

The Public Lands Survey System

**An Essential Network Worthy of
Protection**

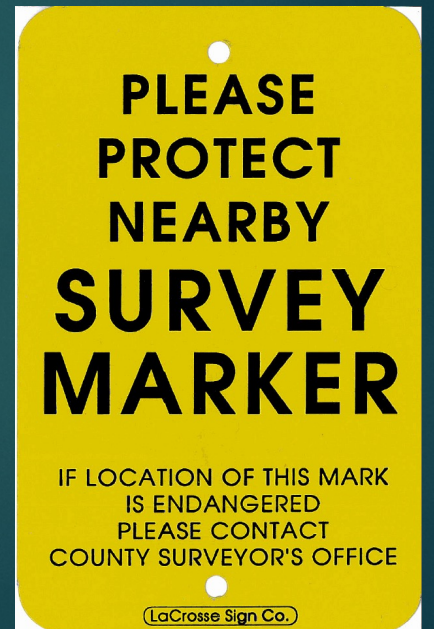


**BRYAN MEYER – LA CROSSE COUNTY
SURVEYOR**

*PRESIDENT ELECT OF THE WISCONSIN SOCIETY OF LAND
SURVEYORS*

*PAST PRESIDENT WISCONSIN COUNTY SURVEYORS
ASSOCIATION*

September 27, 2021





WARNING

Audio books = 150-160 words per minute

**Bryan = Clocked at 192 words per minute
(gusts in excess of 200 words per minute)**



For your convenience, many of your questions and comments have already been incorporated into this presentation.

Name that National Monument





MOUNT RUSHMORE

The sculpture features the 60-foot heads of Presidents George Washington (1732–1799), Thomas Jefferson (1743–1826), Theodore Roosevelt (1858–1919), and Abraham Lincoln (1809–1865). The four presidents were chosen, respectively, to represent the birth, the growth, the development, and the preservation of the United States.

**Land surveyors have a
different name for that
monument**



National Surveyor's Monument

Lincoln = Surveyor

Jefferson = Surveyor

Washington = Surveyor

3 Surveyors and some other guy



“Dude, what exactly qualifies you to talk about the Public Land Survey System?”



June 1976

Sunday Monday Tuesday Wednesday Thursday Friday Saturday

		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

H. A. Sime and Associates
Tomah, Wisconsin

**Historian
Mathematician
Cartographer
Lumberjack
Archeologist
Interpreter
Writer
Thinker
Moderator**



**H. A. Sime and
Associates
Tomah, Wisconsin**

28½ years

**PRIVATE PRACTICE
SURVEY WORK**



DECEMBER 2008

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7		8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24 Christmas Eve	25 Christmas Day	26
27	28	29	30	31 New Year's Eve		

November 2008

S	M	T	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

January 2009

S	M	T	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Notes:

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LA CROSSE COUNTY
 Exceptional services. Extraordinary place.



I ❤️
MY
JOB



45 YEARS

The thing about my job that I am most passionate about is remonumentation of the Public Land Survey System



“So, just what is the Public Land Survey System?”



PUBLIC LAND SURVEY SYSTEM

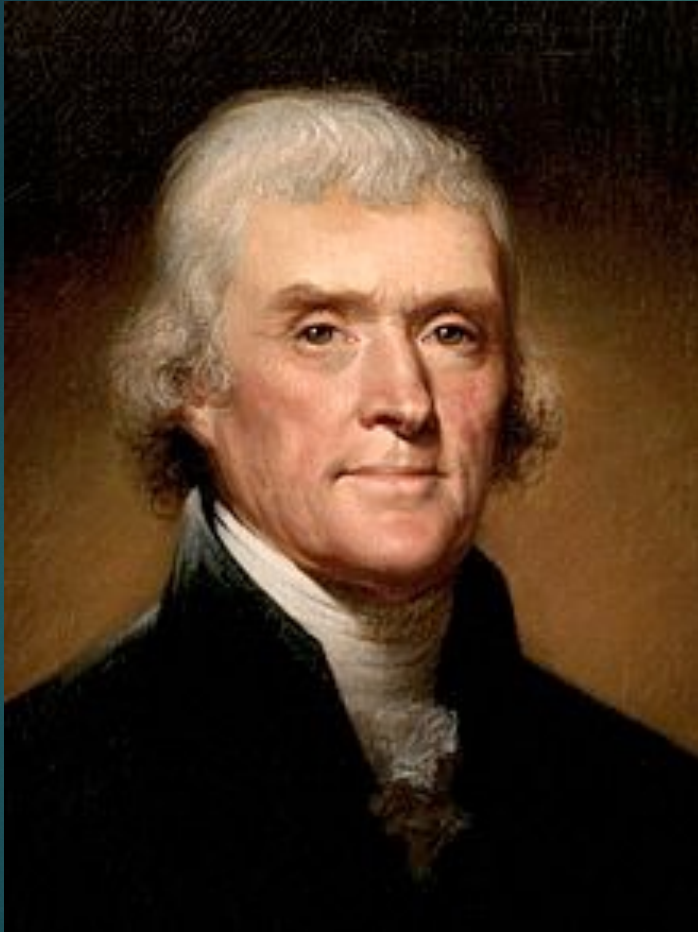
The Land Ordinance of 1785 was adopted by the United States Congress of the Confederation on May 20, 1785.

Set up a standardized system whereby settlers could purchase title to farmland in the undeveloped west

Congress at the time did not have the power to raise revenue by direct taxation, so land sales provided an important revenue stream.

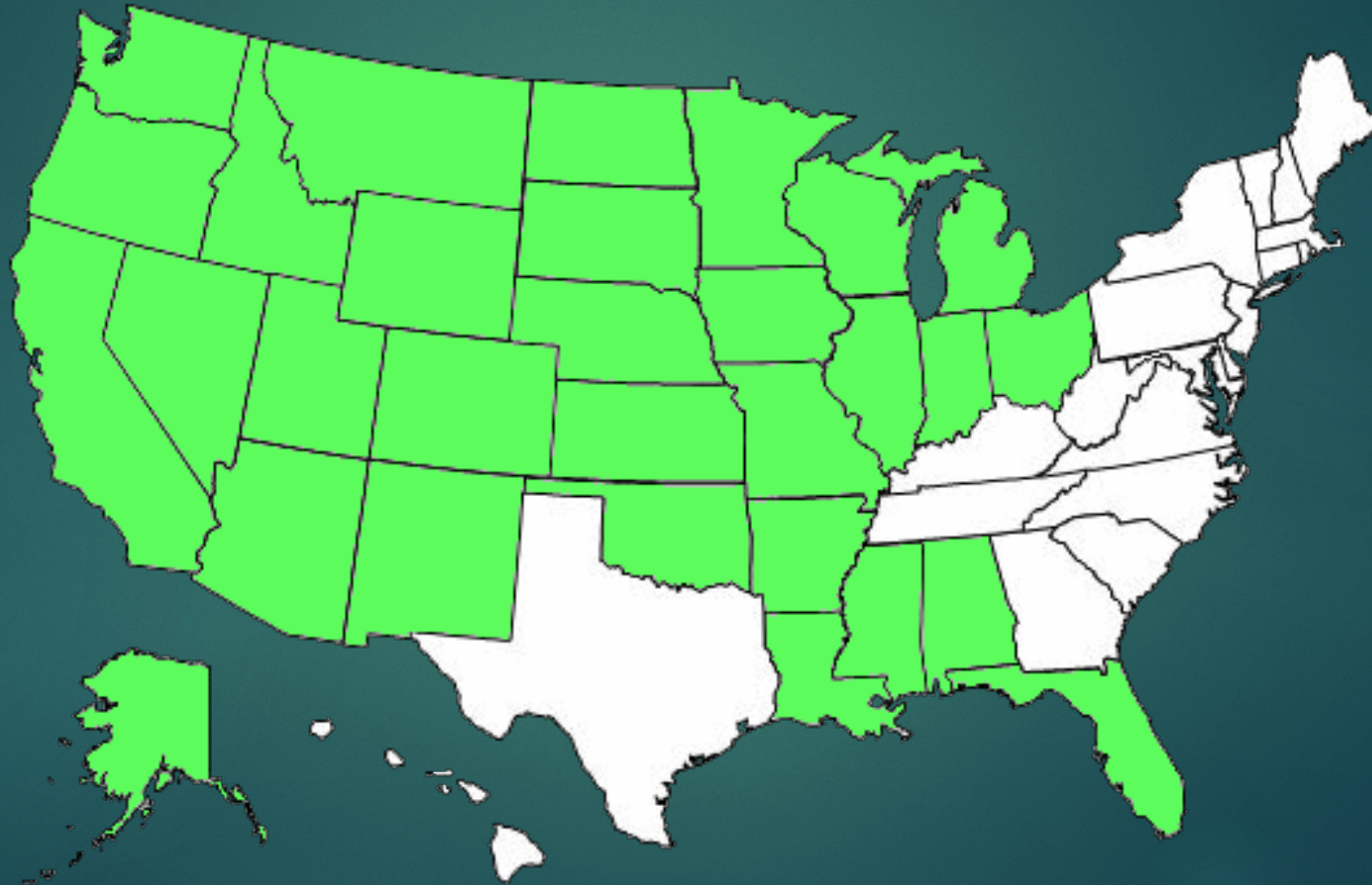
**The PLSS was
Championed by Thomas Jefferson**

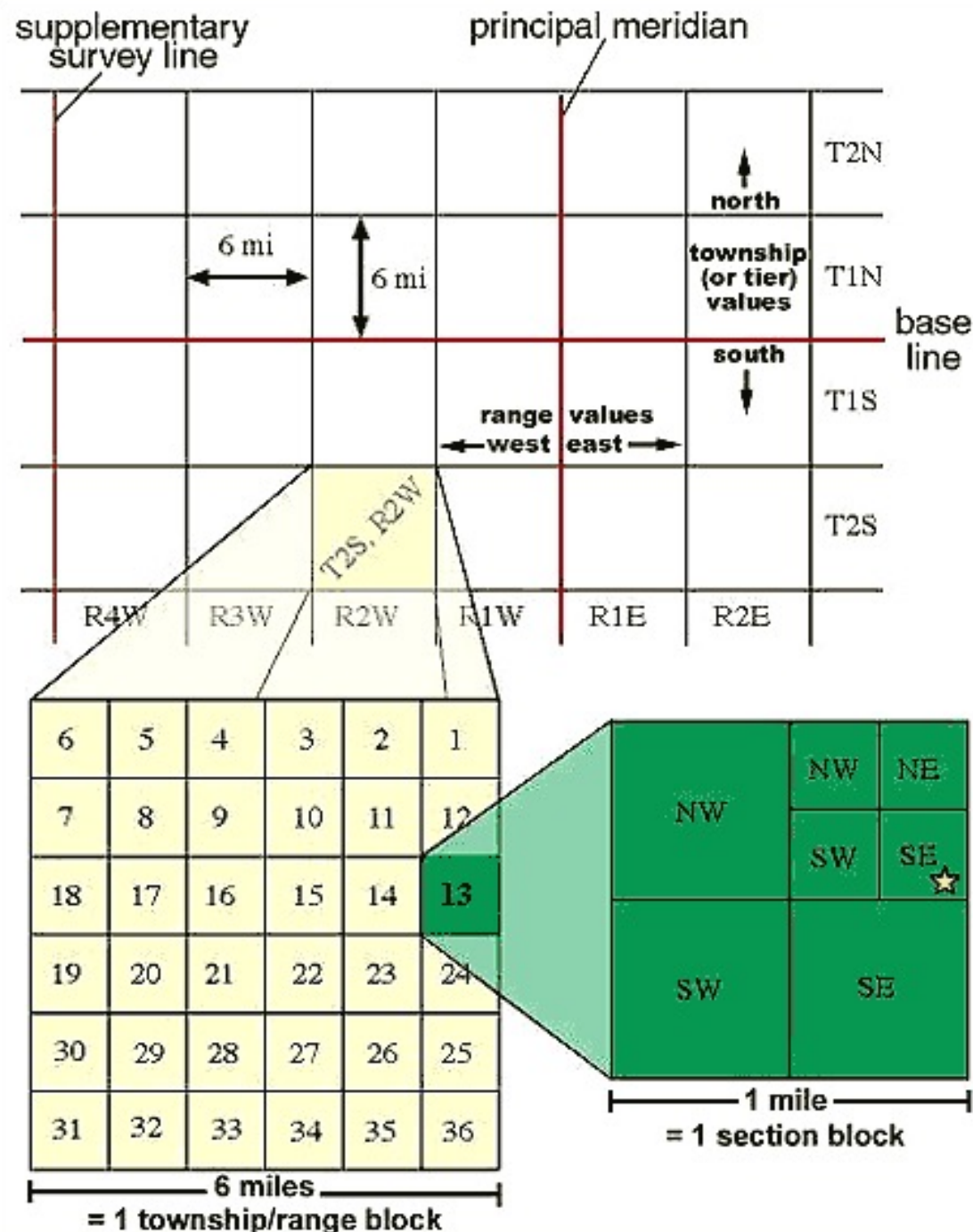
saw a nation of yeoman farmers



Each one owning 160 acres

Public Lands Survey System (PLSS)



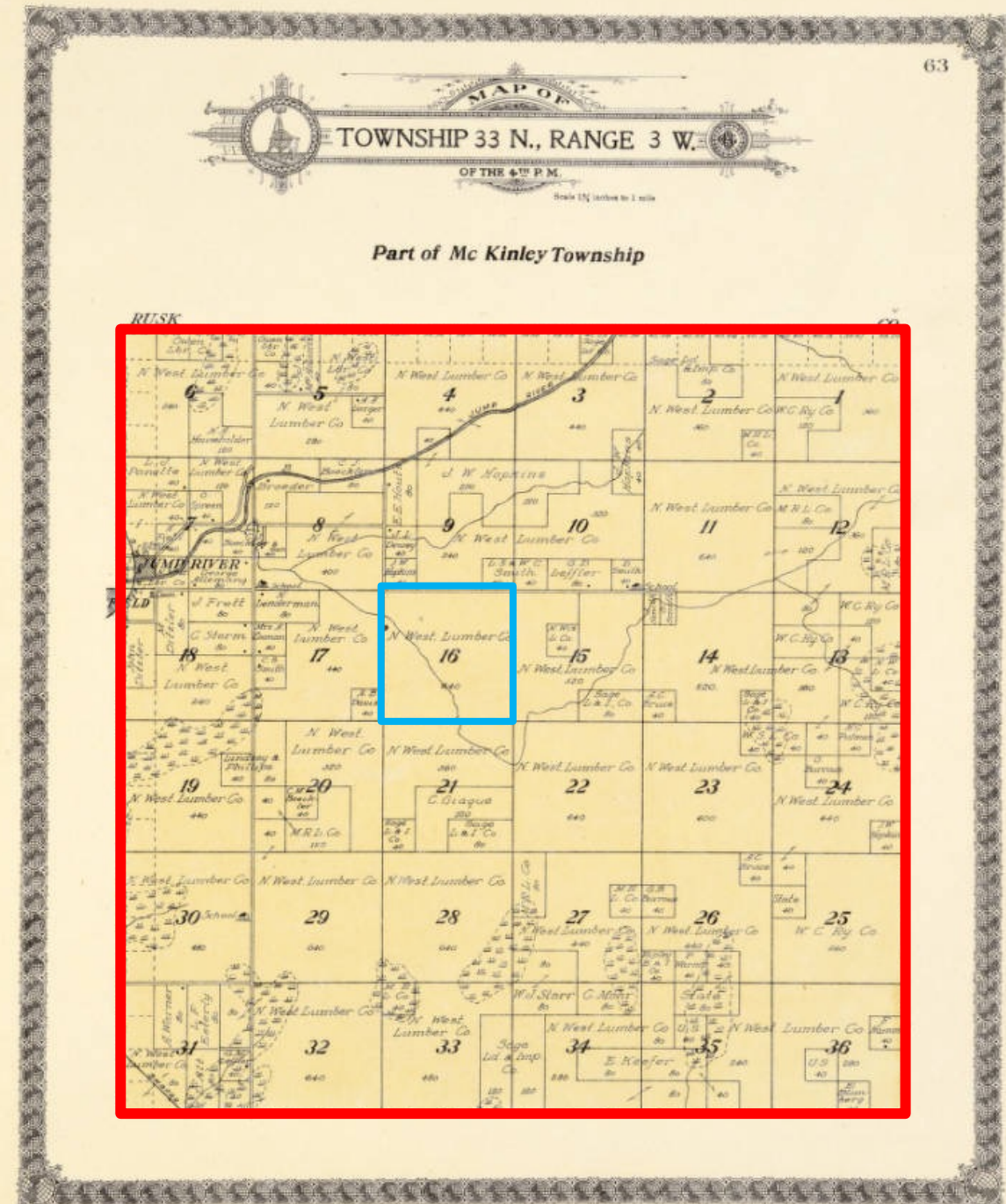


PLSS AT A GLANCE

Townships =
Roughly gridded 6 by 6
mile squares.


Sections =
Roughly
gridded 1 by 1
mile squares.

**Sections =
Roughly
gridded 1 by 1
mile squares.**





The PLSS is the fundamental way that almost all of the state's land was first systematically marked, divided, and described, and remains the basis for that real property today.



The Public Land Survey System (PLSS) has a profound affect on how society operates in Wisconsin; however, it is such an underlying factor that most of us are unaware of it on a daily basis.

Public Land Survey System (PLSS)

Wisconsin's first man-made

INFRASTRUCTURE

in·fra·struc·ture

the basic physical and organizational structures and facilities (e.g. buildings, roads, power supplies) needed for the operation of a society or enterprise.





