



Workflow 1: Creating Plan/Profile sheets using GEOPAK

1. *Open the Clip.dgn and invoke Plan and Profile Sheet Composition tool from Project Manager by selecting the button for Plan & Profile Sheets. Select a Run or create a new Run.*

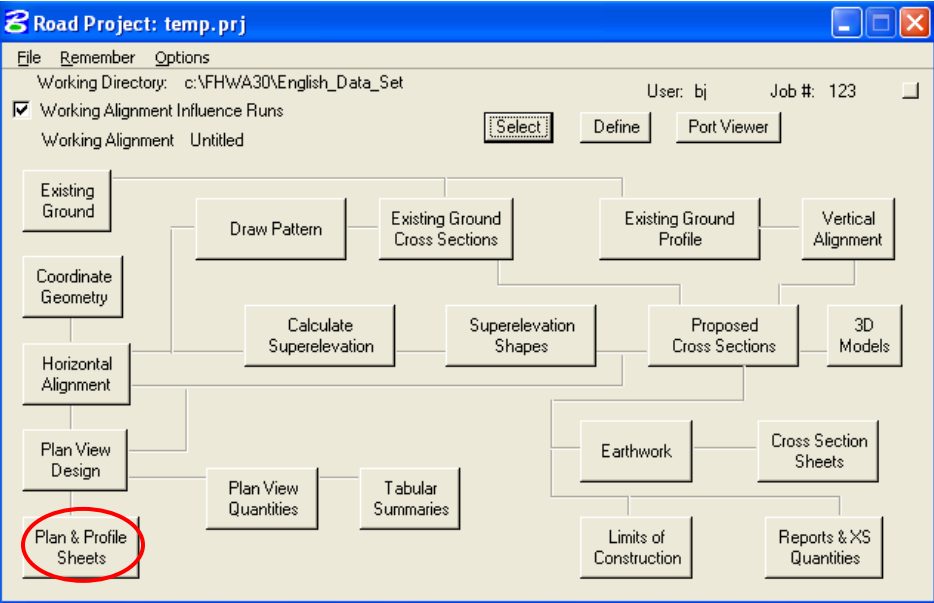


Figure 9-1: Project Manager

The example below is focused on clipping an English project using 100 Scale Plan/Profile sheets.

2. *The following Plan Sheet Layout dialog box appears. Select 100 Scale P_P using the drop down arrow, and select 2.0000 ft/in as shown below for Scale field.*

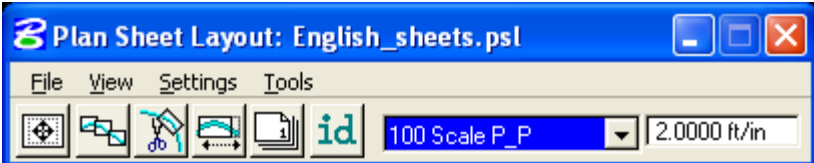


Figure 9-2: Plan Sheet Layout Dialog

3. *From the Plan Sheet Layout dialog box, select Settings > Sheet Layout, modify the Sheet Layout Settings as shown below and select OK:*

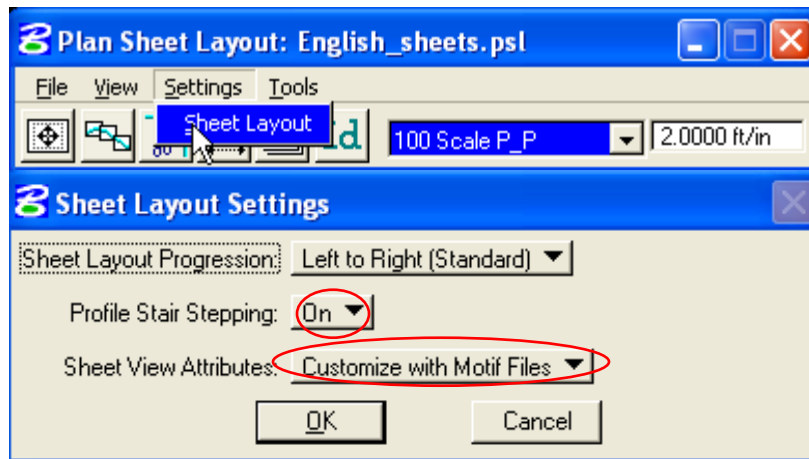


Figure 9-3: Sheet Layout Settings

4. Invoke the Sheet Composition dialog by clicking on the Sheet Composition icon from the Plan Sheet Layout dialog as shown below:

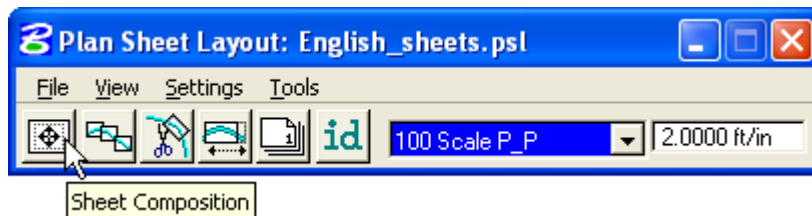


Figure 9-4: Plan Sheet Layout Dialog

5. Modify the Sheet Composition dialog box as shown below:

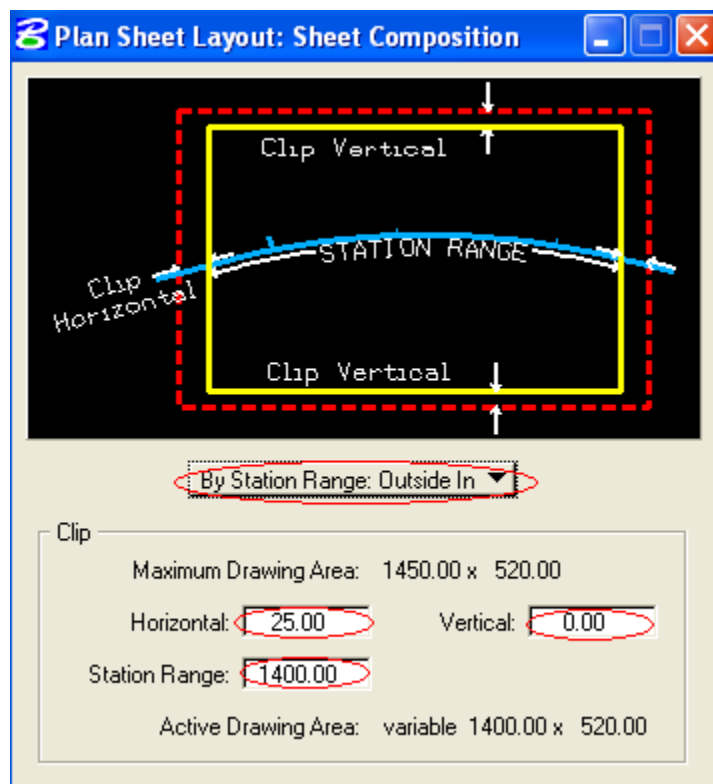


Figure 9-5: Sheet Composition

The above sheet composition dialog setting shows "sheet style" for 100 Scale P_P Sheet. Sheet styles have been created for English and Metric projects. Click [HERE](#) for other sheet style settings located at the end of this documentation.

