GIS Mileage Certification Mapping

Rebekkah Ausbury, Project Engineer
Joanna I. Johnson, Managing Director
Mileage Certification Maps

- Laws
  - PA 283 of 1909, as amended
  - PA 51 of 1951, as amended
- How funding is determined
- Every County, City & Village
  - PA 51 Agency
  - Michigan Department of Transportation (MDOT) Website availability
- Annually updated
- Appearance and uses have evolved
Act 51 Mileage Certification Maps

The mileage certification maps available below are annually submitted to the Michigan Department of Transportation by counties, cities, and villages to certify the mileages of roads and streets under the jurisdiction of each local agency for use in the distribution of the Michigan transportation fund.

The Michigan Department of Transportation is providing these mileage certification maps via this website as the custodian of the maps. However, all outside inquiries regarding either the maps or roads shown as being under the jurisdiction of the local agencies should be directed to the appropriate local body.

Select a Act 51 Mileage Certification Maps category from the drop down menu:

- County
  - 01 Alcona
  - 02 Alger
  - 03 Allegan
  - 04 Alpena
  - 05 Antrim
  - 06 Arenac
  - 07 Baraga
  - 08 Barry
  - 09 Bay
  - 10 Benzie
  - 11 Berrien
  - 12 Branch
  - 13 Calhoun

https://mdotjboss.state.mi.us/SpecProv/act51.htm#1084186
Mileage Certification Maps Evolution

Hand drawn → Auto CAD → GIS
GIS
**RCKC Mileage Certification Book**

- 210 pages
- Website interactive map
- Road name index
- Organized alphabetically by township, then by section
RCKC Mileage Certification Book

• Reference document for staff
• Project estimates
• Private/public debate
• Official road names
• Snow plowing/routes
• 911 Emergency Services/County Dispatch
Why Convert?

• Partnership with County Planning/GIS
  • Limited RCKC staff & GIS software
• 911 Dispatch clarity
• Efficiency
• Mutual Benefit
Why Convert?

• GIS software is made for mapping
• AutoCAD made for design
• Cleaner look
• Easier updating/editing
• Easier sharing layers
• Searchable!! (Ctrl + F)
Before
AutoCAD Derived
Before

AutoCAD Derived
After GIS Derived
After

GIS Derived
Township Sheet
Way-finding Tools
Orienting Tools
Helpful Features

- County Drains
- Border Roads
- Sections
More isn’t always better

- No private roads to avoid confusion
- Drop N, E, S, W street name prefixes for simplicity
Process

August 2020
- Initial conversations and planning
- Sent existing files to GIS Team
- Compare data sets & create sheets in GIS
- Manual data entry

Sept-Dec
- Continued with manual data entry
- Negotiation & comparison with GIS Team
- Creation of sheets in GIS
- Manual data entry

January 2021
- RCKC begins review and comparison with old book
- Formatting & style review

Feb - March
- Continued Quality Control (QC)
- Submission to State
Timeline

• 8 month process
• August 2020 – March 2021
  • Did not meet the December 1, 2020 Deadline
• Underestimated timeline
Communication

• Regular virtual meetings / No County Planning GIS in-person meetings
• Frequent emails and phone calls
• Clear contacts for both organizations
Hurdles

• Lack of in-person meetings
• Understanding the use of the maps and their importance for accuracy
  • Can’t just make adjustments based on a framework base map
  • Differing ideas of the book’s purpose
• “Updating” book caused rework
• Meeting deadlines at many steps in the review
• Small county GIS team
• Ongoing review/QC for errors
Cost

- RCKC contributes $3,000 annually to County Planning for GIS assistance
- County Planning actual estimated cost for this project $19,200 (no additional costs to RCKC)
- Annual estimated maintenance cost $1,000-$3,000
Tips for others

Plan ample time for conversion

Sometimes simple is best

Communicate expectations clearly ahead of work

Get it in writing
Long Term Benefits

- Speaking same language as County Partners
- Layers are endless
- Clean, modern aesthetic, easy to update
Thank You!

Rebekkah Ausbury, Project Engineer
Joanna I. Johnson, Managing Director