From Layers to Apps:
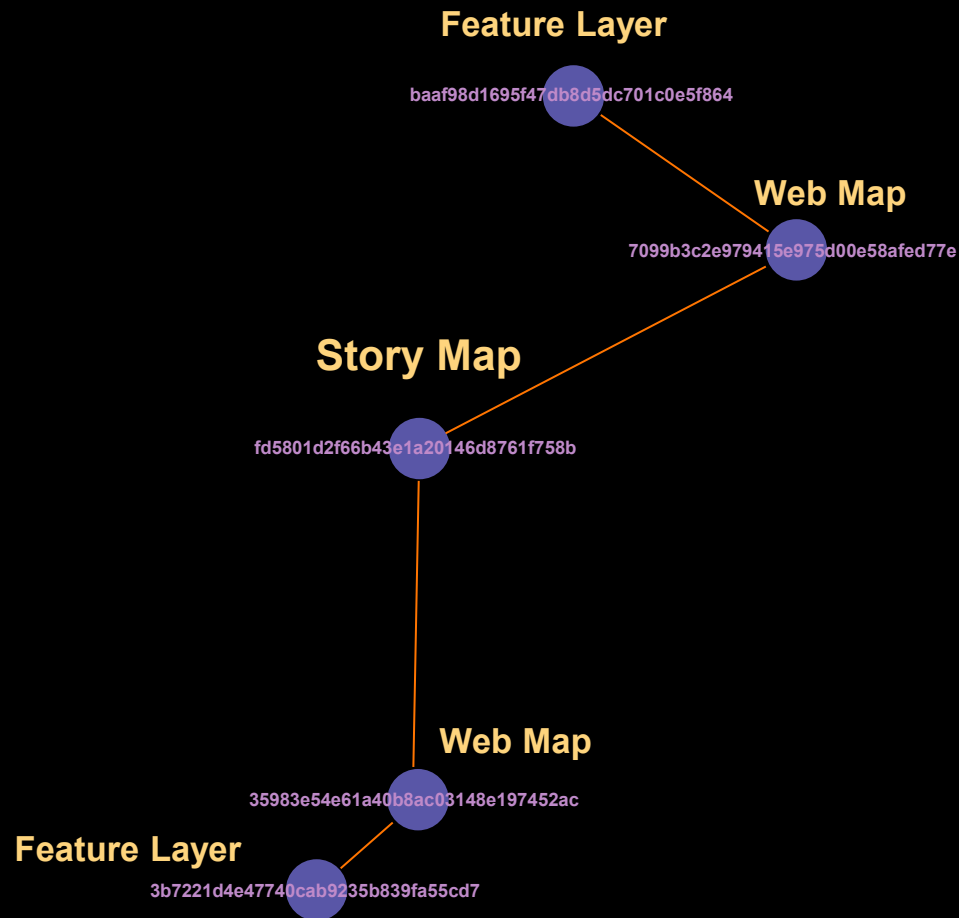
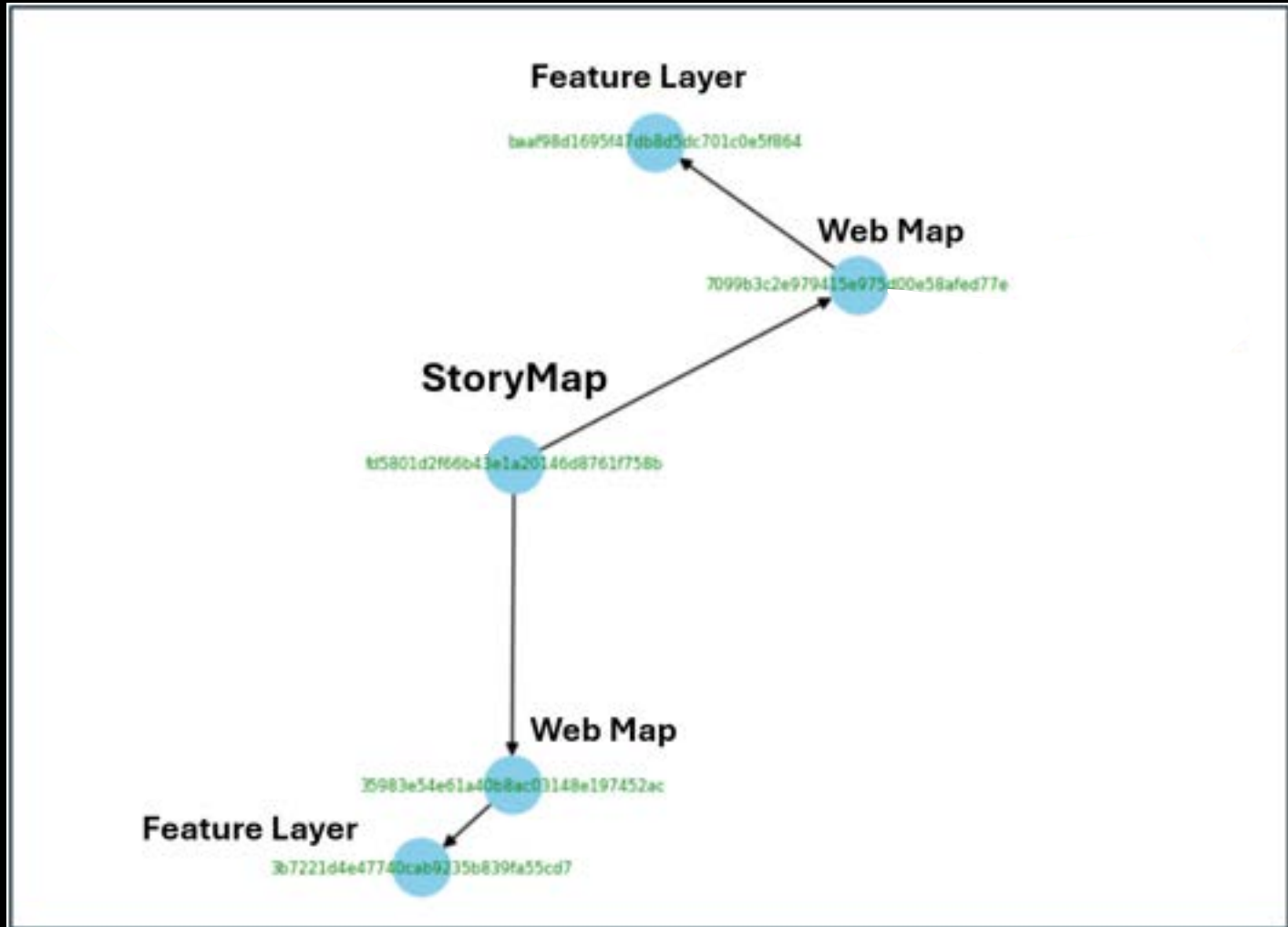## Auditing Downstream Dependencies in ArcGIS Online with Python

