MONTANA
Department of Transportation

Project Development & Delivery - Digital Design and Modeling Services

Tip Guide

Application/Tool(s):	AutoCAD / Civil 3D
Version(s):	13.6.2123.0 Civil 3D 2024.4.6 Update
Environment:	MDT Civil 3D State Kit r2024 v2.3.1
Released/Revised:	3/11/2026

SUPPORT
Open a Case

TIPS FOR SUMMARY SHEETS IN AUTODESK

This document is a supplement to the Summary Frames in Autodesk procedure. It contains guidance for updating summary frames and for adjusting the frames after columns and rows have been added to them.

Acronyms/Definitions Used in This Document

OLE – Object Linking and Embedding. OLEs are embedded copies of information from another document.

References

Summary Sheets in Autodesk Procedure

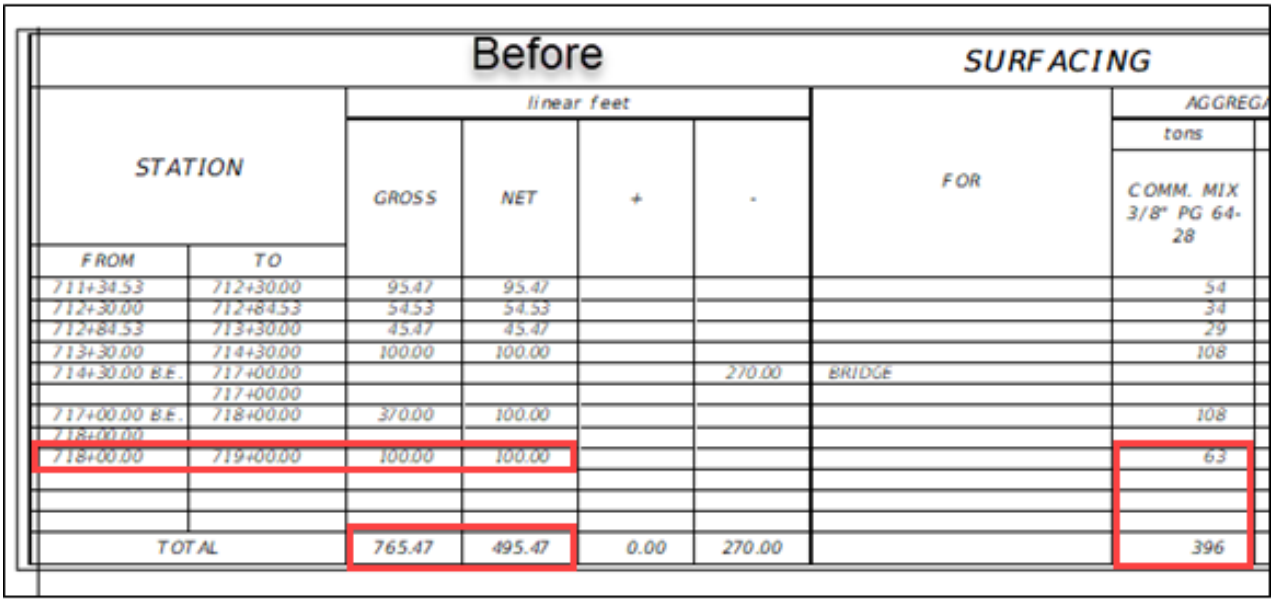
Revisions

3/11/2026	Updates for ADA Accessibility

Updating Summary Frames for Project Changes

Linked OLEs should update automatically after saving changes in Excel. Data values changed in the QMG file will not have an impact to the scaling of the summary frames if the Excel sheet is not saved before tabbing or clicking into the DWG file.

