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RURAL MOBILITY
CHANGES IN PUBLIC TRANSPORTATION SERVICES
and the
EMERGENCE OF RURAL TRANSIT DEMAND
IN ALBERTA

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1. INTRODUCTION

As late as 1979, although little was known with respect to the number of public transportation services/ programs in smaller urban (non-city) and rural municipalities, it is believed they were extremely limited and virtually nonexistent save for those programs dealing with the handicapped.

The Province of Alberta recognized an emerging demand for public transportation services for the elderly and handicapped in smaller urban and rural areas. As a result, in April of 1979 the Public Transportation Operating Assistance Grant Program (PTOAG) was implemented. Its prime objective was to provide assistance to all municipalities where public transit was not available in two major areas.

- The development of specialized services for the elderly and handicapped.

- The subsidization or upgrading of existing transit services in municipalities, benefiting the elderly and the handicapped.

This paper will touch upon the evolutionary process of the grant program, initial funding and recent changes in the funding formula commensurate with present demand.

Primarily, however it will reveal the variety and types of applications devised by municipalities through their own local initiative, including various schemes of local administration, inter-municipal co-operation, as well as problems in the provision of services for the elderly and handicapped.

Discussion will focus upon the level of service which in many communities is still evolving, the introduction of subsidized transit programs, the emergence of taxis in a rural setting, the extent of private funding, and volunteer commitment, etc. In addition pioneer work in the area of Transit Estimating For Communities Under 20,000 undertaken by Alberta Transportation, will relate factors such as cost to these emerging transit systems and suggest some general rules of thumb to consider in assessing the level of transit service that can be accommodated.

In short, this presentation will portray observations and real world experiences in what is a natural evolution of rural transit demand in Alberta Communities ranging between 3,000-10,000 population.

2. PUBLIC TRANSPORTATION OPERATING ASSISTANCE GRANT

Alberta's current population is approximately 2.3 million. An examination of population distribution reveals that 68% live in cities where public transit services have been in existence for sometime, 14% reside in a number of other urban communities between 1000 and 10,000 in population ie. Towns, Villages, Summer Villages and 18% in rural municipalities, where the demand for any form of public transportation services did not previously exist and is only now emerging.

Although figures are not available it has been estimated that Alberta's seniors and handicapped account for some 8%-10% of the provincial population, the majority of which reside in major urban areas primarily cities where public transportation services are more readily available.

Residents of smaller communities and rural areas who are elderly, or handicapped have a greater need for specialized forms of transportation than perhaps those who reside in cities.¹

There are a number of reasons for this.

- Conventional public transit systems are not commonly found in communities of less than 10,000 persons.
- There is often insufficient demand in smaller communities to support a taxi operation.

- Distances to Major local activity centres are usually greater due to the central pattern of institutional development around which small communities were formed.
- Lower densities and linear rural development patterns have tended to increase walking distances and in turn fostered feelings of isolation amongst the elderly and handicapped.

It was in response to these needs that the Province of Alberta implemented the Public Transportation Operating Assistance Grant Program (PTOAG).

Funding under the program was by in large unconditional, leaving regulatory and control functions to individual municipalities to determine its best use in the provision of transportation services for the elderly and handicapped.

The program has assisted a number of smaller communities both urban and rural, to establish and maintain specialized transportation services and has contributed greatly to the evolution of elderly and handicapped or E & H Systems.²

Perhaps the greatest achievement has been realized through the encouragement of community spirit by providing seed money for community sponsored public transit programs which local service clubs are now helping to support. In fact a multiplier effect has occurred to the extent that the impact of each dollar given under the grant has been

TABLE ONE: Public Transportation Operating Assistance Grants

	<u>1979-80</u>	<u>1980-81</u>	<u>1981-82</u>	<u>1982-83</u>	<u>1983-84</u>	<u>1984-85</u>	<u>1985-86</u>
Towns	\$574,576	\$554,298	\$602,248	\$629,908	\$672,188	\$640,798	\$1,012,128
Villages	98,398	102,334	91,920	91,670	93,506	93,796	141,018
Counties	-	427,560	433,806	443,936	444,530	445,622	756,573
Municipal Dist.	-	195,832	197,814	192,828	192,414	192,172	328,827
Improvement Dist.	-	132,548	133,894	133,894	146,434	143,874	207,525
Special Areas	-	12,522	12,522	12,522	12,084	12,084	18,126
TOTAL	\$672,974	\$1,425,094	\$1,472,204	\$1,504,758	\$1,562,156	\$1,528,346	\$2,463,657

magnified through matching private contributions and volunteer commitments of community service groups.