Infrastructure that protects land ownership rights



Markers set in the ground as reference points and guides

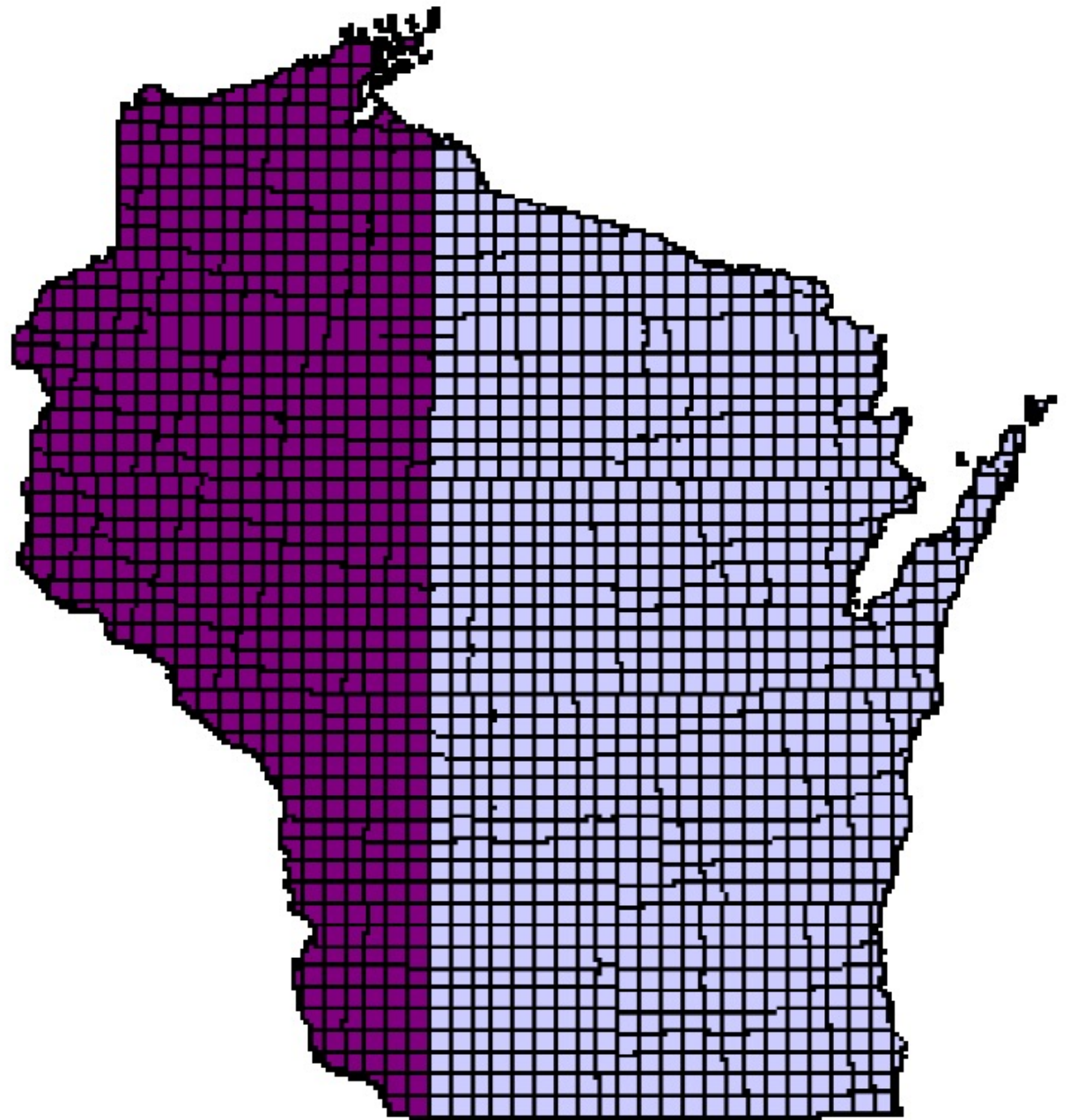


**In Wisconsin,
the Original
Government Survey
took place
between
1832 and 1866**





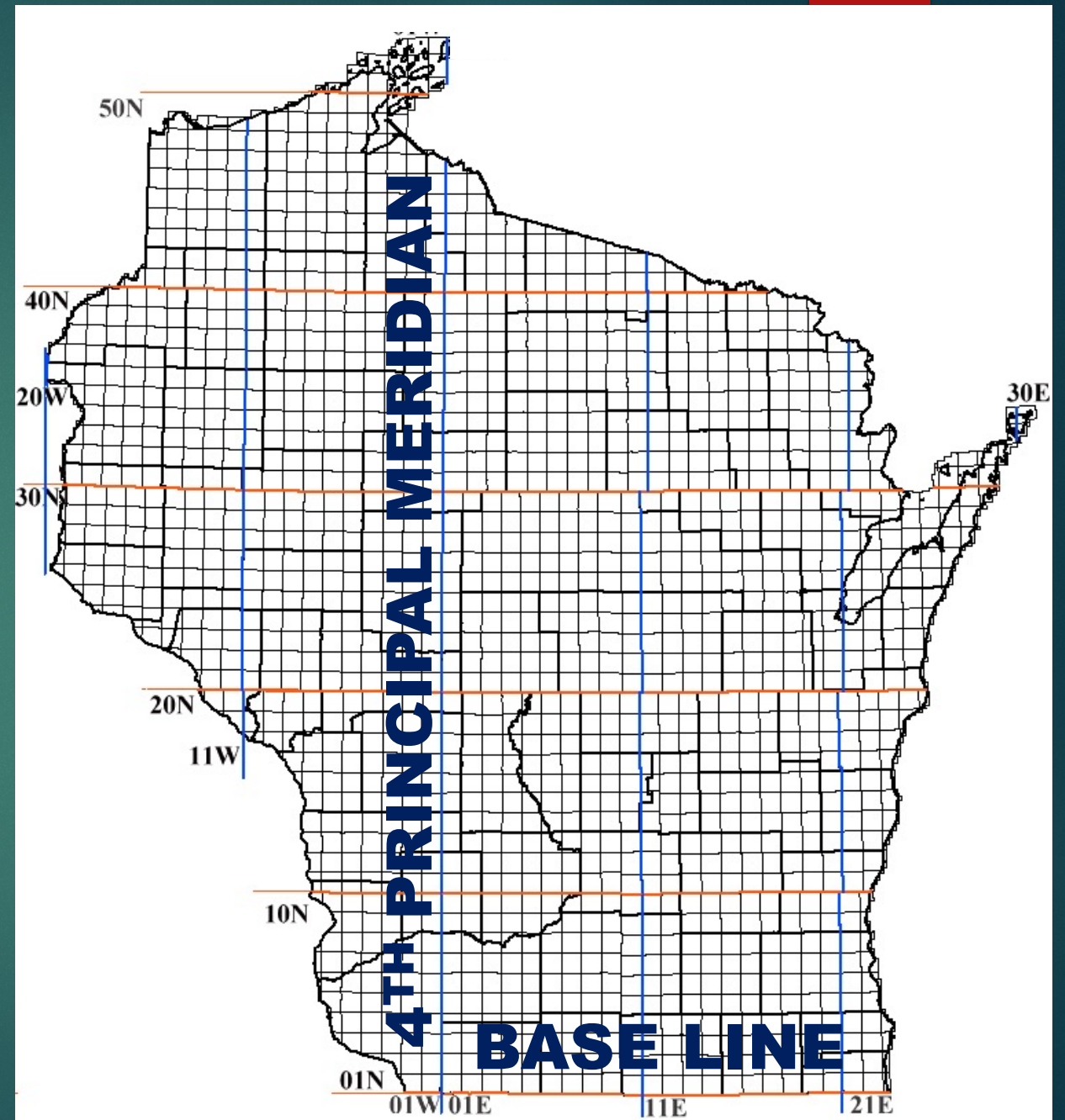
Base line and Principal Meridian



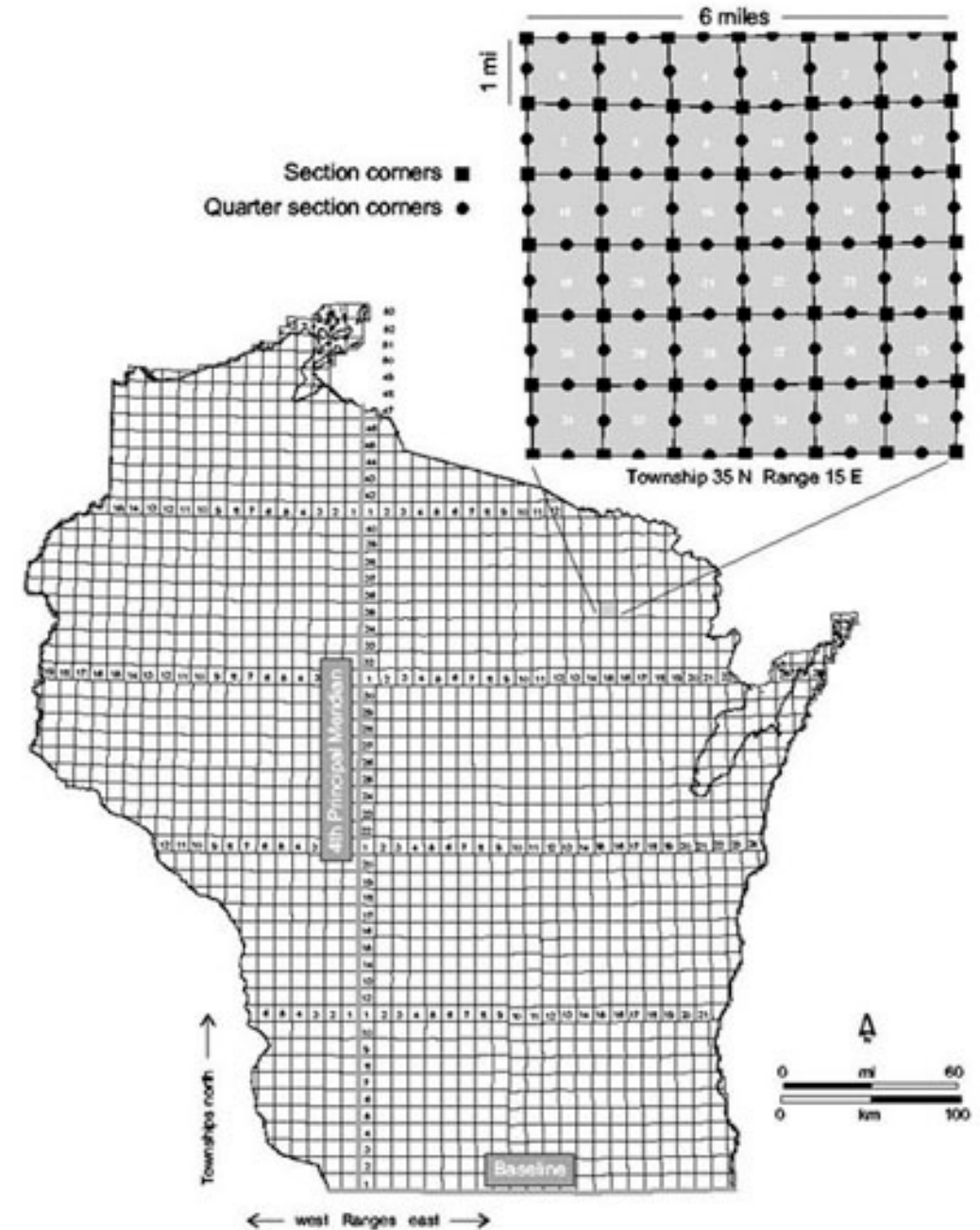
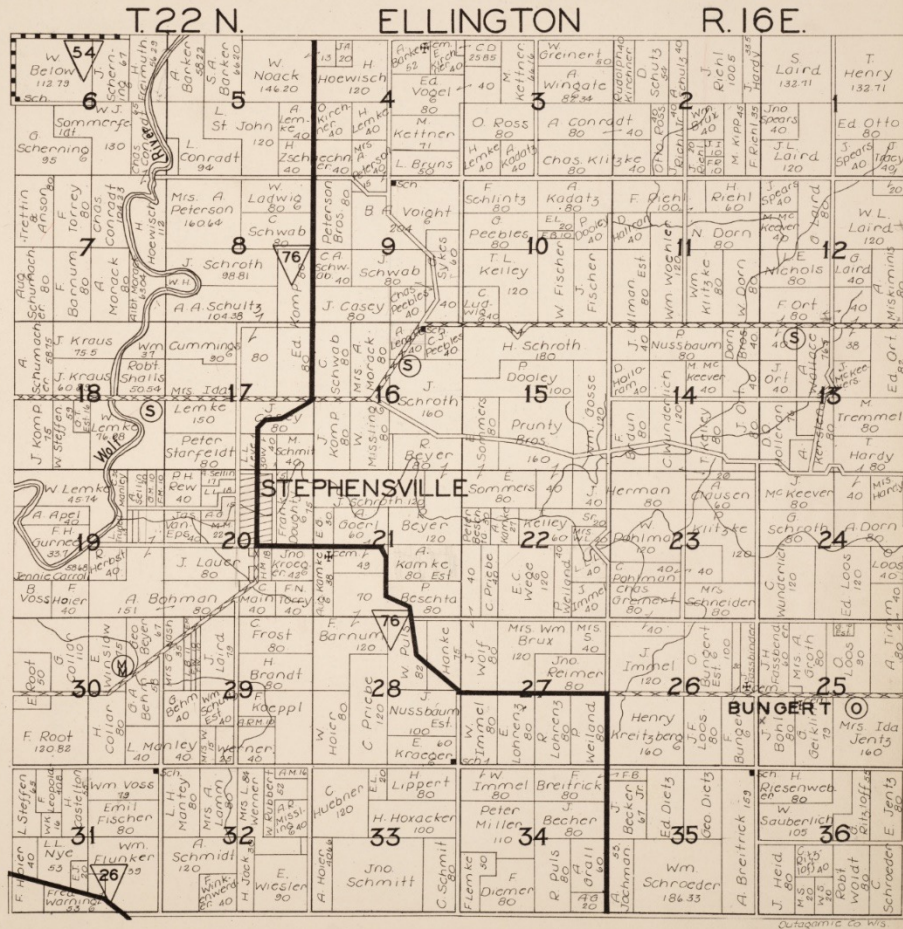
PLSS

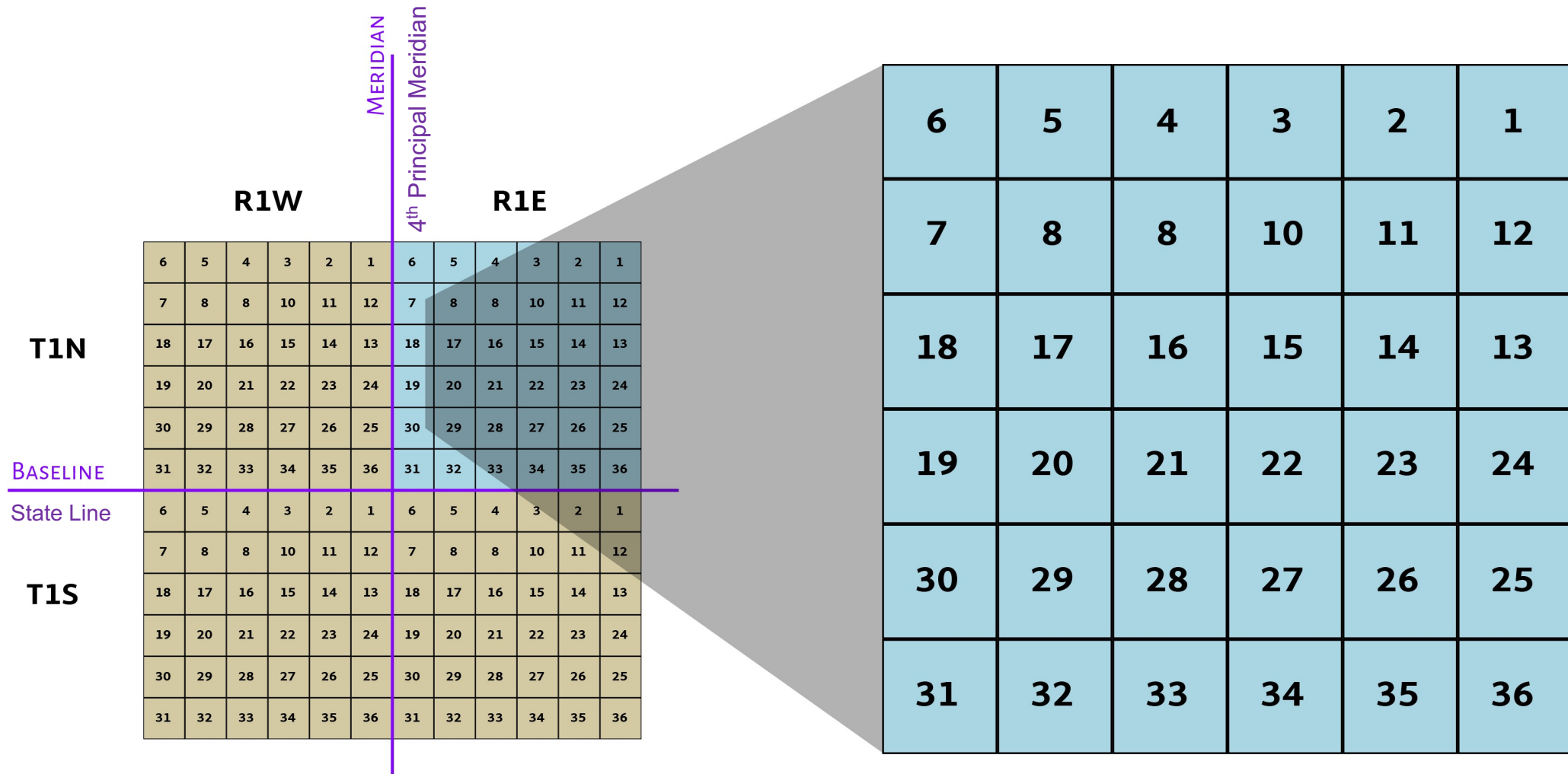
Townships across Wisconsin

6 mile by 6-mile squares



Each of those 6 mile by 6 mile Townships are then divided into 1 mile by 1 mile squares known as Sections.





