

**Standards for Final  
Right-of-Way Legal Descriptions,  
including Supplement to Standards for  
use with GPS Systems And  
Data Specifications for Right of Way  
Applications and Projects**

February 1991  
Supplement to use GPS Systems effective May 2008  
*Amendment to add Electronic Data Specification Effective April 2013*

## **GUIDELINES FOR RIGHT OF WAY FINAL SURVEY DATA**

All final maps and legal descriptions must be certified by an Arizona Registered Land Surveyor. The following list of minimum survey information must be indicated:

1. Maps and legal descriptions shall be prepared by the section only.
2. Section, Township and Range must be indicated.
3. Purpose of right of way (i.e. roadway, utilities, etc.) must be indicated.
4. Basis of bearing must be indicated.
5. Type of monument found or set at each section corner used for reference.
6. Section line and right of way intersection ties shall be shown upon entering and leaving State land parcels.
7. Width, length and acreage of right of way shown must be indicated.
8. If U. S. Government lotted section, lots must be indicated.

### **NOTES:**

When a survey line is used rather than a centerline, a metes and bounds legal description encompassing the area of the right of way is requested.

Curve data must include delta, radius, a length and, if non-tangent, radial bearing or local tangent bearing at the beginning of the curve.

Stationing should also be included if applicable.

***For further information contact the Right of Way Section, Arizona State Land Department, 1616 W. Adams, Phoenix, Arizona 85007, 602-542-4098.***

## **RIGHT OF WAY DESCRIPTION STANDARDS**

The following criteria shall apply to all right of way descriptions prepared for application to cross State owned lands in the State of Arizona. Deviation is not permitted without express written authority from the Cadastral Section of the Arizona State Land Department. Any questions regarding these "Standards" should be directed to a member of the cadastral staff by mail or phone at 602-542-2601.

**A. Written Description:**

Written descriptions shall contain sufficient data to accurately locate right of way alignment within a single section. Descriptions which require the use of bearings and distances to locate the alignment MUST be certified by an Arizona Registered Land Surveyor.

**B. Maps:**

Maps shall be drawn to a scale that will clearly show the alignment of the right of way within a single section. A maximum sheet size of 17" X 22" will be accepted. The certification of maps shall be as that cited for written descriptions.

**C. Section Corner Ties:**

All points of ingress or egress of State land within a section will be tied to at least one of the standard section or quarter section corners of that section. More than one such corner is desirable where acceptable monuments exist.

**D. Section Corner Monuments:**

Section corner monuments should be described as to type, markings and by whom set. Section corner monuments NOT set by GLO/BLM survey require acceptable proof of correct location or used for location purposes and identified as being the "purported" corner in written descriptions and on maps. If diligent search fails to locate any acceptable section corner monuments to which ties can be made, the calculated position of such corners may be used provided a tie to a section corner of an adjacent section is given and properly identified.

**E. Examples:**

Examples of written descriptions and maps are provided on the following pages of this manual.

**SUPPLEMENT TO STANDARDS FOR FINAL RIGHT OF WAY  
DESCRIPTIONS PERTAINING TO USE OF GPS SYSTEM  
MAY 2008**

Guidelines for trails and right of way final survey data using a GPS system (Global Positioning System)

For multi year easements and in some cases easements in rural areas

1. Maps and legal descriptions shall be prepared by the section only.
2. Section, township and range must be indicated.
3. Purpose of right of way (i.e. roadway, utilities, etc.) must be indicated.
4. Type of monument found at section corner that was used for reference.
5. Section line and right of way intersection ties shall be shown upon entering and leaving State land parcels.
6. Width, length and acreage of right of way must be indicated.

Notes on using the GPS system:

Establish a coordinate system on a known section corner. Identify said point *using the preferred spatial reference (NAD\_1983\_HARN\_UTM\_ZONE\_12N) as specified in the following Amendment:*

Use the same coordinate system for the entire project.

