

A photograph of a worker in a yellow safety vest and blue pants standing on a green suspension bridge over a large body of water. The worker is looking down at something in their hands. In the background, there are trees and a clear sky. The bridge has green cables and a concrete deck. On the left side of the image, there are several overlapping, semi-transparent geometric shapes in shades of red and white, resembling stylized arrows or chevrons pointing right.

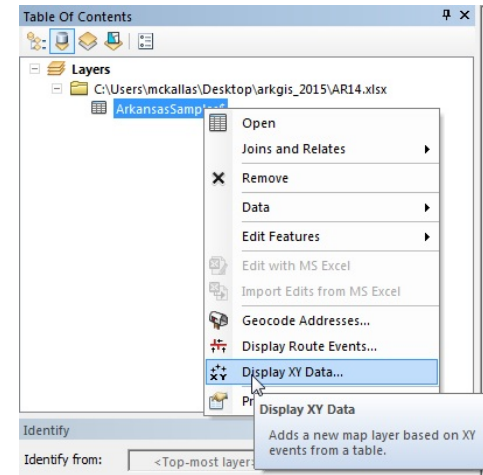
# Configuring esri's platform for a bridge inspection

*By Mike Kallas*

**Tran**Systems

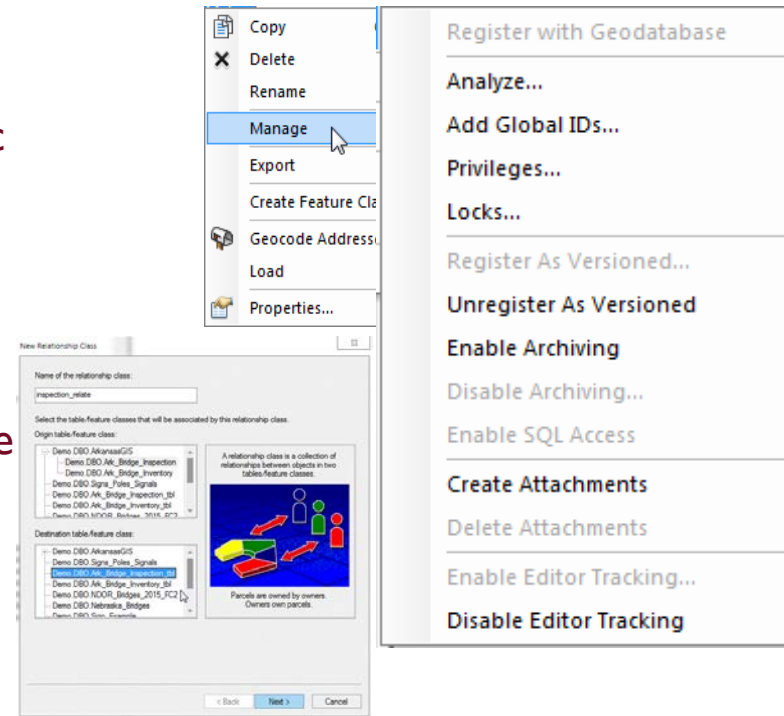
# Setting up Inventory in ArcSDE

- ▶ National Bridge Inventory
  - ▶ <https://www.fhwa.dot.gov/bridge/nbi.cfm>
- ▶ Create your bridge points
  - ▶ X,Y's from MS Excel with some configuration
- ▶ Save bridge *feature class and save as SDE table*
- ▶ Feature class created for field collection, editable



