



Alabama Power Company

Utilizing GIS Solutions

for Survey Drafting

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Drafter, Transmission Data Management and Technology



TRANSMISSION

- Alabama Power Company Serves 1.4 Million Customers
- Over 10,000 miles of Transmission Lines In Central/Southern Alabama
- Over 100,000 Transmission Towers and Poles
- Service Territory of over 44,000 miles






- Transmission Data Management and Technology
 - Route Mapping
 - Substation Boundary
 - Encroachment Drawings
 - Court Exhibits
 - Crossing Drawings
 - And more....




Problem:

Improve drafting efficiency to leverage GIS and knowledge transfer





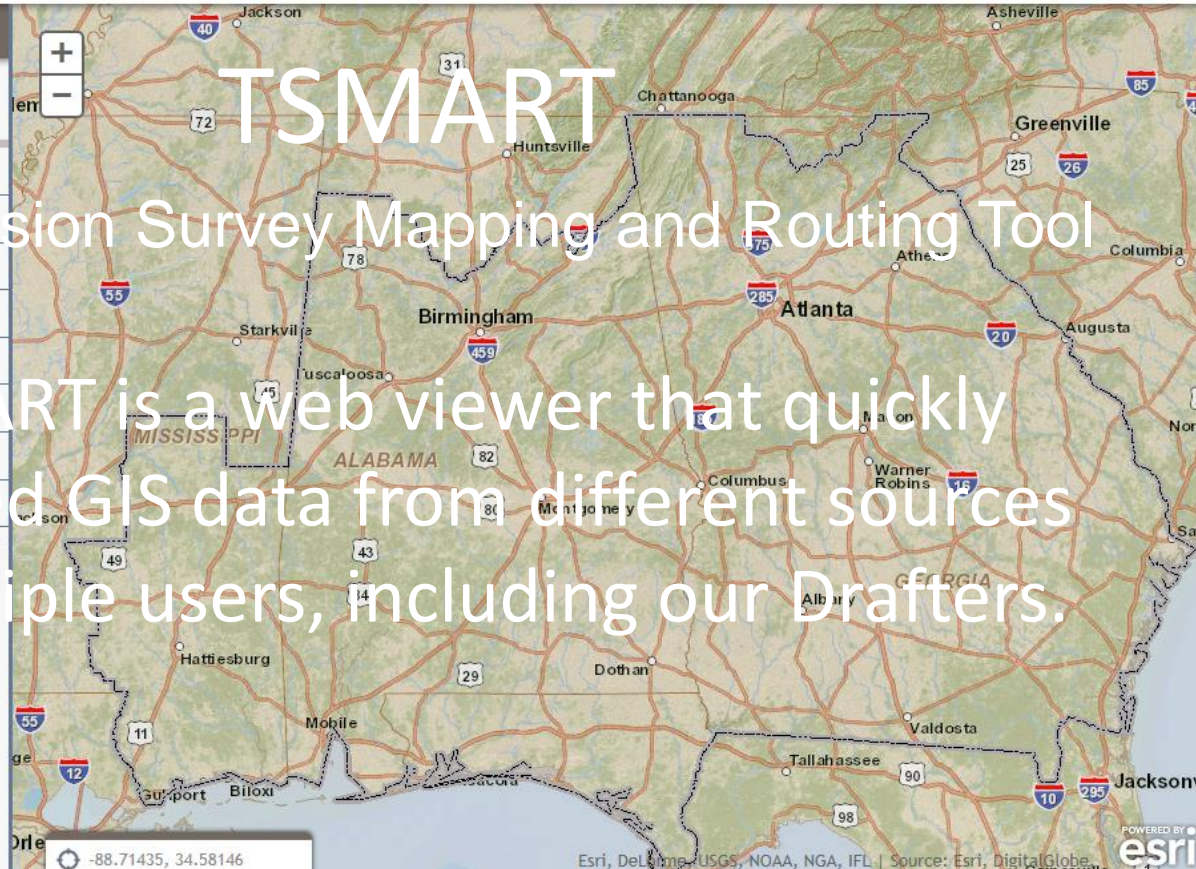
ALABAMA POWER
A SOUTHERN COMPANY



TSMART


- ▶ Study
- ▶ Budgeted
- ▶ Projected
- ▶ Active
- ▶ Archive
- ▶ Inactive
- ▶ Shieldwire
- ▶ Reviewed

NEXT



TSMART
Transmission Survey Mapping and Routing Tool

TSMART is a web viewer that quickly provided GIS data from different sources to multiple users, including our Drafters.

