Examples of the Effectiveness of Wildlife Crossing Structures with Fencing in Reducing Wildlife-Vehicle Collisions While Improving Habitat Connectivity

1. **Wyoming- U.S. Highway 191, Trappers Point**

   **Key Findings:**
   - By the third year following overpass and underpass construction, the total number of wildlife-vehicle collisions dropped by 81%.
   - **Pronghorn–vehicle collisions were completely eliminated, a 100% reduction.**
   - Mule deer–vehicle collisions were reduced by 79%.
   - Back-and-forth movements increased by >60% for mule deer and >300% for pronghorn, suggesting that the crossing structures may enhance movement options and allow ungulates greater flexibility in finding forage.


2. **Arizona- Highway 260**

   **Key Findings:**
   - After construction of 6 crossing structures and wildlife-proof fencing, vehicle collisions with elk were reduced by 87%.
   - Furthermore, fencing in combination with a relatively high density of passages (1 structure/1.1 km) promoted elk highway permeability by funneling animals toward the underpasses where resistance to crossing was lower than that associated with crossings on the road surface.


3. **Colorado- Highway 9**

   **Key Findings:**
   - Wildlife-vehicle collisions decreased progressively during the first two years of the study. Following the construction of Phase 2, the number of mule deer and elk carcasses dropped by 86% to a total of eight reported carcasses, down from the pre-construction 5-year average of 56.4 carcasses.
   - Correspondingly, wildlife-vehicle crashes reported to law enforcement personnel decreased by 70%, to just three crashes, during the first winter of monitoring (2015-2016).


4. **Wyoming- U.S. Highway 30, Nugget Canyon**

   **Key Findings:**
   - Underpass and fence installation effectively reduced DVCs by 81%. “Had fence gates remained closed and cattle guards clear of snow, DVCs could be eliminated altogether.” (Sawyer et al. 2013; page 492). The results suggest that underpasses, combined with game-proof fencing, improve highway safety for motorists while providing safe and effective movement corridors for large populations of migratory mule deer.