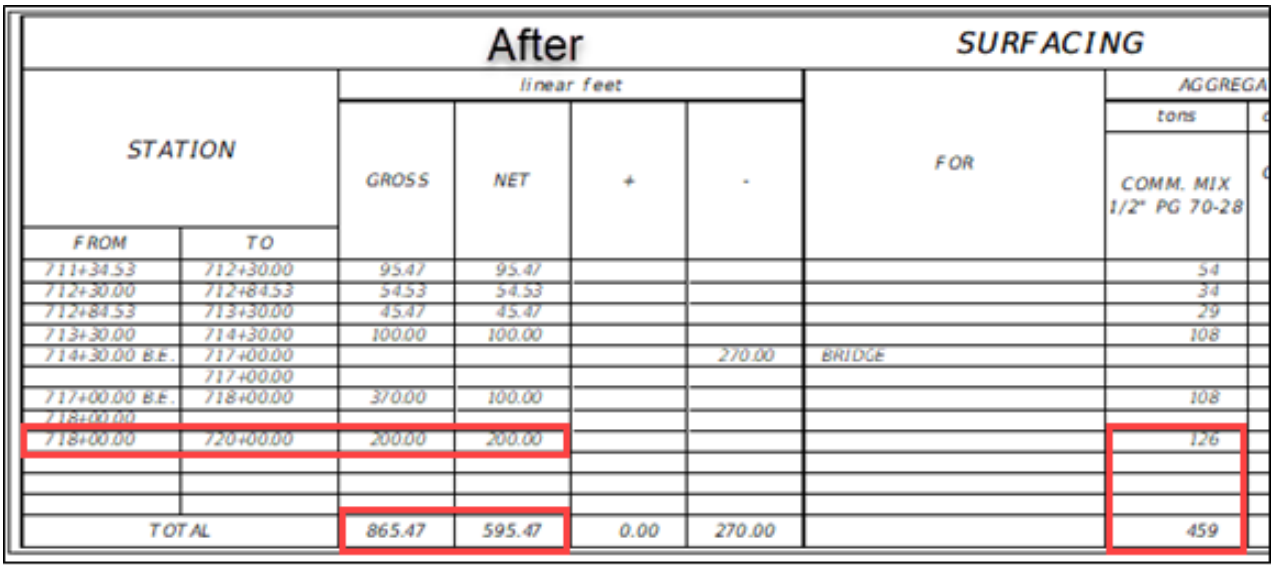
As an example, the Surfacing Section wants to change the grade and size of the plant mix used from **COMM. MIX 3/8" PG 64-28** to **COMM. MIX ½" 70-28** due to an increase in traffic loads. The project manager also wants to extend the end of the project limits. Update the plant mix column in Excel to the requested surfacing recommendation. Update the end station from **719+00** to **720+00** and save the changes. Click back into the **[UPN#]RDSUM001.DWG** file and notice the updates.



Before

SURFACING

STATION		linear feet					AGGREGA
							tons
FROM	TO	GROSS	NET	+	-	FOR	COMM. MIX 3/8" PG 64-28
711+34.53	712+30.00	95.47	95.47				54
712+30.00	712+84.53	54.53	54.53				34
712+84.53	713+30.00	45.47	45.47				29
713+30.00	714+30.00	100.00	100.00				108
714+30.00 B.E.	717+00.00				270.00	BRIDGE	
	717+00.00						
717+00.00 B.E.	718+00.00	370.00	100.00				108
718+00.00							
718+00.00	719+00.00	100.00	100.00				63
TOTAL		765.47	495.47	0.00	270.00		396



After

SURFACING

STATION		linear feet					AGGREGA
							tons
FROM	TO	GROSS	NET	+	-	FOR	COMM. MIX 1/2" PG 70-28
711+34.53	712+30.00	95.47	95.47				54
712+30.00	712+84.53	54.53	54.53				34
712+84.53	713+30.00	45.47	45.47				29
713+30.00	714+30.00	100.00	100.00				108
714+30.00 B.E.	717+00.00				270.00	BRIDGE	
	717+00.00						
717+00.00 B.E.	718+00.00	370.00	100.00				108
718+00.00							
718+00.00	720+00.00	200.00	200.00				126
TOTAL		865.47	595.47	0.00	270.00		459

The OLE automatically updates to match the data in Excel. Since no formatting was changed, no scaling in Autodesk was affected. The same functionality is kept when unhiding columns in Excel. However, this functionality is not kept when inserting rows or columns into a summary frame.

Continuing the example, the project team is requesting that the project receive a chip seal due to increasing the aggregate size of the plant mix. Construction is also requesting that hydrated lime be shown in the surfacing frame for information for the contractor. A Cover – Type 1 column needs to be added to the summary frame, which will require unhiding a column in the surfacing frame. In Excel, **UNHIDE** the columns to the left of the **PLANT MIX** column to reveal the **COVER – TYPE 1** and **HYDRATED LIME** columns. Save the changes and return to the **[UPN#]RDSUM001.DWG** file in Autodesk. Notice the changes.

