

ArcGIS Experience Builder Developer Edition 1.12

Complete Tutorial – Part 1

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Overview

ArcGIS Experience Builder is the next generation Web Mapping Platform from ESRI.

It is the successor to the Web AppBuilder for ArcGIS.

The Experience Builder allows anyone to design mobile friendly multi-page websites with dynamic maps, charts, lists, tables, and images that update automatically as you interact with the elements *without having to write a single line of code!*

It presents a true drag & drop interface using a collection of Themes and Widgets that allows seamless integration between 2D and 3D maps.

The Experience Builder uses JavaScript API 4.x and integrates several Web Mapping Applications like Survey 123 and StoryMaps.

The Developer Edition allows you to add Custom Widgets.

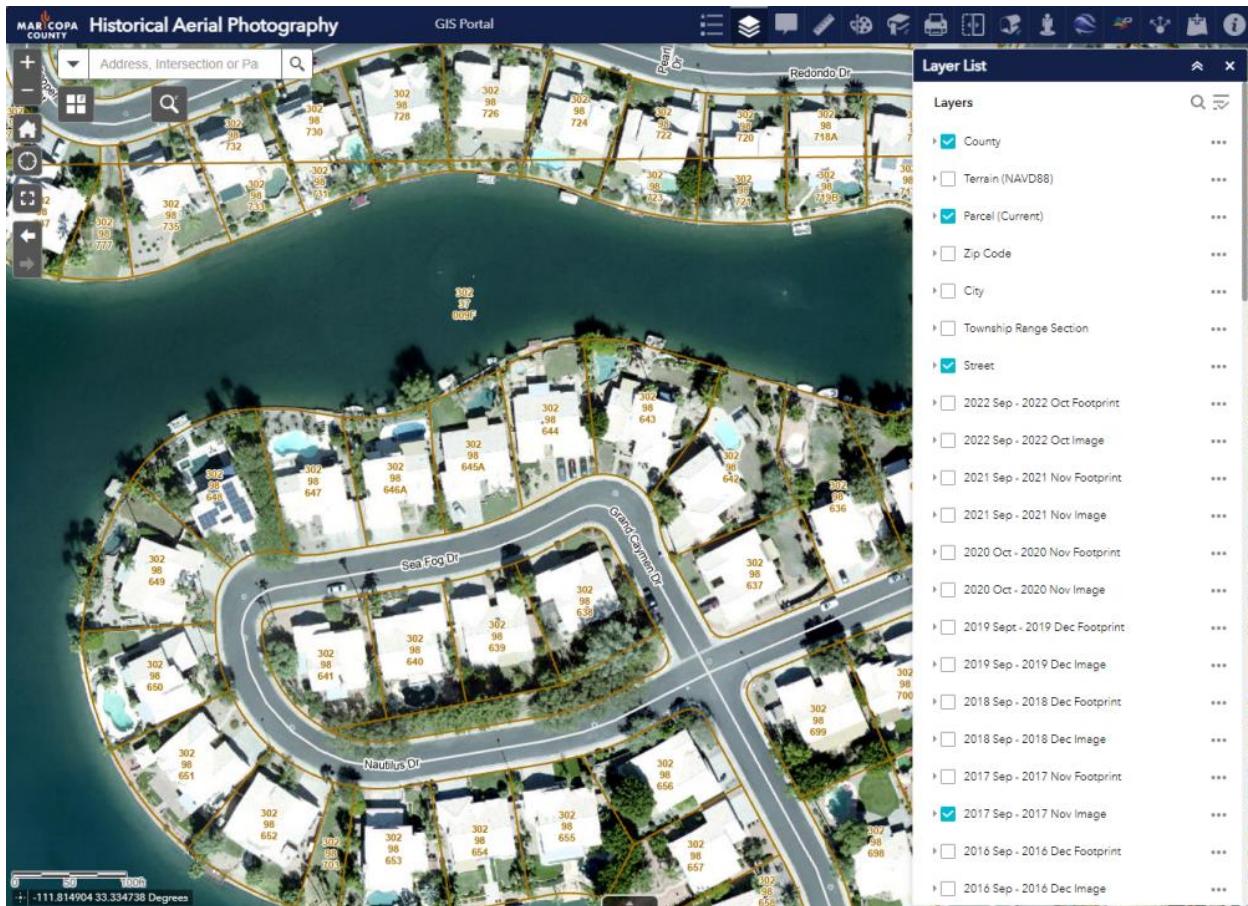
This Tutorial explains how to transition from WAB to EXB using the Historical Aerials Web App as a Case Study.

You will be using **EXB Developer Edition 1.12** with Node.js 14.21.3. The Developer Edition is necessary to add Custom Widgets for Google Maps and Pictometry.

If you have no need to add Custom Widgets, you can go through this tutorial using the ArcGIS Online Edition of the Experience Builder starting at page 66. The interface is identical.

This is the **Web AppBuilder** version of the Historical Aerials Web App.

<https://gis.maricopa.gov/GIO/HistoricalAerial/>



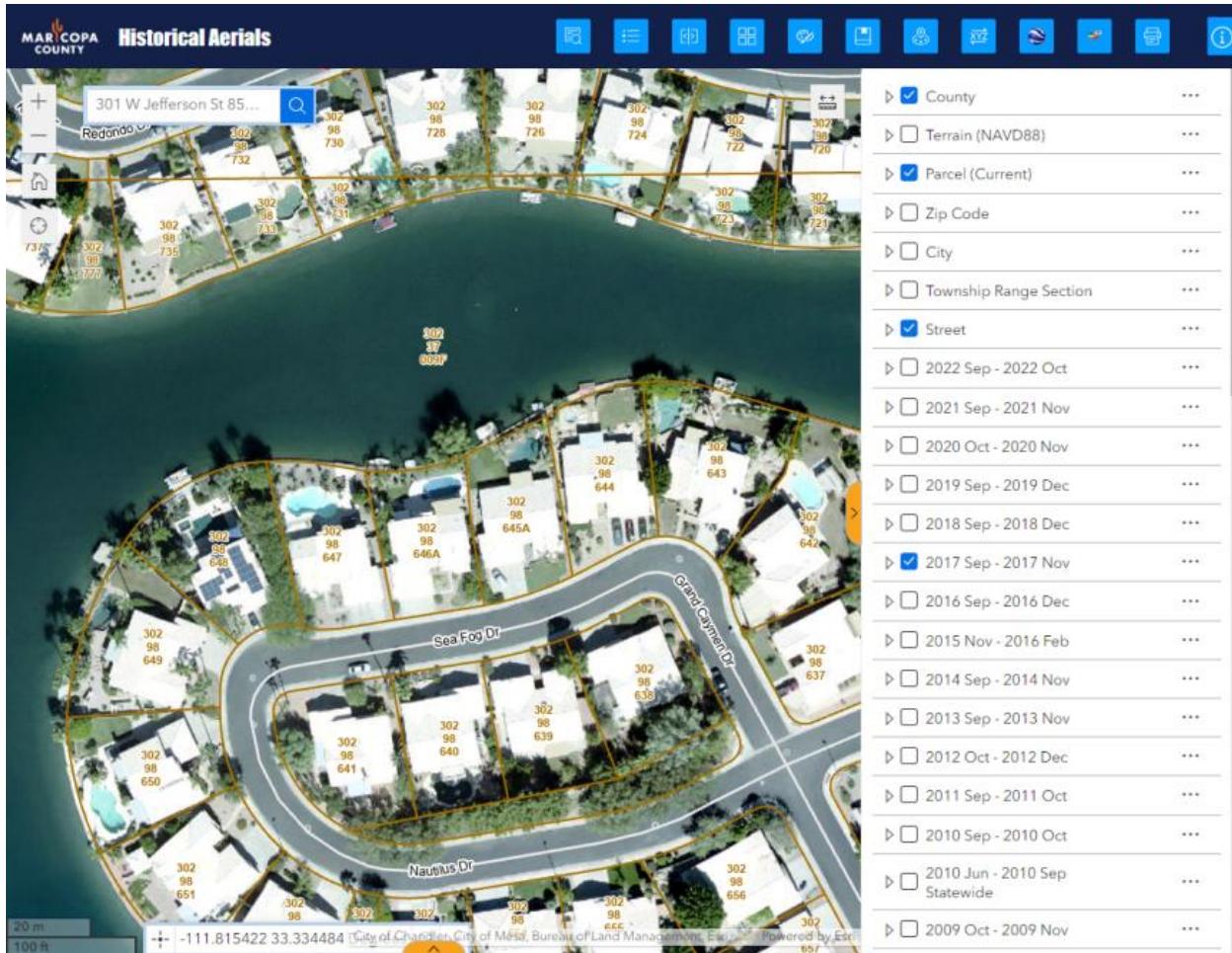
This was built using WAB Developer Edition 2.27

The WAB Developer version uses the following widgets:

- Zoom In
- Zoom Out
- Home
- Location
- Full Screen
- Previous Extent
- Next Extent
- Graphical Scale Bar
- Coordinate Widget
- Attribute Table Widget
- Search Tool
- Enhanced Basemap Gallery Widget (Custom Widget by Robert Scheitlin)
- Enhanced Search Widget (Custom Widget by Robert Scheitlin)
- Legend Widget
- Layer List Widget
- Popup Panel Widget (Custom Widget by Robert Scheitlin)
- Measurement Widget
- Draw Widget
- Enhanced Bookmark Widget (Custom Widget by Robert Scheitlin)
- Print Widget
- Swipe Widget
- Enhanced Locate Widget (Custom Widget by Robert Scheitlin)
- Google Street View Widget (Custom Widget by Robert Scheitlin)
- Google Earth Widget (Custom Widget by Kevin MacLeod)
- Pictometry Widget (Custom Widget by Kevin MacLeod)
- Share Widget
- Add Data Widget
- About Widget

This is the **Experience Builder** version of the Historical Aerials Web App.

<https://daviddas2.github.io/HistoricalAerials/>



This was built using EXB Developer Edition 1.12 (July, 2023).

The EXB Developer version uses the following widgets:

- Zoom In
- Zoom Out
- Home
- Location
- Graphical Scale Bar
- Coordinate Widget
- Search Tool
- Measure Tool
- Map Widget
- Map Layers Widget
- Attribute Table Widget
- Query Widget
- Legend Widget
- Swipe Widget
- Basemap Gallary Widget
- Draw Widget
- Bookmark Widget
- Near Me Widget
- Coordinate Conversion Widget
- Google Maps Widget (Custom Widget by Frederic Poliart, ESRI Australia)
- Pictometry Widget (Custom Widget by Frederic Poliart, ESRI Australia)
- Print Widget

This tutorial will walk you through all the steps showing you how to recreate this EXB app.

No programming is necessary. The two Custom Widgets have been preconfigured for you.

Let's begin!

Publish your Map Services

The very first step to creating a Web Application is to curate your data, create a Geodatabase and publish your Map Services which will then be consumed by your Web Map on ArcGIS Online or Portal.

If you want to make your Web Application open to the public, make sure your Map Services and Web Map are shared with everyone.

The Historical Aerials Web Application uses the following public Map Services:

Aerial Cache Tile Footprints

<https://gis.maricopa.gov/imagery/rest/services/AerialCacheTileFootprint/MapServer>

Aerial Photography Not Available

<https://gis.maricopa.gov/imagery/rest/services/AerialPhotographyNotAvailable/MapServer>

1930 Jan - 1930 Jan

<https://gis.maricopa.gov/imagery/rest/services/Aerial1930Jan1930JanMosaic/MapServer>

1930 Jan - 1930 Jan Oblique

<https://gis.maricopa.gov/imagery/rest/services/Aerial1930Jan1930JanOblique/MapServer>

1937 Jan - 1937 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial1937Jan1937DecMosaic/MapServer>

1949 Feb - 1949 Apr

<https://gis.maricopa.gov/imagery/rest/services/Aerial1949Feb1949AprMosaic/MapServer>

1951 Apr - 1951 Apr

<https://gis.maricopa.gov/imagery/rest/services/Aerial1951Apr1951AprMosaic/MapServer>

1953 Mar - 1953 May

<https://gis.maricopa.gov/imagery/rest/services/Aerial1953Mar1953MayMosaic/MapServer>

1959 Feb - 1959 Feb

<https://gis.maricopa.gov/imagery/rest/services/Aerial1959Feb1959FebMosaic/MapServer>

1961 Jan - 1962 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial1961Jan1962DecMosaic/MapServer>

1964 Jan - 1964 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial1964Jan1964DecMosaic/MapServer>

1969 Jan - 1969 Mar

<https://gis.maricopa.gov/imagery/rest/services/Aerial1969Jan1969MarMosaic/MapServer>

1976 Feb - 1976 Apr

<https://gis.maricopa.gov/imagery/rest/services/Aerial1976Feb1976AprMosaic/MapServer>

1979 Dec - 1979 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial1979Dec1979DecMosaic/MapServer>

1982 Jan - 1982 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial1982Jan1982DecMosaic/MapServer>

1986 Jan - 1986 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial1986Jan1986DecMosaic/MapServer>

1990 Oct - 1990 Oct

<https://gis.maricopa.gov/imagery/rest/services/Aerial1990Oct1990OctMosaic/MapServer>

1991 Jun - 1991 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial1991Jun1991DecMosaic/MapServer>

1991 Nov - 1991 Nov

<https://gis.maricopa.gov/imagery/rest/services/Aerial1991Nov1991NovMosaic/MapServer>

1993 Jan - 1993 Feb

<https://gis.maricopa.gov/imagery/rest/services/Aerial1993Jan1993FebMosaic/MapServer>

1996 Dec - 1997 Feb

<https://gis.maricopa.gov/imagery/rest/services/Aerial1996Dec1997FebMosaic/MapServer>

1998 Jan - 1998 Mar

<https://gis.maricopa.gov/imagery/rest/services/Aerial1998Jan1998MarMosaic/MapServer>

1998 Dec - 1999 Oct

<https://gis.maricopa.gov/imagery/rest/services/Aerial1998Dec1999OctMosaic/MapServer>

2000 Dec - 2001 Mar

<https://gis.maricopa.gov/imagery/rest/services/Aerial2000Dec2001MarOrthoMosaic/MapServer>

2000 Jan - 2000 Apr

<https://gis.maricopa.gov/imagery/rest/services/Aerial2000Jan2000AprMosaic/MapServer>

2001 Jan - 2001 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial2001Jan2001DecOrthoMosaic/MapServer>

2001 Dec - 2002 Feb

<https://gis.maricopa.gov/imagery/rest/services/Aerial2001Dec2002FebOrthoMosaic/MapServer>

2002 Jan - 2002 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial2002Jan2002DecOrthoMosaic/MapServer>

2002 Dec - 2002 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial2002Dec2002DecOrthoMosaic/MapServer>

2003 Oct - 2003 Oct

<https://gis.maricopa.gov/imagery/rest/services/Aerial2003Oct2003OctOrthoMosaic/MapServer>

2003 Dec - 2004 Jan

<https://gis.maricopa.gov/imagery/rest/services/Aerial2003Dec2004JanOrthoMosaic/MapServer>

2004 Nov - 2004 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial2004Nov2004DecOrthoMosaic/MapServer>

2005 Apr - 2005 Apr

<https://gis.maricopa.gov/imagery/rest/services/Aerial2005Apr2005AprOrthoMosaic/MapServer>

2006 Jan - 2006 Feb

<https://gis.maricopa.gov/imagery/rest/services/Aerial2006Jan2006FebOrtho/MapServer>

2006 Oct - 2006 Nov

<https://gis.maricopa.gov/imagery/rest/services/Aerial2006Oct2006NovOrtho/MapServer>

2007 Jun - 2007 Jul Statewide

<https://gis.maricopa.gov/imagery/rest/services/Aerial2007Jun2007JulOrtho/MapServer>

2007 Oct - 2008 Jan

<https://gis.maricopa.gov/imagery/rest/services/Aerial2007Oct2008JanOrtho/MapServer>

2008 Oct - 2008 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial2008Oct2008DecOrtho/MapServer>

2009 May - 2009 Jun

<https://gis.maricopa.gov/imagery/rest/services/Aerial2009May2009JunOrtho/MapServer>

2009 Oct - 2009 Nov

<https://gis.maricopa.gov/imagery/rest/services/Aerial2009Oct2009NovOrtho/MapServer>

2010 Jun - 2010 Sep Statewide

<https://gis.maricopa.gov/imagery/rest/services/Aerial2010Jun2010SepOrtho/MapServer>

2010 Sep - 2010 Oct

<https://gis.maricopa.gov/imagery/rest/services/Aerial2010Sep2010OctOrtho/MapServer>

2011 Sep - 2011 Oct

<https://gis.maricopa.gov/imagery/rest/services/Aerial2011Sep2011OctOrtho/MapServer>

2012 Oct - 2012 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial2012Oct2012DecOrtho/MapServer>

2013 Sep - 2013 Nov

<https://gis.maricopa.gov/imagery/rest/services/Aerial2013Sep2013NovOrtho/MapServer>

2014 Sep - 2014 Nov

<https://gis.maricopa.gov/imagery/rest/services/Aerial2014Sep2014NovOrtho/MapServer>

2015 Nov - 2016 Feb

<https://gis.maricopa.gov/imagery/rest/services/Aerial2015Nov2016FebOrtho/MapServer>

2016 Sep - 2016 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial2016Sep2016DecOrtho/MapServer>

2017 Sep - 2017 Nov

<https://gis.maricopa.gov/imagery/rest/services/Aerial2017Sep2017NovOrtho/MapServer>

2018 Sep - 2018 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial2018Sep2018DecOrtho/MapServer>

2019 Sep - 2019 Dec

<https://gis.maricopa.gov/imagery/rest/services/Aerial2019Sep2019DecOrtho/MapServer>

2020 Oct - 2020 Nov

<https://gis.maricopa.gov/imagery/rest/services/Aerial2020Oct2020NovOrtho/MapServer>

2021 Sep - 2021 Nov

<https://gis.maricopa.gov/imagery/rest/services/Aerial2021Sep2021NovOrtho/MapServer>

2022 Sep - 2022 Oct

<https://gis.maricopa.gov/imagery/rest/services/Aerial2022Sep2022OctOrtho/MapServer>

Street

<https://gis.maricopa.gov/arcgis/rest/services/IndividualService/Street/MapServer>

Township Range Section

<https://gis.maricopa.gov/arcgis/rest/services/IndividualService/TownshipRangeSection/MapServer>

City

<https://gis.maricopa.gov/arcgis/rest/services/IndividualService/City/MapServer>

Zip Code

<https://gis.maricopa.gov/arcgis/rest/services/IndividualService/ZipCode/MapServer>

Parcel (Current)

<https://gis.maricopa.gov/arcgis/rest/services/IndividualService/Parcel/MapServer>

Terrain (NAVD88)

<https://gis.maricopa.gov/arcgis/rest/services/GIO/Countywide10FootContour/MapServer>

County

<https://gis.maricopa.gov/arcgis/rest/services/IndividualService/County/MapServer>

Basemap Layers Streets

World_Street_Map_8421

https://services.arcgisonline.com/ArcGIS/rest/services/World_Street_Map/MapServer

Note: It can take weeks, months, years to curate your data, generate the cached tiles and publish your map services. This is a laborious process. There is no shortcut.

Creating the Web Map and the subsequent Web App using the Experience Builder is the fun and easy part which can be done in a matter of hours.

Examine the Parcel Map Service

Open the URL for the Parcel Map Service:

<https://gis.maricopa.gov/arcgis/rest/services/IndividualService/Parcel/MapServer>

You will get this error message:

gis.maricopa.gov/arcgis/rest/services/IndividualService/Parcel/MapServer

Error: The administrator has disabled the Services Directory.

Code: 403

This is because directory browsing has been disabled on the ArcGIS Servers.

The workaround is to add the `/?f=json` qualifier.

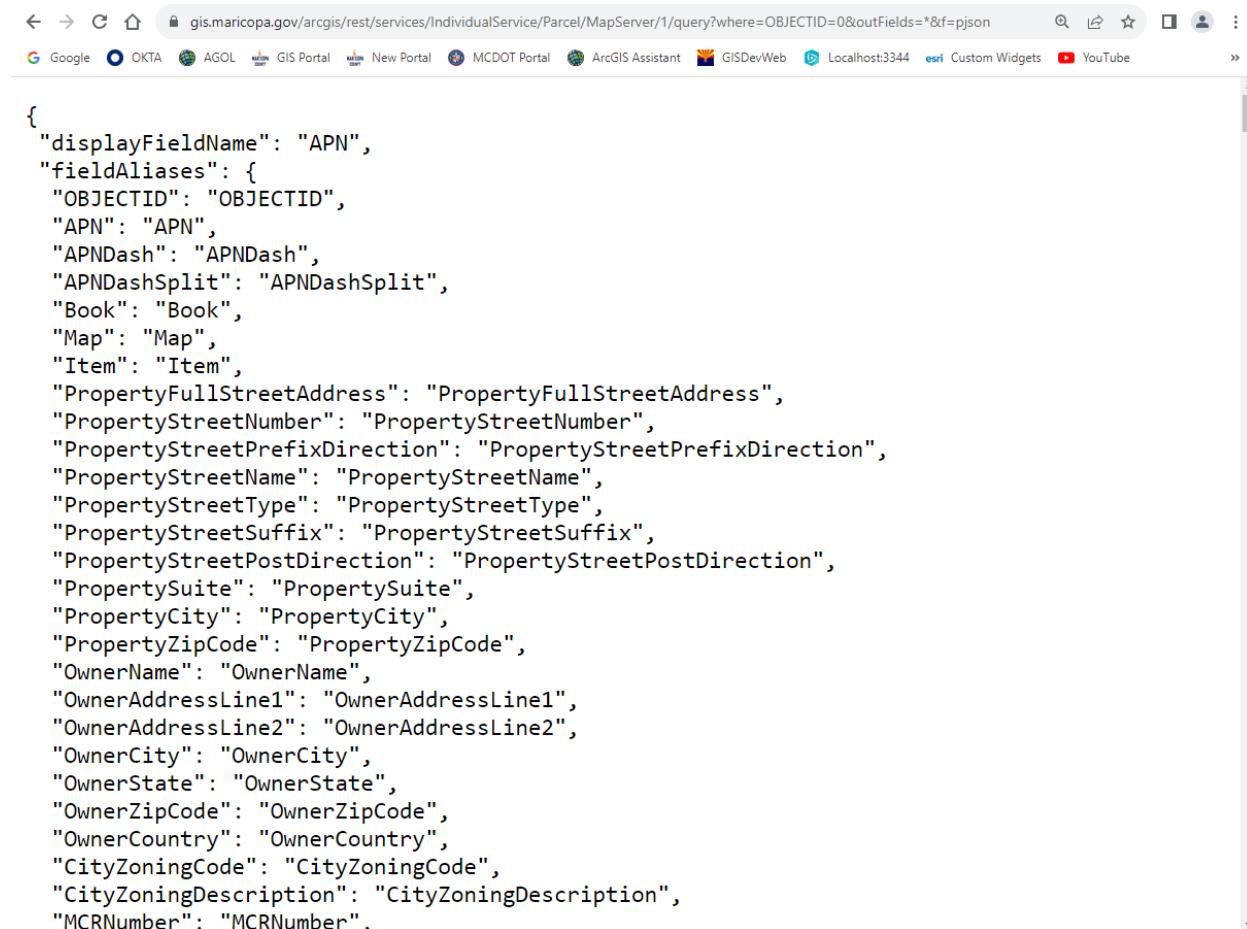
To read the **description** of the map service use:

<https://gis.maricopa.gov/arcgis/rest/services/IndividualService/Parcel/MapServer/?f=pjson>

```
{  
  "currentVersion": 10.91,  
  "cimVersion": "2.9.0",  
  "serviceDescription": "<DIV STYLE=\"text-align:Left;\"><DIV><DIV><P><SPAN>In real estate, a lot or plot is essentially considered a parcel of real property. Possible owner(s) of a lot can be one or more government, or trust. Like most other types of real estate, lots owned by private parties are subject to a county or municipality. These real estate taxes are based on the assessed value of the real property; Other fees by government are possible for improvements such as curbs and sidewalks or an impact fee for land on which is located a dwelling house, occupied or unoccupied. There will be multiple parcels on to </SPAN></P><P><SPAN>Subdivision is the act of dividing land into pieces that are easier to sell or ot
```

To view the items in the map service use:

https://gis.maricopa.gov/arcgis/rest/services/IndividualService/Parcel/MapServer/1/query?where=OBJECTID=0&outFields=*&f=json



The screenshot shows a browser window with the URL https://gis.maricopa.gov/arcgis/rest/services/IndividualService/Parcel/MapServer/1/query?where=OBJECTID=0&outFields=*&f=json. The page displays a large JSON object representing the attributes of a parcel record. The JSON structure includes fields like APN, OBJECTID, and various property details such as street address, city, state, and zip code.

```
{
  "displayFieldName": "APN",
  "fieldAliases": {
    "OBJECTID": "OBJECTID",
    "APN": "APN",
    "APNDash": "APNDash",
    "APNDashSplit": "APNDashSplit",
    "Book": "Book",
    "Map": "Map",
    "Item": "Item",
    "PropertyFullStreetAddress": "PropertyFullStreetAddress",
    "PropertyStreetNumber": "PropertyStreetNumber",
    "PropertyStreetPrefixDirection": "PropertyStreetPrefixDirection",
    "PropertyStreetName": "PropertyStreetName",
    "PropertyStreetType": "PropertyStreetType",
    "PropertyStreetSuffix": "PropertyStreetSuffix",
    "PropertyStreetPostDirection": "PropertyStreetPostDirection",
    "PropertySuite": "PropertySuite",
    "PropertyCity": "PropertyCity",
    "PropertyZipCode": "PropertyZipCode",
    "OwnerName": "OwnerName",
    "OwnerAddressLine1": "OwnerAddressLine1",
    "OwnerAddressLine2": "OwnerAddressLine2",
    "OwnerCity": "OwnerCity",
    "OwnerState": "OwnerState",
    "OwnerZipCode": "OwnerZipCode",
    "OwnerCountry": "OwnerCountry",
    "CityZoningCode": "CityZoningCode",
    "CityZoningDescription": "CityZoningDescription",
    "MCRNumber": "MCRNumber",
  }
}
```

The Parcel Map Service has over 1.7 million records with 99 attributes including hyperlinks to the Maricopa County Assessor, Treasurer and Recorder web pages.

Create a Web Map

After you have decided what Map Services you are going to use, the next step is to create a Web Map.

Note: The New Map Viewer on ArcGIS Online allows several enhancements like the option to group layers. This feature was not available in the Classic Map Viewer.

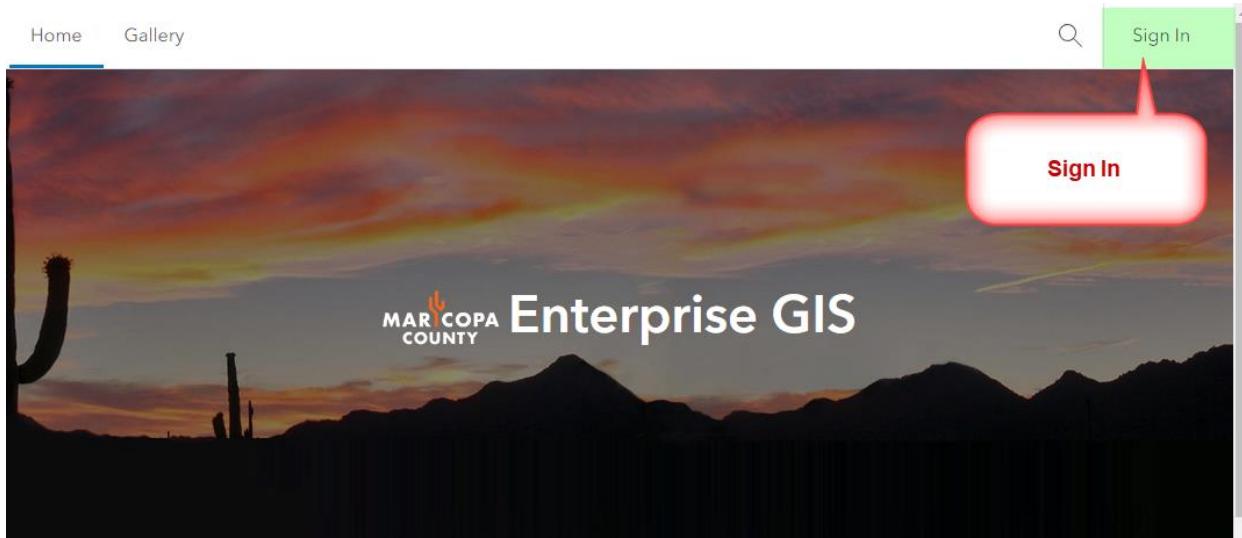
The Web AppBuilder does not recognize these new features. You are limited to using the Classic Map Viewer.

On the other hand, the Experience Builder takes advantage of all the new features introduced in the New Map Viewer. You will be using the New Map Viewer to group the layers.

Login to ArcGIS Online for your Organization.

Example:

<https://maricopa.maps.arcgis.com/home/index.html>



Sign in to Maricopa County
Enterprise GIS



ArcGIS login

GIO_DasT

••••••••••

Keep me signed in

Sign In

[Forgot username?](#) or [Forgot password?](#)

[Privacy](#)

Open the **Map** Tab

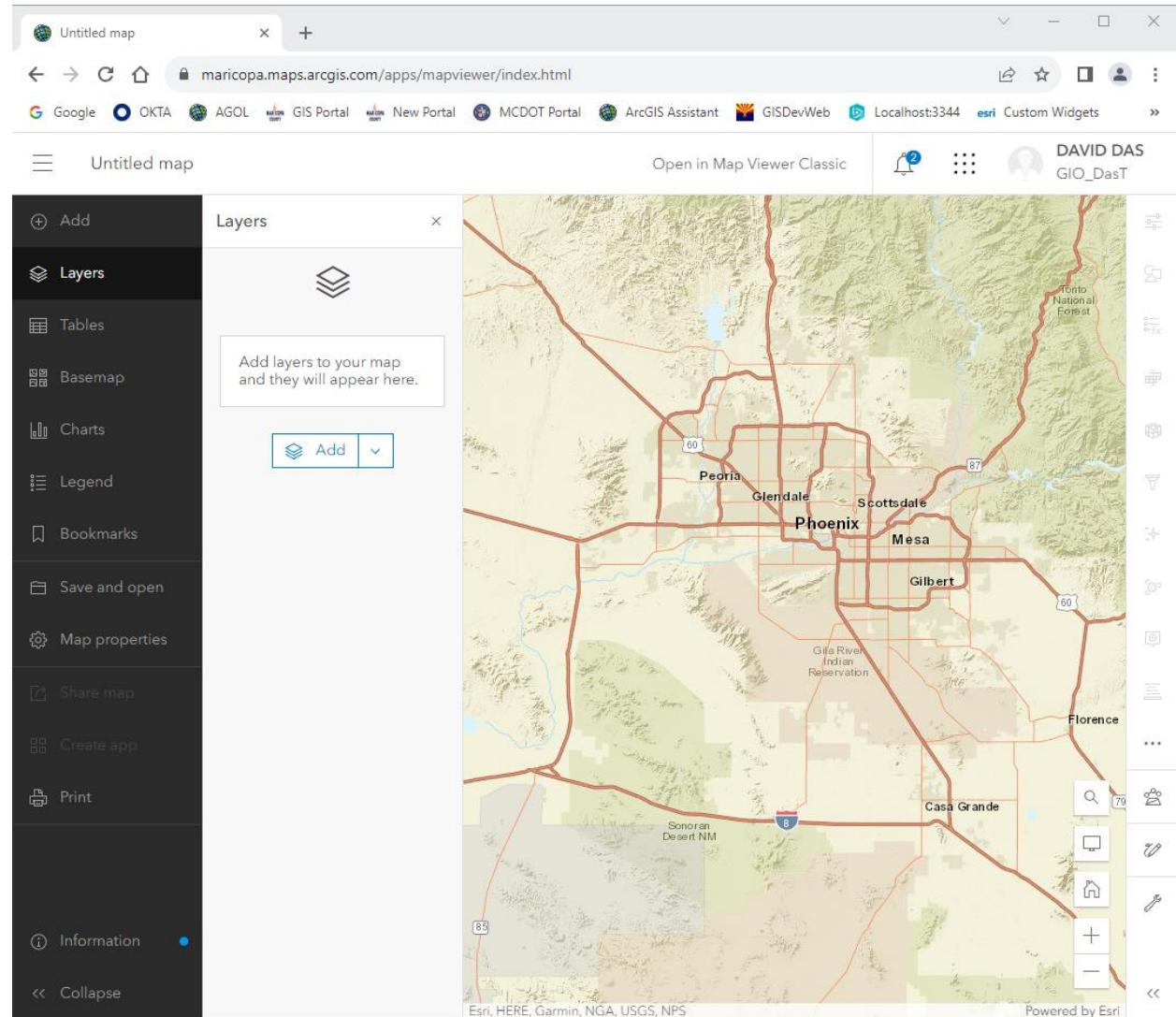
Home Gallery **Map** Scene Notebook Groups Content Organization [Privacy](#)

Maricopa County Enterprise GIS Overview Members Licenses Status Settings

Maricopa County Enterprise GIS	Edit settings	Credits	View status Buy credits
MARICOPA COUNTY	Subscription ID 7074579360	Total remaining credits 442,718.97	Last 7 days 364.81
	Feature Data Store		Last 24 hours 45.39

You are ready to create a Web Map in the New Map Viewer.

<https://maricopa.maps.arcgis.com/apps/mapviewer/index.html>



To save time, the Web Map has already been created for you.

<https://maps.arcgis.com/apps/mapviewer/index.html?webmap=9db8a92251964f0f8790118e9af156fe>

Name of Web Map = **Historical Aerials EXB**

The screenshot displays the ArcGIS Web Map interface for the "Historical Aerials EXB" map. The main view is a satellite map of a residential neighborhood in Phoenix, Arizona, showing a grid of streets and houses. The map includes labels for major roads like Camelback Rd, Indian School Rd, and several avenues (7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th). Other labels include Grand Cr., Luke Ave, Orange Dr., Medlock Dr., Pasadena Ave., Mariposa Dr., Pierson St., Meadowbrook Ave., Minnezona Ave., Clayton Dr., Nestview Dr., Vale Dr., Amelia Ave., Piccadilly Rd., Franklin Ave., and Indiana Ave. The map also shows several parks and green spaces. The left sidebar, titled "Historical Aerials EXB", contains a "Layers" panel with the following items:

- Add
- Layers (selected)
- Tables
- Basemap
- Charts
- Legend
- Bookmarks
- Save and open
- Map properties
- Share map
- Create app
- Print
- Information
- Collapse

The "Layers" panel lists the following layers:

- County
- Terrain (NAVD88)
- Parcel (Current)
- Zip Code
- City
- Township
- Range Section
- Street
- 2022 Sep - 2022 Oct
- 2021 Sep - 2021 Nov
- 2020 Oct - 2020 Nov
- 2019 Sep - 2019 Dec

At the bottom of the sidebar, there is a "20 20" button, an "Add" button, and a dropdown menu. The top of the screen shows the URL "maricopa.maps.arcgis.com/apps/mapviewer/index.html?webmap=9db8a92251964f0f8790118e9af156fe" and the ArcGIS navigation bar with links to Google, OKTA, AGOL, GIS Portal, New Portal, MCDOT Portal, ArcGIS Assistant, GISDevWeb, Localhost:3344, and Custom Widgets.

Notice how the layers have been grouped to make the Layer List more compact.

The screenshot shows the ArcGIS application interface. On the left is a dark sidebar with various options: Add, Layers (selected), Tables, Basemap, Charts, Legend, Bookmarks, Save and open, Map properties, Share map, Create app, Print, and Information. The main area is titled "Layers" and contains a list of layers. Some layers are grouped under specific dates. A red box highlights the group for "2022 Sep - 2022 Oct". A red arrow points from the text "Grouped Layers" to this highlighted group. To the right of the list is a map view showing a residential area with streets like Highland Ave, Campbell Ave, Heatherbrae Dr, and Indian School Rd. The map is divided into four panels, each showing a different time period's aerial imagery.

Layer Group	Description
County	Administrative boundaries
Terrain (NAVD88)	Terrain data
Parcel (Current)	Current parcel boundaries
Zip Code	Zip code boundaries
City	City boundaries
Township Range Section	Township, Range, Section boundaries
Street	Street network
2022 Sep - 2022 Oct	Aerial Imagery (Footprint, Aerial Photography)
2021 Sep - 2021 Nov	Aerial Imagery
2020 Oct - 2020 Nov	Aerial Imagery

Make sure your Web Map is being shared with everyone.

The screenshot shows the ArcGIS Online interface. At the top, there is a navigation bar with links for Notebook, Groups, Content, Organization, a search bar, a notification bell with 2 notifications, a user profile for DAVID DAS GIO_DasT, and a three-dot menu. Below the navigation bar is a blue header bar with tabs: My Content (selected), My Favorites, My Groups, My Organization, and Living Atlas. A search bar below the header contains the text "Search Historical Aerials EXB". To the right of the search bar are buttons for Table, Date Modified, and Filter. The main content area displays a list of items under "My Content". One item, "Historical Aerials EXB", is selected and highlighted with a red box around its sharing icon. A red callout bubble points to this icon with the text "Shared with Everyone". Other items in the list include "Historical Aerials New Map 6". At the top of the content list, there are buttons for Categorize, Move, Change Owner, Share, and Delete. A "Modified" dropdown menu is also visible.

Title	Type	Sharing	Last Modified
Historical Aerials EXB	Web Map	Shared with Everyone	Sep 4, 2023
Historical Aerials New Map 6	Web Map	Not Shared	Aug 27, 2023

This will allow others outside of your organization to access your Web Map, make a copy and modify it to suit their needs and build a new Web Application.

Obtain a Client ID

Open Content | My Content | Add a New Item

The screenshot shows the ArcGIS Content interface. At the top, there is a navigation bar with links: Home, Gallery, Map, Scene, Notebook, Groups, and Content. Below this is a secondary navigation bar with three tabs: Content, My Content (which is selected and highlighted in dark blue), and My Favorites. In the center, there are two main buttons: '+ New item' (highlighted with a red box) and 'Create app'. To the right of these buttons is a search bar with the placeholder 'Search All my content'. The background shows a light gray grid pattern.

Add Developer credentials.

The screenshot shows the 'New item' dialog box. At the top, it says 'New item ⓘ' and has a close button 'X'. Below this is a large dashed box with a file icon and the text 'Drag and drop your file or choose an option'. Underneath are four cloud storage options: 'Your device', 'Google Drive', 'Dropbox', and 'OneDrive'. Below this are six items listed in a grid:

Feature layer Create an editable layer with fields copied from a template or feature layer.	URL Link to an ArcGIS Server web service, KML, OGC WFS, OGC WMS, OGC WMTS, or GeoJSON.
Developer credentials Create OAuth 2.0 credentials to build custom applications.	Application Link to an application on the web or create a new registered application.
Tile layer Create a fast drawing vector tile layer or raster tile layer.	Scene layer Create a fast drawing scene layer using 3d content.

The 'Developer credentials' option is highlighted with a red box.

Add your first redirect URL = <http://localhost:3001>

New item

OAuth 2.0 can be used to authenticate ArcGIS users to access content and location-based services on behalf of the authenticated user. Learn more in the [security and authentication guide](#).

Redirect URLs

Add allowed URLs to a web page or server endpoint to redirect users to after completing authentication.

`http://localhost:3001`

+ Add

Click on Add

Add your second redirect URL = <https://localhost:3001>

New item

OAuth 2.0 can be used to authenticate ArcGIS users to access content and location-based services on behalf of the authenticated user. Learn more in the [security and authentication guide](#).

Redirect URLs

Add allowed URLs to a web page or server endpoint to redirect users to after completing authentication.

`http://localhost:3001`



`https://localhost:3001`



+ Add

Select Application Environment = **Multiple**

URL = <https://localhost:3001>

Application environment

The application environment will affect when the item appears in filtered search results.

<input checked="" type="radio"/> Multiple	<input type="radio"/> Browser
<input type="radio"/> Native	<input type="radio"/> Server

URL

[Back](#)

[Cancel](#) [Next](#)

[Next](#)

Title = EXB Client ID

Tags = EXB

Summary = EXB Client ID

New item

X

Title

EXB Client ID

Folder

Historical Aerials EXB

Categories

Assign categories

Tags

EXB X Add tags

Summary

EXB Client ID

Characters left: 2035

Back

Cancel

Save

Save

Make a note of your Client ID and Client Secret.

Home Gallery Map Scene Notebook Groups Content Organization

EXB Client ID / Overview

 Edit thumbnail 
 Edit  Add to Favorites

EXB Client ID  Application by GIO_DasT
Item created: Sep 4, 2023 Item updated: Sep 4, 2023
View count: 0 

Description

Add an in-depth description of the item.

Credentials

OAuth 2.0 can be used to authenticate ArcGIS users to access content and location-based services on behalf of the authenticated user. Learn more in the [security and authentication guide](#).

Client ID 

Client Secret  

Client ID = **qx2Eu4b0uyJb224A**

Client Secret = **800b2640128b4787ae2c24c07ca8f418**

Note: These values will not work. They were created just for this demo.
You would need to obtain your own Client ID to proceed with this Tutorial.

Do not share your Client ID.

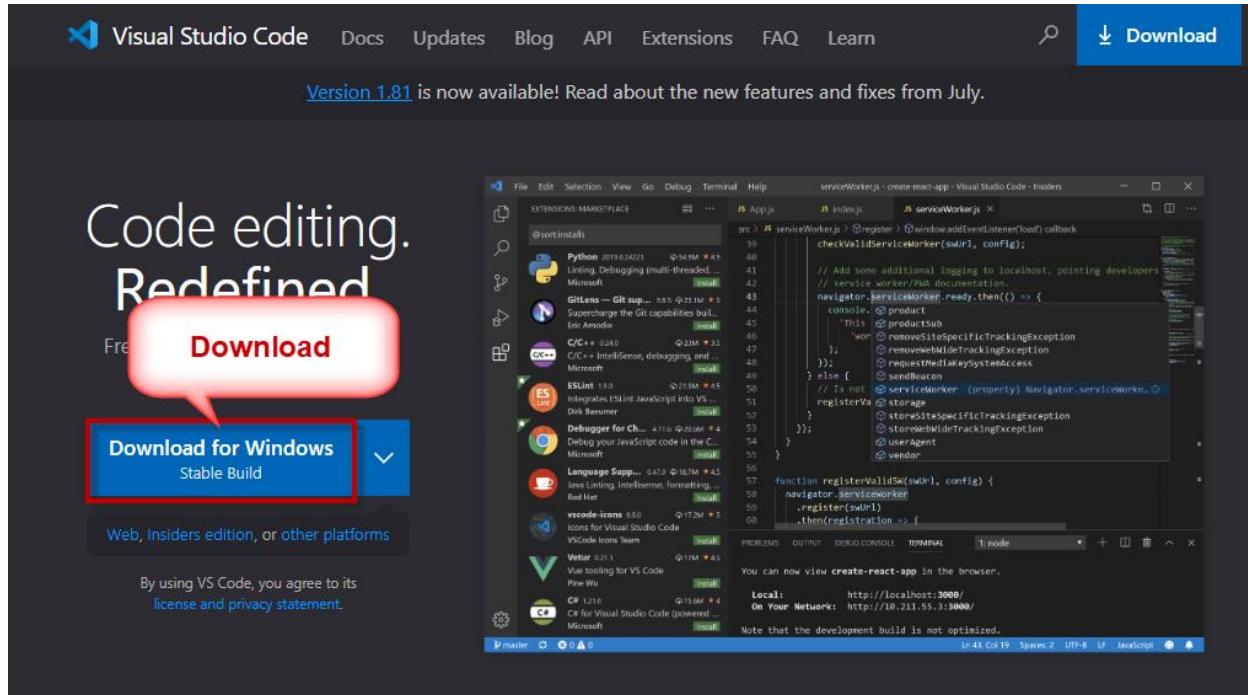
The screenshot shows the ArcGIS Content page. At the top, there are navigation tabs: Notebook, Groups, Content (which is selected), and Organization. To the right of the tabs are search, notification (with 2 notifications), and user profile icons. Below the tabs, a secondary navigation bar includes My Content, My Favorites, My Groups, My Organization, and Living Atlas. A search bar with the placeholder "Search Historical Aerials EXB" is positioned above a table. The table lists three items: "EXB Client ID" (Application type, not shared) and "Historical Aerials EXB" (Web Map type, shared). The "EXB Client ID" row is highlighted with a green background. A red callout bubble with the text "Not shared" points to the "EXB Client ID" row. The table has columns for Title, Type, Shared status, and Last Modified.

Title	Type	Shared	Last Modified
EXB Client ID	Application	Not shared	Sep 4, 2023
Historical Aerials EXB	Web Map	Shared	Sep 4, 2023

Install Microsoft Visual Studio Code

Although you can use Notepad++ to make some quick edits, it is much more elegant to use Microsoft Visual Studio Code as your editor.

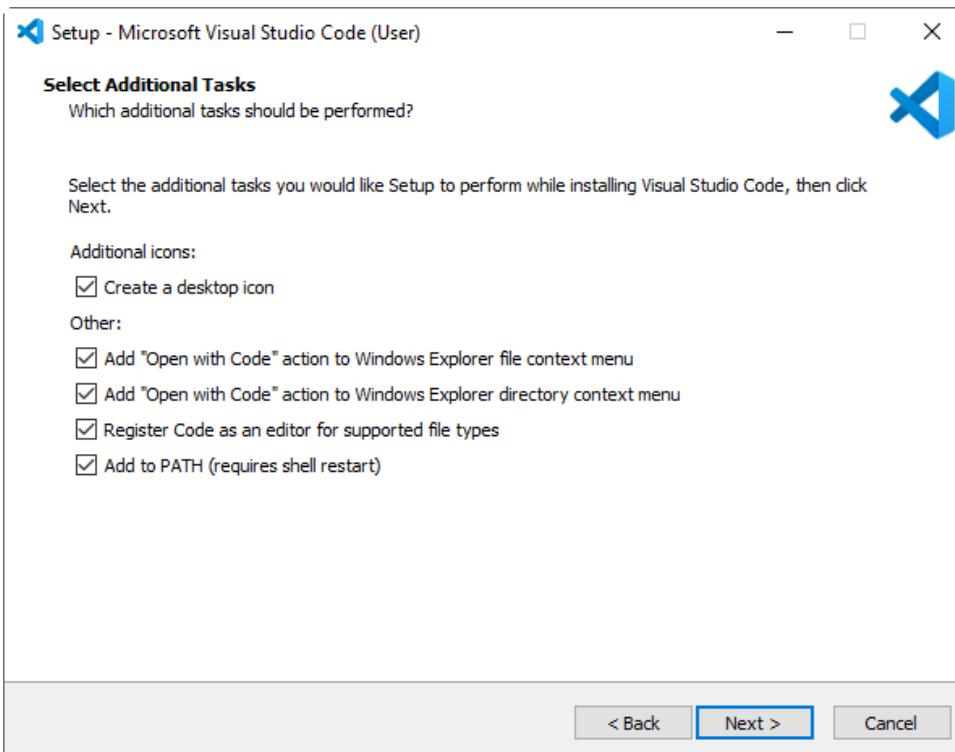
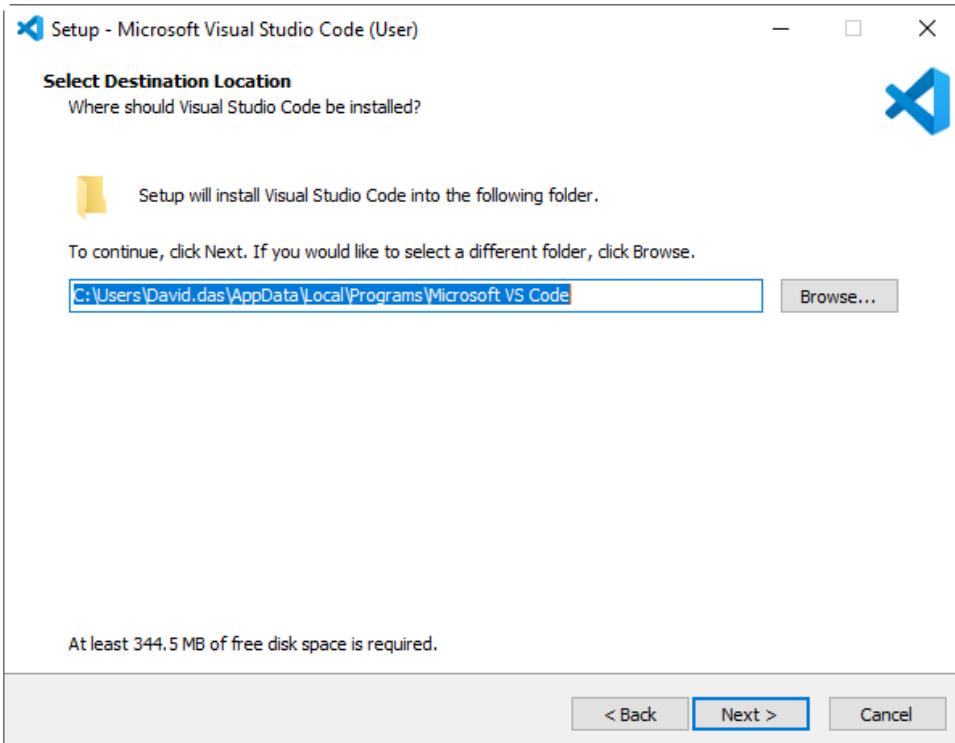
<https://code.visualstudio.com/>

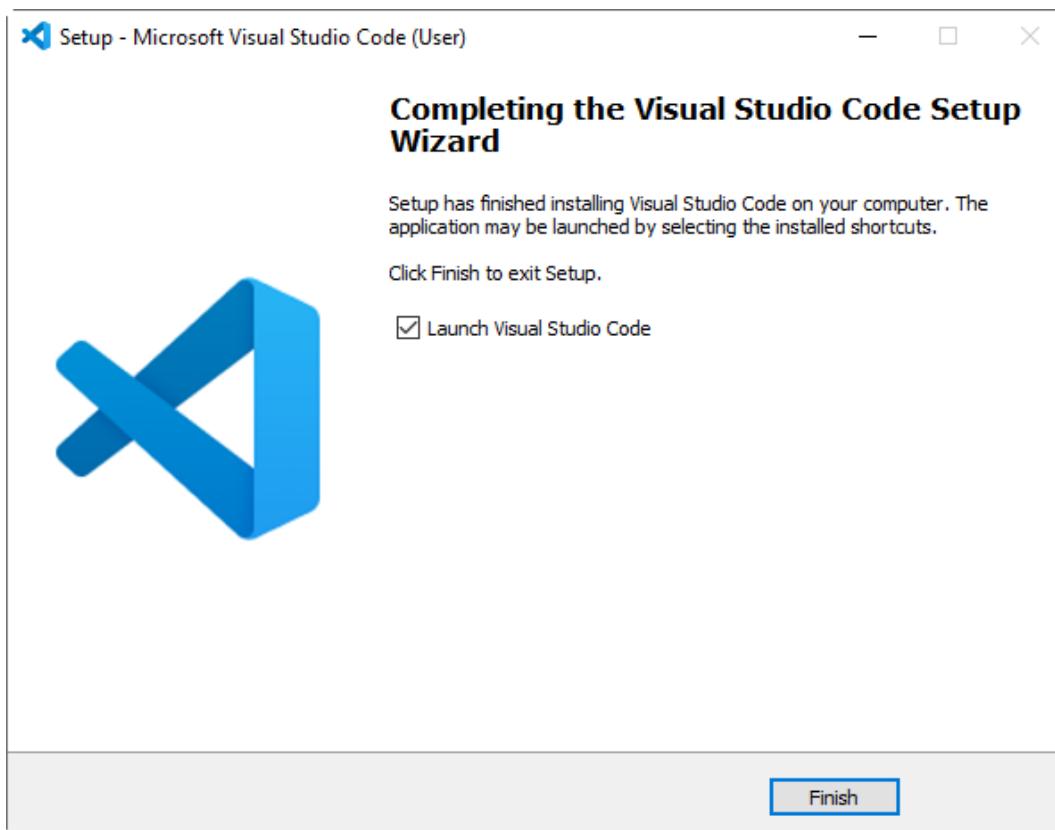
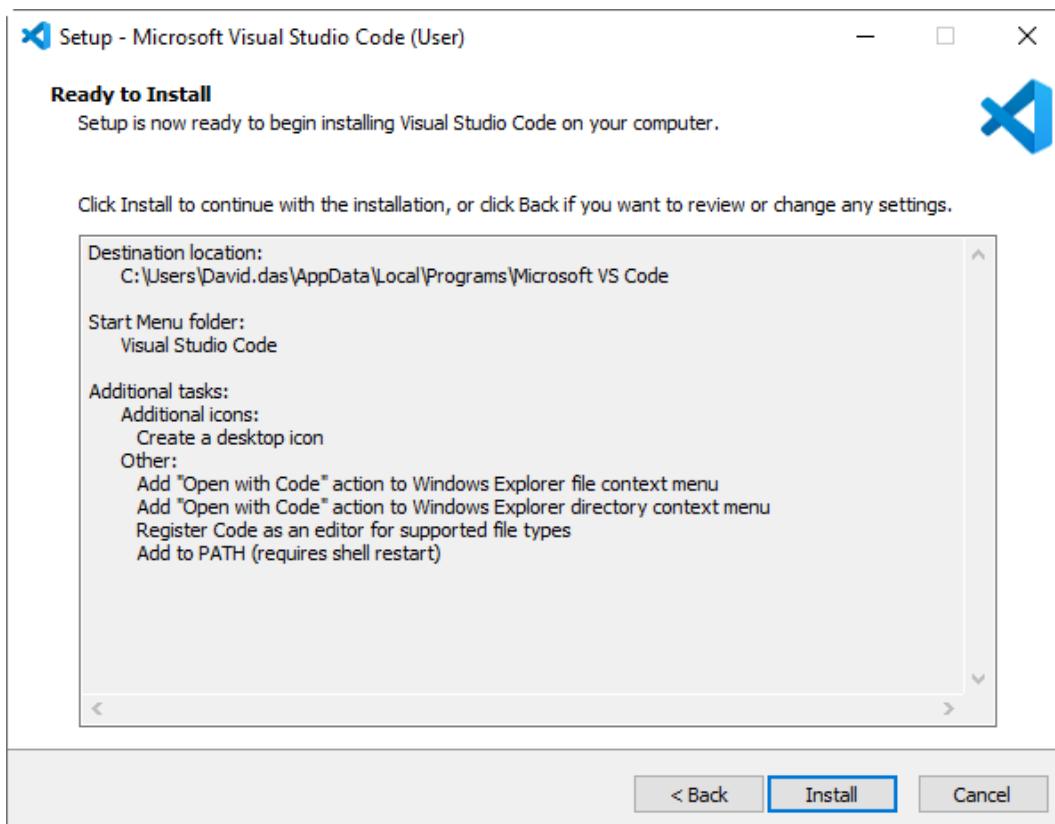


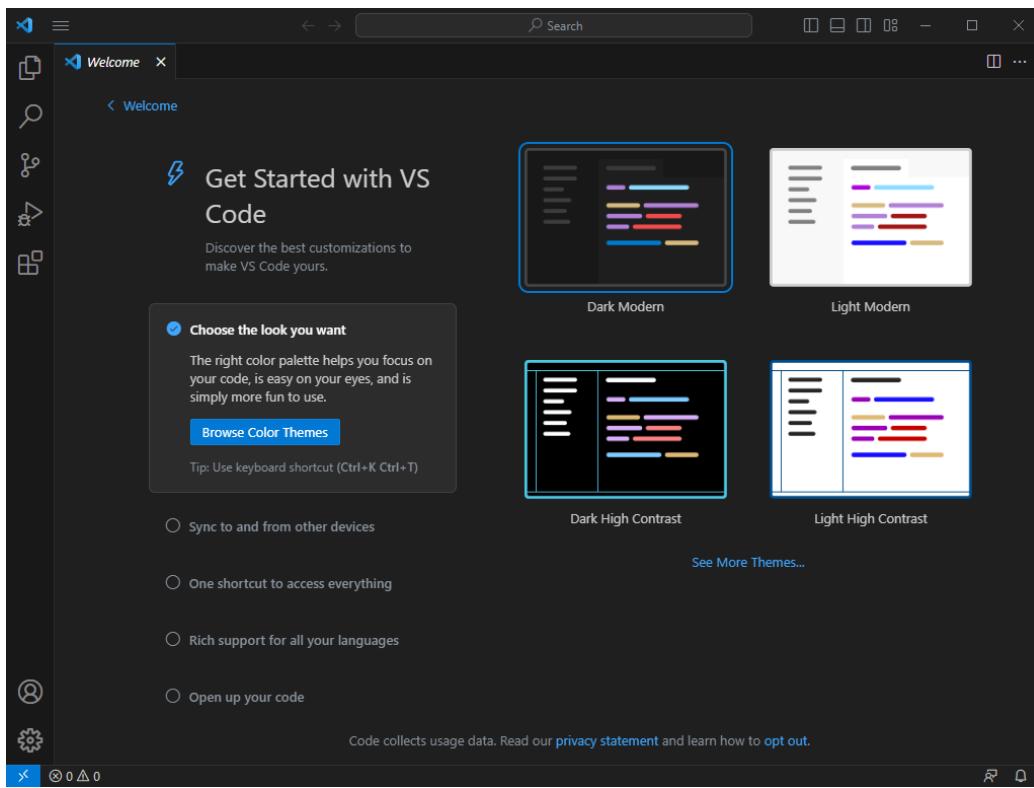
Download Visual Studio Code for Windows (64-bit):

[VSCodeUserSetup-x64-1.81.1.exe](#) 9/1/2023 2:56 PM Application 91,164 KB

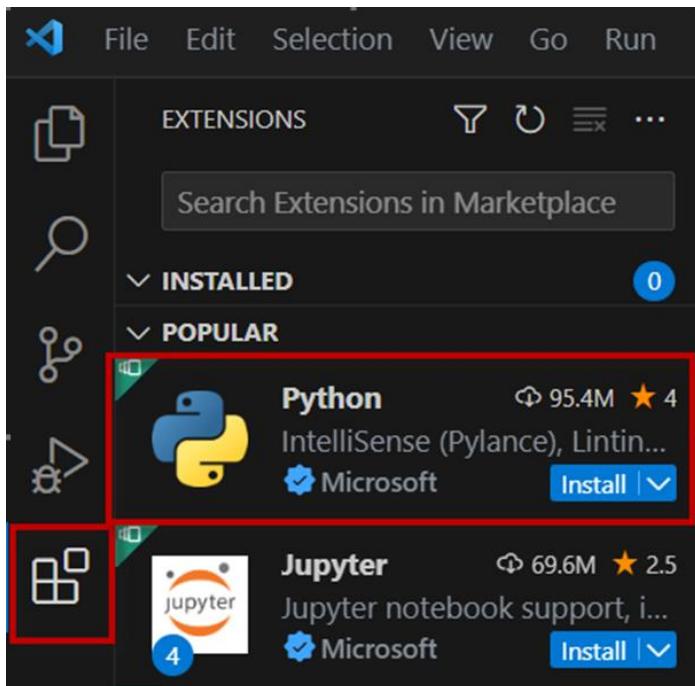
Install Folder = C:\Users\David.das\AppData\Local\Programs\Microsoft VS Code





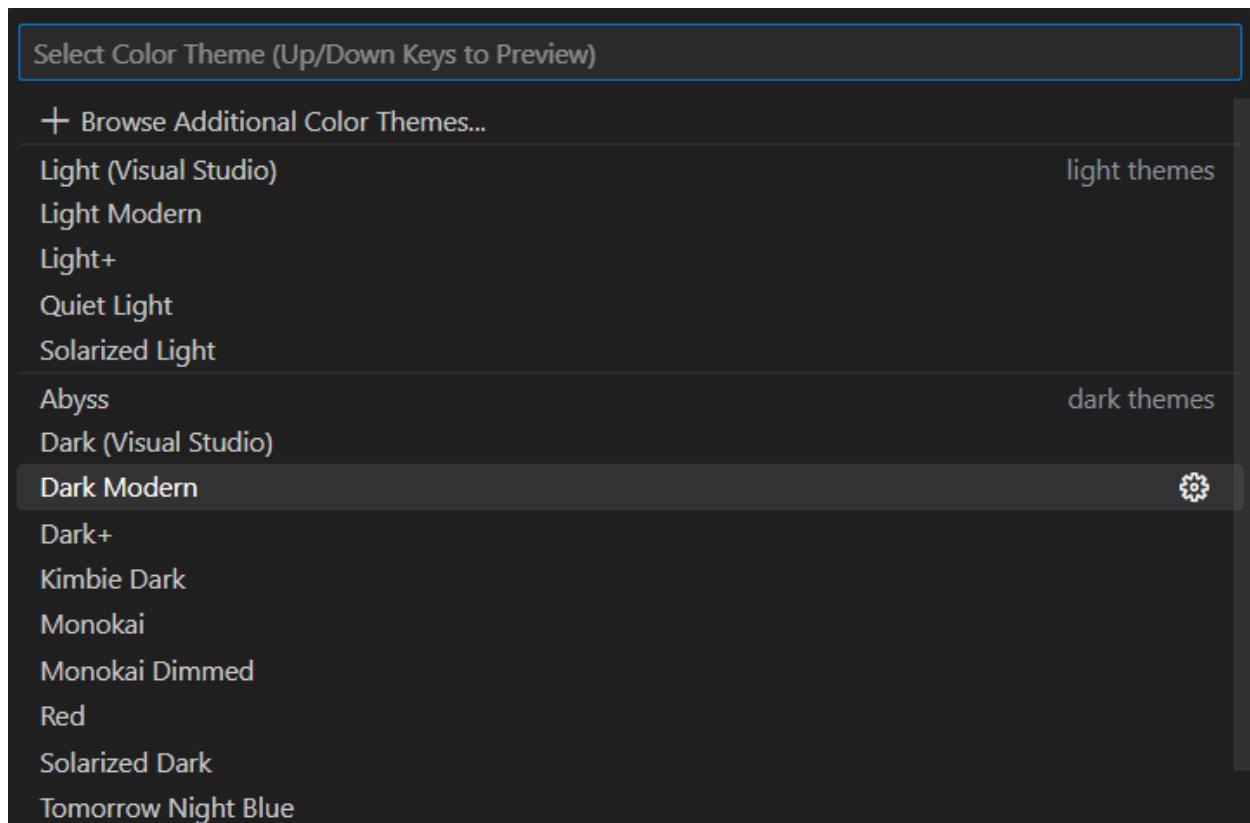


Install the Python and Jupyter Extensions.