2.1 Funding Levels

Table one perhaps best illustrates the evolution of PTOAG which was initially only provided to Towns and Villages on a simplified formula of \$2.00 per capita.

Eventually monies were extended to other local jurisdictions to reflect a pattern of eligibility in funding levels which increased from approximately \$673,000 in 1979 to \$2.5 million in 1985.

Subsequent to a program review last year identifying the good things being done, the grant has been increased to \$3.00 per capita per year for a three year term and is based upon the latest population figures derived from self reported municipal census.

In addition as recent as April 1985, through special legislation, Indian Reserves and Metis Settlements, are now eligible to receive grant funds. The only requirement for all recipients is that they must report each year on the general types of projects towards which PTOAG monies are being applied.

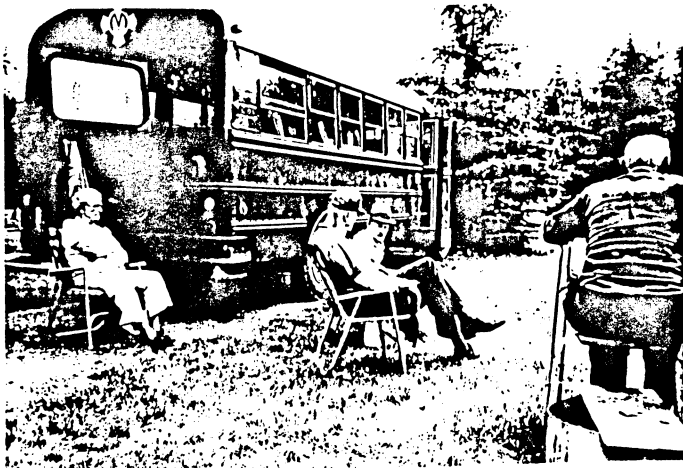
2.2 Utilization of PTOAG Towards the Provision of Public Transportation Services

Based upon a recent sampling of approximately 100 municipalities which accounted for 57% of funds allocated under the 1984 program, we were able to observe and

identify a number of social benefits as well as problems associated with emerging demands and rising levels of expectation for increased public transportation services in smaller urban and rural areas.

2.2.1 Local Perceptions

- The grant enables seniors, disabled and handicapped persons to remain living in their own community, instead of moving to a larger centre ie. City where public transit is available.
- Through increased mobility the grant allows seniors and handicapped to remain in their homes as opposed to having to move to a senior citizens' lodge or nursing home.
- It facilitates arrangements for medical appointments, visiting friends, or participation in organized outings.



- It encourages community spirit and interaction by supporting trips from rural areas to service centres and trips between service centres.
- It encourages community participation by providing seed capital for community programs which local service clubs are now helping to support.

2.2.2 Primary Observations

Throughout our review and discussions with municipalities it became obvious that while the PTOAG Grant was contributing reasonably well towards its intended purpose, because of its unconditional nature, there was and still is a degree of confusion and misconception amongst rural and urban municipalities in terms of the types of uses towards which funds can be applied. Because it was a government grant a small number of communities tended to guard it carefully often banking it rather than risk misuse and consequently losing government funding in subsequent years.

In addition there was considerable lack of knowledge on the part of elderly and handicapped individuals and associations that this type of funding was available to them through the municipality.

- A number of communities primarily in northern regions of the Province had mistakenly assumed the grant was to be used only for capital projects (ie. road paving). Consequently, requests from seniors'

groups for funding of special trips/outings, have been denied until recently.