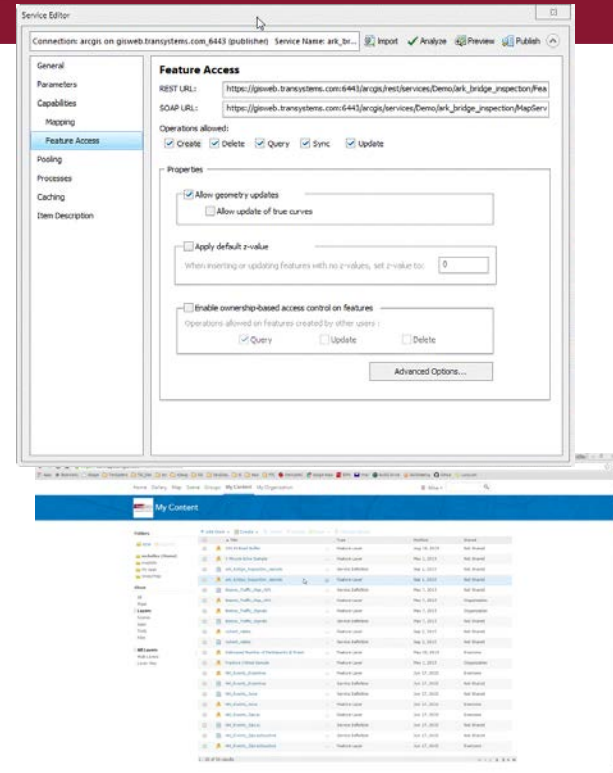
# ArcSDE configuration

- ▶ Once our feature class is created
  - ▶ Create GlobalID's on feature class
  - ▶ Enable Archiving so that you can edit offline (Sync capability in features service set up)
  - ▶ Enable Editor Tracking (captures last person to edit record or feature)
  - ▶ Create Attachments for photos (related table)
- ▶ Build I-M relationship class (have Global ID's in table and feature class)
- ▶ Also in the **Related** table – have a GUID (Bridge\_ID)
  - ▶ On to creating feature service...



# Bringing ArcSDE features to web

- ▶ *Configure your feature service from ArcGIS desktop with related tables and theme (inspection needed, inspection complete)*
- ▶ *Open your MXD with feature class at SDE table already related*
- ▶ *Configure your feature service with SYNC checked (look in details once in arc online)*
- ▶ *Create on your own web services (REST) or Arc Online*
- ▶ *Now finally on to the web and **ArcOnline***



I'm sure these guys are thinking GIS...





# Configuration of Arc Online for field

- ▶ Go to Arc Online – *I'll go to TSC Arc Online*
- ▶ Make a Map and add feature service – *bridge inspection*
- ▶ Configure Pop-ups and Attributes to what you want to see on Collector (there is always tweaking)
- ▶ Display from Attributes
- ▶ Make a search, bookmarks, symbol configuration
- ▶ Save the Map and then go to mobile device

Configure Pop-up  
Stonewall - NBI\_Stonewall

Pop-ups display information about features in the layer. Define the pop-up below.

Pop-up Title  
NBI Stonewall  
(STRUCTURE\_NUMBER\_008)

Pop-up Contents  
Display: A list of field attributes

These field attributes will display:  
STATE\_CODE\_001 (STATE\_CODE\_001)  
STRUCTURE\_NUMBER\_008 (STRUCTURE\_NUMBER\_008)  
RECORD\_TYPE\_005A (RECORD\_TYPE\_005A)  
RECORD\_TYPE\_0 (RECORD\_TYPE\_0)  
ROUTE\_PREFIX\_005B (ROUTE\_PREFIX\_005B)  
ROUTE\_PREFIX\_0 (ROUTE\_PREFIX\_0)

Configure Attributes

Pop-up Media  
Display images and charts in the pop-up:  
ADD +  
No images or charts. Click 'Add' to add one. Use the arrows to order.

Related Data  
☒ Show related data

SORT OPTIONS

SAVE POP-UP CANCEL

Configure Attributes

Check the fields you want to display and edit. Select a field to change its alias, order it, and format it.

Display	Edit	Field Name	Field Alias
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(ITEM359C_Q4)	NOOR359C GA Culvert: Span Length (ft)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(ITEM359D_Q4)	NOOR359D GA Culvert: Height (ft)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(ITEM359E_Q4)	NOOR359E GA Culvert: Fill over culvert (ft)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(GlobalID)	GlobalID
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(OBJECTID)	OBJECTID

OK CANCEL

# And you thought configuration was over...

- ▶ *Don't tell anyone* you have a mobile 'Collector' app until you have tested it
- ▶ Open mobile device – I've used iPad's, worked well
- ▶ Microsoft esri Collector on Windows 10 BETA (soon?) if you like the Surface
- ▶ My *Android, Google Play* experience **limited**, ask my 13 year old daughter, only can contact her via Instagram
- ▶ **View** & Add new feature- Collect here
- ▶ New **adds** a record to (one to many) on inspection table – relationship (example)
- ▶ Bookmarks, search...test it
  
- ▶ Other stuff I'm sure I have missed while configuring

for real...





