

# **DEMAND RESPONSIVE PUBLIC TRANSPORT SERVICES FOR PEOPLE WITH DISABILITIES**

J S Hugo, J Stanbury\* and J Gooch\*

Directorate Transportation & Traffic, Cape Metropolitan Council,  
P O Box 16548, Vlaeberg, 8018

\*Arcus Gibb, P O Box 3965, Cape Town, 8000

## **1. INTRODUCTION**

The Cape Metropolitan Council approved policy in March, 1999, to make the future public transport service within its area accessible to Special Needs Passengers. This policy was based upon a study carried out in 1998 to determine the transport needs of persons with disabilities. The key elements of that study were presented to this conference last year and are summarised below.

One element of the policy was that the future public transport service within the metropolitan area will be made accessible to Special Needs passengers.

This paper describes how the demand-responsive element of the future service has been designed and tendered for award. It concludes by introducing an example of a fully accessible bus that could be used on the primary network and is suitable for all passengers.

## **2. INSTITUTIONAL POLICIES GOVERNING PROVISION OF TRANSPORT FOR SPECIAL NEEDS PASSENGERS**

Provision of transport for Special Needs Passengers is controlled by many institutional policies. The foremost of these is the Constitution of the Republic of South Africa<sup>(1)</sup>, which sets out, in the Bill of Rights that “the state may not unfairly discriminate directly or indirectly against anyone on one or more grounds, including (amongst others) pregnancy, age and disability”.

Leading from this, the Integrated National Disability Strategy<sup>(2)</sup>, issued as a White Paper by the Office of the Deputy President in November 1997, has, as its vision “a society for all”. To achieve this, its Executive Summary states that “this means that there must be an integration of disability issues in all government development strategies, planning and programmes”.

In the transportation arena, the National Department of Transport has formulated policy within its White Paper on National Transport<sup>(3)</sup>, published in September 1996. This states that “the needs of special categories of passengers should be identified by the responsible transport authorities, especially at metropolitan and local level, and these should be addressed in their passenger transport plans”.

### **3. CAPE METROPOLITAN COUNCIL POLICY ON TRANSPORT OF SPECIAL NEEDS PASSENGERS**

In accordance with the above national policies, the Cape Metropolitan Council (CMC) recognises that it has a statutory duty to provide for Special Needs Passengers in planning, regulating and co-ordinating public transport services. Its policy is that “the future public transport service accessible to Special Needs Passengers is to be a combination of the primary public transport network (high frequency, high volume) and the secondary system (mainly collection and distributor services), complimented by a Special Transport Service which is to be provided by a combination of public transport operations and non-governmental service organisations<sup>(4)</sup>”.

### **4. DIAL-A-RIDE SPECIAL TRANSPORT SERVICE**

As one of its ongoing 2004 Olympic Demonstration Projects, the Council is operating a limited Dial-a-Ride service, which will form part of the long-term Special Transport Service envisaged by its policy. The service started in May, 1998 and comprises four specially adapted panel vans/combis operating from the Khayelitsha/Mitchells Plain areas. It is a demand-responsive door-to-door service which provides transport for people with visual or physical disabilities who are unable to use other forms of transport. During the morning and evening peak periods, it transports people to and from work. During the off-peak period, trips for other destinations are made (eg social/medical trips).

Whilst the long-term vision is to have a fully accessible primary public transport system, it was realised that this ideal state can only be achieved over time, subject to the availability of resources. Based upon the success of the demonstration service, the Council resolved on 18 June 1999, to extend the dial-a-ride service to cover the entire metropolitan area. The purpose of this is to help address the immediate need for transport for people with disabilities. In the longer term, it is envisaged that the service will provide transport for those passengers whose disabilities are such that they cannot use any other form of transport.

### **5. LEGAL FRAMEWORK TO OPERATE THE SERVICE**

The Cape Metropolitan Council was established as a transitional metropolitan council in February, 1995. Its powers and duties were set out in a Proclamation published in April, 1995 and included the function of “passengers transport services”. However the Proclamation provided that the metropolitan council shall only address those matters, which cannot by their nature effectively be addressed by the Transitional Metropolitan Substructures.

In a subsequent proclamation issued in 1997, the CMC and its MLC’s re-allocated powers and duties. Legal opinion indicates that the function to provide and regulate passenger transport services was not re-allocated to the MLC’s. However, different interpretations are possible. Hence, it was recommended that the CMC obtain the written agreement of its six MLC’s that it may tender and operate the expanded dial-a-ride service. These agreements were obtained.

## **6. DESIGN OF THE EXPANDED SERVICE**

The design of the expanded service involved addressing several key elements. These included the following:

- Registration procedures for passengers
- Bookings and fares
- Vehicles and equipment
- Monitoring the service
- Tender documentation

Each of these elements is discussed below:

### **6.1 Registration Procedures for Passengers**

Workshops were held with representatives of the Western Cape Network on Disability to discuss how the registration process should work. At these workshops, it was agreed that registration should be based upon whether or not the existing transport system was able to accommodate the passenger.

