

A Handy Reference
Booklet for the
Kansas Mappers,
Appraisers, and
Cadastral Specialists.



KANSAS ASSOCIATION
OF MAPPERS

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This reference book was prepared and provided by the Kansas Association of Mappers, (KAM). KAM was founded in 1986 as a nonprofit organization for professionals working in those fields related to geographic information. KAM’s mission is to provide our members with specialized education, services, information, a designation program, and the opportunity to belong to a community of professionals with similar backgrounds to exchange ideas and experiences, address common problems and concerns, and obtain advice. Our membership has grown to encompass a wide range of professionals, including manual cartographers, land surveyors, and computer-based geographic information specialists. KAM also provides a designation program to raise the professional standards of mapping personnel and recognize those with superior skills.

COMMONLY USED SCALES FOR APPRAISAL MAPS:

- Use the engineering scale marked “10” for all 1” = 100’ maps. (urban)
Each increment will represent 10 feet. (100’ divided by 10 increments.)
- Use the engineering scale marked “20” for all 1” = 200’ maps. (suburban)
Each increment will represent 10 feet. (200’ divided by 20 increments.)
- Use the engineering scale marked “40” for all 1” = 400’ maps. (rural)
Each increment will represent 10 feet. (400’ divided by 40 increments.)
- Use the engineering scale marked “50” for all 1” = 50’ maps. (highly urban)
Each increment will represent 1 foot. (50’ divided by 50 increments.)

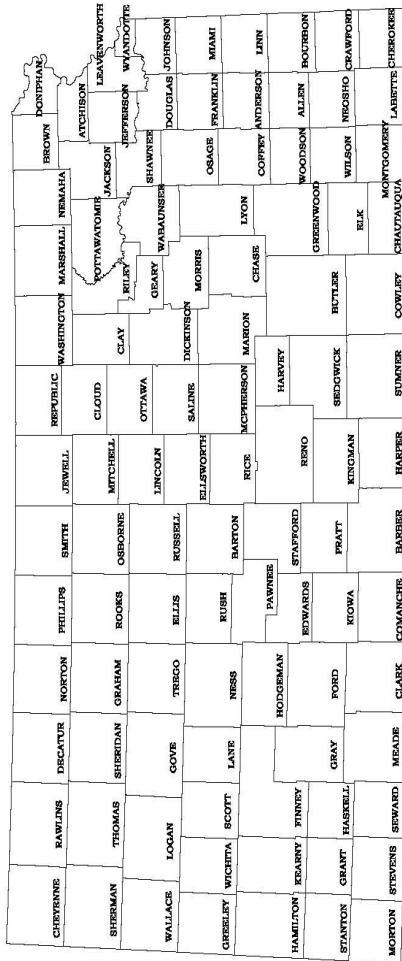
SCALE CONVERSIONS

Scales	Ft./Inch	Miles/Inch	Acres/Sq. In
1:20,000	1666.667	0.316	63.769
1:24,000	2000	0.379	91.827
1:31,680	2640	0.5	160
1:48,000	4000	0.758	367.309
1:62,500	5208.33	0.986	622.744
1:63,360	5280	1	640
1:125,000	10416.667	1.973	2490.98
1:250,000	20833.333	3.946	9963.907
1:500,000	41666.667	7.891	39855.627
1:1,000,000	83333.333	15.783	159422.51

SCALE CONVERSION FORMULAS

FT./IN. =	SCALE
	12
MI./IN. =	SCALE
	63,360
IN./MI. =	63,360
	SCALE
METERS/IN. =	FT./IN. X 0.3048
ACRES/SQ. IN. =	(SCALE)2
	43,560 X 144

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THE PUBLIC LAND SURVEY

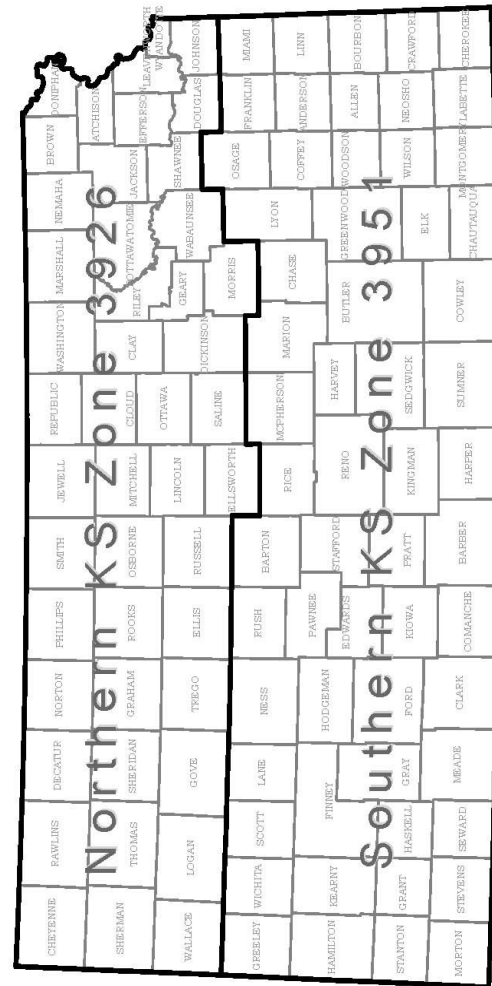
Up to the time of the Revolutionary War and until about the end of the 19th century, land, when parcelled out, and sold or granted, was described by “Metes and Bounds”. That system is used in states along the east coast, Texas, and parts of Ohio. Each parcel of land varies in size, is described independently, and is not tied in to any system of base lines.

