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Optimal Split of Dedicated and Non-Dedicated Services for Demand-Responsive Paratransit

Interim Report

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CHAPTER 1. INTRODUCTION

1.1 The Research Objective

Organizations responsible for providing paratransit service have long been confronted with the over-arching goal of balancing service quality with cost efficiency. This challenge is now more important than ever with the severe financial difficulties facing most transit agencies and human service organizations. The goal of this research effort is to identify how some of these organizations, and especially some transit agencies, have used non-dedicated service delivery mechanisms to improve the cost efficiency of their paratransit services, while maintaining desired or required levels of service quality. A major part of this research will be to determine how various factors influence the particular service mix of dedicated and non-dedicated service for a given system, and to produce a tool that will assist organizations in determining the optimal service mix for them.

1.2 Definitions

Before proceeding, it is appropriate to first define what is commonly understood as *dedicated service* and *non-dedicated service*. These definitions are provided below. In addition, a full glossary of terms for the paratransit practitioner is presented in Appendix A.

- **Dedicated Service.** This is an operation where the vehicles are dedicated to exclusively the transportation of customers of a transportation program (or coordinated set of programs) during a specified period of time. The trips scheduled or dispatched to dedicated paratransit vehicles are typically controlled by one entity – either the responsible organization, its call center or broker contractor, or its operations contractor (for that system or a specific service area).

- **Non-Dedicated Service.** This is an operation where the vehicles used to provide paratransit service do not exclusively provide transportation for the customers of a particular transportation program (or coordinated set of programs); hence, these vehicles are also used to transport other passengers. The most common example is a taxicab operation that can

be called upon to serve a particular trip or a set of trips from a transportation program, but is otherwise free to serve general public trips (dispatched from the base office or flagged from the street) or trips from another contract. Another nuance of the definition is where the non-dedicated service provider has the option of co-mingling trips from different, unrelated contracts on the same vehicle at the same time. An entire transportation program can be based on non-dedicated service. Alternatively, it can augment a dedicated service in an integrated fashion or a supplementary fashion, as described below:

- **Integrated Non-Dedicated Service.** This is a service where trips to be served are booked via a central source (e.g., responsible organization, its call center or broker contractor, or its dedicated operations contractor) for the program at large or for a service region, and where the trips are either scheduled onto dedicated vehicles or are assigned to a provider of non-dedicated service for dispatching to specific drivers/vehicles. Thus, ultimately, it is the program or carrier staff that decides the vehicle or the carrier to which the trip is scheduled or assigned. Sometimes, an operations contractor can provide both dedicated and non-dedicated service.
- **Supplementary Non-Dedicated Service.** This is an auxiliary service that may cater to the same set of (certified/eligible) riders as the dedicates service; however, the riders either directly contact the non-dedicated service provider or are empowered to choose from the central booking staff the auxiliary service option (and sometimes the specific non-dedicated provider as well). The most common example is a taxi subsidy program.

Due to the nature of the research, the study will focus on integrated non-dedicated service and on systems that use non-dedicated service in its entirety, and less so on supplementary non-dedicated service. At the same time, we will acknowledge in this report some of the benefits and obstacles, as experienced by supplemental programs that are also pertinent to integrated non-dedicated service.

1.3 Background; The Need for Research

To meet the challenge of the current financial crises, some transit agencies

and human service agency organizations have implemented and/or modified policies and practices to limit or reduce the *demand*. For example, both transit agencies and organizations responsible for Medicaid transportation have implemented more stringent eligibility certification processes (often including trip by trip eligibility screening) with the goal of shifting prospective and current riders off of more expensive paratransit services, and inducing them to utilize less expensive modes that are accessible to them. Other policies that transit agencies have utilized to reduce demand for paratransit services include: (1) offering service alternatives that attract ADA certified customers to other modes; (2) cutting back to the strict regulatory minimums those policies associated with maximum fare, minimum advance reservation period, service areas and hours; and (3) creating services zones with required transfers. In extreme situations, some transit agencies have reduced the ADA paratransit demand by reducing the areas and times in which fixed-route service is provided, or eliminated their ADA paratransit obligation by switching to a demand response mode of service delivery.

In order to more efficiently serve their current paratransit demand, transit agencies have also implemented policies and practices to improve the productivity of their dedicated fleet in order to increase the cost efficiency of the system. Such policies and practices have included shortening the number of days in advance that a rider may place a reservation and harsher no-show penalties (to reduce no-shows and late cancellations), trip-time negotiation (to spread the peak demand), overbooking (to fill holes in the schedule resulting from no-shows and late cancellations), and more proactive dispatching. The methods of paying, penalizing, and rewarding service contractors can also have a profound effect on productivity where contractors are responsible for scheduling.

Paratransit operating agencies have also focused substantial (and perhaps misplaced) attention on automated scheduling systems as a means to improve service productivity. While there is no doubt these systems have made control room staffs more productive in terms of record keeping, reporting and invoicing, there is limited evidence to support contentions that these systems, and their underlying algorithms, consistently result in more productive vehicle operating schedules.

In contrast, much less attention has been directed to the service delivery structure itself, and in particular to the mix of dedicated and non-dedicated

service, and its effect on service efficiency. The central issues of this topic were clearly defined by Working Group 7 (Service Delivery Structure) at the TRB/Project ACTION-sponsored Workshop on *"Developing & Disseminating Creative Paratransit Operations Ideas"* in November 1997 in Monterey, California. The findings of Working Group 7, distilled into a white paper[1], included the following discussion about service mix:

> *In establishing or refining a service delivery design, the goal of the paratransit practitioner is to achieve a mix of dedicated and non-dedicated service that minimizes the overall cost per trip (or cost per passenger-mile) while meeting or exceeding service quality standards. This is not an easy chore, and often takes months if not years of experimentation to identify just the right split. And, if one looks around the industry, one will find systems that are predominantly dedicated, ones that are predominantly non-dedicated, and ones that have different splits. In each case, however, they have settled upon the split that makes sense for them, based largely on the weight that each places on [service quality vs. service efficiency].*
>
> *With a basic understanding of the spatial and temporal characteristics of demand, it should be possible to develop a system-wide or zone-based dedicated run structure that results in:*
>
> - *good spatial coverage of the peak demand periods;*
> - *a minimization of over-supply in low-demand areas and periods; and*
> - *a minimization of pull-out and pull-in deadheading.*
>
> *With this accomplished, the strategic use of carriers operating non-dedicated vehicles can be used to:*
>
> - *cover the peak overflow trips;*
> - *serve trips in low-demand periods and areas,*
> - *serve those long, out of the way trips that adversely affect the productivity of the dedicated fleet;*
> - *better handle special events or seasonal fluctuations, and*
> - *improve the match between the demand curve and the dedicated run structure, and, by doing so, improve cost efficiency.*
>
> *This split between dedicated and non-dedicated vehicle service is a delicate one and is highly dependent on the characteristics of the trips. For example, a service that has a relatively condensed service area (with shorter trips and*

1. Rodman, W., *Developing and Disseminating Creative Paratransit Operations Ideas – Service Delivery Structure*, findings of Working Group No. 7 at the TRB/Project ACTION sponsored workshop, Monterey, California, November 1997.

common trip patterns) will undoubtedly benefit from a high percentage of dedicated service. In contrast, a more regional service (with longer trips, and more diverse trip patterns) would probably benefit from a higher percentage of undedicated service. The "acid-test" is the productivity of the dedicated fleet and the system-wide unit costs (per passenger trip and per passenger-mile), noting again that cost per trip is a more appropriate measurement for systems where the trips are more homogeneous, and cost per passenger-mile is a more appropriate measurement for systems where the trips are more diverse. With a goal of sizing the supply of the dedicated vehicles so that each vehicle is productive, the task of the scheduling and dispatch staff is to identify when it makes financial sense to add a new vehicle run, and when it makes sense to continue serving those "other" trips with non-dedicated vehicles. It is also important to note that this is not a one-time analysis but should be an on-going task.

These observations continue to be valid today. However, there has been only limited progress in this area. Consider:

- Despite the attention placed on automated paratransit scheduling systems, none of them assist the practitioner with defining the run structure of dedicated vehicles, which in turn is key to determining when non-dedicated vehicles can be most productive. While there are software applications that specialize in runcutting, they are mainly used for large fixed route transit systems, and are rarely used by paratransit practitioners. The process of forming paratransit vehicle runs, for most, is a manual process; the resulting run start and end times are then entered into the paratransit scheduling systems.
- While it only makes sense to mirror the demand curve in shaping the vehicle run structure, there are paratransit systems where this is not done, and where start and end times of runs instead reflect work rules and the convenience of the system drivers and supervisors. This results in a "flat" run structure of straight, unstaggered runs that often provides an oversupply of service during the low-demand periods and insufficient service supply during the peak periods.
- Obstacles thwarting consideration of utilizing a mix of dedicated and non-dedicated vehicles in an integrated fashion include negative perceptions about the quality and safety of service rendered by non-dedicated carriers, insurance and drug-testing issues, limited service coverage, limited fleet size and accessibility, and limited availability. In addition, while non-dedicated providers may be willing to participate in programs, many are just unable to because of lack of funding, financial stability, and/or sophistication.
- The most prominent obstacle in rural communities is the lack of

non-dedicated service providers that have the financial stability to provide the service on an ongoing basis. Additional issues faced by rural paratransit systems in considering the use of non-dedicated service providers include the inability of some providers to provide proper driver training, to comply with regulatory requirements, and to provide supporting documentation. And, it is not unusual for rural agencies to fall back on their own bias for operating paratransit service in-house.

- In addition, some of the agencies that have navigated their way through these obstacles utilize non-dedicated service in a way that is counter-productive toward their goal of system-wide cost-efficiency. In such cases, while the agencies do use taxis, for example, to augment their dedicated vehicles in the peak hours, the trips that are assigned to the taxis are not the long, out of the way trips that adversely affect the productivity of the dedicated fleet, and that are attractive to taxi drivers. Rather, the trips that are assigned to taxis are short, inexpensive trips, i.e., the very ones that would otherwise increase the productivity of the dedicated fleet and that taxi drivers are reluctant to serve because of the low fares. In all likelihood, the thinking behind this practice is to minimize the additional cost outlay – shorter trips, lower cost. However, in following this practice, the dedicated service would likely not be as productive as in the case where these short trips are scheduled onto the dedicated fleet. Because of this, one might speculate that the cost-efficiency of overall system-wide is not maximized, a hypothesis to be established in this report.

The promising news is that there are agencies responsible for providing ADA paratransit and other forms of demand-responsive transportation that have overcome such obstacles to implement a service that employs both dedicated and non-dedicated service in a successful fashion. Moreover, in some cases, the non-dedicated service not only plays a major role in the overall service but also is the basis upon which the service delivery system is structured.

1.4 The Study Components

With these considerations as background, the initial focus of this research study is to examine:

- How service characteristics, service area characteristics, and other factors affect the desirability of non-dedicated service and impact the particular mix of dedicated and non-dedicated service;
- How various factors influence the decision to purchase non-dedicated

service;

- How using non-dedicated service impacts community mobility;
- How using non-dedicated service contributes to meeting FTA's zero-denial requirement (for ADA complementary paratransit services); and
- How the demands on -- and resources and requirements of -- Medicaid and other human service agency programs affect the use and mix of dedicated and non-dedicated service.

Literature Review and Survey

Our assessment of these five issues is based primarily upon information derived from previous studies identified in the Bibliography (presented in Appendix B) and from a survey — conducted by the study team — of agencies/organizations that employ non-dedicated service for their paratransit systems. A summary of the survey is presented in Chapter 2. The survey instrument itself and the detailed responses are presented in Appendix C and Appendix D, respectively.

Case Studies

This Interim Report concludes with a recommended set of criteria for case study selections, and a recommended set of candidate case studies, based on these criteria. The four primary criteria used to select the nine case studies are as follows:

- The lead agency is a transit agency or municipality responsible for public transportation.
- The paratransit service of the lead agency employs a mix of dedicated and non-dedicated vehicles in an integrated fashion, meaning that some entity is determining whether each trip or trip type is to be (a) scheduled to a dedicated vehicle (or assigned to a dedicated provider) or (b) assigned to a non-dedicated provider.
- The system cites improved productivity, a better match of capacity to demand, and/or overall cost-efficiency as major advantages of using non-dedicated vehicles.
- The system has the data to support its belief in the advantages of non-dedicated vehicle operations and is willing to share the data and participate in the project as a case study.

For systems meeting these criteria, we also sought a balance of:

- systems in various geographic regions;
- systems that operate in major metropolitan areas and those that operate in small cities or rural areas;
- systems that have varying program sizes and characteristics
- systems that employ different mixes of dedicated and non-dedicated service; and
- systems that also/alternatively retain different types of non-dedicated service providers other than taxis.

Four case studies in major metropolitan areas and five case studies in small cities and rural areas are recommended. We also identified two back-up alternatives for the metropolitan group and three back-up alternatives for the small urban/rural group. The actual case studies will be conducted in Phase II.

Software Application and Toolkit

The eventual core product of this project will be an easy-to-use automated optimizer-based planning application, into which a transportation manager will input local data and characteristics of his/her service, and information on the availability and characteristics of non-dedicated vehicles in his/her community/region. This application will generate specific guidance to the user, detailing how, when, and the degree to which non-dedicated vehicle services can (should) be integrated with the dedicated fleet, as well as an estimate of the benefits that would result. The accompanying handbook identifies many of the obstacles commonly encountered. The handbook will also describe, via the case studies and other best practices identified through the literature review and survey, ways that various systems have overcome these obstacles, and will include a sample contract. The automated tool will also provide assistance in shaping the run structure of dedicated vehicles. The software application and toolkit will be developed in Phase II.

CHAPTER 2. SURVEY OF AGENCIES USING NON-DEDICATED SERVICE

2.1 Survey Methodology

During the fall of 2004, the project team developed a survey designed to explore several of the issues described previously and to generally better understand the underlying reasons for using non-dedicated service, the major benefits that resulted from such use, and the major obstacles to purchasing and/or using non-dedicated service. The survey was not intended to obtain a comprehensive list of organizations in the US and Canada that utilized non-dedicated service for all or part of their paratransit service, but rather was intended to gain insight into the how's and why's from a cross-section of organizations representing different geographic areas, different demographic settings, and different types of paratransit services.

The survey was pre-tested among some of the internal panel of advisors, who themselves had such services. The survey instrument was then refined based on their response and other comments from them. Meanwhile, based on the literature and knowledge of the industry, the Project Team compiled a list of approximately 50 agencies and organizations believed to be utilizing non-dedicated service for all or part of their paratransit program. A hard copy survey, with instructions, was mailed to each.

The recipients were given a choice to complete and return the hard copy of the survey or complete the survey on line. There were 34 responses, about half of which were mailed and the other half completed on-line at the Survey-One website of team-member, TWJ Consulting. Of the 34 organizations that submitted responses to the survey, there were 31 "quality" responses. The other three indicated that they did not utilize non-dedicated service. Follow-up telephone calls were made, as needed, to obtain missing information or clarify specific responses. These 31 respondents that use non-dedicated service are listed in Figure 2-1 and are sorted alphabetically by city, county, or region, as appropriate.

Figure 2-1 Survey Respondents that Indicated Use of Non-Dedicated Service

Location	Responding Organization	ADA Para	ADA Para Alterna-tive	Persons w/Dis-abilities	Senior	Medicaid	Other HS	GP DAR	GP RPT
Ann Arbor, MI	Ann Arbor Transportation Authority	X			X			X	
Arlington Co., VA	Arlington Co. DOT / STAR		X						
Bellingham, WA	Whatcom Transportation Authority	X		X	X			X	X
Boston, MA	MBTA / The Ride	X							
Calgary, AB	Calgary Transit / Access Calgary			X					
Charlottesville, VA	JAUNT	X			X	X	X		X
Decatur, IL	Decatur Public Transit System	X							
Eau Clair, WI	Eau Claire Transit System	X							
Fitchburg, MA	Montachusett RTA	X			X	X	X		
Haverhill, MA	Merrimack Valley RTA	X			X			X	
Houston, TX	Houston METRO / METROLift		X						
Indiana, PA	Indigo	X			X	X			
LaVerne, CA	Pomona Valley Transportation Authority			X	X				
Los Angeles, CA	Access Services, Inc.	X							
Madison, WI	Madison Metro Transit	X							
Montgomery Co., PA	TransNet & Buxmont Transportation				X	X	X		
Nashville, TN	Metropolitan Transit Authority	X							
Vista, CA	North County Lifeline (NCTD contractor)	X							
Oshkosh, WI	Oshkosh Transit	X							
Ottawa, ON	Para Transpo			X					
Ottawa Co., OH	Ottawa County Transportation Agency								X
Pierce Co., WA	Pierce Transit	X							
Raleigh, NC	Accessible Raleigh Transportation	X							
Medford, OR	Rogue Valley Transit District	X				X			

Location	Responding Organization	ADA Para	ADA Para Alterna-tive	Persons w/Dis-abilities	Senior	Medicaid	Other HS	GP DAR	GP RPT
San Mateo Co., CA	Samtrans	X							
Santa Clara Co., CA	Outreach (VTA broker)	X					X		
Santa Cruz, CA	Santa Cruz MTD	X							
Santa Fe, NM	Santa Fe Trails	X							
Wausau, WI	Wausau Area Transit System	X							
Wenatchee, WA	Link Transit / Link Plus	X	X						
Worcester, MA	Worcester Regional Transit Authority	X			X				

ADA Para = ADA complementary paratransit service
ADA Para Alternative. = Alternative or supplemental paratransit services available to ADA paratransit-certified individuals
Persons w/ Disabilities = Paratransit services available to (non-ADA) persons with disabilities
Senior = Paratransit services for seniors
Medicaid = Non-emergency medical transportation for Medicaid recipients
Other HS = Other types of human service transportation (e.g., for persons with developmental disabilities)
GP DAR = Dial-a-ride services for the general public
GP RPT = Demand-Response Rural Public Transportation for the general public

These systems encompass a diversity of service environments and a wide range in the relative utilization of dedicated and non-dedicated vehicles. Because these systems were chosen for inclusion in the survey specifically because they utilize non-dedicated vehicles, they are not necessarily representative of either all paratransit systems or ADA paratransit systems. Nonetheless, by examining the responses, it is possible to gain some significant understanding of the role of non-dedicated vehicle operations.

2.2 Summary of Survey Results

The results of the survey are summarized and discussed below.

Geographic Representation

The responding organizations reflected a wide geographic representation, although the South Central part of the US was underrepresented. See also Figure 2-2.

Region	No. of Respondents	Percentage of Respondents
Northeast	7	23%
Southeast	4	13%
Midwest/North Central	6	19%
South Central	1	3%
Northwest US	4	13%
Southwest/California	7	23%
Canada	2	6%
Total	31	100%

Service Area Environment

The respondents also reflected a good mix of service area environments, noting that the percentages do not add to 100% as several of the respondents indicated that their service area incorporated more than one of the categories below.

Service Area Type	Percentage of Responses
Metropolitan area	36%
Small Urban	48%
Suburban	33%
Rural	33%

Figure 2-2

B-30 Survey Respondents

It bears mentioning that systems that make the most use of non-dedicated vehicles tend to be located in small urban areas. Nine of the 15 systems (60%) that provide service in such environments use non-dedicated operations for at least 50% of their passenger trips. This is twice the rate of the other service environments.

In contrast, systems located in suburban and rural areas tended to use non-dedicated vehicles for a relatively small portion of their total service — less than 15% of their passenger trips, while systems in metropolitan areas were most likely to employ a moderate use of non-dedicated service — 15% to 50% of all trips.

Organizational Structures

The responding organizations reflect varied organizational/service delivery structures.

Organizational Structure	Percentage of Respondents	
Agency performs reservations/scheduling	48%	
–and operates all or some of service		29%
–and contracts with a single primary carrier		3%
–and contracts with multiple carriers		16%
Agency performs reservations and single carrier performs scheduling and operations	3%	
Call center or broker performs reservations	16%	
–and scheduling; multiple contractors		13%
–carriers perform scheduling/operations		3%
Turnkey contracts	32%	
–Single contractor		19%
–Multiple contractors		13%

Not surprisingly, taxis were the prevalent type of non-dedicated service used. Seven out of every eight respondents utilizes taxis. The breakdown of different types of non-dedicated service providers used by the survey respondents is presented below. The percentages sum to more than 100% as some of the organizations use multiple types of non-dedicated service providers.

Type of Non-Dedicated Service Provider	Percentage of Respondents Using
Taxi	88%
Chair Car Carriers	55%
Livery Operators	15%
Agency Transportation Operators	15%
Accessible School Bus Operators	6%
Airport Shuttle Operators	3%

Primary Roles of Non-Dedicated Service

The predominant use of non-dedicated service is for peak overflow trips and other trips that could not be efficiently scheduled onto the dedicated fleet. Again, the percentages sum to more than 100% as several organizations use more than one type of provider and also use non-dedicated service for multiple roles.

Roles of Non-Dedicated Service Provider	Percentage of Respondents Using For
Peak overflow/inefficient trips	66%
Trips in low demand areas/periods	36%
Special events/seasonal fluctuations	21%
Provides all trips	18%
Provides supplementary service	18%
Provides all trips at certain times of day	15%
Provides all trips in specific areas	9%
Provides specific types of trips (e.g., certification)	3%

Service Mix (Percentage of Trips Served by Non-Dedicated Service)

The extent of non-dedicated service ranges from a very small portion of a paratransit operation all the way up to 100% of the service. Note below that the percentages of respondents do not add up to 100%, as one of systems uses non-dedicated service in both an integrated and a supplemental fashion.

Percent of Trips Served by Non-Dedicated Service Provider		Percentage of Reponses
81% to 100%	6	19%
51% to 80%	6	19%
16% to 50%	5	16%
6% to 15%	6	19%
1% to 5%	6	19%
Supplemental Service	3	10%

As shown above, 38% of the respondents reflect systems that use non-dedicated service in relatively small amounts (15% or less). At the other end of the scale, non-dedicated service reflects the dominant mode of service delivery for an equal percentage of respondents, including a few whose entire service is operated with non-dedicated service.

There were also a few respondents who use non-dedicated service in a supplemental program, as defined in Chapter 1. For example, Houston METRO's MSP program supplements their "regular" ADA complementary paratransit service, with ADA certified customers calling the participating taxi companies directly for a ride. In Wenatchee, WA, customers calling Link Plus for a ride are told that they can choose to take a Link Plus vehicle at a time within one hour each side of the request (as negotiated with the customer), or they can choose a cab or cabulance (chair car). If they choose a cab or cabulance (and many do), the calltaker asks which company they wish to travel with and then will arrange the pick-up with the selected taxi company or cabulance.

Contracts

Nearly all (92%) of the respondents have contracts with non-dedicated service providers (or, in one case, a letter of agreement). Of these, 58% had contracts with specified lengths ranging between 3 and 8 years, including option years. The remaining contracts either had no expiration date or did not specify a contract length. Only 8% had no contract at all. A sample contract is presented in Appendix E.

Contractor Payment Structures and Rates

The rate structures of dedicated and non-dedicated service, as used by the survey respondents, are shown below:

Service Type/Trip	Per Hour	Per Mile or Meter	Per Trip	Other
Dedicated service	52%	17%	22%	9%
Non-Dedicated service				
Ambulatory trips	0%	63%	37%	0%
Non-ambulatory trips	11%	47%	32%	10%

As shown, the predominant payment structure for dedicated vehicle contractors is a rate per revenue vehicle hour. Over half of the systems report paying for dedicated service by the vehicle hour. The next two most prevalent rate structures are per trip, and per mile. One system in North San Diego County utilizes a mix of hourly and mileage-based rates, with the latter reflecting non-labor costs directly related to the vehicle. Another system utilizes a variation of a mileage-based rate: in Santa Clara County, the payment structure is based on mileage operated when there is at least one passenger on board ("live miles").

In contrast, non-dedicated service is mostly purchased by trip mileage – based either on the taxi meter or on vehicle miles with passengers on board. Taxi meter fares are almost universally based upon the combination of a price per pick-up (often called a flag drop) and a price per mile. Since so many of the respondents use taxis (88% of the respondents), it is not surprising that the payment structure corresponds to the existing rate structure (for taxis) already in use.

The next most prevalent rate structure for non-dedicated service is a rate per trip. The respondents who use this structure like it for its administrative ease, and one agency noted that it simplifies the administration of the program if both dedicated and non-dedicated service is procured using the same (per trip) rate structure.

Most of these observations are reflected in the response to the follow-up question: why did you choose this specific rate structure for non-dedicated service?

Why That Rate Structure?	Percentage of Responses
Mirrors Taxi or Livery Rate Structure	36%
Cost Efficient / Structure of Lowest Bidder	27%
Administrative Ease	18%
Same rate for Ded and Non-Ded Service	9%
Previous Structure	6%
Share Risk	3%

It is also noteworthy that actual compensation rates for non-dedicated vehicle services are relatively consistent across systems. The price per pick-up is typically in the range of $2.50 to $3.00 with the price per vehicle mile clustering around $2.00 per mile. Rates for picking up non-ambulatory passengers are somewhat higher, averaging about $3.50 per pick-up. Rates per trip also tend to be found in a relatively narrow band of approximately $11.00 to $14.00 per trip, with per trip rates for non-ambulatory passengers averaging about $19.00 per trip. This relatively narrow range of payment rates most likely reflects the taxi-like nature of the non-dedicated vehicle services, as taxi rates do not vary widely among cities and regions of the country.