1 township = 6 miles
1 township = 36 sections

Township Line

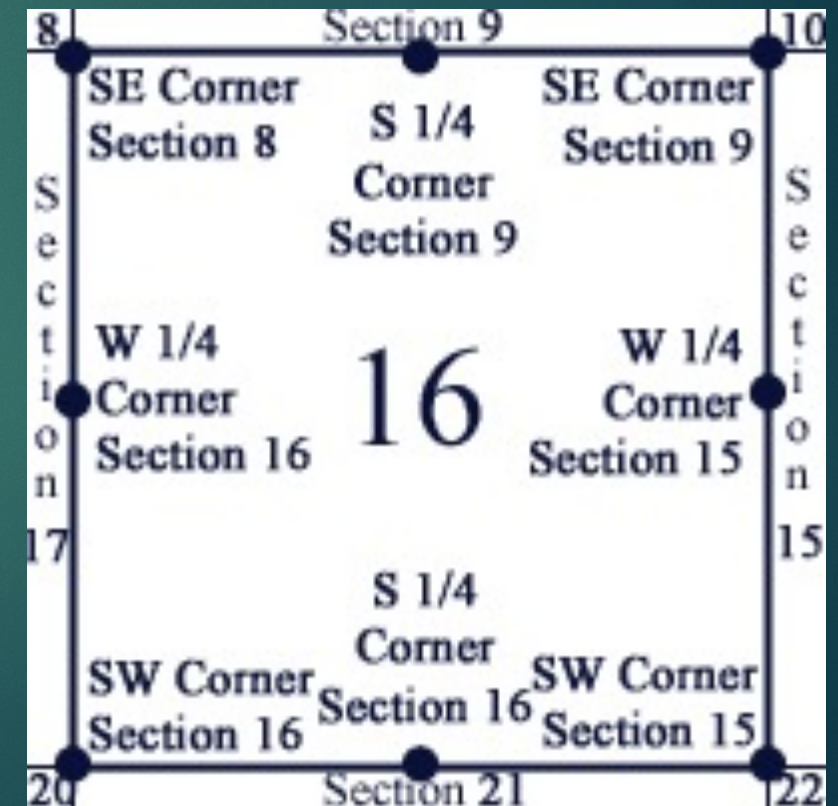
Range Line	6	5	4	3	2	1	Range Line
	7	8	9	10	11	12	
	18	17	16	15	14	13	
	19	20	21	22	23	24	
	30	29	28	27	26	25	
	31	32	33	34	35	36	
Township Line							

Public Land Survey System

Corners established by the PLSS

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

A corner marker set every half mile on the exterior of every Section.



“School Section”

Land Ordinance of 1785

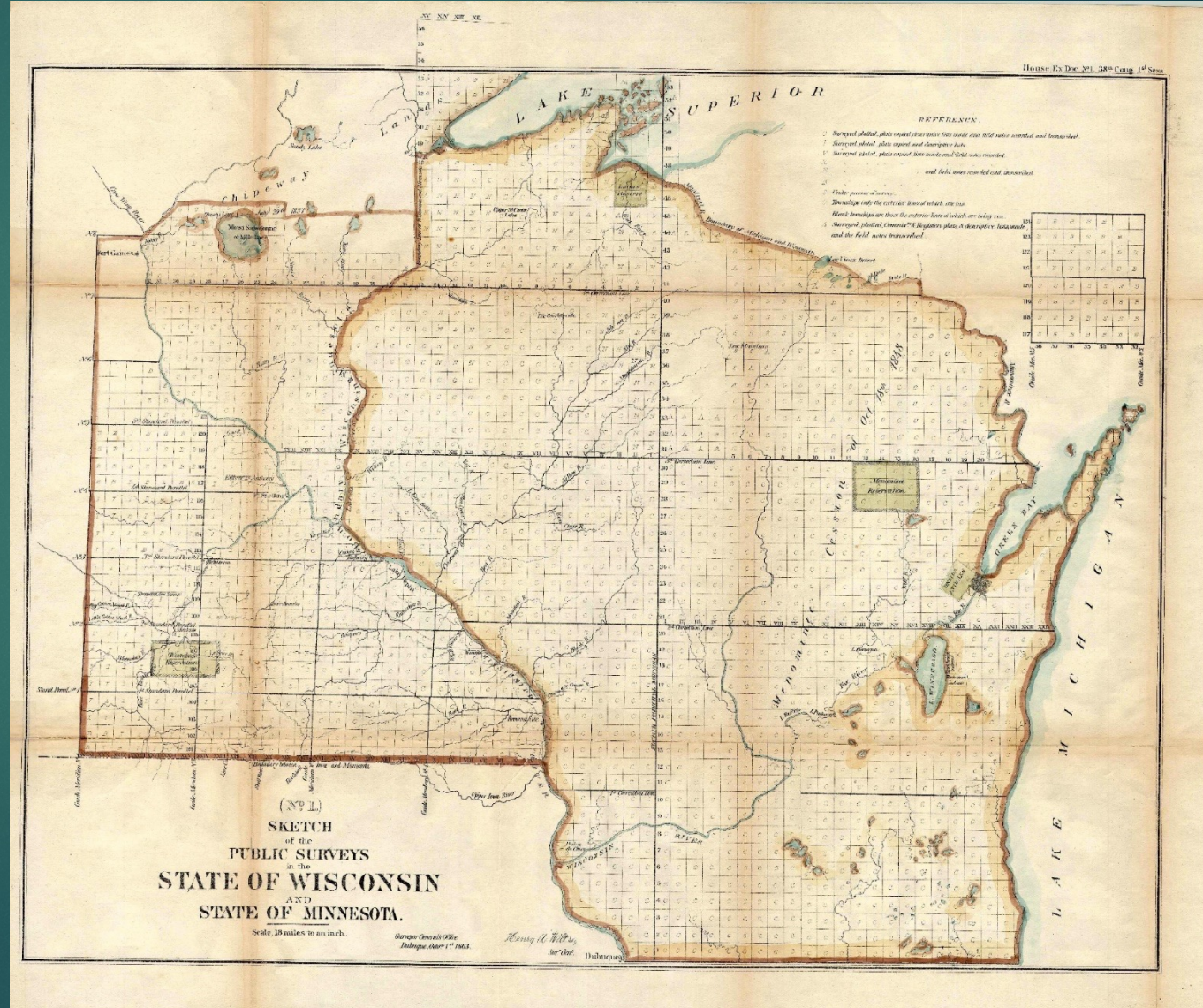
The ordinance was also significant for establishing a mechanism for funding public education.

Section 16 in each township was reserved for the maintenance of public schools.

"There shall be reserved the Lot No. 16, of every township, for the maintenance of public schools within said township."

Wisconsin's first man-made infrastructure

Markers set
basically
every half mile
across
the entire state
which
serve as reference
marks for land
ownership.

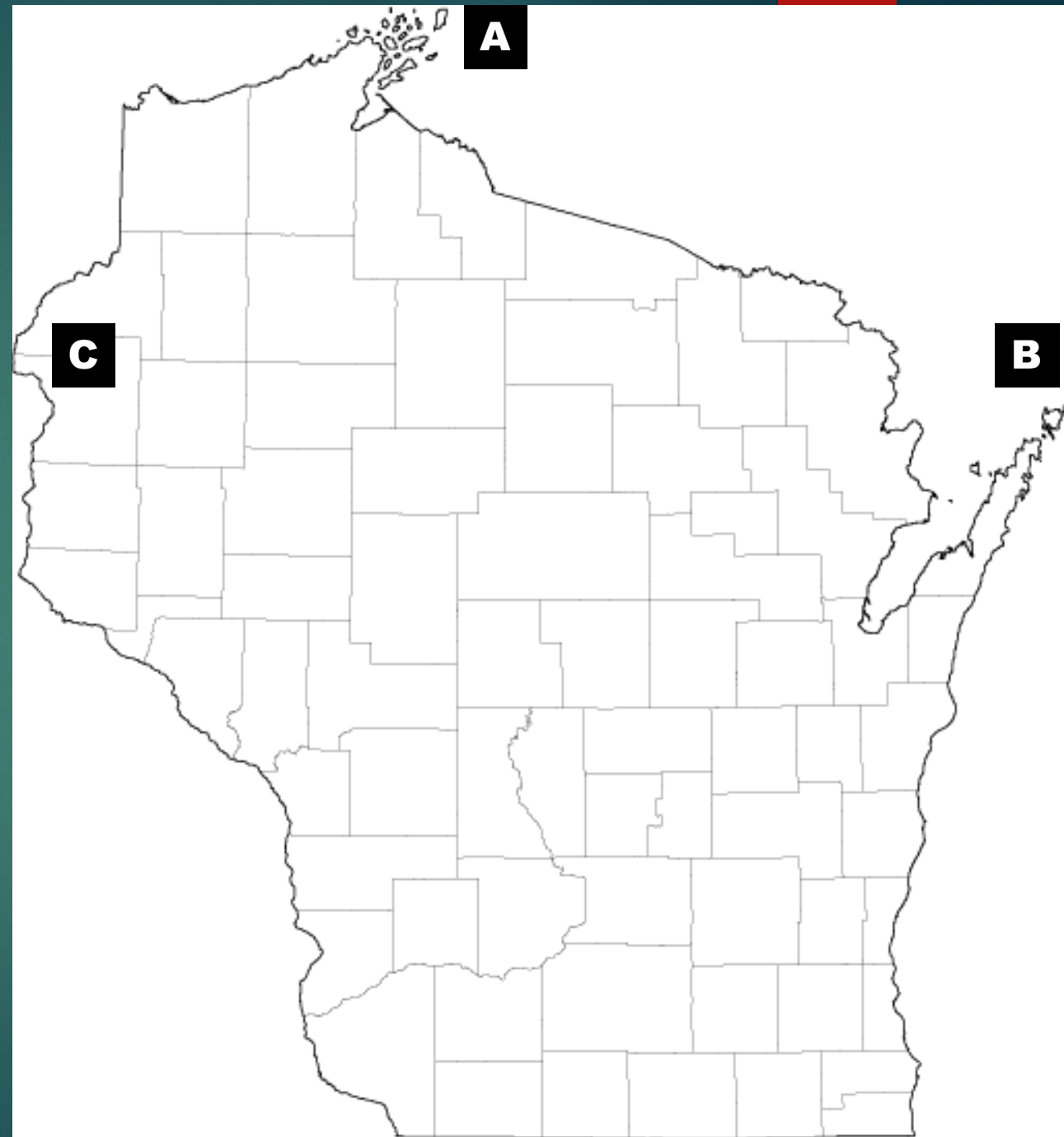


FUN FACTS:

**A = Northmost township: T53N, R3W
(Apostle Islands, Ashland County)**

**B = Eastmost township: T, R30E
(Washington & Rock Islands,
Door County)**

**C = Westmost township: T36N, R20W
(northwestern Polk County)**

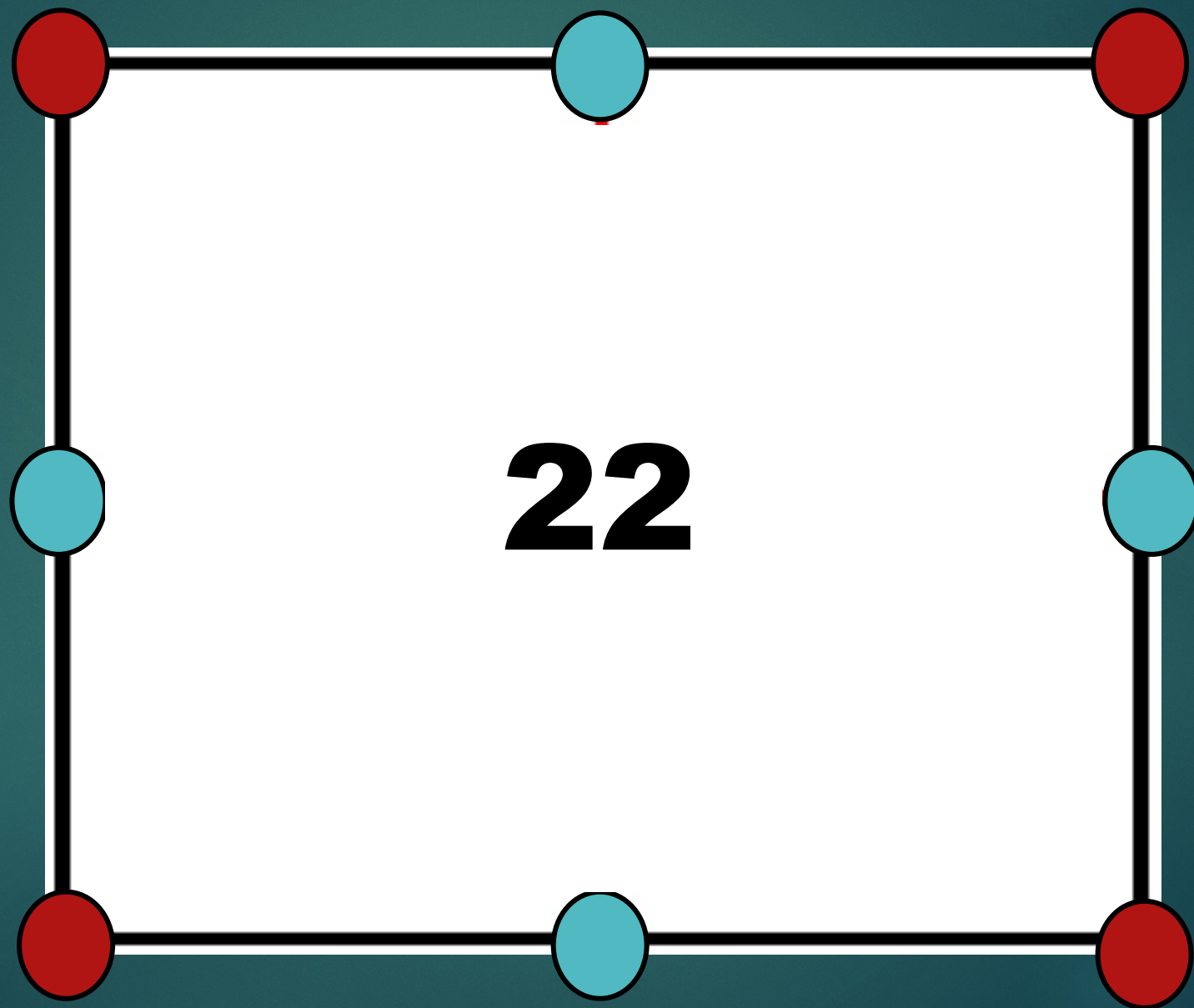


Corners established by the PLSS

**SECTION CORNERS
AND
QUARTER CORNERS**

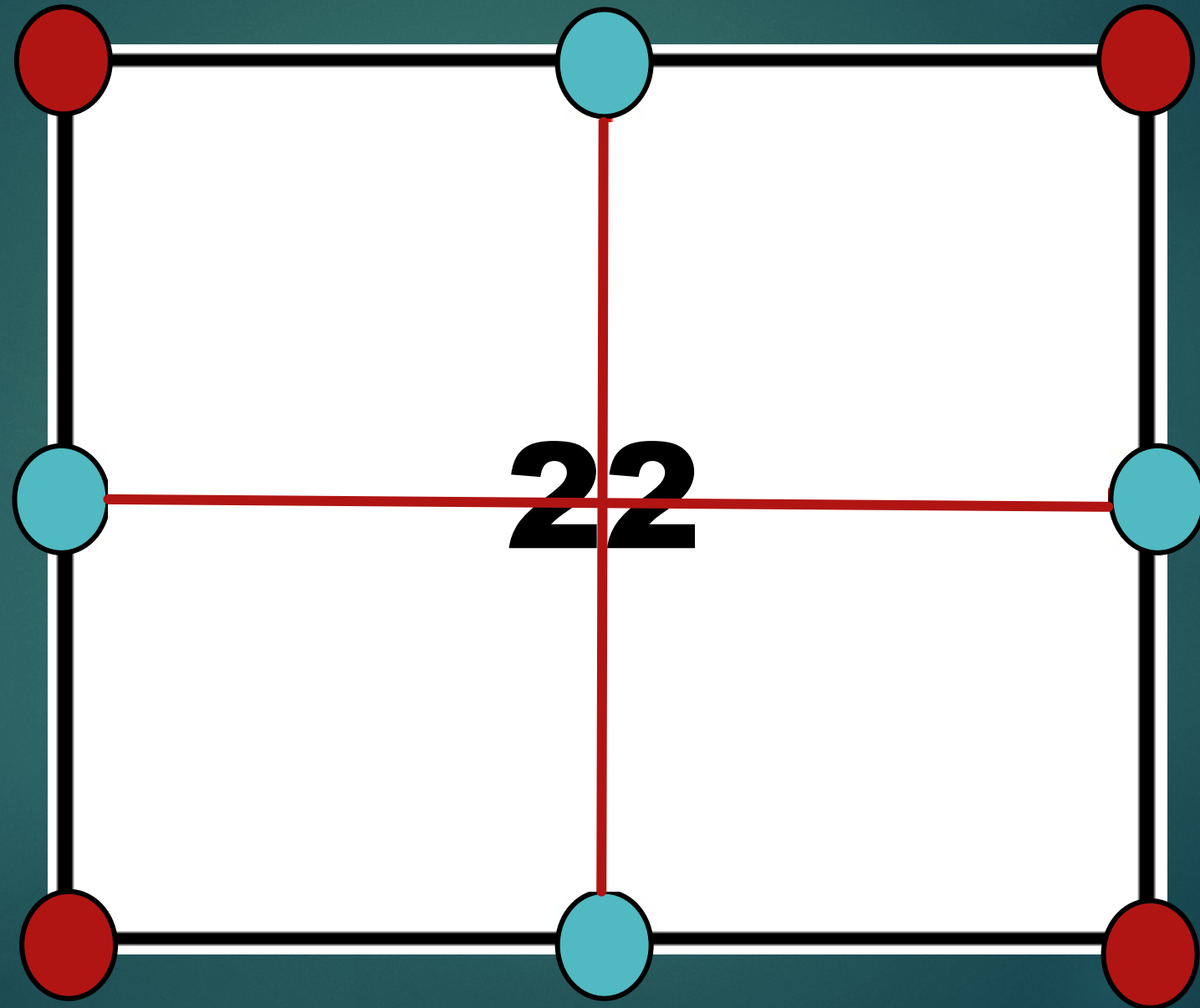
 = SECTION CORNER

 = QUARTER CORNER



 = SECTION CORNER

 = QUARTER CORNER



Original Government Notes

- Measurements
- Corner established (wood posts typ.)
- Bearing trees
- Terrain
- Assessed timber and soils

39
SB TOWNSHIP No. 19 NORTH
C.L. Var. 80°15'

West along SB of Sec. 32
12.86 B Oak 12 in dia
40.00 Set post for sec. cor.
Pine 8 N 37 1/2 E 19
Do 7 N 83 1/2 W 54
47.00 Leave dry land and enter
alder swamp South
80.00 Set post cor of Sec. 31 & 32
Q Oak 12 N 29 1/2 E 14
Aspen 8 N 70 1/2 E 12

Land E of swamp Same as
last mile - west of mile
Alder, Tamarack, Maple and
Aspen Swamp

Dec 1845

40
RANGE No. 17 4TH MERIDIAN N.T.
C.L. Var. 80°15'

West along SB of Sec. 31
4.90 Creek 15 L South and enter
prairie N. & S.
17.00 Enter timber N. & S.
40.00 Set post for sec. cor.
H Oak 24 N 16 E 17
Do 24 N 67 1/2 E 43
51.10 H Oak 12 in dia.
70.60 Intersected NB 54 E. North of
Temporary cor. and set post cor
of Is 18 & 19 N. Co. 1 & 2 N.
H Oak 11 S 37 1/2 E 30
Do 12 N 31 1/2 E 32

Land E of creek alder swamp
rest of mile rolling and level
mostly well timbered. H & R
Oak and aspen.

