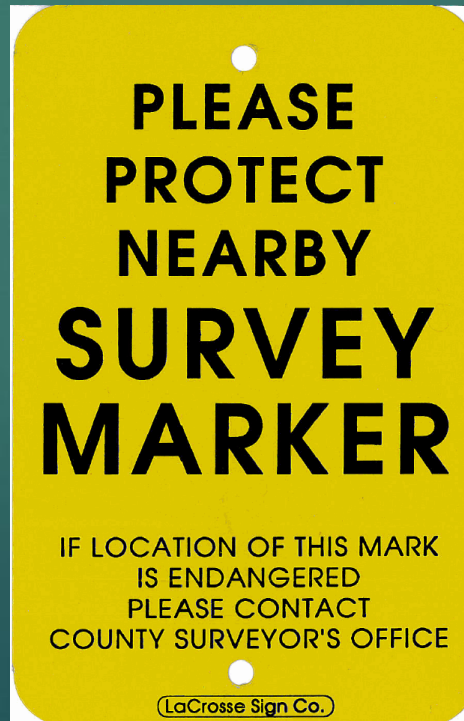


# The Public Lands Survey System

**An Essential Network Worthy of  
Protection**



Wisconsin County Surveyors Association



BRYAN MEYER – LA CROSSE COUNTY  
SURVEYOR/WCSA PRESIDENT

Kevin Boyer – Wood County Surveyor  
WSLS President elect



**WARNING**

**Audio books = 150-160 words per minute**

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

# 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**





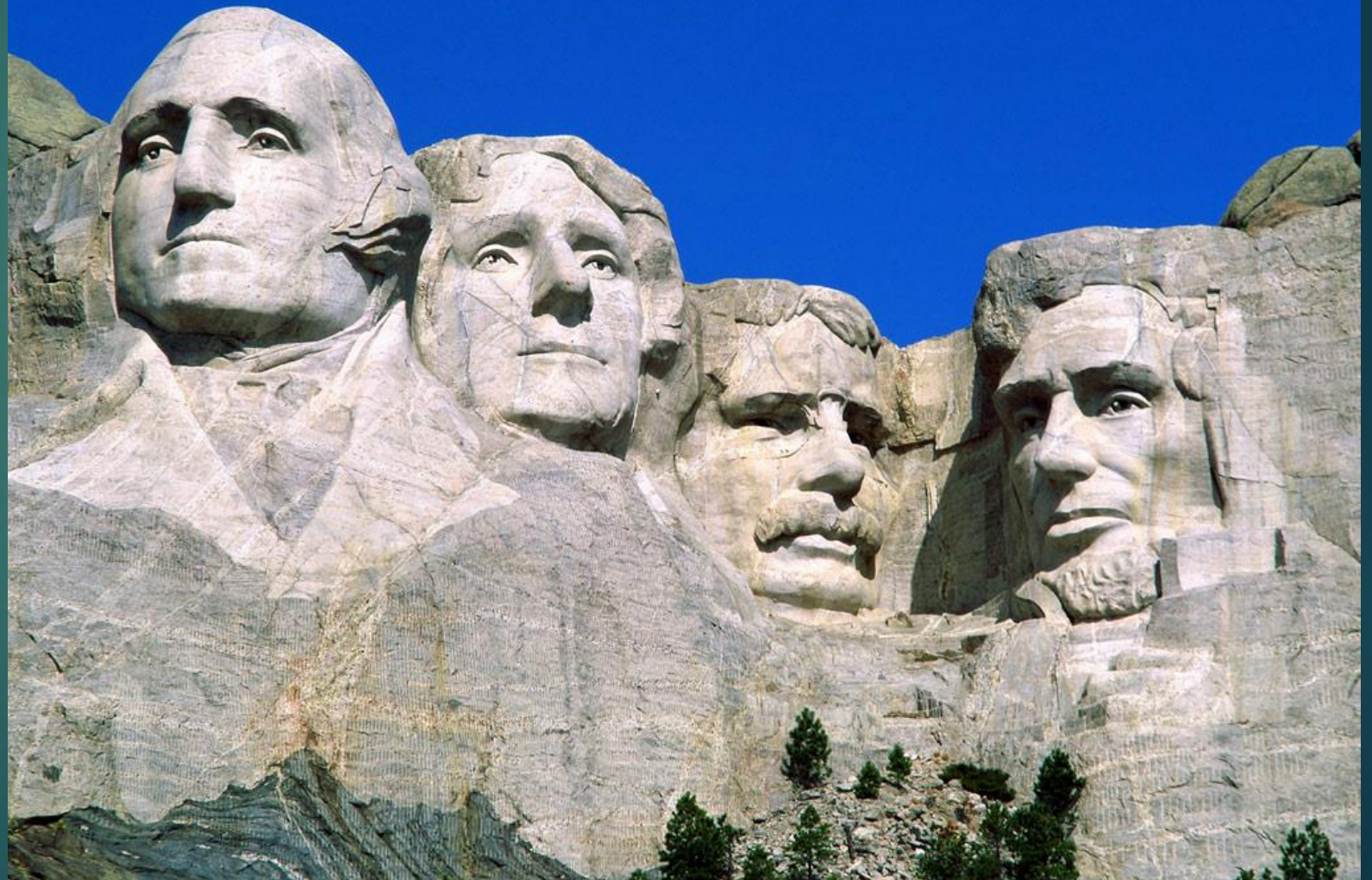
# National Surveyor's Monument


**Lincoln = Surveyor**

**Jefferson = Surveyor**

**Washington = Surveyor**

3 Surveyors and some other guy





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

**“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		

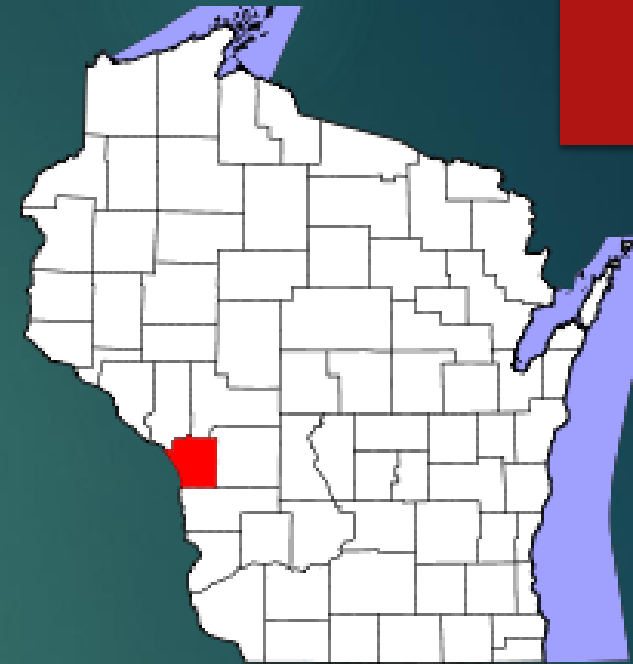
**November 2008**

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:**  
[www.vertex42.com](http://www.vertex42.com)



