

So You're Dead...
Now What?

THE CEMETERY APP

What happens to you when you die?

- (physically speaking, that is)
 - Interment: burial process
 - (not to be confused with a student Internment/Internship)
 - Right of Interment
 - Who owns the burial plot
- Now the cemetery caretaker needs to figure out
 - Where to put you
 - Are you allowed to be put there
 - How to keep track of where they put you

The Cemetery App

- 1. WHY** did we build it?
- 2. WHAT** did we build?
- 3. HOW** did we build it?

Why Did We Build It?

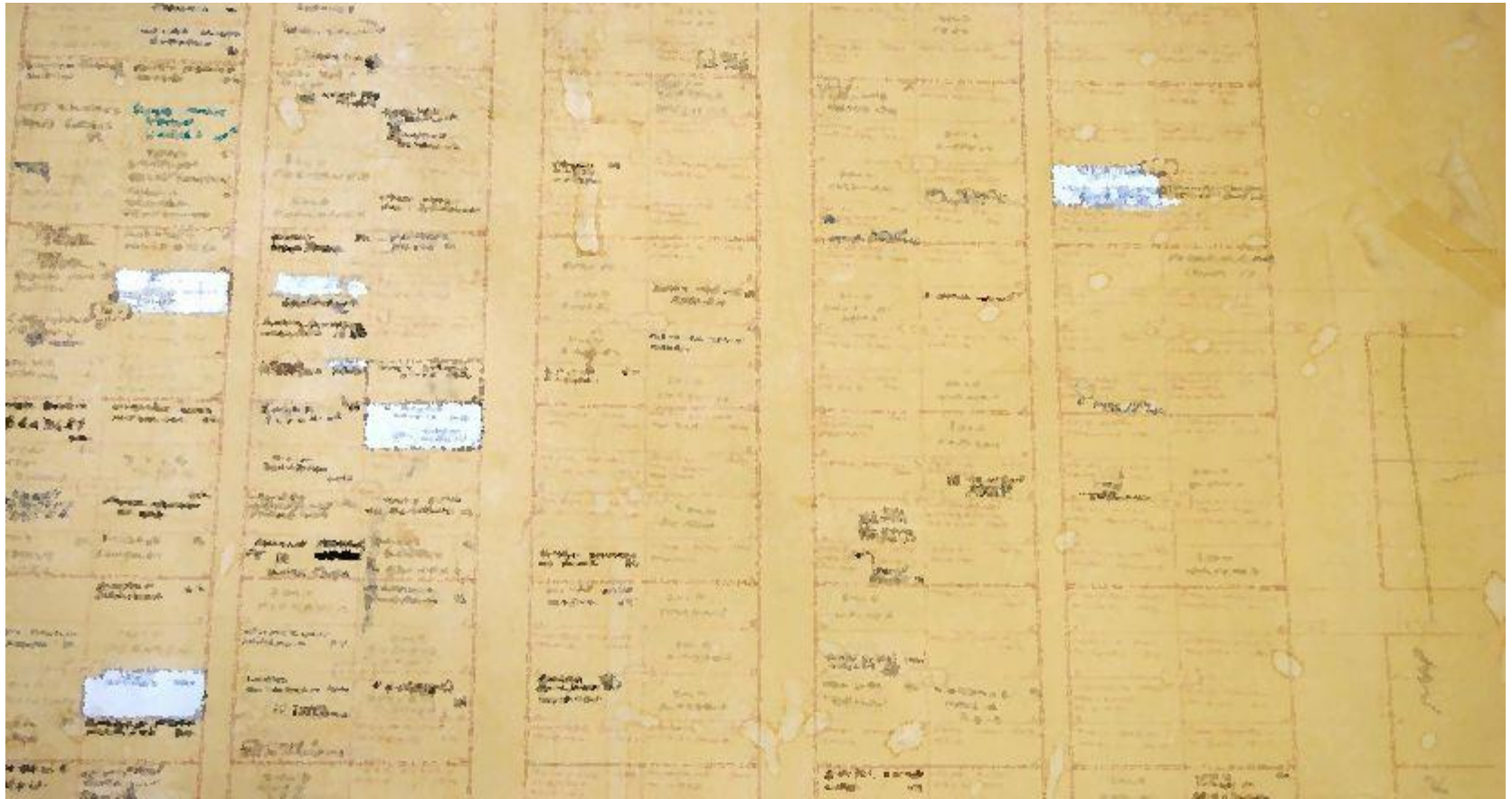
1. Current system cumbersome and error prone
2. Historical data integrity issues still unaddressed
3. Wanted a GIS enabled solution since location is critical
4. Didn't identify a product on the market at the time with good, open GIS integration