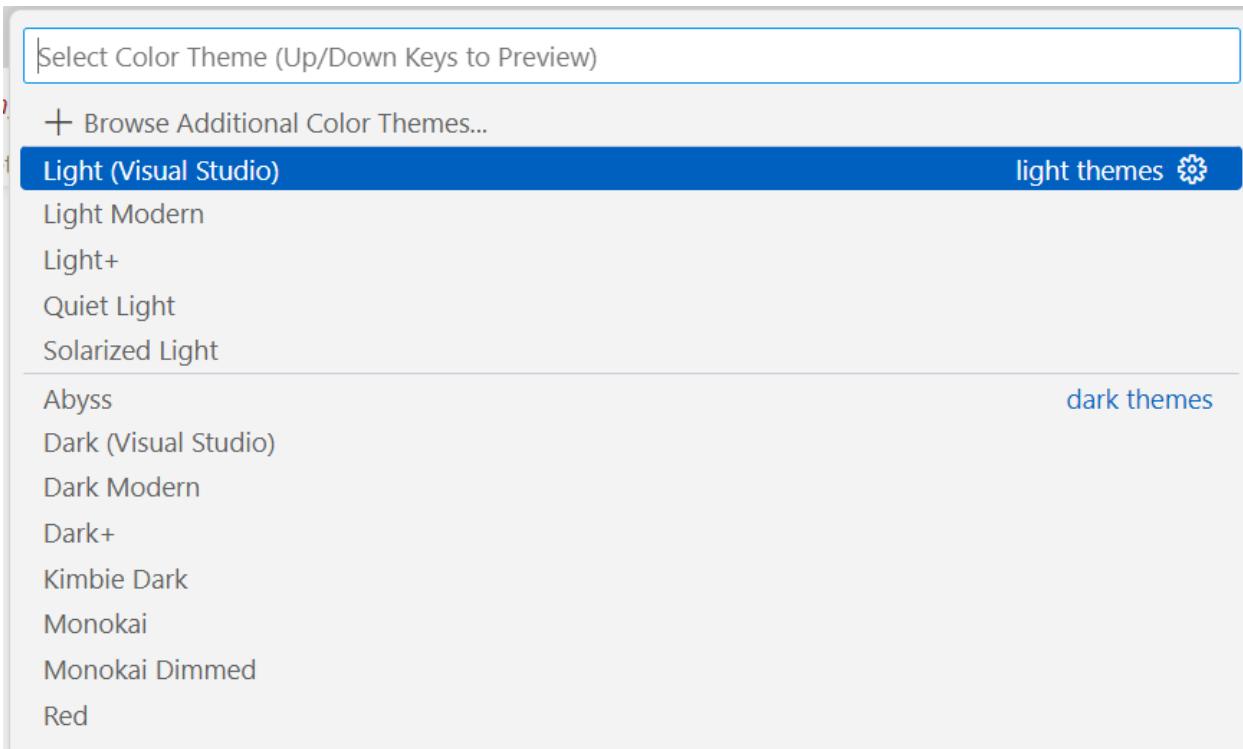


The default Theme is **Dark Modern**.

File | Preferences | Theme | Color Theme



Change this to **Light (Visual Studio)**



Download Experience Builder Developer Edition 1.12

<https://developers.arcgis.com/experience-builder/>

Download the SDK

EXB Dev Version 1.12, July 2023

The screenshot shows the ArcGIS Experience Builder Developer Edition 1.12 landing page. At the top, there's a navigation bar with links for ArcGIS Developers, Documentation, Features, Pricing, Support, Search, and a user profile for DAVID DAS GIO_DasT. Below the navigation bar, the main header reads "ArcGIS Experience Builder" and "A new way of building web apps". A prominent blue button labeled "Get Started" is centered. In the bottom right corner of the main content area, there's a callout box containing a download icon and the text "Download the SDK". This callout box is highlighted with a red border. To the left of the callout, there's a "Get started" section with instructions for installing the software. On the far right, there's an "Install the SDK" link with its own icon.

ArcGIS Experience Builder

Latest release

v1.12 - July 6, 2023

Type	Size	SHA256 checksum	
Download	32.5 MB	4a43d4d7dc04ed53d4f41fc469df9d78b3de3...	 arcgis-experience-builder-1.12.zip

Type	Size	SHA256 checksum	
Node cache	256 MB	bd3a3180cd37cecaf53ec508af332ff52c7...	 exb-1.12-node_modules-cache.zip

Type	Size	SHA256 checksum	
Documentation	19.5 MB	0d9cdc90b6e7a235100e232dc29662ba...	 experience-builder-docs-1.12.zip

 arcgis-experience-builder-1.12.zip	7/13/2023 2:44 PM	Compressed (zipped) Folder	33,343 KB
--	-------------------	----------------------------	-----------

Unzip this file.

You will get a folder named ArcGISExperienceBuilder-1.12

 arcgis-experience-builder-1.12	9/4/2023 4:52 PM	File folder
--	------------------	-------------

Open this folder.

C:\Users\David.das\Downloads\arcgis-experience-builder-1.12\

You will find another folder named ArcGISExperienceBuilder.

 ArcGISExperienceBuilder	9/4/2023 5:05 PM	File folder
---	------------------	-------------

Open the ArcGISExperienceBuilder folder:

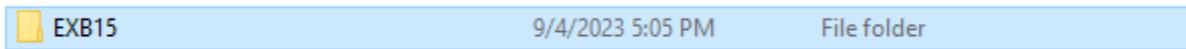
C:\Users\David.das\Downloads\arcgis-experience-builder-1.12\ArcGISExperienceBuilder\

All the necessary files are within this folder.

 client	9/4/2023 5:05 PM	File folder
 server	9/4/2023 5:05 PM	File folder
 3rd-party-license.txt	9/4/2023 4:52 PM	Text Document 68 KB
 readme.txt	9/4/2023 4:52 PM	Text Document 1 KB
 version.json	9/4/2023 4:52 PM	JSON File 1 KB

Rename the ArcGISExperienceBuilder folder to something short like EXB15

C:\Users\David.das\Downloads\arcgis-experience-builder-1.12\



Move the **EXB15** folder to C:\DAVID\EXB

C:\DAVID\EXB\

📁 EXB2	2/13/2022 8:44 PM	File folder
📁 EXB3	7/26/2022 2:36 PM	File folder
📁 EXB4	3/15/2023 11:27 AM	File folder
📁 EXB5	5/1/2023 10:18 AM	File folder
📁 EXB6	5/11/2023 11:54 AM	File folder
📁 EXB7	5/23/2023 10:02 AM	File folder
📁 EXB8	5/26/2023 9:59 AM	File folder
📁 EXB9	6/1/2023 12:59 PM	File folder
📁 EXB10	6/2/2023 8:39 AM	File folder
📁 EXB11	6/15/2023 11:24 AM	File folder
📁 EXB12	6/21/2023 10:48 AM	File folder
📁 EXB13	7/13/2023 2:57 PM	File folder
📁 EXB14	7/18/2023 3:52 PM	File folder
📁 EXB15	9/4/2023 5:34 PM	File folder
📁 Experience Builder Docs	7/20/2023 11:17 AM	File folder

It will be much easier to manage your EXB projects if you keep your pathnames as short as possible.

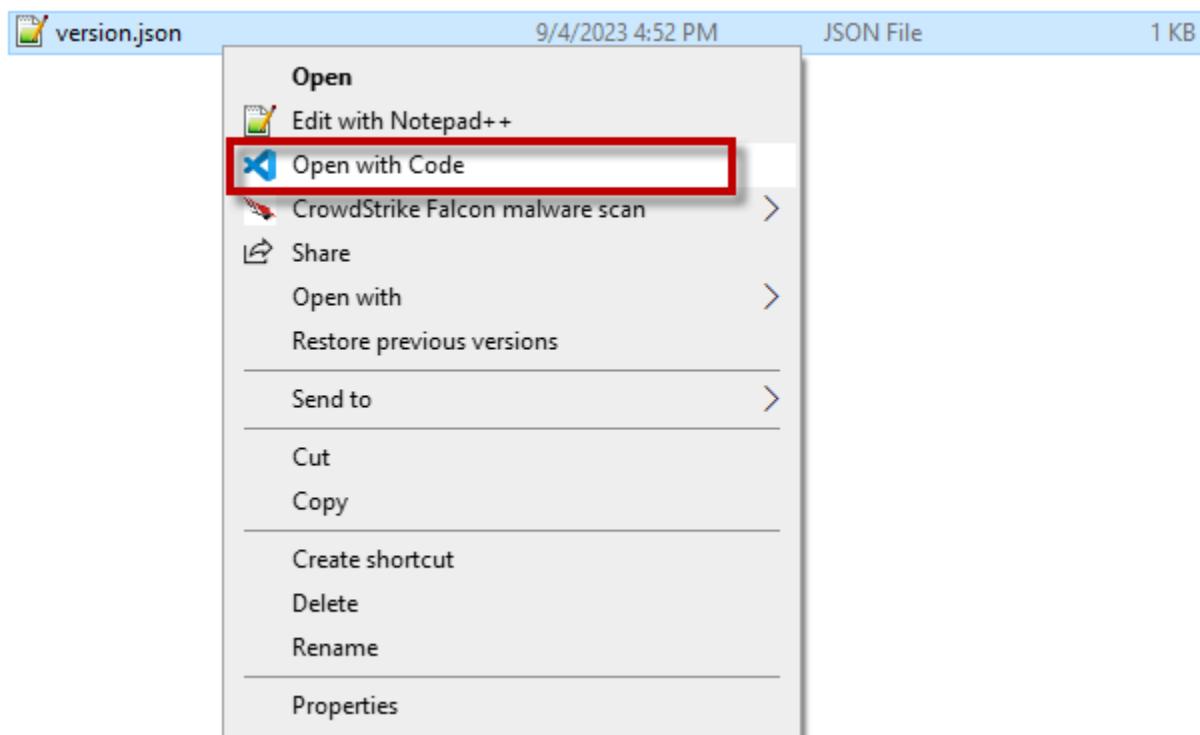
Long pathnames may create issues.

Open the EXB15 folder and examine the contents.

C:\DAVID\EXB\EXB15\

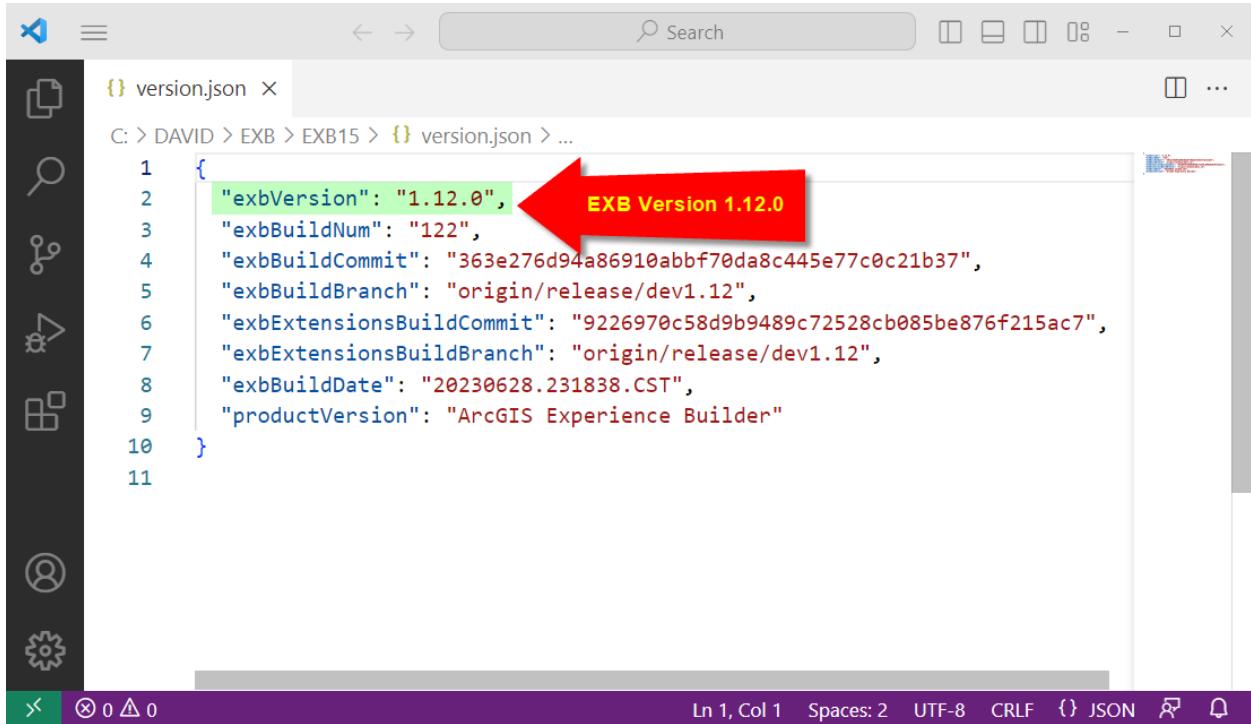
client	9/4/2023 5:34 PM	File folder
server	9/4/2023 5:34 PM	File folder
3rd-party-license.txt	9/4/2023 4:52 PM	Text Document 68 KB
readme.txt	9/4/2023 4:52 PM	Text Document 1 KB
version.json	9/4/2023 4:52 PM	JSON File 1 KB

Right Click on version.json and Open with Code



Check the EXB Version.

It should read **1.12.0**



```
version.json
C: > DAVID > EXB > EXB15 > version.json > ...
1  {
2    "exbVersion": "1.12.0", ← EXB Version 1.12.0
3    "exbBuildNum": "122",
4    "exbBuildCommit": "363e276d94a86910abbf70da8c445e77c0c21b37",
5    "exbBuildBranch": "origin/release/dev1.12",
6    "exbExtensionsBuildCommit": "9226970c58d9b9489c72528cb085be876f215ac7",
7    "exbExtensionsBuildBranch": "origin/release/dev1.12",
8    "exbBuildDate": "20230628.231838.CST",
9    "productVersion": "ArcGIS Experience Builder"
10   }
11
```

Ln 1, Col 1 Spaces: 2 UTF-8 CRLF {} JSON ⚙️ 🗑️

Open the **Client Folder**.

C:\DAVID\EXB\EXB15\client

 _mocks_	9/4/2023 5:34 PM	File folder
 dist	9/4/2023 5:32 PM	File folder
 jimu-arcgis	9/4/2023 5:33 PM	File folder
 jimu-core	9/4/2023 5:33 PM	File folder
 jimu-for-builder	9/4/2023 5:34 PM	File folder
 jimu-for-test	9/4/2023 5:34 PM	File folder
 jimu-icons	9/4/2023 5:34 PM	File folder
 jimu-layouts	9/4/2023 5:34 PM	File folder
 jimu-theme	9/4/2023 5:34 PM	File folder
 jimu-ui	9/4/2023 5:34 PM	File folder
 scripts	9/4/2023 5:34 PM	File folder
 types	9/4/2023 5:34 PM	File folder
 webpack	9/4/2023 5:34 PM	File folder
 your-extensions	9/4/2023 5:34 PM	File folder
 .eslintignore	9/4/2023 4:52 PM	ESLINTIGNORE File
 .eslintrc.js	9/4/2023 4:52 PM	JavaScript Source ...
 jest.config.js	9/4/2023 4:52 PM	JavaScript Source ...
 jest-systemjs-transformer.js	9/4/2023 4:52 PM	JavaScript Source ...
 lerna.json	9/4/2023 4:52 PM	JSON File
 package.json	9/4/2023 4:52 PM	JSON File
 package-lock.json	9/4/2023 4:52 PM	JSON File
 tsconfig.json	9/4/2023 4:52 PM	JSON File
 webpack.config.js	9/4/2023 4:52 PM	JavaScript Source ...

All your Custom Widgets and Themes will go under the **your-extensions** folder.

Open the **your-extensions** folder.

C:\DAVID\EXB\EXB15\client\your-extensions\

 themes	9/4/2023 5:34 PM	File folder
 widgets	9/4/2023 5:34 PM	File folder
 manifest.json	9/4/2023 5:05 PM	JSON File 1 KB

Open the **widgets** folder.

C:\DAVID\EXB\EXB15\client\your-extensions\widgets\

 simple	9/4/2023 5:34 PM	File folder
 .gitkeep	9/4/2023 5:05 PM	GITKEEP File 0 KB

All your custom widgets will go here.

Open the **simple** folder. This is a sample widget.

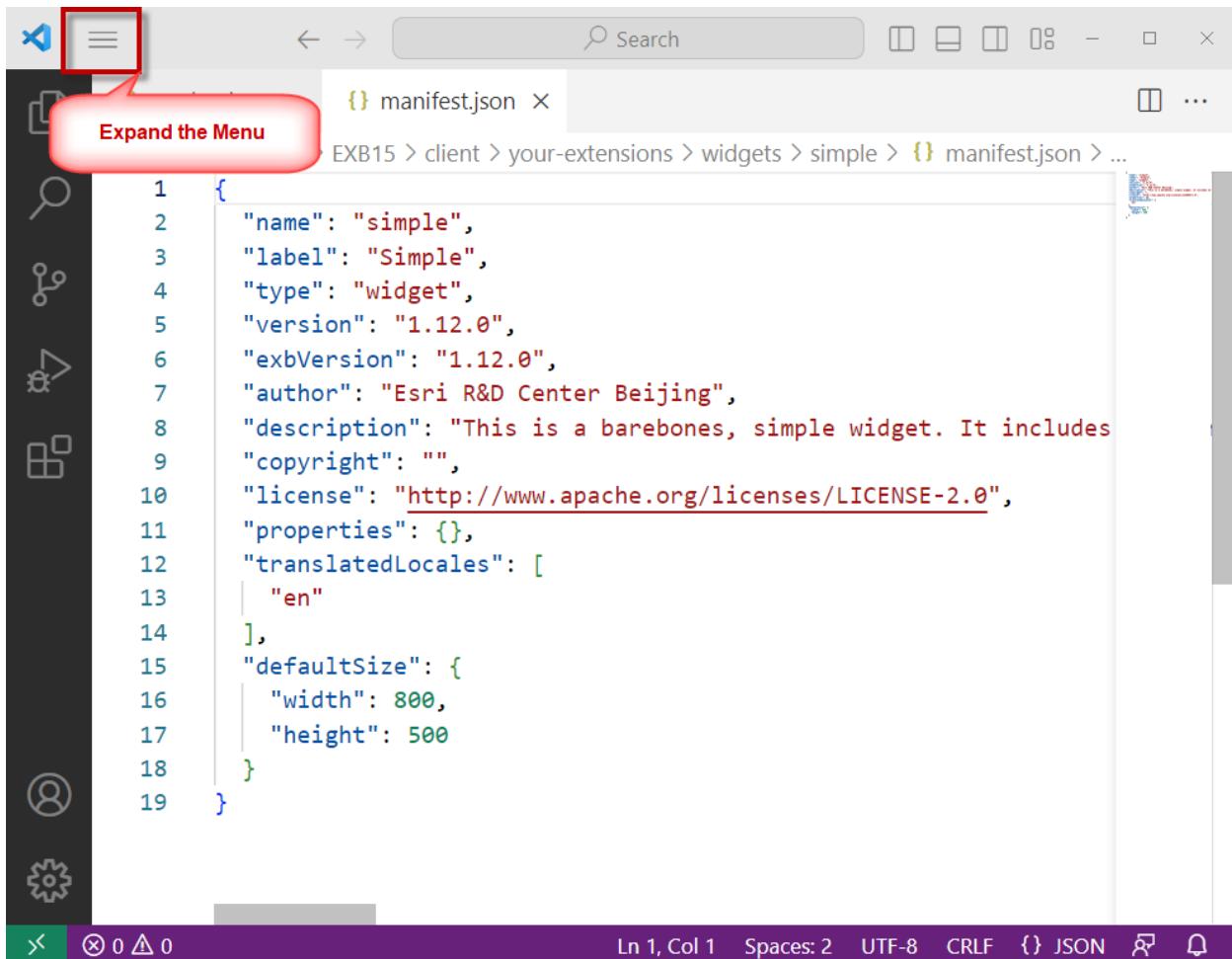
 simple	9/4/2023 5:34 PM	File folder
 .gitkeep	9/4/2023 5:05 PM	GITKEEP File 0 KB

C:\DAVID\EXB\EXB15\client\your-extensions\widgets\simple

 src	9/4/2023 5:34 PM	File folder
 tests	9/4/2023 5:34 PM	File folder
 config.json	9/4/2023 5:05 PM	JSON File 1 KB
 icon.svg	9/4/2023 5:05 PM	SVG Document 3 KB
 manifest.json	9/4/2023 5:05 PM	JSON File 1 KB

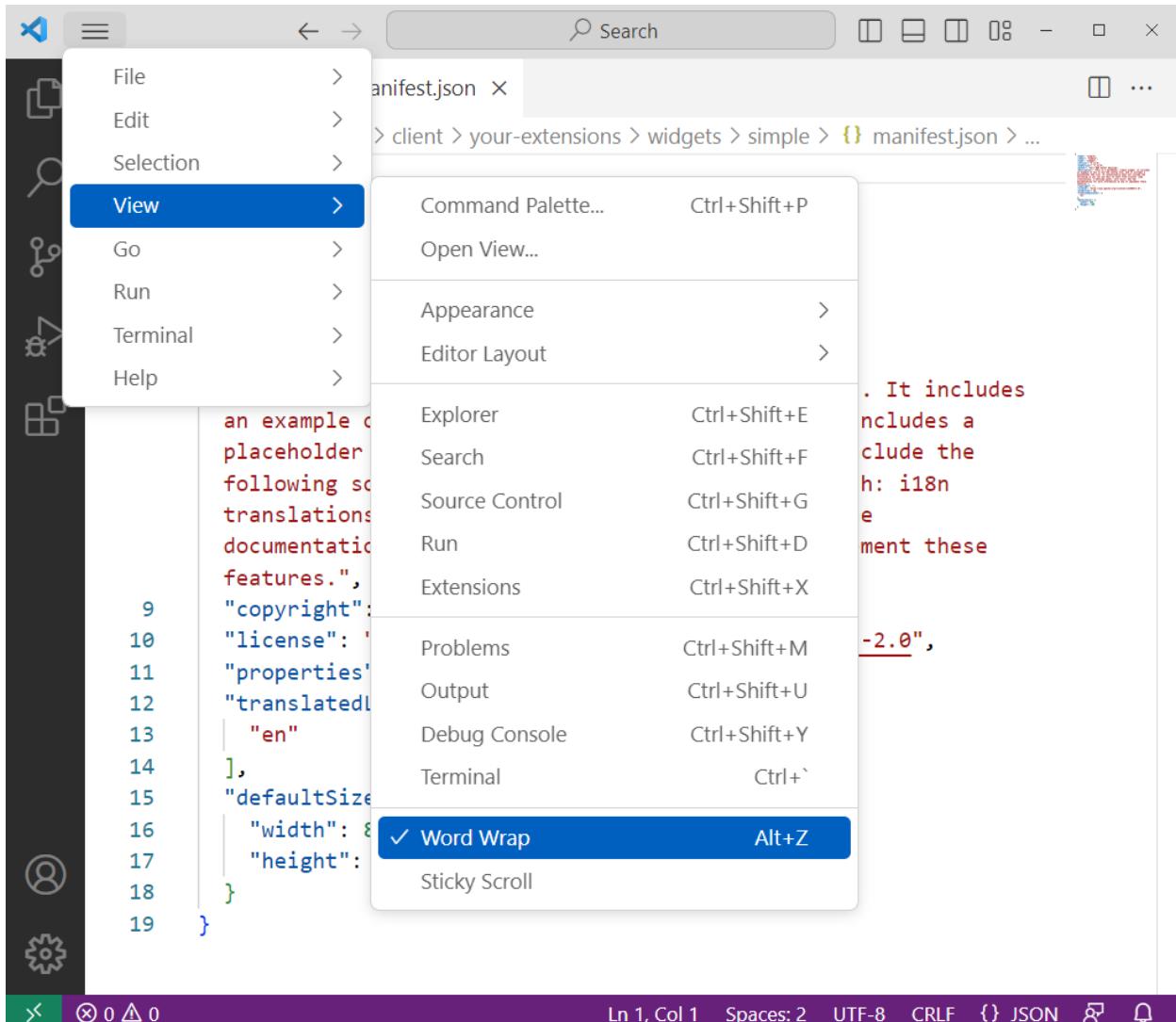
Open **manifest.json** in Code

Expand the Menu



Turn on Word Wrap

File | View | Word Wrap



“version” = Widget Version set by the author.

“exbVersion” = The Experience Builder Version this widget has been designed to run.

The screenshot shows a code editor with the file `manifest.json` open. The file contains JSON configuration for a widget. Two specific fields are highlighted with red boxes and labeled with callouts:

- version**: A field with the value `"version": "1.12.0"`. A red callout bubble labeled "Widget Version" points to this line.
- exbVersion**: A field with the value `"exbVersion": "1.12.0"`. A red callout bubble labeled "EXB Version" points to this line.

The JSON code is as follows:

```
1  {
2    "name": "simple",
3    "label": "Simple",
4    "type": "widget",
5    "version": "1.12.0",
6    "exbVersion": "1.12.0",
7    "author": "Esri R&D Center Beijing",
8    "description": "A simple widget. It includes an example of how to use a placeholder icon file, and it includes a placeholder SVG icon. It intentionally does not include the following so you can use this to start from scratch: i18n translations, a Settings panel, unit tests. See the documentation for more information on how to implement these features.",
9    "copyright": "",
10   "license": "http://www.apache.org/licenses/LICENSE-2.0",
11   "properties": {},
12   "translatedLocales": [
13     "en"
14   ],
15   "defaultSize": {
16     "width": 800,
17     "height": 500
18   }
19 }
```

Note: A widget that has been designed to run on EXB 1.12 may not work on earlier versions without modifications.

Conversely, a widget designed to run on EXB 1.12 may not work on future versions because of breaking changes.

When you add Custom Widgets, make sure they are compatible with the Experience Builder Version you are using.

Custom Widgets designed for a specific version of EXB Dev may not function properly on newer or older versions.

Open the **Server folder**.

C:\DAVID\EXB\EXB15\

 client	9/4/2023 5:34 PM	File folder
 server	9/4/2023 5:34 PM	File folder
 3rd-party-license.txt	9/4/2023 4:52 PM	Text Document 68 KB
 readme.txt	9/4/2023 4:52 PM	Text Document 1 KB
 version.json	9/4/2023 4:52 PM	JSON File 1 KB

C:\DAVID\EXB\EXB15\server\

 cert	9/4/2023 5:34 PM	File folder
 src	9/4/2023 5:34 PM	File folder
 package.json	9/4/2023 5:05 PM	JSON File 2 KB
 package-lock.json	9/4/2023 5:05 PM	JSON File 559 KB
 version.json	9/4/2023 5:05 PM	JSON File 1 KB

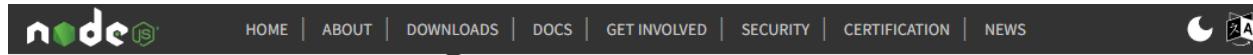
There are only a handful of files.

This folder will get populated once you run a Clean Install of Node.js

Install Node.js version 14.21.3

If you open the Downloads Page for Node.js, you will find the latest Long Term Support (LTS) Version.

<https://nodejs.org/en/download>



Downloads

Latest LTS Version: 18.16.0 (includes npm 9.5.1)

Download the Node.js source code or a pre-built installer for your platform, and start developing today.

LTS Recommended For Most Users	Current Latest Features	
 Windows Installer	 macOS Installer	 Source Code
node-v18.16.0-x64.msi	node-v18.16.0.pkg	node-v18.16.0.tar.gz
Windows Installer (.msi)	32-bit	64-bit
Windows Binary (.zip)	32-bit	64-bit
macOS Installer (.pkg)	64-bit / ARM64	
macOS Binary (.tar.gz)	64-bit	ARM64
Linux Binaries (x64)	64-bit	
Linux Binaries (ARM)	ARMv7	ARMv8
Source Code	node-v18.16.0.tar.gz	

Do not download the latest version!

You may run into issues.

For Experience Builder Developer Edition 1.12, the recommended version of Node.js = 16

<https://developers.arcgis.com/experience-builder/guide/release-versions/>

exbVersion	JSAPI versions	ArcGIS Enterprise	Developer edition	ArcGIS Online	Recomended Node.js versions	Recomended React.js versions
1.12	4.27		1.12	July 2023	16	18
1.11	4.26		1.11	March 2023	16	17
1.10	4.25	11.1	1.10	November 2022	16	17
1.9	4.24		1.9	June 2022	14	17
1.8	4.23	11.0	1.8	March 2022	14	17
1.7	4.22		1.7	January 2022	14	17
1.6	4.21		1.6	October 2021	14	17
1.5	4.20	10.9.1	1.5	June 2021	14	17
1.4	4.19		1.4	April 2021	14	17
1.3	4.18	10.9	1.3	December 2020	14	16
1.2	4.17		1.2	October 2020	12	16
1.1	4.16		1.1	June 2020	12	16
1.0	4.15	10.8.1	1.0	February 2020	12	16

Note: Do not use a Node.js version higher than 16.

However, you can use any version lower than 16.

The minimum version of Node.js required is 12.

For this Tutorial, you will be installing Node.js version 14.

You will get a clean installation with zero warning messages.

Scroll down this page and select Previous Releases

<https://nodejs.org/en/download>

Additional Platforms

Docker Image

Official Node.js Docker Image

Linux on Power LE Systems

64-bit

Linux on System z

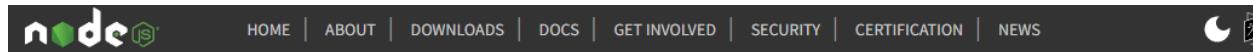
64-bit

AIX on Power Systems

64-bit

- Signed SHASUMS for release files ([How to verify](#))
- All download options
- Installing Node.js via package manager
- **Previous Releases** Previous Releases
- Nightly builds
- Unofficial builds
- Building Node.js from source on supported platforms
- Installing Node.js via binary archive
- Install on Windows Subsystem for Linux (WSL)

<https://nodejs.org/en/download/releases>



Previous Releases

io.js & Node.js

Releases 1.x through 3.x were called "io.js" as they were part of the io.js fork. As of Node.js 4.0.0 the former release lines of io.js converged with Node.js 0.12.x into unified Node.js releases.

Looking for latest release of a version branch?

Version	LTS	Date	V8	npm	NODE_MODULE_VERSION[1]	Releases	Changelog	Docs
Node.js 20.1.0		2023-05-03	11.3.244.8	9.6.4	115	Releases	Changelog	Docs
Node.js 19.9.0		2023-04-10	10.8.168.25	9.6.3	111	Releases	Changelog	Docs
Node.js 18.16.0	Hydrogen	2023-04-12	10.2.154.26	9.5.1	108	Releases	Changelog	Docs
Node.js 17.9.1		2022-06-01	9.6.180.15	8.11.0	102	Releases	Changelog	Docs
Node.js 16.20.0	Gallium	2023-03-28	9.4.146.26	8.19.4	93	Releases	Changelog	Docs
Node.js 15.14.0		2021-04-06	8.6.395.17	7.7.6	88	Releases	Changelog	Docs
Node.js 14.21.3	Fermium	2023-02-16	8.4.371.23	6.14.18	83	Releases	Changelog	Docs
Node.js 13.14.0		2020-04-29	7.9.317.25	6.14.4	79	Releases	Changelog	Docs
Node.js 12.22.12	Erbium	2022-04-05	7.8.279.23	6.14.16	72	Releases	Changelog	Docs

Select **Releases** for Node.js 14.21.3 Fermium

<https://nodejs.org/download/release/v14.21.3/>

Index of /download/release/v14.21.3/

..		
docs/	16-Feb-2023 15:40	-
win-x64/	16-Feb-2023 15:42	-
win-x86/	16-Feb-2023 15:39	-
SHASUMS256.txt	16-Feb-2023 22:06	2953
SHASUMS256.txt.asc	16-Feb-2023 22:06	3835
SHASUMS256.txt.sig	16-Feb-2023 22:06	566
node-v14.21.3-aix-ppc64.tar.gz	16-Feb-2023 15:33	43699874
node-v14.21.3-darwin-x64.tar.gz	16-Feb-2023 16:04	32241321
node-v14.21.3-darwin-x64.tar.xz	16-Feb-2023 16:04	20885076
node-v14.21.3-headers.tar.gz	16-Feb-2023 15:41	603369
node-v14.21.3-headers.tar.xz	16-Feb-2023 15:41	391980
node-v14.21.3-linux-arm64.tar.gz	16-Feb-2023 15:40	34313013
node-v14.21.3-linux-arm64.tar.xz	16-Feb-2023 15:41	21532688
node-v14.21.3-linux-armv7l.tar.gz	16-Feb-2023 15:28	32444336
node-v14.21.3-linux-armv7l.tar.xz	16-Feb-2023 15:29	19390324
node-v14.21.3-linux-ppc64le.tar.gz	16-Feb-2023 15:24	36255542
node-v14.21.3-linux-ppc64le.tar.xz	16-Feb-2023 15:26	22698084
node-v14.21.3-linux-s390x.tar.gz	16-Feb-2023 15:22	34570308
node-v14.21.3-linux-s390x.tar.xz	16-Feb-2023 15:23	21208244
node-v14.21.3-linux-x64.tar.gz	16-Feb-2023 15:22	34278372
node-v14.21.3-linux-x64.tar.xz	16-Feb-2023 15:23	22187736
node-v14.21.3-win-x64.7z	16-Feb-2023 15:43	17670640
node-v14.21.3-win-x64.zip	16-Feb-2023 15:44	29088388
node-v14.21.3-win-x86.7z	16-Feb-2023 15:40	16537820
node-v14.21.3-win-x86.zip	16-Feb-2023 15:40	27489213
node-v14.21.3-x64.msi	16-Feb-2023 15:45	30670848
node-v14.21.3-x86.msi	16-Feb-2023 15:40	28975104
node-v14.21.3.pkg	16-Feb-2023 15:59	32427197
node-v14.21.3.tar.gz	16-Feb-2023 15:33	64736018
node-v14.21.3.tar.xz	16-Feb-2023 15:37	34508116

Download

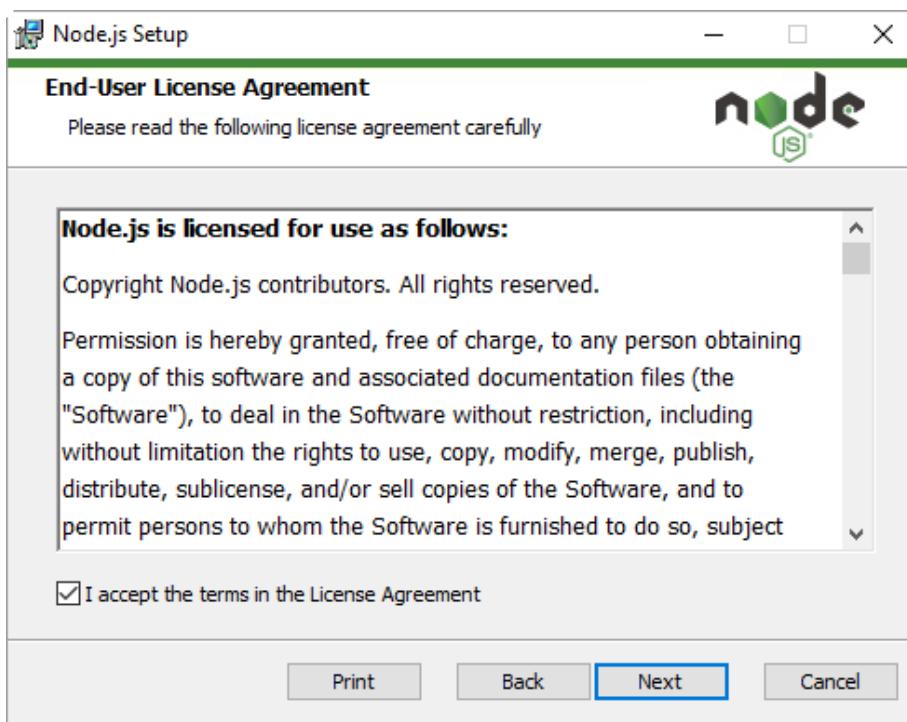
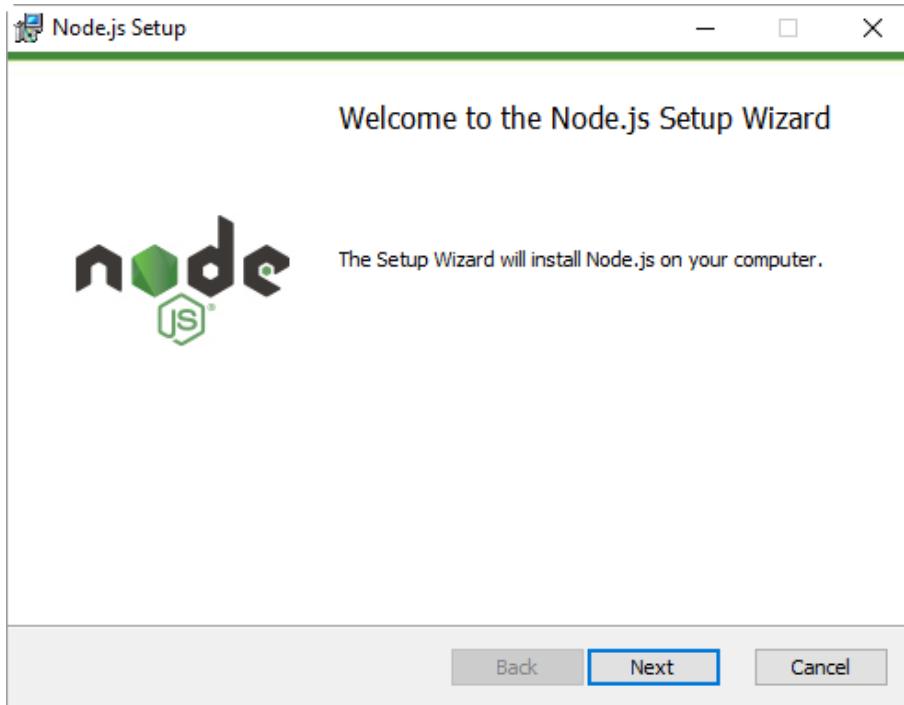
Download the file:

node-v14.21.3-x64.msi

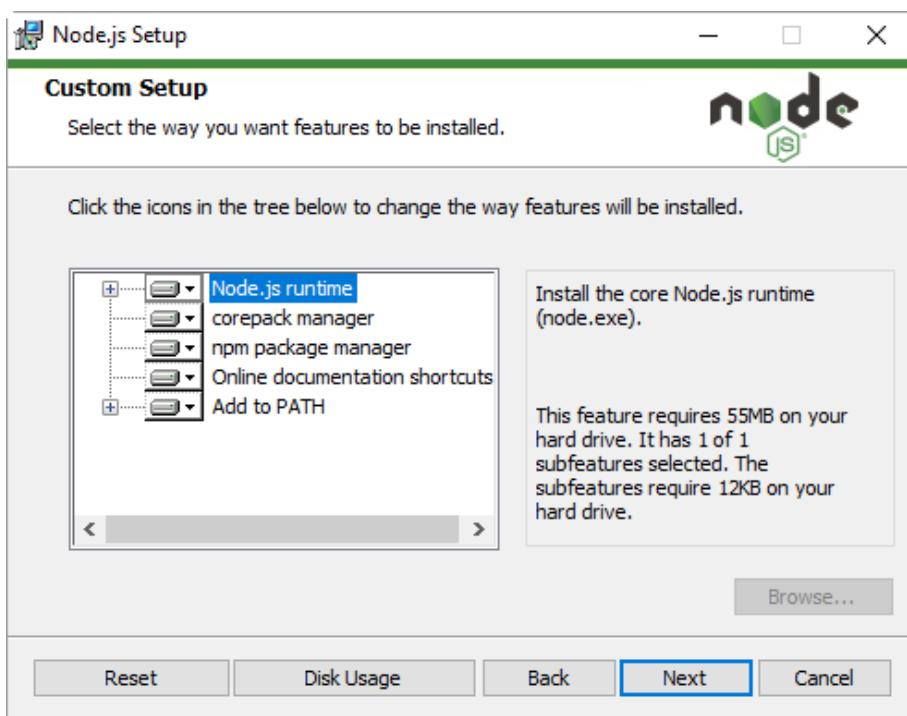
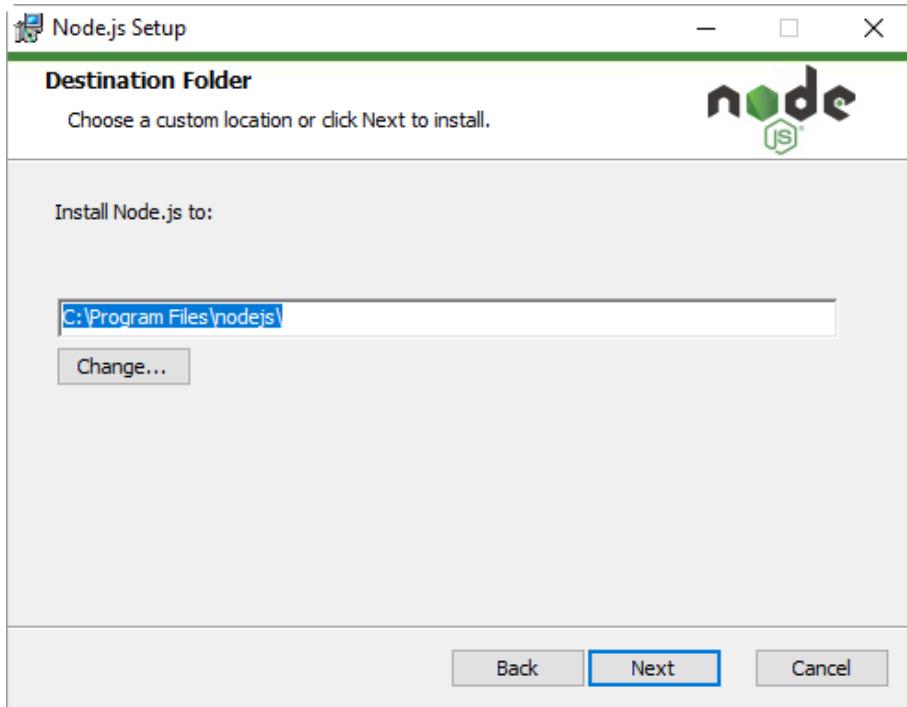
Note, the x64 is for 64-bit machines.

 node-v14.21.3-x64.msi	9/4/2023 6:25 PM	Windows Installer Package	29,952 KB
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Double click on this msi file to run the installation.

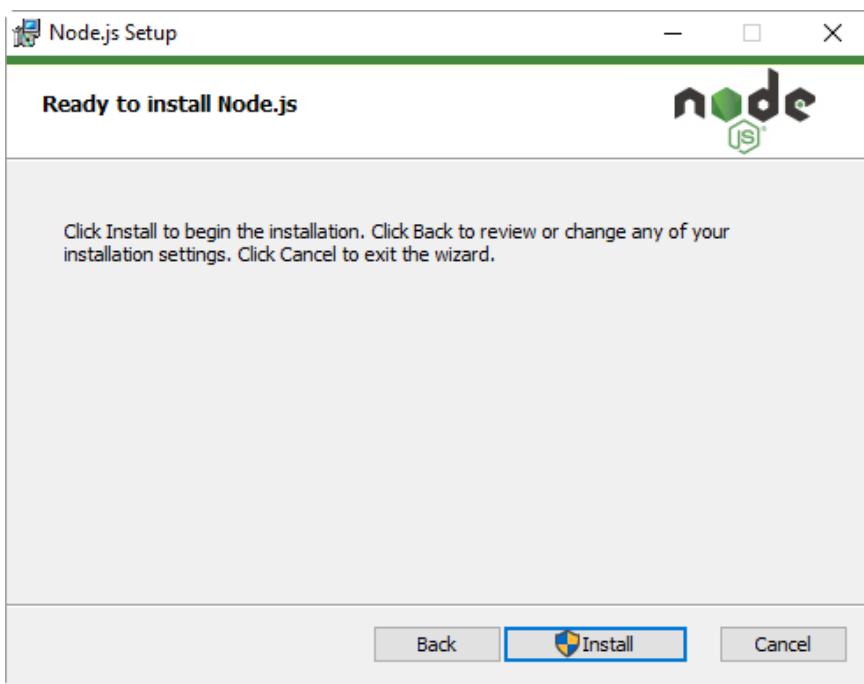
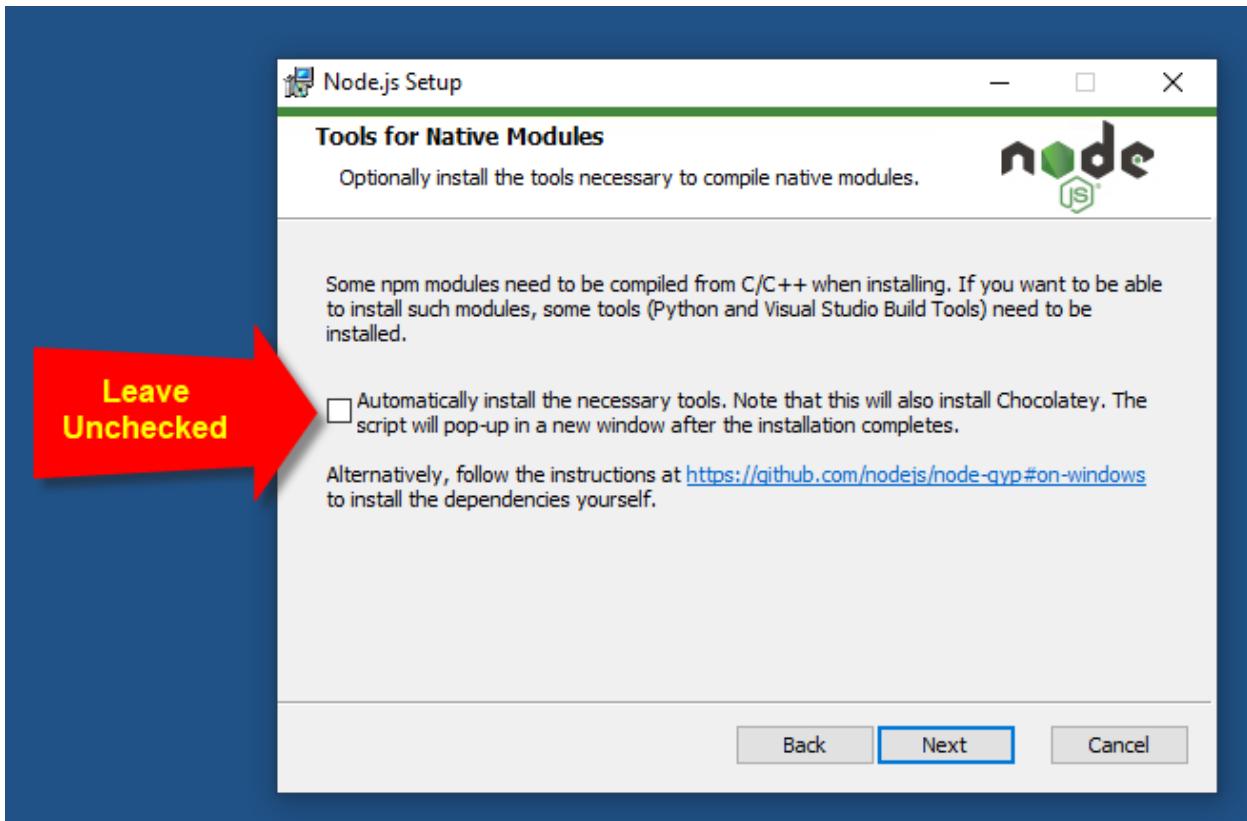


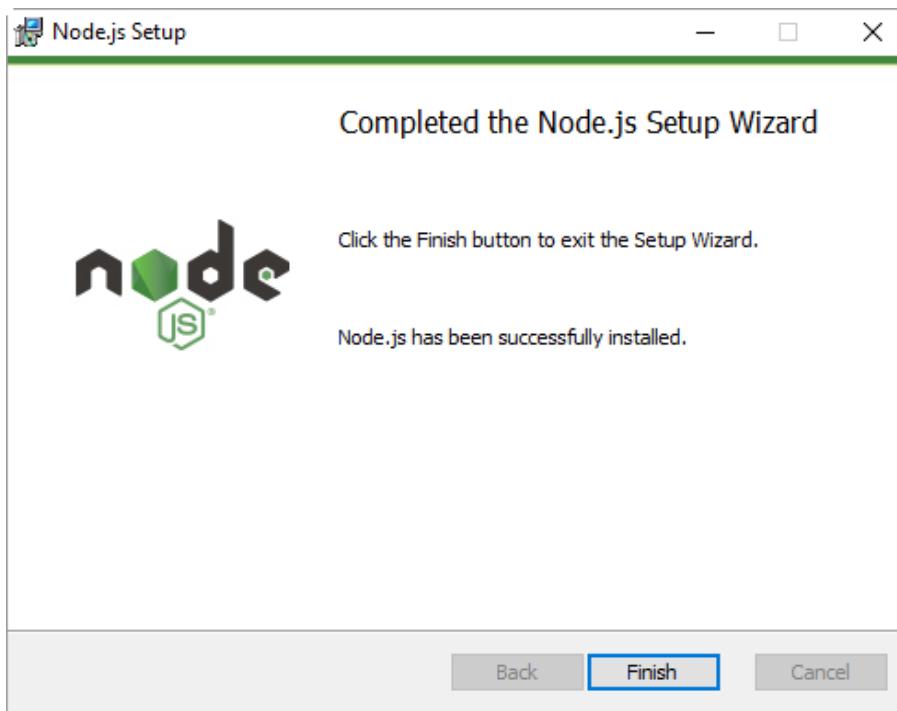
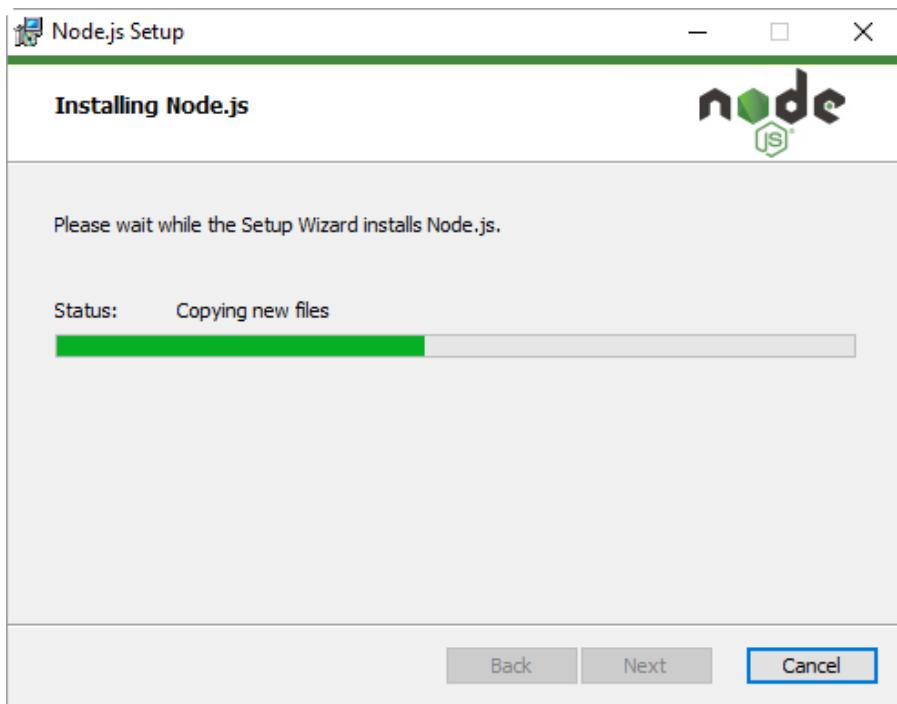
Installation Folder = C:\Program Files\nodejs\



Important: Do not install Chocolatey!

Leave this option unchecked.





Node.js version 14.21.3 has now been installed on your computer.