# Summary

- ▶ Configuration is key
- ▶ ArcSDE: feature classes, tables, manage via ArcCatalog (*Global iD's and Archive*)
- ▶ ArcOnline: add feature service(s) and configure for Collector by 'configure pop-up' then display fields to view or edit on what you want your field folks to view & edit
- ▶ Collector: find assets in field and update to your database quickly, plus add new information from field and photos
- ▶ Next steps: web app builder and dashboards for the office
- ▶ Keep/Make it simple



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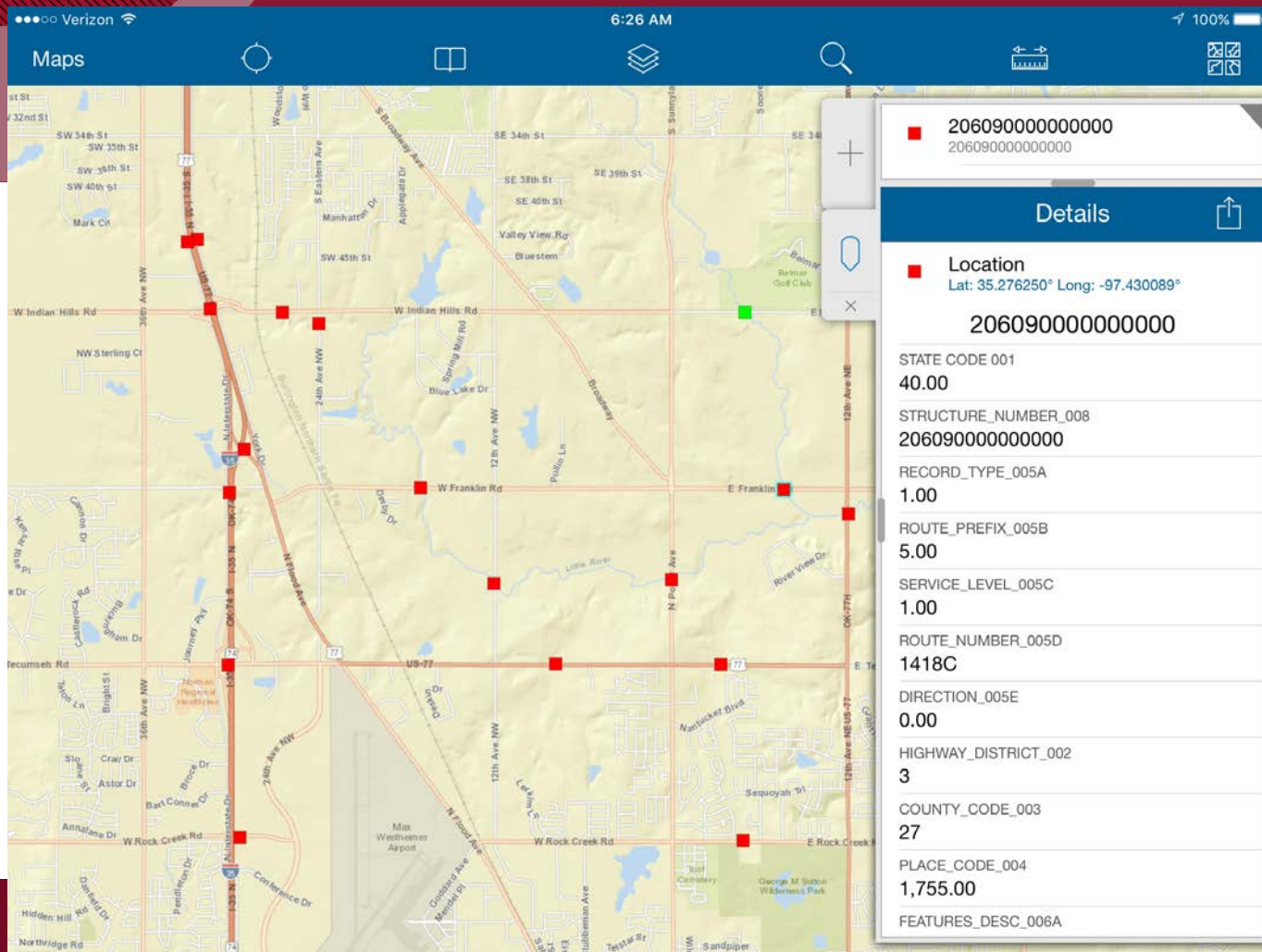
*GIS Guy*

