Finding Real Property: Legal Descriptions

LEARNING OBJECTIVES
Upon completion of this chapter, the student should be able to:

• Explain the importance of an accurate legal description.
• Relate the three methods of legally describing real estate.
• Apply the legal descriptions to specific problems.

Types and Uses of Legal Property Descriptions

What are Legal Property Descriptions?

Legal property descriptions are used to identify the location of real property. They can be formal or informal. A street address is an example of an informal description. A metes and bounds description, lot and block system description and public land survey system (also called rectangular survey system) are all formal descriptions.

Because a street address is no more than a descriptor for mail delivery, it is not exact enough to describe a property's location when a property's ownership changes. Legal documents require the property to be uniquely identifiable by the description. A formal legal property description is required for legal documents such as deeds and mortgages to be complete.

Formal Legal Property Descriptions

3 Major Types (Nevada uses all 3 types)
1) Public Land Survey System
2) Metes and Bounds
3) Lot and Block Survey System
What is a Legal Description?

A legal description is used to describe the location of land in legal documents (for example, the deed to land). The Public Land Survey System (PLSS) is used in legal descriptions. It employs a grid system based on township, range and section numbers. Here's an example of a PLSS legal description:

N 1/2 SE 1/4, SW 1/4, S24, T32N, R18E

You can find the township, range and section information on:

- a property tax bill or property deed.
- plat maps (available by contacting the county clerk).
- USGS topographic maps (available by calling USGS at 1-800-872-6277)

Good Example from a Wisconsin government site:

- When the land was first surveyed in Wisconsin, it was divided into a grid as shown in Figure 1. Each grid cell represents approximately 36 square miles (the measurements were not always precise due to the instruments the surveyors were using, among other limitations). This grid system is known as the Public Land Survey System (PLSS). An example of a legal description using the PLSS is given below.
  N 1/2 SE 1/4 SW 1/4, S24, T32N, R18E
- The descriptions are generally read from front to back. For example, the description above would be read "The north 1/2 of the southeast quarter of the southwest quarter of section 24, township 32 north, range 18 east."
- However, the easiest way to interpret descriptions is from back to front (or, right to left). To determine where the property is, we will break the description down into each of its elements, starting from the back and working our way to the front. We'll be starting with the most general labels and then move into the smallest, most specific labels.
Each cell in the grid is identified by a township and range number. The range number identifies how many cells the property is to the east or west of a starting point. Both eastern and western ranges are possible in Wisconsin, as shown in Figure 2. The range identified in our example legal description, R18E, is highlighted in Figure 3.

- N 1/2 SE 1/4, SW 1/4, S24, T32N, R18E
Background Information

The Public Land Survey System (PLSS) is a way of subdividing and describing land in the United States. All lands in the public domain are subject to subdivision by this rectangular system of surveys. The Bureau of Land Management (BLM) is responsible for regulating and maintaining the PLSS.

The PLSS was begun shortly after the Revolutionary War, when the Federal government became responsible for large areas west of the Thirteen Original Colonies. The transfer of this Federal land to private citizens became an urgent matter for several reasons: land had been promised to the impoverished soldiers of the Continental Army for their service, the indebted Government needed to tap the land's potential to provide sorely needed revenue, and the land held great promise for the future of the young Nation. Because of these pressing concerns, the Government needed a methodical process for dividing the western frontier among the people it served.

In response to this need, the U.S. Congress adopted the system of surveys that became what we know as the PLSS. In the western United States, the PLSS is the basis for most land transfers and ownership today. Land management agencies use the PLSS to describe legal land locations. Federal agencies involved in surface and mineral management require the use of PLSS terminology in their day-to-day actions. Additionally, many agencies dealing with natural resource or environmental databases use PLSS boundaries for georeferencing.

The PLSS is a rectangular survey system that typically divides the land into 6-mile square townships, which are further subdivided into 1-mile square sections. This map layer, compiled by the U.S. Geological Survey, contains PLSS boundaries to the township level. The PLSS is found in the following States: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Florida, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Ohio, Oregon, South Dakota, Utah, Washington, Wisconsin, and Wyoming. In the National Atlas Map Maker, the PLSS information will not be displayed until the map is zoomed in to show an area approximately 400 miles wide or less. For further historical information and for data to the section level and beyond, see the BLM Land Survey Information System page.
What is the Public Land Survey System (PLSS)?
The Public Land Survey System (PLSS) is a way of subdividing and describing land in the United States. All lands in the public domain are subject to subdivision by this rectangular system of surveys, which is regulated by the U.S. Department of the Interior, Bureau of Land Management (BLM).