The present system of Governmental Land Surveys was adopted by Congress on the 7th of May, 1785. It became the legal method of describing and dividing lands. It is called the rectangular system, or sometimes referred to as the “Public Land Survey System” (PLSS).

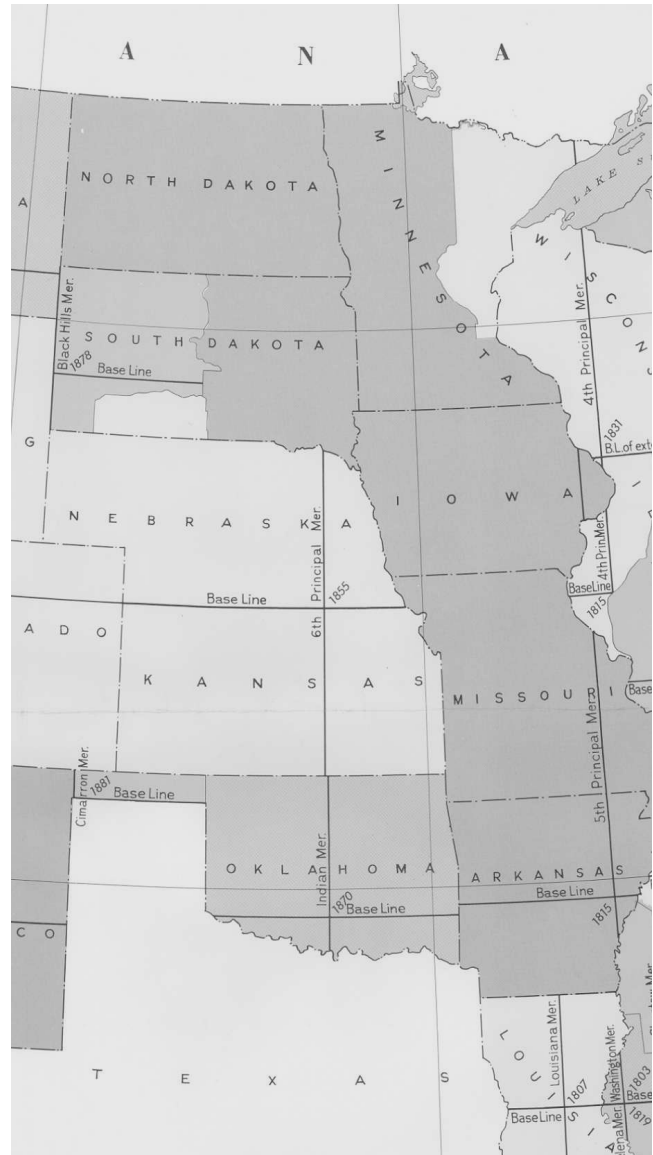
The Kansas-Nebraska Act of May 30, 1854 created the territories of Nebraska and Kansas, which had to be surveyed before settlement of the prairies could proceed. On May 8, 1855, Charles A. Manners set a cast iron monument on the bluff west of the Missouri River at 40° north latitude and continued westward from the monument 108 miles establishing the base line, the boundary between Kansas and Nebraska, and the Initial Point of the 6th Principle Meridian.

This Initial Point controls the system of sections, townships and ranges of the public land surveys in Nebraska, Kansas, and parts of Colorado, Wyoming, and South Dakota. This Initial Point is referenced in all ownership records throughout the system.

