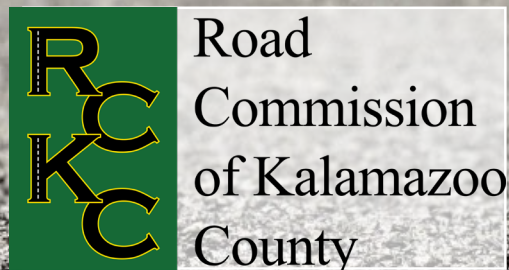


GIS Mileage Certification Mapping

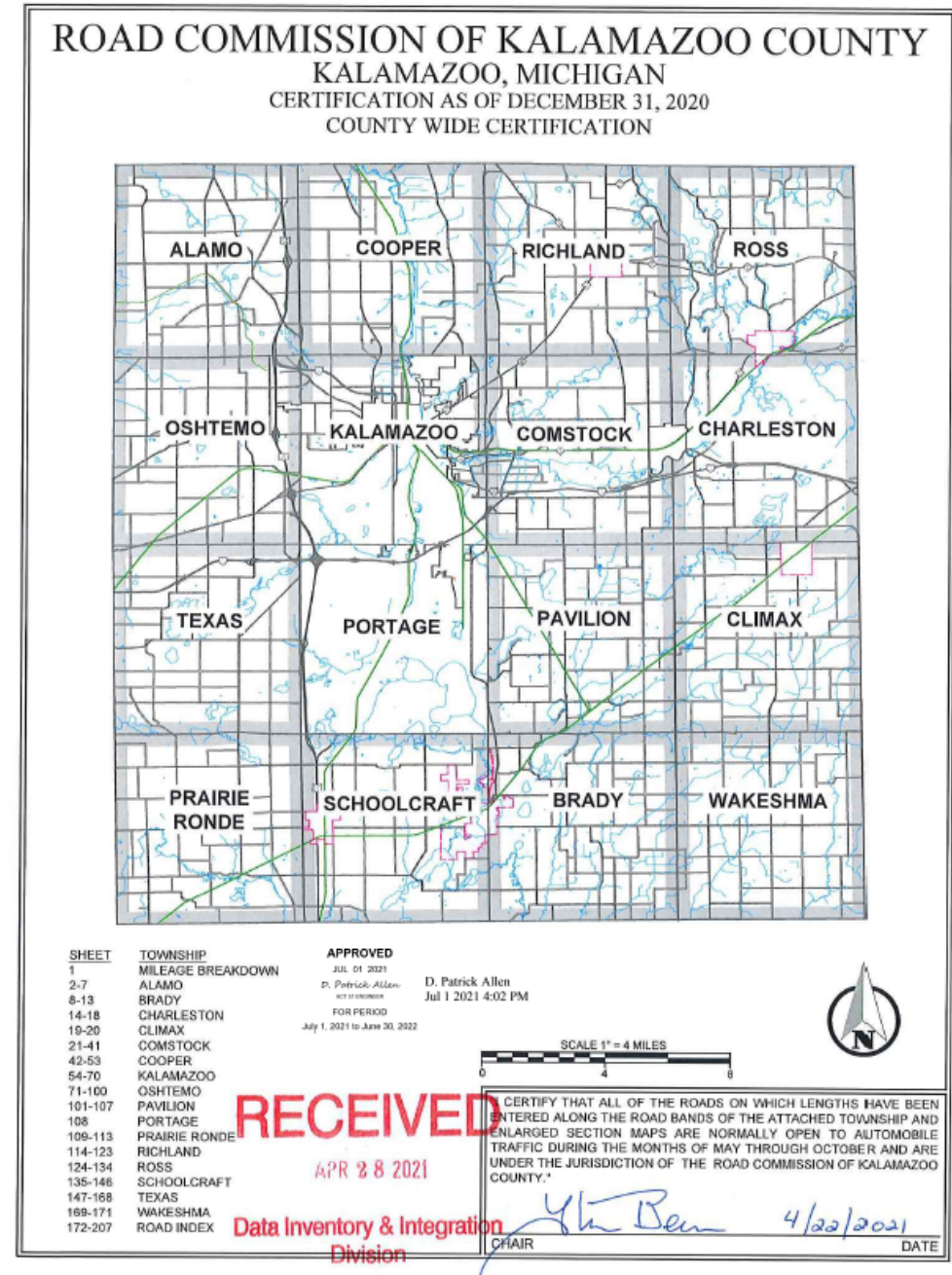
Rebekkah Ausbury, Project Engineer

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.

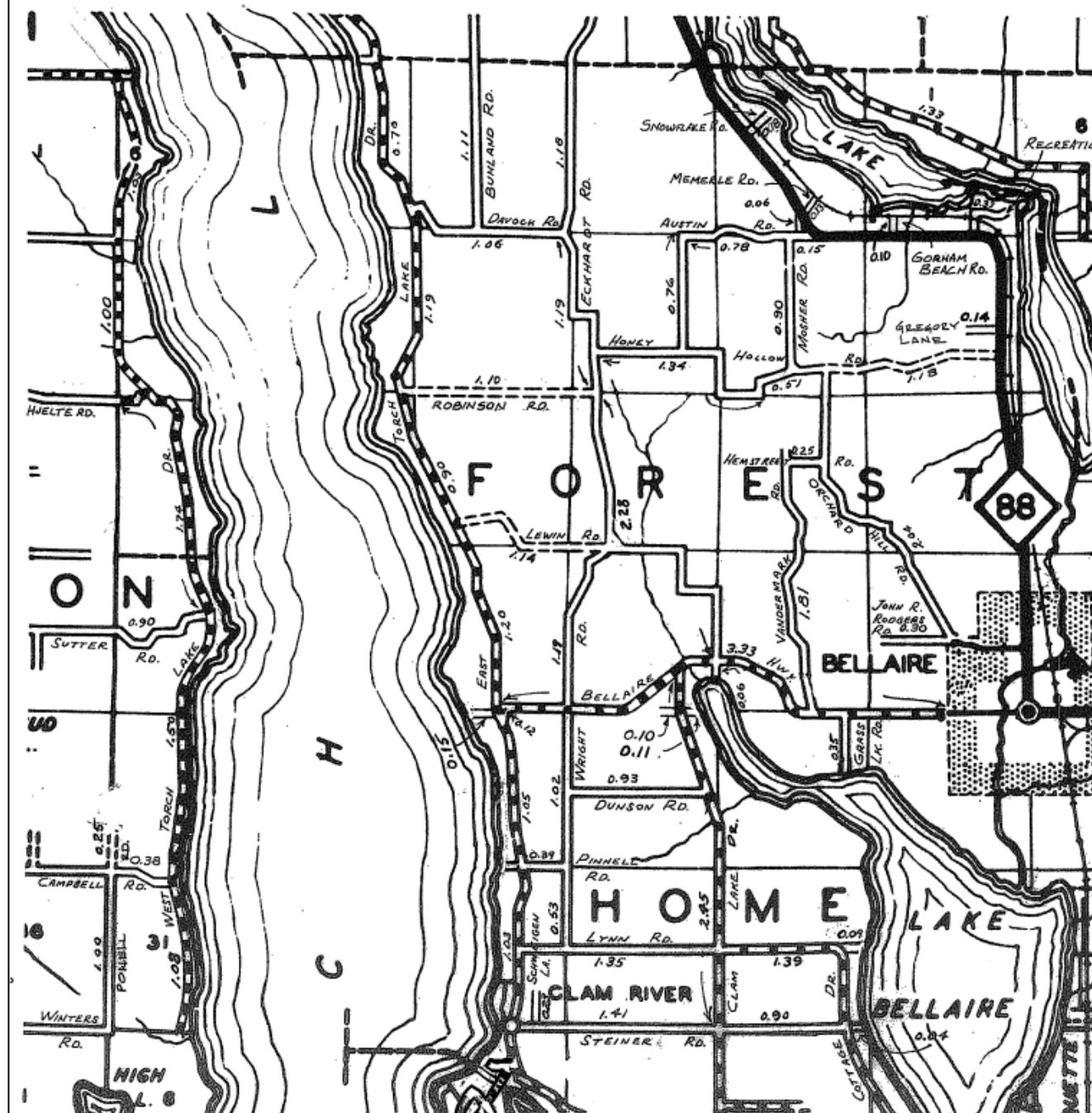
The Michigan Department of Transportation is providing these mileage certification maps via this website as the custodian of the maps. However, all outside inquiries regarding either the maps or roads shown as being under the jurisdiction of the local agencies should be directed to the appropriate local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

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>



LEGEND

COUNTY LINE
 CORPORATE LIMITS
 STATE TRUNKLINE
 COUNTY PRIMARY
 COUNTY LOCAL
 ADJACENT COUNTY
 CITY OR VILLAGE
 STREET

PRIMARY ROAD SYSTEM IS 21.04 MILES

LOCAL ROAD SYSTEM IS 31.40 MILES

I HEREBY CERTIFY THAT THE ROADS SHOWN HEREON BY SYMBOL OR IN RED AS PRIMARY ROADS AND THOSE SHOWN HEREON BY SYMBOL OR IN GREEN AS LOCAL ROADS ARE IN USE AND ARE UNDER THE JURISDICTION OF THE COUNTY ROAD COMMISSION.