David "Daffy" Gimnich
Texas GIS Forum
2025-11-06

The Goal

Feature Layer

baaf98d1695f47db8d5dc701c0e5f864

Web Map

7099b3c2e979415e975d00e58afed77e

Story Map

fd5801d2f66b43e1a20146d8761f758b

Web Map

35983e54e61a40b8ac03148e197452ac

Feature Layer

3b7221d4e47740cab9235b839fa55cd7

arcgis.apps.itemgraph module

From Layers to Apps:

Auditing Downstream Dependencies in ArcGIS Online with Python

FAILURE

David "Daffy" Gimnich
Texas GIS Forum
2025-11-06

From Layers to Apps:

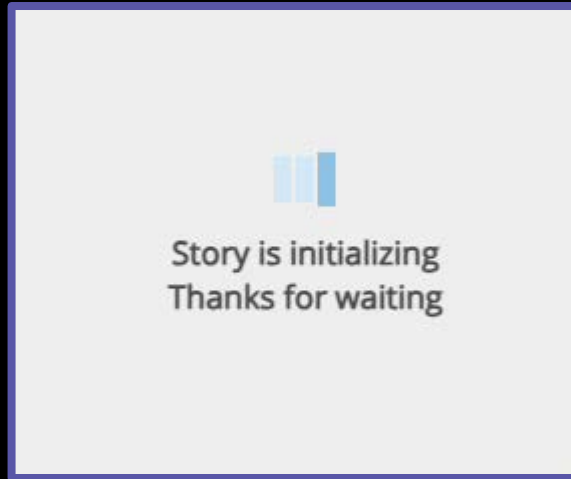## Auditing Downstream Dependencies in ArcGIS Online with Python

FAILURE?