STATE PLANE ZONES



UTM Zone 13										UTM Zone 14										UTM Zone 15																											
Cheyenne	Rawlins	Decatur	Borton	Phillips	Smith	Jewell	Republic	Washington	Marshall	Reynolds	Boon	Southern	Cheyenne	Rawlins	Decatur	Borton	Phillips	Smith	Jewell	Republic	Washington	Marshall	Reynolds	Boon	Southern	Cheyenne	Rawlins	Decatur	Borton	Phillips	Smith	Jewell	Republic	Washington	Marshall	Reynolds	Boon	Southern									
Sheridan	Thomson	Graham	Rock	Osborne	Mitchell	Cloud	Ottawa	Clay	Biley	Ottawa	Wabunsee	Shawnee	Jefferson	Leavenworth	Wichita	Sheridan	Thomson	Graham	Rock	Osborne	Mitchell	Cloud	Ottawa	Clay	Biley	Ottawa	Wabunsee	Shawnee	Jefferson	Leavenworth	Wichita	Sheridan	Thomson	Graham	Rock	Osborne	Mitchell	Cloud	Ottawa	Clay	Biley	Ottawa	Wabunsee	Shawnee	Jefferson	Leavenworth	Wichita
Wallace	Logan	Grove	Trapp	Ellis	Russell	Lincoln	Saline	Dickinson	Geary	Morris	Lyon	Osage	Douglas	Johnson	Wichita	Wallace	Logan	Grove	Trapp	Ellis	Russell	Lincoln	Saline	Dickinson	Geary	Morris	Lyon	Osage	Douglas	Johnson	Wichita	Wallace	Logan	Grove	Trapp	Ellis	Russell	Lincoln	Saline	Dickinson	Geary	Morris	Lyon	Osage	Douglas	Johnson	Wichita
Greeley	Wichita	Scott	Lane	Reas	Rush	Hartman	Pice	McPherson	Manitou	Chase	Lyons	Osage	Franklin	Miami	Wichita	Greeley	Wichita	Scott	Lane	Reas	Rush	Hartman	Pice	McPherson	Manitou	Chase	Lyons	Osage	Franklin	Miami	Wichita	Greeley	Wichita	Scott	Lane	Reas	Rush	Hartman	Pice	McPherson	Manitou	Chase	Lyons	Osage	Franklin	Miami	Wichita
Hamilton	Kearney	Finney	Hodgeman	Powder	Stadford	Steno	Harvey	Butler	Greenwood	Woodson	Allen	Barstow	Woodson	Allen	Barstow	Hamilton	Kearney	Finney	Hodgeman	Powder	Stadford	Steno	Harvey	Butler	Greenwood	Woodson	Allen	Barstow	Woodson	Allen	Barstow	Hamilton	Kearney	Finney	Hodgeman	Powder	Stadford	Steno	Harvey	Butler	Greenwood	Woodson	Allen	Barstow	Woodson	Allen	Barstow
Stanton	Grant	Haskell	Ford	Kiowa	Pratt	Kingman	Sedgewick	Cowley	Chautauque	Cherokee	Cherokee	Crowfoot	Wichita	Neosho	Crowfoot	Stanton	Grant	Haskell	Ford	Kiowa	Pratt	Kingman	Sedgewick	Cowley	Chautauque	Cherokee	Cherokee	Crowfoot	Wichita	Neosho	Crowfoot	Stanton	Grant	Haskell	Ford	Kiowa	Pratt	Kingman	Sedgewick	Cowley	Chautauque	Cherokee	Cherokee	Crowfoot	Wichita	Neosho	Crowfoot
Morton	Stearns	Seward	Meade	Clark	Constance	Barber	Hayes	Sumner	Cowley	Chautauque	Cherokee	Cherokee	Wichita	Neosho	Crowfoot	Morton	Stearns	Seward	Meade	Clark	Constance	Barber	Hayes	Sumner	Cowley	Chautauque	Cherokee	Cherokee	Wichita	Neosho	Crowfoot	Morton	Stearns	Seward	Meade	Clark	Constance	Barber	Hayes	Sumner	Cowley	Chautauque	Cherokee	Cherokee	Wichita	Neosho	Crowfoot



KANSAS FIPS CODES (Federal Information Processing Standard)

20001 - AL ALLEN	20105 - LC LINCOLN
20003 - AN ANDERSON	20107 - LN LINN
20005 - AT ATCHISON	20109 - LG LOGAN
20007 - BA BARBER	20111 - LY LYON
20009 - BT BARTON	20113 - MP McPHERSON
20011 - BB BOURBON	20115 - MN MARION
20013 - BR BROWN	20117 - MS MARSHALL
20015 - BU BUTLER	20119 - ME MEADE
20017 - CS CHASE	20121 - MI MIAMI
20019 - CQ CHAUTAUQUA	20123 - MC MITCHELL
20021 - CK CHEROKEE	20125 - MG MONTGOMERY
20023 - CN CHEYENNE	20127 - MR MORRIS
20025 - CA CLARK	20129 - MT MORTON
20027 - CY CLAY	20131 - NM NEMAHA
20029 - CD CLOUD	20133 - NO NEOSHO
20031 - CF COFFEY	20135 - NS NESS
20033 - CM COMANCHE	20137 - NT NORTON
20035 - CL COWLEY	20139 - OS OSAGE
20037 - CR CRAWFORD	20141 - OB OSBORNE
20039 - DC DECATUR	20143 - OT OTTAWA
20041 - DK DICKINSON	20145 - PN PAWNEE
20043 - DP DONIPHAN	20147 - PL PHILLIPS
20045 - DG DOUGLAS	20149 - PT POTTAWATOMIE
20047 - ED EDWARDS	20151 - PR PRATT
20049 - EK ELK	20153 - RA RAWLINS
20051 - EL ELLIS	20155 - RN RENO
20053 - EW ELLSWORTH	20157 - RP REPUBLIC
20055 - FI FINNEY	20159 - RC RICE
20057 - FO FORD	20161 - RL RILEY
20059 - FR FRANKLIN	20163 - RO ROOKS
20061 - GE GEARY	20165 - RH RUSH
20063 - GO GOVE	20167 - RS RUSSELL
20065 - GH GRAHAM	20169 - SA SALINE
20067 - GT GRANT	20171 - SC SCOTT
20069 - GY GRAY	20173 - SG SEDGWICK
20071 - GL GREELEY	20175 - SW SEWARD
20073 - GW GREENWOOD	20177 - SN SHAWNEE
20075 - HM HAMILTON	20179 - SD SHERIDAN
20077 - HP HARPER	20181 - SH SHERMAN
20079 - HV HARVEY	20183 - SM SMITH
20081 - HS HASKELL	20185 - SF STAFFORD
20083 - HG HODGEMAN	20187 - ST STANTON
20085 - JA JACKSON	20189 - SV STEVENS
20087 - JF JEFFERSON	20191 - SU SUMNER
20089 - JW JEWELL	20193 - TH THOMAS
20091 - JO JOHNSON	20195 - TR TREGO
20093 - KE KEARNY	20197 - WB WABAUNSEE
20095 - KM KINGMAN	20199 - WA WALLACE
20097 - KW KIOWA	20201 - WS WASHINGTON
20099 - LB LABETTE	20203 - WH WICHITA
20101 - LE LANE	20205 - WL WILSON
20103 - LV LEAVENWORTH	20207 - WO WOODSON
	20209 - WY WYANDOTTE

