



Picture by David Crowder, R. V. Anderson Associates Limited, 2006

When York Region decided to widen St. John's Sideroad through a much-loved and extremely sensitive marsh, it knew that it had to get public support if there was going to be any chance of success.

It was, says Dino Basso, "constructive engagement" and the results speak for themselves: a beautiful new road, a boardwalk meandering along the wetlands, and a project that has just been named the American Public Works Association's Project of the Year.

St. John's Sideroad needed to be rebuilt. The two-lane road was substandard, potentially unsafe for pedestrians, and could no longer cope with the traffic. Hardly an unusual situation except for one thing: the road cut straight through the McKenzie Wetland, a beautiful 10-hectare area of marshlands and ponds teeming with wildlife.

"If this project was going to go ahead, we had to show that you could widen a road and leave the surrounding area in better shape than when you started," explains Dino Basso, York Region's Director of Roads Capital Delivery. "We knew that the public was not going to be enthusiastic about building a new road through such a fragile and sensitive area so we decided to use a three-pronged approach."

"The first thing was constructive engagement, working with the community rather than trying to force the issue. Second was context sensitive design, making sure the project blends with and

InSight

St. John's Sideroad – McKenzie Wetlands Project

Location: York Region

Municipalities: York Region / Town of Aurora

Scope: Widening St. John's Sideroad from two to four-lanes; extending the East Holland River Culvert, installing sewer and water lines.

Environmental Challenge: protecting the McKenzie Wetland

Engineering Design: R. V. Anderson Associates

Contractor: Miwel Construction

Sub-contractors:

- Technicore (sanitary sewer)
- Heat Foundations (piling)
- Miller Paving (asphalt)
- Rotomill (road stabilization)

Project Value: \$20 million

Timing: April 2004 to July 2006

Scope:

Road Construction: 2.8 kilometres

Sanitary Sewer: 2 kilometres

Watermain: 1 kilometre

Awards:

Ontario Public Works Association 2006

Environmental Project of the Year

American Public Works Association 2007

Transportation Project of the Year

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enhances the surrounding environment (a technique used more prevalently in the United States than here in Canada). And finally, a commitment to protect, restore, and enhance the natural environment that we would be working in.”

“Even so, at the beginning, not many people thought we could pull it off.”

It was a lengthy process. The project was introduced to the public in 1996 and the opposition initially, as predicted, was vocal and at times hostile.

“We made a conscious decision to do more than just the minimum level of public consultation required to complete an environmental assessment,” says Salim Alibhai, Service Project Manager of the Roads Branch of York Region’s Transportation and Works Department.

“We held a number of public meetings during the planning, design and construction phases to show the residents what the project was intended to achieve and to get their ideas on how to make it better. It was a constructive approach that not only changed public opinion from resistance to acceptance, praise and pride but helped improve the design as well.”

It was by working with the public and the Town of Aurora that the region developed such visionary ideas as a boardwalk alongside the road. As a two-lane road with no provision for pedestrian traffic, St. John’s Sideroad virtually precluded the residents from any access to the wetlands. The boardwalk, on the other hand, would give the public for the first time the opportunity to appreciate the beauty of the area from a safe and unobstructed vantage and, as an added bonus, provide a key link in the Nokiidaa Trail between Aurora and Newmarket.

Added protection for wildlife was another feature that resonated with the public. If the two-lane road had been

potentially dangerous for pedestrians it was downright hazardous for the local animals and reptiles. To safeguard the wildlife, the designers proposed using a vertical retaining wall to raise the roadbed instead of the typical earth berm with embankments on either side. Since the turtles, frogs and other animals that called the wetlands home could not climb the shear face of the retaining wall, they would be forced to use specially designed culverts installed under the road to get from one side of the wetland to the other, a safer and quicker route for all concerned.

Using a vertical retaining wall also helped minimize the footprint of the road and keep the intrusion into the wetland to a minimum.