Timeline



1881/1891

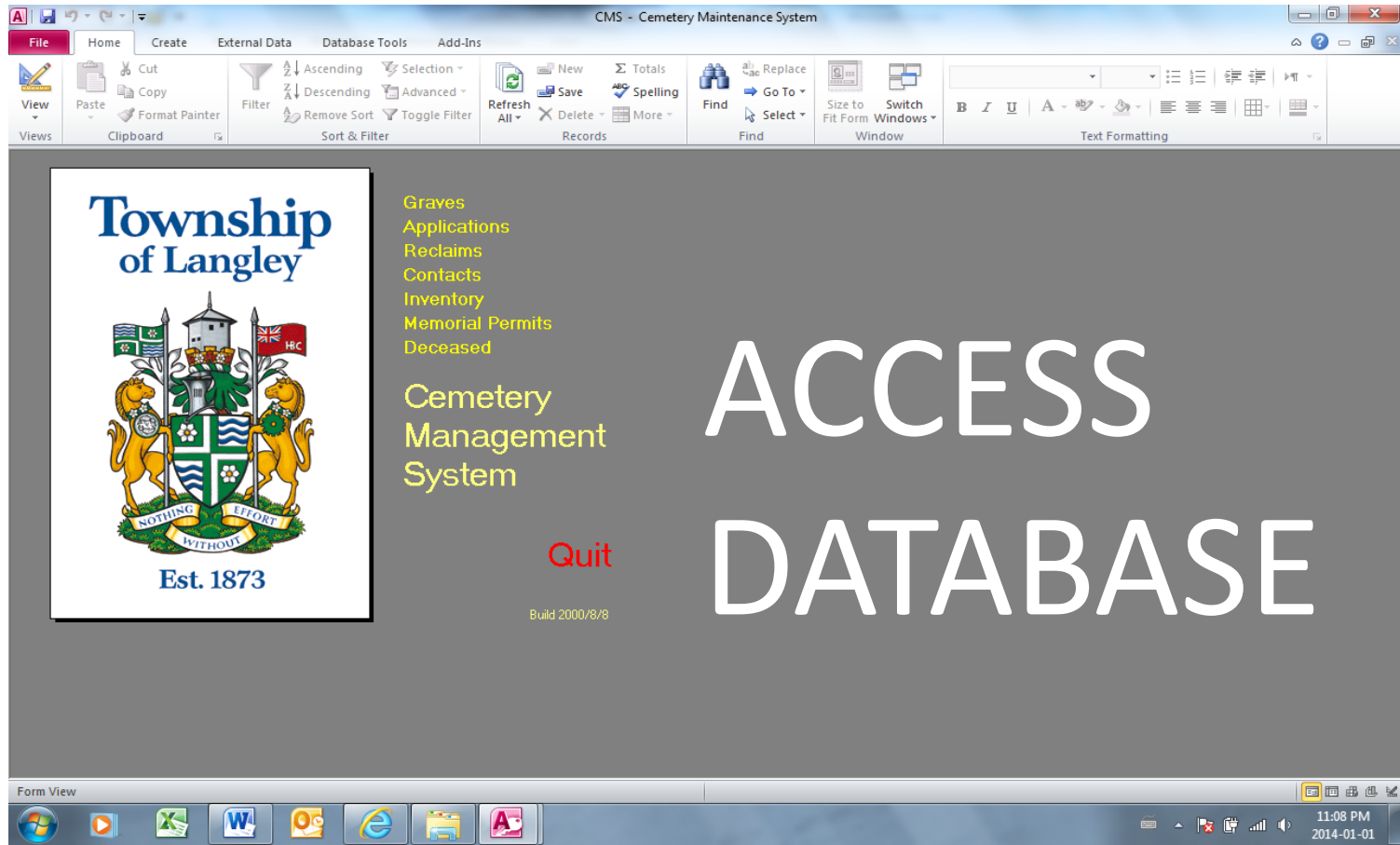
1950



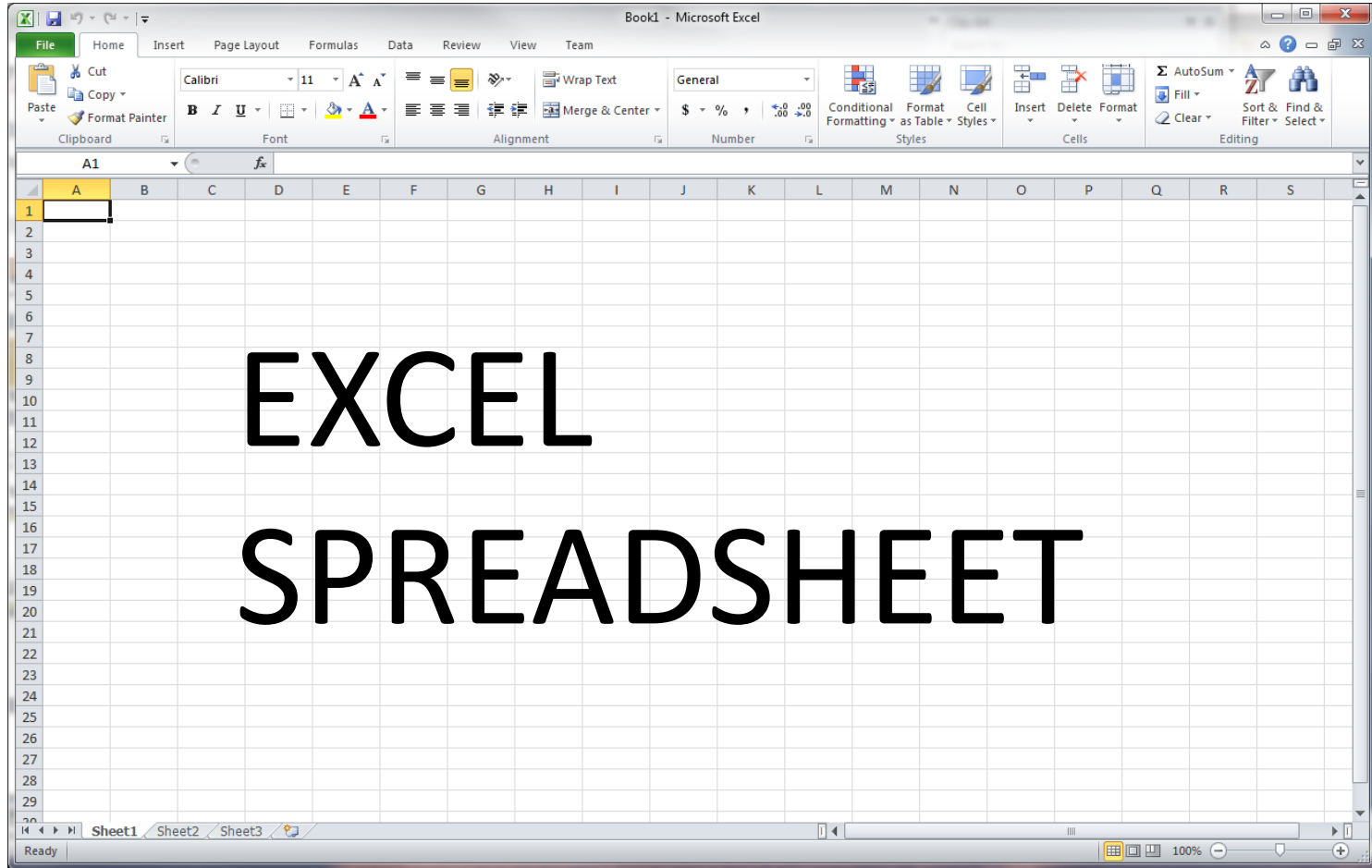
1950

1975

~2000



~2000 2005 2009



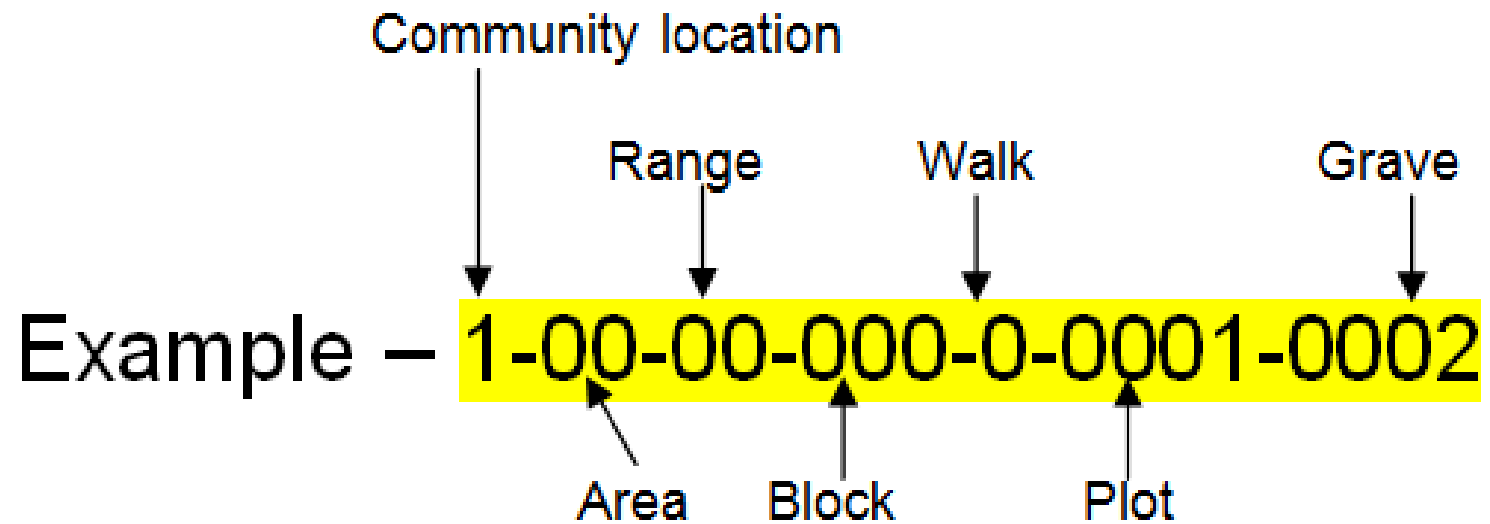
2009

Present

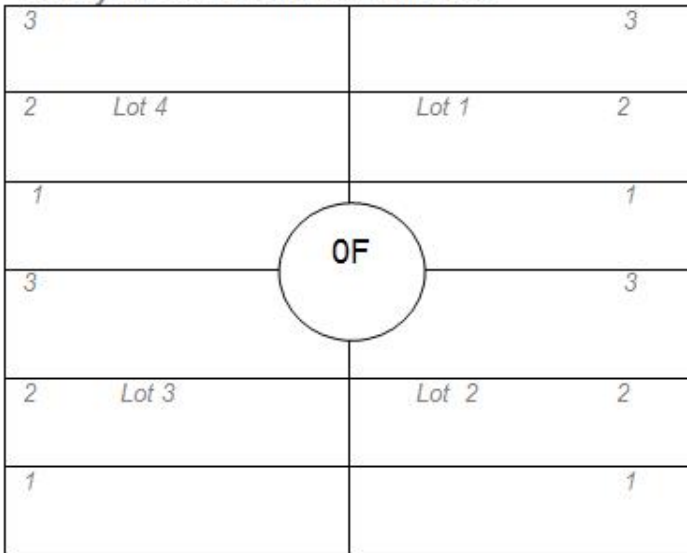
Historical Data Issues

1. Paper maps (ONLY source of location data!!)
& records becoming old and damaged