Several of the respondents who purchase dedicated service or large volumes of non-dedicated service noted that their payment structure also included a monthly fixed amount in addition to the rate per service unit. Thus, instead of compensation being based purely on a rate per service unit, a portion of the compensation attributable to fixed costs (that do not increase with varying demand, such as the cost of facility) is paid out in equal monthly installments.

Operating Characteristics of Dedicated and Non-Dedicated Vehicle Systems

The table below provides some pertinent operating characteristics of these two types of operations in the systems that responded to the survey.

	Dedicated Service		Non-Dedicated Service	
Operating Statistic	Mean	Median	Mean	Median
No. of Vehicles	91	35	70 (55%)	28 (48%)
Passengers	337,000	138,000	200,000 (44%)	48,000 (33%)
RVM	2,849,000	1,085,000	762,000	217,000
Pass/RVH	2.45	1.96	NA	NA
Pass/RVM	0.16	0.14	0.19	0.15
Cost/Pass	$23.21	$23.80	$16.33	$13.78

As shown, these systems as a group make substantial use of non-dedicated vehicles, with such vehicles typically representing over 40% of the total vehicles used in the overall paratransit operation. Of course, the non-dedicated vehicles are used much less intensively than dedicated vehicles, with the latter being used for more than twice as many annual trips per vehicle as the former (an average of 3676 trips per year vs. 1773 trips per year) in the typical system. Of considerable interest is the fact that approximately one-third of all passenger trips are transported on non-dedicated vehicles in the "median" system in this sample. The percentage of such non-dedicated vehicle passenger trips ranges from 1.6% to 100%, with the majority of systems either below 15% or over 50%. (Hence the "median" system is relatively difficult to find in practice.)

Surprisingly, non-dedicated vehicle operations appear to be somewhat more productive than dedicated vehicle operations, registering approximately 7% to 19% more passengers per revenue vehicle mile. However, this may be an artifact of how revenue vehicle miles are measured in non-dedicated vehicle operations, typically only when a passenger is in the vehicle. In contrast, in dedicated vehicle operations, revenue vehicle miles are generated whenever the vehicle is in service, even if no passenger is on board, with deadhead miles contributing to as much as 50% of the total revenue miles, according to the ADA paratransit contractors in Boston and Santa Clara County.

It is also noteworthy that non-dedicated vehicle operations have significantly lower costs per passenger trip than do dedicated vehicle services, approximately $14.00 to $16.00 per trip compared to $23.00 to $24.00 per trip. However, it is important not to overlook that this difference may be at least partially attributable to the difference in capital and operating costs (most of the vehicles utilized by non-dedicated providers are sedans and minivans), overhead, and, potentially, trip length. Because the survey did not attempt to directly obtain information on average passenger trip length for dedicated vehicle operations, it is not possible to easily determine if passengers traveling on dedicated vehicles are making longer trips than those being transported on non-dedicated vehicles. (Based upon the available survey data and some assumptions about deadhead mileage percentages and shared ride mileage percentages for dedicated vehicle operations derived from very limited empirical evidence, it does not appear that average trip lengths are longer on dedicated vehicles, but this conclusion is strongly dependent on the assumptions used.)

Reasons For Utilizing Non-Dedicated Service / Benefits Accrued

The survey also identified the underlying reasons why non-dedicated service is used. When asked to rate different reasons as being a major advantage, a minor advantage, or not an issue, the response was as follows:

Type of Benefit	Major Advantage		Minor Advantage		Not an Issue	
More responsive to fluctuations in demand	24	73%	5	15%	4	12%
Improve over-all cost efficiency	20	61%	9	27%	4	12%
Eliminate/reduce denials	18	55%	6	18%	9	27%
Improve productivity of dedicated fleet	17	53%	5	16%	10	31%
More efficiently serve low-demand times	15	45%	9	27%	9	27%
More efficiently serve outlying areas	13	41%	8	25%	11	34%
Better manage growth	13	39%	10	30%	10	30%
Provide same-day and/or will-call service	8	24%	11	33%	14	42%
Expand service w/o buying new vehicles	8	24%	10	30%	15	45%
Overbook trip requests	6	18%	8	24%	19	58%
Coordinate with human service transportation	4	12%	6	18%	23	70%
Respond to customers' desire for car-like service	2	6%	9	27%	22	67%
Test demand in new areas or at new times	2	6%	4	12%	27	82%

There were also two other benefits mentioned in the "Other" category: (1) Having non-dedicated service provides insurance against disruptions in dedicated service (e.g., union strikes, driver shortages); and (2) The non-dedicated vehicle drivers boosted awareness of the transit system.

Einstein, in his paper, *Optimizing the Mix of Dedicated and Non-Dedicated Vehicles in Complementary Paratransit Service*,[2] identifies other roles and benefits not voiced by the survey respondents. These include:

- to simplify the trip negotiation and scheduling processes
- to reduce the dedicated vehicle spare ratio
- to reduce the cadre of back-up drivers
- to improve overall system on-time performance – by backing up vehicles that are running late or that have broken down
- to minimize overtime among dedicated vehicle drivers
- to "pad" periods when needed dedicated vehicles are on order

2. Einstein, N., *Optimizing the Mix of Dedicated and Non-Dedicated Vehicles in Complementary Paratransit Service*, presented at the Maximizing Your Resources session at the May 2004 APTA Conference Bus and Paratransit Operations in Denver, Colorado.

- to assist dedicated vehicles behind schedule, and
- to fetch stranded passengers (in the event of a no-show, missed trip, or vehicle breakdown).

Based on the survey response above, responsiveness and cost efficiency tie as the number one advantage (among 88% of the respondents who mentioned them as a major or minor benefit) with the tiebreaker going to responsiveness since it was listed by more as a major advantage. On the other hand, when survey respondents were asked why they use non-dedicated service (i.e., the predominant reason), the most prevalent answer was to improve cost efficiency

Why Use Non-Dedicated Service?	Percentage of Responses
To Improve Cost Efficiency	50%
To Increase Capacity	22%
To Enhance Flexibility / Responsiveness	15%
To Provide Same Day Service	4%
To be Compliant with ADA	4%
To Satisfy Customer Preference	4%

Respondents were also asked whether the major advantages indicated above delivered on-going benefits or short-term benefits. Over 80% of the respondents felt that the benefits were on-going, with a few noting that the short-term benefits focused on the ability to be able to accommodate unexpected / seasonal increases in demand without having to buy a vehicle.

When these results were disaggregated by the relative utilization of non-dedicated service by the system, several interesting observations emerged.

- Systems that make lesser use (less than 50% of trips) of non-dedicated vehicles are more likely to cite their value as a capacity safety valve, as a means of incorporating overbooking into their operation, and as a method of improving productivity.
- Systems that make greater use (more than 50% of trips) of non-dedicated vehicles are most likely to cite as their advantage that they improve overall cost-effectiveness, enable them to better handle same day will-call service, and expand their service area without having to acquire new vehicles. Such systems also cite the ability to coordinate with human service agency transportation as important.

- Systems that make the greatest use of non-dedicated vehicles (more than 80% of trips) do not view productivity improvements as an important reason for using them. Since the service structure is primarily based upon non-dedicated service in such systems, the productivity of any dedicated vehicles in use is not the primary focus.

Benefits to the Community

The survey asked respondents to identify any additional benefits that accrued to the community, i.e., over and above the benefits that accrued to their service.

Benefits to the Community?	Percentage of Responses
More Accessible Taxis and Taxi Options	37%
Stabilization of Taxi Companies	4%
Better Taxi Drivers	4%
More/Better Resources for Agency Programs	4%
Opportunities for Agency Programs to Improve Cost Efficiency	4%
Helped Integrate Persons with Disabilities into the Community	4%
Not Sure / None	37%

Problems in Purchasing and/or Using Non-Dedicated Service

When asked to rate problems encountered in purchasing or using non-dedicated service, the respondents' top three answers were (1) lack of available vehicles, (2) problems with oversight and compliance, and (3) service quality/reliability. The complete response is shown below.

Type of Obstacle / Problem	Major Problem		Minor Problem		Not a Problem	
Lack of accessible vehicles	7	23%	7	23%	17	55%
Difficulties in contract compliance and oversight	6	19%	7	23%	18	58%
Substandard on-time performance / service reliability	5	16%	12	38%	15	47%
Few non-dedicated service providers	5	16%	8	26%	18	58%
Non-dedicated service not available when needed	4	13%	7	23%	20	65%
Substandard driver training / sensitivity / assistance	3	10%	12	39%	16	52%
Substandard vehicle quality / maintenance	3	9%	11	34%	18	56%
Inability to meet insurance requirements	3	9%	4	13%	25	78%
Difficulties with complaint investigation/resolution	2	7%	10	33%	18	60%
Difficulties with invoice reconciliation	2	6%	10	32%	19	61%
Poor record keeping	2	6%	8	26%	21	68%
Inability to meet drug testing requirements	1	3%	7	22%	24	75%
Pressures from union labor	1	3%	6	19%	25	78%
Instability of taxi companies	1	3%	6	19%	24	77%
Limitations on taxis' coverage area	1	3%	5	16%	26	81%
Problems with fare box reconciliation	0	0%	3	10%	28	90%

When asked to describe the underlying obstacles associated with the most significant obstacles, the respondents descriptions echoed the results above, although the ranking of the top two most prevalent obstacles was reversed, as shown below. In addition, two respondents indicated that fraud presented an issue for them.

Most Significant Problem?	Percentage of Responses
Excessive Administrative Oversight Required	22%
Provider Lacks Accessible Vehicles	19%
Substandard Driver Training	11%
Substandard On-Time Performance	11%
Non-Equivalent Service Standards	7%
Limited Number of Non-Dedicated Service Providers	7%
Fraud Control	7%
Poor Management Skills	7%
Non-Equivalent Levels of Insurance	4%
Union Pressure to Not Contract for Service	4%

Other problems mentioned included: (1) ensuring that vehicle maintenance and cleanliness complied with standards of the regular fleet; (2) ensuring service quality and driver training; and (3) keeping costs and service quality in balance.

Somewhat surprisingly, there was very little difference in the perception of problems between systems that make substantial use of non-dedicated vehicles and those that use them in a more limited fashion. Those at either end of the spectrum were most likely to cite issues with contract compliance (compared to those with moderately low or moderately high use of dedicated vehicles), and the systems with moderately low usage—15% to 50% of all trips—were most likely to cite problems with the lack of accessible vehicles: 50% compared to 23% overall. But in other respects, there was a striking consensus on the nature of the problems that existed and their perceived severity.

Provision of Accessible Vehicles to Providers

In anticipation that lack of accessible vehicles among prospective/existing providers would be an issue, we asked whether any of the respondents provided or leased accessible vehicles to their non-dedicated service providers. Of the 25 respondents who answered the question, 4 did provide/lease vehicles to their provider(s), 17 did not, and 3 noted that they were either currently considering it or may re-visit the possibility in the future. In addition, one agency (with a supplemental program) noted that they provided a payment incentive for accessible taxis.

CHAPTER 3. FACTORS THAT IMPACT THE MIX OF DEDICATED AND NON-DEDICATED SERVICE

In this section, we examine how characteristics of both the paratransit service and the service area affect the use of non-dedicated service in general, as well as the particular mix of dedicated and non-dedicated service.

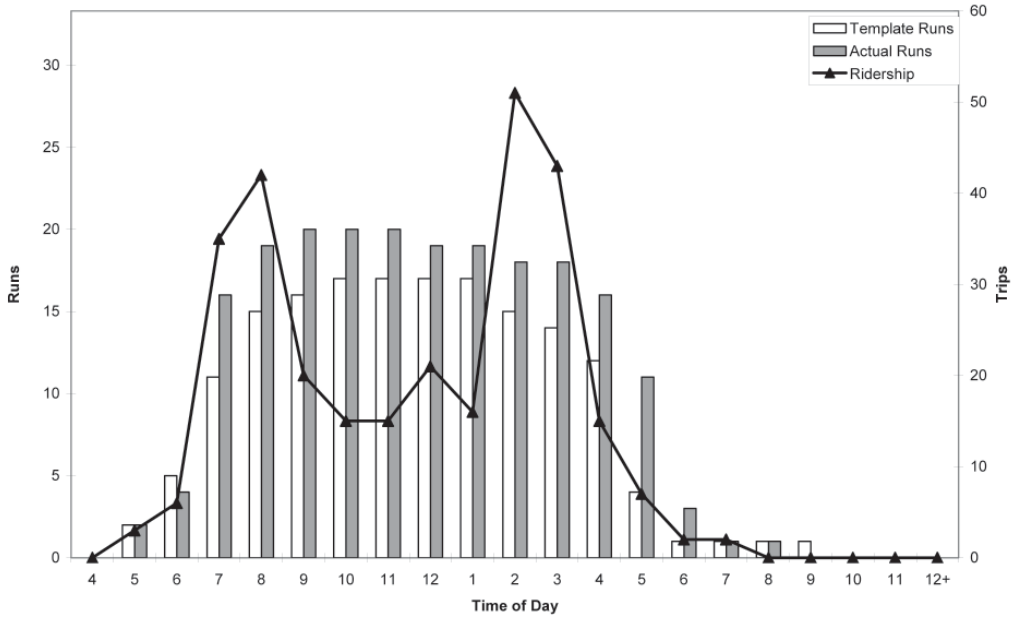
Characteristics of the service itself that bear examination include:

- The temporal characteristics of daily demand
- The spatial characteristics of demand
- Expected fluctuations in demand
- Unexpected increases in demand
- Unexpected decrease in supply

3.1 Temporal Characteristics of Demand

The demand curves of many paratransit systems typically have a pronounced peak in the morning, and a more elongated peak in the afternoon, with demand slowly tapering out into the evening, overnight, and early morning hours. Some systems also have a mini-peak around the noon hour. An example of one such demand curve, plotted against a run structure, is presented in Figure 3-1.

Figure 3-1 Demand Curve vs. Run Structure



There are a few strategies (e.g., staggered runs combined with partial or split shifts) that can be employed to develop a run structure that closely mirrors the demand curve, bearing in mind that driver work rules that limit the length and structure of shifts can sometimes pose an obstacle to this. Recognizing the prevalence of this traditional demand curve, the use of contracted, non-dedicated service provides an additional tool to: (1) generally improve the temporal match between the supply of service and the demand for service; (2) accommodate the peak overflow trips; and (3) serve trips during the low-demand off-peak hours. Indeed, as mentioned in Chapter 2, 88% of the survey respondents recognized that the use of non-dedicated service has proven to contribute to improving cost efficiency.

If the sole or dominant portion of the service is a dedicated fleet (as is the case with most paratransit service in the United States and Canada), it behooves the paratransit manager, as a good steward of the program funding, to maximize the productivity of the dedicated fleet in order to be as cost efficient as possible while otherwise meeting established service standards. The general idea is to remove – or not add -- unproductive dedicated service. Among our survey respondents, 69% reported that they were able to do this by using non-dedicated service.

Typical examples of relatively unproductive service can be found on weekday evenings and weekends, two generally lower demand times. (See for example, the demand curve in Figure 3-1, which illustrates low demand during a weekday evening.) Dedicated vehicle shifts, which commonly have a minimum length of four to eight hours, can be quite unproductive when deployed during these hours. The availability of non-dedicated service to serve these evening and weekend trips thus allows the paratransit manager to better adjust the supply of service to the level of demand during these hours.

On the other hand, the peak demand hours are generally when dedicated vehicles are (or can be) most productive, and a time period when the full complement of dedicated vehicles (less spares and vehicles being maintained) is deployed. Yet even when the run structure is well designed to mirror those peaks, it is often the case that a paratransit manager and scheduling staff will feel frustrated that they cannot productively accommodate all of the peak demand.

This scenario—the inability to readily accommodate all peak demand—may result from there truly being an undersupply of dedicated vehicles to handle the demand. Alternatively, there may be factors or practices in scheduling that thwart the maximization of productivity (which must be balanced, of course, against specified service quality standards). Among the types of trips that are not conducive to productive scheduling are long, out of the way trips that typically take a dedicated vehicle out of the mainstream of trip origins and destinations for up to an hour of time. The good news is that these are precisely the types of trips that are most attractive to non-dedicated providers that are paid by trip length. Thus, if the schedulers have an opportunity to assign these types of trips to a non-dedicated trip provider, especially during the peak period(s), the dedicated vehicles during the peak may be more productive.

Of course, even if this practice is followed, there may still be instances during the peak (and off-peak) when the level of demand outstrips the supply of service on any given day. This usually happens during peak periods. Indeed, when asked to describe the primary role of non-dedicated service in their system, the most prevalent response (representing 66% of the respondents) was to serve peak overflow trips and trips that did not fit efficiently onto dedicated vehicle schedules.

North County Lifeline provides a good example. North County Lifeline is the private, non-profit contractor operating ADA paratransit for North (San Diego) County Transit. On a typical weekday, North County Lifeline assigns between 8% and 10% of its trips to two taxi subcontractors, or about 10 trips to each. The trips they assign to the taxi companies consist mainly of those that cannot be served on their dedicated vehicle operations due to capacity limitations during the peak period, and during early evening periods when there are just a few runs operating.

Conversely, a demand curve that is flatter – as a result of demand-management techniques (e.g., trip negotiation) employed by an agency, or simply because that is the nature of the demand – may suggest that little or no non-dedicated service is needed. For example, some rural public transportation systems have a less-pronounced peak in the morning peak, with steady usage, often associated with the travel patterns of seniors and hours of medical services, between 10:00 am and 3:00 pm.

3.2 Spatial Characteristics of Demand

As mentioned above, dedicated vehicles are often an expensive way to serve long out-of-the-way trips. Serving long trips that do not fit into common trip patterns will therefore adversely affect the productivity of the system, and the lower the productivity, the higher the cost per trip. In contrast, the use of a non-dedicated vehicle is a comparatively cost-efficient way to serve such a trip. First, the dedicated vehicle can be reserved for more productive service. Second, the cost of serving such trips with non-dedicated vehicles may be less expensive than pulling out an additional dedicated run for a minimum number of hours (typically at least 4 hours, and often as much as 8 hours). Thus, a spatial demand that is quite dispersed and that does not fall into spatial (and temporal) patterns conducive to ridesharing may suggest a service delivery design that has a significant portion of non-dedicated service.

The use of non-dedicated vehicles is also a potentially strategic approach to serving a specific, low-demand area and/or new (expanded) area where the demand for the new service is uncertain or is yet to materialize. Nine percent (9%) of the respondents indicated that the primary role of their non-dedicated service was to provide all trips in specific areas. For example, in Pierce County, WA, the Assistant Manager for Pierce Transit's Specialized Transportation program indicated that the trips that they do assign to their non-dedicated service provider (about 4% of the total trips) mainly reflect trips in outlying areas. Similarly, taxis are used in part to more efficiently serve the two western most cities in Pomona Valley Transportation Authority's service area.

In Los Angles, where the regional ADA broker, Access Services, has three primary regional contractors, one of the contractors (MV Transportation) has a 100% dedicated fleet, while the other two (San Gabriel Transit and Global Paratransit) have a mixed fleet of dedicated and non-dedicated taxis. According to the managers of both contractors, San Gabriel Transit and Global Paratransit use their taxis, in part, to serve areas where the spatial patterns of trip making do not lend themselves to dedicated vehicles. In addition, MV Transportation assigns trips that it cannot fit onto its dedicated vehicles to San Gabriel Transit, which also deploys taxis that cover MV's region. From July through September 2004, for example, MV sent during 16% of its trips to San Gabriel Transit. According to Access Services and San Gabriel

Transit staffs, virtually 100% of these subcontracted trips were served by San Gabriel's taxis.

3.3 Fluctuations in Demand

Fluctuations in demand, due to special events and/or seasonal fluctuations can outstrip the capacity of a dedicated fleet. Use of non-dedicated service presents a way to handle these short-term spikes in demand. From the survey, 21% of the respondents indicated that they utilized non-dedicated service providers to accommodate spikes in demand caused by special events or seasonal fluctuations.

3.4 Unexpected Increases in the Level of Demand

In general, it is difficult to quickly expand a dedicated fleet to meet an unexpected or sudden increase in demand. (Such sudden demand changes may result from a policy change, expansion of the service area, changes in operating days or hours, and/or an influx of new riders from a new sponsor.) In many systems, it may not be possible to rapidly increase the fleet size, the number of drivers, or even the number of vehicle hours of existing dedicated service to accommodate a sudden, rapid increase in demand. It typically takes months to order new vehicles or even acquire leaseable vehicles that meet program requirements. In addition, the transportation program must recruit, hire, and train new drivers, which may be particularly difficult in environments that are already experiencing driver shortages.

In circumstances such as these, the use of non-dedicated service can be a useful transitional strategy to bridge the gap until additional vehicles can be secured and/or until new drivers can be recruited, hired, and trained for the dedicated fleet. For example, SamTrans has used taxis as a way to expand capacity to meet increases in ADA paratransit demand until the capacity of its dedicated fleet could be enlarged.

3.5 Unexpected Decreases in Service Supply

The use of non-dedicated service can also provide an "insurance policy" in case of unexpected service disruptions. For example, the Director of the PTM Brokerage in Worcester, MA (for the Worcester RTA) took advantage of its non-dedicated service providers in an unexpected way. From July 7 through September 12, 2004, the unionized drivers of the transit system (and dedicated portion of the paratransit system) were on strike. The non-dedi-

cated service providers were asked to serve the trips that would normally have been scheduled to the dedicated paratransit fleet, and thanks to their efforts, the trip denial rate was less than 1%.

Extended driver shortages can also disrupt service. In 2004, North County Lifeline experienced a sudden and unexpected shortage of drivers that lasted for several months. During this time, the taxi companies came to the rescue, with North County Lifeline assigning as many as 25 trips per day to each taxi subcontractor, compared to the normal 10 trips per day, reflecting an expansion from 10% of the total number of ADA paratransit trips to as much as 25% of the total.

3.6 Service Design Elements

General Service Delivery Design

Even though there are myriad service delivery structures for paratransit, most systems can be categorized into the following four structures:

- In-house operations – Where the responsible agency/organization performs all functions or at a minimum all operational functions, including reservations, scheduling, dispatching, operations, and maintenance.
- Turn-key contracts – Where a contractor (or set of contractors) perform all operational functions – either for the entire system, or, in the case of multiple contractors, for their region or their portion of the system -- and where these service providers are under contract to the responsible agency or its surrogate (e.g., an administrative brokerage)
- Operations contracts – Where the responsible agency/organization (or contracted broker or call center contractor) performs reservations, scheduling, and sometimes, dispatching, and where a carrier or set of carriers -- under contract to the responsible agency or broker -- perform the service delivery and vehicle maintenance functions.
- User-side taxi subsidy programs – Where the sponsoring agency subsidizes all or part of the cost of a taxi ride through various mechanisms, and where the rider chooses which taxi company to ride and/or directly calls the taxi company for the ride.

It is reasonable to surmise that agencies with in-house operations are less likely to utilize non-dedicated service since they do not have experience in contracting, and may have a bias for control. Conversely, agencies that have multiple contracts, and certainly brokers that by the very nature of

their existence do contract for service, would be pre-disposed to utilizing non-dedicated service.

The distribution of service structures among the survey respondents (see Chapter 2) to some extent is consistent with this expectation. The agencies and brokers that utilize multiple carriers reflected 64% of the respondents. At the same time however, 29% of the respondents represented agencies that operate all or part of the service in-house, indicating that the benefits of non-dedicated service outweighed (for them at least) any biases towards exclusive in-house operation. It bears mentioning that in most of these latter cases, the inclusion of non-dedicated service was not part of the original service design, but was added later as a solution to one or more problems.

Outreach, the broker for the Santa Clara Valley Transportation Authority's ADA paratransit service, has always used taxicabs for a portion of its service. At one time there were four taxicab companies under contract. Outreach, would assemble trips into "multiples" which were assigned to the taxi companies. Due to changes in the taxicab industry in the late 1990s, which reduced the reliability of taxi service for paratransit, the number of taxicab vendors was reduced. As of early 2004, Outreach was using only one taxicab vendor, carrying about 7% of trips, mainly in the southern part of its service area where it was not cost-efficient to send dedicated vehicles. As economic conditions have changed recently, Outreach has been examining the potential for greater use of taxicabs, as well as strategies to encourage more participation by the taxicab industry in the delivery of paratransit services. An analysis conducted in 2004, showed potential for increasing the share to as high as 40%.[3]

Prior to the ADA, user-side subsidy programs were a very popular way of providing paratransit to a targeted population in situations where non-dedicated service providers were available. With the advent of the ADA, and the concomitant perceived or actual need to "control" the handling of trip requests, most ADA paratransit services have been organized under one of the three other types of service structures. Some transit agencies (e.g., in Chicago, Denver, Houston, Seattle) still do utilize user-side subsidy programs for their ADA paratransit customers; however, these programs are used in a supplementary fashion as defined in Chapter 2. Meanwhile, user-side subsidy approaches are still used in some municipal-sponsored

3. Nelson\Nygaard Consulting Associates (Koffman, D.), *Paratransit Business Model Study*, prepared for the Santa Clara Valley Transportation Authority, June 2004.

paratransit programs. User-side subsidy programs tend to be found primarily in urbanized areas where there are non-dedicated service providers willing to participate in the program.

Evening and Weekend Service

Most of the systems represented by the survey respondents do provide service on weekday evenings and/or weekends. Nearly all of theses systems utilize non-dedicated service during these lower-demand periods. There are other examples as well. In the early 1990s, the City of Edmonton's (AB) Disabled Adult Transit System (DATS) replaced its dedicated vehicle runs after 6:00 pm and on weekends and holidays with a combination of non-dedicated services when low productivity resulted in a cost per passenger trip on the dedicated service that was greater than the rates established for the non-dedicated carriers. Demand trends were monitored to ensure that this advantage prevailed. As another example, CitiLift, the ADA paratransit service in Reno, Nevada, contracts with a local taxi company to provide all service between 8:00 pm and 6:00am.