CHAIRMAN

DATE



SCALE 0 1/4 1 MILE
 One inch equals 3000 feet

Ashtab Co.—5

T. 30 N. R. 8 W.

Prepared by
 MICHIGAN STATE HIGHWAY DEPARTMENT

2020 PA51
GRAND TRAVERSE COUNTY ROAD COMMISSION
ROADWAY CERTIFICATION MAP

11

SCALE 1 INCH = 4000 FEET
0 2000' 4000' 8000'



LEGEND

COUNTY LINE	-----
GOVERNMENT TOWNSHIP LINES	-----
GOVERNMENT SECTION LINES	-----
CITY CORPORATE LIMITS	-----
SUBDIVISION/CONDOMINIUM LIMITS	-----
ADJACENT COUNTY JURISDICTION	-----
STATE TRUNK LINE HIGHWAY	=====
COUNTY PRIMARY ROADWAY	=====
COUNTY LOCAL ROADWAY	=====
COUNTY LOCAL ROADWAY (SEASONAL)	-----
TOWNSHIP/CITY/VILLAGE ROADWAY	-----
PRIVATE ROADWAY	-----
ROADWAY NOT CONSTRUCTED	-----

PRIMARY ROAD SYSTEM IS: 20.96 MILES.
LOCAL ROAD SYSTEM IS: 0.00 MILES.

TOWNSHIP OF EAST BAY & ACME, TOWNSHIP 27 NORTH, RANGE 10 WEST,
GRAND TRAVERSE COUNTY (28), STATE OF MICHIGAN

PREPARED BY/ REVISED BY: J. SLONECKI, PE
DATE: 06/15/2016
REVISED: JUNE 2016

MAP SHEET 11

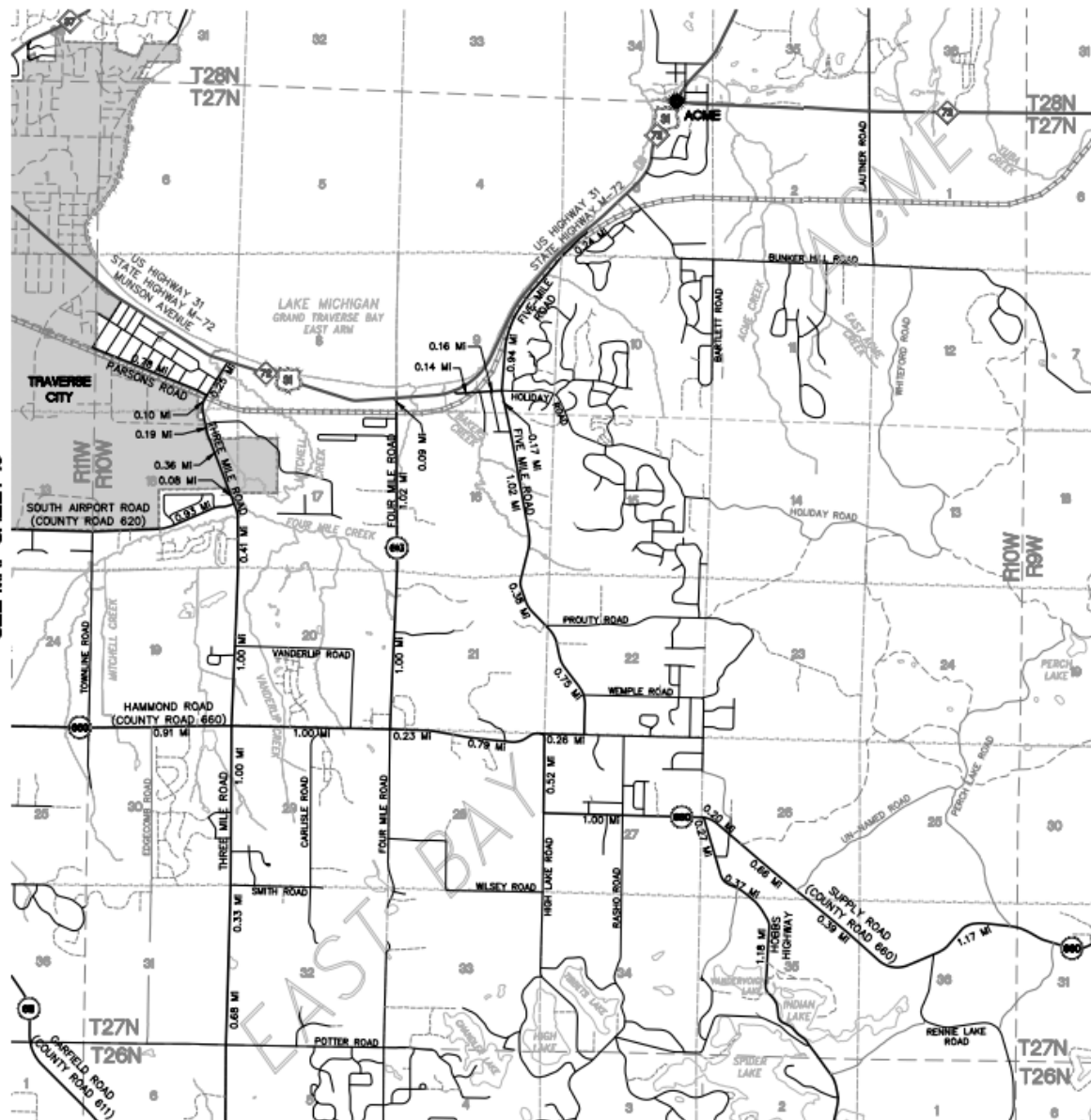


SEE MAP SHEET 14

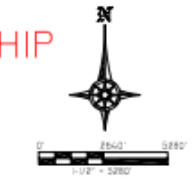
SEE MAP SHEET 10

SEE MAP SHEET 12

SEE MAP SHEET 7



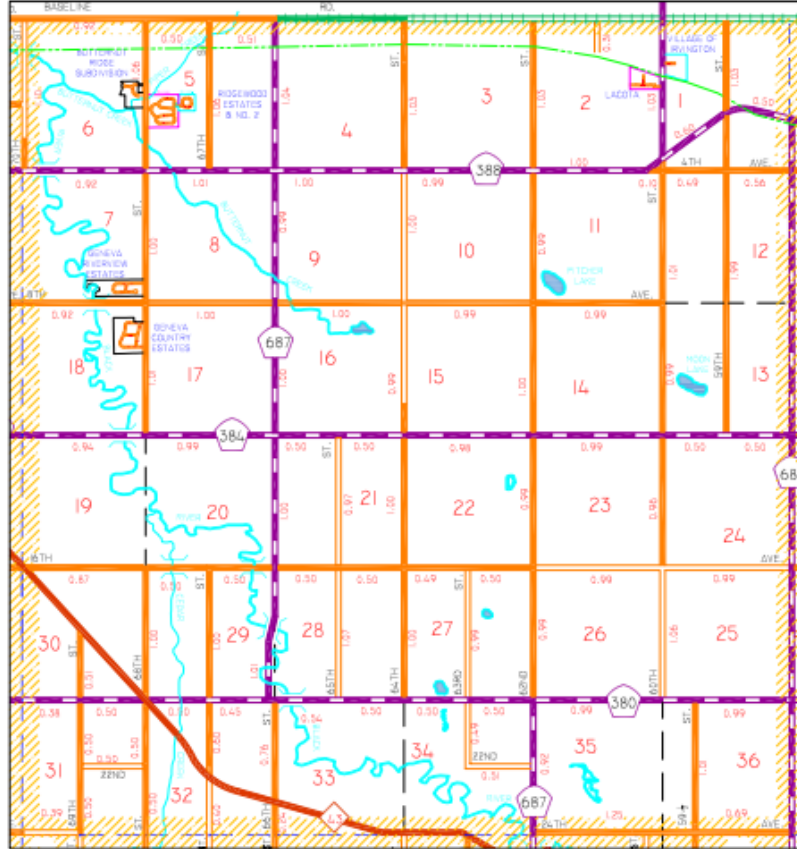
GENEVA TOWNSHIP



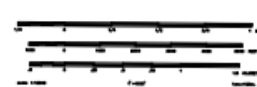
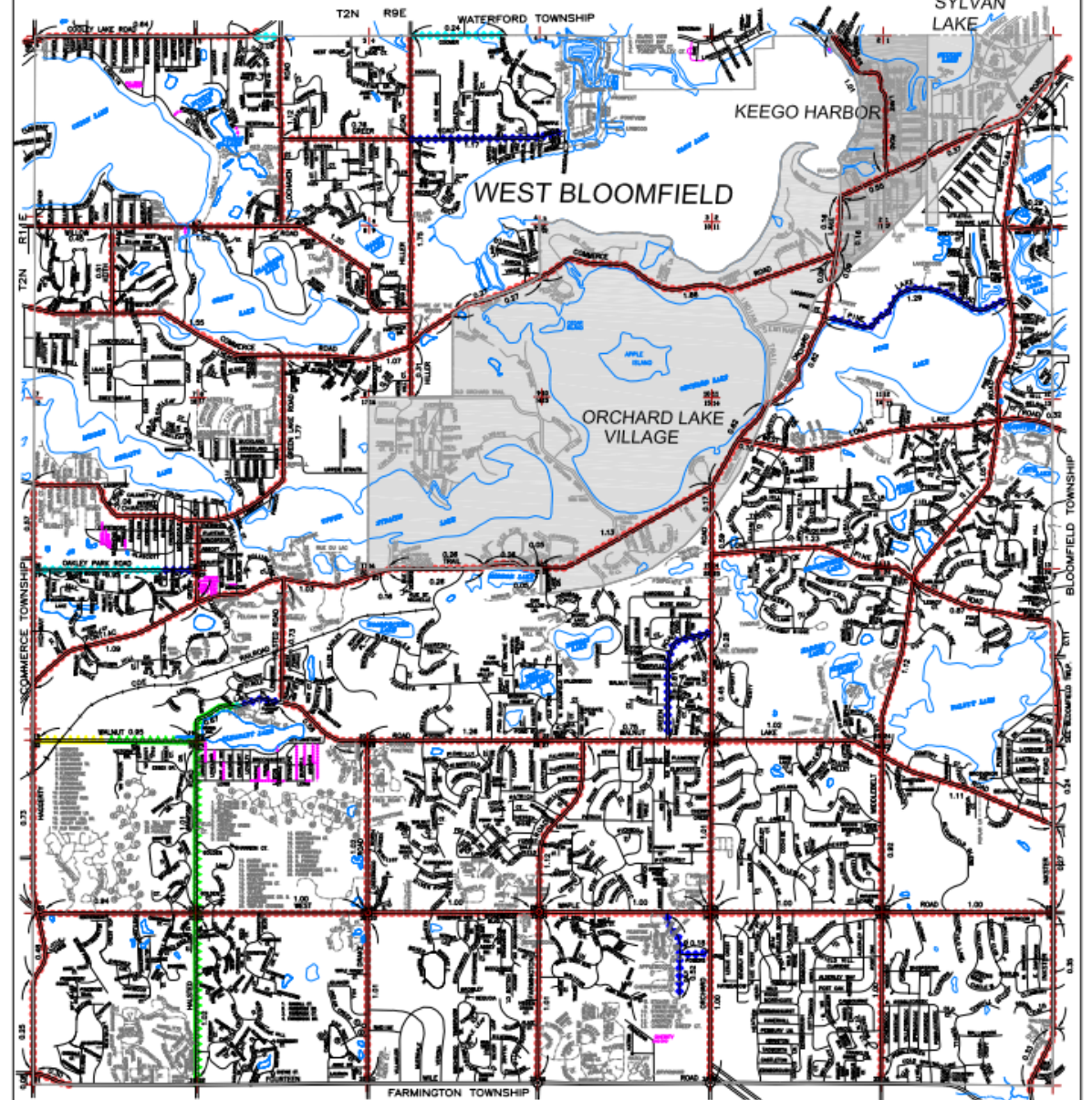
TOWNSHIP: GENEVA, T. 15, R. 16W
COUNTY: VAN BUREN
PRIMARY: 24.71 MILES
LOCAL: 50.80 MILES

