

# URISA Exemplary Systems In Government (ESIG) Award Application

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The Urban and Regional Information Systems Association (URISA) Exemplary Systems In Government (ESIG) Awards recognize exceptional achievements in the application of geospatial information technology that have improved the delivery and quality of government services.

## A. System

### **1. Name of system and ESIG™ category for which you are applying (Enterprise System or Single Process System)**

Single Process System - “Show Me My House” for Snow Ordinance Searches

### **2. A letter from the executive administrator authorizing submission of the system application (letters must be signed and scanned)**

See Appendix A.

### **3. One (1) page, or less, summary of what the system accomplishes and why it is exemplary**

Since 2009, the City of Des Moines has provided the Show Me My House website as a “one stop shop” for residents to look up information about City services that apply to their particular location. In 2012, the City Council enacted major changes to residential parking during snow removal. At that time, Show Me My House was enhanced to allow residents an easy way to look up which snow ordinance parking restrictions apply for any given address in Des Moines.

The application is exemplary because it is citizen-centric, uses enterprise GIS data and technology, and provides operational benefits for City staff. (1) Show Me My House greatly simplifies the residents’ search for information by making the results location-specific. The user does not have to understand the City-wide snow ordinance but only has to enter an address and the applicable parking restrictions for that specific location are displayed. (2) The application uses enterprise GIS data and geoprocessing to produce the results, but the user does not have to know how to read a map or use web-based GIS. (3) The site is also used by City staff to respond to questions and complaints about parking tickets issued during snow removal. Customer service staff can quickly look up the parking restrictions for a location when assisting a resident.

### **4. Three “user testimonials”. These testimonials should include the title of the system, the person’s name, job title (if relevant), a statement of what specific ways the system improves their work and/or the work of their organization, and how frequently they use the system (testimonials may be signed and scanned).**

See Appendix B.

## **B. Jurisdiction**

### **1. Name of jurisdiction**

City of Des Moines, Iowa

### **2. Population served by the organization/agency**

204,220 (as determined by 2010 Census Count Question Resolution)

### **3. Annual total budget for jurisdiction**

\$590,000,000 (General Fund for FY2013)

### **4. Name, title, and address of chief elected and/or appointed official**

Honorable Mayor T. M. Franklin Cownie  
400 Robert D. Ray Drive  
Des Moines, Iowa 50309

### **5. Name, title, address, telephone, FAX, and email for contact person for system**

Anna Whipple, GIS Manager  
602 Robert D. Ray Drive  
Des Moines, Iowa 50309  
Phone: (515) 283-4712  
Fax: (515) 237-1775

## **C. System Design**

### **1. What motivated the system development?**

In 2012, the City of Des Moines enacted changes to its snow removal program. To be able to clear streets more efficiently, the City invested in larger plows and changed its policy to begin plowing residential streets after 2 inches of snowfall rather than the previous policy of 4 inches. The City also changed its snow removal parking ordinance to allow for the increased level of service. The new ordinance prohibits parking on all residential streets during snow removal operations except in specific neighborhoods with limited off-street parking. For help communicating this change to residents, the Public Works Department turned to the IT Department's GIS Division. As a result, IT/GIS enhanced the existing "Show Me My House" website to enable residents to lookup which snow ordinance parking restrictions apply for their location and see snow routes mapped.

### **2. What specific service or services was the system intended to improve?**

Since 2009, the City has provided Show Me My House as a single online resource for residents to look up information about City services that apply to their particular location. This sophisticated site uses GIS to compile rich location-based information for residents but is elegant and simple for them to use. It does not require users to know how to use GIS or even how to read a map. Users simply enter the address for their home or place of interest. As they type, they are immediately shown a list of valid Des Moines addresses to choose from. They are presented with a report detailing information such as garbage and recycling pick up days, zoning, and city council and neighborhood representation for that address. They also see an aerial photo of the property and can link to property assessment and zip code data. Prior to Show Me My House, the City had no way to provide residents all of this information in one place.