Locate points where the centerline of trail or rights of way enters and leaves State land, also at angle points along the centerline of trail or right of way.

Supply bearings and distances between angle points (curve data, radius and arc distance if necessary) and ties to the beginning point.

# Date Specifications for Rights of Way Applications and Projects

*version 6-12-12*

## **I. BACKGROUND:**

*The Arizona State Land Department requires digital spatial data be collected for all Rights of Way application submissions. The standards listed below will apply to all digital data utilized for applications and/or projects unless specifically modified and agreed upon by all parties. The general GIS environment for the Department is the Environmental Systems Research Institute (ESRI) ARCGIS.*

## **II. FILE FORMATS:**

*ESRI shape files or ESRI geodatabase format are the preferred deliverable.*

*Alternatively, CAD data can be delivered as AutoCAD drawing files (.dwg) up to AutoCAD 2010, MicroStation design files (.dgn) up to version 8, or partial drawing interchange files (.dxf) that comply with DXF standards up to AutoCAD 2010. **All CAD data shall include its own unique spatial referencing information which includes projection and datum. All CAD files without spatial referencing information will be returned to the applicant for resubmittal.***

***GPS collected data will be accepted (tracts and points), with spatial referencing information.***

*Our preferred spatial reference is: **NAD\_1983\_HARN\_UTM\_Zone\_12N***

*Exceptions will be considered on a case by case basis by ASLD ROW and/or GIS Management only.*

## **III MEDIA:**

*All digital spatial data shall be delivered via e-mail, downloaded from contractor web or ftp sites, or by CD-ROM or DVD media.*

## **IV. LOGICAL CONSISTENCY OF SPATIAL DATA STRUCTURE:**

*All data sets shall:*

- *Have polygons closed and line segments properly connected properly represent polygonal or line segmented features*

- *Free of line undershoots and overshoots where line segments meet and polygons close*
- *Free of duplicate spatial objects such as polygons, line segments, nodes etc.*

## **V. METADATA:**

*All spatial data sets shall be delivered to ASLD with standard metadata text files. These files shall include information regarding projection and datum of submitted digital product, any relevant information provided within the attributes table, and contact information for the person(s) who created the product.*

### **Contact:**

*Should you have questions or suggestions regarding these standards or need additional information please contact:*

*Jenna Straface  
602-364-3747  
[jstraface@land.az.gov](mailto:jstraface@land.az.gov)*

*Ron Huettner  
602-542-2502  
[rhuettner@land.az.gov](mailto:rhuettner@land.az.gov)*

*Arizona State Land Department  
1616 West Adams  
Phoenix, AZ 85007*

## **RIGHT OF WAY DESCRIPTION STANDARDS USING A GPS SYSTEM**

The following criteria shall apply to all rights of way prepared for application to cross lands owned by the State of Arizona. Any questions regarding these standards should be directed to a member of the Cadastral Survey Unit at 602-542-2601

**A. Written descriptions:**

Written descriptions shall contain sufficient data to accurately locate right of way alignment within a single section. A written description may not be necessary if a proper map is supplied.

**B. Maps:**

Maps shall clearly show the alignment of the right of way within a single section. The maps shall include bearings and distances to the angle points on the centerline of the proposed right of way, bearing and distances to the ties of the centerline of the proposed ROW, the width of the proposed ROW, and a north arrow.

**C. Section Corner Ties:**

All points of ingress or egress of State land within a section will be tied with a bearing and distance to at least one of the standard section or quarter section corners of that section. If the right of way passes through several adjacent sections, the initially used section or quarter corner is acceptable. The prime purpose of located a corner is to establish a coordinate system with the GPS system.

**D. Section Corner Monuments:**

Section corners monuments should be described by type, markings and by whom set. Section corner monuments not set by GLO/BLM survey require acceptable proof of correct location.

**E. Examples:**

Examples of written descriptions and maps are provided on the following pages of this manual.