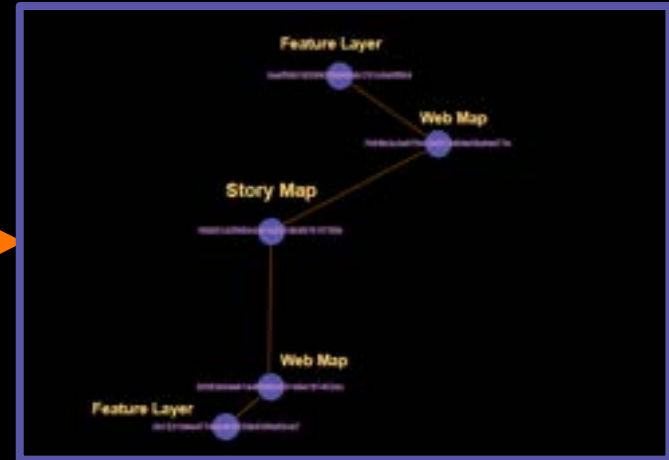David "Daffy" Gimnich
Texas GIS Forum
2025-11-06

Learning from Failure:

Turning Broken Apps and Abandoned Code into GIS Growth
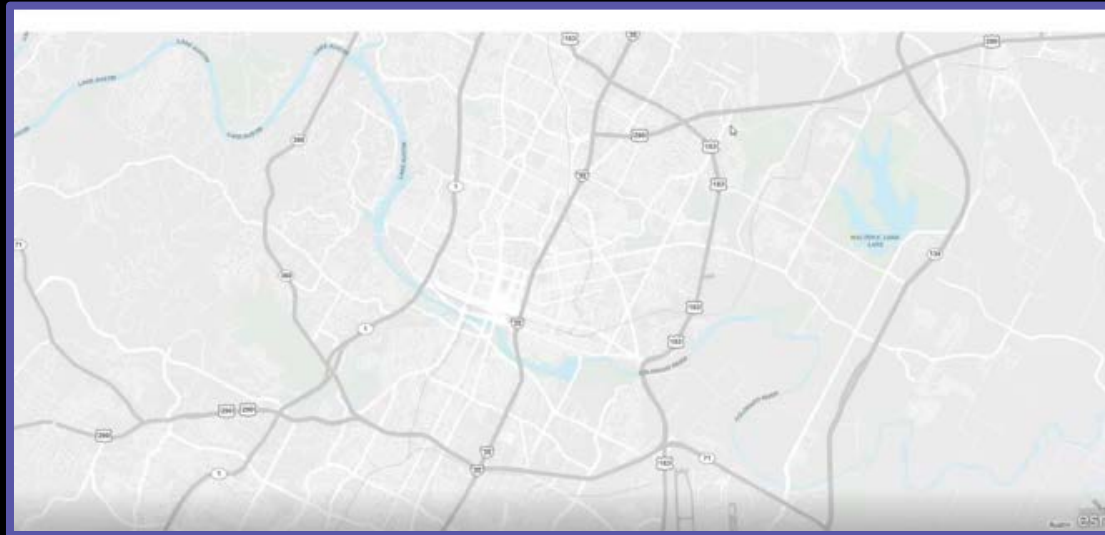
David "Daffy" Gimnich
Texas GIS Forum
2025-11-06