Many communities are keen on maximizing the utility of their grant dollars and as such expressed an interest in being made aware of those initiatives undertaken by other neighboring centres. In addition communities suggested further clarification and publicizing with respect to the intent of the program. The Department has responded through the preparation and circulation of a pamphlet outlining program objectives and information with respect to typical applications by other municipalities as well problems experienced.

- While there was repeated concern for increasing the grant, of more importance to the users was knowing whether or not the program would continue beyond 1985.

The major reason for this concern involves many communities where the level of service or the introduction of subsidized transit programs. Many of these initiatives have only recently been undertaken. In the case of equipment leases or purchases, continuation of the grant would allow vans, wheelchair lifts, etc. to be amortized and would encourage extended private funding or volunteer commitment.

The grant is working well and fulfilling its original objective. Seniors, disabled and handicapped Albertans

are receiving new or improved public transportation services.

Municipalities have demonstrated a great deal of initiative and employ a variety of applications specific to their local transportation needs. Examples of this include the provision of wheel chair curb cuts and wheel chair ramps to public buildings.

As suggested in my opening remarks a multiplier effect has occurred inasmuch as the impact of each dollar given under the grant has been magnified through matching private contributions and volunteer commitments of community service groups.

Rural municipalities frequently allocate portions of their grant to senior citizens groups in urban communities. In a few instances retired seniors still residing on farms are provided with free snowplowing service to their doorstep.

A few smaller municipalities simply transfer grant monies received into general revenue because they perceive the initiation and organization of projects/services for the elderly and handicapped too difficult to administer.

All of this newly acquired knowledge in terms of how grant monies are performing still has to be boiled down into major contributing factors that we as a government agency disbursing monies and municipalities responsible for front line expenditures under the program must recognize in order to respond to emerging demands.

Supplemental Funding

The \$3 per capita while certainly unable to sustain operations and start up costs of basic para-transit service has provided seed capital and an incentive to initiate a public transportation service for seniors and handicapped, but in partnership with private charitable efforts.



For example local service clubs (eg. Lions, A.C.T., Kinsmen, Masons, Elks, Legion, etc.) have often donated funds, driver volunteers, administration volunteers, or vehicle maintenance. Similarly, users have raised funds through bingos or other means to provide a higher level of service. It is an excellent example of a private-public partnership which has fostered community spirit in many Alberta communities. As a result of the volunteer support, the program impacts many more people than the actual

users, and the grant is spent in large part on the users, and not on administration.

Administration

The grant appears to have been handled in a responsible manner with minimal direction or control by Alberta Transportation. To a large extent lobbying by user groups ensures local councils are responsive to community needs. In turn, the local councils keep close watch on the local user groups.

In some communities, Family and Community Support Services (F.C.S.S.) have been delegated the job of administering grant funds between potential users (eg. community seniors clubs or disabled or handicapped organizations) and overseeing the operations of various user groups.

In other municipalities the council prefers to retain this control, whereas still in other communities, local service clubs or user organizations have a special transportation committee to operate services supported by the grant. The flexibility of the program permits this variation in methods of day to day administration. While widespread problems are not found on matters of administration, some communities experience temporary problems involving disputes over who should control allocation of funds. These are usually resolved through the local political process.

Inter-Municipal Cooperation

There are several examples where the grant program has fostered intermunicipal cooperation. Generally, a county and major centre within the county or two towns adjacent to each other have collaborated and pooled their funds to provide a better service to all area residents. A county may give its funds to a town in return for the town administering the funds and agreeing to pick up county residents for planned outings. Stettler, Westlock, the County of Leduc, Bonnyville, the County of Red Deer and the County of Lethbridge are a few examples of municipalities which have cooperative ventures with adjacent municipalities.

Redcliff is another example where residents ride twice a week on a Medicine Hat supported van. Redcliff uses its grant to pay Medicine Hat for this service. In this area as well, arrangements vary widely depending upon local situations.

Level of Service

The level of service offered is commensurate with local community needs. Virtually, all of the communities we examined provided van, bus or taxi service for seniors, and many satisfied the demands from disabled or handicapped persons via specially equipped vehicles. In some cases towns subsidize taxi fares through vouchers issued to seniors and handicapped persons. In other communities

the grant and local donations have combined to purchase and operate small vans or buses.