2. Map data and records disjointed
3. Space at cemeteries becoming more of a premium – subdivisions/ashes/niche walls
4. No automated error checking
5. Grave Marker # Issues

Grave Marker # Issues



Lot Layout – old section West and East



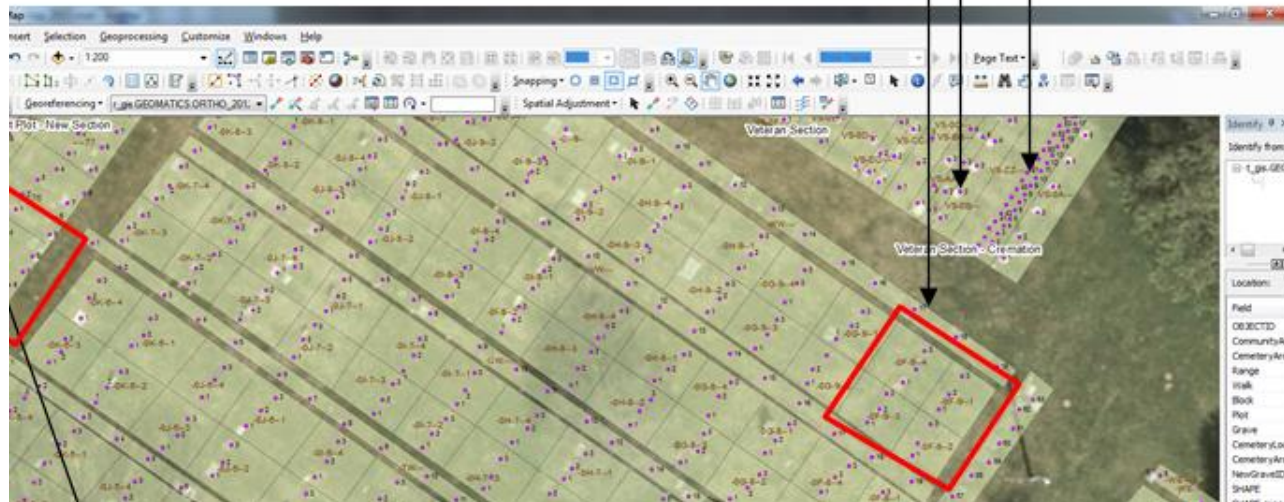
Range 0F, Block 09, Plot 1-4, graves 1-3
 2-00-0F-009-0-0001-0001 to 0003
 2-00-0F-009-0-0004-0001 to 0003