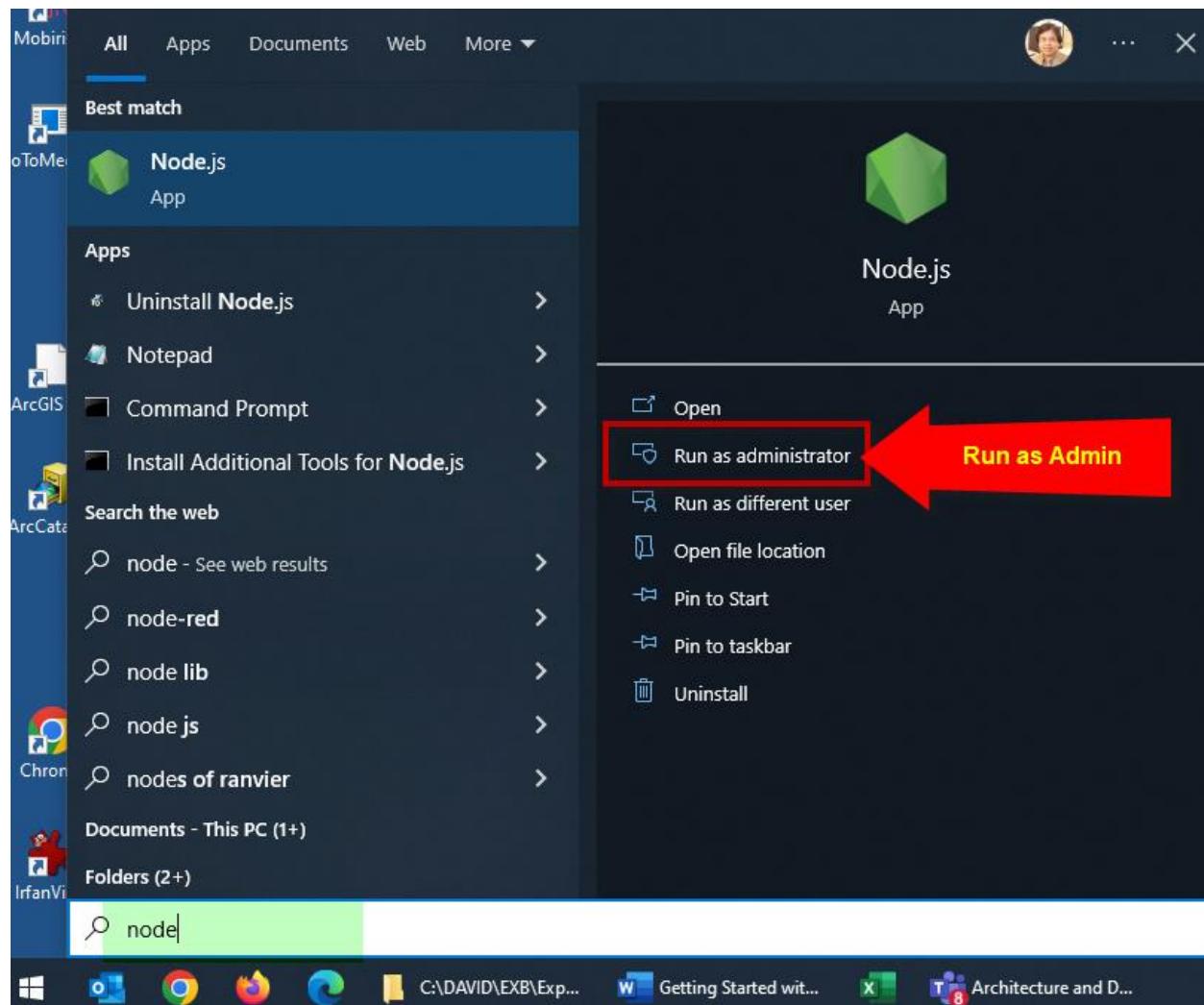
Uninstall or change a program

To uninstall a program, select it from the list and then click Uninstall, Change, or Repair.

Organize	▼	Uninstall	Change	Repair	▼
Name		Publisher	Installed On	Size	Version
Microsoft Visual Studio Code (User)		Microsoft Corporation	9/1/2023	344 MB	1.81.1
Microsoft Visual Studio Installer		Microsoft Corporation	2/10/2022		3.5.2150.18781
Mobirise4		Mobirise.com	2/19/2022	164 MB	
Mozilla Firefox (x64 en-US)		Mozilla	9/1/2023	216 MB	117.0
Mozilla Maintenance Service		Mozilla	8/19/2023	573 KB	116.0.3
Netskope Client		Netskope, Inc.	6/21/2023	26.2 MB	102.1.6.1356
Node.js		Node.js Foundation	9/4/2023	83.0 MB	14.21.3
Notepad++ (64-bit x64)		Notepad++ Team	8/21/2023	14.8 MB	8.5.5
NVIDIA Graphics Driver 517.37		NVIDIA Corporation	2/3/2023		517.37
NVIDIA HD Audio Driver 1.3.39.14		NVIDIA Corporation	2/3/2023		1.3.39.14
NVIDIA USBC Driver 1.46.831.832		NVIDIA Corporation	2/3/2023		1.46.831.832

Node.js

Search for Node from the Start Menu



Run Node.js as Administrator.

This verifies you are running Node.js version 14.21.3

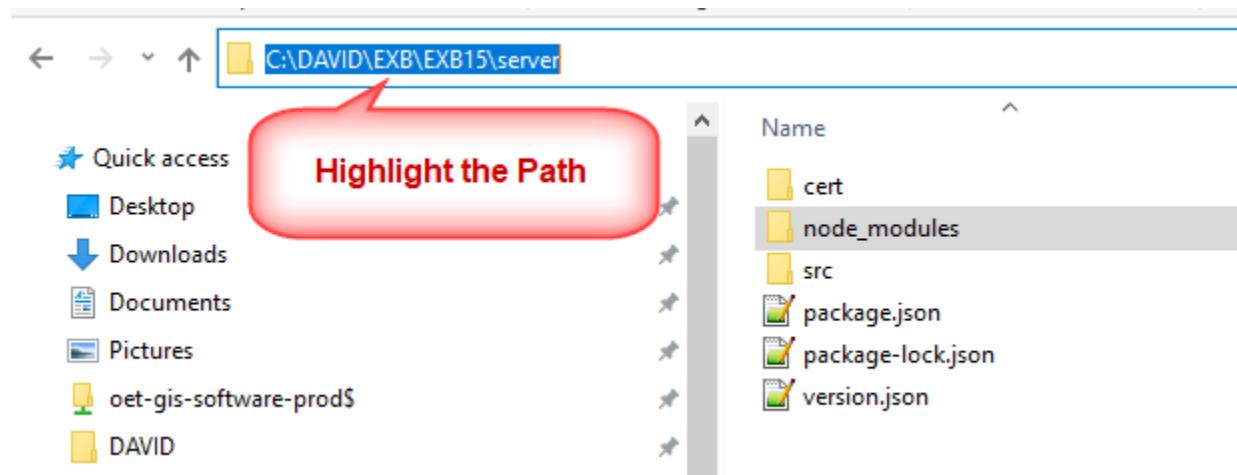
A screenshot of a terminal window. At the top, a red speech bubble highlights the text "Node.js version 14.21.3". The terminal itself displays the following output:
Node.js
Welcome to Node.js v14.21.3.
Type ".help" for more information.
> -

Node.js Server Clean Installation

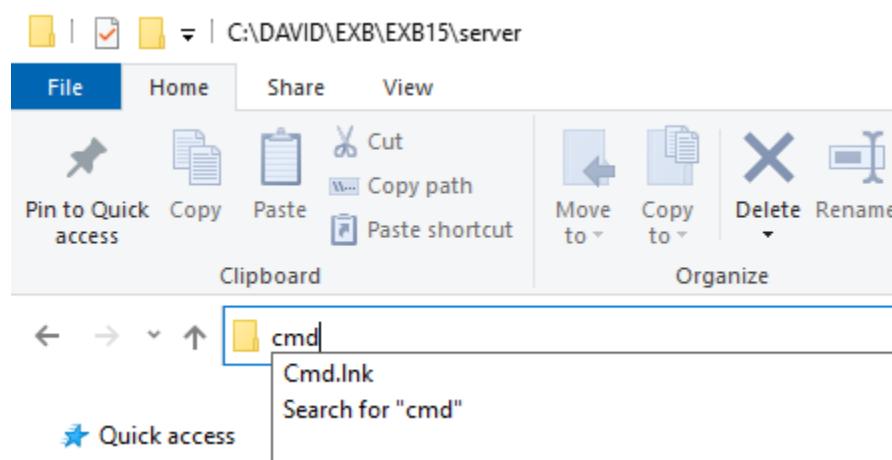
Navigate the **Server Folder**

C:\DAVID\EXB\EXB15\server

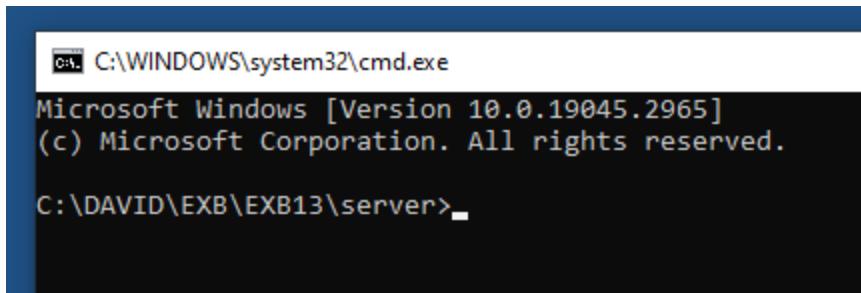
Highlight the path.



Type **cmd** and press Enter.



This opens a Command Window with the correct path already in place.

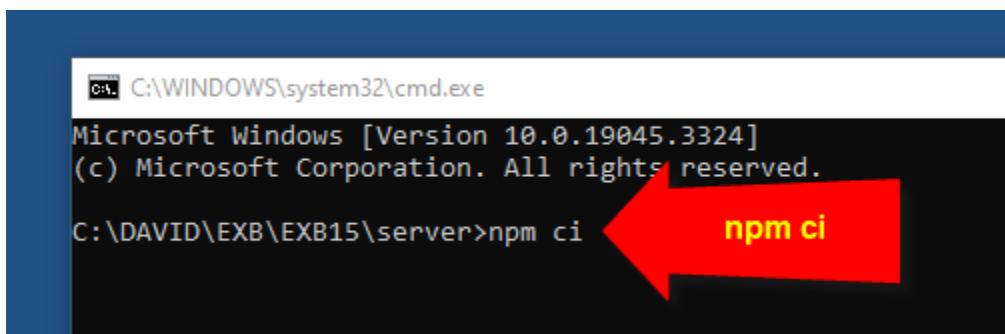


```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.2965]
(c) Microsoft Corporation. All rights reserved.

C:\DAVID\EXB\EXB13\server>
```

Run a Clean Install.

Enter **npm ci**



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.

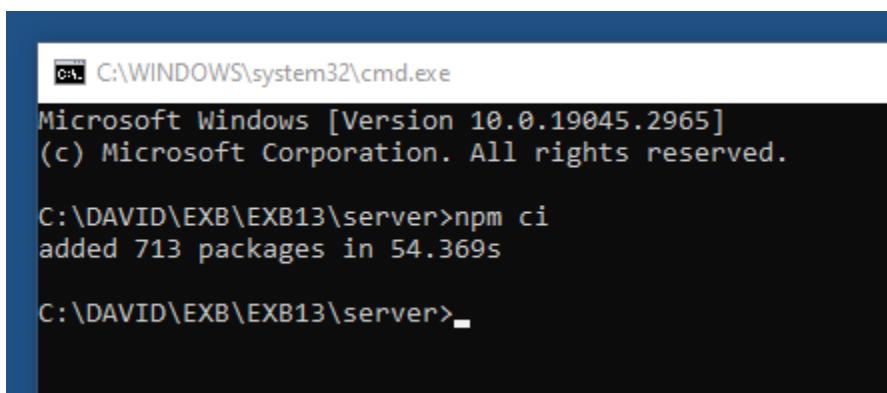
C:\DAVID\EXB\EXB15\server>npm ci
```

Be patient!

This may take 5 minutes.

You may think that the process has hung. Do not close this window.

Wait till you see this prompt.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.2965]
(c) Microsoft Corporation. All rights reserved.

C:\DAVID\EXB\EXB13\server>npm ci
added 713 packages in 54.369s

C:\DAVID\EXB\EXB13\server>
```

713 Packages were added.

Examine your Server Folder.

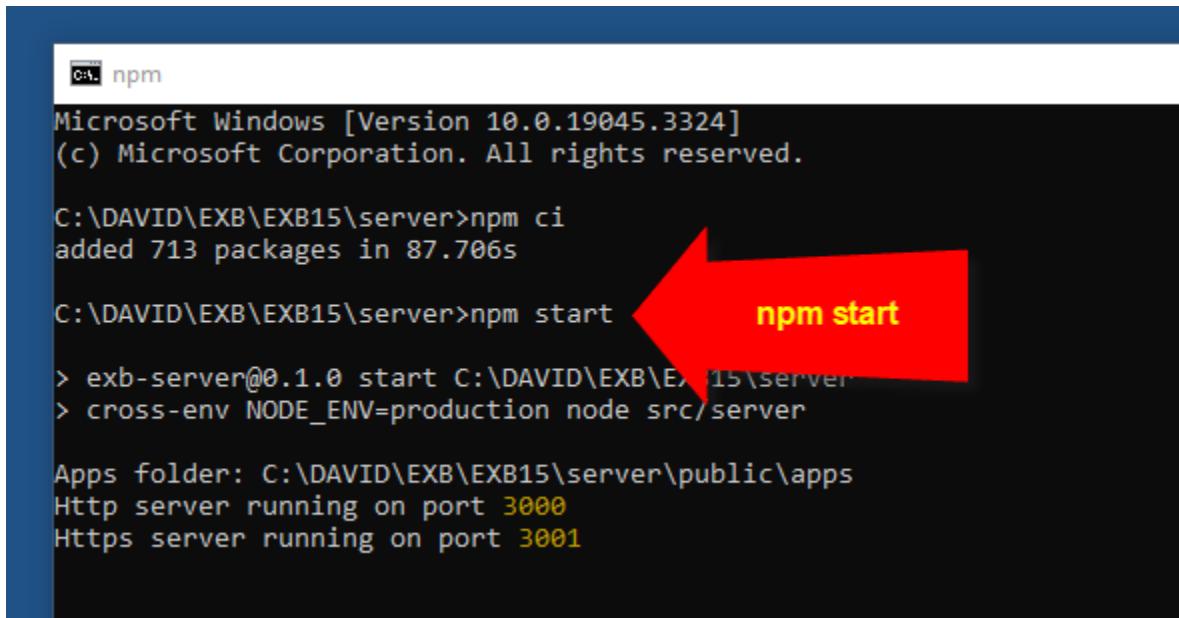
C:\DAVID\EXB\EXB15\server\

A new folder named **node_modules** was created.

 cert	9/4/2023 5:34 PM	File folder
 node_modules	9/4/2023 6:41 PM	File folder
 src	9/4/2023 5:34 PM	File folder
 package.json	9/4/2023 5:05 PM	JSON File 2 KB
 package-lock.json	9/4/2023 5:05 PM	JSON File 559 KB
 version.json	9/4/2023 5:05 PM	JSON File 1 KB

Start the npm server

Enter **npm start**



```
C:\ npm
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.

C:\DAVID\EXB\EXB15\server>npm ci
added 713 packages in 87.706s

C:\DAVID\EXB\EXB15\server>npm start
npm start

> exb-server@0.1.0 start C:\DAVID\EXB\EXB15\server
> cross-env NODE_ENV=production node src/server

Apps folder: C:\DAVID\EXB\EXB15\server\public\apps
Http server running on port 3000
Https server running on port 3001
```

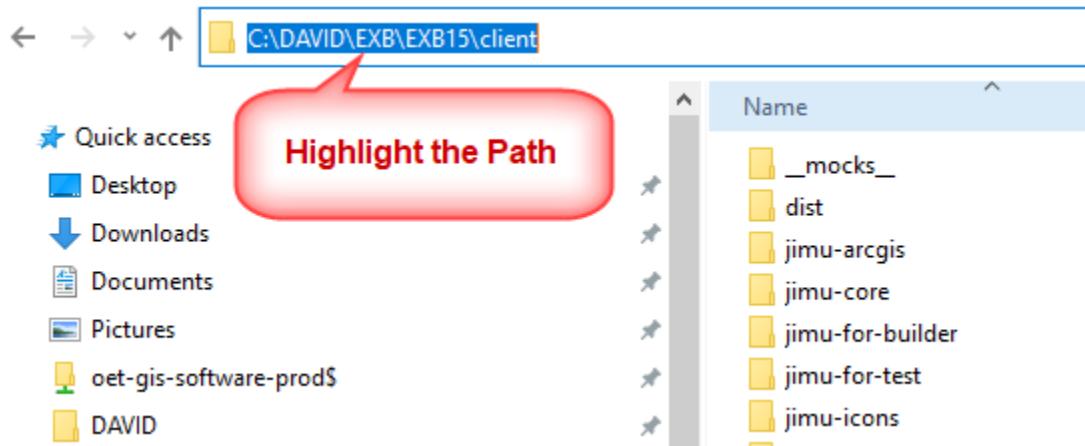
Keep this window open. Do not close this.

Node.js Client Clean Installation

Navigate to the **Client Folder**

C:\DAVID\EXB\EXB15\client\

Highlight the Path



Type **cmd** and press Enter.

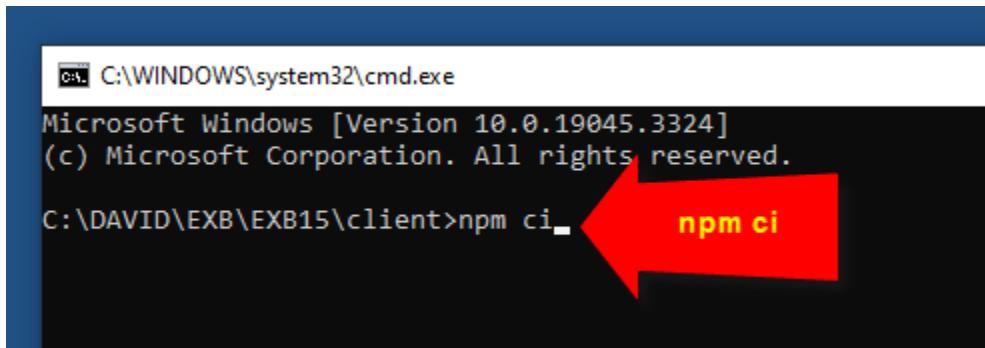
This opens a second Command Window with the correct path already in place.

```
C:\> C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.

C:\DAVID\EXB\EXB15\client>
```

Run a Clean Install.

Enter **npm ci**



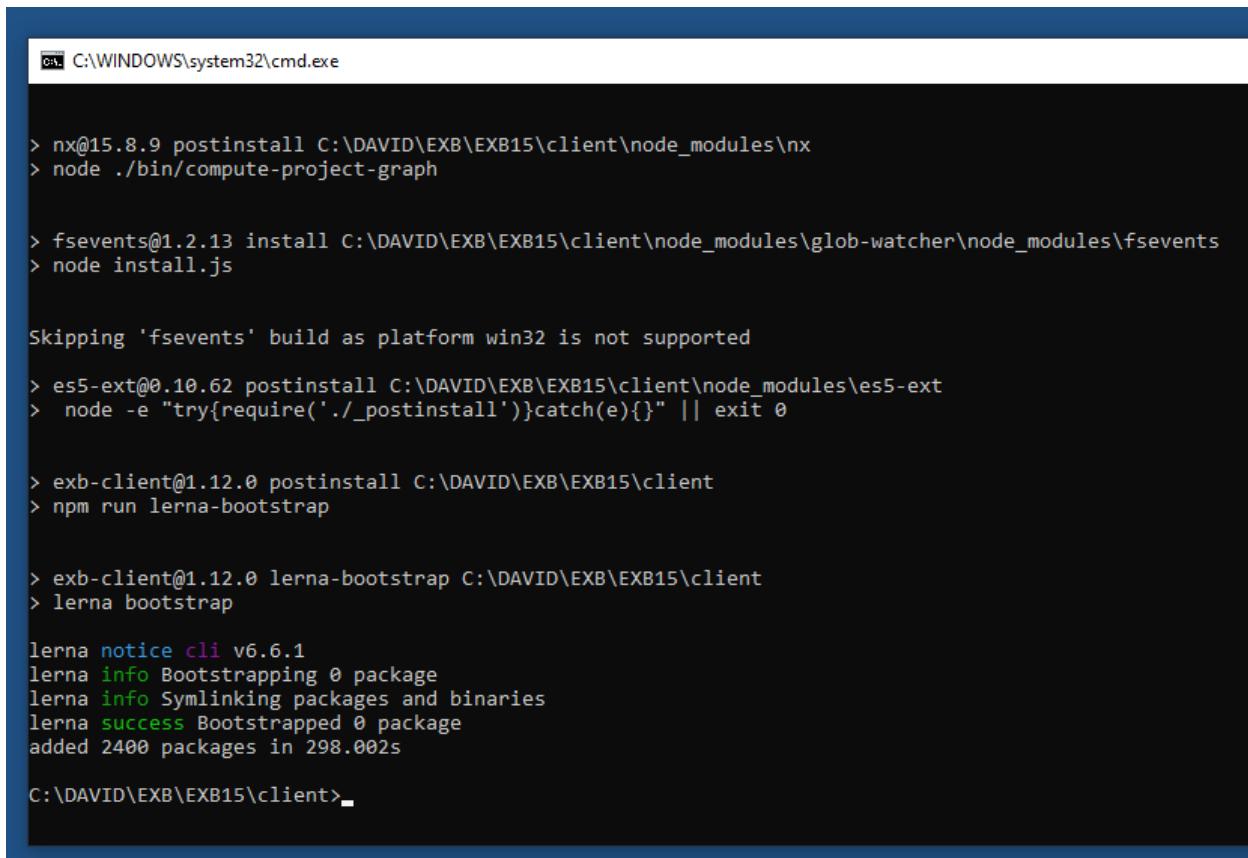
```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.

C:\DAVID\EXB\EXB15\client>npm ci
```

Be patient as the extraction takes place.

This may take 5 minutes.

Eventually, you will get back the prompt like this.



```
C:\WINDOWS\system32\cmd.exe

> nx@15.8.9 postinstall C:\DAVID\EXB\EXB15\client\node_modules\nx
> node ./bin/compute-project-graph

> fsevents@1.2.13 install C:\DAVID\EXB\EXB15\client\node_modules\glob-watcher\node_modules\fsevents
> node install.js

Skipping 'fsevents' build as platform win32 is not supported

> es5-ext@0.10.62 postinstall C:\DAVID\EXB\EXB15\client\node_modules\es5-ext
> node -e "try{require('./_postinstall')}{catch(e){}}" || exit 0

> exb-client@1.12.0 postinstall C:\DAVID\EXB\EXB15\client
> npm run lerna-bootstrap

> exb-client@1.12.0 lerna-bootstrap C:\DAVID\EXB\EXB15\client
> lerna bootstrap

lerna notice cli v6.6.1
lerna info Bootstrapping 0 package
lerna info Symlinking packages and binaries
lerna success Bootstrapped 0 package
added 2400 packages in 298.002s

C:\DAVID\EXB\EXB15\client>
```

2400 packages were added.

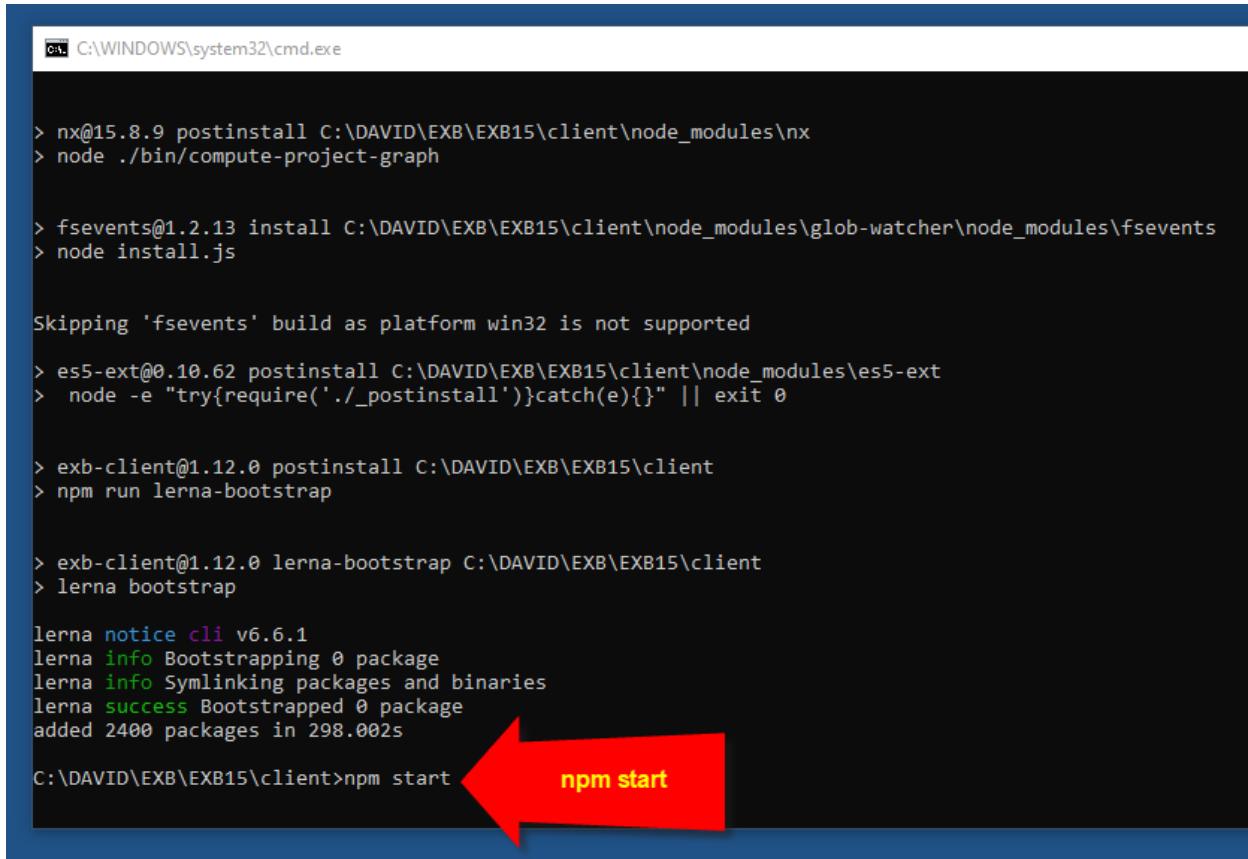
A new node_modules folder was added.

C:\DAVID\EXB\EXB15\client\

 __mocks__	9/4/2023 5:34 PM	File folder	
 dist	9/4/2023 5:32 PM	File folder	
 jimu-arcgis	9/4/2023 5:33 PM	File folder	
 jimu-core	9/4/2023 5:33 PM	File folder	
 jimu-for-builder	9/4/2023 5:34 PM	File folder	
 jimu-for-test	9/4/2023 5:34 PM	File folder	
 jimu-icons	9/4/2023 5:34 PM	File folder	
 jimu-layouts	9/4/2023 5:34 PM	File folder	
 jimu-theme	9/4/2023 5:34 PM	File folder	
 jimu-ui	9/4/2023 5:34 PM	File folder	
 node_modules	9/4/2023 6:58 PM	File folder	
 scripts	9/4/2023 5:34 PM	File folder	
 types	9/4/2023 5:34 PM	File folder	
 webpack	9/4/2023 5:34 PM	File folder	
 your-extensions	9/4/2023 5:34 PM	File folder	
 .eslintignore	9/4/2023 4:52 PM	ESLINTIGNORE File	1 KB
 .eslintrc.js	9/4/2023 4:52 PM	JavaScript Source ...	4 KB
 jest.config.js	9/4/2023 4:52 PM	JavaScript Source ...	4 KB
 jest-systemjs-transformer.js	9/4/2023 4:52 PM	JavaScript Source ...	2 KB
 lerna.json	9/4/2023 4:52 PM	JSON File	1 KB
 package.json	9/4/2023 4:52 PM	JSON File	6 KB
 package-lock.json	9/4/2023 4:52 PM	JSON File	2,030 KB
 tsconfig.json	9/4/2023 4:52 PM	JSON File	1 KB
 webpack.config.js	9/4/2023 4:52 PM	JavaScript Source ...	1 KB

Start the npm client service

Enter **npm start**



```
C:\WINDOWS\system32\cmd.exe

> nx@15.8.9 postinstall C:\DAVID\EXB\EXB15\client\node_modules\nx
> node ./bin/compute-project-graph

> fsevents@1.2.13 install C:\DAVID\EXB\EXB15\client\node_modules\glob-watcher\node_modules\fsevents
> node install.js

Skipping 'fsevents' build as platform win32 is not supported

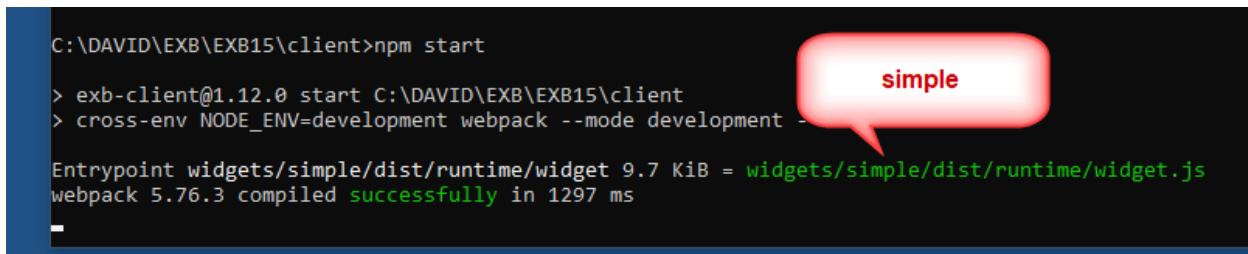
> es5-ext@0.10.62 postinstall C:\DAVID\EXB\EXB15\client\node_modules\es5-ext
> node -e "try{require('./_postinstall')}catch(e){}" || exit 0

> exb-client@1.12.0 postinstall C:\DAVID\EXB\EXB15\client
> npm run lerna-bootstrap

> exb-client@1.12.0 lerna-bootstrap C:\DAVID\EXB\EXB15\client
> lerna bootstrap

lerna notice cli v6.6.1
lerna info Bootstrapping 0 package
lerna info Symlinking packages and binaries
lerna success Bootstrapped 0 package
added 2400 packages in 298.002s

C:\DAVID\EXB\EXB15\client>npm start
```



```
C:\DAVID\EXB\EXB15\client>npm start
> exb-client@1.12.0 start C:\DAVID\EXB\EXB15\client
> cross-env NODE_ENV=development webpack --mode development -
  Entrypoint widgets/simple/dist/runtime/widget 9.7 KiB = widgets/simple/dist/runtime/widget.js
  webpack 5.76.3 compiled successfully in 1297 ms
  
```

Notice how it picks up the simple custom widget.

You should have 2 command windows open.

- npm server
- npm client

The image shows two separate command-line windows side-by-side. The top window is titled 'npm' and has a red speech bubble above it labeled 'npm server'. The bottom window is titled 'webpack' and has a red speech bubble above it labeled 'npm client'. Both windows display terminal logs.

npm server window log:

```
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.

C:\DAVID\EXB\EXB15\server>npm ci
added 713 packages in 87.706s

C:\DAVID\EXB\EXB15\server>npm start

> exb-server@0.1.0 start C:\DAVID\EXB\EXB15\server
> cross-env NODE_ENV=production node src/server

Apps folder: C:\DAVID\EXB\EXB15\server\public\apps
Http server running on port 3000
Https server running on port 3001
```

webpack window log:

```
C:\ DAVID\EXB\EXB15>webpack

> fsevents@1.2.13 install C:\DAVID\EXB\EXB15\client\node_modules\glob-watcher\node_modules\fsevents
> node install.js

Skipping 'fsevents' build as platform win32 is not supported
> es5-ext@0.10.62 postinstall C:\DAVID\EXB\EXB15\client\node_modules\es5-ext
> node -e "try{require('./_postinstall')}catch(e){}|| exit 0"

> exb-client@1.12.0 postinstall C:\DAVID\EXB\EXB15\client
> npm run lerna-bootstrap

> exb-client@1.12.0 lerna-bootstrap C:\DAVID\EXB\EXB15\client
> lerna bootstrap

lerna notice cli v6.6.1
lerna info Bootstrapping 0 package
lerna info Symlinking packages and binaries
lerna success Bootstrapped 0 package
added 2400 packages in 298.002s

C:\DAVID\EXB\EXB15\client>npm start

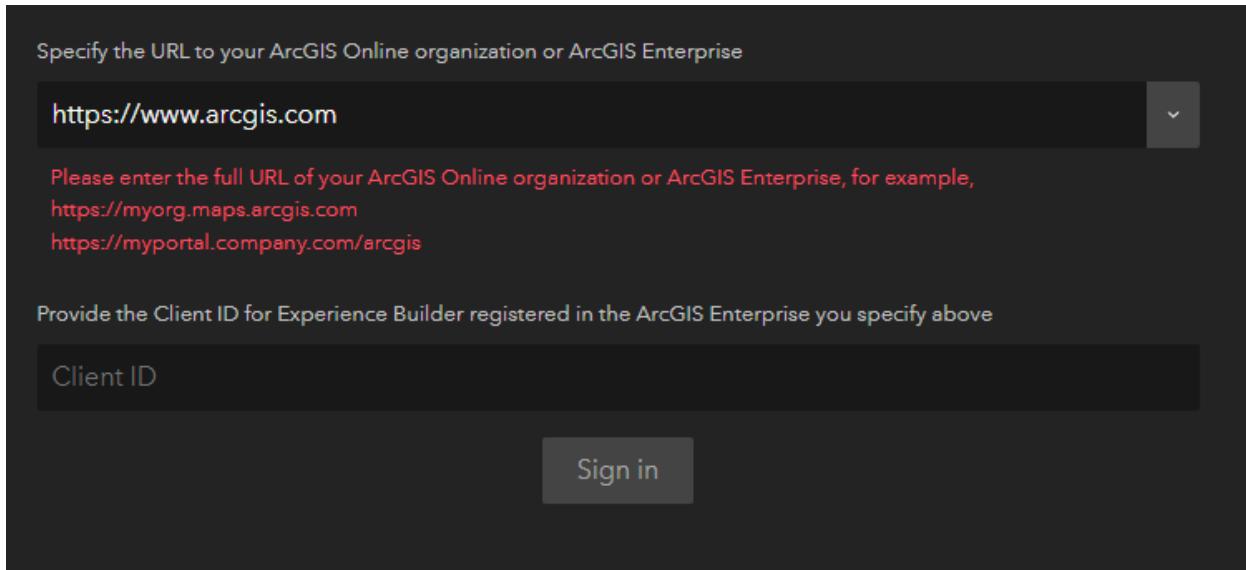
> exb-client@1.12.0 start C:\DAVID\EXB\EXB15\client
> cross-env NODE_ENV=development webpack --mode development --watch

Entrypoint widgets/simple/dist/runtime/widget 9.7 KiB = widgets/simple/dist/runtime/widget.js
webpack 5.76.3 compiled successfully in 1297 ms
```

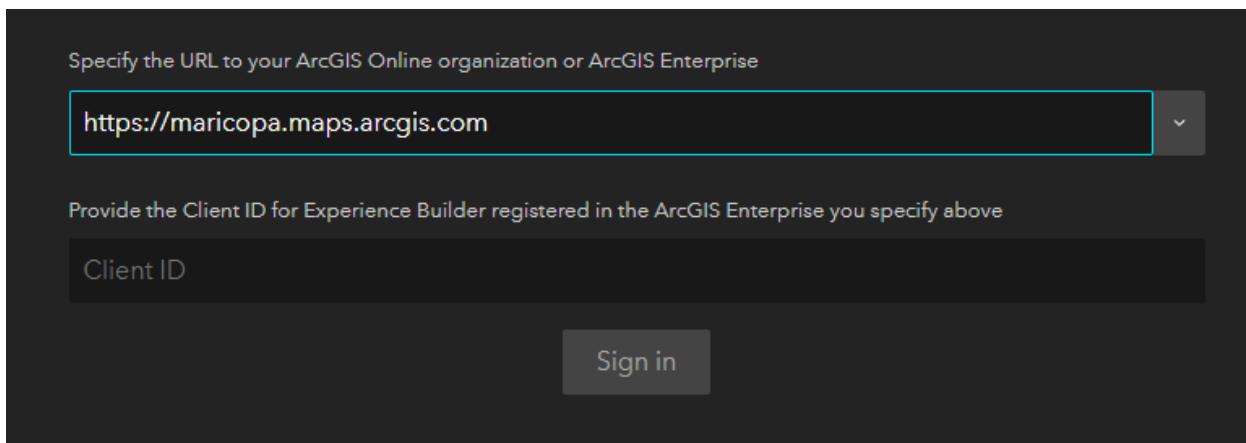
Launch the Experience Builder Developer Edition

Open Chrome and enter:

<https://localhost:3001/>



Specify the URL to your ArcGIS Online Organization = <https://maricopa.maps.arcgis.com>



Enter your Client ID = qx2Eu4b0uyJb224A

Specify the URL to your ArcGIS Online organization or ArcGIS Enterprise

Provide the Client ID for Experience Builder registered in the ArcGIS Enterprise you specify above

Sign in

EXB Client ID wants to access your ArcGIS Online account information [?](#)

Sign in to Maricopa County Enterprise GIS 

ArcGIS login

Keep me signed in

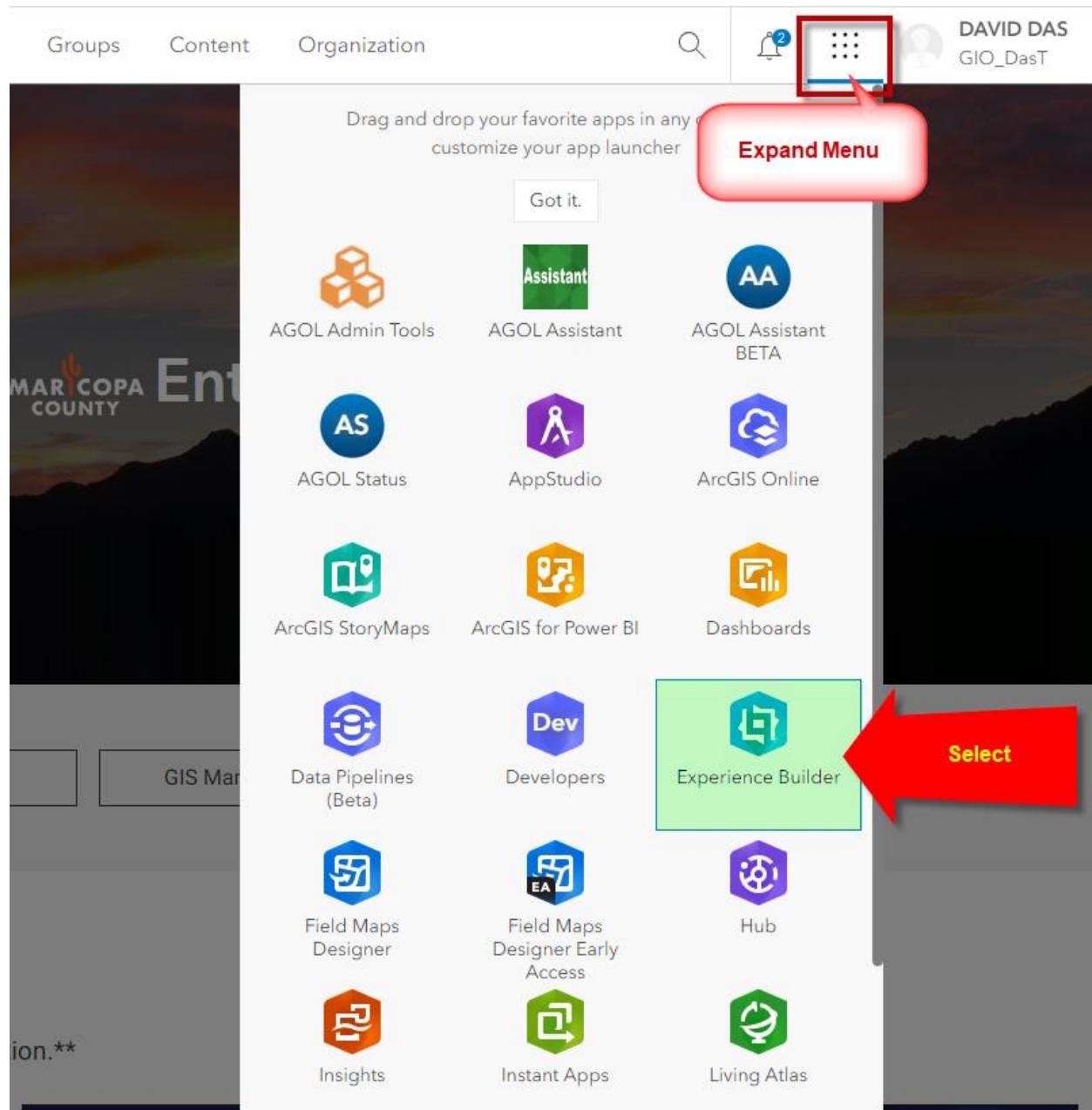
Sign In **Cancel**

[Forgot username?](#) or [Forgot password?](#)

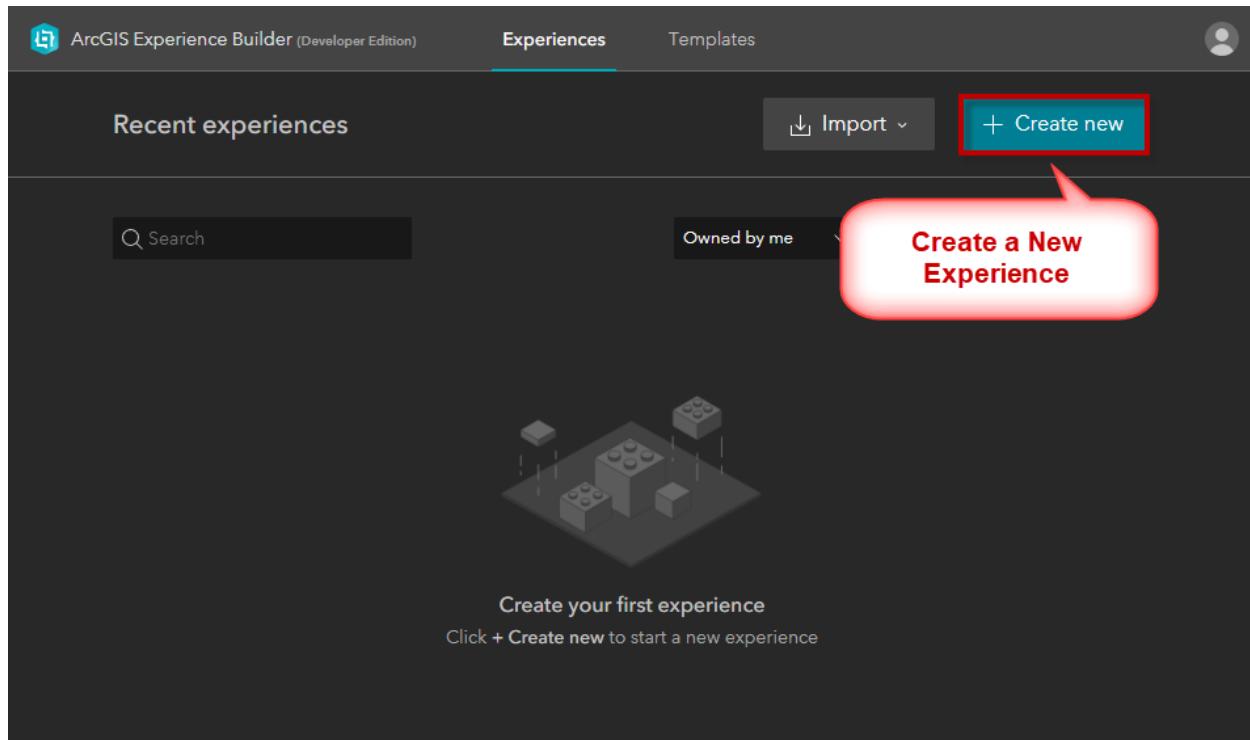
Launching the Experience Builder ArcGIS Online Edition

Note: If you were to launch the ArcGIS Online Edition of the Experience Builder, you would Sign In to your AGOL Account, expand the Menu and select Experience Builder.

<https://maricopa.maps.arcgis.com/home/index.html>

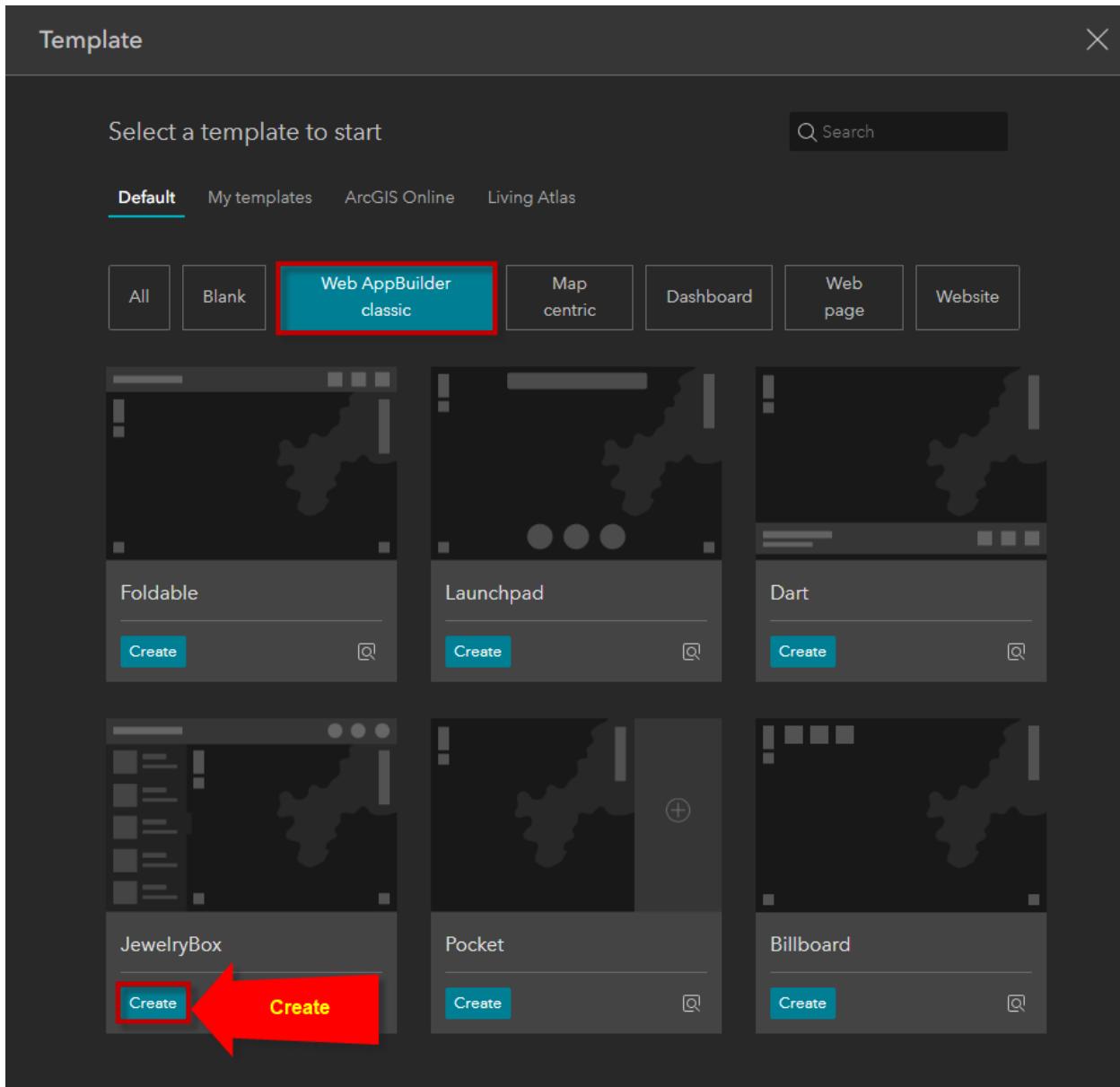


Create a New Experience



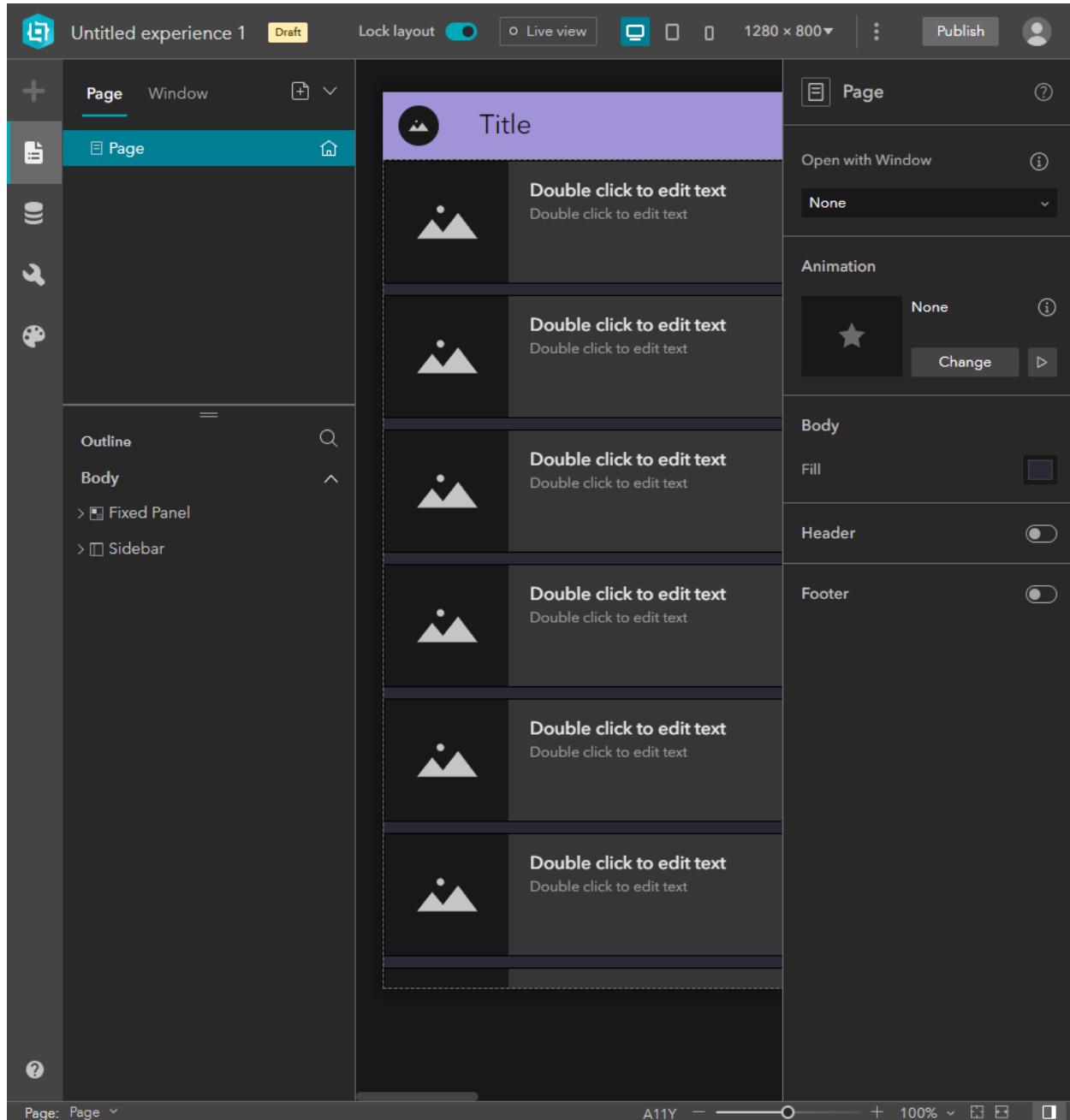
Select the Jewelry Box Template

Select Web AppBuilder classic.

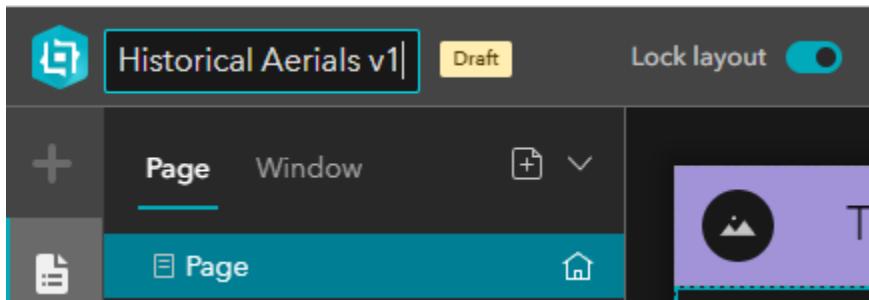


Create your Experience using the Jewelry Box Template.

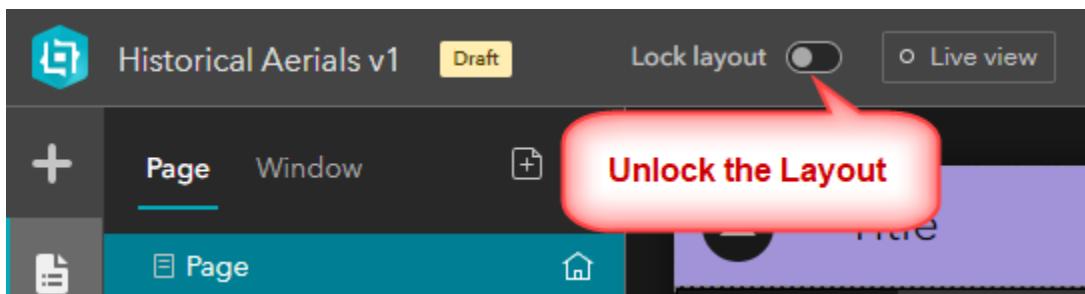
This is what you will see:



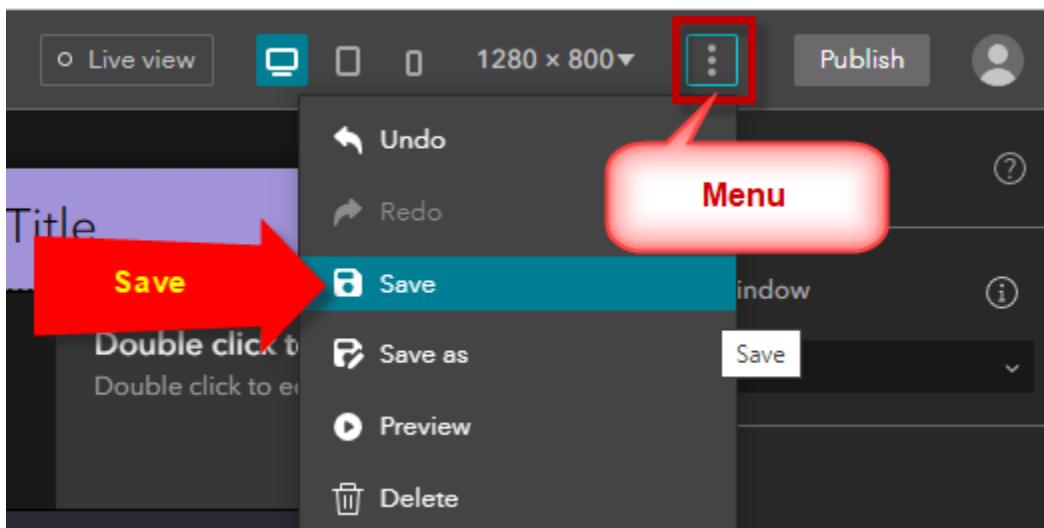
Name your Experience = **Historical Aerials v1**



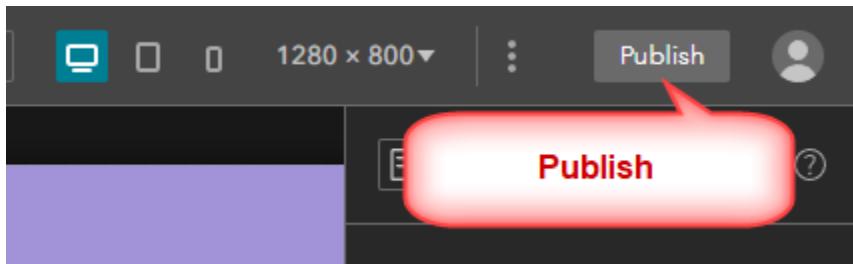
Unlock the Layout



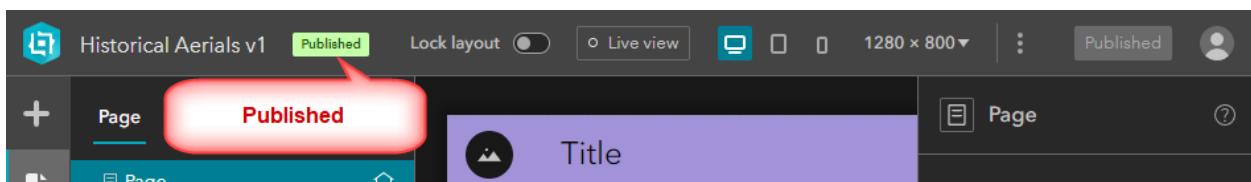
Open the Menu and **Save** the Experience



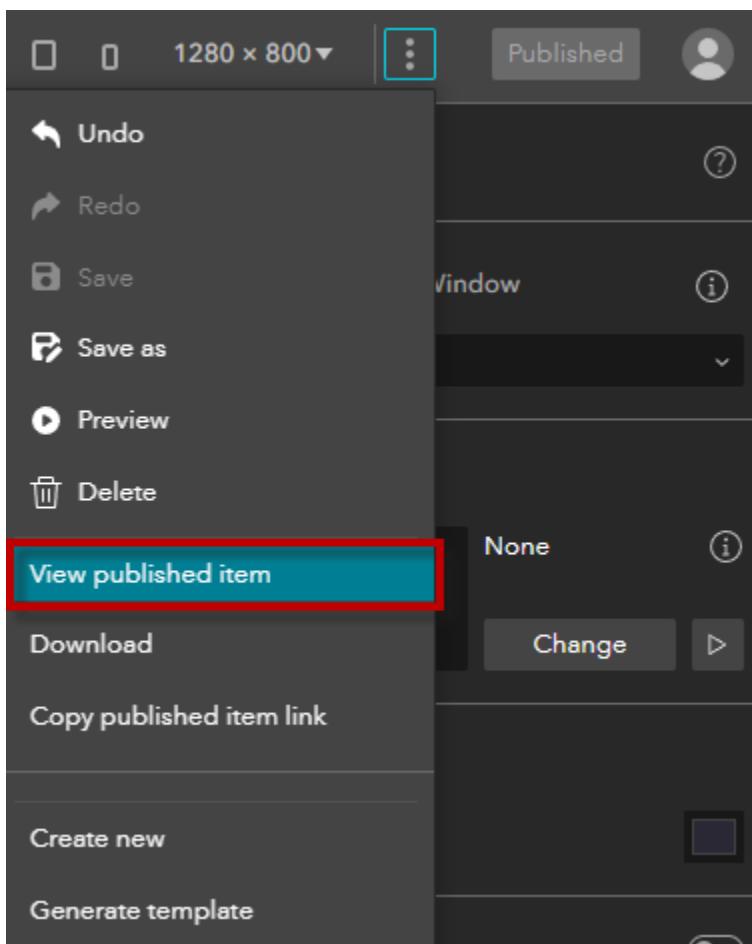
Publish your Experience.



