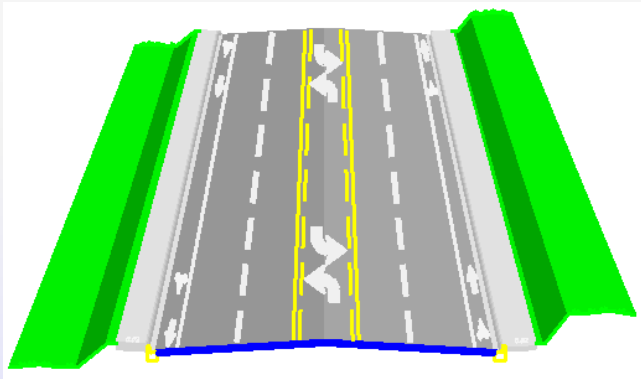


S&PM Tabulation of Quantities with LDM

A screenshot of a software interface displaying a 'TABLE OF QUANTITIES' spreadsheet. The spreadsheet has multiple columns and rows, with a yellow grid background. The title 'TABLE OF QUANTITIES' is visible at the top of the window. The interface includes a menu bar and a status bar at the bottom.

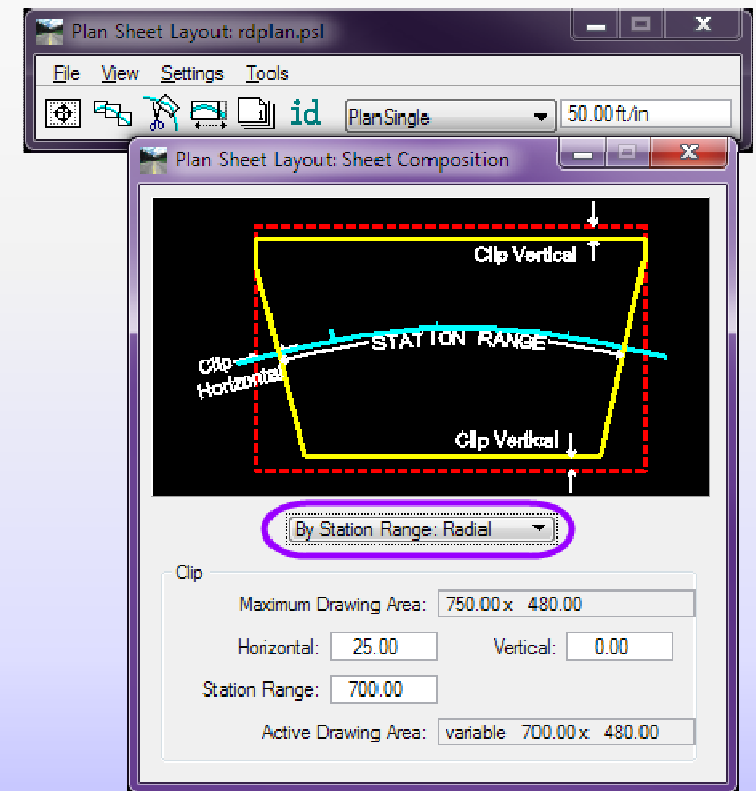
Denise J Broom
Florida Department of Transportation
Engineering/CADD Systems Office
Denise.Broom@dot.state.fl.us

Objectives

- *Learn how to:*
 - *Use the GEOPAK clip borders to calculate quantities with D&C Manager*
 - *Export the quantities to Quantity Manager*
 - *Use LDM to automate the Tabulations of Quantities Sheet*
 - *Update the Excel template and LDM link*

