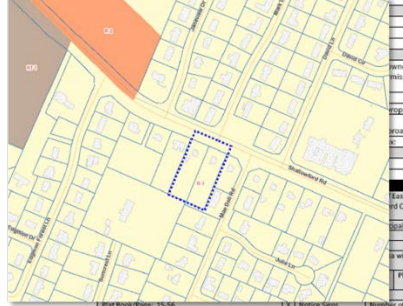




Chattanooga-Hamilton County, TN RPA Integrated Zoning Solution

May 3, 2016

Chattanooga-Hamilton County Regional Planning Agency
ZONING APPLICATION FORM

CASE NUMBER:	2014-139	Date Submitted:	10/27/2014
<small>(Sections 1-6 below to be filled out by Applicant. RPA staff will assist, if needed)</small>			
1 Applicant Request			
Zoning		From: R-1	To: C-2
Total Acres in request area: 1.45 Acres			
2 Property Information			
Property Address:		6514 and 6518 Shallowford Road	
Property Tax Map Number(s):		148C-A-054 and 148C-A-055	
3 Proposed Development			
Reason for Request and/or		Construct Commercial Retail Store	
			
If the RPA Division to file this			
property owner			
roadwaygroup.net			
East Branch of Community Action			
City			
with dimensions			
Plans, if applicable			
Filing Fee: \$635.00		Cash	
X Filing Fee: \$635.00		X Check	
Planning Commission meeting date: 12-8-2014		Application processed by: Trevor Stanton	

About the Presenter



- ▶ Kevin Heeney
- ▶ Application Development Manager – Nashville
- ▶ Technical lead on Project
- ▶ Hobbies: Music, house and yard projects



Project Workflow Understanding



Chattanooga-Hamilton County RPA manages zoning and permit information, comprised of both spatial and non-spatial data, for participating municipalities within Hamilton County

- ▶ Spatial and non-spatial data
- ▶ Legacy data: SDE, loose files
- ▶ Accept Applications by hand
- ▶ Everything becomes a Case
- ▶ All work performed by RPA Staff



Project Objective



Develop a solution that makes access and management of zoning/permit datasets and applications more efficient and intuitive for all stakeholders.



- ▶ Streamline Application Process
- ▶ Improve Stakeholder Input
- ▶ Enhance Workflow Management
- ▶ Improve Reporting Capabilities
- ▶ Migrate Legacy Data

Web Application vs Desktop Add-In



Deciding between a JavaScript driven web-application and a desktop Add-In was critical in the early planning phases. Reasons for going web:

- ▶ Easier to deploy updates
- ▶ Ensure all users are using the same version
- ▶ Better control over what users can edit what data
- ▶ System is internal FOR NOW; long-term plans for allowing applicants to use system
- ▶ Simplified Workflow – only the tools needed



Why?



A modern system needed to be developed to replace the aging (non-ArcGIS based) windows desktop system.