Same-Day Service

Some paratransit systems offer same-day service on a space-available basis. Still others provide same-day service as a regular offering. The incorporation and extent of same-day service appears to have some correlation with service structure.

Many dedicated services are based on next-day or advanced reservations that allow schedulers to utilize advance scheduling on the day(s) before the trip to develop productive vehicle runs. For such systems that also offer same-day, space-available service, the offering is designed to fill gaps in the dedicated vehicle schedules. In contrast, the programs that have a significant amount of same-day service would appear to have evolved from taxi-based services that employ live dispatching as opposed to scheduling software.

Los Angeles' Access Services, Inc. (ASI) presents an interesting case study. From its inception in 1994 through 1998, this regional ADA paratransit system offered same-day service, advanced-request service, and subscription service. The same-day service was facilitated by the nature of the local vendors, who were predominantly taxi companies. Where same-day service did not work well was in a region where the contractor was a national paratransit vendor, who was accustomed to developing advance schedules

using an industry-standard paratransit scheduling package.[4] These experiences resulted in a 1999 re-design of the program that involved separating the vendor contracts in each region into "Ready" Service and "Steady" Service (noting that a contractor could secure both contracts in a particular region), with Ready service equating to same-day service, and Steady service equating to subscription service. Under this design, the Ready providers were all non-dedicated vehicle providers whose methods of assigning trips to vehicles focused on "live" taxi dispatching. The cost efficiencies hoped for via this design did not materialize, however, and the same-day service, not surprisingly, attracted additional demand. (Three quarters of all trip requests occurred on the day of service.) Consequently, the total cost of service began to exceed the budget available. To curb demand, ASI transformed the design in the summer of 2003, changing from a predominantly same-day service to a next-day service (while allowing subscription trips), the minimum required by the ADA. Currently, same-day requests, which are still accepted but on a space available basis only, have been reduced from 75% to 3% of the total trips served. In concert with this shift, the focus of trip assignment is now on advance scheduling.

Will-Call Returns

A common problem among dedicated paratransit services is the lost productivity that results from no-shows on the return trip. This can happen with medical appointments, for example, in cases where the appointments take longer than expected. This situation results in lost productivity associated with the initial wait as well as lost productivity (and probable degradation in on-time performance) associated with accommodating the rider after he/she emerges from the delayed appointment.

For dedicated service operations, one strategy to combat return trip no shows is to be very conservative with the return trip pick-up time on a scheduled return. While this helps to reduce the number of no-shows, this strategy can also lead to lost productivity and a degradation of perceived service quality. A second way is to operate "floater" vehicles dedicated to serving such trips. Floaters help to provide the needed back up to serve riders that are stranded after a no-show, however, the use of such vehicles tend to also deflate the productivity.

4. Multisystems, Inc. (Rodman, W., Thatcher, R., Everett-Lee, L., and Koses, D.,) *Access Service Performance Evaluation and Audit*, prepared for the Los Angeles County Metropolitan Transportation Authority, September 1998

An alternative strategy is to allow "will-call" returns, i.e., open-ended return trips where the riders call when they are ready to go home. For some systems that allow this, will–calls are related to medical appointments. Nonetheless, with an all dedicated fleet, permitting will-calls requires very attentive, pro-active dispatching and/or the use of "floater" vehicles, as previously discussed. Using non-dedicated vehicles to serve these trips thus represents a solution that minimizes productivity loss to the dedicated fleet. In Bellingham, WA, for example, the Whatcom Transportation Authority uses taxis to allow will-calls.

For some systems that are predominantly built around medical transportation, such as Medicaid NEMT and Veterans Administration Medical Center (VAMC) non-emergency medical transportation, will-calls, and the use of non-dedicated vehicles are the norm and not the exception. For example, the Boston VAMC implemented a transportation brokerage in May 1999, hiring a private management company to arrange the transportation of non-emergency medical trips to/from 10 different medical facilities in eastern Massachusetts. Ridership on the system is 54,000 trips per year, or about 200 trips per weekday. Housed at the VAMC in the Jamaica Plain section of Boston, the brokerage staff (1) schedules approximately half of these trips onto VA-operated (in-house) vehicles serving five of the 10 facilities, and (2) schedules and allocates the remaining trips to up to 20 different contracted livery operators operating a mixture of dedicated and non-dedicated vehicles. Interestingly, the type of non-service service provider has evolved in this system from almost entirely taxi operators to entirely livery operators.) The allocation of tips to a particular livery operator is based on the carrier's proximity to the trip origin, the carrier rate, and the carrier's service performance. In this system, there are no minimum trip volume guarantees promised to any carrier. And, almost all of the round trips have a will-call return, which along with the occasional in-patient discharge, are handled on an immediate-response basis and are generally dispatched to the carrier that served the going trip, whenever possible. Thus, three out of every four trips are assigned to non-dedicated vehicle provider.

Transfers

Paratransit-to-paratransit transfers are often a design component of multiple-region, multiple carrier systems, and of operational coordination between systems. Well-orchestrated transfers result in a minimal reduction to productivity for the dedicated fleet, while transfers in general discour-

age customers from making long discretionary trips. On the other hand, paratransit-to-paratransit transfers can be very time-consuming and can counteract any productivity gains if one vehicle is forced to wait idle for a long period of time because it arrives early at the transfer point, and/or the second vehicle arrives late (also noting that a "drop-and-go" policy can mitigate such an occurrence).

In Boston, where inter-carrier transfers are required between regions, one of the MBTA's contractors, Veterans Transportation, employs taxis as a "rapid response" to back up transfer trips, especially if the dedicated vehicle is running late. The owner of Veterans Transportation also mentioned that they normally do not employ taxis to generally handle transfers. While noting that it would be advantageous to the company because the driver would not be paid for waiting, he indicated that it would be unfair to the driver. In addition, such a trip assignment would take the taxi driver out of the prime area of general public demand. Therefore, Veterans Transportation's practice, with respect to paratransit-to-paratransit transfer trips, is to employ taxis as back ups only.

The use of ADA paratransit and other forms of paratransit as a feeder service to fixed-route transit is growing in the industry. The strategy is perceived as a way to shift trips to a more cost-efficient service, while improving the productivity of the dedicated paratransit fleet by reducing the need for the dedicated vehicle to make long trips. An operational problem associated with this strategy is related to the distribution leg of the trip (if a second transfer back to a paratransit vehicle is needed). The coordination between the dedicated distributor vehicle and the arrival of the transit bus or train is problematic for the same reasons as above, and is compounded if the distributor vehicle is operated by a different entity/system. Here too, the use of non-dedicated service provides a potentially simpler solution for the distributor leg because the non-dedicated vehicle has no other commitments. (However, one potentially serious flaw in such use is that the dispatched driver may be tempted to pick up another transit patron instead of the transferring customer.)

Overbooking Strategies

Overbooking is sometimes used as a strategy to increase productivity. As in the airline industry, this is a process where more trip requests are accepted than can be accommodated by the dedicated vehicle runs (while still meet-

ing established service quality standards). When this strategy is employed, the additional (overbooked) trips are placed on an open booking list or unscheduled "holding" run from which they are subsequently picked and scheduled onto "real" runs when gaps in the schedule occur in real time, e.g., due to late cancellations and no-shows. The key to making this technique work effectively is to accurately calibrate the number of overbooked trips permitted to the historic rate of late cancellations and no-shows.

Having the ability to use non-dedicated vehicles (via a contractual arrangement) can significantly increase the dispatcher's "comfort level" when operating with an open booking list. Since advance commitments have been made to passengers on an open booking list, space must be found. Dispatchers can assign trips that do not effectively fit on any dedicated vehicle run to an available non-dedicated vehicle. In essence, non-dedicated vehicles can be creatively used as a dispatcher's "safety net" to maintain on-time performance (including incident management), and to decrease trip denial rates.

The logic of this approach is as follows. The more trips that can ultimately be scheduled (for a given amount of vehicle service hours), the more productive the system. However, the more trips that are accepted, the more risk there is that any accepted trip request will not be served according to system standards. The availability of a non-dedicated service provider reduces that risk, and enables the system to handle additional trips that might not otherwise be attempted.

The Pomona Valley Transportation Authority (PVTA) employs this strategy for its Get About service, a local (non-ADA) DRT service for seniors and person with disabilities. PVTA's primary contractor schedules 300 to 350 weekday trips onto its dedicated fleet and assigns 70 to 100 trips per day to PVTA's taxi subcontractor, for a service mix of roughly 80%/20%. PVTA's Administrator states that having the non-dedicated service has enabled the contractor, as a purposeful strategy to accept more trips than the dedicated fleet can handle. One of the keys to this strategy is being able to assign trips to the taxi subcontractor as late as 45 minute before the trip pick-up time. Because of this policy, schedulers and dispatchers are scheduling unscheduled trips from the holding run into holes in the dedicated runs that result from late cancels and no-shows, and they are able to do this literally right up to that 45-minute time point. The Administrator further states that PVTA's employment of non-dedicated service resulted in an 8% improvement in

productivity and an increase in ridership in two hard-to-serve cities in the western portion of their service area.

In Bellingham, WA, the Whatcom Transportation Authority also utilizes taxis to implicitly overbook.

Back-Up Services

Non-dedicated vehicles can also be used to provide additional "spot capacity" in order to substitute for pre-scheduled vehicles that are running late, have broken down, or are held up by an accident investigation or onboard incident, as well as accommodate riders who are stranded after a return trip no-show. For example, Veterans Transportation is one of The Ride vendors in Boston under contract to the MBTA. This vendor, which serves the wedge-shaped Northwestern region, serves about 1,300 trips per weekday on its dedicated fleet and about 200 trips per weekday with its own taxi fleet. The General Manager of Veterans Transportation noted that the taxis are primarily used to serve overflow trips and to "rapidly respond" to breakdowns of dedicated vehicles. He further added that taxis not only can respond more rapidly than another dedicated vehicle or supervisory vehicle, but using taxis in this manner circumvents any disruption to the rest of the dedicated fleet. The MBTA's Manager for Paratransit Contract Operations also acknowledges this as a clear benefit, adding that the MBTA's auditing of invoices is simplified somewhat because it has the same payment structure for both dedicated and non-dedicated service.

Contractual Rate Structure

As confirmed by our survey response, most dedicated vehicle contractors are paid based on a per revenue vehicle hour rate. This is because the bulk of the typical dedicated operation cost structure is hourly based, with labor and fringe generally accounting for between 50% and 70% of the cost structure. Contractors operating dedicated service prefer hourly rate structures because there is a direct correlation between service rendered and employee pay hours, as opposed to a per trip rate, for example, where there is less correlation between service consumed and employee pay hours.

In contrast, half the survey respondents purchase non-dedicated service on the basis of distance-based rates, i.e., by the taximeter or by the mile, as shown below. (Taximeters fares are almost universally based upon the combination of a price per pick-up -- often called a flag drop -- and a price per mile.)

	Ambulatory Trips	Non-Ambulatory Trips
Per mile rate	15 (50%)	9 (50%)
Per trip rate	9 (30%)	6 (33%)
Other rates	6 (20%)	3 (17%)

There is also sometimes an administrative charge (usually a percentage) added to the pass-through fares. For example, in Bellingham, WA, Whatcom Transit Authority adds a 14 administrative fee onto the approved charges.

This distanced-based payment structure for non-dedicated service is not surprising for two reasons: (1) As confirmed by the survey response (88% of the respondents), most instances of non-dedicated service involve the use of taxis. The survey also confirms that most procuring agencies find it simplest to use the payment structure that is already in use. (2) Per mile rates (or its zonal rate surrogate) are also generally appropriate to systems where there is large and volatile difference in trip lengths, which appears to be another common characteristic of such service.

When agencies assign trips to taxis, they usually assign a list of trips for the taxi dispatcher to dispatch. Typically, these trips are dispatched individually to taxi vehicles, especially if the taxi company is being paid by the meter rate. (The apportionment of two shared rides under this scheme becomes problematic.) Nonetheless, the use of a mileage-based payment rate or a per trip payment rate (see below) structure does not itself preclude shared rides.

The next most prevalent rate structure for non-dedicated service among the survey respondents is a rate per trip. The respondents who utilize this structure like it for its administrative ease. This is especially true in the case of brokerages representing various sponsors. Based on the experience of most brokerages with multiple sponsors, it would appear that the norm for human service agency transportation programs is to budget – and pay for service – based on the number of trips delivered. With its revenues for the program based on a cost per trip, the brokers' administration of the program is also facilitated if the broker pays the carriers -- operating dedicated and

non-dedicated service -- by the trip as well. This per trip sponsorship and payment structure is common among the County Transportation Coordinators in Florida, for example. The MBTA's Manager of Paratransit Contract Operations also noted that it simplifies the administration of the program if both dedicated and non-dedicated service is procured using the same (per trip) rate structure. However, as mentioned above, if there is a wide variance in trip lengths as is often the case with trips assigned to a non-dedicated service provider, a per trip rate may not be the most appropriate structure.

Among the survey respondents, there were no instances where non-dedicated providers were paid by the hour for providing service to ambulatory riders. There were some instances where non-dedicated providers were paid by the hour for providing service to non-ambulatory riders. This included 11% of the survey respondents, and in these cases, the hourly charge was the prevailing rate charged to the general public.

Ultimately, however, it is not the rate structure of the primary contractor that influences the rate structure of the non-dedicated service, but the existing rate structure of non-dedicated service providers, and in most cases, this rate structure is distance based.

Some of procuring agencies also have fuel adjustment clauses and/or have established hour or trip or mileage thresholds that trigger rate renegotiation (e.g., in response to unexpected increases or decreases in demand). These provisions are designed to protect the vendor in case the quantity of service proves much less than expected, and protect the procuring agency in case the quantity of services proves much more than expected. These agencies have found that contractors are more willing to negotiate a lower rate if their risk is reduced.

A few of the respondents (AATA in Arbor Arbor, MI, Access Services in Los Angeles, and PVTA in LaVerne, CA) indicated that their payment structure includes a monthly fixed amount in addition to the variable rate. In doing so, the procuring agencies have recognized that there are some fixed costs that do not vary by the number of hours, miles or trips provided by the contractor and have instituted a payment structure in which these annual fixed costs are divided by 12 and paid to the contractor monthly. In contrast, when a payment structure is just based on a variable rate, the agency or contractor (in its RFP or proposal) first has to estimate how many hours, miles, or trips over which these fixed costs are to be spread. By breaking out these fixed

costs separately, the contractor doesn't lose if the number of service units is less than estimated, while the purchasing agency doesn't pay more than it should if the actual number of service units exceeds the estimate. Through this split payment structure, the purchasing agency is thus sharing the risk with the contractor, but is also protecting itself in the case where ridership is rapidly increasing. This was the case with the AATA.

3.7 Service Area Type

Many areas, especially in sparsely populated rural communities, are devoid of taxi companies and other for-profit operators who might be a source of non-dedicated service. Even in areas where there is a supply of private or private non-profit local transportation service, that supply may be so limited as to not represent a viable option for non-dedicated service. In addition, in such situations the existing demand for such service may be such that the availability of these vehicles (to augment a dedicated fleet) may be limited or non-existent, particularly during times of the day when both services needs for the greatest number of vehicles coincide.

Conversely, there also exist cities and regions that have such an abundance of – and competition among – taxi companies and other non-dedicated service suppliers that their paratransit systems are largely designed around these resources. Einstein claims that "most urban service areas, and a large number of suburban ones, contain far more non-dedicated than dedicated vehicles irrespective of their involvement in the provision of program-affiliated clients."[5]

3.8 Labor Agreements

Labor agreements can have a significant effect on whether and how non-dedicated service is used. For example, the pressure from the union may be such that any use of service contracting gets little consideration, to say nothing of Section 5333(b) -- formerly Section 13(c) -- clauses that may come into play if the introduction of contracted service is accompanied by a reduction of publicly operated service (and hence a reduction in unionized drivers).[6]

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5. Einstein, N., *Optimizing the Mix of Dedicated and Non-Dedicated Vehicles in Complementary Paratransit Service*, presented at the Maximizing Your Resources session at the May 2004 APTA Conference Bus and Paratransit Operations in Denver, Colorado.

6. Transportation Research Board, Special Report 258, *Contracting for Bus and Demand-Responsive Transit Service: A Survey of US Practice and Experience*, Washington, DC, 2001.

In addition, work rules that affect runcutting of the dedicated fleet cab affect the need for non-dedicated service. For example, work rules which stipulate straight shifts and prohibit split shifts, and which stipulate a minimum shift length can be counter-productive to conforming the supply of service to the demand for service. In such an environment, using non-dedicated service can be more cost-efficient than placing another four to eight hour run into service to handle a few trips. Conversely, the more flexible the work rules affecting driver scheduling, the less need there is likely to be for non-dedicated service.

3.9 Cost of Service

Based on the survey data, the non-dedicated vehicle operations have significantly lower costs per passenger trip than do dedicated vehicle services, approximately $13.00 to $15.00 per trip compared to $23.00 to $24.00 per trip. However, it is important not to overlook that this difference may be attributable to differences in capital and operating costs (most of the vehicles utilized by non-dedicated providers are sedans and minivans), overhead, and, especially, trip length and type of service (e.g., ADA vs. Medicaid).

In more urbanized areas where there are several providers of private and private non-profit local transportation service, such as taxis, livery operators, agency operators, and chair car and ambulance carriers, it should be possible to find reasonably priced options for non-dedicated vehicle service, i.e., such that the unit cost of providing non-dedicated service for a particular trip is less costly than pulling out a new run. Even in cases where rates are regulated, such as in the taxi industry, an agency can negotiate a lower rate for private contracts. Conversely, in less populated communities, the dearth of carriers may produce higher rates, as there is likely to be less competition. If lower rates cannot be negotiated, the transportation manager may find it more cost-efficient to keep that trip on the dedicated fleet.

In principle, the unit cost or rate to provide service is one of the most important determinants as to the use of non-dedicated service at all, as well as the relative amounts of dedicated service and non-dedicated service. Ultimately, the optimal split between dedicated and non-dedicated service is where the unit cost of transporting passengers for the whole system is minimized, assuming of course that service quality standards are also achieved.

In Madison, for example, transit agency staff schedule non-ambulatory trips onto two sets of dedicated accessible vehicles. They first schedule non-

ambulatory trips onto runs operated by Metro (13-16 runs per weekday) and then schedule other non-ambulatory trips onto runs operated by their dedicated contractor, Laidlaw (15 runs per weekday). Overflow non-ambulatory trips are assigned to one of Metro's non-dedicated providers, Transit Solutions. The schedulers then schedule ambulatory trips on the Metro and Laidlaw runs. Overflow ambulatory trips are assigned to Badger Cab or Transit Solutions. In the case of both Transit Solutions and Badger Cab, Metro allows the contractors to co-mingle Metro trips with other trips (on the same vehicle at the same time).

While we do not have Metro's in-house costs broken down by administration vs. operations, we shall assume for this example, that the in-house operations cost is roughly the same as Laidlaw's rate – about $45 per hour. Based on this assumption the total operating cost for the two dedicated fleets combined is $26.00 per trip. Overflow non-ambulatory trips cost Metro $27.77 per trip. Thus, it behooves Madison Metro to put as many non-ambulatory trips on their dedicated fleet as possible.

The Madison Metro scheduling staff then fills up the holes in the accessible dedicated fleet as efficiently as possible with ambulatory trips (given that Madison Metro is already committed to putting these dedicated vehicles into service), and then assigns the rest of the ambulatory trips to its two non-dedicated providers—with the bulk of these trips going to the lower-priced alternatives. The ambulatory trips placed on the dedicated fleet increase the productivity and help Madison Metro achieve the efficiency measure of $26.00 per trip. This must be weighed against the $13.75 per trip rate on Badger Cab or $14.99 per trip rate on Transit Solutions.

Overall, for both non-ambulatory and ambulatory trips, Madison Metro winds up a split of 57% on the two dedicated service providers and 43% on the two non-dedicated service providers. However, one might speculate whether it would be more cost efficient overall to reduce the size of the dedicated fleet (given that Madison Metro has the option of utilizing Transit Solutions for non-ambulatory trips at a marginal, additional cost of $1.77 per trip) and, in doing so, use the non-dedicated providers for ambulatory trips at a substantially lower price.

CHAPTER 4. FACTORS THAT INFLUENCE THE PURCHASE AND USE OF NON-DEDICATED SERVICE

In this section, various factors that influence the decision to purchase non-dedicated service are examined. These factors also include a discussion of perceived obstacles or shortcomings associated with using non-dedicated service that may thwart further consideration of integrating non-dedicated service into the service delivery mix.

The survey respondents' top ten obstacles are listed below, ranked by the percentage of respondents who stated that the obstacle was a major problem in using or purchasing non-dedicated service.

Problem	Major	Minor
• Lack of accessible vehicles	23%	23%
• Difficulties in contract compliance and oversight	19%	23%
• Substandard on-time performance / service reliability	16%	38%
• Few non-dedicated service providers	16%	26%
• Non-dedicated service not available when needed	13%	23%
• Substandard driver training / sensitivity / assistance	10%	39%
• Substandard vehicle quality / maintenance	9%	34%
• Inability to meet insurance requirements	9%	13%
• Difficulties with complaint investigation/resolution	7%	33%
• Difficulties with invoice reconciliation	6%	32%

It is noteworthy that no more than 23% of the respondents identified any of the problems as a major problem, and that only 54% identified any of these issues as any kind of problem.

The survey participants were then asked to identify the most significant problem and indicate how it was overcome. Their responses were categorized as follows:

Most Significant Problem?	Percentage of Responses
• Excessive Administrative Oversight Required	22%
• Provider Lacks Accessible Vehicles	19%
• Substandard Driver Training	11%
• Substandard On-Time Performance	11%
• Non-Equivalent Service Standards	7%
• Limited Number of Non-Dedicated Service Providers	7%

Most Significant Problem?	Percentage of Responses
• Fraud Control	7%
• Poor Management Skills	7%
• Non-Equivalent Levels of Insurance	4%
• Union Pressure to Not Contract for Service	4%

Other problems mentioned included: (1) ensuring that vehicle maintenance and cleanliness complied with standards of the regular fleet; (2) ensuring service quality and driver training; and (3) keeping costs and service quality in balance.

These obstacles, and strategies to address them, are discussed below.

4.1 Excessive Administrative Oversight Required / Difficulties in Contract Compliance and Oversight

The most prevalent problem among the survey respondents was the amount of oversight that was required to ensure that non-dedicated service providers complied with contractual obligations associated with driver training, drug and alcohol testing, preventive maintenance programs, complaint investigation/resolution, reporting requirements, and record-keeping. The general problem, as voiced by the General Manager of the Decatur Public Transit System, was that he does not have enough manpower to properly perform contract oversight

Other respondents, such as the Transit Manager in Wausau and the PTM Brokerage Manager in Worcester, also recognized contract oversight as the their biggest problem and addressed it, in part, by hiring additional staff to provide contract oversight and to work with the contractors so that the contractors better understand what is required of them and are more successful in documenting and reporting on compliance issues. The PTM Brokerage Manager reported that the problems were rooted in vendor turnover and the significant turnover of back-office staff among the 6 to 10 non-dedicated providers. Because of this, PTM has had to "revert back to square one" on issues regarding billing, complaint resolution, etc. She further adds that PTM had had the most success with contractors with whom they've spent more time training the owners given the high turnover of back-office staff. In the case of Wausau, WATS ended up taking over the substance abuse program for their non-dedicated provider because the provider, even with assistance from WATS, failed to manage this program properly.

Another type of solution comes from the Transit Manager of Eau Claire Transit who indicated that their reporting requirements presented quite a challenge for their non-dedicated provider. To address this issue, Eau Claire Transit worked with its funding sources to streamline the requirements as much as possible.

In Los Angeles, where the non-dedicated service providers are subcontractors of Access Services, Inc.'s contractors, the most significant problem has been Access Services' limited oversight, monitoring, and accountability of the subcontracted service. Up until recently, the major problems have stemmed from some drivers refusing trips and late trip assignments that the subcontractor is unable to perform, and the lack of communication back to the prime contractor that the trip cannot be served. Subsequent improvements in technology and communication, as well as the assessment of penalties to the contractors for assigned trips not served by their subcontractors have helped to resolve these problems.

4.2 Lack of Accessible Provider Vehicles and Lack/Unavailability of Providers

The second most cited obstacle is that the prospective/existing non-dedicated service provider(s) lacked accessible vehicles, and so the use of the provider(s) was limited to ambulatory trips. This obstacle was mentioned by urban systems, such as the Nashville Metropolitan Transit Authority, as well as small urban and rural systems like Link Transit in Wenatchee, WA, the Rogue Valley Transit District (RVTD) in Medford, Oregon, and Ottawa County (OH) Transportation Agency. In Nashville and Wenatchee, both transit agencies noted that the lack of accessible vehicles " limited the value of the non-dedicated providers."

Solutions to overcome this obstacle include providing, leasing, or even loaning accessible vehicles to the non-dedicated service provider. In Medford, Oregon, for example, RVTD's Brokerage Manager reports that they have provided 19 accessible vehicles (17 low-floor minivans and two cutaways) to their provider, while Link Transit is considering leasing accessible vehicles to its non-dedicated vendor. Elsewhere, Santa Fe Trails has provided 10 accessible vans to its two non-dedicated vendors, while the Pomona Valley Transportation Authority in LaVerne, California has provided five accessible minivans. In Massachusetts, the Montachusett RTA occasionally loans its vendors accessible vehicles when their supply is inadequate to

cover spikes in demand, while the Worcester RTA reports that it will likely be leasing two or three accessible vehicles to its providers in the upcoming year. And, in Ann Arbor, AATA's taxi contractor buys the vehicles used for non-dedicated service, but AATA uses federal capital money, available at 80%, to reimburse the taxi company for these capital costs. (This is described further in Section 4.7.)

