You have been tasked with designing the inlets for a 4-lane divided parkway in Indianapolis, Indiana similar to Germantown Parkway. The road will have high traffic volumes and a speed limit of 50 mph (80 km/h). The businesses on either side of the road are responsible for draining their own parking lots and driveways, so the only thing you have to worry about is the roadway itself and the median between the northbound and southbound lanes. There will be inlets on both sides of the road, so the design drainage area extends from the middle of the median to the curb.

The median is 14 feet wide and each side of the parkway contains two 12-foot traffic lanes, an 8-foot shoulder lane, and a 2.5-foot curb and gutter. The longitudinal slope is 3.5% and the cross-slope of the roadway and shoulders is 2%. The gutter has a 5% slope.

Determine the distance to the first inlet and the spacing of all subsequent inlets. The rainfall intensity for Indianapolis, Indiana can be determined from the chart below:

Clearly state all assumptions and site the relevant source (e.g., table or figure) for your assumptions.