Veterans plots

1-VS-0B-000-0-0000-0001 to 15

Veterans cremation plots - new 2012 addn

1-VS-0C-0ZZ-0-0000-0001 to 74



Data Cleanup – Julie and Krista

1. Photographs taken of Record Books
2. Wall maps photographed
3. Point fc created of grave markers visible on orthophotos
4. GPS points of some grave markers with names collected for georeferencing
 - Julie and Krista - RULES
5. Photographed wall maps georeferenced
6. Wall map info transferred to point fc

Data Cleanup (continued)

7. Access/Excel data cleaned up and added to point fc (Grave Marker #, DeceasedPersonID, Etc.)
8. Created new GraveIndex number for unique identifier (Grave Marker # too complex but still maintained due to significance to Caretakers)

Shane –


What Did We Build?

Cemetery Management System


Home Contacts Right of Interment Deceased Interment Marker Permit Cemetery

Cemetery Management System


What would you like to do?

 **Contact Options:**


- Lookup Contact
- New Contact

 **Right of Interment Options:**


- Lookup ROI
- New ROI
- Surrender Grave

 **Interment Options:**


- New interment authorization
- Lookup interment

 **Deceased Options:**

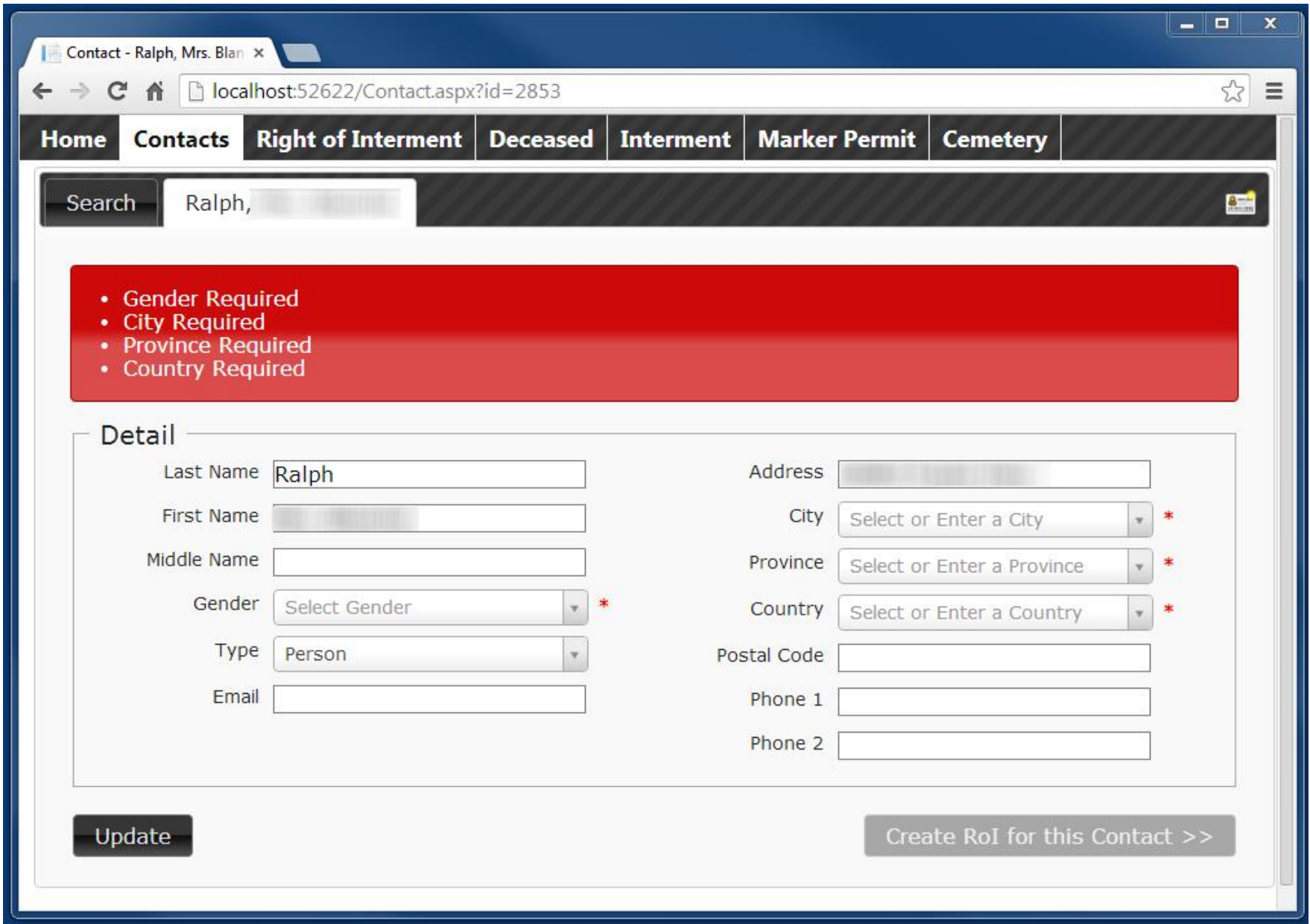
- Lookup Deceased
- New Deceased

 **Marker Permit Options:**

- New Marker Permit
- Lookup Marker Permit

 **Cemetery Maintenance:**

- Murrayville Map
- Langley Lawn Map
- Fort Langley Map
- Lookup grave
- New Grave



Search Ralph, [redacted]