LEGEND
INTERSTATE
STATE TRUNKLINE
CITY OR VILLAGE STREET
CORPORATE LIMITS

COUNTY PRIMARY
COUNTY LOCAL (PAVED)
COUNTY LOCAL (GRAVEL)
ADJACENT COUNTY
RAILROAD
TRAIL



GENEVA TOWNSHIP	
DATE CERTIFIED:	DATE STATE & FEDERAL:
10/2/2006	10/2/2006
REVISION:	REVISION:
80-4	80-4

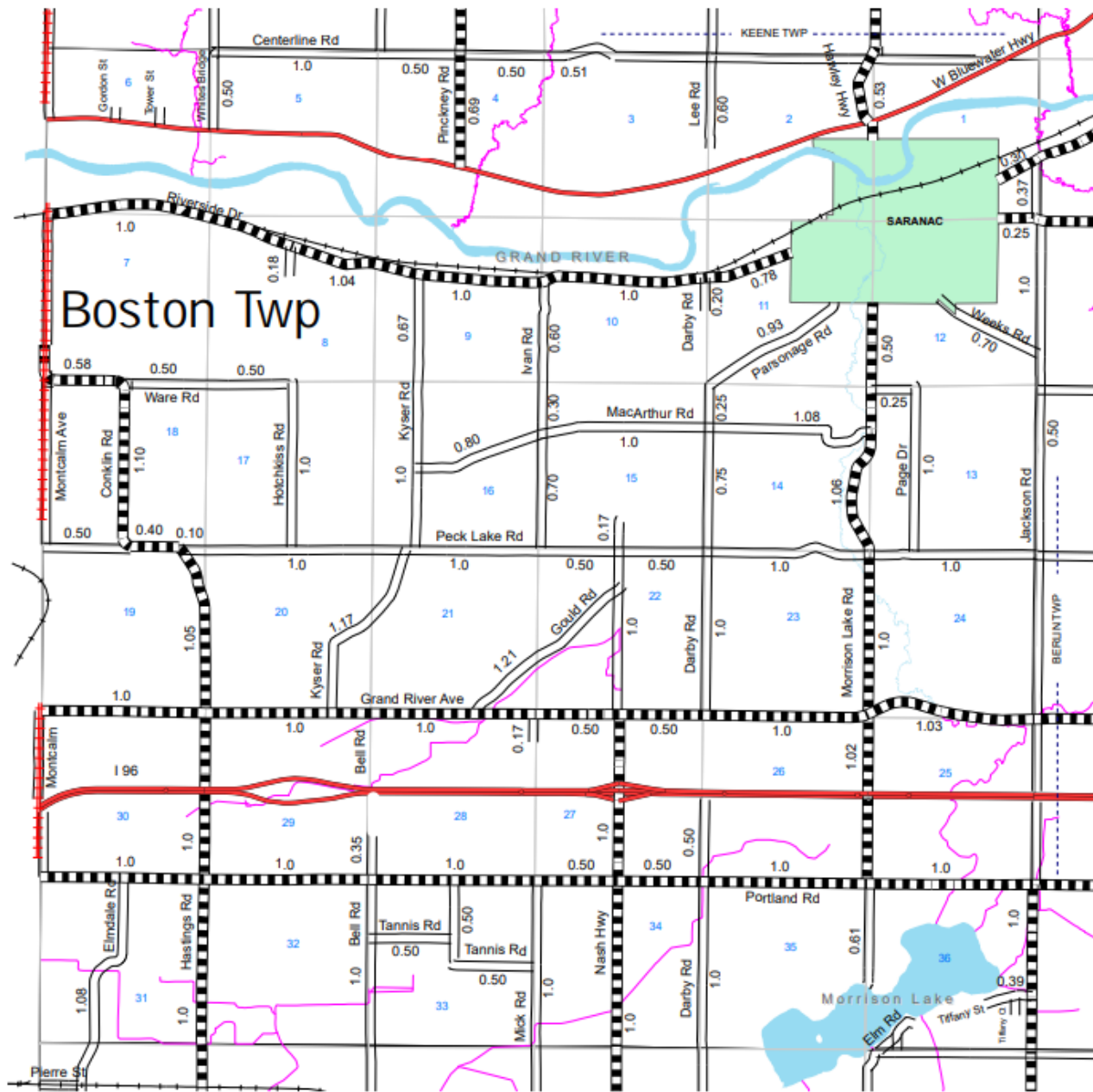


LEGEND	
PRIMARY-PAVED	●●●●●●
PRIMARY-GRAVEL	○●○●○●
LOCAL-PAVED	●●●●●●
LOCAL-GRAVEL	○●○●○●
NATURAL BEAUTY	▲▲▲▲▲▲
PAVED	▲▲▲▲▲▲
SUB LOCAL	▲▲▲▲▲▲
UNPAVED	▲▲▲▲▲▲
PRIVATE	▲▲▲▲▲▲

SHEET 24			
As of December 31, 2020			
Community			
	Primary	Local	Sub'n
West Bloomfield	50.56	8.90	217.84
Reserve of Beverly Crest, Sect. 35			0.08
Orchard Lake	4.39	0.00	0.00
Keego Harbor	1.81	0.00	0.00
Sylvan Lake	0.37	0.00	0.00
Sub Total	57.15	8.90	217.92
Total Mileage	57.15		226.82

CERTIFICATION MAP
WEST BLOOMFIELD TOWNSHIP
ROAD COMMISSION FOR OAKLAND COUNTY
CERTIFIED DEC. 31, 2020

01/28/21



SHEET 3

ACT51

- County Local
- County Primary
- State Trunkline
- RAIL ROAD
- DRAINS
- SECTION LINES
- LAKES & RIVERS
- ADJACENT COUNTY

PRIMARY ROAD SYSTEM TOTAL FEET 0.0 EQUALS 30.33 MILES

LOCAL ROAD SYSTEM TOTAL FEET 0.0 EQUALS 35.64 MILES

I HEREBY CERTIFY THAT THE ROADS SHOWN
HEREON BY SYMBOL AS LOCAL ROADS ARE
IN USE AND ARE UNDER THE JURISDICTION OF
THE IONIA COUNTY ROAD COMMISSION

CHAIRMAN

DATE



TOWNSHIP BOSTON
SECTION T6N R8W
COUNTY IONIA - 34

0 0.25 0.5 1 1.5 Miles

SHEET 3

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

ROAD COMMISSION OF KALAMAZOO COUNTY COUNTYWIDE CERTIFICATION BREAKDOWN

ALAMO			
Sheet	Sec.	Prim.	Local
2		31.20	36.56
3	3		0.43
4	12		0.19
5	24		0.20
6	28		0.23
7	35		0.27
Totals 31.20 37.88			

BRADY			
Sheet	Sec.	Prim.	Local
8		29.45	44.05
9	5		0.42
10	6		0.37
11	7		0.88
12	8		0.70
13	17		0.21
Totals 29.45 46.63			

CHARLESTON			
Sheet	Sec.	Prim.	Local
14		20.85	22.69
15	7		0.35
16	19		0.51
17	20		0.16
18	34		0.24
Totals 20.85 23.95			

CLIMAX			
Sheet	Sec.	Prim.	Local
19		25.35	46.43
20	19		0.97
Totals 25.35 47.40			

COMSTOCK			
Sheet	Sec.	Prim.	Local
21		43.31	26.39
22	2		3.41
23	3		1.07
24	5		9.30
25	6		2.18
26	7		3.34
27	12		0.40
28	15		1.24
29	16		0.92
30	17		1.60
31	18		7.00
32	19		3.83
33	20		4.36
34	21		2.24
35	23		0.92
36	24		1.86
37	26		0.34
38	28		1.08
39	30		1.21
40	31		1.40
41	32		0.41
Totals 43.31 74.50			

