RT NO. UMTA-MA-06-0054-78-1

PARATRANSIT LABOR ISSUES

Carter Brandon
Harvard University
Cambridge MA 02138

FEBRUARY 1978
FINAL REPORT

Prepared for

U.S. DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION ADMINISTRATION
Office of Technology Development and Deployment
Office of Bus and Paratransit Technology
Washington DC 20590

NOTICE

This document is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof.

NOTICE

The United States Government does not endorse products or manufacturers. Trade or manufacturers' names appear herein solely because they are considered essential to the object of this report.

Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
UMTA-MA-06-0054-78-1		

4. Title and Subtitle	5. Report Date
PARATRANSIT LABOR ISSUES	February 1978
	6. Performing Organization Code

7. Author's	8. Performing Organization Report No.
Carter Brandon	DOT-TSC-UMTA-78-11

9. Performing Organization Name and Address	10. Work Unit No. (TRAIS)
Harvard University* Cambridge MA 02138	UM828/R8701
	11. Contract or Grant No.
	DOT-TSC-11968
	13. Type of Report and Period Covered
12. Sponsoring Agency Name and Address U.S. Department of Transportation Urban Mass Transportation Administration Office of Technology Development and Deployment Office of Bus and Paratransit Technology Washington DC 20590	Final Report June 1976-June 1977
	14. Sponsoring Agency Code

15. Supplementary Notes

*Under contract to: U.S. Department of Transportation
Transportation Systems Center
Kendall Square
Cambridge MA 02142

16. Abstract

All paratransit services are labor intensive, second only to conventional taxis among transportation modes. As such, the manner in which the service is provided, the role of the labor force, and, in particular, the compensation afforded to drivers, have significant impact on the cost of system operation.

This report looks into paratransit labor costs as they relate to type of service, union affiliation, management strategies, and characteristics of the system location. Labor costs are analyzed in terms of wage scales, benefits, incentive payments, work rules, scheduling practices, and job definitions. The impact of collective bargaining practices and labor legislation is also examined. Transit labor costs are analyzed separately from paratransit labor costs, and the relationship between the two is explored.

The report concludes that real growth in paratransit over the coming years could effect the establishment of dual union wage standards for paratransit and conventional operators. Although the future of paratransit in small rural communities appears secure, the uncertainty and the high labor costs found in the larger cities make its future there more tentative. Greater cooperation is needed between all levels of government, transit managers, and transit labor unions to further the development of paratransit labor standards and of integrated paratransit services.

17. Key Words	18. Distribution Statement
Paratransit, Paratransit Integration, Demand-Responsive Transportation (DRT), Labor	DOCUMENT IS AVAILABLE TO THE U.S. PUBLIC THROUGH THE NATIONAL TECHNICAL INFORMATION SERVICE, SPRINGFIELD, VIRGINIA 22161

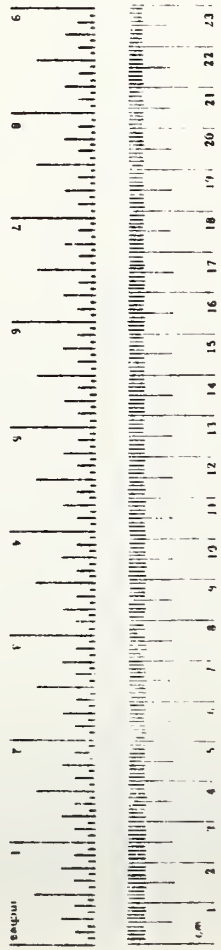
19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	82	

Form DOT F 1700.7 (8-72) Reproduction of completed page authorized

METRIC CONVERSION FACTORS

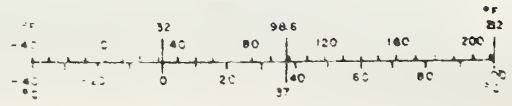
Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



CONTENTS

CONTENTS (CONT)

EXECUTIVE SUMMARY

All paratransit services are labor intensive, second only to conventional taxis among transportation modes. As such, the manner in which the service is provided, the role of the labor force, and, in particular, the compensation afforded to drivers, have significant impact on the cost of system operation.

This report looks into paratransit labor costs as they relate to type of service, union affiliation, management strategies, and characteristics of the system location. Labor costs are analyzed in terms of wage scales, benefits, incentive payments, work rules, scheduling practices, and job definitions. The impact of collective bargaining practices and labor legislation is also examined. Transit labor costs are analyzed separately from paratransit labor costs, and the relationship between the two is explored.

Most transit operations are struggling for survival in the face of rising costs and declining ridership. In fact transit wages have been and continue to be significantly higher than those for skilled industrial workers, and they continue to increase at a rate faster than general wage rate increases in private industry.

Three broad reasons are offered to explain why transit wages are relatively high. They are as follows: (1) public subsidies 'soften' the funding constraints and allow higher wage settlements; (2) transit management arrives inexperienced and ill-prepared at the bargaining table; and (3) political expediency puts pressure on management to capitulate easily to labor demands. However, these factors are less pervasive in the paratransit sector than in conventional transit.

Paratransit services are inherently more labor intensive than conventional transit services: driver productivities for Dial-a-Ride operations range from three to eight passengers carried per hour versus two to three times that amount for fixed route operations. In comparison, exclusive-ride taxi services have an average driver productivity of two to three.

Paratransit is faced, then, with reconciling this disparity between low labor productivity and high conventional transit wages. Issues to be addressed are whether or not to employ unionized labor, how to deal with a high demand for part-time drivers, what type of management organization is most efficient, and how to best integrate services with existing conventional, presumably unionized, transit operations. With regard to the above the following can be noted:

--Average paratransit wages are significantly higher than average taxi driver wages, due in part to lateral pressure within the transit industry to keep non-union transit wages at a near parity level with union wages;

--Most recent paratransit systems have been appearing in small cities, (removed from both existing transit services and transit unions);

--Standard union work rules pose less of a cost to paratransit operations than they do to conventional operations. The main opposing interests between paratransit managers and unions are the wage scales, full-time work guarantees (which exclude part-time drivers), and restrictive job definitions.

In general, paratransit systems are under harsher fiscal constraints than conventional transit systems, and the low labor costs found in rural paratransit systems are essential to their success. The labor costs which urban paratransit systems will ultimately be able to support are not yet known: only when they have 'proven' their viability will a systematic evaluation of their labor needs and constraints be possible.

The issue of union affiliation of paratransit systems is most crucial in urban areas. As a result of several recent developments, it is no longer automatic that paratransit drivers are ensured prevailing wages in large urban areas. Collective bargaining settlements favorable to paratransit may become increasingly the rule rather than the exception. It is uncertain what role union compromises will play in future paratransit development. This author believes that the establishment of dual labor standards for conventional and paratransit drivers, a precedent which has been set in Cleveland and Delaware, would fundamentally

improve the future prospect of paratransit in large urban areas.

Interwoven into this discussion of paratransit labor costs is a study of the cost impact of Section 13(c) of the Urban Mass Transportation Act. This statute protects the employment conditions of transit employees against any adverse effects that may arise out of Federal transit assistance. This report concludes, however, that the application of union standards to new paratransit service is not directly but only indirectly, the administrative effect of Section 13(c).

This labor protection legislation can result in maintaining high transit wages and providing union officials with 'veto' power over Federal grant applications. It is felt, however, that with tougher negotiating and/or greater willingness for management to rely on the assumed impartiality of the Secretary of Labor to resolve impasses, less costly 13(c) agreements could be secured.

A further impact on paratransit implementation is the role of the private sector. It is found that paratransit services can be beneficially contracted out to private management. Furthermore, when paratransit services are proposed as part of an integrated transit plan, the brokerage management strategy, involving both private and public operating agencies, may be preferable to a single operating agency.

Taxi companies are frequently cited as being qualified and economical paratransit operators. In particular, taxi management is experienced in the dispatching skills suited to paratransit; shared-ride taxi is compatible with exclusive-ride taxi services; taxi labor costs are approximately half that of unionized transit drivers; and taxi drivers, even if operating paratransit vehicles, are not likely to be widely organized in the foreseeable future.

Thus, the active interest of the private sector in paratransit will have the effect of keeping costs significantly below those found in conventional transit. In urban areas, the contracting of paratransit services to private managers is a means to keep labor costs low, to separately negotiate wage scales and work rules, to maintain a flexible labor force, and to resolve the

labor affiliation issues related to the administration of Section 13(c). A public transit 'broker' would coordinate these contracted services and address himself to the issue of attaining the maximum transit service possible at a given cost.

The report concludes that real growth in paratransit over the coming years could effect the establishment of dual union wage standards for paratransit and conventional operators. Although the future of paratransit in small rural communities appears secure, the uncertainty and the high labor costs found in the larger cities make its future there more tentative. Greater cooperation is needed among all levels of government, transit managers, and transit labor unions to further the development of paratransit labor standards and of integrated paratransit services.

1. INTRODUCTION

1.1 SCOPE OF STUDY

All paratransit services are labor intensive, second only to taxis among transportation modes. As such, the manner in which the service is provided, the role of the labor force, and in particular, the compensation afforded to drivers, have significant impact on the cost of system operation. Careful study of the labor force, of labor relations, and of collective bargaining practices is important in the further development of paratransit. This report is an initial effort in that direction.

Labor policy is not a 'clean' area of study: political and social factors can heavily influence, often in surprising ways, the economics of labor policies. Analytical tools alone are insufficient to assess the transit and paratransit labor situation. Regional differences greatly influence the labor supply, the labor market, and the prevailing wage scale. Transit unions, while having one identifiable national character, have varying degrees of influence in various states and in cities of various sizes. State and local laws often have direct impact on transit labor policies and upon unionization practices, just as individual decision-makers can and do color labor policies according to their own needs and negotiating skills. All of these factors combine to make generalizations in this area difficult and of dubious value.

Within these broad labor issues, this study will limit itself to the identification and analysis of trends. It will also attempt to make practical recommendations for the shaping of future paratransit labor policies, based on key precedents already found within the increasing sphere of paratransit operational experience. Emphasis will be placed on the long-term interests of paratransit development, on the institutional arrangements affecting labor relations, and on the differing roles

to be played by Federal, state, and local governments in shaping a viable labor policy. Also important is the still-evolving relationship between paratransit services and the conventional transit industry.

1.2 DEFINITIONS

Paratransit is a relatively new and widely appealing concept of public transportation in both urban and rural areas. It may be defined as organized ride-sharing in the range of (but not including) pickup carpools and fixed route bus service. It has two distinguishing characteristics: (a) some degree of formal organization; and (b) flexible routing to serve specific rider origins and destinations rather than simple high demand 'corridors.' There are several types of possible services, each of which can be categorized according to its relative amounts of route flexibility and formality of organization. The most significant paratransit modes are as follows:

Demand-responsive transportation (or, Dial-a-Ride) -- a dynamically scheduled door-to-door service, where the scheduling and dispatching functions may be automated. Bus routes are flexible and continually seek to optimize vehicle productivity combined with high quality service.

Subscription bus service--a door-to-door bus service to riders making the same trip on a regular or periodic basis. The handling of requests, scheduling, and dispatching is similar to that employed by demand-responsive systems.

Van-pooling--a commuter service organized by an employer, which utilizes vehicles owned or leased by the employer, and drivers who are themselves commuters.

Car-pooling--similar to van-pooling, but with smaller, privately owned vehicles, and organized with the aid of an employer or public agency. Ride costs are shared by all riders.

Shared-ride taxi service--the non-exclusive patronage of taxi vehicles, either in an entirely flexible (shared-ride) or fixed route with small deviations (jitney) manner.

1.3 LABOR PRODUCTIVITY AND COSTS

To date, paratransit has proven in general to be a high-cost transit alternative to other modes. This, however, does not mean that paratransit cannot effectively replace other modes in certain situations. Two factors that account for the high costs are the labor-intensive nature of the service and the high cost of labor. The labor issue, therefore, must be looked at from the point of view of (1) the optimal utilization of paratransit labor and (2) the minimization of labor costs.

The first of these considerations will not be discussed here. The determination of labor needs, based upon labor utilization or productivities, is the responsibility of the architects of paratransit services. Labor productivity is more a function of system conception, design, and implementation than of labor contractual relations per se. Labor productivities are relatively fixed for a given paratransit mode, and situational factors, such as public versus private ownership, or of union versus non-union labor, make little difference. The most promising ways to improve labor productivities, as identified in current paratransit literature, are through computer dispatching, an emphasis on the less demand-responsive services (such as many-to-one, many-to-few, and route deviation line-haul bus patterns), and the provision of differing priorities of service at different fare levels. Most of these ideas implicitly define the service concept but have little direct effect on the resulting per unit labor costs.