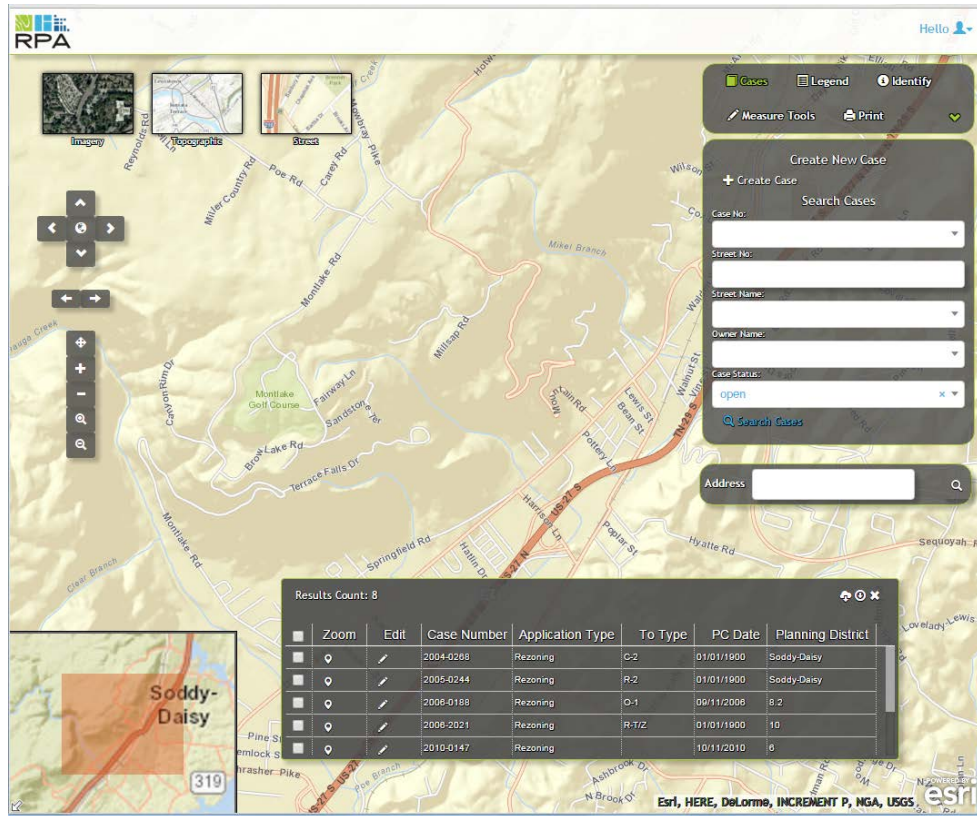


- ▶ Existing System - Client/Server
- ▶ Performance/Slow
- ▶ No longer maintained
- ▶ Windows based File Management
- ▶ No auditing of changes

Solution Overview



A modern web-application built using the latest industry technologies



- ▶ HTML5
- ▶ ESRI JavaScript API
- ▶ No installation required
- ▶ Custom Search capabilities
- ▶ Export Excel/Shapefile
- ▶ Overview map
- ▶ Bootstrap
- ▶ ASP.NET MVC 5
- ▶ SQL Server 2012
- ▶ ArcGIS Server 10.3.1

Intermission - Dwarf Donkeys



Create Cases



Create Case form allows for six different types of applications, data validation and lookups for data integrity

The screenshot shows the "Create Case" form with a "Find Property" dialog box open. The "Find Property" dialog box has a "Search By:" section with radio buttons for "Parcel Number", "Owner Name", and "Street". The "Search For:" field contains "Main St". Below this is a table with the following data:

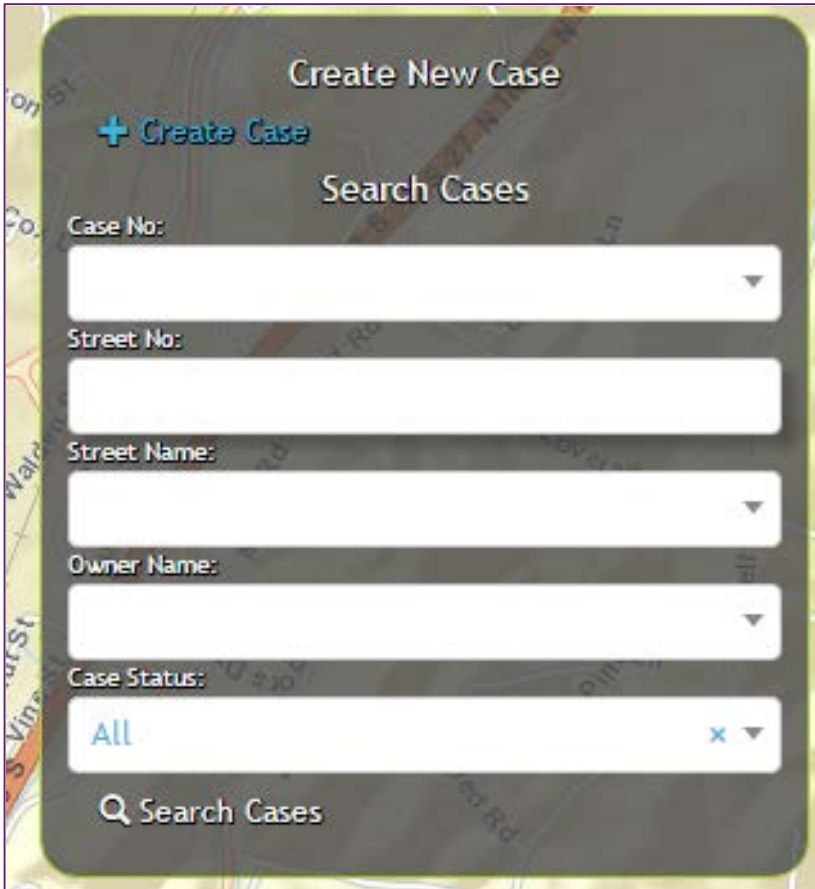
IUM	GISLINK	OWNERNAME1	OWNERNAME2
00P000	033145F B 00200	J & C LLC	
00P000	033145F C 00900	SOUTH BROAD FUELIN...	
00P000	033145K J 00400	MELENDEZ ALFONSO F...	
00P000	033145K J 00600	BEENE MARGARET	
00P000	033145K F 00300	HAMILTON CO & CHATT...	

