

Bringing ArcGIS Server to the Field

City of Woodland, CA



City of Woodland
TECHNOLOGY SERVICES



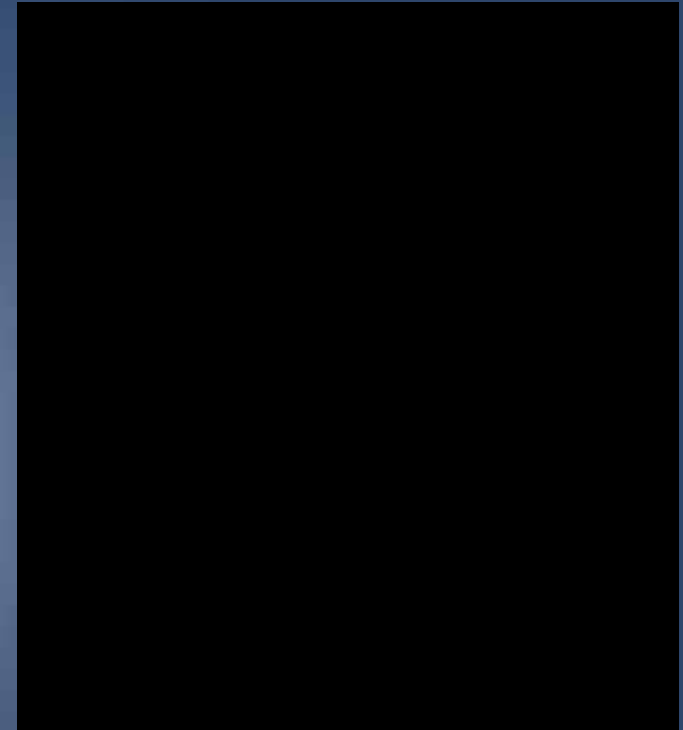
Technology Services Team

- § J Kimura, Senior Application Analyst
- § Danny Hewitt, GIS Analyst
- § Miguel Garcia, GIS Technician
- § Scott Grasso, Application Analyst



Woodland, CA

- § Settled in 1853
- § Incorporated 1871
- § Area 15 Sq. Mi.
- § Population 55,468
- § Home to Sacramento Valley Scottish
- § Notable natives: Charles Schwab,
Dustin Pedroia and Thomas Haden Church



Maintained GIS Layers

- § Full Service City!
- § Sewer, Storm, Water, Electrical, Parks, Trees, Waste Water, Signs, Parks, etc.
- § Parcels, Zoning, Land Use, Police & Fire, etc
- § Total of 280+ layers & 50 related Object tables residing in an ArcSDE geodatabase (10.1)