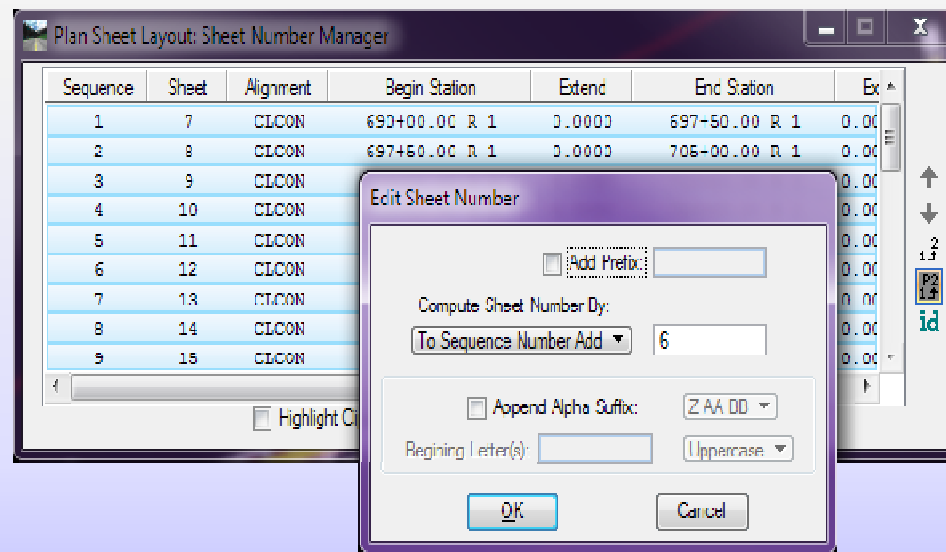
Plan Sheet Composition Tool

- Once all of the signing & pavement markings have been drawn in the design file, open/create the CLIPSP01.dgn file.
- Reference the DSGNSP01.dgn file.
- Create the clip borders for the sheets using the Plan/Profile Sheet Composition tool.
 - Composition - Radial



Plan Sheet Composition Tool

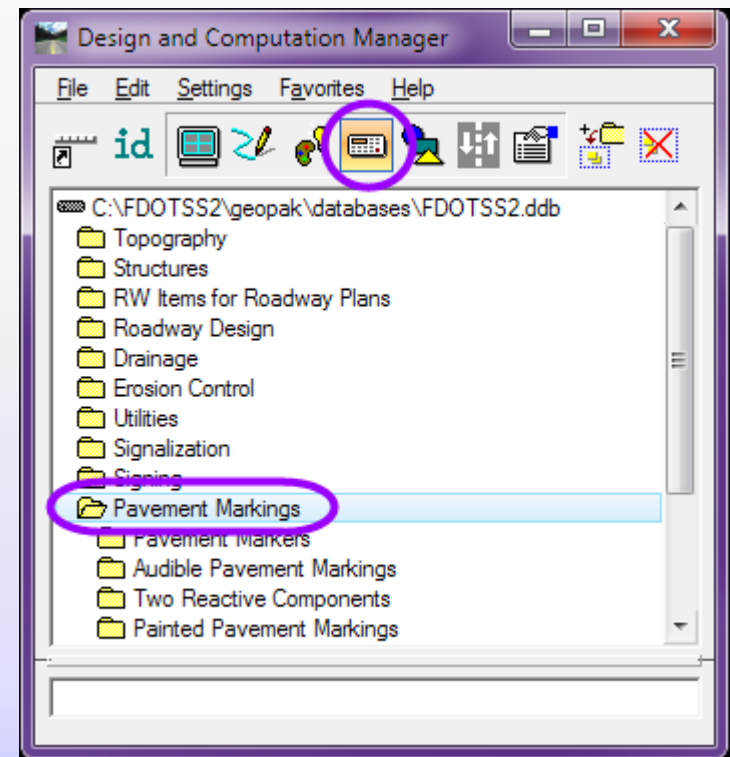
- Using Sheet Number Manager, modify the sheet number associated with the clip borders to match the plan sheet numbers.



D&C Manager

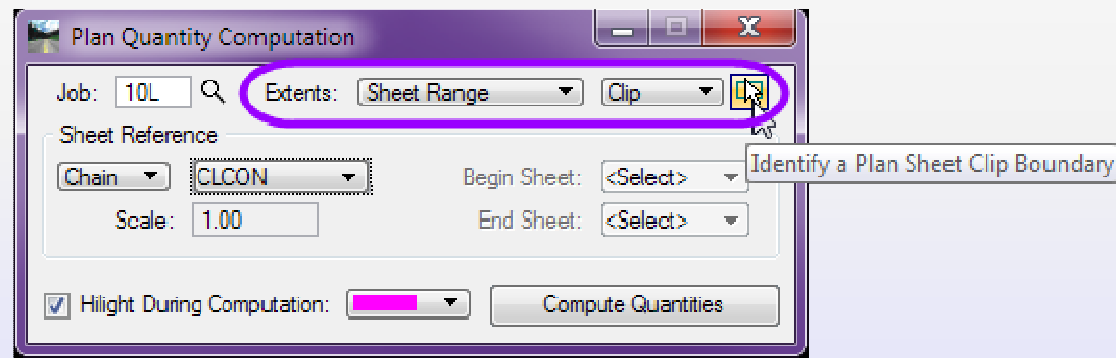
- *Open the D&C Manager.*
 - *GEOPAK > ROAD > Design & Computation Manager*
- *Select the Pavement Markings category.*
- *Click on the Compute button to go into the Compute mode of the D&C.*

Make sure you are in the design file with the clip borders!! This will NOT work if you are not in the same file.



