CaddMapping/CADD/Pages/Suggestions.aspx

Acknowledgements

This program was written for the Ohio Department of Transportation, Office of CADD and Mapping Services by Eric Thomas, Eric Thomas Consulting, LLC.