



# Kansas RTAP Fact Sheet

A Service of The University of Kansas Transportation Center for Rural Transit Providers

## Rural Roads are Tough on Buses

*One county responded by toughening-up their bus design.*

by Arin Gustafson



Numerous brake applications, dirt roads and less stable maneuverability describe a typical day in the life of a rural transit agency.

Frequent brake applications, dirt roads and less stable maneuverability describe a typical day in the life of a rural transit agency. These factors lead to the need for a better rural vehicle design, one that can stand up to the special requirements of rural transit. Ride Solutions in Putnam County, Florida, set out to meet the challenge of providing a vehicle that meets those needs.

Rural environments demand that vehicles be able to handle persistent driving hours on dirt and gravel roads and perform numerous brake applications. Parts such as shocks, transmission, and motor mounts need to be dependable and long lasting. Rural transit agencies may look for vehicles with a shorter wheelbase to have better maneuverability on dirt and gravel roads.

The standard 30-foot bus is often too large for rural transit agencies that serve lower-density areas. Large buses with few clients give the impression to local businesses and community members that the transit service is inefficient. And a standard bus needs to be retrofitted with a platform wheelchair lift. All of the above

conditions can cause rural transit agencies to settle for a vehicle that does not meet their needs.

As Boyd Thompson, Director of Operations for Ride Solutions knows, it can be difficult to find a vehicle that meets all of these conditions. Thompson set out to develop a vehicle specifically designed to meet the needs of his and other rural paratransit agencies. Thompson purchased a used 1975 35-foot RTS bus that had a wheelbase one foot shorter than similar buses. He chose a shorter wheelbase because it would make maneuvering on the dirt roads much easier.

After he selected the bus Thomson arranged for a "30 foot standard conversion" in which one five-foot module was removed from the frame of the bus. Then the engine and body were remanufactured and the bulkheads and radiator were replaced to strengthen the bus and give it structural integrity. The radiator was removed from the bottom of the bus and put on the front to minimize problems with road dust.

The original plywood flooring was replaced because it was soft due to moisture being trapped between the floor and the frame. The contractors

also installed a back door and a platform wheelchair lift.

When the conversion was completed Thompson had shorter, heavy-duty bus better suited to rural environments.

Thompson said the biggest challenge was getting the money to finance the project, which was about \$50,000.

Clients have reacted favorably to the new bus, according to Thompson. It is a nicer, more modern bus, the entrance is more accommodating and it is easier for drivers to maneuver on the dirt roads. He recommends other rural transit agencies look into this type of conversion.

### Sources:

"New Vehicle Innovation for Rural and Flex-Route Agencies," TD Connector, Spring 2000; James Van Sickle, Program Manager, KDOT Office of Public Transportation, 785/296-5194.

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