The PLSS is used to divide public domain lands, which are lands owned by the Federal government for the benefit of the citizens of the United States. The original public domain included the land ceded to the Federal Government by the thirteen original States, supplemented with acquisitions from native Indians and foreign powers. It encompasses major portions of the land area of 30 southern and western States. Since the original PLSS surveys were completed, much of the land that was originally part of the public domain has been transferred to private ownership and in some areas the PLSS has been extended, following similar rules of division, into non-public domain areas. PLSS rules of division are explained below. For areas that were once part of the public domain, legal land descriptions are usually written in terms of PLSS descriptions.

The PLSS typically divides land into 6-mile-square townships, which is the level of information included in the National Atlas. Townships are subdivided into 36 one-mile-square sections (Section 16 is reserved for schools). Sections can be further subdivided into quarter sections, quarter-quarter sections, or irregular government lots. Normally, a permanent monument, or marker, is placed at each section corner. Monuments are also placed at quarter-section corners and at other important points, such as the corners of government lots. Today permanent monuments are usually inscribed tablets set on iron rods or in concrete. The original PLSS surveys were often marked by wooden stakes or posts, marked trees, pits, or piles of rock, or other less-permanent markers.
The PLSS actually consists of a series of separate surveys. Most PLSS surveys begin at an initial point, and townships are surveyed north, south, east, and west from that point. The north-south line that runs through the initial point is a true meridian and is called the Principal Meridian. There are 37 Principal Meridians, each is named, and these names are used to distinguish the various surveys. The east-west line that runs through the initial point is called a base line. This line is perpendicular to the Principal Meridian.

![Image of the United States showing the PLSS]

Each township is identified with a township and range designation. Township designations indicate the location north or south of the baseline, and range designations indicate the location east or west of the Principal Meridian. For example, a township might be identified as Township 7 North, Range 2 West, which would mean that it was in the 7th tier of townships north of a baseline, and in the 2nd column of townships west of a baseline. A legal land description of a section includes the State, Principal Meridian name, Township and Range designations with directions, and the section number: Nebraska, Sixth Principal Meridian T7N, R2W, sec5.
History

Originally proposed by Thomas Jefferson, the PLSS began shortly after the Revolutionary War, when the Federal government became responsible for large areas west of the thirteen original colonies. The government wished both to distribute land to Revolutionary War soldiers in reward for their service, as well as to sell land as a way of raising money for the nation. Before this could happen, the land needed to be surveyed.

The Land Ordinance of 1785 which provided for the systematic survey and monumentation of public domain lands, and the Northwest Ordinance of 1787 which established a rectangular survey system designed to facilitate the transfer of Federal lands to private citizens, were the beginning of the PLSS. Under Congressional mandate, cadastral surveys (surveys of the boundaries of land parcels) of public lands were undertaken to create parcels suitable for disposal by the Government. The extension of the rectangular system of surveys over the public domain has been in progress since 1785, and, where it applies, the PLSS forms the basis for most land transfers and ownership today. The Manual of Instructions for the Survey of the
Public Lands Of The United States, 1973 documents current official procedures for PLSS surveys.

Certain lands were excluded from the public domain and were not subject to survey and disposal. These lands include the beds of navigable bodies of water, national installations such as military reservations and national parks, and areas such as land grants that had already passed to private ownership prior to subdivision by the Government. France, Spain, and Mexico all conferred land grants in territory they claimed; many of these grants were confirmed by the U.S Government when the territory in which they were situated was acquired by the United States, and the land was then excluded from the public domain.

Over the past two centuries, almost 1.5 billion acres have been surveyed into townships and sections. The BLM is the Federal Government's official record keeper for over 200 years' worth of cadastral survey records and plats. In addition, BLM is still completing numerous new surveys each year, mostly in Alaska, as well as conducting resurveys to restore obliterated or lost original survey corners.

Commonly Used Terms

**Base line**—A parallel of latitude, or approximately a parallel of latitude, running through an arbitrary point chosen as the starting point for all sectionalized land within a given area.

**Government lot**—A subpart of a section which is not described as an aliquot part of the section, but which is designated by number, for example, Lot 3. A lot may be regular or irregular in shape, and its acreage may vary from that of regular aliquot parts. These lots frequently border water areas excluded from the PLSS.