The "Create Case" form in the background includes fields for "Case Number", "Applicant Info", "Case Info", "Impacted Properties" (with a "Parcels:" section), "From Zone Type", "To Zone Type", "County District", "Planning District", and "Neighborhood". There are "Cancel" and "Add Selected" buttons at the bottom of the dialog box.

- ▶ Search for and select one or more impacted parcels
- ▶ Select from existing or add new applicants
- ▶ Data Validation and drop downs as needed
- ▶ Data auto-populated based on Parcel (such as Planning District)

Case Search

Custom Case Search with Search as-you-type dropdowns



Create New Case

+ Create Case

Search Cases

Case No:

Street No:

Street Name:

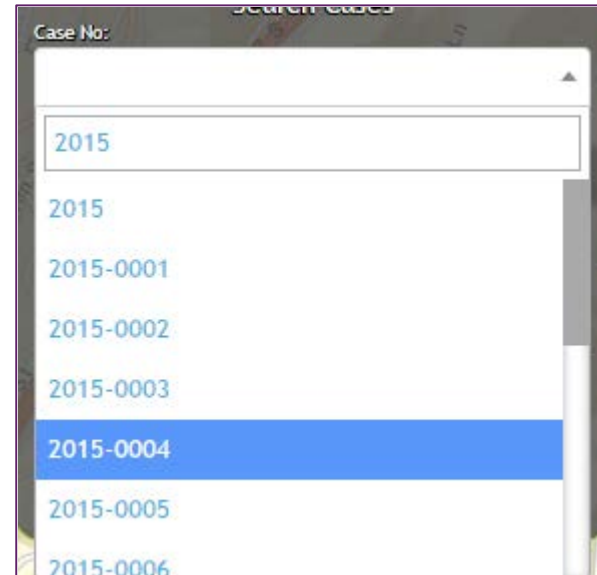
Owner Name:

Case Status:

All

Search Cases

- Specific to project data
- Search as you type dropdowns
- Wildcard search



Case No:

2015

2015-0001

2015-0002

2015-0003

2015-0004

2015-0005

2015-0006

Case Recommendations



Various entities may comment, approve or reject changes in a case through the approval process.

	Case ID	Type	Action	Recommendation	
➔	1999-0239	Applicant			
➔	1999-0239	Staff ▼	Approved ▼		ENTER ZONING
➔	1999-0239	PC ▼	Approved ▼	A	
➔	1999-0239	GOVT ▼	Approved ▼	A	1998-1999 OI

- ▶ View each party's comments
- ▶ View Spatial edits through process
- ▶ Close case once approved

Case Workflows



As a case goes through the approval process, different users have different roles along the way. Once a case is opened by RPA, it must go through Mapping, Planning Commission, Government Approval and Closing. Users may pass the case on to the next or previous entity as needed.

- ▶ Assign to next entity with approval or previous with rejection
- ▶ Email notifications inform users of needed actions
- ▶ A dashboard shows a queue (to-do-list) for specific users.

A screenshot of a 'Submit Case' dialog box. The dialog has a dark background with a yellow border. At the top, there are two checkboxes: 'Site Plan Included' and 'Deeds Received'. Below these is the title 'Submit Case'. Underneath is the label 'Send notification to:' followed by a white dropdown menu currently showing '-None-'. At the bottom right of the dialog are 'Yes' and 'No' buttons. The background of the application window shows a map with a red line and the text 'Stown Rd'.

Document/File Management



The previous system used Windows based file system management; the new system uses secure, permissions based access to upload and download files associated with a case.

Documents

2015-0004 Aerial Map.jpg --- Aerial Map	⬇	✕
2015-0004 Landscape Zoning Map.pdf --- Landscape Zoning Map	⬇	✕
2015-0004 Application.pdf --- Application	⬇	✕
2015-0004 PC Map.pdf --- PC Map	⬇	✕

File To Attach:

Choose File

2015-0004 PC Map.pdf

Description of File:

PC Map

Attach File

Case Spatial Editing

A specific set of spatial editing tools have been identified for editing zoning polygons.

