

Leveraging GIS and Native Mobile App to Update Exempt Property Information

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Why

- Per Statute, the assessor shall estimate, according to his or her best information and judgment, the true cash value and assessed value of every parcel of real property
- Per Statute, the governor shall report the estimated state equalized valuation and the amount of tax foregone in each county because of the exemptions granted
- Natural Disaster causing damage- need to report estimated values
- Created a project to use as a learning tool



What

- What needs to be done
 - Property data needs to be collected on 2,914 parcels
 - Verify legal descriptions and input land size
 - Collect Building/improvement information
 - Collect exterior measurements
 - Photograph improvements
 - Apply estimated true cash value to all parcels using State Tax Commission approved cost manual

What

- Problems to deal with
 - Lack of resources, time, and staff
 - No improvement or land information in data base due to it's low priority
 - Staff Skepticism
 - Large Complex Buildings
 - Unique Buildings
 - Some Inaccessible buildings

What

- Management of people
 - 6 certified assessors/appraisers
 - 3 - performing field work
 - 3 - reviewing work

How - Traditional Paper Method

Preparation for fieldwork

- Print record cards for all parcels to be visited from BS&A (CAMA data software provider approved by State of Michigan)
- Print off valuation statements
- Print any existing pictures on file
- Print off aerial image
- Print off any sale documents
- Assemble field notes and possibly draw building sketches from current aerials if sketch does not exist
- Assemble packets of properties into groups to visit
- Create map and assign order of parcels to visit

How - Traditional Paper Method

Field Work

- Verify that you are at the correct parcel
- Try to speak to property owner to verify information
- Measure and draw sketch
- Take new pictures
- List all improvements and note any characteristics of property they may influence value

How - Traditional Paper Method

Post Field Work

- Verify and attach individual photos to correct parcel one at a time
- Draw sketch in apex (digital sketch software) and verify that it closes
- Verify written notes and input into BS&A
- Return to the field to gather missing or unclear information
- Correct errors and place parcel folder in review pile

How - Leveraging Technology

- Project Preparation
 - Use BS&A to generate list of Exempt properties
 - Generated building outlines from the 2010 SEMCOG flight for reference
 - For large complex buildings, draw apex sketch from building outlines
 - Upload data to Pivot Point
 - Create work groups and assign to users
 - Use work order map to determine order that parcels will be visited

Work Order Manager Map

Click on the map to select/unselect features.

Selected Features

- 02-125-0028-001
- 02-875-0026-000
- 02-875-0014-000
- 02-875-0035-000
- 02-875-0027-000
- 02-875-0028-000
- 02-875-0048-000
- 02-012-3004-000

Parcels selected, on map, in order of desired route for the day.

