A Guide to ArcGIS Pro Layer Blend Modes
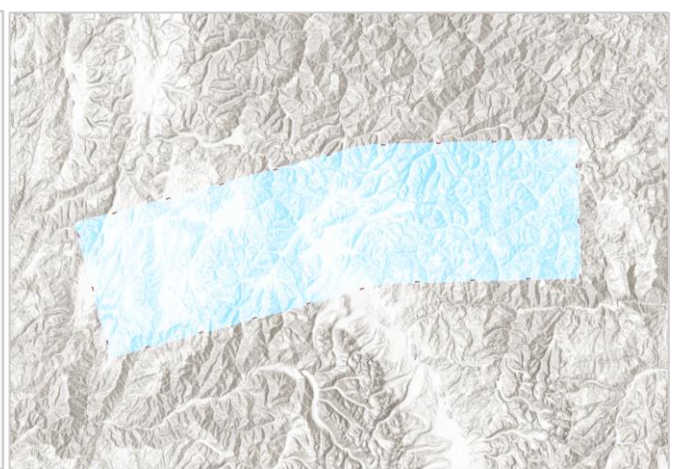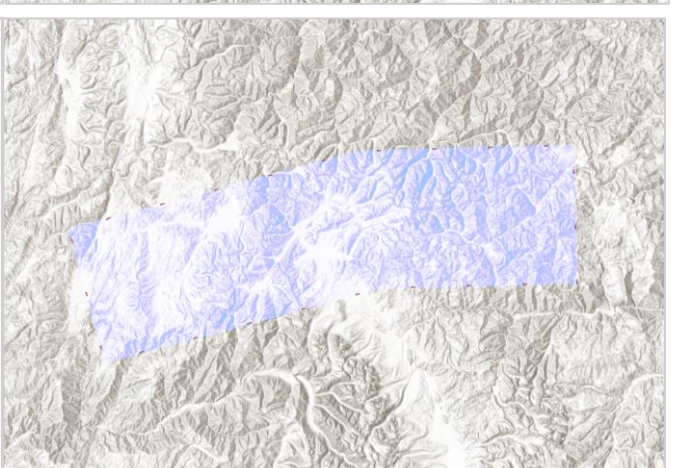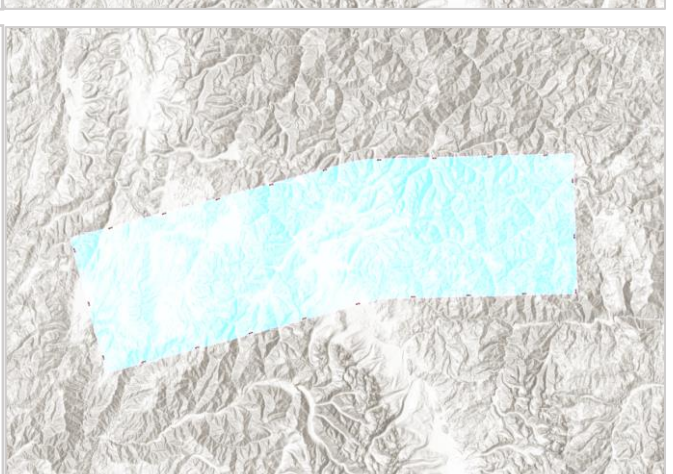
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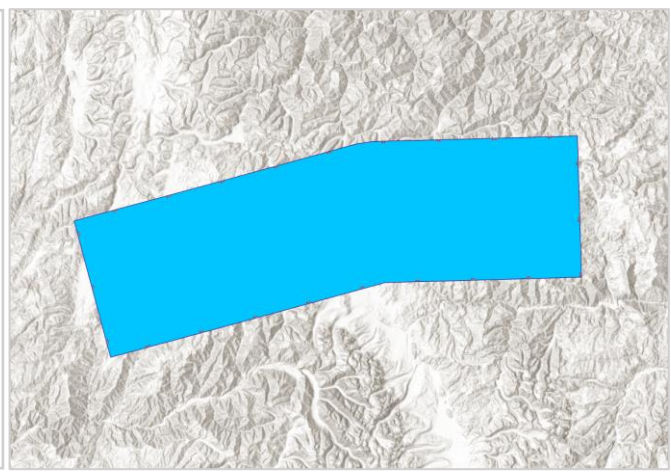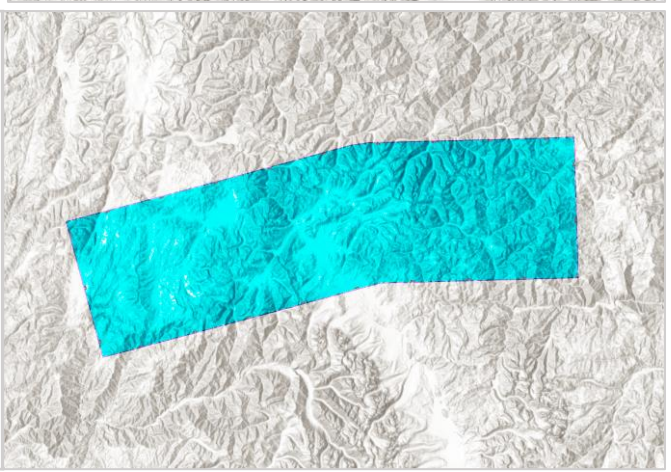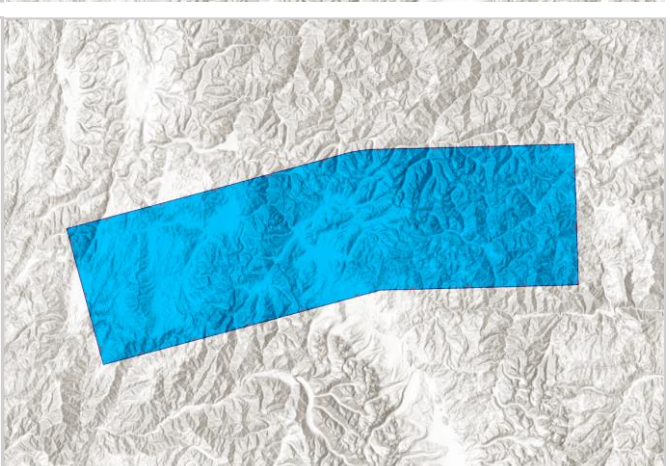# ArcGIS Pro Lightening Blend Modes