The second issue, the minimization of transit labor costs, is the concern of this paper. This paper looks at transit costs separately from paratransit costs, and explores the relationship between the two. Labor costs are a function of wage scales, benefits, incentive payments, work rules, and scheduling practices; the exact determination of these component factors is

the result of periodic negotiations between labor and management. It is in the arena of such negotiations that transit planners translate their labor needs, as required to provide the type of service desired, into economic and working realities.

1.4 ORGANIZATION

This report is organized as follows: the second section gives a summary of transit labor, wage trends, work rules, labor legislation, and of collective bargaining practices. This section is important as background material.

The third section focuses on paratransit labor; it relates paratransit labor standards, rules, and trends to those of conventional transit. The issues are examined from the respective viewpoints of labor management and governments, as revealed around the bargaining table. Case studies illustrate the politics of paratransit labor issues.

The fourth section explores the process of paratransit rationalization, i.e., the process of involving the private sector in the comprehensive planning and implementation of transit. Included is an examination of the impact of rationalization on labor. It is found that many of the labor issues raised can be more easily resolved in the brokerage management concept than under single management.

The fifth section concludes by raising the possibility of dual labor standards for paratransit and conventional transit as a means of securing the future of paratransit in urban areas.

2. SUMMARY OF TRANSIT LABOR ISSUES

2.1 THE TRANSIT LABOR COST FACTOR

The mass transit industry in the United States consists of a wide variety of autonomous units: transit services are widely dispersed across the nation with little communication between operators. This is true in spite of the fact that many local units are organized under national unions such as the Amalgamated Transit Union (ATU) or the Transit Workers Union (TWU), and that the trade association, the American Public Transit Association (APTA), attempts to keep the many transit entities attuned to particular issues.[1] The primary result of this situation is that most transit properties have their own unique labor/management relations as evidenced by specific clauses or phrases in the employment contract. The international unions function to make policy statements and to assert wage and fringe benefit guidelines, but properly leave the final adjustments in wages, hours, and working conditions to the local collective bargaining process.[2]

Most transit operations are struggling for survival in the face of rising costs and declining ridership. Labor costs represent substantially more than half of these costs: typically 68 percent of total operating costs are labor, and up to 85 percent of all costs are labor-related.[3] Furthermore, transit wages have been and continue to be significantly higher than those for skilled industrial workers, and they continue to increase at a rate faster than general wage rate increases in private industry.

2.1.1 Reasons for High Transit Labor Costs

There are three broad reasons why wages in the transit industry are relatively high. No distinction is made at this time between publicly and privately owned operations, although this distinction will be further examined in the next section. Since the industry-wide trend is toward public ownership, it is emphasized here.

1. Deep public subsidy: Due to the influx of Federal subsidies, there is an apparently 'unlimited' source of transit capital and operating revenues. On the negotiating table, it is much harder for management to fight labor demands when the clear bargaining platform of profitability -- the life or death of the operation itself -- is removed. Instead, profitability is replaced by vague budgeting and subsidy guidelines. For example, a labor demand for an increase of a certain percentage in its compensation package is 'buffered' by the fact that it is often not clear whose money is being spent.[4] The burden of financing the increase can create a need for fare hikes, or it can help leverage increased Federal operating subsidies. Since labor can argue -- effectively -- that the local municipality will not bear the entire cost of wage increases, local management has not been desperately hurt by lucrative wage settlements. Transit subsidies, in effect, have been diluted by labor demands rather than having been more selectively spent on ways to upgrade quality of service.[5]

2. Collective bargaining practices: In contemporary collective bargaining practices, several institutional factors combine to give labor the bargaining edge -- theoretically at least -- over management. First, management negotiating officials are cited as being inexperienced: they concern themselves with labor contracts only a fraction of their time in comparison with full-time labor negotiators. Secondly, public officials are answerable to no clear authority, and rather than having an executive mandate to follow, must endeavor to meet the political expectations of an elected board or council. "When the director of the transit authority, the mayor, and city lawyers are responsible for representing the city, the ultimate responsibility for a settlement favorable to the city is not easily assigned to any one person or group... Consequently, authority and decision-making are diffused rather than centralized."[6] A third factor which

benefits labor is Section 13(c), the labor protection clause, of the Urban Mass Transportation Act of 1964. Section 13(c) virtually ensures that prevailing regional wage standards will apply in any Federally-aided transit or paratransit project. The provision helps maintain high levels of employee compensation simply by stipulating that prevailing levels will not be undercut. Transit management also contends that Section 13(c) gives organized labor 'veto' control over Federal grants because the Section 13(c) labor/management agreement must be reached before the grant proposal can be awarded. Section 13(c) and its importance is fully discussed below in Section 2.3. All of the above mentioned institutional factors which describe the collective bargaining process demonstrate how difficult it is to check rising wage trends for public transit labor.

3. Political realities: A third categorical reason for labor's success in transit negotiations may be the strong political pressures on public officials to reach a settlement prior to strike action. This is illustrated by noting that "between 1967 and 1971, 85 percent of all public transit bargaining impasses was settled through arbitration while 96 percent of all private transit disputes was resolved by strikes."[7] Labor and management both recognize that public expectations of uninterrupted transit services are high, and labor can use this fact to achieve greater and quicker concessions.

2.1.2 Public Ownership of Transit Systems

One consequence of the financial crisis facing the transit industry has been the shift from private to public ownership of major transit properties. Public acquisition makes the required public support of transit easier and facilitates the passage, if needed, of effective regulatory policies. It effectively removes urban transit from the influence of traditional market forces, and recognizes its role as being similar to that of public utilities.

This trend has affected transit labor in two ways: in terms of the cost of labor, and in terms of workers' bargaining rights. It will be seen that the effect on the former has been measurable while the effect on the latter has been negligible.

Statistical studies have shown that public ownership, especially when combined with Federal subsidies, has a positive effect on raising wage levels. One study concluded that the total impact during the years 1963 to 1971 was a 9-12 percent increase in wages over wages typical of privately owned transit systems.[8] Another study concluded that while the effect was real, it was probably less than 5 percent.[9] While these numbers do not correlate, it can be safely concluded that public ownership has helped encourage high wage trends in the transit industry. The reasons for this are described above.

In a given locality, the transit labor force usually belongs to the same transit union regardless of management affiliation. Thus, if there is more than one operating transit company in that area, which is common, labor costs will not vary greatly between privately and publicly owned transit companies. It has been stated that "Although not always true, the worker's right to organize, to be recognized, and to bargain collectively, is not substantially different under public ownership from what it was under private control."[10] In the rare case that a non-union and a unionized transit operation co-exist in the same area, there is usually close parity between wage levels. This is because the non-union operation is under pressure to conform, or nearly conform, to prevailing wage rates, at the risk of being organized.

There is one exception to this discussion which must be presented. Some states, mostly in the South, prohibit public management to bargain collectively with its employees. Here, then, public take-over of transit companies sometimes has resulted in a reduction of employee rights, and has enabled management to establish its own wage scale. This situation, however, has been

negated in cases where Federal funding is sought. Section 13(c), in addition to guaranteeing that wage levels will not be undercut, entitles employees of both public and private companies to equal rights.

It is infrequent today that public ownership of a transit property threatens to weaken labor's bargaining position. On the contrary, public ownership not only preserves workers' rights, it enables labor to bargain for higher wages than would have been possible under private ownership.

2.2 ELEMENTS OF TRANSIT LABOR NEGOTIATIONS

Labor contracts are basically negotiated on three levels: wages, fringe benefits, and work rules. This section will describe the current levels of transit labor compensation on these three levels, and underline some of the relevant issues that will be later referred to in the context of paratransit.

2.2.1 Wages and Fringe Benefits

Average transit wage rates in 1975 ranged between $4-7 per hour, for both publicly and privately owned transit properties, with the average being $6.25 per hour. Fringe benefits added approximately another 16 percent onto the average transit worker's compensation package.[11] These statistics can be put into perspective by noting the following:

1. Industry-wide average transit wages are substantially higher than the average wage rate for skilled industrial workers in the private sector, including those in regulated industries.[12]

2. In the last decade, transit wages have significantly improved relative to the overall national wage structure, despite transit's financial hardship. This upward trend, which is largely a function of built-in cost-of-living escalator adjustments, is a tendency which will not be easily checked. It should be noted that although wage increases over the 1962-75 period totaled 91.3 percent, the real wage increase, due to inflationary cost price index increases, was a much smaller 23.8 percent.[13]

3. Wage differentials between regions and between various population groups are significant. A typically high wage system is a large, publicly-owned, and subsidized system located in a large city in the Pacific region; a typically low wage system is a small, privately-owned system in a small city in the Southwest. These wage differentials are shown in the following chart.

A. Wage Rates and Increases in Wage Rates for Local-Transit Operating Employees, by Region, for the period 7/1/74-7/1/75.

Region	Aver. Hourly Rate (7/1/75)	Change from 7/1/74 Cents/Hr.	Percent
New England	$6.23	66¢	11.8%
Middle Atlantic	6.44	57	9.8
Border States	6.42	81	14.3
Southeast	5.32	53	11.1
Southwest	4.42	47	11.9
Great Lakes	6.39	59	10.1
Middle West	5.83	42	7.9
Mountain	5.28	55	14.5
Pacific	6.50	83	14.5
All Regions	6.25	64	11.3

B. Wage Rates by Population Groups, from selected cities, July 1, 1975.

Population Group	Aver. Hourly Rate
1,000,000 or more	$6.24
500,000 - 1,000,000	5.94
250,000 - 500,000	5.54
100,000 - 250,000	4.81

Source: U.S. Dept. of Labor, Bureau of Labor Statistics, January 1976; cited in 'Transit Wages,' by Kenn Mericle and David Modest, August 1976.

4. Even in a typically low wage system (i.e., a small private transit company) wages are high relative to average wage rates in local industrial and manufacturing jobs in the private sector.

5. Although little data is currently available on fringe benefits awarded in the transit industry, it can be noted that those paid in large transit systems are higher than those paid in large firms in the private sector.[14] These benefits are not at the expense of low wages.

These figures will be further put into perspective in the discussion in Section 3 relating paratransit wage levels to those for conventional transit.

2.2.2 Work Rules

The financial impact of labor work rules is not easily assessed or recorded. Work rules can generally be classified into three categories: (1) employee scheduling, (2) seasonal changes in service schedules, and (3) labor force utilization. Of these three types, the first accounts for most of the current inefficiencies in the utilization of transit labor and consequently is the most important work rule issue in transit labor negotiations.

1. Employee scheduling: This is the process of matching employees to available work runs, i.e. the process of matching employees who would prefer to work eight-hour, continuous shifts with service schedules which reflect the highly irregular patterns of demand for transit services. The structuring of runs and the assignment of drivers to these runs are subject to constraints that result in two kinds of labor inefficiencies. The first is driver time which does not produce fare-box revenue but for which the driver must nevertheless be paid. The second is driver time that must be paid for at premium rates. The problems which account for these inefficiencies are:

a. Lay-over time: The slack at the end of a circuit before a driver is scheduled to leave again.

b. Make-up time: The time it takes a driver to do his complete set of circuits, each of which normally takes a determinable amount of time. If the total run time falls short of eight hours, the driver must be paid for the non-productive time required to make up a full eight-hour shift: if the run time exceeds eight hours, he must be paid a premium rate, usually time and a half, for the overtime.

c. Spread-pay: Since drivers must often be assigned to runs which are split into two segments corresponding to the peak periods of demand, they are usually paid a spread-pay premium for the inconvenience of excessively long work days.

The issues involved here are clear enough: management seeks to minimize the time a driver works which does not produce revenue or which must be paid for at a premium rate. The workers seek to work a regular eight-hour shift, and, failing this, seek to be paid for all the time which their labor is available to the employer, whether it is productively used or not. They seek, also, premium pay for the inconvenience of overtime and split shifts. The goals of both parties, although legitimate, often come into direct conflict with each other as a result of the peak patterns of transit demand.

Work rules found in the transit industry today obviously represent the negotiated settlements of this conflict. A typical set of work rules today might include the following provisions, although the exact rules and limitations vary greatly across the country:[15]

1) Drivers are guaranteed 40 hours' pay per week, even though they may not work the full amount.

2) Straight runs (eight hours' work in nine hours) must equal at least 60 percent of total runs.

3) Any driver whose shift spans over 10.5 hours receives a 50 percent spread premium for any additional time; any spread time in excess of 12 hours is awarded a double-time premium.

4) Regardless of the piece of work performed, a two-hour minimum must be paid.