A two-stage procedure was devised for registrations. Initially, the person will submit their application form to a secretarial body representing the CMC. This will include a statement by both the applicant and his/her medical doctor (for persons with physical impairments) or Orientation and Mobility Instructor (for persons with visual impairments) that they are unable to use the existing transport system as it is unable to accommodate their disability. Then, the application will be assessed on behalf of the CMC, by retained occupational therapists and mobility instructors. The specialist will either accept the applicant to the service or request that an appointment is made to see the person for an interview. The specialists to undertake the assessment are to be nominated by the Western Cape Network on Disability and agreed by the CMC.

### **6.2 Bookings and Fares**

The request for a booking shall be received, by the Operator for the service, on the current demonstration project toll-free 0800 telephone number. Generally, bookings will be taken for the next day's service. However, as the service is to provide transport for people to/from employment, repeat bookings will be accepted for up to a maximum of six months. Thereafter, that person must reapply for the following six months.

During the morning and evening peak periods, only employment related bookings will be accepted. Trips for shopping collection of medicines etc will be permitted during the off-peak periods.

One of the problems encountered by the demonstration service was the difficulty to keep to time. Many reasons exist which include passengers not being ready to be picked-up. In the extended service, the vehicles will wait a maximum of 5 minutes from the scheduled collection time and then depart.

Passengers will be charged a fare for their journey. This will be the equivalent of the standard cash bus fare for the trip. Since the vehicles will not operate on any fixed route, a fare system was devised where the metropolitan area was divided into different zones.

### **6.3 Vehicles and Equipment**

The demonstration project proved that a combination of converted panel vans and combis were able to successfully perform the duties of the Dial-a-Ride service. These vehicles were therefore adopted as the basis of the expanded service although an option to supply purpose-built vehicles was maintained within the tender documents.

Each panel van will be converted to a people-carrier and fitted with a hydraulic lift to enable passengers in wheelchairs to use the service. The wheelchairs will be fastened to the floor of the vehicle by a 4-point webbing system which is suitable for both manual and electric wheelchairs. Passenger restraints will also be provided.

The combis will also be fitted with wheelchair and passenger restraint systems, however, ramps will be used instead of hydraulic lifts.

The vehicles will be provided with radios for communication with their operating base.

### **6.4 Monitoring the Service**

To ensure that the service meets the operational standard set by CMC, it will be monitored by an independent organisation. To assist this monitoring, all vehicles will be fitted with a passive GPS from which information will be downloaded daily. The information will show the route driven by the vehicle on a background of a standard road map and also the time of pick-up/setting-down of passengers.

Other forms of monitoring will include visiting the Operator's depot to check on vehicle and equipment condition and the receipt of bookings.

### **6.5 Tender Documentation**

The tender documentation was based upon the National Department of Transport's standard documentation for tendering bus services. This was modified to suit a demand responsive service instead of a route-based service. The basis of paying the Operator remains the same (ie revenue kilometres). However, the definition of a trip alters as the service no longer operates on a fixed route. Instead its route changes as the pick-up and setting-down points of the booked passengers change. A trip was therefore defined as starting when the first passenger boards the bus and finishes when the vehicle next becomes empty.

The Contract will be for four years, which may be extended by mutual agreement for a further two years.

## **7. TENDER AND RESPONSE**

The service was advertised for tender on 6 November, 1999. Documents were collected by eight organisations of which five submitted tenders on the closing date of 10 December, 1999. The bill of quantities allowed for 17 vehicles to operate the service (13 new vehicles) and reuse of the existing four demonstration vehicles). Four of the five tenders received were very competitive and within the budget of R6 million per annum. Currently, the Council is debating the award of the Contract.

## **8. WAY AHEAD**

Expansion of the Special Transport Service forms just one of the initiatives being undertaken by the CMC. Through its Agent, Modalink, a passenger-friendly bus is currently being tested in Cape Town. Features of the bus are:

- easy boarding and alighting through wide double doors and kneeling suspension
- retractable ramp for wheelchair and pram access
- increased mobility on the bus accommodated by low floors and grab rails
- smooth rides

This bus shows one of the ways forward to help make the primary public transport network accessible for all.

## **ACKNOWLEDGEMENT**

The authors would like to express their thanks to the representatives of the Western Cape Network on Disability for their contribution to the development of the policies and procedures described in this paper

## **REFERENCES**

- (1) The Constitution of the Republic of South Africa, 1996
- (2) White Paper on Integrated National Disability Strategy, 1997 Office of the Deputy President
- (3) White Paper on National Transport Policy, 1996 Department of Transport
- (4) Cape Metropolitan Council, 29 March 1999

## **FOR PEOPLE WITH DISABILITIES**

J S Hugo, J Stanbury\* and J Gooch\*

Directorate Transportation & Traffic, Cape Metropolitan Council,  
P O Box 16548, Vlaeberg, 8018  
\*Arcus Gibb, P O Box 3965, Cape Town, 8000

### Short CV for Jim Stanbury

Jim Stanbury is a Civil Engineer with more than 20 years experience in the study, design and contract administration of highway and transportation projects throughout Africa and the Middle East.

He joined GIBB (then Sir Alexander GIBB & Partners) in 1978 in their UK Office and was transferred to South Africa in 1996 via primarily Kenya and the United Arab Emirates. Since then he has been involved with transportation projects within the Cape Metropolitan Area.

In particular, he has been responsible for the Cape Metropolitan Council's Study of the Transport Needs of Mobility Disadvantaged Persons (now know as Special Needs Passengers).

From this study, evolved the CMC's policy on that subject. These were presented to the audience at last year's conference.