- Gender Required
- City Required
- Province Required
- Country Required

Detail

Last Name

First Name

Middle Name

Gender *

Type

Email

Address

City *

Province *

Country *

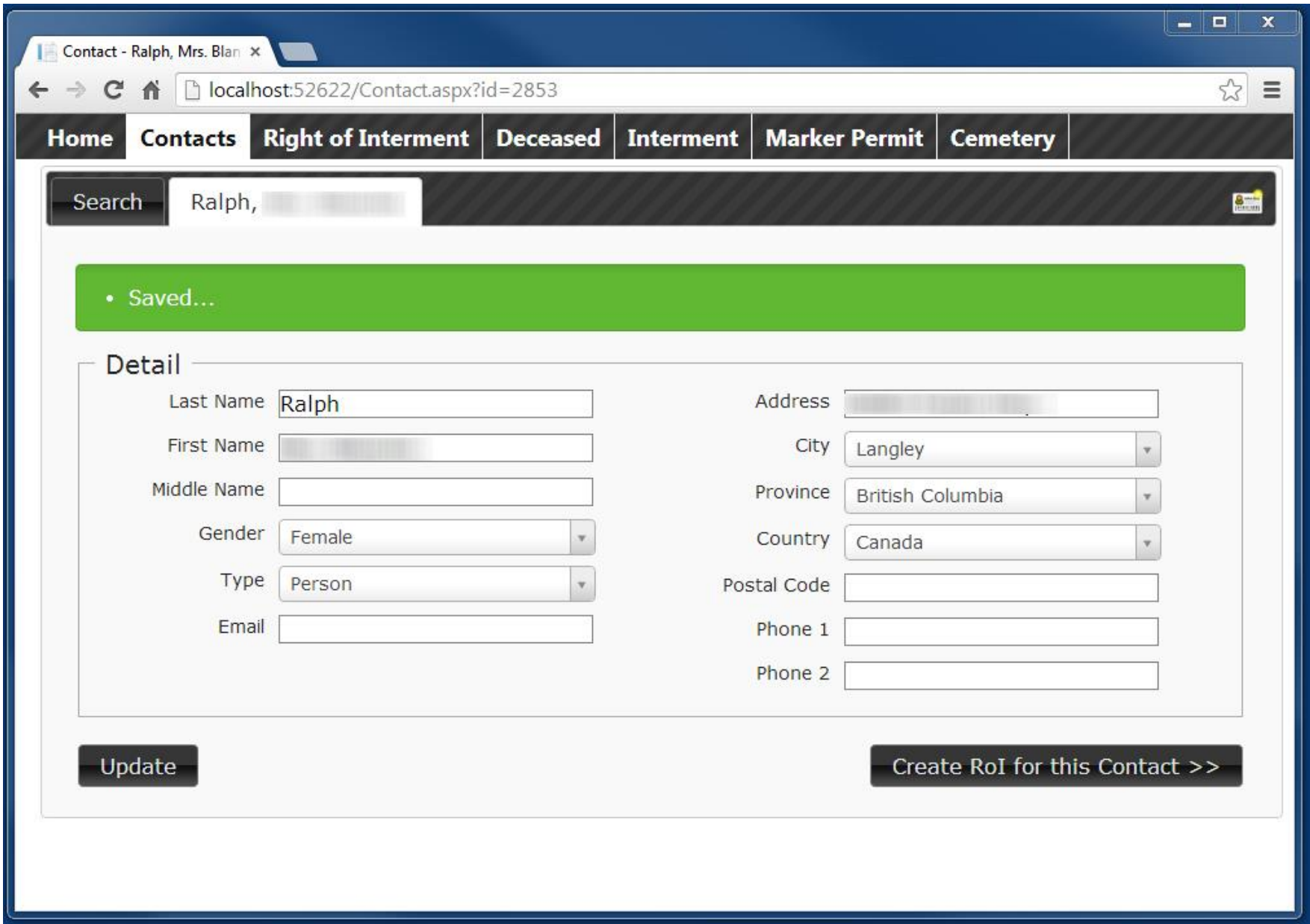
Postal Code

Phone 1

Phone 2

Update

Create RoI for this Contact >>



Search

Ralph, [redacted]

• Saved...