COOPER			
Sheet	Sec.	Prim.	Local
42		30.86	40.10
43	18		0.56
44	19		1.99
45	24		0.68
46	25		1.54
47	26		1.02
48	28		0.52
49	30		1.84
50	32		0.95
51	34		0.96
52	35		6.12
53	36		6.55
Totals 30.9 62.83			

KALAMAZOO			
Sheet	Sec.	Prim.	Local
54		25.57	5.21
55	1		1.00
56	4		2.13
57	5		5.14
58	6		3.60
59	7		6.69
60	8		3.24
61	9		0.94
62	11		4.64
63	12		8.64
64	13		8.20
65	14		3.29
66	17		12.08
67	18		4.59
68	23		1.29
69	24		3.32
70	25		0.89
Totals 25.6 74.89			

OSHTEMO			
Sheet	Sec.	Prim.	Local
71		41.87	30.75
72	1		1.29
73	2		1.94
74	3		0.54
75	8		0.97
76	10		1.93
77	11		7.33
78	12		0.46
79	13		2.04
80	14		4.95
81	15		0.69
82	16		0.55
83	17		1.94
84	18		1.16
85	19		0.16
86	20		0.70
87	21		0.51
88	23		1.69
89	24		3.19
90	25		3.91
91	26		2.74
92	27		0.91
93	28		0.29
94	30		1.12
95	31		0.92
96	32		0.72
97	33		1.36
98	34		0.22
99	35		1.78
100	36		0.96
Totals 41.9 77.72			

PAVILION			
Sheet	Sec.	Prim.	Local
101		26.95	41.25
102	4		0.28
103	19		2.82
104	20		1.43
105	24		0.91
106	29		1.48
107	33		0.15
Totals 27 48.32			

PORTAGE			
Sheet	Sec.	Prim.	Local
108		10.63	0.00
Totals 10.6 0.00			

PRAIRIE RONDE			
Sheet	Sec.	Prim.	Local
109		21.52	47.97
110	5		0.46
111	25		1.26
112	35		0.95
113	36		1.47
Totals 21.5 52.11			

RICHLAND			
Sheet	Sec.	Prim.	Local
114		26.53	42.01
115	5		0.24
116	6		0.38
117	11		0.38
118	12		1.04
119			
120			
121			
122			
123			
Totals 26.53 42.01			

TEXAS			
Sheet	Sec.	Prim.	Local
147		32.34	34.92
148	1		1.31
149	2		1.32
150	3		2.60
151	4		4.19
Totals 32.34 34.92			

SHEET	TOWNSHIP
1	MILEAGE BREAKDOWN
2-7	ALAMO
8-13	BRADY
14-18	CHARLESTON
19-20	CLIMAX
21-41	COMSTOCK
42-53	COOPER
54-70	KALAMAZOO
71-100	OSHTEMO
101-107	PAVILION
108	PORTAGE
109-113	PRAIRIE RONDE
114-123	RICHLAND
124-134	ROSS
135-146	SCHOOLCRAFT
147-168	TEXAS
169-171	WAKESHMA
172-207	ROAD INDEX

COUNTYWIDE TOTALS			
Primary Roads	445.82	miles	
Local Roads	824.63	miles	

RCKC Mileage Certification Book

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

-
- This map shows a residential area with the following features:
- Streets:** Hart St, Owen Dr, 6th St, 7th St, 8th St, 9th St, and Ave.
 - Lots:** 21, 22, 23, 26, 27, 28, 33, 34, and 35.
 - Water Features:** Mud Lakes and a creek.
 - Dimensions and Distances:** Various measurements are marked along the streets and lots, such as 0.55, 0.75, 1.00, 1.20, 1.25, 0.80, 0.60, 0.65, 0.50, 0.40, 0.48, 0.55, 0.17, 1.00, 0.50, and 1.00.
 - Other Labels:** DR (Driveway), ST (Street), and F (Front).

A photograph of six rowers in a long boat on a calm lake at sunset. The sun is low on the horizon, creating a warm orange and yellow glow. The rowers are silhouetted against the bright water. In the background, there are dark, silhouetted mountains under a sky with scattered clouds.

Why Convert?

- **Partnership with County Planning/GIS**
 - Limited RCKC staff & GIS software
- **911 Dispatch clarity**
- **Efficiency**
- **Mutual Benefit**

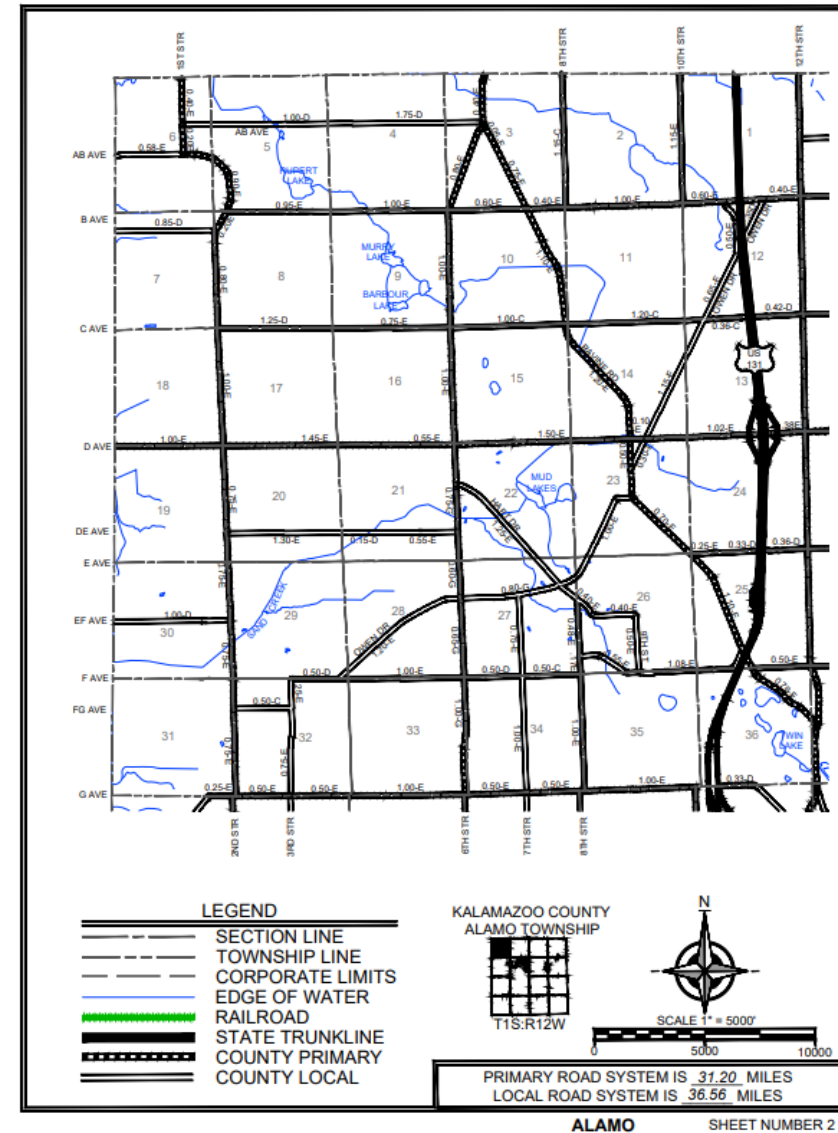
Why Convert?

