

The background of the slide is a light gray gradient with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance. The title text is centered in the middle of the slide.

MAPPING CLUSTERED ASSETS WITH GIS

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Elsinore Valley Municipal Water District

● EVMWD Background

The District is located along the I-15 corridor in Southwest Riverside County in the State of California.

California Special District formed in 1954

96 Sq. mile Service Area

~40,000 Connections

Population Served – 133,000

160 Employees

Potable, recycled, and wastewater collection and treatment

Groundwater basin management, recharge, arsenic removal

Facilities

2 Water Treatment Plants

55 Pump Stations

77 Reservoirs

12 Wells

46 Pressure Reducing Stations

1,982 Air Vacs

7,642 Fire Hydrants

18,434 Valves

780 miles of Pipeline

3 Wastewater Treatment Plants

36 Sewer Lift Stations

8,516 Sewer Manholes

386 miles of Sewer Mains

ArcGIS 10.2 Enterprise GIS backbone

Field Mapplet mobile work order system used to create & complete work orders in the field

GIS or map centric approach in selecting features to create work orders.

Work order data stored in Mobile Work Order System database and can be pulled into CMMS.(Maximo is the District's official record of maintenance.)

Reports are written to account for work being done and can also be written to provide maintenance history on a particular feature.

Mobile Work Order System

The screenshot displays a mobile application interface for a work order system. The top section features a toolbar with various icons for navigation and data management, including 'Zoom In', 'Zoom Out', 'Pan', 'Back', 'Next', 'Clear', 'Flag View', 'Map', 'Identify', 'Street View', 'Open', 'Create', 'Delete', 'Sync', 'View Log', 'Cache', 'Rotate Left', and 'Rotate Right'. The main area is a map showing a residential or commercial area with utility lines (blue and red) and property boundaries. The map includes labels for streets like 'DUFFLAW' and 'MORNING STAR CANYON'. The bottom section contains a data table with columns for 'Name', 'Status', 'Staffer', 'Category', 'Date Created', 'Date Completed', 'Number of Assets', and 'Flag'. The table is currently empty.

Name	Status	Staffer	Category	Date Created	Date Completed	Number of Assets	Flag
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Water System Valves

Left Right

VT_AV: 20131024_1NAZXVC0

Name 20131024_1NAZXVC0 Flag (none)

Completed 0 / 2

Assets Tasks & Resources

1. VA-676 x 2. AR-20

OperationalStatus: Operational
Current Position: Open
of Turns:
Torque (lb-ft):

Last Date Turned: 10/24/2013
Extension: No
Depth To Nut:
Turn Direction to Close: Clockwise

Date Serviced: 10/24/2013

Comments

Attachments (0)

Attributes - WValves	
Name	Value
Drawing Number	2316
Diameter	6
Maximo ID	VA-676
Pressure Zone	1601
SUBS(2 is Butterfly Valv...	4
Exercise Date	9/2002

Navigation

Map

2316_Valves_2316.pdf

Show selected Document ...

Hide/Show Location Info

OK Cancel

Water System Air Vac

VT_AV: 20131024_1NAZXVC0

Name: 20131024_1NAZXVC0 Flag: (none)

Completed: 0 / 2

Assets | Tasks & Resources

1. VA-676 2. AR-20

Operational Status Operational	Date Serviced 10/24/2013	Service Type Routine	Can Material Type 	<input type="checkbox"/> Complete
Can Replaced <input type="checkbox"/> Yes <input type="checkbox"/> No	Body Replaced <input type="checkbox"/> Yes <input type="checkbox"/> No	Painted <input type="checkbox"/> Yes <input type="checkbox"/> No	Graffiti Removed NA	Attachments (0)
Above Ground <input type="checkbox"/> Yes <input type="checkbox"/> No	Flushed <input type="checkbox"/> Yes <input type="checkbox"/> No	Vent Screen Inspected/Replaced <input type="checkbox"/> Yes <input type="checkbox"/> No		

Comments

Additional Work is Needed?

Attributes - Air Release Valve	
Name	Value
Diameter	1
Maximo ID	AR-20
Drawing Number	2316
Pressure Zone	1601
Manufacturer	Apco

2316_AirVac_2316.pdf

Show selected Document ...

Navigation: e-Compass: 0°
Bearing: 0°
Distance: 0 ft

Map:

Hide/Show Location Info

OK Cancel

The Challenge

Field Maintenance Supervisor:

“This works great for system valves and air vacs, but what about valves and air vacs at facilities such as pump stations or reservoirs?”

How do we create or model yard piping drawings for a clustered asset in GIS and create work orders spatially in Field Mapplet?