D&C Manager

- *On the Plan Quantity Computation dialog, set the Extents to Sheet Range and Clip.*
- *Click on the icon Identify a Plan Sheet Clip Boundary. Select one of the clip borders.*



- *The dialog will populate the Chain Name, Scale, Begin Sheet and End Sheet. Note that the Begin and End Sheet values will be the same. Use the drop down option to select the End Sheet.*
- *Click Compute Quantities.*

D&C Manager

- *On the Computation Results:*
 - *Set the Export Format to DBMS*
 - *Type in a file name for the mdb file*
 - *Set the option to Create*
 - *Type in 0300 for Groupings.*
 - *Click Export.*

Item	Description	Quantity	Unit	Export
0706 3	Reflective Pavement Markers (W/R)	217.00	EA	<input checked="" type="checkbox"/>
0710 11160	Painted Pavement Markings, Pavement Message (Bike Symbol)	14.00	EA	<input checked="" type="checkbox"/>
0710 11131	Painted Pavement Markings, White, Skip, 6" (10/30)	1.17	GM	<input checked="" type="checkbox"/>
0710 11111	Painted Pavement Markings, White, Solid, 6"	0.28	NM	<input checked="" type="checkbox"/>
0710 11123	Painted Pavement Markings, White, Solid, 12"	325.00	LF	<input checked="" type="checkbox"/>
0710 11125	Painted Pavement Markings, White, Solid, 24"	56.00	LF	<input checked="" type="checkbox"/>
0710 11211	Painted Pavement Markings, Yellow, Solid, 6"	0.52	NM	<input checked="" type="checkbox"/>
0710 11170	Painted Pavement Markings, Arrows (Left Directional Arrow)	14.00	EA	<input checked="" type="checkbox"/>
0710 11170	Painted Pavement Markings, Arrows (Right Directional Arrow)	3.00	EA	<input checked="" type="checkbox"/>
0710 11290	Painted Pavement Markings, Yellow, Island Nose	46.10	SF	<input checked="" type="checkbox"/>
0706 3	Reflective Pavement Markers (Y/Y)	19.00	EA	<input checked="" type="checkbox"/>
0710 11124	Painted Pavement Markings, White, Solid, 18"	6.00	LF	<input checked="" type="checkbox"/>

Export Format:

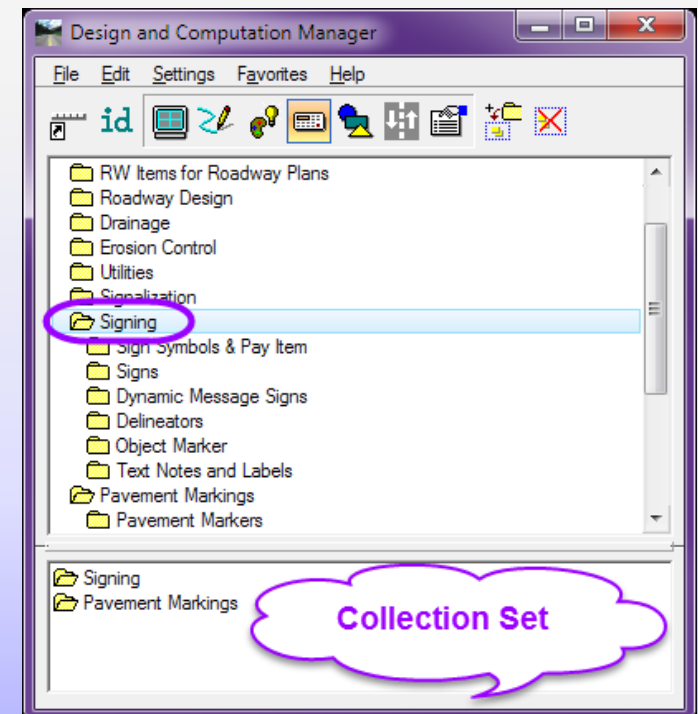
Run:

D&C Manager



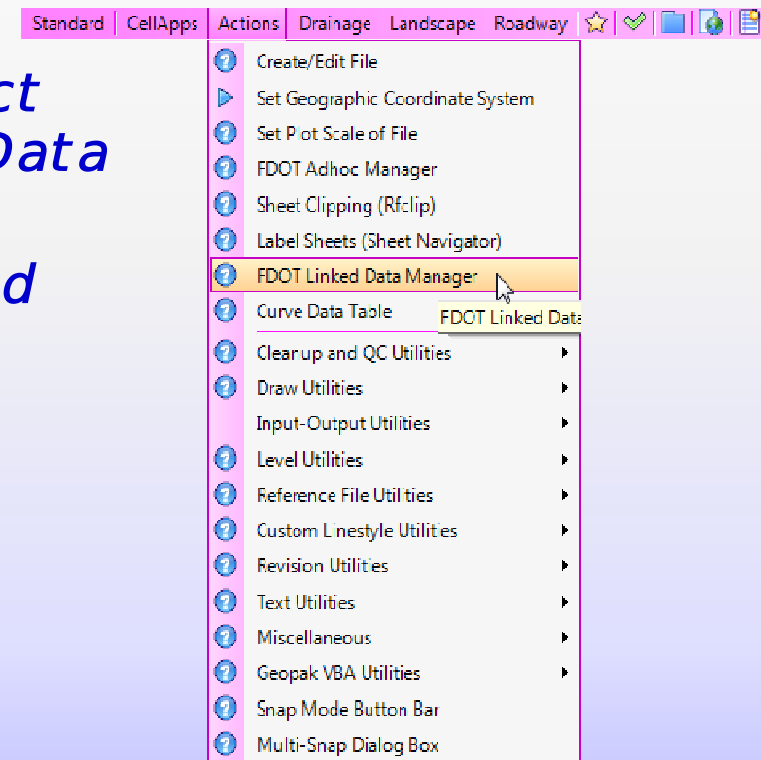
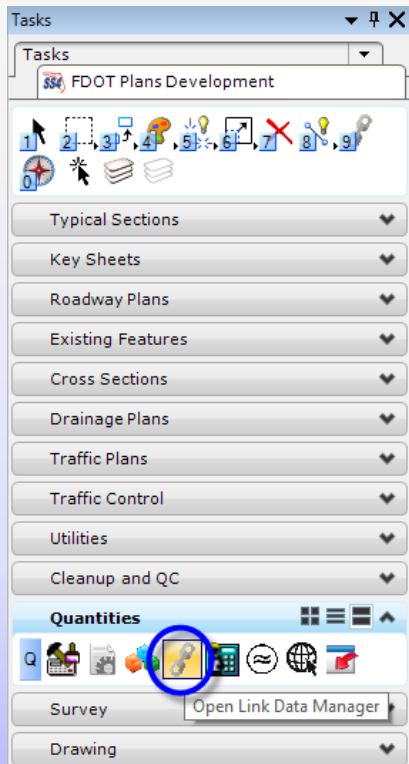
- Repeat steps to calculate the pay items under the Signing category.
 - Change the option from Create to Append before exporting the quantities to the mdb file.

(Alternatively, a collection set can be created for all of the pay items from the 2 categories being used in the project. If created, use the collection set to create the quantities.)



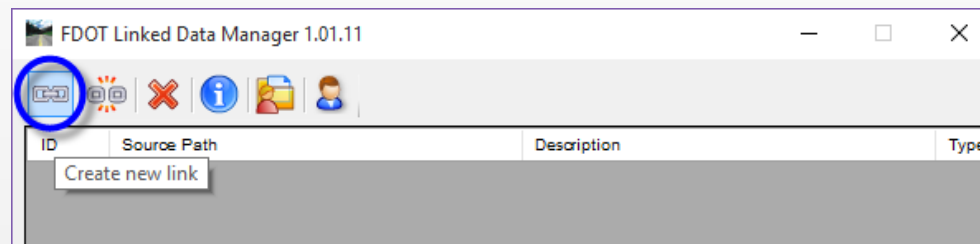
Linked Data Manager

- In MicroStation, create and open the design file, TABQSP01.dgn.
- On the FDOT Menu, select Actions > FDOT Linked Data Manager (LDM).
- LDM can also be accessed from the Quantities task menu.