ArcGIS Server

§ Cityworks

§ customer since 2002

§ Geocortex Essentials

§ customer since 2010

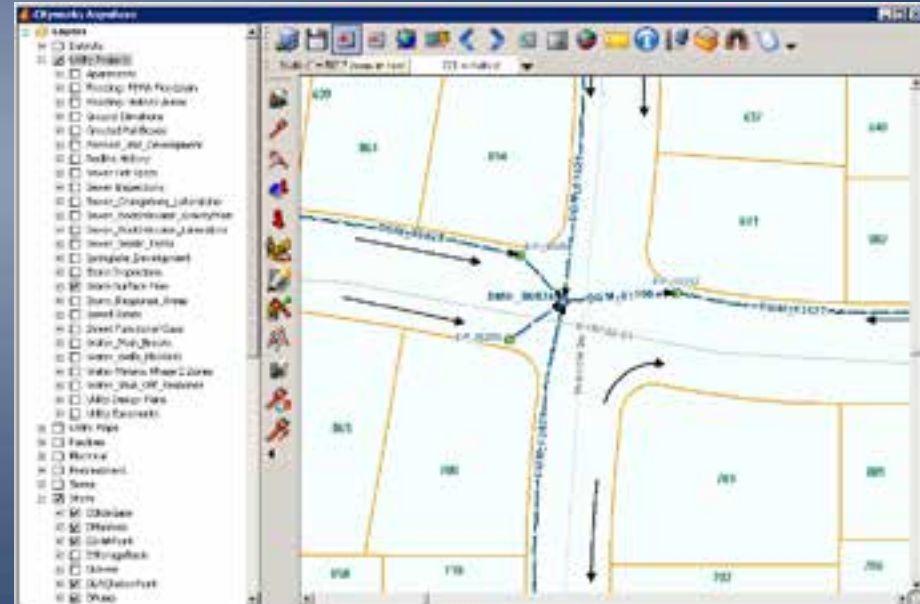
§ ArcGIS for Windows Mobile

§ using since 2012



Cityworks - Past

- § Paper, paper, paper...
- § Standalone
 - § Pre-GIS
- § Cityworks Anywhere
 - § ArcEngine, MXD based



Cityworks - Present

- § GIS, web based
- § Real time attribute edits
- § Redlines
- § Inspections
- § Embedded Crystal Reports



