

SECOND REGULAR SESSION

# HOUSE BILL NO. 2364

## 101ST GENERAL ASSEMBLY

INTRODUCED BY REPRESENTATIVE MAYHEW.

4850H.02I

DANA RADEMAN MILLER, Chief Clerk

### AN ACT

To repeal sections 60.401, 60.410, 60.421, 60.431, 60.441, 60.451, 60.471, 60.480, 60.491, and 60.510, RSMo, and to enact in lieu thereof eight new sections relating to land surveys.

*Be it enacted by the General Assembly of the state of Missouri, as follows:*

Section A. Sections 60.401, 60.410, 60.421, 60.431, 60.441, 60.451, 60.471, 60.480, 2 60.491, and 60.510, RSMo, are repealed and eight new sections enacted in lieu thereof, to be 3 known as sections 60.401, 60.411, 60.431, 60.441, 60.471, 60.480, 60.496, and 60.510, to 4 read as follows:

60.401. The [~~systems of~~] **most recent system of state** plane coordinates [~~which have~~ 2 ~~been~~] established by the [~~National Ocean Survey~~] National Geodetic Survey, or its 3 [~~successors~~] **successor, based on the National Spatial Reference System, or its** 4 **successor, and known as the State Plane Coordinate System**, for defining and stating 5 the [~~geographic~~] positions or locations of points on the surface of the earth within the state of 6 Missouri [~~are hereafter to~~] **shall be known [and designated]** as the [~~"Missouri Coordinate~~ 7 ~~System of 1927" and the]~~ **"Missouri State Plane Coordinate System [of 1983]"**.

60.411. **The Missouri state plane coordinate system may have one or more** 2 **projection zone layers. Each layer of zones shall be covered by geodetically referenced** 3 **mapping projections adopted and supported by the National Geodetic Survey as a** 4 **component of the National Spatial Reference System. Each layer of zones shall be** 5 **identified by the geodetic datum upon which they are defined and each zone shall** 6 **remain uniquely and consistently defined throughout its implementation within a** 7 **particular layer.**

EXPLANATION — Matter enclosed in bold-faced brackets [thus] in the above bill is not enacted and is intended to be omitted from the law. Matter in **bold-face** type in the above bill is proposed language.

60.431. The plane coordinate ~~[values for]~~ of a point on the earth's surface, **to be** used  
2 ~~[to express the geographic]~~ **in expressing the** position or location of ~~[such]~~ **the** point in the  
3 appropriate zone of ~~[this system]~~ **the Missouri state plane coordinate system**, shall consist  
4 of two distances expressed in ~~[U.S. Survey Feet]~~ **feet** and decimals of a foot ~~[when using the~~  
5 ~~Missouri coordinate system of 1927 and expressed in]~~ **or in** meters and decimals of a meter  
6 ~~[when using the Missouri coordinate system of 1983]~~. **If values are expressed in feet, the**  
7 **International foot, which is equal to three thousand forty-eight ten-thousandths meter**  
8 **(0.3048 meter), shall be used as the standard foot for the Missouri state plane coordinate**  
9 **system.** One of these distances, to be known as the "east x-coordinate", shall give the  
10 ~~[position in an east and west direction]~~ **distance east of the y-axis**; the other, to be known as  
11 the "north y-coordinate", shall give the ~~[position in a north and south direction]~~ **distance**  
12 **north of the x-axis. The y-axis of any zone shall be parallel with the central meridian of**  
13 **that zone. The x-axis of any zone shall be at right angles to the central meridian of that**  
14 **zone.** These coordinates shall ~~[be made to]~~ depend upon and conform to plane rectangular  
15 coordinate values ~~[for the monumented points of the North American Horizontal Geodetic~~  
16 ~~Control Network, as published by the National Ocean Survey/]~~ **as established, published, or**  
17 **broadcast by the National Geodetic Survey, or its successors, and whose plane coordinates**  
18 have been computed on the systems defined in sections 60.401 to ~~[60.481]~~ **60.496.** Any such  
19 station **or method** may be used for establishing a survey connection to ~~[either]~~ **the Missouri**  
20 **state plane** coordinate system.

60.441. When any tract of land to be defined by a single description extends from one  
2 into another of the coordinate zones ~~[set out in section 60.410]~~, the positions of all points on  
3 its boundaries may be referred to as either of the zones and the zone which is used shall be  
4 specifically named in the description.

60.471. The use of the term "Missouri **State Plane** Coordinate System ~~[of 1927]~~ ~~or~~  
2 ~~"Missouri Coordinate System of 1983]"~~ on any map, report of survey, or other document shall  
3 be limited to coordinates based on the Missouri **state plane** coordinate system as defined in  
4 sections 60.401 to ~~[60.491]~~ **60.496.**

60.480. Descriptions of tracts of land by reference to subdivisions, lines, or corners of  
2 the United States public land survey, or other original pertinent surveys, are hereby  
3 recognized as the basic and prevailing method for describing such tracts. Whenever  
4 coordinates of the Missouri **state plane** coordinate system are used in such descriptions they  
5 shall be construed as being supplementary to descriptions of such subdivisions, lines, or  
6 corners contained in official plats and field notes of record; and, in the event of any conflict,  
7 the descriptions by reference to the subdivisions, lines, or corners of the United States public  
8 land surveys, or other original pertinent surveys shall prevail over the description by  
9 coordinates.

