



Workflow 2: Generating Proposed Cross Sections

1. Select Proposed Cross Sections button from the Project Manager Workflow Dialog Box.

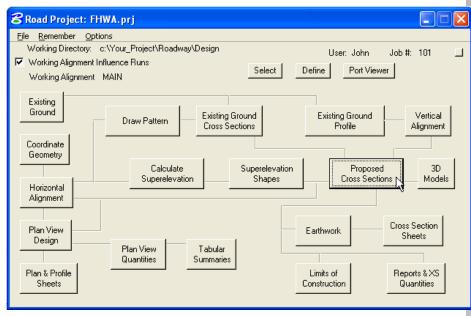


Figure 8-9: Accessing Proposed Cross Sections

2. The following dialog will be activated, since no run exist for the example Select New to create a Run.

웅 Select Run		\mathbf{X}
Run		
New	Time	
opy ►	04/06/2006	09:17:18
<u>M</u> odify		
<u>D</u> elete		
Description		
Untitled		
1		
	OK	Cancel

Figure 8-10: Create a New Run



- *3. Create a New Run by entering the run name and description and select OK.*

8 New Run	Name		\mathbf{X}
Run Name:	MAIN		
Description	Proposed Mainline		
	<u>0</u> K	Cancel	

Figure 8-11: New Run

4. From the Select Run dialog, select the newly created run MAIN and select OK.

웅 Select Ri	in 📲	×
<u>R</u> un		
Name	Time	
MAIN	04/10/2006 15:12:00	
Untitled	ようしている 03:17:18 04/06/2006 09:17:18	
Description		
Proposed Mai	nline	
	OK Cancel	

Figure 8-12: Select New Run

5. Selecting a Run will access the Proposed Cross Section Dialog.

8 Proposed Cross S	ections - MAIN	
Eiles		
XS DGN File Pattern Existing Ground Shapes Shape Clusters Define DGN Variables Define Variables Plot Parameters	▲ ▼	

Figure 8-13: Proposed Cross Sections Dialog

The Proposed Cross Section run shown in this workflow will be for an Undivided New Pavement Typical Section.



CFLHD CADD Standards Manual Chapter 8 — Cross Sections





The proposed Cross section run holds the same information as the former Proposed Cross Section Input File and Exception Data File that were used with .X10 criteria.

6. Select the XS DGN File from the Proposed Cross Section dialog. Note that the dialog box is already filled in by the Working Alignment definition.

8 Proposed Cross S	ections - MAIN	
Eiles XS DGN File Pattern Existing Ground Shapes Shape Clusters Define DGN Variables Define Variables Plot Parameters	▲ XS DGN File c:\Your_Project\Roadwa Tolerance 0.010000	Files

Figure 8-14: Selecting XS DGN File



The tolerance should always be set to 0.01 for English projects and 0.003 for Metric projects. The tolerance setting is very important and the proposed cross section will not process without setting this value.

7. Select the Pattern and toggle on Use Working Alignment Definition.

8 Proposed Cross S	ectio	ns - MAIN
<u>F</u> iles		
XS DGN File Pattern Existing Ground Shapes Shape Clusters Define DGN Variables Define Variables Plot Parameters	•	✓ Use Working Alignment Definition By DGN File Chain MAIN Select Horiz. Scale 1 Vert. Scale 1 DGN File File Search Criteria File ✓ Lv Names: P_GPK_Pattern_01 ✓ Lv Numbers: ✓ Colors: ByLevel ✓ Styles: ByLevel ✓ Veights: ByLevel ✓ Types: 3-4 Match Display Reset

Figure 8-15 Selecting Pattern







8. Select the Existing Ground and toggle on Use Working Alignment Definition.

Files XS DGN File Pattern Existing Ground Shapes Shape Clusters Define DGN Variables Define Variables Plot Parameters V Use Working Alignment Definition DGN File Files Search Criteria V Names: X_E_Ground_XS V V Numbers: V Colors: ByLevel
Weights: ByLevel Types: 3-4 Match Display

Figure 8-16 Selecting Existing Ground

9. Select the Shapes and toggle on Use Working Alignment Definition.

8 Proposed Cross S	ections - MAIN	
<u>Fi</u> les		
XS DGN File Pattern Existing Ground <mark>Shapes</mark> Shape Clusters Define DGN Variables Define Variables Plot Parameters	Use Working Alignment Definition	Files

Figure 8-17: Selecting Shapes

The Working Alignment Definition toggle can be used for Pattern, Existing Ground and Shapes; these were previously defined for this working alignment. Shapes can be selected using Working Alignment definition, All in DGN, By Search Criteria, or in Shapeless Mode. Proposed Cross Sections should be run in shapeless mode for Existing Features, Existing and Proposed Right of Way, and Cross Section Labeling Typical Sections.