March

Story is initializing
Thanks for waiting

October

November

```
"header": {
  "linkText": "Austin Street Banner Program",
  "linkURL": "https://www.austintexas.gov/page/street-banners",
  "logoURL": "https://www.arcgis.com/sharing/rest/content/items/850a02de3fed4578aa827a68d1e7f8a9/resources/sm_mj_logo__1711044293165.jpg",
  "logoTarget": "https://www.austintexas.gov/page/street-banners",
  "social": {
    "facebook": false,
    "twitter": false,
    "bitly": false
  }
},
"appGeocoders": [
  {
    "singleLineFieldName": "SingleLine",
    "name": "COA Composite Locator",
    "url": "http://austintexas.geocortex.com/arcgis/rest/services/Geocode/COA_Composite_Locator/GeocodeServer"
  },
  {
    "singleLineFieldName": "SingleLine",
    "name": "Esri World Geocoder",
    "url": "http://geocode.arcgis.com/arcgis/rest/services/World/GeocodeServer"
  }
]
},
"story": {
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      "content": "\u003Cp style=\"text-align:center\"\u003E\u003Cspan style=\"font-size:18px\"\u003E\u003Cstrong\u003ELearn more and apply at \u003Ca href
style=\"color:#00529b\"\u003EATXBanners.org\u003C/span\u003E\u003C/a\u003E\u003C/strong\u003E\u003C/span\u003E\u003C/p\u003E\n\n\u003Cp style=\"text-align:center\"
size:14px\"\u003E\u003Cstrong\u003E\u003Cspan style=\"color:#467F89\"\u003ETo Navigate:\u003C/span\u003E\u003Cbr\u003E\n*    The map is dynamic and
location\u003Cbr\u003E\n*    Select \u003Cspan style=\"color:#467f89\"\u003Eaddresses\u003C/span\u003E in table to navigate to banner location\u003C
features\u003C/span\u003E\" to activate informational pop-up windows. Google Streetview links are provided to show the over-the-street banner locations. \u003
counts are an approximate daily average calculated using historic data for the area.\u003C/strong\u003E\u003C/span\u003E\u003C/p\u003E\n\u003C!--class=\"MsoNormal\
tabindex=\"0\"\u003E\n\u003Ctable border=\"1\" cellpadding=\"0\" cellspacing=\"0\" class=\"MsoNormalTable\" width=\"501\"\u003E\n\t\u003Ctbody\u003E\n\t\t\u003Ctr\
size:14px\"\u003E\u003Cstrong\u003ELocation #\u003C/strong\u003E\u003C/span\u003E\u003C/td\u003E\n\t\t\t\u003Ctd style=\"text-align:center\" valign=\"top\" width=\
size:14px\"\u003E\u003Cstrong\u003EAddress\u003C/strong\u003E\u003C/span\u003E\u003C/td\u003E\n\t\t\t\u003Ctd style=\"text-align:center\" valign=\"top\" width=\"70
size:14px\"\u003E\u003Cstrong\u003EDirection\u003C/strong\u003E\u003C/span\u003E\u003C/td\u003E\n\t\t\t\u003Ctd style=\"text-align:center\" valign=\"top\" width=\
Counts\u003C/strong\u003E\u003C/span\u003E\u003C/td\u003E\n\t\t\u003C/tr\u003E\n\t\t\u003Ctr\u003E\n\t\t\t\u003Ctd style=\"text-align:center\" valign=\"top\"\u003E
size:10.0pt\"\u003E1\u003C/span\u003E\u003C/strong\u003E\u003C/td\u003E\n\t\t\t\u003Ctd valign=\"top\" width=\"226\"\u003E\u003Cspan style=\"font-size:12px\"\u003E
style=\"color:#467F89\"\u003E1600 1/2 N. Lamar Blvd.\u003C/span\u003E\u003C/a\u003E\u003C/span\u003E\u003C/td\u003E\n\t\t\t\u003Ctd style=\"text-align:center\" val
```

AUSTIN Lamppost Banners

- Lamppost Banner Locations
- Bridge: CONGRESS AVENUE, FIRST STREET & S. LAMAR
- Downtown: CONGRESS AVENUE
- Downtown: CONVENTION CENTER
- Downtown: CITY HALL & SECOND STREET & CESAR CHAVEZ STREET
- Downtown: DOWNTOWN
- Downtown: REPUBLIC SQUARE

Republic Square

Located in the historic heart of Austin, the Republic Square district is a vibrant hub of community and culture. This district encircles the iconic Republic Square Park, a favorite local gathering place known for its lively farmer's markets and public events. The Republic Square district is currently comprised of (7) lampposts that can hold (7) 32" x 90" banners, but additional poles are coming soon which will bring the total to (27) lampposts that can hold (32) 32" x 90" banners.