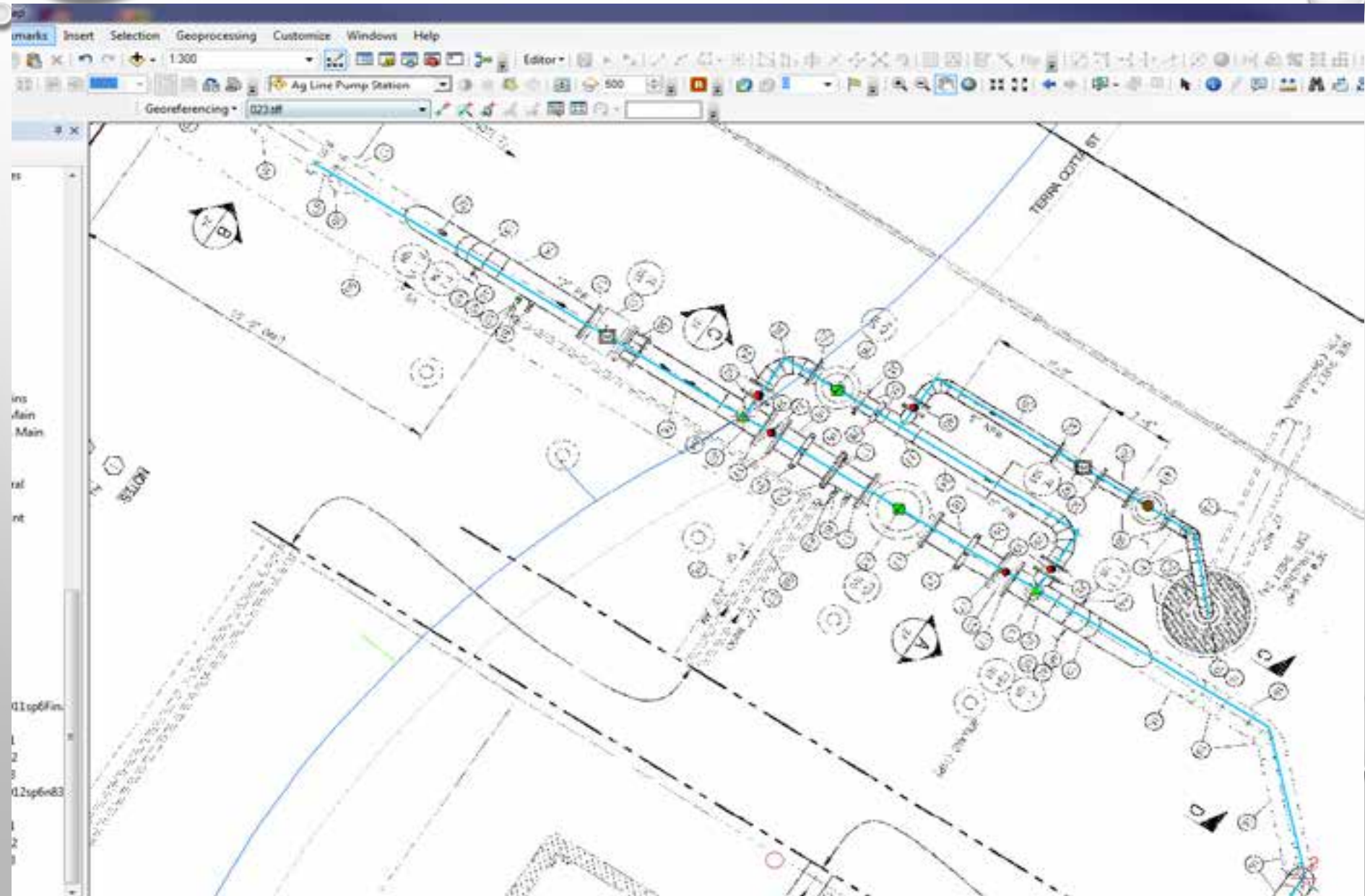
Yard Piping Feature Dataset

The screenshot shows the ArcCatalog interface with the following components:

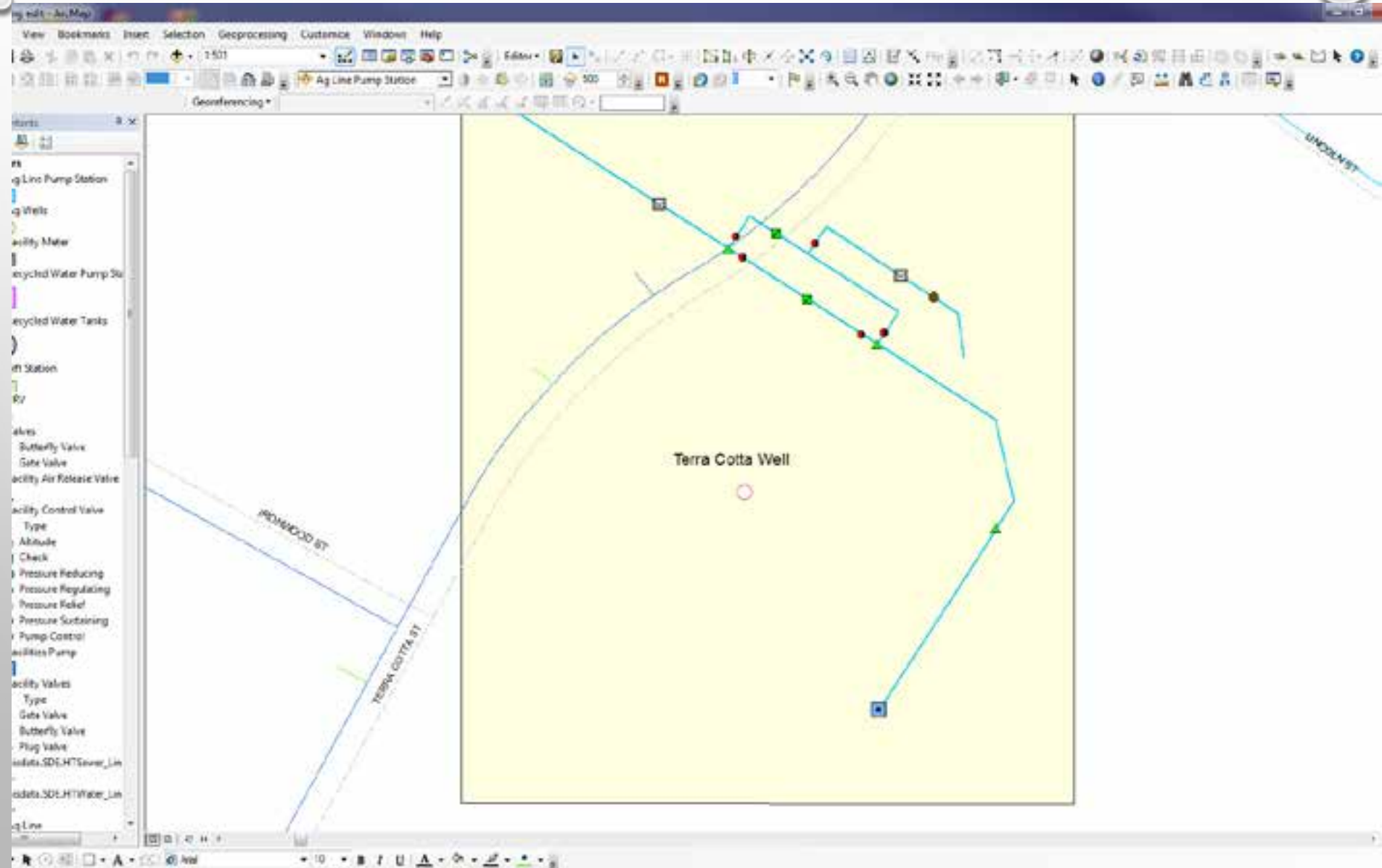
- File Name:** ArcCatalog - Database Connections\chewbacca.sde
- Menu Bar:** File, Edit, View, Go, Geoprocessing, Customize, Windows, Help
- Database Connections:** Database Connections\chewbacca.sde
- Catalog Tree:** A list of folders and feature datasets under 'gisdata.SDE'. The 'gisdata.SDE.Yard_Piping' folder is highlighted in yellow. Its sub-items are:
 - gisdata.SDE.FacilitiesExtent
 - gisdata.SDE.FARValve
 - gisdata.SDE.FControlValve
 - gisdata.SDE.FMtr
 - gisdata.SDE.FPipes
 - gisdata.SDE.FPump
 - gisdata.SDE.FValves
- Contents Pane:** A table listing the contents of the selected folder. The table has columns for 'Name' and 'Type'.