Change Assigned User: -- No Change --

Change Assigned Group: -- No Change --

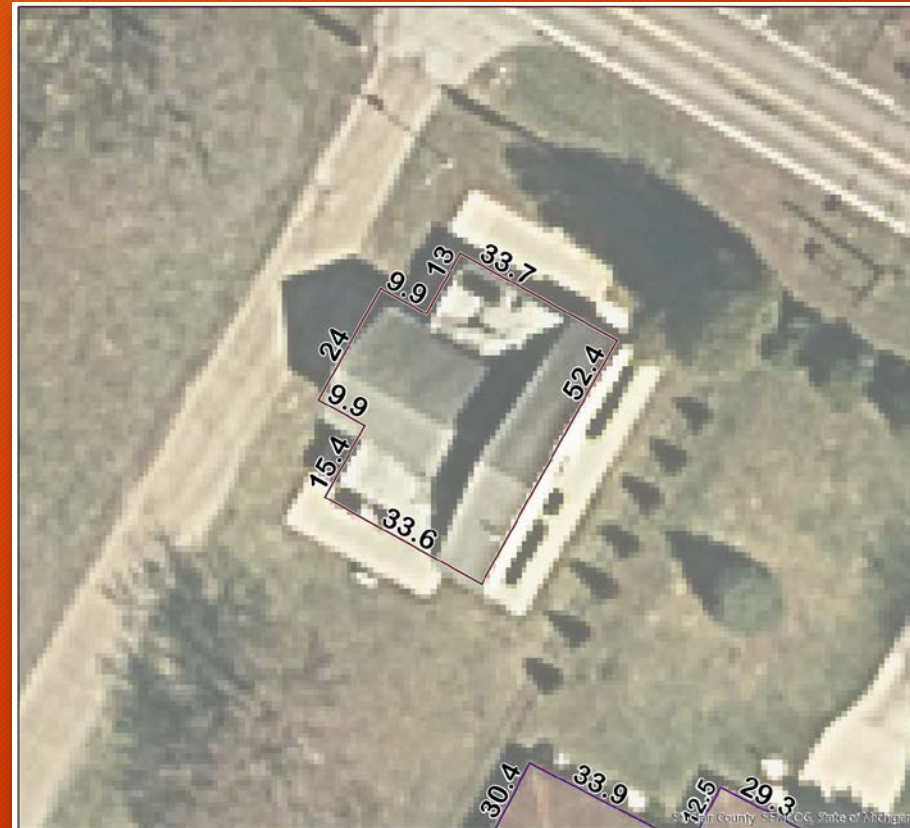
Assign

Back the Work Order Manager

Home | Contact Us | © 2019 - Pivot Point (6/5/2019 2:15 PM)

Generated Building Outline Example

- We had zero data in BS&A but we wanted to provide field appraisers data to validate against, to make their life easier
- Offshore contractor had previously hand digitized building outlines (in GIS form) based on the 2010 SEMCOG data
- Identified buildings by intersecting with parcel and building then filtering by parcel class of 7xx
- Workload split across several work stations taking several days
- Almost 2,000 documents generated



Building Type:	Office Building
Residential SqFt:	0
Non Res SqFt:	2000
Stories:	1
Median Height (LiDAR):	14
Drawn Area:	1999.583008

SEMCOG Building ID: 6006401

74-01-010-1001-000

How - Leveraging Technology

Field Work

- Verify that you are at the correct parcel
- Speak with owner/manager and answer questions to collect and validate CAMA data
- Verify measurements on sketch created from building outlines
- Take new pictures
- List all improvements and note any characteristics of property they may influence value

Field Work

- Main Parcel Page
 - Parcel Details
 - Aerial Photo
 - Record Card
 - Current Photo
 - Current Sketch
 - Notes

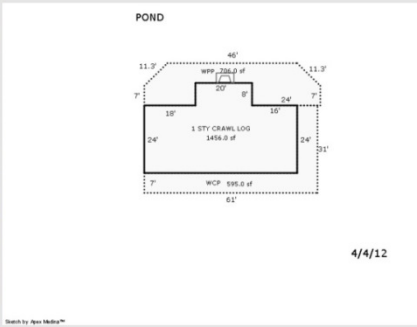



9:43 AM Wed Jun 5

Back Feature Details

09-002-2001-000

Address: 14129 BURT RD, ALLENTON, MI 48002 Note: 6-5-06 REFUSED

Owner: STANGE DONALD/ELIZABETH



Attributes Permits (0) Work Order Sales (1) Notes (0)

Settings Search Work By List Work By Map

Driving Directions

Use work by map to select next parcel and then pressing



for driving directions to the next parcel

The image displays two screenshots of a mobile application interface. The left screenshot shows a map titled "Work Order Map" with several parcels highlighted in red. The map includes a search bar, navigation controls, and a bottom menu with options like "Work Selected", "Open", "Visited", "Deferred", "Field Review", "Field QC", and "Previous". The right screenshot shows a "Marked Location" pop-up for "555 West Blvd, Marine City, MI 48039, United States". It includes a "Directions" button (32 min drive), "Edit Location", "Remove", "Favorite", "Share", "Latitude 42.7203", "Longitude -82.5017", and options to "Create New Contact", "Add to Existing Contact", and "Report an Issue".

