The plastic bodied vehicle, a world car, would be sold in kit form to local assemblers, in the way Volvo cars are assembled in Nova Scotia.

A consultant on the job was a man who should know what he wants, the owner of a New York City taxi fleet. His recommendations? Make it rugged and easy to repair. Now, the car awaits a manufacturer.

Lots of work

Claude Gidman feared he would have to leave the field of transportation when he returned to Canada more than 15 years ago after a spell with Ford of Britain. But the automobile designer has found plenty of work. He has helped design a new streetcar, now in service in Toronto, the driver's cab for a New York subway line, and other vehicles such as snowmobiles and road graders.

The Toronto Transit Commission's light rail vehicle was developed by the Ontario government's Urban Transportation Development Corporation with Mr. Gidman's firm Gidman Design Associates of Mississauga acting as consultants responsible for human engineering and body design. The company has also renovated the interior of B.C. Rail's "Budd" cars and is currently involved in the design of a new small, city transit bus. The bus, which is designed to make transit easier for the disabled and elderly has a unique feature of being able to lower itself almost to ground level by using air bags. A prototype of the bus, which is developed for Ontario Bus Industries of Mississauga, will be tested in the next few months.

In these and other products, Mr. Gidman has found that the Canadian condition that affects design is not a style so much as limited funds and small volumes.

As a result, the Canadian approach to design has to be more of a custom approach, a condition that sometimes makes Canadian designers highly creative.

Nowhere, said Mr. Gidman, is the Canadian designer's role more worthy of recognition than when a small-to-medium firm successfully competes with an international giant.

"This is where the cleverness of the designer becomes most evident," he said. "The work the designer has done to bring the product up to the standard of some international leader, say General Motors or IBM, has to be ingenious. The Canadian designer does not have the advantage of advanced styling studios and test centres. The designer has to do more with less."

In actual fact, design's contribution to the final value of a transportation product is usually less than 2 per cent. A simple wooden chair might be seen as almost totally the work of a designer. But transportation products, with costly engines, transmissions and electronics are sometimes built almost entirely without the collaboration of an industrial designer.

At the same time, good design can give these products an advantage over competing products.

"The major reason for design is profit enchancement," said Bill Stanton of Tetrad Design Group Incorporated in Winnipeg. "Many manufacturers are operationally oriented and therefore tend to think of the product as an item made 'easily' and 'quickly'. These words are in our vocabulary, but more important is the word 'sell'. No matter what the product, if it doesn't sell, someone is hurting or out of business. Designers provide features and benefits that make products easier to sell."

What exactly, you might ask, is this elusive element called design?

When Claude Gidman did the interior of the motorman's cab for the New York Port Authority subway cars he concentrated on the "human factors" – in this case, on ways to lessen driver fatigue and increase alertness. From a distance the cab looks the same as the one it replaced. But from close up one finds the driver is much better off than before. Visibility, placement of controls and instruments, and seating were all improved. When Mr. Gidman presented the new design to a committee of managers and train drivers they accepted it in a single 20-minute session.

Canadian Foremost Limited of Calgary, which custom builds heavy vehicles, won the contract a few years ago for a new tourist bus that could be driven on Alberta's Columbia ice fields. Earlier buses made by Foremost for Brewster Transport Company Limited of Banff, Alberta, had used existing bus bodies and ran on caterpillar tracks. The new bus is wheeled, to give a smoother ride and lower service costs. The only requirement for the design was that the bus hold 56 passengers. Otherwise, it was a chance to design a vehicle from scratch.

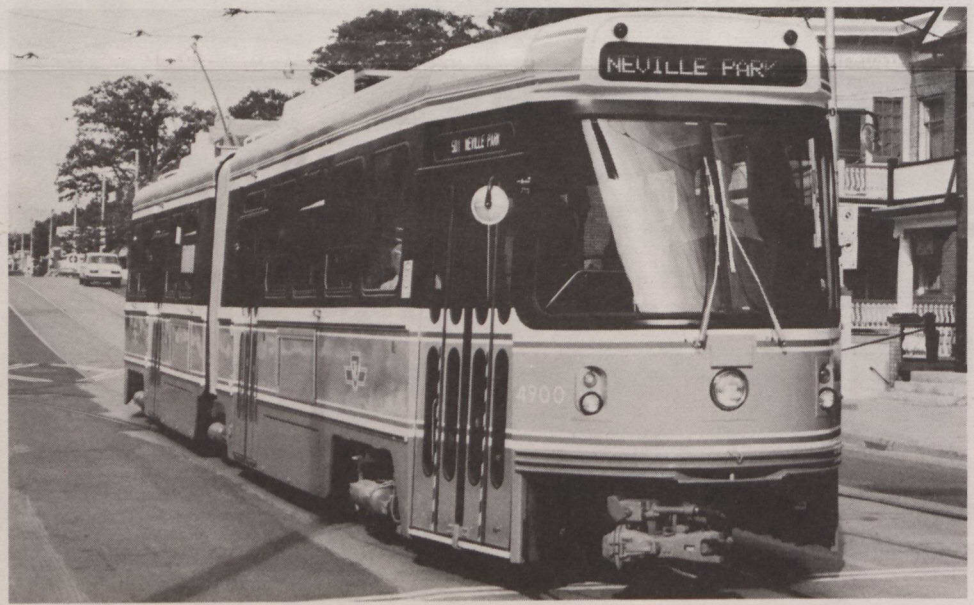
Once Foremost engineering manager Allen Pusch had done a basic layout, he called in Toronto design consultant John Vanderhoef.

The main problem for Mr. Vanderhoef was the vehicle's height. With tires 1.65 metres high, he had to take something that was perched in the air like a tree house and make it look like a bus.

While Foremost engineers prepared the chassis, Mr. Vanderhoef did the design engineering for the cab. The 1 200 parts for the cab had to be assembled for welding on Foremost's existing assembly fixtures. Working under these restrictions, Mr. Vanderhoef came up with a cohesive unit – a bus with exaggerated road clearance that still looked like a bus.

Sometimes creativity is found in the shape of an object, like the *Concorde* airplane, or early French Canadian furniture.

Other times the creative design amounts to a synthesis of tried and proven elements into something new. A



Toronto Transit Commission

The Toronto Transit Commission's streetcar designed by Claude Gidman.