6. Invoke the Layout Sheets tools by selecting the Layout Sheets icon from the Plan Sheet Layout dialog as shown below:

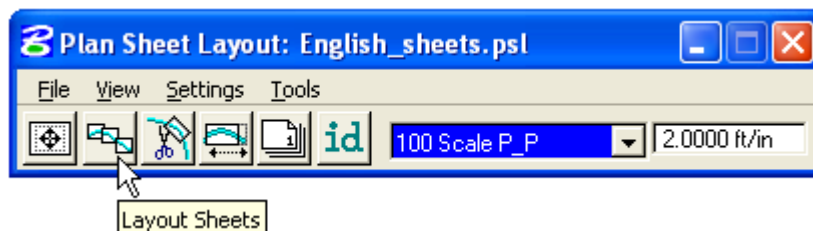


Figure 9-6: Plan Sheet Layout Dialog

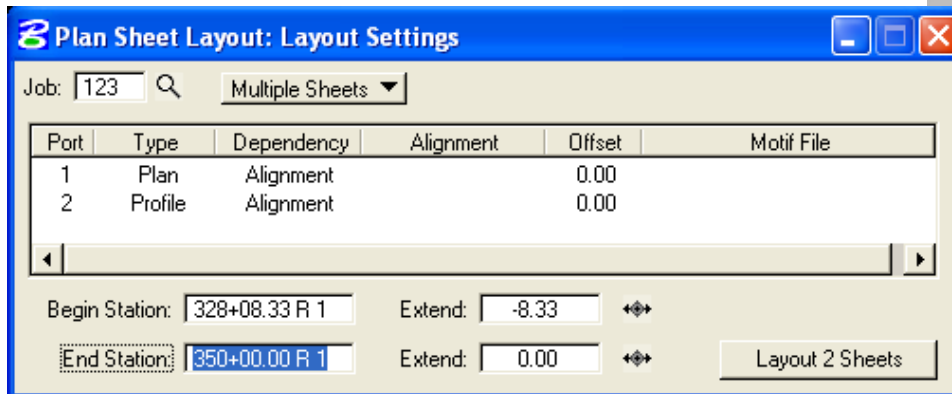


Figure 9-7: Layout Settings

7. Select *Multiple Sheets* from the dialog box and Select the GPK file by keying it into the "Job:" box, or by browsing using the file open icon.
8. To populate the *Plan Port Data* dialog box, double click along the row for Port 1 in the *Layout Settings* dialog box and the following dialog box will be invoked.

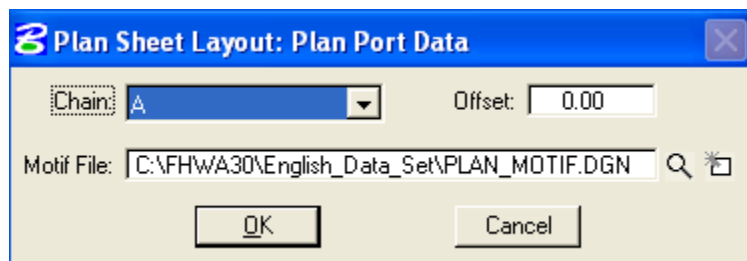


Figure 9-8: Plan Port Data

9. Select the correct *Chain* and the appropriate *Plan Motif* file. Select *OK*. If the *Motif File* has not been created, create *Motif* files using the *Create Motif File* icon as shown below:

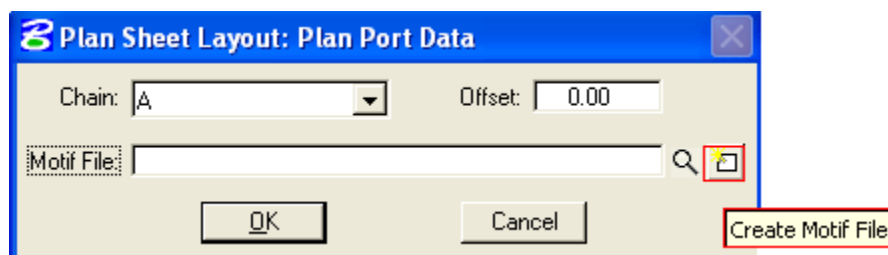


Figure 9-9: Plan Port Data - Create Motif File

Motif file should be created from a 2D seed file. After creating the Motif file, make sure to attach the required reference files.



To create Double Plan Sheets (plan/plan), attach Plan Motif File to Port 1 and 2.

10. To populate the Profile Port Data dialog box, double click along the row for Port 2 in the Layout Settings dialog box and the following dialog box will be invoked.