# Section Map

Arizona State  
Land Department

Application/File no. Example 1

- Preliminary description
- Final description



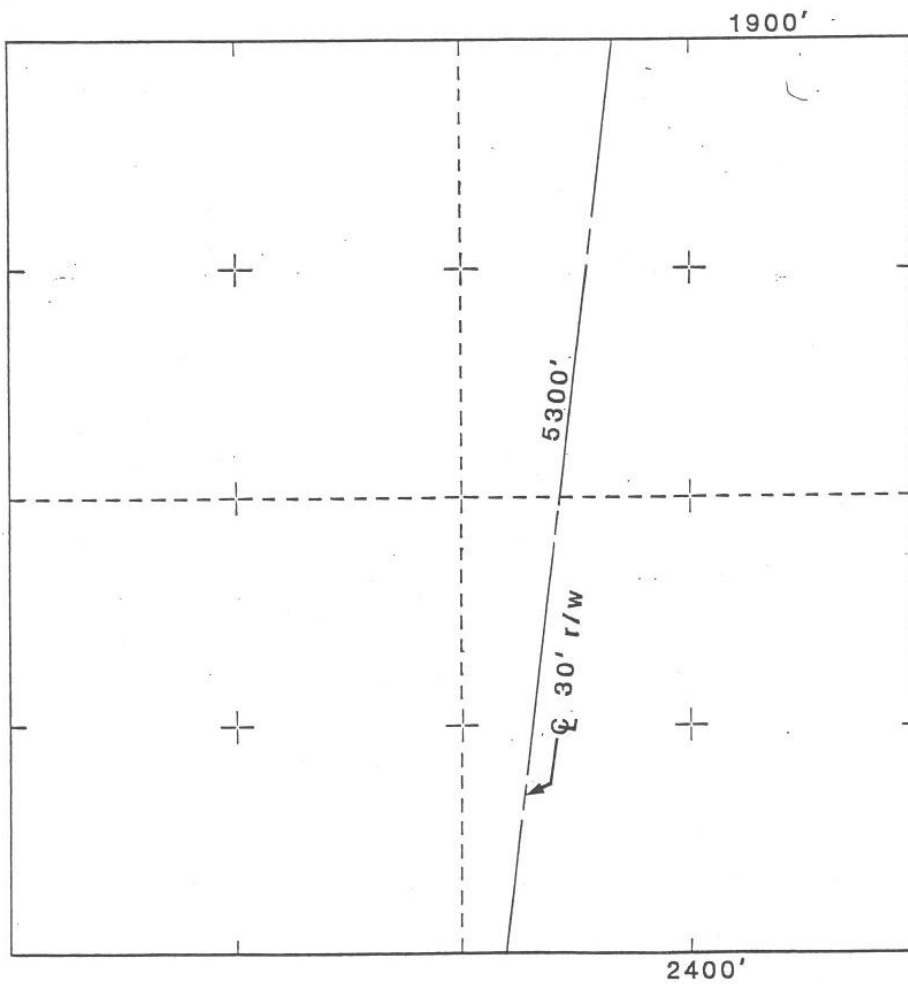
Twp. 1N

Rge. 10E

Sec. 23

Scale

1" = 1000'



Show GLO/BLM lots where applicable.