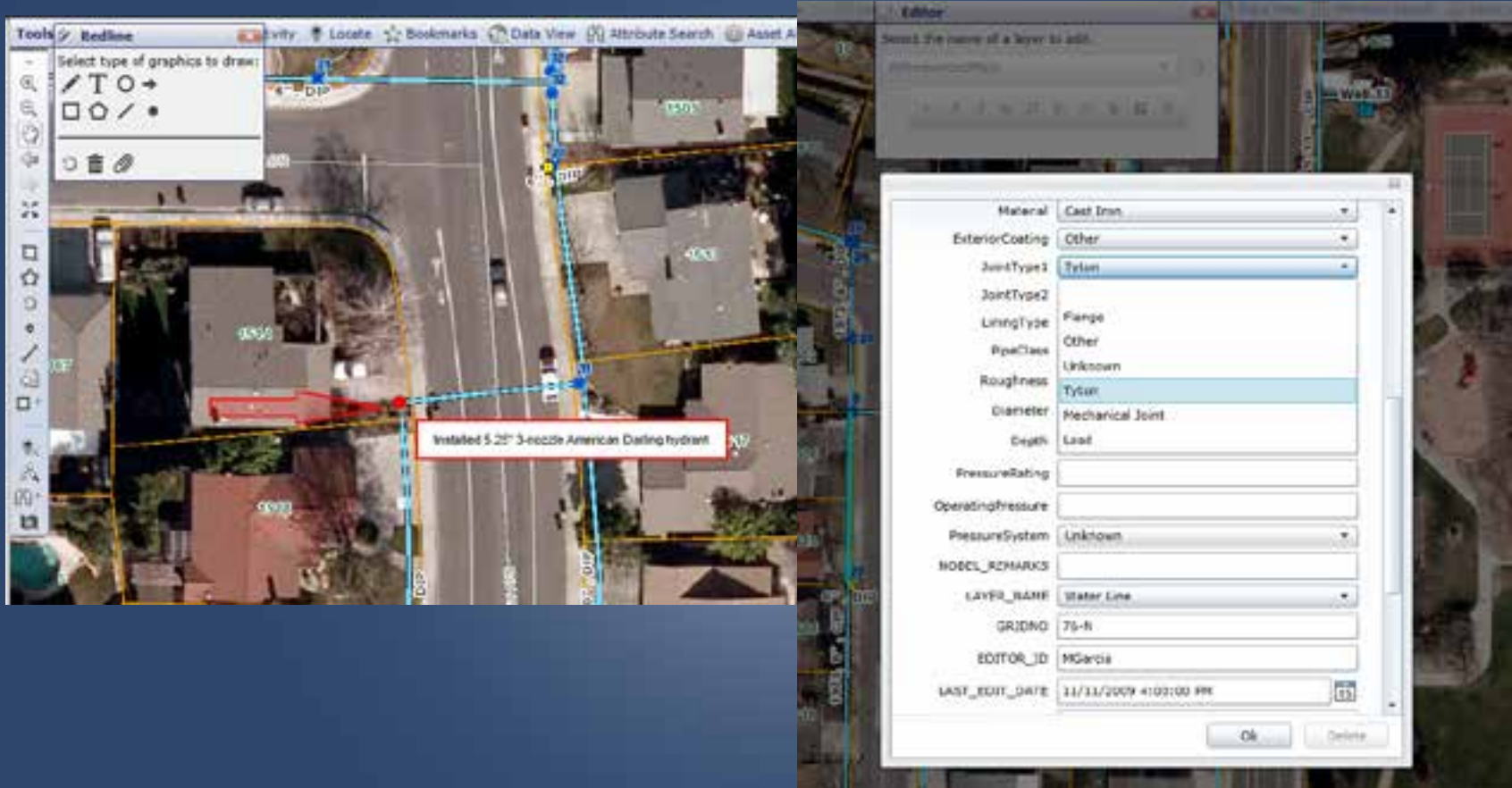
Track Work History & Inventory

The screenshot displays the Cityworks software interface, which is used for managing work orders and tracking work history and inventory. The interface is divided into several sections:

- Left Panel:** Contains navigation and status information, including "ALL EMERGENCY/URGENT IN LAST 72 HOURS", "Report Card", and "Weather" data.
- Top Panel:** Shows a list of work orders with columns for ID, Description, Priority, Category, and Status.
- Right Panel:** Displays a detailed view of a specific work order, including:
 - Work Order Details:** Description (Project Vandalism - RAC), Number (10000), Entry Type (WORKORDER), Category (Event Work), Status (Completed), Priority (HIGH), Submitted To (GIA W/ BSW), and Reported Date/Time (6/22/2014 12:00 AM).
 - Custom Fields:** A list of custom fields such as "REPORT WADT - REC/DAT", "AMOUNT HURT - RATIO/DAT", "HOURS OF SOMETHING", "RASON FOR COMING", "DID REASON OF REPORT", "DID REASON BY REPORT", "DID CLIP/PH", "DID/D3 REMOVE", and "WT OR SAKIS CL. YR".
 - Location Information:** Address (CITY LIGHTS), Location Details, File Path, Title Number, X Location (4,825 MT), and Y Location (3,800,476).
 - Activity Log:** A table showing activity with columns for Type, ID, Entry/Id, Feature Type, Feature ID, and Legacy.



Redlines & Real-Time Attribute Edits



Cityworks - Future

- § Complete rollout of AMS to all divisions
- § Create a robust PM workflow
- § Add Citizen engagement
- § Improve user experience through customization
 - § Primarily XML & JavaScript
- § Add other divisions
 - § Facilities, Water Treatment



Prior to Geocortex

- § Other vendors for parcel data
- § CAD owner of record of parcel data
- § Paper maps
- § Default Esri maps in Server 9.3
 - § Little customization
- § Limited to WebADF
 - § On it's way out