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



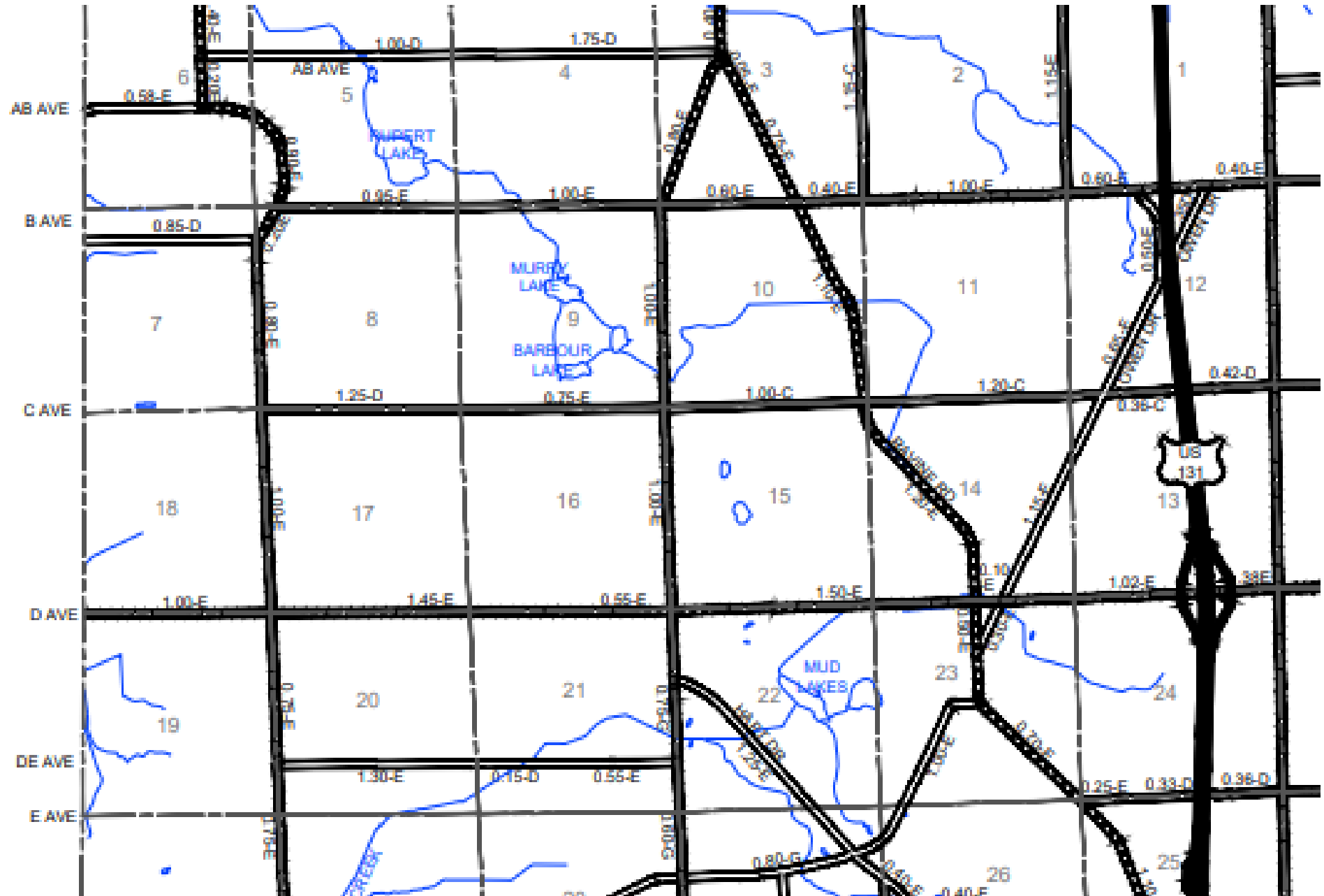
Before

AutoCAD Derived



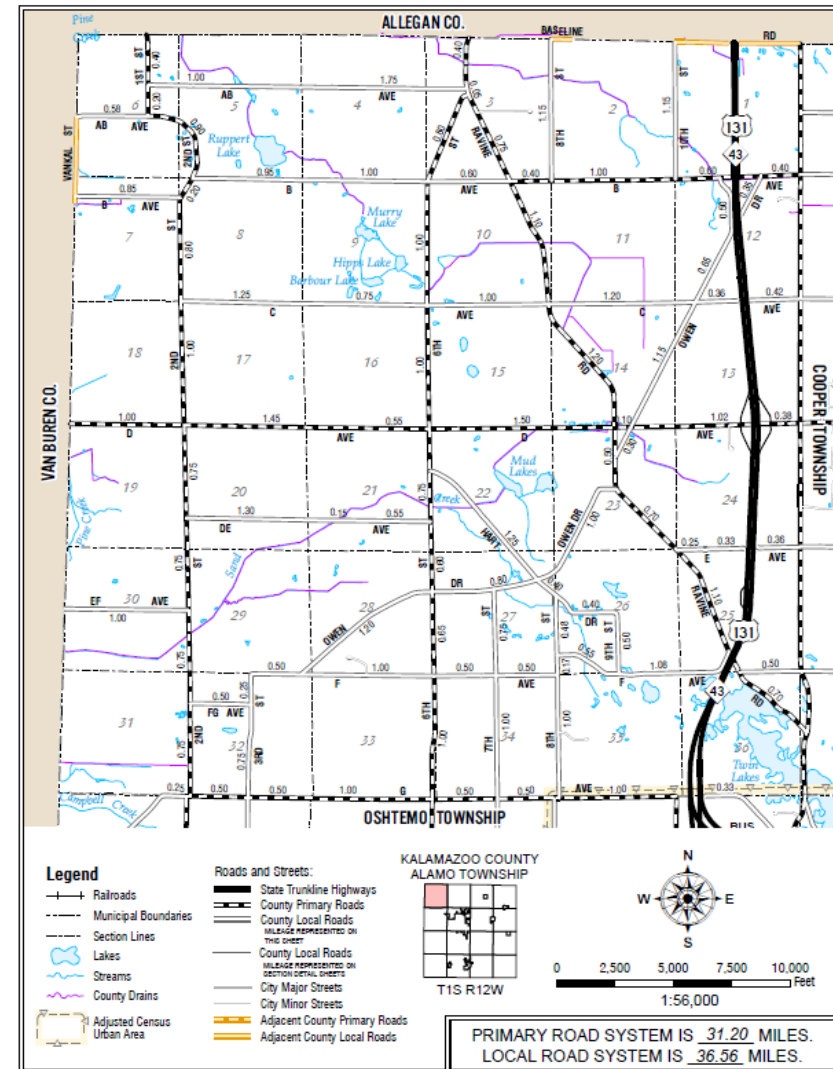