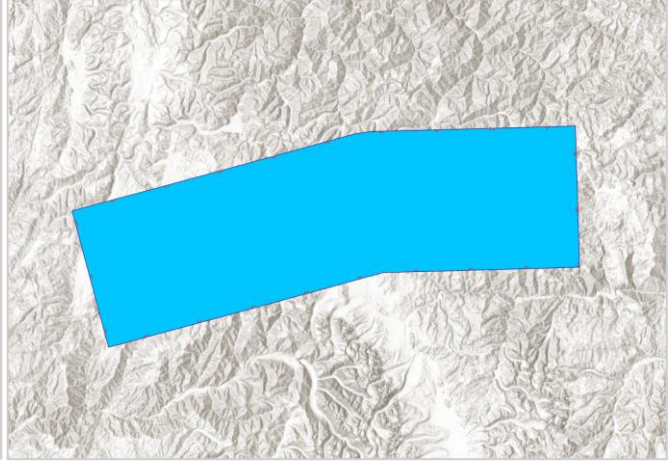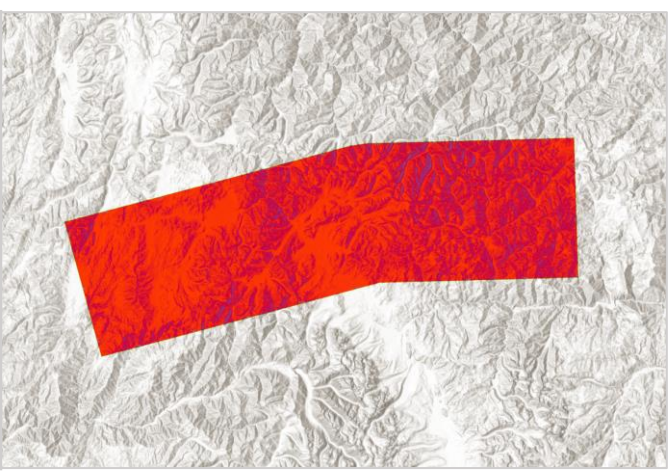|		
NORMAL	No blend mode applied.	
LIGHTER	Colors in the top and background layers are multiplied by their alphas (layer opacity and the layer's data opacity), and the resulting colors are added together. All overlapping midrange colors are lightened in the top layer. The opacity of the layer and the layer's data affect the blend result.	
COLOR DODGE	Creates a brighter effect by decreasing the contrast between the top and background layers, resulting in saturated midtones and bright highlights.	
LIGHTEN	Compares the top and background layers and retains the lighter color in the top layer. Colors in the top layer become transparent if they are darker than the overlapping colors in the background layer, allowing the background layer to show through completely. This blend mode can be thought of as the opposite of the Darken blend mode.	
LINEAR DODGE	Sums the values in the two layers (also known as additive blending). Blending with white gives white. Blending with black does not change the image. When the top layer contains a homogeneous color, this effect is equivalent to changing the output black point to this color, and (input) <u>white point</u> to the inverted color. The contrast is decreased when there is no clipping.	

