

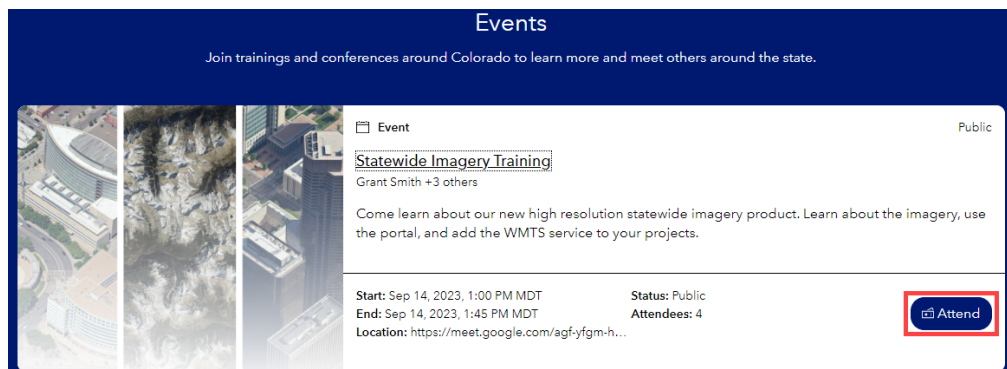
CDOT - Accessing Colorado Statewide Aerial Imagery From The Vexcel Portal

The purpose of this workflow is to describe the steps used to access imagery and download GeoTIFF data from the Vexcel Portal then use this data in OpenRoads Designer. This includes assigning the proper geographic coordinate system to the DGN file that will reference the imagery data.

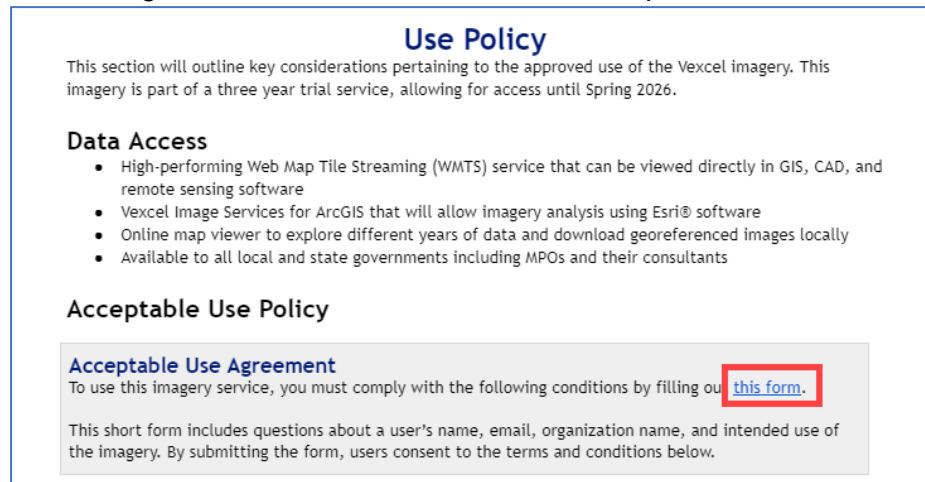
Important!: Please visit the [Colorado Statewide Aerial Imagery User Guide](#) for information on access and usage policies, specifications, and other information about the Vexcel Portal.

Creating An Account

1. In order to access the imagery, users will need to attend one of our statewide imagery training sessions or a weekly drop-in session. The calendar for upcoming training can be found on the [OIT-GIS page of our website](#). Once users attend the training and fill out the Acceptable Use Agreement form, they will receive an email from Vexcel to set up an account.



2. On page 6 of the [Colorado Statewide Aerial Imagery User Guide](#) is a link to the “Acceptable Use Agreement”. **Left Click** the link and complete the form.



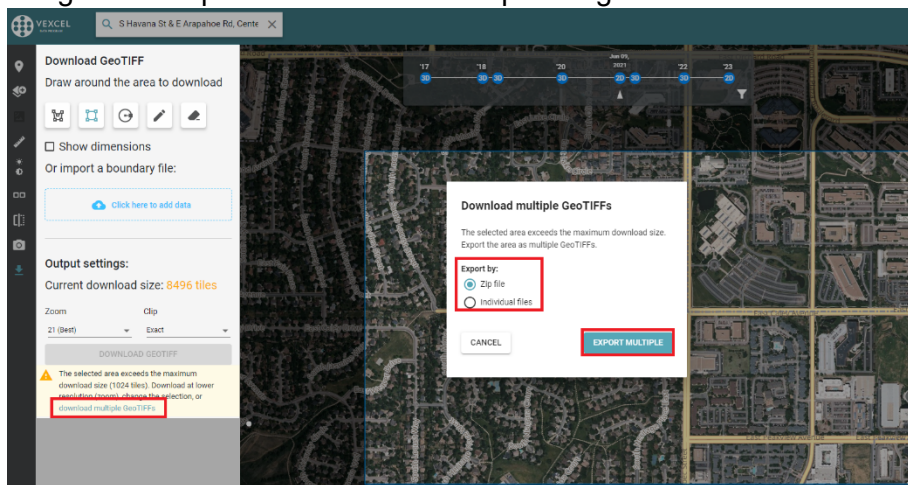
3. You will receive an email from support@vexcelgroup.com that will invite you to create an account. **Left Click** the ‘Activate account’ button.