T. B. description	S.L.D. Engineering
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# Section Map

Arizona State  
Land Department

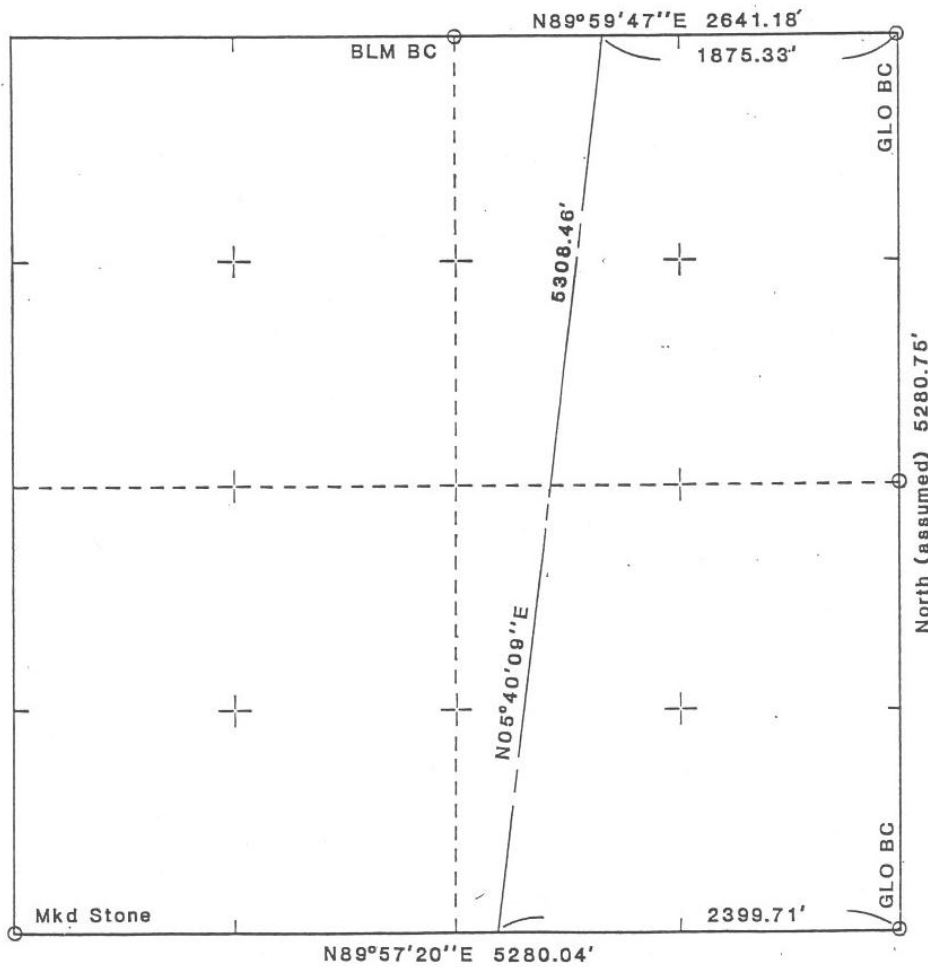
Application/File no. Example 2

- Preliminary description
- Final description



Twp. 1N  
Rge. 10E  
Sec. 23

Scale  
1" = 1000'



Show GLO/BLM lots where applicable.

T. B. description	S.L.D. Engineering
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Written description for Example 2

A strip of land being thirty (30) feet in width across the West half of the East half (W2E2) of Section 23, Township 1 North, Range 10 East, Gila and Salt River Meridian, Pinal County, Arizona. The centerline of said strip of land being more particularly described as follows:

Beginning at a point on the South line of said Section 23, from which a GLO brass cap marking the Southeast corner of said section, bears N89°57'20"E a distance of 2399.71 feet. Thence N05°40'09"E along said centerline a distance of 5308.46 feet to a point on the North line of said section, from which a GLO brass cap marking the Northeast corner bears N89°59'47"E a distance of 1875.33 feet, said point being the point of termination of the herein described centerline.

Said strip of land contains 3.65 acres, more or less.



