OPERA
Local Operational Research Assistance Program

Reptile Crossing

Project Number 2013-08

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Problem Turtles frequently cross a busy highway in Washington County, which is dangerous for both the turtles and drivers. Some motorists stop on the road to pick up the turtles and assist them in crossing, resulting in potentially hazardous traffic disruptions.

Solution Washington County installed a specialized below-grade, dry culvert under the road to facilitate the safe travel of turtles and other reptiles from one side of the road to the other. Additionally, the county installed a fence designed to funnel the turtles into the tunnel as well as a camera and an infrared trail counter to observe and keep track of the animals using the culvert.

Procedure The location for the turtle culvert was selected based on multi-year observations of problem areas and recommendations by the Minnesota Department of Natural Resources. Various fencing options were also explored and implemented. At the tunnel location, crews cut pavement at a 10-degree angle and removed a section about 2.5 feet wide to allow for the tunnel and encasement material. The aggregate base was placed and tunnel pieces measuring 3 feet were installed. The crew then layered patch asphalt to encase the tunnel and leveled it with the existing pavement. Finally, 2,000 feet of fencing was installed on northwest side of the tunnel, and silt fences totaling 2,500 feet in length were installed at three other entry points.

Results Since the culverts were installed, no amphibians or reptiles have been found dead on the road, and drivers no longer create traffic hazards by stopping to help turtles cross the highway.

Approximate Cost $60,000

OPERA Funding $10,000

Implementation The county is evaluating the performance of the installation, and it has established a monitoring protocol to ensure the fence and tunnel are being inspected frequently. Volunteer monitors walk the fence multiple times each week and document animals using the fence and tunnel. The infrared counter provides a count of how many passes occur through the culvert. Additionally, the number of turtle crossings—and fatalities—will continue to be documented and analyzed.

Status Complete

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