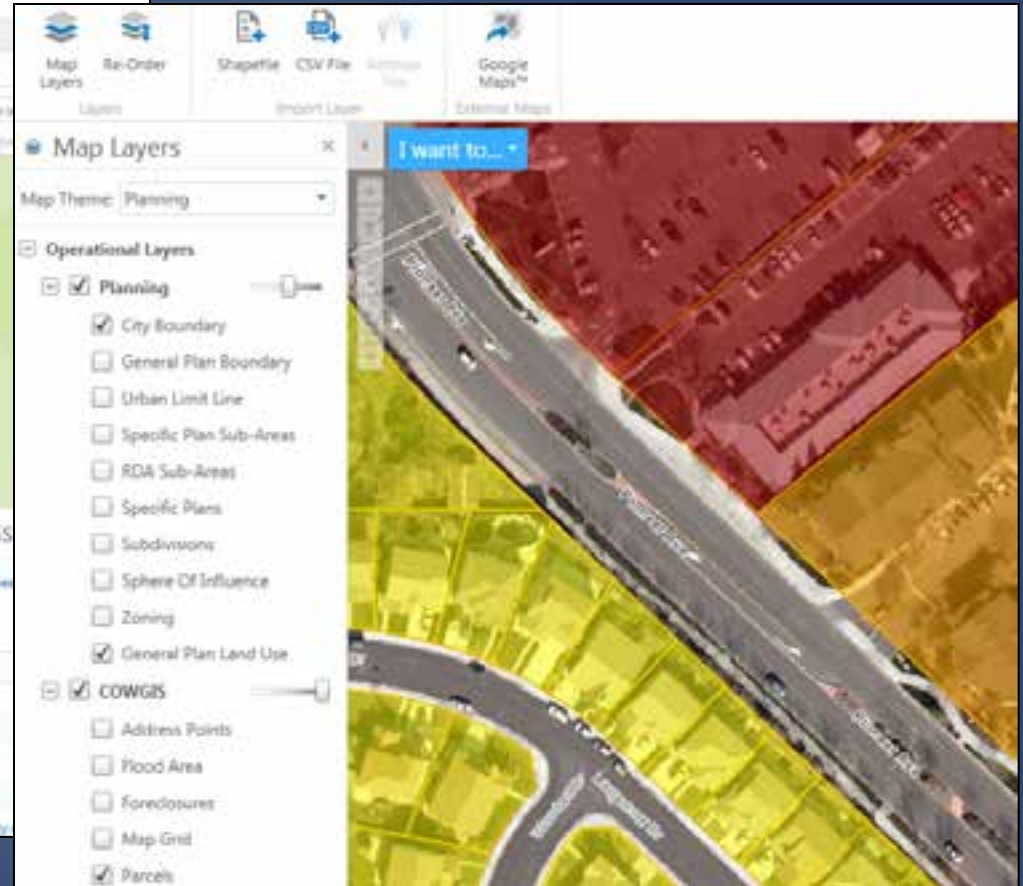
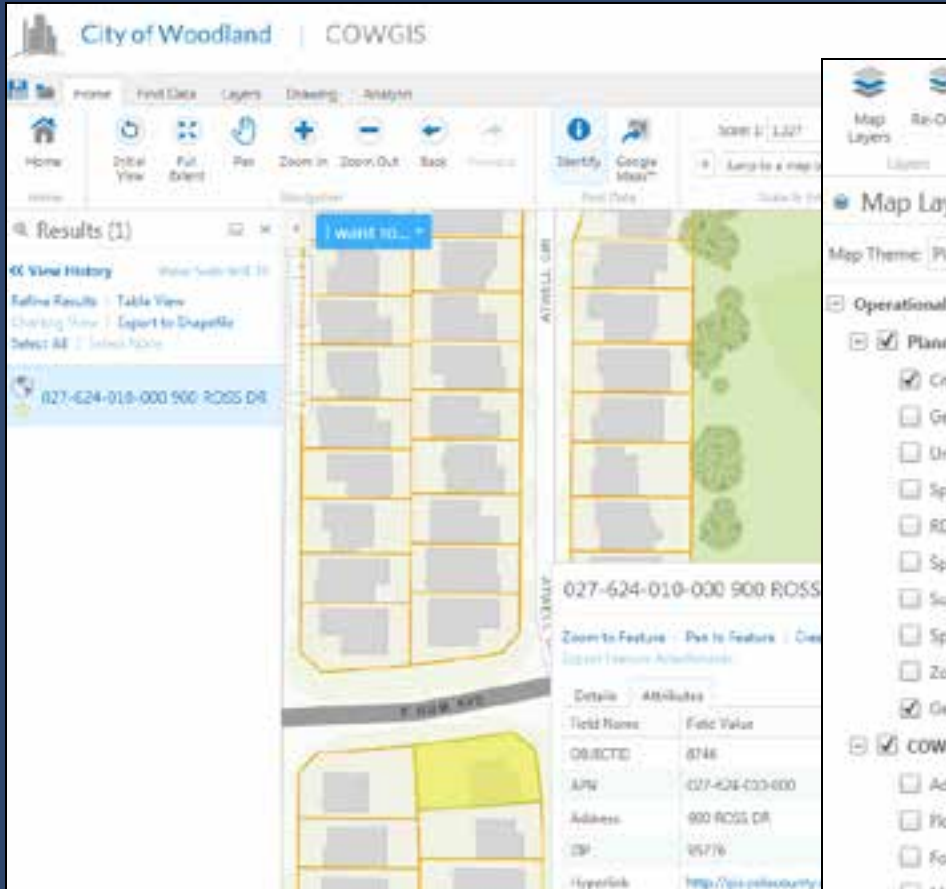