**LA CROSSE COUNTY**  
 Exceptional services. Extraordinary place.





I ❤️  
MY  
JOB



43

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?”**



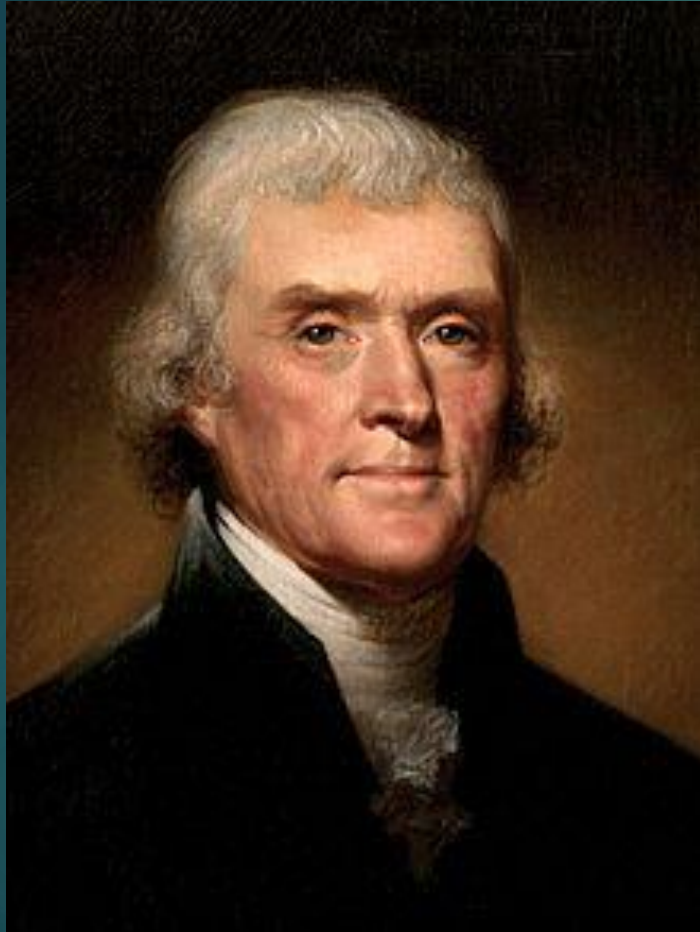


# **PUBLIC LAND SURVEY SYSTEM**

**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.**

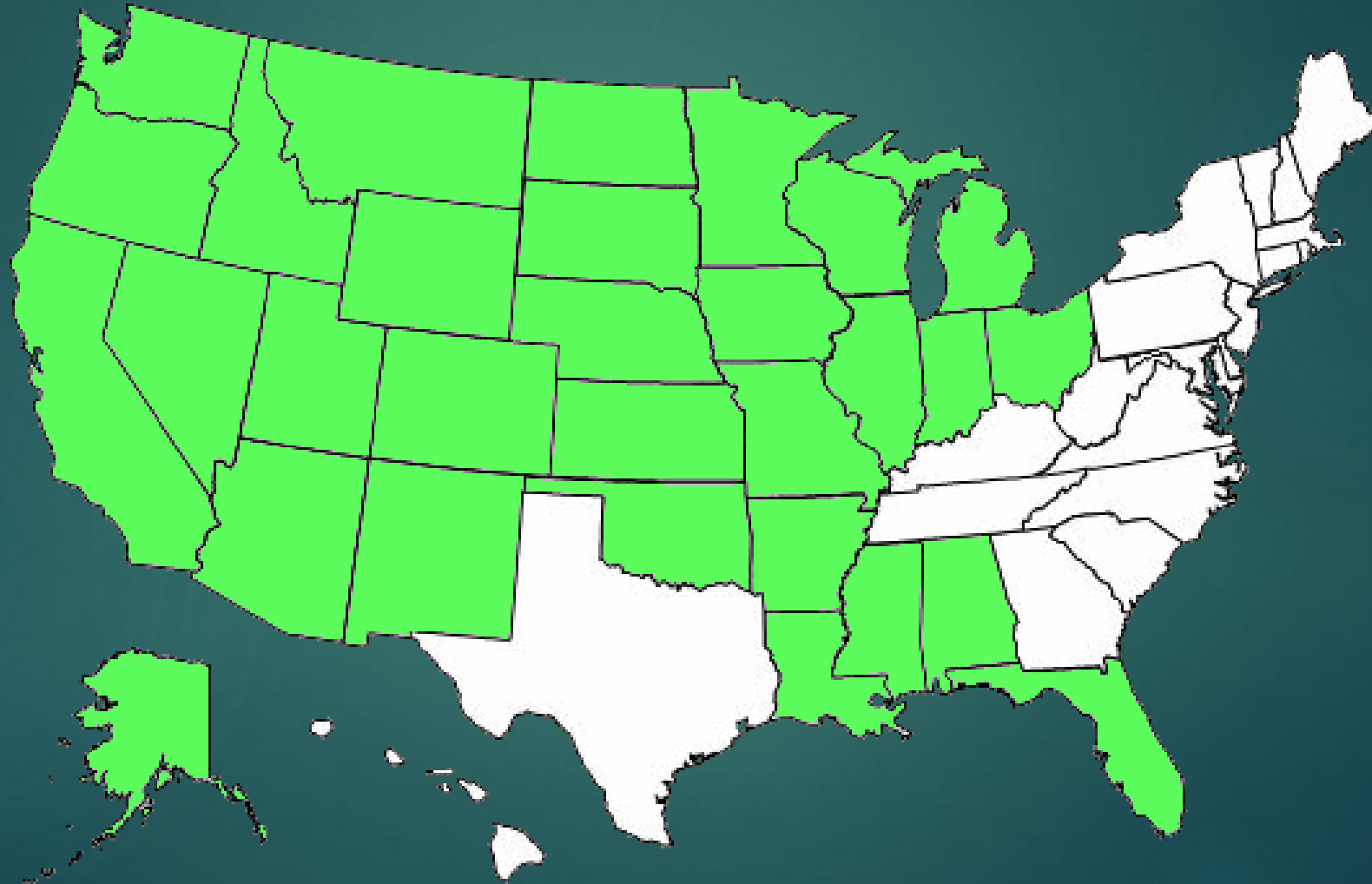


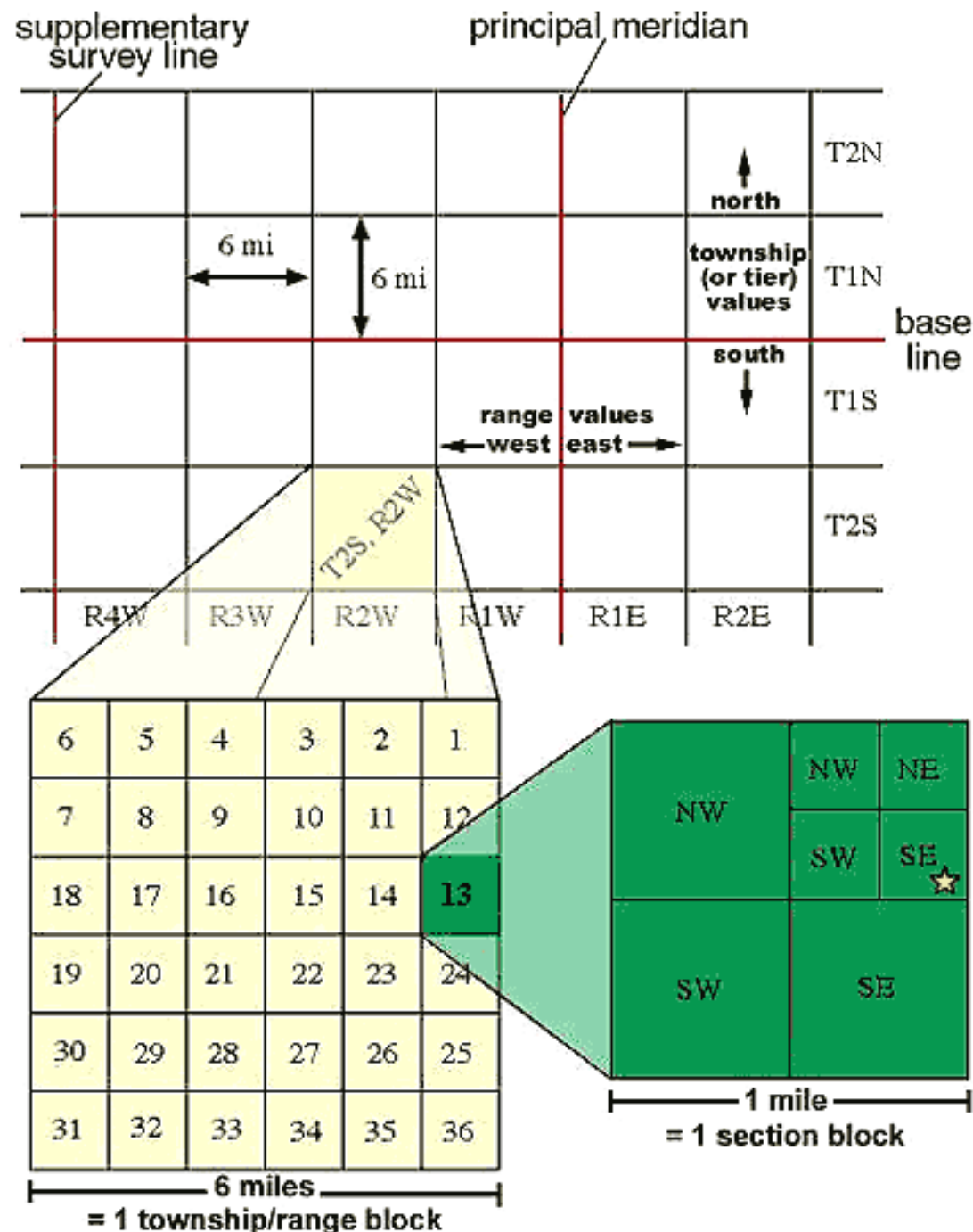
**Championed by Thomas Jefferson**

**Yeoman farmers**

**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.**





**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





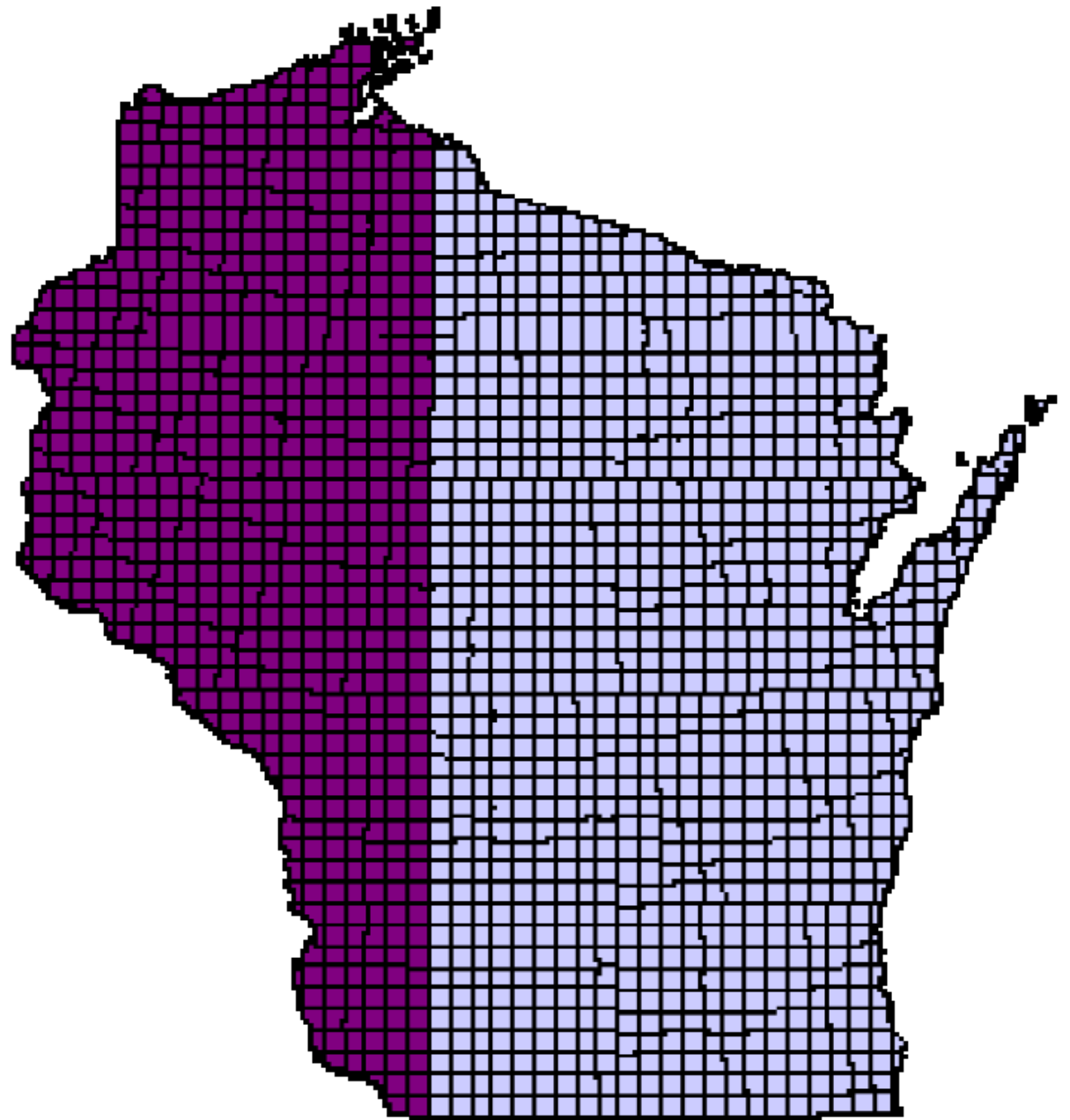
**In Wisconsin,  
the Original  
Government Survey  
took place  
between  
1832 and 1866**







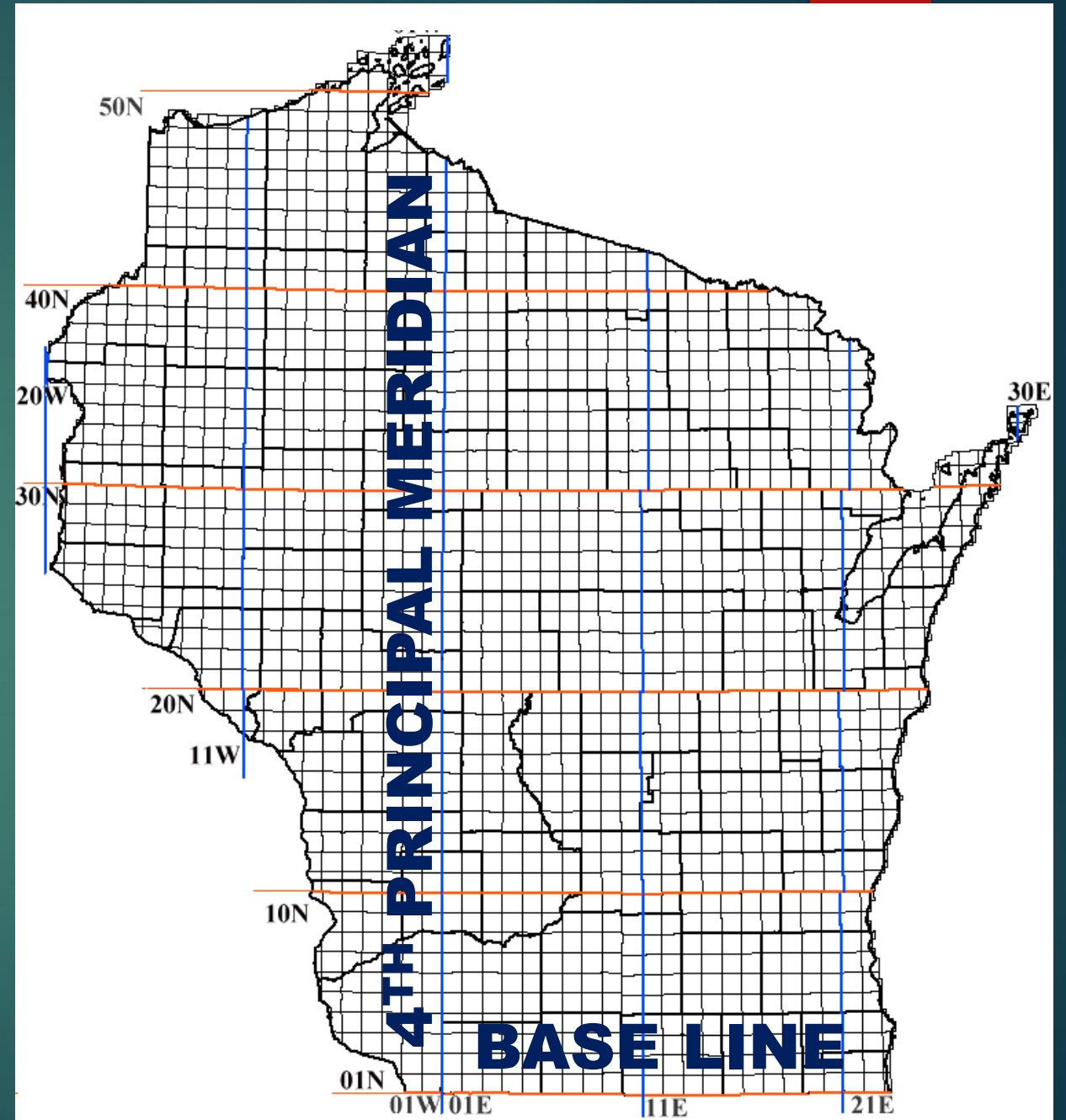
## Base line and Principal Meridian



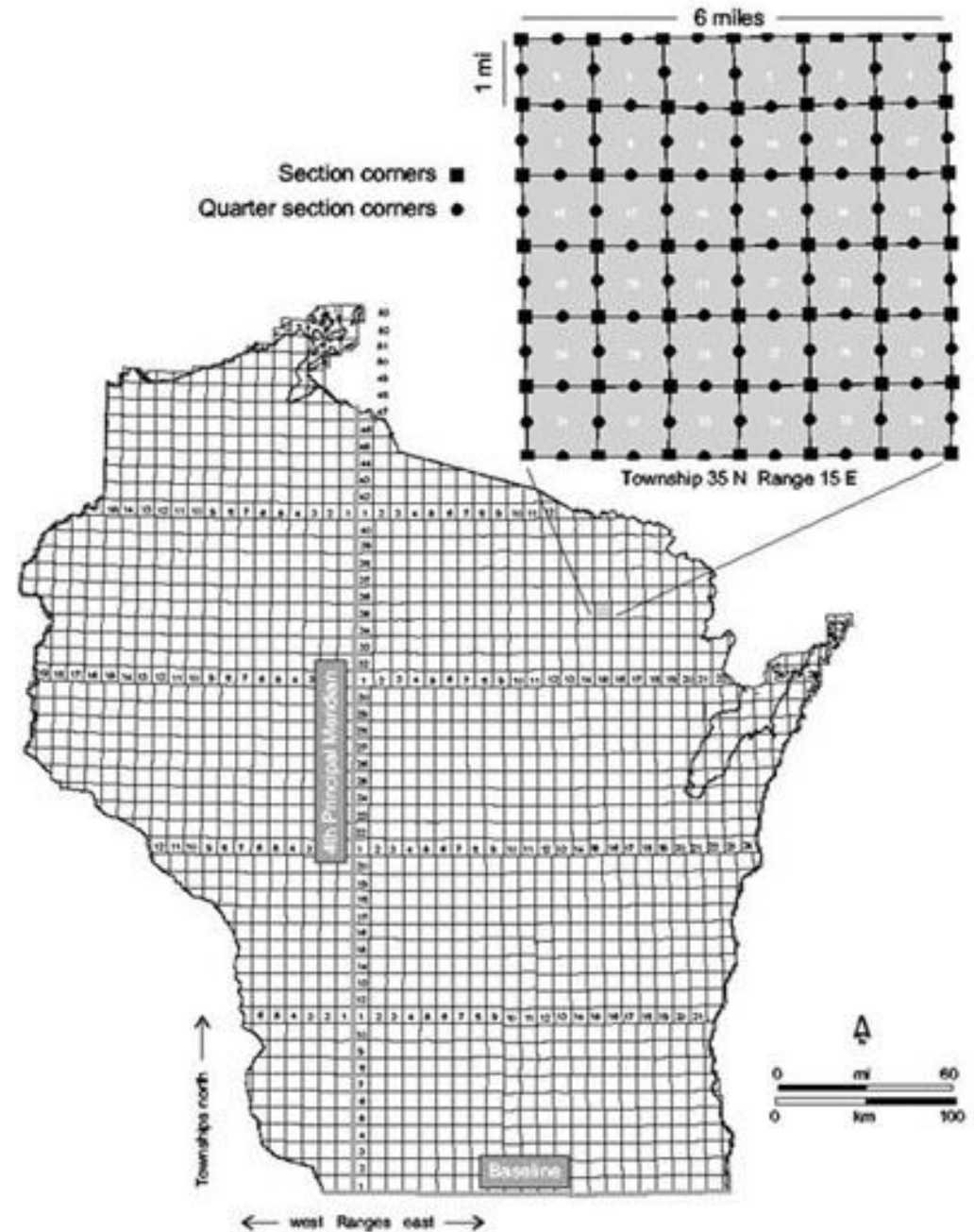
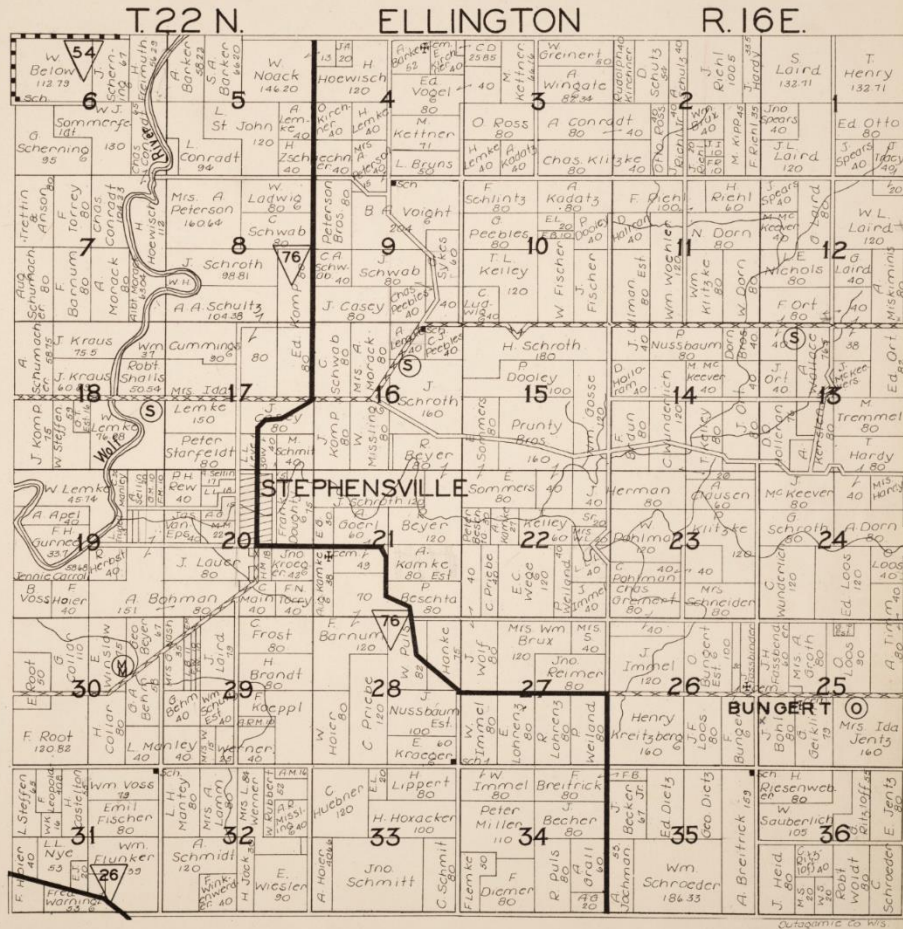
# PLSS

