

Survey Requirements for Full Delivery Projects with Boundary Design and Fencing Guidelines

The full delivery provider (Provider) shall furnish one point of contact as a central point of communication for real property acquisition. The Provider shall contact the Project Manager at the Division of Mitigation Services (DMS) to discuss any variations in the easement boundary that stray from the technical proposal prior to proceeding with the acquisition.

Conservation Easement Boundary Design and Fencing Guidelines

Simplified project boundaries minimize encroachments, protect mitigation assets, lower fencing costs and make it easier for adjacent landowners to understand boundaries. Fewer and longer lines must prevail over many short lines when considering the easement boundary. Wetland delineations and measurements from the top of bank serve as tools to help draw the conservation easement boundary but should not be the single determinant of the easement boundary location.

Fences are required on all sites with livestock access to areas adjacent to the conservation easement. Fencing styles and alignments should be based on landowner and livestock needs with careful consideration for the time, energy and financial resource capacity of the landowner to maintain installations in good working condition. Use resources like the NRCS to help develop well designed and built fences that can meet the landowners needs. A good fence will provide less opportunity for encroachment, reduce maintenance needs, and will facilitate long-term protection of the conservation easement. Room to maintain the fence without impacting the integrity of the conservation easement shall be considered prior to installation. **The State is not responsible for maintenance of fencing.**

Survey and Boundary Marking Requirements

- 1) All surveys shall meet the Standards of Practice for Land Surveying in North Carolina as described in Title 21, Chapter 56 of the North Carolina Administrative Code.
- 2) The Provider shall show the existing property corners, nearby easements, dwellings, roadways, streams and creeks on the survey plat. The Provider shall also show all other easements that are within 100 feet of proposed conservation easement boundary lines. Manholes and power poles shall also be shown on the plat. All existing easements or rights-of-way that affect the project must be shown on the plat.
- 3) The survey plat will serve as a baseline document for existing infrastructure. Roads, paths, trails, and other items of enduring quality that are intended to remain as a use within the easement area shall be located. This plat provides a spatial reference for long-term stewardship of the easement.
- 4) The Provider shall set 5/8" rebar 30" in length with 3-1/4" aluminum caps on all easement corners. Caps shall meet DMS specifications (Berntsen RBD5325 imprinted with NC State Logo # B9087 or equivalent). After installation, caps shall be stamped with the corresponding number from the table of coordinates that is required in paragraph 7 below.
- 5) The Provider shall place a 6-foot tall durable witness post at each corner in the conservation easement boundary. Witness posts shall be placed within the conservation easement area. Posts shall be made of material that will last a minimum of 50 years. The Provider shall attach a conservation easement sign to each witness post and place additional signs at no more than 200-foot intervals along boundary lines. When

appropriate, the Provider shall mark existing trees with conservation easement signs and/or blaze conservation easement lines at approximate eye level. Originally created during the NC Ecosystem Enhancement Program era, a five minute YouTube Video link is provided as a boundary marking resource <https://youtu.be/7dE7edd3V5M>.

- 6) All surveys shall be tied to the North Carolina State Plane Coordinate System NAD83 (NSRS2011) per the Standards of Practice or Land Surveying in North Carolina, Title 21 NCAC 56.1602(g), **regardless of whether the property is or is not within 2,000 feet of a geodetic monument** and with application of 21-56.1607 GLOBAL POSITIONING SYSTEM SURVEYS or 21-56.1603 CLASSIFICATION OF BOUNDARY SURVEYS.
- 7) The landowner(s) or his/her legal representative must sign the recorded plat.
- 8) Access to the easement area must be shown, with location and width depicted by a dotted line and note on the recorded plat.
- 9) The Provider shall send an Adobe Acrobat (.pdf) copy and an Arc GIS file of the preliminary plat to the DMS Project Manager and the State Property Agent by electronic mail. The title block shall read, "Conservation Easement Survey for the State of North Carolina, Division of Mitigation Services", survey sheet number, and shall contain the SPO parcel ID number, DMS project name and number.
- 10) The title block shall contain the name of the landowner, location, date surveyed, scale of the drawing, name, address, registration number and seal of the surveyor. **A table of coordinates (northing and easting) for all property corners must be included on the plat.** All corners shall be numbered consecutively starting with number 1. If multiple parcels comprise a single project, assign a unique number to each property corner within the project. The text metes and bounds description for each tract of the surveyed areas shall be provided on standard letter sized paper and titled "Exhibit A".
- 11) After written approval has been received from the SPO and DMS, the Provider shall record the final approved plat and obtain all necessary approvals from the county review officer.
- 12) The Provider shall send electronic copies of the recorded plat to blane.rice@doa.nc.gov, jeff.mulligan@doa.nc.gov and Jeffrey.horton@ncdenr.gov. Include along with the PDF of the recorded plat the digital files in CAD (.dwg) and Arc GIS format. The DMS Project Manager should also be included in the electronic delivery.
- 13) All files must be geo-referenced and projected in NC State Plane Coordinates, NAD83 (NSRS 2011), in US Survey Feet. The CAD and Arc GIS files must contain a closed polygon of the conservation easement shape and must contain a polygon layer in addition to the line work.
 - For tips on creating GIS compatible CAD drawings, please see ESRI's [Creating Compatible CAD Data for ArcGIS](#).
 - Digital files submitted to DMS shall follow the guidance document: [Format, Data Requirements and Content Guidance for Electronic Drawings Submitted to DMS](#).