Geocortex - Present

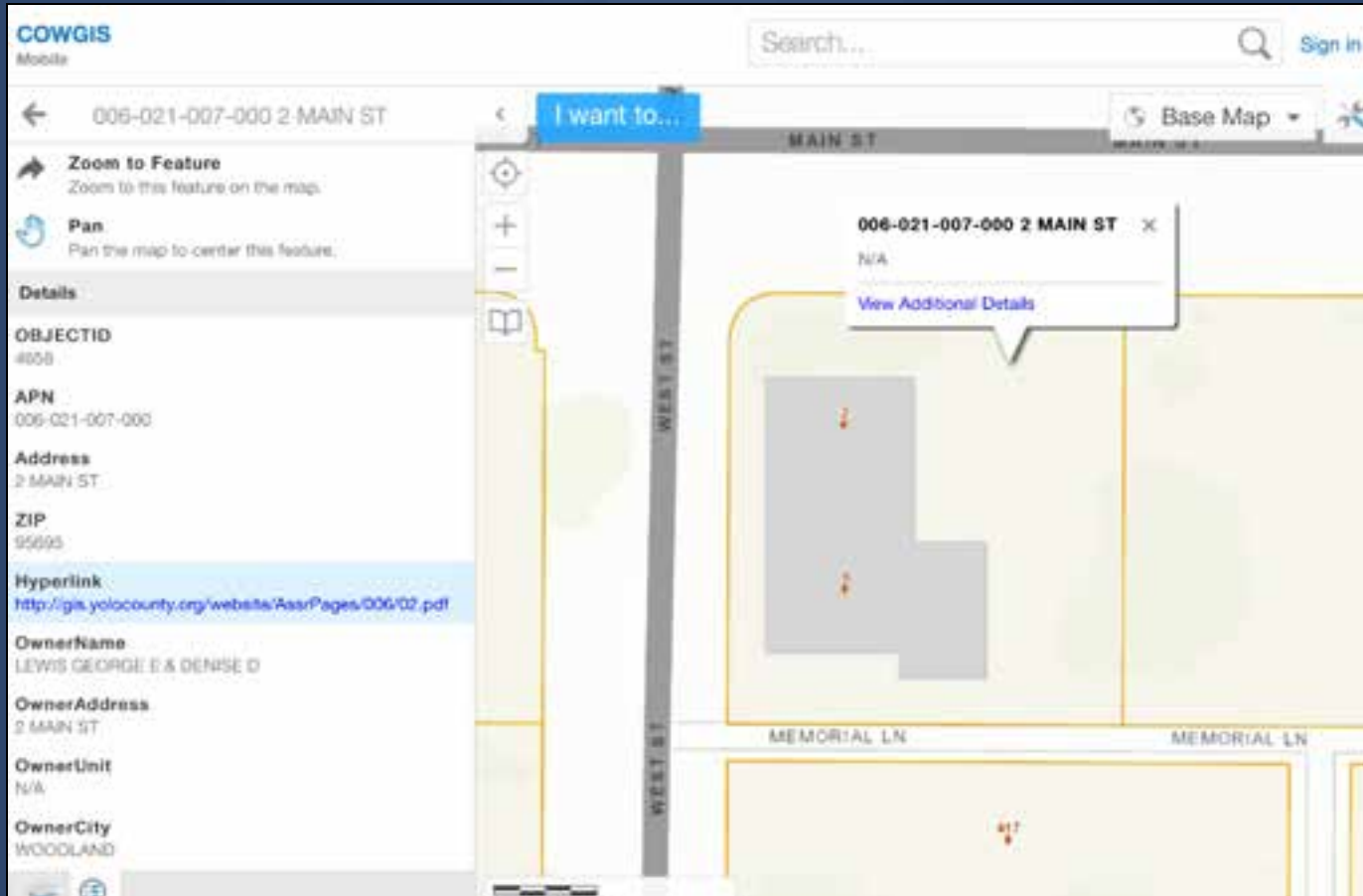
- § One site with different viewers
 - § Silverlight (office staff)
 - § HTML5 (tablets)
- § GIS owner of record for parcel data
- § Utilities GIS viewer
 - § For those not needing the functionality found in Cityworks