The fourth and fifth most commonly cited obstacles are the scarcity of non-dedicated providers, and the unavailability – or the lack of excess capacity -- of existing providers during peak demand times. This was particularly the case among the nine respondents who served small urban areas, the five respondents who served rural areas, and the six respondents who served both small urban and rural areas. For example, the transportation manager in Ottawa County, Ohio, reported that there was only one provider to choose from. And, in Bellingham, WA, the Manager of Specialized Transportation for the WTA indicated that the smaller community has not attracted many non-dedicated service providers, and as a result, the service quality and cost benefits that are typically associated with competition have not materialized from the marketplace. He further reported that, because of the absence of competition, he has devoted much effort to maintaining a good relationship with the contractor; he attributes this, and a good procurement process and contract, as ways to avoid problems.

In many rural communities and regions, there is not enough demand to support taxis and other non-dedicated providers. Thus, if there is any public transportation at all in these communities, it is likely to be demand-responsive service, with origins in human service transportation and operated with dedicated vehicles.

4.3 Poorer Service Quality and Reliability / Differences in Driver Training and Substance Abuse Testing

The third most cited reason for not purchasing or not using non-dedicated service is the perception that the service quality and reliability of the non-dedicated service is substandard or poorer than the service provided by the in-house or dedicated service contractor(s). The service quality issues most commonly mentioned were the poor quality of customer service, lack of professionalism exhibited by the non-dedicated service drivers, and poorer on-time performance. Several transportation managers in the survey attributed the problem to lack of – or substandard – driver training.

For example, the transportation managers in Madison, WI, Medford, OR, and Oshkosh, WI reported differences in on-time performance, tracing the underlying reason back to differences in driver hiring and training, turnover, and supervision, especially among taxi providers.

In many cities, taxi drivers are independent contractors. In a past review of Access Services in Los Angeles,[7] it was noted that such drivers could always refuse to accept a trip. Because of this, it may take longer to dispatch a trip, and it may take longer for that driver to get to the pick-up point, leading to on-time issues, than if the drivers were employees Moreover, it is generally more difficult for a dispatcher to "find" a driver willing to take trips when there are other customers competing for the driver's service. For example, in Los Angeles and other cities, the general public presents formidable competition for taxicab resources during peak times, and especially when the weather is inclement. In Santa Clara County, the taxi service provided as part of the Outreach brokerage was not reliable when the local economy was soaring: not only was there a shortage of taxis, but the demand outstripped the supply. Since the end of the technology boom, the reliability of the taxi service has improved significantly. [8]

As one solution to driver related issues, several respondents mentioned that they require the same training for any driver serving a program trip, whether operating a dedicated or non-dedicated vehicle. For example, in Montgomery County, PA, where three of TransNet's six contractors operate both dedicated and non-dedicated vehicles, TransNet subjects all drivers to the same training requirements. This is also true in Boston where one of The Ride contractors, Veterans Transportation, operates both dedicated vehicles and a taxi fleet. In this system, all drivers must undergo the same training, and in the case of both Access Services in Los Angeles and Outreach in San Jose, both brokers directly provide the driver training.

In Los Angeles, Access Services not only trains but also certifies all drivers of their system (whether operating dedicated or non-dedicated vehicles) before they are allowed to serve an ASI trip. This has been especially important in Los Angeles, where many of the drivers providing service have not been

7. Multisystems, Inc. (Rodman, W., Thatcher, R., Everett-Lee, L., and Koses, D.,) *Access Service Performance Evaluation and Audit*, prepared for the Los Angeles County Metropolitan Transportation Authority, September 1998

8. Nelson\Nygaard Consulting Associates (Koffman, D.), *Paratransit Business Model Study*, prepared for the Santa Clara Valley Transportation Authority, June 2004.

taxi company employees, but independent contractors, who could not be "forced" to receive this training, much less other requirements such as dug and alcohol testing (see below). ASI and its taxi association contractors "marketed" the training and other requirements related to certification as an opportunity for the drivers. For agreeing to become certified ASI drivers, the certified drivers would get a steady flow of trips, as compared to their non-certified drivers. This strategy proved to be successful.[9]

Monitoring of contractors also plays an important part of ensuring an equivalence of service quality. Oshkosh Transit noted that requirements for equivalent training must be backed up by monitoring of contractor training records and curriculum (if the training is performed by the contractor) to ensure that all drivers serving program trips have been trained according to contract standards. Oshkosh Transit also added that stepping up their monitoring efforts produced a marked improvement in customer satisfaction regarding timeliness. Monitoring is also an important component of ensuring equivalency in vehicle maintenance and in contract compliance in general.

Lastly, but perhaps most importantly, the Manager of Service Development for Ann Arbor Transportation Authority points out that the world of public transit and for-profit non-dedicated service providers are very different. Many problems can result because the two entities look at things very differently. One important example of this is in the payment structure. He believes that it is vital for the public entity to try to understand the business aspect, so that the payment structure rewards good service. For example, taxi operators are essentially entrepreneurs. If the taxi operators can make more money carrying for-hire taxi passengers, then the paratransit riders will be treated as second-class citizens.

4.4 Drug and Alcohol Testing

The Federal Transit Administration first published drug and alcohol testing rules in February 1994, and then in 2001 revised, updated, and consolidated the rules into one, 49 CFR Part 655. This regulation applies to recipients or sub-recipients of Federal financial assistance under 49 USC Sections 5307, 5309, and 5311 of the Federal Transit Act. This regulation also applies to any

9. Einstein, N., *Optimizing the Mix of Dedicated and Non-Dedicated Vehicles in Complementary Paratransit Service*, presented at the Maximizing Your Resources session at the May 2004 APTA Conference Bus and Paratransit Operations in Denver, Colorado.

contractor who performs safety-sensitive functions (stands in the shoes) for a covered transit agency. Safety-sensitive functions include the operation of a revenue service vehicle, operating a non-revenue vehicle that requires a Commercial Driver's License, controlling dispatch or movement of a revenue service vehicle, maintaining a revenue service vehicle, and providing security while carrying a firearm. Non-dedicated transportation providers that stand in the shoes of covered transit agencies must comply with the FTA regulation even if their involvement is limited or incidental. The preamble to the updated regulation clarifies applicability to non-dedicated taxicab operators. The regulation applies to taxicab operators when the transit provider enters into a contract (written or otherwise) with one or more entities to provide taxi service as part of the public transit service. Drug and alcohol testing rules do not apply to taxicab operators when service is provided where patrons are allowed to choose the taxicab companies that will provide the services. Thus, if the transit system, broker, etc. assigns trips to non-dedicated service providers, they are covered by the rule. If customers choose between service providers without direction or control of the transit agency, the non-dedicated service provider is exempt.

Note that the non-dedicated service provider has the option to designate which portion of their service is to be used to provide the transit services and only that portion need comply. However, if the service is integrated and the service is provided interchangeably, the taxi operators total operation must be included. This includes not only drivers, but also maintenance and dispatch personnel. Maintenance is excluded only if the taxi company contracts out its maintenance activities and the company provides service for a grantee that receives funding under Section 5311 or a grantee that receives funding under Sections 5307 and 5309 and has a designated service area under 200,000 in population. Taxi operators that serve urban systems in large metropolitan areas (> 200,000 population) must ensure that their first-tier maintenance contractors are also in compliance with the regulation.

FTA considers the fact that taxi services are often provided by independent contractors as irrelevant. Similarly, the fact that in some cases no Federal operating dollars are used to pay for the taxi services is irrelevant if the taxi operator is providing public transit service.

Brokerages and human service agency transportation programs that provide several transportation programs under one umbrella need only test the public transportation component of the services as long as the services

are distinctly separate. Specifically, if there is no intermixing of funds or personnel, the "other" services are considered separate and the non-FTA funded transportation programs are not subject to FTA's drug and alcohol testing rules. In situations where there is some minimal overlap of duties or shared responsibilities of staff (i.e. shared dispatchers, or emergency backup drivers), FTA considers this "incidental overlap" and does not require coverage of the individuals performing the incidental job functions.

Other non-dedicated service providers may find that they are covered under the regulatory authority of more than one mode. Many transit systems contract with safety-sensitive contractors who are already required to comply with the drug and alcohol testing regulations of the Federal Motor Carrier Safety Administration (FMCSA). If those contractors are able to segregate the employees who provide transit services from those who perform safety-sensitive functions for the other modes, the employer is required to establish programs for each group of employees, allowing for the corresponding differences in the modal rules.

However, if the contractor's employees perform safety-sensitive functions for both transit and another mode, the employer must determine which modal administration regulates the majority (> 50 percent) of the employees' time performing safety-sensitive functions covered under the USDOT. Once determined, the employee will be subject to pre-employment and random testing under the regulatory authority of the primary modal administration. The assignment of regulatory authority for reasonable suspicion and post-accident testing will depend on the function an employee is performing at the time of the incident/accident. Return-to-duty and follow-up tests will be assigned to the modal administration that generated the initial positive test.

The biggest challenge facing transit agencies that choose to use non-dedicated service providers in relation to drug and alcohol testing include the following.

- Understanding subtleties of applicability
- Communication of requirements to service providers
- Education of service providers and understanding of differences between FTA and FMCSA rules
- Willingness of service providers
- Obtaining the services of compliant service agents (i.e. collection

sites, BATs, labs, MROs, and SAPs

- Training of service provider safety-sensitive employees and supervisors
- Assurance that scientifically valid random selection process is used
- Establishing policy
- Establishing compliant testing procedures
- Record keeping
- Oversight and enforcement

As a response to these challenges, many transit systems have included the service provider in their own random selection pools, have provided training, included them in the transit agency's contract for testing services, and provided ongoing oversight. The amount of effort required to ensure compliance can vary drastically by service provider and can be a major challenge for the transit agency and the service provider. Non-compliance of a service provider may render the whole transit agency in non-compliance and can be a stumbling block for many.

It is also important to note that that FTA drug and alcohol policies do not apply in the case of supplemental services, i.e., where the customer is empowered to directly choose which carrier is to serve his/her trip. It is speculated that a taxi company or individual independent contractors, for example, may be more likely to participate in a supplemental program because of the dearth of such policies. That being said, it is not uncommon for transit agencies or governing municipalities to invoke their own drug and alcohol policies. (See Section 4.6 below.)

4.5 Differences in Insurance Requirements

In the taxi and livery industry, the insurance requirements are either regulated by the municipality, or fall under a state minimum. Either way, it is rare when the insurance levels are equal to the required levels for most ADA, municipal-based, or human service agency paratransit service, and if a lower insured vehicle is used, it places the purchasing organization at risk. Moreover, with the skyrocketing of insurance costs in the last four years, the higher insurance requirements of ADA paratransit programs, some municipal dial-a-ride programs, and some human service agency transportation programs have precluded program participation for many

taxi and livery operators.

In many communities, this problem has been addressed by the non-dedicated contractor insuring only a portion of its fleet, i.e., insuring at the higher levels the vehicles that will be providing non-dedicated service to the paratransit program. While this presents a reasonable solution to this obstacle, the primary downside is that this also limits the flexibility the taxi company or association has in dispatching.

In Los Angeles, Access Services on behalf of its contractors that operated taxis, went to their contractors' insurance companies and proved a correlation between using only certified drivers (who, again, received specialized training and were subject to drug and alcohol training) and a reduction in accidents. This resulted not only in a decrease in the cost of insurance premiums for the company and associations, but in the expansion of these practices to all drivers (because of the decreased cost) and hence more global certification. The operational result of this was that dispatchers had more drivers and vehicles to dispatch to.[10]

4.6 Regulatory Environment

In Massachusetts, regional transit authorities (RTAs) are required to use operations contractors. There is also a state policy to coordinate transportation services. The latter has resulted in common regional boundaries among districts of state human service agencies that are respectively responsible for providing non-emergency medical transportation to Medicaid recipients, the transportation of persons with developmental disabilities, and other state agency clients requiring specialized transportation. In each district, a lead agency has emerged as the coordinating entity; in most regions, it is a regional transit authority. Some regional transit authorities, such as the Montachusett RTA and the Worcester RTA, two of the survey respondents, provide human service agency transportation well beyond the service area of the fixed-route and ADA paratransit services. Because of the dispersed nature of the human service agency trips, and because the RTAs are required to use operations contractors, it is not uncommon for the RTAs involved in human service agency transportation to utilize non-dedicated providers. Montachusett RTA, for example, uses over 200 non-dedicated providers to

10. Multisystems, Inc. (Rodman, W., Thatcher, R., Everett-Lee, L., and Koses, D.,) *Access Service Performance Evaluation and Audit*, prepared for the Los Angeles County Metropolitan Transportation Authority, September 1998

serve nearly 3,000,000 trips per year (75% of its paratransit trips) throughout eastern Massachusetts.

The regulatory environment can also affect the usefulness of non-dedicated providers, and especially taxis. Taxis are usually regulated by municipalities. This may cause difficulty with respect to their usefulness when a regional program is larger than the area in which the taxi may pick-up trips. For example, in San Diego County, North County Lifeline (North County Transit District's ADA paratransit contractor) regularly assigns 8% to 10% of its trips to two taxi companies. These trips typically are the ones that No. County Lifeline cannot serve with its dedicated fleet. One of the providers (Courtesy Cab) has a license to serve throughout the NCTD service area. The other, Yellow Cab of Escondido, only is licensed to pick-up in Escondido. Therefore, North County Lifeline is limited to sending only trips that originate in Escondido to Lifeline. If Yellow Cab of Escondido were licensed to pick-up trips in a broader area, North County Lifeline's schedulers and dispatchers would have more flexibility. A study[11] recently completed for NCTD also looked at the prospect of broadening use of taxis, and identified three prospective contractors in the Oceanside area. Only one of these was licensed to pick-up trips in Oceanside, thereby virtually requiring North County Lifeline to subcontract with more than one taxi company in the Oceanside area if it decides to utilize non-dedicated service in this area.

It is also worth noting that some municipalities, such as Santa Clara County in California, have taxi regulations that include requirements for drug testing, insurance, driver hiring (driver record and criminal history checks), driver training, and the condition of the vehicle. In the case of Santa Clara County, these taxi requirements were as stringent as those required by the Santa Clara Valley Transportation Authority's broker (Outreach) for its primary contractor. Hence, these requirements have together paved the way for incorporation of taxis as non-dedicated providers in the ADA paratransit service.[12] (See also Section 4.3)

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11. Nelson\Nygaard Consulting Associates (Koffman, D., Rodman, W., and Weiner, R.), *Paratransit Improvement Study*, prepared for the North County Transit District, March 2005.

12. Nelson\Nygaard Consulting Associates (Koffman, D.), *Paratransit Business Model Study*, prepared for the Santa Clara Valley Transportation Authority, June 2004.

4.7 Capital Costs vs. Operating Costs

For transit agencies, capital monies are generally more readily available from funding sources than are operating monies. Federal monies available to transit agencies generally cover 80% of the cost of capital purchases. And where federal operating funding was formerly available at 50%, this funding is now available only at a very small percentage. The availability of capital funding suggests that it would be in the transit agencies' best interest to purchase vehicles that would be operated in a dedicated fashion by in-house employees or a contractor.

AATA in Ann Arbor also provides a contrasting spin to this theme, remembering that 84% of AATA's 202,000 trips are served by its non-dedicated (taxi) provider. In Ann Arbor, the taxi company purchases vehicles and charges AATA for their use, but AATA uses a capital grant to pay this portion of the contract cost. Each year, AATA's Section 5307 grant includes a line item for Capital Cost of Contracting, which provides 80% of the cost of portion of the contract attributable to contracted service. AATA believes that this is a better option than using capital funds to purchase vehicles and leasing them to the operator because the contractor doesn't have to deal with federal procurement regulations. Instead, the contractor purchases the vehicles it wants, and the contractor can do this relatively quickly. AATA also pays for the portion of the cost of the taxicabs paid by capital grants through capital cost of contracting. Essentially, AATA multiplies the annual depreciation on the cabs times the proportion of miles in paratransit service to calculate this value, noting that FTA has approved this methodology.

There were also examples mentioned in the survey response where capital monies were not available, where vehicles were in short supply, and where the use of non-dedicated vehicles served as a stop-gap measure until new vehicles could be purchased or until purchased vehicles arrived. For example, the General Manager of the Decatur Public Transit Systems reported that they use non-dedicate service because DPTS does not have the capital funds to acquire the necessary fleet to handle the demand. North County Lifeline in San Diego County uses non-dedicated service in part because of fleet maintenance issues that constrain the availability of vehicles.[13]

13 Nelson\Nygaard Consulting Associates (Koffman, D., Rodman, W., and Weiner, R.), *Paratransit Improvement Study*, prepared for the North County Transit District, March 2005.

CHAPTER 5. THE IMPACT OF NON-DEDICATED SERVICE ON COMMUNITY MOBILITY

5.1 Benefits to the Community from Integrated Programs

The survey and literature search unveiled several different ways in which the use of non-dedicated vehicles in an integrated fashion had a positive impact on community mobility beyond the program itself.

More Accessible Taxis and More Mobility Options

The most commonly cited benefits linked more accessible taxis and more taxi options for the general public. The inclusion of non-dedicated service providers into a paratransit program has, in many cases, required that the non-dedicated provider supply accessible vehicles (along with sedans), or that the lead agency provide accessible vehicles to the provider. From the survey, for example, we find that the Pomona Valley Transportation Authority in LaVerne, CA, the Rogue Valley Transit District in Medford, OR, and Santa Fe Trails all provide accessible vehicles to their non-dedicated service providers.

In Calgary, AB, the community had been without accessible taxi service for 10 years, up until Access Calgary integrated (via an RFP process) non-dedicated accessible taxis into its programs. This led to a local taxi company purchasing accessible vans for the program. However, these accessible taxis are now part of its on-demand service that is available to the general public.

Another benefit can be the availability of accessible taxi service at times when the "primary" paratransit service is not available. The Rogue Valley Transit District's Brokerage Manager reports, "In the past, taxi providers did not have accessible vehicles. Clients now have access to taxi wheelchair service after 8 pm and on weekends." The program manager for the demand-responsive rural public transportation system in Ottawa County, OH, echoes this assessment, stating that the integration of accessible taxi service "has given the general public other options for transportation outside of our service

times." The Manager of Service Development of the Ann Arbor Transportation Authority points out that such inclusion has brought about expansion of taxi options that might not otherwise have occurred in a medium-sized town such as Ann Arbor.

In addition, the Paratransit Program Manager for Madison Metro Transit points out that the increased mobility options "help to integrate people with disabilities into the general community" and increase their opportunities for socialization.

Improved Service Quality to the General Public

A key benefit for the community is that quality of paratransit driver training improves "the level of customer service provided by the non-dedicated taxi drivers when they are serving taxi customers outside of the program", as reported by the Director of Para Transpo in Ottawa, ON.

In Los Angeles, the certification of all taxi drivers that would be supplying ADA paratransit service, as well as the vehicle certification and higher level of insurance, as discussed previously, all have contributed improved to a higher level of service to general public.[14]

Expanded, Attractively-Priced Resources for Other Transportation Programs

A few of the survey respondents noted that other transportation programs (e.g., municipal dial-a-ride programs and human service agency programs) could also take advantage of a new resource. The Manager of Specialized Transportation for Whatcom Transportation Authority in Bellingham, WA, stated in the survey, "The primary benefit is the enhanced ability and experience of the taxi company to take on contract-based work, e.g., Medicaid transportation.

Moreover, if the entire program is based on non-dedicated vehicles, and the program allows co-mingling of riders with trips from other contracts, then these resources can be stretched among many contract-based transportation programs. This is the case in Eau Claire, WI where the ability to co-mingle trips not only results in cost sharing through supply-side coordination, but

14. Multisystems, Inc. (Rodman, W., Thatcher, R., Everett-Lee, L., and Koses, D.,) *Access Service Performance Evaluation and Audit*, prepared for the Los Angeles County Metropolitan Transportation Authority, September 1998

also provides an attractively priced option for human service agencies that purchase transportation.

Stabilization and Growth of Carriers

As discussed above, the integration of non-dedicated service provides into paratransit can provide a steady revenue stream to those carriers. In rural or small urban areas, contracts for services may be the only thing that keeps these non-dedicated service providers afloat. Without the contract, they would go out of business, leaving the community with no service at all.

In the case of municipal or private, non-profit human service agency operators, this revenue stream provides some of the same benefits as above, but also enables them to offset capital investments, focusing funding that would otherwise go to capital purchases, to instead deliver more transportation. In the case of companies offering private-for-hire service (e.g., taxi, livery, chair car, and ambulance companies), inclusion in the program enables the company to grow, providing more employment opportunities, and becoming a more viable transportation resource in the community. For example, the more taxis (and taxi companies), the better the quality of service tends to be (less wait time and/or broader service coverage).

However, it is important – especially in the case of for-profit non-dedicated providers -- that they do not become overly reliant on the paratransit program, lest they evolve into a de facto dedicated provider and cease to be a viable non-dedicated resource for the general public. Indeed, without a deliberate control of trip assignments, there is a potential that non-dedicated service contractors may become too dependent on paratransit contract work. The following examples, one urban and one rural, illustrate the ramifications of this shift.

In 1985, the City of Edmonton's (AB) Disabled Adult Transit System (DATS) evolved from an turn key contracted operation to a City controlled brokerage with a fleet of dedicated vehicles and a number of non-dedicated vehicle contracts that included several taxi companies and a number of independent owner-operators. Over time, DATS shifted an increasingly high proportion of its trips to the non-dedicated service contractors (because of their cost advantage) and the number of independent owner-operator contractors increased. As the City became more reliant on the non-dedicated contractors, many of the contractors stopped seeking work outside the paratransit contract (both drivers aligned with the taxi companies and many of the

independent contractors), and in effect became dedicated service contractors. This included participants in an accessible taxi demonstration project who liked working a regular shift, working with a safe market, and a steady income. With this shift there was increased pressure on the City to assign more work to each contractor. At the same time, the City asserted more direct control over the independent owner-operators (driver training, road supervision and performance assessments using City human resources protocols). Eventually a core of the independent contractors sought Amalgamated Transit Union representation. In 1998, the Alberta Labor Relations Board recognized the independent owner-operator contractors as City employees. As a result, service flexibility declined and costs increased.

In rural Glenn County, CA, ADA and general public dial-a-ride services are provided through a service agreement with Jimmie's Cab Service in the small communities of Orland and Willows. The original intent was to have the local taxi operator provide the public dial-a-ride services in conjunction with regular taxi services. Currently 98% of Jimmie's business is paratransit contract work. Jimmie's Cab Service no longer seeks regular taxi business and no longer operates outside of the County's contracted service hours. As a result, both Orland and Willows no longer have a taxi service available outside Glenn County Transit service hours. Glenn County Transit is currently considering a plan to replace the dial-a-ride service with a flex route service that is fully integrated into interurban services. Jimmie's Cab Service has been lobbying against this proposal.

Both examples illustrate a need to control or limit the amount of work assigned to non-dedicated-vehicle service contractors. In the case of Edmonton, the City lost a high degree of service flexibility and a cost advantage. In the case of Glenn County, communities lost their taxi service.

5.2 Benefits to the Community from Supplemental Programs

In addition, the survey respondents with supplemental programs also acknowledge the positive impact of the program on community mobility beyond the program. For example, Houston METRO and the Chicago Transit Authority, which serve metropolitan areas, and Link Transit, which serves a small urban area (Wenatchee, WA) and surrounding rural areas, utilize a subsidized taxi program to supplement their ADA complementary paratransit program.

- Houston METROLift supplements its ADA paratransit service with a subsidized taxi voucher program called METROLift Subsidy Program (MSP), which is available only to ADA-certified patrons. Participating in this program are five taxicab providers, all under contract to METROLift. The patron calls up any of the five to request service on a first call first ride basis, and pays the first $1.00 of the taxicab meter with METRO paying up to the next $8.00 of the fare. The patron also pays any amount over a $9.00 meter fare. As a fraud and budgetary-control strategy, each taxicab provider is issued a specified number of trip vouchers per day during specific time periods of the day. Once the vouchers for a time slot are used up, patrons are refused service and must call for the next time slot, noting that each rider is guaranteed a ride home at any time if they receive a voucher on their origin trip. METRO is given a 4% discount on their meter fare portion. METRO also provides an additional $2.00 per trip for wheelchair taxicabs (to offset the wheelchair ramp conversion cost).