Because the snow ordinance parking restrictions enacted in 2012 vary based on location, Show Me My House provides a simple way for residents to find out what restrictions apply for their location.

### **3. What, if any, unexpected benefits did you achieve?**

In the winter of 2012-2013, the City began enforcing the new snow ordinance and ticketing vehicles parked on residential streets. On approximately 970 miles of streets, parking would no longer be allowed during snow removal. On another 40 miles of residential streets, parking would be allowed on alternating sides of the street depending on the calendar date. Additionally, parking would continue to be prohibited on snow routes. Following a grace period allowing drivers to become accustomed to the changes, parking tickets were issued which generated hundreds of phone calls to the City Clerk's Office. Show Me My House became a resource to City staff as well as the public to quickly look up whether a location was on a snow route or subject to a residential street parking restriction. The City Clerk's Office was able to respond to residents' questions immediately and accurately.

### **4. What system design problems were encountered?**

The new snow ordinance was a significant change for City operations and the people of Des Moines. It was done in response to citizen feedback about winter road conditions and a desire to see streets cleared more quickly. Public Works prepared the community for the change by piloting the residential snow removal program in certain neighborhoods a year in advance and using every communication outlet available, including meeting directly with neighbors, while developing the ordinance. Also, the GIS functionality of Show Me My House was already built and available online for looking up garbage pick up days and other City services. Thus, the snow ordinance functionality was built into Show Me My House well before the first snowfall in 2012, and no major design problems were encountered.

### **5. What differentiates this system from other similar systems?**

Previously, the City relied on static maps of snow routes and street signage to communicate parking restrictions. Show Me My House gives anyone with internet access the ability to look up snow removal parking restrictions for any address in Des Moines whether it is their home, business, or other location of interest. Show Me My House differs from other GIS applications in that the user does not have to know how to read a map or operate an interactive map application. The user simply begins typing an address, which then auto-completes from a list of valid Des Moines addresses. The geoprocessing task of intersecting the address point with multiple polygon layers for parcels, wards, neighborhoods, zoning districts, garbage/recycling routes, snow districts, etc. is hidden from the user. The user then receives a thumbnail map and report of applicable services, contacts, and ordinances for their address.

## **D. Implementation**

### **1. What phases did you go through in developing the system?**

The initial development of Show Me My House was completed in 2009 in conjunction with an overall redesign of the City website. The phases were:

- Implement an enterprise geodatabase on SQL Server
- Implement ArcGIS Server on an IIS web server
- Convert or create GIS data for the enterprise geodatabase including addresses, parcels, wards, neighborhoods, and zoning, garbage/recycling routes
- Create and test web map services, address locators, and geoprocessing services in ArcGIS Server
- Design, build, and test address lookup and Show Me My House report using JavaScript and ASP.NET forms
- Release Show Me My House in conjunction with release of new City website

## **2. Were there any modifications to the original system design? Why? What?**

Over time, more information has been added to the original Show Me My House design. The geoprocessing services and report now also return permit inspection contacts, census geography, snow routes, and snow ordinance parking restrictions. Except for ArcGIS Server upgrades and minor “back end” code changes to make the site more efficient, the original system design has largely remained the same.

## **E. Organizational Impact**

### **1. What user community does the system serve and how?**

Show Me My House serves residents of Des Moines by providing a “one stop shop” for information on a variety of City services based on location. Specifically, the enhancement to Show Me My House to identify and describe snow ordinance parking restrictions makes it easier for residents to find out whether they can park at a particular location during snow removal operations. It takes a complex and significant policy change and simplifies the search for information by making it location-specific. The user can find out how the policy applies specifically to their location without having to read a map or contact the City. Likewise, Show Me My House serves City staff across multiple departments who need to look up information pertaining to a given address. It particularly helps the City Clerk’s Office process complaints or questions about snow ordinance parking tickets.

### **2. What are the ultimate decisions/operations/services being affected? If appropriate, provide a few examples including, but not limited to: screen input/output forms, paper products, or other descriptive graphics.**

For City Clerk’s staff, Show Me My House is being used to accurately respond to resident questions or complaints regarding parking tickets issued during snow removal.