Original Corners of the PLSS



**Wood posts
(most
cases)**



Bearing trees





“Wait”

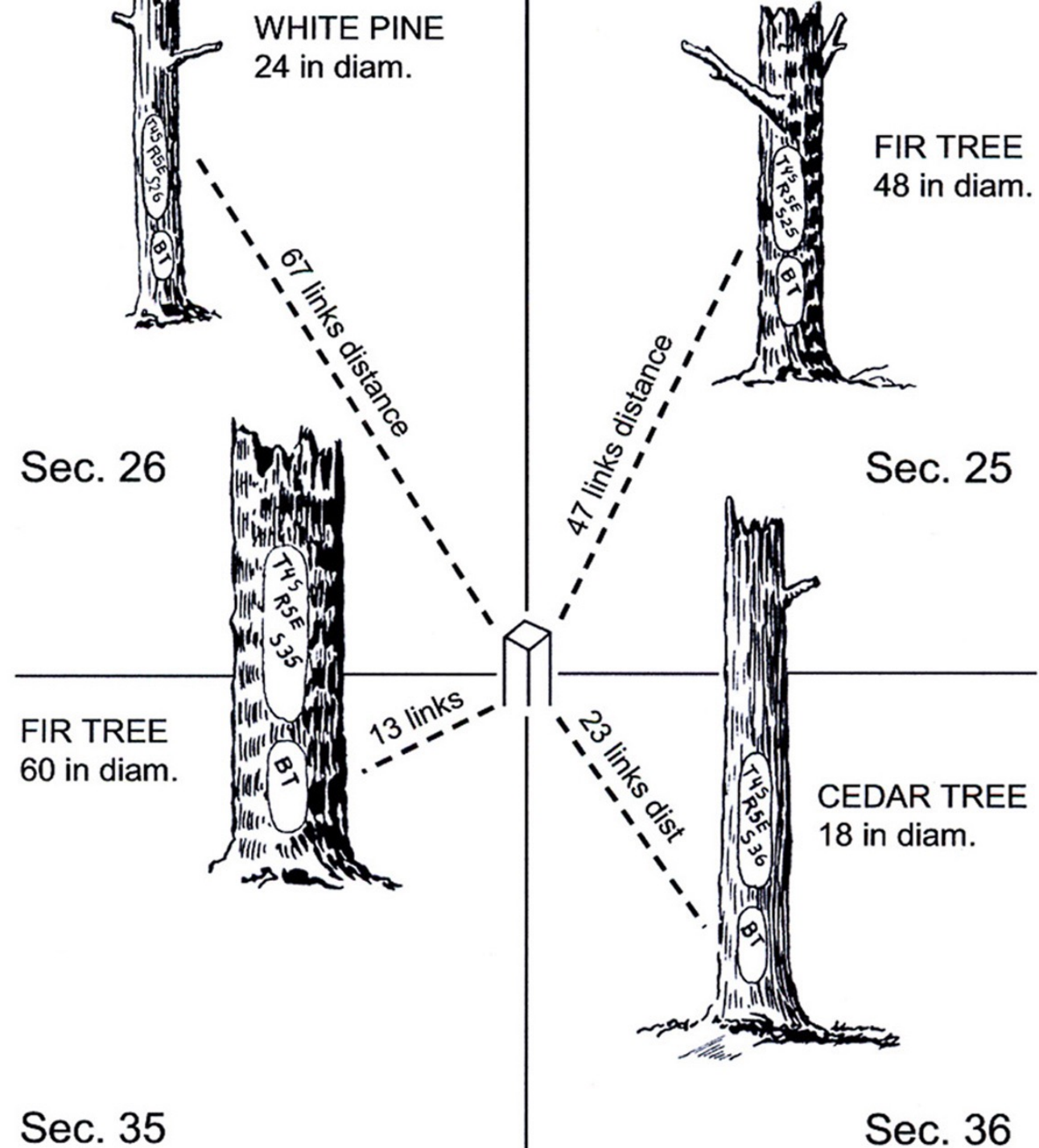
“Wood posts?”

“Trees?”

Marking the Corners

Wood posts were typically set for the corners

Bearing trees or witness trees





“Hey Bryan, do you have any examples of the equipment or wood posts from the PLSS?”

If you own land in Wisconsin, these corner monuments effect you and your property ownership rights!





“If these corner locations are so important, shouldn’t we be taking steps to recover them and get them back in the ground?”



YES.

**In order to protect landowner rights,
these corners are absolutely necessary!**



**“Sounds tricky, how do you
find or re-establish
those corner locations?”**



Look at the evidence

Original Government Survey Evidence

Subsequent survey work done after the OGS

Fence corners and fence lines

Witness testimony

Original Government Survey Evidence





**Steve Waak
Washburn County**



Corner #653

John P. Houghton Bearing Tree
October - 1855
10° W.Pine @ N47° E, 9.2'


Steve Waak
Washburn County

Corner # 1643

Edgar Sears Original Post
May - June 1856

Steve Waak
Washburn County





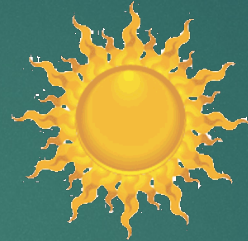
Corner #495

Henry Maddin Original Post
October - November 1853

And when we find evidence of the Original Government corner, surveyor's reactions go something like this....



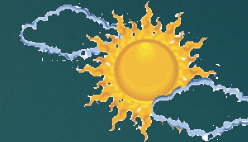
Time and the elements took their toll on the initial system.



Sunny



Partly Sunny



Partly Cloudy



Sun & Rain



Raining



Thunderstorms



Snowing



Cloudy



Windy



Rainbow



Tornados / Hurricanes



Clear





Over the years, the vast majority of
PLSS evidence was

LOST

“What if the original government survey evidence is gone?”

Then what?



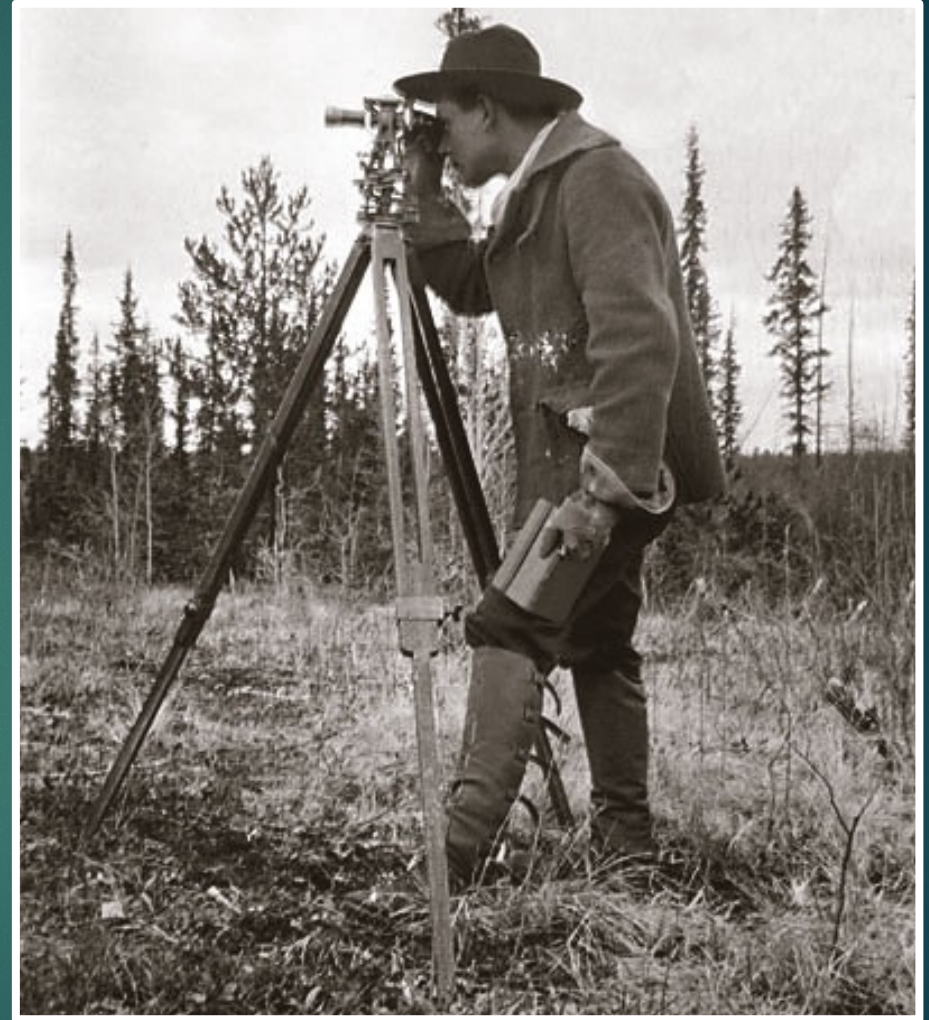
EVIDENCE

- **Surveys that happened after the OGS**
- **Fence corners and fence lines**
- **Witness testimony**
- **Deeds**
- **Subdivision Plats**
- **Cemetery Plats**
- **Road Records**

Surveys Subsequent to the Original Government Survey



Surveyors (often a County Surveyor) utilized and perpetuated PLSS corners





Sometimes they set “stuff”

Plow shares Gun barrels Railroad spikes
Pipes Grader blades Drag teeth Stones
Buggy axels Window Weights Iron bars Bricks