KS-NE Act of May 30, 1854

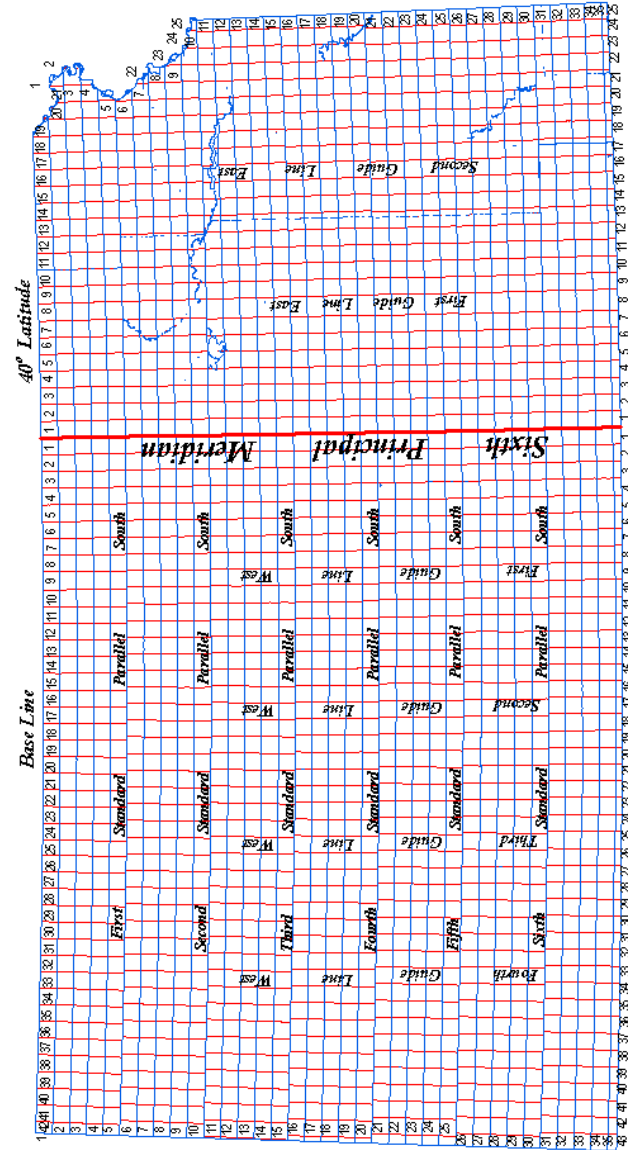
On May 8, 1855, Charles Manners set a cast iron monument on a bluff west of the Missouri River at the 40⁰ North Latitude.

1855-1856, Manners surveyed westward 108 miles establishing the initial point for the Base Line and 6th P. M.

June 11, 1987, the Professional Surveyors of the 6th P.M. dedicated a memorial at the site, located just NW of Mahaska, Kansas, at the Washington-Republic County and Kansas-Nebraska State Boundaries.

KANSAS COUNTIES

1	ALLEN	AL	53	LINCOLN	LC
2	ANDERSON	AN	54	LINN	LN
3	ATCHISON	AT	55	LOGAN	LG
4	BARBER	BA	56	LYON	LY
5	BARTON	BT	57	MARION	MN
6	BOURBON	BB	58	MARSHALL	MS
7	BROWN	BR	59	MCPHERSON	MP
8	BUTLER	BU	60	MEADE	ME
9	CHASE	CS	61	MIAMI	MI
10	CHAUTAUTQUA	CQ	62	MITCHELL	MC
11	CHEROKEE	CK	63	MONTGOMERY	MG
12	CHEYENNE	CN	64	MORRIS	MR
13	CLARK	CA	65	MORTON	MT
14	CLAY	CY	66	NEMAHA	NM
15	CLOUD	CD	67	NEOSHO	NO
16	COFFEY	CF	68	NESS	NS
17	COMANCHE	CM	69	NORTON	NT
18	COWLEY	CL	70	OSAGE	OS
19	CRAWFORD	CR	71	OSBORNE	OB
20	DECATUR	DC	72	OTTAWA	OT
21	DICKINSON	DK	73	PAWNEE	PN
22	DONIPHAN	DP	74	PHILLIPS	PL
23	DOUGLAS	DG	75	POTTAWATOMIE	PT
24	EDWARDS	ED	76	PRATT	PR
25	ELK	EK	77	RAWLINS	RA
26	ELLIS	EL	78	RENO	RN
27	ELLSWORTH	EW	79	REPUBLIC	RP
28	FINNEY	FI	80	RICE	RC
29	FORD	FO	81	RILEY	RL
30	FRANKLIN	FR	82	ROOKS	RO
31	GEARY	GE	83	RUSH	RH
32	GOVE	GO	84	RUSSELL	RS
33	GRAHAM	GH	85	SALINE	SA
34	GRANT	GT	86	SCOTT	SC
35	GRAY	GY	87	SEDGWICK	SG
36	GREELEY	GL	88	SEWARD	SW
37	GREENWOOD	GW	89	SHAWNEE	SN
38	HAMILTON	HM	90	SHERIDAN	SD
39	HARPER	HP	91	SHERMAN	SH
40	HARVEY	HV	92	SMITH	SM
41	HASKELL	HS	93	STAFFORD	SF
42	HODGEMAN	HG	94	STANTON	ST
43	JACKSON	JA	95	STEVENS	SV
44	JEFFERSON	JF	96	SUMNER	SU
45	JEWELL	JW	97	THOMAS	TH
46	JOHNSON	JO	98	TREGO	TR
47	KEARNY	KE	99	WABAUNSEE	WB
48	KINGMAN	KM	100	WALLACE	WA
49	KIOWA	KW	101	WASHINGTON	WS
50	LABETTE	LB	102	WICHITA	WH
51	LANE	LE	103	WILSON	WL
52	LEAVENWORTH	LV	104	WOODSON	WO
			105	WYANDOTTE	WY