**60.496. The provisions of this chapter shall not be construed to prohibit the appropriate use of other geodetic reference networks.**

60.510. The functions, duties and responsibilities of the department of agriculture shall be as follows:

(1) To restore, maintain, and preserve the land survey monuments, section corners, and quarter section corners established by the United States public land survey within Missouri, together with all pertinent field notes, plats and documents; and also to restore, establish, maintain, and preserve Missouri state and county boundary markers and other boundary markers considered by the department of agriculture to be of importance, or otherwise established by law;

(2) To design and cause to be placed at established public land survey corner sites, where practical, substantial monuments permanently indicating, with words and figures, the exact location involved, but if such monuments cannot be placed at the exact corner point, then witness corners of similar design shall be placed as ~~near by~~ **nearby** as possible, with words and figures indicating the bearing and distance to the true corner;

(3) To establish, maintain, and provide safe storage facilities for a comprehensive system of recordation of information respecting all monuments established by the United States public land survey within this state, and such records as may be pertinent to the department of agriculture's establishment or maintenance of other land corners, Missouri state **plane** coordinate system stations and accessories, and survey monuments in general;

(4) To provide the framework for all geodetic positioning activities in the state. The foundational elements include latitude, longitude, and elevation which contribute to informed decision making and impact on a wide range of important activities including mapping and geographic information systems, flood risk determination, transportation, land use and ecosystem management and use of the Missouri state **plane** coordinate system, as established by sections 60.401 to ~~[60.494]~~ **60.496**;

(5) To collect and preserve information obtained from surveys made by those authorized to establish land monuments or land boundaries, and to assist in the proper recording of the same by the duly constituted county officials, or otherwise;

(6) To furnish, upon reasonable request and tender of the required fees therefor, certified copies of records created or maintained by the department of agriculture which, when certified by the state land surveyor or a designated assistant, shall be admissible in evidence in any court in this state, as the original record; and

(7) To prescribe, and disseminate to those engaged in the business of land surveying, regulations designed to assist in uniform and professional surveying methods and standards in this state.

2 ~~[60.410. 1. For the purpose of the use of this system, Missouri is~~  
 3 ~~divided into three separate zones, to be officially known as "The East Zone",~~  
 4 ~~"The Central Zone", and "The West Zone".~~

5 ~~2. The area now included in the following counties shall constitute the~~  
 6 ~~east zone: Bollinger, Butler, Cape Girardeau, Carter, Clark, Crawford, Dent,~~  
 7 ~~Dunklin, Franklin, Gasconade, Iron, Jefferson, Lewis, Lincoln, Madison,~~  
 8 ~~Marion, Mississippi, Montgomery, New Madrid, Oregon, Pemiscot, Perry,~~  
 9 ~~Pike, Ralls, Reynolds, Ripley, St. Charles, Ste. Genevieve, St. Francois, St.~~  
 10 ~~Louis, St. Louis (city), Scott, Shannon, Stoddard, Warren, Washington and~~  
 11 ~~Wayne.~~

12 ~~3. The area now included in the following counties shall constitute the~~  
 13 ~~central zone: Adair, Audrain, Benton, Boone, Callaway, Camden, Carroll,~~  
 14 ~~Chariton, Christian, Cole, Cooper, Dallas, Douglas, Greene, Grundy, Hickory,~~  
 15 ~~Howard, Howell, Knox, Laeclde, Linn, Livingston, Macon, Maries, Mercer,~~  
 16 ~~Miller, Moniteau, Monroe, Morgan, Osage, Ozark, Pettis, Phelps, Polk,~~  
 17 ~~Pulaski, Putnam, Randolph, Saline, Schuyler, Scotland, Shelby, Stone,~~  
 18 ~~Sullivan, Taney, Texas, Webster and Wright.~~

19 ~~4. The area now included in the following counties shall constitute the~~  
 20 ~~west zone: Andrew, Atchison, Barry, Barton, Bates, Buchanan, Caldwell,~~  
 21 ~~Cass, Cedar, Clay, Clinton, Dade, Daviess, DeKalb, Gentry, Harrison, Henry,~~  
 22 ~~Holt, Jackson, Jasper, Johnson, Lafayette, Lawrence, McDonald, Newton,~~  
~~Nodaway, Platte, Ray, St. Clair, Vernon and Worth.]~~

2 ~~[60.421. 1. As established for use in the east zone, the Missouri~~  
 3 ~~coordinate system of 1927 or the Missouri coordinate system of 1983 shall be~~  
 4 ~~named; and, in any land description in which it is used, it shall be designated~~  
 5 ~~the "Missouri Coordinate System of 1927, East Zone" or "Missouri Coordinate~~  
 6 ~~System of 1983, East Zone".~~

