

- reasons for fixing and floating stations,
 - evaluation of adjustment results,
 - Total man-hours spent by crew and processor and overall assessment of the mission and performance of equipment.
- j. All completed LD-200 cards (latest version, see [Figure 10-F](#)).
- k. One *digital copy of original GNSS raw data in Leica, Trimble, Topcon, or RINEX-3 format. This data can be delivered on a CD or via FTP server if the client has an existing FTP account with VDOT.

Sec. 10.07 LD-200 Card (Rev. 8/00)

As of 7/01/99, VDOT reverted to preparing surveys and design plans in imperial units, using the **U.S. Survey Foot**. This meant revisions to the survey manual. It also meant revising the LD-200 card. GNSS has become a major tool for surveyors. The old LD-200 card did not have enough supporting data for a surveyor to use. Some new revisions include: adding Latitude and Longitude (out to 5 decimal places), the Geoid and ellipsoid heights, control station or VDOT project station that adjusted values are based on, horizontal closure and the sketch and detailed description (on back of printed version, below on electronic version). This new LD-200 Horizontal Control card (see [Figure 10-F](#)) will help the surveyor by giving more background knowledge of the coordinate origin and inspire more surveyors to turn in an electronic version of the card and data. The card is a cell in the Microstation cell library (see **Appendix A**).

Sec. 10.08 Basis of the State Plane Coordinate System

To make full use of the State Plane Coordinate System, one must understand how the plane coordinates of any given point are directly related to the geodetic coordinates (latitude and longitude) of that point. First, it should be understood that the latitude of a point is the angular difference between that point and the equator. The longitude of a point is the angular difference between that point and the zero meridian, which arbitrarily passes through Greenwich, England. Virginia is divided into two (2) Lambert Conformal Conic Projection zones, North and South. The dividing line runs along latitude of 38°. **The Code of Virginia §55-288.1** divides the zones along the county lines, as listed on [Figure 10-G](#). A point is positioned using GNSS methods and the position is referenced to a geodetic coordinate system, latitude and longitude. The Geodetic Coordinates are directly related to the Virginia State Plane Coordinate System by definition in **The Code of Virginia §55-292** (see [Figure 10-H](#)).

* Rev. 7/15