**Principal meridian**—A meridian line running through an arbitrary point chosen as a starting point for all sectionalized land within a given area.

**Range**—A vertical column of townships in the PLSS.

**Section**—A one-square-mile block of land, containing 640 acres, or approximately one thirty-sixth of a township. Due to the curvature of the Earth, sections may occasionally be slightly smaller than one square mile.

**Township**—An approximately 6-mile square area of land, containing 36 sections. Also, a horizontal row of townships in the PLSS.
Public Land Survey System
* Also called the government survey system, established by Congress in 1785
* Describes the property’s physical relationship within the United States.
* Based on two sets of intersecting lines
  * principal meridians
    * run north and south
    * each has a name or number
    * no parcel of land is described by reference to more than one principal meridian
    * the meridian used may not necessarily be the nearest one
    * The Mount Diablo Principal Meridian and Base Line are used for all rectangular descriptions in Nevada.
* Baselines
  * run east and west
* further divisions are:
  * townships
    * run east and west
    * run parallel to the base line
    * run 6 miles apart
    * form strips of land called township tiers
  * ranges
    * 6-mile-wide strips
    * run north and south
    * run parallel to the principal meridian
  * sections
    * each township contains 36 sections
    * a section is 1 square mile or 640 acres
    * sections are numbered 1 - 36
    * section 16 is a school section
* correction lines
  * because of the curvature of the earth, correction lines are needed
  * government check is the area bounded by 2 guide meridians and 2 correction lines - an area approx. 24 miles square
* Fractional sections and government lots
  * undersized or oversized sections
  * can be created by:
    * curvature of the earth
    * land bordering or surrounding large bodies of water
    * by artificial state borders

section → 640 acres.
acre → 43,560 square feet
1 mile → 5,280 feet
A SECTION

section → 640 acres.
acre → 43,560 square feet
1 mile → 5,280 feet

<table>
<thead>
<tr>
<th>Unit</th>
<th>Measurement</th>
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<tbody>
<tr>
<td>mile</td>
<td>5,280 feet; 1,760 yards; 320 rods</td>
</tr>
<tr>
<td>rod</td>
<td>16.5 feet; 5.50 yards</td>
</tr>
<tr>
<td>sq. mile</td>
<td>640 acres (5,280 x 5,280 = 27,878,400 ÷ 43,560)</td>
</tr>
<tr>
<td>acre</td>
<td>43,560 sq. feet; 160 sq. rods</td>
</tr>
<tr>
<td>cu. yard</td>
<td>27 cu. ft.</td>
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<tr>
<td>sq. yard</td>
<td>9 sq. feet</td>
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<tr>
<td>sq. foot</td>
<td>144 sq. inches</td>
</tr>
<tr>
<td>chain</td>
<td>66 feet; 4 rods; 160 links</td>
</tr>
</tbody>
</table>

**Math Quiz 8**

1. How many acres are in the SE ¼ of the SW ¼ of the N ½ of Section 4, TN4, PM 6?

   *(Hint: 640 acres in 1 section) so… (640 ÷ 4 = 160) and (160 ÷ 4 = 40) and (40 ÷ 2 = 20 acres)*

2. What would be the value of a vacant lot located on the NE ½ of the NW ¼ of the NE ¼ of the NE 1/5 of S5, T7, PM4? Land is selling for $140,000 per acre.

   *(640 ÷ 2 = 320) and (320 ÷ 4 = 80) and (80 ÷ 4 = 20) and (20 ÷ 5 = 4 acres) so...

   4 X $140,000 = $560,000
Metes-and-Bounds Method

**Metes and bounds** is a system or method of describing land, real property. The system has been used in England for many centuries, and is still used there in the definition of general boundaries. By custom, it was applied in the original Thirteen Colonies that became the United States, and in many other land jurisdictions based on English common law.

Typically the system uses physical features of the local geography, along with directions and distances, to define and describe the boundaries of a parcel of land. The boundaries are described in a running prose style, working around the parcel in sequence, from a point of beginning, returning back to the same point. It may include references to other adjoining parcels (and their owners), and it, in turn, could also be referred to in later surveys. At the time the description is compiled, it may have been marked on the ground with permanent monuments placed where there were no suitable natural monuments.

The term "metes" refers to a boundary defined by the measurement of each straight run, specified by a distance between the terminal points, and an orientation or direction. A direction may be a simple compass bearing, or a precise orientation determined by accurate survey methods. The term "bounds" refers to a more general boundary description, such as along a certain watercourse, a stone wall, an adjoining public road way, or an existing building.