## Townships across Wisconsin

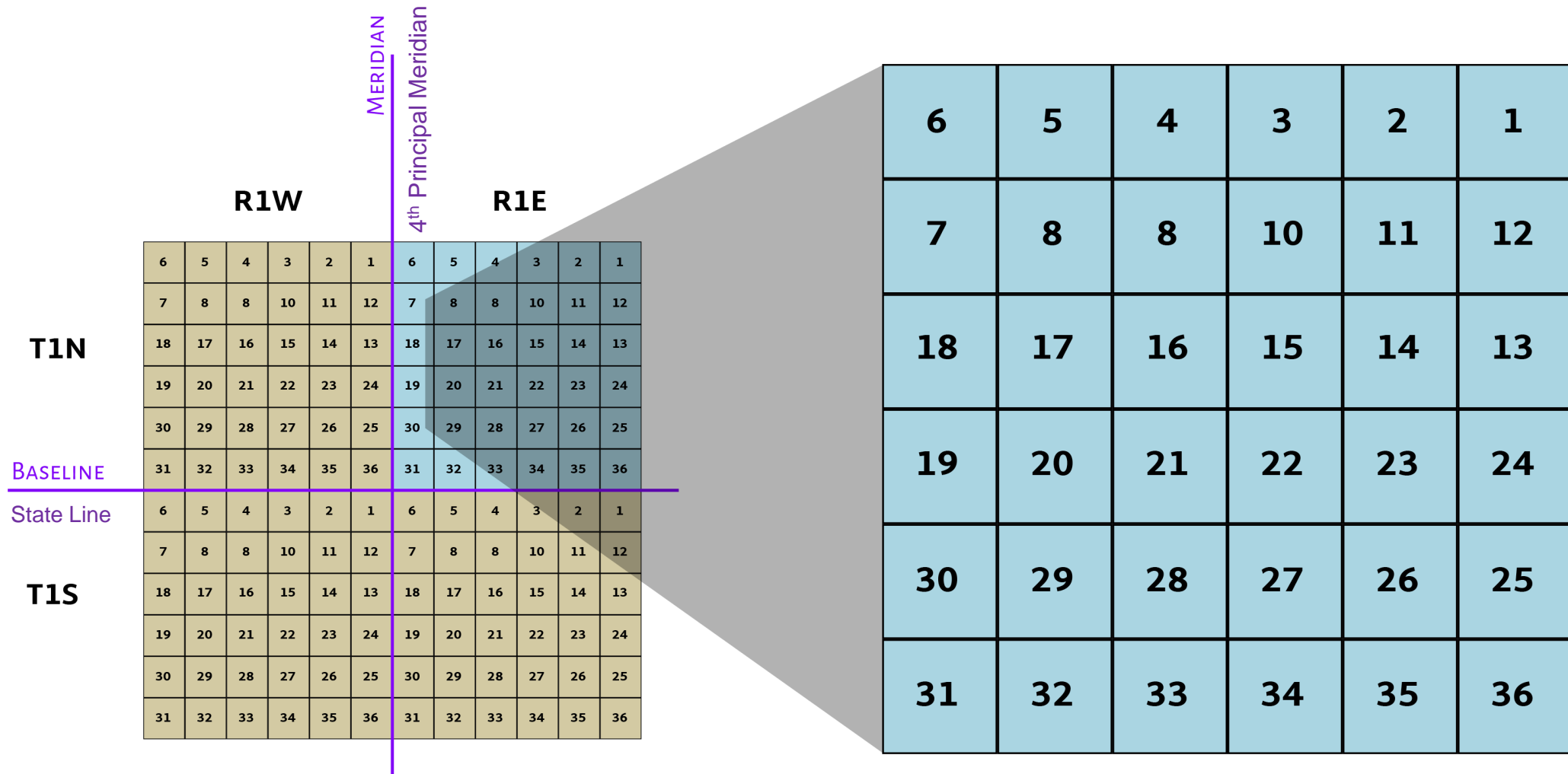
6 mile by 6 mile squares



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





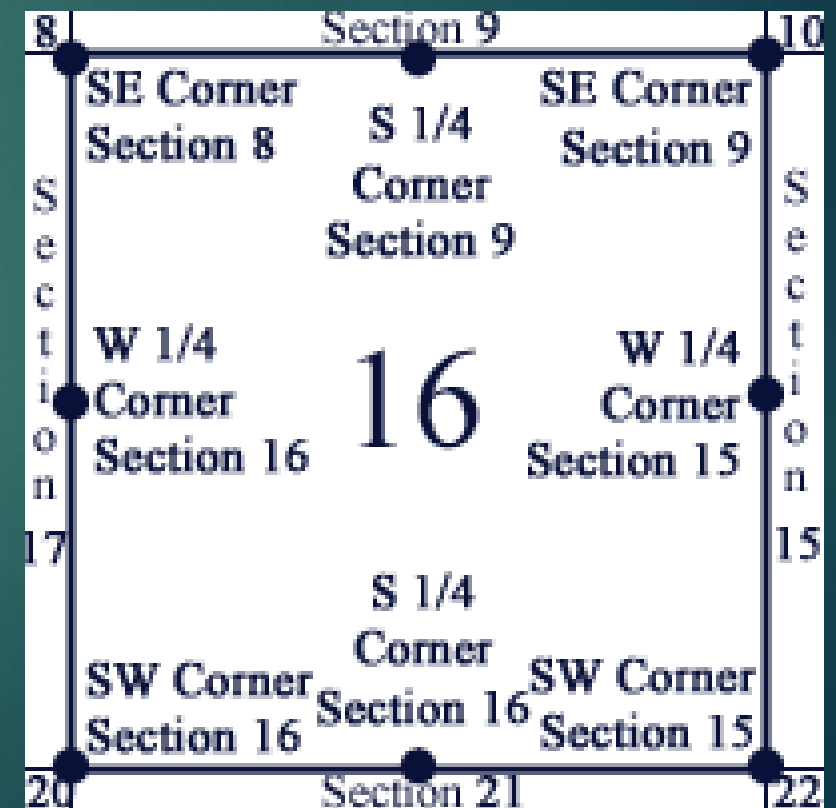


1 township = 6 miles  
1 township = 36 sections

# 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

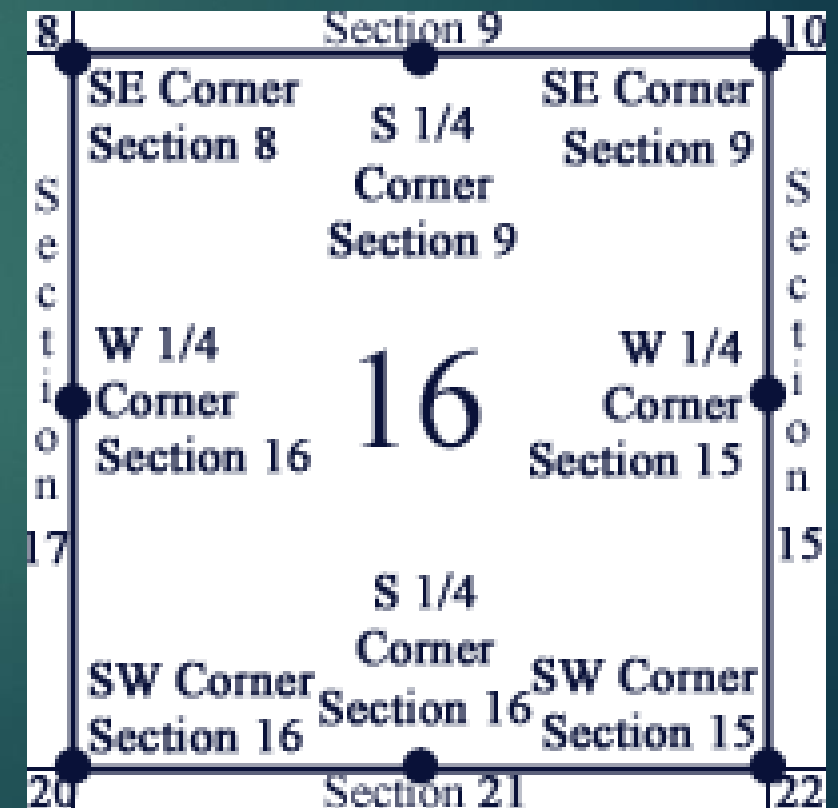
**A corner marker set every half mile on the exterior of every Section.**



