SECOND REGULAR SESSION

SENATE BILL NO. 1026

101ST GENERAL ASSEMBLY

INTRODUCED BY SENATOR BROWN.

4882S.01I ADRIANE D. CROUSE, Secretary

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 the Missouri state plane coordinate system.

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Section A. Sections 60.401, 60.410, 60.421, 60.431, 60.441, 60.451, 60.471, 60.480, 60.491, and 60.510, RSMo, are repealed and eight new sections enacted in lieu thereof, to be known as sections 60.401, 60.410, 60.431, 60.441, 60.471, 60.480, 60.496, and 60.510, to read as follows:

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

60.410. **[**1. For the purpose of the use of this system, Missouri is divided into three separate zones, to be

EXPLANATION-Matter enclosed in bold-faced brackets [thus] in this bill is not enacted and is intended to be omitted in the law.

officially known as "The East Zone", "The Central Zone", and "The West Zone".

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

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

4. The area now included in the following counties shall constitute the west zone: Andrew, Atchison, Barry, Barton, Bates, Buchanan, Caldwell, Cass, Cedar, Clay, Clinton, Dade, Daviess, DeKalb, Gentry, Harrison, Henry, Holt, Jackson, Jasper, Johnson, Lafayette, Lawrence, McDonald, Newton, Nodaway, Platte, Ray, St. Clair, Vernon and Worth.**] The Missouri state plane coordinate system may have one or more projection zone layers. Each layer of zones shall be covered by geodetically reference mapping projections adopted and supported by the National Geodetic Survey as a component of the National Spatial Reference System. Each layer of zones shall be identified by the geodetic datum upon which they are defined and each zone**

shall remain uniquely and consistently defined throughout its implementation within a particular layer.

60.431. The plane coordinate **[**values for**] of** a point on the earth's surface**, to be** used **[**to express the geographic**] in expressing the** position or location of **[**such**]** point in the appropriate zone of **[**this system**] the Missouri state plane coordinate system,** shall consist of two distances expressed in **[**U.S. Survey Feet**] feet** and decimals of a foot **[**when using the Missouri coordinate system of 1927 and expressed in**] or** meters and decimals of a meter **[**when using the Missouri coordinate system of 1983**]. When values are expressed in feet, the International foot (one international foot equals 0.3048 meters), shall be used as the standard foot for the Missouri state plane coordinate system.** One of these distances, to be known as the "**East** x-coordinate", shall give the **[**position in an east-and-west direction;**] distance east of the Y axis;** the other, to be known as the "**North** y-coordinate", shall give the **[**position in a north-and-south direction**] distance north of the X axis. The Y axis of any zone shall be parallel with the central meridian of that zone. The X axis of any zone shall be at right angles to the central meridian zone.** These coordinates shall **[**be made to**]** depend upon and conform to plane rectangular coordinate values **[**for the monumented points of the North American Horizontal Geodetic Control Network, as published by the National Ocean Survey/National Geodetic Survey**] as established, published or broadcast by the National-Geodetic Survey,** or its successors, and whose plane coordinates have been computed on the systems defined in sections 60.401 to **[**60.481**] 60.496.** Any such station **or method** may be used for establishing a survey connection to **[**either**] the** Missouri **state plane** coordinate system.

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

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

60.480. Descriptions of tracts of land by reference to subdivisions, lines, or corners of the United States public land survey, or other original pertinent surveys, are hereby recognized as the basic and prevailing method for describing such tracts. Whenever coordinates of the Missouri **state plane** coordinate system are used in such descriptions they shall be construed as being supplementary to descriptions of such subdivisions, lines, or corners contained in official plats and field notes of record; and, in the event of any conflict, the descriptions by reference to the subdivisions, lines, or corners of the United States public land surveys, or other original pertinent surveys shall prevail over the description by 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 **[**60.491**]** **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.

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

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

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

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

(1) The Missouri coordinate system of 1927, east zone, is a transverse Mercator projection of the Clarke spheroid of 1866, having a central meridian 90 degrees — 30 minutes west of Greenwich, on which meridian the scale is 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 the parallel 35 degrees — 50 minutes north latitude. This origin is given the coordinates: x = 500,000 feet and y = 0 feet;

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

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

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

(1) The Missouri coordinate system 1983, east zone, is a transverse Mercator projection of the North American Datum of 1983 having a central meridian 90 degrees — 30 minutes west of Greenwich, on which meridian the scale is 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 the parallel 35 degrees — 50 minutes north latitude. This origin is given the coordinates: x = 250,000 meters and y = 0 meters;

(2) The Missouri coordinate system 1983, central zone, is a transverse Mercator projection of the North American Datum of 1983 having a central meridian 92 degrees — 30 minutes west of Greenwich, on which meridian the

scale is set at one part in fifteen thousand too small. The origin of coordinates is at the intersection of the meridian 92 degrees — 30 minutes west of Greenwich and the parallel of 35 degrees — 50 minutes north latitude. This origin is given the coordinates: x = 500,000 meters and y = 0 meters;

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

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

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

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