10. Select Shape Clusters from the Proposed Cross Section dialog. The following dialog box will appear. Select Scan.

2 Proposed Cross Sec	tions - MAIN	
<u>Fi</u> les		
XS DGN File Pattern Existing Ground Shapes Shape Clusters Define DGN Variables Define DGN Variables Define Variables Plot Parameters	Chain Tie/PGL Profile Chain Chain TieO.00000(Prof AddModifyDeleteUp	Typical Thick
Side Slope Condition	lodify Delete Up	Down
Criteria File		
Name	Description	
Add	Delete Up Do	own

Figure 8-18: Selecting Shape Clusters

11. Selecting Scan button will access the List of Clusters dialog box as shown below. Select the shape cluster and close the dialog box.

BList of Clusters			
Chain <mark>MAIN</mark>	Tie/PGL 0.000000	Profile PRMAIN	
			45
	Cle	ose	



12. Select the add button from the main shape cluster dialog box to add the shape cluster to the list box as shown.

8 Proposed Cross Section	ons - MAIN	
<u>Fi</u> les		
XS DGN File	Chain Tie/PGL Profile	
Pattern Existing Ground Shapes Shape Clusters	MAIN 0.000000 PRMAI	N Typical
D.C. DONLY 111	Chain MAIN <u>Tie</u> 0.00000	Prof PRMAII Scan

Figure 8-20: Add List of Clusters







13. Once the shape cluster is added to the list box, highlight the information in list box shown and the Typical button will become active. Select the Typical button to access the Typical Section Generator.

8 Proposed Cross S	ecti	ons - MAIN			
<u>F</u> iles					
XS DGN File Pattern Existing Ground Shapes Shape Clusters	•	Chain MAIN	Tie/PGL 0.000000	Profile PRMAIN	Thick
Define DGN Variables Define Variables Plot Parameters		Chain MAIN	Tie Modify	0.0000(Prof PF	

Figure 8-21: Select Typical Section

14. Through the Typical Sections Generator, 6 Typical Sections are available. Select UNPAVT for undivided new pavement. In the Range window, Select Apply to Whole Chain and then Select Apply button at the bottom of the dialog box.

If the proposed cross section need to be processed for a station range, select By Station Range and then define begin and end stations.

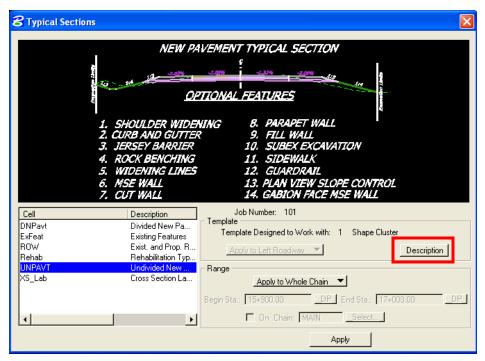


Figure 8-22: Choose Typical Section







Select the Description button in the Typical Section dialog box to access the online help for the highlighted Typical Section. Help document provides detailed drawings, descriptions and information on how each of the Typical Sections work.

The help files can also be accessed outside the Typical Sections Dialog Box. For Consultants, **Help** documentations are available through the **V8_Resource.zip** download on CFLHD Website. Help files (*.wri files) are available in the *V8_Resource\X_30\Typicals\ English or Metric directory.*

The **Help** documentations can be found on the CFLHD network at: *N:\Standards\V8_RESOURCE\X_30\Typicals\English or Metric directory.*

15. By selecting apply in the dialog box above, the criteria files associated with the selected Typical Section is populated into the main Proposed Cross Section dialog box.

S DGN File Chain Tie/PGL Profile Pattern MAIN 0.000000 PRMAIN TV ixisting Ground MAIN 0.000000 PRMAIN TV Shapes Chain MAIN 0.000000 PRMAIN TV Shapes Chain MAIN Tie 0.000001 Prof PRMAII S Define DGN Variables Chain MAIN Tie 0.000001 Prof PRMAII S Side Slope Condition Add Modify Delete Up D LT T Define Modify Delete Up Down
Shapes Shape Clusters Define DGN Variables Chain MAIN Tie 0.00000 Prof PRMAII S Define Variables Add Modify Bedefinable Variables Add Modify Side Slope Condition LT
Redefinable Variables Add Modify Delete Up D Side Slope Condition LT
DefineModifyDeleteUpDown
Criteria File
Name Description shoulder x30 Shoulder 09-27-2007.
slopes.x30 Slopes 09-27-2007.
dioposito er coor.