79-1459

Chapter 79.--TAXATION

Article 14.--PROPERTY VALUATION,EQUALIZING ASSESSMENTS,APPRAISERS AND ASSESSMENT OF PROPERTY

79-1459. Preparation of appraisal maps, contents; preparation of appraisal records for improvements and land parcels, contents; classification of property. The county appraiser shall:

(a) Prepare an accurate appraisal map or maps of all real estate located within the county showing: (1) All property or lot lines; (2) the names of all subdivisions; (3) block and lot numbers in urban areas; (4) township, range and government lot numbers in rural areas; (5) street names; (6) rights-of-way; (7) recorded easements; and (8) any other information which may be deemed useful to the county appraiser or may be prescribed by the director of property valuation. Such map or maps shall be kept current.

(b) Utilizing the format prescribed or approved by the director of property valuation, prepare an appraisal record for each improvement or group of buildings which constitute an improvement showing: (1) Name and address of the property owner, the property classification and subclassification, taxing unit number and the city or township in which the property is located; (2) a description of the parcel of real estate adequate to locate it upon the appraisal map; (3) a sketch of the improvements showing dimensions and, if found advisable, a photograph thereof; (4) the building classification category as provided for by law; (5) the major building specifications of each improvement; (6) the exact or approximate date of construction of each building; (7) the value indicators of the improvements; (8) the appraised valuation of the improvements and of the land and of their total; and (9) any other information which may be deemed useful to the county appraiser or may be prescribed by the director of property valuation. If the appraisal record is contained on a card, the card shall have enough columns to show changes and appraised value of five or more successive years.

(c) Utilizing the format prescribed or approved by the director of property valuation, prepare an appraisal record for each parcel of land showing: (1) The name and address of the property owner, the property classification and subclassification, taxing unit number and city or township in which the property is located; (2) a description of the parcel of land adequate to locate it upon the appraisal map; (3) a sketch of the dimension of the land and the total number of acres; (4) the general classification of land as provided for by law and, if agricultural, the number of acres in each capability classification; (5) the value indicators of the appraised land; (6) the appraisal of the land and of the improvements and of their total; and (7) any other information which may be deemed useful to the county appraiser or may be prescribed by the director of property valuation. If the appraisal record is contained on a card, the card shall have enough columns to show changes and appraised value of five or more successive years.

(d) If it is found advisable, combine the land appraisal record and the improvements appraisal record provided for in subsections (b) and (c) showing all information required therein.

(e) Annually, as of January 1, classify all taxable and exempt real and personal property into one of the following classifications:

Residential. Residential property shall include all land and improvements utilized or intended to be utilized as a dwelling or home and all personal property listed on residential personal property statements.

Commercial. Commercial property shall include all land and improvements utilized or intended to be utilized as a business or income producing enterprise and all personal property subject to ad valorem taxation listed on commercial personal property statements.

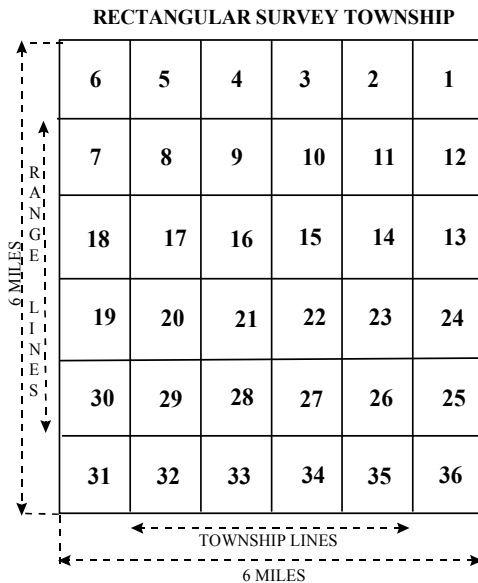
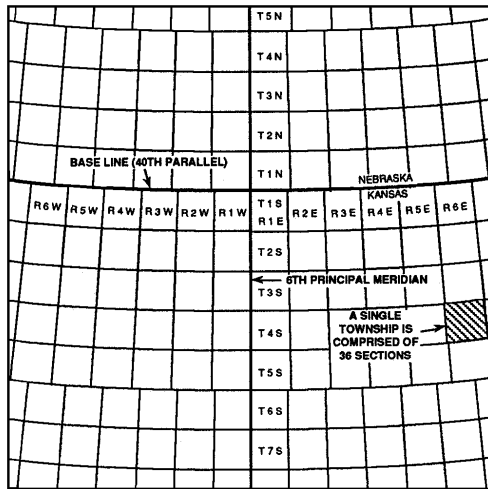
Agricultural. Agricultural property shall include all land and improvements utilized or intended to be utilized for the production of livestock or crops and all personal property listed on agricultural personal property statements.