Detail

Last Name

First Name

Middle Name

Gender

Type

Email

Address

City

Province

Country

Postal Code

Phone 1

Phone 2

Update

Create RoI for this Contact >>

Detail

RoI No

RoI Date

Grave Marker #

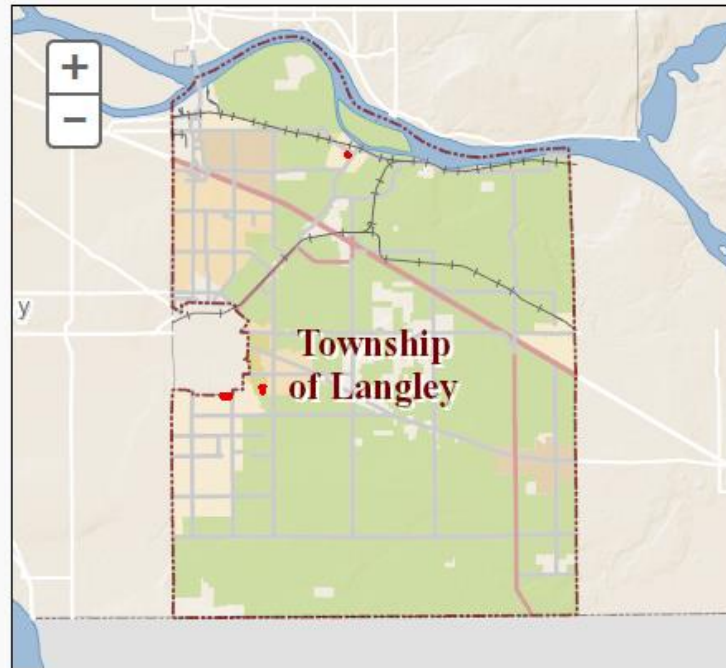
ROI Holder

Surrender Date

Transfer Date

Transferred To

Note



Insert

Surrender ROI

Transfer ROI

Search New Right of Interment

Detail

RoI No

RoI Date

Grave Marker #

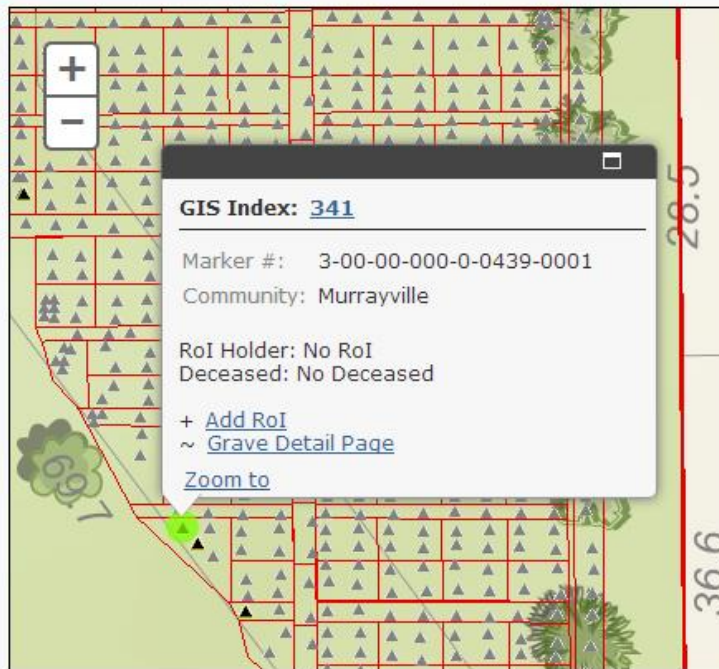
ROI Holder

Surrender Date

Transfer Date

Transferred To

Note



Insert

Surrender ROI

Transfer ROI

Cemetery

localhost:52622/Cemetery.aspx?maps&cemetery=1

Home Contacts Right of Interment Deceased Interment Marker Permit Cemetery

Search New Grave Murrayville Map Langley Lawn Map Fort Langley Map

3-00-00-000-0-0194-0001 RoI Holder: Deceased: + Add RoI ~ Grave Detail Page
3-00-00-000-0-0195-0001 RoI Holder: Deceased: + Add RoI ~ Grave Detail Page
3-00-00-000-0-0198-0001
3-00-00-000-0-0199-0001
3-00-00-000-0-0162-0002
3-00-00-000-0-0163-0002 RoI Holder: Deceased: + Add RoI ~ Grave Detail Page
3-00-00-000-0-0176-0002
3-00-00-000-0-0177-0002
3-00-00-000-0-0180-0002
3-00-00-000-0-0181-0002

(5 of 40)

GIS Index: 5703

Marker #: 3-00-00-000-0-0194-0001
Community: Murrayville

[Zoom to](#)

4516 4517 4518 4519 4520 4521 4522 4523 4524 4525 4526 4527 4528 4529 4530 4531 4532 4533 4534 4535 4536 4537 4538 4539 4540 4541 4542 4543 4544 4545 4546 4547 4548 4549 4550 4551 4552 4553 4554 4555 4556 4557 4558 4559 4560 4561 4562 4563 4564 4565 4566 4567 4568 4569 4570 4571 4572 4573 4574 4575 4576 4577 4578 4579 4580 4581 4582 4583 4584 4585 4586 4587 4588 4589 4590 4591 4592 4593 4594 4595 4596 4597 4598 4599 4600

200.6 44 AVE

localhost:52622/Cemetery.aspx#tabs-3

How Did We Build It?

Application Requirements


- Web based application
- The usual C.R.U.D
(Create, Read, Update, and Delete)
- GIS map integration

Web

- Accessibility
 - Mobile devices in the field
- Manageability
 - No client software other than browser
- Ease of use
 - Leverage familiar web interfaces

CRUD

- Review paper forms



Marker Permit

Township of Langley
Est. 1873

Date: _____
ROI # M 4444

1 Cemetery
Fort Langley Langley Lawn Murrayville

2 Lot Location
Area: SW Range: _____ Block: _____
Plot: 35 Grave: 4

3 Marker Placement
New Reset

4 In Memory of
Name(s) of deceased on marker: _____

5 Fees

Marker installation	\$
Perpetual care fund	\$
Set	\$
Marker	\$
STP	\$
Total	\$

Payment Method:
Cheque Cheque no. _____
American Express MasterCard Visa
Cash Debit

Operations | 4700 - 224 Street, Langley, BC V2Z 1N4

MEMORIAL PERMIT APPLICATION

Township of Langley
Est. 1873

DATE: June 30/10.

LANGLEY LAWN FORT LANGLEY MURRAYVILLE
 WALL NICHE

Name: _____
Address: _____
Postal Code: _____
Phone No. (Res.) _____ (Bus.) _____
Description of Grave Space: 943-3
Name(s) of Memorial: _____
Size of Memorial 8 x 12 10 x 16 12 x 20 18 x 30
Type of Memorial Bronze Granite
Colors of Memorial Black Gray Red Other _____
Installation of Memorial: _____
Remove / Reset: _____
SS Vase: _____
GST: _____
TOTAL: _____

Signature of Applicant: _____

OFFICE USE ONLY

01-1451-0000 210 201
01-1452-0000 _____
01-1453-0000 _____

01-1454-0000 5250
01-4296-0000 1050 / 263

Right of Interment Surrender

Date: NOV 13 2012
ROI # S 0011
Approved by: _____

Interment Permit

Date: NOV 2 2012
ROI # I 0072
M # _____
I # _____
Approved by: _____

1 Cemetery
 Fort Langley Langley Murrayville

2 Lot Location
Area: _____ Range: _____

3 Cemetery
6 Fees

THE CORPORATION OF THE TOWNSHIP OF LANGLEY
20338 - 65 Avenue, Langley BC V2Y 3J1 No. 7672

CEMETERY PERMIT APPLICATION

DATE: AUGUST 24 2009
 Langley Lawn Cemetery Fort Langley Cemetery Murrayville Cemetery

I, _____
Address: _____
Postal Code: _____ Phone No: (Res.) _____ (Bus.) _____
make application for the purchase/use of RESERVED grave(s).
Description of grave space(s) LANGLEY LAWN OAK #43
For immediate use? No Yes Grave LANGLEY LAWN OAK #3
If yes, Name of Person to be interred: _____
Former Address: _____

Goods/Services Purchased: (All Goods/Services are to be paid in advance)

Cost of Grave(s)	\$	<u>SAT. INTERMENT</u>
Opening and Closing	\$	_____
Grave Liner	\$	_____
Installation of Memorial	\$	_____
Extra Charges	\$	_____
GST	\$	_____
Total	\$	_____

Signature of Purchaser: _____
Signature of Issuing Agent: _____

Declaration of Authority:
I, _____ Phone (Res.) _____ (Bus.) _____
Address: _____ Postal Code: _____
declare that in accordance with the provisions of Sections 51 and 52 of the "Cemetery and Funeral Services Act" (attached and which I have read), that I have the right to control the disposition of the remains of (full name) _____
By providing this authorization, I warrant the truth of the facts stated in this document, the identity of the human remains that are to be interred, and the right to make the authorization.