Some operations may stipulate that on weekends there are minimums of 80 or 90 percent straight runs; others may establish an absolute maximum spread time (usually 13 hours). While there is by no means any nation-wide conformity to a given set of work rules, contracts which are favorable to labor in one city are

often extracted by the union in another city for a basis of comparison. As this kind of negotiation continues, and as Federal operating subsidies lend a certain financial uniformity to geographically diverse operations, transit work rules may become standardized in the future.[16]

The direct cost of these scheduling work rules is a complex issue that has only begun to be systematically studied.[17] Some initial statistics are helpful, however:

a) The Cleveland Transit Service shows an average lay-over time (based on 10 runs) of 14 percent--which is higher than the minimum lay-over time of 10 percent of the route running time stipulated in the contract.[18]

b) Lay-over time averaged 18.4 percent of total scheduled operating hours on 1,627 runs of the Massachusetts Bay Transit Authority (MBTA) in the fall of 1975. There is no minimum lay-over time stipulated in the MBTA contract: this labor inefficiency is entirely due to scheduling inefficiencies.

c) The MBTA paid a negligible amount of scheduled overtime (.12 pay hours per driver for a 3-month period) in the fall of 1975. During the same period, the average make-up time was only 0.3 percent of the total hours. (Unscheduled overtime, which is caused by a wide variety of incidental factors, is not included here.)

d) Run-off time (the time required to both move the bus from the garage to the beginning point of the route and from the end point of the run back to the garage) accounted for 9.6 percent of total operating hours in Cleveland and approximately 5 percent of total operating hours for the MBTA.[19]

e) Spread-pay premiums totaled 6.5 percent of all wages and allowances paid on regularly scheduled MBTA runs during the fall of 1975.

It is clearly impossible to make generalizations on the basis of these few examples. However, assumptions can be made that will later qualify for valid comparisons with paratransit operations. First, lay-over time, more than make-up time, run-off time, or scheduled overtime, is a source of inefficient labor utilization. This is interesting in light of the fact that most contracts do not stipulate lay-over time as a required end-of-the-run rest period--it is caused, rather by scheduling and dispatching decisions. Second, run-off time, the second largest labor inefficiency factor, is also a function of factors other than contractual provisions. It depends primarily on the spatial relationship between the garage where the vehicle is stored and the beginning and end points of routes.[20] Third, the low figures for make-up time, scheduled overtime, and spread-pay premiums do not tell the whole story. It is generally accepted that split run rules, in addition to the cost impact of spread-pay premiums, cause 'service inflation' during off-peak periods.

Service inflation describes the situation where it proves cheaper to schedule more straight-time runs at mid-day (service which is both unnecessary and unprofitable) than to pay the cost of spread-pay premiums. The premium associated with spread-time runs, then, prevents the system schedules from matching the service provided with the varying ridership demand. A secondary cause of service inflation is the contractual scheduling constraints that limit the percentage of split runs. If work rules require that 60 percent of all runs must be straight, then inflated off-peak schedules may be the direct result.

2. Seasonal changes in service schedules: The second category of work rules relates to seasonal changes in service schedules, and the driver's right to periodically pick his new schedule. The driver 'pick' -- the choosing of individual work runs -- usually takes place every 3-6 months. This practice imposes little cost on management. On the contrary, since the time of the pick is the only time that dispatchers can adjust

work runs to changing and seasonal levels of ridership demand, it is an invaluable opportunity for management to tailor its services to operating conditions. This is equally true for paratransit systems and for conventional transit systems.

3. Labor force utilization: The third category of work rules pertains to job definitions, job mobility, and employment security. The most important impact they have on transit labor is to limit -- and usually prohibit -- part-time labor. From the preceding discussion of split shifts, clearly part-time labor would be an ideal solution to the peaking demand problem. A base labor requirement could be established that would guarantee all full-time drivers a straight run, which would then be augmented during peak hours by part-time drivers. Such a scheme would reduce operating costs in a three-fold manner: (1) by reducing the number of regular full-time drivers, (2) by reducing mid-day service inflation, and (3) by eliminating spread-pay premiums. This scenario, however, violates the almost nationally guaranteed 40-hour work week for all regular drivers. The only exception to this rule is that of stand-by drivers, i.e. drivers who are available to fill in for regular drivers who are absent due to sickness, vacation, etc.

In summary, then, work rules which have emerged from free-bargaining tables represent compromise solutions to the problems of scheduling and guaranteeing full-time work. They reflect very real concerns of transit workers, and in most cases, are firmly entrenched in practice. In particular, attempts to reform minimum-work guarantees, overtime, and spread-pay premiums would face strong union opposition. It is more realistic to realize greater savings by increasing off-peak demand (i.e. smoothing out the peaks in the service demand curve) or by diverting drivers to other activities. Paratransit is a likely candidate to achieve both these goals.[21]

The potential of paratransit to attract a greater off-peak ridership than does conventional transit is central to much paratransit literature. This point will not be discussed further here, other than to note that UMTA is very optimistic that this

potential will be realized by ongoing paratransit demonstrations. The second possibility -- that of relaxing driver job definitions-- is examined in Section 3.2.

2.3 TRANSIT AND SECTION 13(c)

Section 13(c) of the Urban Mass Transportation Act is a labor protection clause. In drafting this Act, Congress was concerned that some Federally-funded transit projects might cause a decrease in transit employment. This 'adverse impact', it was felt, might arise from either of two sources: (1) transit automation, whereby Federal capital grants would cause a decrease in the absolute number of transit jobs, and (2) competition between the Federally-funded project and local, private transit companies, resulting in a loss of service, loss of profit, and lay-offs in the existing local operation. It is the goal of Section 13(c) to guarantee that labor rights and employee compensation should not be worsened as a result of Federal transit subsidies. By delegating responsibility for satisfying the 13(c) provision to the Secretary of Labor, not to the Secretary of Transportation, it was intended that labor, not transportation concerns should dominate the settling of difficult cases.

Transit employees who stand to be adversely affected are assured that their bargaining rights, compensation, and working conditions are to be protected, and that they would be given priority for employment (or reemployment) in the new project, should their old job be displaced. The text of 13(c) itself reads:

> (c) It shall be a condition of any assistance under section 3 of this Act that fair and equitable arrangements are made, as determined by the Secretary of Labor, to protect the interests of employees affected by such assistance. Such protective arrangements shall include, without being limited to, such provisions as may be necessary for (1) the preservation of rights, privileges, and benefits (including continuation of pension rights and benefits) under existing collective bargaining agreements or otherwise; (2) the continuation

> of collective bargaining rights; (3) the protection of individual employees against a worsening of their positions with respect to their employment; (4) assurance of employment to employees of acquired mass transportation systems and priority of reemployment of employees terminated or laid off; and (5) paid training or retraining programs. Such arrangements shall include provisions protecting individual employees against a worsening of their positions with respect to their employment pursuant to Section 5(2)(f) of the Act of February 4, 1887 (24 Stat. 379-ICC Act) as amended. The contract for the granting of any such assistance shall specify the terms and conditions of the protective agreements.[22]

Section 13(c) makes specific reference to Section 5(2)(f) of the Interstate Commerce Act, which set a precedent for labor protection in the case of railroad consolidations and mergers. The benefits provided by Section 5(2)(f) are among the most generous available in the American economy:[23] it guarantees that any transit employee who is affected by Federal funding (i.e., not just the employee of the property receiving Federal aid, but also employees of other transit companies which might be adversely affected by publicly-aided competition[24]) will not be placed in a 'worse position' for a period of either four years, or the length of his employment with the transit property, whichever is shorter. Section 13(c) stipulates that these benefits are the minimum benefits to be awarded, and the Secretary of Labor may, if appropriate, require more generous arrangements.

A few points concerning 13(c) should be noted here, as they are relevant to the forthcoming discussion of paratransit.

1. The provision is vague on the subject of how 'fair and equitable arrangements' are to be arrived at. As stated above, the final authority lies with the Secretary of Labor, but such high-level intervention is the exception, not the rule, to actual administrative practice. The basic presumption is that the agreement will be negotiated by management and labor in each locality, and that each agreement will thus reflect local working conditions and circumstances peculiar to each Federal grant.

2. The Department of Labor (DOL) has been criticized for failing to establish criteria for 13(c) bargaining.[25] To counteract this complaint, and to facilitate processing of operating grant applications (available since 1974), DOL, APTA, and organized labor groups such as ATU and TWU have helped develop a national model 13(c) agreement. Since its approval in mid-1975, nearly half of those transit properties receiving operating assistance from UMTA have become a party to this agreement.[26]

3. Some state laws prohibit municipalities from bargaining with unions. In cases where public agencies are attempting to acquire private unionized operations, yet are forbidden by law to contract with a union 13(c) becomes a barrier to the receipt of Federal subsidies. Alternative procedures have been found to resolve most of these cases. The most common procedure is to create a separate transit authority, management company, or a non-profit corporation that is able to bargain with the union. This type of institutional solution contributes to the emerging popularity of the 'brokerage' management strategy, discussed in Section 4.3.

4. It is the point of view of management that the necessity of reaching a 13(c) agreement before Federal funding can be approved has given transit unions inordinate bargaining strength. Others believe that management should put more faith in the discretionary power of the Secretary of Labor than is currently the common practice. Management's haste to sign 13(c) agreements has perhaps led to excessive settlements that would not have arisen under the Secretary's arbitration.[27]

5. One final arguable criticism of 13(c) is that it does far more than simply ensure that prevailing wages will be guaranteed to transit workers: some claim that it reinforces the institutional arrangements that give rise to such high wage rates. The rights of labor organizations, it is felt, are protected rather than the rights of individual employees.[28] This embedding of union rights is currently being challenged by paratransit.[29]

The Department of Labor has received less criticism for awarding pro-labor 13(c) settlements than it has for generally playing too small a role in the negotiation of 13(c) agreements. It is being pressured into taking a more active role. The current economic hardships, together with the trend toward public takeover of transit properties, have made 13(c) a central and difficult administrative issue in transit development.

Section 13(c) has become a scapegoat for those arguing the insufferable rise of labor costs. There is little doubt that unions have generally been more pleased than management with the impact of 13(c). In defense of 13(c), however, it must be recognized that it is a 'status quo' provision, and does not of itself effect wage trends or labor relations. It merely ensures that union compensation and rights are sustained.

3. PARATRANSIT LABOR

The mosaic of issues presented in the preceding section -- the autonomus nature of transit operations, the high component of labor costs in transit operations, the high prevailing wage rates found in unionized transit operations, the "publicization" of transit operations, the infusion of Federal funds, the institutional characteristics of collective bargaining practices, the impact of the several kinds of work rules, and the impact of Federal transit labor legislation-- all must now be brought into focus upon paratransit. To the extent that paratransit development takes place within the existing transit industry, the institutional and labor environment generally conforms to the above picture. Wages will probably equal those in conventional transit, and collective bargaining rights will be extended to cover new paratransit services. Paratransit, however, by not falling completely within either the definitional or practical domain of conventional transit, represents a variety of alternative approaches to the current transit labor situation.

3.1 THE PARATRANSIT LABOR COST FACTOR

3.1.1 Paratransit Labor Force and Compensation

The labor force currently utilized by various paratransit operations is not a homogenous one: the labor pool varies both according to the type of paratransit service being offered and the type of management ownership. Paratransit labor sources include:[1]

1. Unionized bus operators: They operate in accordance with strict union regulations as to salaries, fringe benefits, and work rules. Typically the larger Dial-a-Ride and subscription bus systems (e.g., Rochester, NY; Santa Clara, CA; Ann Arbor, MI; Haddonfield, NJ) hire organized labor.

2. Unionized taxi drivers: They are protected by union regulations which are less strict than those for bus operators,

but which still restrict length of shifts and percentage commission to be taken by the driver from the total revenue. In terms of paratransit, unionized taxi drivers typically operate shared-ride taxi systems and special services to the elderly and handicapped. These services are often operated in conjunction with health care and social service organizations, and often with UMTA Section 16(b) funding.

3. Free-lance drivers: These non-union, professional, and often part-time drivers, often operate shared-ride taxi and special services, and in addition may drive home-to-work subscription buses. This labor group includes those driving non-union (and often leased) taxi, school buses, and private limousine services.

4. Volunteer drivers: Used in van-pooling and ride-pooling programs, the driver/passenger is compensated for expenses and often receives additional free use of the vehicle.

Just as paratransit labor sources vary greatly, so do the wages earned. Unionized bus operators earn prevailing wages of $5-7 per hour plus fringe benefits. Taxi drivers earn a wage rate approaching half that amount, or $2.50-4.00 per hour, not including tips. Free-lance and part-time drivers usually earn about $2.50-3.00 per hour, or approximately the same wages as earned by small-town, non-union taxi drivers.