The system is often used to define larger pieces of property (e.g. farms), and political subdivisions (e.g. town boundaries) where precise definition is not required or would be far too expensive, or previously designated boundaries can be incorporated into the description.

**Usage**

A typical description for a small parcel of land would be: "beginning with a corner at the intersection of two stone walls near an apple tree on the north side of Muddy Creek road one mile above the junction of Muddy and Indian Creeks, north for 150 rods to the end of the stone wall bordering the road, then northwest along a line to a large standing rock on the corner of John Smith's place, thence west 150 rods to the corner of a barn near a large oak tree, thence south to Muddy Creek road, thence down the side of the creek road to the starting point."

The sequence begins with an identified corner serving as benchmark, then gives distance, direction and various boundary descriptions as if one were walking the bounds pacing off the distance to the next corner where there is a change of direction. Generally where watercourses form part of the bounds their meander is taken as a straight line between the established corners and their monuments.

In many deeds, the bearing is described not by a clockwise degree measure out of 360 degrees, but instead by indicating a direction north or south (N or S) followed by a degree measure out of
90 degrees and another direction west or east (W or E). For example, such a bearing might be listed as "N 42°35' W", which means that the bearing is 42°35' counterclockwise (to the west) from north.

This has the advantage of providing the same degree measure regardless of which direction a particular boundary is being followed; the boundary can be traversed in the opposite direction simply by exchanging N for S and E for W. In other words, "N 42°35' W" describes the same boundary as "S 42°35' E", but is traversed in the opposite direction.

In most distance measures, especially those in older deeds and where measuring distances over a furlong, boundary lengths are listed in rods or poles instead of feet or meters. Rods and poles are equivalent measures equaling 16.5 feet.

**Difficulties**

Some courts have established a list of priorities to resolve inconsistent descriptions of corners. In descending order starting with the most reliable: (1) natural monuments, (2) artificial monuments such as roads and marked or surveyed lines, (3) adjacent tracts or boundaries, (4) courses or directions, (5) distances, and (6) area or quantity.

Once such a survey is in place, the corners may have to depend on tradition and long use to establish the line along the boundaries between them. In some areas where land was deeded before 1693 the lengths given predate the changes to the length of the furlong and mile by Queen Elizabeth I. In other places references to the official borders of towns, counties, states and even the U.S. may have changed. Compass directions always have to be tied to a table of annual deflections because magnetic north is constantly changing. The description might refer to landmarks such as the large oak tree which could die, rot and disappear; or be confused with a different tree that had grown over time. Streams might dry up, meander or change course. Man-made features such as roads, walls, markers or stakes used to mark corners and determine the line of the boundaries between corners may have been moved. As these features move, change and disappear over time, when it comes time to re-establish the corners along the line of these boundaries (for sale, subdivision, or building construction) it can become difficult, even impossible, to determine the original location of the corner. In the metes and bounds system, corners, distance, direction, monuments and bounds are always carried back to the original intent regardless of where they are now. Court cases are sometimes required to settle the matter when it is suspected the corner markers may have been moved.

These kinds of problems caused the United States to largely replace this system except in the east. Beginning with the Land Ordinance of 1785, it began a transition to the Public Land Survey System (PLSS) used in the central and western states. The eastern, or original states, continue to use the metes and bounds surveys of their founders.²⁰

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Metes-and-Bounds Method Review

* oldest type **used for irregularly shaped properties**
* **Describes the physical dimensions of the property itself.**
* Walks us around the property.
* Specifically describes the property boundaries, not it’s location within an area.
* relies on a property’s physical features
* starts at a **point of beginning (POB)**
* from the POB, the surveyor proceeds around the property’s boundaries
* boundaries are recorded by referring to monuments
* monuments are:
  * fixed objects used to identify the POB
  * may be a natural object
    * stone
    * large tree
    * lake
    * stream
  * may be a manmade object
    * street
    * highway
    * fence
    * canal
    * markers placed by surveyors
  * often include the words ‘more or less’

Commencing at the center north sixteenth corner (CN 1/16) of said Section 29; thence south 00′16″06’ each along the north-south center section line of said section 20, a distance of 422.86 feet to A to the southeast corner of lot 45, an arc length of 96.31 feet to a point which a radial line bears sough 02′28″31′′, through a central angle of 09′36″43″; thence south 00′22″06″ east, 93.68 feet to the point of beginning.
Containing 8.949 acres more or less.