The Show Me My House website can be found at <http://arcgis.dmgov.org/EXTmapcenter/AddressLookUp.aspx>. Screenshots of the user interface and output are also in Appendix C.

### **3. What were the quantitative and qualitative impacts of the system?**

The qualitative impacts are better communication with the public regarding the snow ordinance change and more responsive customer service when residents contact the City Clerk’s Office with questions or complaints about parking tickets issued during snow removal. The impacts are demonstrated in the number of visitors to the Show Me My House website that consistently peak on the day of and immediately following a snowstorm. For most of 2012, the traffic to Show Me My House averaged around 90 visitors per week, but in December spiked to 160 visitors per week in conjunction with Des Moines’ first major snowstorm of the winter. We are unable to distinguish how much of the increased traffic is from the public versus City staff using the website.

### **4. What effect has the system had on productivity?**

City Clerk’s Office staff has seen an increase in productivity because customer service representatives no longer have to consult multiple online and paper maps to determine what snow removal parking restrictions apply to a location. Because Show Me My House is also available online to the public, City staff can direct a resident to the website and explain their parking options.

### **5. What, if any, other impacts has the system had?**

When compared to 2011, the 2012 web statistics for Show Me My House indicated a 75% increase in the number of visitors to the site. They also indicated that more visitors were finding the site through a web search engine using phrases like “show

me my house” and “show me my address”. These results suggest that the City is achieving a certain level of branding or phrase recognition with Show Me My House and that it is a successful public communication outlet worthy of future enhancement. City staff have already recognized its usefulness, and plans are underway to redevelop Show Me My House to provide more location-based information to residents.

## **6. How did the system change the way business is conducted with and/or service delivered to clients? Give specific examples comparing the old way with the new.**

The following is taken from the testimonial of Linda Main, Senior License Clerk, and compares the old and new processes:

During the winter season, I, and the rest of the City Clerk’s Office staff, use “Show Me My House” daily. This year the City of Des Moines implemented new parking restrictions during snow events. We currently enforce Snow Route Plowing, City Wide Plowing and Odd/Even Plowing. A search of their house address provides me with a visual of the residence and surrounding streets with details of the parking restrictions for the area. It allows me to quickly convey to the citizen accurate information regarding where they can and cannot park during a snow storm.

Before “Show Me My House” I had a very large detailed map hanging on the wall of the City Clerks’ Office showing Snow Route streets and Priority Neighborhoods. When a citizen called for parking information, I would search their house address on the Polk County Assessors’ website and find cross streets for their residence. I then had to walk to the map, search the map for the location and then try to determine where a citizen could legally park their vehicle during snow removal operations. Not only was this a very time consuming task but inaccurate information could easily be conveyed to the person. “Show Me My House” turned a several minute task into less than 1 minute!

Providing the citizen has internet access, together we can go to “Show Me My House” and have a visual picture and discuss alternative parking locations, thus avoiding an expensive snow removal parking ticket.

## **F. System Resources**

### **1. What are the system’s primary hardware components? Give a brief list or description of the hardware configuration supporting the system.**

- Web server running Windows Server 2008, IIS, and ArcGIS Server 10.0 Advanced Enterprise Edition
- Geodatabase server running Windows Server 2008 and SQL Server 2008 R2 Standard Edition

### **2. What are the system’s primary software components? Describe the primary software and, if a commercial package, any customizations required for the system.**

Show Me My House is a custom web application developed on ASP.NET that uses ArcGIS Server geocoding and map services to find addresses, query parcels, and render a thumbnail aerial map. The geospatial data that are queried and rendered in Show Me My House are stored in an ArcSDE enterprise geodatabase on SQL Server. The data are maintained and processed for the application using ArcGIS Desktop and geoprocessing models. No customizations to the foundational ESRI enterprise GIS products (ArcGIS Server, ArcSDE, or ArcGIS Desktop) were required

### **3. What data does the system work with? List and briefly describe the database(s).**

Show Me My House used the following City of Des Moines GIS datasets:

- Address points, streets, and street names
- Parcels
- Garbage and recycling routes

- Zoning districts, conditional zones, and overlay districts
- Inspector districts
- Snow routes
- Residential snow ordinance parking zones
- Neighborhoods
- Wards
- City boundary
- Census tracts, block groups, and blocks
- Aerial photos

#### **4. What staff resources were required to implement the system? (i.e., report approximate staff and consultant time as FTE's)**

The original Show Me My House implementation required approximately 160 hours of staff time. The enhancement to include snow ordinance parking restrictions required approximately 40 hours of staff time.

#### **5. Comment on anything unusual about the resources used to develop your system, such as data, software, personnel and financing.**

The development and implementation of Show Me My House was completed using existing City hardware, software, data, and staff resources. No additional hard costs were incurred for this project.

## Appendix A. - Executive Administrator Authorization Letter



April 15, 2013

Urban and Regional Information Systems Association (URISA)  
Exemplary Systems in Government (ESIG) Awards Program  
701 Lee Street, Suite 680  
Des Plaines, IL 60016

Dear URISA Exemplary Systems in Government Awards Program:

As City Manager for Des Moines, Iowa, I am pleased to send this letter authorizing the submission of an application for an Exemplary Systems in Government Award (ESIG). The City of Des Moines is applying for an ESIG award in the Single Process System category for our "Show Me My House" website and its application for snow ordinance searches.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard A. Clark". The signature is fluid and cursive.

Richard A. Clark  
City Manager

## Appendix B. – User Testimonials

1. Linda Main, Senior License Clerk
2. Sharon Hall, Public Works Customer Service Team Leader
3. Deb Maier, Business Analyst



Linda Main  
Senior License Clerk  
400 Robert D Ray Dr  
Des Moines, IA 50309

April 2, 2013

Re: ESIG Award Application for "Show Me My House" for Snow Ordinance Searches

"Show Me My House" has been an exceptional tool for citizens and city staff to get information about several aspects of their property – when is my garbage day? who is my building inspector? who is my Council Member? etc. So when the new snow ordinances went into effect, it was a logical decision to add snow event parking information.

During the winter season, I, and the rest of the City Clerk's Office staff, use "Show Me My House" daily. This year the City of Des Moines implemented new parking restrictions during snow events. We currently enforce Snow Route Plowing, City Wide Plowing and Odd/Even Plowing. A search of their house address provides me with a visual of the residence and surrounding streets with details of the parking restrictions for the area. It allows me to quickly convey to the citizen **accurate** information regarding where they can and cannot park during a snow storm.

Before "Show Me My House" I had a very large detailed map hanging on the wall of the City Clerks' Office showing Snow Route streets and Priority Neighborhoods. When a citizen called for parking information, I would search their house address on the Polk County Assessors' website and find cross streets for their residence. I then had to walk to the map, search the map for the location and then try to determine where a citizen could legally park their vehicle during snow removal operations. Not only was this a very time consuming task but inaccurate information could easily be conveyed to the person. "Show Me My House" turned a several minute task into less than 1 minute!

Providing the citizen has internet access, together we can go to "Show Me My House" and have a visual picture and discuss alternative parking locations, thus avoiding an expensive snow removal parking ticket.



Sharon Hall  
Public Works Customer Service Team Leader  
216 SE 5<sup>th</sup> St  
Des Moines, IA 50309  
April 5, 2013

Re: ESIG Award Application for "Show Me My House" for Snow Ordinance Searches

This was my first year working with Show Me My House. I started using it to determine the parking restrictions for specific addresses during snow removal. I quickly discovered there is a lot more information on this site that is very helpful to me, my co-workers, and citizens of the city. From this site I have information on solid waste collection dates, which Neighborhood Association a resident is in, who their council person is, among others things. There is also a link from this site to get property assessment information from the Polk County Assessor's page. I find that I am using Show Me My House more often.

