

Wildlife bridges are important to animals whose normal activities are affected by the highway underneath the bridge. For many reasons, including hunting, breeding and migration purposes, animals normally cross highways anyway. When they cross at an inopportune time it is extremely dangerous to drivers, as well as the animal that is attempting to cross.

The structure I am proposing is a bridge, not unlike a normal highway entrance/exit overpass. Many are seen on other portions of the I-90 highway. It would be one-hundred feet wide at its narrowest point at the center, but wider at the base. It will act as a funnel for the target animals, and look less like a man-built crossing, which will achieve a natural look for the bridge. The more natural look and setting of the crossing should increase use of the bridge by the animals. In the design there is also a graduated dirt fill ramp on both sides of the bridge to provide a gentle incline and decline.

The proposed bridge would have a structural support pan of concrete with a dirt fill. This dirt filled support pan would be planted with natural growths to provide a natural look to the bridge for the animals. As for driver safety, a four foot concrete barrier topped with a curved chain link fence would be on both sides of the bridge to prevent access to lower areas and the highway itself. This structure of fence and barrier would be covered by a colored camouflage net structure to hide the artificial construction from crossing animals.

To keep the animals off of the highway while still trying to funnel them towards the land bridge, I propose a steep (steep on both sides) hill close to the highway that will block both sight and sound of the highway enough, so that the animals are not frightened or deterred from crossing the bridge at the expected point. If the wildlife doesn't cross at this expected point, when they try to cross at a later time it will probably be across the highway itself, which at any point is dangerous.

A bridge like the one I designed and described above would most likely work for the I-90 highway because it is much larger and has a more natural design in comparison to other wildlife bridges. Most other wildlife bridge designs are meant to span two-lane highways. This bridge needed to be designed to span three-lane highways, which on average are around twenty five feet wider than the two-lane highways. This extra width means that if an arch was to support the bridge, then it would need to be very tall. The bridge I designed has a lot of support for the center, which is very important for the type of arch where the middle is flat or almost flat. This design utilizes concrete supports placed in the center section under the bridge for added strength and stability. It is also designed flat in the center to allow for wildlife to more easily access and cross it. Thanks for the opportunity to work on the designs for the bridge; it was a really fun project.