Summary frame with hidden columns:

Before

SURFACING

STATION		linear feet				FOR	AGGREGATE		BITUMINOUS MATERIAL		REMARKS
							tons	cu. yards	gals.	sq. yards	
FROM	TO	GROSS	NET	+	-		COMM. MIX 3/8" PG 64-28	CRUSHED AGG. COURSE	EMULSIFIED ASPHALT TACK	AGG. TREAT.	
711+34.53	712+30.00	95.47	95.47				54	94	29	292	TYP. NO. 1 TRANS TO TYP. NO. 2, RT
712+30.00	712+84.53	54.53	54.53				34	59	19	185	TYP. NO. 2 TRANS. TO TYP. NO. 3
712+84.53	713+30.00	45.47	45.47				29	49	15	155	TYP. NO. 3 THEN TYP. NO. 4
713+30.00	714+30.00	100.00	100.00				108	157	54	360	TYP. NO. 4
714+30.00 B.E.	717+00.00				270.00	BRIDGE					
	717+00.00										
717+00.00 B.E.	718+00.00	370.00	100.00				108	157	54	360	TYP. NO. 4 TRANS. TO TYP. NO. 5
718+00.00											TYP. NO. 5 THEN TYP. NO. 6
718+00.00	719+00.00	100.00	100.00				63	109	34	340	TYP. NO. 6 TRANS. TO TYP. NO. 1, LT
TOTAL		765.47	495.47	0.00	270.00		396	625	205	1,692	

Summary frame after columns were unhidden:

After

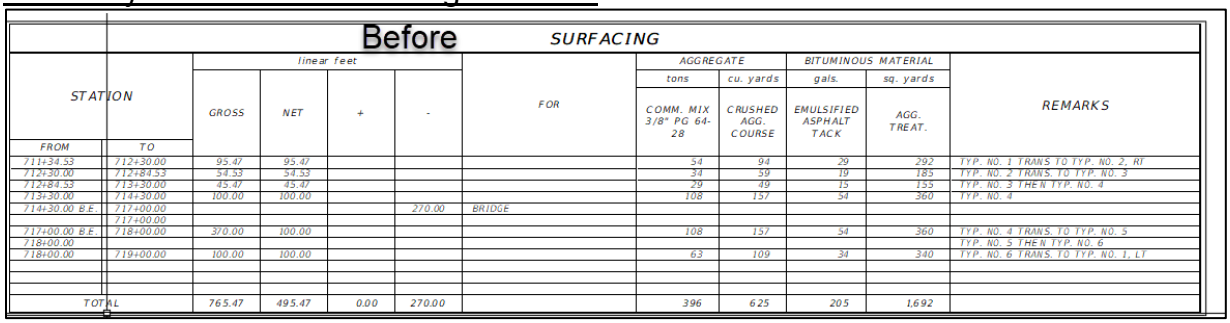
SURFACING

STATION		linear feet				FOR	tons	AGGREGATE			BITUMINOUS MATERIAL		REMARKS
								sq. yards	tons	cu. yards	gals.	sq. yards	
FROM	TO	GROSS	NET	+	-		HYDRATED LIME	COVER TYPE 1	COMM. MIX 1/2" PG 70-28	CRUSHED AGG. COURSE	EMULSIFIED ASPHALT TACK	AGG. TREAT.	
711+34.53	712+30.00	95.47	95.47						54	94	29	292	TYP. NO. 1 TRANS TO TYP. NO. 2, RT
712+30.00	712+84.53	54.53	54.53						34	59	19	185	TYP. NO. 2 TRANS. TO TYP. NO. 3
712+84.53	713+30.00	45.47	45.47						29	49	15	155	TYP. NO. 3 THEN TYP. NO. 4
713+30.00	714+30.00	100.00	100.00						108	157	54	360	TYP. NO. 4
714+30.00 B.E.	717+00.00				270.00	BRIDGE							
	717+00.00												
717+00.00 B.E.	718+00.00	370.00	100.00						108	157	54	360	TYP. NO. 4 TRANS. TO TYP. NO. 5
718+00.00													TYP. NO. 5 THEN TYP. NO. 6
718+00.00	719+00.00	100.00	100.00						63	109	34	340	TYP. NO. 6 TRANS. TO TYP. NO. 1, LT
TOTAL		765.47	495.47	0.00	270.00		0	0	396	625	205	1,692	

Since Excel and Autodesk recognize the hidden cells in the link, all scaling is kept the same and the summary frame is updated without removing data from the OLE upon updating.

Undo all changes made in Excel through the previous examples. Update the summary frame by **INSERTING** two columns for Hydrated Lime and Cover Type 1. Save the QMG file, and notice the changes made in Autodesk.