Given the choice, then, it would clearly be cheaper to operate paratransit services, which are characteristically labor-intensive, by drawing from the taxi labor pool than by employing transit union bus operators. The issue of whether a paratransit manager does, indeed, have this choice is the basic issue confronting the development of paratransit. Secondary issues which also must be explored are the relative impacts this choice has on service delivery, cost, and management.

Theoretically, there is a clear tradeoff that must be resolved by the transportation administrator between wages that are high enough to maintain an attractive labor force and low enough to keep costs down to the level of system viability. In most real situations, however, the public official has little flexi-

bility to determine optimal wage rates, and becomes frustrated in his efforts to do so.

In terms of specific services, subscription buses, shared-ride taxis, and special service programs face the issues of whether or not to employ unionized labor, how to deal with a high demand for part-time drivers, and what type of management organization is most efficient. Dial-a-Ride services face similar issues: whether or not to use union labor, and in some cases, how to best integrate services with existing conventional, presumably unionized, transit operations. In the case of volunteer ride-sharing programs, the cost of labor is not an issue. Except for an initial capital investment, these services are self-supporting. They pose little in the way of labor problems, short of the problems of logistics and reliability inherent in mobilizing a volunteer labor force.

3.1.2 Union Affiliation and Wage Parity

The question of labor affiliation in paratransit implementation (especially Dial-a-Ride and subscription bus) is an important and often crucial one. Some studies have tried to prove that due to the inherent lower productivity of paratransit labor, "transit authorities cannot sustain paratransit if they must pay drivers and controllers salaries equivalent to those paid fixed-route operators."[2] Driver productivity here is defined as the ratio of passengers carried per labor hour. Driver productivities for Dial-a-Ride operations range from three to eight, whereas productivity is usually two to three times that amount for fixed route operations.[3] In comparison, exclusive-ride taxi services have an average driver productivity of two to three, which is only slightly less.[4]

The current rule of thumb in paratransit implementation is that urban systems are bound to union labor while rural and small community systems pay roughly two-thirds of prevailing union rates to non-union personnel. Average paratransit wages are significantly higher than average taxi driver wages. This is due, in part, to lateral pressure within the transit industry to keep non-union

transit wages at a near parity level with union wages. Non-union paratransit operators are under pressure to roughly conform to the higher wage scale to avoid the risk of being organized.

Paratransit managers are struggling against what has been called the 'Baumol-Bowen' effect in their desire to pay drivers less than union wages.[5] This rule states that wages rise at similar rates in an economy regardless of relative differences in worker productivities. The effect is even more binding when unions are involved, as is the case in the transit industry. Although managers would ideally wish to pay taxi-level wages in order to cut costs, they must pay higher wages because of the nature of their labor needs.

It must be noted that certain spokesmen arguing on behalf of paratransit drivers say that it is misleading to define driver productivity simply in terms of passengers carried per hour. They claim that although driver productivity for paratransit is lower than for fixed-route bus drivers, the job requires more concentration, more constant driving, and more familiarity with the streets in the service area. Furthermore, they claim, the paratransit driver must sometimes plan his route in advance, and in some cases, understand and use computerized communications equipment. While these arguments are in themselves true, most agree that they, in themselves, do not sufficiently affect the requisite skills of a paratransit driver to merit higher wages.

In terms of absolute numbers, the number of smaller, non-union paratransit systems is far greater than the number of unionized systems. However, the larger, unionized Dial-a-Ride systems in Rochester, Ann Arbor, Haddonfield, and Santa Clara have been more important to paratransit planners in terms of demonstration value. Hence, they have received disproportionate attention in paratransit literature, creating the impression that more paratransit systems are unionized than is currently the case.

Most recent paratransit systems have been appearing in small cities, removed from both existing transit services and transit unions. Attempts to unionize these smaller community services

have sometimes failed. For example, in Luddington, Michigan, paratransit employees were offered a bonus of certain fringe benefits in return for voting to remain non-union. In La Habra, California, they were simply told that the system would be forced to fold if unionized. In both cases, the drivers reasoned that lower-paying jobs were better than no jobs at all.

There are three main reasons why these smaller systems are able to resist unionization, and thus keep costs down. The first is the one just mentioned: higher costs would kill the project. Secondly, many of these systems are so small that unions are simply not interested. Thirdly, most of these systems operate in communities where conventional transit modes have proven unsuccessful. Hence, the transit unions are not represented in the community, and have no operational base.

In contrast, the unionized Dial-a-Ride systems in urban areas are the largest paratransit mode in terms of capital expense, fleet size, and service area. More importantly, they are the most often integrated with conventional, and presumably unionized, transit services. Dial-a-Ride systems have had the highest net costs per ride of all paratransit modes--costs which sometimes exceed those of exclusive-ride taxi systems. Operational experience to date is insufficient to answer the question of whether the advantages of integrated paratransit services at union wage scales offset the inevitable high labor costs.[6]

3.1.3 Unionization and Restrictive Work Rules

What are the costs of paratransit unionization beyond those of higher wages? Restrictive work rules have measurable effects on paratransit operations: two standard rules have a greater impact than all the others. These are (1) the provisions that make the use of part-time labor impossible, and (2) job definitions that prevent drivers and control staff members from performing other functions during the off-peak hours. The remaining work rules, which cause some labor inefficiencies in fixed-route operation, are less consequential to paratransit systems. The ease with which paratransit modes, especially Dial-a-Ride, can

accommodate these rules stems from the flexible scheduling and routing characteristic of paratransit.

Each of the several common types of transit labor inefficiencies is analyzed below. Two questions are asked of each: 1) what is its operational impact on paratransit, and 2) what cost effect, if any, does it have on paratransit. For easy reference, they are discussed in the same order as presented in the previous section (Section 2.2.2), and summarized in Appendix II.

1. Lay-over time: Wasted lay-over time between runs is not a factor in paratransit, especially in Dial-a-Ride and shared-ride taxi systems, because runs tend to be continuous. Thus, a 10-20 percent savings in labor efficiency over that of conventional transit is possible. A union bid for a mandatory lay-over time (10 minutes per hour) failed in the Rochester Dial-a-Ride system.

2. Make-up time: The difficulty of scheduling runs in fixed-route operations is eliminated in Dial-a-Ride and shared-ride taxi systems because the vehicle has an indeterminate schedule. The dispatcher can ensure that the driver is back at the garage almost exactly as his run time expires simply by carefully tailoring the driver's last stops around the end-time commitment. Operational experience in Rochester, under both manual and computer dispatching control, has shown that drivers can be realistically brought out of service very close to their scheduled times. Make-up time poses no greater problem for paratransit operations than for conventional operations, where its impact is negligible.

3. Spread-pay premiums: Paratransit, like conventional transit, is susceptible to the peaking of transit demand. Its work force, however, remains more constant throughout the day than that of conventional transit. Thus, the need for split runs in paratransit is much less than in conventional transit operations, and the spread-pay premiums account for less in paratransit systems than in conventional systems, although there is no current data to support this.

The reason for this lies in the fundamental planning concept behind paratransit. Transit ridership during peak hours is most efficiently carried by either conventional transit modes, or by the most productive paratransit modes, such as subscription buses and home-to-work ride-pooling programs. The lower demand periods are more effectively served by the less productive and more personalized paratransit modes such as Dial-a-Ride, shared-ride taxis, jitneys, and special services to the elderly and handicapped. This latter set of service modes is very labor-intensive. In the period of a day, a single paratransit operation can shift its characteristic operating mode from the most productive services to the most personalized. By so doing, the peaked ridership demand can be most effectively met. Also, the driver surplus which traditionally results from the normal curtailing of peak hour services is absorbed into the operation of the more specialized services.

The Rochester Dial-a-Ride system is a good example of this. Its fleet of medium-sized buses provides a home-to-work subscription service in the mornings and afternoons, and provides Dial-a-Ride services in the day and night. As a result of this arrangement, however, the payment of spread-pay premiums is not entirely avoided. Split runs are still scheduled in Rochester, not because of the need to accommodate peak-hour driver requirements, but for convenience. Split runs are convenient, in this case, in order to avoid sending several vehicles into service at the same time. It is important to avoid all the morning drivers coming out of service at the same time, leaving nobody on the road. Similarly, it is undesirable to schedule all the night drivers for work precisely eight hours prior to the system shut-down time. Staggering driver in-service and out-of-service times, which requires carving out split runs, ensures the continuous availability of service. This convenience scheduling of split runs in Rochester is the exception, however, not the rule.

4. Run-off time: This is the time required to move the bus to and from the garage to the beginning and end points of its route. Since paratransit runs do not ordinarily start or finish

at established points, the dispatcher can reduce the run-off time by beginning and ending vehicle tours near the garage. The closer the garage is located to the center of the service area, the less run-off deadheading occurs. (Rochester has an ideal situation, where the garage is located across the street from the main intersection and transfer point of its service area.)

Although no work rules affect run-off time, it was seen that in the case of conventional transit it can absorb as much as 5-10 percent of total operating hours. Judicious paratransit implementation can eliminate what for conventional transit is the second greatest source of labor inefficiency.

5. Driver guarantee of 40 hours work per week: The almost universal stipulation in unionized transit systems is the prohibition against use of part-time drivers. Independent paratransit systems, when not so restricted, can employ part-time drivers to achieve a much more economical labor cost. The strict use of full-time drivers in conventional transit is associated with the direct cost of spread-pay premiums, and the indirect cost of service inflation. While these can be assumed to be less for unionized paratransit operations, they nevertheless do exist, and cut into operating budgets.

The problem, however, goes deeper than a simple measurement of these costs: certain paratransit services are inherently part-time services, similar to school bus and charter services. One of the positive features of paratransit is its ability to tailor its services to meet specific transit needs, at specific times. Among the market sectors paratransit can best serve are the peak-hour home-to-work trips and special service trips. The cost of providing these kinds of services with full-time drivers would be prohibitive, unless the drivers were otherwise employed during the remaining hours of the working day. In a large paratransit or integrated conventional transit system, this could be done; but it is impossible now to determine the extent of this kind of practice.

6. Job definitions: The relaxation of job definitions would also mitigate the problems inherent in the peaking of transit demand. It would become possible for conventional bus drivers to switch to driving paratransit and special service vehicles for the elderly and handicapped during the low-demand periods. Similarly, supervisors could become dispatchers during peak hours; dispatchers could become drivers during the drivers' lunch breaks; and drivers could do minor maintenance work during off-peak hours. This practice is most common in the small paratrasit operations. All of the job changes mentioned above are currently being exercised, often very successfully in at least one locality. However, some of these switches may be infeasible in real terms for all but the most informal of operations. Practical barriers include the following: drivers need special licenses which dispatchers would be required to get; drivers would need training as mechanics; and regular route drivers would need special training before being allowed to drive paratransit vehicles.

There are even more fundamental reasons why job restrictions are, in the case of the larger paratransit systems employing transit or taxi union labor, essentially practical and not needless constraints. These larger operations require a differentiation of skills and an organization of manpower that would be both unnecessary and inefficient in small operations. However, even in the larger systems there is room for compromise: in Ann Arbor, for example, job descriptions are not so restrictive that controllers cannot take calls, dispatchers cannot fill in for drivers, and non-union supervisors cannot become dispatchers, when an "acute shortage exists."

In summary, then, the main opposing interests between paratransit managers and unions are wage levels, full-time work guarantees, and restrictive job definitions. Paratransit modes are more efficient than conventional transit modes in terms of lay-over time, make-up time, run-off time, and spread-pay time, where the implicit savings due to increased labor efficiency may be as much as 20 percent. These findings are summarized in Appendix II.

3.2 PARATRANSIT DEVELOPMENT: A STUDY OF UNION COMPROMISES

3.2.1 Union Attitudes towards Paratransit

The attitude of the Amalgamated Transit Union towards the development of paratransit is, and has been over the past decade, supportive: its primary concern, however, is that of labor protection. Statements have been made that no favors can be afforded to paratransit that would tend to undermine existing labor standards.[7] In particular, the ATU often expresses its apprehension that paratransit may drain patronage away from existing transit operations, draw public subsidies away from conventional transit, and continually seek to employ non-union labor. The reason the ATU is not willing to ride the current paratransit wave, especially when the wave is a labor-intensive one, is that union officials feel that due to high costs, paratransit will have a limited impact on public transit. Even though the transit industry is operating on a severe deficit, and paratransit is a hopeful way to expand services, the ATU does not intend to allow compromise on labor standards to help "subsidize" the cost of transit.