Plan Sheet Layout: Profile (VERT)

Profile Data

Profile: VERT

Chain: A

Station: 328+08.33 R 1

Elevation: 7300.00

Horizontal Scale: 100.00

Vertical Scale: 10.00

By DP X: 530185.12
Y: 1833037.11

Equation Treatment: No Gap

Profile Cell

Draw Cell at X,Y Identify Cell Identify Profile Port

Motif File

C:\FHWA30\English_Data_Set\PROFILE_MOTIF.DG

OK Cancel

Figure 9-10: Profile Layout

11. If a profile cell exists for the file that is referenced to the Clip.dgn file, then select on Identify cell, place data point on the profile cell and accept. Profile Data dialog fields can be populated using this method, or manually enter in the required information.
12. Select the appropriate Profile Motif file. Select OK. If the Motif file has not been created, create Motif files using a 2D seed file as outlined in step 9.
13. GEOPAK will calculate the number of sheets to layout. Number of sheets calculated will be placed on the button at the bottom right of the Layout Settings dialog box. Use the "Extend" distance field to shift the clipping shapes ahead or back a given distance from begin and end stations. If the number of sheets is acceptable,



press the Layout # Sheets button and GEOPAK will draw clipping shapes into the drawing.

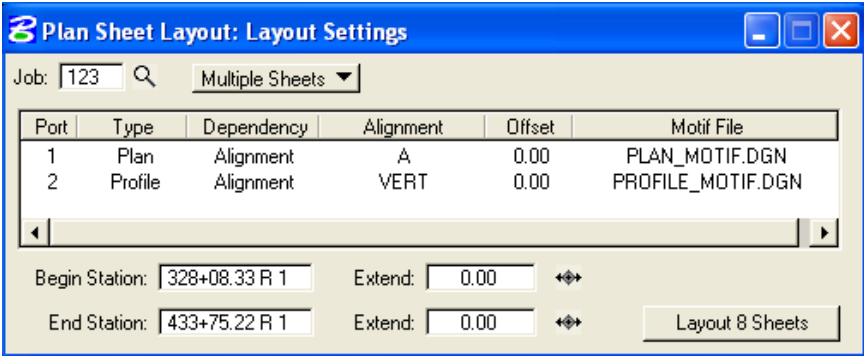


Figure 9-11: Layout Settings

In order for the data to be clipped correctly, use the Sheet Layout Modify Tools. Two most common types of modification supported are sliding the sheets and modifying the drawing area. The drawing area cannot be increased in Length (Horizontal) or Height (Vertical) to exceed the drawing area setup in the sheet library.

- 14. *For extremely curved chains and steep vertical curves it may be necessary to modify the clipping shapes. To invoke the Modify tools, use the Modify Sheets icon from the Plan Sheet Layout dialog as shown below:*

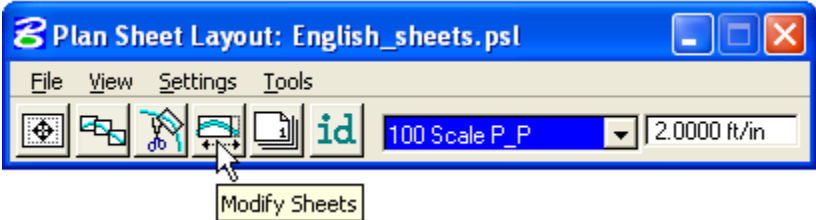


Figure 9-12: Plan Sheet Layout Dialog

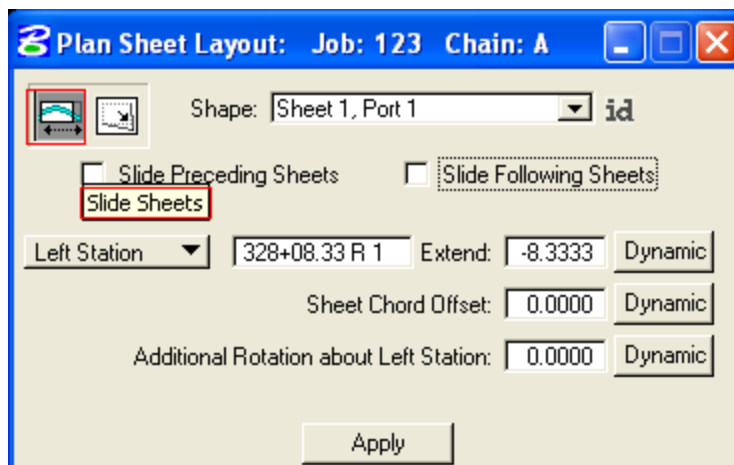


Figure 9-13: Modify Sheet Layout-Plan

15. Use the drop down arrow to select the clipping shape to be modified from the list or Identify the clipping shape by clicking on the ID button and then data pointing the clipping shape.