Parcel Viewer



Parcel Viewer - iPad



Geocortex - Future

- § Web editing
 - § Spatial & attribute edits
- § Add more customized sites
- § Integration with other systems
 - § Cityworks & CCTV program
 - § Permitting/Licensing
 - § Utility Billing
 - § Public Safety



Field Data Collection - Past

§ Trimble TCS2

- § Survey grade equipment

- § Lots of overhead time

§ ArcPad

- § seldom used, too much overhead



ArcGIS for Windows Mobile - Present

- § Trimble GeoXH 6000
- § Real time GPS corrections
- § Using to gather new features only
- § Sync with SDE database
 - § Either Default or a QC Version



ArcGIS for Windows Mobile - Setup

The image displays three overlapping screenshots from the ArcGIS for Windows Mobile setup process:

- Editing: SignsAndMarkings - Capabilities:** A configuration screen with a left-hand menu containing 'General', 'Parameters', 'Capabilities' (highlighted), 'Pooling', 'Processes', 'Caching', and 'Item Description'. The main area is titled 'Select and configure capabilities' and includes a 'Mapping (always enabled)' checkbox, and several unchecked checkboxes for 'WMS', 'Schematics', 'Network Analysis', and 'WFS'. A 'Mapping Configuration' section and 'URLS' are partially visible at the bottom.
- Map Layers:** A screenshot of the 'Map' pane with a menu bar (File, Project, Tools, Help). It shows 'Add' and 'Remove' buttons, 'Operational Layers' with 'Cleanouts' and 'Cleanout' checked, and 'Basemap Layers'.
- GPS Collection Settings:** A dialog box with the following settings:
 - GPS Quality Filter:
 - Required Fix Type: Float Real Time Kinematic
 - Maximum PDOP: 4
 - Allow client to change
 - GPS Streaming Settings:
 - Streaming Mode: Time



ArcGIS for Windows Mobile - Field

The image displays three overlapping screenshots of the ArcGIS for Windows Mobile Field application interface. The background screenshot is the 'GPS Controller' screen, which shows a skyplot of satellite signals, current coordinates (38°40'28.453"N, 121°46'02.634"W), HAE (-9.64m), and PDOP (2.09). It also displays GNSS settings: Max PDOP = 9, Min SNR = 1, and Min Elevation = 5°. The middle screenshot is the 'Task List' screen, which is titled 'No Fix' and lists several actions: 'Collect Features' (Add new features), 'Search' (Search for features), 'View Work List' (View and manage the work list), 'Manage Edits' (View and manage local updates), and 'Synchronize' (Synchronize changes back to the ...). The bottom screenshot is the 'Collect Feature' screen, which is titled 'GPS' and shows a form for data entry. The form includes fields for 'Location' (Capturing GPS Position, Tap to Cancel), 'FacilityID' (<Invalid Value>), 'Sign Type' (Stop), and 'SignCode' (Bike Lane). The bottom of the screen features a navigation bar with 'Cancel' and 'Save' buttons.



ArcGIS for Windows Mobile - Future

- § Collect data in our local projection
 - § Avoids having to re-project data
 - § Virtually eliminates any post-processing
- § Improve data already in SDE
- § Upgrade to Trimble TSC3
 - § Real-time syncing with Trimble AccessSync



Other Future Applications

- § Police & Fire RMS
 - § AVL
 - § Emergency Operations
- § Building inspections
- § Public facing
 - § ArcGIS Online



Q & A

§ Questions?

§ Thank you for your time!

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