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# Asphalt Topics

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## Awards Issue

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The Paver of the Year Awards

Dufferin Construction

The Trillium Awards





## Paver of the Year Finalist

### GAZZOLA PAVING



“Gazzola Paving did an excellent job on Highway 409,” says Alain Beaulieu, the head of MTO’s Construction Contracts Section.

A nice compliment, replies Adrian Van Niekerk. “Anyone who has driven this road would agree it was one of the worst freeways in the Toronto area. We like to think that we made a silk purse out of a sow’s ear.”

Highway 409 is about as short as a road can be and still have the distinction of being called a highway. Just five kilometres long, the six-lane highway provides direct access to Lester B. Pearson Airport from Highway 401. Opened to traffic in 1978, it was built as a composite highway, a concrete base with an asphalt surface course, and until construction started two years ago, had not been upgraded.

Gazzola Paving repaved the highway as part of a much larger reconstruction project awarded to Dufferin Construction. Highway improvements included repairing and reconstructing 13 bridges and the installation of a concrete barrier wall and high mast lighting.

Highway rehabilitation started in 2008 when Gazzola milled off 90 millimetres of the surface course. The 50,000 tonnes of

reclaimed asphalt pavement was taken back to the Gazzola yard for use on future projects.

Asphalt was removed with a Wirtgen 2200 milling machine with a 3.6 metre head, purchased from Germany specifically for this project. The first of its kind in southern Ontario, it can grind a full lane at a time and, while a significant investment, provides a vast improvement in production efficiency.

“Once we milled off the surface, we could see that the concrete base was in much worse condition than we had anticipated,” recalls Van Niekerk. “It was in a serious state of disrepair. The panels had shifted and Dufferin Construction, which was handling the concrete work, had to replace the panels that were damaged, cracked, or deformed.”



"Starting with a smooth base for paving is essential but a concrete base does not lend itself to milling and profiling. We used both a high speed and traditional California profilograph to see where the dips and bumps were before placing the base asphalt."

Gazzola laid the base course in 2009. The mix, a Superpave 19, varied in thickness between 50 and 65 millimetres in order to rectify the unevenness of the concrete base and provide a smooth base for the surface course. Gazzola also paved the shoulders with a 200 millimetre thick deep strength asphalt. The paving was all staged at night and completed behind a rolling barrier wall.

"Some of our Profile Indices on the concrete base started in the range of 1300 to 1400 millimetres per kilometre," Adrian says. "It was a huge challenge to get the PIs for the asphalt base to acceptable limits."

In 2010, Gazzola Paving was back on the project laying the surface course, a 40-millimetre lift of Superpave 12.5 FC2. Paving was done at night, in echelon three-lanes wide.

"Gazzola's biggest challenge was the roughness of the concrete base and we certainly commend them for their



investment in the milling equipment, which helped it meet the smoothness specifications," concludes MTO's Alain Beaulieu. "The workmanship, matt uniformity and smoothness on this project were all excellent." ■

The Paver of the Year Awards continued ...

## Backgrounder

### Paver of the Year Finalist Gazzola Paving

**Project:** Highway 409 from Highway 427 to east of Islington Avenue

**Length:** 6 lanes, 4 kms long (12.6 equivalent 2-lane kilometres)

**Scope:** reconstruction

**Contract value:** \$60 million (\$9 million for paving)

**Timing:** June 2008 to Sept 2010

#### Hot Mix Asphalt:

Superpave 19	48,000 tonnes
Superpave 12.5 FC2	22,000 tonnes

#### Lifts:

Base course	50 mm to 65 mm
Surface course	40 mm

**Asphalt Cement:** PG 70-28

**HMA Producer:** Gazzola's Attwell plant

**A/C Supplier:** McAsphalt Industries

#### Aggregate Suppliers:

Coarse aggregates - Dufferin Aggregates  
Fine aggregates - Aecon Materials and Construction

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