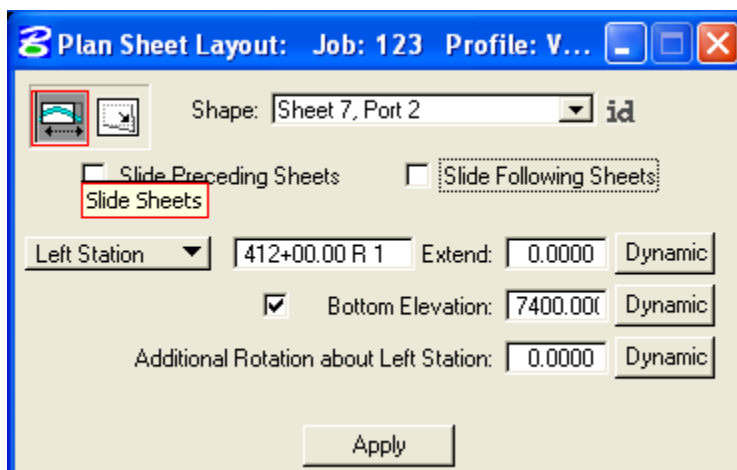


Figure 9-14: Modify Sheet Layout-Profile



NOTE: The application is intelligent enough to know whether a Plan clipping shape or Profile clipping shape has been identified. When a Profile clipping shape is identified, the "Sheet Chord Offset" field changes to "Bottom Elevation", (as shown above). When modifying the vertical position of a Profile clipping shape, toggle "Bottom Elevation" ON, type in the desired "bottom of the shape" elevation, or press **Dynamic** and move the shape up or down.

Drawing area cannot be increased horizontally or vertically to exceed the drawing area setup in the Sheet Library.



16. Use the Sheet Number Manager tool to number sheet to CFL standards. To invoke the Sheet Number Manager tool, use the Sheet Number Manager icon from the Plan Sheet Layout dialog as shown below:

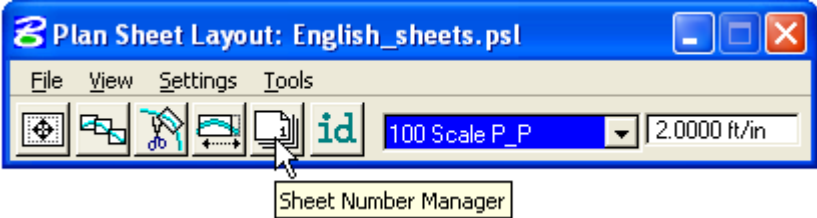


Figure 9-15: Plan Sheet Layout Dialog

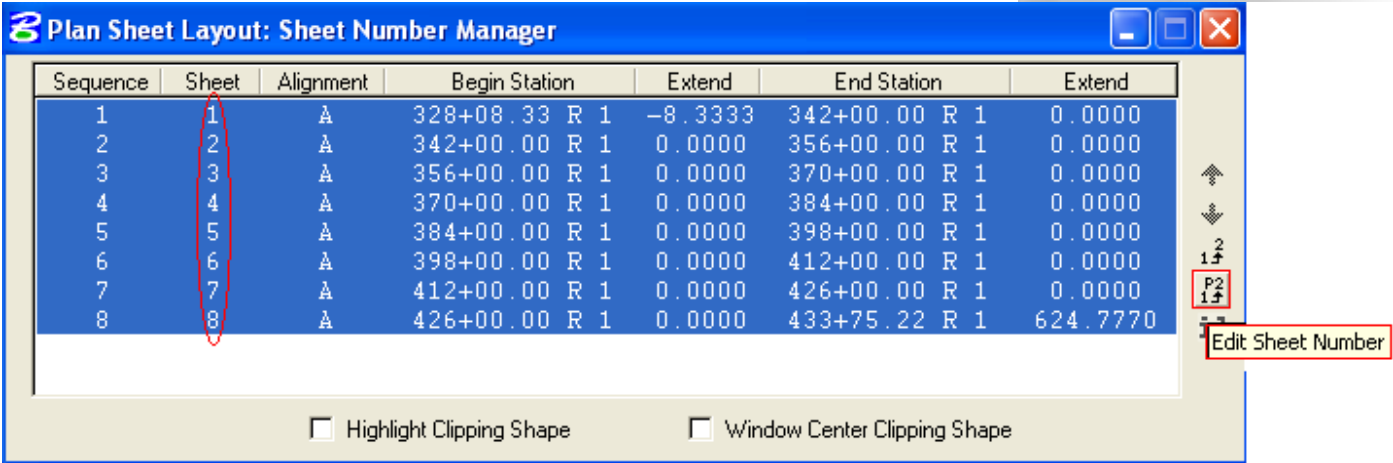


Figure 9-16: Sheet Number Manager

17. To select all rows, click anywhere on row one, hold down the shift key and click a second time anywhere on the last row. Once rows are selected, select the Edit Sheet Number icon as shown above.

18. The Edit Sheet Number dialog box will appear, complete as shown below and select OK. Dialog box values correspond to CFL specific sheet numbering schemes. Use "C" for main plan and profile sheets or "D" for minor roads. The examples below, the sheets are numbered in sequence beginning with D1.