State Appraised. State appraised property shall include all property designated by statute to be appraised by the director of the division of property valuation.

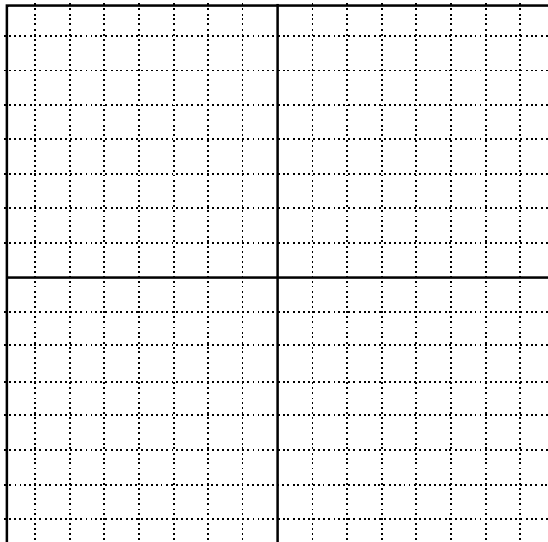
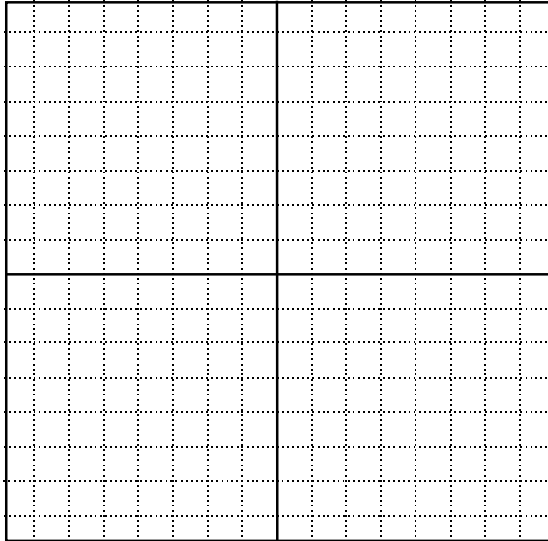
Public Service. Public service property shall include all land and improvements utilized for benevolent, charitable, religious or governmental purposes and all personal property listed on public service personal property statements.

The county appraiser shall, annually, as of January 1, subclassify each major classification of all taxable and exempt, real and personal property in a manner prescribed by the director of the division of property valuation.

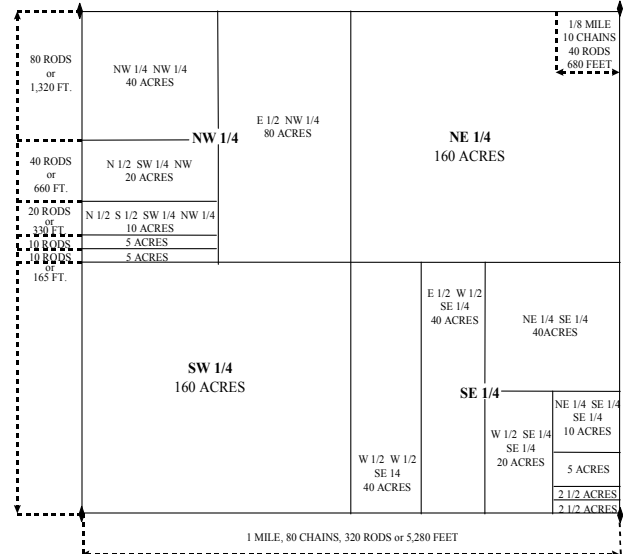
History: L. 1982, ch. 391, § 6; July 1.



SECTION GRID: Copy this page and use when plotting rectangular survey descriptions.



RECTANGULAR SURVEY OF A SECTION OF LAND



LINEAR MEASURE

1 Link = 7.92 Inches
 25 Links = 1 Rod
 1 Rod = 16.5 Feet
 1 Chain = 66 Feet
 1 Chain = 4 Rods
 1 Chain = 100 Links
 1 Furlong = 40 Rods
 1 Mile = 8 Furlongs
 1 Mile = 80 Chains
 1 Mile = 320 Rods
 1 Mile = 5,280 Feet

AREA MEASURE

1 Sq. Yard = 9 Sq. Feet
 1 Sq. Rod = 272.25 Sq. Feet
 1 Acre = 43,560 Sq. Feet
 1 Acre = 160 Sq. Rods
 1 Acre = 10 Sq. Chains
 1 Sq. Acre is approximately
 208.75 Feet Sq.