Before

AutoCAD Derived



After

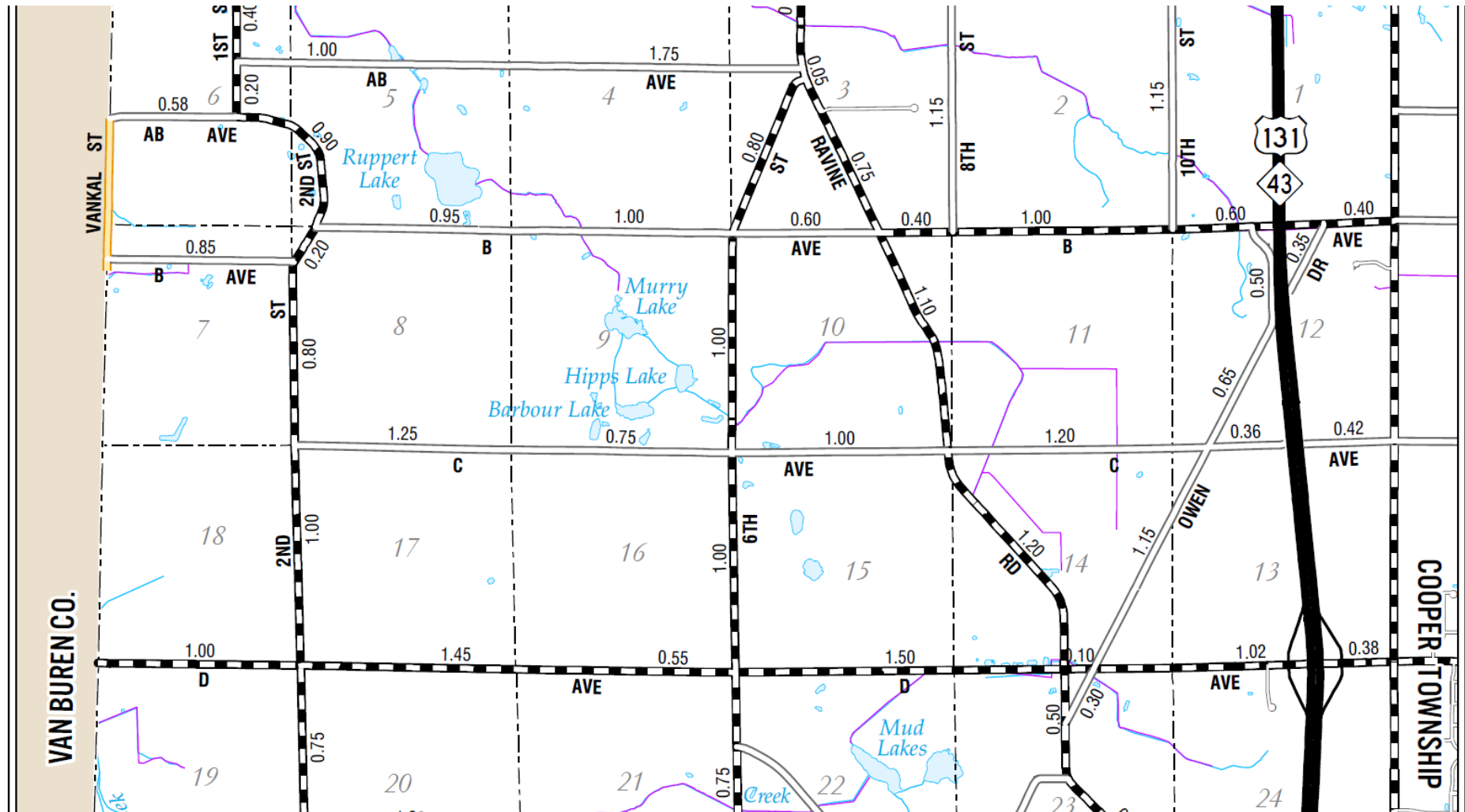
GIS Derived

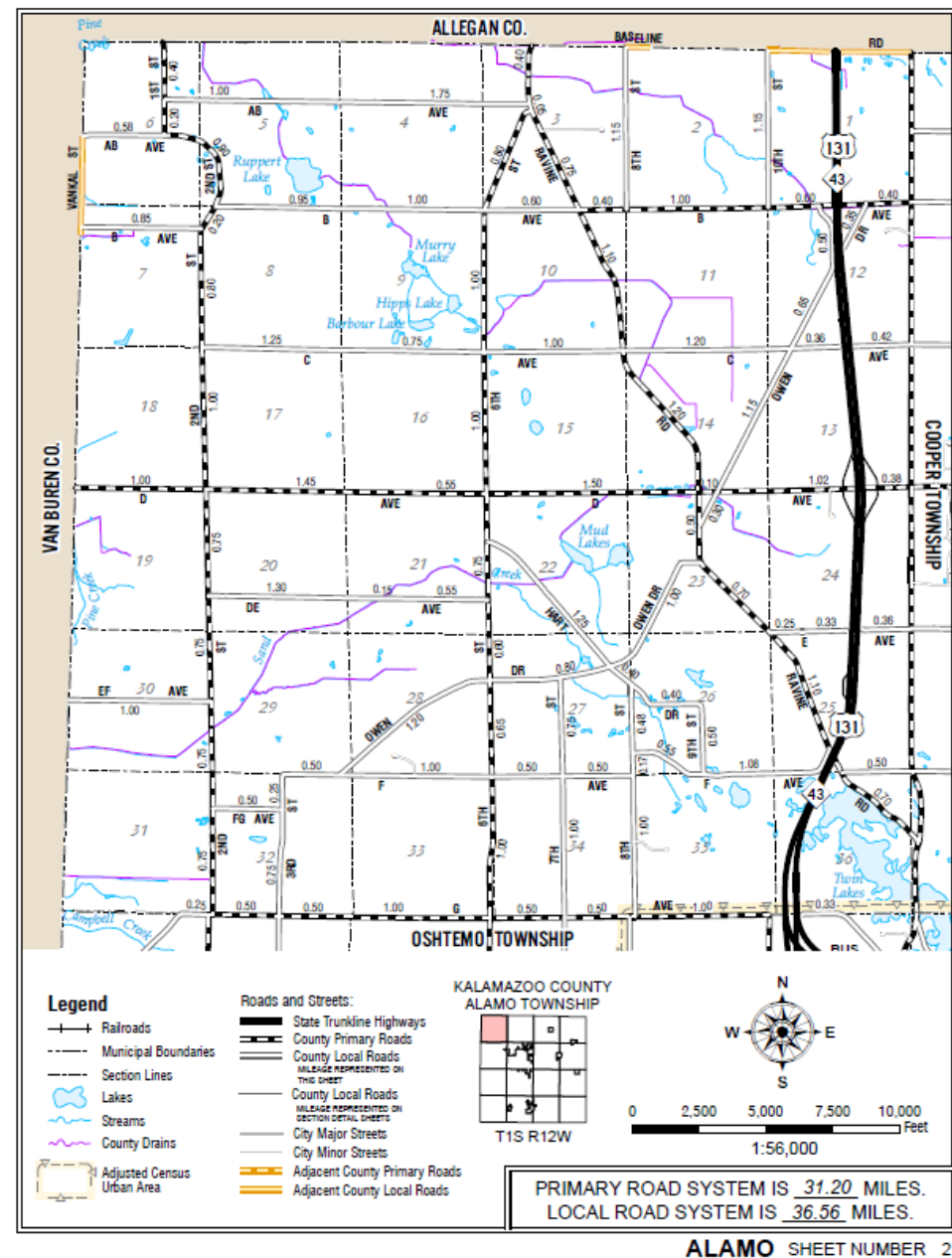
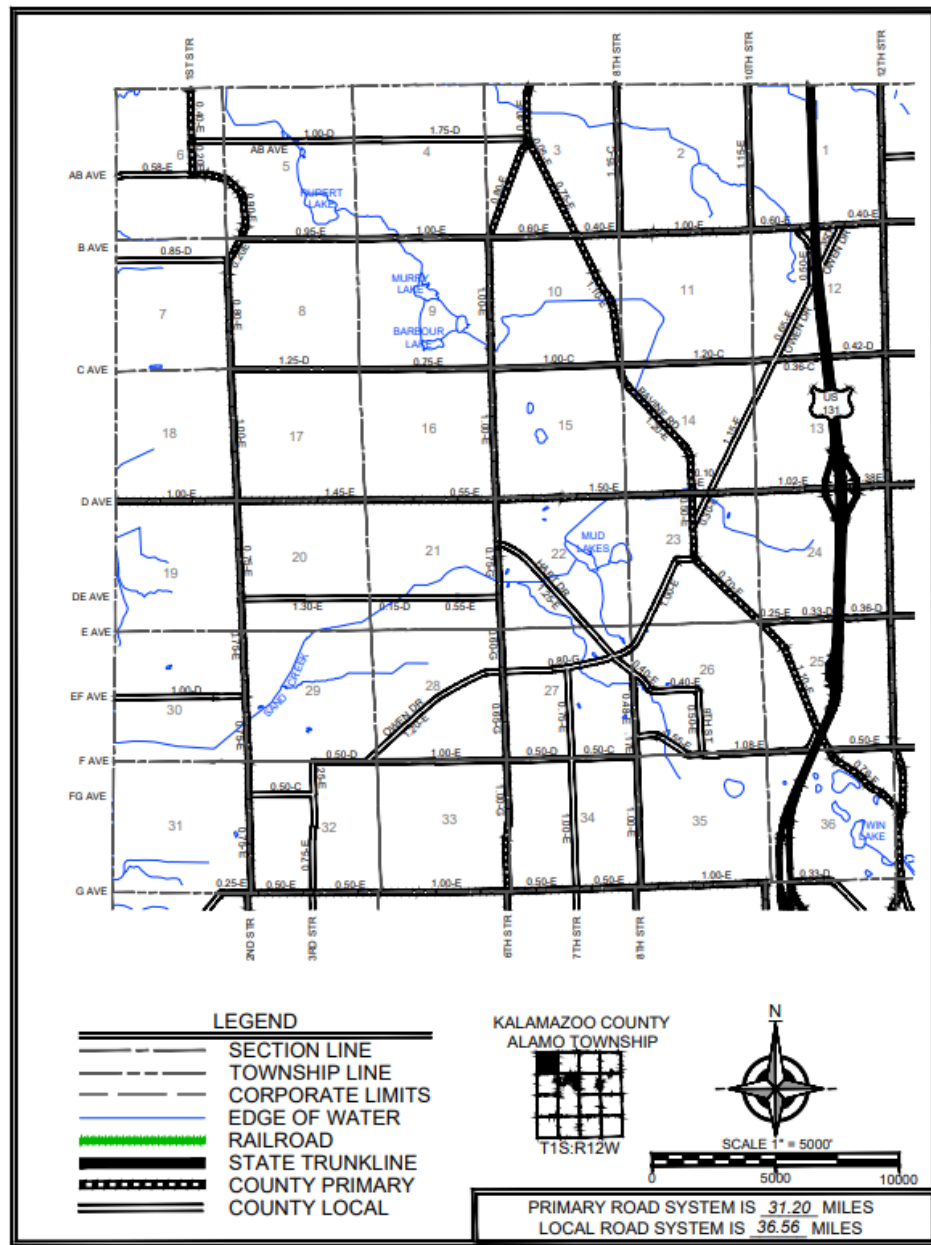