Town of Bangor 1867

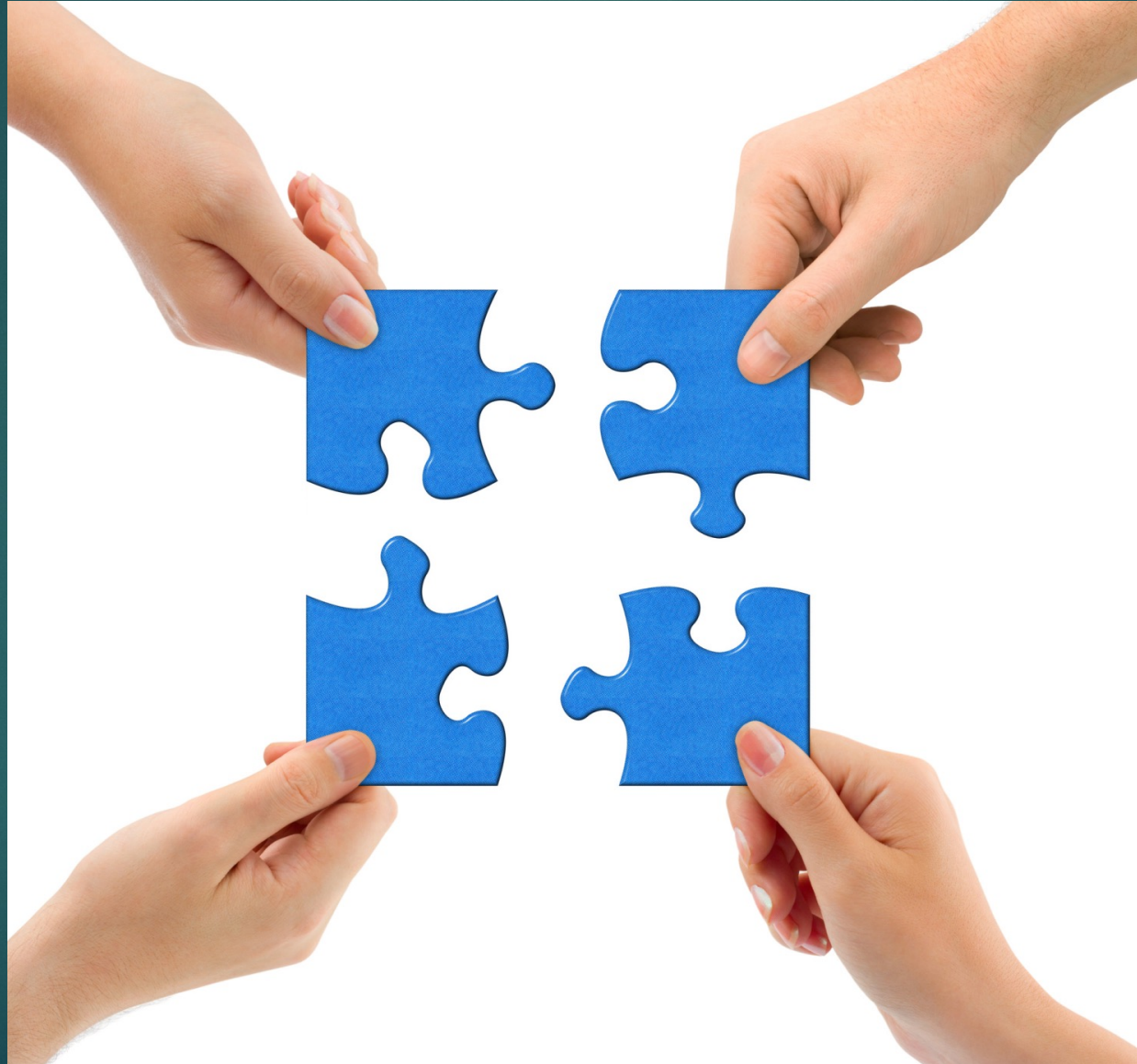
Henry Bliss – County Surveyor





**Many times however, we aren't so fortunate
when it comes to finding direct evidence**

Sometimes we need to look further



EVIDENCE AND MEASUREMENTS

Fence corners



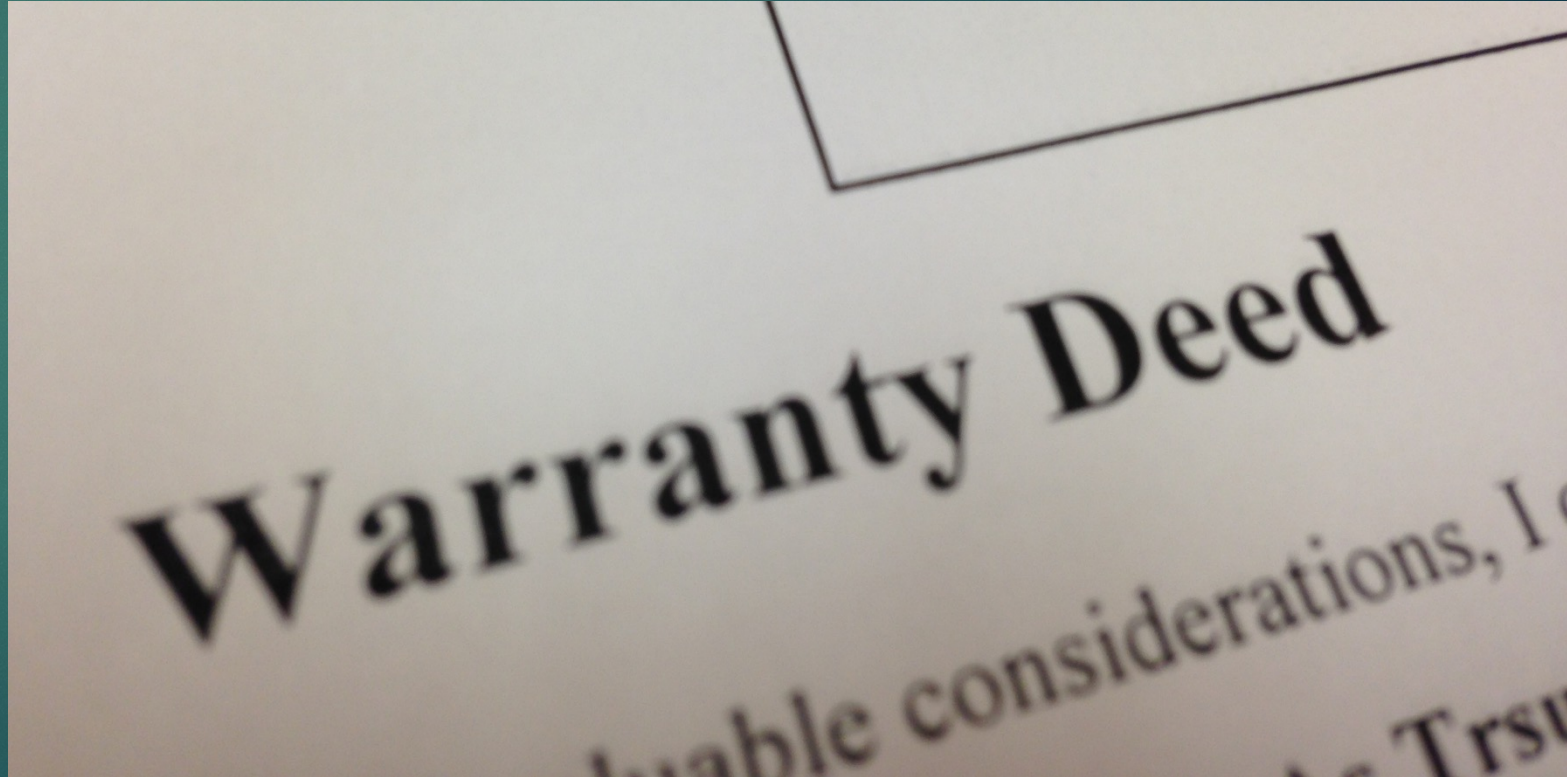
Fence lines



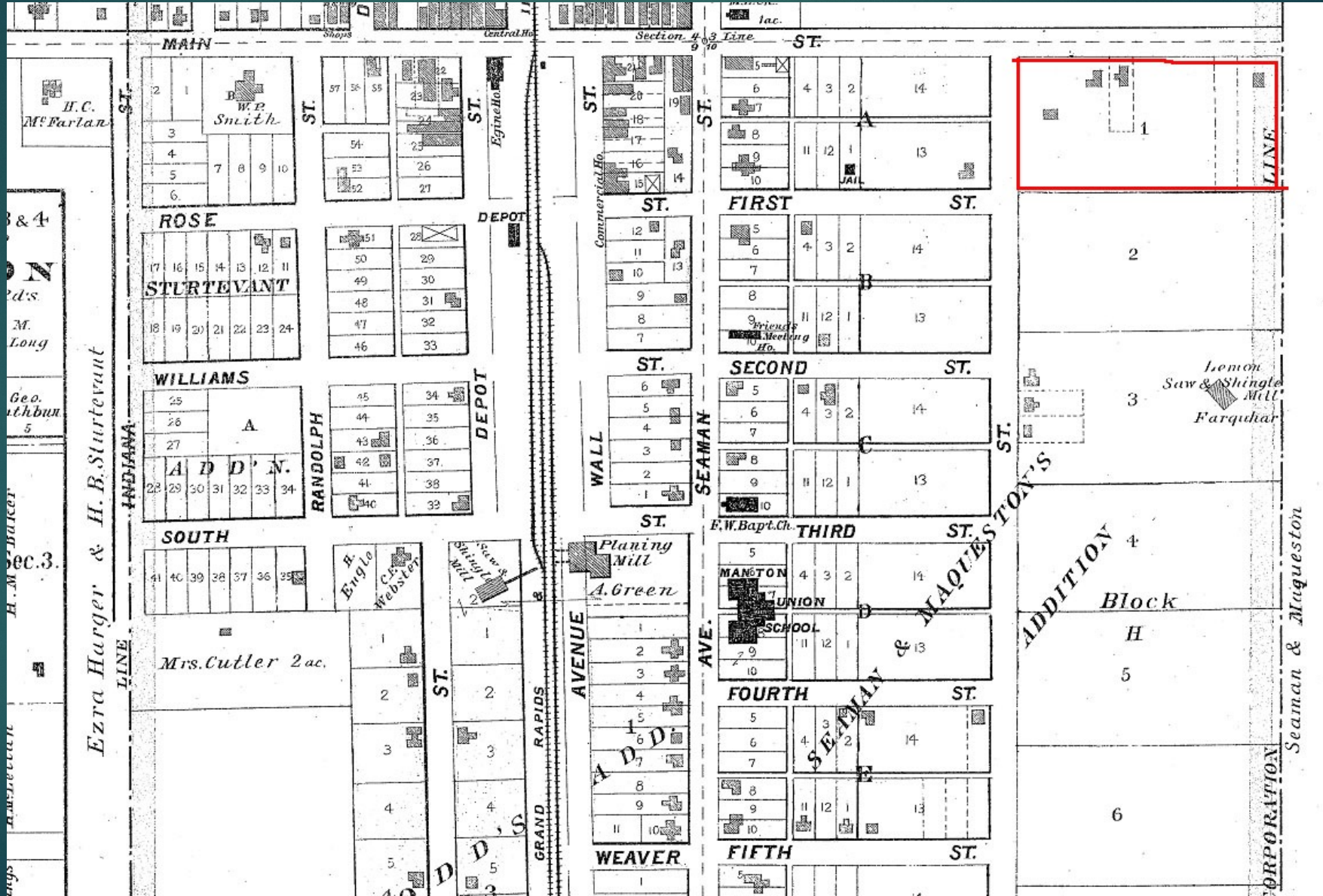
Witness Testimony



Deeds



Subdivision Plats



Cemeteries and Cemetery Plats



SECTION 8 T 15 N, R 5 W, TOWN OF Washington

A 4x4 grid with a dot at the bottom center and the number 8 in the cell above it.

North
East
Theta Angle
Horiz. Order
Vert. Order

~~2" x 31"~~ iron pipe, 2 3/8" x 37"

Assumed North

Crew: William C. Jung
Peter Follansbee
Date: 10/2/89

Crew: William C. Jung
Peter Follansbee
Date: 5/2/00 8/6/08

To the North is the old Blinn family cemetery. In 1904 Fred Blinn deeded his farm to Hundt (as described in Volume 106 Deeds, Page 53) except for a 35 ft square parcel in the Southwest corner of the SW-SE. This parcel was reserved for burial purposes. Using this 1904 description, I set the corner by lining in with the old fence to the North and measuring 35 feet South from the NW corner of the cemetery. The cemetery fences are very old. I would assume that the location of the corner was known when the fences were built. The South fence is probably off to the North because of the highway cut. Describe or show any material discrepancy between the location of the restored corner and that of the corner previously restored or reestablished.

NO	DESCRIPTION	BEARING	DISTANCE
1	Concrete post at the NW corner of cemetery	North ₊	35'
2	Set new I.B. and cap Existing P.K. nail in Hass Road centerline	South ₊	43.00 43.14'
3	To P.K. ^{new} nail in unblazed 24" ^{25 1/2"} tamarack, 27"	-----	21.65 21.67'
4	To center of concrete fence post	-----	34.35'

MAP SHOWING DISTANCE AND DIRECTION TO OTHER PUBLIC LAND
SURVEY CORNERS USED FOR REESTABLISHING THE CORNER

Describe any record evidence, monument evidence, testimonial evidence or any other material evidence you considered and whether the monument was found or restored through acceptance of an obliterated evidence location.

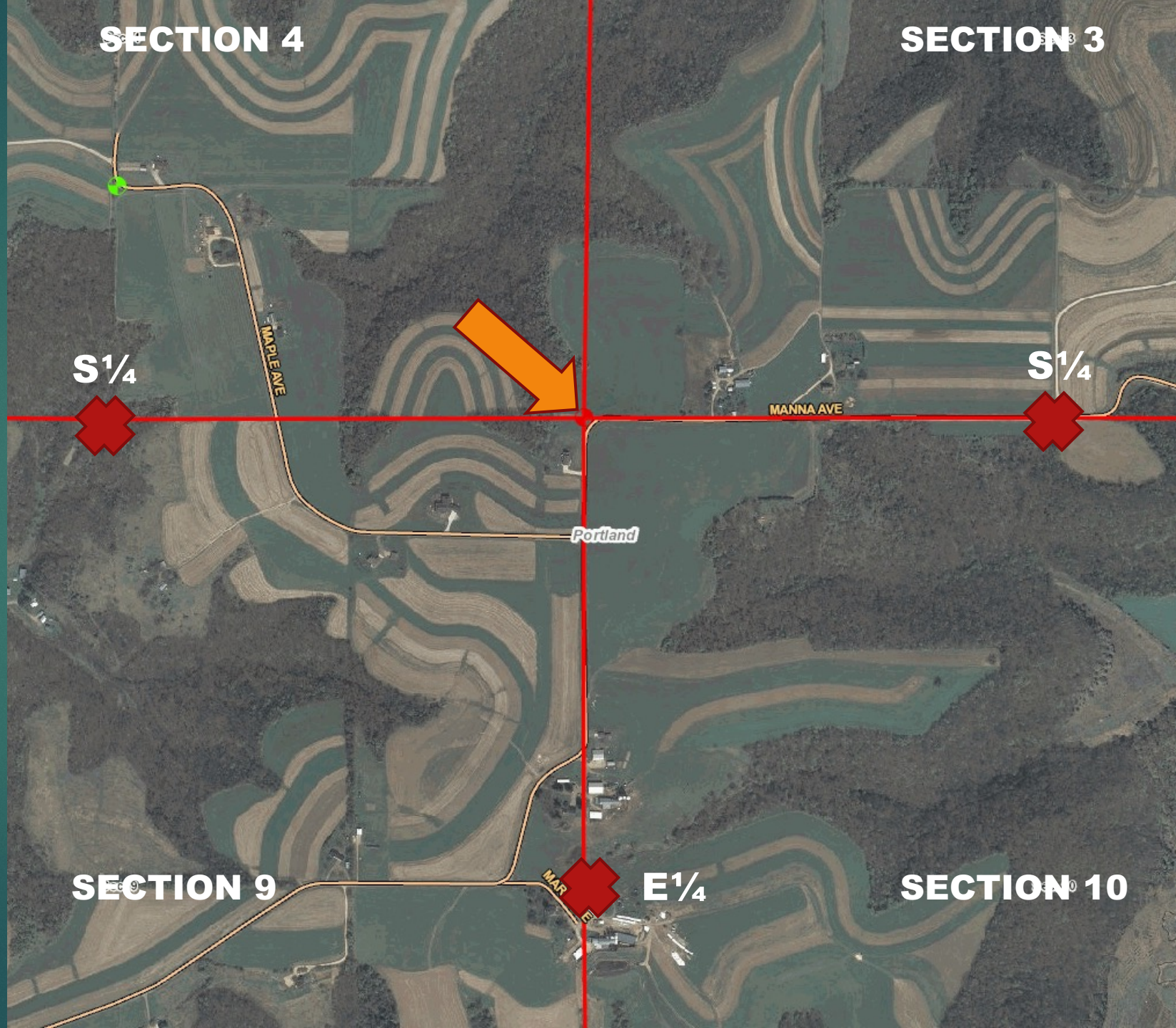
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Town and County Road Records



**Southeast corner of
Section 4,
T15N, R4W,
Town of Portland,
Monroe County,
Wisconsin.**





Manna Avenue

Maple Avenue

The Town Board of said Town did meet pursuant to such notice, at the time and place specified, and did thereupon adjourn the time of deciding upon such application until the 2d day of June 1916, at 10 o'clock in the forenoon of said day, notice of said adjournment being publicly given, and forthwith filed in the office of the Town Clerk of such Town, and that upon such adjourned day, the said Town Board did again meet at the time and place specified, and after personally duly examining and viewing such highway, as required by law, did make the following order, to-wit:

HIGHWAY ORDER.

Maguore COUNTY, }
Town of Pariland ss.

Whereas, upon application of 13 freeholders and applicants for homesteads, under the laws of the United States, occupying the same, residing in said Town of Pariland for the relocating of a highway, which said proposed relocation is set forth and described in said application as follows: Beginning at the center of the highway running N & S along the east line of the NE $\frac{1}{4}$ Sec 9 Tawn 15 R 4 E. at a point 4 rods south of the NE Corner of the NE $\frac{1}{4}$ of the NE $\frac{1}{4}$, said Sec. Tawn and range; thence North 89° West across the NE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of said Section to a point 39 rods south of the NE Corner of before said NE $\frac{1}{4}$ of NE $\frac{1}{4}$; thence North 63° West 24 rods, 4 links; thence North 17½° West 76 rods 20 links to the North line of the NE $\frac{1}{4}$ of the NE $\frac{1}{4}$ said Sec. Tawn and range; thence North 17½° West 68 rods to the center of highway in the NE $\frac{1}{4}$ of the NE $\frac{1}{4}$ Sec 4 Tawn and range before said.

The Town Board of said Town did meet pursuant to such notice, at the time and place specified, and did thereupon adjourn the time of deciding upon such application until the 3d day of June 1916, at 10 o'clock in the forenoon of said day, notice of said adjournment being publicly given, and forthwith filed in the office of the Town Clerk of such Town, and that upon such adjourned day, the said Town Board did again meet at the time and place specified, and after personally duly examining and viewing such highway, as required by law, did make the following order, to-wit:

HIGHWAY ORDER.

Wayne COUNTY, }
Town of Parlane } ss.

Whereas, upon application of 13 freeholders and applicants for homesteads, under the laws of the United States, occupying the same, residing in said Town of Parlane for the relocating of a highway, which said proposed relocation is set forth and described in said application as follows: Beginning ~~at~~ at the center of the highway running N & S along the east line of the NE $\frac{1}{4}$ Sec 9 Town 15 R 4 W. at a point 4 rods south of the NE Corner of the NE $\frac{1}{4}$ of the NE $\frac{1}{4}$, said Sec. Town and range, then



CERTIFICATE

I, Bryan H. Meyer, do hereby certify that on the 12th day of December, 1989, I found (evidence) no evidence of the Northeast corner of Section 9, T 15 N, R 4 W Fourth Principal Meridian, and I re-established said corner according to the Wisconsin Statutes as shown and described hereon.

Dated this 15th day of Dec., 1989.

Bryan H. Meyer

Deputy County Surveyor

CERTIFIED LAND CORNER

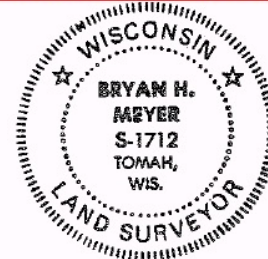
History of corner establishment since Original Government Survey

Portland town road records call for this corner to be 41 rods North of the intersection of 2 Town Roads. It does not appear that the Town Road described in said records was laid out by a surveyor, although said records do make calls for bearings and distances. Said records are dated June 3, 1916. Description of corner evidence found:

I searched in an area 676.50 feet (41 rods) North of the road intersection and at a proportionate distance between the North $\frac{1}{4}$ corner of section 9 and the North $\frac{1}{4}$ corner of Section 10. Found a stone with a cross on top, down 12". This stone fits the distance to said road intersection and said proportionate distance **AMAZINGLY** well! There is no record of this stone. I accepted the stone as the corner.

No. 27

21504040000



H. A. Sime and Associates
P. O. Box 705, Tomah, WI
Phone: (608)-372-5392

COUNTY SURVEYOR FORM NO. 1

Description of corner and witness monuments, references and accessories used to perpetuate the original or re-established location of this corner:

Crew: Meyer, Forsythe, Kenworthy

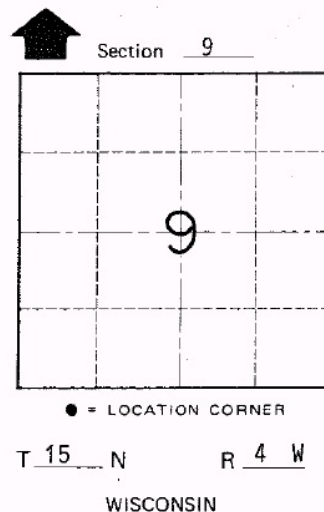
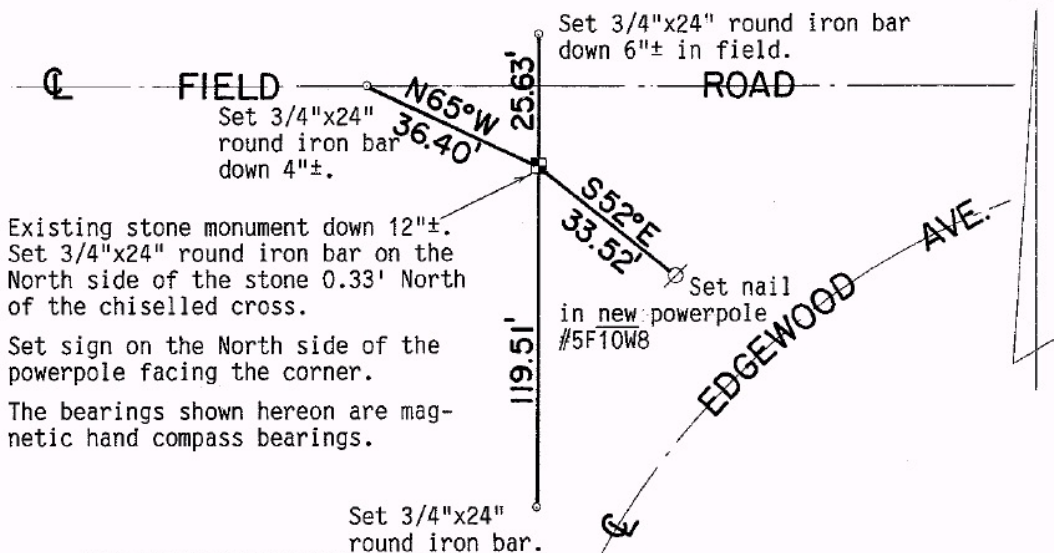
Date: December 12, 1989

Witnesses to corner location:

John Kenworthy

Brian Forsythe

Bryan H. Meyer



SURVEY CONTROL ORDER

Horizontal	_____
Vertical	_____

Corner	East (X)	North (Y)	Elevation (Z)	Zone
Control Sta. Name				

WISCONSIN COORDINATE SYSTEM

Town of Portland

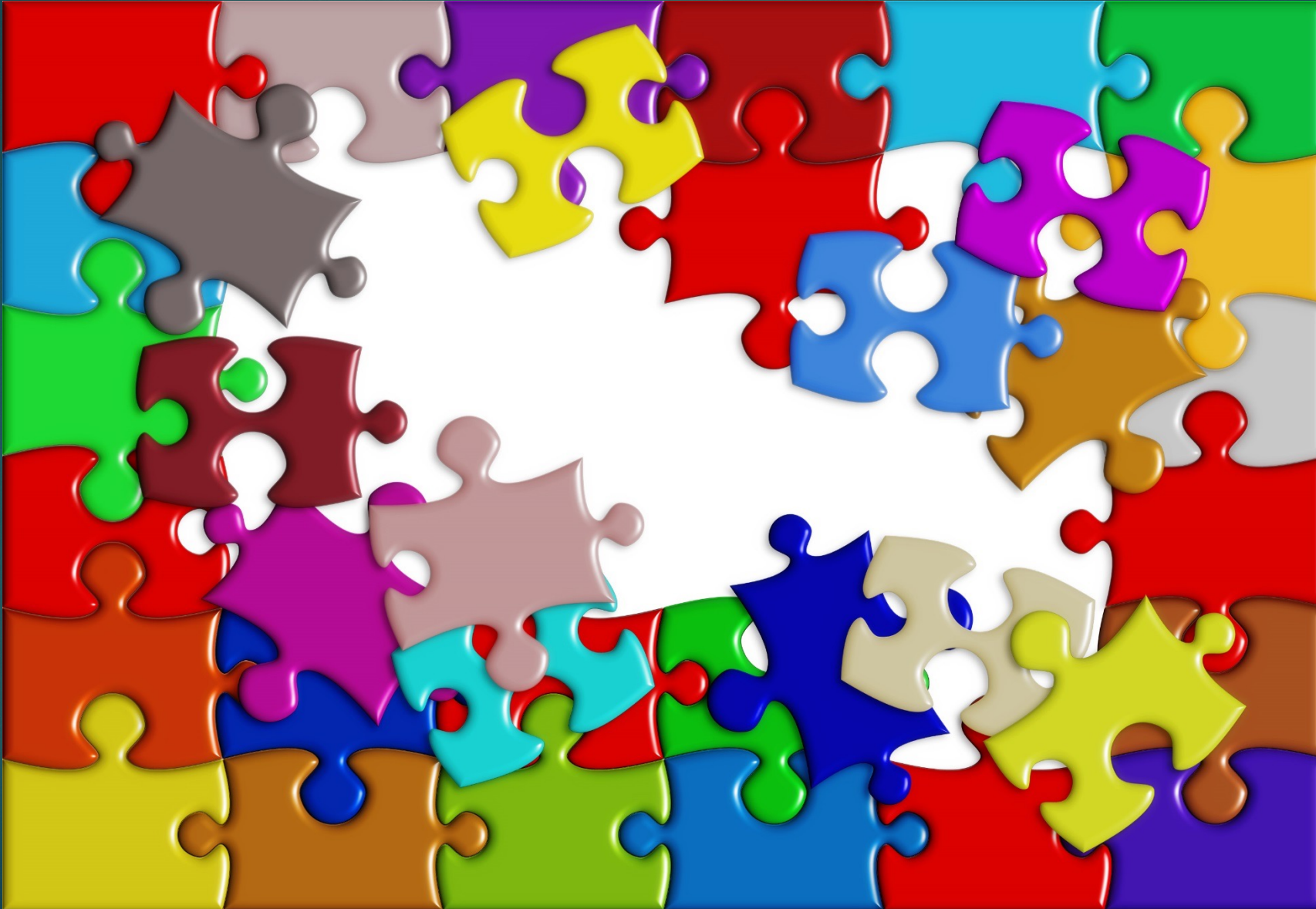
County of Monroe

History of corner establishment since Original Government Survey

Portland town road records call for this corner to be 41 rods North of the intersection of 2 Town Roads. It does not appear that the Town Road described in said records was laid out by a surveyor, although said records do make calls for bearings and distances. Said records are dated June 3, 1916. Description of corner evidence found:

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Measurements to evidence





**This network of corners – our infrastructure
is vitally important to land
ownership, taxation, easements, etc.**

NW 1/4		NW 1/4 NE 1/4		NE 1/4 NE 1/4	
		SW 1/4 NE 1/4		SE 1/4 NE 1/4	
W 1/2 SW 1/4	E 1/2 SW 1/4	N 1/2 NW 1/4 SE 1/4		NW 1/4 NE 1/4 SE 1/4	NE 1/4 NE 1/4 SE 1/4
		S 1/2 NW 1/4 SE 1/4		SW 1/4 NE 1/4 SE 1/4	SE 1/4 NE 1/4 SE 1/4
		W 1/2 SW 1/4 SE 1/4	E 1/2 SW 1/4 SE 1/4		

Typical Section Subdivisions

IN AN IDEAL WORLD.....

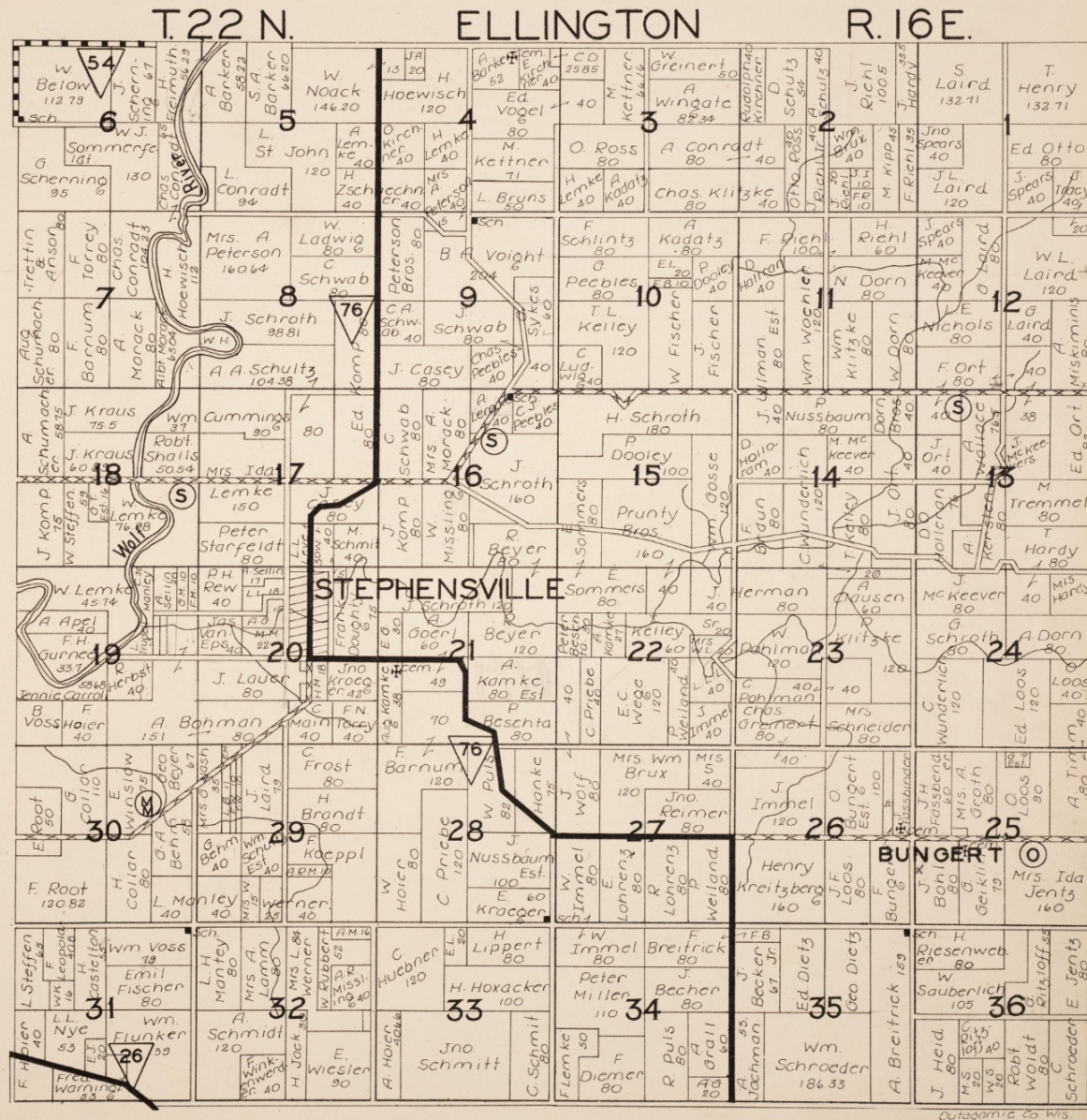
One mile distance = 5280 feet

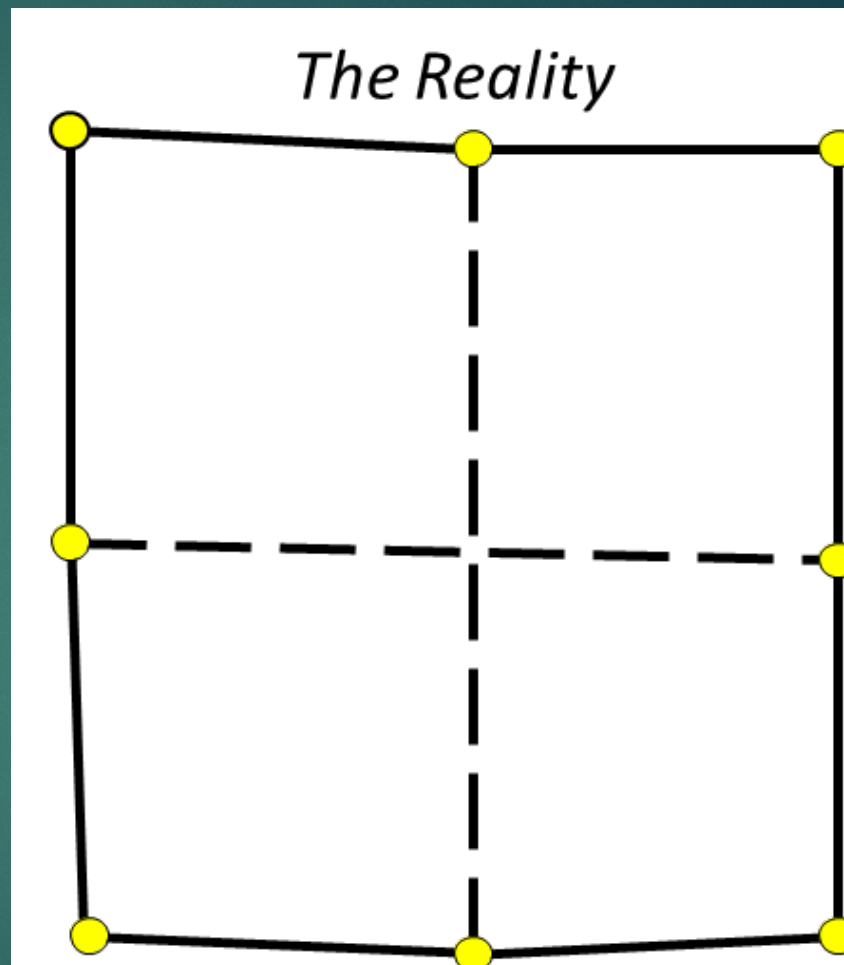
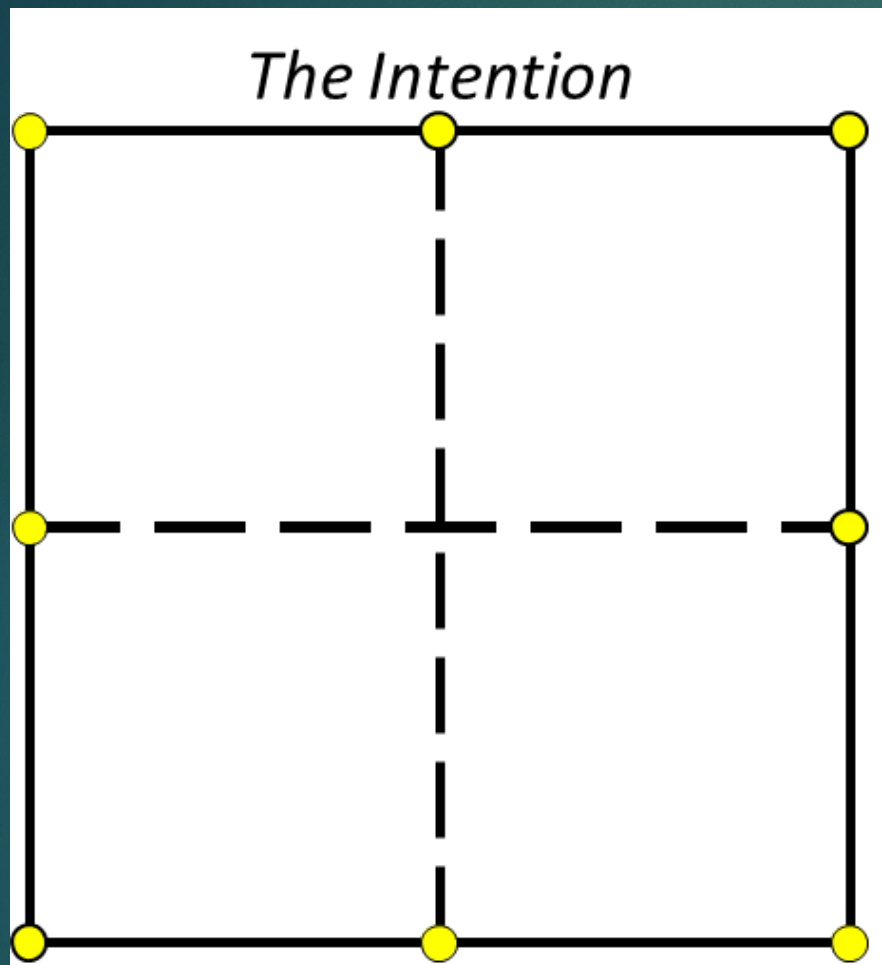
Half mile distance = 2640 feet