ArcGIS Pro Darkening Blend Modes

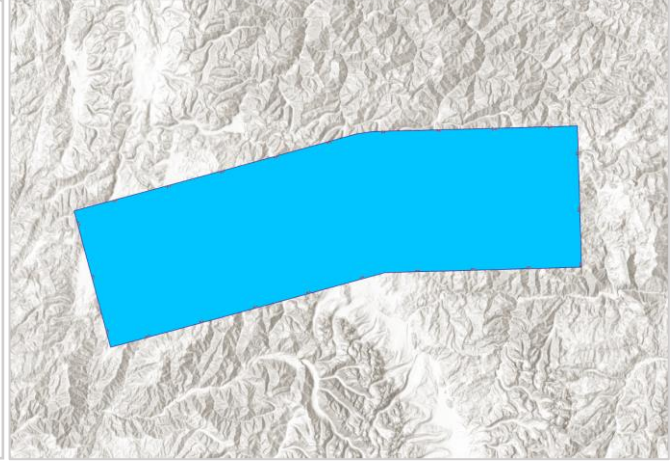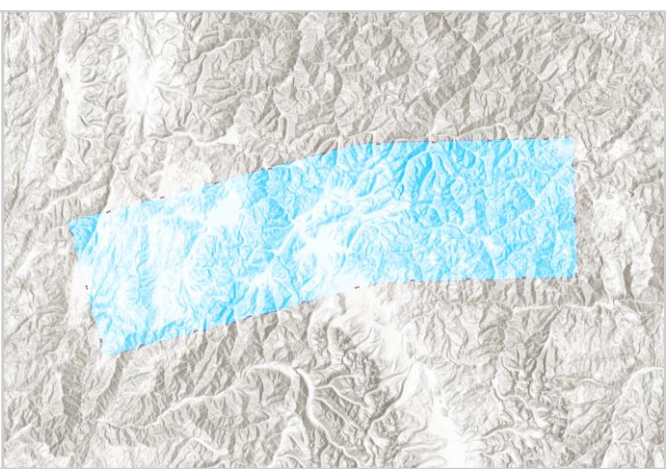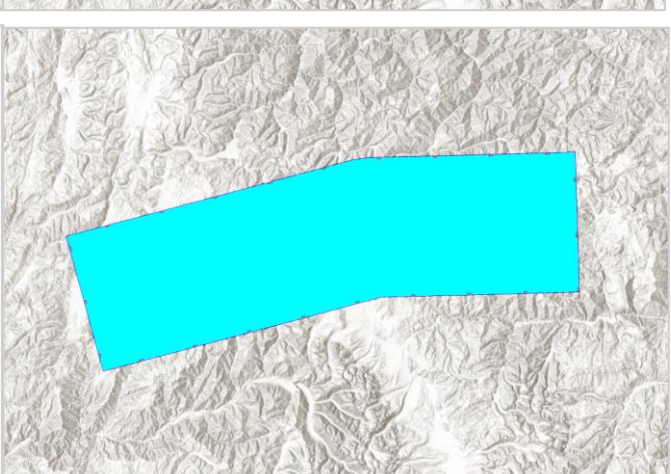|		
NORMAL	No blend mode applied.	
MULTIPLY	Emphasizes the darkest parts of overlapping layers by multiplying colors of the top layer and the background layer. Midrange colors from top and background layers are mixed more evenly.	
COLOR BURN	Intensifies the dark areas in all layers. The Color Burn blend mode increases the contrast between the top and background layers by tinting colors in overlapping areas toward the top color. To do this, Color Burn inverts the colors of the background layer, divides the result by the colors of the top layer, and inverts the results.	
DARKEN	Emphasizes the darkest parts of overlapping layers. Colors in the top layer become transparent if they are lighter than the overlapping colors in the background layer, allowing the background layer to show through completely.	
LINEAR BURN	Sums the value in the two layers and subtracts 1. This is the same as inverting each layer, adding them together (as in Linear Dodge), and then inverting the result. Blending with white leaves the image unchanged.	