POWERED BY 

Esri, DeLorme, USGS, NOAA, NGA, IFL | Source: Esri, DigitalGlobe

TSMART

(Technical Info)

- HTML5
- ArcGIS Server (rest endpoints)

TSMART

(Data Used)

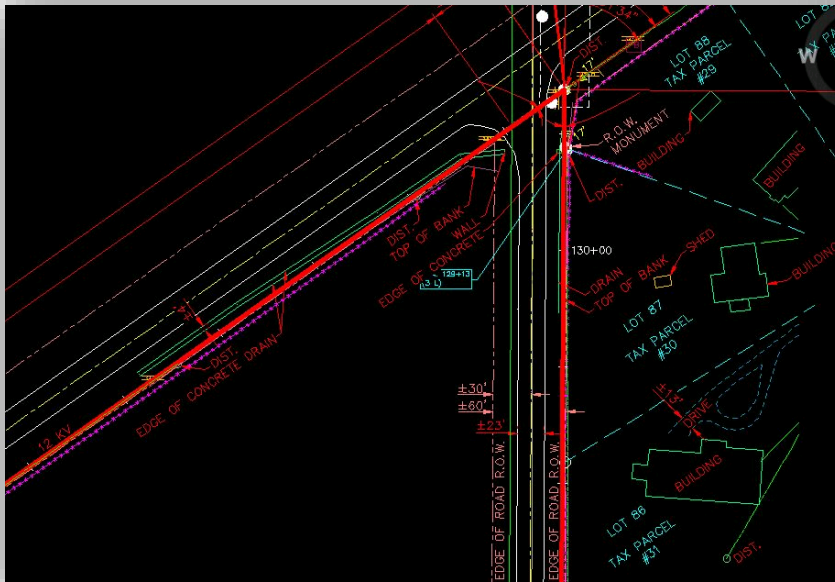
- Survey/Cadastral
- Route Planning
- Environmental
- Construction
- Design
- ESRI and other available map services (Imagery/Streets)

Additional Issues to Address:

1. Supplemental Paper Drawings
2. GIS/AutoCAD Separate Apps

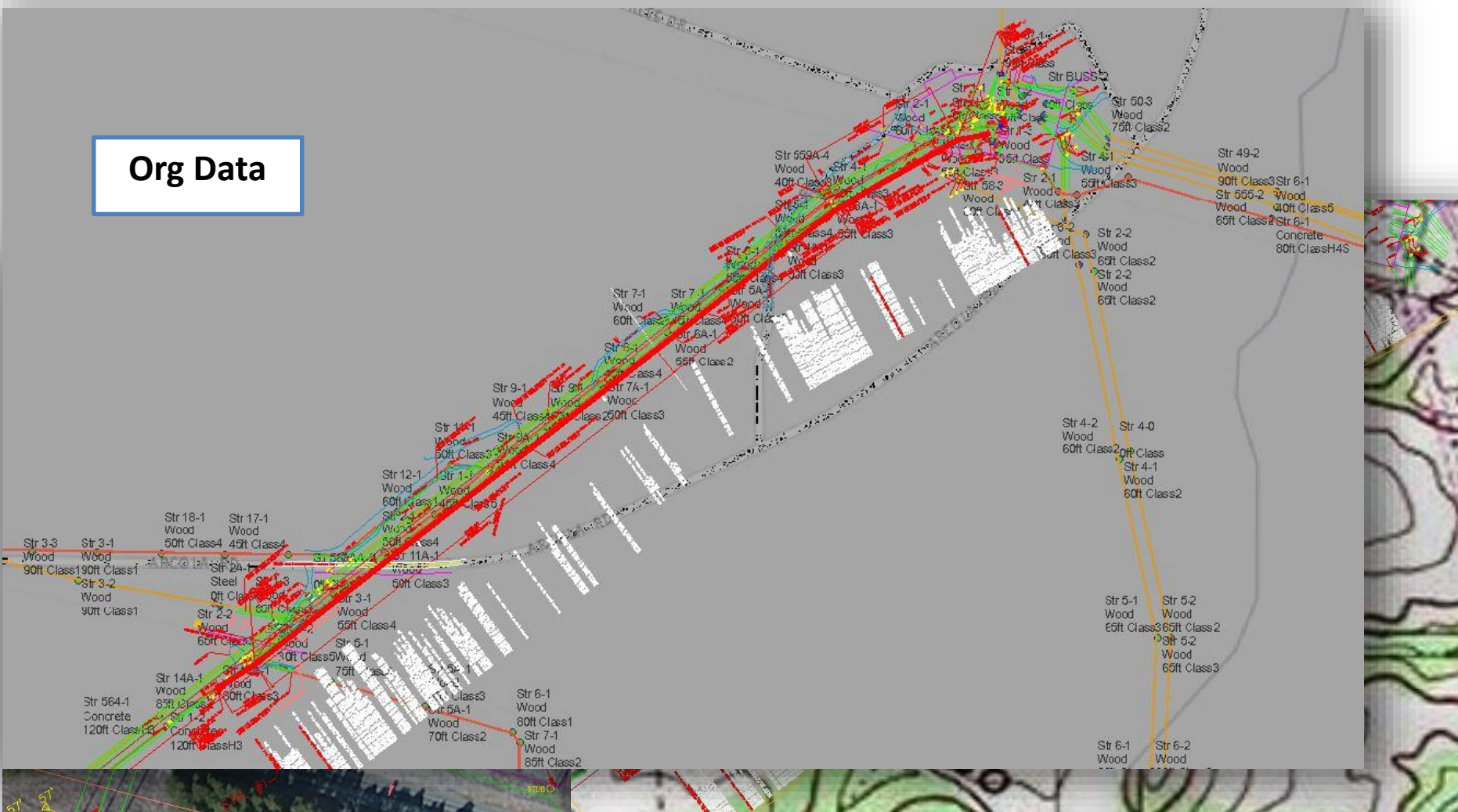
Hand-Drawn Maps

Additional Issues to Address:



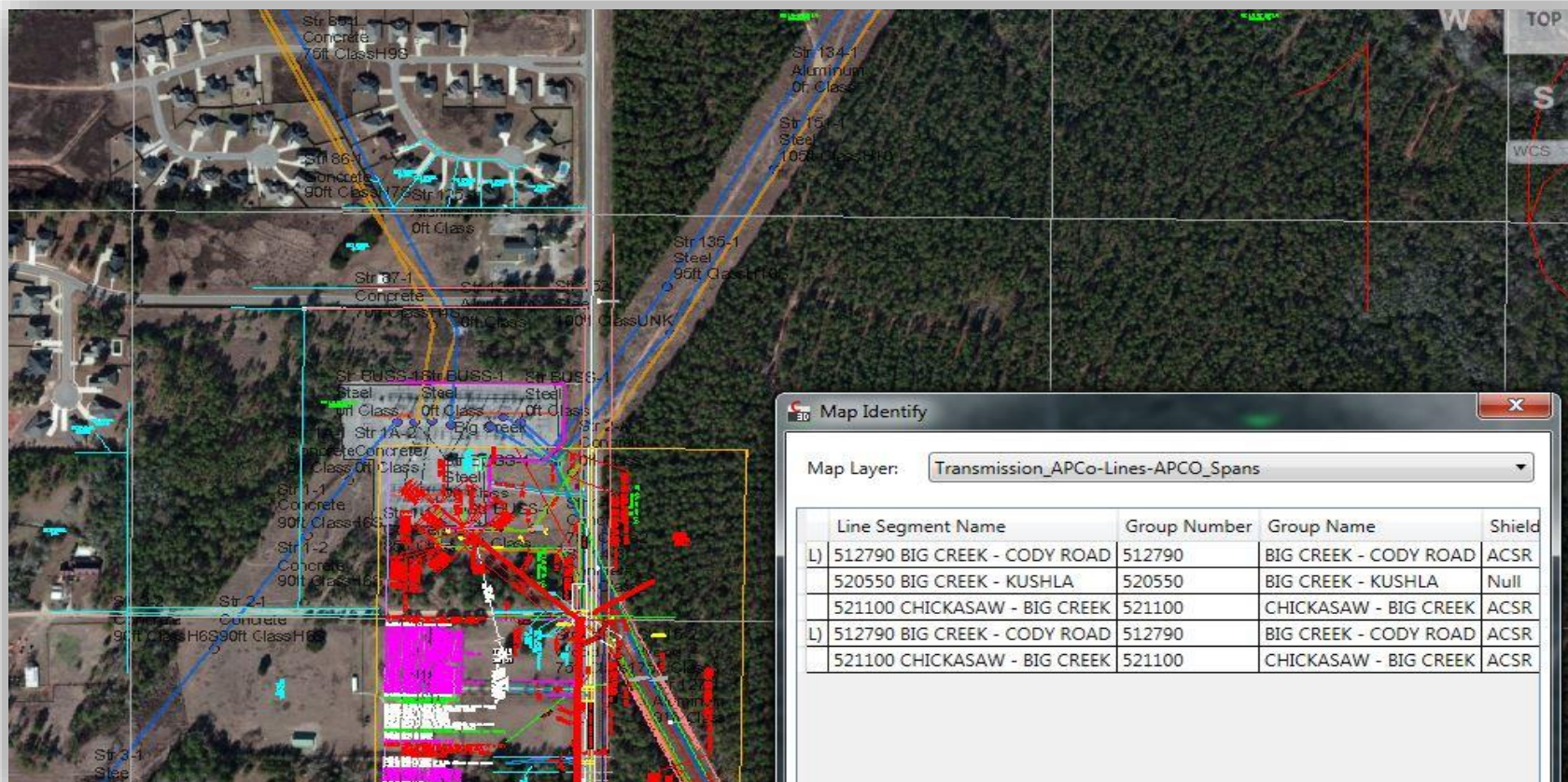


Org Data

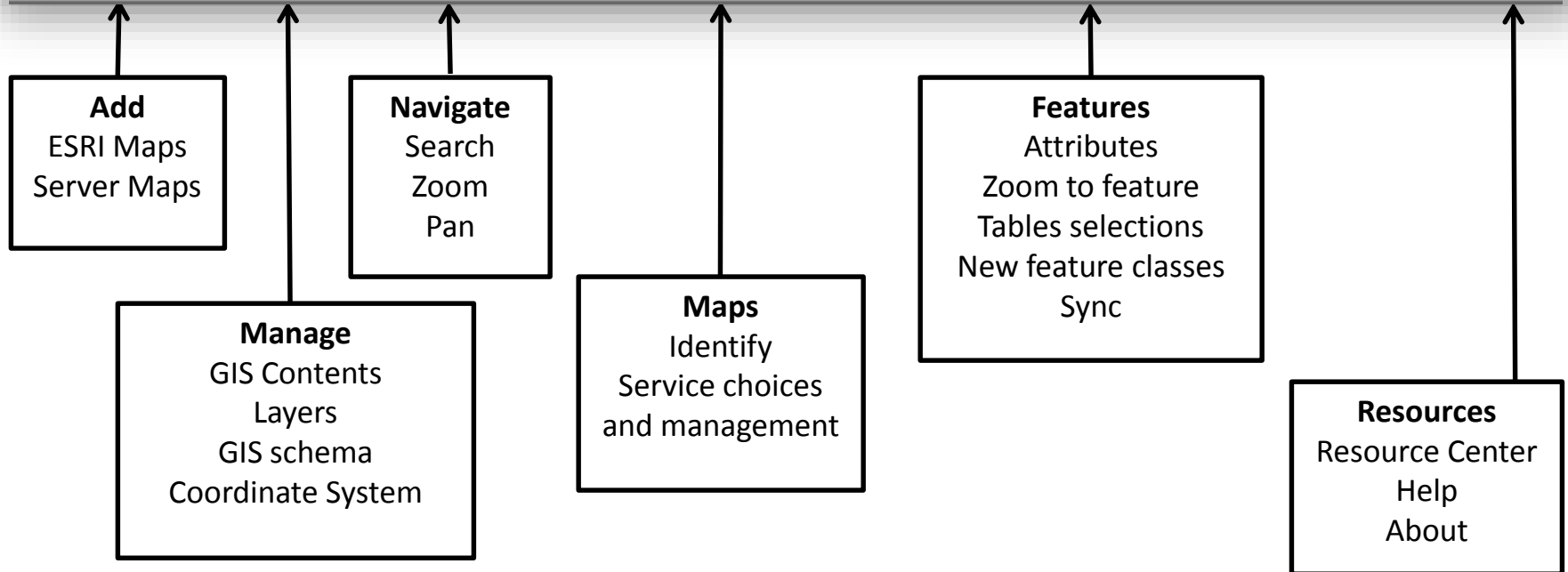
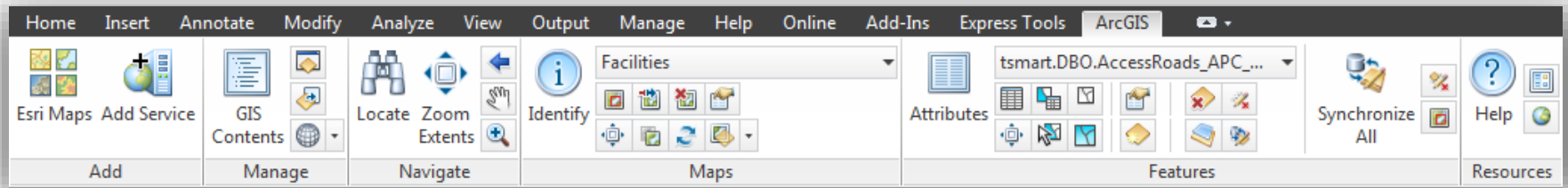