Quarter mile distance = 1320 feet

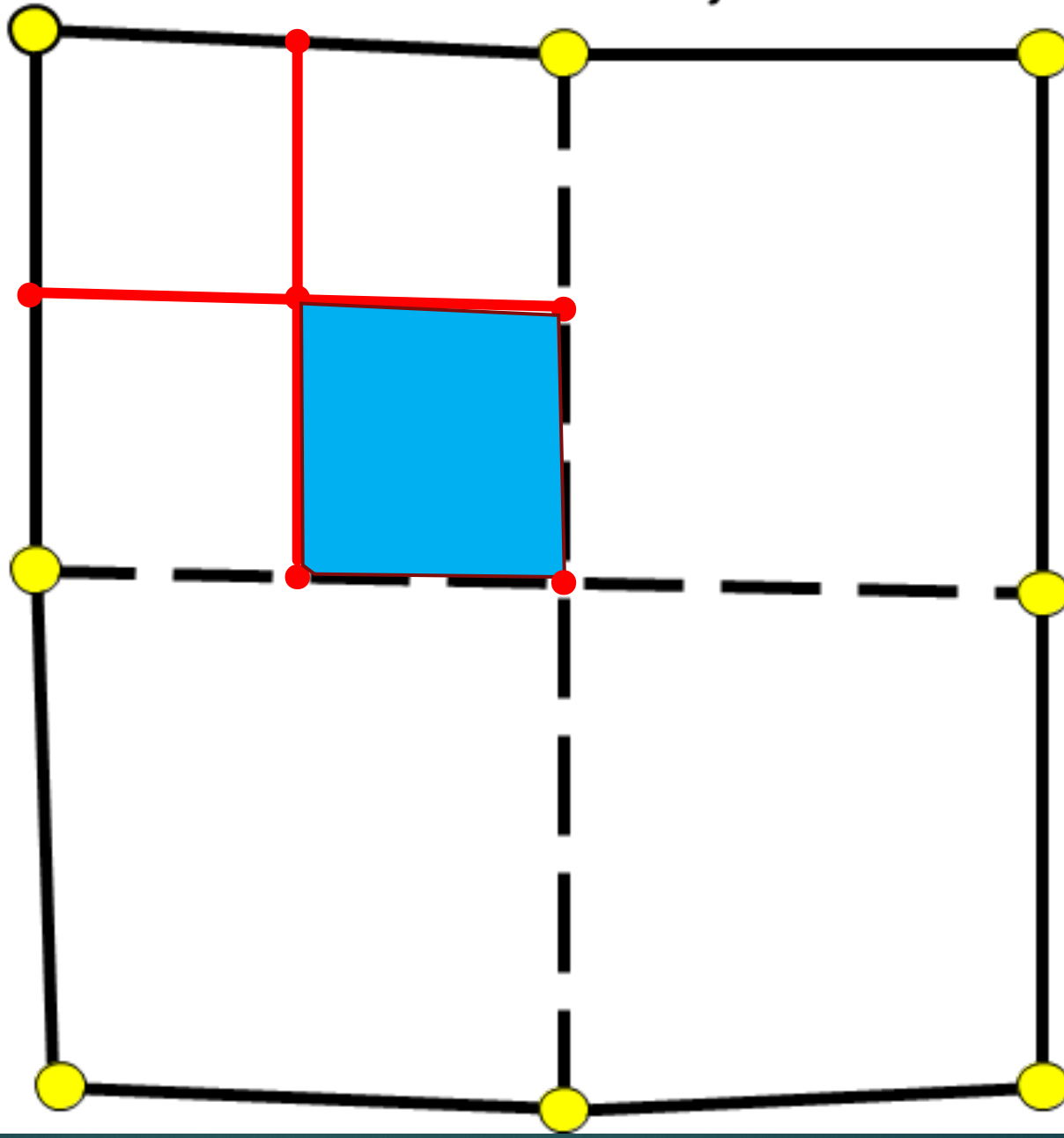
Section area = 640 acres

“Forty” = 40 acres

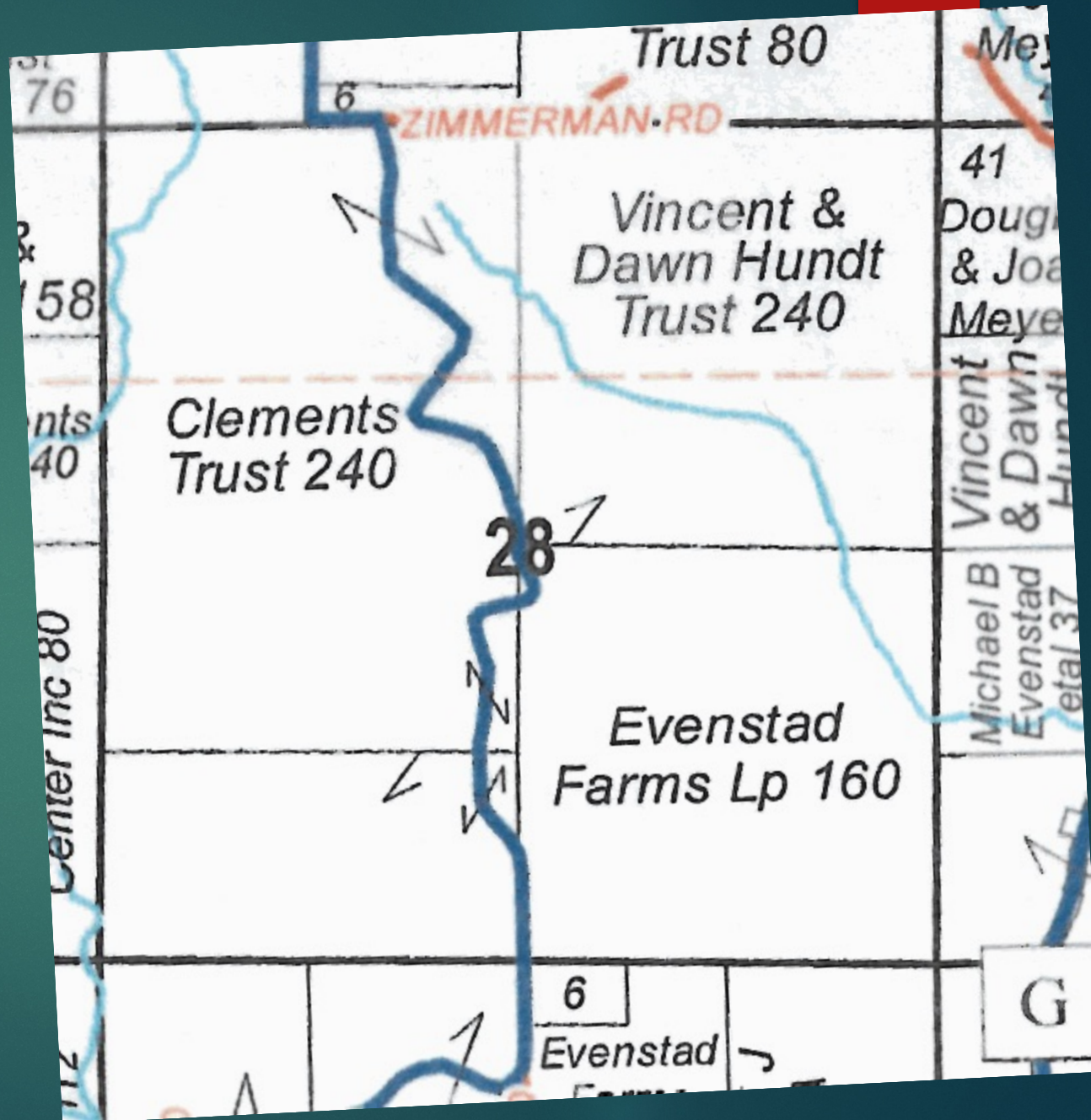




The Reality

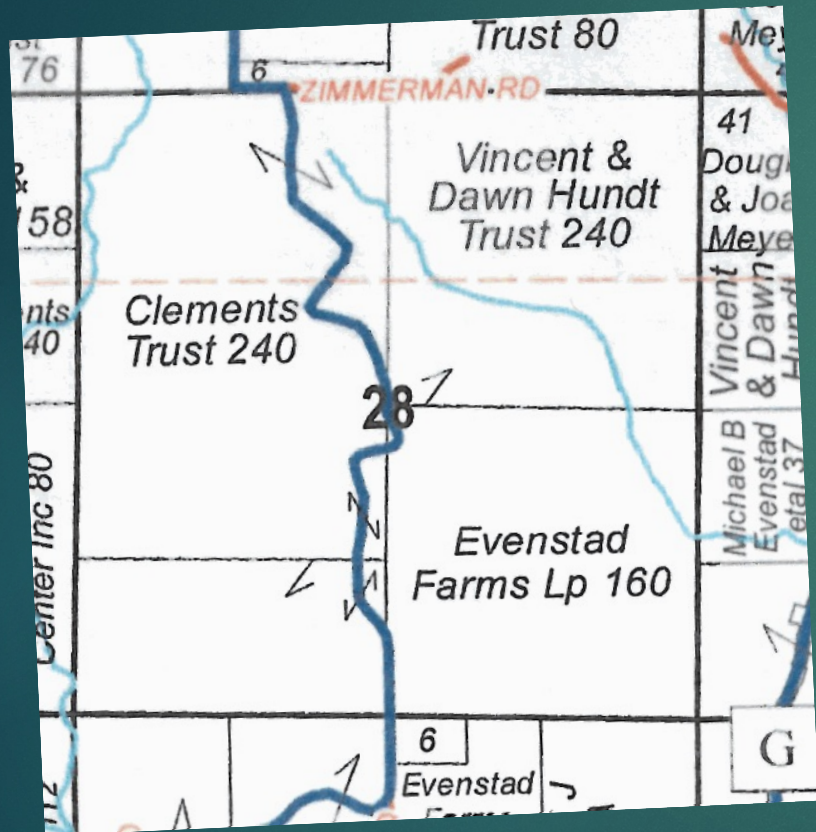


**Section 28, T15N, R5W,
Town of Washington
La Crosse County, WI**

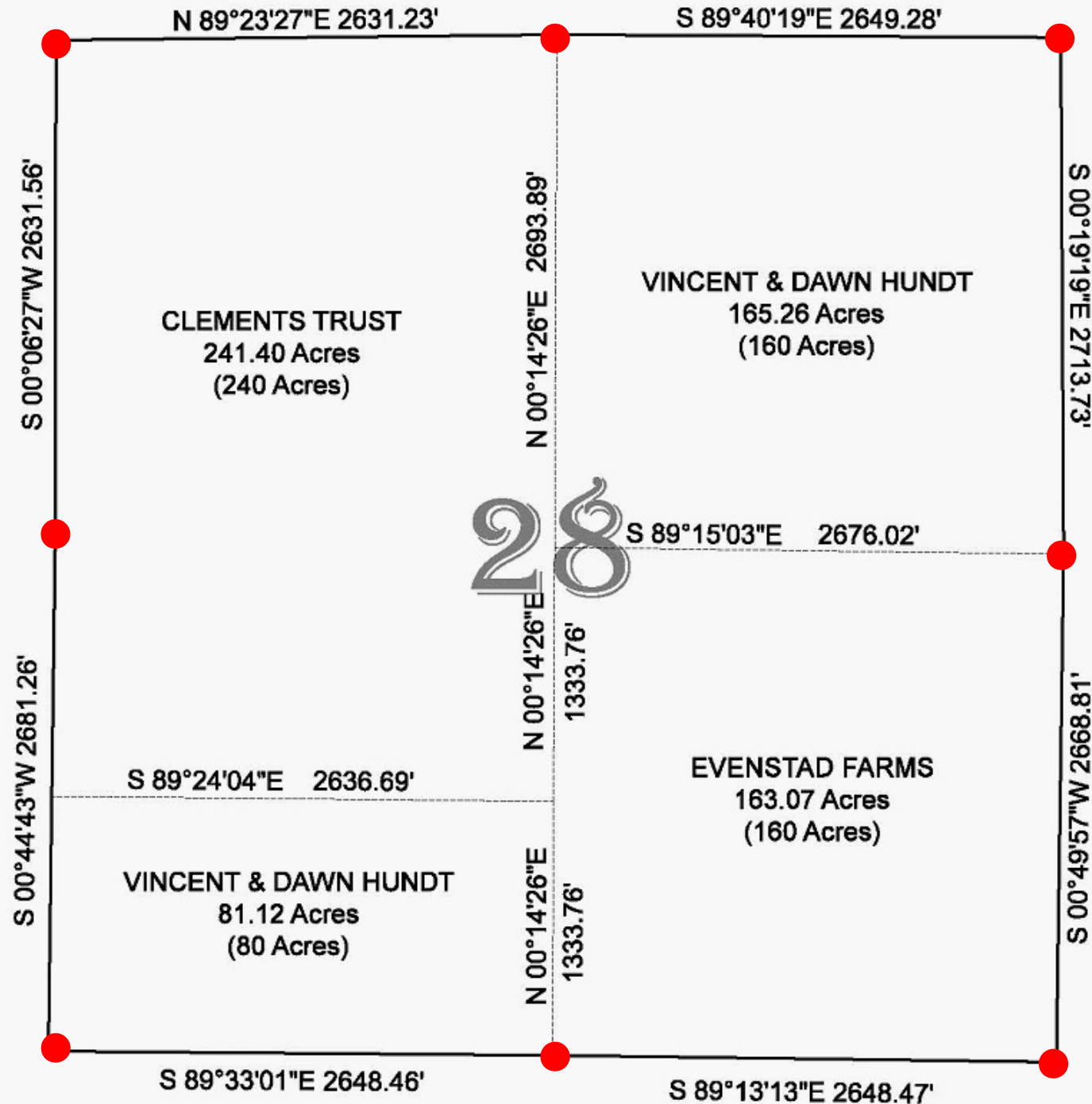


CREDIT: Rockford Map Publs., Inc.

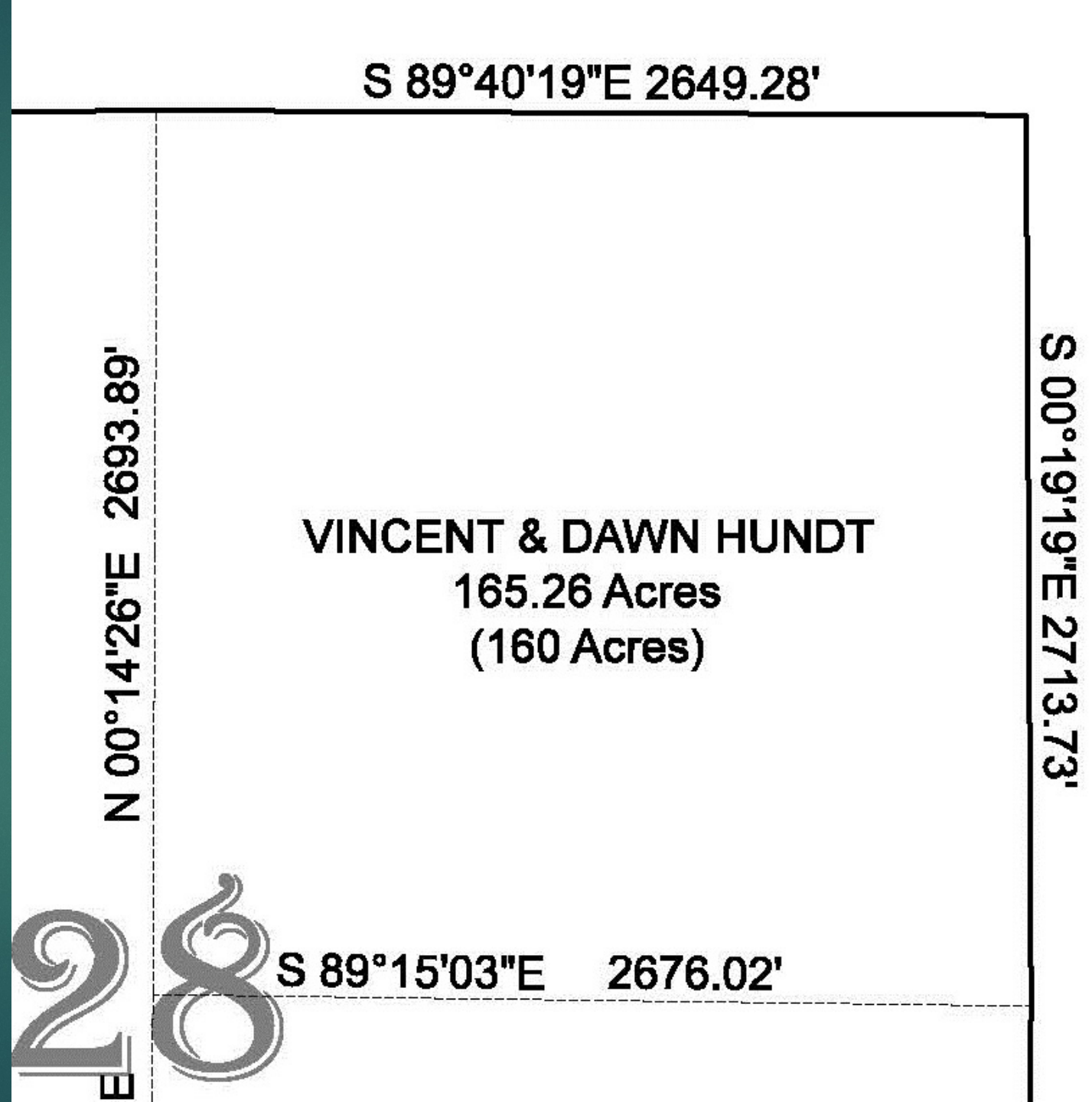
Section 28, T15N, R5W



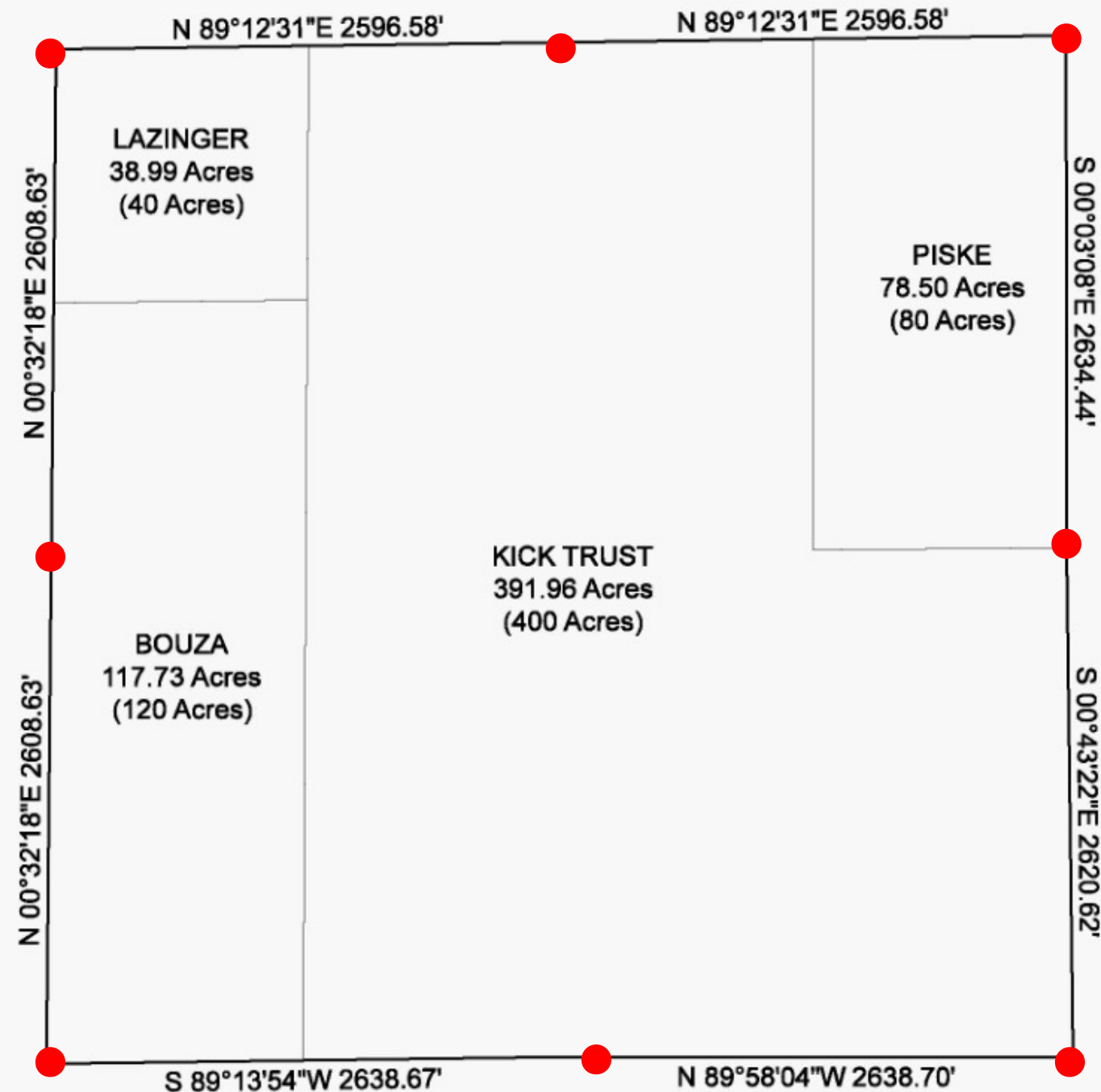
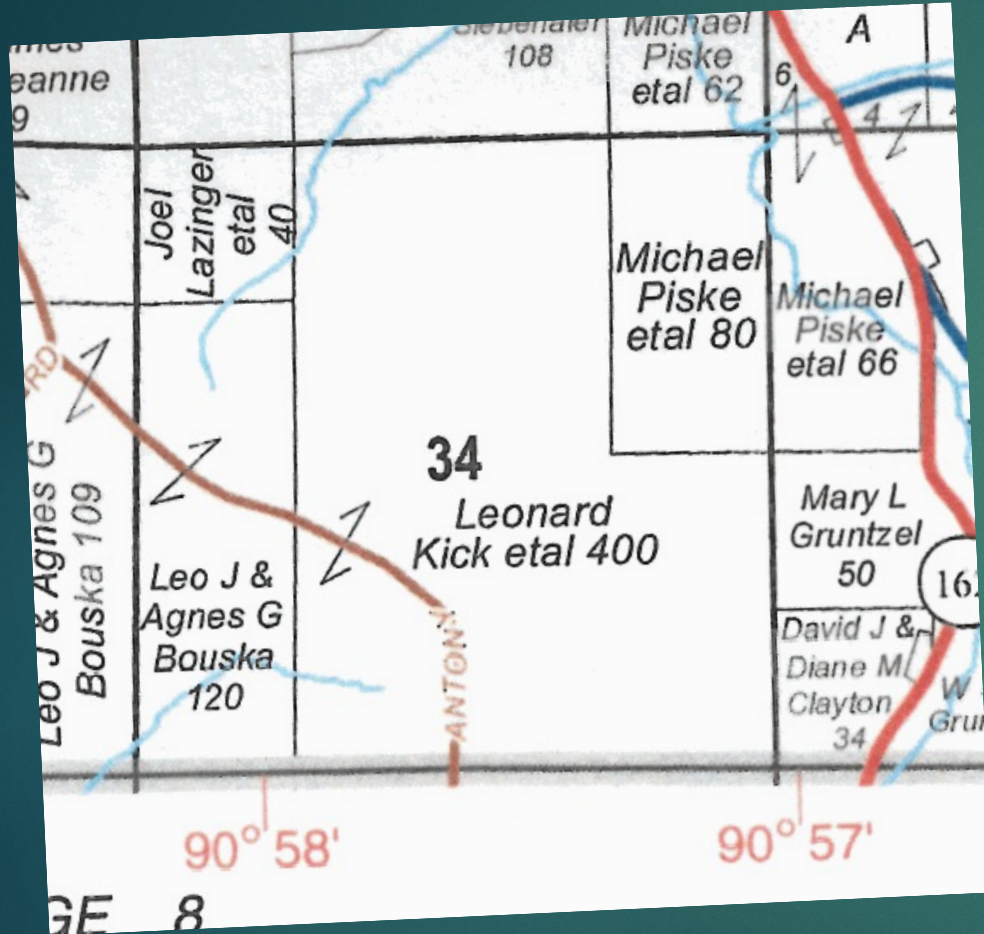
CREDIT: Rockford Map Publs., Inc.