# 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.**





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

# **“School Section”**

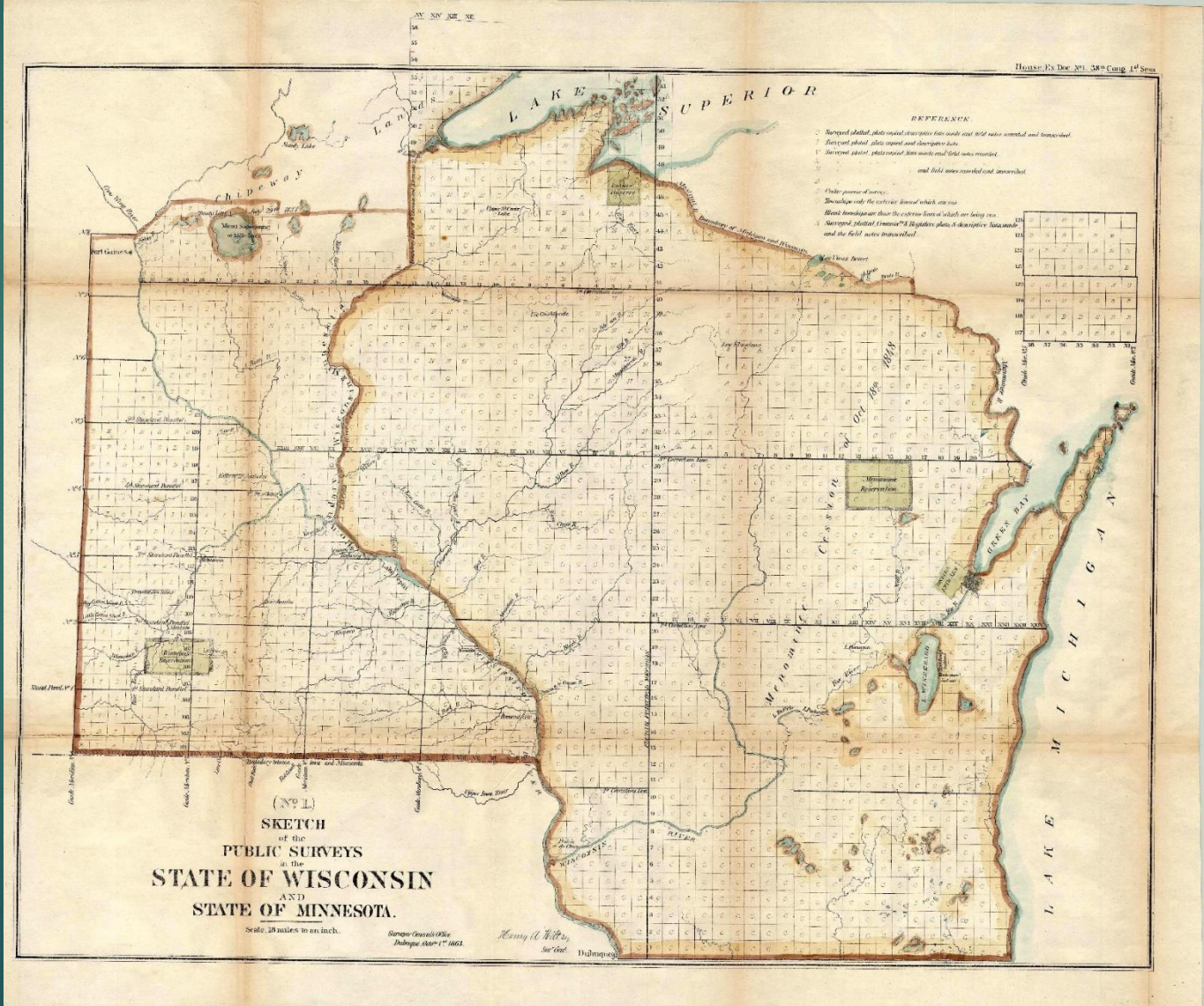
## **Land Ordinance of 1785**

**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."*

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



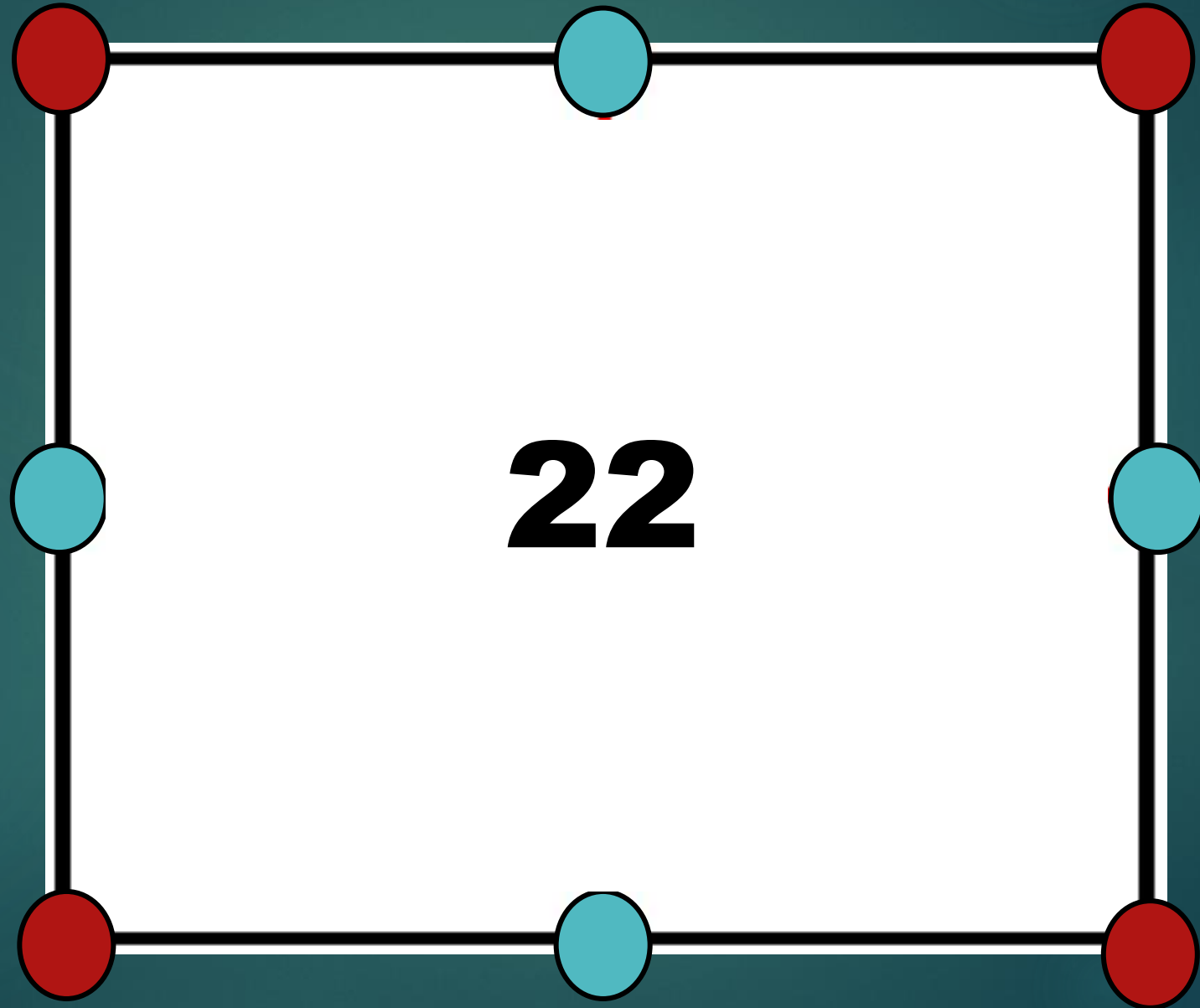


**Corners established by the PLSS**

**SECTION CORNERS  
AND  
QUARTER CORNERS**

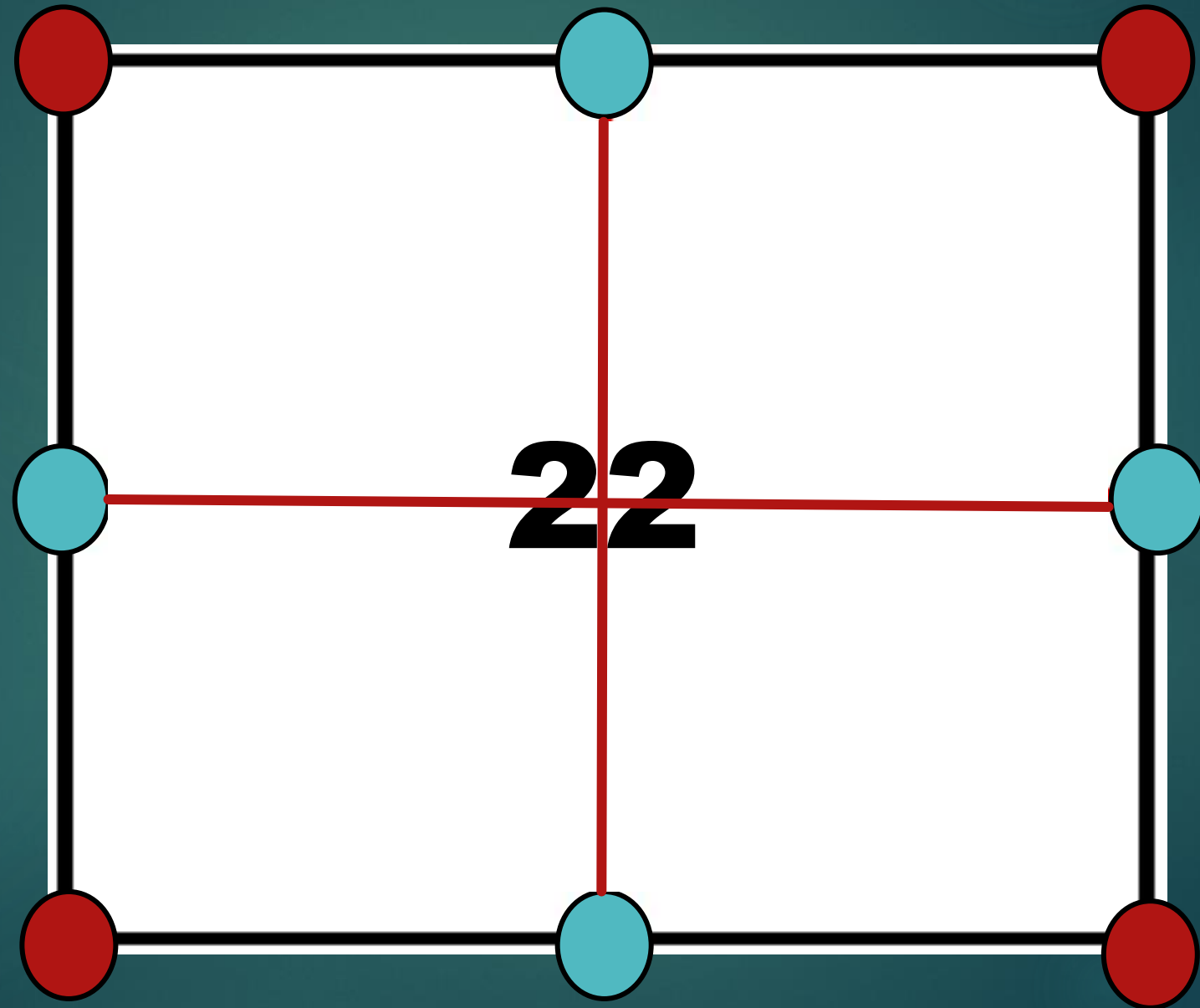
 = SECTION CORNER

 = 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 Var. 80° 15'

C.L.

West along SB of Sec. 32  
12.86 B Oak 12 in dia  
40.00 Set post for sect. 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 and 32  
R Oak 12 N 29 1/2 W 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. Var. 80° 15'

C.L.

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 sect. cor.  
W Oak 24 N 1 E 17  
Do 24 N 67 1/2 E 43  
51.10 W Oak 12 in dia.  
70.60 Intersected NB 54 the North of  
Temporary cor. and set post cor  
of Is 18 & 19 N. Co. 1 & 2 N.  
W Oak 11 S 37 1/2 E 30  
Do 12 N 31 1/2 E 32

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



# Original Corners of the PLSS



**Wood posts  
(most  
cases)**

**Bearing trees**





**“Wait”**

**“Wood posts?”**

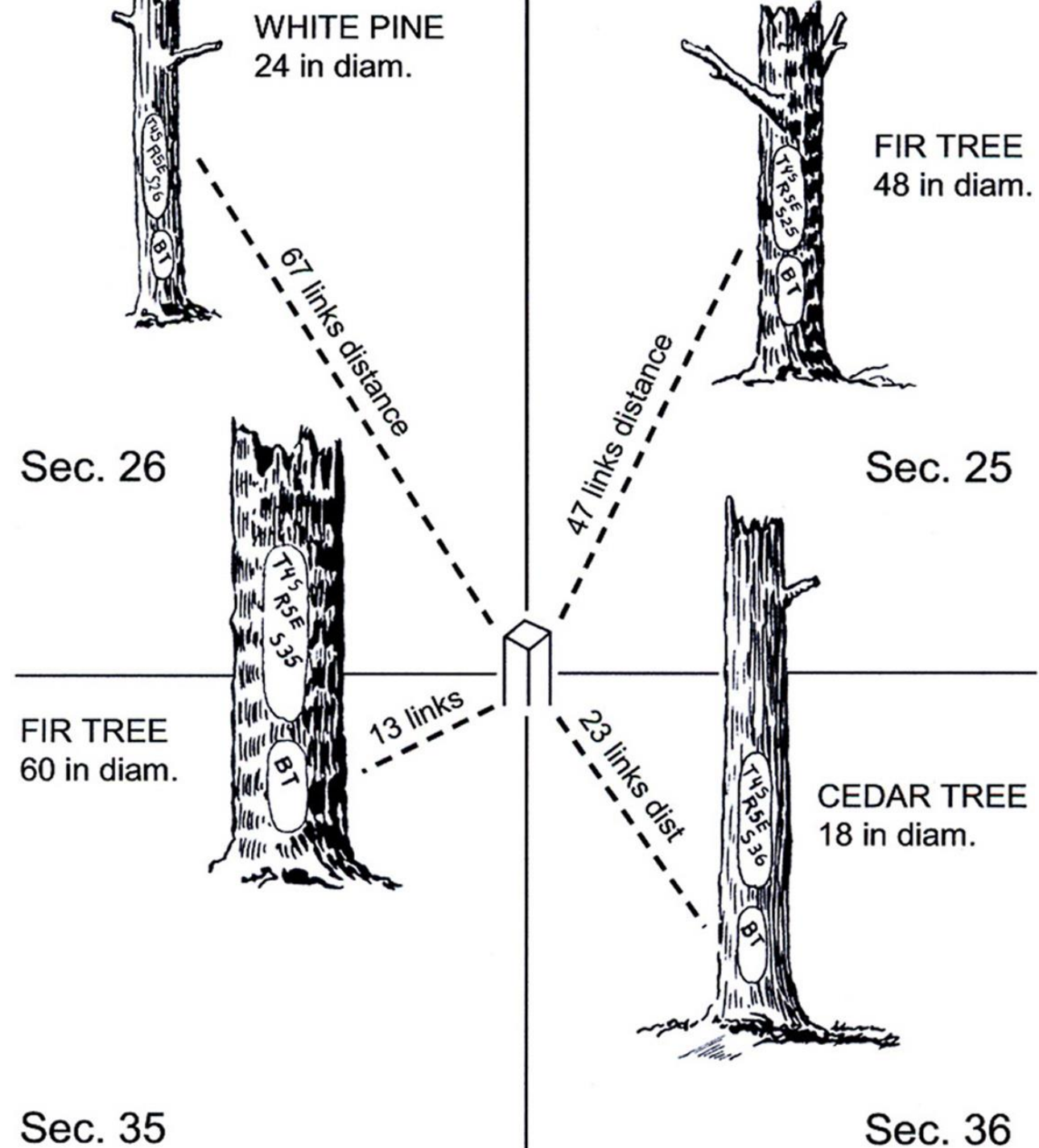
**“Trees?”**



# 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**

**GUESS  
WHAT?**





**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**





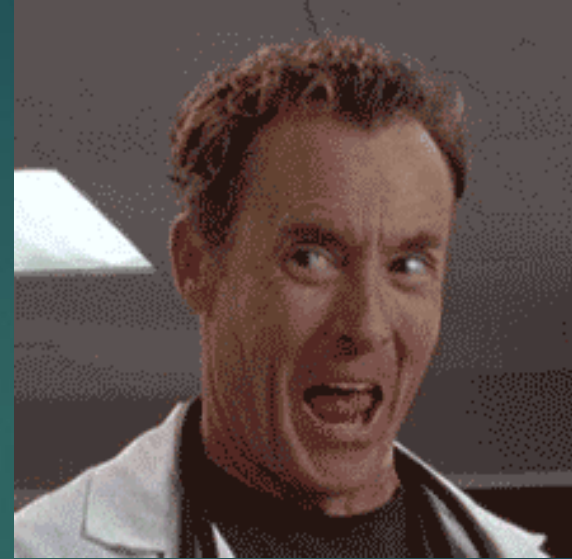
A photograph of a wooden post, identified as the Henry Maddin Original Post, standing vertically in a dense thicket of dry, greyish-brown branches and some green foliage. The post is light brown and shows signs of weathering. At the base of the post, a white circular survey marker is visible. The ground is covered with dry leaves and twigs. Two white text boxes are overlaid on the image: one at the top center and one on the left side.

Corner #495

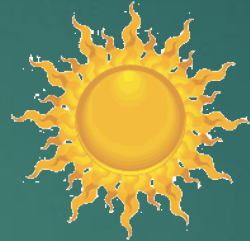
Henry Maddin Original Post  
October - November 1853



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



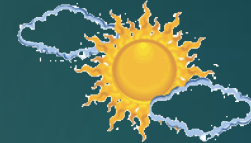
# Time and the elements took their toll on the initial system.



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?