- The CTA's taxi subsidy program is called the Taxi Access Program or TAP. As in Houston, it is available only to ADA-certified persons. Unlike the MSP program, vouchers are distributed to customers who may pick them up at the CTA offices and distribution centers and/or request them by mail (a recent program change). Customers are limited to using four vouchers per day. Each voucher costs the customer $1.75 (equivalent to the fare for the CTA's ADA paratransit service, called Special Services). Each voucher has a face value of $12.00. Thus, customers may use these vouchers for fares up to $12.00, and pay the difference for any portion of the fare over $12.00. The taxi companies record the actual fare on the vouchers, and get reimbursed for the fare, plus $2.50 for handling the voucher, with $1.25 going to the company and $1.25 going to the driver. In addition, the CTA started a voucher-less pilot program (called Mobility Direct) in 2003 that is now a part of TAP. In this program, designed for repetitive (subscription) trips, the customer pays the $1.75 cash fare, and the taxi companies invoice $10.40 (ambulatory trips) and $13.40 (non-ambulatory trips) in Zone 1, and $18.00 (ambulatory trips) and $21.40 (non-ambulatory trips) in Zone 2. One of the reasons for starting the voucher-less program pilot was to eliminate the need to have a voucher before taking a TAP trip, and to provide

an incentive for more drivers to participate. TAP trip making has increased tremendously in the last three years, from 121,858 trips in 2002 to 521,311 trips in 2004 (including 131,435 Mobility Direct trips). The General Manager of the CTA's Paratransit Operations reports that rapid increase in TAP ridership is due to three factors:

- Vouchers are now available by mail.
- Vouchers have an increased face value.
- The City of Chicago, working in conjunction with the CTA, has mandated that all city taxi affiliations (as well as all the independents) participate in the program (previously it was not required). The City of Chicago also offers up for competitive bid accessible taxi medallions. And, the City of Chicago mandates that each taxi company or affiliation serve at least one TAP trip per day in designated "under-served" areas.

- In Wenatchee, WA, Link Transit has made arrangements for a supplemental taxi service to augment its ADA paratransit service in its outlying communities. Due to the distances, it is very difficult and inefficient to provide paratransit in and between the outlying rural communities in Link Transit's service area. Accordingly, Link Transit entered into user-side subsidy arrangements with three different taxi providers (two of which also provide accessible cabulance service). If a paratransit passenger calls for a ride on the Link Transit paratransit service (Link Plus) and wants to travel at a time that is not efficient or convenient for the Link Plus system, Link Transit calltaker offers the passenger the opportunity to take a taxi. The individual is told that they can choose to take a Link Plus vehicle at a time within one hour each side of the request, as negotiated by staff, or they can choose a cab or cabulance. If they choose a cab (most do), the calltaker asks which company they wish to travel with and then will arrange the pick-up with the selected cab or cabulance. The passenger pays the cab operator the same cash fare of $1.00 that they would have paid on Link Plus. Link Transit will reimburse the cab operator a pre-negotiated zone-based rate that ranges from $10 to as much as $70 per trip.

Supplementary non-dedicated service thus may cater to the same riders; however, the primary difference is that riders directly contact or choose to use the non-dedicated service provider. In each of the examples above, the eligibility requirements are the same; however, the primary difference is

how the trips are requested.

The success of these programs stem from who benefits, and in the cases cited above, it's not just a win-win situation, but a win-win-win-win situation.

- Winner #1: The transit agency wins because trips are shifted from its higher-cost regular ADA paratransit service to a lower cost service. For example:
  - o The cost per trip on Houston's MSP in FY 04 was $6.80, bearing in mind that the maximum subsidy for any MSP trip is $8.00. This compares very favorably to $19.23 per trip for the "regular" METROLift van and sedan contract service in FY 04 (which includes all costs except for vehicle depreciation). The overall average of both programs is $17.63,
  - o In Chicago for FY 2004, the cost per trip on CTA's TAP was $13.36, compared to $25.15 per trip for CTA's Special Services ADA paratransit service.
  - o Link Transit's ADA paratransit service (Link Plus) has a fully loaded cost of approximately $6.90 per mile and a marginal cost of about $3.00 per mile. Accordingly, if Link Plus can group three riders for a trip, it is less costly to serve the trip in-house on a Link Plus vehicle. In contrast, if there are less than three riders traveling at the same time, it is less costly to send them by taxi. In additional, the General Manager of Link Transit has found that by using the cabs, the productivity of the dedicated portion of Link Plus has increased from 3.3 passengers per hour to 3.9 passengers per hour.
- Winner #2: The customer benefits in three ways: (1) MSP provides same-day, immediate service, (2) it is available at times when METROLIft is not; and (3) customers can use MSP to travel to destinations beyond the METROLift service area (recognizing that the longer trips, even with the $8.00 subsidy, will have a costly fare.
- Winner #3: Other winners include each of the participating taxicab companies and other non-dedicated service providers, which benefit from the increased business.
- Winner #4: The last winner is the community. In Wenatchee, WA, for example, the General Manager of Link Transit indicated, "The program stabilized cab services and has ensured the continuation of cab service in our rural communities. In addition, a new cabulance company started up here in Wenatchee. When we were signing the

company up as a provider, I asked the owner why he started his business. He stated that he had heard that Link and TranCare (the Medicaid broker) were unhappy with the vehicle condition of one of the providers and he saw a market opportunity. The net result is that the other provider purchased a new accessible vehicle to compete with the new provider's new vehicle." The General Manager also reported in the survey that he is currently considering leasing of accessible vehicles to the taxicab service, noting that this would extend the mobility options above to non-ambulatory patrons. Meanwhile, in Houston, it was noted in the survey that the extra $2.00 incentive subsidy has been successful in increasing the number of accessible taxis in the community. And in Chicago, the CTA's Taxi Access Program has resulted in an influx of 55 accessible taxis to the community, and was recognized by the Mayor of Chicago as positively contributing to the image of the city as a place to live and visit.

5.3 Summary of Benefits to the Community

The evidence thus indicates that using non-dedicated service, or integrating it with a dedicated fleet, or supplementing a program with a non-dedicated service all to benefit metropolitan, small urban, and rural communities in myriad ways

- Improved Service Quality – The programs have resulted in better-trained drivers of services available to the general public and to human service agencies. And, in at least one case, the program attracted a new non-dedicated service provider to the area, which in turn prompted an existing carrier to upgrade its fleet in order to compete. With more carriers, the community benefits from better coverage and an increase in service quality owing to a higher level of competition.
- More Mobility Options – The programs have led to an infusion of accessible taxis available to the general public, and in the case of supplemental service, accessible transportation at times and to areas not covered by the base program.
- Stabilization and Growth of For-Profit Carriers – In rural and small urban areas, the additional business generated by programs has led to the stabilization of carriers that otherwise may not have occurred. An indirect benefit to these communities has been the accompanying

new operational jobs (drivers, supervisors, call-takers, dispatchers, etc.) that have been created, although this is difficult to quantify. In all cases, the additional capabilities can be – and have successfully been – marketed to human service agency and related programs in the public and private sector that need to purchase specialized transportation, further adding to the stabilization and growth of these companies.

- Stabilization and Growth of Non-Profit Carriers/Programs – The mutual allowance of trip sharing among programs has allowed transit agencies and human service agencies alike to stretch their funding dollars, resulting in expanded access to needed services. Moreover, if agencies can "get out of the transportation business" as a result of their being a comparably-priced, high quality service option, these agencies can focus on what they do best – the provision of social services. Alternatively, for those agencies that do operate transportation service, inclusion in another program as a contractor, provides an additional revenue stream, often allowing the agency to either expand access to its clients (more trips, more days/hours, broader service area) or transfer budget previously earmarked for transportation to other services.

CHAPTER 6. HOW THE USE OF NON-DEDICATED SERVICE HELPS TO MEET FTA'S ZERO-DENIAL REQUIREMENT

6.1 The Requirement

The Americans with Disabilities Act prohibits "substantial numbers of trip denials" in ADA complementary paratransit. This requirement is contained in 37 CFR 131 as follows:

(f) Capacity constraints. The entity shall not limit the availability of complementary paratransit service to ADA paratransit eligible individuals by any of the following:

(1) Restrictions on the number of trips an individual will be provided;

(2) Waiting lists for access to the service; or

(3) Any operational pattern or practice that significantly limits the availability of service to ADA paratransit eligible persons.

(i) Such patterns or practices include, but are not limited to, the following:

(A) Substantial numbers of significantly untimely pick-ups for initial or return trips;

(B) Substantial numbers of trip denials or missed trips;

(C) Substantial numbers of trips with excessive trip lengths.

(ii) Operational problems attributable to causes beyond the control of the entity (including, but not limited to, weather or traffic conditions affecting all vehicular traffic that were not anticipated at the time a trip was scheduled) shall not be a basis for determining that such a pattern or practice exists.

6.2 Use of Non-Dedicated Service to Enhance Capacity and Reduce/Eliminate Denials

This requirement effectively means that the supply of service must accommodate the demand in such a way that there is not a "pattern or practice" involving regular or repeated actions – as opposed to isolated, accidental, or singular incidents, noting that occurrences which cause an unanticipated increase in demand, such as special events, that result in intermittent trip denials, do not constitute a

pattern or practice. FTA has explained that transit operators should plan to accommodate all demand within ADA requirements.

As was indicated in Chapter 2, 73% of the survey respondents indicated that they considered the use of non-dedicated service to contribute to eliminating or reducing denials. Of these survey respondents, three out of four thought this to be a major benefit, and one out of four a minor benefit. As a major benefit, this was ranked third overall behind responsiveness and cost efficiency.

The issue at hand for most of our survey respondents is that their dedicated vehicle fleet is over-burdened during the peak periods. And, while we surmise that most use methods (notably trip negotiation) to smooth out the demand during the peaks, there are other times during the service day where demand simply exceeds the supply. Thus, there is a need to increase the service capacity at these times (and other times when the demand outstrips the supply of service).

The unique problem that occurs during peak periods is that there are typically no more dedicated vehicles to place into service. There are several possible reasons for this. For example,

- The General Manager of the Decatur Public Transit System indicated that DPTS does not have the capital funds to acquire the necessary fleet to handle all of the demand.
- In North (San Diego) County, the Director of Transportation for North County Lifeline, NCTD's ADA paratransit contractor, indicated that a driver shortage and long turn around times from their maintenance contractor limit North County Lifeline's ability to place enough vehicles into service during the peaks.

In addition, for many systems, it may also simply be the case that the number of peak overflow trips and the time duration of this additional demand does not warrant the pullout of another vehicle run, with a minimum driver shift that oftentimes ranges from four to eight hours. Indeed, in response to the question "Why do you use non-dedicated vehicles?" a substantial number of respondents linked serving the peak overflow trips effectively with the cost-efficiency of non-dedicated service. For example, the Access Ride Manager for the MTA in Nashville, indicated that the trips that get assigned to the taxis (which she calls the "taxi overflow trips") are so assigned when there are not enough (dedicated) vans to transport the program's customers. In rural Ottawa County, Ohio, "Trips are assigned to non-dedicated vehicles

as needed to meet the peak demand. They are also used when trips do not fit into dedicated vehicle routes." Ultimately, for ADA complementary paratransit services, if a system does not have the capacity to serve the demand during peak hours, the use of non-dedicated service provides an important strategy, if not the prime solution, to minimizing and eventually eliminating denials during this period.

It should also be emphasized that several respondents use non-dedicated service to serve long out of the way trips that would otherwise adversely affect the productivity of the dedicated fleet. This strategy increases the effective capacity of the dedicated fleet. Not only can non-dedicated service serve peak overflow trips, it can actually reduce the number of peak overflow trips by increasing the productivity of the dedicated vehicle fleet.

CHAPTER 7. THE IMPACT OF MEDICAID/HUMAN SERVICE TRANSPORTATION PROGRAM REQUIREMENTS ON SERVICE MIX

The survey results illustrate how paratransit programs use non-dedicated vehicles for human service transportation (including Medicaid) and how the needs and requirements of those programs affect the supply of non-dedicated service for use by other programs such as ADA paratransit. They also illustrate how the concept of "non-dedicated service" may depend on point of view, sometimes including arrangements that go beyond the central concerns of this research.

Survey respondents that use non-dedicated service for human service transportation include:

- JAUNT in Charlottesville, Virginia, provides ADA paratransit and human service transportation in Charlottesville and four other jurisdictions. Most of the service is provided using JAUNT's fleet and drivers, but a small number of overflow trips was for many years subcontracted to a taxi service.
- Indigo in Indiana, Pennsylvania coordinates ADA, Medicaid, senior shared-ride, and various human service agency transportation programs in a predominantly rural area. They schedule 23% of their trips onto dedicated vehicles operated by Indigo and contractors and 77% to a variety of non-dedicated service providers.
- TransNet in Montgomery County, Pennsylvania, administers Medicaid and senior shared-ride transportation, as well special transportation for companies, hospitals, public and private schools, or colleges. Some of TransNet's six providers schedule a portion of trips on taxis or other on-demand vehicles. One of the largest providers estimated that 25% of its 700 weekday trips were served by taxis or on-demand vehicles, mostly for trips that are 20 to 30 miles away where it is more efficient than sending a dedicated vehicle.
- The Montachusett Regional Transit Authority (MART)

in Fitchburg, Massachusetts, provides fixed-route bus and ADA paratransit service in its immediate region, and human service agency paratransit, including Medicaid, throughout Eastern Massachusetts extending as far as Boston. MART uses over 200 private carriers including taxi operators, and Medicaid van providers, and other carriers that mix MART work with other contracts.

Three more respondents illustrate other arrangements that involve non-dedicated use of vehicles in ways that go beyond the primary focus of this project.

- The MBTA in Boston, Massachusetts, has contracts with four providers for ADA paratransit service, one of which is a non-profit provider that uses some of its accessible vans for ADA service mixed with other service. By mixing clients, the provider is able to make more efficient use of vehicles and maintain additional capacity. Since MBTA pays the provider by the trip, mixing clients on vehicles does not create a problem.
- The Eau Clair Transit System in Eau Clair, Wisconsin, contracts with a non-profit provider for paratransit service. The same provider also holds contracts for senior dining transportation, sheltered workshop routes, and a variety of other services in a much larger area. Clients from the various programs may all be on a van at the same time.
- The Rogue Valley Transit District in Medford, Oregon operates ADA paratransit and acts as broker for Medicaid transportation. Two of its contractors use vehicles leased from RVTD, which they are permitted to use for brokered Medicaid rides if the vehicles have not been scheduled for the paratransit program.

In these cases, the provider is non-dedicated from the perspective of the transit system. However, the provider operates a fleet of vehicles that is entirely dedicated to that provider's operation. In general, coordinated human service transportation may often be viewed as non-dedicated service from the perspective of participating agencies, although the coordinated provider operates a dedicated fleet. Even though these arrangements are not the principal focus of this research, they do offer an attractive way to increase efficiency and enhance community mobility.

Several other respondents illustrate how human service transportation impacts the supply of non-dedicated vehicles for ADA paratransit. Link Transit

in Wenatchee, Washington operates its ADA paratransit system primarily with its own fleet and employee drivers, but supplements this internal operation by contracting with non-dedicated service providers operating taxis and non-dedicated lift-equipped vans. These resources might not be available to Link Transit if it were not for the fact that these carriers have a large base of business providing non-emergency medical transportation for Medicaid.

The most significant factor governing use of dedicated and non-dedicated vehicles for human service transportation appears to be travel patterns. For example, staff of the Montachusett Regional Transit Authority described how transportation is provided for Councils on Aging (COA) and for the state Department of Mental Retardation (DMR). The COA programs mainly involve trips to senior centers, while the DMR programs mainly involve trips to workshops or training programs. Both types of trips lend themselves to productive grouping on dedicated or quasi-dedicated vehicles. All of these trips tend to be repeated, with the same individuals traveling on a more or less regular schedule every week. This also supports grouping and schedule optimization.

In 11 rural communities, the COAs themselves dispatch and operate vehicles provided by MART. For the DMR, MART creates routes that are operated on a bid basis. MART considers the DMR contracts "non-dedicated" since the DMR routes only operate twice a day and the carriers use the vehicles for other contacts at other times. However, the vehicles are dedicated to DMR for a particular portion of each day and can be scheduled by MART to make optimum use of the available capacity. From the perspective of many ADA paratransit systems that carry similar trips with very strong peaking of demand this type of part-day contract could be a very attractive and productive type of partially dedicated service.

In the case of non-emergency medical transportation (NEMT) provided under Medicaid, travel patterns are often dispersed and more spread out during the day. With the exception of dialysis trips and adult day health care, NEMT is often arranged on relatively short notice and often not regular in schedule. State Medicaid programs are required to provide necessary transportation to and from medical providers.[15] States that provide NEMT as an "optional medical service" under Medicaid regulations must meet

15. 42 CFR 431.53 and 42 CFR 440.170(a)

certain criteria, such as recipient freedom of choice in selecting providers, open participation by all providers who meet agency requirements, and provision of the same level of service across the state and to clients with similar needs. These requirements and travel patterns have led to the growth of many private for-profit companies that operate lift-equipped vans for NEMT service. Many states also pay for taxi rides to Medicaid-funded medical appointments.

MART uses non-dedicated vans for many of the Medicaid trips that it arranges, but also uses taxicabs, especially for trips under five miles in length for people who do not need extra assistance to and from the vehicle. Medicaid rules in Massachusetts (as in many states) allow use of taxicabs and set requirements for their operation that are distinct from the requirements that govern lift vans.

In many states, there appears to be a trend away from using taxicabs for NEMT and, to some extent, away from non-dedicated transportation in general. A recent survey found that 21 states are using some type of transportation brokers for NEMT.[16] These brokers are permitted when states obtain a waiver from the freedom of choice rule mentioned before, or if a state elects to provide NEMT as an "administrative service" and not as an optional medical service. The broker typically seeks out the least-cost mode for travel rather than letting the individual beneficiary choose a provider. Several of the respondents to our survey are NEMT brokers or sole service providers in their area including MART, Indigo, and TransNet.

In some cases, the brokers have specifically tried to reduce use of taxis, placing many of these trips on fixed-route transit or grouping them together. For example, in the Portland, Oregon, area, Tri-Met became a Medicaid NEMT broker. Tri-Met and the state Medicaid program anticipated savings by directing trips to bus passes and tickets instead of the more expensive taxis. In addition, it was anticipated that there could be savings by more effective grouping of trips, negotiating lower rates with providers, and reducing misuse, particularly rides taken after 5:00 p.m. when riders had been able to call taxi companies directly. The brokerage reduced the percentage of rides on taxicabs from 39% to 29% and the percentage of rides on wheelchair vehicles from 8% to 5%.[17]

16. Stefl, G. and Newsom, M., *Medicaid Non-emergency Transportation: National Survey 2002-2003*, presented at the National Consortium on the Coordination of Human Services Transportation, December 2003.

Some human service programs avoid using taxicabs for similar reasons as ADA paratransit providers. For example FASTRAN in Fairfax County, Virginia, and JAUNT in Charlottesville, Virginia, both report difficulties relating to taxi drivers. As this research was being completed, JAUNT's taxi subcontractor declined to participate in a new contract because the company's drivers preferred to serve other trips. Most taxi drivers are independent contractors rather than employees. As a result it is difficult to enforce training requirements and other standards. Taxi drivers are commonly free to choose which trips they take and many of them reportedly prefer not to serve disabled passengers who require a higher level of assistance than other passengers. These considerations apply less to non-dedicated vans that serve Medicaid trips.

Several respondents mentioned FTA drug testing rules. These rules do not derive from human service regulations but can affect human service transportation when coordinated providers mix FTA and human service funding. Some coordinated human service providers, such as COAST in Colfax, Washington, keep funding streams separate in cases where that is needed to avoid applying FTA rules to strictly non-ADA service. Others, such as JAUNT, find it impractical to do this and concentrate on operating a coordinated system that meets all FTA requirements.

Even though Medicaid rules may not require drug testing for drivers, it is possible for paratransit systems to negotiate and enforce such a requirement in the case of Medicaid vans driven by employee drivers. By comparison, enforcing such a requirement can be more difficult with independent-contractor taxi drivers. However, the experience of numerous ADA paratransit systems, including Access Services in Los Angeles, California, North County Transit District in Oceanside, California, and the MBTA in Boston, Massachusetts, shows that, in the right circumstances, drug testing rules do not need to be a barrier to using taxicabs.

Additional Impacts for Uncoordinated vs. Coordinated Systems

In locations where human service agency transportation programs are independent, uncoordinated transportation programs, their use of non-dedicated service providers, together with the public demand for these services, collectively presents competition for transit agency use of these

17. Burkhardt, J., Koffman, D. and Murray, G., *Economic Benefits of Coordinating Human Service Transportation and Transit Services*, Transit Cooperative Research Program, Report No. 91, 2003.

same non-dedicated transportation resources, especially since the travel peaks among the various customers, clients, and general public often coincide. Thus, there may not be a sufficient amount of non-dedicated resources available for use by public transit agencies, although allowing providers to co-mingle customers from different contracts on the same vehicle, as is done in Boston, MA, Eau Claire, WI, Indiana. PA, and Rogue Valley, OR, can somewhat relieve this availability problem,

Human service agencies that operate their own services provide a resource as well, but it rarely is in a "standby" non-dedicated mode. There are ADA paratransit services, such as ACCESS in Pittsburgh and Dispatch-A-Ride in Norwalk, CT, which have a history of utilizing human service agency operators as contractors. However, these resources are most often used in a dedicated fashion and not a non-dedicated one. Indeed, one of the reasons that such services are not available as a standby service is because the drivers sometimes double as program staff. For example, with human service agencies that provide day activities, it is not uncommon to find the drivers serving as counselors or classroom aides during the day.

The reason that many Medicaid and human service agencies elect to "join" a coordinated system is because of economies of scale, where the trip patterns of the collective ridership do enable dedicated vehicles to be used and at a unit rate that is less than the non-dedicated service rate of an uncoordinated program. In Pittsburgh, for example, where ACCESS coordinated the transit agency's ADA paratransit service with the County senior shared ride program, and with the transportation programs of over 100 different public and private human service agencies, the system is predominantly served with dedicated providers, noting that some of those providers are themselves human service transportation operators, as mentioned above.

CHAPTER 8. CASE STUDY SELECTION CRITERIA AND CANDIDATES

8.1 Case Study Selection Criteria

Three major criteria were utilized to select the candidates for the nine case studies:

- The lead agency is a transit agency or municipality responsible for public transportation
- The systems employ a mix of dedicated and non-dedicated vehicles in an integrated fashion, meaning that some entity is determining whether each trip or trip type is to be (a) scheduled to a dedicated vehicle (or assigned to a dedicated provider) or (b) assigned to a non-dedicated provider.
- The systems cite improved productivity, a better match of capacity to demand and/or overall cost-efficiency as major benefits of using non-dedicated vehicles **and** have the data to support this position **and** are willing to share the data and participate in the project as a case study.

The second criterion excludes (1) systems that use taxis for supplemental service in which the decision to use a taxi is entirely up to the individual rider; and (2) systems that use 100% dedicated or non-dedicated vehicles. In principle, an argument could be based that these cases represent extremes of a continuum and could be used to help calibrate a model. However, excluding one service type or the other entirely indicates that strong institutional or historical issues are likely to be involved which would cloud investigation of the optimal mix. We also excluded some systems that described themselves as using non-dedicated vehicles because their contract providers serve other work, but in which the providers operate dedicated fleets.

In addition it was necessary to eliminate from consideration systems where members of the research have conflicts of interest due to consulting engagements. This consideration affected Access Services in Los Angeles and the North County Transit District in Oceanside, California.

Within these criteria, we also sought a balance of:

- systems in various geographic regions;

- systems that operate in major metropolitan areas and those that operate in small cities or rural areas;
- systems that have varying program sizes and characteristics
- systems that employ different mixes of dedicated and non-dedicated service; and
- systems that also/alternatively retain different types of non-dedicated service providers other than taxis

8.2 Candidate Case Studies

This process resulted in the identification of nine case study candidates and five alternates. Summary descriptions of each of these case studies are presented below and in Table 8-1 (after the descriptions)

We are recommending four case study candidates in major metropolitan areas (plus two alternates) and five case study candidates in small cities and rural areas (plus three alternates).

The list of candidates includes a wide range of relative utilization of dedicated and non-dedicated vehicles and system sizes (measured in terms of patronage), with geographic representation from the Northeast, Southeast, Midwest, California, and Northwest, as well as Canada. While seven of the nine recommended systems use taxis, six of the nine use other types of non-dedicated vehicles as well.

Metropolitan Areas

- **Arlington County, VA** (Agency**:** County DOT; Program: STAR; Service Type: Alternative local paratransit for residents who are certified as ADA eligible by the regional ADA paratransit program) – Arlington County is located across the Potomac River from Washington DC. At the urging of its ADA-eligible residents, Arlington County in 1999 set up a service, called STAR, to provide these residents with an alternative to WMATA's Metro Access ADA paratransit service, noting that STAR is not an ADA complementary paratransit service. Persons eligible for STAR must live in Arlington County, and have already been certified as ADA-eligible by Metro Access. Reservations are taken by the County's call center contractor, and are either scheduled onto 10 dedicated vehicles operated by two contractors (Diamond – 6 vehicles, and Answers, Inc – 4 vehicles), with the rest assigned to Red Top Taxi for dispatching onto non-dedicated taxi-

cabs and accessible taxicabs. One of the interesting aspects of this program is that most trips are served by Red Top. For example, of the 8,589 trips in March, 6,415 trips (including 5,131 ambulatory trips and 1,284 wheelchair trips) or 75% of all trips were assigned to the non-dedicated service provider. Another interesting aspect of this is the cost: including the call center operation, the cost per trip to the County is $21 per trip. Had these trips been served on the Metro Access system, it would have cost the County $35 per trip. The County has since added to this program senior grocery shuttle runs, serving different areas of the county, 5 days a week.

- **Boston, MA** (Agency: MBTA; Program Name: The Ride; Service Type: ADA Paratransit) – One of The Ride vendors, Veterans Transportation, runs a dedicated fleet of about 100 vehicles, and has 75 taxis eligible to serve ADA trips. During a typical weekday, Veterans Transportation serves about 1300 trips on the dedicated fleet, and assigns the balance (200 trips or 13%) onto its own taxi fleet. Both Bob Rizzo, Manager of Contract Paratransit Operations for the MBTA, and Dan McGuinness, President of Veterans Transportation report that these taxis are invaluable in covering peak trips, and rapidly responding to breakdowns of dedicated vehicles. Veterans Transportation extends from Boston's northwestern suburbs into the city.