Using the Vexcel Portal to Obtain GeoTIFF Images

An in-depth guide for using the Vexcel Portal can be found in the [Colorado Statewide Aerial Imagery User Guide](#) in the section **Navigating the Vexcel Portal** (page 9). The steps below are a “quick start” for downloading GeoTIFF images.

1. Open the [Vexcel Portal](#) in a web browser and **Sign In**.
2. Zoom in on the project area in the Vexcel Portal. You can use the search bar to locate your project area.
3. Refer to the [Colorado Statewide Aerial Imagery User Guide](#) in the section **Export GeoTIFF** section (page 21) for downloading the GeoTIFF images.

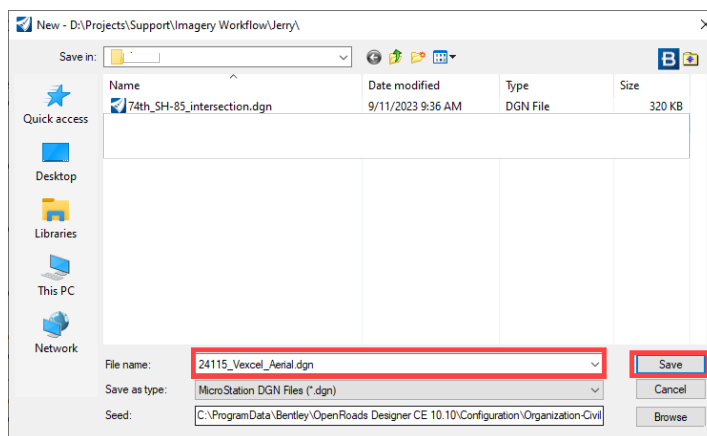
Note: The maximum size for a single image is 1024 tiles. If a larger area is selected, you are given the option to download multiple images.



Using GeoTIFF Images in OpenRoads Designer

Once the image(s) is downloaded it can be attached to an OpenRoads Designer DGN file. It is the “best practice” to attach the imagery to a blank DGN file that has the appropriate geographic coordinate system for the images. This DGN file is then referenced to project data DGN files that use the project geographic coordinate system.

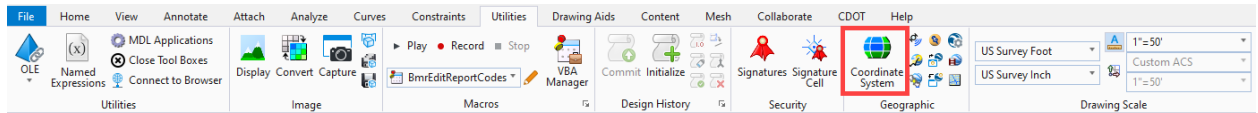
1. Launch ORD.
2. Create a new **2D DGN** file. In this example the new file is named **24115_Vexcel_Aerial.dgn**.



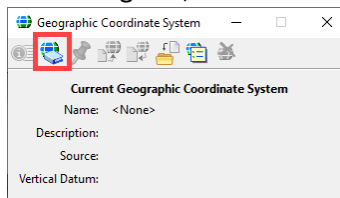
- The geographic coordinate system for the imagery can be found by

Projection	Mercator, Auxiliary, Sphere
WKID	3857
Authority	EPSG
Linear Unit	Meter (1.0)
False Easting	0.0
False Northing	0.0
Central Meridian	0.0
Standard Parallel 1	0.0
Auxiliary Sphere Type	0.0
Property	Value
Geographic Coordinate System	GCS_WGS_1984
WKID	4326
Previous WKID	-1
Authority	EPSG
Angular Unit	Degree (0.0174532925199433)
Prime Meridian	Greenwich (0.0)
Datum	D_WGS_1984
Spheroid	WGS_1984
Semimajor Axis	6378137.000000
Semiminor Axis	6356752.314245
Inverse Flattening	298.257224