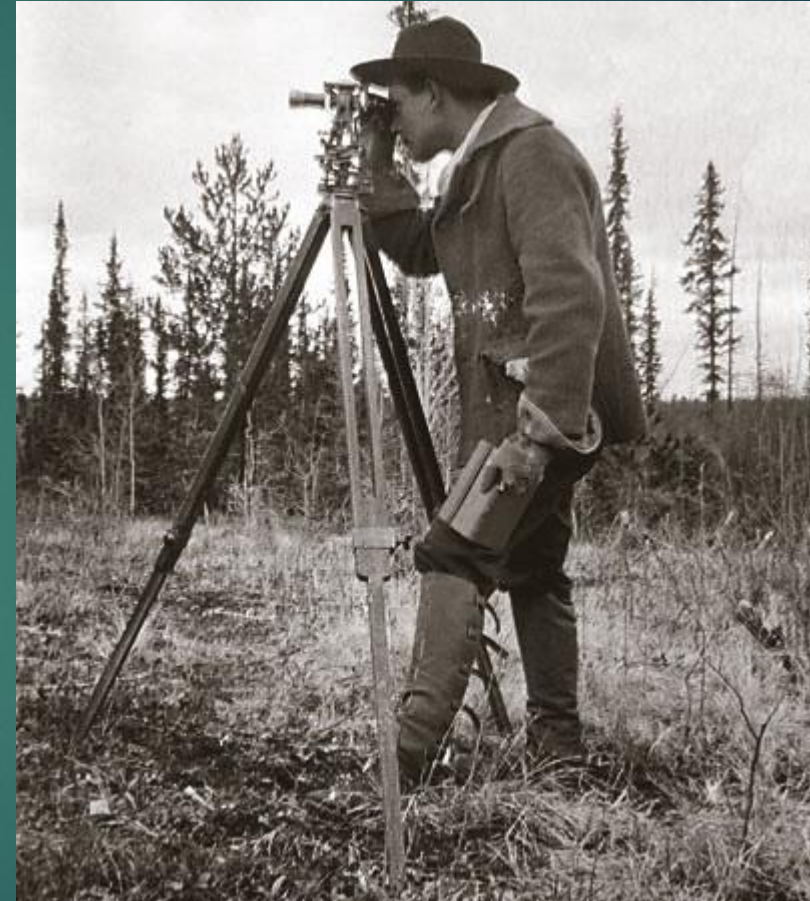


# EVIDENCE

- **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

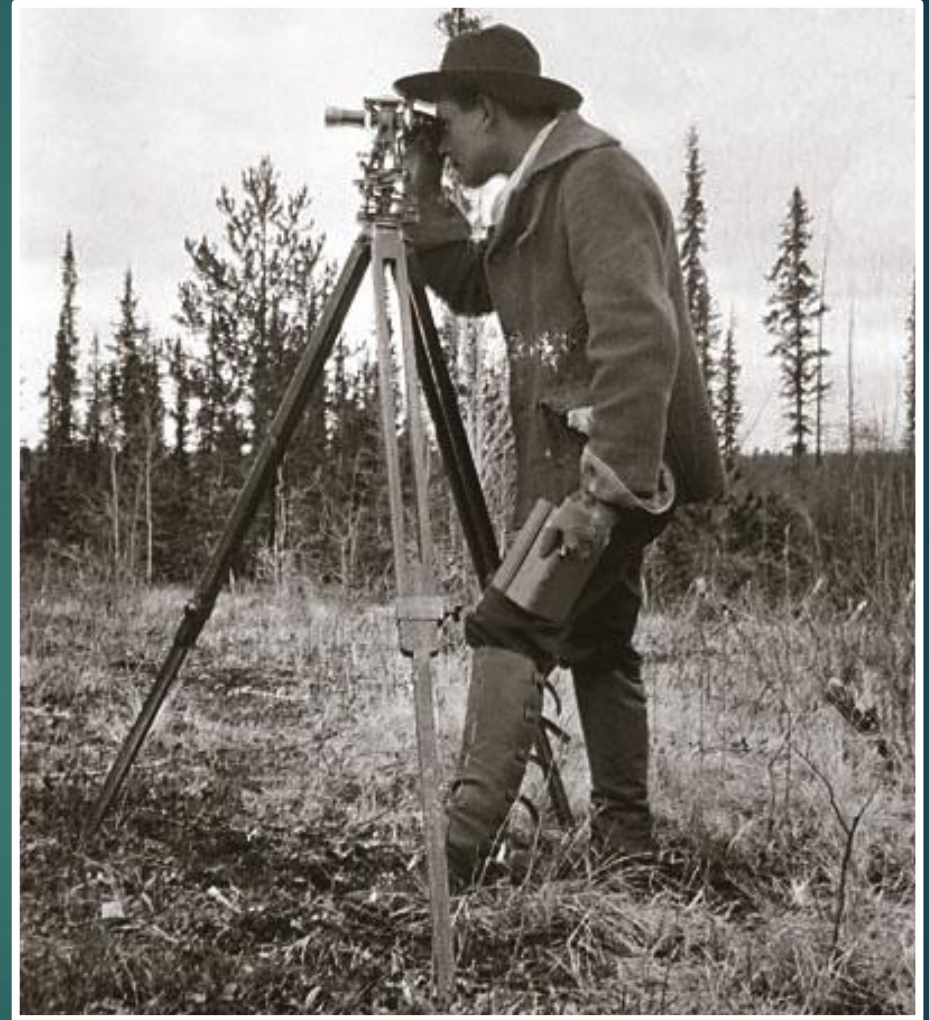




## Surveys Subsequent to the Original Government Survey



**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

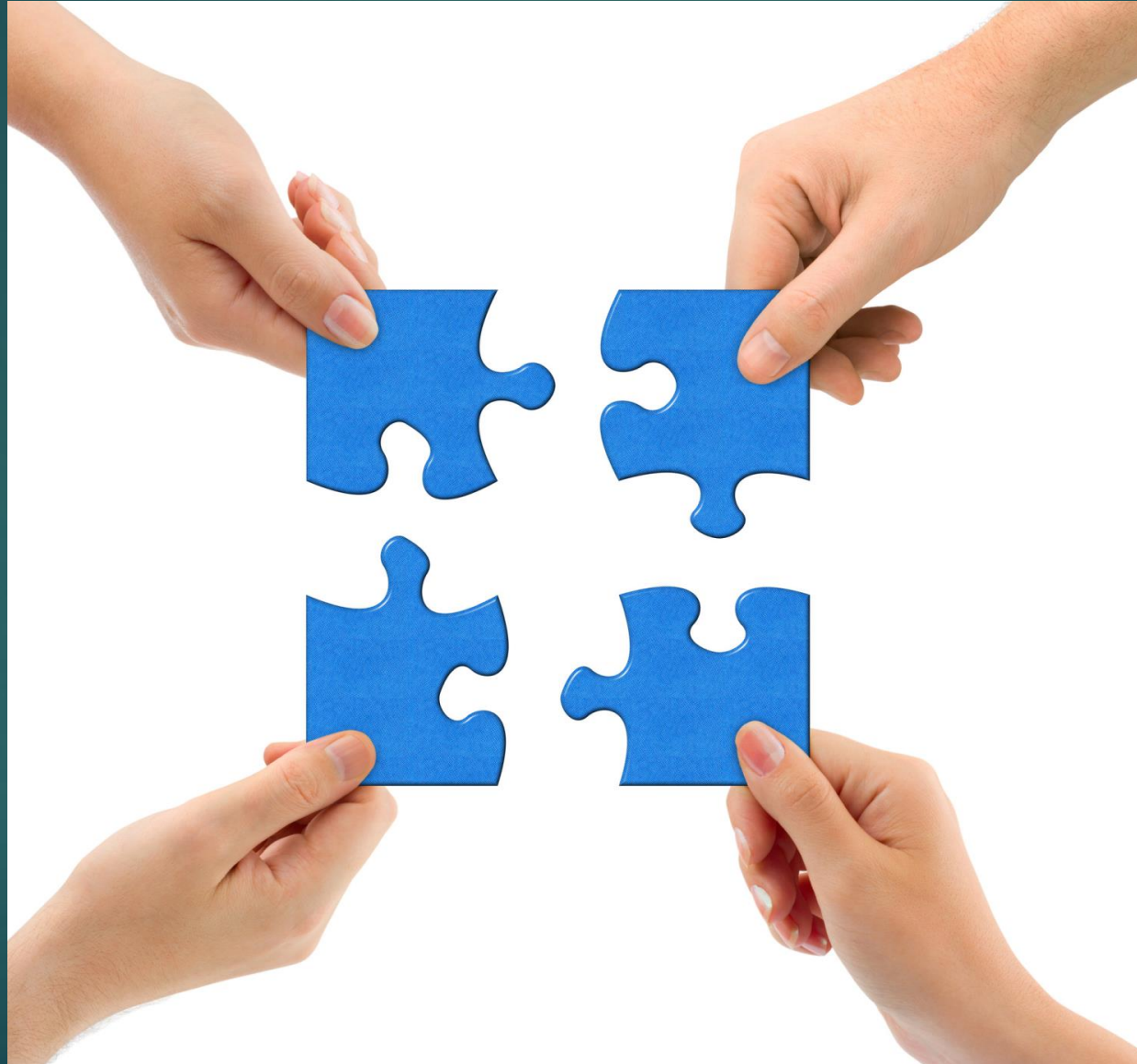






**Many times however, we aren't so fortunate  
when it comes to finding direct evidence**

# Sometimes we need to look further





# EVIDENCE AND MEASUREMENTS

**Fence corners**



**Fence lines**



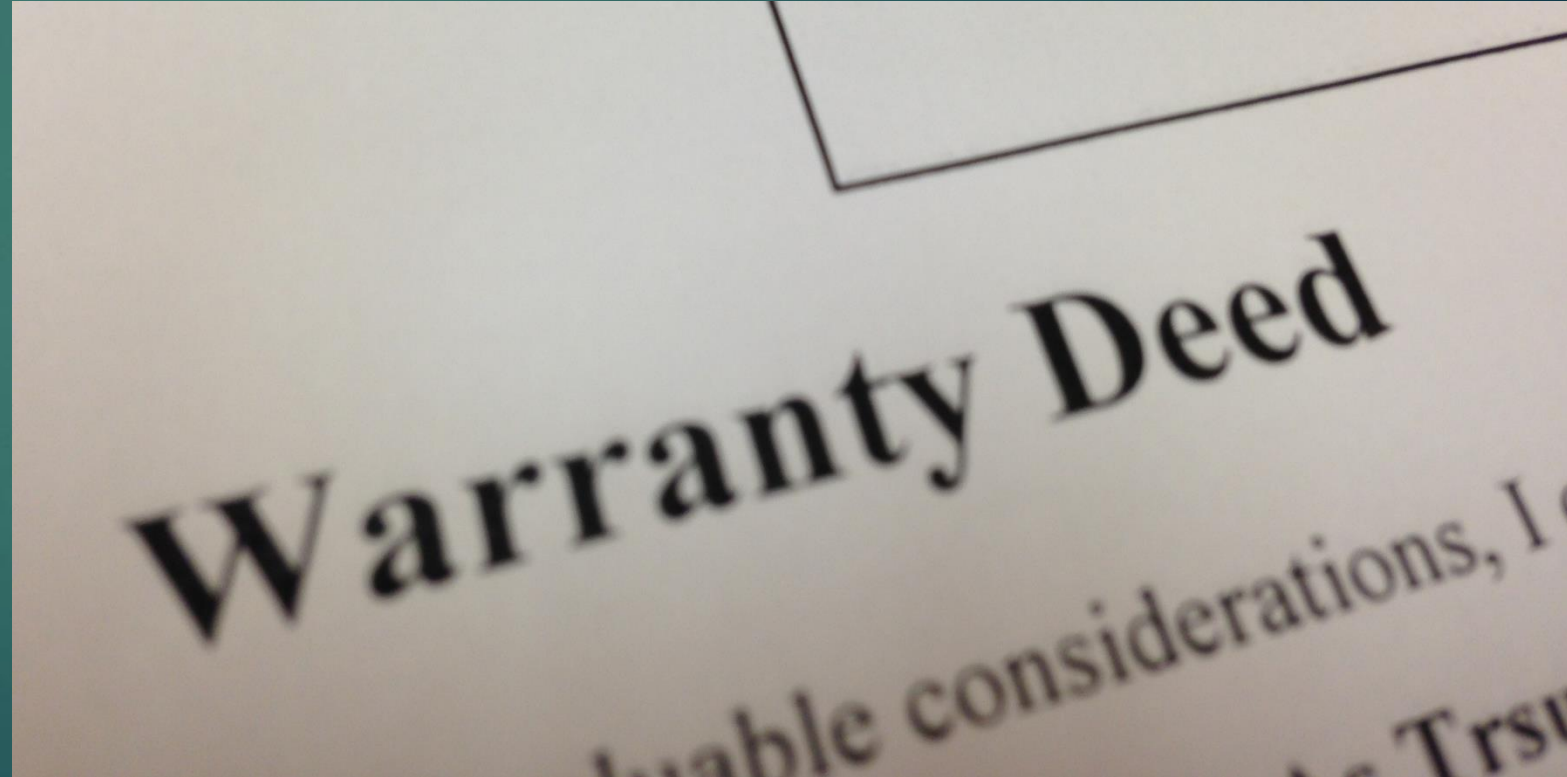


# Witness Testimony

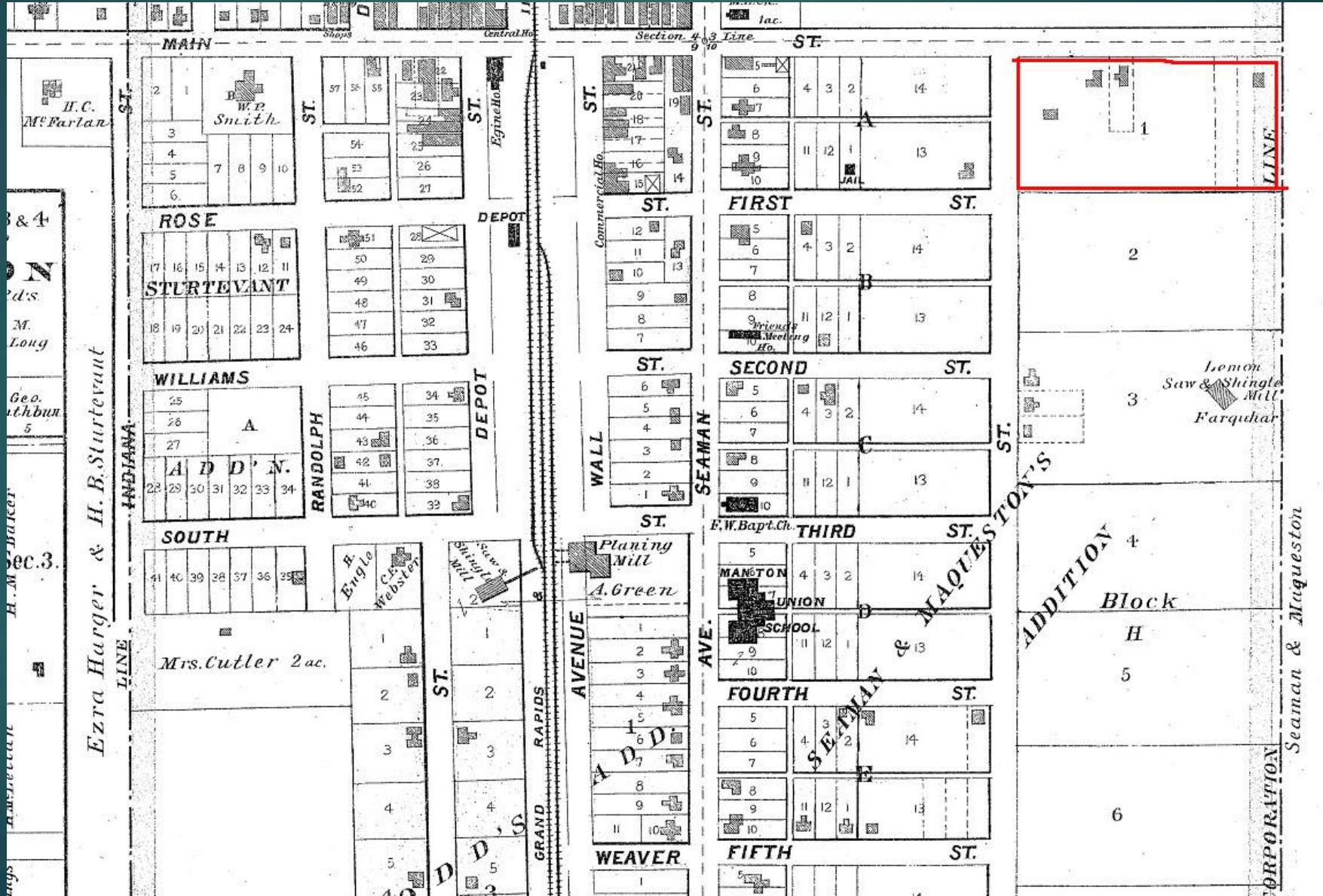




# Deeds



# Subdivision Plats





# Cemeteries and Cemetery Plats





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



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.

WISCONSIN COORDINATE SYSTEM
North
East
Theta Angle
Horiz. Order
Vert. Order
TYPE OF LANDMARK
<del>2" x 31"</del> iron pipe, 2 3/8" x 37"
BEARINGS ARE REFERENCED TO
Assumed North

(not to scale)

The "newest" grave is 1899.  
Fenced in 1942?

N

□ = concrete fence post

Blinn Cemetery

32'

29.5'

34'

30'

35'

(1)

(2)

(3)

(4)

Reset  $2\frac{3}{8}" \times 37"$  (again)  
Set  $2" \times 34"$  iron pipe (set sign and post)  
(4.70' South of center of concrete fence post)  
4.98' leaning North

(In N. ditch)

13.144

I.B. (1)

Hass Road

(centerline)

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.

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.





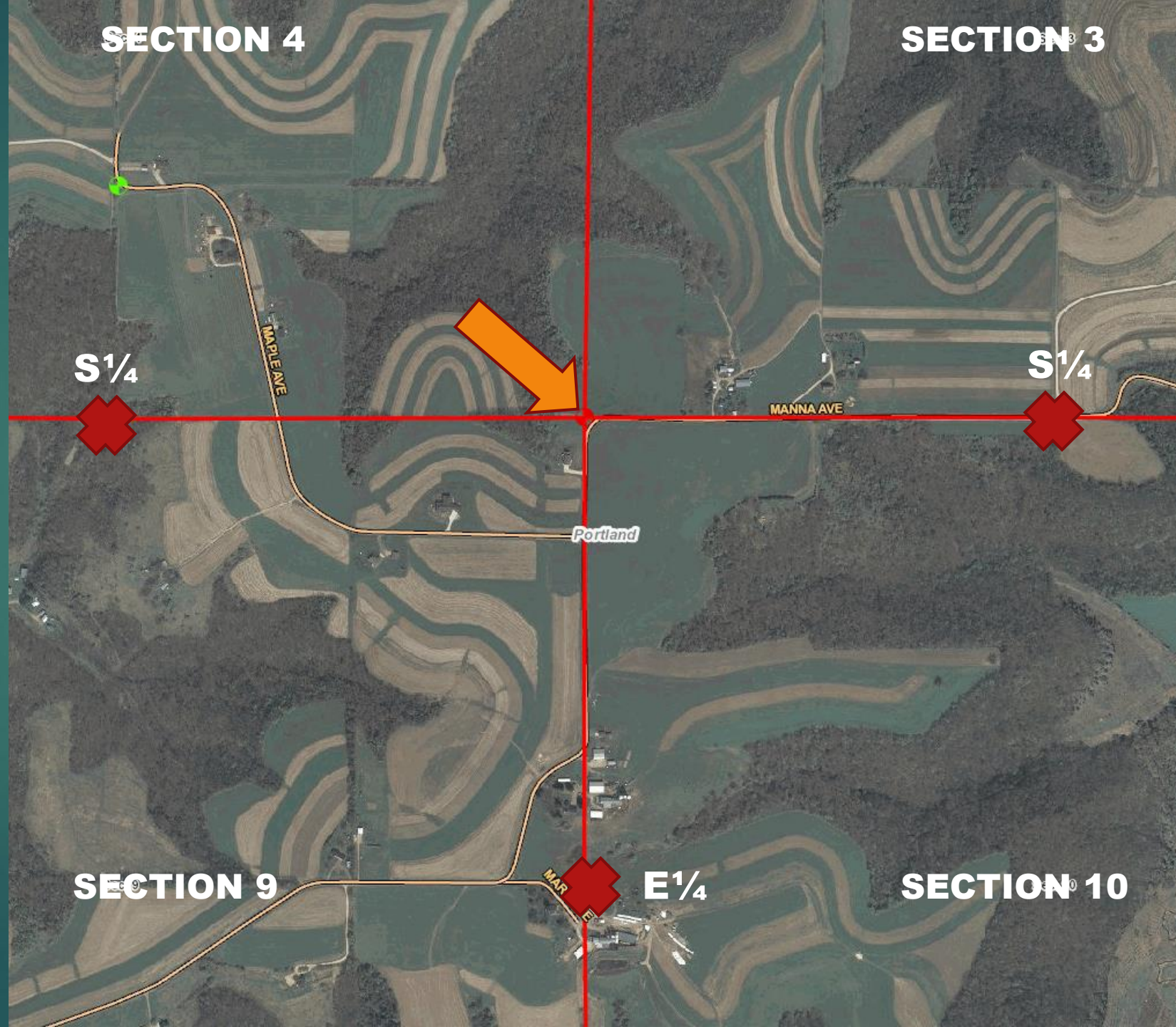


# Town Road Records





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





An aerial photograph of a rural landscape. The image shows a mix of green fields, brown plowed fields, and dark green wooded areas. Two roads are visible: one running horizontally across the middle and another running vertically on the left. Several small buildings, likely farmhouses or barns, are scattered throughout the landscape. The text 'Maple Avenue' is overlaid on the left side, and 'Manna Avenue' is overlaid on the right side.