*Sharon Hall*



Deb Maier  
IT Business Analyst  
602 Robert D Ray Drive  
Des Moines, IA 50309  
April 5, 2013

Re: ESIG Award Application for "Show Me My House" for Snow Ordinance Searches

Incorporating the snow ordinance information into the "Show Me My House" application makes it easy for a citizen to identify whether they can park during a snow event or not without having to contact city staff. They are able to self-serve specific information for their address from either the home page or the snow removal page of our website which saves them time as well as saves the city staff from having to handle as many telephone calls. This was especially valuable this past winter since the parking restrictions changed, and "Show Me My House" supported providing this information in a transparent and specific manner.

In addition, snow ordinance searches enhanced the overall value of the "Show Me My House" application because the more information a citizen can locate that is specific to their address the less time they need to spend searching for that information.

Deb Maier

## Appendix C. – Show Me My House

home | services | government | information center | map center | contacts | around the city | search | /AA

### Show Me My House

To access information about your property address:

Please type your address or nearest intersection.

After submitting your address or intersection, click **select** next to the desired search result to retrieve your property information.

To find an address: type the house number, street prefix, street name and street suffix.  
(example: 1007 E Grand Ave)

To find an intersection: type both street prefixes, street names and street suffixes separated by a slash.  
(example: E Grand Ave / E 2nd St)

2415 C

- 2415 College Ave
- 2415 Cottage Grove Ave

**Figure 1.** User input page. As the user begins typing an address, he or she is provided a list of valid Des Moines addresses for auto-completion.

## Show Me My House - Aerial Map and Information Report

**2415 COTTAGE GROVE AVE, DES MOINES** [Verify USPS Zip Code](#) [Get Property Assessment Information](#)

### Garbage and Yard Waste Pick Up

**Pickup Day:** Friday

Please have all of your weekly items for collection placed curbside by 6:30 am the day of your pickup.

### Recycling Pick Up

**Designated Route:** Orange

Collection of recyclables is performed every other week on the same day as regular garbage collection. To see the full route schedule, click the designated route above (Yellow or Orange).

For additional inquiries, please visit the Metro Waste Authority website or contact the Public Works Department.

### Zoning

**Zoning District:** R1-60

See Chapter 134 of the Municipal Code for Zoning Ordinance details.

**Conditional Zone:**

**Overlay District:**

### Permitting

For permitting questions, please contact the Permit and Development Center at (515) 283-4200.

- Building Inspector:** Russell Legler 515-283-4219
- Electrical Inspector:** Terry Bennigsdorf 515-283-4927
- Mechanical Inspector:** Joshua Sullivan 515-283-4039
- NID Inspector:** Eric Moore 515-283-4759
- Plumbing Inspector:** Kevin Newman 515-237-1461
- Zoning Inspector:** Robert Knudson 515-237-1412
- ROW Inspector:** Robert Silvers 515-237-1463



### Snow Ordinance

During snow removal operations, both residential street and snow route parking restrictions apply. Refer to the Snow Removal website or contact the Public Works Department for details.

<b>Residential Street Parking Restriction:</b>	<b>Park on odd side of street on odd calendar days. Park on even side of street on even calendar days. Vehicles must be parked on correct side by 7:00 am. Located in Odd/Even Parking Zone.</b>
<b>Snow Route Parking Restriction:</b>	<b>No parking on snow routes. Located on or adjacent to snow route shown in light blue on map.</b>

### Neighborhood

<b>Name:</b>	Drake
<b>District</b>	
<b>Ward:</b>	3 Christine Hensley
<b>Annexed into City of:</b>	Des Moines
<b>County:</b>	Polk

### Census

See the U.S. Census Bureau American FactFinder document for community details.

### Get Additional Census Information

<b>Tract:</b>	26
<b>Block Group:</b>	1
<b>Block:</b>	1029

**Figure 2.** Show Me My House results page. The user receives an aerial map and report of information applicable to the address. The snow ordinance parking restrictions are described under the map, and the snow routes are shown in blue in the map. The user can link to a number of other information sources including a larger map, postal code, property assessment, and snow removal details.