There is a direct relationship between the types of services offered and community size. Smaller centres are more likely to use the grant to fund planned out of town bus trips, wheelchair ramps etc. Larger communities have established phone-in dispatch service, and some have regular bus schedules to take people from their homes to the doctor or shopping. The level of service appears to be a function of:

- percentage of seniors, disabled or handicapped in a given community;
- distance between nearby towns (eg. Redcliff and Medicine Hat have a joint use agreement);
- distance to major recreation areas (eg. communities near Waterton Lakes National Park organize regular trips to the park);
- level of local volunteer support;
- evolving demand. Over time, some municipalities have evolved from a used school bus to a van equipped with a wheelchair lift or from a van driven by volunteers, to a regular day time bus service operated by paid drivers. This evolution is still occurring.

The types of trips supported by the grant varies from community to community; and includes medical trips to town and to larger centres, shopping trips, social trips, and

planned group outings to other Alberta towns for social or recreation purposes. Medical trips have priority in many communities.

Vehicle Purchase/Subsidy

Many communities have used the grant to purchase a van or bus for use by seniors, disabled and the handicapped. In some cases vehicles were donated by service clubs.



Operating and maintenance expenses are similarly supported by a variety of funds ranging from totally grant supported to private charitable support. Where users are issued vouchers to subsidize taxi fares, communities have had to restrict the amount of subsidy per ride and the number of rides per user to allow the grant funds to last an entire year.

TABLE 2
PUBLIC TRANSPORTATION OPERATING ASSISTANCE GRANT
SELECTED MUNICIPALITIES

AUGUST, 1984

MUNICIPALITY	COMMUNITY POPULATION 1983	USE OF PTOAG FUNDS				SUPPLEMENTAL FUNDING IN ADDITION TO PTOAG		OPERATOR	INTER-MUNICIPAL COOPERATION	TYPE OF SERVICE	USER FEES	REMARKS	
		SENIOR TRIPS	HANDICAP TRIPS	OTHER USES	PURCHASE VEHICLES	FUNDS	SERVICE						
VULCAR	1,507	▲	▲	(1)				M		Taxi Bus	Free (2)	(1) Wheelchair ramp, meals on wheels; operated through Legion Auxiliary. (2) On overnight bus tours, individuals pay their own accommodation.	
WAINWRIGHT	4,477	▲	▲					M A		Taxi Bus(2)	(1)	(1) Taxi vouchers worth \$1.50 are distributed to the Senior Citizens and handicapped of Wainwright. (2) A bus is rented to go to Drumeller.	
WESTLOCK	4,432	▲	▲		Handi-van	H A ACT	M(1)	M	MD	Handi-van(2)	\$1.00	* Restricted use of handi-van to the handicapped and elderly in the town and M.D. of Westlock. (1) Town provides insurance. (2) Van operates similar to transit service with scheduled stops at designated areas.	
WHITECOURT	5,408	▲	▲					M		Taxi(1)	(2)	(1) Dispatch service subsidizing door-to-door taxi. (2) Taxi tickets (full fare) granted weekly to seniors and handicapped.	
COUNTY OF ATHABASCA	5,974	▲	▲		Handi-van	Le ACT		M	Co	Handi-van(1) School-bus(2)	(3)	(1) The handi-van is used to transport senior citizens and handicapped persons in and around the county. (2) The van drivers may now use local school buses after school hours for seniors' transportation. (3) Fares are dependant upon destination.	
COUNTY OF BEAVER	5,347	▲	▲	(4)					Co		(3)	(1) Group using bus hires drivers. (2) Bus insured through county. (3) Bus is owned and operated by county - used mostly for trips to Edmonton for leisure, medical and shopping. (4) Pays ambulance operation costs.	
M.D. OF BONNYVILLE	9,407	▲	▲					A	FCSS	MD	Taxi(1) Bus	50¢	* Grant is divided amongst 3 municipal areas. (1) Subsidized taxi in Bonnyville and seniors club in Glendon.
M.D. OF FOOTHILLS	9,725	▲	▲		2 Handi-vans					M	(1) (2)	(2)	(1) Handi-buses are operating in two of the three areas. (2) Type of costs and utilization of services is determined by the towns. (3) Operated by Senior Citizens' Association in High River and Municipalities in Turner Valley and Obitoks.