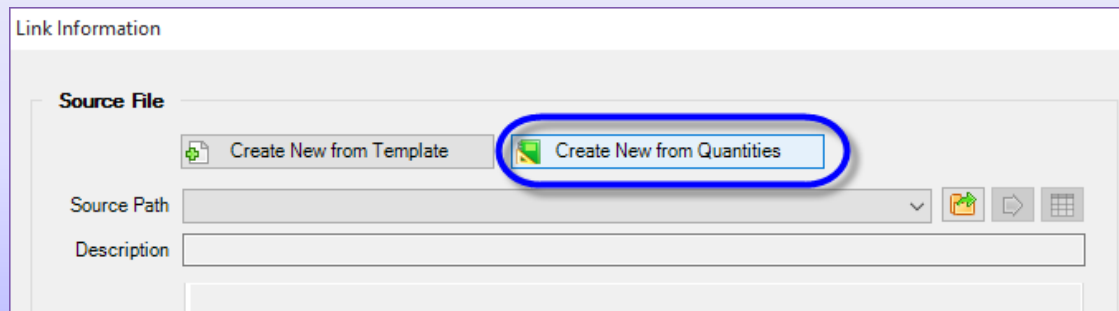


Linked Data Manager

- In LDM, select Create New Link.

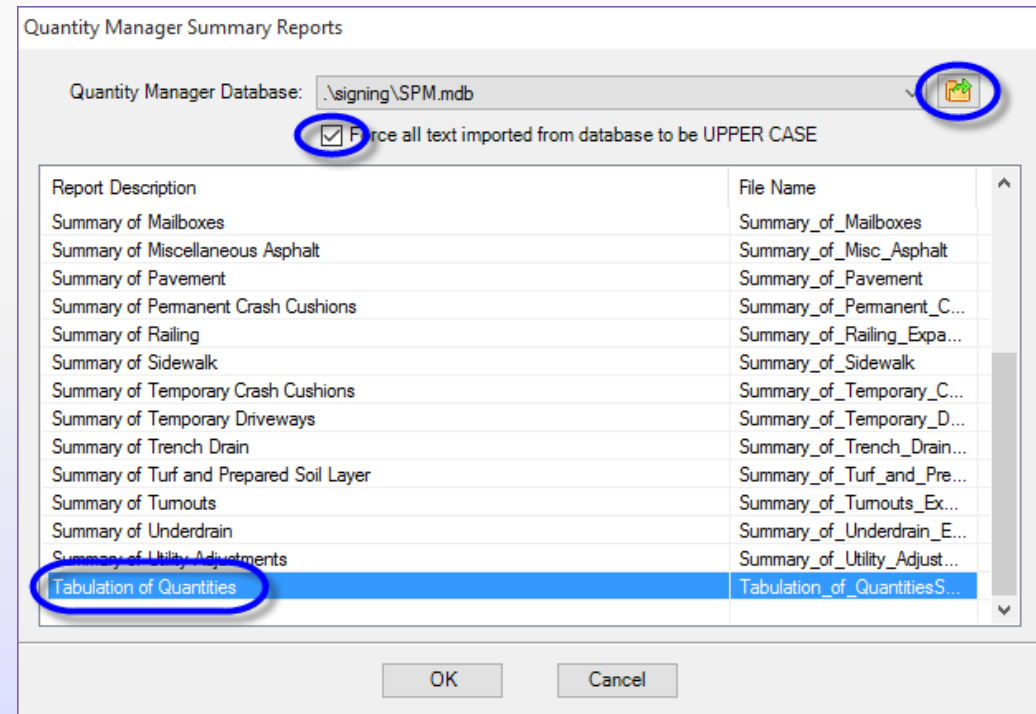


- On the Link Information dialog, select Create New from Quantities.



Linked Data Manager

- On the Quantity Manager Summary Reports dialog, use the Browse button to navigate to and select the mdb database creating with D&C Manager.
- Toggle on the option to force the text to be all upper case.
- Select Tabulation of Quantities from the list of available reports.
- Click OK.