- Downtown: W. SIXTH STREET
- Downtown: E. SIXTH STREET & RED RIVER STREET
- Downtown: SEAHOLM
- East: E. ELEVENTH STREET
- South: BARTON SPRINGS ROAD
- South: RIVERSIDE DRIVE
- South: S. LAMAR BOULEVARD
- South: SOCO (SOUTH CONGRESS AVENUE)

D - COMING SOON
A
C - COMING SOON
E - COMING SOON
Republic Square
B

Lessons

- Be proactive
- Ask for help
- The basics of a JSON file

arcgis.apps.itemgraph module

What's New in ArcGIS API for Python 2.4.1

¡April 2025!
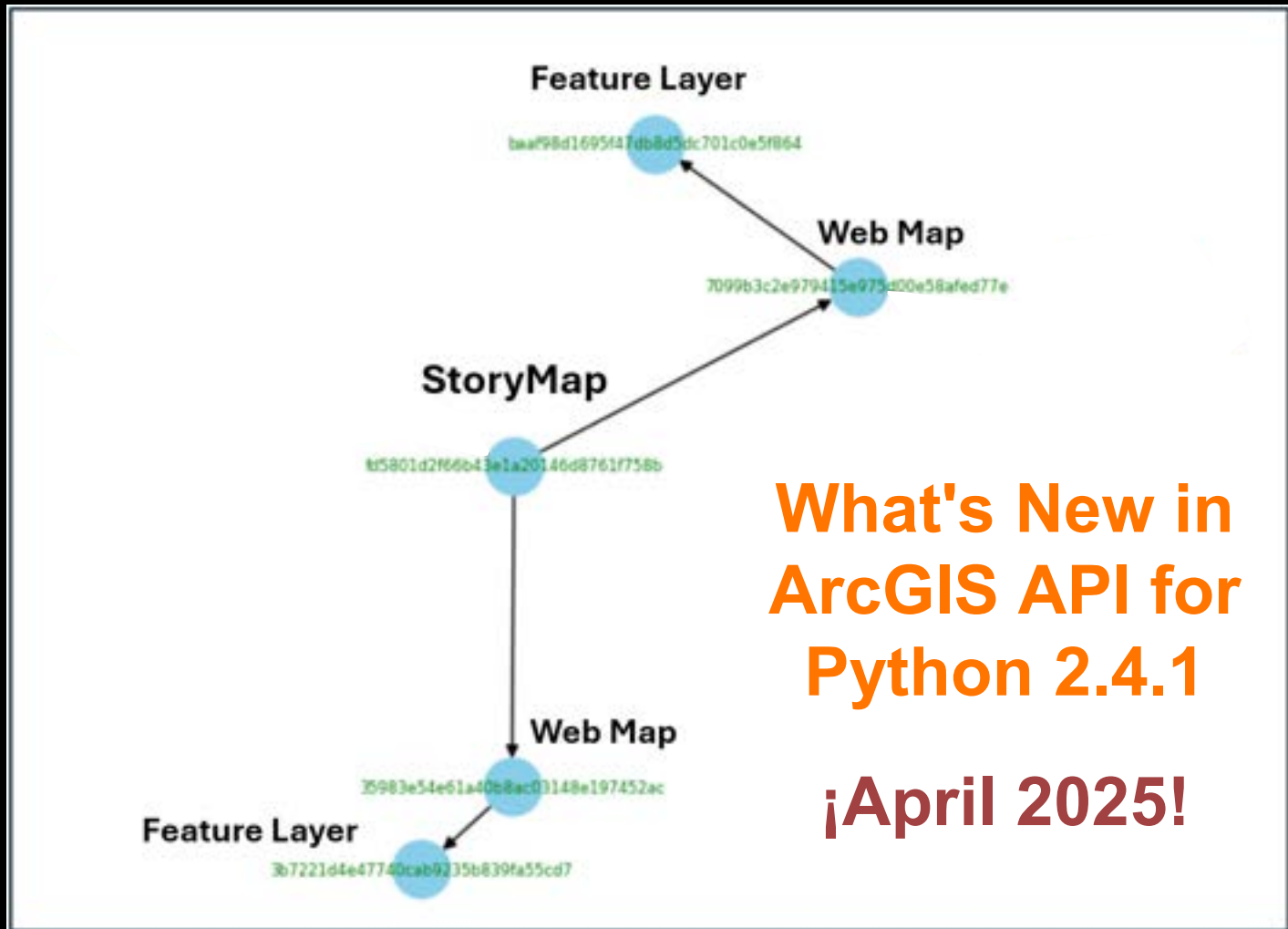
arcgis.apps.itemgraph module