In the preceding discussion of paratransit labor costs, paratransit unionization was equated with high costs. Non-union operations were described as being under pressure to approach wage parity with prevailing wages to avoid the possibility of organization. And the above summary of the official ATU position towards paratransit does not reveal much apparent flexibility in its acceptance of paratransit.

While all of this is true, it is not the whole truth. The situation is not so simple, nor does the unionization of paratransit automatically ensure that prevailing wages are paid. Recently, union compromises have been bargained for and gained: settlements have been reached which apply specifically to paratransit, and are not carbon copies of conventional transit labor agreements. As a result, collective bargaining settlements favorable to paratransit may become increasingly the rule rather than the exception.

Interestingly enough, the pressure for compromise is greatest in those medium-to-large cities where wage levels are high, and where the need for an innovative transit solution, such as paratransit, is urgent. On the other hand, it is in these same cities that labor unions are most powerful, and that the likelihood of union compromise is not great.

3.2.2 Reasons for Union Compromise

There are four main reasons why unions may increasingly compromise on paratransit settlements. First, paratransit is a labor-intensive transit innovation that is receiving both popular and professional support. It is also an innovation that is, in most cases, prohibitively expensive to operate at prevailing wage rates. Whereas unions worry that paratransit may compete with and detract ridership from existing transit, paratransit advocates insist that the integration of the two would be to the synergetic benefit of both. The ATU supported the Rochester Dial-a-Ride project for reasons that perfectly describe this ideal relationship. The local ATU shop letter said of the project when it was still in planning stage: "The Dial-a-Bus will provide a direct link between existing Regional Transit Service (RTS) lines and with home-to-station services. City residents who work in a variety of suburban industries will also be aided by being able to take a Dial-a-Bus from RTS lines to places of employment... The implementation of this (network) will also, of course, mean up to 100 new jobs through the major expansion of the RTS bus fleet... It will represent a decisive step forward in the continuing effort to provide convenient, economical public transit for the entire Rochester metropolitan area."[8]

The second reason is simply that mass transit is a failing industry, and that any new option should be encouraged. If paratransit can help even slightly to revitalize the industry, then jobs are gained. If the industry continues to fail, then layoffs, wage guidelines, or funding cuts could result. In either case, the transit unions stand little to lose by supporting paratransit.

The net impact of paratransit on conventional transit labor standards will be negligible.

Thirdly, trends in paratransit development show that the states, notably Michigan, California, Wisconsin, and Florida, and not the Federal Government, are taking primary responsibility for future development. Since state financing is not subject to Section 13(c) regulation, prevailing wage levels are not in any way upheld by law. In the absence of 13(c) protection, unions may find themselves with less leverage with which to protect prevailing wages across all transit operations.

The fourth, and most direct reason why unions may be persuaded to compromise on their standards is represented by the facts surrounding the Cleveland case (see below). In brief, this case shows how transit unions are currently threatened by the contracting of paratransit operations to non-union, private operating agencies. The unions are fearful that such competition may undercut existing labor standards. One way for organized labor to win the service contract, without turning the issue into a highly politicized one, is to compromise on their demands. The second way, of course, is to organize the independent operator, which may not always be an immediately available option.

It is still too early to determine what role union compromises will play in future paratransit development. Certainly no labor spokesman has gone, or will go, on record as saying that wage cuts, in this case, are acceptable. Few politicians will actively encourage the undercutting of labor standards by contracting out paratransit services. The only real means to solve this issue is on a case-by-case basis at the local bargaining table.

Two important examples of successful labor negotiations are detailed below. The first case, the Cleveland "Community Responsive Transit" (CRT) system, is a model of union compromise. The second, the history of the "Personalized Transit" (PERT) system of Rochester, New York, is a less significant, but good example of union-management cooperation. The importance of this cooperation was that open communication was maintained throughout the

planning and implementation phases.

3.2.3 The Cleveland "Community Responsive Transit" System

In April, 1976, a labor dispute between the Greater Cleveland Regional Transit Authority (RTA) and Local 268 of the ATU, concerning the use of regular RTA (union) drivers in the newly proposed CRT system, was settled. The agreement was reached that: (excerpts)

1. CRT funds will be split with one-third used to provide taxicab contracted service to areas of lower density and two-thirds used to provide service manned by RTA (Amalgamated) personnel serving areas of higher density. (Contracted service may include vehicles other than taxicabs.)

2. A new classification, CRT Operator, will be established. The CRT Operator will operate a vehicle with a seating capacity of less than 30 passengers, with or without a wheelchair lift.

3. The rate for the CRT Operator will be established at $4.40 per hour; this rate is 69 percent of the present RTA Operators' rate. It was agreed that a differential of 31 percent will be maintained for a minimum of five years.

4. At the outset of the program, CRT Operators and extras will be guaranteed 30 hours of work per five-day work week.

5. CRT Operators will have an opportunity to qualify for regular RTA operator work after a minimum of one year of service as a CRT Operator.[9]

Other than these, all other provisions concerning employment of the regular RTA operators apply equally to CRT operators. These provisions include vacation, holidays, insurance, pensions, sick benefits, employment representation, seniority, and overtime provisions.

It appears that the primary motivation for the union compromise was simply to prevent its being underbid by the taxi companies for operation of the CRT service. The CRT system, which very recently began operation, is the successor to an earlier, Federally-

funded demonstration project called Neighborhood-Elderly Transit (NET). NET was operated by union labor and was costing over $4.75 a ride--a high cost which has been blamed on the combination of 'free' Federal monies, inefficient management, and high union wages. The attitude accompanying the termination of the demonstration funding was that: (a) a new strategy would be needed to allow local and state monies to afford the new CRT service; and (b) that an expanded service, especially in the form of expanded special services to the elderly, was politically desirable. A local taxi company offered to provide a continuation of the same type of service at a rate which was much cheaper than was possible with union labor. Whereas the ATU announced that one vehicle hour of unionized CRT operation would cost $17.50 per vehicle hour, the Yellow Cab Company bid for operation of the identical service at a fee of $11.50 per vehicle hour. At the risk of a union walkout, or a union refusal to sign the pending 13(c) agreement, the management was willing to negotiate with the unions and not contract the entire service out to the taxi companies. The union, on the other hand, agreed to the above precedential compromise as a result of employment, political (the interests of the elderly and handicapped), and competitive pressures.

3.2.4 The Rochester "Personalized Transit" System

The second example, that of the Rochester PERT system, is often forwarded as a model of labor cooperation. Local union officials were included in the early stages of planning and design of this Federal demonstration project. Labor officials felt that this early management concern for labor policy was both innovative and important in later winning union support for the project. Obviously, the fact that the union was not being undercut by PERT meant that it had little to lose: it had been early decided that the system would be unionized. In spite of this, the union's enthusiastic support was revealed in other ways and was important in securing local community approval. Minor modifications in the standard union work rules were easily won. Job description changes were made in the standard job classifications to accommodate the

automation of the vehicle communication procedures. Finally, and most importantly, the union agreed to allow non-union control room staffing. The Amalgamated Transit Union publicly used the Rochester example to counteract criticism that transit labor concerns resist technological change and that the transit unions' lack of flexibility inhibits transit innovations.

On the other hand, the PERT system aimed to increase the number of transit jobs in Rochester. It would have been self-defeating for the ATU to oppose the system. As a Federal demonstration project, the PERT system was striving to improve Dial-a-Ride labor productivity via the application of sophisticated new technology. The PERT system remains a crucial test of whether the high cost of unionized labor can be offset by efficient, automated control systems. Its success or failure may be critical to the future of publicly operated Dial-a-Ride systems in large urban areas.

3.3. PARATRANSIT AND SECTION 13(c)

As stated in the preceding section, Section 13(c) of the Urban Mass Transportation Act protects the employment conditions of transit employees against any adverse effects that may arise out of Federal transit assistance. If a union local exists in the recipient community, 13(c) virtually ensures that union standards will prevail in any Federally-aided transit project. This section argues, however, that the application of union standards to new paratransit services is not directly, but only indirectly, the administrative effect of 13(c).

The controversy surrounding 13(c) is real and must be looked at realistically. The questions that must be asked are the following:

1. what actual impact has 13(c) had to date on paratransit development and implementation;

2. what are the currently unresolved issues pertaining to the administration of 13(c), and are they likely to be resolved in the near future;

3. what restrictions does 13(c) place on management, both public and private;

4. how does 13(c) relate to the taxi industry in terms of its emerging role as a paratransit operator?

These four questions serve as an outline for the remainder of this discussion.

3.3.1 The Cost Impact of 13(c)

First, the impact of 13(c) coverage can be assessed on the basis of selected case studies. As a preface to this, it must be emphasized that most paratransit implementations to date are either non-union or have not received Federal funding, and thus have been negligibly concerned with 13(c). The main reason for this is that most of these projects are in communities of under 50,000 people, which are ineligible for UMTA funding, and for which 13(c) is inapplicable. To the extent that paratransit development continues in the smaller communities, with only the help of local and state funding, 13(c) is of no import. As was the case with the issue of unionization, the 13(c) controversy is centered around the larger paratransit systems in urban areas.

Also, it must be remembered that 13(c) is a 'status quo' statute: it serves to guarantee union standards that have been won earlier at the bargaining table. As such 13(c) reinforces, but is not the source of, lucrative settlements.

The cost impact of 13(c) is potentially twofold. First is the influence that it may have in maintaining high transit wages. Second, it is possible that union officials, by withholding approval of a 13(c) agreement, can sustain a 'veto' power over Federal grant applications. Even a significant union delay in signing the 13(c) agreement, which is short of an actual veto, can represent a major cost burden to the transit management. This second factor is one of the main reasons why 13(c) has stirred up controversy: management feels vulnerable to union 'veto' threats, and thereby feels compelled to capitulate easily

to high union demands. More than one writer has suggested that this sense of vulnerability is more a myth than real -- and that with tougher negotiating and/or willingness to rely on the assumed imparitality of the Secretary of Labor to resolve impasses, less costly settlements could be secured.[10]

An example of the first effect, that of forcing higher labor costs, is the Arterial/Personal Transit system in Santa Clara, California. At the time of the Santa Clara Transit District's initial request to UMTA for capital funding, the fixed-route bus drivers were already union members. The control room staff and dispatchers were not. The Amalgamated Transit Union was little interested in organizing the staff because it was, at that time, so small. With the introduction of county-wide Dial-a-Ride services, the size of the control staff more than tripled, from approximately 50 to 160 employees. The union then became sufficiently interested in the expanded staff to start a successful organization campaign. The 13(c) negotiations that corresponded to the second grant application in the summer of 1974 were reportedly the basis for the easy capitulation of management to this organization effort. The 13(c) was negotiated at that time, and when submitted to the Department of Labor it was summarily approved.

Although the 13(c) provision itself supplied neither the mechanism nor the motive for organization of the control staff, it did serve to specifically force the issue of labor affiliation. In final accounting, unionization of the control staff represented a probable net payroll increase of 10-20 percent over the previous non-union control staff wage rates.

The second type of 13(c) adverse cost impact, that of forced delay, is described by the events transpiring in Haddonfield, New Jersey. For this UMTA Dial-a-Ride demonstration project, the Department of Labor was slow in giving 13(c) approval. The Department of Labor was under pressure from the state and from state-level labor officials to withhold its approval until other, ongoing labor negotiations between the state and the Amalgamated Transit Union were completed. A six-month delay was incurred,

compounded subsequently by a two-month Amalgamated Transit Union strike. This eight-month delay not only induced high lay-over costs, but also affected the ultimate success of the Haddonfield demonstration project. By giving state and local governments a head start, elsewhere, in Dial-a-Ride development, and by reducing the effective role played by the Federal Government, it served to slow down the overall course of paratransit development.

In the above two cases, Santa Clara and Haddonfield, the drivers were all union members. This is not, however, the rule: controversial 13(c) agreements have been resolved in ways other than the complete unionization of the paratransit labor force. The "fence" arrangement is the most common, and most important, of these alternative type of agreements.

The fence-type agreement implies a demarcation of non-competitive jurisdictions for transit and paratransit modes.[11] One example of this is in Delaware, where the state transit administration has been divided between regular and special (elderly and handicapped) services. A 13(c) agreement was reach in late 1975 wherein the specialized transit operations were authorized to employ non-union drivers at below prevailing wage rates, while the conventional transit operation remained bound to the employment of union labor. The distinction between two legitimately different types of transit service, and the allowance of separate labor agreements, constituted the fence agreement.[12]

The Cleveland Community Responsive Transit (CRT) system negotiated a unique 13(c) agreement which can also be described as a "fence" strategy. Here, the delineation of non-competitive jurisdictions was not based on service types, but on service areas. As a response to the original proposal to contract out all CRT operations to a taxi company, the Amalgamated Transit Union indicated that it might veto the required 13(c) agreement: although this position was never made explicit, it was implied. CRT management responded to this by offering a partial contract to the union, and by carefully delimiting the zones to be respectively served by union and non-union drivers. The taxi-operated vehicles were restricted

to the less densely settled, and therefore less lucrative areas of the service district; the union drivers served the more urban areas of the service district.