Validate

- Verify Address
- Speak with owner/manager
 - Fill in Questionnaire
- Measure exterior walls and markup sketch, aerial, or building outline



8:19 AM Wed Jun 5

Feature Details Sketches

4/4/12

Sketch by Apex Media™

< > 2/3 Properties New New Mark-up Resume Mark-up List View

Settings Search Work By List Work By Map

8:21 AM Wed Jun 5

Feature Details Supplemental Images

Building Type	Value Utility/Health Improvement	Special Purpose	Utility Location	Utility Location
Year Built				
Class/Construction	N, Frame	N, Frame	N, Frame	N, Frame
Quality/Finish	Good	Low Cost	Low Cost	Low Cost
# of Walls, Basement	4 Wall, 100	4 Wall, 60	4 Wall, 100	4 Wall, 44
Height	14	10	10	10
Heating System	No Heating/Cooling	No Heating/Cooling	No Heating/Cooling	No Heating/Cooling
Length/Width/Area	36' x 34' = 1224	18' x 12' = 216	36' x 24' = 864	35' x 13' = 455
Cost New	\$ 21,792	\$ 4,354	\$ 3,267	\$ 3,880
Est. Year Cash Value	\$ 10,700/100 = 107.0	\$ 2,177/100 = 21.8	\$ 1,633/100 = 16.3	\$ 1,940/100 = 19.4
Depreciated Cost	\$ 4,350	\$ 871	\$ 659	\$ 776
+ This-In-Place Items	\$ 0	\$ 0	\$ 0	\$ 0
Investment, Item #	Save # 10000 = Cost			
Itemized	--			
Multi-In-Place	--			
Item	--			
E.C.P.	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
+ Good	20	20	20	20
Est. Year Cash Value	\$ 4,300	\$ 870	\$ 659	\$ 776
Comments				
Total: Estimated Year Cash Value of Agricultural Improvements / This Card: 6224 / All Cards: 8524				

*** Information herein deemed reliable but not guaranteed***

< > 3/3 Properties New New Mark-up Resume Mark-up List View

Settings Search Work By List Work By Map

Validate

- Note any characteristics of any improvements in the note section

Can use voice text to quickly record notes

- Take pictures of all sides of all buildings

- Change work order status of parcel to "visited"

3:21 PM Tue Jun 4

< Back Editing Feature Details

02-625-0024-000

Address: 600 WARD ST, MARINE CITY, MI 48039

Owner: INDIAN HEAD INDUSTRIES

Note

Note Type

General Comment

Save

3:21 PM Tue Jun 4

< Back Edit Work Order

Parcel 02-625-0024-000

Address 600 WARD ST, MARINE CITY, MI 48039

Created On 6/3/2019 11:05:48 AM

Work Group 2020 Industrial Study

Order 999999

Status Visited

Sub Status

Activity SelectActivity

New Construction Adjustment Demolition No Change

Comment

Update Work Order

Done

"Visited" Visit

Open

Visited

Deferred

Office Review

Closed

Technology In Action

Live demo

Management of Work

- 2,914 parcels need to be broken down into groups, prioritized, and assigned to appraisers
- Field work and data entry needs to be reviewed
- Track progress of project
- Ensure annual statutorily required equalization duties are being completed as well

Detailed Statistics - Saint Clair County Equalization

Work Set: Exempt Buildings | Last Computed: 06/05/2019 01:40:42 PM | [Refresh statistics](#)