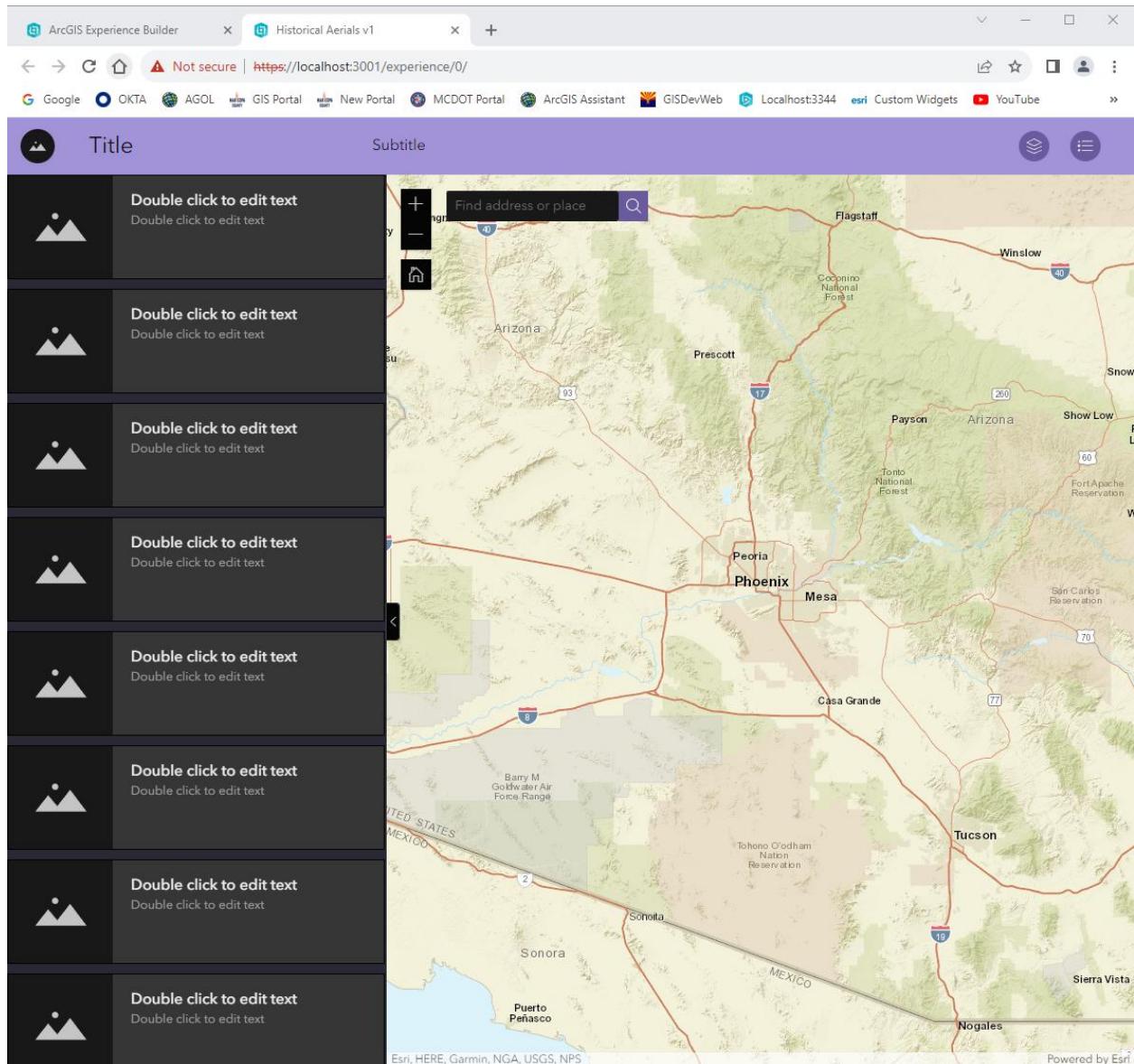
Your Experience has been published.



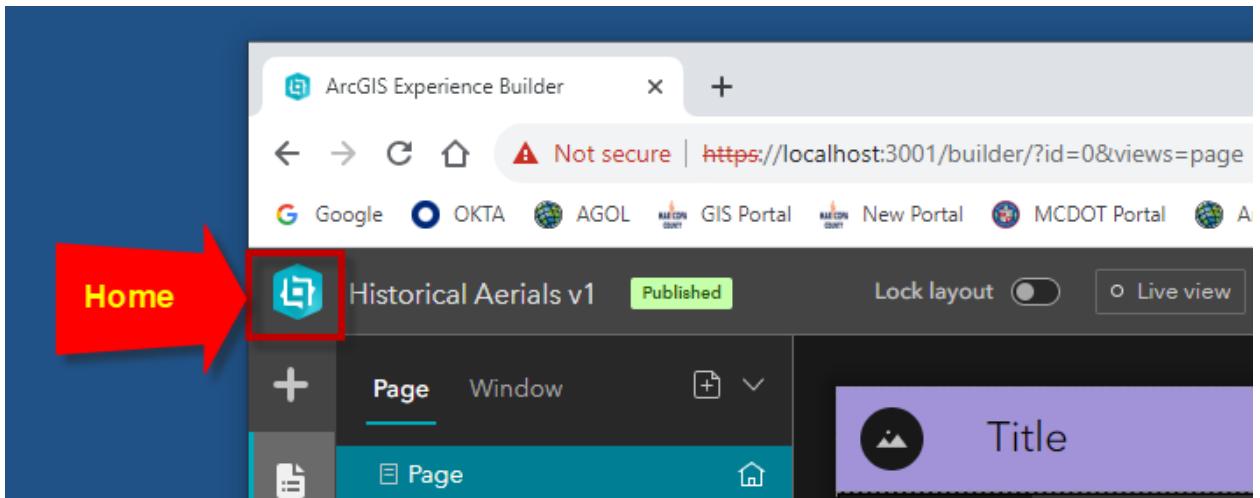
View published item.



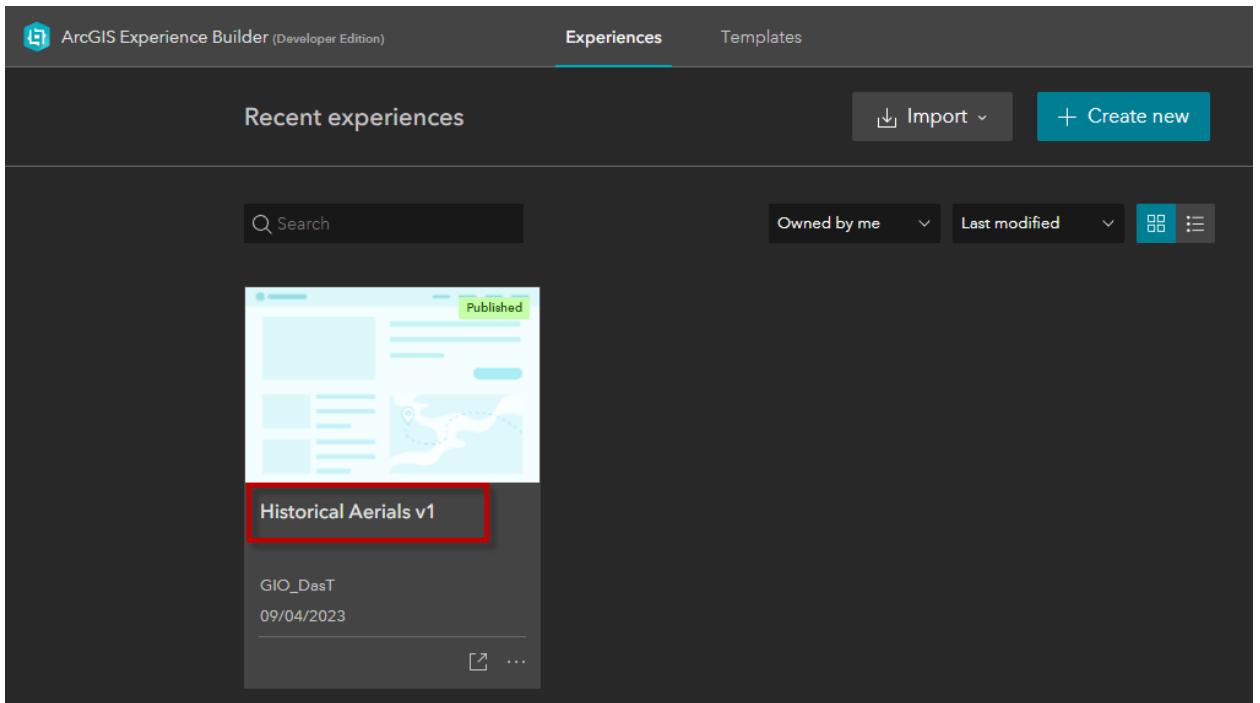
<https://localhost:3001/experience/0/>



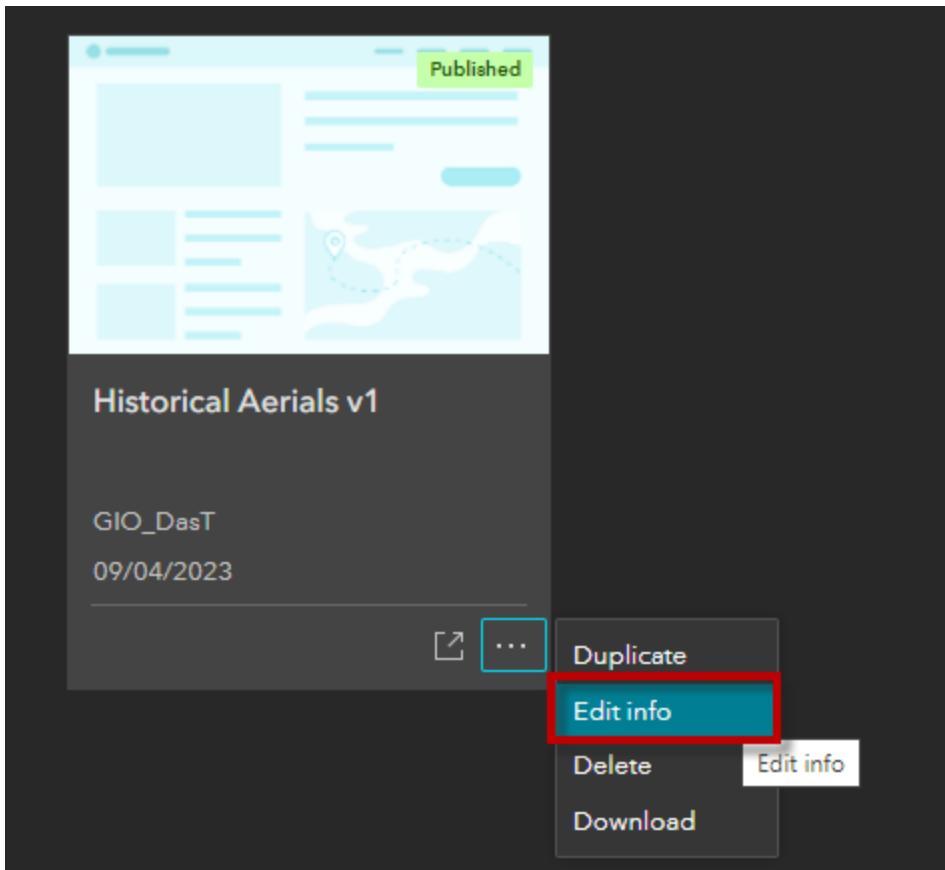
Go back to the Experience Builder Home Page.



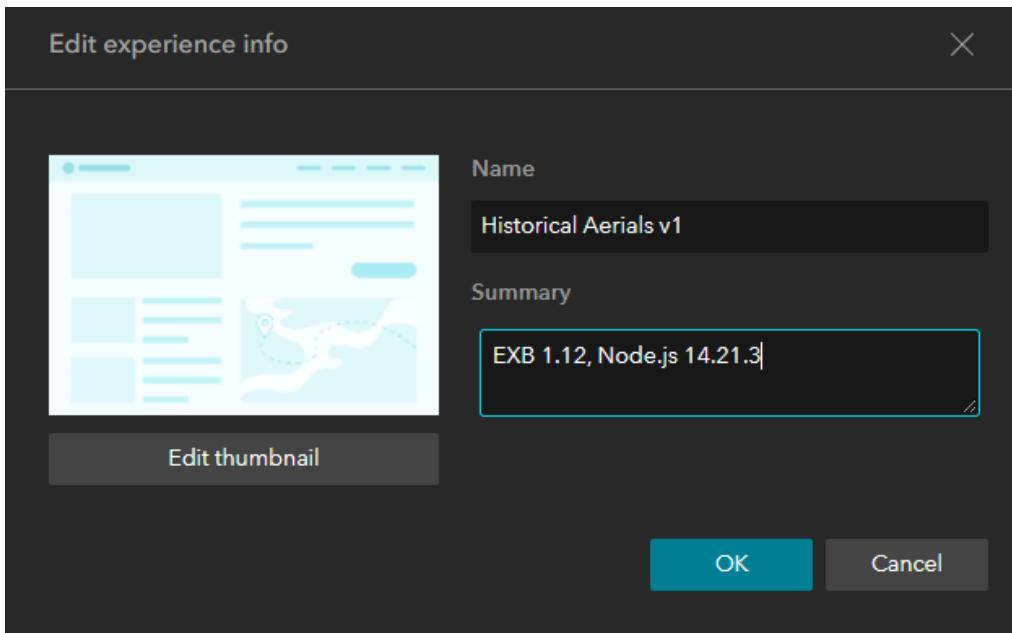
You have one Experience named **Historical Aerials v1**



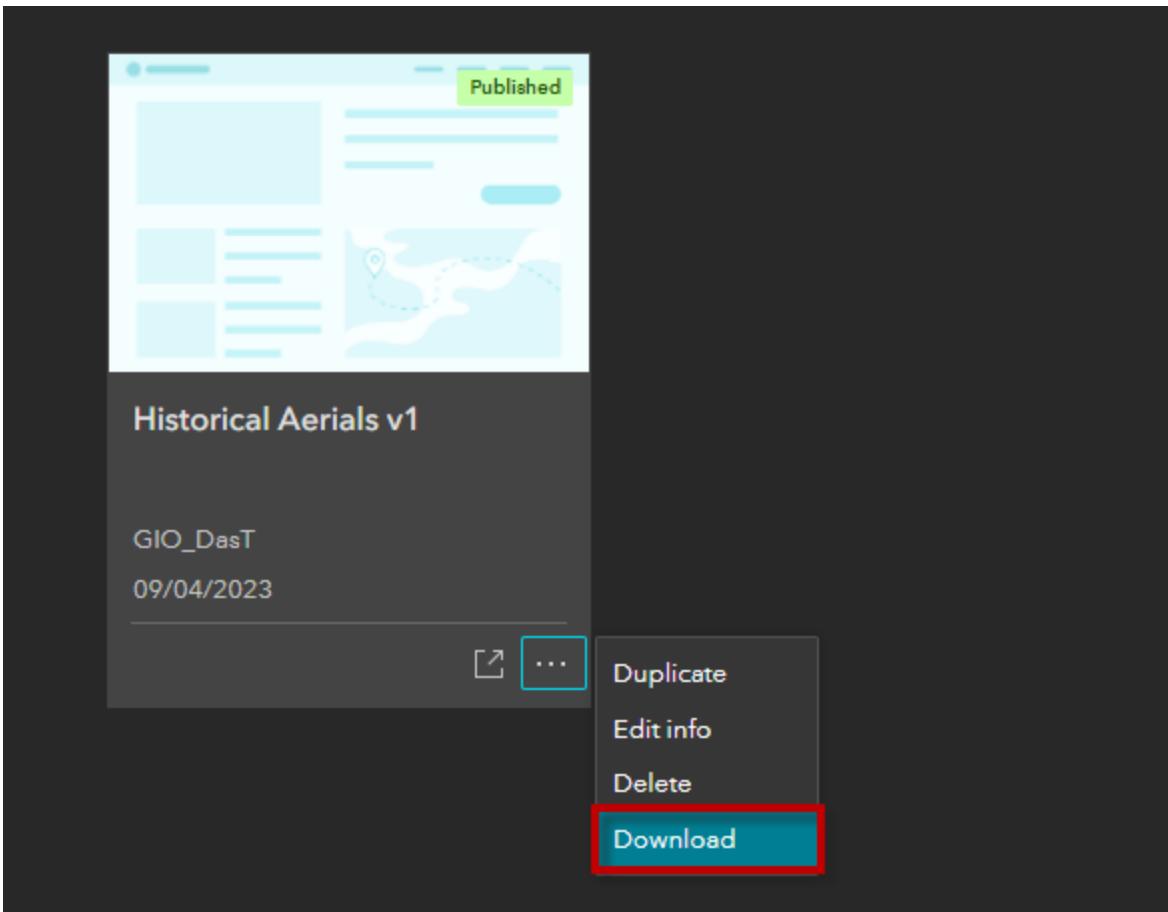
Edit the information.



Add Summary = EXB 1.12, Node.js 14.21.3



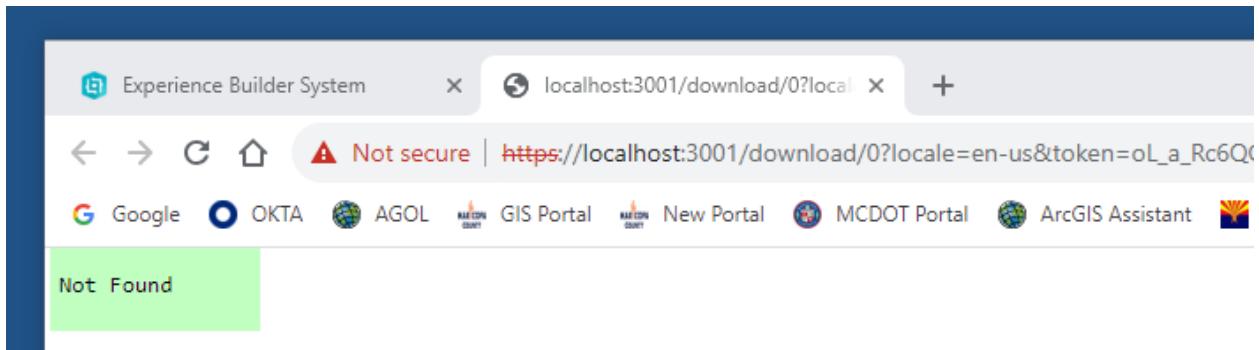
Download the ZIP File.



https://localhost:3001/download/0?locale=en-us&token=oL_a_Rc6QCHyFXYJ5IINQEG1HLbQqd9jqBG7wE6ZD6x5tX-O59mLUYZS-q1EX9Z3Qzw4DvpF_NOHTEqL7JH6LUF8VyhrPp9IMBFy-jw9lZoasm31gUGoyVNK6FOQyNmeZ1HhGioAez1XDvR-0HYL_QUHy9h5dqaZuBhpUmYLeImjCXLfaVHkic2FJNVWZCN0aXo-v2hYTodd00jZkh7uC44nz1W8IGz198WpXjHdrKg.

Most likely this process will fail.

You will get an error message = **Not Found**

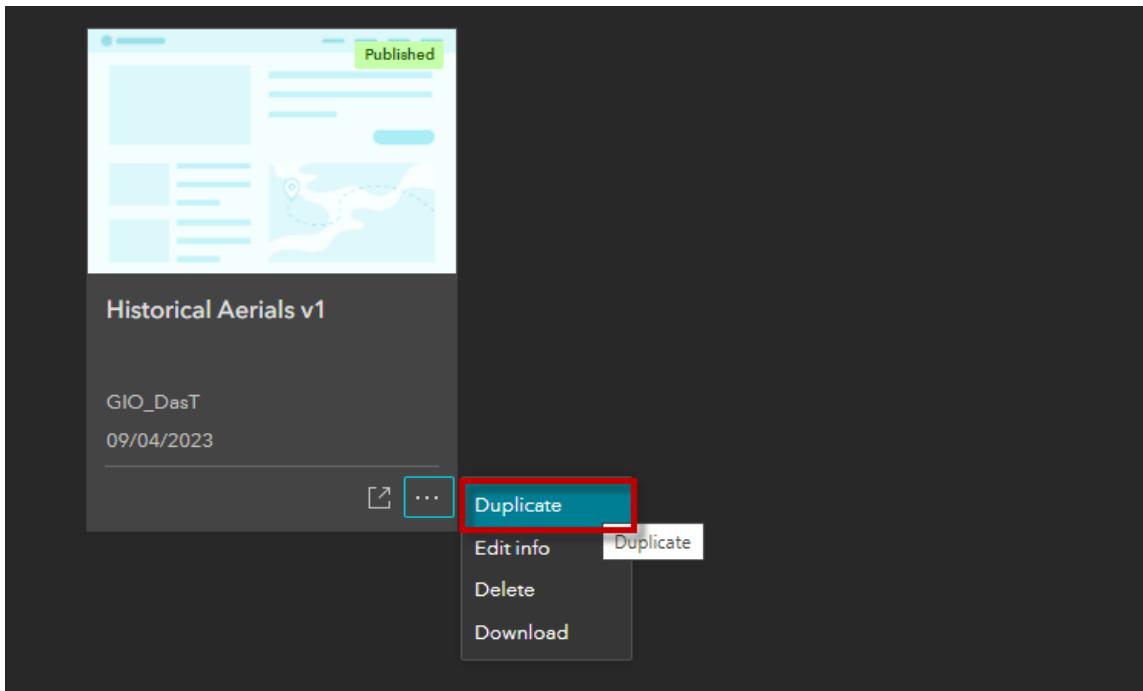


Do not worry!

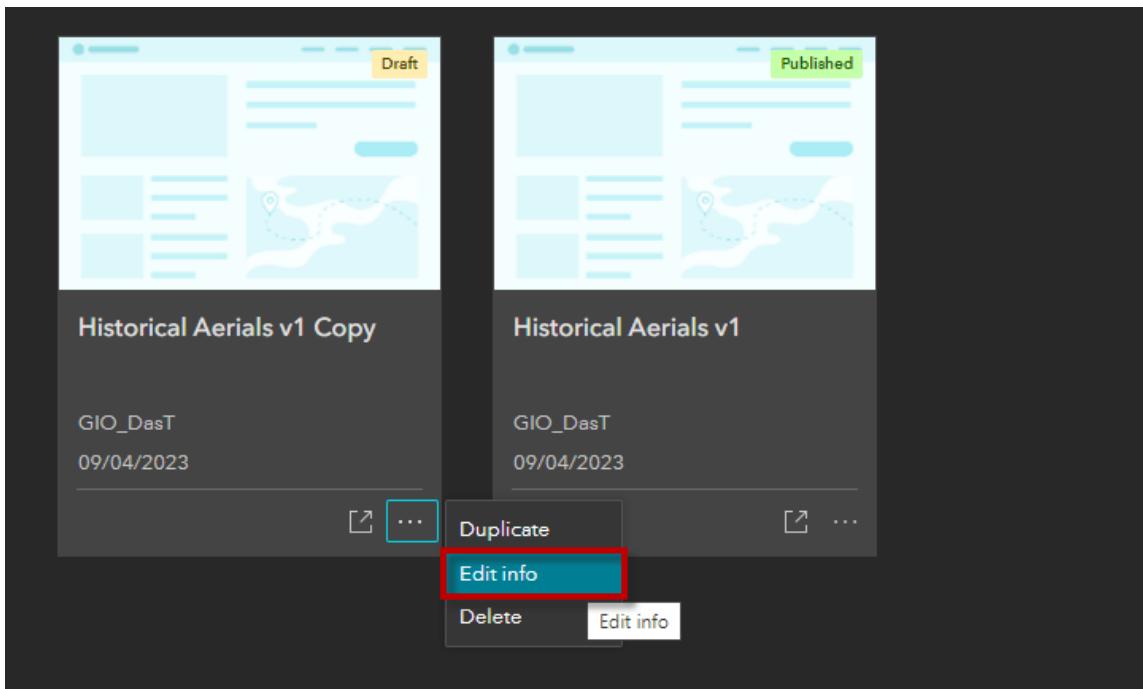
You will learn later how to manually assemble the necessary files that you would need to host your finished Web App.

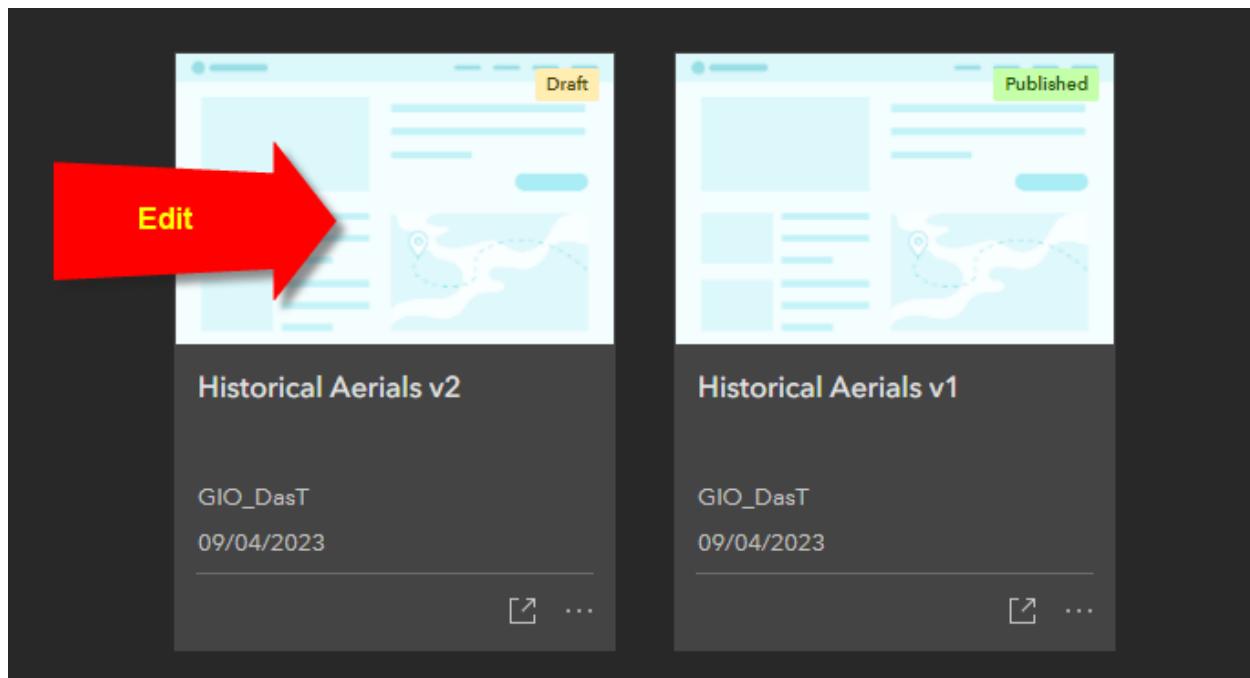
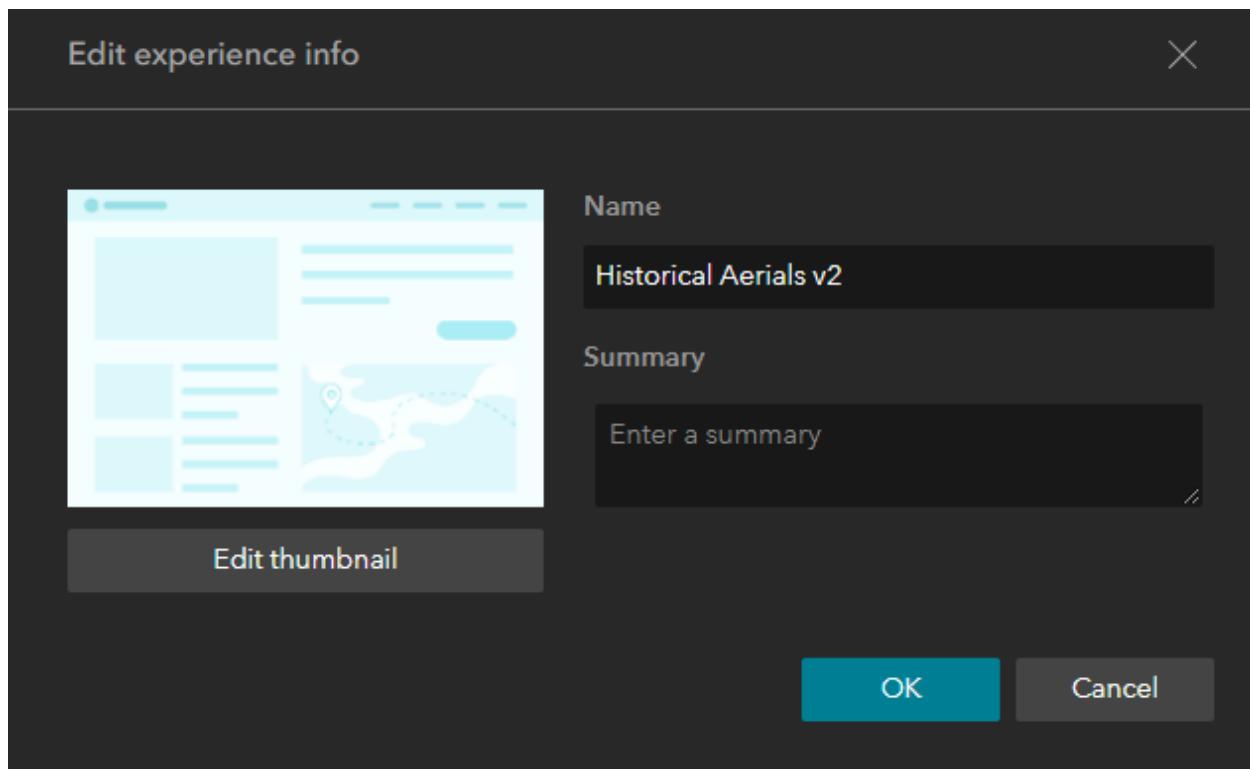
Create Historical Aerials v2

Duplicate Historical Aerials v1 to create Historical Aerials v2

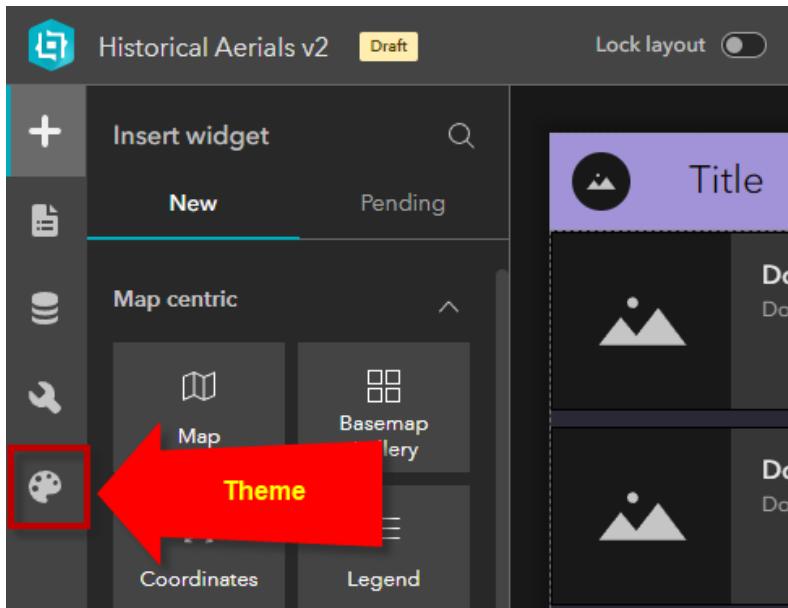


Edit Info

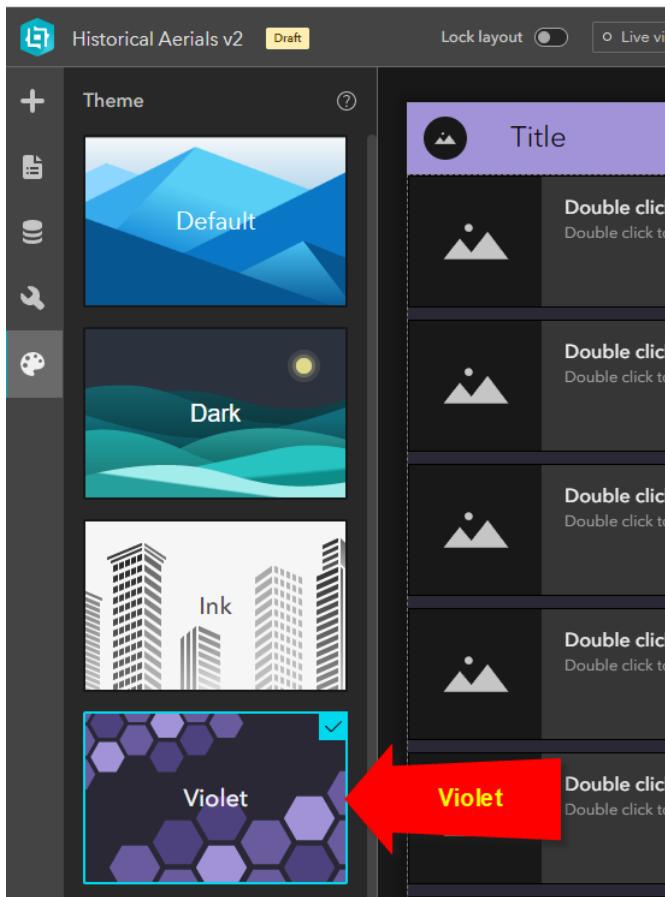




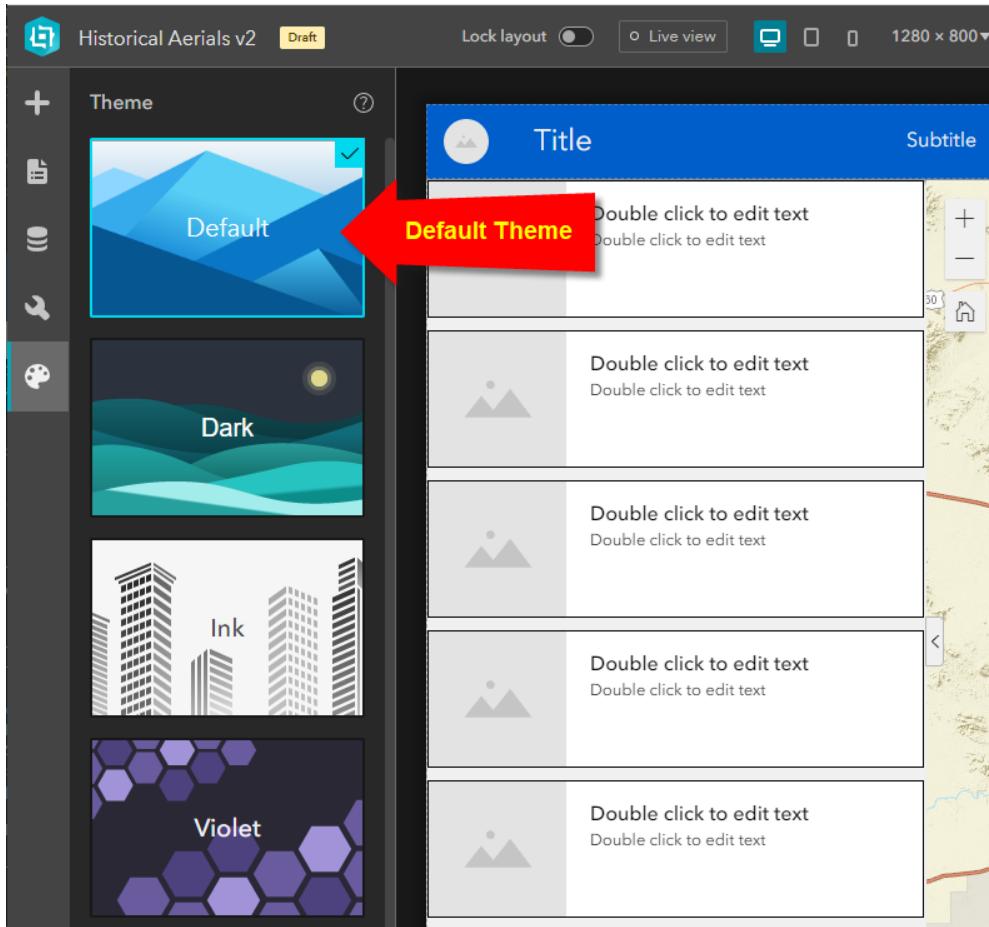
Open the Theme Tab



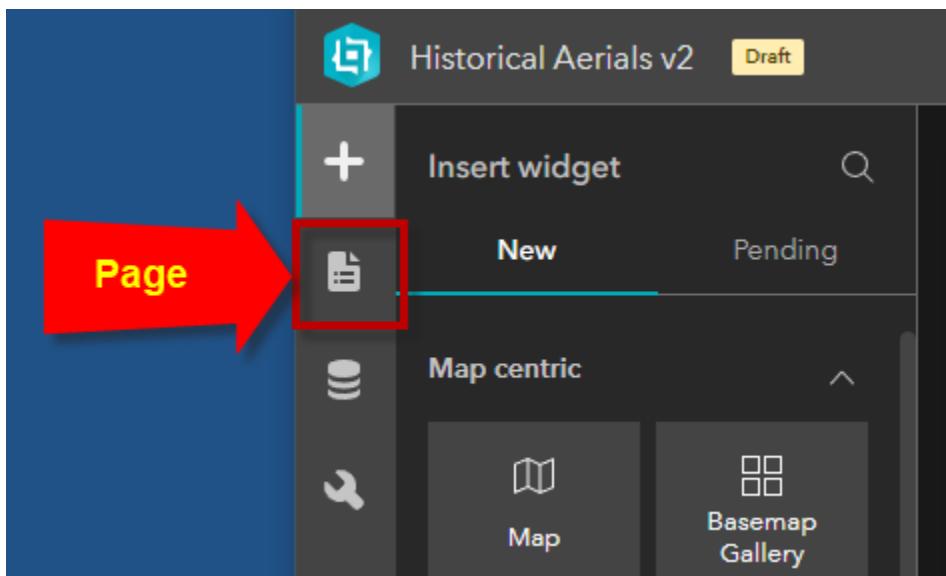
The current Theme = Violet



Switch to the Default Theme

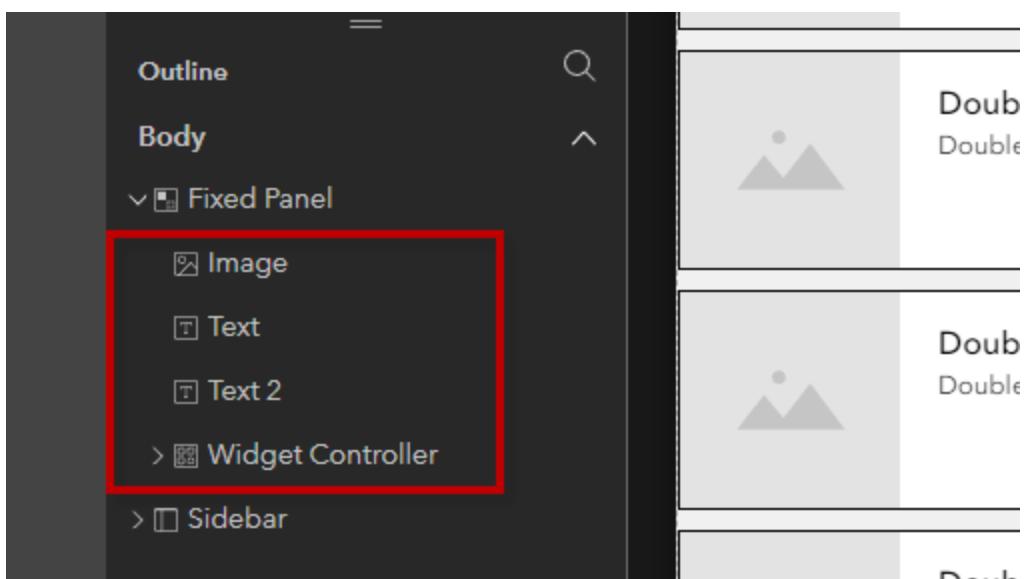
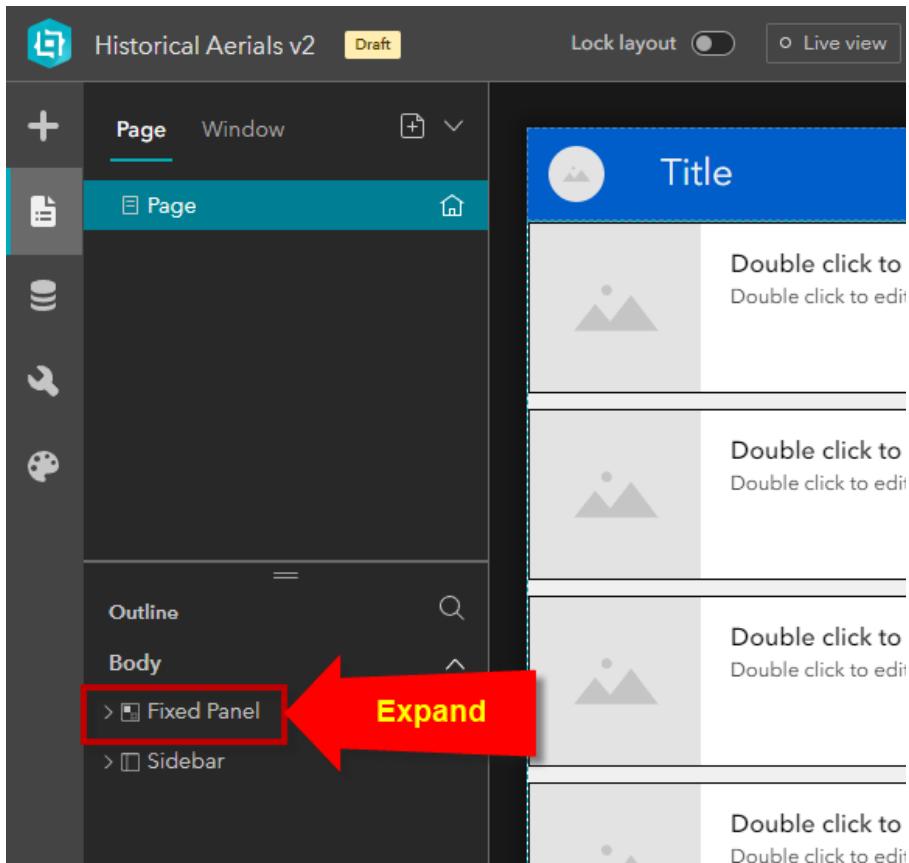


Open the Page Tab



The Page Tab reveals the outline.

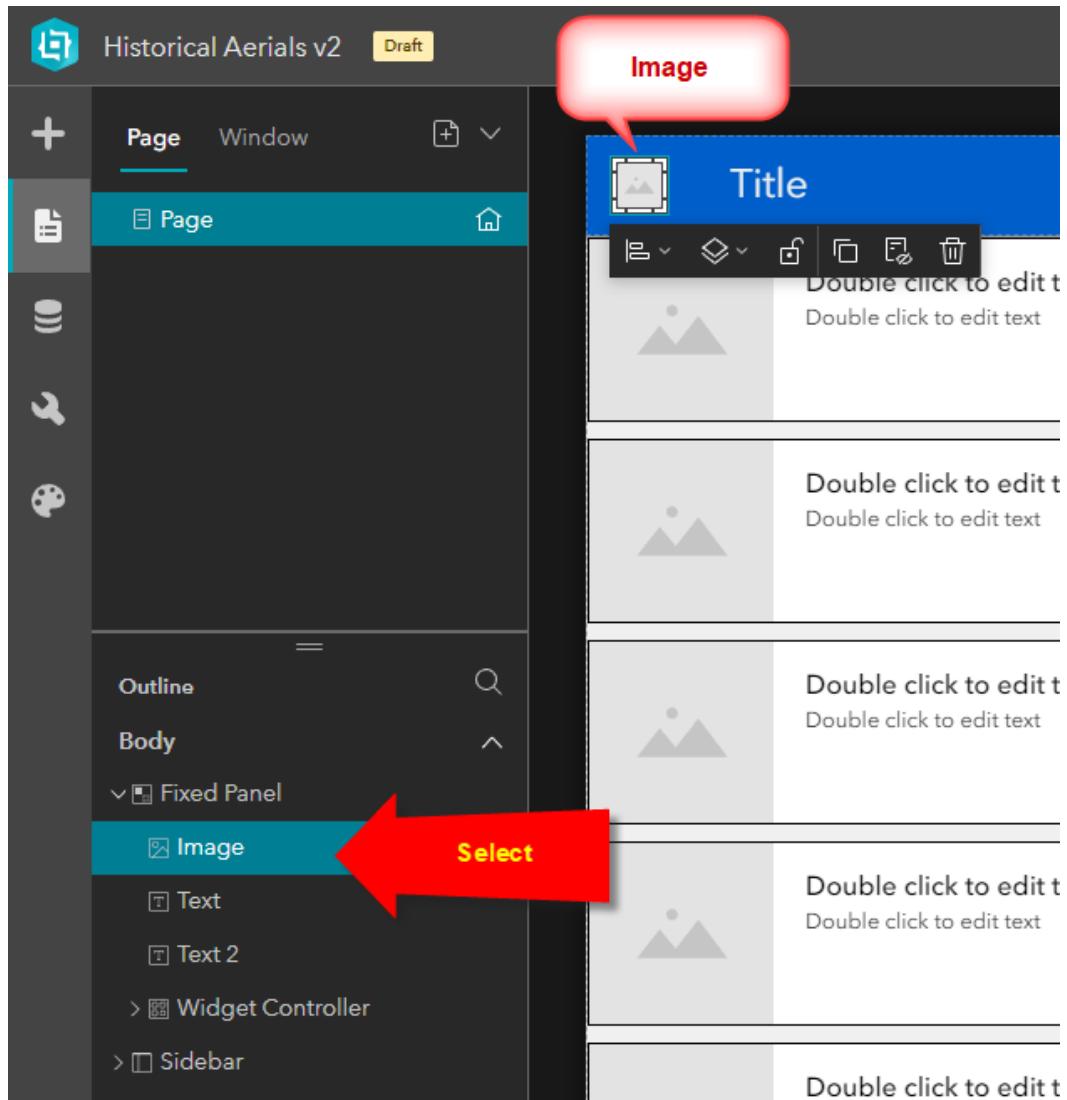
Expand the Fixed Panel.



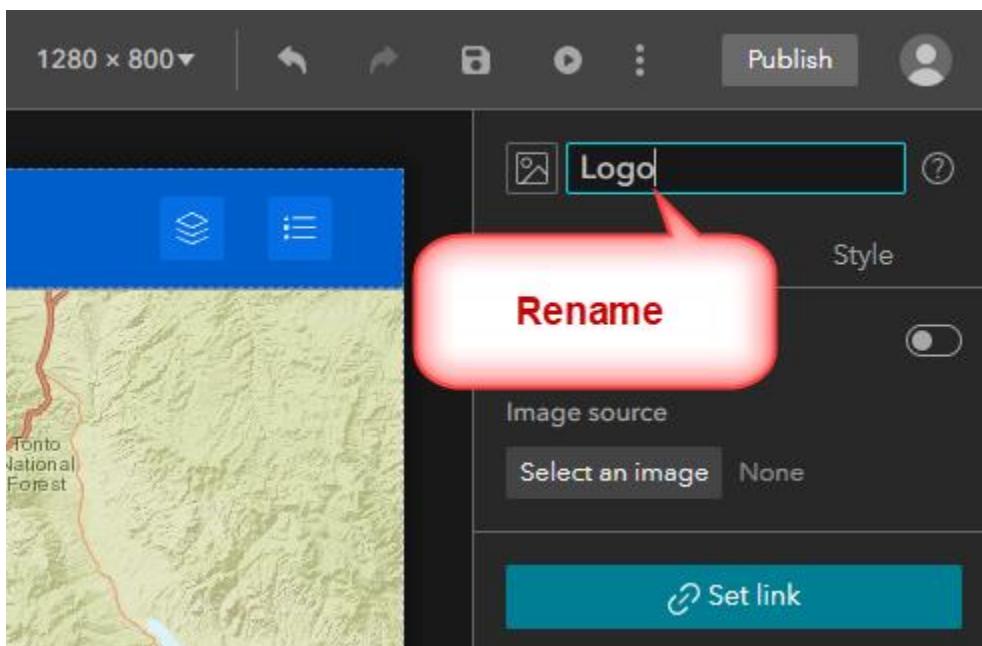
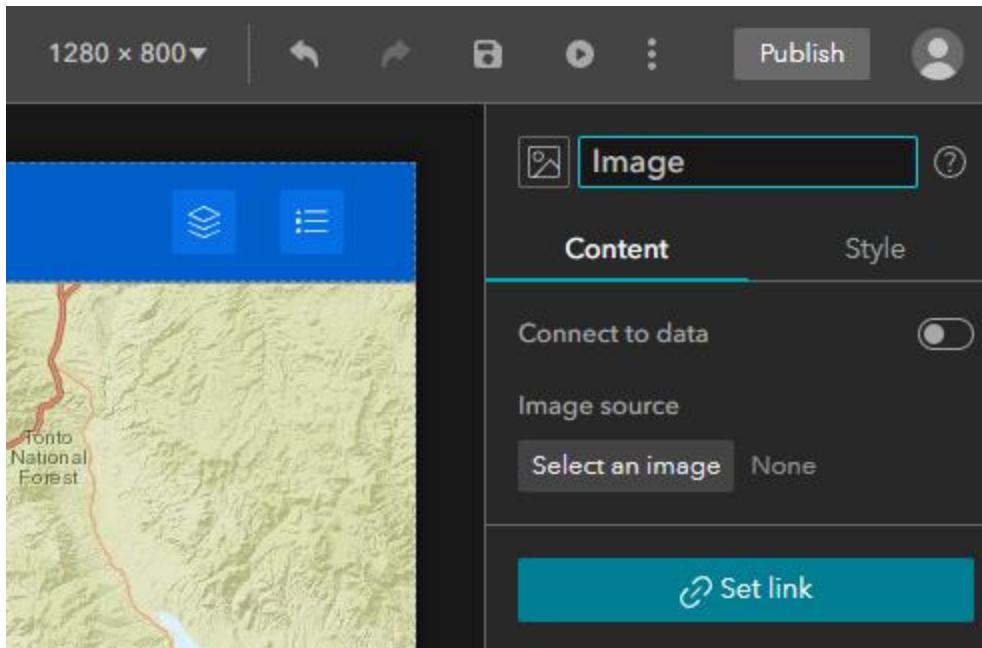
Identify each widget on the Page.

Select the Image widget on the Page Outline.

This allows you to configure the Image widget.



Rename the Image widget to Logo



Download this Zip file:

<https://daviddas2.github.io/exb/custom.zip>

Unzip custom.zip

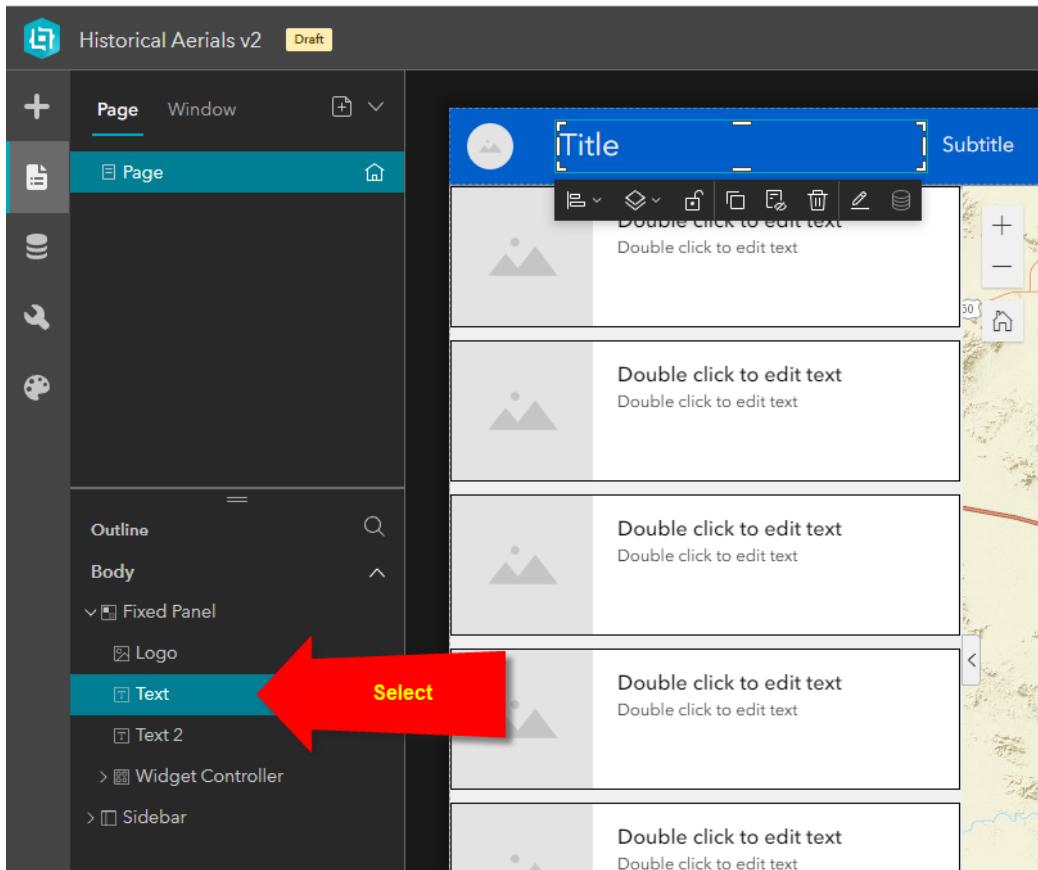
 custom.zip	9/4/2023 9:15 PM	Compressed (zipped) Folder	43 KB
--	------------------	----------------------------	-------

C:\Users\David.das\Downloads\custom\Custom\

You will get two fully configured custom widgets for Google Maps and Pictometry.
You will use the included Logo.png image.

 get-map-coordinates-class	9/4/2023 9:16 PM	File folder	
 get-map-coordinates-class2	9/4/2023 9:16 PM	File folder	
 Logo.png	9/4/2023 9:16 PM	IrfanView PNG File	11 KB

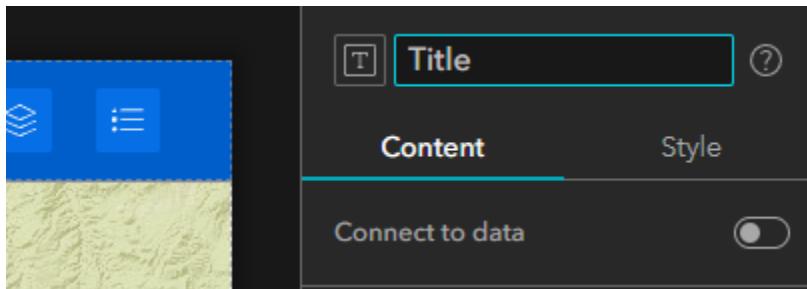
Select the Text widget in the Outline.



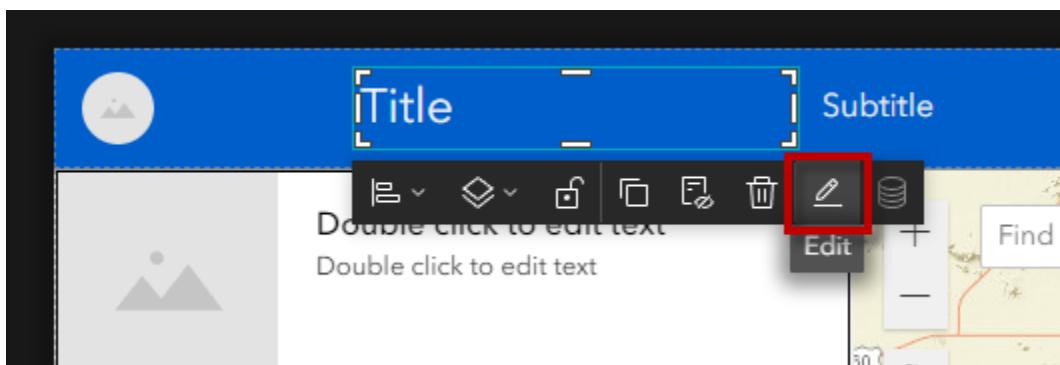
Resize the Title Box to make more room for the rectangular Logo.



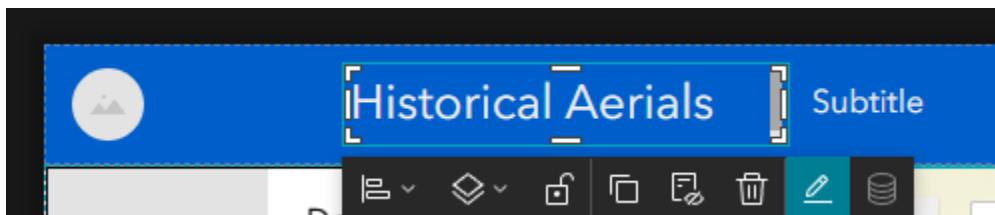
Rename the Text widget to Title.