- **LaVerne, CA** (Agency: Pomona Valley Transportation Authority; Program Name: Get About; Service Type: Paratransit for Seniors and PWD) – PVTA is located in Los Angeles County and operates a four-city elderly and disabled paratransit system that carries 95,000-115,000 passengers annually. Its primary contractor receives all trip requests (generally one day in advance and subscription, and some same day service on a space-available basis) and schedules about 80% of these trips (about 300-350 trips per weekday) onto the 18 18-passenger dedicated accessible vehicles that it operates. The balance (70-100 rides per day or 20% of the total trips) is referred to the on-demand non-dedicated provider (cab company) based primarily on scheduling and efficiency criteria. Because the dedicated vehicle provider has productivity standards to meet, it will naturally select the trips based on scheduling efficiencies. The cab provider uses a mix of cabs and accessible minivans. The major role of the

non-dedicated vehicles is to cover trips at peak periods as well as trips at the edges of the service area which would consume a large amount of time on the dedicated vehicles causing on-time and ride time issues. Since a small number of the cabs are accessible low floor minivans, cabs are effective in serving isolated rides particularly for those in mobility devices. The cabs are also effective in covering the start and end of the day when demand does not justify pulling out a large number of dedicated vehicles. While the majority of trips are referred to the taxi company a day in advance, the dedicated contractor is allowed to refer trips to the cab as late as 45 minutes prior to the pick up time. This permits the contractor to overbook on the dedicated service, and hence have more trips available to plug holes that emerge from no-shows and late cancellations. This resulted in an 8% improvement in productivity, and an increase in ridership in two of the most western cities.

- **Ottawa, ON** (Agency: OC Transpo, Program Name: Para Transpo; Service Type: Paratransit for PWD) -- Para Transpo is Ottawa's door-to-door transportation service for persons with disabilities who are unable to use conventional transit services. The hours of service, geographic areas served and fare structure are similar to OC Transpo's conventional transit system. There are approximately 12,000 persons with disabilities registered with Para Transpo. Approximately 30% of registrants use either a wheelchair or scooter and therefore require a wheelchair accessible vehicle. The remaining 70% of registrants are ambulatory and can usually travel in either a passenger car or a wheelchair accessible vehicle. Private sector operators under contract deliver Para Transpo service and the operations (reservations, scheduling and dispatch functions) and administration (planning and policy development, client eligibility and certification and contract monitoring) are provided in-house. Para Transpo service is currently provided through three distinct contracts, one using dedicated wheelchair-accessible vans; one using dedicated non-accessible sedans and one using non-dedicated/non-accessible taxies. Efficient schedules are developed for the dedicated services and then all remaining trips (about 11%) are forwarded to the non-dedicated taxi contractor.

Alternate #1

- **Calgary, AB** (Agency: Calgary Transit; Program: Access Calgary; Service Type: Paratransit for PWD) -- Access Calgary provides shared-ride door-to-door service to PWD. The agency determines customer eligibility and is responsible for accepting trip requests, scheduling and dispatch. Approximately 475,000 or 56% of the 850,000 annual trips are scheduled onto dedicated runs operated by the not-for-profit Calgary Handibus. The remaining 375,000 trips are assigned to two local taxicab companies, Checker Cab and Associated Taxi. Productivity on the dedicated hourly-bid runs is maximized before the taxi assignments are made.

Alternate #2

- **Nashville, TN** (Agency: Nashville Metropolitan Transit Authority; Program: Access Ride; Service Type: ADA Paratransit; also serves some non-ADA trips) -- Nashville MTA's ADA paratransit service, like many of its counterparts, has a service area that is defined by the fixed-rout corridors, but also serves some non-ADA trips (about 8% of the total) going to/from origins and destinations beyond ¾ miles but within 1-1/2 miles. The MTA intakes trip request and schedules 78% of its 181,500 trips onto its in-house fleet of dedicated vehicles (31 peak runs) as efficiently as possible, and assigns the overflow ambulatory trips to one taxi company, American Transportation.

Small Urban and Rural Areas

- **Bellingham, WA** (Agency: Whatcom Transportation Authority; Programs: Specialized Transportation, Flex Service, Dial-A-Ride, Safety Net; Service Types: ADA Paratransit, Paratransit for Seniors and Persons with Disabilities, Flexible Transit, General Public Dial-A-Ride, and Rural Demand Response Transportation) – WTA's Specialized Transportation includes ADA paratransit as well as seniors and some non-ADA persons with disabilities in geographically extended areas. WTA also provides other demand-responsive programs including a flexible transit service that utilizes the same call center as Specialized Transportation, a general public dial-a-ride service in one specific community, and a rural demand-response transportation service. The service structure of most of these services includes a dedicated fleet, operated by WTA, and a non-dedicated taxi company. WTA

staff schedules 98% of its 169,000 paratransit trips onto its own fleet, and assigns the balance to a local taxi company on a ride-by-ride basis. WTA uses this non-dedicated service to fill gaps when the dedicated fleet is very busy, when a particular dedicated vehicle is running late, and to save the expense of keeping a WTA operator on an extended time for one or two trips. While only 3% of the trips are served by taxi, the taxis allow WTA to implicitly overbook and allow will-calls.

- **Haverhill, Massachusetts** (Agency: Merrimack Valley Regional Transit Authority; Program: EZ Trans; Service Type: ADA Paratransit, Seniors, and General Public Dial-A-Ride in 5 Communities, called Ring and Ride) -- MVRTA has a fleet of 17 paratransit vehicles. They provide 14 to their primary turnkey contractor First Transit, and three to First Transit's subcontractor, Assist Transportation, which provides ADA and senior paratransit services in the town of Methuen. All 17 vehicles are operated on a dedicated basis. First Transit schedules trips about 91% of the 61,000+ annual trips from all three programs onto these vehicles as efficiently as possible. The remaining 9% of the trips are assigned to a livery operator, Andover Livery. Non-dedicated vehicles are used only as back up to help meet peak demands and on occasion for a passenger or passengers whose appointments run late. They also serve trips that do not fit on the dedicated vehicles. Andover Livery is responsible for vehicle operation, maintenance, operating facility, vehicles, fuel and insurance. Both Assist Transportation and Andover Livery get reimbursed based on zonal rate.

- **Indiana, PA** (Agency: Indiana County Transit Authority, Program: Indigo; Service Type: ADA Paratransit, Senior Shared Ride Program; Medicaid NEMT Transportation) – Indigo's paratransit program is split into three programs, described below. Approximately 77% of the total paratransit ridership (60,153 trips) is served with non-dedicated vehicles.

  (1) ADA Paratransit - Low ridership (410 trips in FY 2004) a result of (a) minimizing service to the letter of the law, and (b) providing a free fare on Indigo's fixed-route system beginning in 1991, when 18,000 free trips were made by persons with disabilities (PWD). Just a few of the ADA trips (4) are scheduled onto the

Indigo fleet, which consists of 3 dedicated vehicles. Almost all of the ADA trips (406) are sent to a contractor (Stewart Bus Lines), which schedules trips onto vehicles that are non-dedicated in the sense that other non-ADA trips are co-mingled with ADA trips on these vehicles.

(2) Section 203 Senior Shared-Ride Program - (39,149 trips in FY 02) -- Indigo devotes 2 dedicated vans. Staff schedules 11,500 of these trips onto these vans - mostly trips going to the Senior Action Center, to medical appointments, and grocery shopping. The rest are sent to Stewart Bus Lines (27,575 trips), where they are scheduled onto non-dedicated vehicles, similar to the ADA and MATP trips, and Pittsburgh North Air Ride (74 trips).

(3) Medical Assistance Transportation Program (Medicaid NEMT) -- (20,594 trips in FY 2004). 2,074 trips are scheduled onto Indigo vans. The rest are sent to four different vendors. They include (1) Stewart Bus Lines (7,114 trips), (2) Pittsburgh North Air Ride (7,141 trips), (3) Citizens Ambulance, a private non-profit (4,265 trips), and (4) Med-Van (none in FY 2004).

- **Madison, WI** (Agency: Madison Metro Transit; Program: Metro Plus; Service Type: ADA Paratransit) – Metro Plus staff intakes trip requests and schedules non-ambulatory trips onto two sets of dedicated accessible vehicles, respectively operated by Metro (13-16 runs per weekday) and Laidlaw (15 runs per weekday). Overflow non-ambulatory trips are assigned to one of Metro's non-dedicated providers, Transit Solutions. The schedulers then schedule ambulatory trips on the Metro and Laidlaw runs. Overflow ambulatory trips are assigned to Badger Cab and Transit Solutions. Of the 236,400 trips, 43% are assigned to the two non-dedicated providers.

- **Ottawa County, OH** (Agency: Ottawa County Transportation Agency; Program: OCTA; Service Type: General Rural Public Transportation) -- OCTA is the public transit provider in the county and offering curb-to-curb demand-responsive transportation service within Ottawa County and also serving medical and employment trips to neighboring counties. Advance notice (at least 24 hours) is required on all trips. OCTA intakes the trip requests and scheduled 94% of its 52,726 trips onto the fleet of 17 dedicated vehicles operated

by the OCTA. Other trips, including overflow trips or trips that are inefficient to serve on the dedicated fleet are assigned to our non-dedicated (taxi) service provider.

Alternate #3

- **Medford, OR** (Agency: Rogue Valley Transit District; Program: Valley Lift and TransLink; Service Type ADA Paratransit and Medicaid) - RVTD intakes trip requests for its ADA paratransit service called Valley Lift and NEMT requests from Medicaid recipients for a five county region through its "TransLink" brokerage. Non-ambulatory ADA paratransit trips are sent (primarily) to two primary contractors (Yellow Cab and Valley Cab) for scheduling onto 16 dedicated accessible vehicles provided by RVTD. RVTD leases ten of these vehicles to Yellow and the other six to Valley. These two contractors operate these vehicles in a dedicated fashion, although they are allowed to co-mingle on these vehicles Medicaid trips that come through the TransLink brokerage or an occasional private pay trip - but on a space available basis only. All trips served on the 16 vehicles are non-ambulatory. For Yellow Cab, 82% of the trips served on the 10 vehicles are ADA trips, while the remaining 18% are Medicaid trips. For Valley Cab, 76% of the trips served on the 10 vehicles are ADA trips, while the remaining 24% are Medicaid trips. Overflow non-ambulatory ADA trips are sent to two other carriers, City Ride and Mobile Care, operating non-dedicated accessible vehicles of their own. Meanwhile, ambulatory ADA paratransit trips are first sent to two other taxi company contractors (Metro Cab and Ashland Taxi) based on their fleet capacity, for dispatching onto their non-dedicated taxi fleets. If there are other ambulatory ADA trips, they are assigned to Yellow Cab and Valley Cab for dispatching onto their non-dedicated taxi fleets. For the TransLink (Medicaid) brokerage, RVTD has approximately 45 vendors throughout the 5 county region, among them the Yellow, Valley, and Metro cab companies. With the exception of those Medicaid trips that get scheduled onto the RVTD-provided accessible vehicles, virtually all of the other Medicaid trips are being served by non-dedicated service providers operating taxis, sedans and/or accessible vehicles. The overall split of the combined 39,000 ADA and Medicaid trips within RVTD's service area: 19% of the trips are scheduled onto dedicated vehicles, and 81% of the trips

are served with non-dedicated vehicles.

Alternate #4

- **Pierce County, WA** (Agency: Pierce Transit; Program: Shuttle; Service Type: ADA Paratransit) -- Pierce Transit does the reservations and scheduling in-house, and schedules 96% of its 411,488 trips onto two dedicated fleets operated by Pierce Transit (36 vehicles, 161,571 trips) and their primary contractor (67 vehicles, 249,917 trips). Pierce Transit then assigns the other 18,371 trips (mostly overflow trips and trips in outlying areas) to a single non-dedicated provider that is reimbursed by a zonal rate. The non-dedicated vehicle operator is a for-profit carrier that specializes in providing services for people with special needs. This carrier hold several contracts, the largest of which is with the state Medicaid broker to provide Medicaid transportation in several areas, noting that all the services performed by this contractor are on a contract basis with some funding agency.

Alternate #5

- **Wenatchee, WA** (Agency: Link Transit; Program: Link Plus; ADA Paratransit.) -- Link Transit performs reservations and scheduling for its Link Plus service, scheduling roughly 95,000 trips onto its fleet of 25 accessible vehicles, and assigning another 2,500 trips to four taxi and cabulance subcontractors. The trips assigned to these non-dedicat6ed providers are mostly peak overflow trips and long, inefficient trips. Link Transit also has a supplemental program that serves another 15,00 trips per year.

Figure 8-1 Candidate Case Studies

Agency	Location	Region	Types of Non-Dedicated Vehicles		% Non-dedicated	Total Pass.
			Taxicabs	Other Vehicles		
Large Metropolitan Areas						
Arlington Co. DOT / STAR	**Arlington, VA**	**SE**	**Y**	**Y**	**74%**	**90,000**
MBTA / The RIDE	**Boston, MA**	**NE**	**Y**	**Y**	**10%**	**1,309,400**
OC Transpo / Para Transpo	**Ottawa, ON**	**Canada**	**Y**		**11%**	**657,000**
Pomona Valley Transp. Authority / Get About	**LaVerne, CA**	**SW**	**Y**	**Y**	**16%**	**94,500**
Calgary Transit / Access Calgary (Alternate)	Calgary, AB	Canada	Y		44%	850000
Nashville MTA / Access Ride (Alternative)	Nashville. TN	SE	Y		22%	181,500
Small Urban and Rural				**Y**		
Indiana County Transit Authority / Indigo	**Indiana, PA**	**NE**		**Y**	**77%**	**75,000**
Merrimack Valley RTA / EZ Trans	**Haverhill, MA**	**NE**		**Y**	**9%**	**61,000**
Madison Metro Transit / Metro Plus)	**Madison, WI**	**MW**	**Y**		**43%**	**236,400**
Ottawa County Transportation Agency	**Port Clinton, OH**	**MW**	**Y**		**6%**	**52,700**
Whatcom Transportation Authority	**Bellingham, WA**	**NW**	**Y**		**2%**	**169,000**
Link Transit / Link Plus (Alternate)	Wenatchee, WA	NW	Y		2%	113,900
Pierce County / Pierce Transit (Alternate))	Pierce Co., WA	NW		Y	4%	429,900
Rogue Valley Transit District	Medford OR	NW	Y	Y	81%	38,958

Appendix A
Glossary of Terms for the Paratransit Practitioner

Appendix A: Glossary of Terms for the Paratransit Practitioner

Abandoned calls	These are reservations calls that were put on hold (manually by an automated telephone system), and that were subsequently terminated by the customer. The number of abandoned calls, if tracked by a telephone MIS, can be used as a service quality measure. A high rate of abandoned calls may indicate that there is an insufficient number of call-takers or telephone lines.
ADA	**Americans with Disabilities Act** - 1991 Act that contains provisions on the acquisition of accessible vehicles by public and private entities, requirements for complementary paratransit service by public entities operating a fixed-route system, and provision of nondiscriminatory accessible transportation service.
Advance request period	The period of time (before the day of the trip) when a trip request may be placed. The ADA requires that systems provide, at a minimum, next-day service. It does not require same-day service, although many systems do provide same-day service, most on an "as available" basis and/or in response to request for **will-call returns**. The ADA formerly required a 14-day advance request period, but no longer does. As a result, many systems have shortened the advance reservation period to one week or less.
AVL	**Automatic Vehicle Location** - Computer-based vehicle tracking based on location technology, such as the global positioning system. Transmitter devices on board vehicles are used in conjunction with location technology to transmit the location of the vehicle to the radio dispatcher. In conjunction with some paratransit scheduling software and MDTs, the AVL system can be used to "location-stamp" each stop, in order to ensure that the arrival and departure time data really does pertain to the stop in question. The AVL system also is integral to systems that provide the driver with automated directions, because the system knows at any given point, where the vehicle is, and which direction it needs to go to get to the specified destination.

Brokerage	A paratransit brokerage serves as a middleman between one or more trip-sponsoring (funding) agencies and a complex service delivery network, usually involving more than one service provider. Typically, the broker enters into agreements with the funding sponsors, and organizes the service delivery network. This may include contracting with the service providers. The broker may also directly perform call-center function (such as reservations and scheduling), and in some cases, may operate some of the service (sometimes known as a **partial or hybrid broker**). The broker may also perform or be responsible for certain functions more typically associated with the funding agencies (e.g., eligibility determination, trip ticket/scrip management, carrier/service monitoring, and carrier invoice processing).
Complementary paratransit	Specialized demand-responsive service provided for people who cannot use fixed-route transit or rail service due to a disability, meeting specific comparability requirements as established by the Americans with Disabilities Act. The service is called "complementary" because it is provided, at a minimum, where and when the fixed route service is provided, and because it complements fixed-route service, that is it provides additional service needed to make the entire system usable by people with disabilities.
Contract rate structure	A rate structure defines how a contracted service provider is paid for its service. Typically rate structures for paratransit include per revenue vehicle hour, per revenue vehicle mile, and per trip, or a combination thereof. Revenue vehicle hours or miles often begin with the first pick-up and end at the last drop-off of a run, although they sometimes are calculated from pull-out to pull-in, and, in the case of revenue hours, sometimes excludes breaks of a predetermined minimum length. It might also include a monthly fixed amount covering expenses that do not change significantly with the change in service volume, and a variable rate (per revenue vehicle hour, per revenue mile, or per trip) to cover costs that could change significantly with a change in service volume.
Cost efficiency	Cost efficiency for paratransit systems is usually measured in terms of cost per trip, although it can also be measured in terms of cost per mile, and for dedicated service, cost per hour. The lower the cost per trip, the more cost-efficient the system. Service productivity, typically measured in trips per hour, can serve as a surrogate measure for cost efficiency but only for dedicated service.

Curb-to-curb service	A demand-responsive service that picks up and delivers passengers at the curb or roadside nearest their origin or destination. Passenger assistance is not provided other than for actual boarding and alighting.
Dedicated service	This is an operation where the vehicles in operation are dedicated to the transportation of customers of a transportation program (or coordinated set of programs) during a specified period of time. (See also **Non-Dedicated Service**.)
Demand curve	A graph depicting the volume of trip requests (or trips served) during the service day.
Demand-responsive	A characteristic of transit service in which vehicles are routed according to passenger boarding and alighting requests.
Demand-responsive feeder or connector	A transit service in which vehicles operate in demand-responsive mode within a zone, with one or more scheduled transfer points that connect with a fixed-route network. A high percentage of ridership consists of trips to or from the transfer points.
Dial-A-Ride	A form of demand-responsive public transportation without fixed stops or fixed schedules in which vehicle routing is determined entirely in response to passenger service requests made by telephone or similar means.
Dispatching	The dispatching function is divided into Radio Dispatching and Window Dispatching. Both involve activities that happen on the day of the trip. **Radio Dispatching** is the process of monitoring vehicle operations and issuing voice instructions (via radio or cell phone) or text messaging (via MDTs) to drivers to make adjustments to a pre-planned schedule. This may involve making sure that the drivers are keeping up with their schedules, responding to no-shows, assisting drivers with incidents and emergencies, communicating late cancellations to the drivers, scheduling same-day “add-on” trips to vehicle runs and communicating these add-on trips to the drivers, switching trips from one run to another in response to vehicle running late or to vehicles that have become disabled and communicating these changes to the drivers, assisting lost drivers, responding to “Where’s my ride?” calls from customers, and, where the system has MDT/AVL capabilities, ensuring that the proper pick-up/drop-off times are being entered into the system, and ensuring that vehicle is in the right place. **Window Dispatching** involves assigning vehicle drivers and vehicles to scheduled vehicle run, providing the **driver manifests** for each **vehicle run** to the assigned driver, and recording or blessing shift start and end times, and pull-out and pull-in times and mileages.

Door-to-door service	A demand-responsive service that picks up passengers at the door of their place of origin and delivers them to the door of their destinations. The driver escorts or physically assists passengers between the vehicle and door of the origin or destination. Door-to-door service provides a higher level of assistance than curb-to-curb service. (Sometime used loosely as a synonym for "demand-responsive service.")
Driver manifest, trip manifest, or trip sheet	A driver manifest or trip manifest or trip sheetincludes the list of trips or stops in the proper sequence for a specific vehicle run, along with needed information about the customers to be transported (name, mobility device used, disability, etc.). The manifests also provide spaces to document actual service data that pertain to each trip and stop, and run-level summary information.
Driver wait time	The number of minutes a driver is instructed to wait for a customer after arriving at the pick-up location (and within the pick-up window), before calling the dispatcher to indicate a no-show and to get instructions as to whether the driver should wait longer or proceed to the next stop.
Dwell time	The time it typically takes to load or unload a passenger. Includes **Driver wait time**, use of the lift or ramp, and securement of the passenger. Computerized scheduling systems often accommodate different dwell times for ambulatory and non-ambulatory customers.
FTA	**Federal Transit Administration**
GIS	**Geographic Information System –** A system that is used to display service areas and other locations. GIS systems interface with automated paratransit systems to locate addresses and distances for scheduling purposes, and with AVL systems to locate vehicles.
GPS	**Global Positioning System** - Technology using signals transmitted from a network of satellites in orbit to determine locations on the earth.
Hold time	The period of time that a caller is placed on hold. Some telephone systems track and differentiate between initial hold time (up until a customer first speaks with a call-taker) and total hold time. Average hold time and maximum hold time, can be used as a service quality measure. A high average hold time may indicate that there may be an insufficient number of telephone lines or call-takers (or that a re-adjustment of call-taker schedules to better match the call volumes is warranted)..
Holding run	A "bin" into which unscheduled trips can be placed, pending their being scheduled.

Human service agency	A government or not-for-profit organization that provides services for essential needs such as medical care, income support, housing, education, training, and public health, typically for people requiring help due to age, disability, low income or similar reasons.
Human service transportation	Transportation provided by or on behalf of a human service agency to bring people participating in the agency's programs or services to those programs or services.
ITS	**Intelligent Transportation Systems** - Advanced technologies applied to various aspects of transportation to enhance mobility, energy efficiency, and environmental protection.
IVR	**Interactive Voice Response** – A software application that accepts a combination of voice telephone input and touch-tone keypad selection and provides appropriate responses in the form of voice, fax, callback, e-mail or other media. IVR is usually part of a larger application that includes database access.
MDT	**Mobile Data Terminal** also sometimes called MDCs or Mobile Data Computers. These are on-board monitors/keyboards or computers that are used to communicate data between the vehicle and the dispatch office. Sometimes, also refers to an integrated on-board device that combines a mobile data terminal with a vehicle logic unit and other devices such as GPS, a communications interface, or smart card reader. MDTs are typically used to display today's schedule (driver manifest) for that vehicle, taking the place of a paper driver manifest. Much of the information typically entered onto the driver manifest by hand (e.g., pull-out and pull-in times and odometer readings, actual arrival time and departure time at each stop, the odometer reading at each stop, break times) is instead entered into the MDT by the push of a button. The drivers can transmit codes back to the radio dispatcher, rather than by voice, for standard communications. Also, radio dispatchers can transmit add-ons, late cancellations, and changes to the drivers via the MDTs.
Missed trip	This is a trip that was scheduled to be served but was not served due to provider or driver error or adverse operational circumstances. This is not a customer **no-show**, where the customer was at fault. Some systems also include in the missed trip count trips that were served but where the vehicle arrived very late (e.g., 60+ minutes late after the negotiated pick-up time or window).
Negotiated pick-up time	The quoted pick-up time after a customer places the trip request (vs. the requested pick-up time).

Non-dedicated service This is an operation where the vehicles in operation are not dedicated to the transportation of customers of a transportation program (or coordinated set of programs) and also carry other passengers. For example, a user-side subsidy taxi program. Non-dedicated service can be used in conjunction with dedicated service to meet peak demands or other situations where the use of additional dedicated vehicles may not be cost-effective or possible.

Overbooking A strategy where more trip requests are taken than can be scheduled onto dedicated vehicle runs. Trips that are unable to be scheduled at the time of the reservation are placed into **holding runs** where they reside until they are scheduled or dispatched into holes in the schedule that are created by late cancellation and no-shows, or assigned to a non-dedciated service provider (if available). Accepting these trip requests is telling the customer that the trips will be served. Thus, it is generally a good idea to have a back-up plan (e.g., non-dedicated service provider) in case a trip cannot be subsequently scheduled/dispatched onto the dedicated fleet.

Paratransit Most commonly used to refer to specialized demand-responsive service provided for seniors and people with disabilities, especially ADA complementary paratransit. Historically, used to refer to a variety of shared-ride transportation services other than conventional transit service, usually using small vehicles.

Pick-up window A window of time, constructed from the negotiated pick-up time, in which a vehicle may arrive for a pick-up and not be deemed early or late. For example, a common pick-up window is +/- 15 minutes from the negotiate pick-up time. Some systems also have a **Drop-Off Window**.

Productivity A measure of the quantity of desired results produced per unit of resources applied. In paratransit (and especially for dedicated service), productivity is commonly measured using passenger trips per hour. Unfortunately, systems do not all define "passenger trips" and "hours" the same way. With some systems, trips are defined as total passenger-trips, including PCAs, companions, etc. In other systems, trips are defined as just the program-eligible passengers. As the denominator for the productivity calculation, most systems use **revenue vehicle hours**. The NTD defines revenue vehicle hour as first pick-up to last drop-off less breaks, whereas **total hours** also including the breaks and the deadheading to and from the yard, and hence pullout to pull-in.