Linked Data Manager

- *On the Save File dialog, navigate to the Signing directory and click Save.*
 - *NOTE: This file name may be changed!*
- *LDM will process the information, create the Excel worksheets and then populate the Link Information dialog box.*
 - *This process may take a minute or two depending on the size of the database.*

Linked Data Manager

- On the Link Information dialog box
 - Type in a Description beneath the Source Path. (Optional)
- Under Quantity Report settings,
 - Toggle on the option to Place Title Block.
 - Modify the Cell Offset X to 0.0.
- Leave the Graphic Settings set to FDOT > Standard.
- Toggle on the desired user options.
- Click OK.

Link Information

Source File

Create New from Template Create New from Quantities

Source Path .\signing\Tabulation_of_QuantitiesSPM.xlsx

Description Optional Description

Quantity Report

Place Title Block

Header Rows 2

Table Array X 18

Cell Library roadway.cel

Cell Name shplan

Cell Offset X 0.0

Cell Offset Y 9.4

Graphics Settings

FDOT Standard

Site

Project

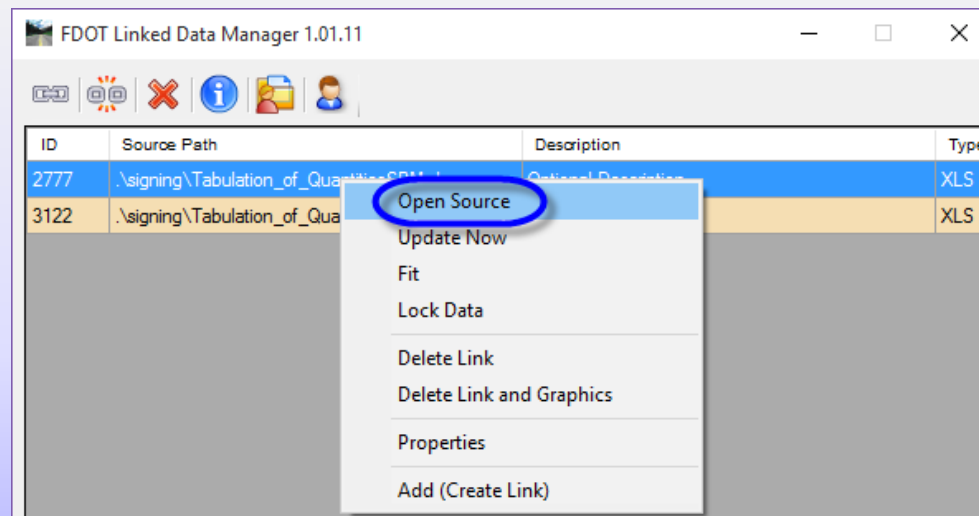
Use Drawing Scale Update Graphics on File Open Lock Graphics Use Print Area

OK Cancel

Linked Data Manager

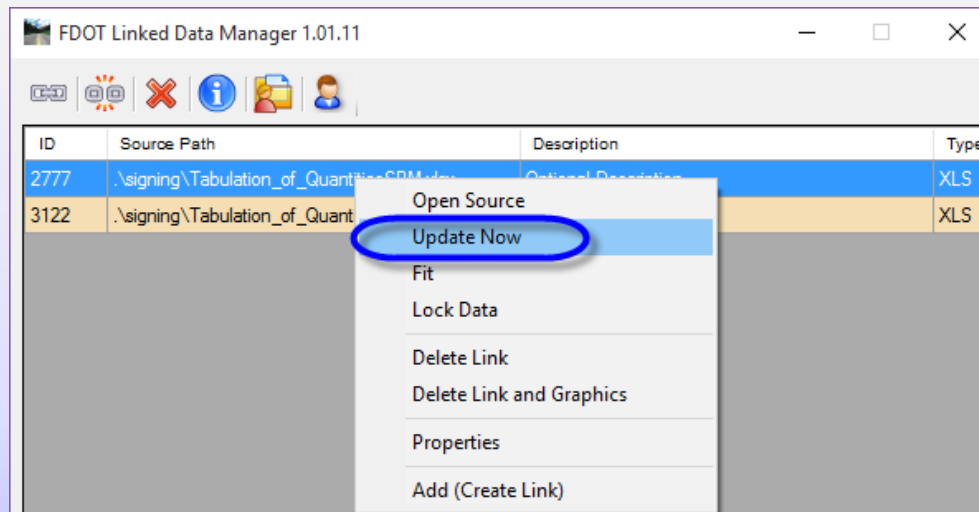
The data in the Excel can be modified if necessary to break down some of the pay items to match the needs for specific districts.