Current Work Order Status

Email	Open	Visited	Deferred	Office Review	Field Review	Closed	Total
Jdiaz@stclaircounty.org	0	0	0	3	0	117	120
jdove@stclaircounty.org	0	0	0	8	0	54	62
jsears@stclaircounty.org	0	0	0	0	0	31	31
kthueme@stclaircounty.org	0	0	0	0	0	275	275
Unassigned@Saint Clair County Equalization	456	0	0	0	0	0	456
Totals	456	0	0	11	0	477	944

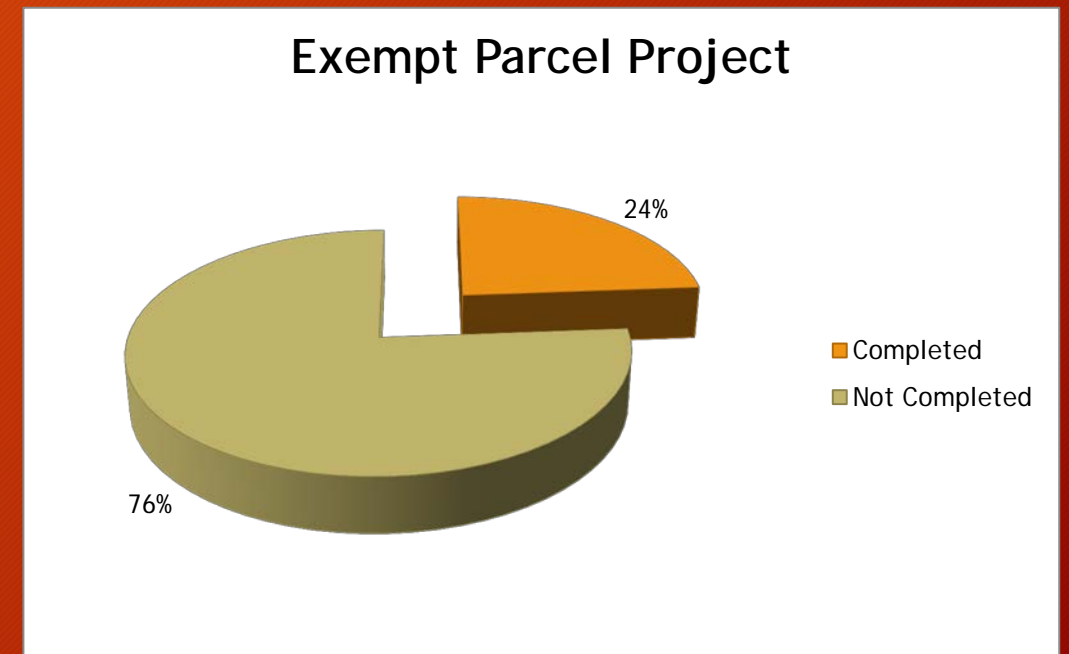
Work Completed By User | [ESRI Work Order Map \(updated nightly\)](#)

Current Work Group Status

Name	Open	Visited	Deferred	Office Review	Field Review	Closed	Total	Field Work Complete	Office Work Complete	Total Days	Days Left	Parcels Per Day	Parcels Per Day Needed
+ Algonac Rel/DNR/Oth	0	0	0	0	0	34	34	100.0%	100.0%	-	-	-	-
- Berlin Rel/DNR/Oth	4	0	0	0	0	29	33	87.88%	87.88%	-	-	-	-
jdove@stclaircounty.org	0	0	0	0	0	25	25	100.0%	100.0%	-	-	-	-
jsears@stclaircounty.org	0	0	0	0	0	4	4	100.0%	100.0%	-	-	-	-
Unassigned@Saint Clair County Equalization	4	0	0	0	0	0	4	0.0%	0.0%	-	-	-	-
+ Brockway Rel/DNR/Oth	0	0	0	0	0	12	12	100.0%	100.0%	-	-	-	-
+ Burtchville Rel/DNR/Oth	14	0	0	0	0	2	16	12.5%	12.5%	-	-	-	-
+ Casco Rel/DNR/Oth	8	0	0	0	0	1	9	11.11%	11.11%	-	-	-	-
+ China Rel/DNR/Oth	12	0	0	0	0	2	14	14.29%	14.29%	-	-	-	-
+ Clay Rel/DNR/Oth	70	0	0	0	0	3	73	4.11%	4.11%	-	-	-	-
+ Clyde Rel/DNR/Oth	36	0	0	0	0	42	78	53.85%	53.85%	-	-	-	-
+ Columbus Rel/DNR/Oth	15	0	0	0	0	2	17	11.76%	11.76%	-	-	-	-