A - Senior Citizens Association
C - Community Action Group
F.C.S.S. - Family & Community Support Services

H - Handicapped Association
I - Institution
Ki - Kinamen Club

LI - Lions Club
Le - Canadian Legion
M - Municipality

Co - County
MD - Municipal District
P - Private Society
ACT - Associated Canadian Travellers



User Fees

Some communities recoup part of the cost of providing transportation services to seniors, and the handicapped from the users themselves. With taxi voucher systems, the user will often pay for extra long trips or when the user exceeds the maximum number of trips subsidized by the town. In bus/van services, users pay about \$1.00 - \$1.50 per return trip or in some instances no charge is levied. For longer group outings users are sometimes asked to pay for a portion of the operating costs. User fees vary according to the local situation.

Information Summaries (Extract)

Inasmuch as Alberta Transportation is committed to the Program for another three years at least, we will continually be updating our current base of knowledge. One of

ADMINISTRATIVE & UTILIZATION CHARACTERISTICS

SUMMARY

(% of Communities Examined)

SUPPLEMENTAL FUNDING	50%	Private (includes service clubs and businesses)
	29%	No supplemental
	21%	Public Funds
ADMINISTRATION	30%	Community Corps
	60%	Municipality
	10%	F.C.S.S.
INTER-MUNICIPAL COOPERATION	34%	
USERS	54%	Seniors plus handicapped
	12%	Seniors only
	30%	Seniors and handicapped and other (usually children)
	4%	Seniors plus other (usually no handicapped in community)
VEHICLES USED	78%	Van or bus
	7%	Subsidize taxi
	15%	Van plus taxi
USER FEES	71%	Yes (Above a basic amount)
	29%	No

the major problems is in the presentation of this type of data for comparative analysis. Table 2 is simply an extract of an information/inventory sheet we developed with assistance from MANOP Services Ltd.

3. RURAL MOBILITY & THE EMERGENCE OF RURAL TRANSIT DEMAND

The upshot of our examination of the PTOAG has identified that there is an increasing demand for transportation services for the elderly and handicapped in rural Alberta. These services however are at various stages of evolution and are delivered in a variety of ways.

We see public transportation services organized and administered by local service clubs, senior citizen associations, social service agencies, handicapped associations, community action groups, municipalities and institutions such as hospitals. For example the Town of Provost turns over the \$3 per capita PTOAG to the Lions Club Handi-van Committee, who operate the service. Several other service clubs in the community (eg. Legion, Kinsmen etc.) assist with additional financing a service which caters to both the elderly and handicapped.

Another specialized transportation service is operated by the Senior Citizens Association in Vermilion. The Seniors, through a local taxi firm have arranged for a transportation service based upon a voucher system which provides a \$1.00 subsidy toward the taxi fare. Only one

voucher is allowed per trip, which generally runs \$2.00. The number of vouchers are recorded by the Senior Association. There are no limits on the purpose of the trip and service is available 24 hours per day seven days per week.³

Our evaluations to date suggest that the level and type of public transportation service provided is usually a reflection of the organization delivering the service. Seniors' Associations tend to provide exclusive services for the elderly, while a municipality or community action group normally caters to overall community needs.

Presently in Alberta there are 30 evolving para-transit systems servicing the elderly and handicapped, all in communities of less than 10,000 in population.

Current demand, we have found, consists primarily of the following trip purposes in descending order of priority.

- Medical appointments
- Shopping and personal business.
- Social recreational
- Out-of-town excursions.

These trip purposes are more characteristic of the elementary level of transit demand now present in smaller urban and rural communities. To some extent however, there is evidence of transportation services being used for school trips and work trips, which adds a new dimension for potential ridership.

Many of the services are free or with only nominal charges ranging between 50 cents and \$1.50 per ride one way. Flat rate and zone fare systems are also common.