Creates an ItemGraph from a list of items. The function recursively explores the **dependencies** of each item that is part of the organization, encompassing the full dependency tree of each source item.

```
{
    "_uid": "29c113d4929",
    "addType": "itemBrowser",
    "type": "Web Map",
    "id": "daf768b06b2f45eb8f26b9b82ba993b0",
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    "description": "\u003Ch4\u003E\u003Cspan style=\"color:hsl(0,0%,30%);\"\u003E\u003Cstrong\u003ECongress Avenue
Bridge\u003C/strong\u003E\u003C/span\u003E\u003C/h4\u003E\u003Cspan style=\"color:hsl(0,0%,30%);\"\u003EThe Congress Avenue
tourist attraction. It's home to the largest Austin Bat Colony and is also known as the Ann W. Richards Congress Avenue Brid
of (12) lampposts that can hold (12) 32" x 90" banners.\u003C/span\u003E\u003Ch4\u003E\u003Cspan style=\"color:hsl(0,0%,30%
Bridge\u003C/strong\u003E\u003C/span\u003E\u003C/h4\u003E\u003Cp\u003E\u003Cspan style=\"color:hsl(0,0%,30%);\"\u003EThe Fir
Jr. Bridge, is a main connecting bridge to North and South Austin and brings you directly into downtown Austin. This bridge
referred to as Lady Bird Lake. The South First Street district is comprised of (18) lampposts that can hold (18) 32" x 90"
banners.\u003C/span\u003E\u003C/p\u003E\u003Cp\u003E\u003Cspan style=\"color:hsl(0,0%,30%);\"\u003E\u003Cstrong\u003ELamar 
Bridge\u003C/strong\u003E\u003C/span\u003E\u003C/p\u003E\u003Cp\u003E\u003Cspan style=\"color:hsl(0,0%,30%);\"\u003EThe Lam
listed in the National Register of Historic Places. This bridge is steps away from the Pfluger Pedestrian Bridge, which is 
connecting bridge to North and South Austin, and it is a primary access point for traffic bound for Zilker Park. The Lamar 
lampposts that can hold (8) 32" x 90" banners.\u003C/span\u003E\u003C/p\u003E",
    "url": "https://austin.maps.arcgis.com/sharing/rest/content/items/daf768b06b2f45eb8f26b9b82ba993b0",
    "visible": true,
    "editorID": "1711581410904",
    "viewerLink": false,
    "openLinksInApp": false,
    "liveItemDetails": false,
    "customThumbnail": false,
    "customThumbnailType": "url",
    "termsOfUse": false
},
```

Lessons

- Be proactive
- Ask for help
- The basics of a JSON file

- Python programming & how to read code
- Advanced understanding of JSON
- **Reflect on past lessons learned**