Request stop service	A transit service in which vehicles operate in conventional fixed-route, fixed-schedule mode and also serve a limited number of defined stops near the route in response to passenger requests. (Request stops differ from flag stops in not being directly on the route.)
Reservations	The process of receiving and booking requests for same-day, advance-reservation, and/or subscription (standing order) trips. In many systems, the staff that receive reservations also receive process cancellations, change-orders, and provide general information about the system and other customer service functions.
Ride time or travel time	The time a customer is on board the vehicle. Many paratransit systems have established a maximum ride time as a scheduling parameter and service quality measure.
Run structure	The set of dedicated vehicle runs that are constructed in such a way as to provide adequate capacity at various times of the service day. The run structure may include a combination of straight runs, split runs, and/or partial or part-time runs, with staggered start and end times, and accommodations for deadheading and breaks, and are generally constructed to match the demand curve. Run structures are often depicted with bar graphs for comparison with the demand curves for the same day.
RVH	Revenue Vehicle Hour – A span of time when a vehicle is available for carrying passengers, including layover and recovery time, but excluding deadhead time to and from a vehicle storage location or break location, or between routes.

Scheduling

In a demand-responsive service, the process of determining the path and schedule of vehicles in the system so that they serve the trips that have been requested. Also, the process of assigning a booked trip request to a specific vehicle run, and determining in the vehicle run the scheduled (as opposed to requested) pick-up time and drop-off times for the trip. In some systems, trip requests are initially scheduled onto a vehicle run immediately after the trip request is booked and while the customer is still on the phone; this is called **real-time** or **immediate** scheduling. Some of these systems also have automated **batch scheduling** capabilities, where the system schedules all trips to be scheduled as efficiently as it know how, noting most operations that utilize batch scheduling have schedulers review and further refine the schedule, as need. In a system that permits trips to be requested on short notice, the process of scheduling may be merged with dispatching. In most systems, the scheduling process ends when the driver manifests for each vehicle run are printed. In cases where a system utilizes taxi contractors (or other non-dedicated service providers), the scheduling process also includes assigning trips to the non-dedicated provider for subsequent dispatching by the provider; this includes giving/sending the list of such trips to the provider.

Computerized paratransit scheduling systems typically provide computer-assisted scheduling and/or automated scheduling capabilities. Computer-assisted scheduling provides help to the scheduler, but ultimately it is the scheduler who must decide where to schedule a trip. These are often used by smaller systems, and greatly increase office staff productivity as they are used to generate driver manifest and various reports. Automated scheduling systems, based on **GIS** map of the service area that underlies the system, and based on various parameters such as average vehicle speed, allowable pick-up window, dwell times, and maximum on-board travel time suggests one of more runs onto which the trip would fit, and automatically inserts the trip into each run for reservation agent or scheduler blessing.

Service mix

Dedicated service can be combined with non-dedicated service as an efficient response to the demand. The combination of these two different types of service is often referred to as a service mix, and is often expressed as the ratio of dedicated service to non-dedicated service.

Service quality Paratransit service quality is typically measured by average and maximum hold times of the reservations staff, by the percentage of abandoned calls, by on-time performance of service delivery and degree of lateness for the late trips, by percentage of missed trips, the complaint ratio, and the complaint resolution response time.

Slack time The amount by which the time scheduled for a process exceeds the time required for its completion. In demand-responsive or flexible transit, slack time refers to time in a vehicle schedule that is available to schedule a deviation or an additional passenger stop without affecting the rest of the schedule.

Split shift A driver assignment that has two distinct pieces during a given day, with a period of non-paid, non-work in between. This is not to be confused with a straight shift with a lunch break. A split shift has two sets of starting and ending times in one day. If the two pieces are assigned to two different drivers, each piece is often referred to as a **partial** shift.

Standing order or subscription trip Standing Orders and Subscription Trips (one in the same) are typically defined as trips of a specific customer that recur in regular pattern (e.g., at least once a week and that go to and from the same origin and destination at the same times). This might include a daily work trip, a senior nutrition trip, or a Monday / Wednesday / Friday dialysis trip, for example. They involve a one-time request, and hence are booked automatically after the one-time request is processed. Customers call again only to cancel, or to arrange a temporary suspension.

With automated scheduling systems, standing orders are scheduled onto runs in templates for each day of the week. When the template is used to create the schedule for a specific date, all the standing order trips that were scheduled into runs in the template are copied over into the respective runs for that date (unless there is a customer or trip suspension). This is done before the rest of scheduling process begins.

If an ADA paratransit system is capacity-constrained (noting that under the current no-denial requirement, there should be no capacity constraints), then the system, by law, is limited to having standing orders represent no more than 50% of the trips served at any time of day. However, if there is no capacity constraint, then this regulation is moot, and there is no such limit.

Straight shift A driver assignment that has one starting time and one ending time in a given day.

Trip	In the paratransit industry, a trip is usually synonymous with a "passenger trip" which is a movement of passenger from origin to destination.
Trip time negotiation	The process in reservations of negotiating an alternative pick-up to the one requested in order to create a more efficient schedule or to be able to accommodate the trip request. For ADA paratransit systems, negotiated trip times that are more than 60 minutes before or after the requested pick-up time constitute denials, regardless of whether the customer agrees to the offered pick-up time or not.
Turnkey contract	This is contract to provide all operational functions, including reservations, scheduling, dispatching, operations, and maintenance. It can also include the provision of an operations/maintenance facility, paratransit scheduling software (and hardware), and/or vehicles. It seldom includes, but can include, the eligibility determination function.
Vehicle run	A vehicle run or tour is the piece of work that a driver performs between pull-out and pull-in. Trip requests are scheduled onto specific vehicle runs. **Holding runs**, usually organized by time of day, are used as a temporary place to store unscheduled trip requests in some computer systems.
Will call return trips	These are round-trip requests that are booked with an unspecified return pick-up time. Some systems permit will-call return trips for medical appointments and dialysis trips, where there is wide fluctuation (beyond the control of the customer) as to when the customer will be ready to go home. So, instead of scheduling the return trip pick-up time, the return is left open. When the customer is ready to be picked up, the customer calls and the dispatcher "live-dispatches" the trip to a vehicle, much like a taxi dispatcher.

Appendix B
Bibliography

Appendix B: Bibliography

Bellheimer, J.W., Lave, R.E., Jones, P., Fratessa, C., and Newman, D. (Systan, Inc.), *Paratransit Handbook: A Guide to Paratransit System Implementation Volume I and II*, prepared for Urban Mass Transportation Administration, Washington, DC, February 1979.

The Paratransit Handbook has been developed as a guide to aid public officials, planners, system operators, and interested community groups in planning, designing, implementing, operating, and evaluating integrated paratransit systems. The Handbook represents a compendium of techniques and experience drawn from existing Dial-A-Bus and shared-ride taxi paratransit systems. Five interrelated sections contained in two volumes comprise the Handbook.

Burkhardt, J., Koffman, D. and Murray, G., *Economic Benefits of Coordinating Human Service Transportation and Transit Services*, Transit Cooperative Research Program, Report No. 91, 2003.

TCRP Report 91 examines the net economic benefits associated with various strategies and practices for coordinating human service transportation and general public transit, provides quantitative estimates of these strategies and practices, and identifies innovative and promising coordination strategies and practices. The report includes detailed case studies showing how coordination has helped tap funding sources, reduce the cost of transportation, increase productivity, and expand transportation services.

Christ, E., *Demand-Responsive Operating Forms as Part of Differentiated Service Model in Regional Public Transport*, in *Public Transport International*, November 1995.

Low demand patterns outside the major built-up areas in the transport region during peak hours and at weekends prompted the Westphalia Transport Association Ltd. (WVG) firms to consider the development of demand-responsive forms of operation. In the process, these forms, whose service characteristics clearly differ from the conventional line operations using buses that are commonly found in rural areas, are assuming great importance within WVG's service strategy. Thus, demand-responsive service forms, like other modified PT products, are being marketed as product lines within their own right as part of WVG's "Differentiated Service Model". In the WVG transport region, these have taken the form of hailed shared taxi and taxibus services.

EcoPlan, *The European Paratransit Experience*, prepared for the Office of Policy Research of the USDOT, October 1981.

This project surveyed developments of both less traditional transportation forms with a high information content, including demand responsive services, new kinds of taxi systems, and car-sharing, as well as other forms of vehicles

sharing, including car pools and bus pools. The objectives of the project, in its own words, were to: "unravel some of the controversy concerning paratransit and specifically to show how a variety of relatively low-cost, innovative transportation concepts are being tried out in Europe, and what roles they might play in the future." Over the course of the 18 months collaborative research program behind the reports, the number of working papers, field trips, brainstorming sessions were organized and shared with the various participants.

Einstein, N., (Transportation Alternatives), *Optimizing the Mix of Dedicated and Non-Dedicated Vehicles in Complementary Paratransit Service*, proceedings from the *Maximizing Your Resources* session at the APTA Conference Bus and Paratransit & Bus Rapid Transit Conference in Denver, Colorado, American Public Transportation Association, May 2004

One important dynamic of paratransit system design still largely misunderstood is that of the relationship between dedicated and non-dedicated service. An exaggerated reflection of this misunderstanding is illustrated by the considerable number of complementary paratransit service (CPS) programs that provide service on only one of these bases. Dedicated vehicles provide service only to clients of a specific program or funding agency (e.g., a transit agency, under the ADA), or a group of such programs or agencies (e.g., under a coordination or consolidation arrangement), for specific blocks of time (which may be adjusted daily in some operating structures). In contrast, non-dedicated vehicles effectively fade in and out of service to these clients, irregularly or methodically alternating or integrating its provision with service to non agency-affiliated clients, including the general public. The two most common examples of non-dedicated services are: (1) taxi services alternating or integrating service to special clients with service to general public riders; and (2) non-emergency medical transportation (NEMT) services integrating CPS with NEMT clients traveling to or from the same common destinations (hospitals, clinics, etc.), and/or in some cases, transporting the CPS clients to other destinations.

Fleishman, D. and Flusberg, M. (Multisystems, Inc.), *General Community Paratransit Services in Urban Areas*, prepared for Office of the Secretary of Transportation, Urban Mass Transit Administration, Washington, DC, January 1982

This volume addresses general community paratransit services in small cities and metropolitan areas, with the latter separated into suburban and inner city areas. Systems designed for neighborhood/community circulation and those designed to be integrated with existing line haul transit are both addressed. Within these contexts, included are a range of service options, like dial-a-ride/shared-ride taxi, route and point deviation, checkpoint services, jitney, and intra-community "flexible" fixed route services. The report also looks at factors which may influence the future direction for general community paratransit. Some of these topics include energy availability and cost,

reductions in transit subsidies, migratory and development patterns, and technological advances.

Gilbert, G, Cook, T., Nalevanko, A., Everett-Lee, L., *TCRP R-75 (Project B-16), The Role of the Private-for-Hire Vehicle Industry in Public Transit*, prepared for the Transportation Research Board – Transit Cooperative Research Program, Washington, DC, 2000.

This report describes the types of public transit services being provided by private-for-hire-vehicles (PHVs), e.g., taxicabs, shuttles, limousines and cars, and categorizes such services. This report is published in two parts. The first part documents the results of a national survey of PHVs. The results of this survey indicate a continuing trend toward diversification of PHV operators, a size distribution skewed toward smaller operations, heavy reliance on independent contractor drivers, and a high incidence of contracting (particularly among taxicab operators). The results also indicate that transit service contracting is not a significant source of PHV revenues. The second part of the report summarizes eight case studies and draws conclusions from the analysis of these case studies. The case study sites are Ann Arbor, Michigan; DuPage County, Illinois; Houston, Texas; Los Angeles, California; Montgomery County, Maryland; Portland, Oregon; Seattle, Washington; and the State of Wisconsin. The functional areas examined for these case studies consist of funding, the selection process, contract terms, general administration, public/private roles and responsibilities, regulatory requirements, and operations. This report includes a multimedia presentation on CD-ROM. This presentation provides information on the current services that PHVs provide in the public transit sector and showcases the case studies. The report should be useful to public and private transportation managers, metropolitan planning organizations, and other transportation decision makers at local, state, and federal levels.

Gilbert, G. and Samuels, R.E., *The Taxicab--An Urban Transportation Survivor*, North Carolina University Press, Chapel Hill, NC, November 1982.

The evolution of the taxi from the early horse-drawn European vehicles to the futuristic "paratransit" vehicles of today is traced, relating the development of mass transit to that of the taxi and showing how both forms of urban transportation changed in response to alterations in cities and urban life. The authors discuss particular facets of the taxi industry, including economics, innovative services, regulation, and the future of the taxi as a private-sector service. They maintain that this industry, with its range of flexible services, has the potential to alleviate some of the current problems of urban transportation. Specifically, they argue that the inclusion of taxis in public transit programs will lead to innovative solutions to our urban transportation problems.

Hirano, S, *How to Beat the High Cost of Paratransit Service, Metro Magazine,* Bobit Publishing Company, Torrance, CA, August 2002.

Filling growing paratransit demand without incurring high costs is a challenge as more disabled users enter transit systems. Several agencies share their strategies. The "Seattle Plan" offers a bare- bones ADA-mandated service complemented by a non-ADA service paid for by subscriptions. Broward County, Florida, toughened eligibility requirements while making conventional service accessible to all but the most extremely disabled. Dedicated taxis is another way to cut capital costs. Overhead controls can also help curb paratransit budgets.

Horn, MET, *Fleet Scheduling and Dispatching for Demand-Responsive Passenger Services,* in *Transportation Research. Part C: Emerging Technologies*, Elsevier Science, Limited, Kidlington, Oxford, England, February 2002.

A scheduling and dispatching software system called L2sched has been developed to manage the deployment of demand-responsive passenger transport fleets such as special services for the disabled or aged people, "maxi-taxi" services, ride-sharing arrangements or conventional taxis. Since there can be significant overlap amongst the various demand-responsive modes, this system supports multiple modes of operation for both the fleet and individual vehicles. Booking requests can be immediate or in advance of travel. An initial implementation is chosen for each incoming request with an objective of minimizing travel time or maximizing future fleet capacity. This incremental insertion scheme is supplemented by post-insert improvement procedures, a periodically executed steepest-descent improvement procedure applied to the entire fleet and a rank-homing heuristic incorporating information about future patterns of demand. A simple objective for scheduling operations is based on localized minimization of travel time, while an alternative incorporating occupancy ratios has a more strategic orientation. In addition to its scheduling functions, L2sched includes automated vehicle dispatching procedures designed to optimize customer service and vehicle deployment. The system can handle a variety of contingencies such as vehicle breakdowns and trip cancellations. Tests indicate that the system will be effective in real-time applications and is an improvement over simpler systems.

Horn, MET, *Multi-Modal and Demand-Responsive Passenger Transport Systems: A Modeling Framework with Embedded Control Systems* in *Transportation Research. Part A: Policy and Practice*, Elsevier Science, Limited, Kidlington, Oxford, England, February 2002.

This paper describes a modeling system called LITRES-2, which is designed to help transportation planners and operators investigate the performance of public transport systems, especially for demand-responsive transport modes and traveler information technologies. Conventional timetabled services such

as buses and trains are modeled along with taxis (both single- and multiple-hired) and other demand-responsive services. From pre-defined specifications of aggregate demand, the system produces a stream of fully-articulated, time-ordered travel requests. Individual requests are resolved as single- or multiple-leg journeys, through the use of request-broking and journey-planning modules that seek to minimize travelers' generalized costs. Journey-legs allocated to demand-responsive modes are handled by a fleet-scheduling module which includes provisions for instantaneous and advance bookings as well as for contingent situations such as breakdowns and passenger no-shows. The fleet-scheduling and journey-planning modules are designed as embedded control systems and are intended for use in real-time as well as modeling applications. Recent planning studies using LITRES-2 show that the system can achieve a convincing level of credibility in representing base-case passenger-transport conditions and speculative planning proposals. LITRES-2 appears to be most useful in modeling situations where the critical issues are concerned with the deployment and performance of passenger transport systems.

Langille, D. (Nelson\Nygaard Consulting Associates*), Pomona Valley Transportation Authority Service Evaluation and Analysis: Final Report*, prepared for the Pomona Valley Transportation Authority, December 2001.

The report summarizes the service efficiency and quality evaluation findings for PVTA's diverse family of services and identifies unserved markets and opportunities for improvement in the way services are operated and administered. Final recommendations cover enhanced service monitoring, ongoing customer outreach and contract oversight, a reduction in the Get About fleet size and pull out, changes to scheduling procedures, demand management strategies (service area and eligibility restrictions for San Dimas Dial-a-Cab and Claremont Dial-a-Ride), changes to the Get About cost allocation formula, and the introduction of service within the current Get About framework to low income residents of Pomona.

Langille, D., (Nelson\Nygaard Consulting Associates*), RTS Supplemental Taxi Services Study – Technical Memorandum #1: Evaluation of Potential Supplemental Taxi Services in Ridgecrest*, and *Technical Memorandum #2: Specifications and the Definitions of Responsibilities for RTS Supplemental Taxi Services*, prepared for the City of Ridgecrest, March 2000.

Technical Memorandum #1 provides an overview of taxicab/public transit partnership models. Summarizes the evaluation of potential supplemental taxicab applications in Ridgecrest and a series of recommendations regarding implementation. *Technical Memorandum #2* defines roles and responsibilities and outlines a series of recommended contract specifications.

Koffman, D., Rodman, W., and Weiner, R. (Nelson\Nygaard Consulting Associates), *Paratransit Improvement Study*, prepared for the North County Transit District, March 2005.

NCTD's ADA paratransit system, called LIFT, was analyzed to look for improved policies and operating methods that would help in meeting demand at reasonable cost. The study recommended a shorter advance reservations period, more use of taxicabs, improved driver scheduling using split shifts, and a new ADA eligibility process.

Koffman, D. (Nelson\Nygaard Consulting Associates), *Paratransit Business Model Study*, prepared for the Santa Clara Valley Transportation Authority, June 2004.

VTA requested an analysis of its ADA paratransit business model in which paratransit service is broker by Outreach, a non-profit organization. The analysis examined Outreach's use of taxicabs, its use of large numbers of sedans in dedicated operation, and its method of paying providers by the mile with passengers on-board. The brokered method was compared to turnkey operation at other systems. The analysis found that the present system was cost-efficient and that more trips could be efficiently assigned to taxicabs.

Lave, R. and Mathias, R., *State of the Art of Paratransit*, in *Transportation in the New Millennium: State of the Art and Future Directions, Perspectives from Transportation Research Board Standing Committees*, Transportation Research Board, A1E10: Committee on Paratransit, Washington, DC, 2000.

This paper, authored by members of the Transportation Research Board Committee on Paratransit, defines paratransit as that public and private mass transportation in the spectrum between private autos and conventional transit. In practice, paratransit covers 2 broad areas: that required for public transit agencies to be in compliance with the Americans with Disabilities Act; and all other paratransit, including other demand-responsive services such as shared rides, taxicab, and livery services. The paper focuses on demographic aspects of use, the relationship between fixed-route transit and paratransit, size of the paratransit market and providers, service delivery, scheduling and dispatching, and labor, among others.

Multisystems, Inc., *Paratransit: Options for the Future*, prepared for Technology Sharing Program, Urban Mass Trans Administration, Washington, DC, December 1982

Over the past decade paratransit has evolved but is seen as not yet at its full maturity. Paratransit services have been shown to be capable of meeting various transportation needs well-served neither by mass transit or the private auto. Typically small in scale and flexible in structure, paratransit options can be targeted to particular market segments or they can be designed to provide community-wide service. Paratransit options can provide cost-effective service in areas lacking the densities necessary to support mass transit, and

can be operated in the private sector, thus needing no extensive public financial support. Given the appropriate regulatory environment, these characteristics combined with the economic and demographic factors and trends described earlier, should result in an increased role for paratransit over the coming decade. It is concluded that the private sector should be involved to a greater extent; that the role of the activity center (employers, shopping centers, etc.) should be encouraged; service initiation should be at the community level; transit authorities should be more open to paratransit; coordination of all providers of public transportation should be achieved; states should promote paratransit; demonstrations of service and institutional concepts should continue; and the Federal government should create an environment conducive to utilization of paratransit.

Multisystems, Inc., *Paratransit Services for the Transportation Handicapped,* prepared for Office of Policy Research, Urban Mass Trans Administration, Washington, DC, April 1982.

This volume is one of a series aimed at developing an understanding of the nature of the various paratransit concepts, the results and impacts they have had, and what roles they might play in the future. This volume examines the experience of various types of transportation-handicapped (TH) paratransit services, discusses the state-of-the-art of organizational and service options and issues, and explores the nature of future directions in this area. Much of the information is based on a series of case studies prepared in conjunction with this report. Cases selected represent a variety of institutional arrangements ranging from social-service agency-sponsored and operated to transit-agency-operated and sponsored, as well as a range of service delivery mechanisms. While an effort has been made to compile comparable statistics for each service, it has not always been possible. The characteristics of these services include key cost and ridership information. It is expected that TH paratransit will continue to grow. There are over 3,000 systems in operation and annual ridership is estimated to be between 20- and 40-million. Potential usage is estimated at 100-million trips per year, depending of future funding and regulation.

Olason, R.A., *Accessible Raleigh Transportation: A Paratransit System Using Trip-By-Trip Eligibility Determination and Two-Tiered, User-Side Subsidy*, in Transportation Research Record No. 1760, Transit: Bus Transit and Maintenance, Paratransit, and New Technology. Transportation Research Board, Washington, DC, 2001.

Accessible Raleigh Transportation (ART), a local, ordinance-based, complementary paratransit service, provides subsidized service for those unable to drive because of a disability and those unable to ride a bus. ART relies on Raleigh's open-door taxicab licensing policy established by city ordinance. No contract is required to manage the program or operate the service. ART has successfully provided paratransit service for more than 10 years in a fast-growing, highly suburbanized city of 280,000. ART's

Americans with Disabilities Act paratransit element, Tier II, adheres strictly to trip-by-trip eligibility using a functional screening tool. The use of eligibility determination and the user-side subsidy points to a new direction for public transportation.

Rodman, W., Thatcher, R., Everett-Lee, L., and Koses, D. (Multisystems), *Access Service Performance Evaluation and Audit,* prepared for the Los Angeles County Metropolitan Transportation Authority, September 1998

Access Services is the regional ADA paratransit service in Los Angeles. The service structure is a brokerage, with turnkey contractors providing service in 6 regions. Most of the contractors have a mixture of dedicated and non-dedicated service. This project included interviewing and observing Access Service staff and contractor staffs, collecting and analyzing system-wide and regional data, meeting with disabilities groups, conducting a peer analysis, and conducting a rider survey. As a result of this assessment, short-term and long-term actions were recommended to improve service quality and/or cost-efficiency. These included actions to increase on-time performance, decrease the no-show, cancellation, and missed trip rates, and decrease telephone hold times and number of abandoned calls, Recommendations relating to cost-efficiency included, among others, increasing the percentage of standing orders and advance-scheduled reservations, and enforcement of ASI's no-show policy.

Rodman, W., Everett-Lee, L, and Koses, D. (Multisystems), *Review of MetroAccess*, prepared for the Washington Metropolitan Area Transit Authority, March 1998.

This project involved an assessment and re-design of WMATA's paratransit brokerage. Recommendations included vesting the responsibility of carrier procurement with the broker, de-centralizing the reservations and scheduling function with the carriers, re-structuring the service delivery network, infusing taxi subcontracts into reach region, and restructuring the procurement and contract documents for the broker and for the carriers.

Rodman, W., Everett-Lee, L, Marks, B., Kraus, J., and Fish, C. (Multisystems), *Evaluation of CTA's Special Services and Taxi Access Program,* prepared for the Regional Transportation Authority, October 1997.

This project involved evaluating the two components of the Chicago Transit Authority's paratransit program, Special Services, CTA's ADA paratransit service which was operated with dedicated vehicles, and the Taxi Access Program or TAP, a supplementary taxi subsidy program for ADA-certified customers. in conjunction with the City of Chicago, recommendations were developed to (1) require TAP participation among all taxi medallion holders; (2) ensure that TAP trip requests in certain areas of the City were honored; and (3) infuse accessible taxis to the taxi companies and associations serving Chicago.

Rodman, W., *Findings of Working Group No. 7, Service Delivery Structure*, proceedings from *Developing and Disseminating Creative Paratransit Operations Ideas;* prepared for TRB/Project ACTION, November 1997.

TRB and Project ACTION co-sponsored a conference of paratransit practitioners, entitled *Developing and Disseminating Creative Paratransit Operations Ideas,* held in Monterey, CA in November 1997*.* The conference attendees were divided into seven working groups, each tackling separate components of paratransit operations. This paper summarized the findings of Working Group 7 which delved into aspects of the Service Delivery Structure. Included in the paper are discussions on balancing service quality and cost efficiency, and determining the most appropriate management and organizational structures, service design (including a discussion on dedicated and non-dedicated service), and procurement strategies. The paper also included (1) a trouble-shooting guide that identified possible solutions to common shortcoming, and (2) related topics needing more research.

Stefl, G. and Newsom, M., *Medicaid Non-emergency Transportation: National Survey 2002-2003*, presented at the National Consortium on the Coordination of Human Services Transportation, December 2003.

The National Consortium on the Coordination of Human Services Transportation commissioned a survey of Medicaid directors in all 50 states to obtain current information on non-emergency medical transportation (NEMT) funding and service delivery models. The survey found great diversity of NEMT program construction, and a rapid pace of NEMT program evolution. NEMT program design is rapidly evolving in an effort to increase access to an ever-growing and more diverse Medicaid population, to find more cost effective ways to deliver services, and to increase quality and safety measures. States are increasingly looking to managed and capitated models to achieve these outcomes.

