**INFORMATION FOR REGISTERED LAND SURVEYOR**

**Introduction**

This section outlines the requirements which the professional land surveyor must consider when preparing a legal description and exhibit drawing for a proposed easement on behalf of their client, our customer. These requirements are provided to achieve an optimum degree of uniformity of product submitted to TEP/UES.

- Legal description will be prepared and stamped by a Professional Land Surveyor in good standing registered in the State of Arizona.

- The submitted legal description for an easement to be granted shall meet the criteria set forth in Section 14 of the PDF titled, "Arizona Boundary Survey Minimum Standards," available on the Arizona Board of Technical Registration website. Page size must be 8.50 x 11.00 inches in portrait orientation.

- An exhibit drawing must accompany the legal description to visually support the written narrative (see requirements below).

**Legal Description**

1. **Caption**
   
   a) Indicate use in a general manner, such as: "An electric easement within a portion of...." DO NOT state specific use (i.e., particular type of equipment nor its use as overhead or underground).

   b) State geographic location by:

   - Reference to a government land division within the U.S. Public Land Survey System, a Land Grant, a Reservation, a Homestead, etc.

   - Lot or parcel (number or letter), block or tract within a county recorded subdivision identifying said County Recorder’s Office and the recordation number of said subdivision.

   - Citation of the recorded deed of the parcel of land the easement will encumber.

2. **Body**

   - A clearly stated basis of bearing, referencing two existing, physically described controlling monuments.

   - Sufficient data to enable a mathematical verification of the easement being inscribed within the property being encumbered.

   - Where described, curve segments shall contain sufficient information to allow verification of the data by mathematical analysis. Curves are presumed to be circular and tangent. All other non-tangent and/or non-circular curves must be noted in the description.

   - Identify and note any existing, recorded electric easement(s) which is/are intended to join with the new easement as a continuous, uninterrupted land right.

   - Report the total area of the easement(s) in square feet when less than an acre (rounded to the nearest foot) or in acres when area exceeds 43,560 square feet (three places to right of the decimal).
INFORMATION FOR REGISTERED LAND SURVEYOR

Exhibit Drawing

- Page size to be 8.50 x 11.00 inches (ANSI A).
- Title block must state the township, range, section(s) and meridian of the easement location.
- A north arrow.
- If applicable, a line table and/or curve data will be shown.
- Note assessor’s parcel number (APN) of affected parcel.
- The county recording number of the deed of the underlying parcel.
- Boundary lines shown of all parcels affected by the easement.
- Depict existing, recorded electric easement(s) which is/are intended to join with the new easement.

Deliverables

In an effort to operate and maintain a geographic information system (GIS) for both corporate land rights and facility mapping purposes, TEP/UES now requires delivery of specific electronic files by the customer (see b & c below).

a) An original, stamped paper final draft which meets County recording requirements based on A.R.S. 11-480.

b) CAD file of the results of survey drawing (AutoCAD 2005 or newer) (.DWG or .DXF) geo-referenced to the minimal standard of Arizona State Plane Grid Coordinate System NAD83/HARN92, AZ Central Zone, State Plane Int'l Feet. Newer published National Spatial Reference System (NSRS) datums by the NGS such as NAD83(CORS96), NAD83(2007) and NAD83(2011) are acceptable. Please note as part of the required metadata file.

c) Metadata text file (include projection, datum, project name, Company/Firm, name of preparer and date).

Below are a resources for geodetic control for GPS RTK localization of an easement survey:

- NOAA NGS Survey Marks and Datasheets site [http://www.ngs.noaa.gov/datasheets/](http://www.ngs.noaa.gov/datasheets/)
- Santa Cruz County (AZ) Public Works Department, a comprehensive control survey by CPE Consultants LLC (March 2014) titled, "Santa Cruz County GIS Control Monument Survey"
- NOAA NGS OPUS online positioning solution of a GPS static session [http://www.ngs.noaa.gov/OPUS/]