7 ~~2. As established for use in the central zone, the Missouri coordinate~~  
 8 ~~system of 1927 or the Missouri coordinate system of 1983 shall be named;~~  
 9 ~~and, in any land description in which it is used, it shall be designated the~~  
 10 ~~"Missouri Coordinate System of 1927, Central Zone" or "Missouri Coordinate~~  
 11 ~~System of 1983, Central Zone".~~

12 ~~3. As established for use in the west zone, the Missouri coordinate~~  
 13 ~~system of 1927 or the Missouri coordinate system of 1983 shall be named;~~  
 14 ~~and, in any land description in which it is used, it shall be designated the~~  
 15 ~~"Missouri Coordinate System of 1927, West Zone" or "Missouri Coordinate~~  
~~System of 1983, West Zone".]~~

2 ~~[60.451. 1. For the purpose of more precisely defining the Missouri~~  
 3 ~~coordinate system of 1927, the following definition by the United States Coast~~  
 4 ~~and Geodetic Survey is adopted:~~

5 ~~(1) The Missouri coordinate system of 1927, east zone, is a transverse~~  
 6 ~~Mercator projection of the Clarke spheroid of 1866, having a central meridian~~  
 7 ~~90 degrees — 30 minutes west of Greenwich, on which meridian the scale is~~  
 8 ~~set at one part in fifteen thousand too small. The origin of coordinates is at the~~  
~~intersection of the meridian 90 degrees — 30 minutes west of Greenwich and~~

9 the parallel 35 degrees — 50 minutes north latitude. This origin is given the  
10 coordinates:  $x = 500,000$  feet and  $y = 0$  feet;

11 (2) The Missouri coordinate system of 1927, central zone, is a  
12 transverse Mercator projection of the Clarke spheroid of 1866, having a central  
13 meridian 92 degrees — 30 minutes west of Greenwich, on which meridian the  
14 scale is set at one part in fifteen thousand too small. The origin of coordinates  
15 is at the intersection of the meridian 92 degrees — 30 minutes west of  
16 Greenwich and the parallel of 35 degrees — 50 minutes north latitude. This  
17 origin is given the coordinates:  $x = 500,000$  feet and  $y = 0$  feet;

18 (3) The Missouri coordinate system of 1927, west zone, is a transverse  
19 Mercator projection of the Clarke spheroid of 1866, having a central meridian  
20 94 degrees — 30 minutes west of Greenwich, on which meridian the scale is  
21 set at one part in seventeen thousand too small. The origin of coordinates is at  
22 the intersection of the meridian 94 degrees — 30 minutes west of Greenwich  
23 and the parallel 36 degrees — 10 minutes north latitude. This origin is given  
24 the coordinates:  $x = 500,000$  feet and  $y = 0$  feet.

25 2. For purposes of more precisely defining the Missouri coordinate  
26 system of 1983, the following definition by the National Ocean Survey/  
27 National Geodetic Survey is adopted:

28 (1) The Missouri coordinate system 1983, east zone, is a transverse  
29 Mercator projection of the North American Datum of 1983 having a central  
30 meridian 90 degrees — 30 minutes west of Greenwich, on which meridian the  
31 scale is set at one part in fifteen thousand too small. The origin of coordinates  
32 is at the intersection of the meridian 90 degrees — 30 minutes west of  
33 Greenwich and the parallel 35 degrees — 50 minutes north latitude. This  
34 origin is given the coordinates:  $x = 250,000$  meters and  $y = 0$  meters;

35 (2) The Missouri coordinate system 1983, central zone, is a transverse  
36 Mercator projection of the North American Datum of 1983 having a central  
37 meridian 92 degrees — 30 minutes west of Greenwich, on which meridian the  
38 scale is set at one part in fifteen thousand too small. The origin of coordinates  
39 is at the intersection of the meridian 92 degrees — 30 minutes west of  
40 Greenwich and the parallel of 35 degrees — 50 minutes north latitude. This  
41 origin is given the coordinates:  $x = 500,000$  meters and  $y = 0$  meters;

42 (3) The Missouri coordinate system 1983, west zone, is a transverse  
43 Mercator projection of the North American Datum of 1983 having a central  
44 meridian 94 degrees — 30 minutes west of Greenwich, on which meridian the  
45 scale is set at one part in seventeen thousand too small. The origin of  
46 coordinates is at the intersection of the meridian 94 degrees — 30 minutes  
47 west of Greenwich and the parallel 36 degrees — 10 minutes north latitude.  
48 This origin is given the coordinates:  $x = 850,000$  meters and  $y = 0$  meters.

49 3. The position of either Missouri coordinate system shall be as  
50 marked on the ground by horizontal control stations established in conformity  
51 with the standards adopted by the department of agriculture for first-order and  
52 second-order work, whose geodetic positions have been rigidly adjusted on the  
53 appropriate datum and whose coordinates have been computed on the system  
54 defined in this section. Any such station may be used for establishing a survey  
55 connection with the Missouri coordinate system.]

2           ~~[60.491. The Missouri coordinate system of 1927 shall not be used~~  
3           ~~after July, 1990; and the Missouri coordinate system of 1983 shall be the sole~~  
              ~~system after this date.]~~

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