- Right click on the link in the LDM dialog box and select Open Source.



Linked Data Manager

- *Make sure to save the changes in Excel.*
- *In MicroStation, right click on the link in the LDM dialog box and select Update Now.*



Linked Data Manager

- Review the information in MicroStation.

There may be some minor adjustments that will need to be made in Excel to correct the formatting, word wrap, etc. If so, keep in mind that this template is designed to completely fill in the plan sheet. Adjustments to the columns widths can make the table too small or too large, throwing it outside the borders of the plan sheet.

The screenshot displays a MicroStation plan sheet with a 'TABULATION OF QUANTITIES' table. The table has columns for 'PAY ITEM NO.', 'DESCRIPTION', 'UNIT', 'SHEET NUMBERS' (S-11 to S-17), 'TOTAL THIS SHEET', and 'GRAND TOTAL'. The 'SHEET NUMBERS' column is further divided into sub-columns for each sheet (S-11 to S-17). The 'TOTAL THIS SHEET' and 'GRAND TOTAL' columns are also divided into sub-columns for 'QTY' and 'AMOUNT'. The table contains several rows of data, including items like 'PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE' and 'PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE'. An 'FDOT Linked Data Manager 1.01.11' dialog box is overlaid on the table, showing a list of data sources with columns for 'ID', 'Source Path', 'Description', and 'Type'. The dialog box lists two items: '2777' and '3122', both with source paths pointing to 'vegring\Tabulation_of_QuantitiesSPM.xlsx' and descriptions of 'Optional Description'. The dialog box also shows a 'Type' column with values 'XLS' and 'XLS'. The dialog box is titled 'FDOT Linked Data Manager 1.01.11' and has a standard Windows window interface with a title bar, menu bar, and toolbar. The dialog box is positioned over the 'TABULATION OF QUANTITIES' table, partially obscuring some of the data. The table is titled 'TABULATION OF QUANTITIES' and has a header row for 'PAY ITEM NO.' and 'DESCRIPTION'. The 'UNIT' column is also present. The 'SHEET NUMBERS' column is divided into sub-columns for each sheet (S-11 to S-17). The 'TOTAL THIS SHEET' and 'GRAND TOTAL' columns are also divided into sub-columns for 'QTY' and 'AMOUNT'. The table contains several rows of data, including items like 'PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE' and 'PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE'. The dialog box is titled 'FDOT Linked Data Manager 1.01.11' and has a standard Windows window interface with a title bar, menu bar, and toolbar. The dialog box is positioned over the 'TABULATION OF QUANTITIES' table, partially obscuring some of the data. The table is titled 'TABULATION OF QUANTITIES' and has a header row for 'PAY ITEM NO.' and 'DESCRIPTION'. The 'UNIT' column is also present. The 'SHEET NUMBERS' column is divided into sub-columns for each sheet (S-11 to S-17). The 'TOTAL THIS SHEET' and 'GRAND TOTAL' columns are also divided into sub-columns for 'QTY' and 'AMOUNT'. The table contains several rows of data, including items like 'PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE' and 'PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE'.

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			S-11	S-12	S-13	S-14	S-15	S-16	S-17	QTY	AMOUNT	QTY	AMOUNT	QTY	AMOUNT	QTY	AMOUNT			
110-1110	PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE	LF																		
110-1112	PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE	LF																		
110-1113	PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE	LF																		
110-1114	PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE	LF																		
110-1115	PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE	LF																		
110-1116	PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE	LF																		
110-1117	PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE	LF																		
110-1118	PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE	LF																		
110-1119	PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE	LF																		
110-1120	PAINTED PAVEMENT MARKINGS - YELLOW - ISLAND NOSE	LF																		



Questions???

Thank-you for joining today's presentation.

Need some HELP? Contact me...

(850) 414-4751

E-mail: Denise.Broom@dot.state.fl.us

OR: ecso.support@dot.state.fl.us

<http://www.dot.state.fl.us/ecso>

FDOT CADD Support Forum On-line

http://communities.bentley.com/communities/user_communities/fdot_cadd_support/default.aspx