GEOMETRIC AREA EQUATIONS

Square = Any Side Squared
 Rectangle = One Side X Base
 Triangle = Base X Half Perpendicular Height
 Parallelogram = Base X Perpendicular Height
 Trapezoid = Half the Sum of the Parallel Sides X Perpendicular Height
 Circle = Diameter Squared X 0.7854; or Radius Squared X 3.1416

METRIC CONVERSION CHARTS

Linear Equivalents

<u>STANDARD to METRIC</u>	<u>METRIC to STANDARD</u>
1 inch = 2.54 centimeters	1 centimeter = 0.3937 inch
1 foot = 0.305 meter	1 meter = 3.28 feet
1 yard = 0.914 meter	1 meter = 1.094 yards
1 mile = 1.61 kilometers	1 kilometer = 0.621 mile

Area Equivalents

<u>STANDARD to METRIC</u>	<u>METRIC to STANDARD</u>
1 sq. inch = 6.45 sq. cms	1 sq. cm = 0.155 sq. inch
1 sq. foot = 0.0929 sq. meter	1 sq. meter = 10.76 sq. feet
1 sq. yard = 0.836 sq. meter	1 sq. meter = 1.196 sq. yards
1 acre = 0.405 hectare	1 hectare = 2.47 acres
1 sq. mile = 2.59 sq. kms.	1 sq. km = 0.386 sq. mile

Linear Conversions*

<u>WHEN YOU KNOW:</u>	<u>MULTIPLY BY</u>	<u>TO FIND</u>
centimeters	0.3933701	inches
meters	3.280840	feet
meters	1.093613	yards
kilometers	0.621371	miles

Area Conversions*

<u>WHEN YOU KNOW:</u>	<u>MULTIPLY BY</u>	<u>TO FIND</u>
sq. centimeters	0.155000	sq. inches
sq. meters	10.76391	sq. feet
sq. meters	1.195990	sq. yards
sq. kilometers	0.386102	sq. miles
hectares	2.471054	acres

* If conditions are reversed, divide instead of multiplying.

KS PARCEL IDENTIFICATION NUMBERING

Each parcel number is unique in that, within a given county no number will ever be duplicated. On the map, parcel numbering always begins in the northeast corner of the geographic area in question and continues in a counterclockwise manner. Generally speaking, geographic areas are either sections or blocks.

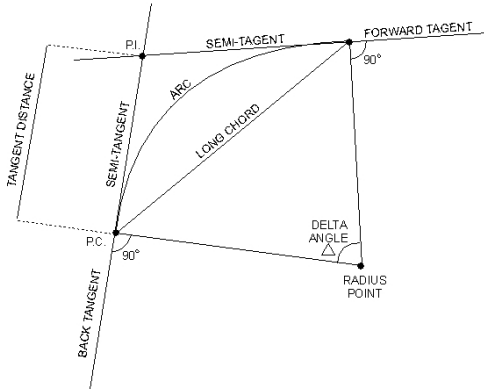
The parcel identification number is made up as follows:

000	00	0	00	00	000.00	0
Map #	Section #	Sheet #	Quarter Section #	Block #	Parcel #	Ownership Code

Every parcel identifier has a *Map Number*, *Section Number*, *Parcel Number*, and *Ownership Code*. With the exception of the Ownership Code all of these numbers will be displayed somewhere on the map. The Parcel Number is displayed in the northeast corner of parcels on a 1" = 400' maps and in the center of lots on 1" = 200', 1" = 100', and 1" = 50' scale maps. Only 1" = 100' and 1" = 50' scale maps will have a Quarter Section Number.

The *Sheet Number* is used only under very rare circumstances where elongated sections are present. Counties where the rectangular survey show sections of more than a mile requires two maps to depict all of the intelligence area.

The *Block Number* is a number which is assigned to definable geographic regions on 1" = 200', 1" = 100', and 1" = 50' scale maps. For example, a typical urban block would be assigned a *Block Number*.



Chord - Any straight line connecting the tangents of a curve.

Delta (Δ) - The angle made by the two radii from the center of the arc to the point of curvature (P.C.) and point of tangency (P.T.).

Long Chord (L.C.) - The chord from the point of curvature (P.C.) to the point of tangency (P.T.).

Point of Curvature (P.C.) - The point at which the curve begins.

Point of Intersection (P.I.) - The point at which the two tangents meet. The deflection angle at this point is equal to delta.

Point of Reverse Curvature (P.R.C.) - A point at which a curve in one direction ends and another curve in the opposite direction begins.

Point of Tangency (P.T.) - The point at which the curve ends.

Radius (R) - The distance from the tangent to the center of curve or arc. Note, radii are always perpendicular to the tangents at the point of curvature and the point of tangency.

Semi-Tangents - Straight lines which extend from the P.C. to the P.I. and from the P.I. to the P.T.; in a simple curve, semi-tangents will always be the same length.

Tangent (T) - A line that touches the curve at one point and is at a right angle to the radius at the point of contact.

CONVERTING DEEDED ACREAGE INTO DIMENSIONS

If a deed's primary legal description states "the North 90 acres of the North Half" or the "West 30 acres of the South West Quarter", mappers must convert those acreages to dimensions in order to properly map the parcel.

Begin by making the conversion of acres to square feet. 1 Acre = 43,560 Square Feet. So, take the stated acreage times 43,560.

$$\text{Acreage} \times 43,560 = \text{Total Sq. Ft.}$$

Next, use the total sq. ft. and divide by the known dimension.

$$(\text{Total Sq. Ft.}) \div (\text{The Known Dimension}) = \text{The Unknown Dimension}$$

Example A: "The North 90 acres of the North Half of Section 15"

$$90 \text{ acres} \times 43,560 = 3,920,400 \text{ Total Square Feet.}$$

The deed states that the 90 acre tract is located in the north part of the North Half of Section 15. If the section is a regular-sized section, the known measurement along the north side is one mile or 5,280 feet.

$$3,920,400 \text{ square feet} \div 5,280 \text{ feet} = 742.5 \text{ feet}$$

Thus the parcel dimensions would be 5,280 east and west and 742.5 north and south. To check your work, multiply 5,280 x 742.5 and divide by 43,560 to get total acres.