ArcGIS Pro Comparison Blend Modes

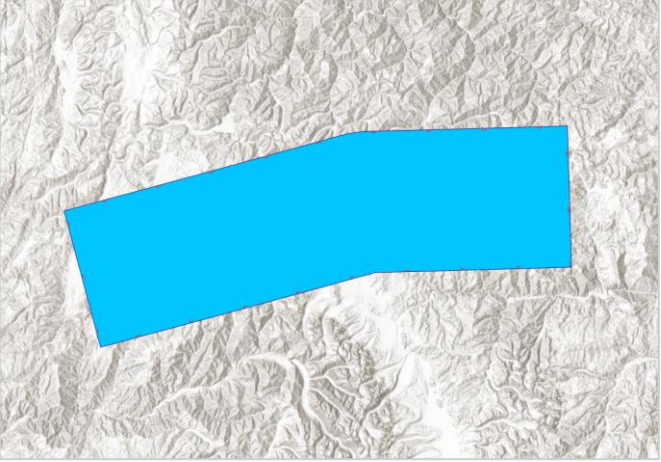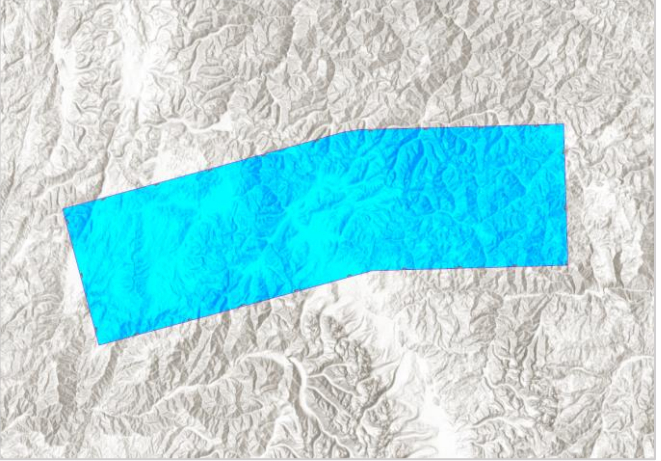|		
NORMAL	No blend mode applied.	
DIFFERENCE	Subtracts the darker of the overlapping colors from the lighter color. When two pixels with the same value are subtracted, the result is black. Blending with black produces no change; blending with white inverts the colors. This blend mode is useful for aligning layers with similar content.	
EXCLUSION	Intensifies the dark areas in all layers. The Color Burn blend mode increases the contrast between the top and background layers by tinting colors in overlapping areas toward the top color. To do this, Color Burn inverts the colors of the background layer, divides the result by the colors of the top layer, and inverts the results.	

ArcGIS Pro Divergent Blend Modes

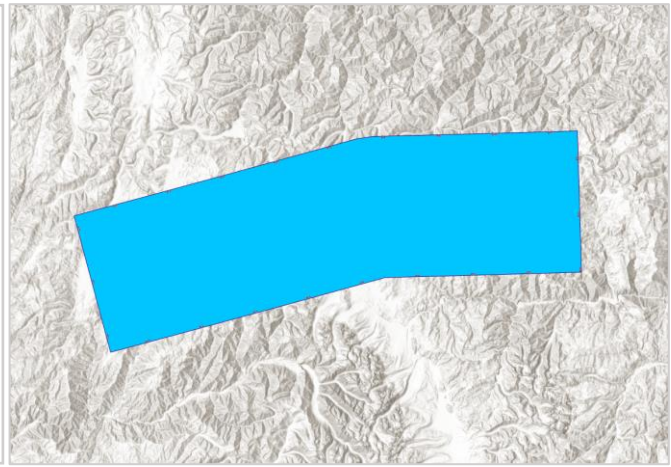|		
NORMAL	No blend mode applied.	
OVERLAY	Uses a combination of the Multiply and Screen blend modes to darken and lighten colors in the top layer, with the background layer always shining through. This results in darker color values in the background layer intensifying the top layer, while lighter colors in the background layer wash out overlapping areas in the top layer.	
HARD LIGHT	Multiplies or screens the colors, depending on the colors of the top layer. The effect is similar to shining a harsh spotlight on the top layer.	
SOFT LIGHT	Applies a half-strength Screen blend mode to lighter areas and half-strength Multiply blend mode to darker areas of the top layer. The Soft Light blend mode is a softer version of the Overlay blend mode.	
LINEAR LIGHT	Combines Linear Dodge and Linear Burn (rescaled so that neutral colors become middle gray). Dodge is applied when the value on the top layer is lighter than middle gray, and burn applies when the top layer value is darker. The calculation simplifies to the sum of the bottom layer and twice the top layer, subtract 1. This mode decreases the contrast.	

ArcGIS Pro Divergent Blend Modes

NORMAL	No blend mode applied.	
PIN LIGHT	Replaces the colors, depending on the blend color. If the blend color (light source) is lighter than 50% gray, pixels darker than the blend color are replaced, and pixels lighter than the blend color do not change.	
VIVID LIGHT	Uses a combination of the Color Burn and Color Dodge blend modes by increasing or decreasing the contrast, depending on the colors in the top layer.	

NORMAL	No blend mode applied.	
LUMINOSITY	Creates an effect with the luminosity of the top layer and the hue and saturation of the background layer. This blend mode is the opposite of the Color blend mode.	
SATURATION	Creates an effect with the saturation of the top layer and the hue and luminosity of the background layer. This blend mode produces no change when the background layer is 50 percent gray with no saturation.	
HUE	Creates an effect with the hue of the top layer and the luminosity and saturation of the background layer.	
COLOR	Creates an effect with the hue and saturation of the top layer and the luminosity of the background layer. This blend mode is the opposite of the Luminosity blend mode.	