**Maple Avenue**

**Manna 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 Parliament ss.

Whereas, upon application of 12 freeholders and          applicants for homesteads, under the laws of the United States, occupying the same, residing in said Town of Parliament 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 Tawn 15 R 4 W. at a point 41 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 Parlatan } 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 Parlatan 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 19 89, 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. 19 89.

*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

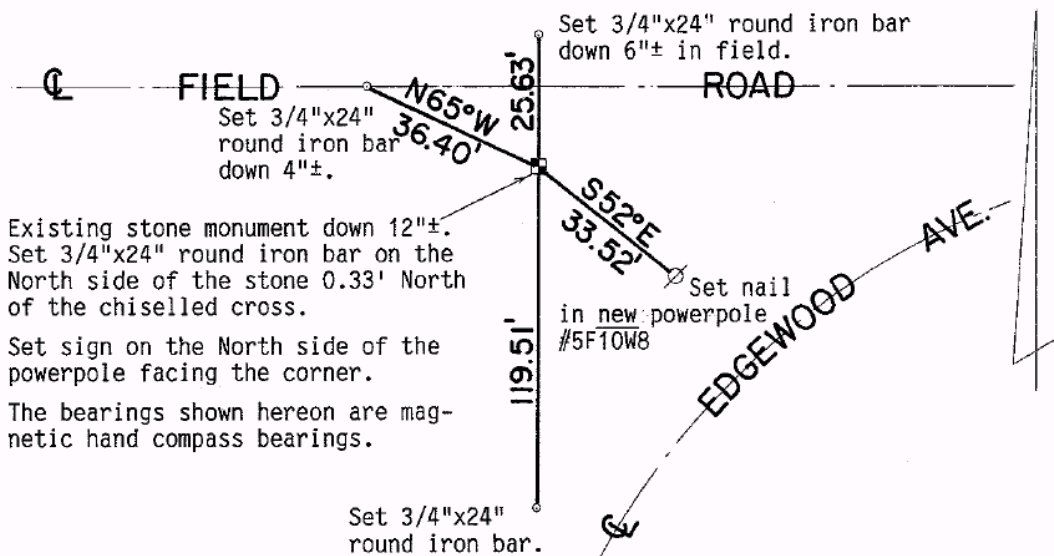
Date: December 12, 1989

Witnesses to corner location:

John Kenworthy

Brian Forsythe

Bryan H. Meyer

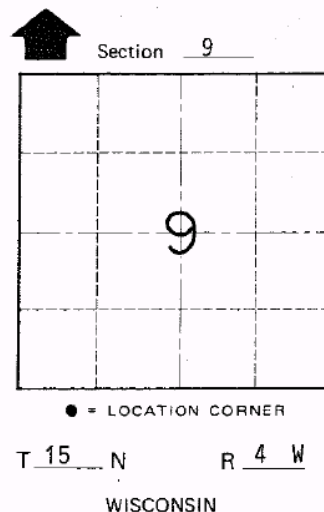


Existing stone monument down 12"±.  
Set 3/4"x24" round iron bar on the North side of the stone 0.33' North of the chiselled cross.

Set sign on the North side of the powerpole facing the corner.

The bearings shown hereon are magnetic hand compass bearings.

Set 3/4"x24" round iron bar.



SURVEY CONTROL ORDER

Horizontal

Vertical

WISCONSIN COORDINATE SYSTEM

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

City/Village Monroe 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



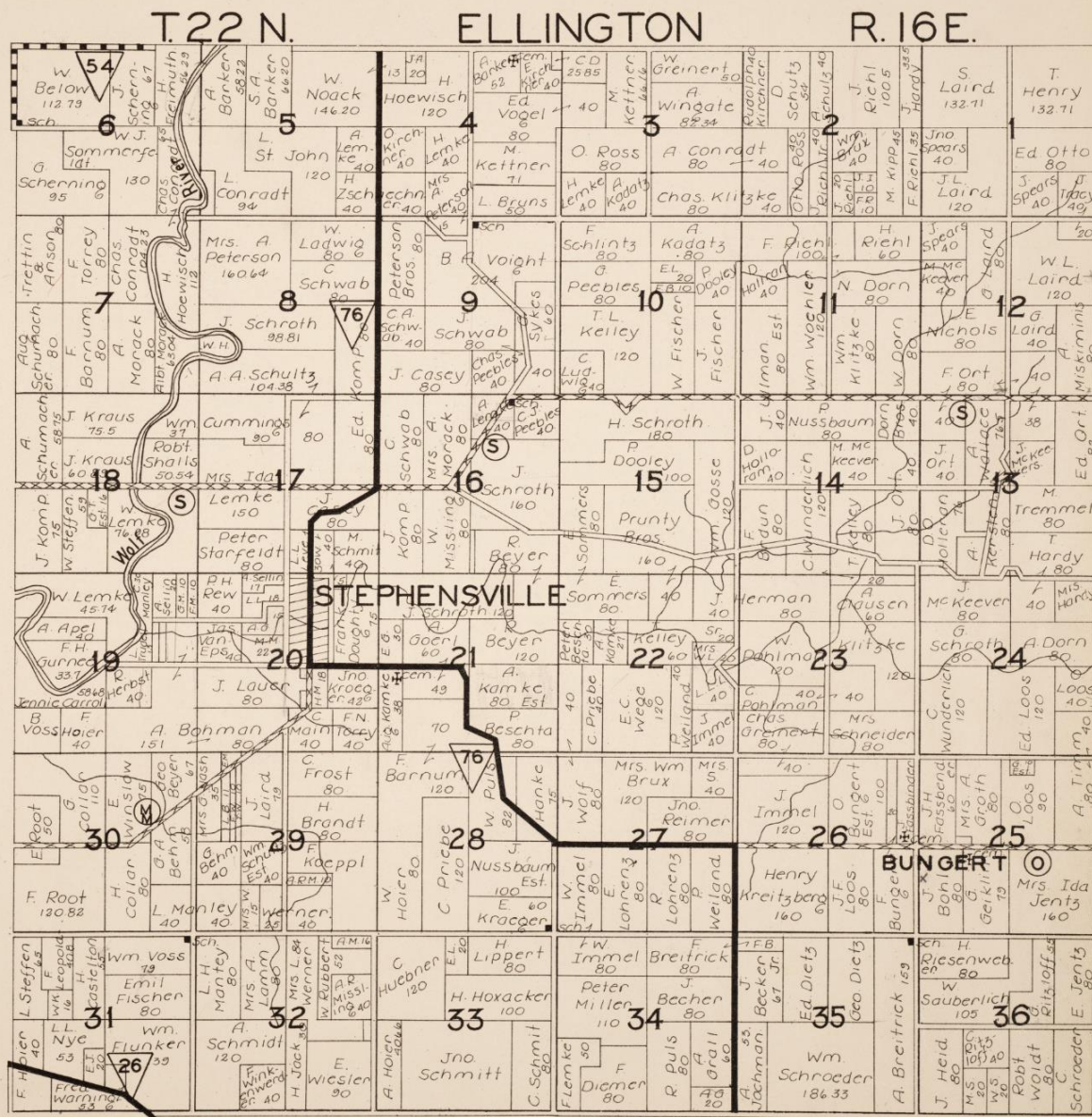


**This network of corners – our infrastructure  
is vital important to land  
ownership, taxation, easements, etc.**



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

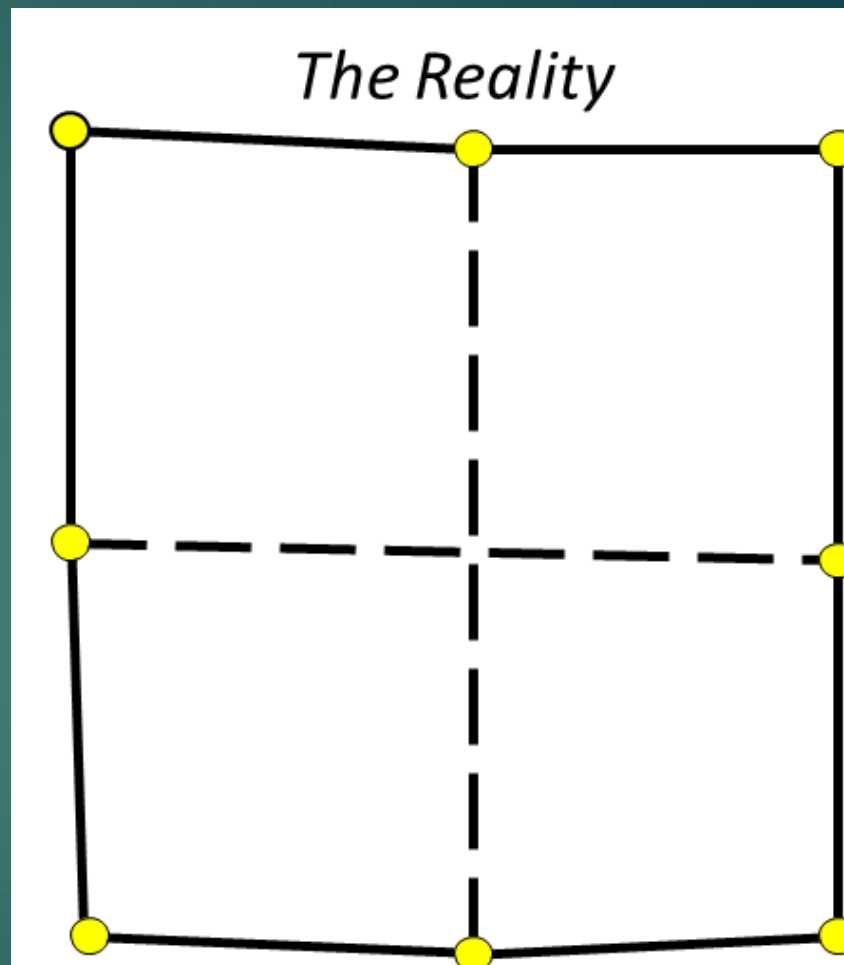
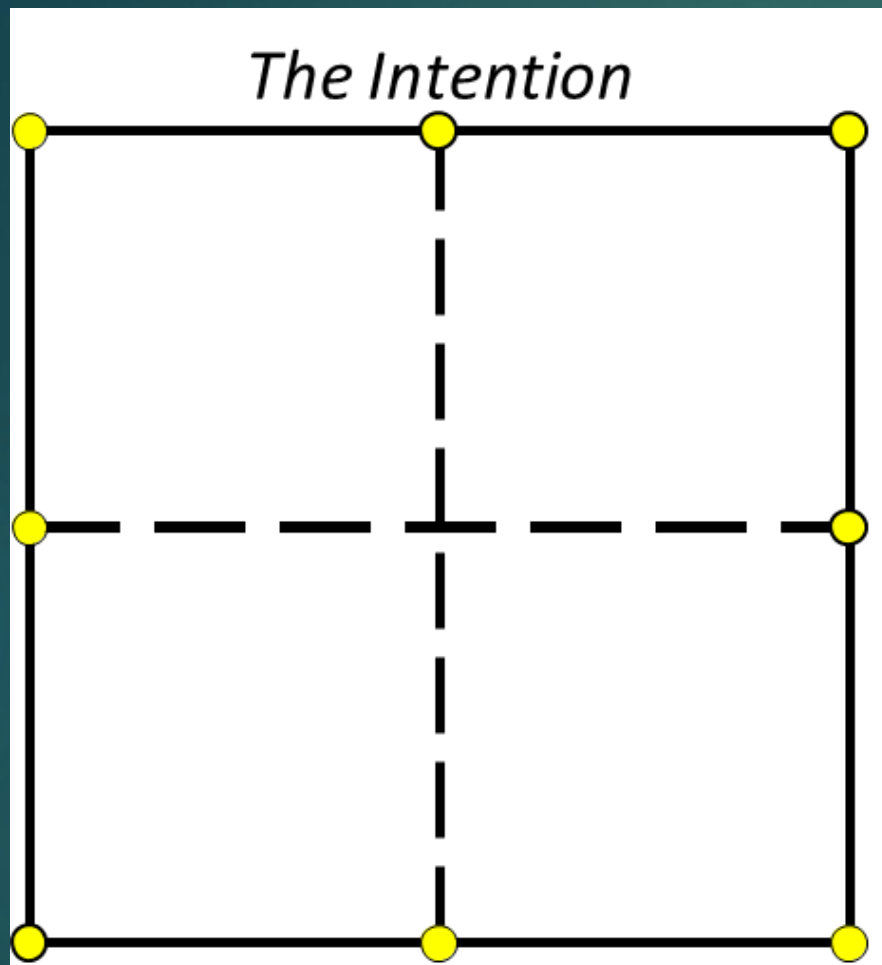
## Half mile distance = 2640 feet

