

## **CHAPTER 47-20.2 PLANE COORDINATES**

**47-20.2-01. North Dakota coordinate system zones defined.** The systems of plane coordinates which have been established by the national oceanic and atmospheric administration national ocean survey/national geodetic survey or its successors for defining and stating the geographic positions or locations of points on the surface of the earth within this state are, as of July 1, 1989, to be known and designated as the North Dakota coordinate system of 1927 and the North Dakota coordinate system of 1983. For the purpose of the use of these systems, the state is divided into a north zone and a south zone:

1. The area now included in the following counties constitutes the north zone: Divide, Williams, McKenzie, Mountrail, Burke, Renville, Ward, McLean, Bottineau, McHenry, Sheridan, Pierce, Rolette, Towner, Benson, Wells, Foster, Eddy, Ramsey, Cavalier, Pembina, Walsh, Nelson, Grand Forks, Griggs, Steele, Traill.
2. The area now included in the following counties constitutes the south zone: Dunn, Golden Valley, Slope, Bowman, Adams, Hettinger, Stark, Mercer, Oliver, Morton, Grant, Sioux, Emmons, Burleigh, Kidder, Logan, McIntosh, Stutsman, Barnes, LaMoure, Dickey, Cass, Ransom, Sargent, Richland.

**47-20.2-02. North Dakota coordinate system names defined.** As established for use in the north zone, the North Dakota coordinate system of 1927 or the North Dakota coordinate system of 1983 is named, and in any land description in which it is used it must be designated the North Dakota coordinate system of 1927, north zone, or the North Dakota coordinate system of 1983, north zone. As established for use in the south zone, the North Dakota coordinate system of 1927 or the North Dakota coordinate system of 1983 is named, and in any land description in which it is used it must be designated the North Dakota coordinate system of 1927, south zone, or the North Dakota coordinate system of 1983, south zone.

**47-20.2-03. North Dakota coordinate system defined.** The plane coordinate values for a point on the earth's surface, used in expressing the geographic position or location of such point in the appropriate zone of this system, shall consist of two distances, expressed in United States survey feet [meters] and decimals of a foot [meter] when using the North Dakota coordinate system of 1927. One of these distances, to be known as the X-coordinate, shall give the position in an east-west direction; the other, to be known as the Y-coordinate, shall give the position in a north-south direction. 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, or its successors, and the plane coordinates which have been computed on the systems defined in this chapter. Any such station may be used for establishing a survey connection to either North Dakota coordinate system. For the purposes of converting coordinates of the North Dakota coordinate system of 1983 from meters to feet, the international survey foot must be used. The conversion factor is: one foot equals 0.3048 meter exactly.

**47-20.2-04. Federal and state coordinate description same tract - Federal precedence.** Whenever coordinates based on the North Dakota coordinate system are used to describe any tract of land which in the same document is also described by reference to any subdivision, line, or corner of the United States public land surveys, the description by coordinates must be construed as supplemental to the basic description of each subdivision, line, or corner contained in the official plats and field notes filed of record, and, in the event of any conflict, the description by reference to the subdivision, line, or corner of the United States public land surveys prevails over the description by coordinates, unless the coordinates are upheld by adjudication, at which time the coordinate description will prevail. This chapter does not require any purchaser or mortgagee to rely on a description, any part of which depends exclusively upon the North Dakota coordinate system, unless the description has been adjudicated as provided in this section.

#### **47-20.2-05. North Dakota coordinate system origins defined.**

1. For the purposes of more precisely defining the North Dakota coordinate system of 1927, the following definitions by the United States coast and geodetic survey are adopted:
  - a. The North Dakota coordinate system of 1927, north zone, is a Lambert conformal conic projection of the Clarke spheroid of 1866, having standard parallels at north latitudes, forty-seven degrees twenty-six minutes and forty-eight degrees forty-four minutes along which parallels the scale shall be exact. The origin of coordinates is at the intersection of the meridian one hundred degrees thirty minutes west of Greenwich and the parallel forty-seven degrees zero minutes north latitude. This origin is given the coordinates:  $x = 2,000,000$  feet [609.6 kilometers], and  $y = 0$  feet [0 kilometers].
  - b. The North Dakota coordinate system of 1927, south zone, is a Lambert conformal conic projection of the Clarke spheroid of 1866, having standard parallels at north latitudes forty-six degrees eleven minutes and forty-seven degrees twenty-nine minutes along which parallels the scale shall be exact. The origin of coordinates is at the intersection of the meridian one hundred degrees thirty minutes west of Greenwich and the parallel forty-five degrees forty minutes north latitude. This origin is given the coordinates:  $x = 2,000,000$  feet [609.6 kilometers], and  $y = 0$  feet [0 kilometers].
2. For the purposes of more precisely defining the North Dakota coordinate system of 1983, the following definition by the national ocean survey/national geodetic survey is adopted:
  - a. The North Dakota coordinate system of 1983, north zone, is a Lambert conformal conic projection of the North American datum of 1983, having standard parallels at north latitude of forty-seven degrees twenty-six minutes and forty-eight degrees forty-four minutes along which parallels the scale shall be exact. The origin of coordinates is at the intersection of the meridian one hundred degrees thirty minutes west of Greenwich and the parallel forty-seven degrees zero minutes north latitude. This origin is given the coordinates:  $x = 600,000.0000$  meters, and  $y = 00.0000$  meters.
  - b. The North Dakota coordinate system of 1983, south zone, is a Lambert conformal conic projection of the North American datum of 1983, having standard parallels at north latitude of forty-six degrees eleven minutes and forty-seven degrees twenty-nine minutes along which parallels the scale shall be exact. The origin of coordinates is at the intersection of the meridian one hundred degrees thirty minutes west of Greenwich and the parallel forty-five degrees forty minutes north latitude. This origin is given the coordinates:  $x = 600,000.0000$  meters, and  $y = 00.0000$  meters.

**47-20.2-06. North Dakota coordinate system - Use of term.** The use of the North Dakota coordinate system of 1927 north zone or south zone or the North Dakota coordinate system of 1983 north zone or south zone on any map, report of survey, or other document must be limited to coordinates based on the North Dakota coordinate systems as defined in this chapter. The map, report, or document must include a statement describing the standard of accuracy, as defined by the national ocean survey/national geodetic survey, maintained in developing the coordinates shown therein. The coordinates must be established in conformity with these standards:

1. No coordinates based on the North Dakota coordinate system, purporting to define the position of a point on a land boundary, may be presented to be recorded in any public records or deed records unless the point is connected to a triangulation or

traverse station established in conformity with the standards prescribed in this chapter.

2. Coordinate values used in land descriptions under this section must be certified by a duly registered land surveyor under the laws of this state.

**47-20.2-07. Use of the term North Dakota coordinate system - Limitation.** Repealed by S.L. 1989, ch. 555, § 7.

**47-20.2-08. Federal and state coordinates describing same tracts - Federal precedence.** Repealed by S.L. 1989, ch. 555, § 7.

**47-20.2-09. Reliance on description of North Dakota coordinate system.** Repealed by S.L. 1989, ch. 555, § 7.