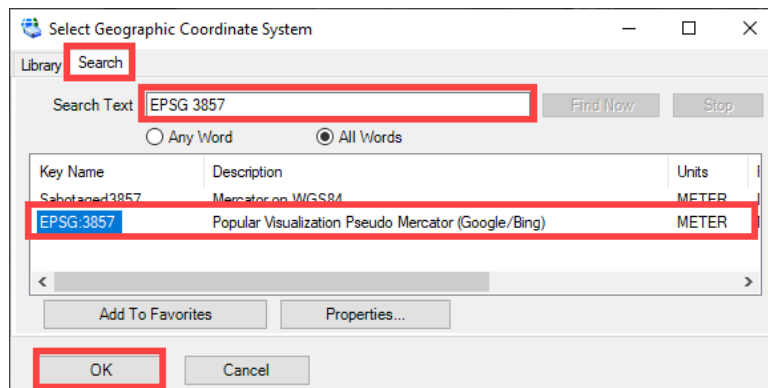
- Go to **Ribbon > Utilities tab > Geographic group > Coordinate Systems**. This displays the **Geographic Coordinate System** dialog box.



- In the **Geographic Coordinate System** dialog box, select the **From Library** icon.

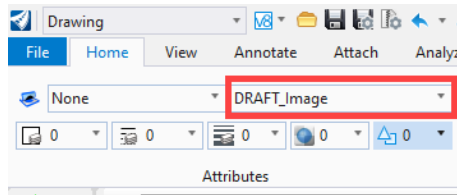


- When the **Select Geographic Coordinate System** dialog appears, select the **Search** tab.
- In the **Search Text** field, enter **EPSG 3857** and toggle on the **All Words** radio button. The **EPSG 3857** coordinate system is used for all Vexcel imagery.
- Left click the desired coordinate system for the image being added and Left click the OK button.
- The selected coordinate system is attached to the DGN file.

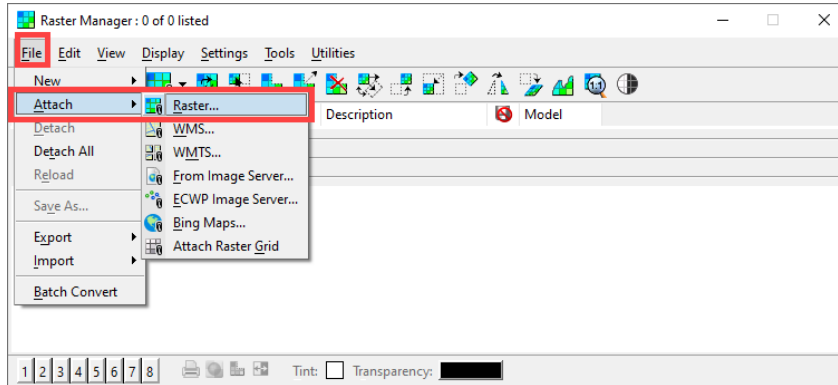


- Close the **Select Geographic Coordinate System** dialog box.

11. Set the **Active Level** to **DRAFT_Image**.



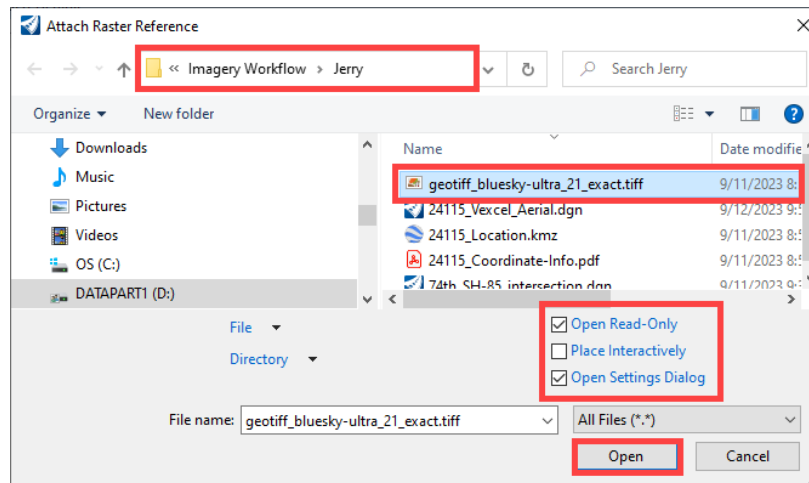
12. Open the **Raster Manager** and select **File > Attach > Raster**.