816-329-6878

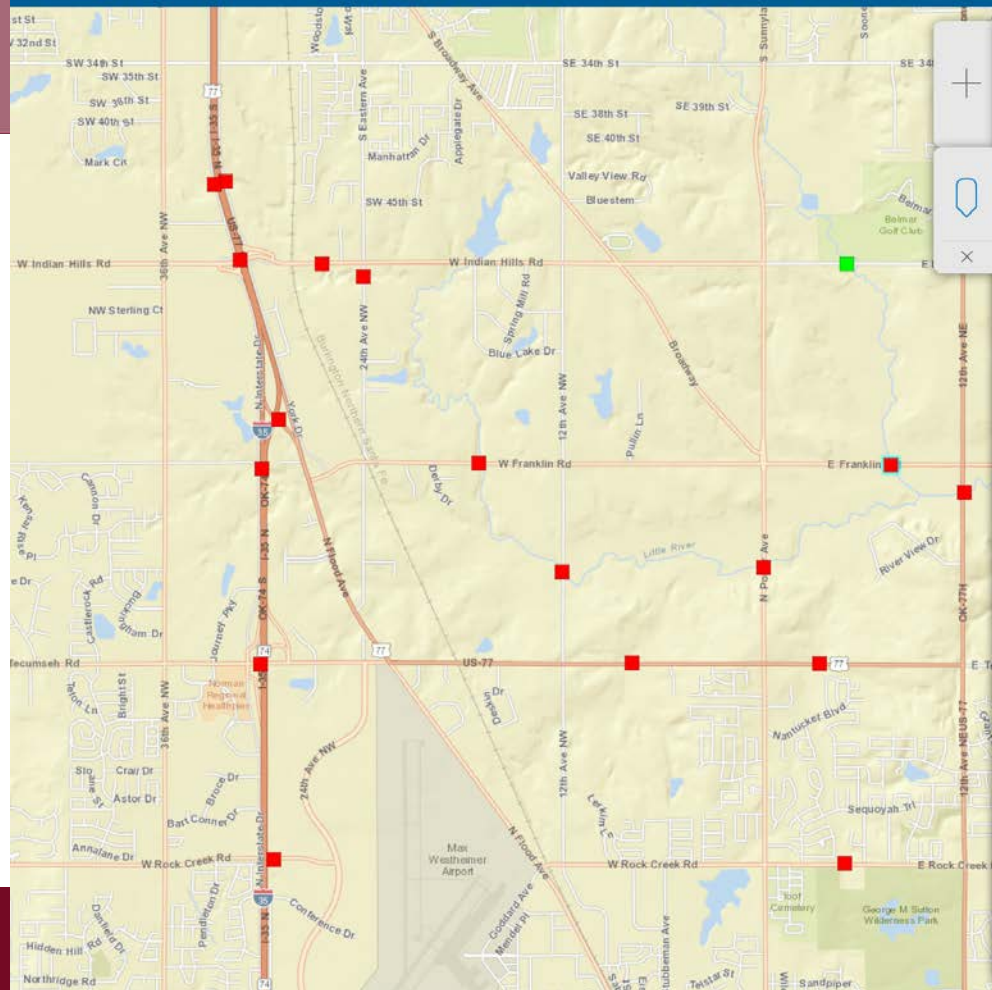
913-972-7092

[mckallas@transystems.com](mailto:mckallas@transystems.com)

# Collector







2060900000000000  
2060900000000000

## Details

**Location**  
Lat: 35.276250° Long: -97.430089°

NATIONAL\_INVENTORY\_ID  
0.00

PIER\_PROTECTION\_111

BRIDGE\_LEN\_IND\_112  
Y

SCOUR\_CRITICAL\_113  
7.00

FUTURE\_ADT\_114  
5303

YEAR\_OF\_FUTURE\_ADT\_115  
2032

MIN\_NAV\_CLR\_MT\_116  
0.00

SUFFICIENCY\_RATING  
82.70

Inspection Status  
Needs Inspection

### Bridge Inspections


View

New





Submit



## Date: , Inspector:

Inspection Date	>
Inspector	>
Deck Rating	>
Superstructure Rating	>
Substructure Rating	>
Channel Rating	>
Culvert Rating	>
Overall Notes	>

# This is Josh, he is happy using Collector