# Section Map

Arizona State  
Land Department

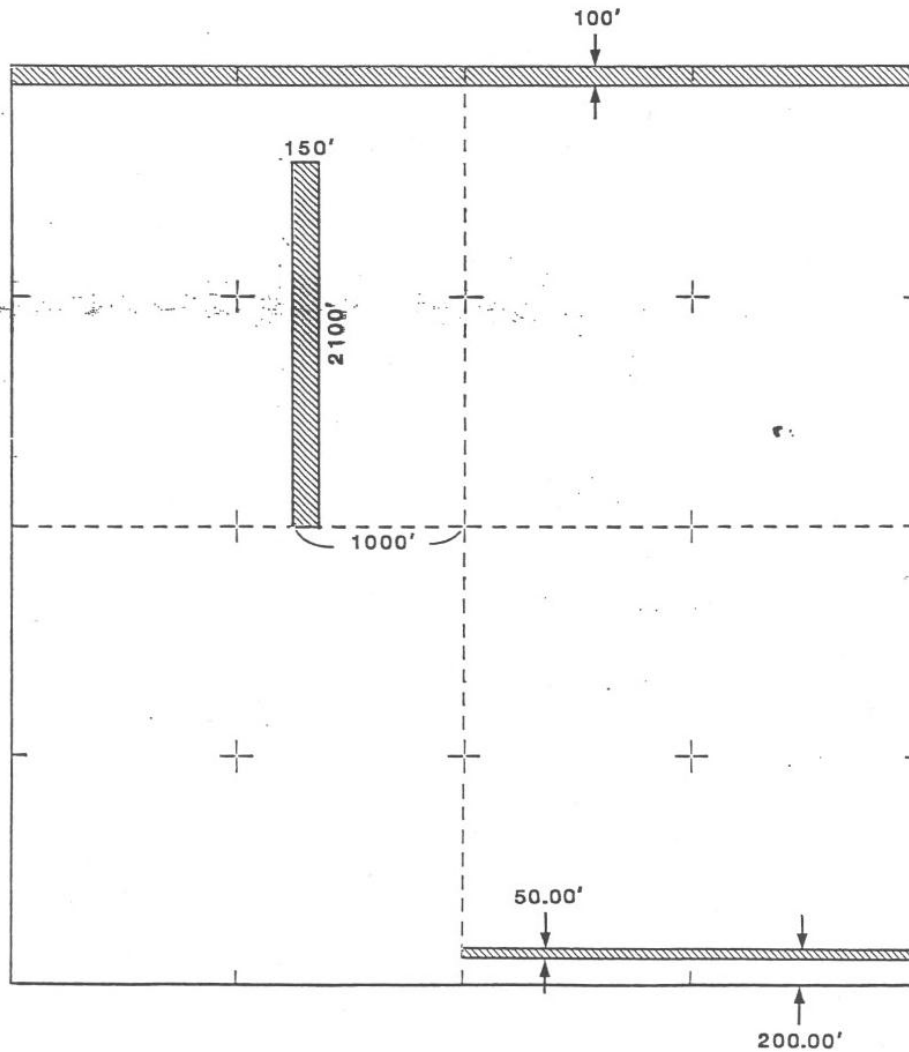
Application/File no. Example 3

- Preliminary description
- Final description

Twp. 2S  
Rge. 1W  
Sec. 10

Scale  
1" = 1000'

NOTE: Az RLS Certification NOT Required.



Show GLO/BLM lots where applicable.

T. B. description	S.L.D. Engineering
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Written descriptions for Example 3

The north 100 feet of Section 10, Township 2 South, Range 1 West, Gila and Salt River Meridian, Maricopa County, Arizona.

Containing 12.12 acres, more or less.

-OR-

The north 50.00 feet of the south 200.00 feet of the Southeast quarter of section 10, Township 2 South, Range 1 West, Gila and Salt River Meridian, Maricopa County, Arizona.

Containing 3.03 acres, more or less.

-OR-

The west 150 feet of the east 1000 feet of the south 2100 feet of the East half of the Northwest quarter of section 10, Township 2 South, Range 1 West, Gila and Salt River Meridian, Maricopa County, Arizona.

Containing 7.23 acres, more or less.

NOTE: The above examples of written final descriptions do NOT require certification by an Arizona Registered Land Surveyor.