Select the **Edit Tool** or double click on the Text Box to enter Edit Text Mode.



Enter: Historical Aerials

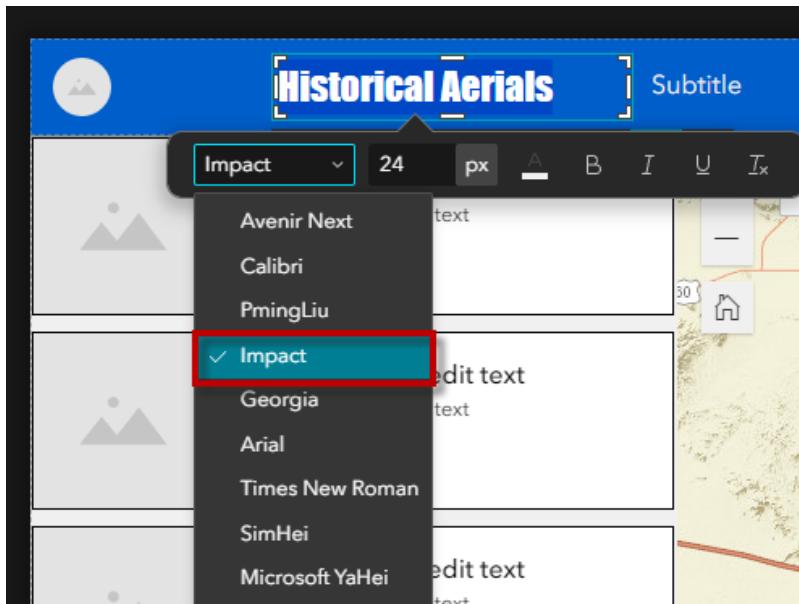


Select the entire Text string.

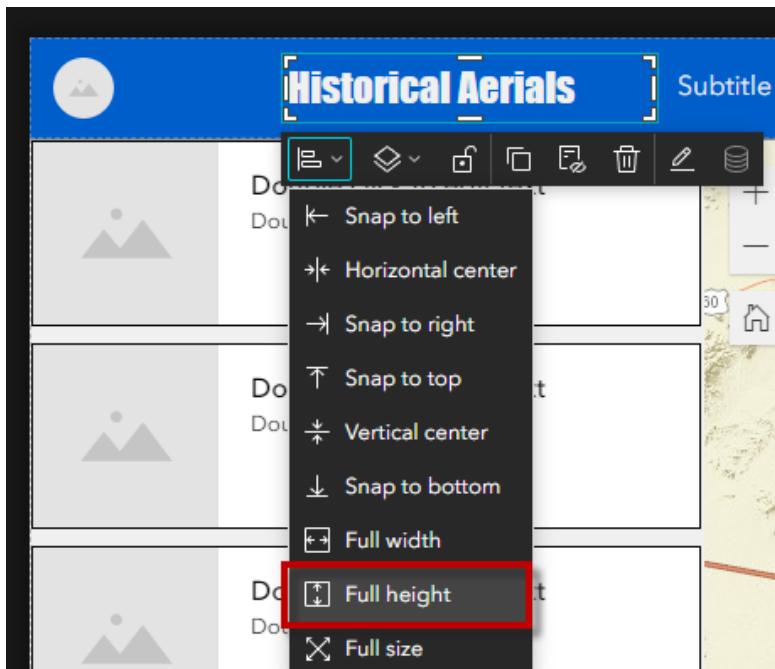
Select Font = Impact

Font Size = 24

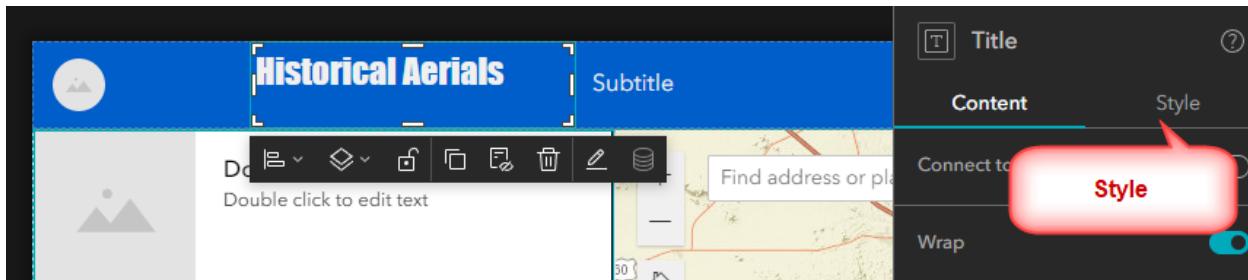
Color = White



Select Align = Full Height

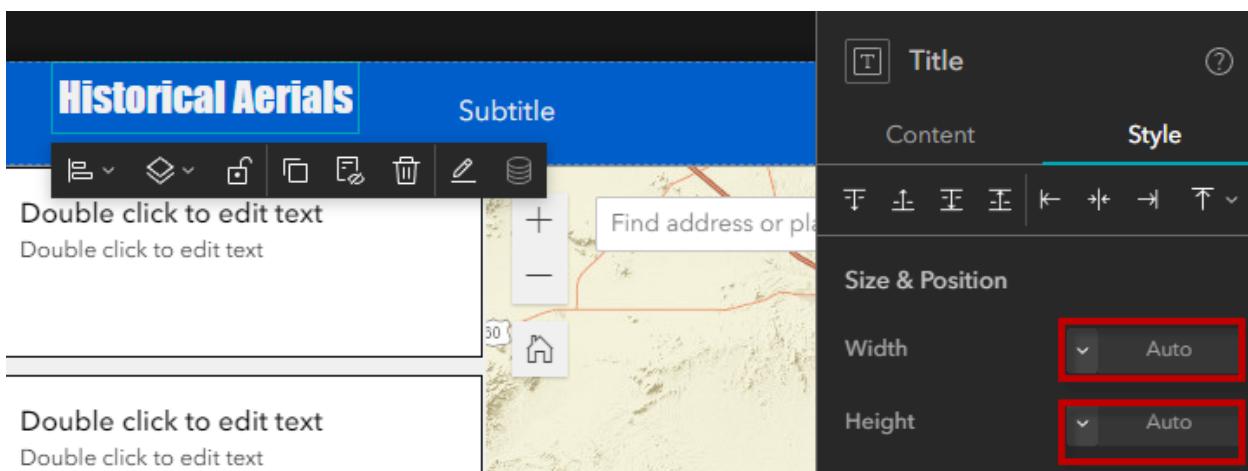


Open the Style Tab

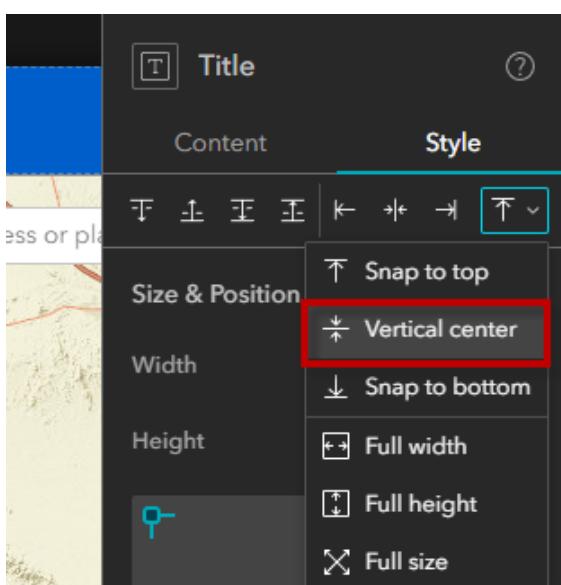


Set Width = Auto

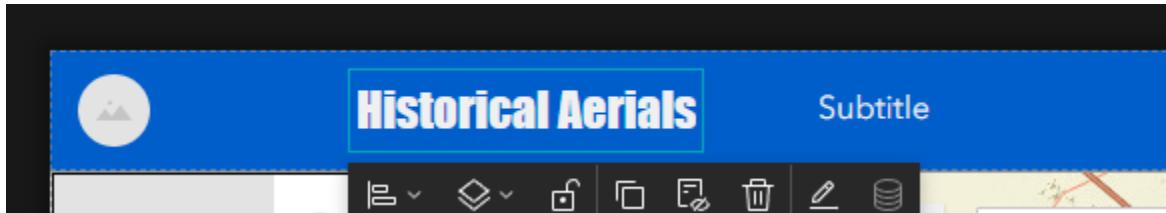
Set Height = Auto



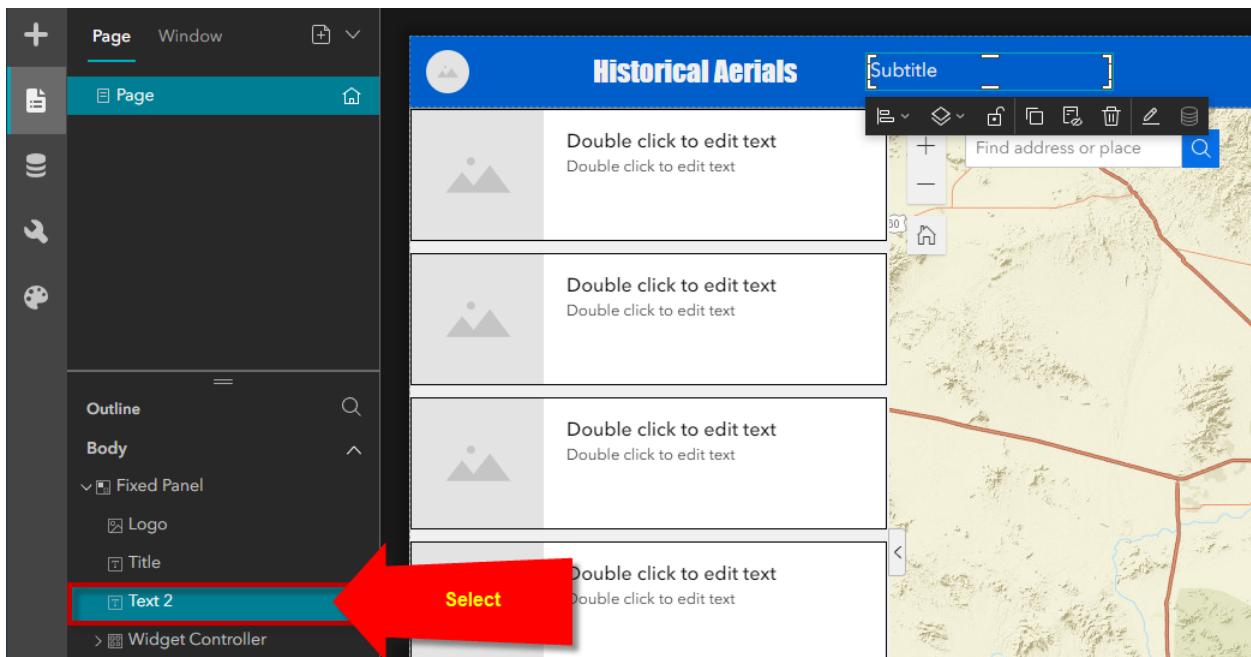
Select Vertical Center



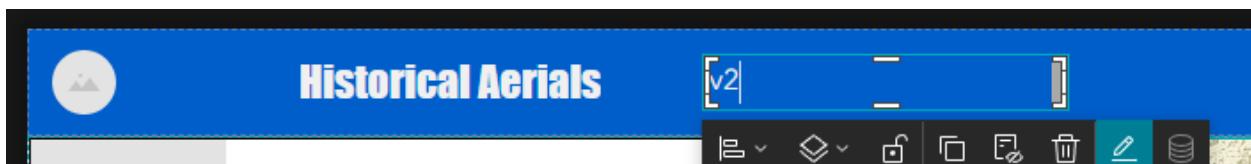
This is your Title perfectly fitted and vertically centered.



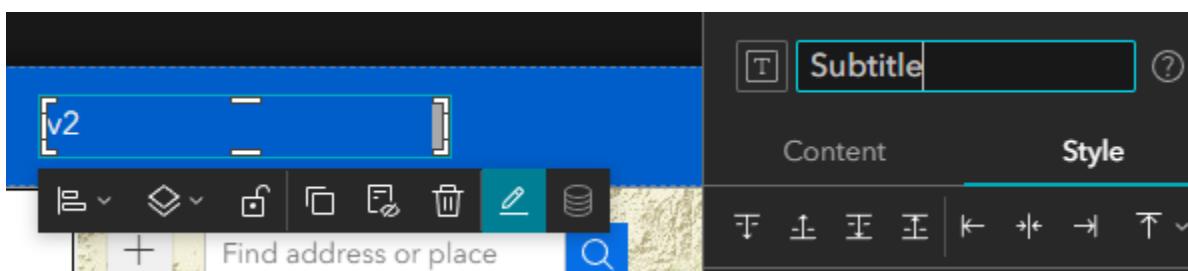
Select the **Text 2** widget from the Page Outline.



Enter v2 for your Subtitle.



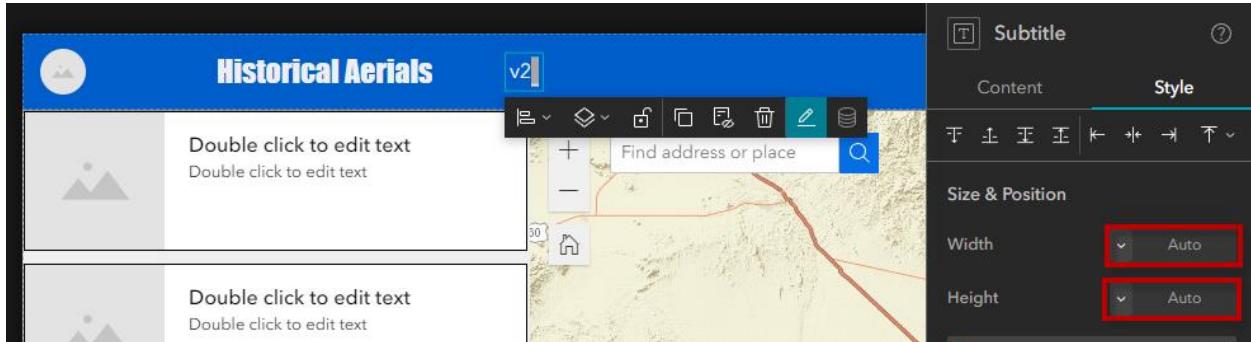
Rename the Text 2 widget to Subtitle.



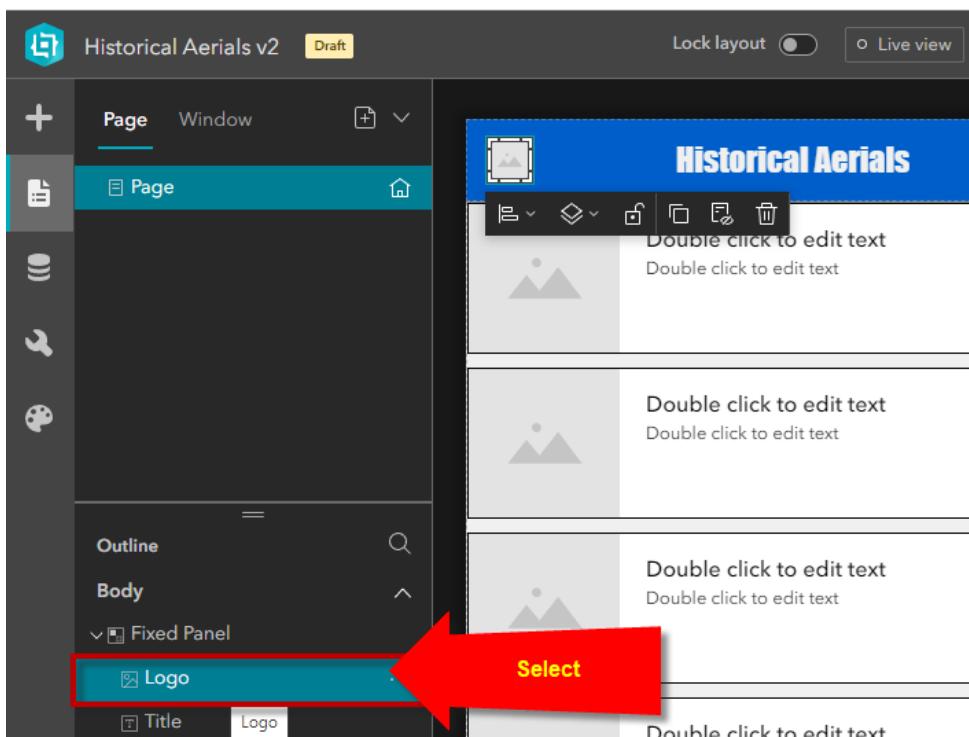
Set the Size & Position:

Width = Auto

Height = Auto



Select the Logo widget from the Page Outline.

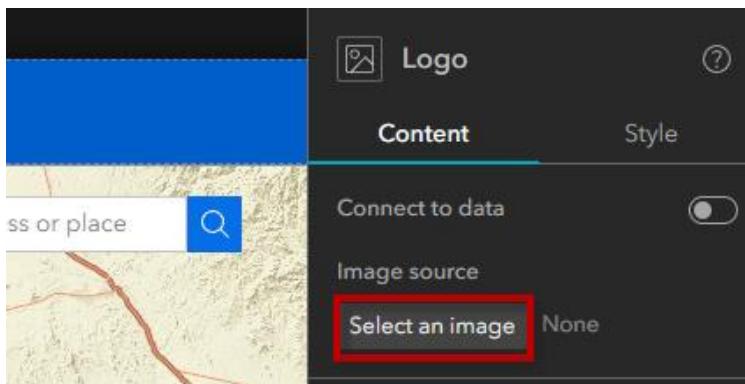


Increase the width of the Logo box.

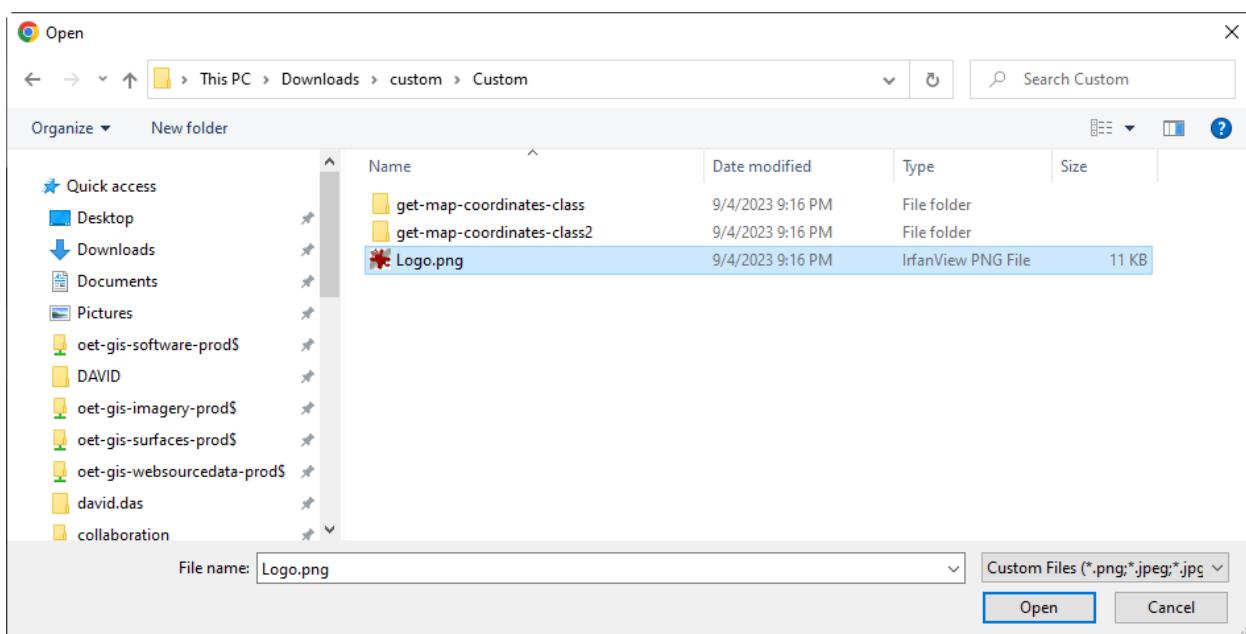
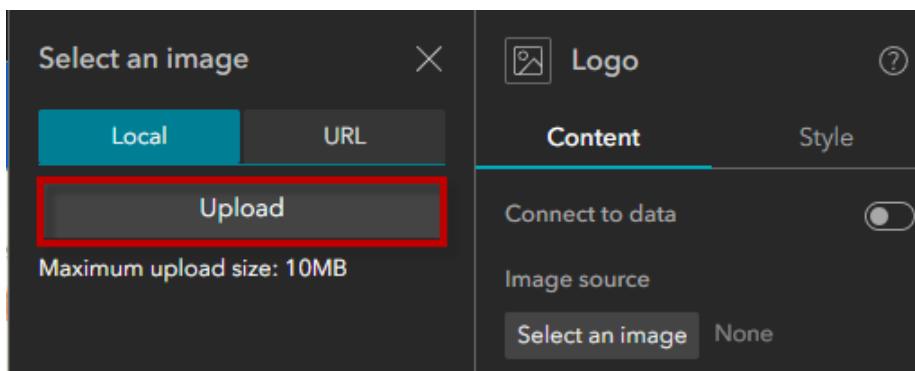


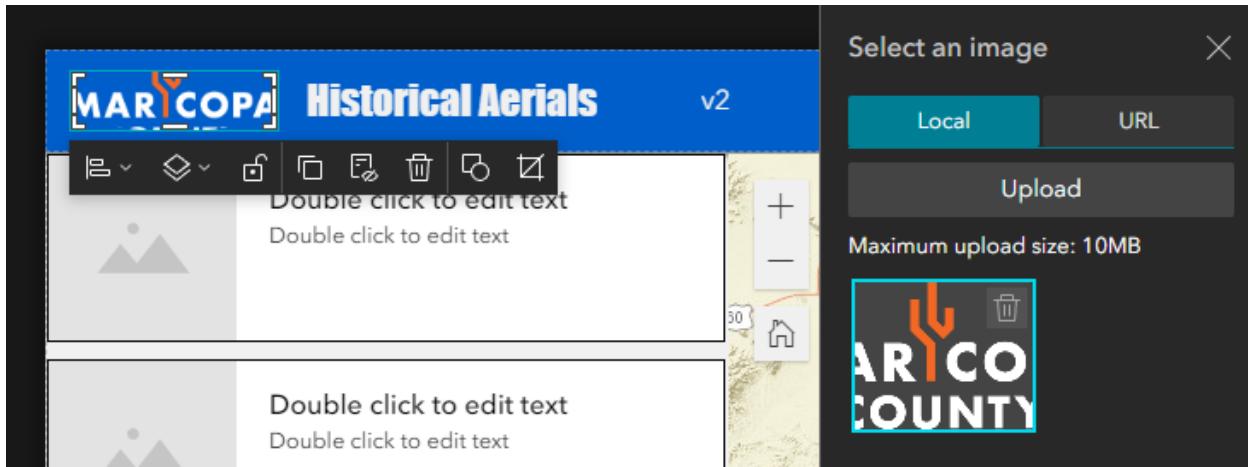
Open the Content Tab for the Logo Properties.

Select an image.

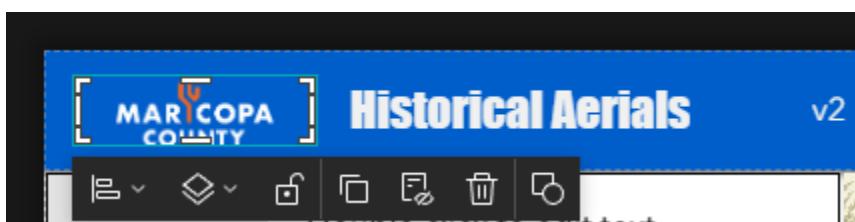
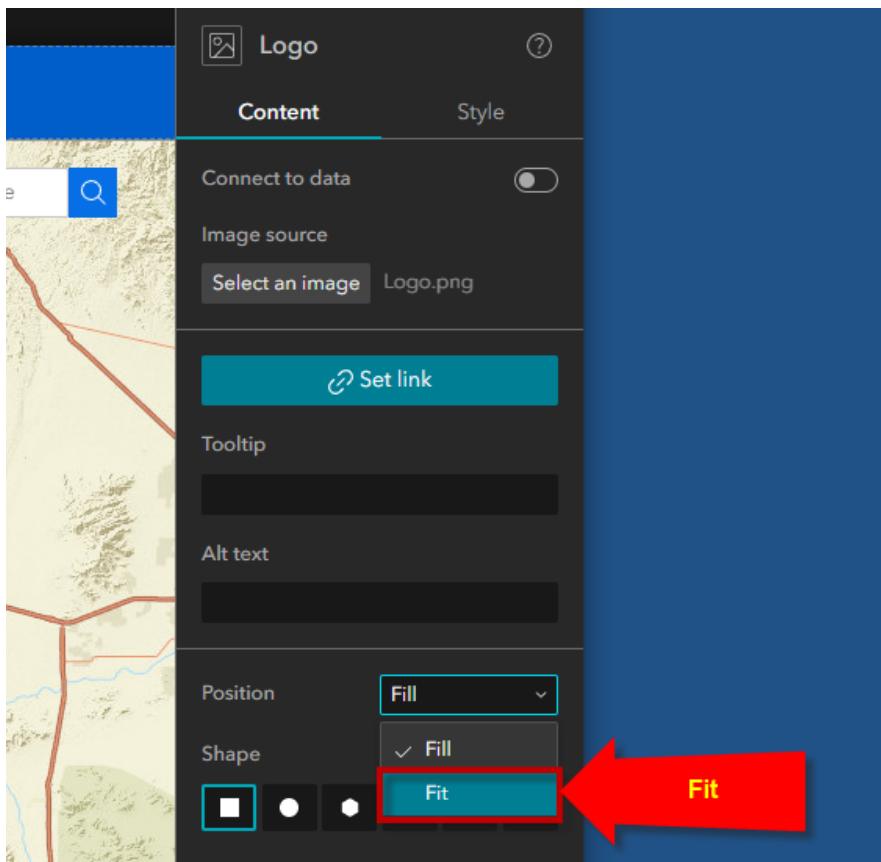


Upload Logo.png from your Local computer.

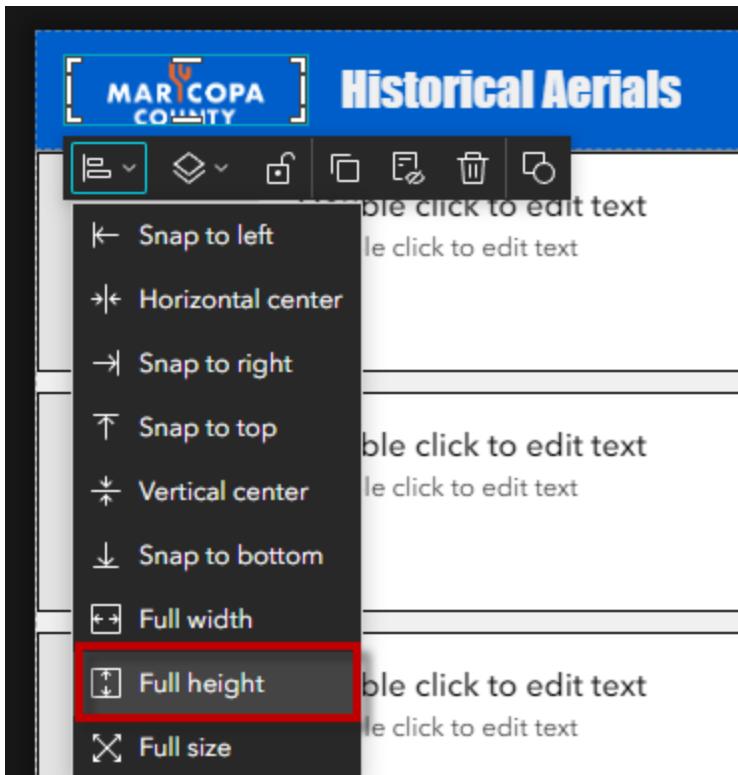




Change Position to Fit

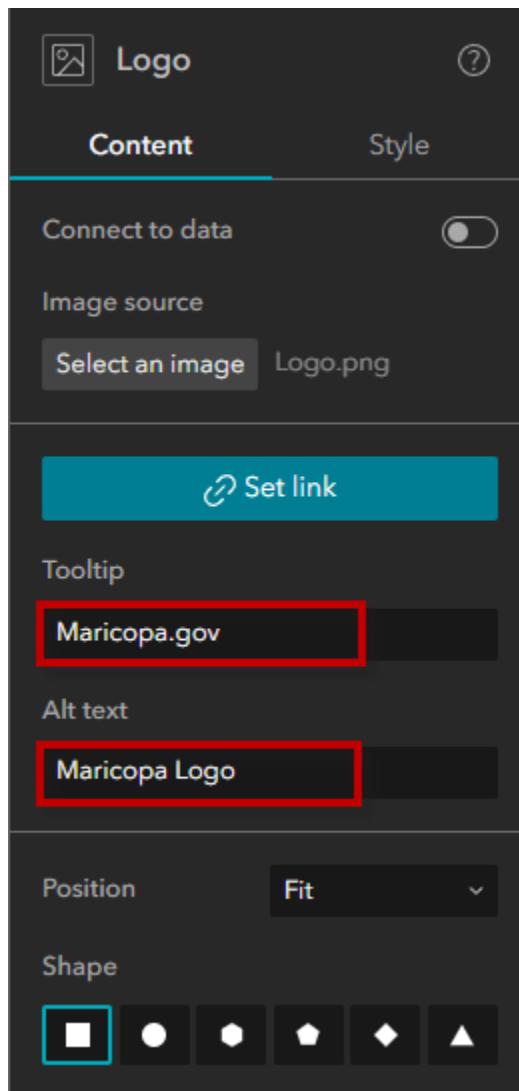


Align = Full Height

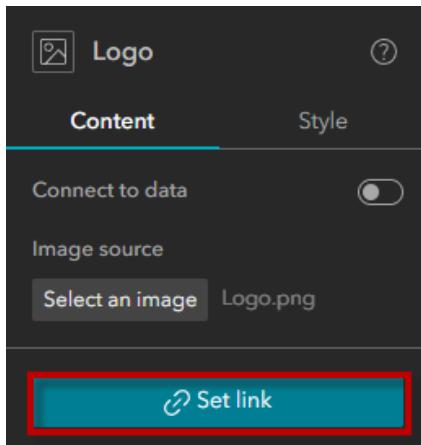


Tooltip = Maricopa.gov

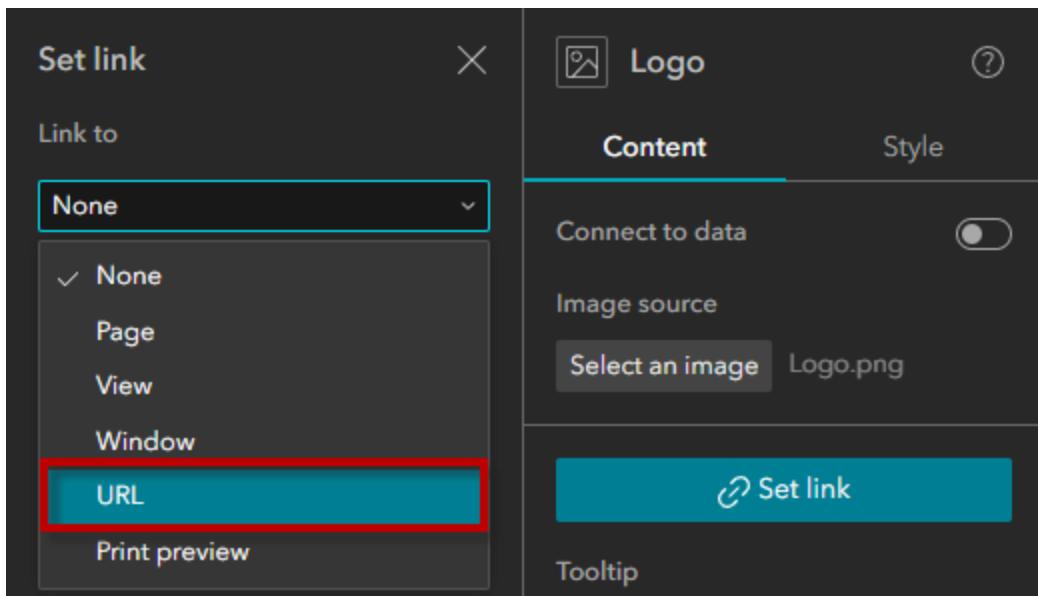
Alt Text = Maricopa Logo



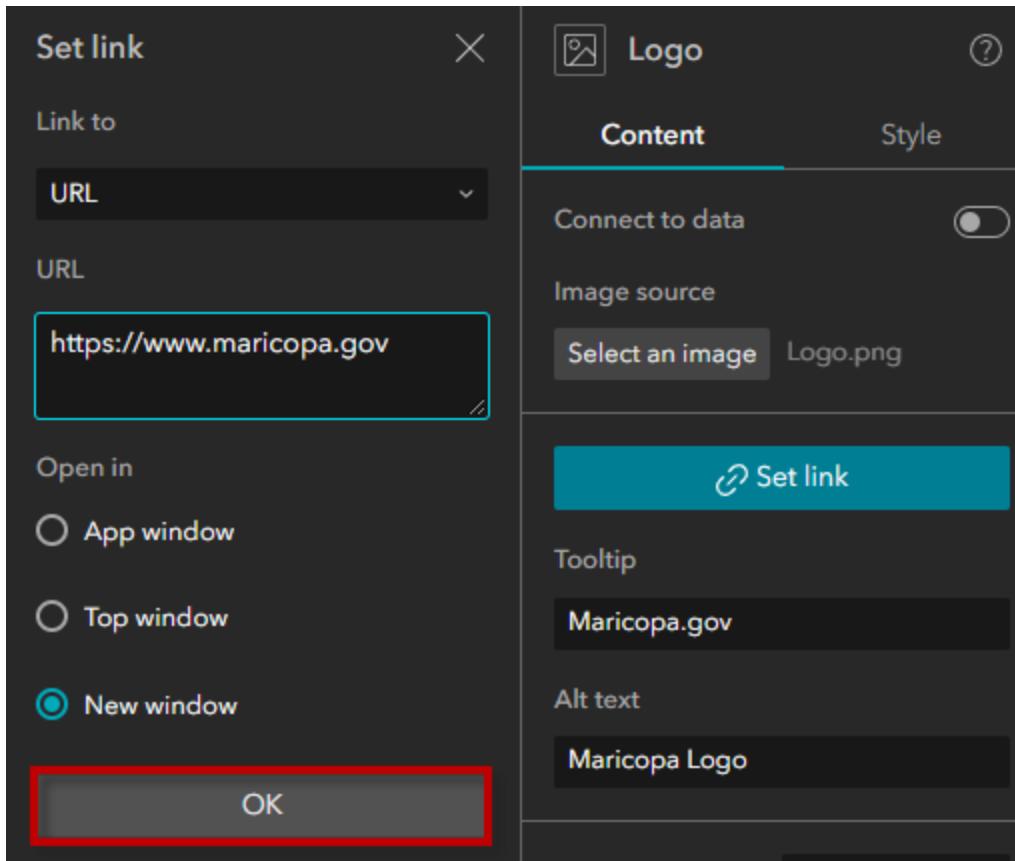
Click on the Set Link button.



Link to URL



URL = <https://www.maricopa.gov>



Resize the Logo to make it aesthetically pleasing.



Apply Maricopa County Color Palette

PRIMARY COLORS



SUMMER NIGHT BLUE
#132048



SUNRISE ORANGE
#F26724

SECONDARY COLORS



#006EB5



#383838



#F3F3F3



#FAA21B

COLORS TO USE WHEN PLACED ON SUMMER NIGHT
BLUE #132048



#059BFF



#FF8F5C

Primary Colors:

Summer Night Blue = #132048

Sunrise Orange = #F26724

Secondary Colors:

Blue = #006EB5

Dark Gray = #383838

Light Gray = #F3F3F3

Orange = #FAA21B

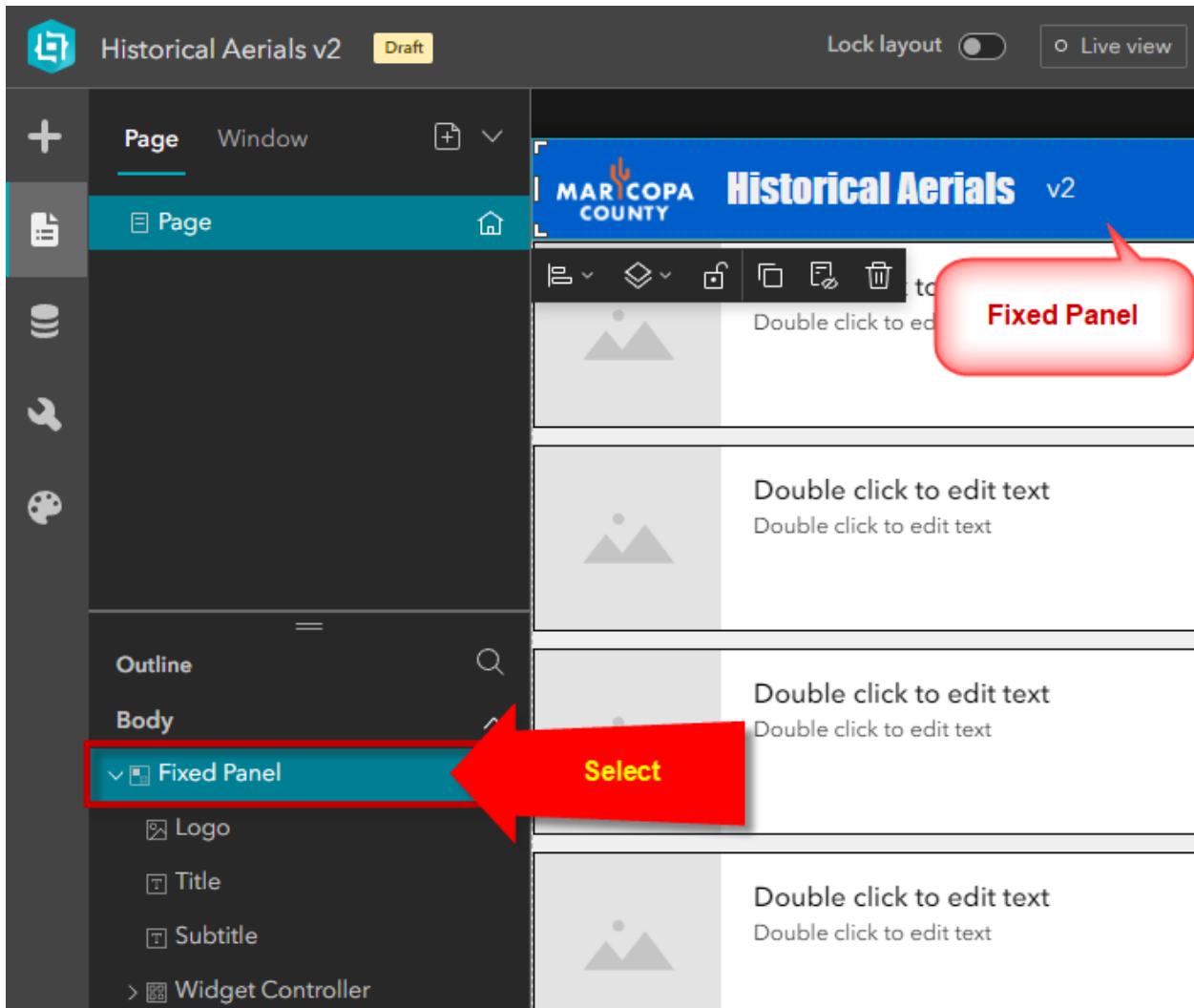
Colors to be used when placed on Summer Night Blue

Light Blue = #059BFF

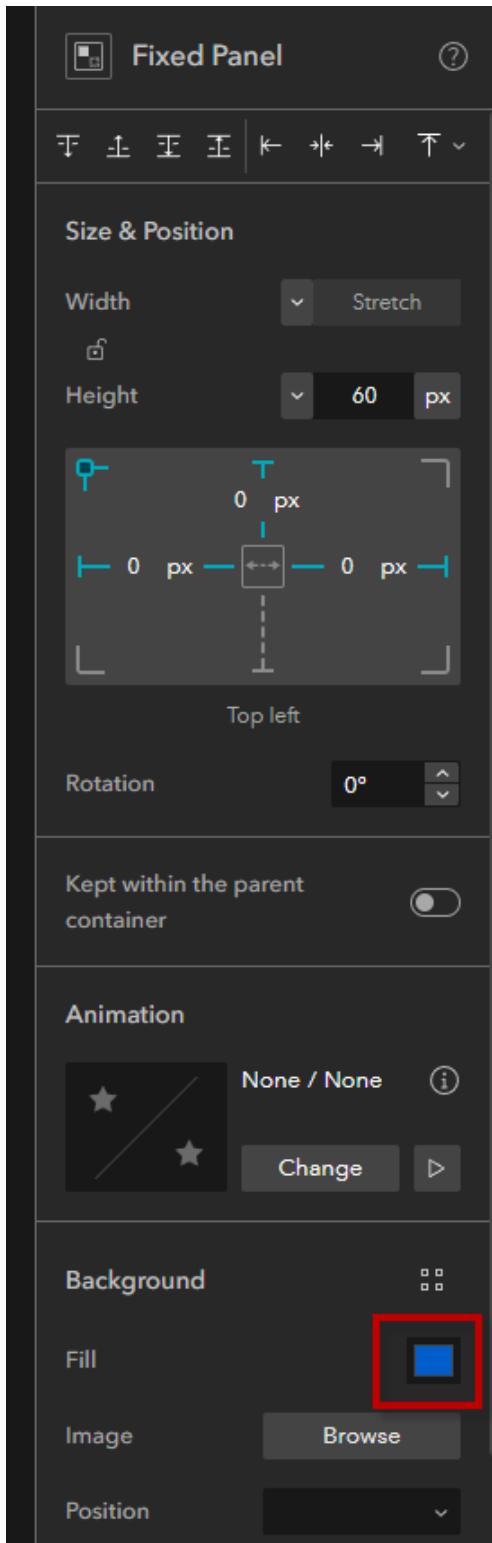
Pale Orange = #FF8F5C

Change the Fixed Panel Background Color

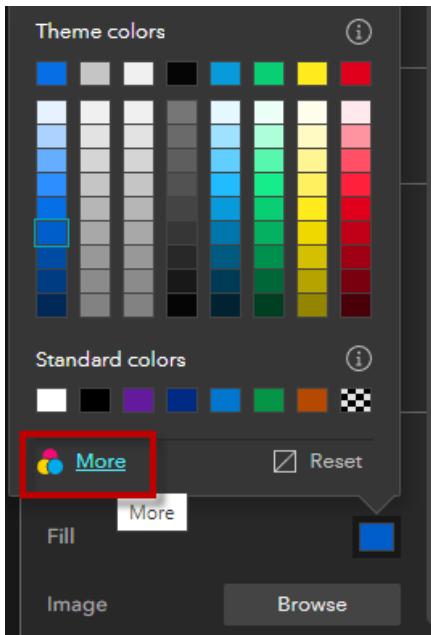
Select the Fixed Panel from the Page Outline.



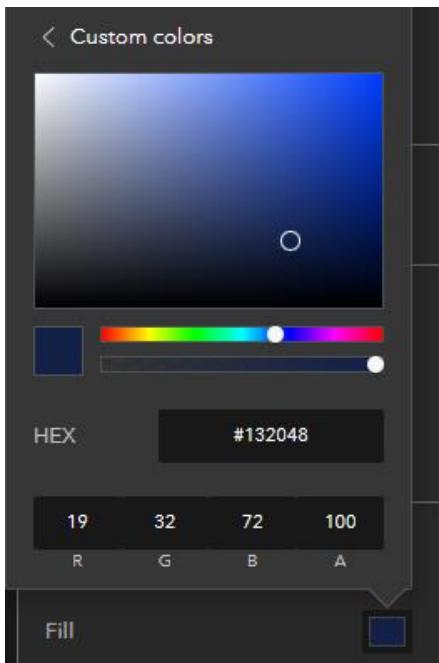
Select the Background Fill.



Select More

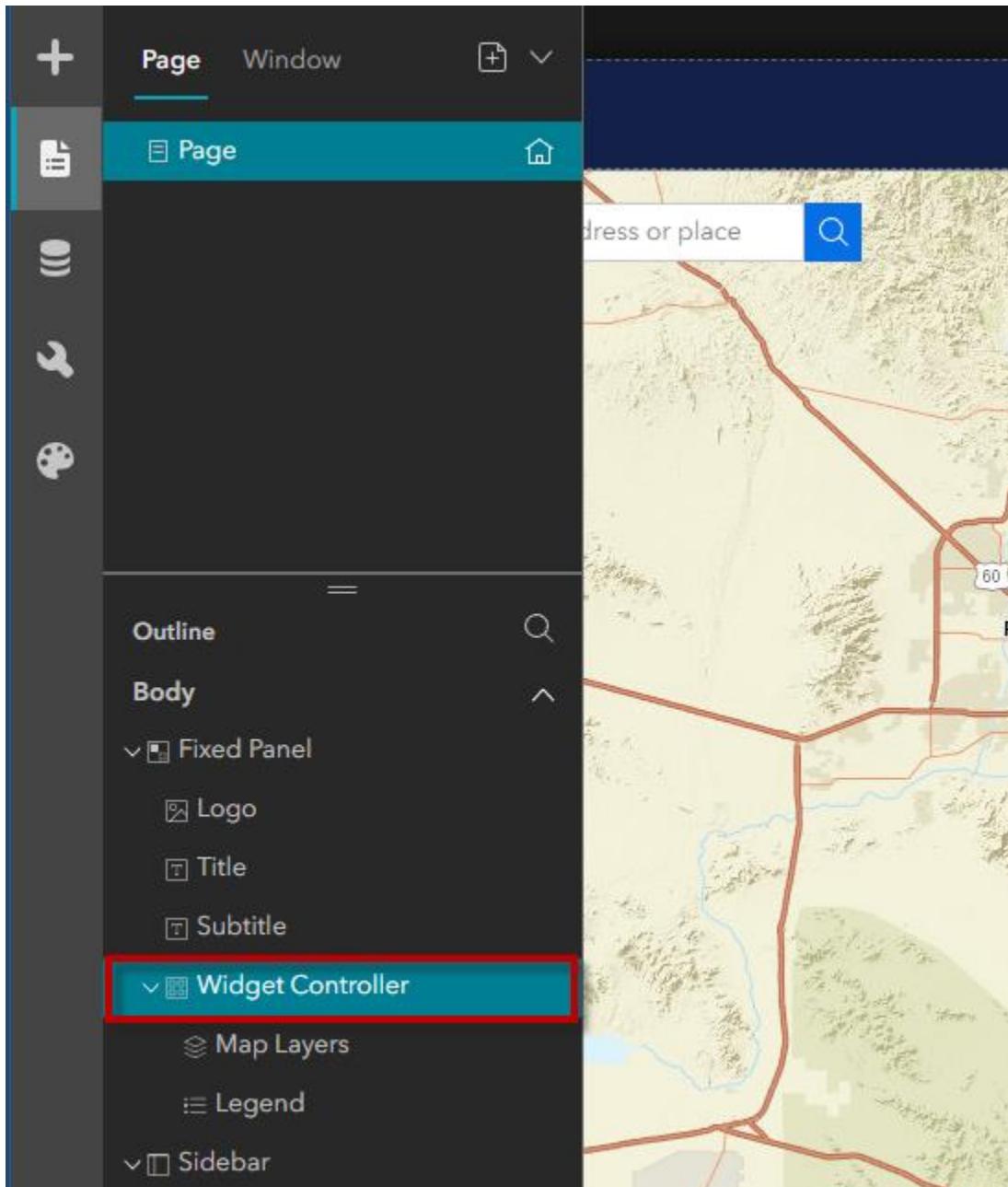


Enter HEX value = #132048

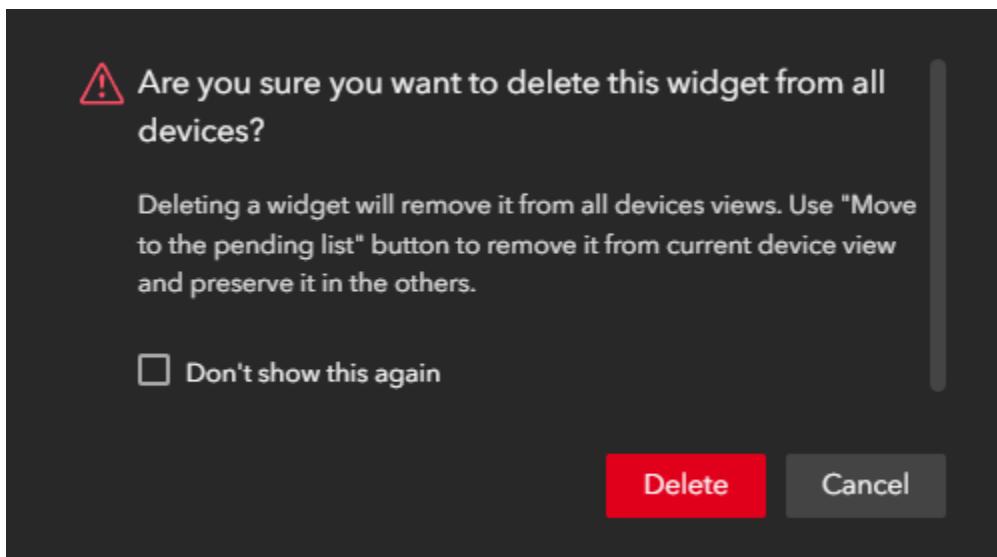
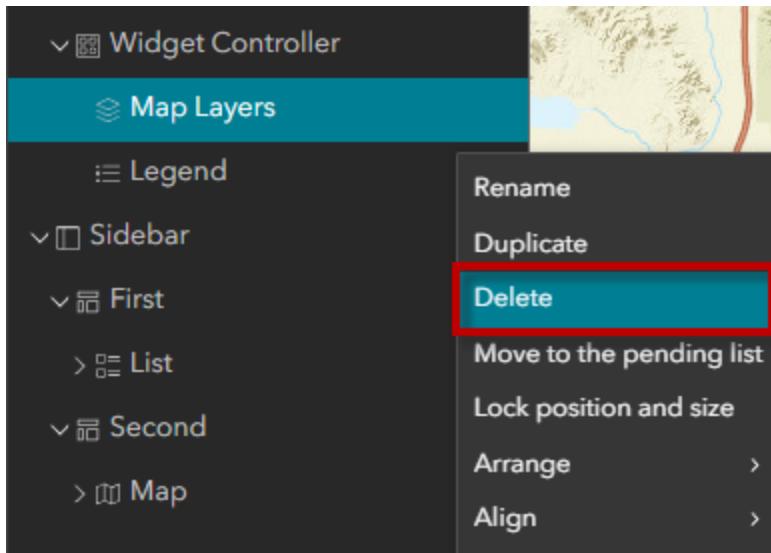


Delete the Map Layers Widget

Expand the Widget Controller in the Page Outline.



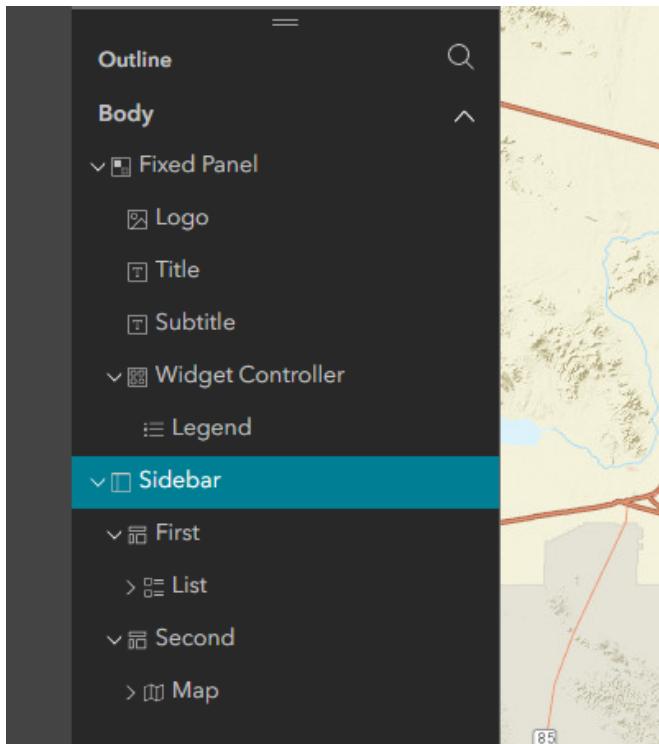
Delete the Map Layers Widget.



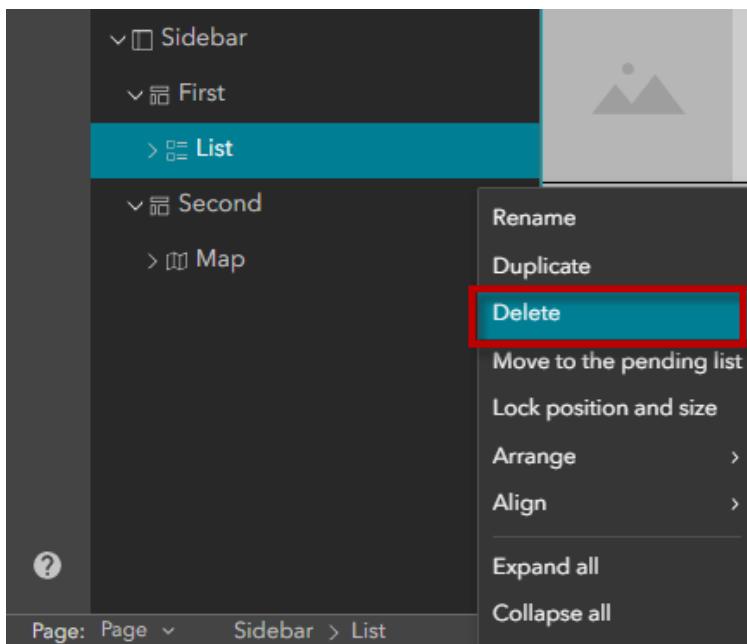
Delete

Delete the List Widget

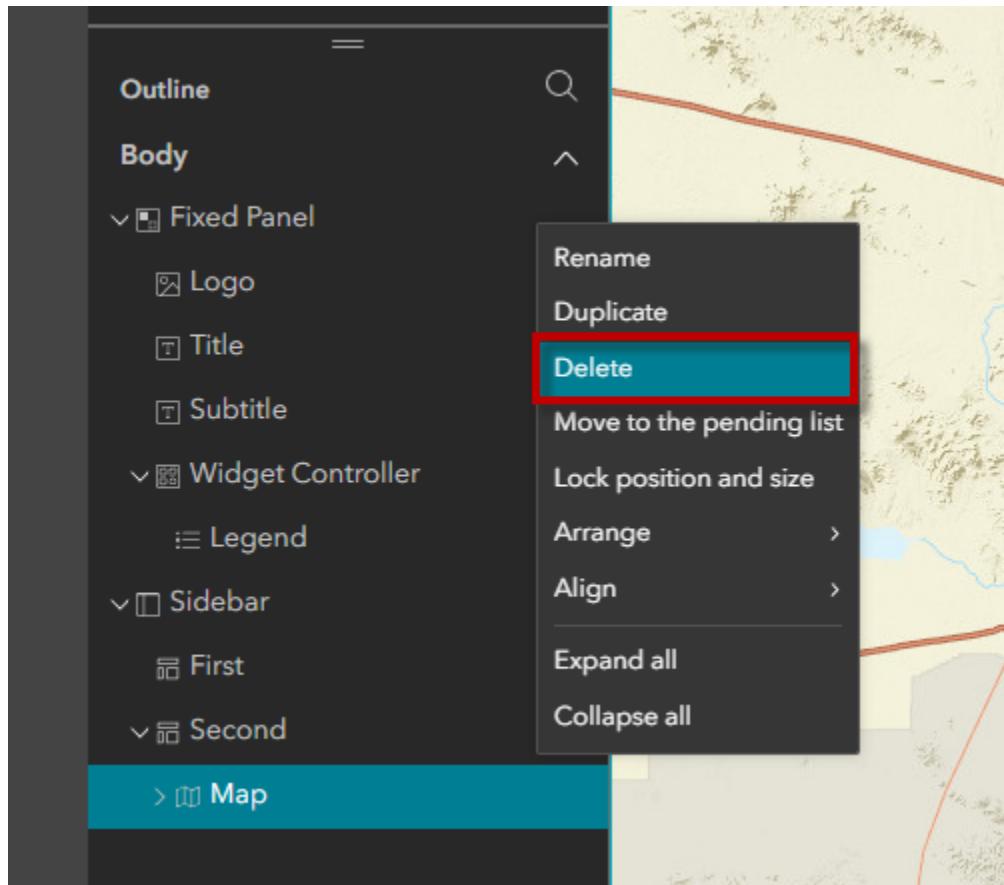
Expand the Sidebar widget on the Page Outline.



