

Instructions for Preparing Exhibits, Plats and Field Notes

For The Following Lower Colorado River Authority

Canal Crossings and Transmission Line Crossings

Required Information:

Miscellaneous Easements (Pipelines)

Maps (or plats) showing the location of proposed projects on LCRA-owned lands are required as part of the Canal/Transmission Line Crossing review process. The following instructions are to be followed when requesting new work (proposed project).

The information specified below represents **minimum** requirements of the LCRA Survey & Mapping Department; additional information may be requested on a project-by-project basis to facilitate a full evaluation of the proposed activity.

The information should be submitted along with the submittal form and processing fees. Each exhibit or plat and field notes must conform to the specifications contained herein. The information provided is not considered complete, and processing of the review will not be initiated until all information requested has been submitted and our staff has determined that it is adequate.

NOTE: Surveys and survey plats required by other entities, Federal, State, County and/or City, are PERMISSIBLE and usable for LCRA purposes provided they meet the following requirements.

SUBMIT SURVEY PLATS, FIELD NOTES AND/OR EXHIBITS DIGITALLY,

PLEASE PROVIDE THE INFORMATION IN ALL OF THE FOLLOWING FORMATS:

1. In an ESRI format (i.e. Shape file) of the easement polygons
2. AutoCAD version 6 or later in a DWG format
3. PDF of all drawings, exhibits, plats and field notes

A. GENERAL INSTRUCTIONS:

1. Each exhibit or plat should be 8-1/2" x 11" or 8-1/2" x 14".
2. Any shading used to identify specific areas must be reproducible by ordinary copy machines.
3. Each plat and field notes submitted must comply with all TBPLS Rules and also the following; have a title block identifying, at a minimum: (a) applicant name; (b) applicant address; (c) project name; (d) date of preparation; (e) name of preparer, and (f) applicant phone number, (g) project location as follows:
 - (1) provide county, survey name (original grantee) and, as applicable, survey or section number, block number, township number, subdivision name, lot or tract number, and an abstract number.
4. The scale for each map or plat must be clearly indicated both with an annotated scale of 1" = ??? and by graphic scale.

5. Vicinity Maps -- Exhibit A for each project application must be a Vicinity Map showing the general location of the proposed work. The Vicinity Map may be produced using a U.S.G.S. 7.5-minute topographic map and/or a Texas Department of Transportation County Road Map as its base layer. The project location should be indicated by a prominent arrow on the map. An 8 1/2" x 11" Xerox copy from the original topographic or county map showing the project location is sufficient. It is not necessary to submit the entire topographic or county map, so long as the map is appropriately identified as to the origin of the base information (e.g., name, and date of base map information used). This is most easily accomplished by copying the legend of the base map and making it part of the Vicinity Map.
6. Project Site Exhibit -- Exhibit B –**Requesting a Pipeline Crossing** – Under a LCRA Transmission Line or Canal Easement - Each project submittal should contain demographic features such as road numbers, street names, railroad crossings, corporate city limits, and other prominent locative features should be included on the Detailed Project Plan. This should be produced at sufficient scale and detail to enable irrigation field inspectors to locate the project on the ground with minimal difficulty. A North arrow must be provided. Annotation may be included on the map regarding distance of the project from known points (e.g., highway intersections, road and/or stream crossings, etc.). Designate point of entry of pipeline into the easement and point of exit of the pipeline from the easement must be shown in State Plane Grid Coords (in Tx Central 4203) NAD 83/HARN/CORS OR NAD83 (NSRS2007) horz datum and NAVD 88 vertical datum. Grid bearing basis with surface annotation is required. Also an aerial plan- view drawing and a cross-sectional drawing of all proposed engineered structures on LCRA-owned lands at the project site. Depth of burial at not fewer than 60” below the natural flow line of a canal or surface of the ground for transmission lines.
7. Detailed Project Plan -- Exhibit C - **Requesting an Easement** Crossing LCRA lands owned in fee simple. Each project submittal should be in Survey Plat and Field Notes format which provides specific project location information. The Detailed Project Plan should be produced at sufficient scale and detail to enable irrigation field inspectors to locate the project on the ground with minimal difficulty. **This survey plat and field notes must satisfy all Texas Board of Professional Land Surveyors rules concerning plat requirements.**

Page 1 of the Detailed Project Plan should contain, at a minimum:

- a. A North arrow
- b. The location of pipeline in relation to the existing canal or transmission line (angle of intersection)
- c. Designate point of entry of pipeline into the LCRA owned land and point of exit of the pipeline from the LCRA owned land. These points must be shown in State Plane Grid Coords (normally Tx Central 4203) NAD 83/HARN/CORS OR NAD83 (NSRS2007) horz datum and NAVD 88 vertical datum. Grid bearing basis with surface annotation is required.
- d. The Detailed Project Plan cross-sectional drawing must include notation as to the outside diameter (OD) of all pipelines covered by the easement, and the relationship of the pipeline(s) to any other pipeline(s) in the immediate vicinity.
- e. The identification numbers for any structures at the site previously authorized by the LCRA (available from the respective LCRA Irrigation District office upon request)
- f. Course and distance from one end of the proposed pipeline easement to the nearest survey corner or subdivision survey corner shall be included, along with the survey name (original grantee), and as applicable, survey or section number, block number, township number, subdivision name, lot or tract number, and abstract number of all surveys abutting the easement.
- g. Must submit three signed and sealed originals of the plat and field notes after LCRA reviewed approval of “draft” version..
- h. The easement width dimensions and the location of the easement centerline.

Page 2 of the Detailed project Plan must contain an As-Built Survey – (If applicable)

- a. Showing the depth of burial of pipeline. This must be furnished for all projects on LCRA-owned lands including crossings of both canal and transmission lines.
- b. The survey plat shall show plan view only for projects on LCRA-owned tracts. Failure to provide this information is, by terms of this contract grounds for termination of the easement and or removal of the structure from LCRA owned/leased land.

A profile drawing showing the proposed depth of burial at not fewer than 60” below the natural flow line of a canal or surface of the ground for transmission lines.

- c. LCRA will issue an easement using the proposed ROW and depth of burial information. Following installation of the pipeline, however, the applicant is required by terms of the LCRA contract to provide a survey of actual burial depth measurements for that portion of the ROW length occupying LCRA-owned land. The spacing between depth-of-burial measurement points is a function of the length of ROW. If the easement length is less than 500 feet, the depth of cover of the structure and waterway bottom elevation shall be determined at intervals not to exceed 50 feet
- d. All elevations must be referenced to NAVD88 and grid coordinates must reference Texas State Plane coordinate System of 1983. The accuracy of the waterway bottom and pipeline elevations shall be +/- one-half (.5') foot for the waterway bottom and +/- one-half (0.5') foot for depth of burial less than or equal to 10 feet and +/- fifteen (15%) percent for depth of burial greater than ten (10) feet. Manual probing and electronic means (both active and passive) of survey type shall be acceptable for depth of burial determinations.

**CERTIFICATION BY A TEXAS REGISTERED PROFESSIONAL LAND SURVEYOR IS REQUIRED
ON THE "DETAILED PROJECT PLAN"**