“We developed a lot of ideas, not all of which were that easy to explain. Using artists renderings of the various options at the public meetings was a very effective and persuasive tool,” recalls Basso. “Instead of telling the public what we planned to do we could actually show them what could be achieved and in some cases what we didn’t want to do as well.”

As the design started to take shape, York Region staff members worked closely with their counterparts in Aurora. The region was responsible for the road but it was Aurora that had responsibility for sidewalks and illumination.

The town could have gone for standard sidewalks and lamp posts, Alibhai says, but they understood what we were trying to achieve and what the public wanted and were more than happy with the wooden boardwalk and the heritage lights to support the context sensitive design.

There was one other group that played a key role in the consultation process: the McKenzie family, who created the wetlands in 1973 and still lived just north of the project.

“Gord McKenzie and his wife had an enormous personal and emotional investment in the wetlands and it was important to us that they were heavily involved. It was the right thing to do,” says Basso. “After all the wetlands were



BUILDING THE ROAD: “The work outside the wetlands was fairly standard. The focus of attention was really on the wetlands portion of the project,” says Wayne Bruce, Miwel Construction’s construction manager.

Miwel’s first task was to install the sheet metal retaining walls to support the raised roadbed, one of the unique features of the project and one that defined the environmentally sensitive approach the designers had taken. Not only was the retaining wall designed to protect wildlife when the road was completed, it also served as a temporary barrier to protect the wetlands during construction.

With the retaining walls firmly in place, Miwel Construction replaced the layer of peat below the road with stone wrapped with geotextile filter material and built up the roadbed with a final layer of aggregate.

Three cross-culverts, wet and dry, were installed under the road connecting the two sections of the wetland, allowing water to flow naturally through the marsh area and giving the wildlife its safe route from one side to the other.

Final paving however was at least a year away.

The clay bed underneath the new lanes needed time to

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in many ways theirs. Gord McKenzie died shortly before the project was completed but I hope that having seen the ideas go from plan to fruition that he was pleased with the results.”

The final design included many of the suggestions developed in the public workshops: the installation of a meandering boardwalk with lookouts over the marsh, a bike path, extensive planting of trees and shrubs, decorative benches and ornamental lighting, and educational plaques highlighting natural features and the history of the area.

“Sometimes in municipal works, if there are additional costs the answer is no,” concludes Basso. “We took the approach of developing the options first and then the cost so that we could show both our York and Aurora councils what could be achieved with some incremental spending. The message for public works officials is that the cheapest and easiest is not necessarily the optimum way of determining what is best.”

The project, which included an additional two kilometres of road widening and pipe installation outside the wetlands area, got underway in August 2004, eight years after the public consultation first began.



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settle and so a temporary asphalt pavement was laid for traffic to use during the winter.

Construction began again in earnest in May 2006, six months ahead of schedule because the clay beneath the roadbed had settled far more quickly than the engineers had anticipated. The temporary asphalt pavement was removed and the road re-graded to resolve the settlement issues and bring the roadbed to finished grade. A cedar veneer was installed on the retaining walls (another design idea developed during the public consultation workshops), the timber boardwalk was built and the landscaping completed. It took just six days to lay a new asphalt pavement to complete the project and the new road opened for traffic in July 2006.

FOLLOWING-UP: A year has passed since the construction crews packed up their tools and left the area and York Region continues to monitor the area to gauge the success of the project.

“There is a senior citizens residence nearby and you will often see some of the residents sitting on the benches just quietly enjoying the view,” says Dino Basso. “I have ten years invested in this project and it’s gratifying to see just what can be achieved with the right approach.”

“This was more than just a road widening project. Our primary function is to move people and goods but not at the expense of the quality of our life. This project was a unique opportunity to improve our transportation system, enhance an environmentally sensitive area, and create a place where local residents and wildlife can safely co-exist side by side. It is a delight to see people walking, jogging, and bicycling along the boardwalk and the bike path enjoying nature as it was intended.”

“And that’s something to celebrate.” **M**