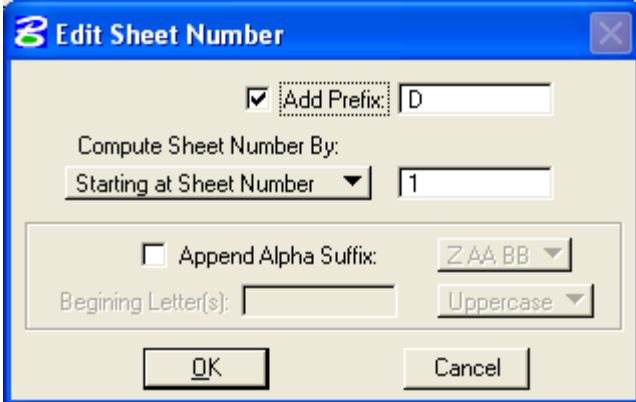


Figure 9-17: Edit Sheet Number

19. Upon Selecting OK, Sheet numbers will change from 1 to D1 in the Sheet Number Manager dialog box.

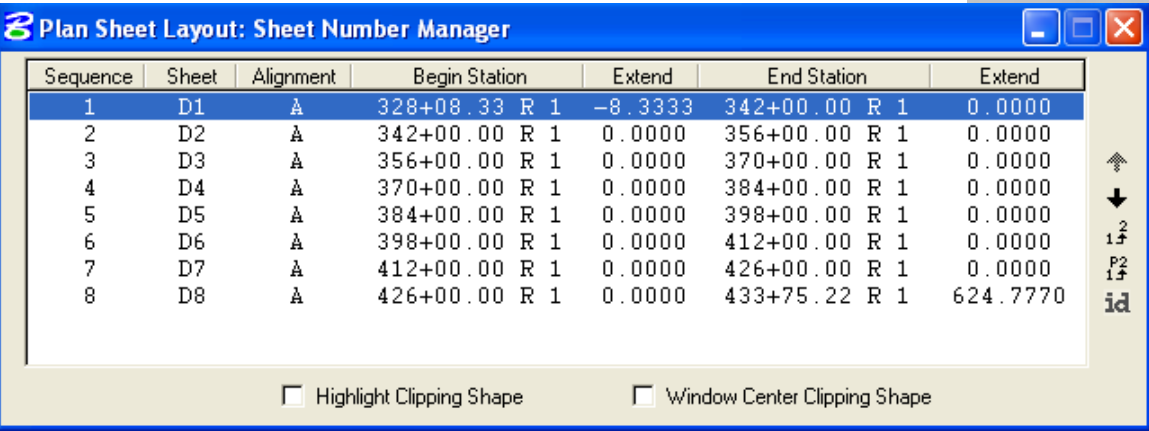


Figure 9-18: Sheet Number Manager

20. To Invoke the Clip Sheets tool, Select the Clip Sheets icon from the Plan Sheet Layout dialog as shown below:

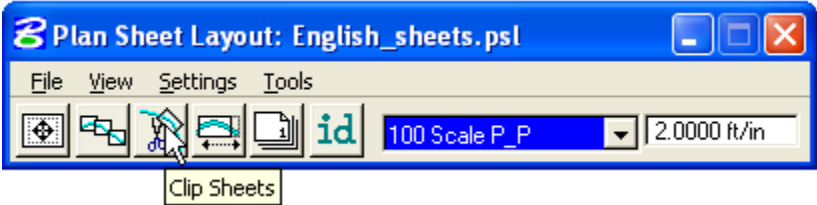


Figure 9-19: Plan Sheet Layout Dialog

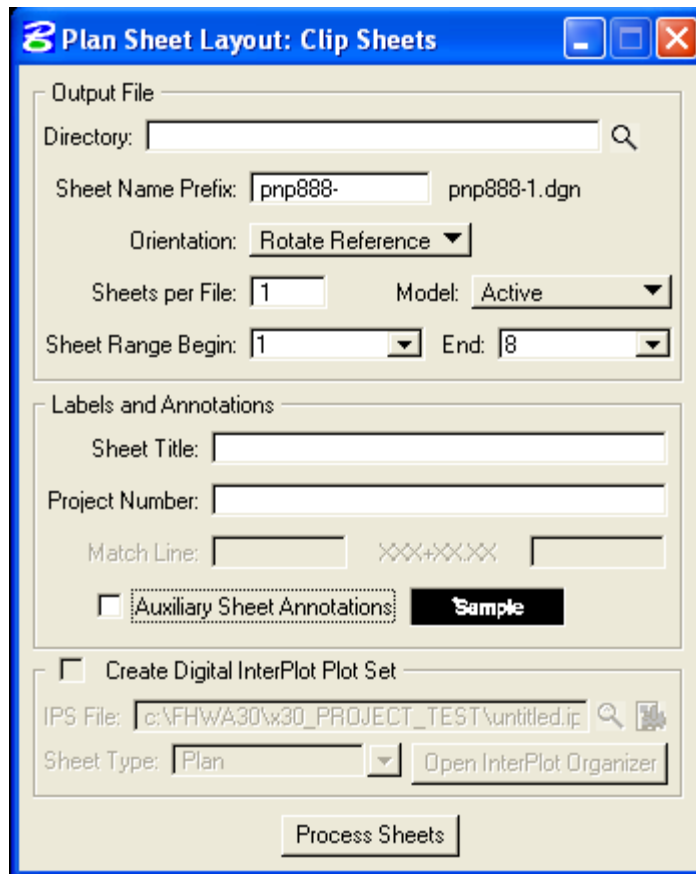


Figure 9-20: Clip Sheets

21. In the *Clip Sheets* dialog box, select the directory for the output file and type in the *Sheet Name Prefix*. Sheet name prefix should follow the naming convention set in Chapter 3 of the *CFL CADD standards Manual*.



NOTE: The software appends the beginning sheet number to the "Sheet Name Prefix". You most likely will have to rename this (or these) file(s) later.

22. Select *Orientation to Rotate View* for *Plan & Profile sheets* and *Single Plan sheets*. Select *Orientation to Rotate Reference* for *Double Plans sheets* and *Profile sheets*. Sheet Cell is rotated and moved into correct position with plan reference file data when orientation is set to *Rotate View*. Reference file data is rotated and moved into correct position with each of the sheet cells when orientation is set to *Rotate Reference*.



- 23. Select Sheet per File to 1. CFLHD policy is to create one sheet per file.
- 24. Select the Sheet Range required from the pick list using the drop down arrows.
- 25. Enter Labels and Annotation. Complete Clip Sheets dialog as shown below. Select Process Sheets.

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
16	ST	KEYS VIEW ROAD PRA JOTR 13(1)	D1	

Figure 9-21: Clip Sheets

Since the CFL reference sheet cell drawing is write protected. The following dialog box below will appear. Just click **OK**.

