Top mounted Post to Box Culvert Design – MwRSF tested a box culvert design for 27 2/4 inch high corrugated beam guardrail using a half post spacing in 2002. The results are described in TRP-03-114-02. A recent project was to simplify the weld detail. I believe the recommendation was to leave the weld the same as the original design. There was no upper bound listed for the amount of fill above the culvert. The lower bound was 9 inches of fill. Is there an upper bound to the amount of fill for the post to function properly? Can this design be used for 31 inch high MGS guardrail as well?

TTI recently (2012) tested a similar design with a 31 inch high w-beam guardrail and posts at a standard spacing. Again, there was no upper bound recommended for the depth of fill on top of the culvert. Is there a limit or does post performance either improve or stay about the same with greater fill depths.

I think I heard TTI also tested another box culvert mount using weak posts at a half post spacing. Is this true and do you have any details about the design and/or contact information?

Any other comments about this design would be appreciated. We love the Midwest side mounted socket design, but there are several existing box culverts where we cannot mount the guardrail that far out due mainly to grading issues for the approach guardrail.