Summary frame before inserting columns:

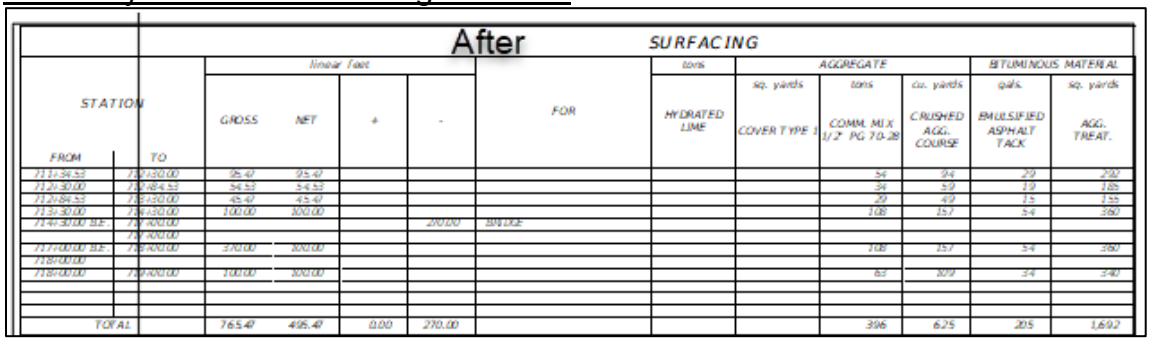


Before

SURFACING

STATION FROM	STATION TO	linear feet GROSS	linear feet NET	linear feet +	linear feet -	FOR	AGGREGATE tons COMM. MIX 3/8" PG 64-28	AGGREGATE cu. yards CRUSHED AGG. COURSE	BITUMINOUS MATERIAL gals. EMULSIFIED ASPHALT TACK	BITUMINOUS MATERIAL sq. yards AGG. TREAT.	REMARKS
711+34.53	712+30.00	95.47	95.47				54	94	29	292	TYP. NO. 1 TRANS TO TYP. NO. 2, RT
712+30.00	712+84.53	54.53	54.53				34	59	19	185	TYP. NO. 2 TRANS. TO TYP. NO. 3
712+84.53	713+30.00	45.47	45.47				29	49	15	155	TYP. NO. 3 THEN TYP. NO. 4
713+30.00	714+30.00	100.00	100.00				108	157	54	360	TYP. NO. 4
714+30.00 B.E.	717+00.00				270.00	BRIDGE					
	717+00.00										
717+00.00 B.E.	718+00.00	370.00	100.00				108	157	54	360	TYP. NO. 4 TRANS. TO TYP. NO. 5
718+00.00											TYP. NO. 5 THEN TYP. NO. 6
718+00.00	719+00.00	100.00	100.00				63	109	34	340	TYP. NO. 6 TRANS. TO TYP. NO. 1, LT
TOTAL		765.47	495.47	0.00	270.00		396	625	205	1,692	

Summary frame after inserting columns:



After

SURFACING

STATION FROM	STATION TO	linear feet GROSS	linear feet NET	linear feet +	linear feet -	FOR	tons HYDRATED LIME	AGGREGATE sq. yards COVER TYPE 1	AGGREGATE tons COMM. MIX 1/2" PG 70-28	AGGREGATE cu. yards CRUSHED AGG. COURSE	BITUMINOUS MATERIAL gals. EMULSIFIED ASPHALT TACK	BITUMINOUS MATERIAL sq. yards AGG. TREAT.
711+34.53	712+30.00	95.47	95.47						54	94	29	292
712+30.00	712+84.53	54.53	54.53						34	59	19	185
712+84.53	713+30.00	45.47	45.47						29	49	15	155
713+30.00	714+30.00	100.00	100.00						108	157	54	360
714+30.00 B.E.	717+00.00				270.00	BRIDGE						
	717+00.00											
717+00.00 B.E.	718+00.00	370.00	100.00						108	157	54	360
718+00.00												
718+00.00	719+00.00	100.00	100.00						63	109	34	340
TOTAL		765.47	495.47	0.00	270.00				396	625	205	1,692

The new columns are not recognized in the original OLE and data was lost from the summary frame. In this case the **REMARKS** column was removed. The OLE in Autodesk recognizes the original column/row designation from the initial copy and paste operation. The data was not removed from the Excel file, but the OLE sees it as being replaced with new information. For this reason, **it is best practice to hide and unhide cells when working with summary frames**. If new columns or rows are needed, the original OLE must be deleted and the copy and paste special operations must be repeated.

If a column or cell is resized in Excel, some scaling changes may occur in Autodesk. If the spreadsheet is not saved before tabbing or clicking into the **[UPN#]RDSUM001.DWG** file, Autodesk will adjust text widths and heights to match the “new” scale of the OLE object. Additionally, saving in Excel will automatically update changes made to the summary frame in Autodesk without the need for having to tab or click into the **[UPN#]RDSUM001.DWG** file.