



Figure 1: Wildlife crossing structures reconnect landscapes across roads. This rendering was submitted as part of the ARC International Wildlife Crossing Infrastructure Design Competition in 2010. Image from Olin Studio.

## **WILDLIFE CROSSING INFRASTRUCTURE FOR A GREEN RECOVERY: EMERGING OPPORTUNITIES FOR INNOVATION IN POST- COVID-19 RECOVERY EFFORTS**

While roads are an essential part of modern life, they fragment habitats and landscapes. The effectiveness of wildlife crossing infrastructure (WCI) in reducing wildlife-vehicle collisions and reconnecting landscapes across roads are well documented in scientific literature. There are also many co-benefits derived from implementing WCI, such as increased biodiversity and climate resilience. However, WCI projects are not implemented on a national scale in the US or Canada, in part due to lack of funding prioritization. Both US and Canadian governments have made significant investments in infrastructure to aid in recovery from the COVID-19 pandemic. WCI can be an important element in achieving many of the broad policy goals within Canadian economic recovery spending, yet are largely left out of recovery spending plans. This is in contrast to the United States, who has committed \$350 million for WCI implementation, and has explicitly included WCI in several existing infrastructure programs.

As part of the Master Research Paper, a thematic review of the US and Canadian infrastructure and spending plans was conducted to identify emerging opportunities for landscape connectivity and green infrastructure projects. The potential for co-locating WCI with active transportation uses was then explored in greater detail through an integrative literature review. WCI projects can contribute to national goals of climate resilience, economic recovery, and closing the infrastructure gap. However, positioning projects for funding will require strategic communication of the co-benefits of connected landscapes that align with national funding goals.



Figure 2 (left)  
This MRP explored the benefits and trade offs of co-locating wildlife crossing structures with active transportation uses. This rendering is from the ARC International Wildlife Crossing Infrastructure Design Competition held in 2010. Image from Landshape, Zwarta and Jansma Architects via ARC Solutions.



Figure 3 (right)  
Landscape fragmentation from road construction can decrease habitat area and reduce wildlife movement. Fragmentation leads to isolation across habitat patches. Image adapted from Wildsight, by Bailey Repp.

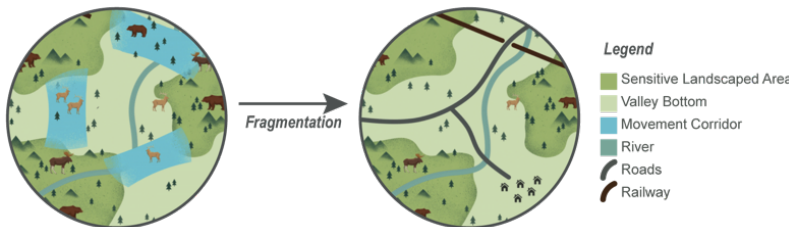


Figure 4 (above)  
Each year, Wildlife Vehicle Collisions cost the US \$8 billion. In Ontario, 1 in 17 vehicle accidents involve a wild animal. This image is from a photographic series, At Rest by Emma Kisiel. The series depicts roadkill on American highways, drawing attention to the human impact of roads and vehicles on animals.