It should be noted that the delay incurred by the 13(c) negotiations in Cleveland was a factor in the temporary suspension of transit service to the community. Following the termination of Neighborhood-Elderly Transit, the predecessor to CRT, it was partly due to the 13(c) delay that CRT was not able to immediately commence operation. In terms of community inconvenience, this long delay represented a significant cost.

More fundamentally, the Cleveland example raises the question of whether union labor would have become involved at all with CRT were it not necessary for management and labor to reach a 13(c) agreement. Cleveland officials have indicated that it was not because of the 13(c) agreement, but rather more general "logistical" reasons, that the union-taxi compromise was necessary. The term "logistical" was interpreted to mean: (a) the union's historical right to exclusivity to all local transit services, (b) the political implications of denying union participation in a publicly funded transit project, and (c) the union's ability to threaten to have an illegal slow-down or walkout of the regular RTA bus services. The 13(c) agreement provided, it was felt, a convenient stage upon which the inevitable compromise was struck.

As a final footnote to this discussion of the present impact of 13(c) administration, it must be remembered that there are certain situations in which Federal capital and operational assistance grants are not contingent upon 13(c) approval. The most important of these are special services for the elderly and handicapped if funded by UMTA Section 16(B)(2) monies. Also exempt from 13(c) coverage are the ride-sharing programs undertaken by the Federal Government outside the auspices of UMTA, most notably the efforts of the Federal Highway Administration and the Federal Energy Administration.[13]

3.3.2 13(c) Administration: Outstanding Issues

The full extent of 13(c) coverage has never been fully defined. The Department of Labor has failed to establish national labor standards for paratransit similar to those it has already advanced for conventional transit. This latter set of standards, known as the National Model 13(c) Agreement, was established in 1975 through negotiations sponsored by the Department of Labor, and involving the Amalgamated Transit Union, the Transit Workers Union, and the American Public Transit Association. The parties could not agree on the terms by which paratransit could be included in the model agreement. The main obstacle to establishing all-inclusive standards was whether paratransit operators should be guaranteed prevailing union wages.

A secondary issue was what precise level of employment compensation must be guaranteed, under 13(c), to all employees affected by paratransit development. These questions have yet to be firmly answered. Nor, for several reasons, is it clear that they should be answered:

1. Transit settlements have always been highly variable, and paratransit, in particular, has a widely varying labor force. Any 'comprehensive' 13(c) labor policy would certainly be riddled with unwieldy qualifiers that would render its usefulness marginal.

2. The Department of Labor feels that paratransit 13(c) agreements should be handled on a case-by-case basis until paratransit emerges as a more significant trend in urban transportation and the operational characteristics of paratransit modes are better known. In this context, then, it is clear why 13(c) issues have never been generalized: a suitably general test case has never arisen.

3. The preferred means for settling 13(c) labor disputes has been negotiation between the affected local parties. In cases of prolonged dispute, arbitration has remained a last resort, and is overseen by the Department of Labor. The Department is committed to the belief, however, that local negotiations are more sensitive to the local situation, and can more successfully

guarantee a "status quo" settlement than is possible with Federal intervention.

In short, the above reasons characterize the Department of Labor's belief that the transit employee's 13(c) protection is akin to his right to free bargaining. In most cases, both wages and 13(c) agreements are negotiated locally.

In light of this belief, it is unlikely that the current case-by-case administration of 13(c) will change in the near future. And until it does, the unresolved issues surrounding paratransit and 13(c) can only be resolved on a case-by-case basis.

Also, it would be unrealistic to think that the 13(c) statute will be legislatively altered any time in the foreseeable future, in spite of certain management protestations that would support such action. It is more likely that Federal subsidies will be more closely monitored, that management's bargaining skills will be reinforced, or that wage guidelines will be imposed, than it is that 13(c) protection will be eclipsed. The fundamental legislative issue concerning 13(c), very generally, is its impact on industry-wide manpower deployment.[14] In this context, the issues relating paratransit and 13(c) have a negligible impact.

3.3.3 13(c) and Paratransit Unionization

Section 13(c) protects the employment conditions of transit employees against any adverse effects that may arise from Federal transit assistance. This means that no Federally subsidized rival transit system can undercut prevailing wages; or, otherwise stated, it means that the rival system is assured of equal labor protection and compensation. What is the net effect of this on the labor affiliation of paratransit innovations?

George Hilton explores this question, and warns that:

> Indirectly, Section 13(c) amounts to a protection of franchise rights of existing transit enterprises. The protection of job rights of union members extends to employees of a rival of an operation subsidized by UMTA. Consequently, UMTA cannot attempt to create competitive rivals to existing transit monopolies. Accordingly, UMTA's efforts to produce demand-responsive systems amount to an effort to provide taxicab service at transit rates, which, given the union organization of the drivers, is grossly uneconomical.[15]

Hilton identifies, but overstates, this important issue. He argues that: (a) since 13(c) protects job rights of union workers and (b) since such protection extends to rival operations, that (c) all Umta-funded projects must perforce be unionized. He does not consider the possibility that certain transit innovations may not necessarily be rival to existing operations. In non-rival conditions, equal protection guarantees do not automatically apply.

In reality, paratransit is rarely competitive with existing conventional transit modes. Indeed, it is the specific intent of paratransit planners to reach out to transit markets currently forsaken by conventional transit. (In this context, Roos underlines the fact that "existing conventional transit is servicing an extremely limited market -- the central business district-oriented work trip generally comprises only 10-20 percent of travel in a metropolitan area."[16]) Thus, paratransit modes, including ride-pooling, shared-ride, Dial-A-Ride, as well as special services for the elderly and handicapped, can be non-competitive with conventional transit franchise operations. By implication, referring back to Hilton's argument, prevailing wages and union standards need not be automatically extended to the paratransit sector.

The issue of franchise rights, however, cannot be so easily dismissed. A currently prevalent concept among paratransit advocates is the 'brokerage' concept of system management. This is an institutional strategy that would create a public monitoring agency, or 'broker,' to function as a coordinator of both public and private, paratransit and conventional transit services. The goal of system integration is well served by this concept. In light of 13(c) it is particularly interesting, for the brokerage concept purports to divide transit modes among discrete operating agencies. This would then allow paratransit modes to enjoy a different labor affiliation from that of conventional transit modes. The current situation in Cleveland is a preliminary step towards a brokerage arrangement, where both transit labor and non-union taxi drivers are contracted by the same

Regional Transit Authority to provide discrete transit services (This concept is more fully discussed in Section 4.3).

3.3.4 13(c) and the Taxi Industry

The most salient issue to arise under Section 13(c) is the relationship of this regulation to the taxi industry. More specifically, are taxi employees eligible for coverage? UMTA policy in the past has been to not compensate taxi operators on the basis of their never having been designated as urban transit workers. The rationale for this, however, is becoming increasingly tentative. Altshuler makes the point that, "To the extent that UMTA funds are used in support of taxi-like operations, or of operations that are clearly competitive with taxi service, the case for exclusion of taxi employees from 13(c) protection is weakened."[17] The current UMTA position is that shared-ride taxi and van-pooling services do generally qualify as urban transit, making them eligible for Federal subsidy. These programs are likely to be competitive with exclusive-ride taxi services. UMTA is concerned, therefore, that its funding actions to support these paratransit modes may lead to a broadening of the coverages to be provided under 13(c).

It should be noted that there are specific problems associated with the extension of 13(c) coverage to taxi drivers. These problems include the unique employment arrangement of many taxi drivers who lease their cabs, the indeterminable wages earned by most drivers, and the part-time nature of much taxi work. These problems relate to the specific coverage that could potentially be made available to taxi drivers. Each of these problems is discussed in more detail by Altshuler.[18]

The reasons why such a broadening of 13(c) coverage has not been accepted by UMTA are as follows:

1. taxi employees and taxi unions are only now beginning to organize behind the issue;
2. federal funding of shared-ride taxi programs has not yet reached the critical point where it is no longer considered a demonstration but an ongoing program, at which point the Depart-

ment of Labor would accordingly deem 13(c) protection necessary;

3. local regulations in many areas prohibit shared-ride taxis, and are a liability to the broadening of a national shared-ride program.

Nationwide interest in shared-ride taxi, from the local regulatory and entrepreneurial levels to the higher governmental funding levels, will have to greatly expand before any formal extension of 13(c) protection rights becomes an actuality.

4. PARATRANSIT RATIONALIZATION

4.1 PRIVATE PARATRANSIT MANAGEMENT

As a transit innovation, paratransit spans the traditional gap between publicly and privately owned transit operations. Its historical roots are in the private sector. Paratransit advocates believe that successful interfacing of paratransit with conventional transit will involve extensive coordination between the public and private sectors. It is also assumed that efficient transit operation can be better realized by private operators, suitably regulated and subsidized if necessary, than by entirely publicly-owned operators. Private transit has been traditionally void of innovation due to profit-making needs and heavy regulation. But it is felt that paratransit innovation, when planned and/or assisted by public agencies, can be beneficially contracted out to private management.

One question that this raises is why paratransit is particularly suited to private management. Paratransit, at its best, represents an integrated system of services that are balanced with respect to customer needs. The concept of an integrated system does not imply a single operating agency. There are three reasons for this:

1. The initiative for paratransit is not coming exclusively from public transit authorities but also from the private sector (and, in the case of ride-pooling, from organizational efforts by private employers).

2. The barriers to entry for many paratransit modes are low enough so as to encourage innovation by any number of small operators.

3. Discrete transit services imply the possibility of distinct labor agreements and compensation levels.

In order to encourage this branching out of paratransit service providers, UMTA initiated in 1976 a policy in the original Act of 1964 that put a new emphasis on private management. UMTA required

that private transit operators, including taxi companies, be afforded a "fair and timely opportunity to participate to the maximum extent feasible in the provision of the proposed special transportation services."[1] UMTA further decided that a locality, in order to be eligible for Federal assistance, offer the management of any new transit service to both private and public operators. This process of involving the private sector in the comprehensive planning and implementation of an integrated transit service is called rationalization.

4.2 TAXI RATIONALIZATION

Taxi companies, in particular, are most frequently cited as being qualified and economical paratransit operators. Not only is shared-ride taxi naturally compatible with current taxi operations, taxi management is also experienced in the type of scheduling and dispatching skills suited to Dial-a-Ride, subscription, and special services. More importantly, the taxi labor costs would be approximately half that of unionized transit drivers. And finally, not only is the taxi labor force largely non-union, its characteristics (entrepreneurial, part-time, on a vehicle lease basis, with a high driver turnover, and receiving commission payments) are such that it will most likely not be widely organized in the foreseeable future.

The integration of taxi operators with paratransit services, and in a broader sense with urban transit, poses some important labor-related questions. UMTA is now slowly beginning to offer both shared-ride taxi capital and operational demonstration grants, in addition to the assistance it is providing for other types of taxi-operated paratransit services. This raises the following questions:

1. how appropriate to paratransit is the taxi labor force, and what effect might Federal operational assistance have on the taxi labor force;

2. how vulnerable will taxi-operated paratransit services be to labor organization;

3. if organized, what effect might organization have on taxi employee compensation?

In short, all these questions seek to determine exactly how applicable the taxi labor force is to paratransit.

4.2.1 The Taxi Labor Force

The first question basically asks how similar the taxi labor force is to the transit labor force. To the extent that these two groups are similar, increased Federal funding of taxi-operated paratransit services would have a negligible impact on the make-up of the taxi labor force. Conversely, if these two groups have different characteristics, then by implication, an increase in Federal funding would effect a shift in the taxi labor characteristics towards those of the transit industry. This issue is important because many people feel that the taxi labor force, in its current state, is unsuited to more carefully tailored public services.

Employee profile studies have shown that taxi drivers are typically younger, more transient, and with fewer family obligations than are their counterparts in the transit or paratransit (Dial-a-Ride) industries. The important corollary to this is that the paratransit labor force more closely resembles that of the transit industry than that of the taxi industry, even in the case of non-union paratransit systems being operated by taxi companies. This generalization is based on experience in several cities, noting particularly that:

1. most paratransit systems rely on full-time employees for most of the driving, which is more typical of transit than of taxi operations;

2. most paratransit systems require a more rigid and regular scheduling of driver runs than do taxi operations, thus requiring a more stable work force;

3. rather than simply needing a driver's license, most paratransit operators need a special bus operator's license and some need special medical training, thus attracting a class of drivers more characteristic of transit than of the taxi industry;

4. turnover rates for paratransit tend to be very low compared to those for taxi drivers (driver turnover rates of 30 percent per year are not uncommon in the taxi industry[2]).