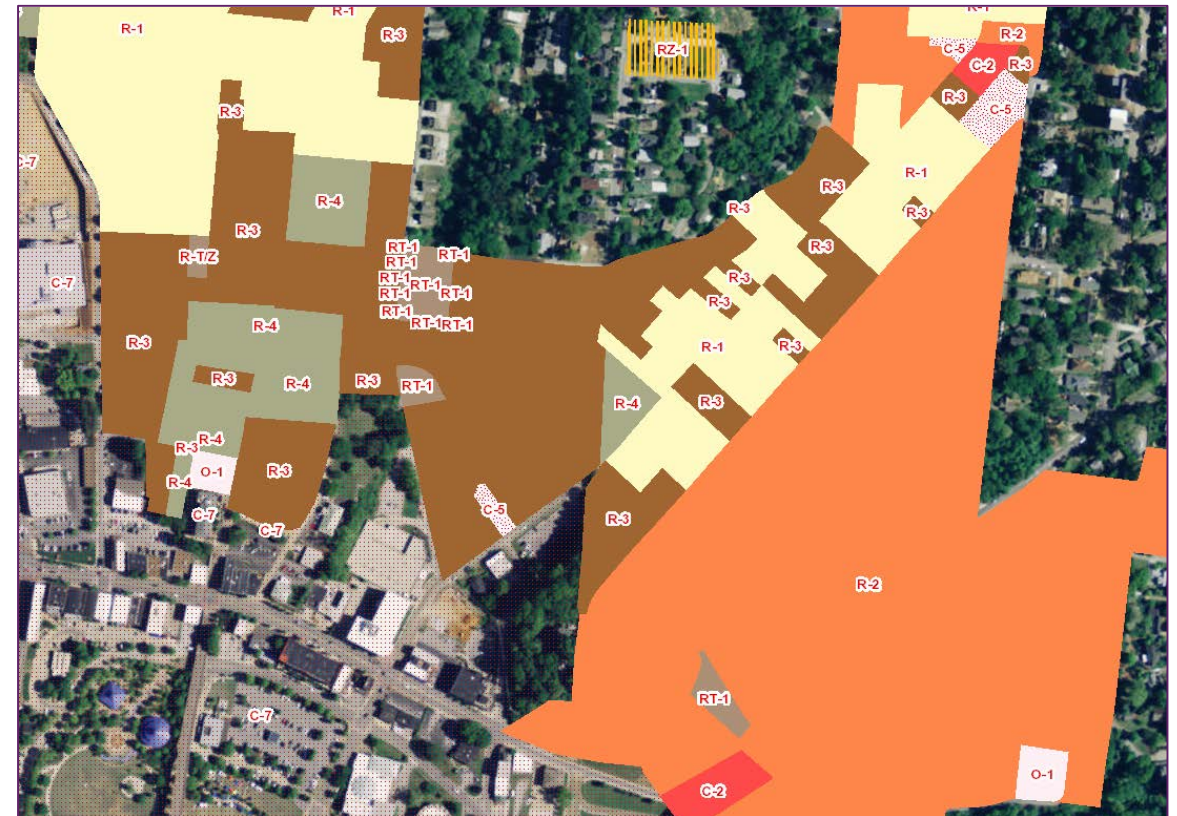
- ▶ Reshape
- ▶ Cut
- ▶ Merge
- ▶ Fill to feature (e.g. roads)
- ▶ Edit Vertices
- ▶ Snapping
- ▶ Delete
- ▶ New Polygon



Auto-update Zoning Layer

Once a Case is approved and closed, the county-wide zoning layer is auto-updated with the recommended changes for the case.

- ▶ Case Geometries are clipped from the zoning layer
- ▶ Case Geometries are merged into the zoning layer
- ▶ The zoning layer is dissolved without multi-part based on zone-type and other attributes



All changes are tracked to understand who changed what, when and why

	UserAudit_ID	AuditTy...	AuditTime	User_ID	UserName
1	1	Insert	2016-03-03 15:59:31.510	1	LoginDummy
2	2	Insert	2016-03-03 15:59:31.543	2	SysAdmin
3	3	Update	2016-03-03 16:00:50.017	2	SysAdmin
4	4	Update	2016-03-03 16:01:06.193	2	SysAdmin
5	5	Insert	2016-03-03 16:28:12.817	3	bob
6	6	Update	2016-03-03 16:29:42.653	3	bob
7	7	Insert	2016-03-08 11:22:44.053	4	bob
8	8	Update	2016-03-08 11:22:58.370	4	bobby
9	9	Update	2016-03-08 12:10:50.113	4	bobby
10	10	Update	2016-03-08 12:11:16.570	4	bobby
11	11	Update	2016-03-08 12:14:51.150	4	bobby
12	12	Update	2016-03-08 12:15:02.923	4	bobby
13	13	Delete	2016-03-08 12:24:14.200	3	bob

- ▶ Record of change before and after
- ▶ Datetime stamp of change
- ▶ User who made the change
- ▶ Both spatial and non-spatial data

Future Enhancements

The current system, as designed, is internal to Hamilton County and Chattanooga; however potential expansion of the system to an extranet has been discussed.