# Transportation & Public Works Development Review web application

User Guide   Provide Feedback

ATD
ATD_Publisher

My Content › TDS › **ATD Development Review Web Map**

JSON Editor   Resources   Item Details

Description   Data

{} Format

Cancel   Save

> nearmap   Aa ᗑ .∗ 1 of 4   ↑ ↓ ≡ ✕

```
 1
 2    "operationalLayers": [
 3        {
 4            "id": "nearmap_us_2636",
 5            "title": "Nearmap US Vertical Imagery",
 6            "url": "https://aom-us.nearmap.com/arcgis/rest/services/nearmap_us/ImageServer",
 7            "visibility": false,
 8            "minScale": 100142,
 9            "maxScale": 0,
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11            "layerType": "ArcGISImageServiceLayer"
12        },
13        {
14            "id": "TRANSPORTATION_development_engineering_areas_5532",
15            "opacity": 0.35,
16            "title": "Development Engineering Areas",
17            "url": "https://services.arcgis.com/0L9SC3BVTaxqcmED/arcgis/rest/services/TRANSPORTATION_development_engineering_areas/FeatureServer/0",
18            "visibility": false,
19            "itemId": "aa543b39d6eb4cba8e7cabfa76e21e20",
20            "layerType": "ArcGISFeatureLayer",
21            "layerDefinition": {
22                "minScale": 614400,
23                "maxScale": 0,
24                "drawingInfo": {
25                    "labelingInfo": [
26                        {
27                            "labelExpression": "[DEV_ENGINEERING_AREA]",
28                            "labelExpressionInfo": {
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30                            },