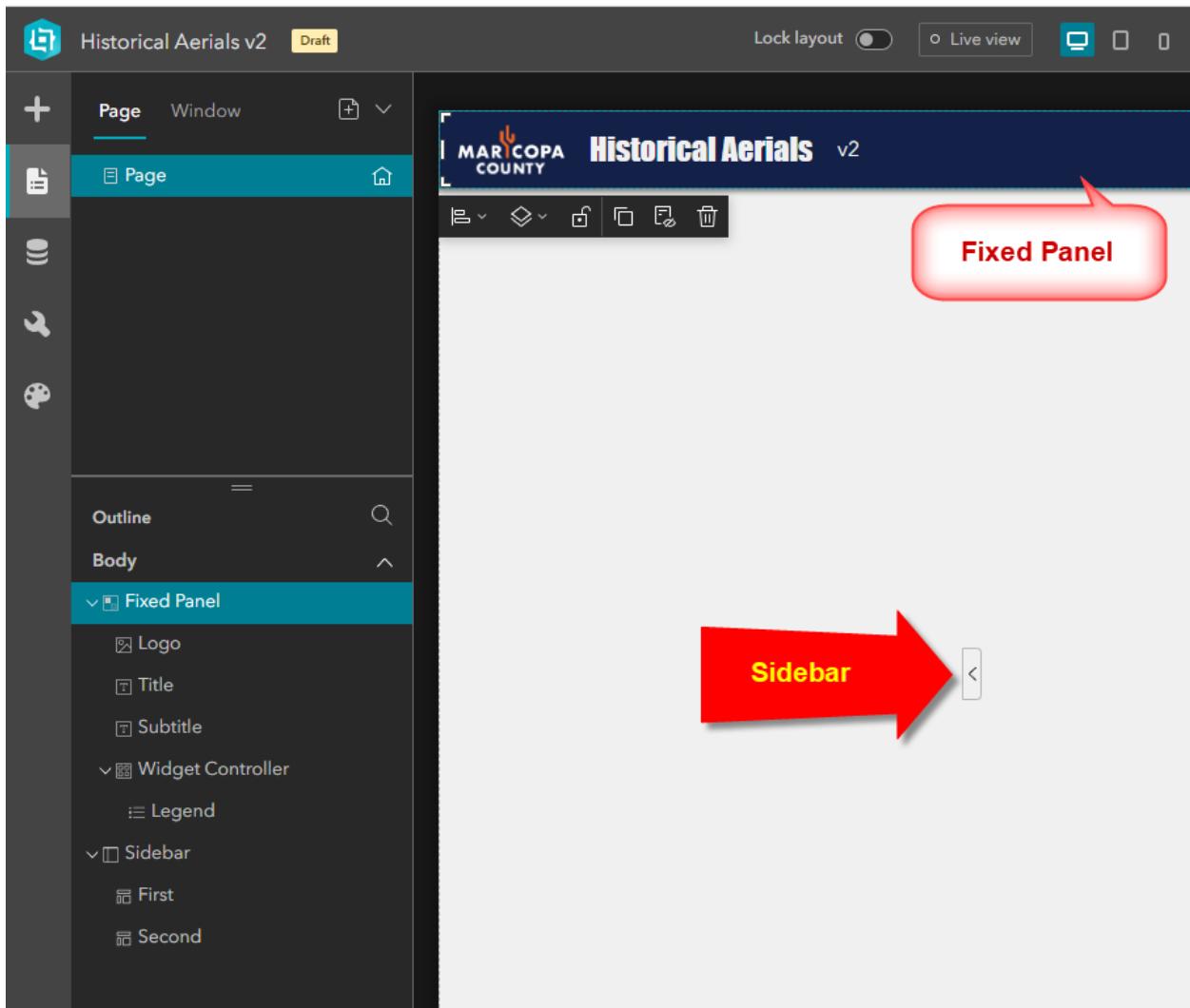
Delete the List Widget



Delete the Map Widget



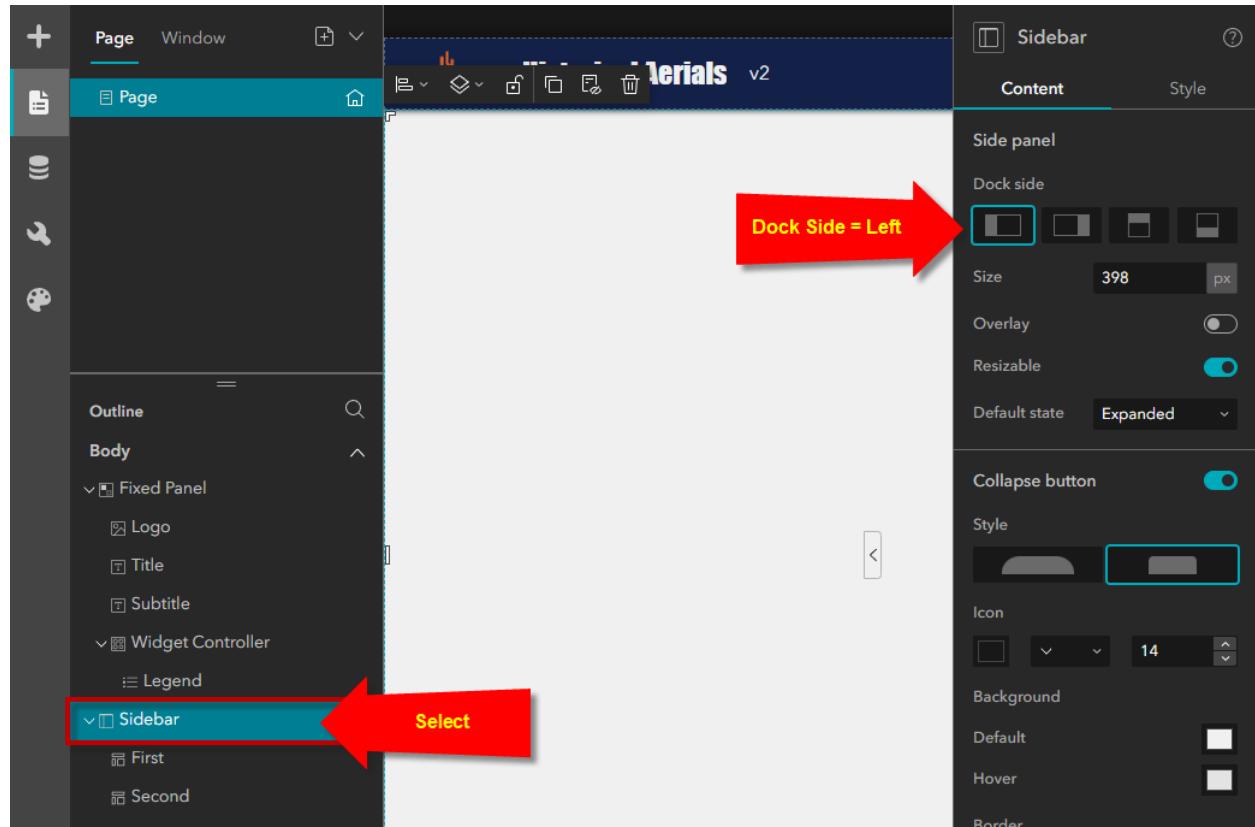
This leaves you with an almost empty template featuring a Fixed Panel and a Sidebar.



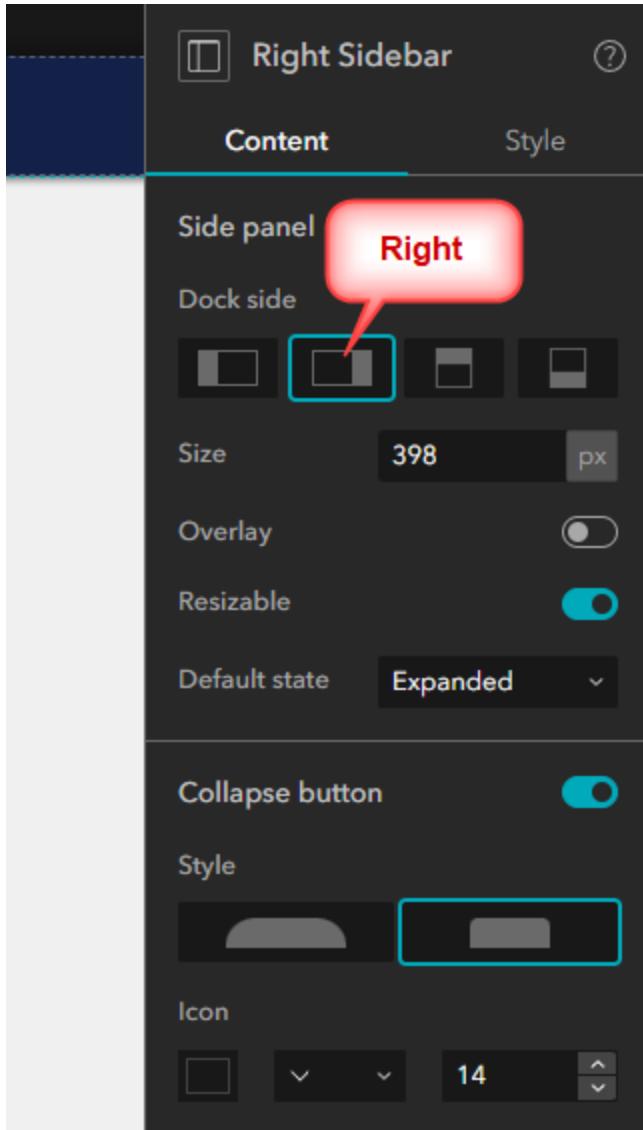
Make the Sidebar dock to the Right

Select the Sidebar from the Page Outline.

Notice that this Sidebar docks on the Left.



Change Dock Side = Right

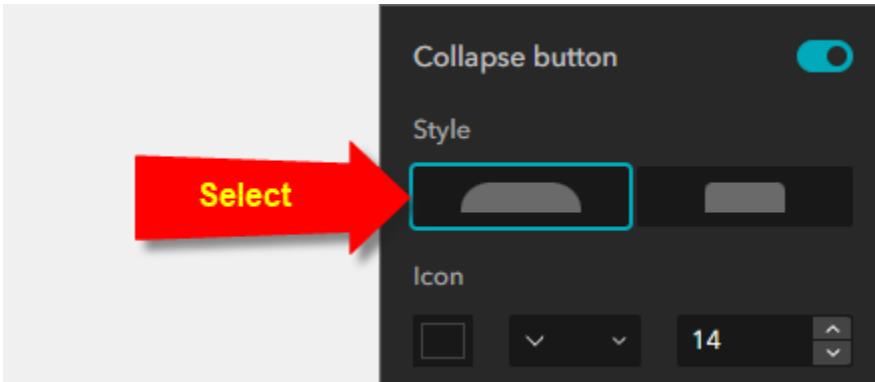


Resizable = Yes

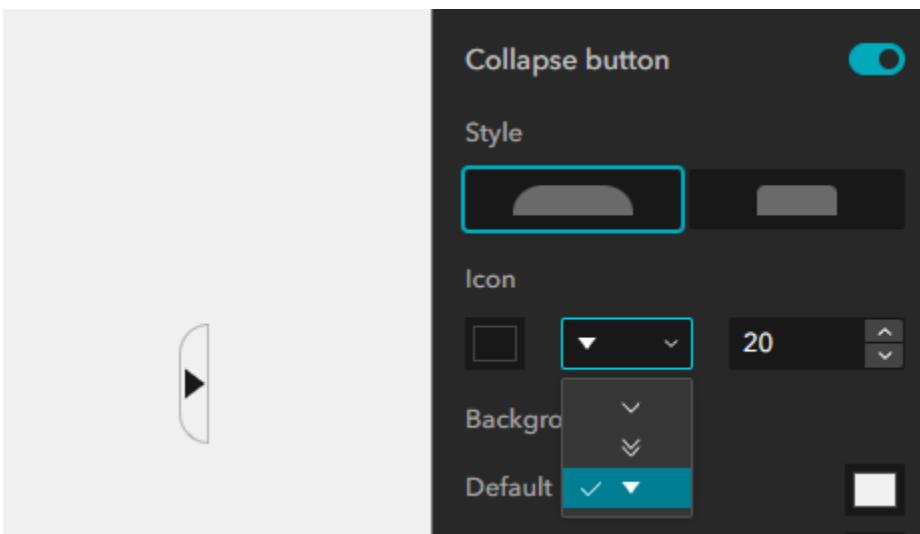
Default state = Expanded

Collapse button = Yes

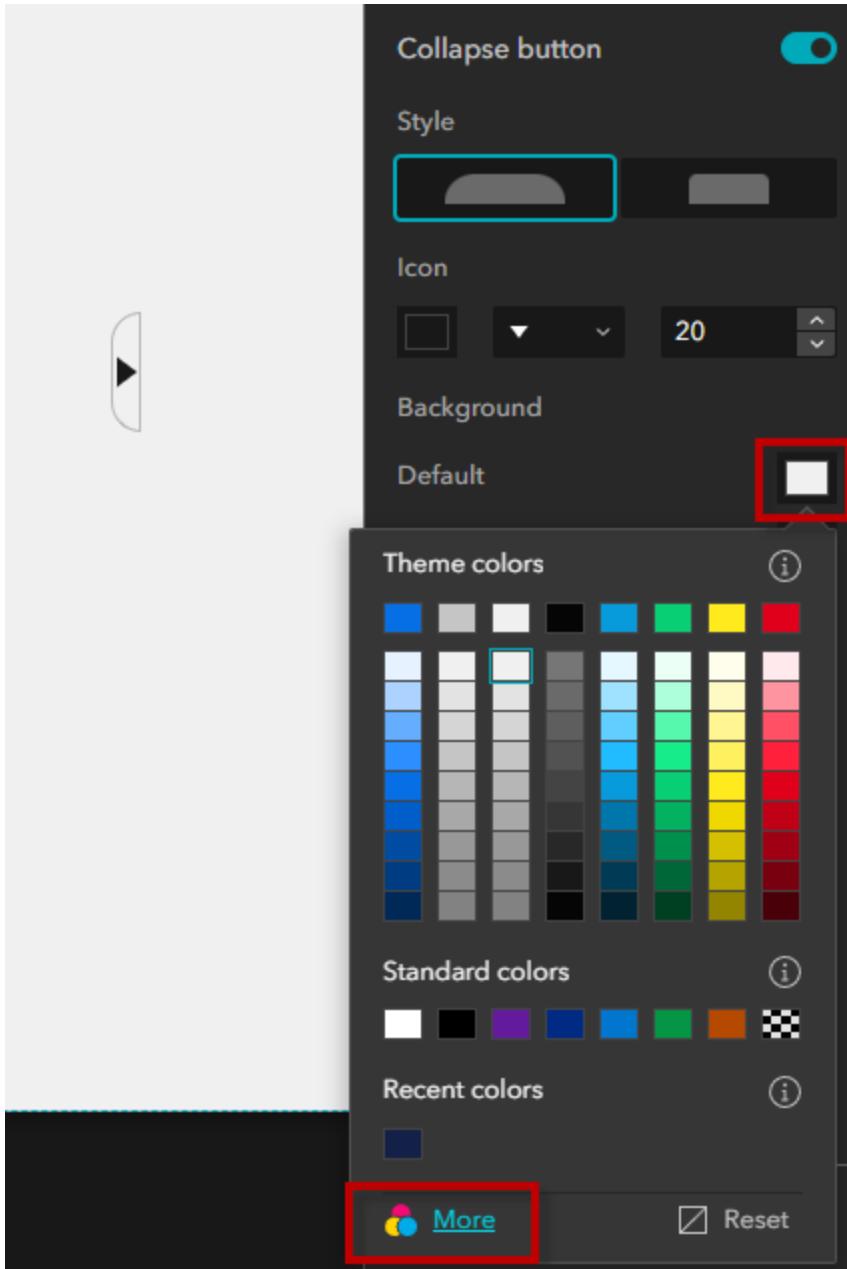
Change the Collapse button style.

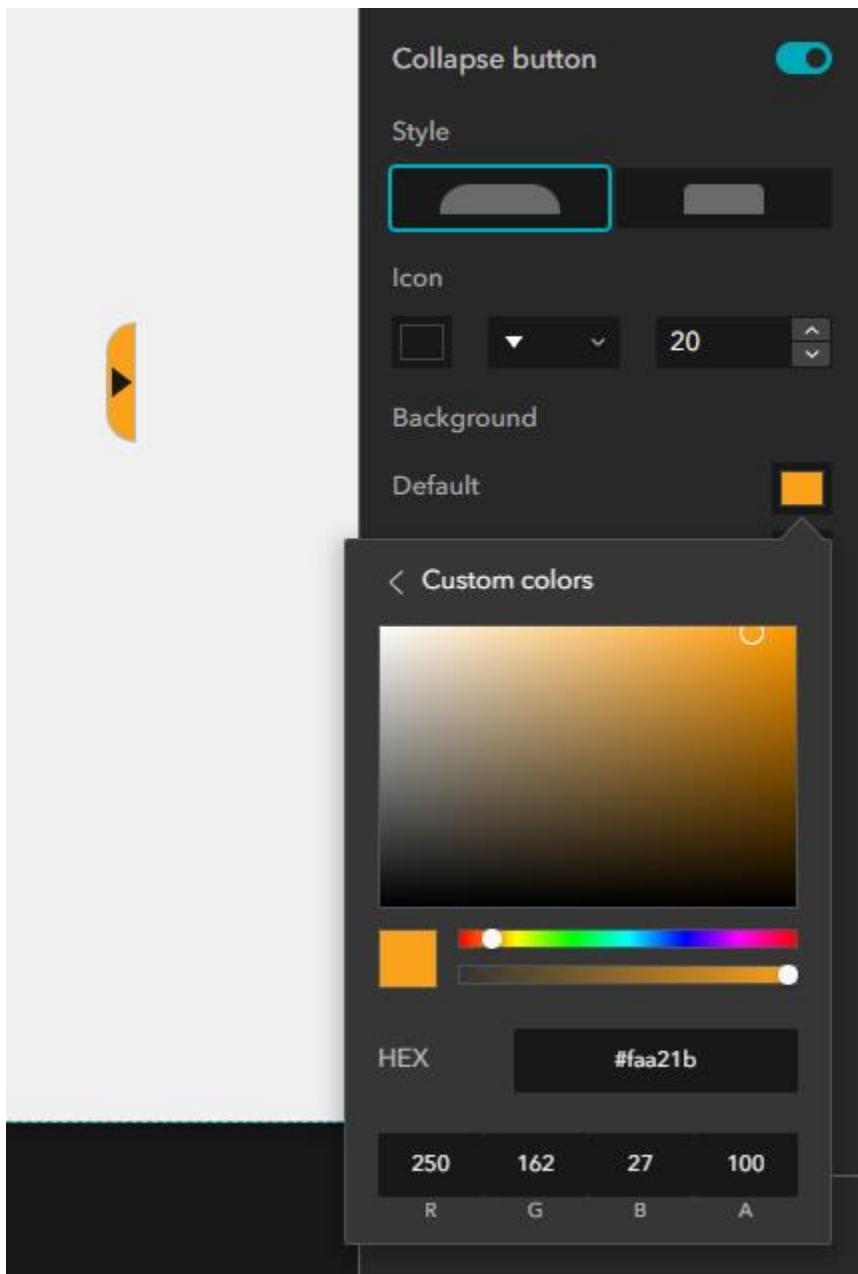


Change the Icon Style and Size

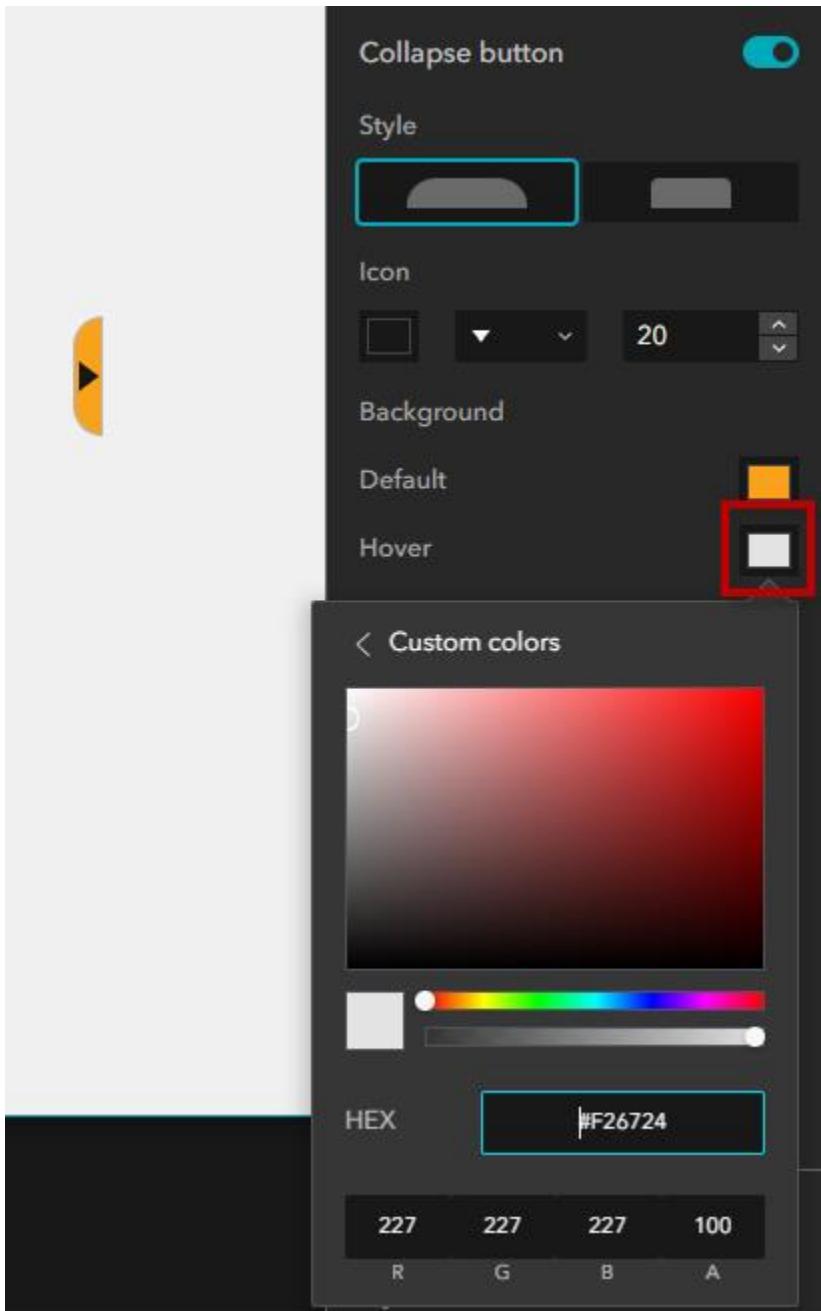


Change the default color of the Collapse button = #FAA21B





Change the Hover Color = #F26724



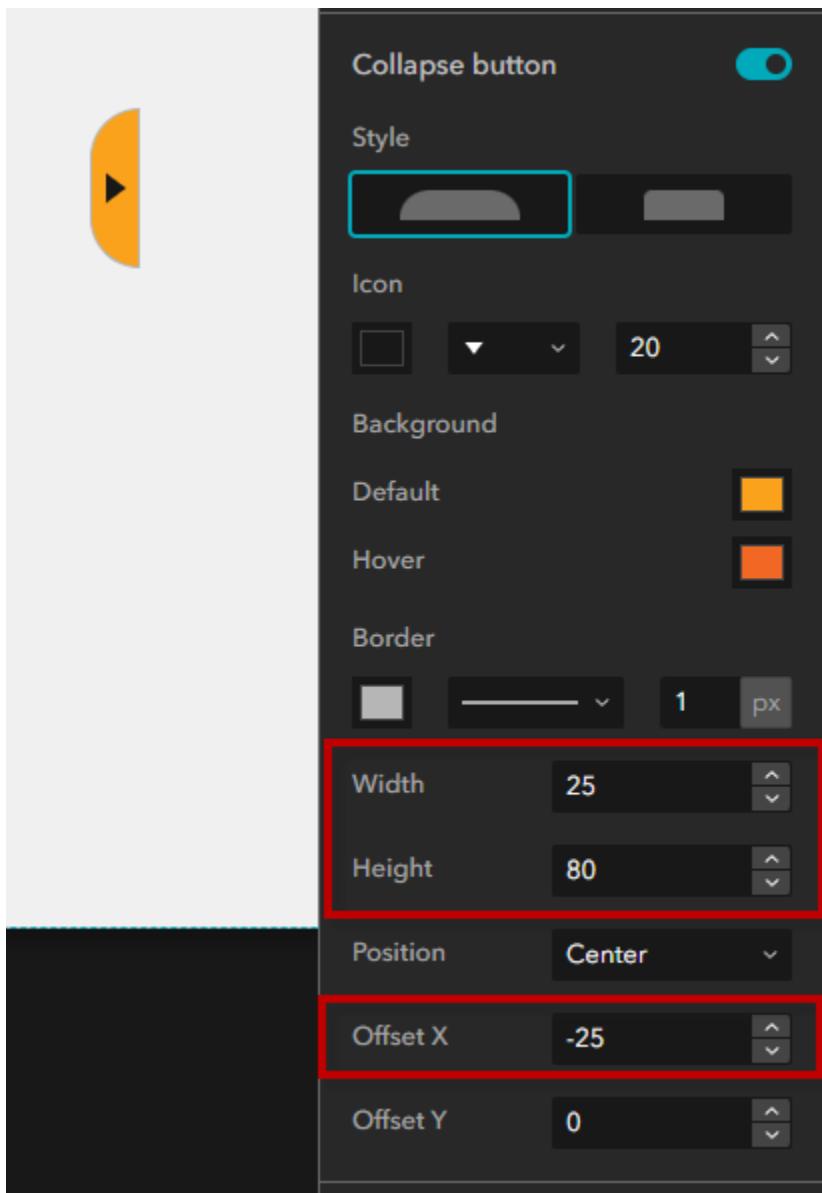
Change the Width and Height of the Collapse button.

Width = 25

Height = 80

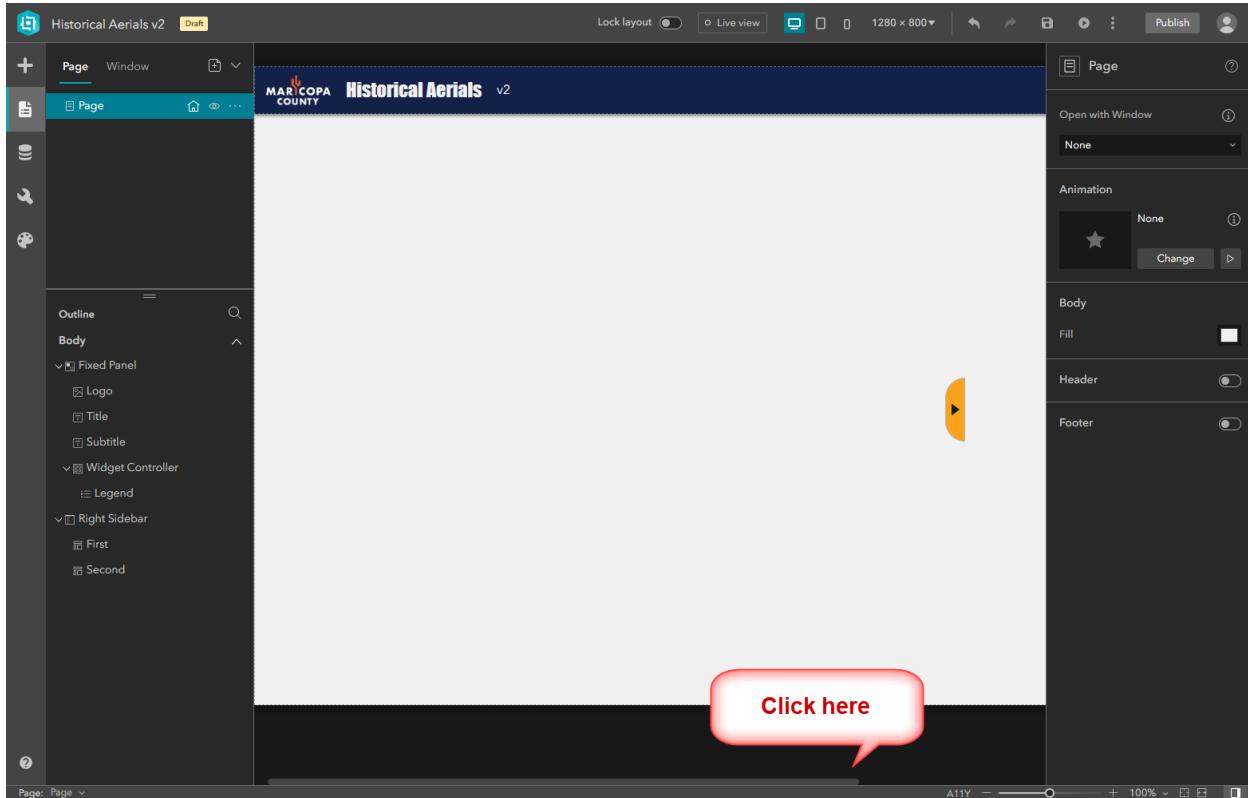
Offset X = -25

The negative Offset X must match the width.

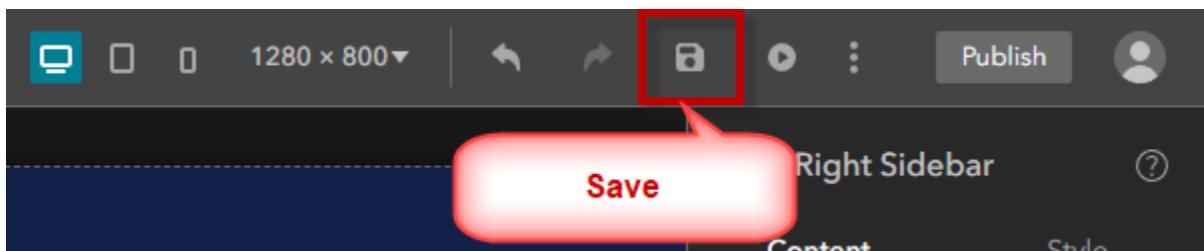


Note: If you have problems engaging the Collapse button on a Smartphone, you need to make this collapse button larger.

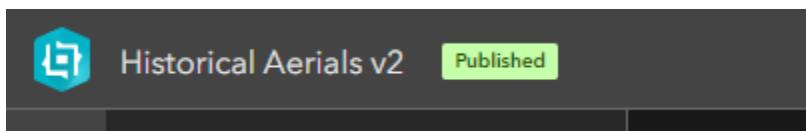
Click anywhere outside the Page.



Save

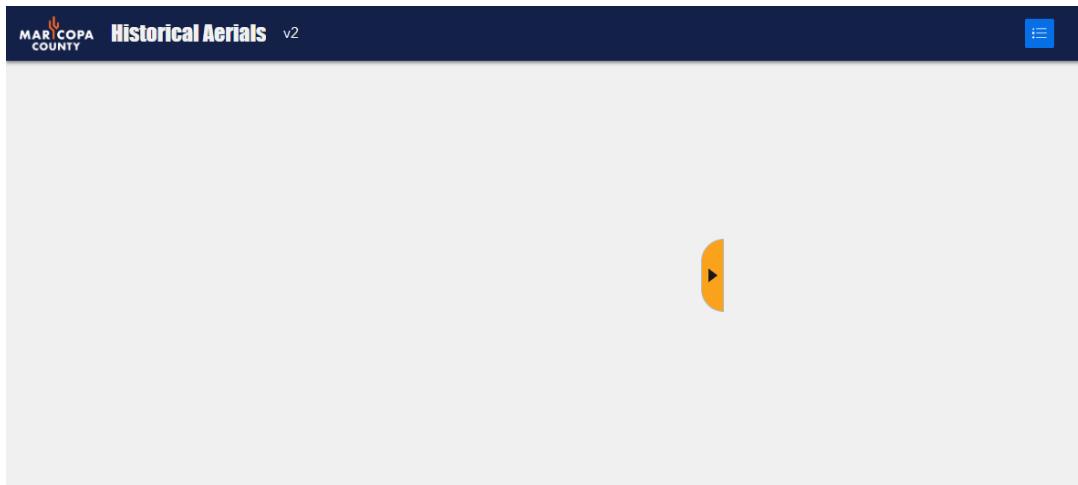


Published



View Published Item.

<https://localhost:3001/experience/1/>



Click on the collapse button.

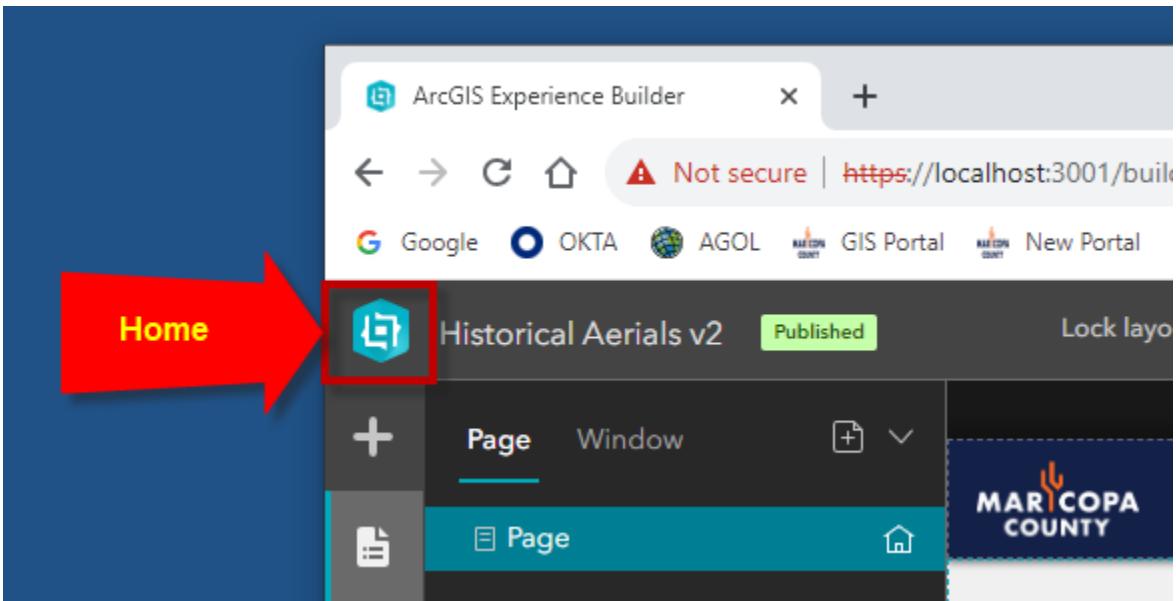
The Right Sidebar will collapse to the right.



When you hover over the button, it would turn orange.



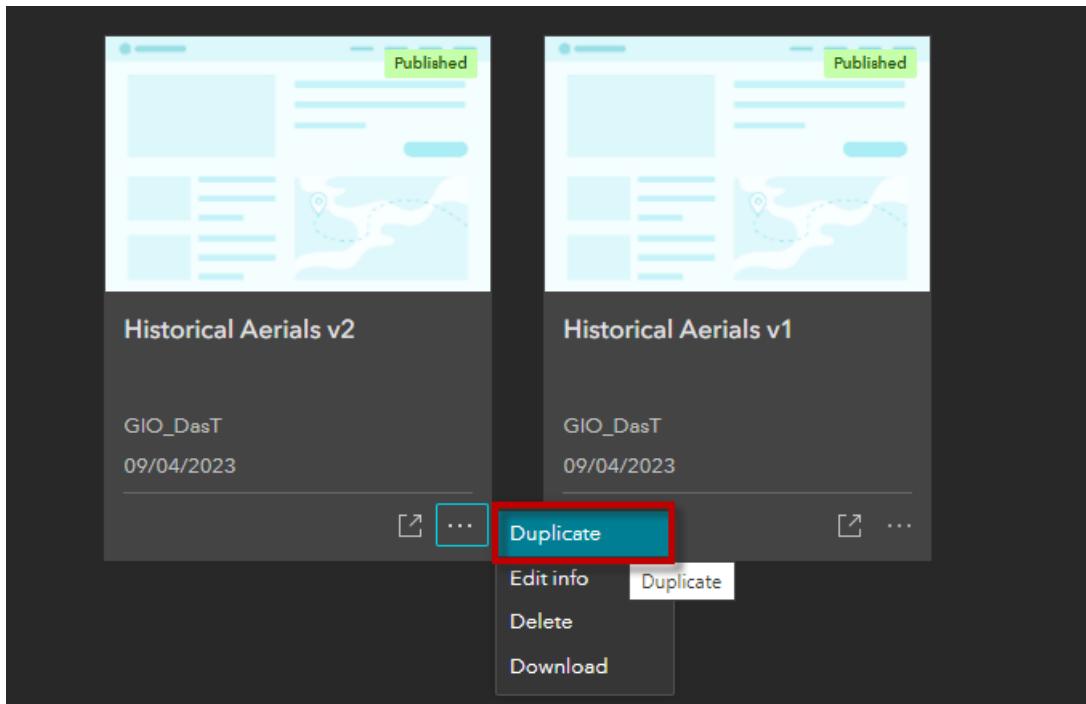
Go back to the Home Page



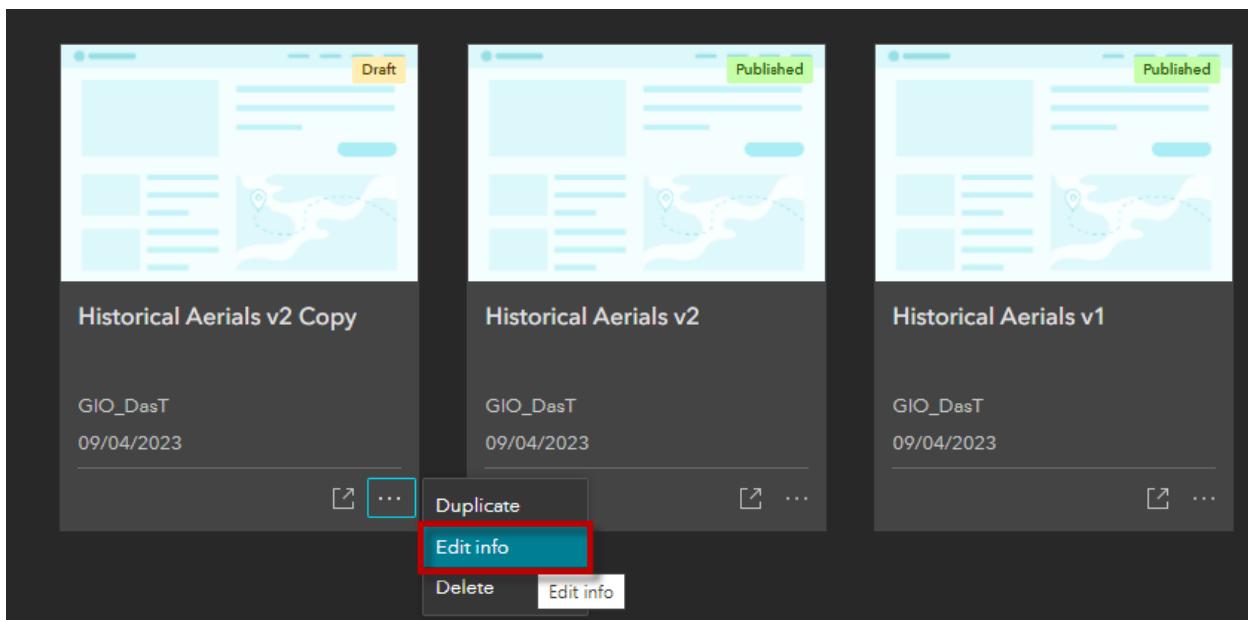
A screenshot of the ArcGIS Experience Builder interface, specifically the 'Experiences' tab. The top navigation bar includes 'ArcGIS Experience Builder (Developer Edition)', 'Experiences' (which is underlined), and 'Templates'. Below the navigation, there's a search bar and filters for 'Owned by me' and 'Last modified'. The main area shows two recent experiences: 'Historical Aerials v2' and 'Historical Aerials v1', both created by 'GIO_DasT' on '09/04/2023'. Each experience card has a preview thumbnail, a title, the owner's name, the creation date, and three-dot and edit icons at the bottom.

Create Historical Aerials v3

Duplicate Historical Aerials v2 to create Historical Aerials v3

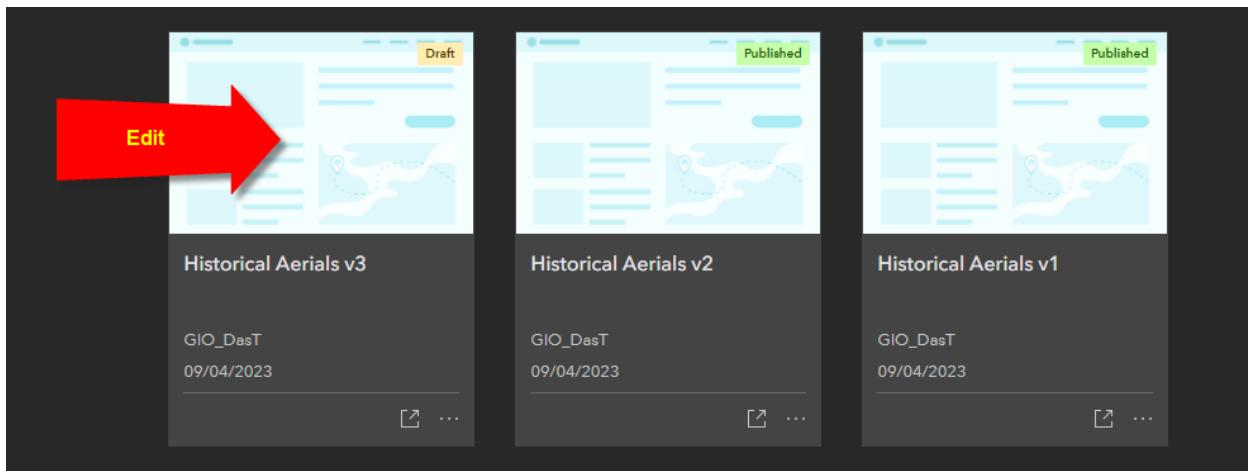
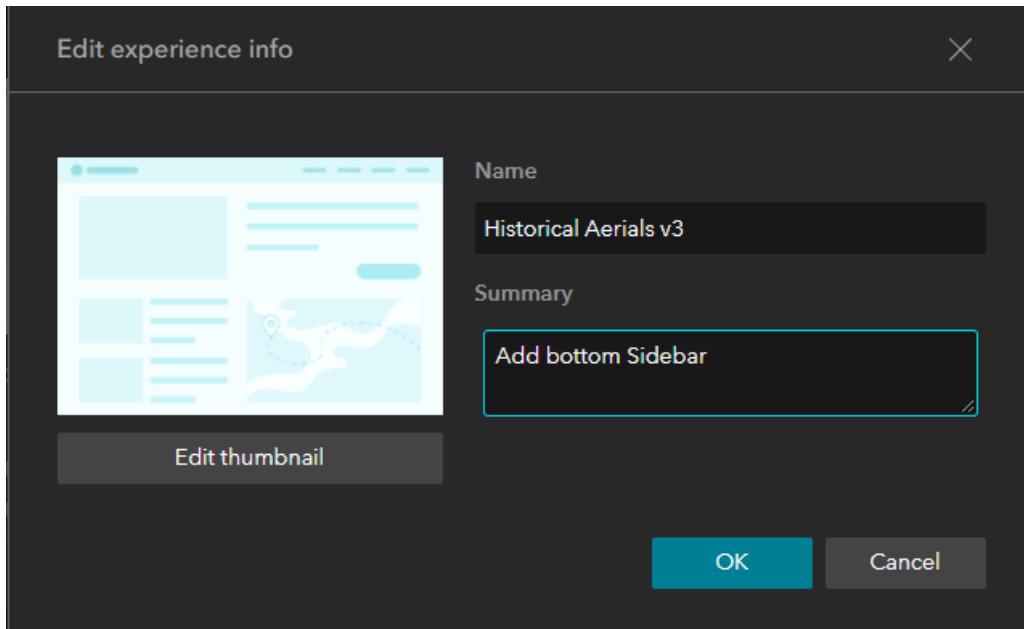


Edit Info

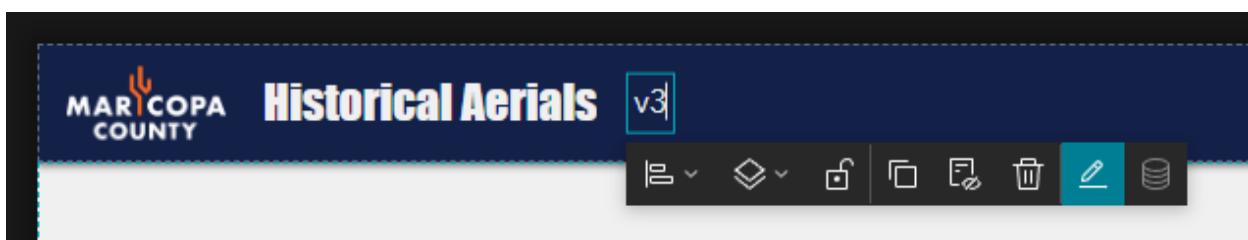


Name = Historical Aerials v3

Summary = Add bottom Sidebar



Edit the Subtitle to read v3

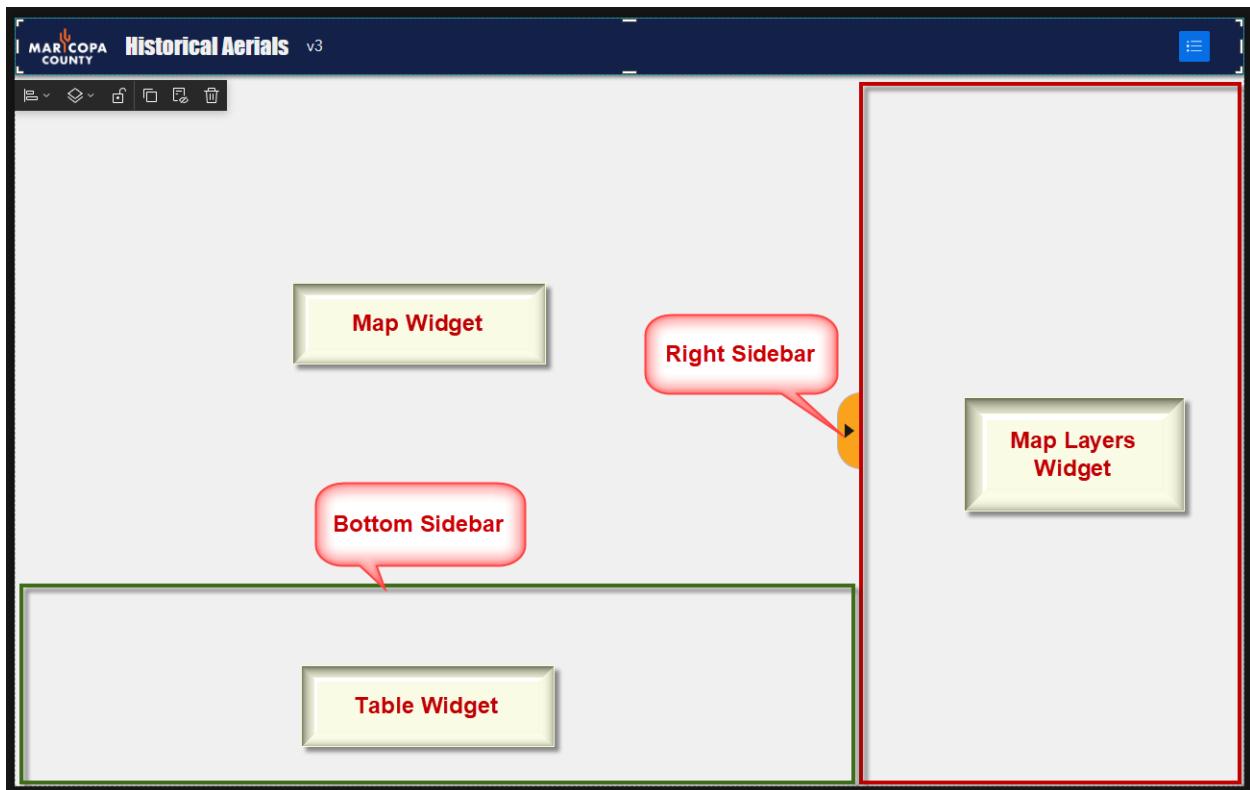


Plan your Layout

The Map Layers widget will be housed within Right Sidebar widget that can be collapsed to make more room for the Map widget on the Left.

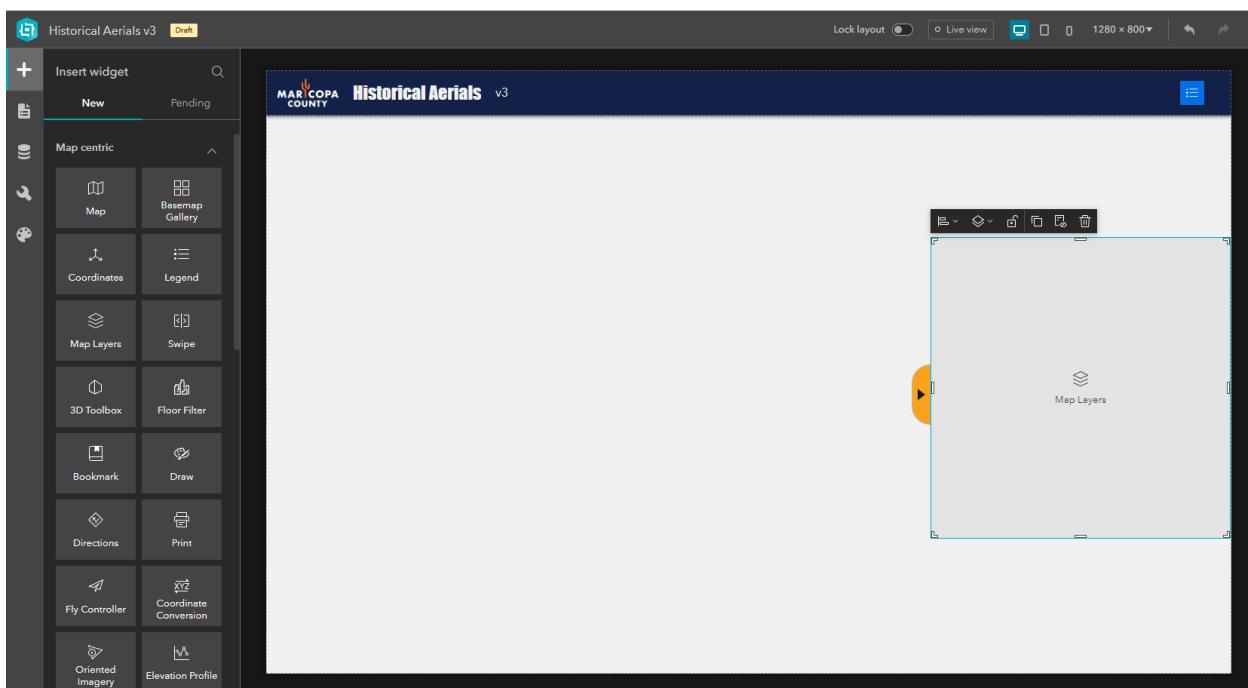
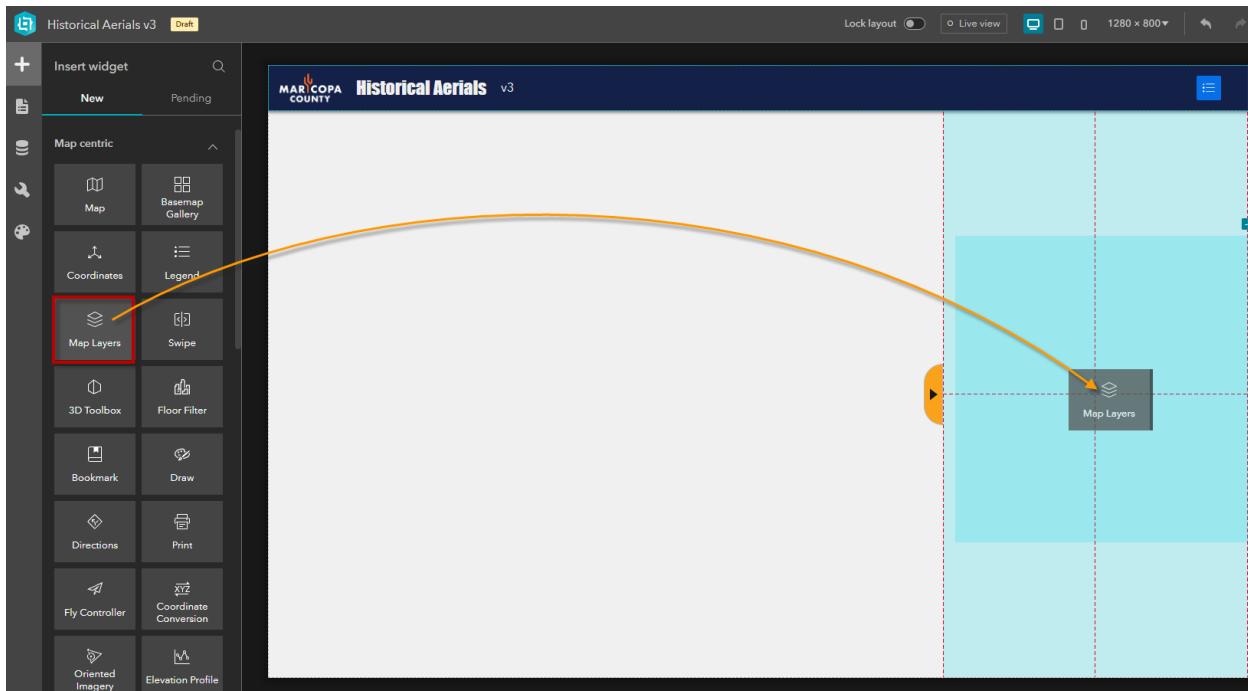
You will add a Bottom Sidebar widget to house the Table widget which can be collapsed to make more room for the Map widget.

The Bottom Sidebar widget will remain closed by default.

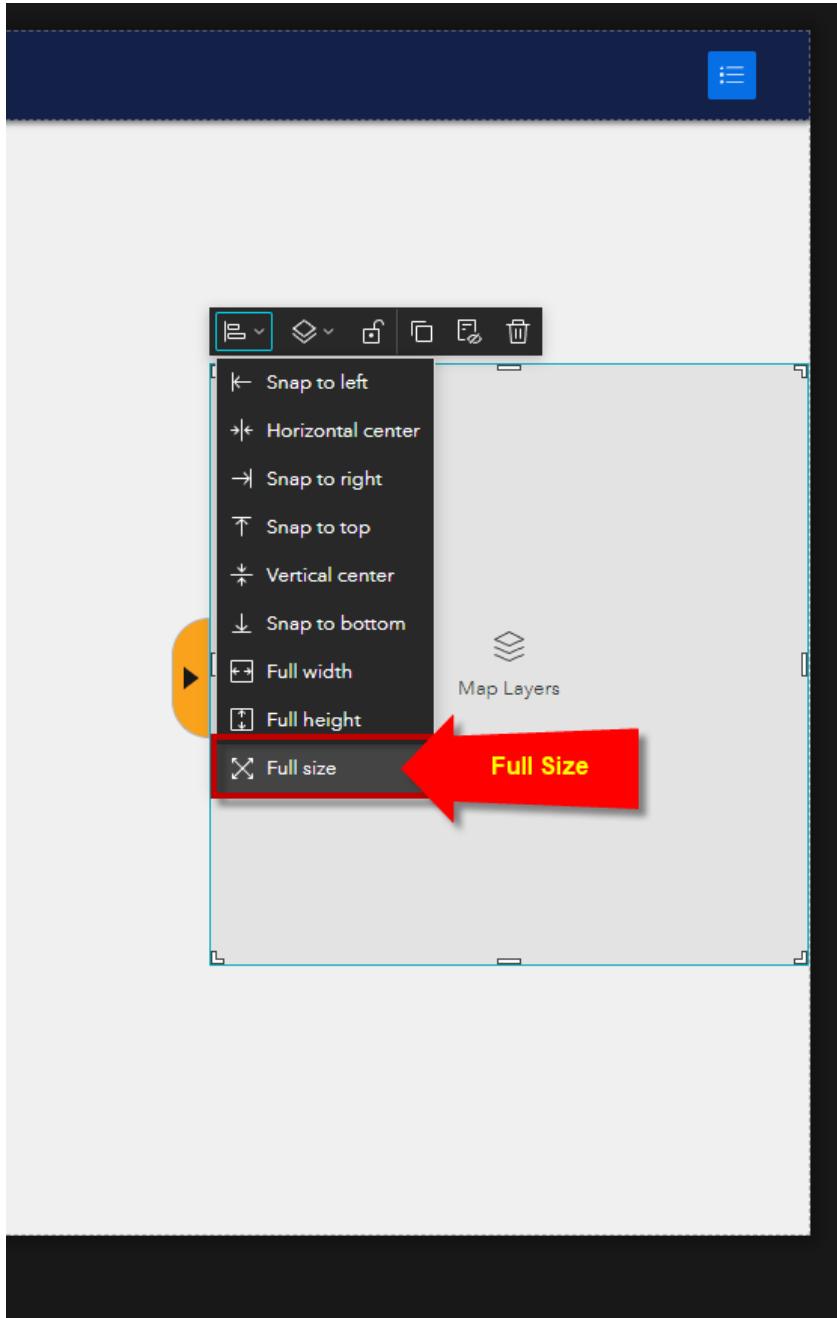


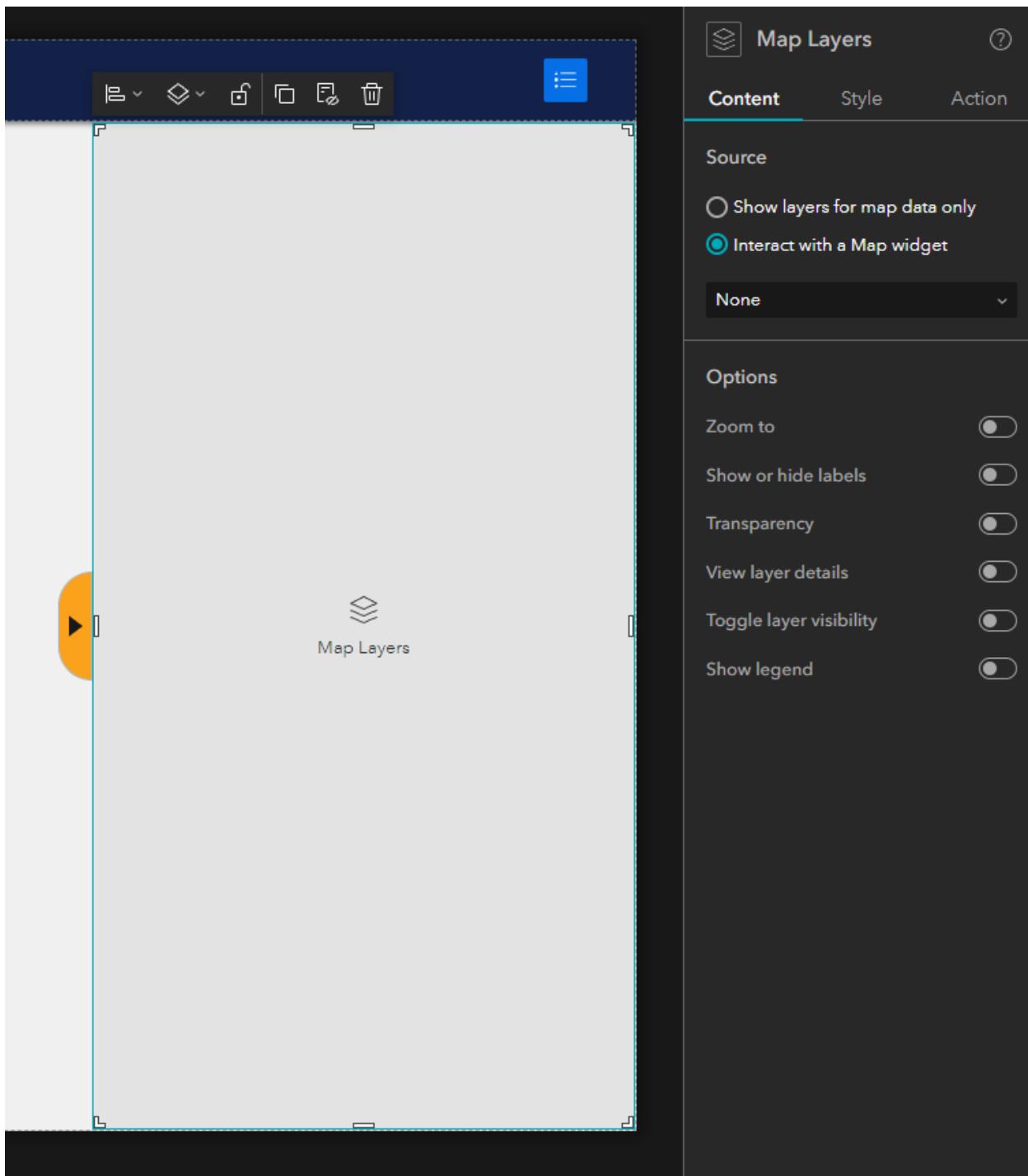
Add the Map Layers Widget

Drag the Map Layers widget over the Right Sidebar.



