Homework 2: Geometric Design & Pavement Design

Textbook Assignment

Number	Points	Answer
3.2	10	(high pt., sta. = 340+58, el. = 1318.15 ft; PVC, sta = 337+50, el. = 1312 ft; PVT sta = 342+50, el. = 1315.75 ft)
3.7	10	8.9 ft
3.8	10	The curve is adequate for the conditions. The criteria one could use are K = 206.5 (greater than required K = 151) or minimum L = 583.2 ft (less than actual L = 800)
3.25	10	PC sta = 2694+90, PT sta = 2704+68, safe speed = 59.26 mph
3.27	10	e = 0.413, D = 5.73, L = 523.6 ft, STA_{PC} = 1122+42.05, STA_{PT} = 1127+65.65
3.31	20	You figure this one out

Additional Required Work (30 points)

Using the 1993 AASHTO equation and common assumptions, how many ESALs should the Interstate 5 rigid pavement under the 45th St. overpass in the southbound direction support? How many has it supported already?

Note: you must determine it's structure and other information from http://wspms.ce.washington.edu/. This will require you to spend a bit of time figuring out how this application works. There are multiple ways to answer this question.