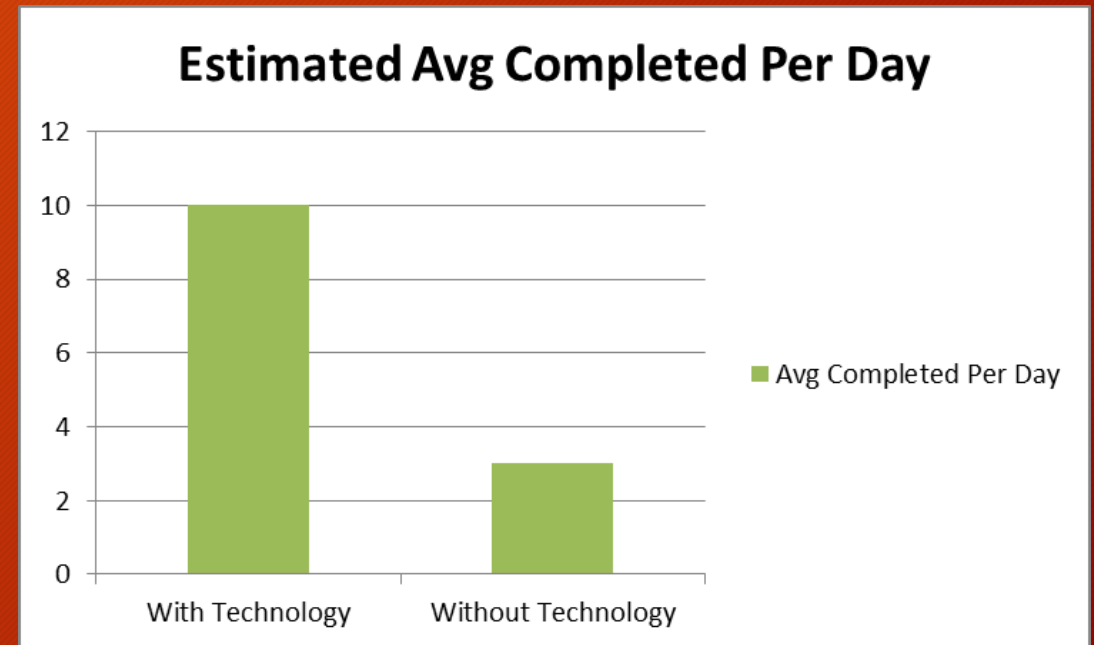
Wrap Up

- Current project status
 - Have completed 694 parcels out of 2,220
 - Completion time - about 5 weeks/3 appraisers
 - Bad weather and other work not considered
 - It's estimated 11 more weeks to complete



Wrap Up

- Using new technology & utilizing GIS data
 - On average about 10 parcels per day can be completed
- Using old process
 - On average about 4 parcels per day can be completed
 - It is estimated to have taken 16 weeks to complete what took 5 weeks to complete using the new technology.



Wrap Up

- Challenges/problems faced and overcome
 - Untrained staff on new technology
 - GIS System working with Pivot Point App
 - Weather
- Conclusions
- Positive feedback from staff
- time spent for field work preparation has significantly decreased
- Significant gains in the efficiency of our data collection process
- Overall this has been a positive experience and it will only get better as my staff gains more experience with the new technology

Wrap Up

- Q&A