Name	Type
Aerial2007.SDE.Aerial	SDE Raster Catalog
gisdata.SDE.CanyonLakeWTP	SDE Feature Dataset
gisdata.SDE.ConstructionProjects	SDE Feature Dataset
gisdata.SDE.County	SDE Feature Dataset
gisdata.SDE.County_Water_Co...	SDE Feature Dataset
gisdata.SDE.DeveloperData	SDE Feature Dataset
gisdata.SDE.Endangered_Species	SDE Feature Dataset
gisdata.SDE.EngineeringData	SDE Feature Dataset
gisdata.SDE.EOC	SDE Feature Dataset
gisdata.SDE.EWD_Water_System	SDE Feature Dataset
gisdata.SDE.Facility_Layouts	SDE Feature Dataset
gisdata.SDE.FinanceLayers	SDE Feature Dataset
gisdata.SDE.Historical_Boundari...	SDE Feature Dataset
gisdata.SDE.HorsethiefWWTP	SDE Feature Dataset
gisdata.SDE.Irrigation	SDE Feature Dataset
gisdata.SDE.Lake_Aeration	SDE Feature Dataset
gisdata.SDE.Landbase	SDE Feature Dataset
gisdata.SDE.LEAPS	SDE Feature Dataset
gisdata.SDE.LosPinos2APumpSt...	SDE Feature Dataset
gisdata.SDE.NetworkPhoneSyst...	SDE Feature Dataset
gisdata.SDE.On_Site_Irrigation_...	SDE Feature Dataset
gisdata.SDE.OtherAgencydata	SDE Feature Dataset
gisdata.SDE.ProposedProjects	SDE Feature Dataset
gisdata.SDE.RailroadWWTP	SDE Feature Dataset
gisdata.SDE.Reclaimed	SDE Feature Dataset
gisdata.SDE.Regional_Plant	SDE Feature Dataset
gisdata.SDE.RetiredFeatures	SDE Feature Dataset

Creating Features in ArcGIS



Yard Piping Layout in ArcGIS



Attributes For Feature Dataset

End Point Arc Segment
Create a circular arc segment by placing the start and end points of the curve and defining a radius. Press R to enter a radius.

A-4 LS

RiverEdge Dh

Pumpower Dr

Attributes

- Facility Control Valve
 - Check
 - Check
- Facilities Pump
- Facility Valves
- Facility Pipes
 - m2764
 - m2764

OBJECTID	230
Type	Check
CatalogNum	<Null>
STKNum	<Null>
CodeNum	<Null>
Size	8
ConfinedSpace	<Null>
Facility	A-4 LS
MaximID	FCV-230
Parent	604
Status	Active
GlobalID	{DFE15328-7986-489F-8C94-C778211982...}

Domain Attributes

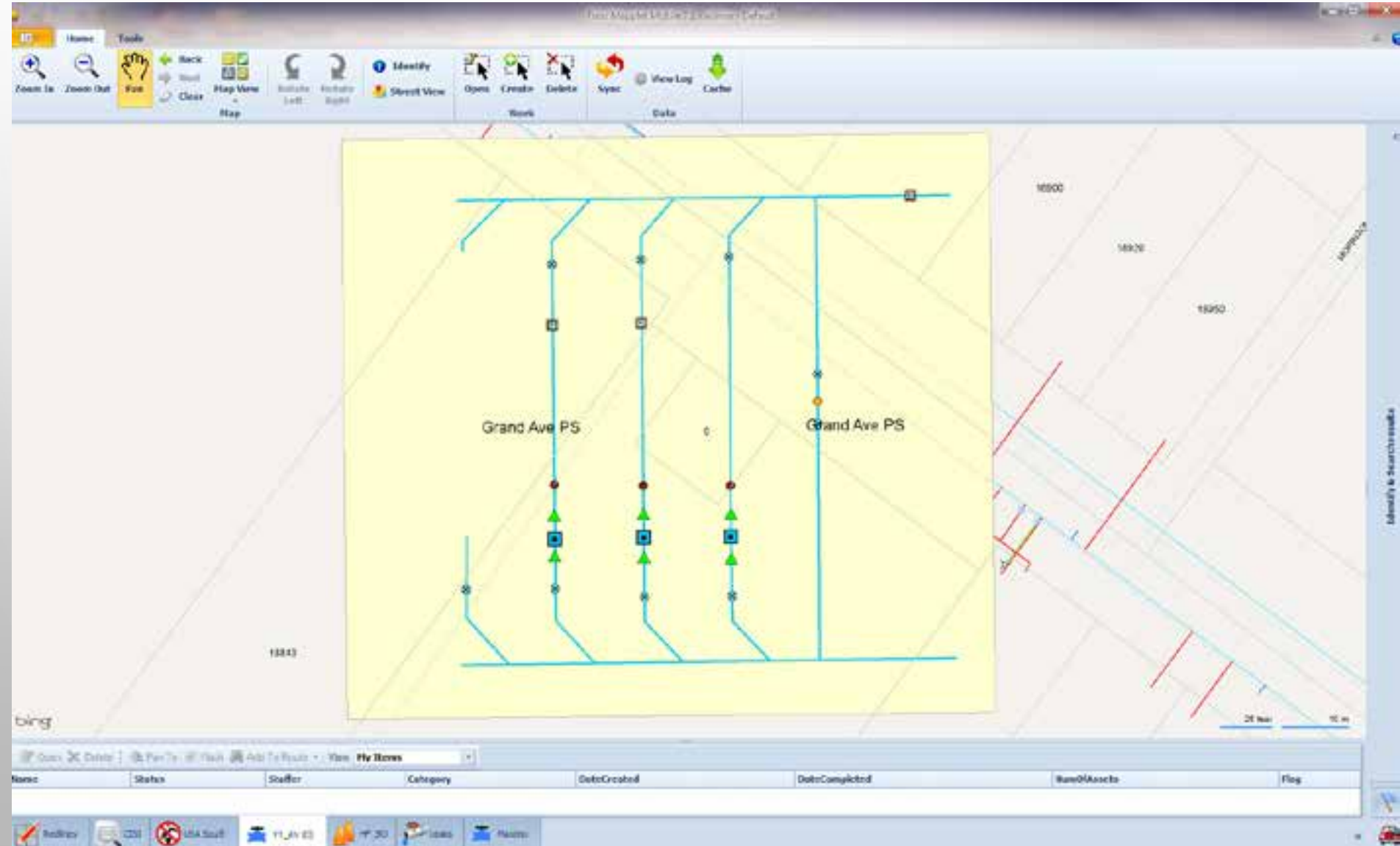
OBJECTID
Object ID
Null values not allowed

