Site Grading Vignette:

1/2 hour +/-

General Notes:

Site grading principles:

- Crown – point goes downhill with the direction of the slope
- Swale – point goes uphill against the direction of the slope; steep open triangle
- Grade lines run perpendicular to the direction of water flow
- Contours close together = steep slope
- Contours far apart = shallow slope
- Contours that are evenly spaced = uniform slope
- To drain surface water around level area the lower elevation must almost completely surround the entire level area

Slope % translation:

- 10% = 10/100 = 1/10 = 1’ diameter circle
- 20% = 20/100 = 1/5 = 5’ diameter circle
- 30% = 30/100 = 3/10 = 3.3’ diameter circle

Problem:
Modify the site’s topography responding to programmatic & regulatory requirements

1. Dealing with a sloping site & existing situation – direct water with grading
-or-

2. Dealing with a new situation on an existing site – given FFE and must slope away

General notes / Tips:

- Translate maximum slope % to x/100 and use circle as a guide
- Avoid tree drip lines, light poles
- Check direction and intervals of contours
- Use circles on sketch to check % of slopes
- Create swales
- Follow program exactly
- Sketch centerlines of proposed swales prior to manipulating grades
- Use circles to represent distances between contours
- Drainage in parking lots must be consistent .... = separation between contours; use swales at sides to direct run-off
- To provide positive drainage from a level flat surface then next lowest contour must surround that surface and have swales to direct water
- If problem has area that is to remain don’t change contours in that area
- Direct water around level paved areas
- Note street grades but don’t alter
- Don’t alter grades beyond property lines
- Crown goes with slope – crown down
- Swale goes against slope – swell up