Signature: _____ Witness: _____

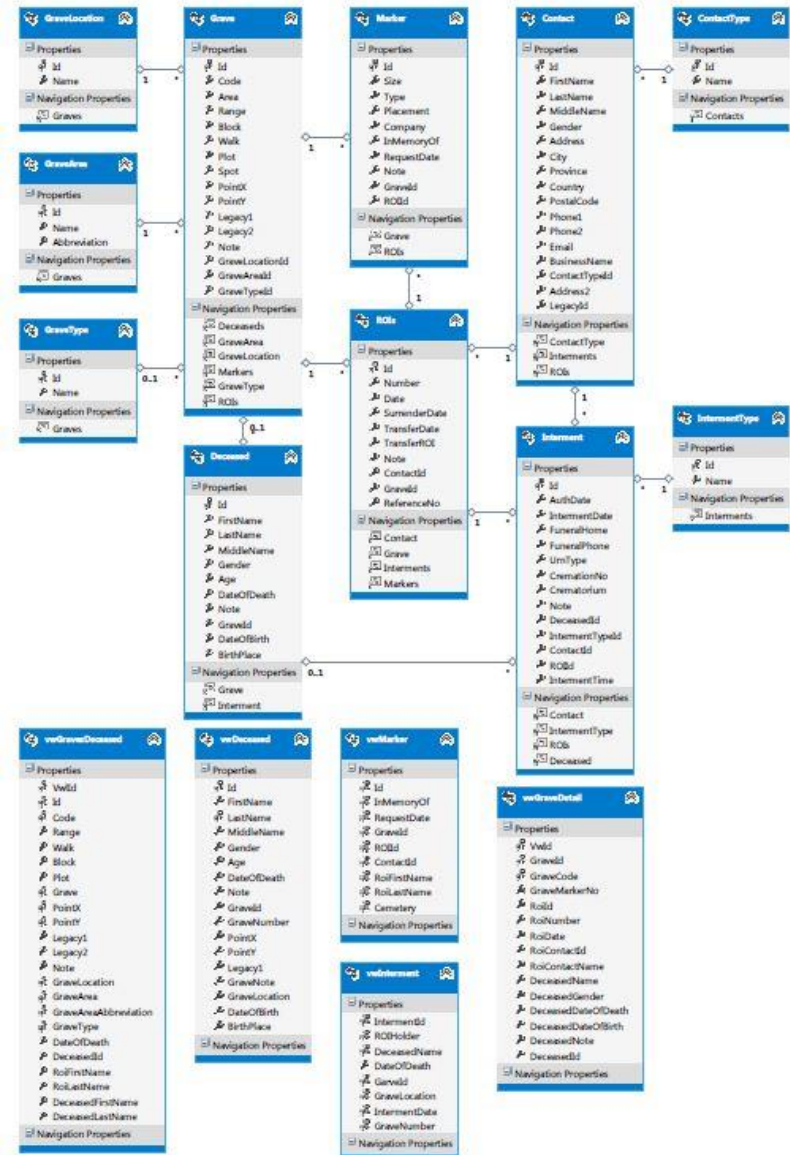
FOR OFFICE USE ONLY

Is the grave currently occupied? No Yes

01-1451-0000 450/506.25 01-1453-0000 _____ 01-4296-0000 2250/2532/8.43
01-1452-0000 _____ 01-1454-0000 168.75 Licence No. _____

CRUD

- Review paper forms
- Created a data model



CRUD

- Review paper forms
- Created a data model
- Code
- Test
- Code
- Test
- Code
- Test

The image displays three overlapping screenshots of a web application interface, likely for managing interment records. Each screenshot shows a form with various fields and buttons.

The top screenshot, titled "New Interment", includes a "Search" button and an "Insert" button. The form fields are:

- Auth Date: Feb 13, 2014
- Deceased: Type to search Name
- Note: (Text area)
- ROI Number: Type ROI Number or Holder
- ROI Holder: (Text field)

The middle screenshot, titled "New Marker", includes a "Search" button and an "Insert" button. The form fields are:

- Date: Feb
- Marker Number: (Text field)
- ROI Number: Type
- ROI Holder: (Text field)
- In Memory of: (Text field)

The bottom screenshot, titled "New Interment", includes a "Search" button and an "Insert" button. The form fields are:

- Interment Date: Feb 13, 2014
- Interment Time: 3:00 pm
- Funeral Home: (Text field)
- Funeral Phone: (Text field)
- Interment Type: Select Interment Type
- Urn Type: (Text field)
- Cremation No: (Text field)
- Crematorium: (Text field)

GIS

Search

Detail

RoI No

RoI Date

Grave Marker #

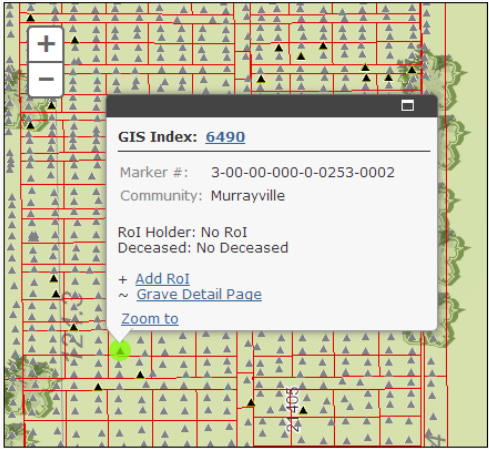
RoI Holder

Surrender Date

Transfer Date

Transferred To

Note



GIS Index: [6490](#)