31                            "labelPlacement": "esriServerPolygonPlacementAlwaysHorizontal",
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34                            "repeatLabel": true,
35                            "symbol": {
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Transportation & Public Works Development Review web application
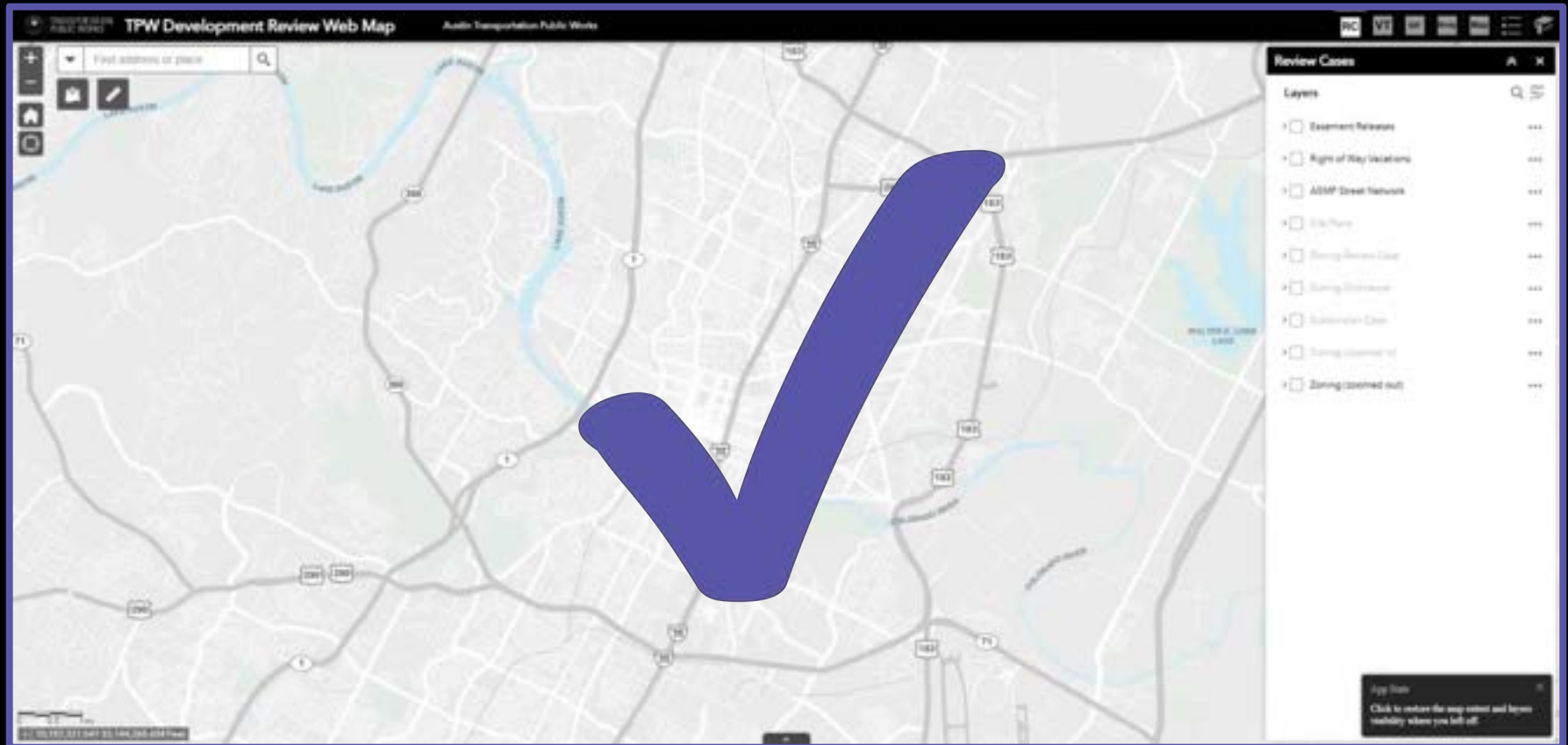
Nearmap loading solution for web maps

How to remove Nearmap from web maps that won't load.

AGOL First and foremost, I want to give **Hardy, Allison** credit for pointing me to this solution. Thank you Allison!

Howdy everyone, so recently with the AGOL update there is a major problem with Nearmap not loading in web maps, and because it won't load it is causing errors with web applications. But also, it won't allow us to make changes to and save web maps. But we have found a temporary workaround. In this video I show how we can go into the backend code of a web map and remove Nearmap entirely. This doesn't fix Nearmap, but at least for the time being it will allow web apps to load and for edits to be made to web maps.

In the video I reference a link for ArcGIS Assistant. There are two websites for this, so ¡PLEASE! use this link: https://assistant.esri-gs.com/

see more
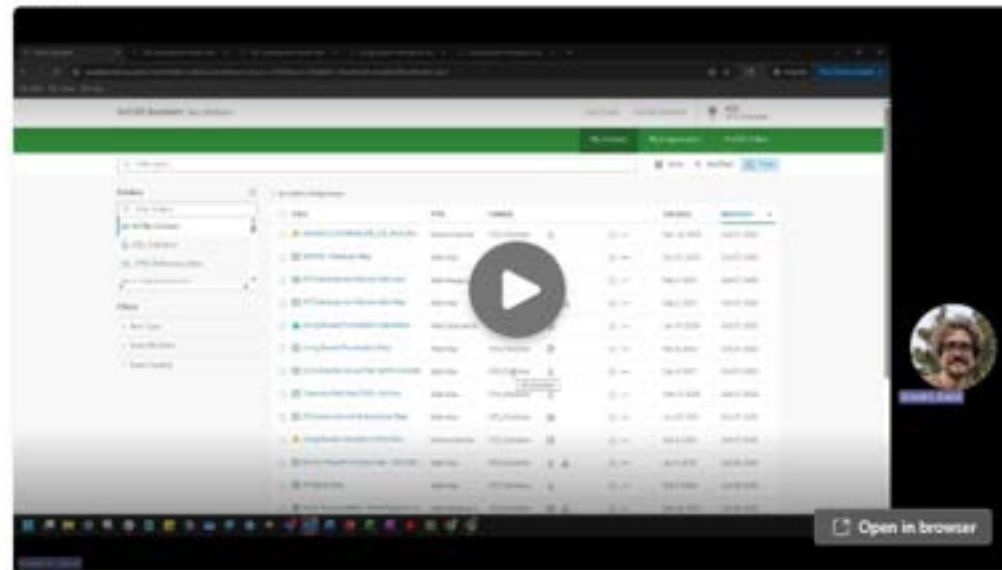
▶ AGOL assistant Nearmap fix demo-20251027_165215-Meeting Recording.mp4

Lessons

- Be proactive
- Ask for help
- What a JSON file can do

- Python programming & how to read code
- How to access and gather info from JSON
- <u>Reflect on past lessons learned</u>

- <u>**Reflect on past lessons learned!!!**</u>
- Edit a live JSON file
- Importance of knowledge sharing

Thank you!

Questions?