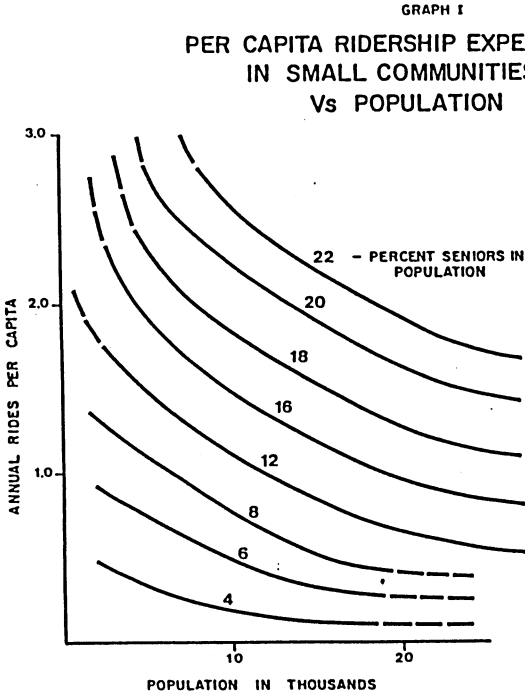
Public transportation services are primarily localized within a community, however the beginnings of a regional service are present in the CRAB's system which simply involves a joint venture between the four municipalities of Crossfield, Rockyview, Airdrie and Balzac.



All of the transportation systems identified offer primarily on-demand services with little scheduling. The exception is excursion trips where vans and buses must be reserved in advance.

In most cases staffing to operate these rural transportation services is volunteer or part-time with less than 20% engaging full-time paid drivers.

Graph I illustrates the relationship between the number of seniors and ridership in communities of certain populations.



SOURCE: RURAL MOBILITY STUDY, 1964, MANOP SERVICES LTD.

Generally we found a range in the number of rides per capita in smaller communities from 0.3 to 2.7 depending upon the percentage of seniors in the overall population.⁵

Table 3 perhaps best illustrates the average costs per capita for those Alberta Communities examined. These vary

TABLE 3
SELECTED E & H SYSTEM AND COMMUNITY STATISTICS

Community	Population Served (1983)	% Age 65 +	Service Provided	Ridership (1-Way Trips)	Fare	Op. Cost Per Ride	R/C Ratio	Annualized Rides/Capita	Cost/Capita
Claresholm area	3,493	19.5	Subsidized taxi	9,300 est.	\$0.75	\$1.50	50%	2.66	\$4.00 (1)
Crowsnest Pass	7,306	12.6	Bus (limited)	3,200 ?	\$1.00	\$5.15 ?	23% ?	0.44 est.	\$2.25 ?
Edson	6,210	6.3	Subsidized taxi	1,041 (2)	\$1.00	\$3.86	26%	0.35	\$0.65
Edson & I.D. 14	7,110	6.3	Handi-Van	3,967 (3)	N.C.	\$3.31	0	0.56	\$1.85
Fort Saskatchewan	12,169	4.8	Subsidized taxi	4,300 est.	\$1.00	\$3.25 est.	30%	0.35	\$1.13
High Prairie and area	5,642 (4)	10.2	Regional van	4,524	\$1.00 avg.	\$4.62	19%	0.80	\$3.42
Lac La Piche	2,069	8.7	Subsidized taxi	1,300 est.	N.C.	\$1.50	0	0.64 est.	\$1.35 (5)
Pincher Creek (a)	3,757	10.8	Subsidized taxi	2,000 est.	\$1.00	\$3.00	33%	0.53 est.	\$1.60 (6)
Pincher Creek (b)	3,757 +	10.8	Van services (6)	-	N.C.	-	-	-	-
Provost and area (7)	4,367	21.3	Handi-Van	2,400 est.	\$0.50	\$4.60	11%	0.55	\$2.53
Stettler and area (8)	6,000 est.	15.1	Handi-Van	4,000 est.	\$0.75	\$3.75 est.	20%	0.67 est.	\$2.50 est.
Taber and area	6,500	12.4	Handi-Van	3,800	\$0.75	\$4.17 est.	22%	0.58	\$2.44
Vermilion (10)	3,745	17.1	Subsidized taxi	9,230 (9)	\$0.71 avg.	\$1.71	42%	2.95	\$4.21