Aerial Photographs

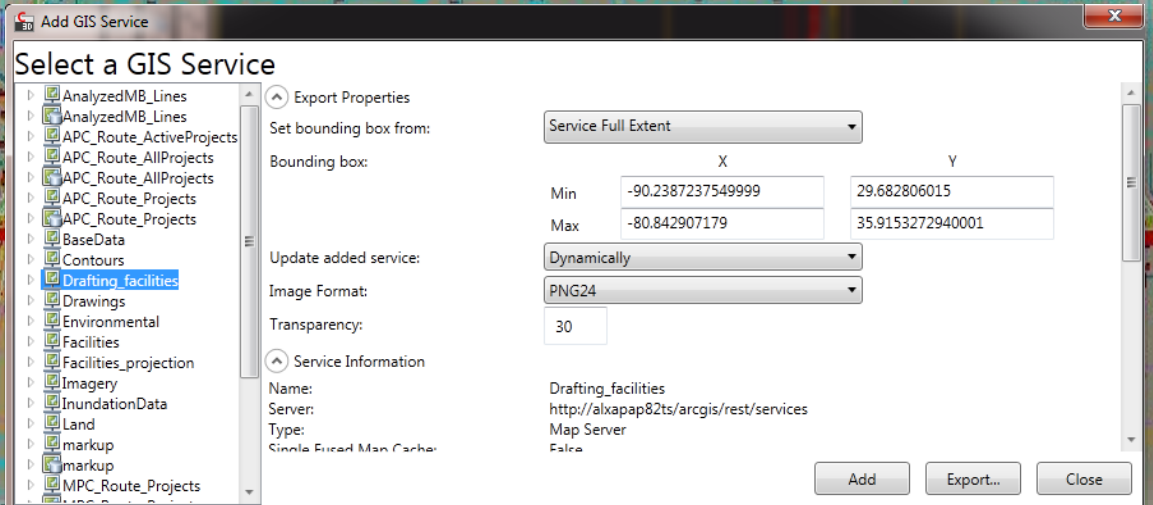
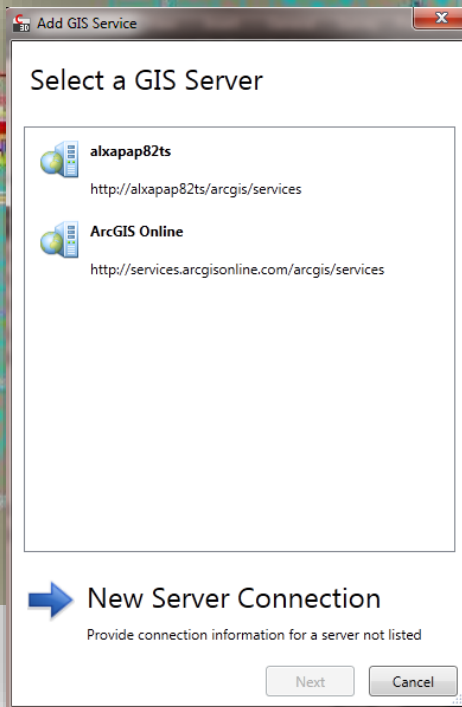
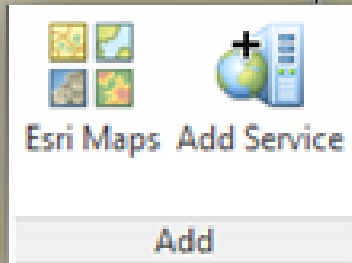
Efficiently Identify ArcGIS Map Service information from multiple sources