It can be assumed, then, that any major expansion in the paratransit industry will create jobs more characteristic of transit than of taxis. Even if new paratransit services are operated by taxi companies, the available drivers will display those worker characteristics typical of transit labor, not of taxi labor. The current paratransit situation supports this conclusion, and the trend will most likely continue. Furthermore, the increasingly active participation of taxi companies in paratransit will probably dispel any public bias running counter to such participation.

4.2.2 Taxi Labor Organization

This expansion and shift in the taxi labor force following an increasing number of paratransit implementations would increase, not surprisingly, its vulnerability to labor organization. This is due to three factors.

First, paratransit services, clearly belonging to the family of urban transit modes, fall under the organizational interests of the Amalgamated Transit Union and the Transit Workers Union, whereas exclusive-ride taxi services do not. Thus the conventional transit union will not willingly watch governmental transit monies go into a non-union urban transit mode. Transit unions want to impose wage levels and work rules similar to those for the transit industry upon the emerging paratransit sector.

Secondly, the shift in labor characteristics documented above begins to reverse those factors that hitherto account for the low degree of unionization in the taxi industry. These alterations combine to make labor organization of a taxi-operated paratransit

service an easier prospect than in the taxi industry. The impact paratransit would bring to taxi drivers includes: (a) the shift from a largely commission wage basis to a more fixed (hourly) compensation rate; (b) the shift from a flexible driver schedule to one more directly determined by regular services needs; (c) the shift from an unstable labor force to a more stable and full-time one; and (d) the shift from individualistic driver attitudes to a more professional attitude of responsibility for the overall system viability. Taxi drivers, who are independent, perceive far fewer net benefits from unionization than would drivers of paratransit vehicles, who may be restricted in their work hours and wage levels by management policies.

Thirdly, most taxi companies today are set up as groups of small corporations that by remaining small, limit the owner's liability. Presumably, taxi-operated paratransit services would be similarly set aside from the owner's original investment in exclusive-ride taxis. This discrete separation of paratransit drivers and taxi drivers enables them to have different labor affiliations. For example, the drivers for an exclusively taxi-cab corporation may well refuse a bid to organize at the same time that drivers for a paratransit service corporation vote to unionize. Thus the separation of labor forces may make the organization of certain segments (e.g. the paratransit drivers) easier than would otherwise be the case. A minority of paratransit drivers under taxi company management may be able to organize themselves, whereas in an industry-wide vote, the organizational attempt would be thwarted by a majority of regular taxi drivers.

Although the vulnerability of paratransit operations to unionization may be clear, the speed with which the process will occur is not. Pending the growth of a national paratransit industry, it will proceed very slowly and on a very haphazard basis.

4.2.3 Compensation for Unionized Paratransit/Taxi Drivers

It is even likely that unionized paratransit drivers with roots in the taxi industry will receive lower wages than union transit workers. The following factors support this:

1. Federal funding of taxi-operated paratransit services will presumably be limited. This is both because of a fundamental political reluctance to fund private business in a potentially entirely self-supporting activity, and because Federal assistance to taxi companies will predominantly be capital improvement, not operational, grants. Operating revenues will be mostly derived from the farebox, state, and local sources, and will not be sufficient to allow lucrative wage settlements. As explained above (Section 2.1.1), Federal operating assistance is often diluted by rising wage scales: this would not be possible in the fiscally tight typical paratransit operation.

2. Union taxi drivers today do not receive significantly higher wages than do non-union taxi drivers, and both receive substantially less than transit union bus drivers.[3] Union wages have not been able to rise above non-union levels simply because such a cost increase would cause taxi companies to fold. Paratransit services, operated by taxi companies, will not in the near future be any more sanguine. The main question concerning privately operated paratransit modes is not so much what wage level they can support, but simply whether the service is potentially self-supporting at all.

3. Taxi drivers that provide paratransit services will face competition from both other taxi drivers and from an underemployed job market. This job competition will prevent them from gaining wage settlements far in excess of taxi wage levels. This downward wage competition would be lessened only slightly should paratransit drivers organize into a union separate from that of taxi drivers, as has been discussed above.

4. Most taxi-operated paratransit services will be so small as to lack sufficient bargaining strength to negotiate significantly higher wages. If integrated paratransit services are coordinated under the brokerage management concept, then individual services are contracted out to the lowest bidder. This contractual favoring of lower cost paratransit operators clearly favors the status quo, a low level of paratransit driver compensation.

5. Experimental wage schemes can be devised for taxi-based paratransit operations that more closely resemble taxi wage-incentives than transit's straight hourly wage structure. In this way, high payroll outlays would be proportionately accompanied by increased labor productivity. Unlike the case of regular bus operations, driver motivation has a decided impact on paratransit driver productivity. Thus, if paratransit systems find themselves under pressure by labor to pay higher wages, it may prove judicious to adopt a payment plan more typical of taxis than of transit.

The above five factors show why most privately operated paratransit systems outside of the large urban areas will pay, and will be able to keep paying, wages that are significantly lower than transit union standards. Thus, the prospect of unionization of taxi companies that contract to provide paratransit services is not the last word: even if unionized, the likelihood of a rapid rise in wages and labor costs is small.

4.3 THE BROKERAGE CONCEPT

A currently prevalent concept among paratransit advocates is the 'brokerage' concept of systems management. It is an institutional strategy that would create a public monitoring agency, or 'broker,' to function as a coordinator of both public and private, paratransit and conventional transit services. Coordination techniques for a public transit broker include:[4]

1. developing pricing policies that encourage the combined use of service provided by different operators;

2. establishing a centralized computer control system with a comprehensive data base of travel requirements;

3. encouraging intermodal coordinated transfers between different operators;

4. coordinating transit marketing and promotion;

5. soliciting, in a coordinated manner, state and Federal funding for a comprehensive transit system.

In addition, a public broker can benefit from greater economies of scale in capital purchases than could any independent service operator.

Adoption of the brokerage management strategy, in a given urban area, would have the following effects on labor:

a. By encouraging the participation of private-sector transit operators, and by contracting management services out to the lowest bidder, operating costs would be kept to a minimum. Since labor costs account for the majority of these costs, non-union, low-paying management costs would be favored.

b. Distinct transit services, varying from conventional transit to voluntary ride-pooling, would be centrally coordinated. But they could enjoy differing labor affiliations. In some cases, the brokerage arrangement could actually help facilitate unionization of some components by establishing a clear organizational unit. In general, however, the managerial separation of services would have a net impact of discouraging unionization.

c. The contracting of paratransit services on a temporal basis -- usually for one to four years -- also inhibits unionization since higher wages will be competitively undercut.

In net terms, then, when taxi operators are contracted to perform paratransit services, the brokerage management strategy helps sustain the non-union, low-cost status quo of the taxi industry. The utilization of the strategy, in a real situation, would be more of a convenient management mechanism than a strategy which represents a muscle-bound labor policy. The brokerage agency is in no way equipped to inhibit labor organizational drives, or to discourage an organizational amalgamation of its various transit and paratransit labor segments. Since the brokerage agency does not replace management, it does not assume management's responsibility to negotiate contracts with labor: it has the far simpler role of periodically selecting the lowest qualified bidder to operate the proposed transit service.

The central concern of the brokerage agency is the overall service attainable at a given cost. The broker has the flexibility to build into the service contracts incentive measures for the operators to improve their services. However, the contract will rarely, if ever, contain language that explicitly addresses the labor issues discussed above.

5. CONCLUSION

Due to the peculiar nature of paratransit, it is a challenge to the bi-modal structure of the current American transit system. It is representative of neither the automotive nor the mass transit industry. Its challenge is partly indicated by the new input it is bringing to the transit labor situation.

The newness of paratransit, in terms of labor, can be summarized with the following five points:

1. many paratransit systems are being implemented in small cities with a population of less than 50,000;

2. paratransit operations serve a potentially different and distinct market from that of conventional transit;

3. paratransit services in many localities are being initiated by, or contracted to, independent operators such as companies, even where conventional transit services and public transit authorities exist;

4. paratransit labor is inherently less productive than conventional transit labor;

5. the financial exigencies of paratransit may well be harsher than those for conventional transit.

These five reasons combine to assert that paratransit cannot afford its drivers the lucrative wages that prevail in conventional transit. Real growth in paratransit over the coming years could sufficiently strengthen these factors to effect a fundamental change in the transit labor situation. This change would be to establish dual union wage standards for paratransit and conventional transit operators. It would be the logical conclusion to a trend which has only begun.

Today there is no standard for paratransit labor compensation in urban areas. The rule of thumb has been that paratransit drivers receive transit union wages. This may change in the years

to come. The agreement reached in Cleveland could set a precedent, and dual standards based on labor productivity could become the rule. The dual standards would be applied to distinct service areas with varying service needs. Or, the labor agreement reached for the State of Delaware could set a precedent, and dual standards, based on service type, could be defined. While there is no mechanism in this country to make such standards generally defined and accepted nation-wide, a series of local actions such as the two named here could have a measurable impact on the national transit situation.

One industry where dual wage standards have been increasingly accepted is the construction industry. In 1976, a wage rate approximating 75 percent of prevailing construction wages for residential rehabilitation, small home construction, and small commercial construction was agreed upon by construction unions and contractors in many cities nation-wide. The Federal Government has become party to these agreements by authorizing the lower labor rates for certain Federally-funded housing rehabilitation programs. This secondary wage rate was successfully negotiated as a result of severe economic pressures on the construction industry, pressures which are similar to those on the transit industry. The measure of labor productivity as the basis for the dual wage structure applies equally well to the concept of paying unionized paratransit drivers a lesser rate than prevailing transit wages.

Not only would such advances prove enormously beneficial to the future of paratransit, they would also facilitate the development of integrated transit service. Indeed, without the general acceptance of lower wage scales for paratransit drivers, the future of paratransit only seems secure in the smaller, non-urban, implementations.

How might this shift towards a dual labor standard come about? First, paratransit must emerge as a more viable transit innovation than it presently appears. A more active participation

by the private sector in paratransit demonstrations is crucial to achieve this. Only when paratransit experience has 'proven' its viability will a systematic evaluation of its labor needs and constraints be possible: only then can UMTA, the Department of Labor, the American Public Transit Association, and the labor unions agree on paratransit labor guidelines.

Secondly, the potential of integrating paratransit with conventional transit must be realized. Only then will the future of paratransit in the larger urban areas be assured.

Thirdly, urban transit in general must become a more urgently recognized national priority, one which requires both innovative solutions and compromises. Increased governmental spending in transit must be accompanied by a positive shift in the public attitude towards the planning, cost, and utilization of urban transit services.

Only through the coordinated planning and implementation of integrated transit services can dual labor standards possibly emerge. Towards this end the brokerage management strategy has developed, a significant innovation in transit planning. By means of this centralized strategy, many of the outstanding paratransit labor issues could be resolved. It would be the mechanism by which:

a. a varied and flexible labor force could be maintained;

b. a suitable compensation agreement could be reached;

c. work rules and job descriptions could be separately defined and negotiated;

d. the potential of service integration could be explored.

Furthermore, the protection offered by Section 13(c) could be directly applied, as originally intended, to employees of rival transit services without upholding prevailing union wages for all transit employees in a blanket fashion.

The paratransit sector is becoming a significant innovative force within the transit industry. It suffers, however, from fragmentation and a lack of a broad, organized constituency.

This fragmentation does not pose a labor problem for small community paratransit systems: there, labor standards are largely shaped by free market forces. In urban areas, however, a greater clarification of labor standards will be needed as the paratransit sector continues to develop.

REFERENCES

Section 2:

1. Smith, J.A., "Labor Implications for Paratransit Service," University of N. Florida, November 1975, p. 2.

2. Elliott, J.M., (ATU), cited in Kirby, R.F., et al., Paratransit: Neglected Options for Urban Mobility, The Urban Institute, Washington DC, 1975, p. 150.

3. Mundy, R.A., "The Economic Use of Subsidies for Urban Mass Transportation," Transportation, June 1976, p. 5.

4. Altshuler, A., "The Decision-Making Environment of Urban Transportation," MIT, October 1975 (revised June 1976), p. 18.
Avery, G.A., "Breaking the Cycle -- Regulation and Transportation Policy," Urban Affairs Quarterly, June 1973, p. 424-425.