Marker #: 3-00-00-000-0-0253-0002

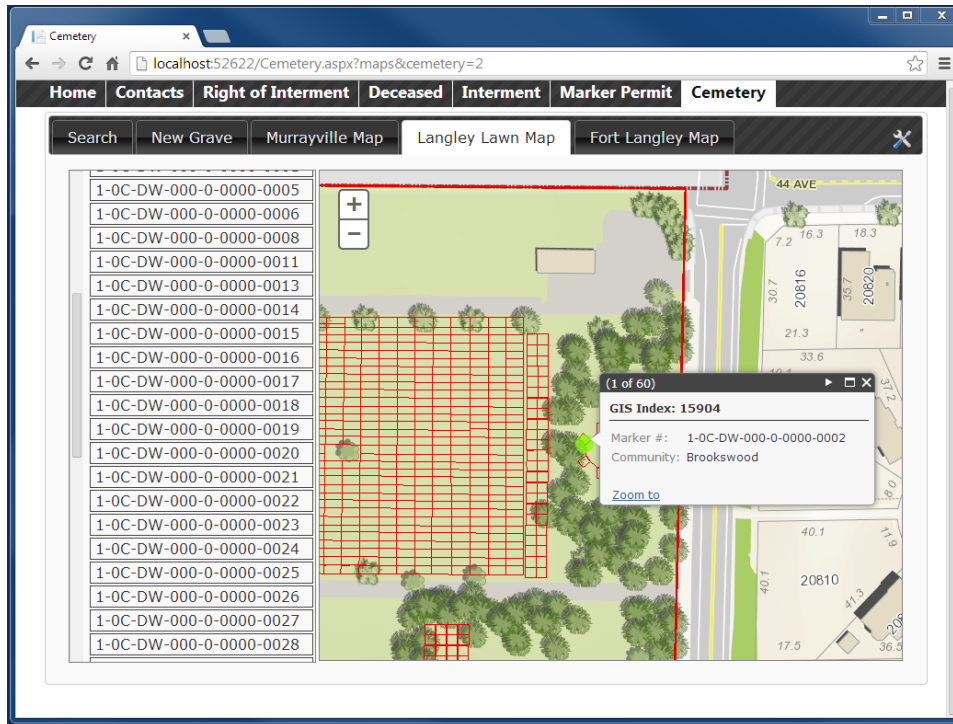
Community: Murrayville

RoI Holder: No RoI
Deceased: No Deceased

+ [Add RoI](#)
~ [Grave Detail Page](#)
[Zoom to](#)

- Pick grave on map when entering Right of Interment
- View grave on map when reviewing existing Interments

GIS



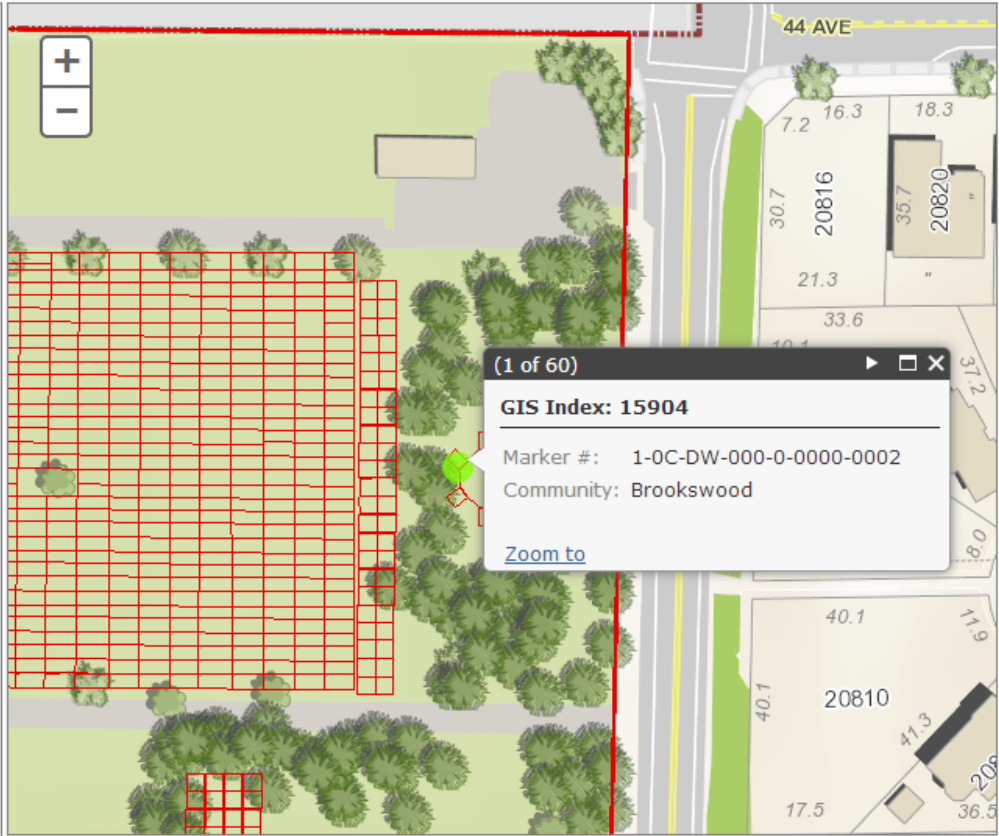
- Browse maps by cemetery
- View grave details
- Link back to data entry pages

Technologies

- SQL
- HTML
- JavaScript
- REST
- ASP.NET & C#
- RIP



- 1-0C-DW-000-0-0000-0005
- 1-0C-DW-000-0-0000-0006
- 1-0C-DW-000-0-0000-0008
- 1-0C-DW-000-0-0000-0011
- 1-0C-DW-000-0-0000-0013
- 1-0C-DW-000-0-0000-0014
- 1-0C-DW-000-0-0000-0015
- 1-0C-DW-000-0-0000-0016
- 1-0C-DW-000-0-0000-0017
- 1-0C-DW-000-0-0000-0018
- 1-0C-DW-000-0-0000-0019
- 1-0C-DW-000-0-0000-0020
- 1-0C-DW-000-0-0000-0021
- 1-0C-DW-000-0-0000-0022
- 1-0C-DW-000-0-0000-0023
- 1-0C-DW-000-0-0000-0024
- 1-0C-DW-000-0-0000-0025
- 1-0C-DW-000-0-0000-0026
- 1-0C-DW-000-0-0000-0027
- 1-0C-DW-000-0-0000-0028



(1 of 60)

GIS Index: 15904

Marker #: 1-0C-DW-000-0-0000-0002
Community: Brookwood

[Zoom to](#)

Questions?