NOTES:

- (1) The H.D. of Willow Creek does not contribute funding.
- (2) For six-month period (service limited to funding available).
- (3) Includes school trips.
- (4) Serves Faust, Kinuso, Joussard, Driftpile, Grouard and part of I.D.
- (5) Operates at a surplus.
- (6) Two van services are also provided (no statistics available to date).
- (7) Serves part of the municipality.
- (8) Serves Gadsby and the County.
- (9) For 9 months of service in 1982; funds carried over from 1981.
- (10) The Vermilion Association for the Mentally Retarded also operate a van.

Source: Rural Mobility Study, 1984 MANOP Services Ltd.

with the level supplemented funding or degree of volunteer support.

Costs per ride on the other hand can be used as a measure of the efficiency of these public transportation systems. We found that where subsidized taxi operations were in place the cost per ride was less than in areas where specialized vans or buses were being used. Costs for vans and buses in smaller urban and rural municipalities range from \$4.00 to \$10.00 per passenger trip. Typically in small communities where taxi service is viable, there is a flat rate of between \$1.50 to \$3.00 per person trip.⁶

Revenue/cost or R/C ratio is another effective measurement of the viability of these emerging transportation/rural transit systems. Obviously a desirable R/C ratio would be 50% but certainly this can only be a goal for a mature system. For the most part our communities fell well below the 50% R/C level with the exception of one (Town of Vermilion). However, in Vermilion's case when PTOAG funds were used up, rather than subsidize through fare increases or other means, the service was terminated. Thus Vermilion has only been able to operate a service for 9 months of the year.

Consideration of all of these factors particularly with respect to revenues and costs have formed the basis for further work in the area of estimating transit demands in smaller communities of under 20,000 in population.

4. TRANSIT ESTIMATING FOR COMMUNITIES UNDER 20,000 POPULATION

Approximately 3 years ago Alberta Transportation engaged the services of MANOP Ltd. to develop a quick and dirty methodology for determining various criteria against which the merits of public transit could be evaluated. A series of more detailed investigations into the transit service options again in smaller Alberta Communities ensued with some very interesting results.

Factors considered involved the shape or configuration of a community, patterns of development and its impact upon the demand for public transportation relative to travel times and walking distances.

Other factors such as the presence of physical barriers ie. railways, rivers etc. were also considered in relation to trip length and time. The population and age structure, vehicle ownership per household and general nature of the community in terms of whether it was a self-supporting resource or agricultural centre, a bedroom community etc. were all assessed as contributing factors affecting transit demand.

A number of transit options including Car Pooling, Van Pooling, Shared Ride Taxis, Contracted routes for bus, van or taxi, and fixed route bus service were then tested against these community factors for some seventeen selected communities. These studies we called **Transit Feasibility Studies.**

Out of this work which is still experimental and on-going, we identified some general rules of thumb for municipalities who are thinking about implementing transit systems.

1. The feasibility of transit for any community under a population threshold of 12,000 is questionable.
2. Only more mature communities where there is a greater percentage of seniors or a resident institution ie. homes for the disabled and mentally handicapped which generates transit type trips can sustain some form of transit option.
3. While 50% is a desirable R/C ratio there are a number of para-transit systems operating at a 40-45% R/C ratio.
4. Transit evolution begins in the form of subsidized-taxi or van pooling in smaller communities. Municipalities who are inclined to jump directly into implementing a full transit system will surely fail unless a minimum demand level has already been established. Our work thus far suggests that of the emerging public transportation/transit systems those most likely to succeed are experiencing a significant lag between the level of service provided and increasing demands.

FOOTNOTES

1 through 6

Rural Mobility Study, 1984 MANOP Services Ltd.

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1. Rural Mobility Study, 1984 MANOP Services Ltd.
2. Transit Estimating For Smaller Communities 1980,
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3. Public Transportation Operating Assistance Grant,
Program Review 1984, Alberta Transportation
4. Alberta Council on Aging, 1983.