5. Hilton, G.W., Federal Transit Subsidies, American Enterprise for Public Policy Research, 1971, p. 106.

6. Mundy, R.A., "Survey of Labor Issues," University of Tennessee, January 1976, pp. 12-13.

7. Lieb, R.C., Labor in the Transit Industry, U.S. Department of Transportation, May 1976, p. 27.

8. Hammermesh, D.S., "The Effect of Government Ownership on Union Wages," Labor in the Public and Non-Profit Sectors, Princeton University Press, 1975, p. 238.

9. Barnum, D., Collective Bargaining and Manpower in Urban Mass Transit Systems, NTIS, 1972, p. 115.

10. Ibid., p. 124, cited in Lieb, p. 26.

11. Lieb, p. 13.

12. Altshuler, A., et al., "Paratransit and the Problems of Urban Transportation," Phase One, Technical Report, U.S. Department of Transportation, Contract No. DOT-OS-50240, April 1976, pp. B-35.

13. Derived from Lieb, p. 15.

14. Altshuler, A., et al., pp. B-36.

REFERENCES (CONT)

15. Mundy, "Labor Issues," p. 23.

16. Smith, J.A., p. 17.

17. The Altshuler, et al. study represents the primary work being done along these lines.

18. Sproull, W.C., "A Method for Evaluating the Relationship of Research, Development and Demonstration Programs to Operator Labor Cost Components in Bus Transit Systems, American University, Ph.D. Dissertation, 1973, pp. 63-4.

19. Ibid., p. 63.

20. Althshuler, A., et al., pp. B-38.

21. Wilson, N.H.M., "The Effect of Driver Schedules on Dial-a-Ride Performance", MIT, April 1975, pp. 2-3.

22. Urban Mass Transportation Act of 1964, as amended, 1975.

23. Altshuler, A., "The Federal Government and Para-Transit," MIT, October 1975, p. 27.

24. Horwitz, W.L., "Administration of Section 13(c) -- Urban Mass Transportation Act," Final Report, Jefferson Associates, January 1972, p. 26.

25. Ibid.

26. Lieb, p. 35.

27. Ibid., p. 55.

28. Horwitz, p. 27.

29. Smith, p. 21.

Section 3:

1. Kirby, R.F., et al., Paratransit: Neglected Options for Urban Mobility, The Urban Institute, Washington DC, 1975, p. 257.

2. Fielding, G.J., "Demand-Responsive Transit: an Overview of Integrated Systems," University of California, March 1976, p. 5.

REFERENCES (CONT)

3. Kirby, p. 162.

4. Ibid., p. 81.

5. Burk, G., "Transportation's Troubled Abundance," Fortune, July 1971, p. 138.

6. Wilson, N.H.M., and Ewing, R., "Demand Responsive Common Carrier Innovations," MIT, August 1976, p. 49.

7. Maroney, D. V., Jr. "Labor Relations from Labor's Point of View," address, Amalgamated Transit Union, March 1976, delivered at the Paratransit Conference in Washington DC.

8. Amalgamated Transit Union Division No. 282, letter, August 19, 1972.

9. Greater Cleveland Regional Transit Authority, "Memorandum of Agreement," April 26, 1976.

10. Lieb, pp. 55-6.

11. Altshuler, A., "Federal Government," p. 35.

12. Povlitz, T., "Overcoming Institutional Barriers in Specialized Transportation," Delaware Authority for Specialized Transportation, October 1975.

13. Roos, D., "Integrated Urban Transportation Systems - a Challenge for the Future," MIT, March 1976, p. 4.

14. Smith, p. 31.

15. Hilton, p. 111.

16. Roos, p. 10.

17. Altshuler, A., "Federal Government," p. 31.

18. Ibid., p. 28.

Section 4:

1. Patricelli, R.E., address to the 6th Annual International Conference on Demand-Responsive Transportation, March 15, 1976.

REFERENCES (CONT)

2. Roos, D., "Institutional Changes Needed to Foster the Development of Paratransit," MIT, November 1975, p. 11.

3. Kirby, p. 89.

4. Roos, "Institutional Changes," p. 15.

BIBLIOGRAPHY

Altshuler, Alan, "The Decision-Making Environment of Urban Transportation," MIT, October 1975 (revised June 1976).

Altshuler, A., et al., "Paratransit and the Problems of Urban Transportation," Phase One, Technical Report, U.S. Department of Transportation. Contract No. DOT-OS-50240, April 1976.

Amalgamated Transit Union Division No. 282, letter, August 19, 1972.

Avery, George A., "Breaking the Cycle--Regulation and Transportation Policy," Urban Affairs Quarterly, June 1973.

Barnum, Darold, Collective Bargaining and Manpower in Urban Mass Transit Systems, NTIS, 1972.

Burk, Gilbert, "Transportation's Troubled Abundance," Fortune, July 1971.

Fielding, G.J., "Demand-Responsive Transit: an Overview of Integrated Systems," University of California, March 1976.

Greater Cleveland Regional Transit Authority, "Memorandum of Agreement," April 26, 1976.

Hammermesh, Daniel S., "The Effect of Government Ownership on Union Wages," Labor in the Public and Non-Profit Sectors, Princeton University Press, 1975.

Hilton, George, W., Federal Transit Subsidies, American Enterprise for Public Policy Research, 1971.

Horwitz, Wayne L., "Administration of Section 13(c)-- Urban Mass Transportation Act," Final Report, Jefferson Associates, January 1972.

Kirby, R.F., et al., Paratransit: Neglected Options for Urban Mobility, The Urban Institute, Washington D C, 1975.

Lieb, Robert C., Labor in the Transit Industry, U.S. Department of Transportation, May 1976.

Maroney, Dan V., Jr., "Labor Relations from Labor's Point of View," address, Amalgamated Transit Union, March 1976, delivered at the Paratransit Conference in Washington DC.

Mundy, Ray A., "The Economic Use of Subsidies for Urban Mass Transportation," Transportation, June 1976.

BIBLIOGRAPHY (CONT)

Mundy, Ray A., "Survey of Labor Issues," University of Tennessee, January 1976.

Patricelli, R.E., address to the 6th Annual International Conference on Demand-Responsive Transportation, March 15, 1976.

Povlitz, Thomas, "Overcoming Institutional Barriers in Specialized Transportation," Delaware Authority for Specialized Transportation, October 1975.

Roos, Daniel, "Integrated Urban Transportation Systems - A Challenge for the Future," MIT, March 1976.

_____, "Institutional Changes Needed to Foster the Development of Paratransit," MIT, November 1975.

Smith, Jay A., "Labor Implications for Paratransit Service," University of N. Florida, November 1975.

Sproull, William C., "A Method for Evaluating the Relationship of Research, Development and Demonstration Programs to Operator Labor Cost Components in Bus Transit Systems," American University, Ph.D. Dissertation, 1973.

Urban Mass Transportation Act of 1964, as amended, 1975.

Wilson, Nigel H.M., "The Effect of Driver Schedules on Dial-a-Ride Performance," MIT, April 1975.

Wilson, Nigel H.M. and Ewing, Reid, "Demand Responsive Common Carrier Innovations," MIT, August 1976.

APPENDIX A:

SUMMARY OF SELECTED CHARACTERISTICS OF TEN PARATRANSIT SYSTEMS

Source: U.S. Department of Transportation
Transportation Systems Center

City	Type of Service	Pop. in Service Area(s)	Pop. Density Pop/sq. mi.	No. Routes	Avg Rte	One Way Time (min)	Average Headway (min)
Ann Arbor, MI	DAR (Pilot)	17,000	7,100				
El Cajon, CA	Shared Taxi	60,500	5,000				
Haddonfield, NJ	D-A-R	39,900	3,700	D-A-R Shuttle			Peak: 40 Midday: 20
Merced, CA	D-A-R	30,000	3,000				
Merrill, WI (11/75)	Point Deviation	9,500	1,730	1 Route with 10 checkpoints		30	30
Rochester, NY	D-A-R	66,000	4,100				
Batavia, NY	D-A-R	18,000	4,200				
Hicksville, NY	Shared Taxi	48,000	7,100				
LaHabra, CA	D-A-R (Pilot)	47,000	6,714				
Ann Arbor, MI (10/75) (Final data on expanded system)	D-A-R (Expanded) 5/76-7/8 complete	100,035 (citywide)	4,589	2 Express rts.			Peak: 15 Midday: 30

Service Area Size (sq. mi.)	No. of Vehicles in Service	Median Family (Hshld.) Income ($)	Average Autos per Hshld.	Average Pass. Wait Time (min.)	Average Pass Ride Time (min)/Aug. Trip Length	Average Pickup Time Deviation (min)	Average Daily Vehicle Miles
4	5	15,000	1.5	11.0	13.0/-	7.5	550
12	14	(10,600)	1.6	20.0			2,500
10.9	12	(16,700)	1.5	23.5	12.5/3.2	1.5 early to 4.5 late	1,853
10.0	4	8,323		20.5			460
5.5	2	(8,600)	Chk. Pt.: 5 door: 18	10.5/-			230
16.0	16	13,000	1.4	20.0	23.0/2.7	Manual: 15-20 Computer Control: 10.0	
4.5	5	9,900	1.2	17.0	15.0/-		
7.0	30	(13,900)	1.5	12.5	10.0/-	3.5	
7.0	6	12,212					653
21.8 (5 service areas)	20 Veh.						

Average Daily Vehicle Hours	Average Daily Ridership	Oper. Costs per Veh. - Hr. ($/veh. hr)	Oper. Cost per Passenger ($/pass.)	Vehicle Productivity Measure (Pass/ veh.-hr)	Vehicle Productiv. Measure (Pass./ veh.-mi)	Vehicle Density in Service Area (veh/sq. mi.)	Drivers' Base Wage Rate ($/hr.)
28	200	10.50	1.74	6.43	0.35	0.75	6.00
150	550	4.69	1.28	3.7	0.22	1.17	
138	925	18.52	1.18	5.88	0.41	1.1	6.00
35	255	7.36	1.01	10.5	0.55	0.4	3.75
21	288	9.49	0.99	11.0	0.64	0.36	4.50
-	735	14.50	2.65	5.9	-	1.0	8.00
-	475	-	-	8.0	-	1.16	-
-	1,013	-	2.74	-	-	4.29	
52	415	15.85	1.88	7.7	0.61	0.86	-
	3,000	-	-	-	-		-

Standard Base Fare (One-Way Adult Fare - $)	Operating Subsidy Per Pass. ($/pass.)	Operating Ratio (costs/rev)	Percentage of Youth Ridership(%) (Percentage of Tot. Pop. 15-24(%))	Percentage of Elderly Ridership(%) (Percentage of Tot. Pop. 65+ (%))	Major Trip Purposes(%)	Notes
.60	1.27	3.7	28	11	Work-(34) School-(25)	
.50	0.90	3.4	-	67 (12)	Shopping- Medical/ dental	
.60	0.92	8.2	- (13.5)	13 (8)	Work-(33-44) Shop.-(29-39)	
.25	0.76	2.5	15	30	Shopping-(30) School-(25)	
.25 (1) .40 (2) .50 (3)	0.71	7.0	25	30 (18)	School-(25) Work-(22) Shopping-	(1) Chk. pt. to chk. pt. (2) door to chk. pt. (3) door to door
1.00	1.65	3.6	37 (16)	- (8)	Work-(38) Shopping-(28)	
.6	-	-	-	-	-	
1.79(2)	0.95	-	-	-	Work-(40) Shopping-(25)	(1) drivers lease the veh. (2) average including zone fare plus mileage
.50	1.45	6.5	-	-	Work- Shopping -	
.25	-	-	-			

APPENDIX B: SUMMARY OF WORK RULE IMPACT ON TRANSIT SERVICES

	Lay-over Time	Make-up Time	Spread-pay Premiums	Run-off Time	40-hour Work Week Guarantee	Strict Job Definitions
Conventional Transit	10-20% inefficiency (of total operating hours)	0-1% inefficiency (of total operating hours)	5-10% inefficiency (of total wage costs)	5-10% inefficiency (of total operating hours)	source of spread-pay premiums and of service inflation	negligible impact
Paratransit	negligible impact	negligible impact	0-5% inefficiency (of total wage costs, estimated)	negligible impact	less of an impact than for conventional transit: also, part-time labor, if available, is a tremendous aid to flexible paratransit planning	negligible impact; also, non-restrictive job definitions aid flexible paratransit planning

U. S. DEPARTMENT OF TRANSPORTATION
TRANSPORTATION SYSTEMS CENTER
KENDALL SQUARE, CAMBRIDGE, MA. 02142

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF TRANSPORTATION
513