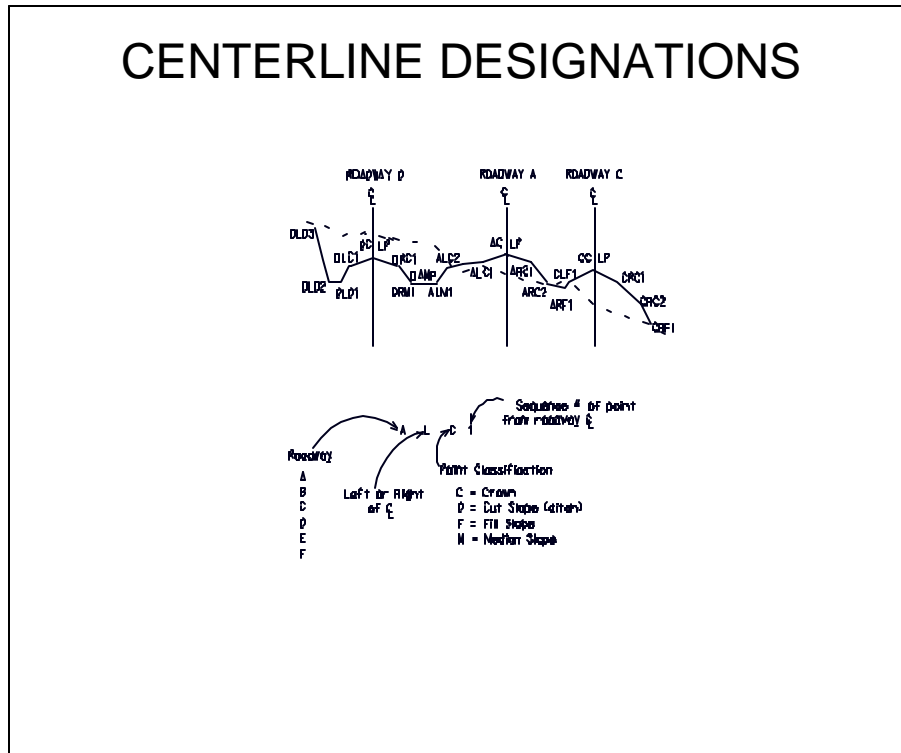


1300.04 TAKING PRECONSTRUCTION CROSS SECTIONS

- A. Preliminary Survey Requirements: The designer and the District will work together to determine the “Preliminary Survey Requirements”. The requirements can vary for each project.
- B. Preliminary Survey with Data Collector/GeoPak – When the preliminary survey is put in a “Husky” or some other Data Collector and loaded in **GeoPak**, then preconstruction cross sections can be taken mathematically at any plane.
- C. Preconstruction Cross Sections. The preconstruction cross sections will, in most cases, consist of additional and extended sections omitted from the preliminary survey. Cross sections must be taken wherever necessary to show the true excavation quality. Some of these points will include:
 - 1. Zero sections between cut and fill.
 - 2. P.C. and P.T. (T.S. and S.T.) of horizontal curves.
 - 3. Points where width of side ditch and borrow changes.
 - 4. Points where backslope changes.
 - 5. Points where width of roadway changes in cut section.
 - 6. Beginning and end of side borrow pits.
 - 7. Extending preliminary cross sections where necessary.
- D. Cross Section Accuracy. Cross sections shall be taken accurately, at right angles to the centerline, at known locations so that final cross sections may be taken at the same stations. Each section shall be an accurate profile of the ground at that location. The rod shall be held vertically and the tape shall be read to the nearest 1 ft (300 mm) from the centerline of the project. The rod shall be read to the nearest 1/10 foot (30 mm). All sections shall be taken both left and right of centerline and shall extend at least 10 ft (3 m) beyond the construction limits.



- E. Preliminary Cross Sections Used to Compute Final Quantities. When final quantities are to be computed in the field office and the preliminary cross sections are to be used as the preconstruction sections, the Project Manager should request the plotted cross sections by letter to the Construction Division. These cross sections should then be carefully checked to determine that they are of sufficient width to cover the construction limits. Preliminary cross sections are sometimes extended arbitrarily beyond the actual cross section limits when the project is designed in the Lincoln Office.
- F. Intersections. The Project Manager should take preconstruction cross sections on intersections occurring in excavation sections. These cross sections shall be taken at right angles to the intersecting road and may begin at the centerline of the project or at the right-way-way line. In either case, they should “close” on a cross section taken at right angles to the centerline of the project on each side of the intersecting road. The notes should include a complete sketch showing the following:
1. The station of the intersecting road or approach road.
 2. The location of the cross sections.
 3. Ties to the project centerline and to the approach road line extended.
 4. Angle of intersection.
 5. North point.

- 6. Station or plus of project cross sections on which intersecting road cross sections are to “close”.
- G. Other Excavation Areas – Channel changes and borrow pits that are not parallel to the centerline of the project shall be cross sectioned separately and tied to the project centerline in a manner similar to that described for intersections. Waste banks shall be cross sectioned if overhaul is involved. They shall be tied to the project centerline and haul routes shown.
- H. Cross Section Notes. Notes on intersections, channels, approaches, etc., are usually kept in a separate notebook. Cross section notes should be kept in a manner similar to the example in Division III. Do not crowd the notes.