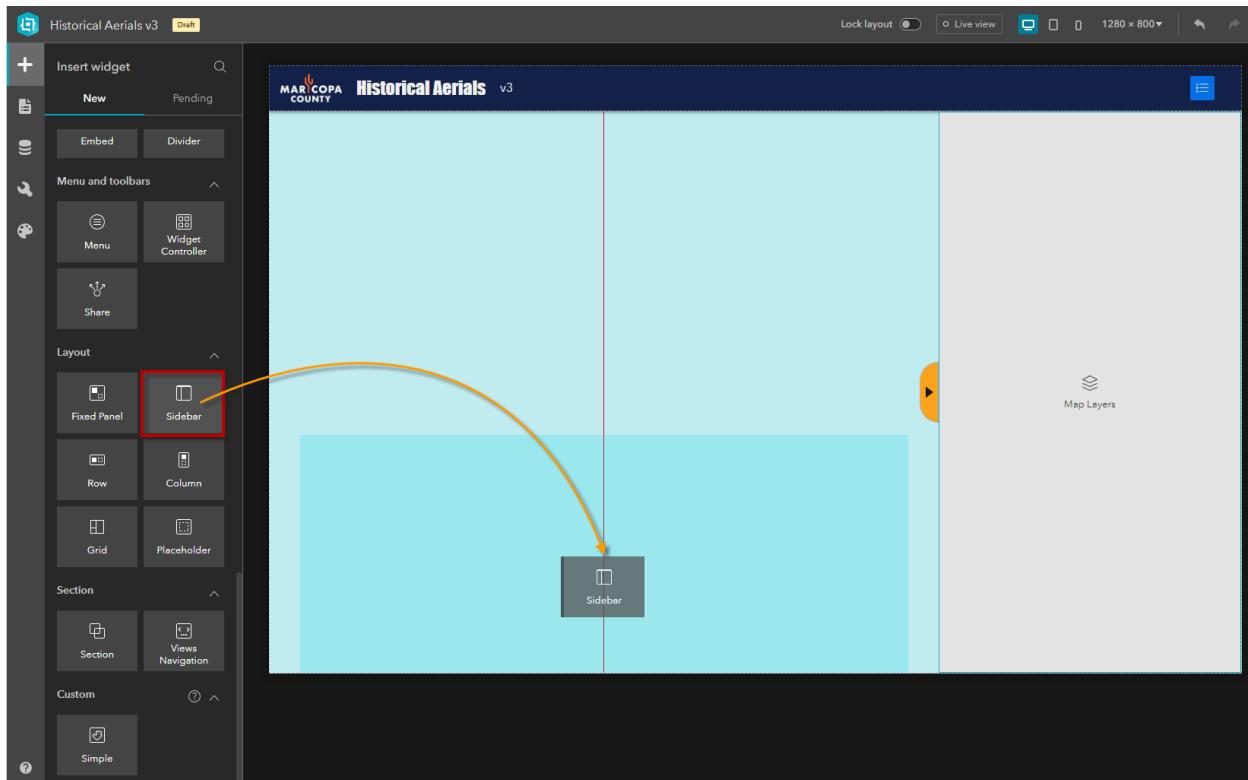
Align = Full Size



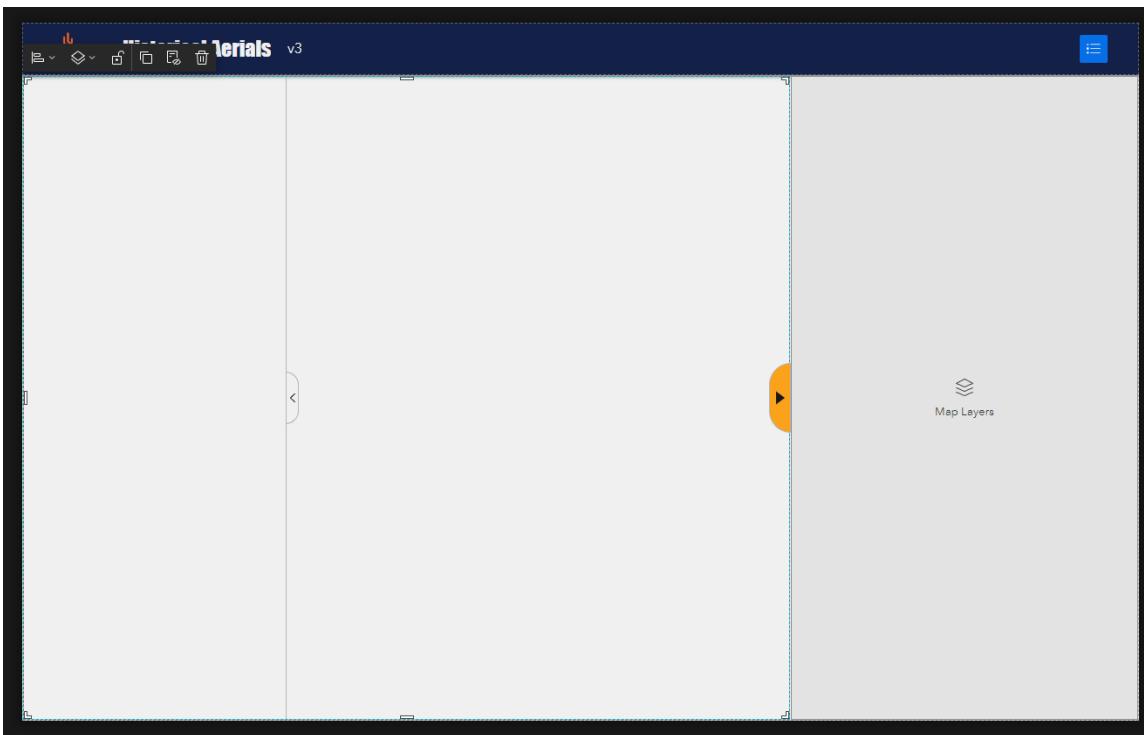
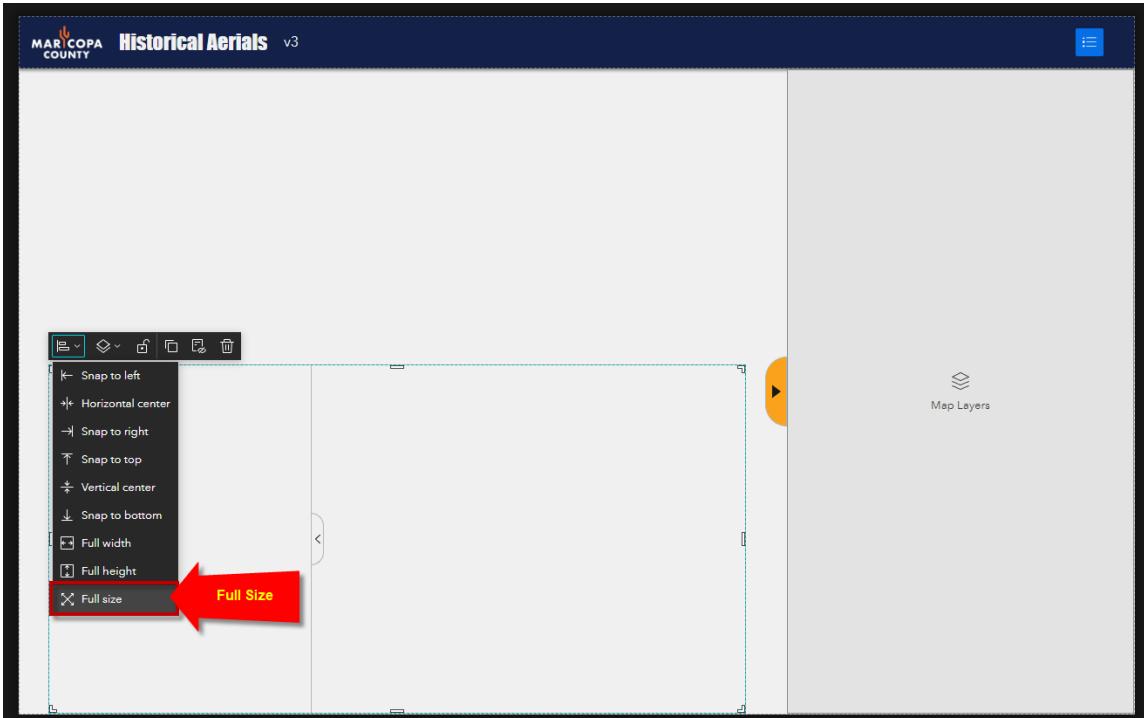


Add the Bottom Sidebar widget

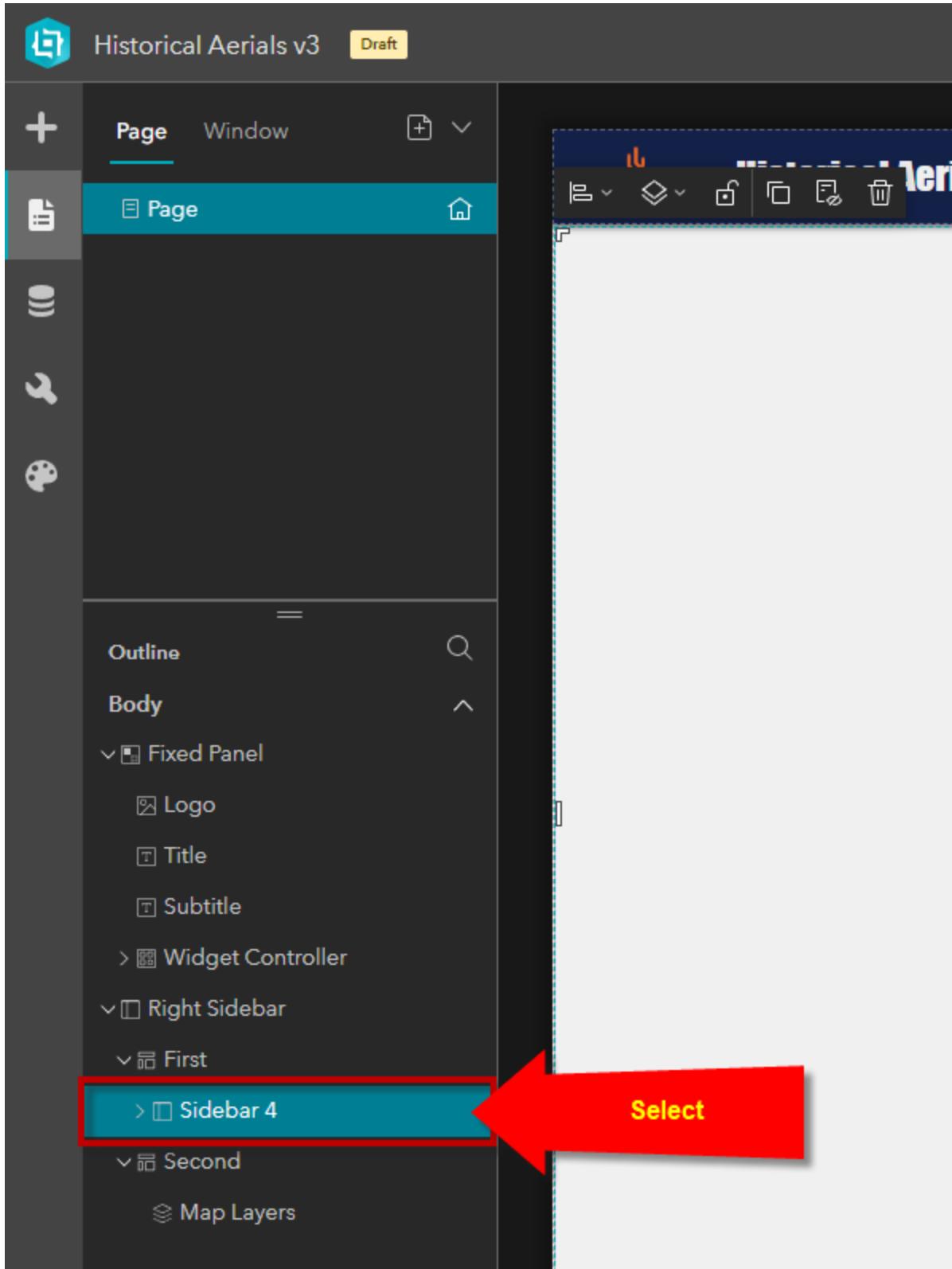
Drag the Sidebar widget on bottom left of the page as shown.



Align = Full Size



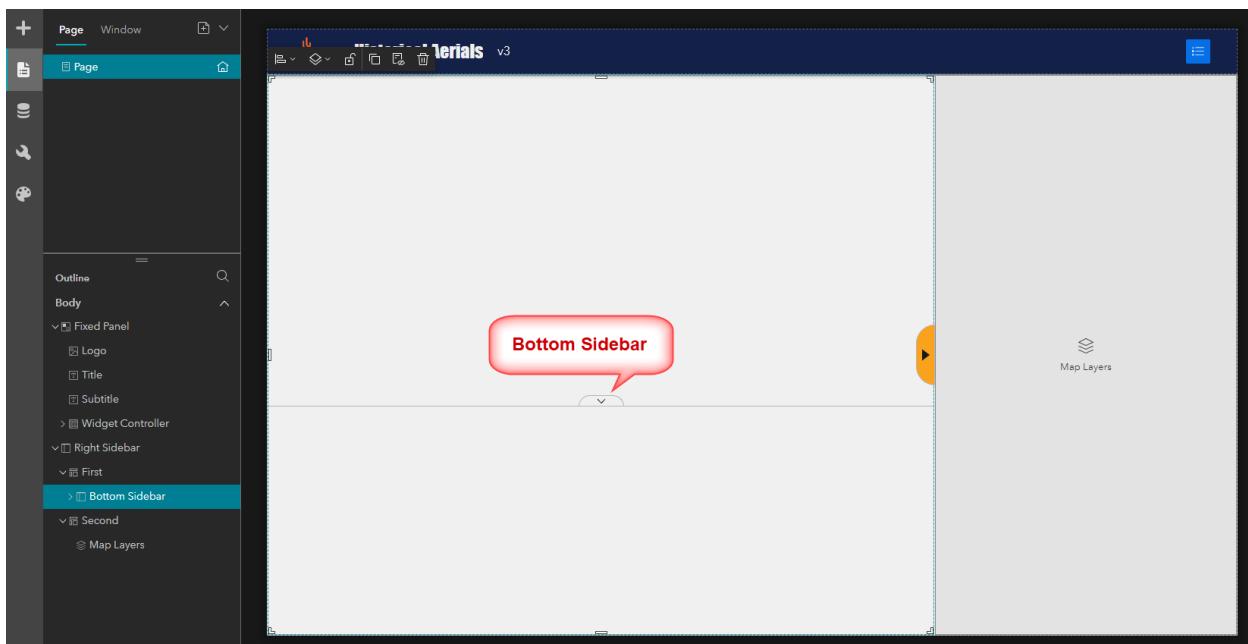
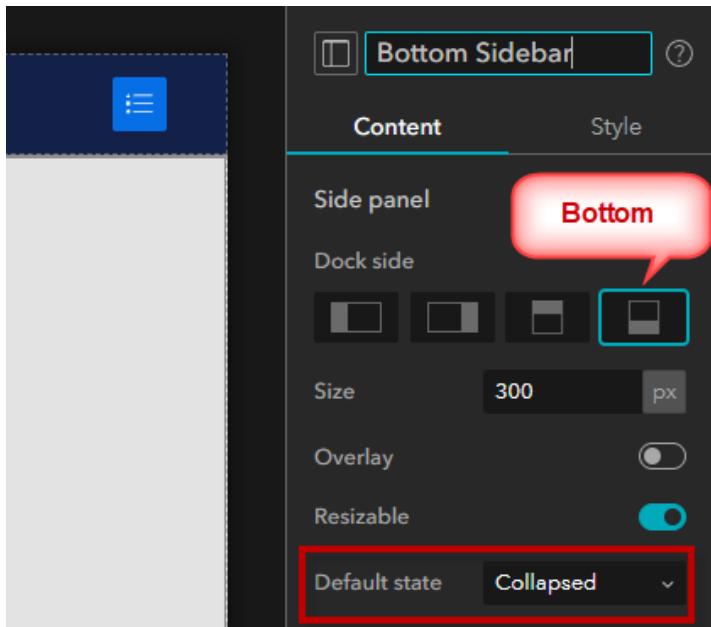
Select the Sidebar 4 widget from the Page Outline.



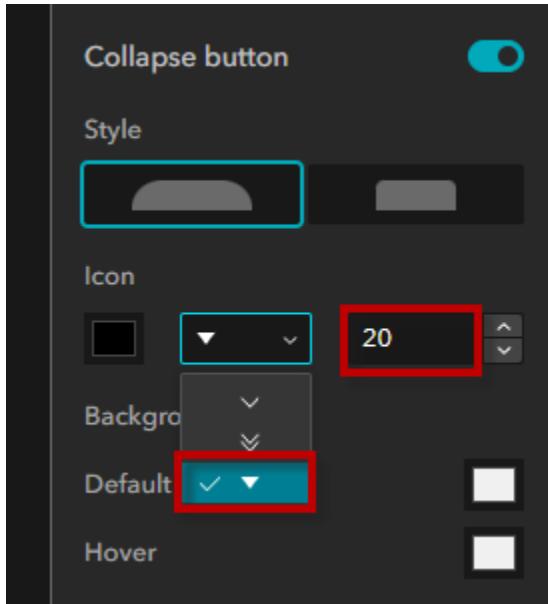
Rename the Sidebar 4 widget to **Bottom Sidebar**

Dock side = **Bottom**

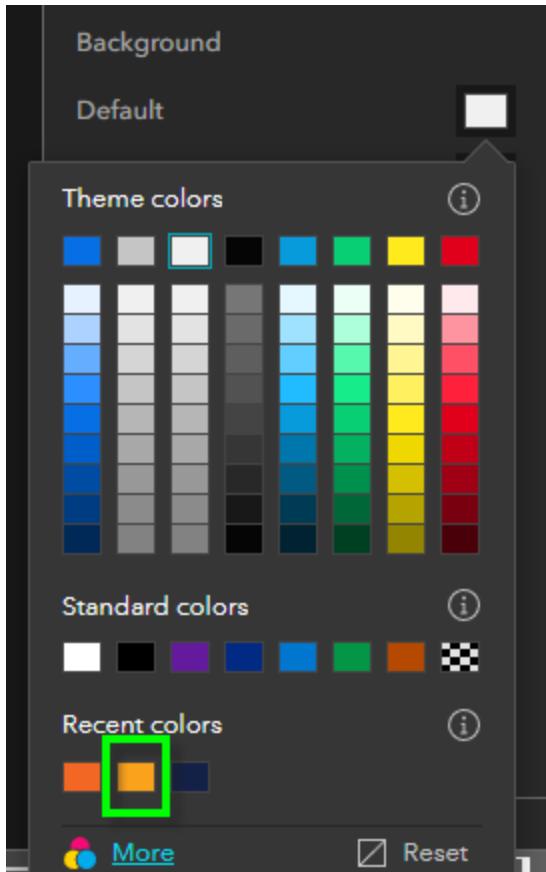
Default state = **Collapsed**



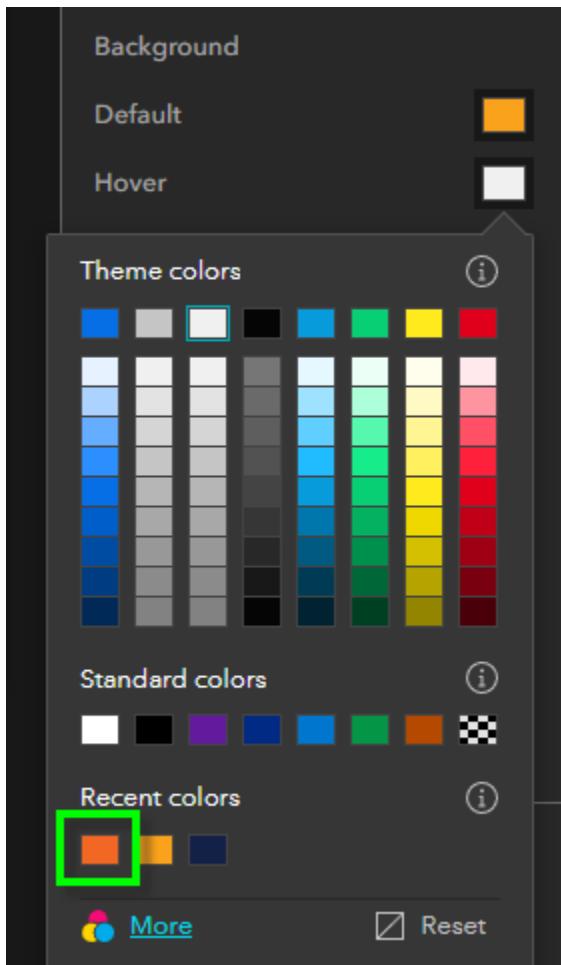
Change the Button Icon and size.



Change the Default Color = #FAA21B



Change the Hover Color = #F26724



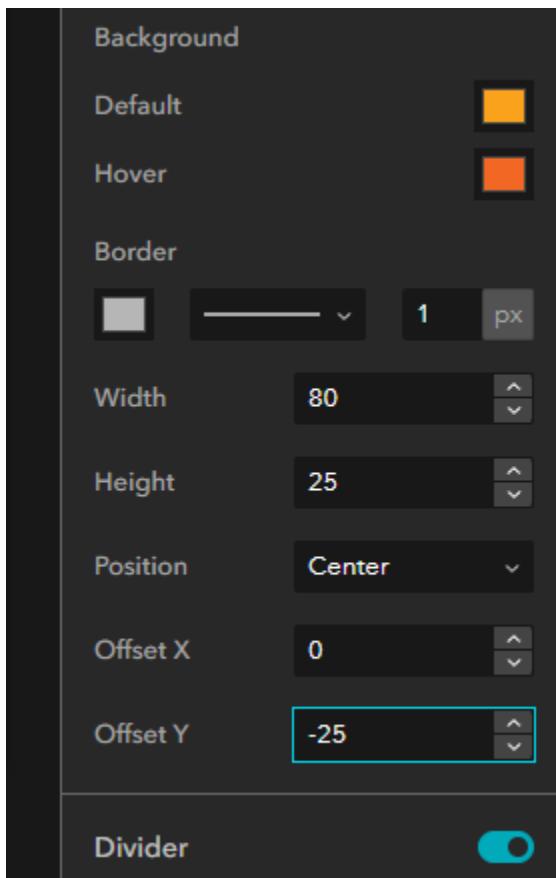
Change the Width and Height of the Collapse button.

Width = **80**

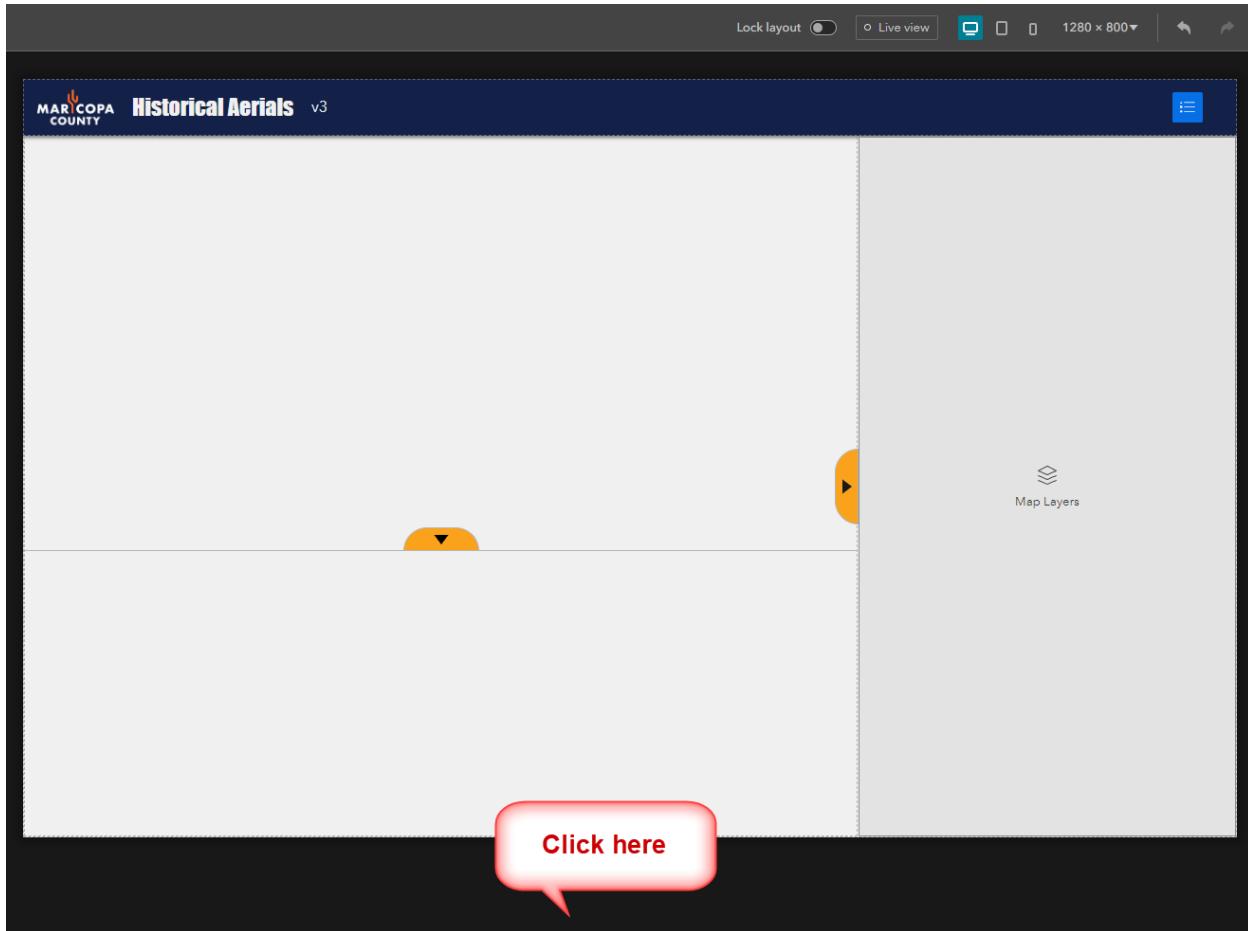
Height = **25**

Offset Y = **-25**

The negative Offset Y must match the height.



Click anywhere outside the Page.

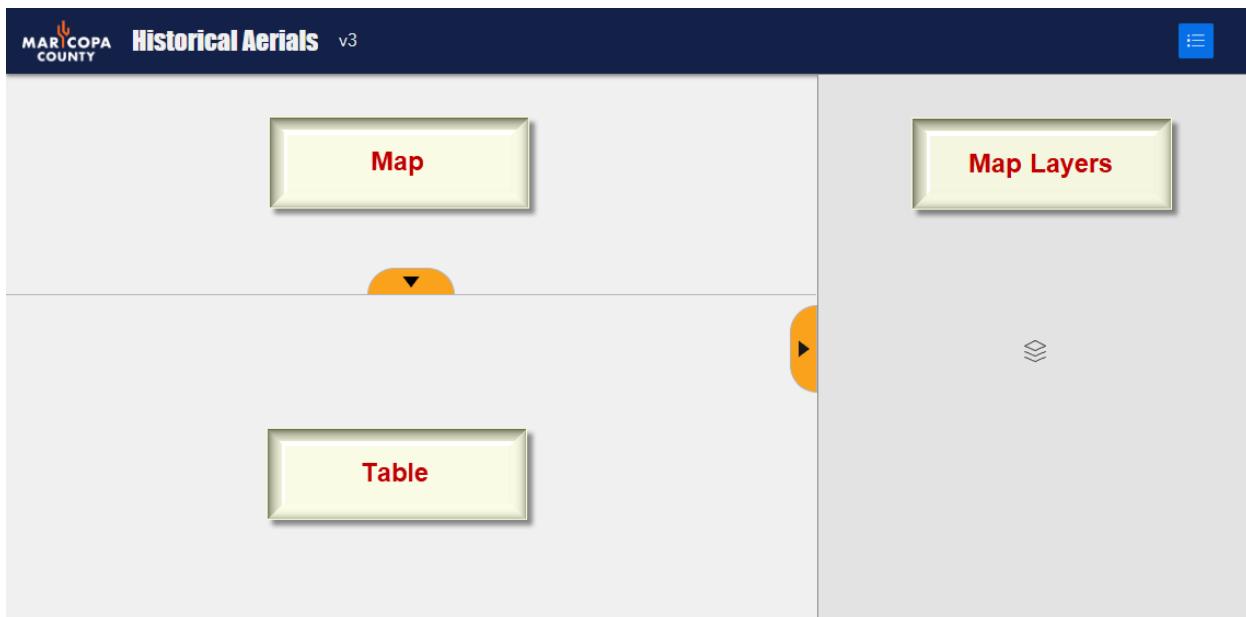
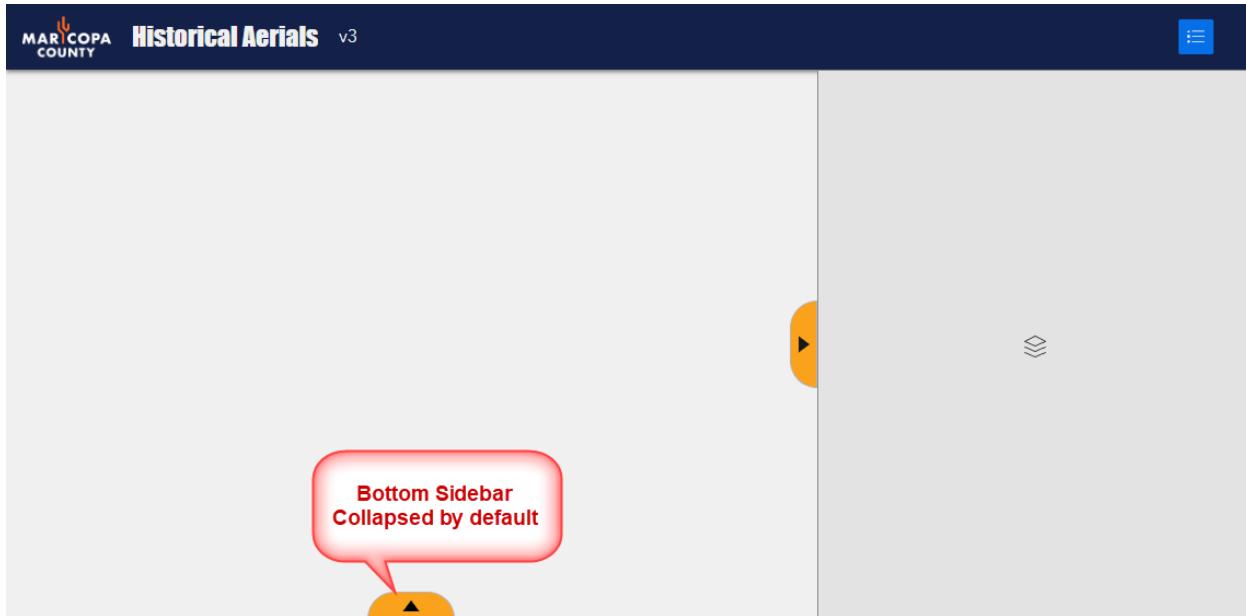


Save

Publish

View Published Item

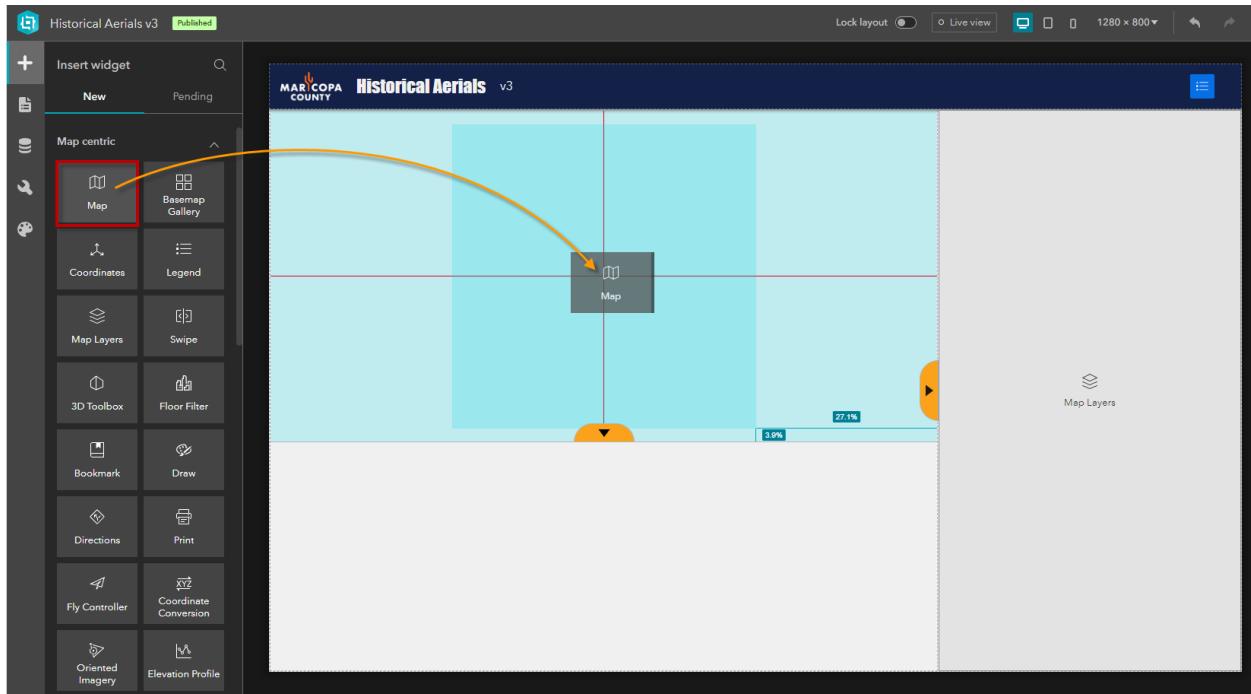
<https://localhost:3001/experience/2/>



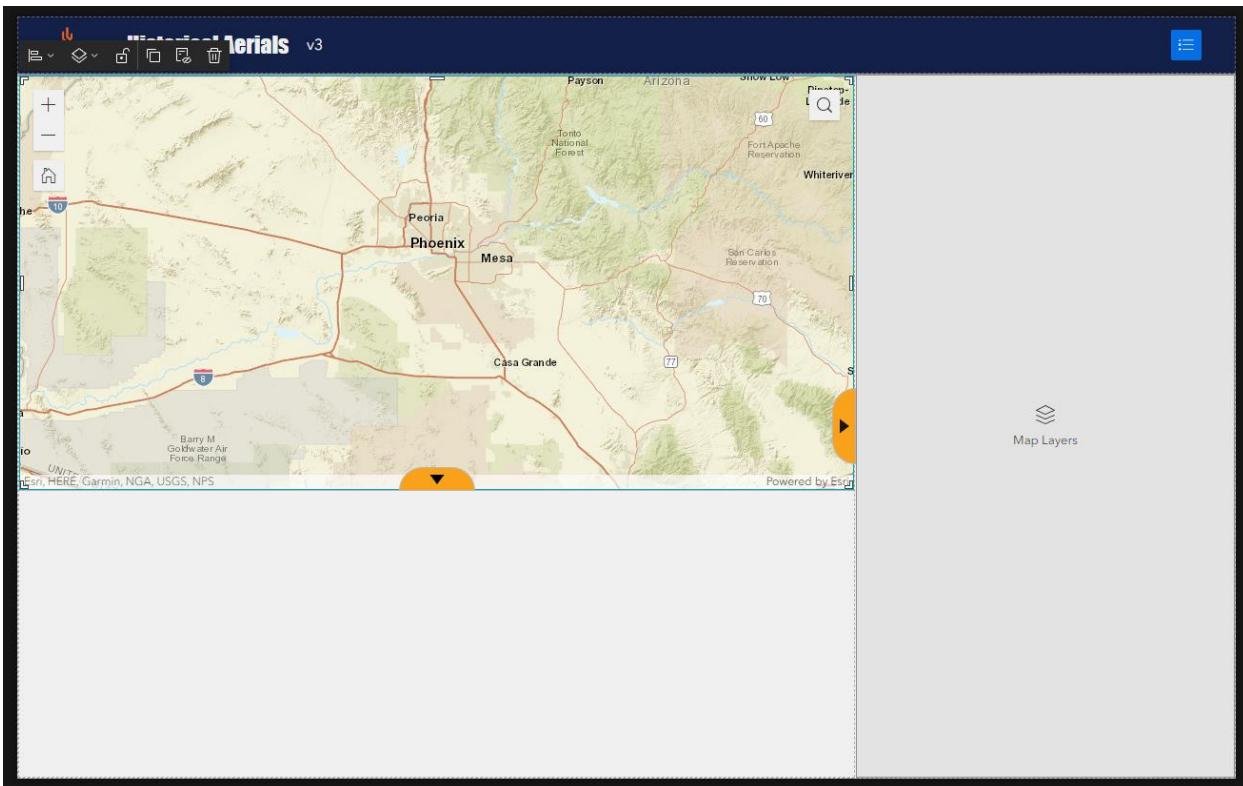
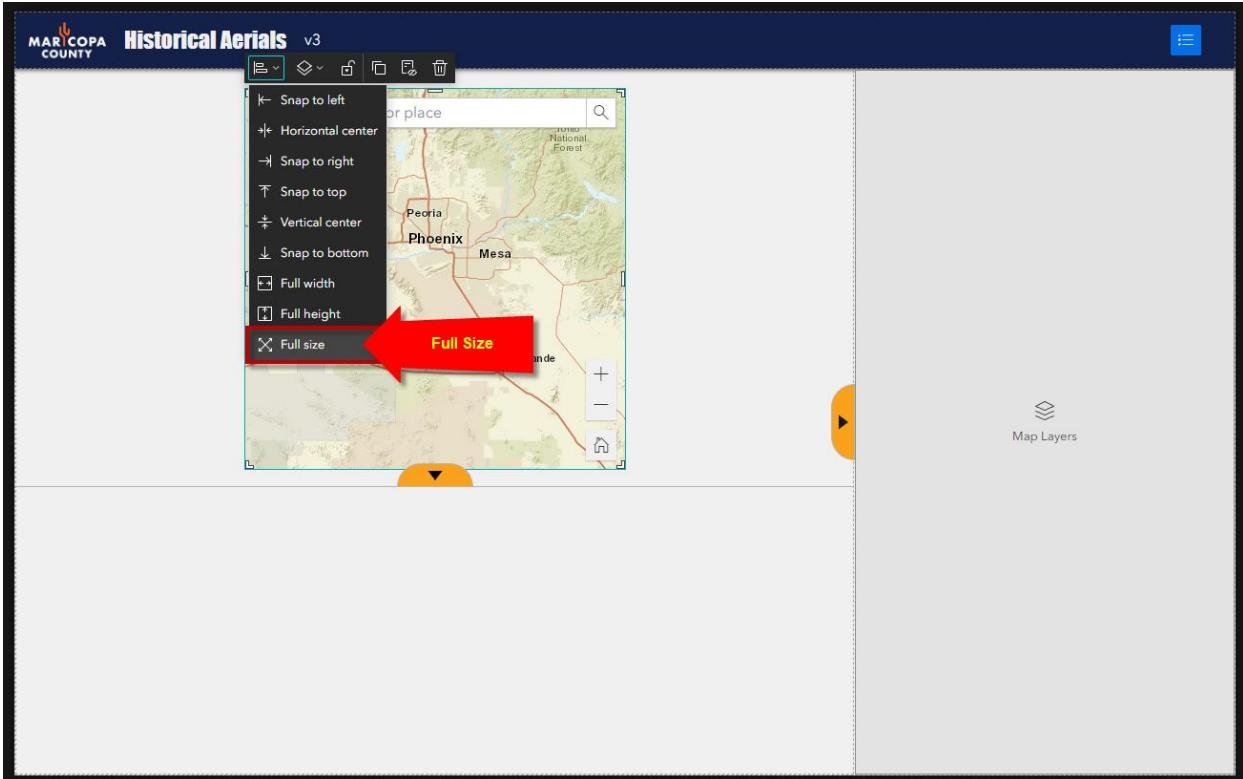
Add the Map Widget

Open the Insert Tab.

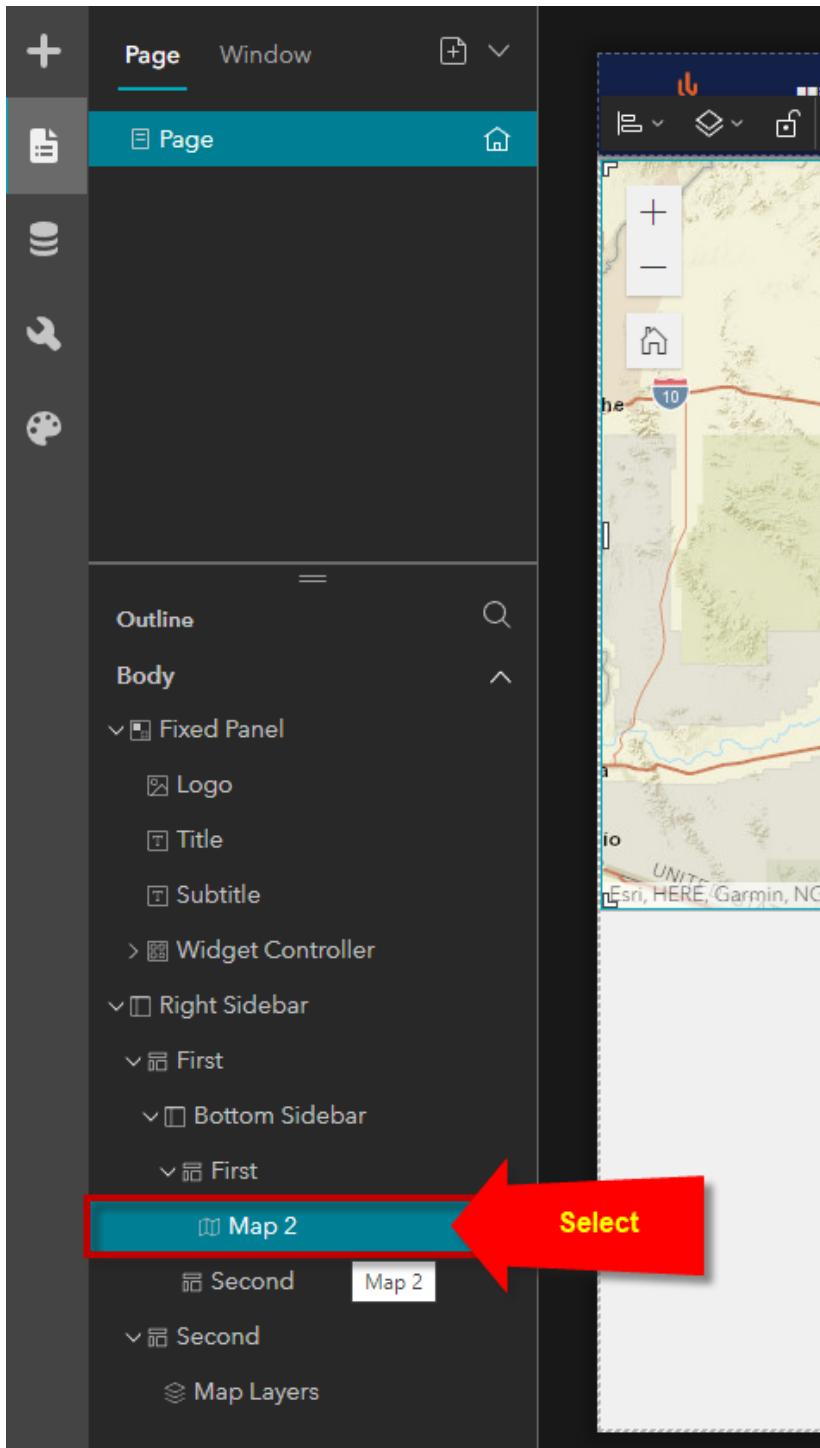
Drag the Map widget on the top left of the page as shown.



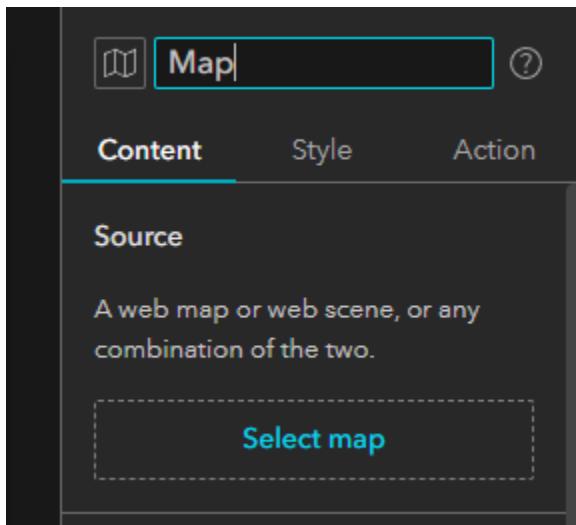
Align = Full Size



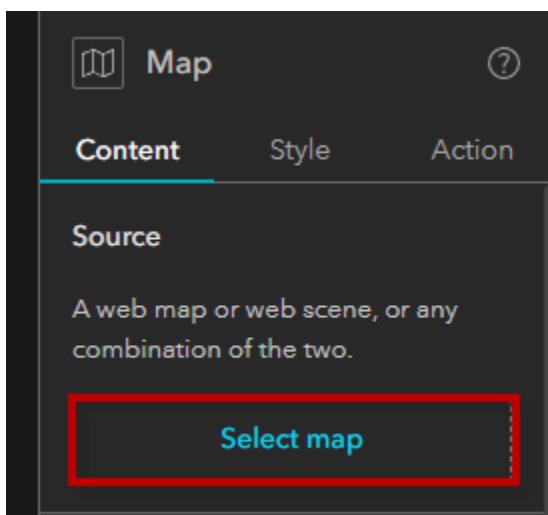
Select Map 2 from the Page Outline.



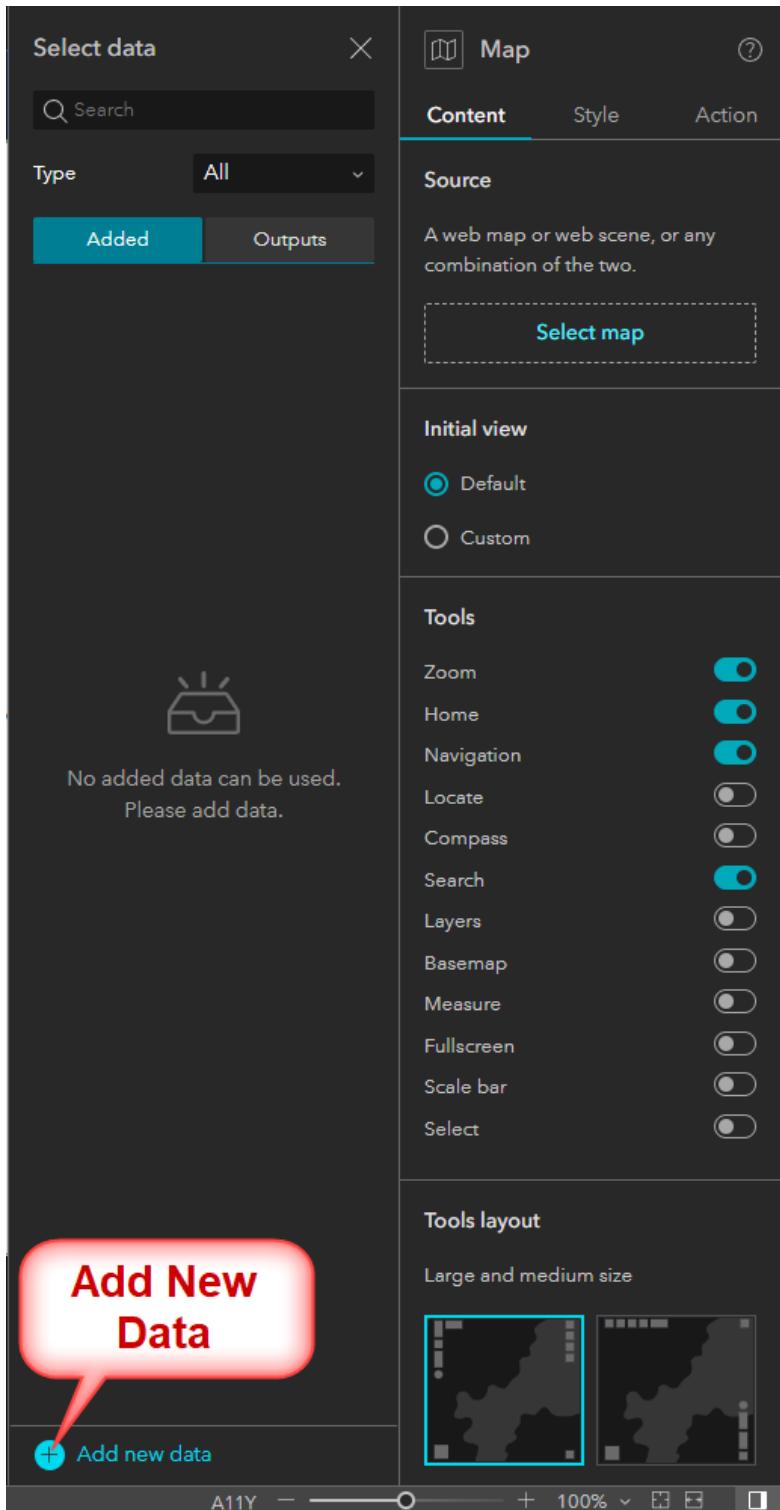
Rename the Map 2 widget = Map



Select Map



At the very bottom, select Add New Data

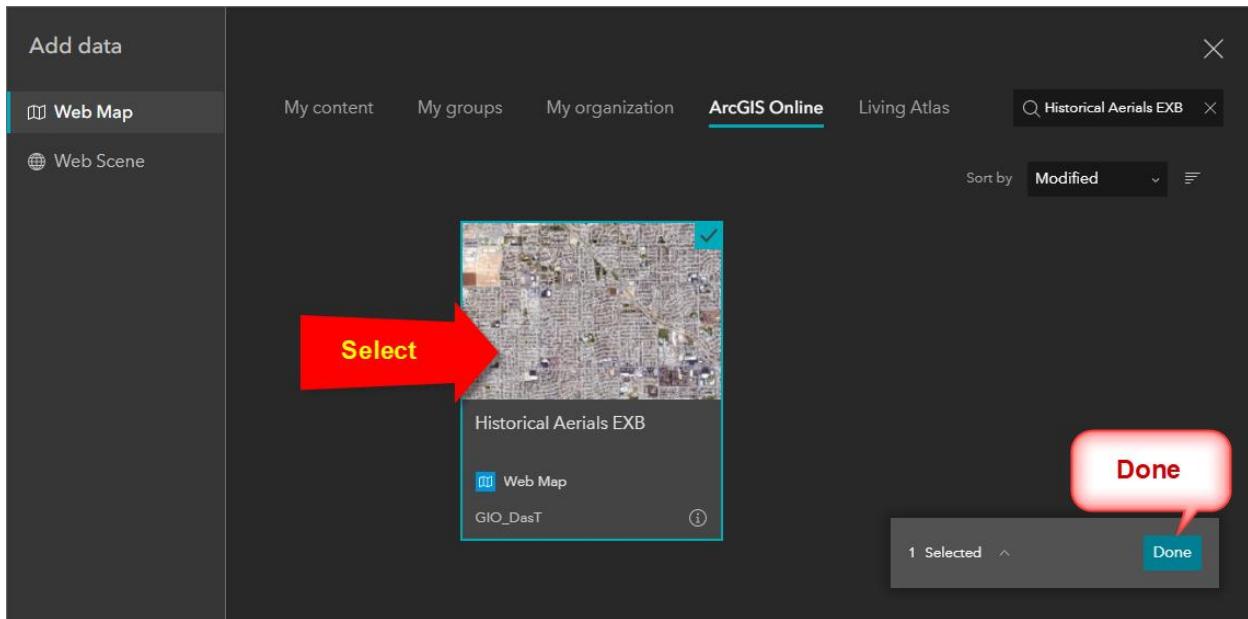


Open the ArcGIS Online Tab.

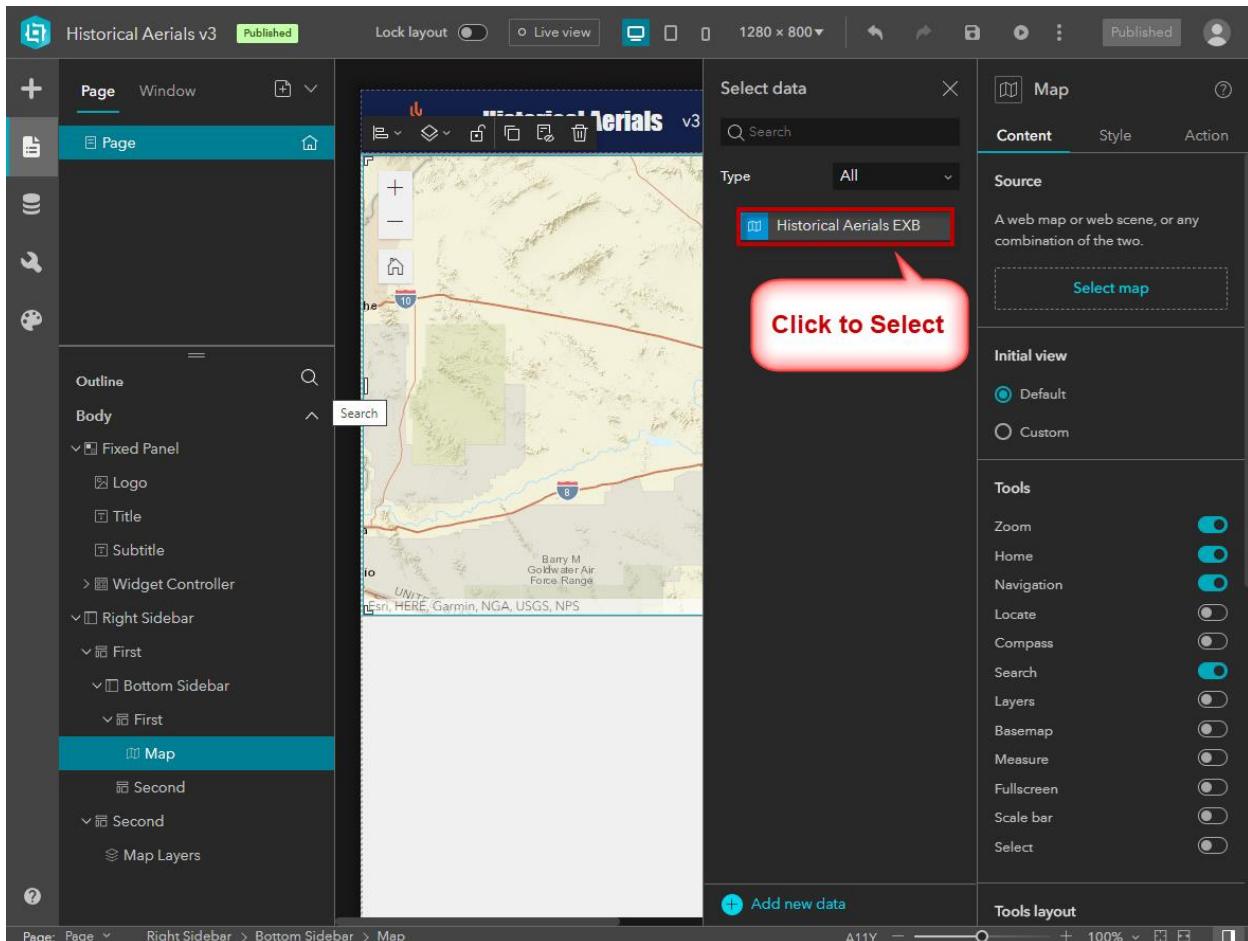
Enter **Historical Aerials EXB** in the Search Box.