Example B: "West 30 acres of Southwest Quarter of Section 15"

$$30 \text{ acres} \times 43,560 = 1,306,800 \text{ total square feet}$$

The deed states that the 30 acre tract is located in the west part of the Southwest quarter of Section 15. If the section is a regular-sized section, the known measurement along the west side of the quarter is one half mile or 2,640 feet.

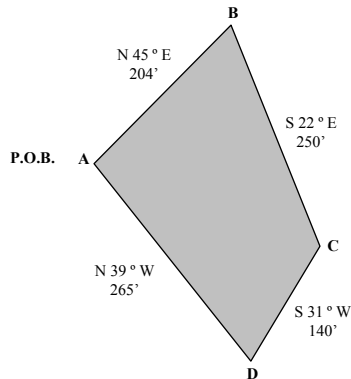
$$1,306,800 \text{ square feet} \div 2,640 \text{ feet} = 495 \text{ feet}$$

Thus the parcel dimensions would be 495 east and west and 2640 north and south. To check your work, multiply 495 x 2,640 and divide by 43,560 to get total acres.

USING A LAND COMPASS

Determine the Point Of Beginning (POB). In this example, it is the point labeled "A",

thence North 45 degrees East 204 feet,
thence South 22 degrees East 250 feet,
thence South 31 degrees West 140 feet,
thence North 39 degrees West 265 feet,
to the point of beginning.



A Land Compass is constructed on the principle of the surveyor's compass--360 degrees are divided into four 90 degree quadrants. Place the center of the compass at the point of beginning of the first line of the course, designated as Point A in the example, with the North and South line of the compass coinciding with the line selected to be the North and South line of the map. A "course" is the combination of the direction and length of any particular line, as 'North 45 degrees East, 204 feet,' etc.

Next, locate 45 degrees from North toward East and draw a line through this point. With the "20" side of an engineer's scale, measure off the first distance, which is 204 feet. This will fall at point B.

Now, move the center of the compass to Point B, keeping the North and South line of the compass on a North and South line of the map. Repeat the process using the data in the second course. In the second course, the bearing is South 22 degrees East; the angle to be laid off is 22 degrees from the South toward East. Proceed in the same manner throughout the balance of the description. When the last line (in this case D-to-A) is drawn, it must pass through A and the distance must measure the distance given in the last course.

If the last two conditions are not fulfilled, there is either an error in laying out the course and distance, or the description is in error.

In the example given, the description proceeds clockwise. Had the description been written so that it proceeded counter-clockwise, the dimensions would be the same, but the directions would be reversed. "North 39 degrees West" would be "South 39 degrees East," "South 31 degrees West" would be North 31 degrees East,," etc.

MOST COMMONLY USED ACRONYMS:

BIL	Band Interleaved by Line
CAD	Computer Aided Design/Dispatch/or Drafting
CAMA	Computer Assisted Mass Appraisal
CD-R	Compact Disc, Recordable
CD-ROM	Compact Disc, Read Only-Memory
CIR	Color Infrared
CMS	Cadastral Mapping Specialist
COGO	Coordinate Geometry
COM	Component Object Model
DASC	Data Access and Support Center
DB	Database, Decibel
DEM	Digital Elevation Model
DIME	Dual Independent Map Encoding
DLG	Digital Line Graph
DOQ	Digital Orthophoto Quadrangle
DPI	Dots Per Inch
DRG	Digital Raster Graphic
DTM	Digital Terrain Model
DWG	Drawing File Extension
DXF	Digital Exchange Format
EOS	Earth Observation Satellite
EOSAT	Earth Observation Satellite (Company)
FGCC	Federal Geodetic Control Committee
FGDC	Federal Geographic Data Committee
FIPS	Federal Information Processing Standard
FSA	Farm Services Agency, USDA
FTP	File Transfer Protocol
GIF	Graphics Interchange Format
GPS	Global Positioning System
HARN	High Accuracy Reference Network
HTML	HyperText Markup Language
HTTP	HyperText Transfer Protocol
HUC	Hydrologic Unit Code
IAAO	International Association of Assessing Officers
JPEG	Joint Photographic Experts Group
MGE	Modular GIS Environment
NAD	North American Datum
NAPP	National Aerial Photography Program
NAVD	North American Vertical Datum
NGS	National Geodetic Survey
NRCS	Natural Resources and Conservation Service, USDA
NSDI	National Spatial Data Infrastructure
OCR	Optical Character Recognition
ODBC	Open DataBase Connectivity
OLE	Object Linking and Embedding
PDF	Portable Document File
PIN	Parcel/Personal Identification Number
PIXEL	Picture Element
PLS	Professional Land Surveyor
PLSS	Public Land Survey System
QUAD	Quadrangle
RGB	Red, Green, Blue
RTK	Real-Time Kinematic (GPS)
RTP	Real-Time Positioning
SID	Scanned Image Data
SQL	Standard Query Language
TIFF	Tagged Image File Format
TIGER	Topologically Integrated Geographic Encoding and Referencing
TIN	Triangulated Irregular Network
URISA	Urban and Regional Information Systems Association
USDA	United States Department of Agriculture
USGS	United State Geological Survey
UTM	Universal Transverse Mercator