(The following legal description was shortened from a full-page size to this paragraph)
Lot-and Block Survey System

The Lot and Block Survey System is a method used in the United States and Canada to locate and identify land, particularly for lots in densely populated metropolitan areas, suburban areas and exurbs. It is sometimes referred to as the Recorded Plat Survey System or the Recorded Map Survey System.

Origins of the system

The system is the most recent of the three main survey systems. It began to be widely employed in the United States in the 19th century when cities began to expand into the surrounding farmland. The owners of a large tract of land would create a plat and subdivide the tract into a series of smaller lots to be sold to buyers. This subdivision survey plan would then be recorded with an official government record keeper. The officially recorded map then became the legal description of all the lots in the subdivision. The method became widespread after the post World War II expansion into the suburbs when formerly rural areas became heavily populated and large tracts of rural land were divided into smaller lots.

Mechanics

The system begins with a large tract of land. This large tract is typically defined by one of the earlier survey systems such as metes and bounds or the Public Land Survey System. A subdivision survey is conducted to divide the original tract into smaller lots and a plat map is created. Usually this subdivision survey employs a metes and bounds system to delineate individual lots within the main tract. Each lot on the plat map is assigned an identifier, usually a number or letter. The plat map is then officially recorded with a government entity such as a city engineer or a recorder of deeds. This plan becomes the legal description of all the lots in the subdivision. A mere reference to the individual lot and the map's place of record is all that is required for a proper legal description.

Understanding property descriptions

The Lot and Block system is perhaps the simplest of the three main survey systems to understand. For a legal description in the Lot and Block system a description must identify:

- the individual lot,
- the block in which the lot is located, if applicable,
- a reference to a platted subdivision or a phase thereof,
- a reference to find the cited plat map (i.e., a page and/or volume number), and
- a description of the map's place of official recording (e.g., recorded in the files of the County Engineer).

The legal description of a 2.5 acres (10,000 m²) property under the Lot and Block system may be something like; Lot 5 of Block 2 of the South Subdivision plat as recorded in Map Book 21, Page 33 at the Recorder of Deeds. Some simple maps may only contain a lot and map number, such as...
Lot C of the Riverside Subdivision map as recorded in Map Book 12, Page 8 in the office of the City Engineer. The more technical details of the legal description are all contained in the recorded plat map and there is no need to reiterate them in a deed or other legal description.

By contrast, a Public Land Survey System legal description of the same 2.5 acres (10,000 m²) property would be something like SW 1/4 SW1/4 NE1/4 SW1/4 SEC 18 TIS R1E. The metes and bounds description may be something like, Beginning at a monument located at the SE corner of the property now or formerly of J.W. Smith; thence north 330 feet to a point; thence east 330 feet to a point; thence south 330 feet to a point, thence west 330 feet to the place of beginning.

Other uses

A type of the Lot and Block system is frequently used for tax identification purposes in the United States. This designation, often called a Tax Identification Number or Tax Parcel Number, is not directly based on the legal description of the property. Such tracking could easily become cumbersome and confusing. Often a separate identifier is used to track the property for the purposes of real estate taxation. Counties and local governments often keep track of real estate properties by systems based on the Lot and Block system.

The system can be used even if the property is not legally described by the Block and Lot system. A property legally described by a metes and bounds description may still be assigned a Tax Identification Number based on a separate Lot and Block system. In this case, a survey of all parcels in the county or municipality would be combined to create a separate Block and Lot system to identify the properties for taxation purposes. For example, a metes and bounds described parcel may be assigned the Tax Identification Number 14-55-118, which has nothing to do with the legal description of the property recorded in the deed other than its use to create the tax Block and Lot maps. In this case, the first number may be used to indicate the local municipality, the second number indicates the tax map on which the property is recorded, and the third number is the parcel identification number on the indicated map. A similar system might be Tax Identification Number 205-K-33 where "205" is the map book volume number, "K" is the individual map, and "33" is a parcel number.21

Lot and Block Survey System Review

* Designates the property’s physical relationship to the Subdivision in which it is located.
* Portrays the property’s relationship to it’s’ subdivision.
* uses lot-and-block numbers
* refers to a plat map filed in the public records
  * example: lot 13, block 6, Indian Springs Subdivision, Clark County, State of Nevada