Vincent and Dawn Hundt are being assessed for 160 acres in the NE $\frac{1}{4}$ but in reality, they enjoy 165.26 acres of land.

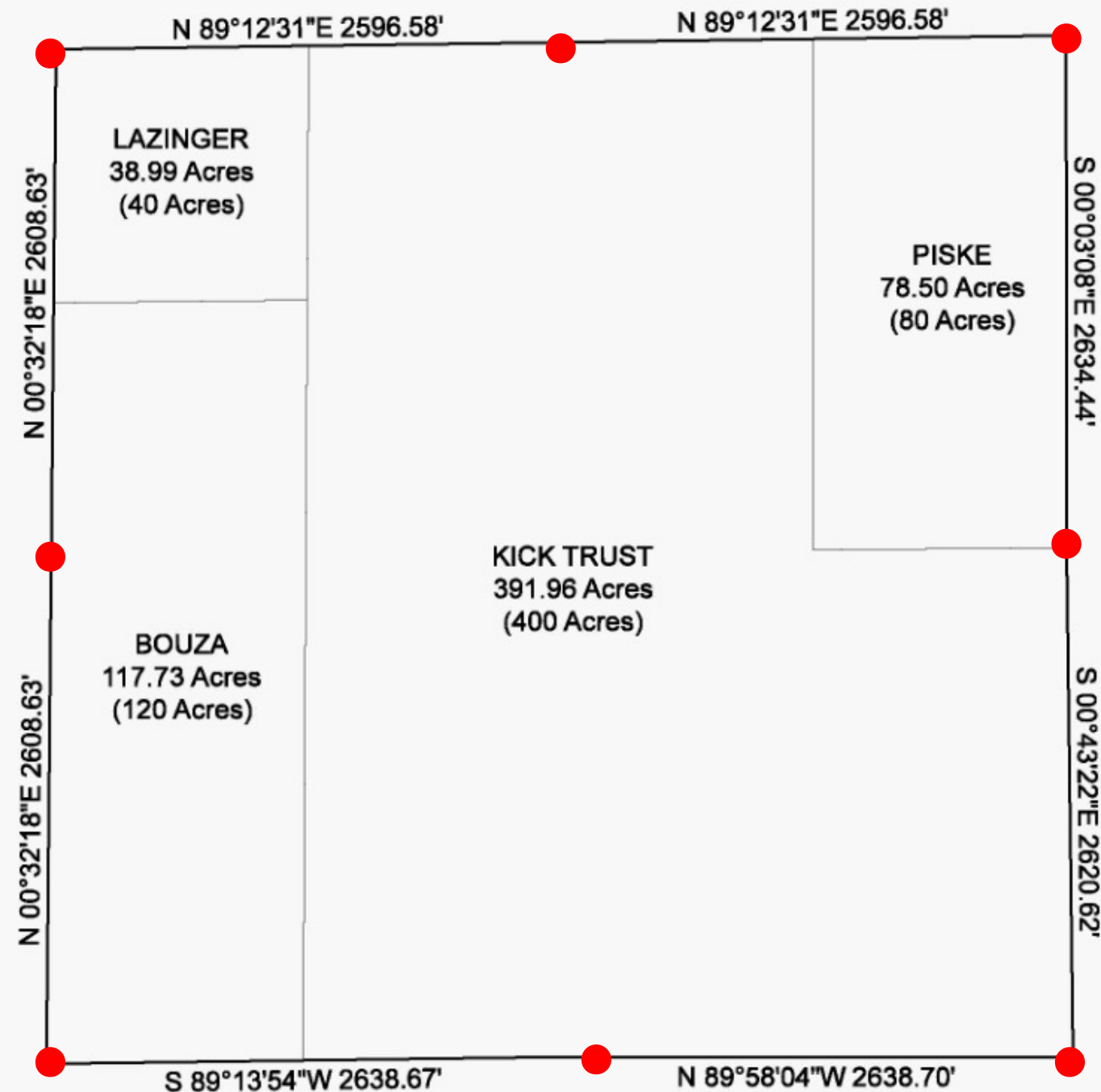
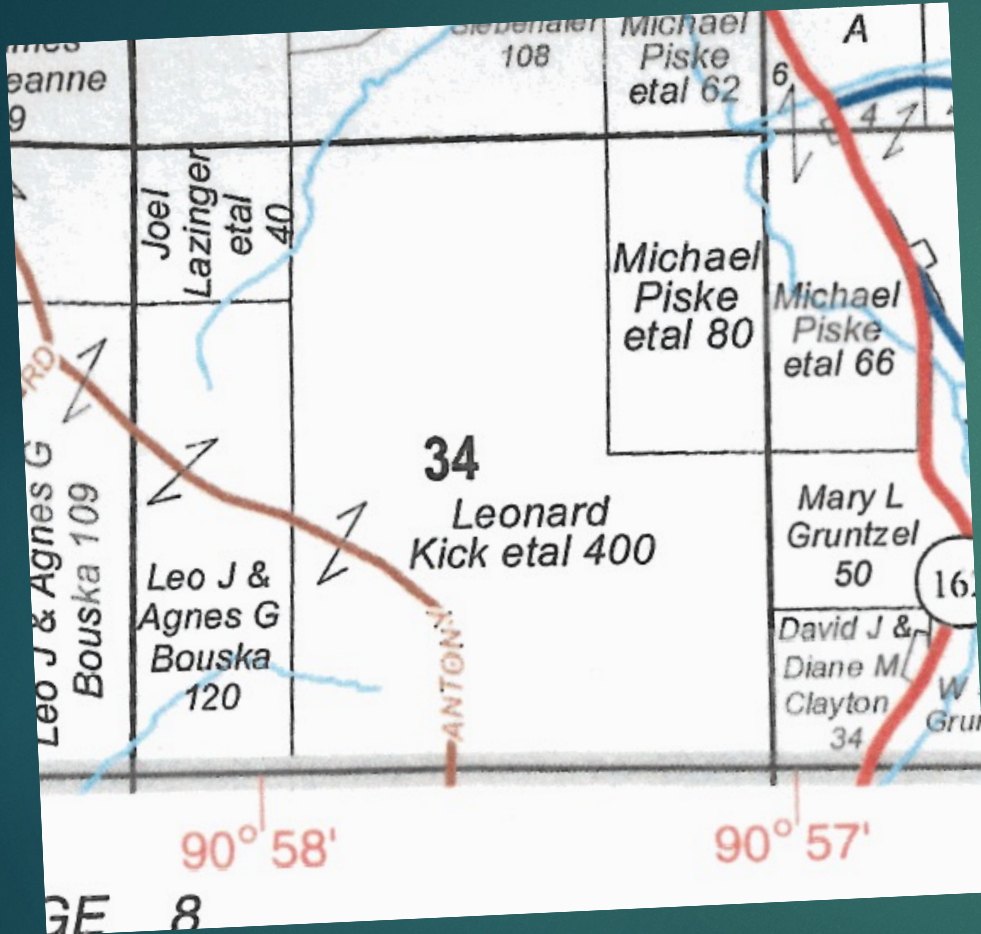


Section 34, T15N, R6W



CREDIT: Rockford Map Publs., Inc.

Section 34, T15N, R6W



CREDIT: Rockford Map Publs., Inc

Once we get all the corners in the ground....



we're not done yet

Corner Maintenance



Corner Maintenance



1. Check the condition of the marker

2. Check the ties

3. Set a warning sign

Please help us
protect these
important corner
locations

**PLEASE
PROTECT
NEARBY
SURVEY
MARKER**

IF LOCATION OF THIS MARK
IS ENDANGERED
PLEASE CONTACT
COUNTY SURVEYOR'S OFFICE

LaCrosse Sign Co.



**If you know of a survey
marker that is endangered,
let a surveyor know!**

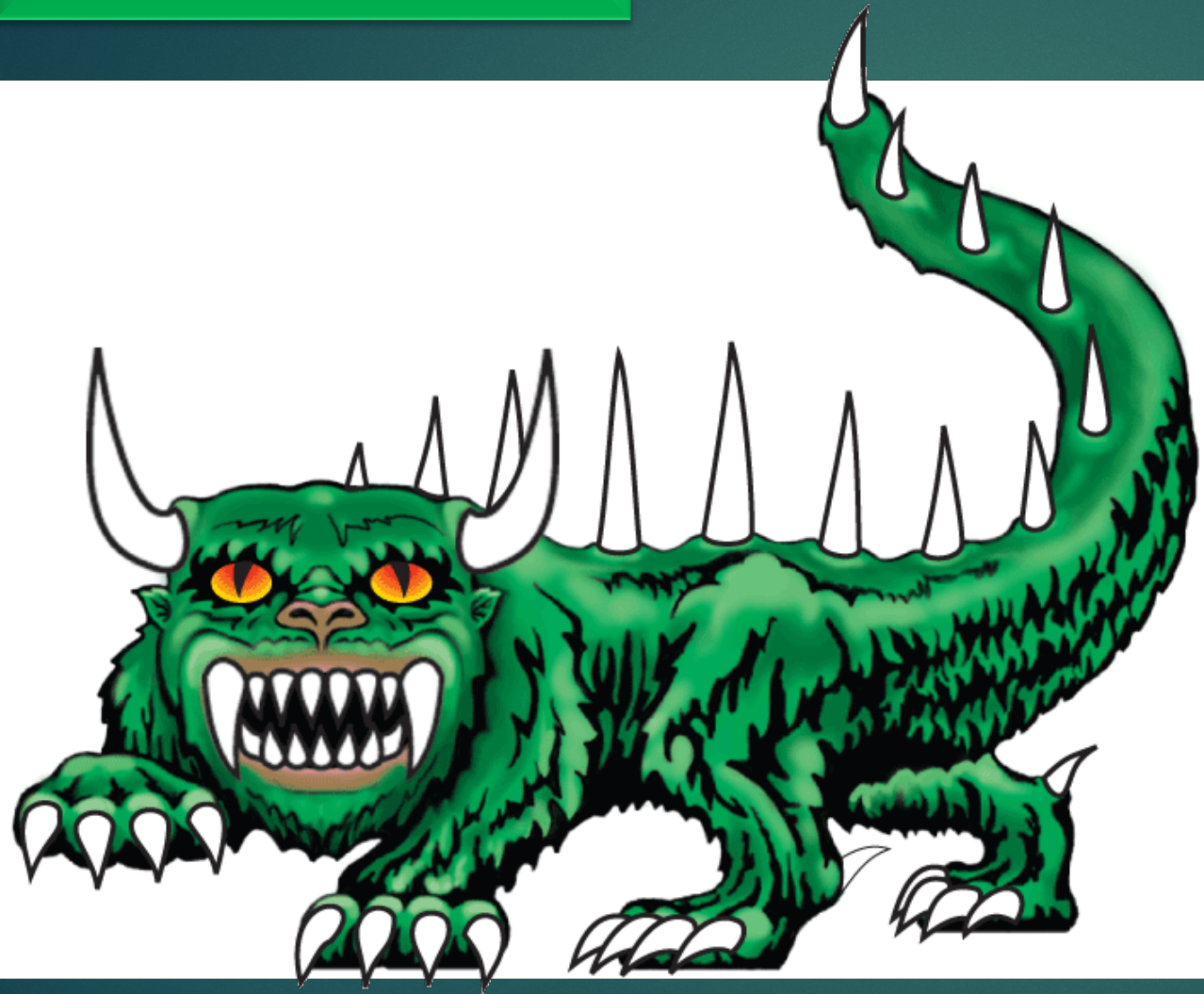


**These corners don't
belong to the
County Surveyor,
they belong to every
Wisconsin property
owner.**



**“Hey Bryan, do you have any “fun facts”
about the PLSS in Wisconsin?”**

PLSS HUMOR



Eugene Shepard

well-known Wisconsin land surveyor,
timber cruiser and prankster

Captured a specimen in Section 37
in a Township near Rhinelander

Did you know?





Wisconsin State Capitol Tours

Drop-in tours (45-55 min.) start at the Information Desk (inside the central rotunda). Mon.- Sat. at 9:00, 10:00, 11:00 a.m. and 1:00, 2:00, 3:00 p.m. Sundays at 1:00, 2:00, 3:00 p.m. A 4:00 p.m. tour is offered weekdays (Monday - Friday) Memorial Day through Labor Day. Reservations requested for groups of ten or more.

Officer Tammy Johnson – Capitol Police



Yes, I am a geek!

**And sometimes being a geek
can get you places!**













All because I'm a PLSS geek!

Wisconsin County Surveyors Association

2021 Board of Directors



President: Ryan Duckart – Brown County

Past President: Bryan Meyer – La Crosse County

Vice-President: Laurence Johns III – Vernon County

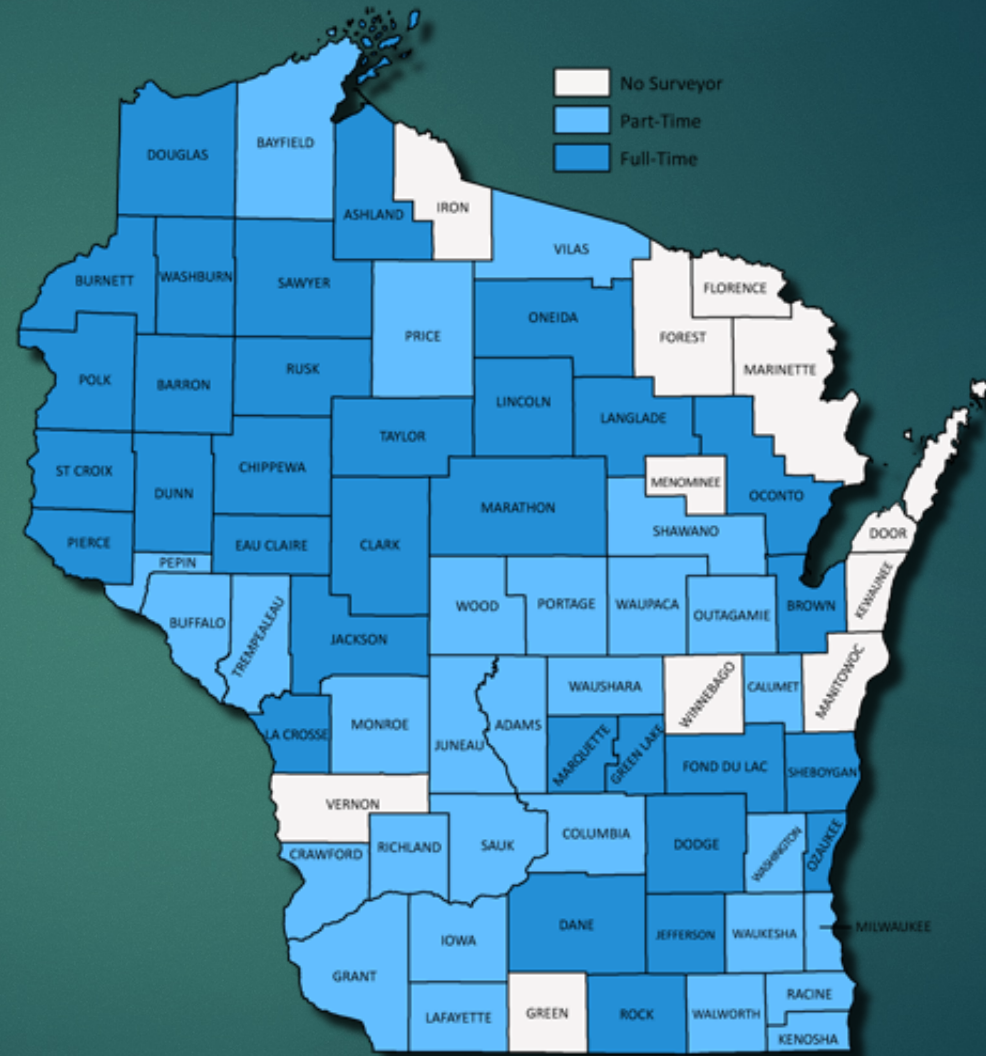
Secretary: Tom Leslie – Brown County

Treasurer: Tom Carlson - Dunn County

Director: Wade Pettit – Clark County

**Director: Rob Merry – Kenosha, Milwaukee,
Walworth & Waukesha Counties**

Meet four time each year in Neillsville





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bmeyer@lacrossecounty.org



Questions?