Figure 8-23: Populated Shape Cluster

16. The Define DGN Variables is not applicable for Undivided New Pavement Typical and should be left blank. This variable is used only with Automated Cross Section Labeling Typical.





17. Select Define Variables and edit Cross Section Dgn, Proposed Plan Dgn and Geopak Lines Dgn values. Edit the default value of the variable and select Modify to accept.

8 Proposed Cross Sectio	ns - MAIN	
<u>Fi</u> les		
XS DGN File Pattern Existing Ground Shapes Shape Clusters	Variable PROJECT UNITS E OR M CROSS SECTION DGN PROPOSED PLAN DGN GEOPAK LINES DGN TEXT SIZE	Value E cross.dgn plan.dgn 1.2
Define DGN Variables Define Variables Redefinable Variables	By file All 🔻	Select
	SS SECTION DGN I\Roadway\Design\XS_101_APP1. 	

Figure 8-24: Populated Shape Cluster

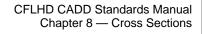


If any of the dgn files are not in the working directory, the full file path must be specified. These dgn files are used by criteria to search for plan view elements.

18. Select Redefinable Variables as shown below. Select the Edit button to modify each of the default variables and to set project specific values.

8 Prop	osed Cross S	ect	ior	is - MAIN	
<u>Fi</u> les					
Shapes Shape (Define Define \	Ground	•		Variable _d_DefinePavementLayers _d_FirstFullLengthLayer _s_PavementClosureOption _d_SurfacingLayer1Thickness _d_SurfacingLayer2Thickness _d_SurfacingLayer3Thickness	▲ ▼
	efine				_
				•	
/* o	ff vertically and i	not c	dayl	ment that are to be closed */ ighted to shoulder */ en guardrail or aggregate */	.
1		с. пу		Edit	

Figure 8-25: Redefinable Variables







Never remove the default syntax of "if (Sta>=0+00 R 1) then" from beginning of each of the redefinable variable statements. When editing the station ranges for the redefinable variables, make sure { and } are placed after every "if, then" statement. Station ranges should be defined in the order of the baseline stationing. "and", "or" and "not" are all valid syntax to use when editing redefinable variables.

The changes made to the define variables and redefinable variables are stored in the proposed cross section run, criteria is not being modified. Every time a Typical Section is reapplied (shape clusters populated), the proposed cross section run will be overwritten, therefore your define variables and redefinable variables will go back to default. Prior to reapplying a Typical Section, makes sure to create an input file by selecting File>Export or make a copy of the pxsprj.inp file and save as a different name. The backed up input file can be used to copy and paste project specific values to your default proposed cross section run.

19. Select Plot Parameters and toggle off all the plot options as shown below.

8 Proposed Cross Section	ns - MAIN			
<u>Fi</u> les				
Existing Ground Shapes Shape Clusters Define DGN Variables Define Variables Redefinable Variables Plot Parameters Drainage	XS Lines	Sanole Sanole Sanole		
Transition Definition				
Intersect between Clusters				
Process Clusters as Indicated				
🔲 🔲 Remove Skewed Effect				
Process Only Sections V	/ith Existing Ground			

Figure 8-26: Plot options

20. Select the drainage, this should be left blank. This will not apply to the 6 Typical Sections. Once the run has been modified for the working alignment, Select Files >Save Settings to save your run.





B Proposed Cross	Sections - MAIN	
<u>Fi</u> les		
Run Save Settings Export Exit Define Variables Redefinable Variables	XS DGN File c:\Your_Project\Roadwa Tolerance 0.010000	Files

Figure 8-27: Save Settings

21. Select Files >Run to process your proposed cross sections.

8 Proposed Cross Sections - MAIN	
Files Pun Save Settings Export Exit Define Variables Redefinable Variables	Files

Figure 8-28: Run Proposed Cross Section

22. The following Proposed Cross Section Run dialog box will appear. Select the To Log File, change To Screen if no log file is desired. Select the Apply Button to process the proposed cross sections to your XSDGN file.

8 Proposed Cross Section	X
To Log File To Screen ▼	
 Pause On Each Section Criteria Viewer 	

Figure 8-29: Process Proposed Cross Section