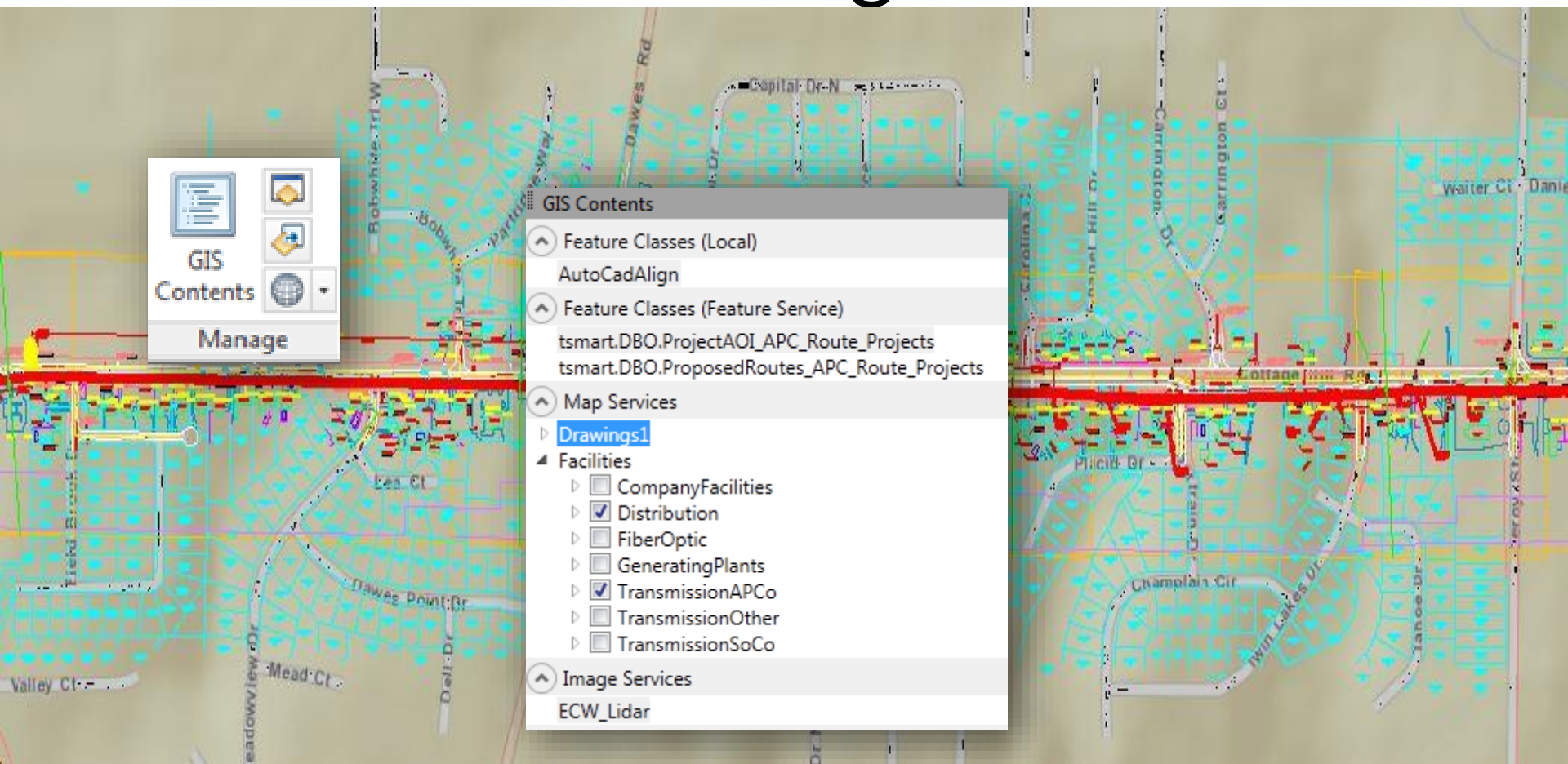
ArcGIS for AutoCAD Ribbon



Add Services



Manage

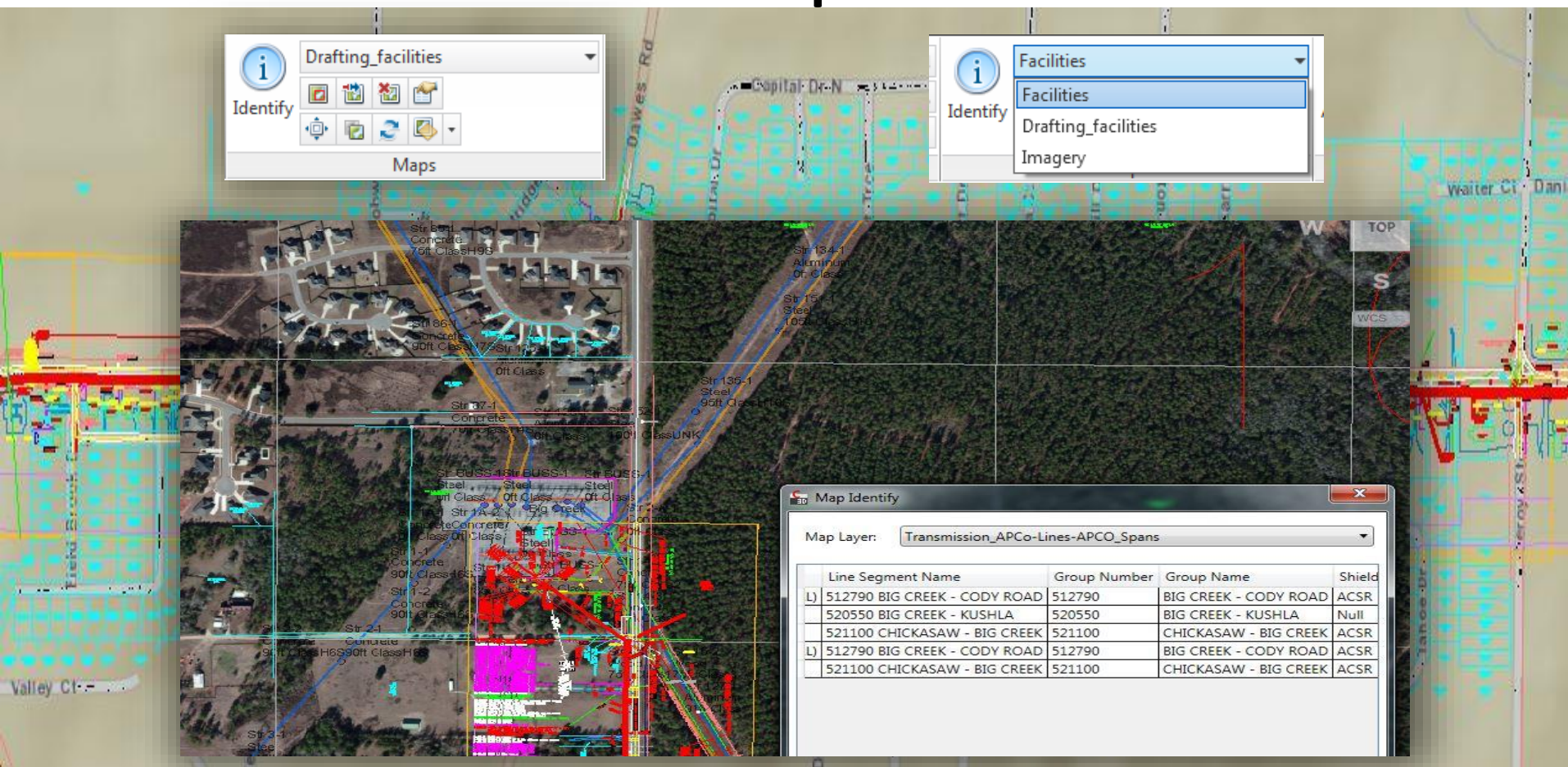


Navigate

The screenshot displays a GIS application interface for navigating and locating transmission lines. The interface is divided into several panels:

- Navigate Panel (Top Left):** Contains icons for 'Locate' (binoculars), 'Zoom Extents' (square with arrows), and 'Navigate' (hand cursor). Below these icons is a 'Navigate' button.
- Locate Panel (Bottom Left):** Contains a 'Locate' button, a 'Single Line Input' field with the text 'Pete Sentz Road M', a 'Locator' dropdown menu set to 'ArcGIS World Geo', and a 'Service Description' field set to 'World'.
- Map View (Center):** Shows a map of a road network. A red line segment is highlighted, labeled '12 KV' and 'Pete Sentz Rd'. A black box labeled 'DIST.' is positioned over the road. A red arrow points to a specific location on the road, labeled 'H 100'. A black box labeled '6' is positioned near the top left of the map. A black box labeled '1' is positioned near the bottom left of the map. A black box labeled '42' is positioned near the top right of the map. A black box labeled 'EL' is positioned near the top right of the map. A black box labeled 'FACE' is positioned near the top right of the map. A black box labeled 'DIST.' is positioned near the bottom left of the map. A black box labeled '12 KV' is positioned near the center of the map. A black box labeled 'Pete Sentz Rd' is positioned near the center of the map. A black box labeled 'H 100' is positioned near the center of the map. A black box labeled '6' is positioned near the top left of the map. A black box labeled '1' is positioned near the bottom left of the map. A black box labeled '42' is positioned near the top right of the map. A black box labeled 'EL' is positioned near the top right of the map. A black box labeled 'FACE' is positioned near the top right of the map. A black box labeled 'DIST.' is positioned near the bottom left of the map. A black box labeled '12 KV' is positioned near the center of the map. A black box labeled 'Pete Sentz Rd' is positioned near the center of the map. A black box labeled 'H 100' is positioned near the center of the map.
- Search Results Panel (Bottom Right):** A list of search results for 'Pete Sentz Rd, Mobile, Alabama, 36608'. The results are:
 - Pete Sentz Rd, Mobile, Alabama, 36608
 - Mobile, Alabama
 - Mobile, Alabama
 - North Mobile, Alabama
 - Mobile Terrace, Alabama
- Map Navigation (Bottom):** A navigation bar with arrows for navigation and a status bar indicating '1 of 5 selected'.

Maps



Identify

Drafting_facilities

Maps

Identify

Facilities

Facilities

Drafting_facilities

Imagery

Map Identify

Map Layer: Transmission_APCo-Lines-APCO_Spans

	Line Segment Name	Group Number	Group Name	Shield
L)	512790 BIG CREEK - CODY ROAD	512790	BIG CREEK - CODY ROAD	ACSR
	520550 BIG CREEK - KUSHLA	520550	BIG CREEK - KUSHLA	Null
	521100 CHICKASAW - BIG CREEK	521100	CHICKASAW - BIG CREEK	ACSR
L)	512790 BIG CREEK - CODY ROAD	512790	BIG CREEK - CODY ROAD	ACSR
	521100 CHICKASAW - BIG CREEK	521100	CHICKASAW - BIG CREEK	ACSR

ArcGIS for AutoCAD

- ESRI plug-in for AutoCAD that enables the use of AutoCAD as a web client to ArcGIS Server.
- It gives the user map resources for reference during AutoCAD production
- Ability to add maps and map services.
- View one or more georeferenced ArcGIS Server map services in AutoCAD without any data conversion.
- Access to image services and geolocation service for navigating within an AutoCAD drawing.
- Feature layers may reference data from a variety of sources such as geodatabases, shapefiles, or raster data.

How moving to this product has improved work

- Faster drawing times.
- More accurate drawings.
- Better consistency of drawing information.
- Allows drafters to inadvertently do quality control of our GIS data.