ALAMO SHEET NUMBER 2

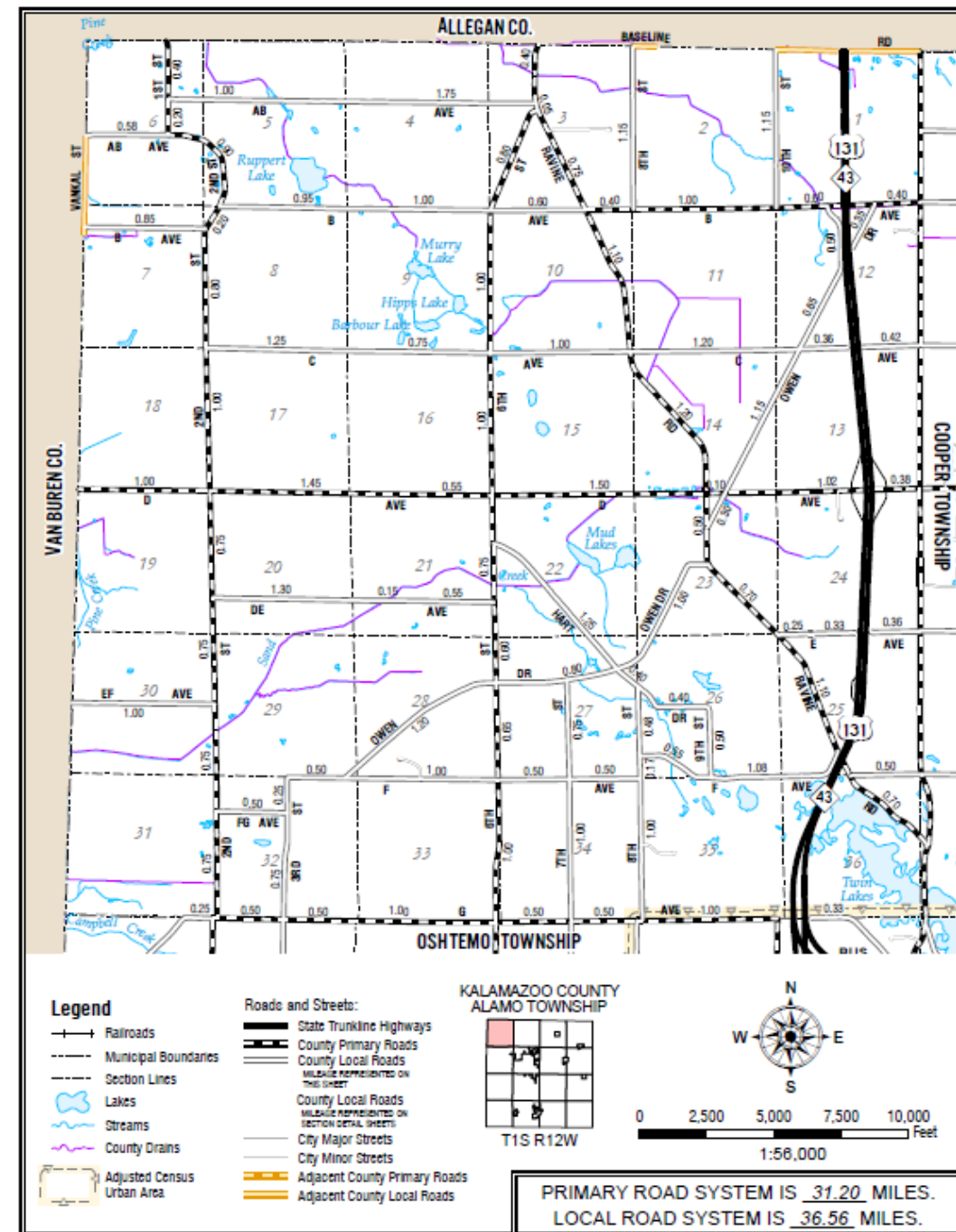
After

GIS Derived

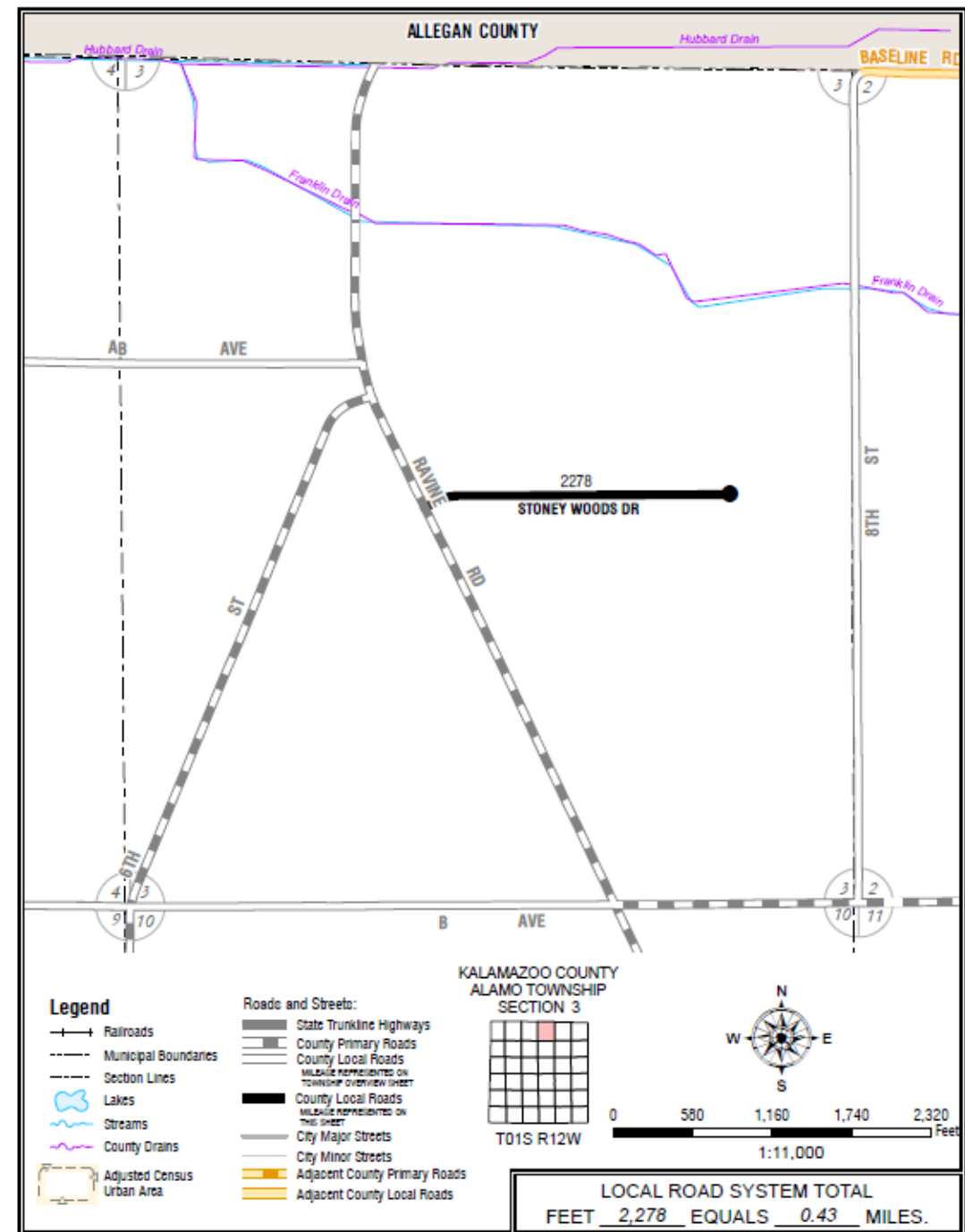




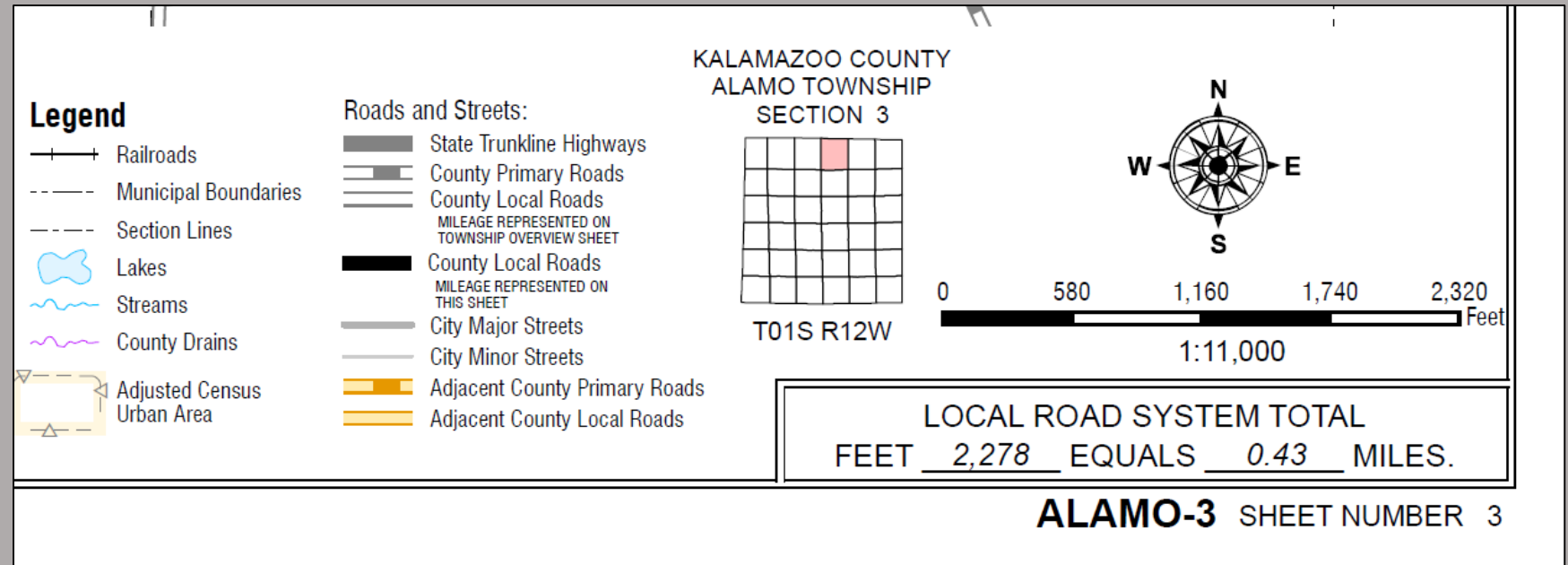
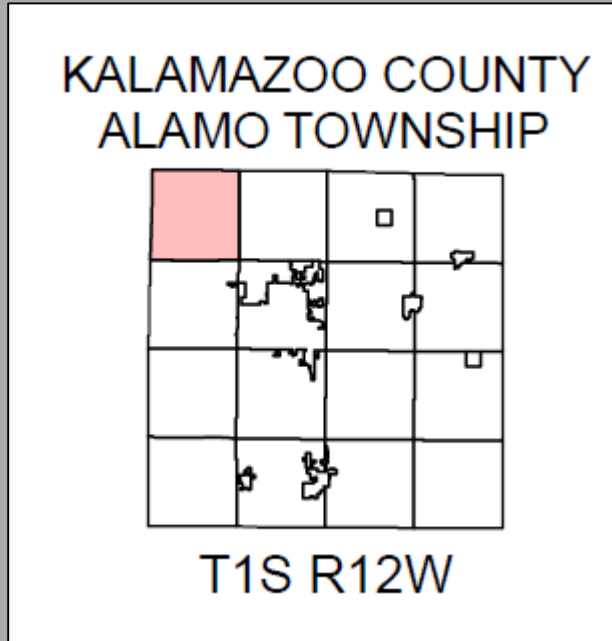
Township Sheet



