

## Example of detour for drainage area that is too large

2. **Detour:** It should be noted that due the size of the drainage area and amount of flow conveyed the designed detours shown here will be suitable to failure. If possible it is recommended to phase construction in a manner that the need for detours is eliminate.

Little Elk Creek: 3-96" CGMP @ 0.003 ft/ft slope 150 feet downstream of bridge with  $\text{inlet}_{\text{elev}} = 1491.51 \text{ ft}$  and  $\text{Roadway}_{\text{min. grade}} = 1510.00 \text{ ft}$ . Use special end pipe treatment with toe into channel (similar to roadway standard SCES-2).

$$\begin{aligned}Q_{\text{ot}} &= Q_{4.7} = 2311.07 \text{ cfs} \\V_{4.7} &= 11.67 \text{ fps} \\CHW &= 1510.00 \text{ ft}\end{aligned}$$

Little Elk Creek Overflow: 4-60" CGMP @ 0.003 ft/ft slope downstream of bridge with  $\text{inlet}_{\text{elev}} = 1499.8 \text{ ft}$  and  $\text{Roadway}_{\text{min. grade}} = 1510.00 \text{ ft}$ . Use special end pipe treatment with toe into channel (similar to roadway standard SCES-2).

$$\begin{aligned}Q_{\text{ot}} &= Q_{4.7} = 2522.18 \text{ cfs} \\V_{4.7} &= 5.9 \text{ fps} \\CHW &= 1510.00 \text{ ft}\end{aligned}$$