Pump Station Location in Field Mapper

The screenshot displays the Field Mapper software interface. The top menu bar includes 'Home' and 'Tools'. The 'Tools' menu is expanded, showing options like 'Back', 'Next', 'Flag View', 'Map', 'Identify', 'Street View', 'Open', 'Create', 'Delete', 'Sync', 'View Log', and 'Cache'. A tooltip for the 'Back' button is visible, stating 'Click to go back to the previous map extent.' The main map area shows a street grid with several red lines representing utility lines and a blue square with the number '5' indicating a pump station location. The map is overlaid on a Bing satellite-style background. The bottom of the screen shows a table with columns for 'Name', 'Status', 'Staffer', 'Category', 'DateCreated', 'DateCompleted', 'NumOfAssets', and 'Flag'. The Windows taskbar is visible at the very bottom.


Name	Status	Staffer	Category	DateCreated	DateCompleted	NumOfAssets	Flag
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Pump Station Yard Piping Layout



Yard Piping Facility Valve

VT_AV: 20131021_002GAERF

Name: 20131021_002GAERF Flag: (none) 

Completed: 0 / 2

Assets | Tasks & Resources

1. FAV-67 2. FVA-365 x

OperationalStatus: Operational
 Current Position: Open
 # of Turns:
 Torque (lb-ft): Complete


Last Date Turned: 10/21/2013
 Extension: No
 Depth To Nut:
 Turn Direction to Close: Clockwise Attachments (0)


Date Serviced: 10/21/2013

Comments:

Attributes - Facility Valves	
Name	Value
Diameter	12
Maximo ID	FVA-365
Drawing Number	m1881

Show selected Document ...

Navigation: 
 e-Compass: 0°
 Bearing: 0°
 Distance: 0 ft

Map: 
 Scale: 25 feet / 10 m

Hide/Show Location Info

Yard Piping Facility Air Vac

VT_AV: 20131021_002GAERF

Name 20131021_002GAERF

Flag

(none)

Completed 0 / 2

Assets Tasks & Resources

1. FAV-67 x 2. FVA-365

Operational Status

Operational

Date Serviced

10/21/2013

Service Type

Routine

Can Material Type

Complete

Can Replaced

Yes
 No

Body Replaced

Yes
 No

Painted

Yes
 No

Graffiti Removed

NA

Attachments (0)

Above Ground

Yes
 No

Flushed

Yes
 No

Vent Screen Inspected/Replaced

Yes
 No

Comments

Additional Work is Needed?

Attributes - Facility Air Release Valve

Name	Value
Diameter	.5
Maximo ID	FAV-67
Drawing Number	m1881
Pressure Zone	1434
Manufacturer	APCO

Navigation



e-Compass: 0°

Bearing: 0°

Distance: 0 ft

Map



Show selected Document ...

Hide/Show Location Info

OK

Cancel

QUESTIONS?

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