

## 14\_15 Guardrail on Curb and Gutter Berm

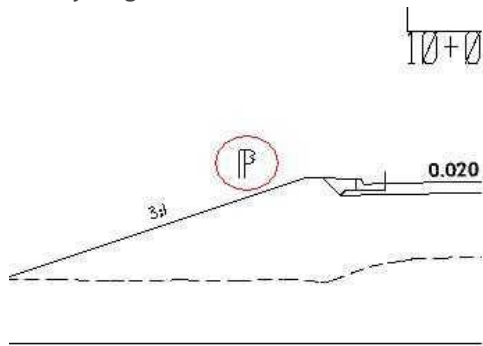
### Question:

1. How does the "CS01 WIDEN BY GUARDRAIL LINE" Criteria variable work for curb and gutter typical sections with berms?
2. Why does Criteria place the guardrail up in the air freestanding sometimes?

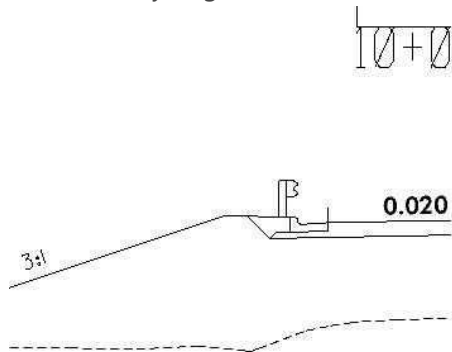
### Answer:

1. If you've placed a guardrail line in a DSN and tell Criteria to look for the guardrail element in the DSN, Criteria will only test two situations. First, if the guardrail line is NOT at the face of the curb, then the total berm width is 14' (12' to the face of the guardrail). No matter what the offset distance is in the DSN file. This is in compliance with STD 862.01 sheet 11 or 11. Second if the guardrail line is at the face of the curb (2' from the proposed EOP for 2'-6" curb and gutter), then Criteria will draw the guardrail at the face of the curb and the set BERM WIDTH is used. Also in compliance with the same standard.

2. The formula used to locate the point where the guardrail is to be drawn, WHEN the guardrail line is at the face of the curb, is wrong (going in the opposite direction and slope) and the berm width distance added an extra 6" that is not needed. Remember that the berm width is always measured from the face of curb and not the back of the curb. This is where I think the extra 6" for the curb width came from. This is what you get with the old formula for CSLP01.CRI.



This is what you get with the modified formula for CSLP01.CRI.



In summary, berm width AND the offset distance of the guardrail line in the DSN are not considered when the guardrail line is NOT at the face of the curb. Berm width is only considered when the guardrail line is at the face of the curb.