Select this Web Map.

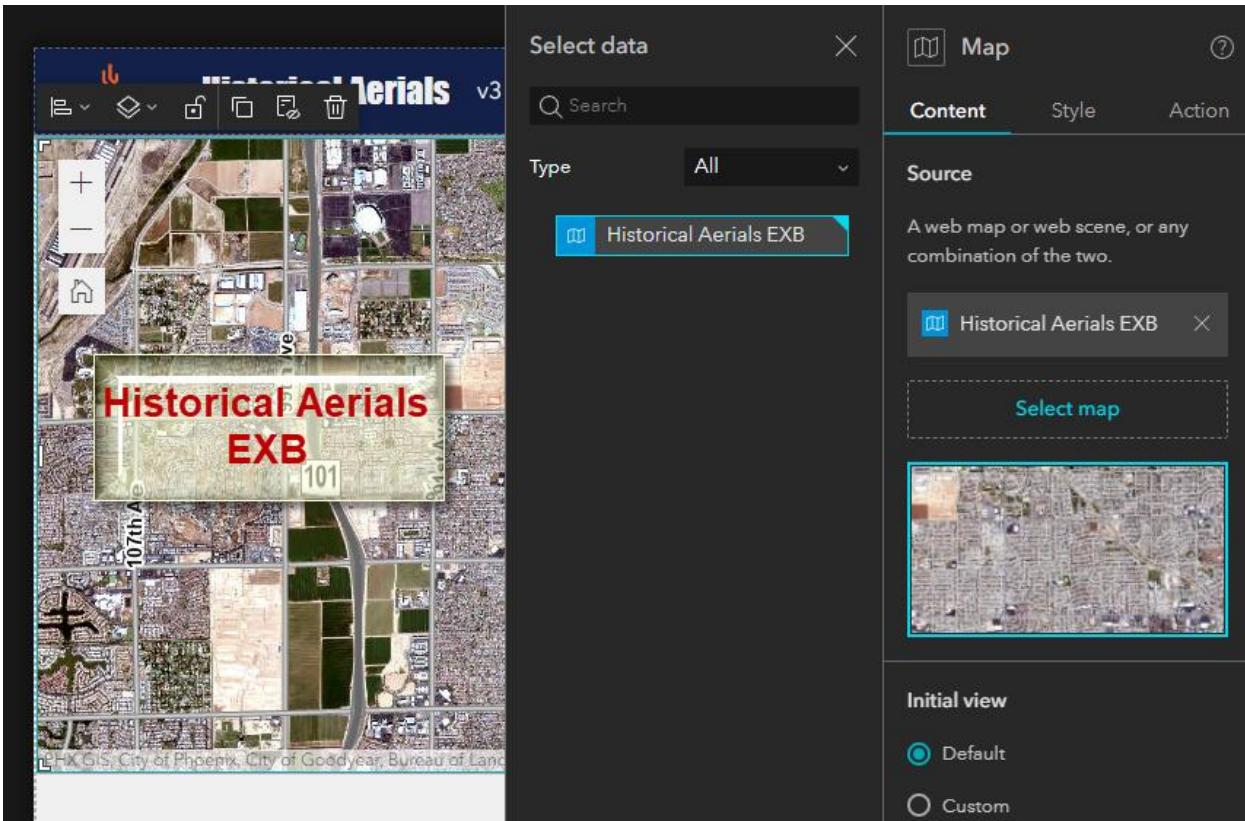
Press **Done**.



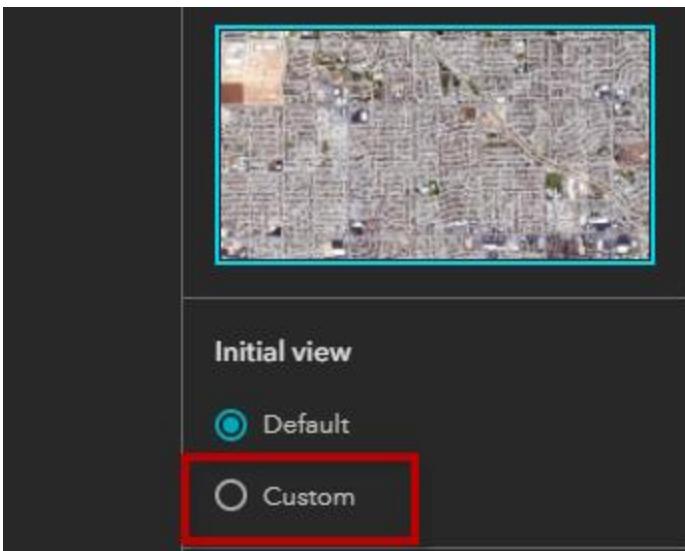
Click on **Historical Aerials EXB** to select this Web Map.



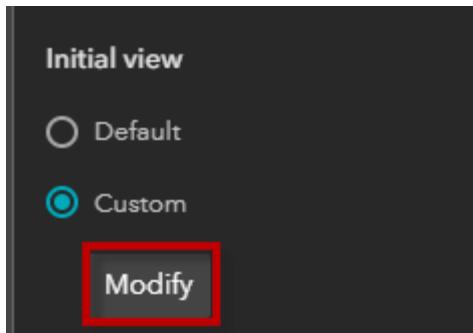
This is how the **Historical Aerials EXB** Web Map will appear.



Set a custom Initial View.



Modify



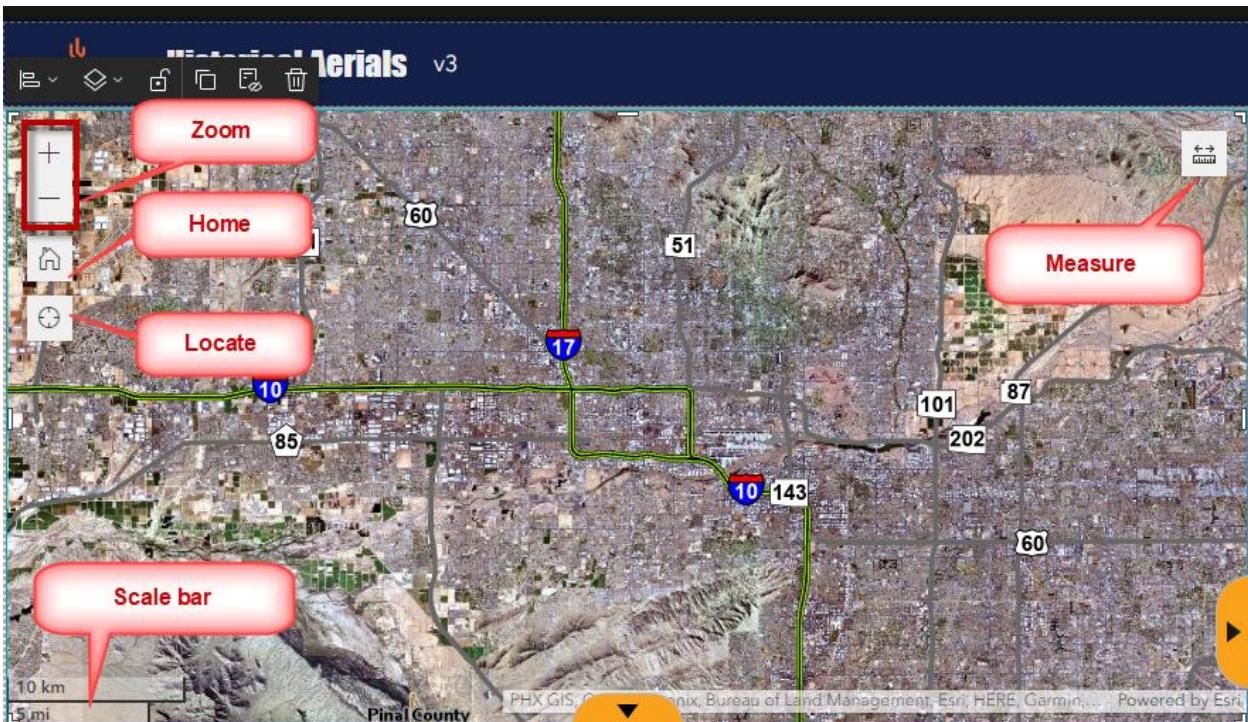
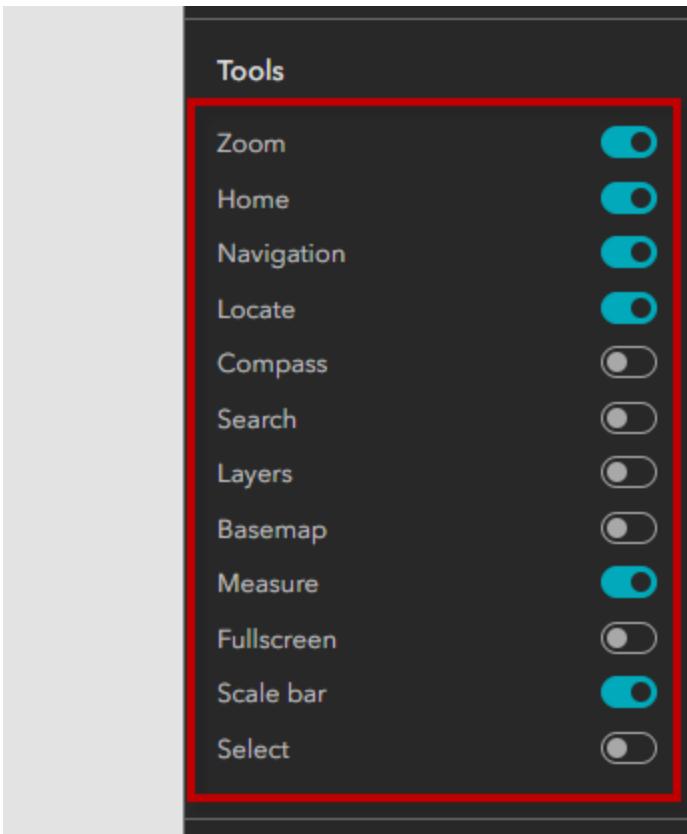
Modify Initial View.

Pan and zoom to set your initial extents.

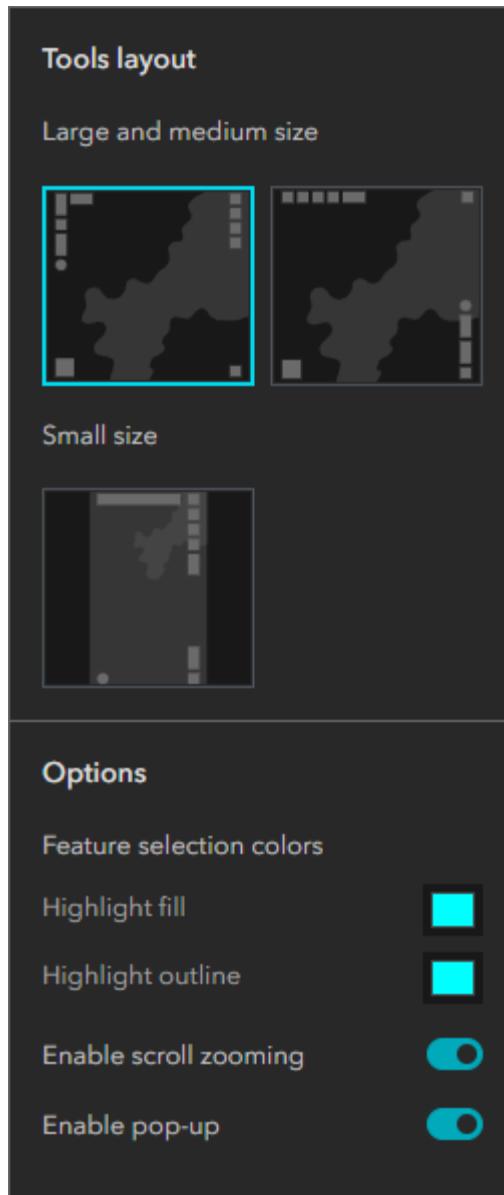


OK

Turn on these Map Tools.



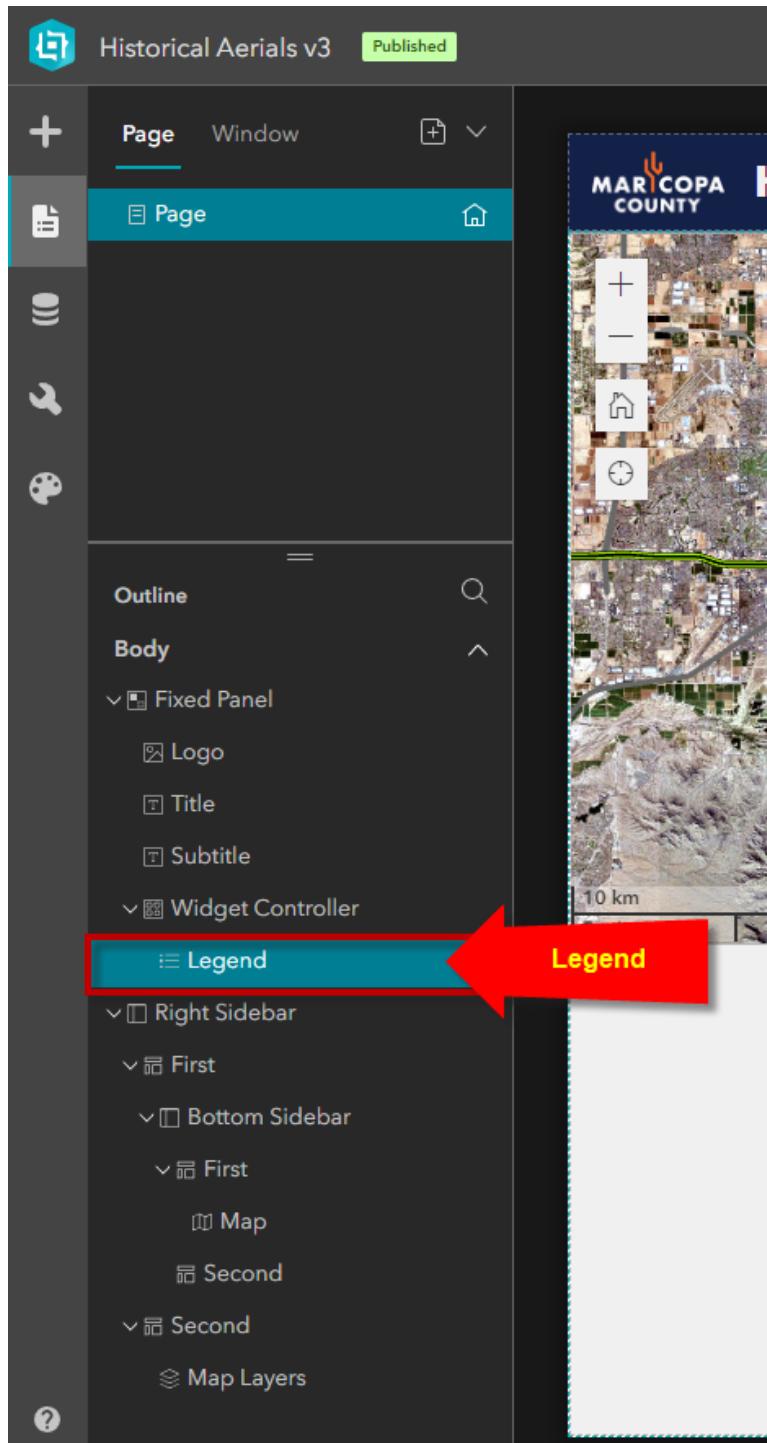
Tools Layout and Options.



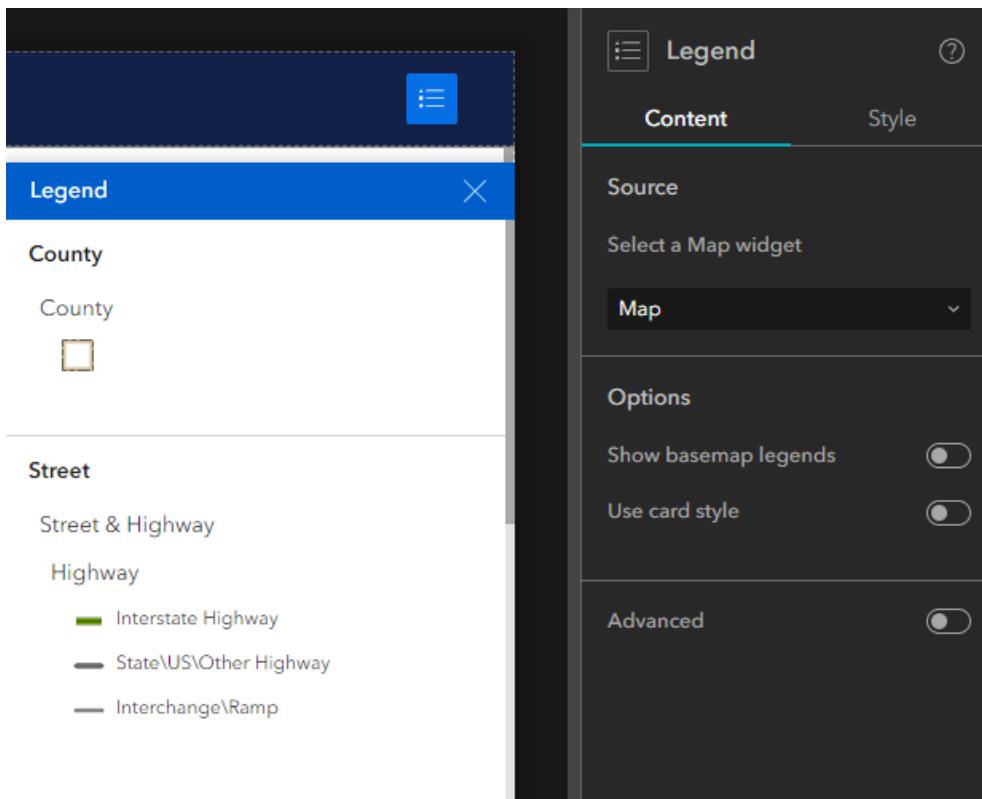
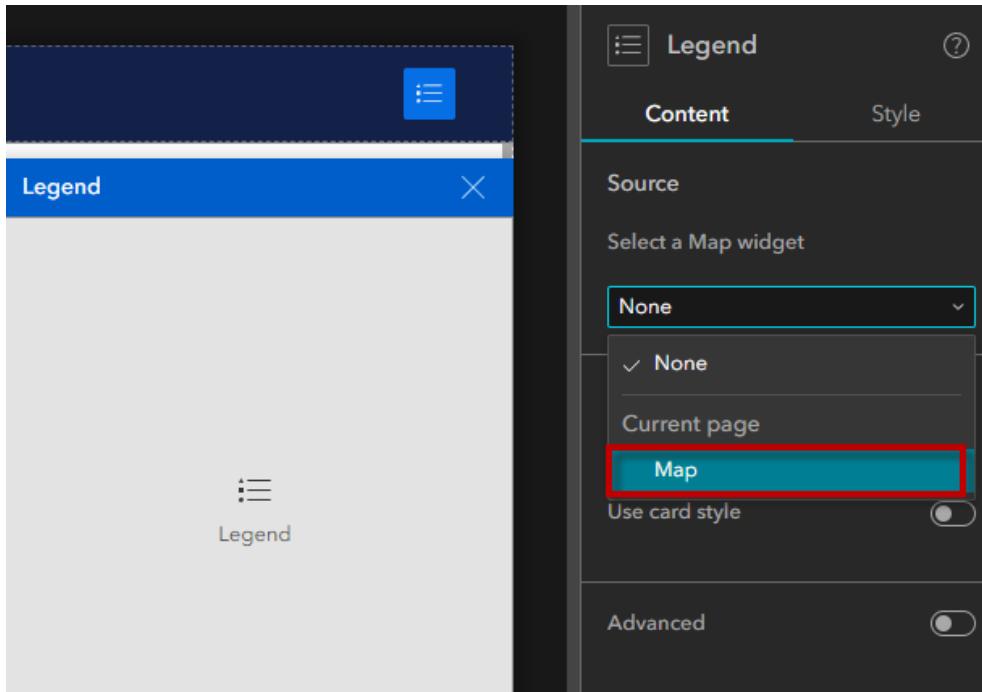
Keep the defaults.

Configure the Legend Widget

Expand the Widget Controller in the Page Outline and select **Legend**.

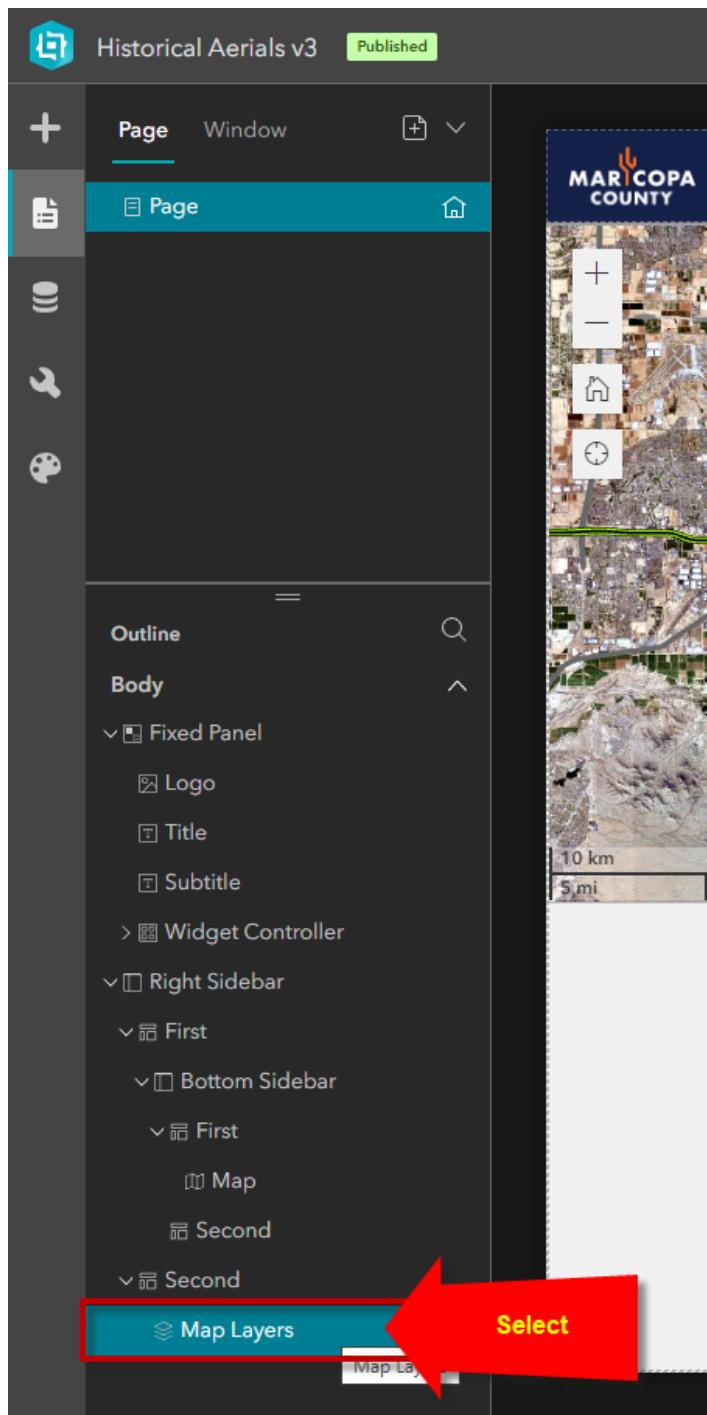


Select Source = Map

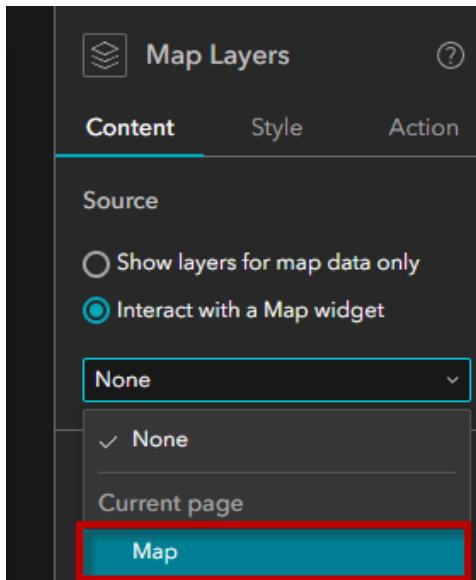


Configure the Map Layers Widget

Select the Map Layers widget from the Page Outline.



Select Source = Map



Map Layers

Content Style Action

Source

Show layers for map data only

Interact with a Map widget

Map

Customize layers

Historical Aerials EXB

Options

Zoom to

Show or hide labels

Transparency

View layer details

Toggle layer visibility

Show legend

County

Terrain (NAVD88)

Parcel (Current)

Zip Code

City

Township Range Section

Street

2022 Sep - 2022 Oct

2021 Sep - 2021 Nov

2020 Oct - 2020 Nov

2019 Sep - 2019 Dec

2018 Sep - 2018 Dec

2017 Sep - 2017 Nov

2016 Sep - 2016 Dec

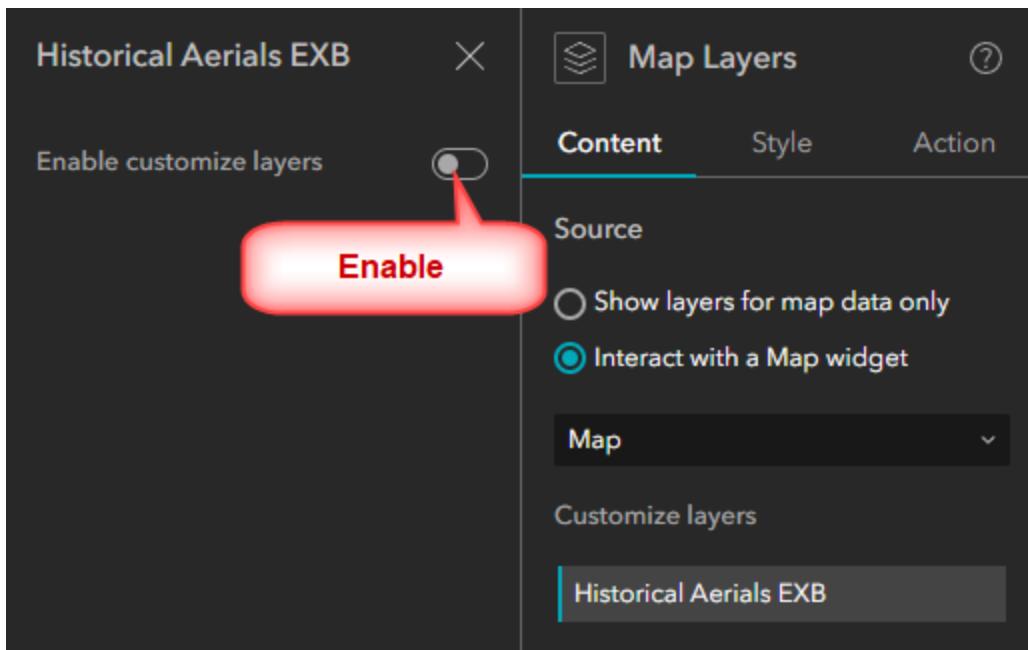
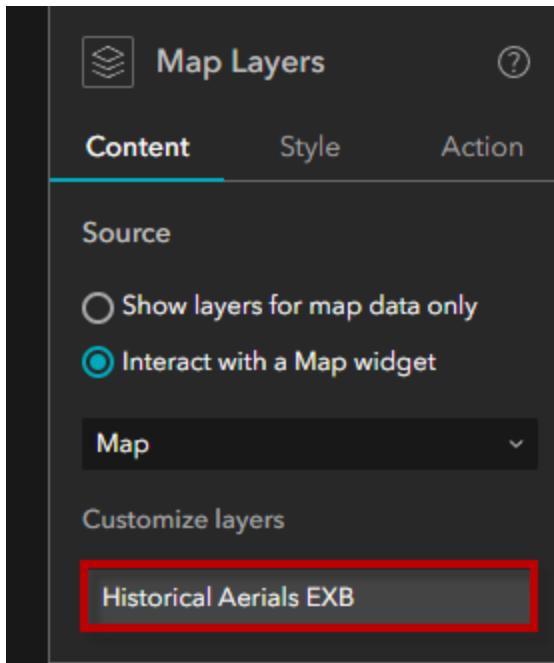
Enable these Options.

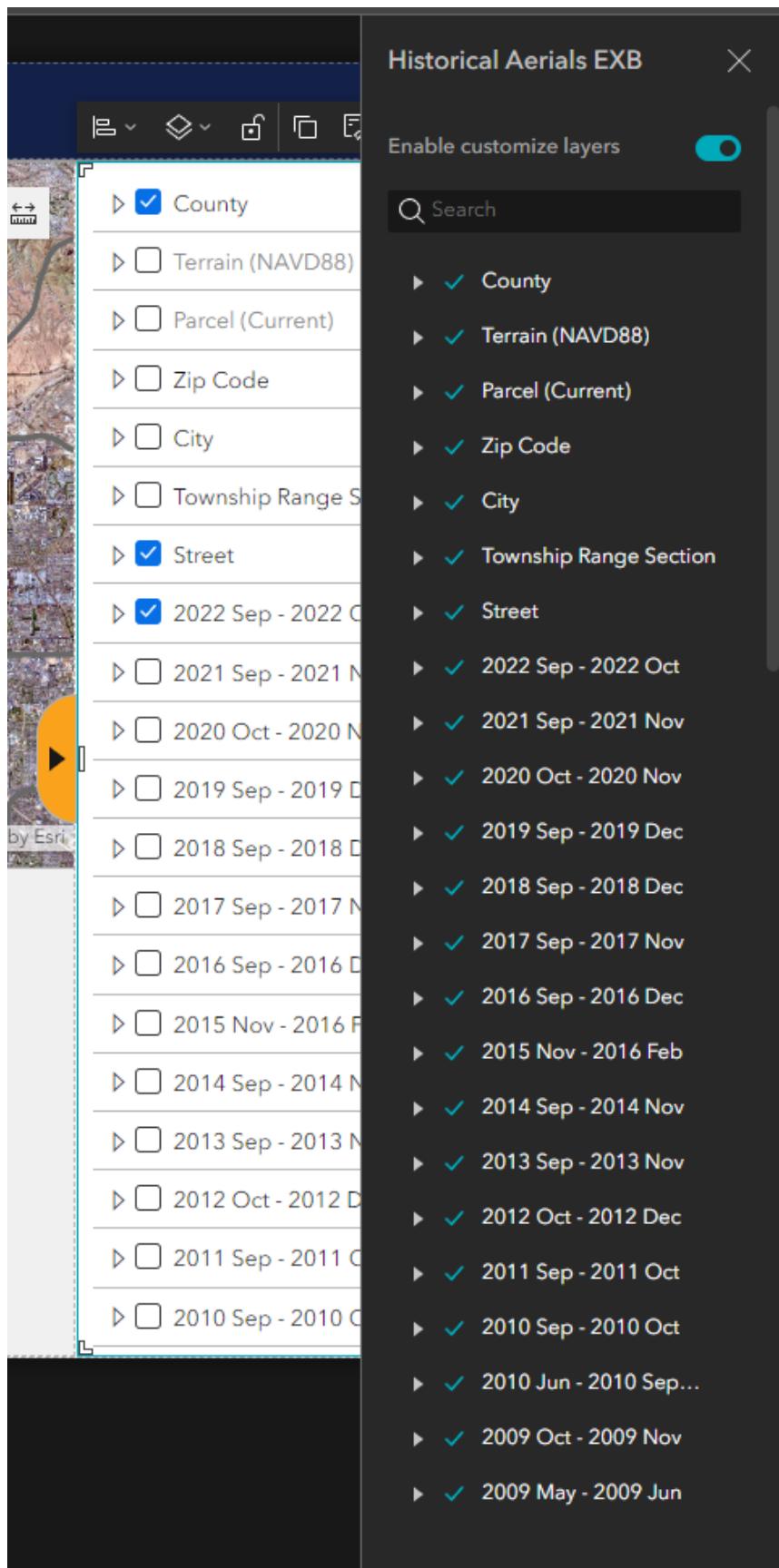
The screenshot shows the ArcGIS interface with the following components:

- Map Layers Panel:** On the left, it lists historical aerial layers from 2010 to 2022. Layers for "County", "Street", and "2022 Sep - 2022 Oct" are checked. Other layers like "Terrain (NAVD88)" and "Parcel (Current)" are unchecked.
- Map Layers Panel (Content Tab):** Shows the "Source" section with two options:
 - Show layers for map data only
 - Interact with a Map widgetIt also includes a "Map" dropdown set to "Historical Aerials EXB".
- Options Panel:** On the right, a red box highlights the following settings:
 - Zoom to:
 - Show or hide labels:
 - Transparency:
 - View layer details:
 - Toggle layer visibility:
 - Use tick boxes
 - Show legend:
 - Show legend for all visible layers by default

It is possible to customize this Layer List.

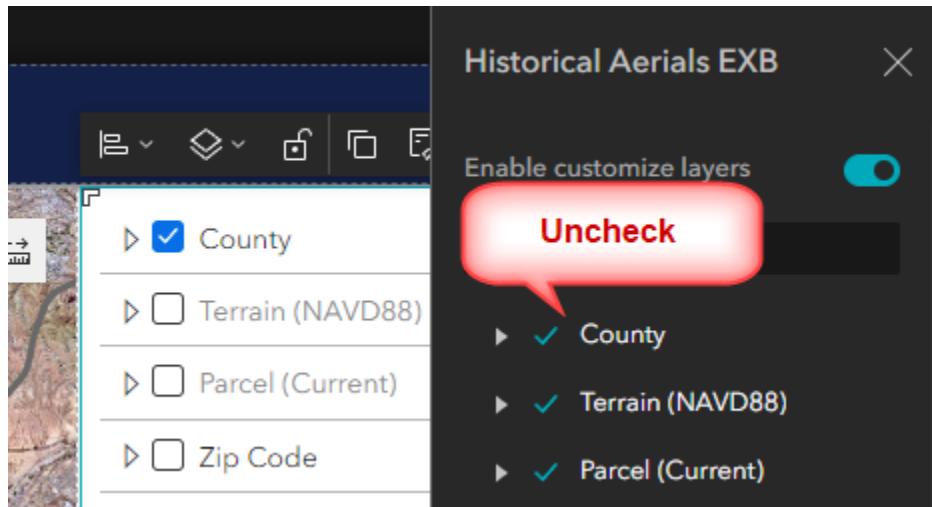
Select Historical Aerials EXB



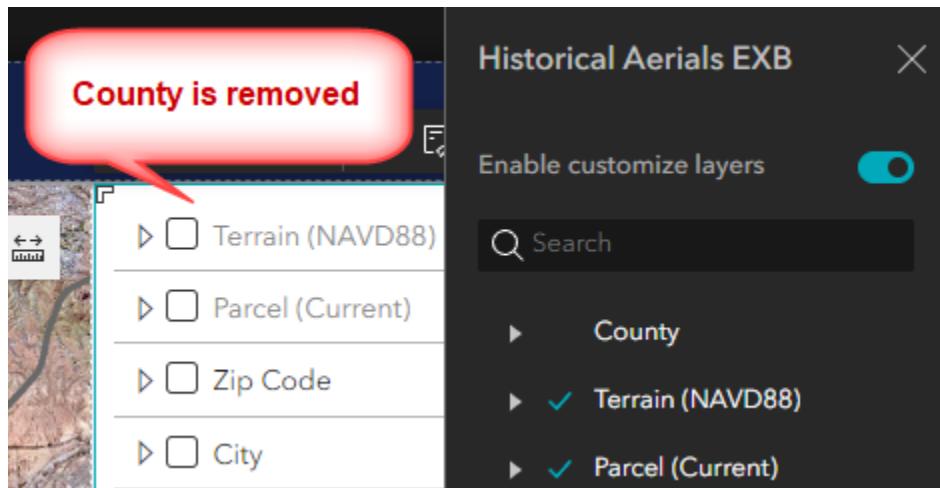


Let's say you do not want the County Layer to appear on the Layer List.

Uncheck the County Layer.

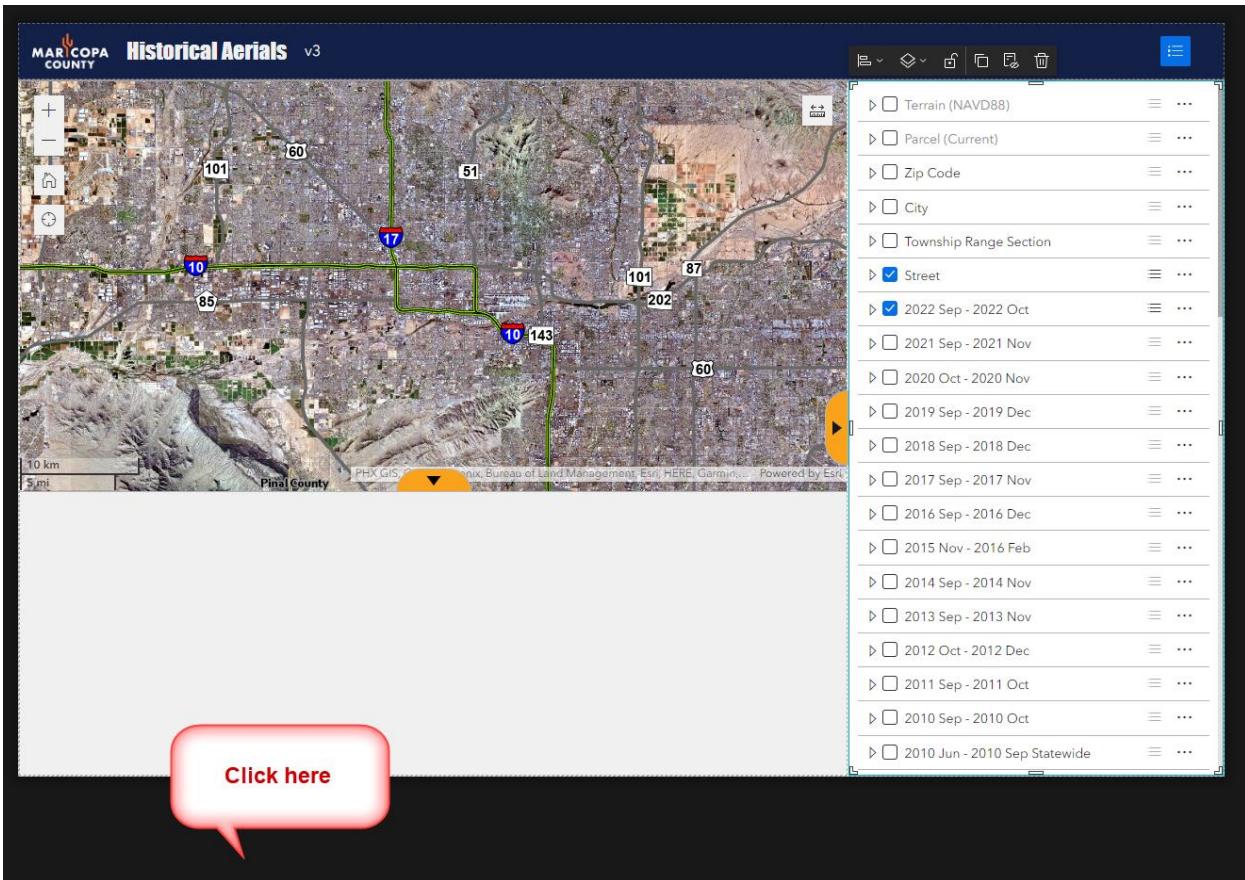


The County Layer is removed from the Layer List.



Check the County Layer to make it reappear.

Click anywhere outside the Page.

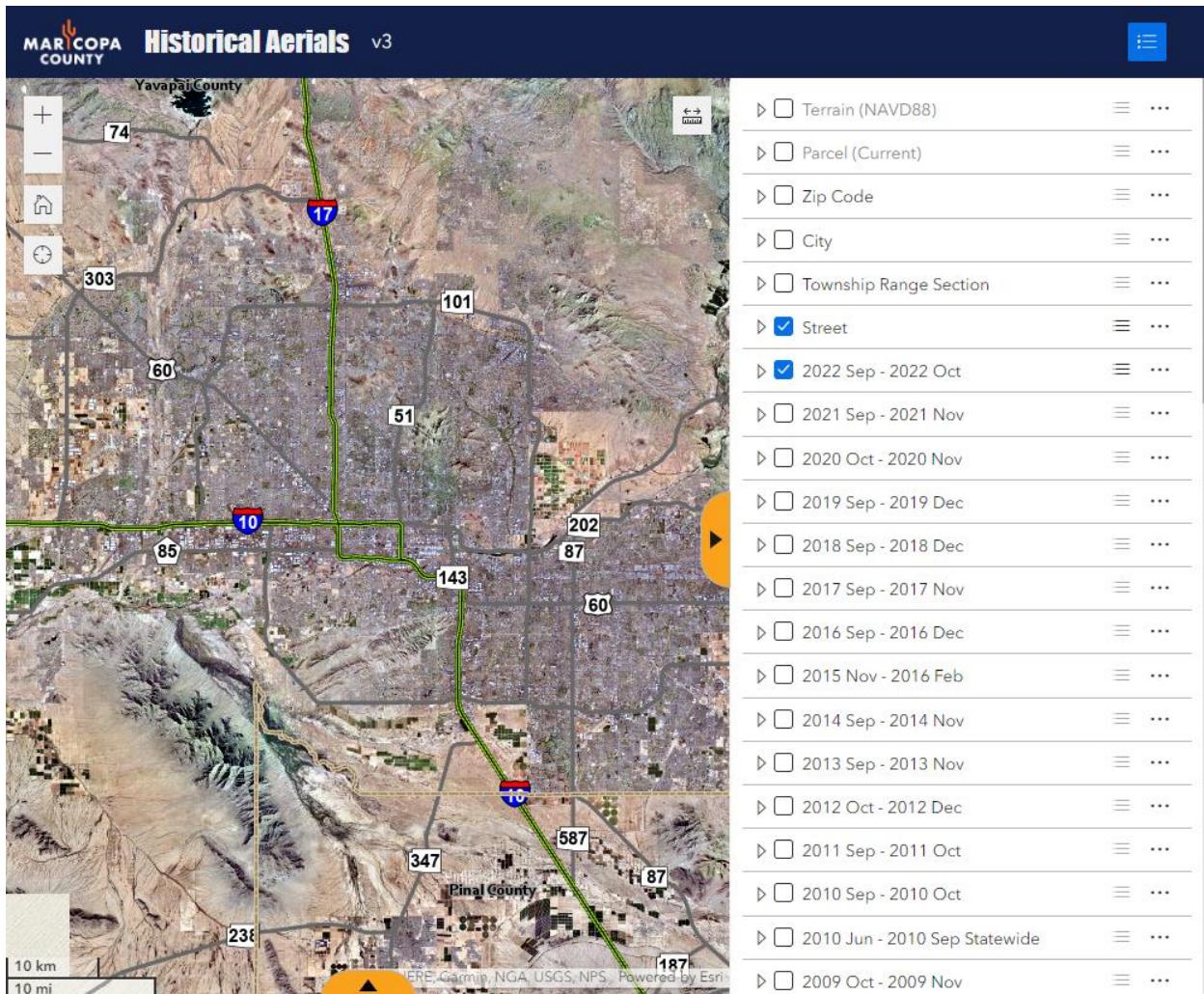


Save

Publish

Preview published item.

<https://localhost:3001/experience/2/>

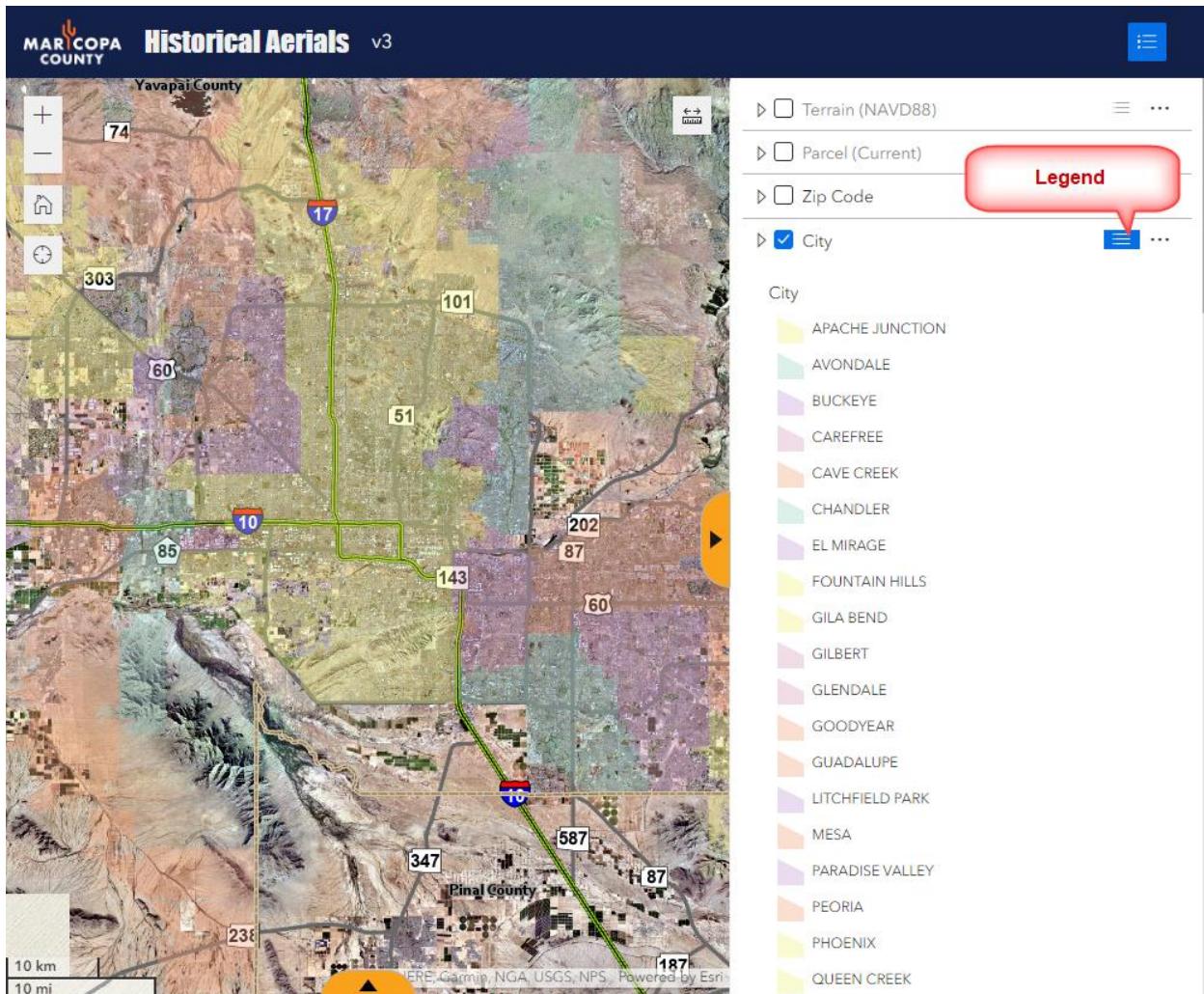


Turn on the City Layer.

The map shows a satellite view of the Phoenix metropolitan area, spanning parts of Maricopa, Yavapai, and Pinal counties. Major roads like Interstate 17, State Route 10, and State Route 85 are visible. The legend on the right lists various map layers, with the 'City' layer highlighted in green and its checkbox checked, indicating it is currently turned off. A large red arrow points to the 'City' entry in the legend.

- Terrain (NAVD88)
- Parcel (Current)
- Zip Code
- City
- Township Range Section
- Street
- 2022 Sep - 2022 Oct
- 2021 Sep - 2021 Nov
- 2020 Oct - 2020 Nov
- 2019 Sep - 2019 Dec
- 2018 Sep - 2018 Dec
- 2017 Sep - 2017 Nov
- 2016 Sep - 2016 Dec
- 2015 Nov - 2016 Feb
- 2014 Sep - 2014 Nov
- 2013 Sep - 2013 Nov
- 2012 Oct - 2012 Dec
- 2011 Sep - 2011 Oct
- 2010 Sep - 2010 Oct
- 2010 Jun - 2010 Sep Statewide
- 2009 Oct - 2009 Nov

Expand the **Legend Icon** next to the City Layer.



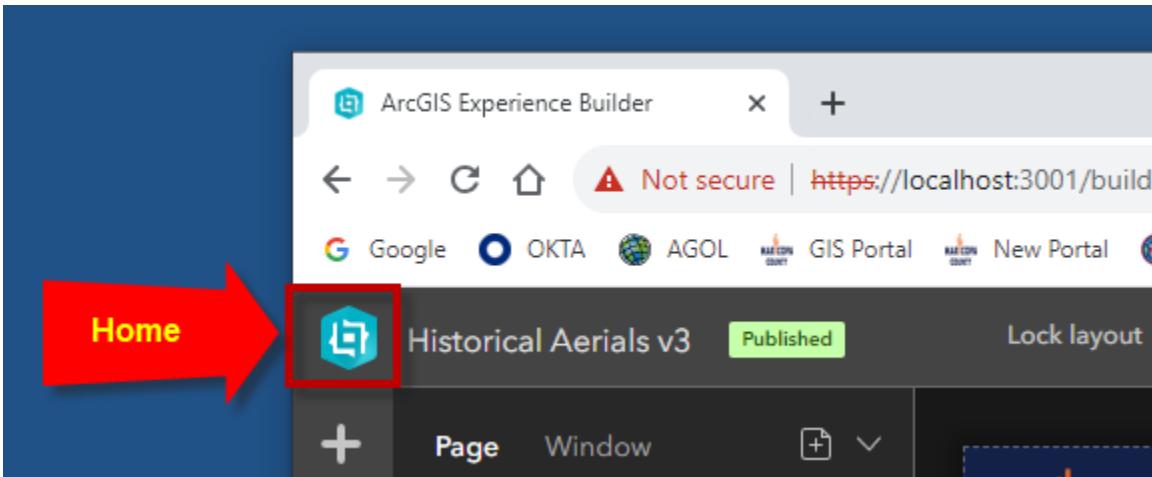
Congratulations for making it this far!!

It is all downhill from here. All you need to do is add a few more widgets to complete your Web App.

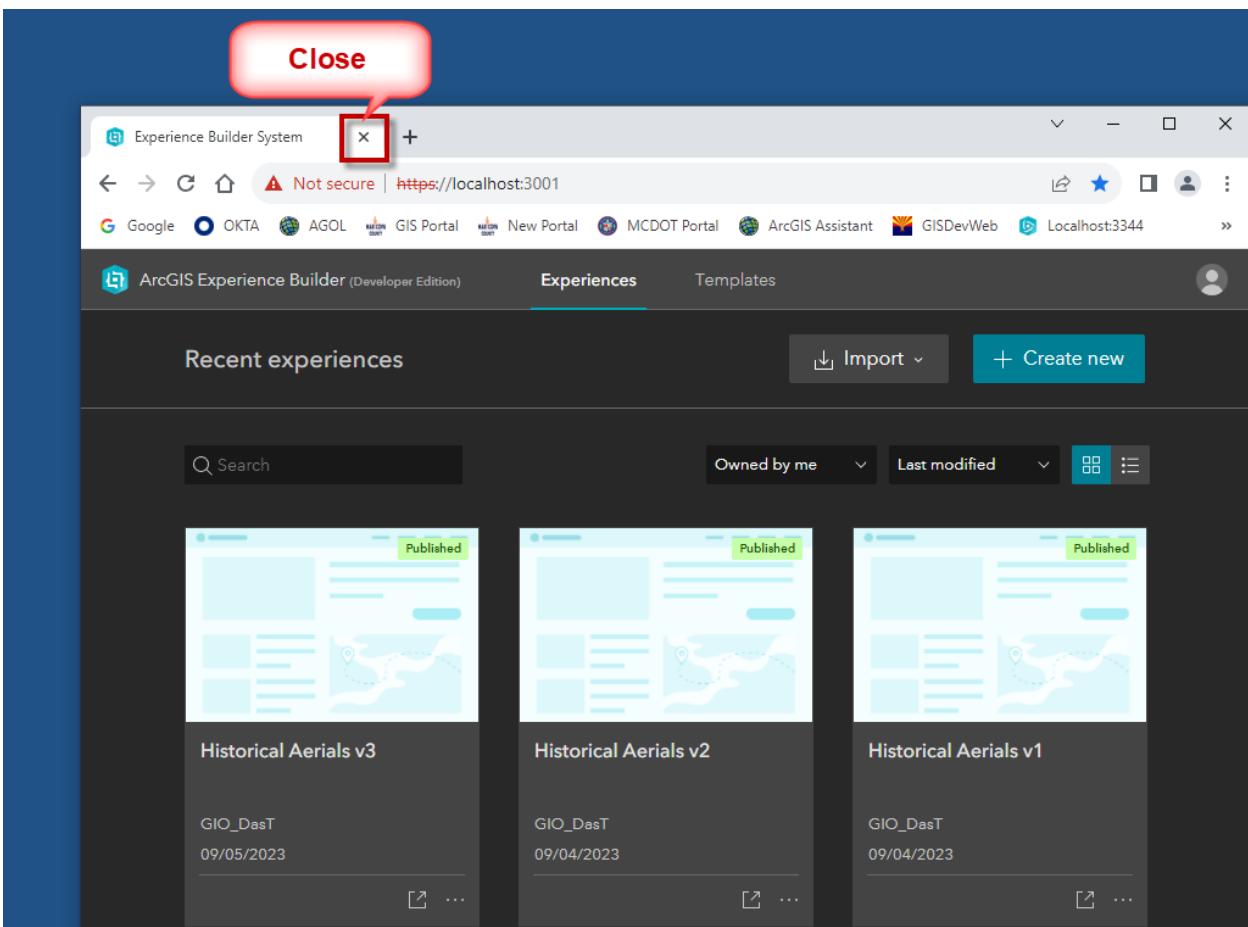
It is time to take a break.

You will be closing this session and starting up a new one.

Go back to the Experience Builder Home Page.



Close the Experience Builder System Tab.



Close the npm Server and npm Client Command Windows.

The image shows two separate command-line windows side-by-side. Both windows have a red speech bubble with the word "Close" and a red box highlighting the close button (X) in the top right corner of the window frame.

Top Window (npm):

```
C:\DAVID\EXB\EXB15\server>npm start
> exb-server@0.1.0 start C:\DAVID\EXB\EXB15\server
> cross-env NODE_ENV=production node src/server

Apps Folder: C:\DAVID\EXB\EXB15\server\public\apps
Http server running on port 3000
Https server running on port 3001
[Error: ENOTEMPTY: directory not empty, rmdir 'C:\DAVID\EXB\EXB15\server\temp\0\cdn\1\widgets\arcgis-map\src\data-actions'] {
  errno: -4051,
  code: 'ENOTEMPTY',
  syscall: 'rmdir',
  path: 'C:\\DAVID\\EXB\\EXB15\\server\\temp\\0\\cdn\\1\\widgets\\arcgis\\arcgis-map\\src\\data-actions'
}
[Error: ENOENT: no such file or directory, copyfile 'C:\DAVID\EXB\EXB15\client\dist\widgets\common\text\dist\runtime\translations\ru.js' -> 'C:\DAVID\EXB\EXB15\server\temp\0\cdn\1\widgets\common\text\dist\runtime\translations\ru.js'] {
  errno: -4058,
  code: 'ENOENT',
  syscall: 'copyfile',
  path: 'C:\\DAVID\\EXB\\EXB15\\client\\dist\\widgets\\common\\text\\dist\\runtime\\translations\\ru.js',
```

Bottom Window (webpack):

```
> node -e "try{require('./_postinstall')}catch(e){}" || exit 0

> exb-client@1.12.0 postinstall C:\DAVID\EXB\EXB15\client
> npm run lerna-bootstrap

> exb-client@1.12.0 lerna-bootstrap C:\DAVID\EXB\EXB15\client
> lerna bootstrap

lerna notice cli v6.6.1
lerna info Bootstrapping 0 package
lerna info Symlinking packages and binaries
lerna success Bootstrapped 0 package
added 2400 packages in 298.002s

C:\DAVID\EXB\EXB15\client>npm start
> exb-client@1.12.0 start C:\DAVID\EXB\EXB15\client
> cross-env NODE_ENV=development webpack --mode development --watch

Entrypoint widgets/simple/dist/runtime/widget 9.7 KiB = widgets/simple/dist/runtime/widget.js
webpack 5.76.3 compiled successfully in 1297 ms
```

This concludes **Part-1** of the Experience Builder Developer Edition 1.12 Tutorial.

<https://daviddas2.github.io/exb/part1.pdf>

When you are ready, continue with **Part-2** of this Tutorial.

<https://daviddas2.github.io/exb/part2.pdf>