**Quarter mile distance = 1320 feet**

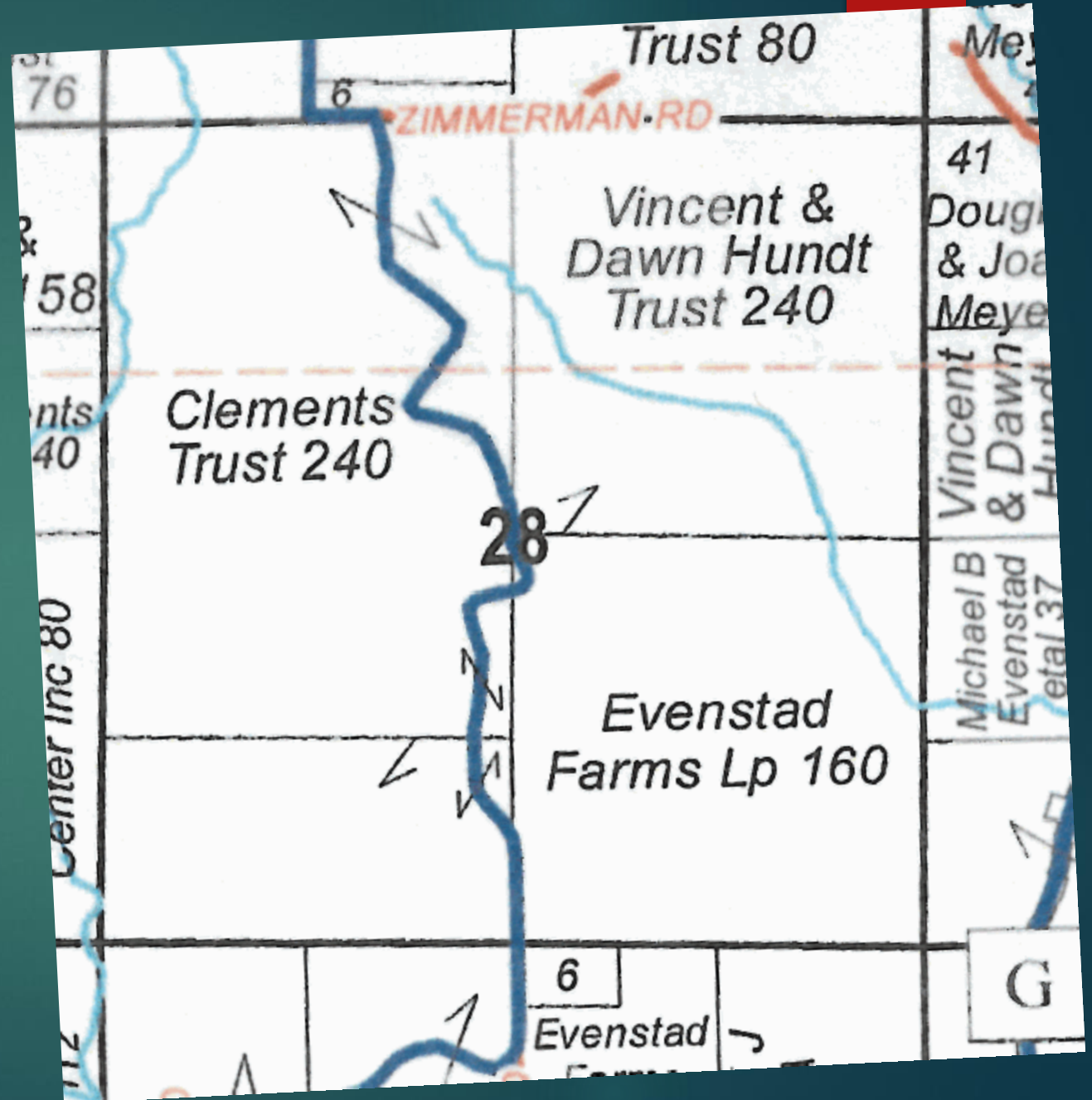
**Section area = 640 acres**

**“Forty” = 40 acres**





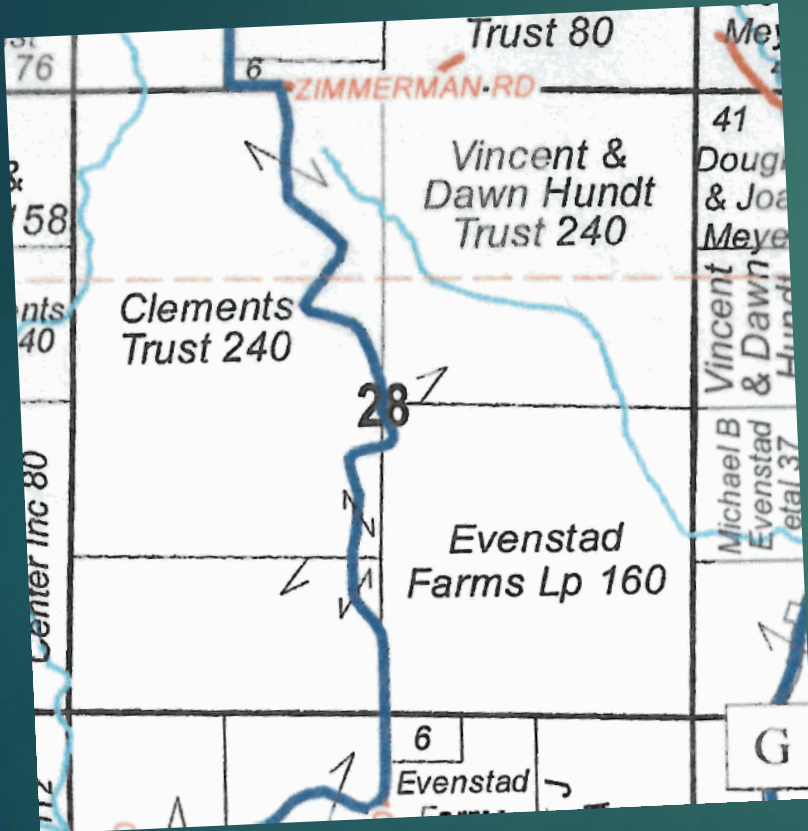
**Section 28, T15N, R5W,  
Town of Washington  
La Crosse County, WI**



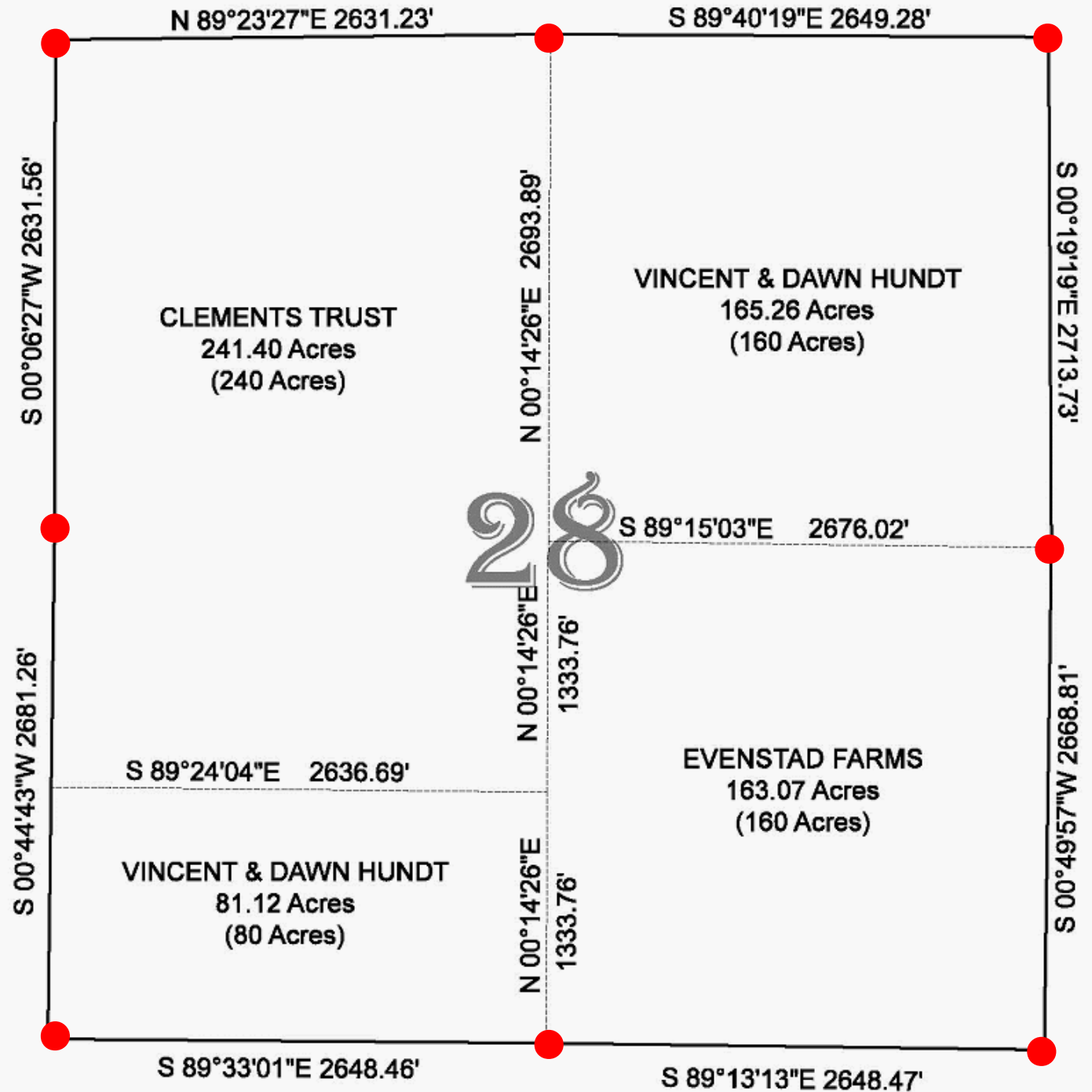
CREDIT: Rockford Map Publs., Inc.



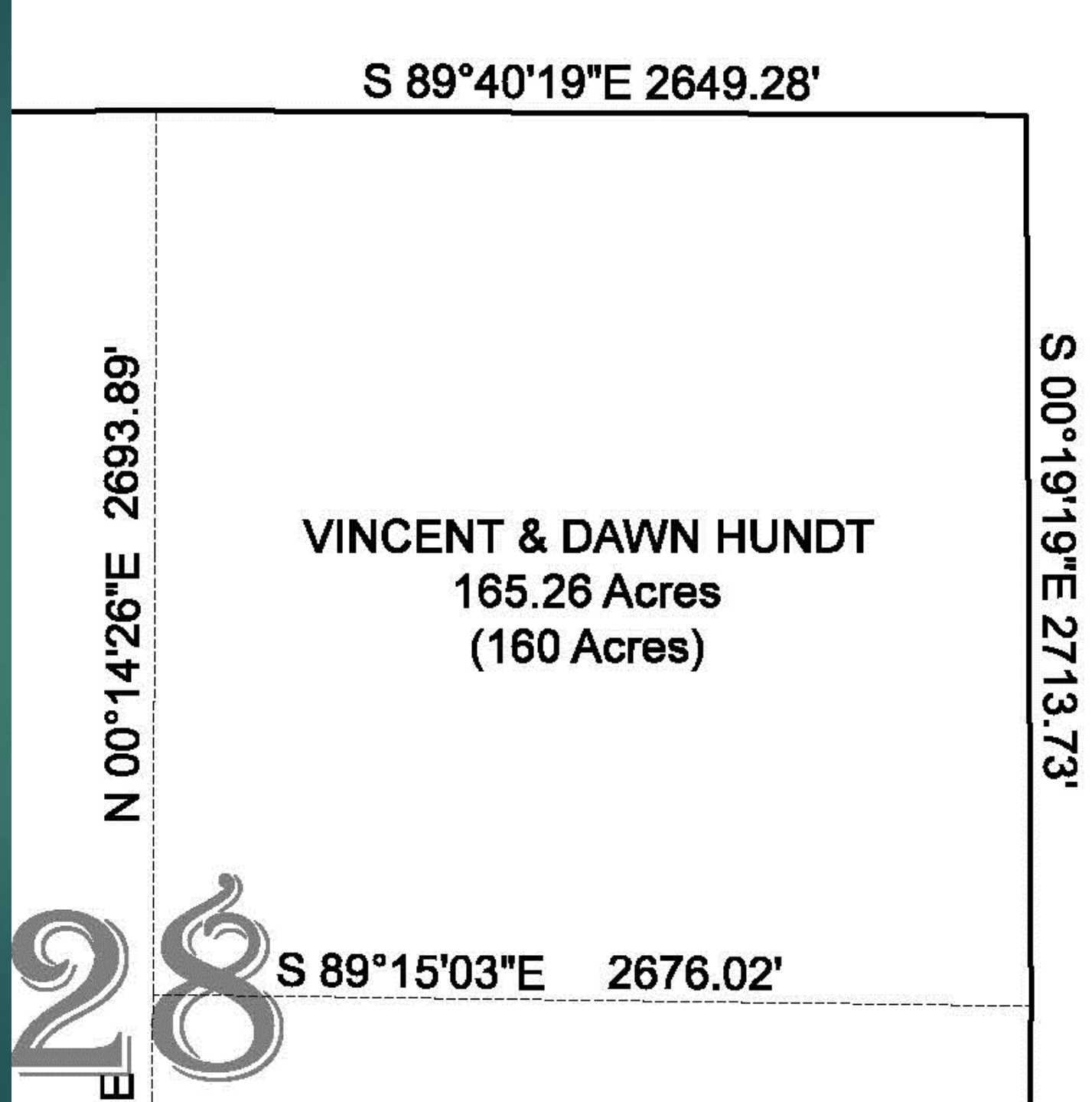
# Section 28, T15N, R5W



CREDIT: Rockford Map Publs., Inc.

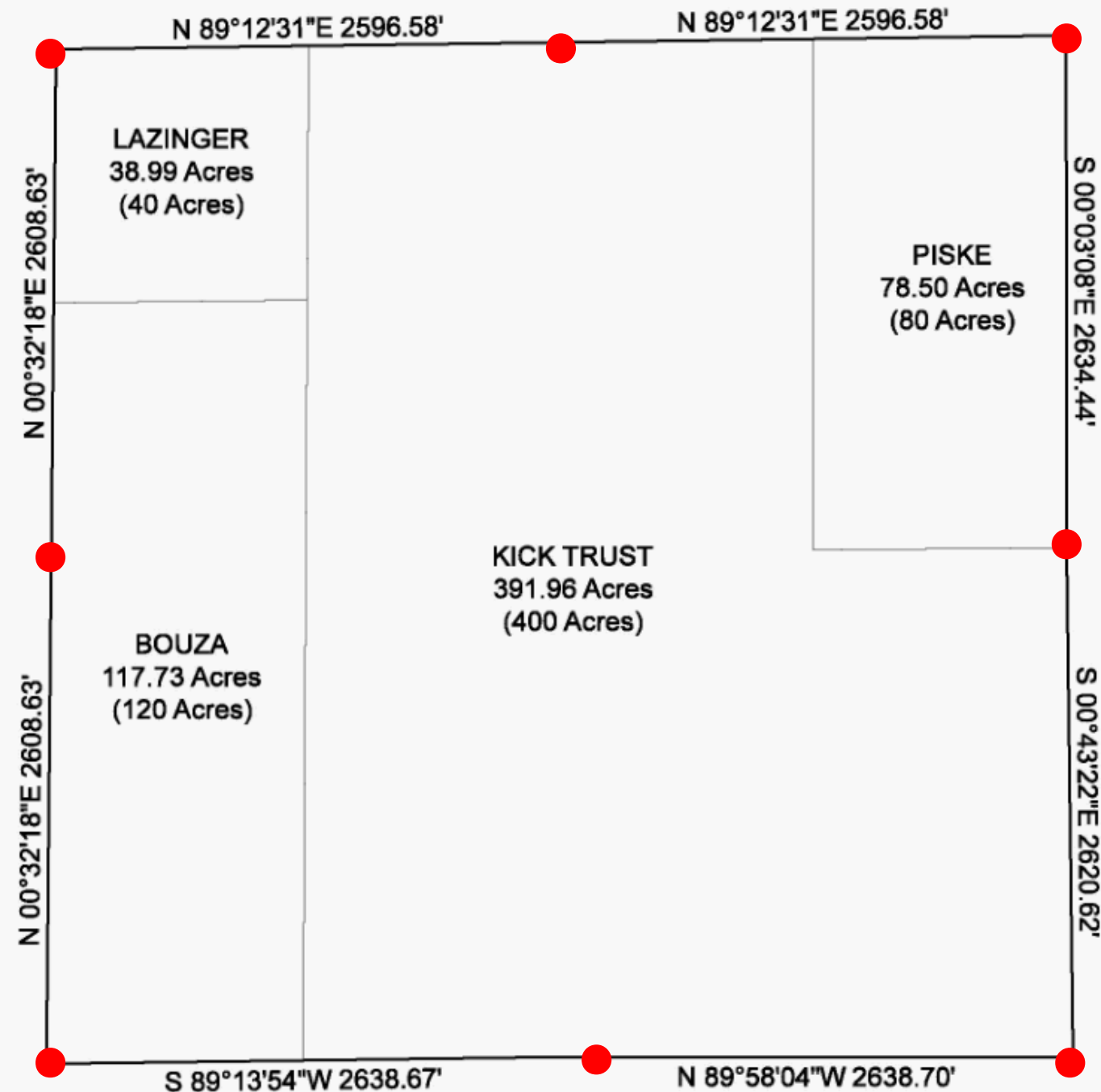
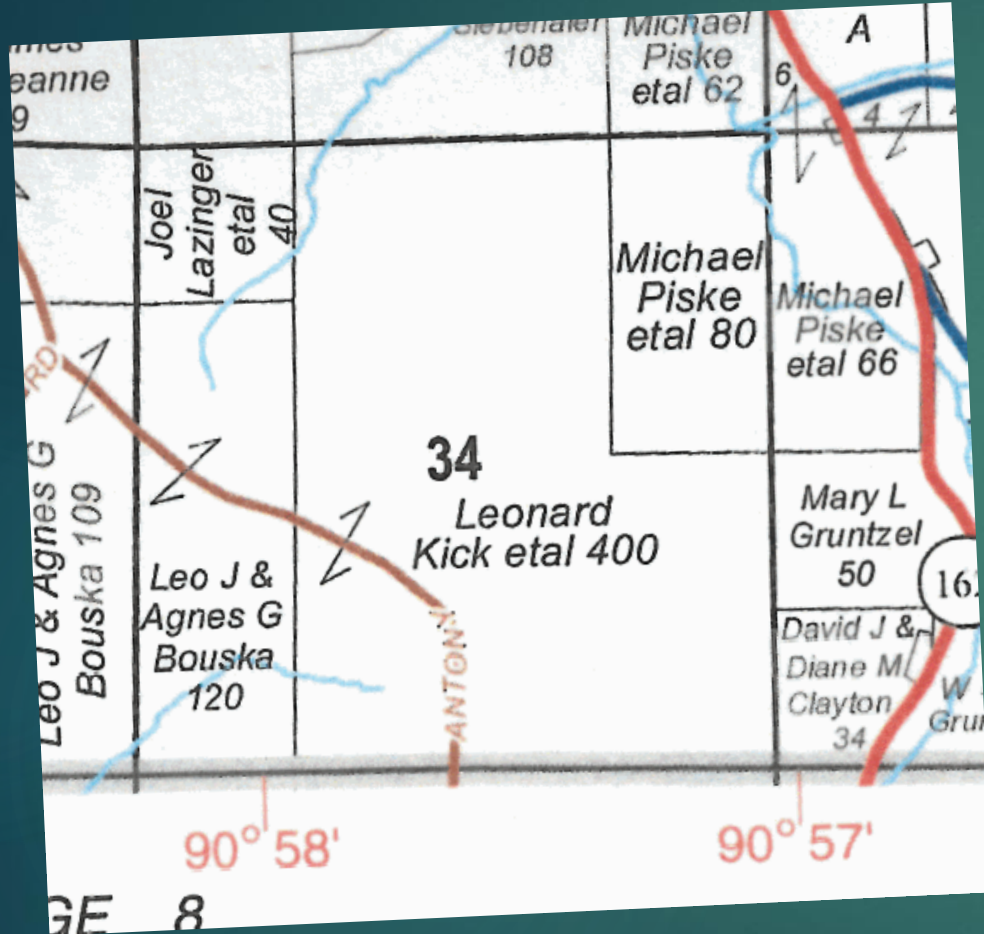


Vincent and Dawn Hundt are being  
assessed for 160 acres in the NE  $\frac{1}{4}$   
but in reality they enjoy 165.26  
acres of land.