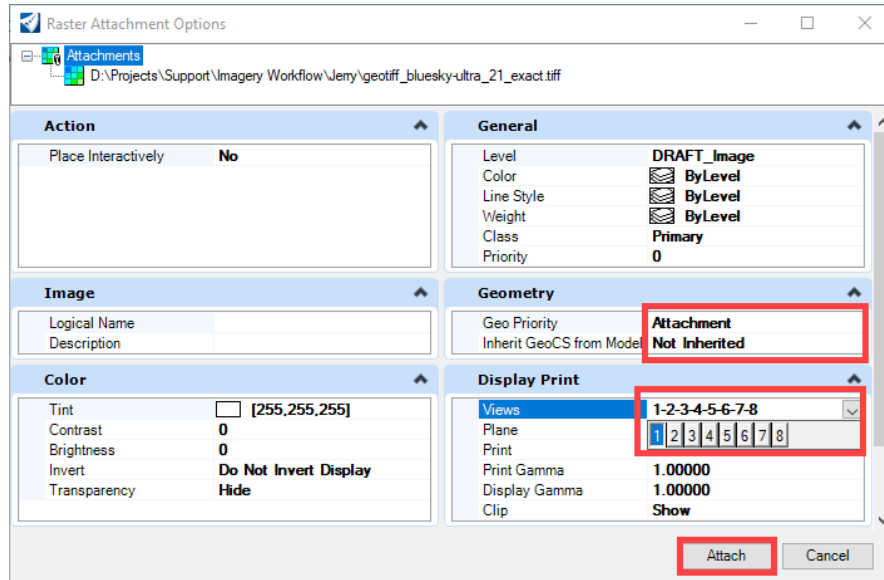
13. Navigate to the folder containing the image(s) and highlight the desired file(s).

14. Set the check boxes as shown below.

15. **Left Click** the **OK** button. This displays the **Raster Attachment Options** dialog box.



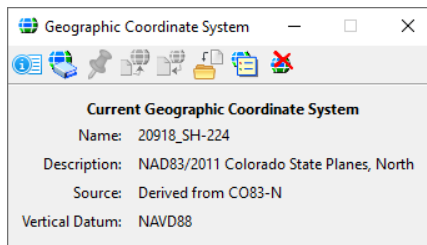
16. In the **Raster Attachment Options** dialog box, verify that the Geo Priority is set to Attachment.
17. Set the views for the image to display in as desired.
18. **Left Click** the **Attach** button to complete the process.



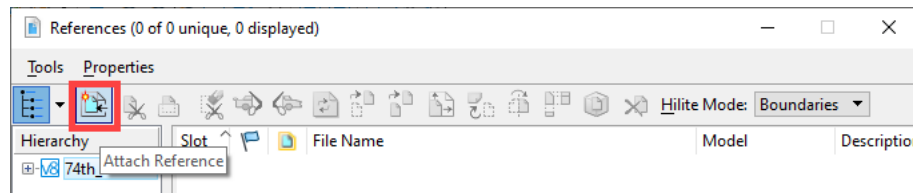
Attaching the Image DGN File to a Project Data DGN File

Once the image DGN file has been properly set up, it can be attached to your project data DGN files.

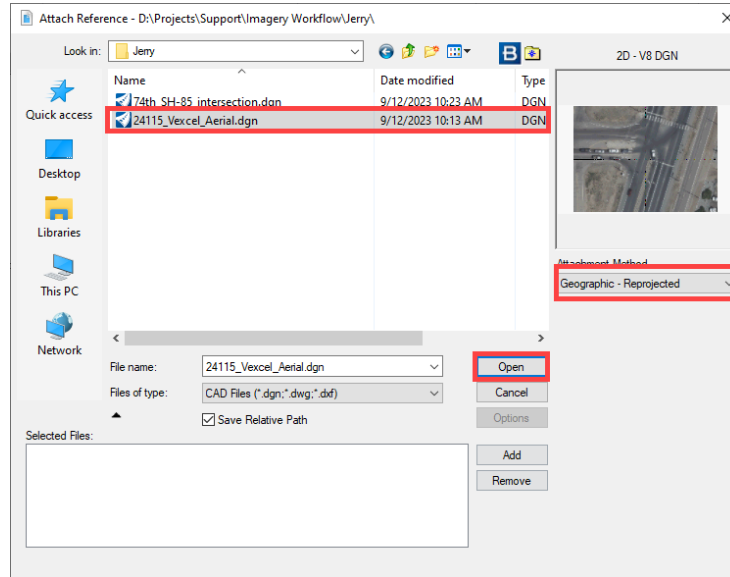
1. Open the desired project data DGN file.
2. Verify that the project coordinate system has been assigned to the file.



3. Open the **References** dialog box.
4. Select **Attach Reference**.



5. In the **Attach Reference** dialog box, navigate to the folder containing the imagery DGN file.
6. Highlight the desired file.
7. Set the **Attachment Method** to **Geographic – Reprojected**.
8. Left Click the Open Button to complete the attachment process.



Below is an example of the image file attached to the project data file.



Note: As of the time of this writing, there is a known issue with the imagery not aligning properly. CDOT is aware of this issue and are working with Vexcel to correct it.