

Workflow MS 16 - Image Reprojection to Project Coordinate Datum

Images to Project Datum Coordinate System

Images at CDOT are typically oriented to Colorado State Plane coordinate systems. This workflow guides you through the steps required to attach an image in a Colorado State Plane Coordinate system and modify its location so the image will re-project to the Project Datum coordinate system.

In order for this to be completed, information from the Survey must be obtained. This information can be found on the Project Control Diagram sheet of the plan set.

Project Coordinate Datum

A modified coordinate system is computed for each CDOT project to provide horizontal values for mapping and surveying purposes. CDOT project modified coordinates are based on the Colorado State Plane Coordinate System of 1983(92) in unites of US Survey Feet.

Project Control Diagram sheets are included in CDOT plan sets and a note explaining the Project Coordinate Datum can be found on this sheet.

An example:

Project coordinates are modified Colorado State Plane XXXXXX Zone NAD '83/(XX) coordinates. The combined elevation/scale factor used to modify the coordinates from state plant to project coordinates is 1.XXXXXXXXXXXXX. The resulting project coordinates are truncated by 200,000m in the Northing and 400,000m in the Easting after converting from state plane coordinates to project coordinates. The CHARN is based on the NAD '83(XX) datum.

Project Coordinates Northing US Survey Feet = (State Plane Coordinate Northing * 1.XXXXXXXXXXXXX - 200,000) * (3937/1200).

Project Coordinates Easting US Survey Feet = (State Plane Coordinate Easting * 1.XXXXXXXXXXXXX - 400,000) * (3937/1200).

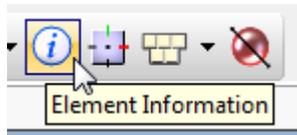
Relocate the Image

The workflow to relocate an image that is defined with Colorado State Plane Coordinates into a Project Coordinate Datum can be completed by editing the origin and pixel size of the referenced image.

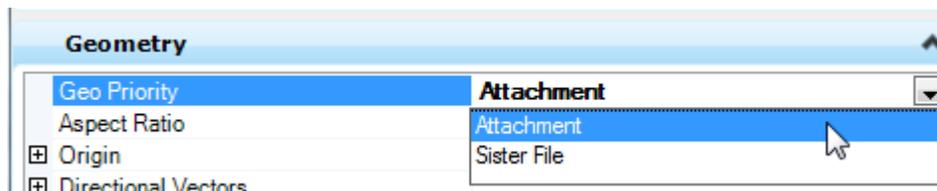
1. Create a new design file and using Raster Manager, attach the project image. Be sure the **Place Interactive** option is **Not** selected.
2. The **Raster Attachments Options** dialog box opens.
3. Expand the **Geometry** tab and set the **Geo Priority** to **Sister File**.



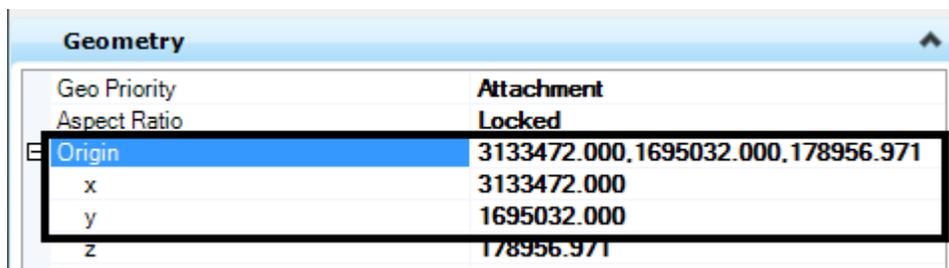
4. Click the **Attach** button.
5. Select the attached image by using the Element Selection tool.



6. Expand the **Geometry** tab and change the **Geo Priority** to **Attachment**.

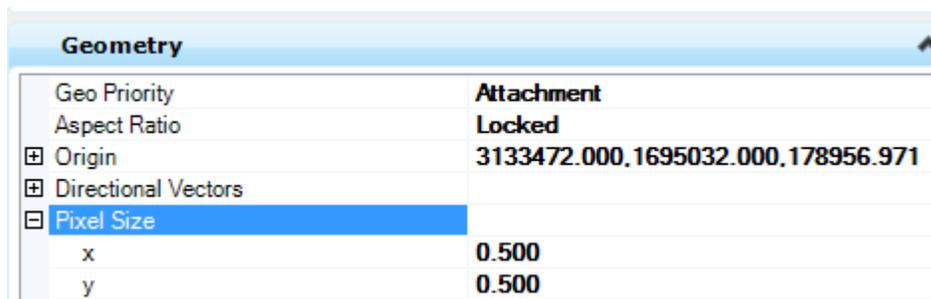


7. Modify the Origin X and Y using the procedures for the **Project Control Diagram**.



8. For example: (State Plane Coordinate Northing * 1.XXXXXXXXXXX - 200,000) * (3937/1200) and (State Plane Coordinate Easting * 1.XXXXXXXXXXX - 400,000) * (3937/1200).

9. Next, modify the pixel size X and Y.



10. For example: Pixel Size X * 1.XXXXXXXXXXX and Pixel Size Y * 1.XXXXXXXXXXX.

Note: The precision is set to 3 decimal places so the pixel size values may not appear to change.

11. Once values have been adjusted, close the Element Information dialog box.