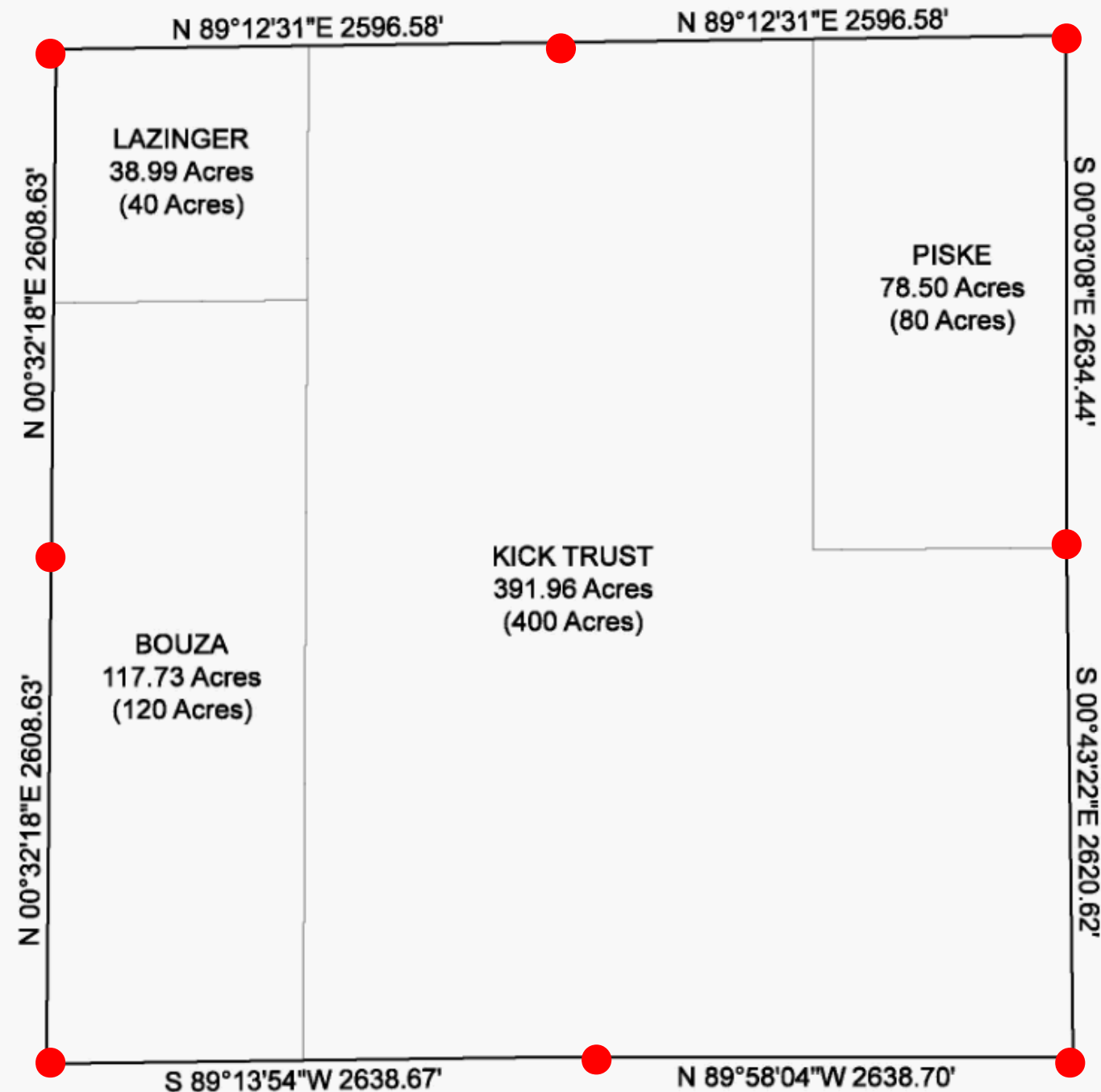
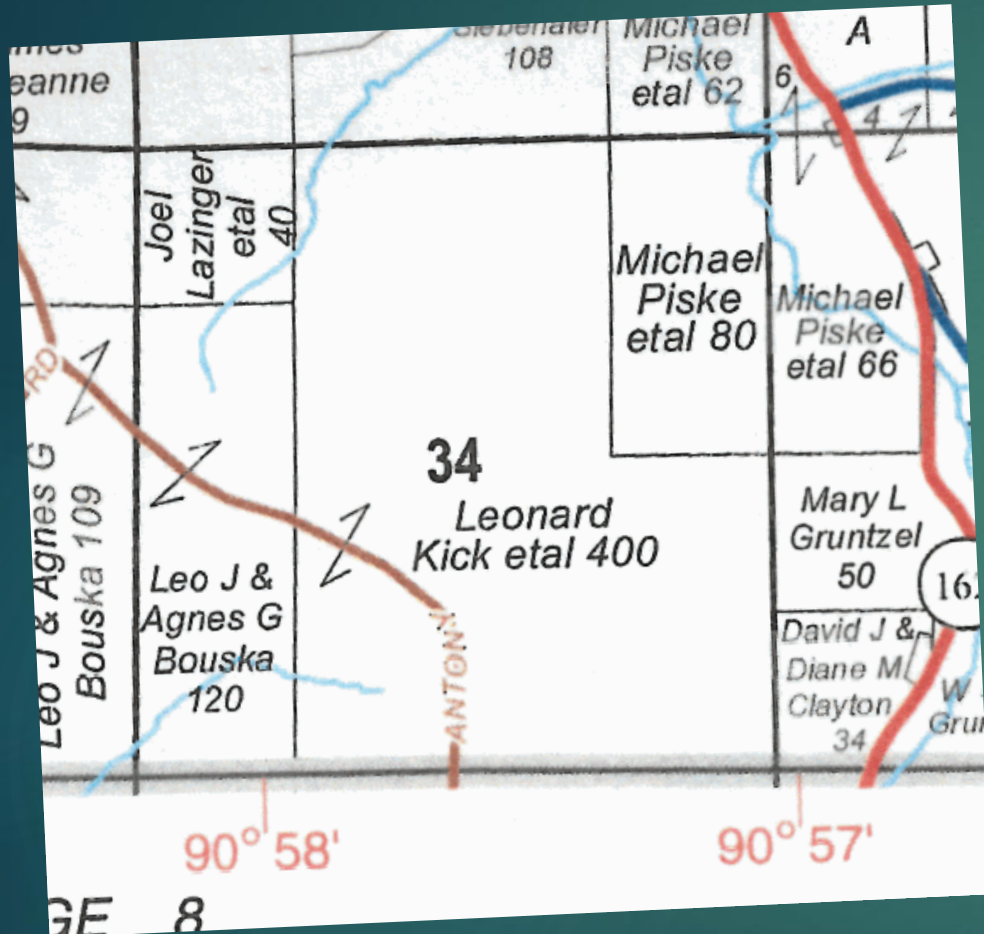


# Section 34, T15N, R6W



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!**



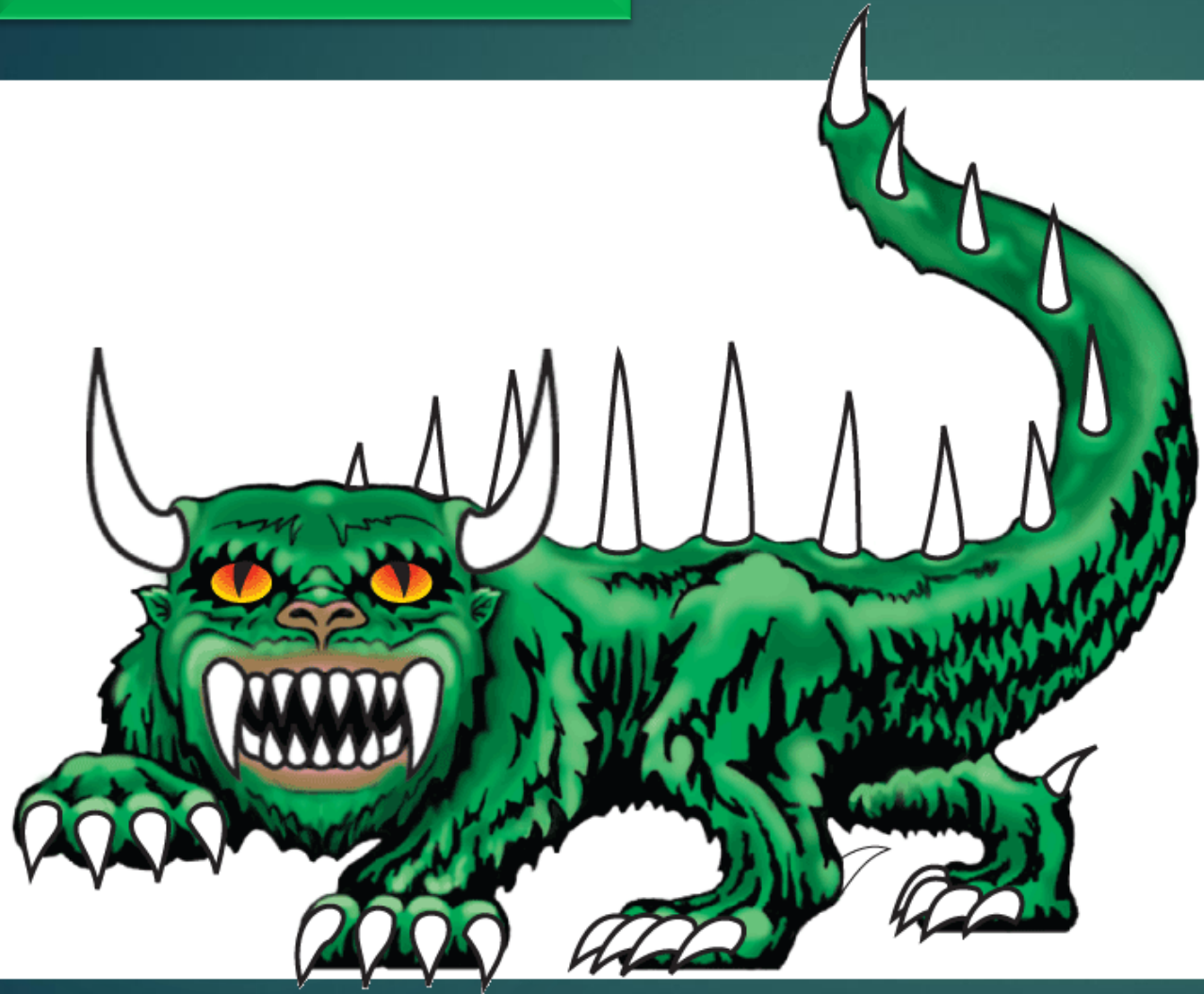
**These corners don't  
belong to the  
County Surveyor,  
they belong to every  
Wisconsin property  
owner.**





**“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?







**Yes, I am a geek!**

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







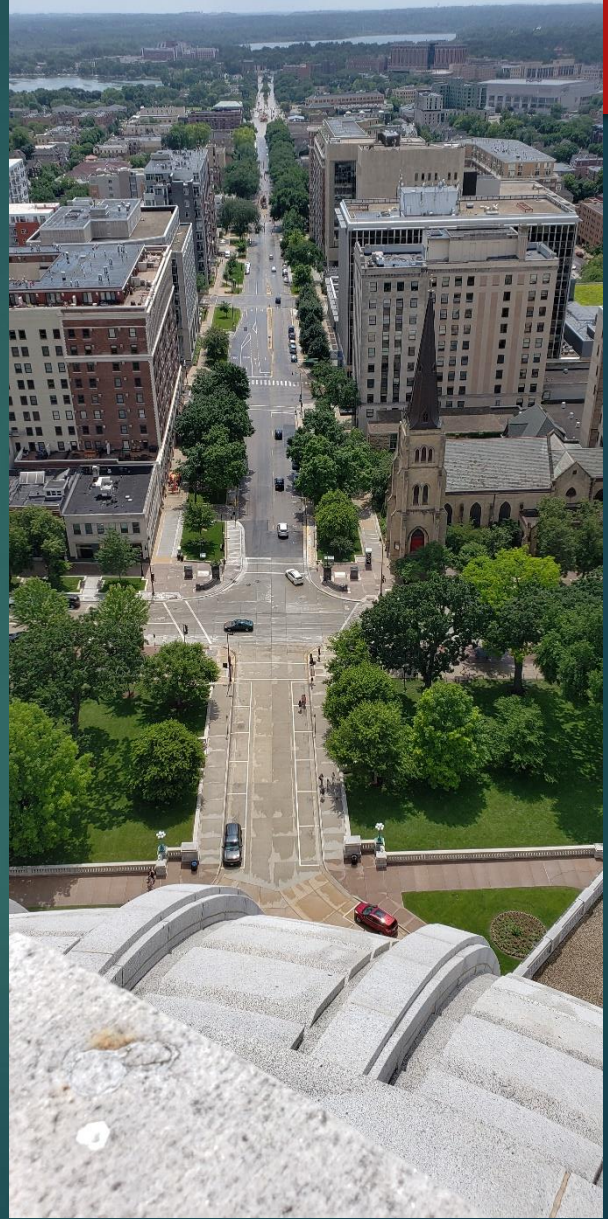
















**All because I'm a PLSS geek!**



# **Wisconsin County Surveyors Association**

## **2019 Board of Directors**



**President: Bryan Meyer – La Crosse County**

**Vice-President: Ryan Duckart – Brown County**

**Secretary: Brenda Hemstead – State Cartographer's office**

**Treasurer: Steve Geiger – Polk County**

**Director: Laurence Johns III – Vernon County**

**Director: Wade Pettit – Clark County**

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

**Meet four time each year in Neillsville**

-





# Questions?

**Bryan Meyer**  
**212 6<sup>th</sup> Street North**  
**La Crosse, Wisconsin 54601**  
**608-785-9626**  
[bmeyer@lacrossecounty.org](mailto:bmeyer@lacrossecounty.org)