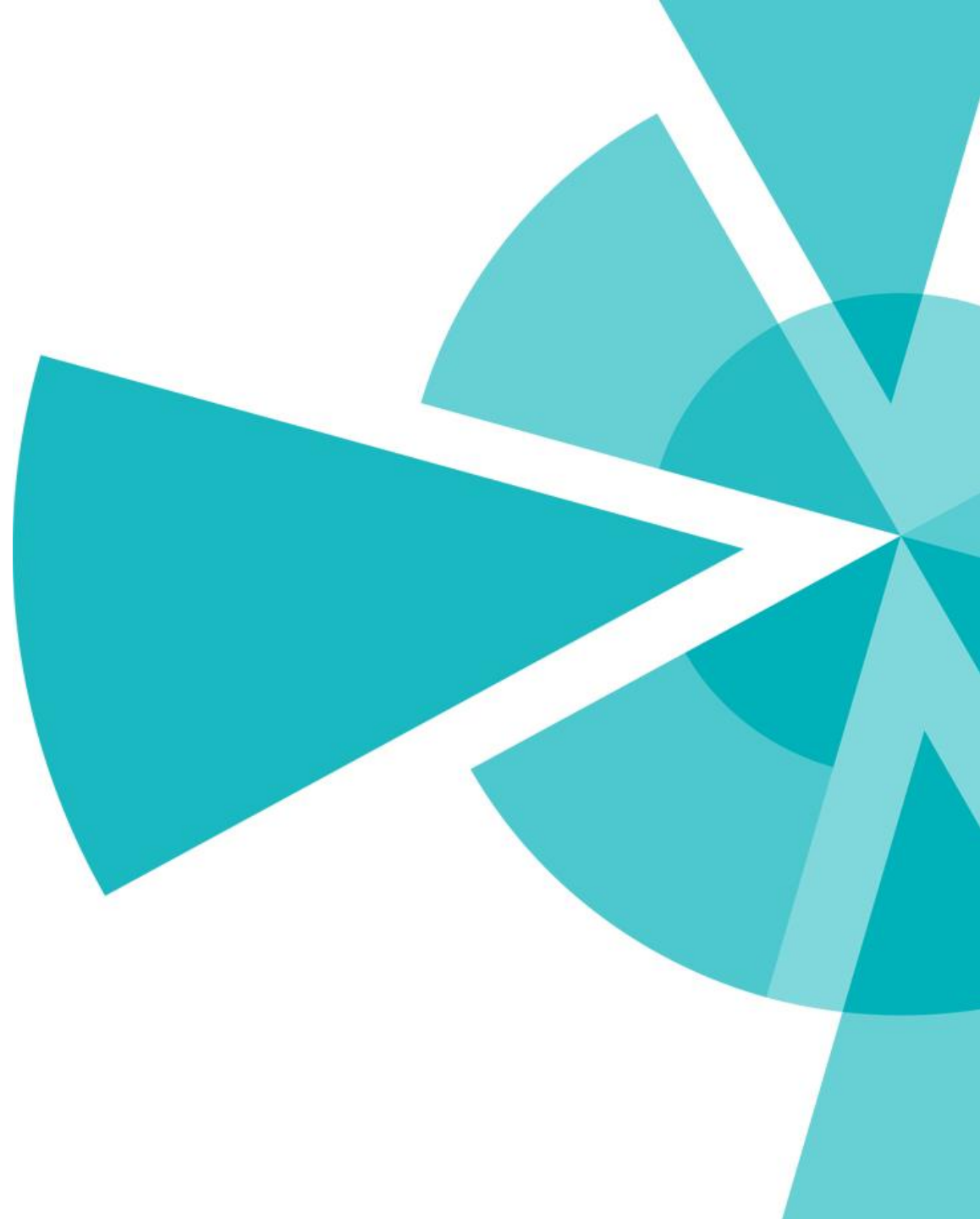
- ▶ Applications completed online
- ▶ Applicant can view status or be notified with questions or changes to their case
- ▶ Community may supply feedback or be notified of zoning changes in their area.
- ▶ Mobile Field collection of property photos



Questions?

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Project Approach