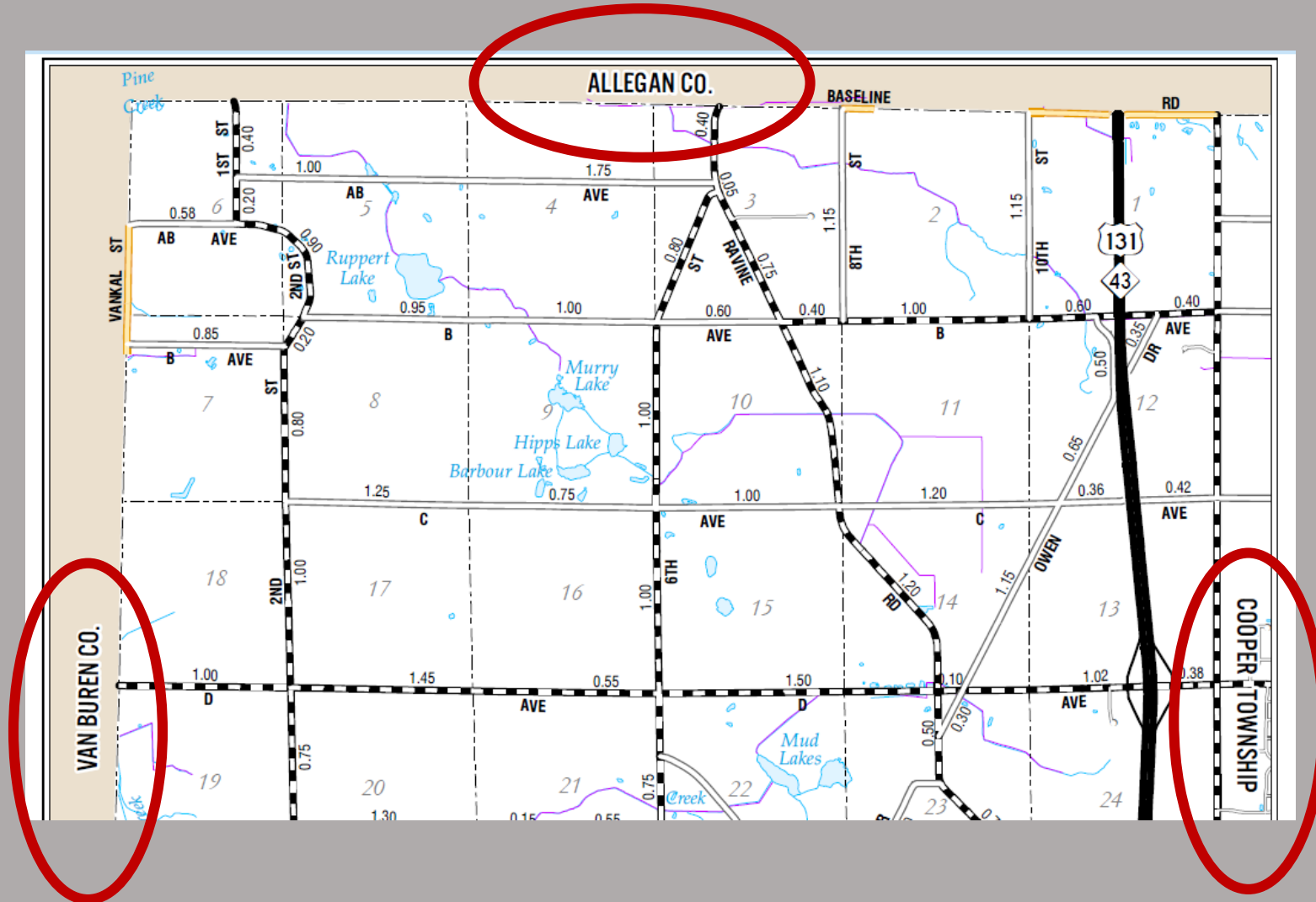
Detailed Section Sheet



Way-finding Tools

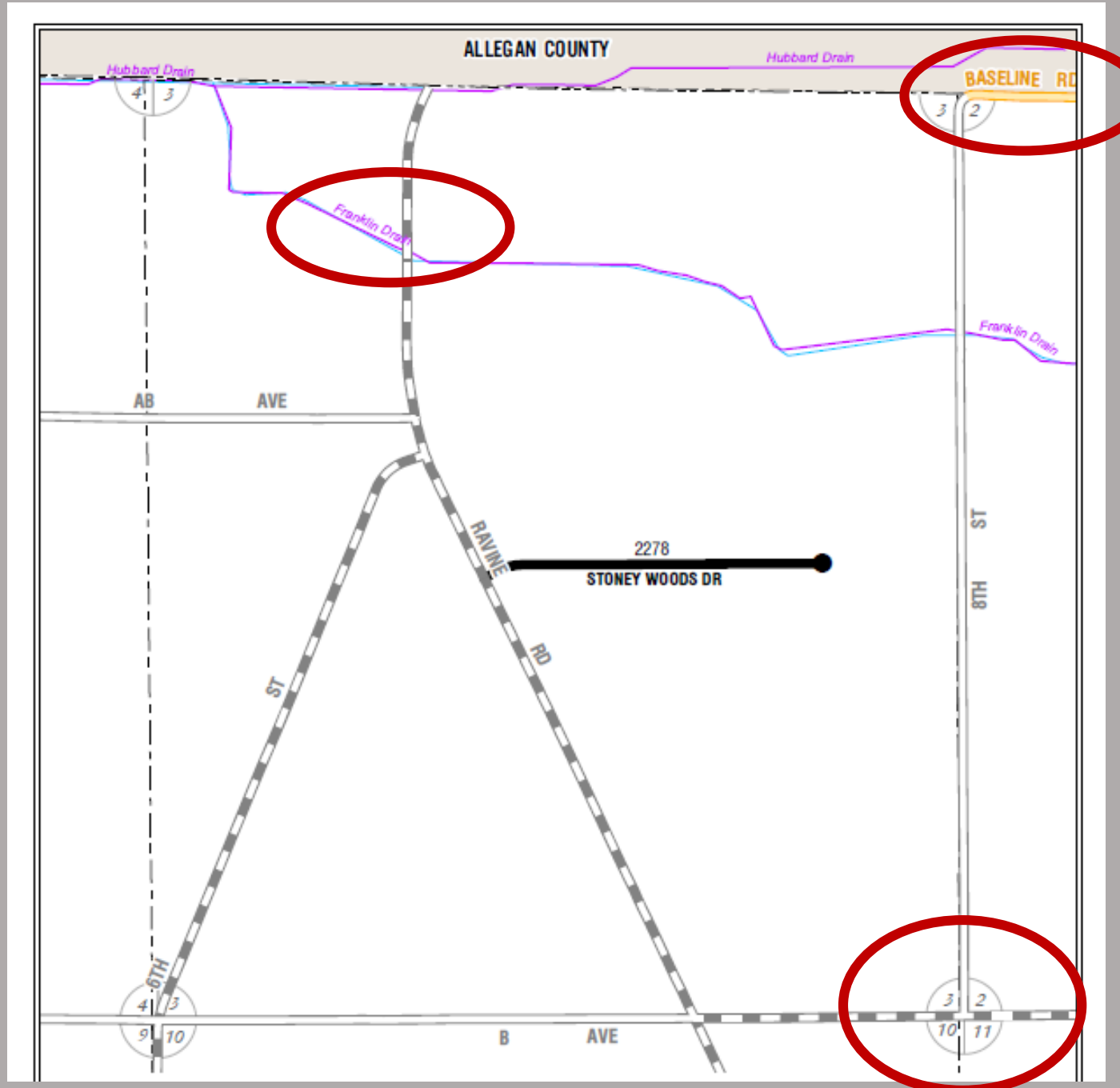



Orienting Tools




Helpful Features

- **County Drains**
- **Border Roads**
- **Sections**



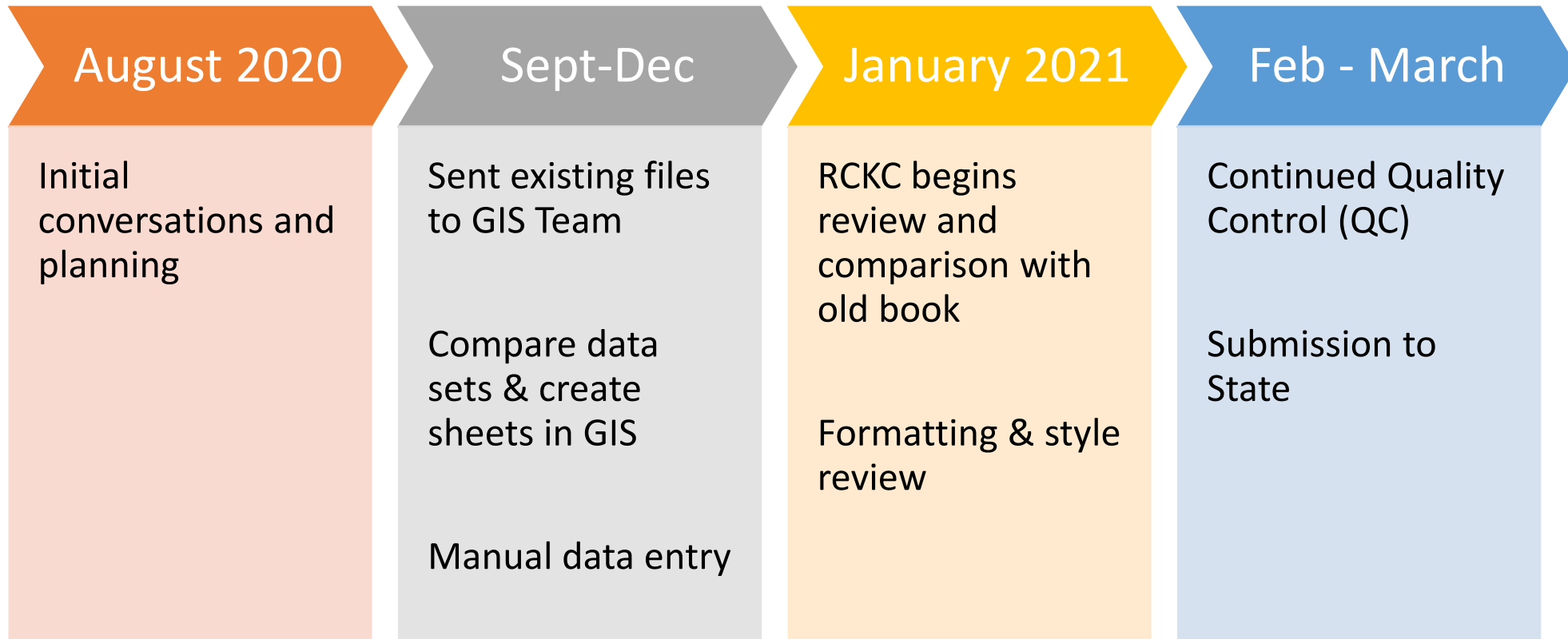


More isn't
always
better



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

Process



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