Teal, R., *Private Enterprise in Public Transportation: The Case of The Taxi Industry,* in *Transportation Quarterly,* Enos Foundation for Transportation, Inc., Westport, CT, April 1985.

The use of taxi firms as public transportation contractors represents an alternative approach to public service provision. Rather than transform private enterprise into a public organization for transportation service delivery, like the mass transit industry, this approach retains the private sector character of the public transportation provider and allows for many of its activities to be purely private market oriented. The increasing use of taxi firms as public transportation providers raises two important questions. First, does this particular use of private enterprise by the public sector make possible more cost-effective public transportation services? Second, will this development help maintain an economically viable private sector taxi capability? This paper presents an analysis aimed at helping to provide answers to these questions.

Subjects covered include historical background, performance of taxi firms, financial impacts, labor and legal impacts, and others.

Teal, R. with Goodhue, R., Mortazavi, K and Rooney, S., *Taxi-Based Special Transit Services, Final Report*, prepared for Urban Mass Transportation Administration, March 1983.

This study of the role of the taxicab industry in providing public transit services to the elderly and disabled community focused on the ways in which taxi companies utilized existing vehicles and infrastructure to deliver service to this target population. Non-dedicated vehicles were frequently employed for this purpose. The study collected data on operating costs and productivity associated with different types of service organization—including dedicated vehicle operations and those utilizing non-dedicated vehicles—and illustrated the differences in cost-effectiveness between such different approaches.

Teal, R. with Goodhue, R., Mortazavi, K., and Rooney, S., *Transportation Research Record 862, Taxi-Based Public Transportation for the Elderly and Handicapped,* prepared for the Transportation Research Board, 1983.

This TRB publication focuses on the differences in cost-effectiveness of dedicated vehicle and non-dedicated vehicle service operations when the taxicab industry is the service provider.

Teal, R. with Goodhue, R., and Marks, J., *Transportation Research Record 778, Subsidized Shared Ride Taxi Services*, prepared for the Transportation Research Board, 1981.

This TRB publication is a summary and synopsis of the FTA study cited below. As one of its major points of emphasis, it identified the cost-effectiveness advantages of non-dedicated fleet operations for DRT when provided by taxi operators, including quantifying those advantages using data from California DRT systems.

Teal, R. with Fielding, G., Giuliano, G,, Goodhue, R., and Marks, J., *Shared Ride Taxi Services as Community Public Transit, Final Report*, prepared for the Urban Mass Transportation Administration, March 1980.

This study focused on the use of taxicabs in shared ride mode as a means of providing local public transport. The study first publicized the “integrated fleet” concept for delivering demand responsive transit in taxi vehicles. In a number of communities in California and elsewhere, it was discovered that non-dedicated taxi vehicles were being used to provide shared ride demand responsive transit to the general public, a form of subsidized shared ride taxi service. Moreover, these integrated fleet services had a record of superior cost-effectiveness compared to their dedicated vehicle counterparts, whether provided by taxi companies or other DRT providers.

Teal, R. with Giuliano, G., *Taxi-Based Community Transit: A Comparative Analysis of System Alternatives and Outcomes*, *Proceedings of the 21st Annual Meeting of the Transportation Research Forum*, 1980.

This paper focused on the impact of system organization on the cost-effectiveness of taxi-based forms of DRT operations. It demonstrated that taxi-based non-dedicated vehicle operations typically had higher vehicle productivities and lower costs per passenger than did DRT systems that utilized dedicated vehicles.

Teal, R. with Fielding, G. and Giuliano, G., *Taxis as Public Transit,* Proceedings of the Conference on Taxis as Public Transit, Institute of Transportation Studies, University of California, Irvine, December 1978.

This overview chapter for the proceedings of the first comprehensive conference on the use of taxis as public transportation both identified the key issues in using taxi organizations for this purpose and also outlined the advantages of doing so. The ability to utilize DRT vehicles in non-dedicated mode and to share infrastructure costs with other, non-public transit services, were among the advantages cited in this review of the-current practice.

Transportation Research Board, *Special Report 258, Contracting for Bus and Demand-Responsive Transit Service: A Survey of US Practice and Experience*, Washington, DC, 2001.

In the interest of learning more about contracting as a method of transit service delivery, the 1998 Transportation Equity Act for the 21st Century (TEA-21) called on the Transportation Research Board (TRB) to conduct a study of contracting by recipients of federal transit grants. TEA-21 called for an examination of the extent and practice of transit service contracting and its effects on operating costs, customer service, safety, and other aspects of service quality and quantity. To conduct the study, TRB convened a 12-member committee of experts in public transportation management, labor, economics, and public policy. In carrying out the study, the committee reviewed previous reports on transit service contracting; conducted its own nationwide survey of public transit systems and their general managers; and interviewed transit managers, labor union leaders, contractors, and members of transit policy boards. Resulting findings and conclusions are summarized in this report, along with additional insights and ideas for follow-on study. The contents are organized as follows: (1) Introduction; (2) Public and Private Provision of Transit in the United States; (3) Conceptual Framework and Previous Studies on Contracting; (4) Transit Service Contracting in the United States: Extent and Practice; (5) Transit Contracting Experiences and Advice from General Managers; and (6) Summary and Assessment.

Welch, W, and Dubost, C., *Taxis That Save You Money In ADA Paratransit*, proceedings from the APTA Bus and Paratransit Conference in Milwaukee, WI, American Public Transportation Association, May 2003.

The efforts of the San Mateo County Transit District (SamTrans) in California to add taxis to ADA paratransit services are detailed. The paper compares 2 pricing schemes for using taxis in ADA paratransit service: 1) the user-side subsidy, and 2) managed service where selected trips are provided at meter rates. The fallacy of using average-cost pricing to compare taxi and paratransit trips is examined. Often overlooked is the fact that taxi trips tend to be shorter than paratransit trips; comparing the short taxi trip with an average-length paratransit trip gives a distorted view of the savings. SamTrans set aside the concept of user-side subsidy service in favor of a managed-taxi plan where taxis replace selected paratransit trips and the agency pays the full meter rate and an administrative fee. With a simple marginal-cost pricing concept, SamTrans identified paratransit driver shifts that could be replaced by taxi at great savings. Results of a demonstration project to test whether managed taxis could reduce ADA paratransit operating costs are provided.

Appendix C
Survey Instrument

Survey on the Use of Non-Dedicated Vehicles in Paratransit Service

Your cooperation is requested to assist with research for the Transit Cooperative Research Program (TCRP). To help in conducting TCRP Project B-30, "Optimal Split of Dedicated and Non-Dedicated Services for Demand-Responsive Paratransit," we are gathering information from paratransit systems that use some combination of dedicated and non-dedicated vehicles.

By "non-dedicated vehicles" we mean vehicles, such as taxicabs, that are not devoted exclusively to your paratransit system but also carry other passengers, and which can be used as needed to meet peak demands or other situations where the use of additional dedicated vehicles may not be cost-effective or possible. Examples of non-dedicated service providers include:

- Taxicabs
- Livery vehicles, including limousines, sedans and black cars
- Privately-operated vans that also provide Medicaid or private for-hire wheelchair accessible transportation (sometimes called ambulettes, chair cars, cabulances, and medi-vans, or wheelchair vans)
- Vehicles operated by public or private human service agencies that have some available time or capacity that can be used for paratransit trips.
- Accessible school buses
- Airport transportation vehicles

This goal of this research effort is to develop tools that can be used by transportation managers to determine the appropriate split between dedicated and non-dedicated paratransit services, and to help better shape the structure of dedicated runs to increase cost-effectiveness and meet peak demand needs. This tool will be made available as a public-domain product to assist the paratransit industry. The information you provide will be used to help develop and calibrate the tool.

You are being included in this survey because we believe that your paratransit system currently uses non-dedicated vehicles for at least part of your paratransit service. You may have previously provided some of this information for the Easter Seals Project Action "Characteristics Of ADA Paratransit Systems**"** (CAPS) database. If so, we have provided a summary of the relevant data about your system (from this database) that you can review for accuracy, so you don't need to provide it again.

In completing the survey, please either respond to and return this paper questionnaire to Heather Cherin, Nelson\Nygaard, 785 Market St., Suite 1300, San Francisco, CA 94103, or respond to the survey questions on-line at:
http://response.survey-one.com/jsp/scstart.do?id1=1662&id2=11&sname=52

If we have an email address for you, you will be receiving an email no later than October 25 which includes this link to the on-line survey, and you can access it directly from the email. We encourage you to use the on-line survey if it is convenient. To complete the survey on-line, you will need to use the following user log-in: "*S99999"* and the following password: "*TCRP30"*. Please note that you can complete the on-line survey in multiple sessions if needed before submitting it, it is not necessary to complete it in a single session.

If you have any questions about the survey itself or about the project, you can reach me at 617-698-0700 or wrodman@nelsonnygaard.com, or by contacting Heather Cherin, who will be compiling the survey results, at 415-284-1544 or hcherin@nelsonnygaard.com.

Thanks you very much for your time and contributions to this important effort.

Will Rodman, Nelson\Nygaard
TCRP B-30 Principal Investigator

Respondent Information

Name:_____
Title:_____
Organization:_____
Address 1:_____
Address 2:_____
City/Town:_____State/Prov:_____Zip/Postal Code:_____
Work Telephone:_____Work Fax:_____
E-Mail Address:_____

1. Who receives trip requests from customers? (Check all that apply.)

☐ Transit agency (or City, County, or other principal agency responsible for the paratransit service)
☐ Call center contractor or broker
☐ Single operations contractor
☐ Multiple operations contractors

2. Who schedules trip requests onto dedicated vehicles and/or assigns trips to non-dedicated service providers? (Check all that apply.)

☐ Transit agency (or City, County, or other principal agency responsible for the paratransit service)
☐ Call center contractor or broker
☐ Single operations contractor
☐ Multiple operations contractors

3. Who operates the paratransit vehicles in your service? (Check all that apply.)

☐ Transit agency (or City, County, or other principal agency responsible for the paratransit service)
☐ Single operations contractor
☐ Multiple operations contractors

4. Please describe this service structure in your own words:

_____
_____
_____
_____

5. Are any of the following types of non-dedicated vehicles used in your service? (Check all that apply.)

☐ Taxicabs
☐ Livery vehicles, including limousines, sedans and black cars
☐ Privately-operated vans that also provide Medicaid or private for-hire wheelchair accessible transportation (e.g., ambulettes, chair cars, cabulances)
☐ Vehicles operated by public or private human service agencies that have some available time or capacity that can be used for paratransit trips.
☐ Accessible school buses
☐ Airport transportation vehicles
☐ Other. Please describe:_____

6. What role or roles do non-dedicated vehicles play in your service? (Check all that apply.)

☐ Provide all service
☐ Provide all service in certain areas
☐ Provide all service at certain times of day
☐ Provide particular types of trips (for example to eligibility interviews, to specific agencies, etc.)
☐ Trips are assigned to non-dedicated vehicles as needed to meet peak demand or serve trips that do not fit efficiently onto dedicated vehicle schedules.
☐ Trips are assigned to non-dedicated vehicles to augment the dedicated fleet in low-demand area(s) and/or during low-demand times.
☐ Trips are assigned to non-dedicated vehicles to augment the dedicated fleet to meet spikes in demand caused by special events and/or seasonal fluctuations.
☐ Provide supplementary service directly available to riders (riders may directly call the non-dedicated service provider to use the service).
☐ Other. Please describe: _____

7. Please describe how non-dedicated vehicles are used in your own words:

_____
_____
_____

8. Please characterize the service area(s) in which the non-dedicated service is provided? (Check all that apply.)

☐ Metropolitan (250,000 population or more)
☐ Small Urban (50,000 population or more)
☐ Suburban (including part of metropolitan areas)
☐ Rural

9. What payment formulas and rates apply to your contracted services?
(If you have multiple contracts of each type, please provide a range or average for each type of contract.)

Dedicated vehicles

Per vehicle hour:_____ + Per month:_____
Per vehicle mile:_____ + Per month:_____
Per trip:_____ + Per month:_____
Other:_____

Non-dedicated vehicles:

Ambulatory
Per pick-up ("drop change")_____ + Per-mile_____
Per trip:_____
Other:_____

Non-ambulatory (wheelchair trips)
Per pick-up ("drop change")_____ + Per-mile_____
Per trip:_____
Other:_____

10. Why did you select that rate structure for non-dedicated service?

_____
_____

11. Do you have a contract with the non-dedicated service provider(s)? If yes, what is the contract term? Could you please send us a copy of the contract?

_____
_____

12. Please provide summary statistics for your dedicated and non-dedicated service for the most recent full fiscal year:

	Dedicated	Non-dedicated	Notes
Total active vehicles			
Passenger Trips			
Vehicle revenue hours			
Vehicle revenue miles			
Operating Cost			
Number of providers			

13. What costs are included/excluded in "Operating Cost" identified in Question #12?

	Dedicated		Non-dedicated	
	Included	Excluded	Included	Excluded
Reservations	☐	☐	☐	☐
Scheduling	☐	☐	☐	☐
Dispatching	☐	☐	☐	☐
Vehicle operation	☐	☐	☐	☐
Maintenance	☐	☐	☐	☐
Operating facility	☐	☐	☐	☐
Vehicles	☐	☐	☐	☐
Fuel	☐	☐	☐	☐
Insurance	☐	☐	☐	☐

14. Why do you use non-dedicated vehicles?

_____
_____
_____
_____
_____
_____

15. Following is a list of things sometimes claimed as advantages of using non-dedicated vehicles. To what extent is the ability to do these things an advantage of using non-dedicated vehicles for you?

	Major Advantage	Minor Advantage	Not an issue for us
Improve the productivity of dedicated vehicles	☐	☐	☐
Be more responsive to fluctuations in demand	☐	☐	☐
Better manage growth	☐	☐	☐
Serve outlying areas more efficiently	☐	☐	☐
Serve low-demand times (for example, nights and Sundays) more efficiently	☐	☐	☐
Be more cost-effective overall	☐	☐	☐
Respond to customer desires for car-like service	☐	☐	☐
Provide same-day service and/or will-call (call when ready) return trips	☐	☐	☐
Provide a safety valve that lets you eliminate or reduce denials	☐	☐	☐
Ability to overbook trips requests for dedicated vehicles	☐	☐	☐
Ability to expand service without buying vehicles	☐	☐	☐
Ability to “test” demand in new areas or time periods	☐	☐	☐
Coordination with human service transportation	☐	☐	☐
Other:_____	☐	☐	☐

16. Of the MAJOR advantages you specified in Question 15, which provided only one-time or short-term benefits and which have also provided continued benefits to the system?

_____
_____
_____
_____

17. Has the introduction of non-dedicated service to your program benefited the community-at-large in any way, i.e., beyond your program? If yes, how?

_____
_____
_____
_____

18. To what extent have any of the following been a problem for you in using – or precluding the purchase of -- non-dedicated service?

	Major Problem	Minor Problem	Not an issue for us
Substandard driver training / sensitivity / assistance	☐	☐	☐
Inability to meet insurance requirements	☐	☐	☐
Inability to meet drug testing requirements	☐	☐	☐
Lack of accessible vehicles	☐	☐	☐
Limitations on taxis' ability to pick up in cities where they are not licensed	☐	☐	☐
Substandard on-time performance / service reliability	☐	☐	☐
Substandard vehicle quality / maintenance	☐	☐	☐
Pressures from union labor	☐	☐	☐
Few non-dedicated service providers	☐	☐	☐
Availability of non-dedicated service at the times needed	☐	☐	☐
Instability of taxi companies	☐	☐	☐
Difficulties in contract compliance and oversight	☐	☐	☐
Difficulties with complaint investigation and resolution	☐	☐	☐
Problems with farebox reconciliation	☐	☐	☐
Poor recordkeeping	☐	☐	☐
Difficulties with invoice reconciliation	☐	☐	☐
Other: _____	☐	☐	☐

19. Could you please describe the underlying obstacles associated with your most significant problem(s), if any, and how they were overcome? (Please also provide your insights on how to avoid potential problems.)

_____
_____
_____
_____

20. Did you provide accessible vehicles to any of the non-dedicated service providers? If so, what type and how many?

_____
_____
_____
_____

21. Have you encountered any other problems associated with purchasing or using non-dedicated vehicles?

_____
_____
_____
_____

22. Any other comments?

_____
_____
_____
_____

Appendix D
Detailed Survey Responses

Results of TCRP B-30 Survey

1. Who receives trip requests from customers? (Check all that apply.)

☐ Transit agency (or City, County, or other principal agency responsible for the paratransit service)
☐ Call center contractor or broker
☐ Single operations contractor
☐ Multiple operations contractors

1. Who receives trip requests from the customers? (Check all that apply)	NUMBER OF RESPONSES	% RESPONSES	% QUESTION VALUE
Transit Agency (or City, County, or other principal agency responsible for the paratransit service)	18	56%	49%
Call center contractor or broker	6	18%	16%
Single operations contractor	9	28%	24%
Multiple operations contractors	4	12%	11%

Total # of surveys that answered this question: 32
Total # of survey filings: 34
Response ratio: 94%

2. Who schedules trip requests onto dedicated vehicles and/or assigns trips to non-dedicated service providers? (Check all that apply.)

☐ Transit agency (or City, County, or other principal agency responsible for the paratransit service)
☐ Call center contractor or broker
☐ Single operations contractor
☐ Multiple operations contractors

2. Who schedules trip requests onto dedicated vehicles and/or assigns trips to non-dedicated service providers? (Check all that apply)	NUMBER OF RESPONSES	% RESPONSES	% QUESTION VALUE
Transit Agency (or City, County, or other principal agency responsible for the paratransit service)	17	53%	46%
Call center contractor or broker	4	12%	11%
Single operations contractor	11	34%	30%
Multiple operations contractors	5	15%	14%

Total # of surveys that answered this question: 32
Total # of survey filings: 34
Response ratio: 94%

3. Who operates the paratransit vehicles in your service? (Check all that apply.)

☐ Transit agency (or City, County, or other principal agency responsible for the paratransit service)
☐ Single operations contractor
☐ Multiple operations contractors

3. Who operates the paratransit vehicles in your service? (Check all that apply)	NUMBER OF RESPONSES	% RESPONSES	% QUESTION VALUE
Transit Agency (or City, County, or other principal agency responsible for the paratransit service)	13	40%	31%
Single operations contractor	13	40%	31%
Multiple operations contractors	16	50%	38%

Total # of surveys that answered this question: 32
Total # of survey filings: 34
Response ratio: 94%

4. Please describe this service structure in your own words:

Ann Arbor, MI / Ann Arbor Transportation Authority (AATA – A-Ride)

AATA directly operates four dedicated accessible buses and has a non-dedicated service provider (a taxi company) that also operates 2 accessible vehicles and 35 sedans. AATA takes all trip requests for advance reservations, 1 to 14 days in advance, schedules trips onto its own dedicated fleet, and assigns the rest to the taxi company. (Most non-ambulatory trips requests are assigned to the taxi company.) The taxi company directly receives requests for same-day trips. Over 84% of the 202,000 trips get assigned to the non-dedicated provider, and about 50% of the trips are same-day requests. In FY 2005, we are eliminating directly-operated service and contracting all service. (Chris White, Ann Arbor)

Arlington County, VA / STAR

STAR is local, alternative transportation program for County residents who have been deemed ADA-eligible by WMATA. Arlington County's call center contractor schedules about 25% of the trips into 10 dedicated runs operated by two van operators, and assigns the balance (about 75% of the trips) to one cab company for dispatching onto non-dedicated accessible and non-accessible taxicabs. (Eric Smith, Arlington County/STAR)

Bellingham, WA / Whatcom Transportation Authority (WTA)

WTA provides 95-98% of our paratransit service directly. We contract out a small amount of auxilliary service to a local taxi company on a ride-by-ride basis. We use this auxilliary service mainly to fill gaps when very busy or running late, and to save the expense of keeping a WTA operator on an extended time for one or two trips. (Chris Colburn, Whatcom Transportation Authority)

Boston, MA / MBTA - The Ride

MBTA determines ADA paratransit eligibility, establishes policies, sets service criteria and has turnkey contracts with four private companies for reservations, scheduling, dispatching, vehicle operation and maintenance, personnel hiring and training, reporting, etc. Two of the MBTA's four Paratransit Contractors utilize non-dedicated vehicles. One uses its own taxis to do so (but does not mix passengers), while the other a Non-Profit Social Services Provider uses a number of its accessible vans in mixed service use to supplement its capacity to deliver service under our Contract and to enhance efficiency. (Bob Rizzo, MBTA - The RIDE)

Calgary, AB / Access Calgary

Access Calgary (AC) provides shared-ride door to door service to PWD. AC determines customer eligibility and is responsible for accepting trip requests, scheduling and dispatch. The trips are scheduled to contracted service providers (mix of dedicated/non-dedicated). Vehicles and drivers are provided by the service providers. (Karim Arayani, ACCESS Calgary)

Charlottesville, VA / JAUNT

JAUNT provides paratransit service, as well as rural and human service agency service, in the region. We do subcontract a very small number of overflow trips to a local taxi service. We do all the reservations, scheduling and dispatching of the subcontracted service. Although there is a municipal fixed-route bus system, JAUNT is also owned by the city and four other jurisdictions. (JAUNT, Inc.)

Decatur, IL / Decatur Public Transit System (DPTS)

DPTS operates 6 accessible paratransit vans, and manages a supplementary taxi program in which two contracted taxi companies participate. Participants in our ADA complementary service are given a choice of using our wheel chair accessible vans or taxicabs. Most ambulatory participants – and some non-ambulatory participants whose wheelchair can fit in the trunk or back of a cab -- use the taxicabs. They have a choice of two taxi cab companies, and place the trip request directly with either taxi company. (Richard Foiles, Decatur Public Transit System)

Eau Clair, WI / Eau Claire Transit System

We contract with Abby-Vans, Inc of Neillsville, WI for paratransit. They are a private, for-profit business. Abby began transportation services 15 years ago strictly as a SMV provider. Over the years, they have contracted with various municipalities to provide public transit Shared-Ride taxi, elderly & disabled transportation (85.21 in WI), senior dining transportation and sheltered workshop routes. In 2002, the City of Eau Claire and Eau Claire County joined their paratransit services in a unique arrangement and bid out the service, with Abby-Vans winning the contract. In 2003, Eau Claire County also awarded their MA Common Carrier and Social Services contract to Abby-Vans. So, Abby operates one, centralized office in Neillsville. They have a toll-free number with 14 lines to handle the volume of calls for all the various contracts and programs. Abby utilizes passenger vans (most are lift-equipped) which STAY WITH THE DRIVERS at all times. They hire drivers from all the Counties which they serve. The maintenance is conducted in Neillsville; vans are traded out as needed. So, all programs are combined to be shared ride! This distributes the administrative costs among all programs so Abby can keep their per trip costs competitive. They maximize their dispatching as much as possible. It is conceivable that a MA client, paratransit client and private-pay medical client may all be on the van at the same time. It works very well, and the City of Eau Claire is very pleased with the service. (Gwen Van Den Heuvel, Eau Claire Transit System)

Fitchburg, MA / Montachusett RTA

Montachusett RTA provides fixed route bus service and ADA paratransit in the Fitchburg region, and human service agency paratransit (including Medicaid) throughout Eastern Massachusetts (including Boston and Worcester). Paratransit services are provided by over 200 private carriers. (Mohammed Khan, Montachusett Regional Transit Authority)

Haverhill, MA / Merrimack Valley RTA

We have a total of 17 active vehicles in our fleet. Fourteen are operated by drivers hired by our operating company and three vehicles are operated by a contractor. Non-dedicated vehicles are used only as back-up to help meet peak demands and on occasion for a passenger or passengers whose appointments run late for whatever reason and our dedicated vehicles have reached capacity or are not in the area.The back-up contractor who utilizes non-dedicated vehicles is responsible for vehicle operation, maintenance, operating facility, vehicles, fuel and insurance. They also schedule and dispatch the trips that they are given onto their vehicles. We take the reservations. (Joe Constanzo, MVRTA)

Houston, TX / Houston METRO - METROLift

METROLift contracts with two private transportation operators, First Transit, Inc. and Greater Houston Transportation Company (Yellow Cab) for dedicated van and sedan operations and maintenance. Management, customer service, reservations, scheduling, and dispatch are performed by METRO employees. The two contractors together employ over 400 drivers and fourteen street supervisors/starters for METROLift. This organizational structure allows METRO to maintain control and accountability for the service while saving money on vehicle operations through increased efficency and driver wage savings. METROLift also contracts with five taxicab providers for a supplemental non-dedicated taxicab programs called METROLift Subsidy Program (MSP), a subsidized taxi voucher program available to ADA certified patrons. (Suzie Edrington, Houston METRO)

Indiana, PA / Indigo

Indigo operates and contracts for paratransit service in Indiana County. PA, coordinating ADA, the Medical Assistance Transportation Program (Medicaid), and the senior shared-ride program. Serving a predominantly rural area, Indigo schedules 23% of 60,000 annual trips onto dedicated vehicles operated by Indi Go and assigns the remaining 77% of the trips to a variety of non-dedicated service providers. (Jerry Blair, Indigo)

LaVerne, CA / Pomona Valley Transit Authority (PVTA)

We operate a four-city elderly and disabled paratransit system that carries 95,000-115,000 passengers annually. Our primary contractor receives all trip requests generally one day in advance and subscription. Some same day service is available. The primary contractor pulls out approximately 18 dedicated vans (18 passenger, lift equipped) and handles about 80% of the rides on these vehicles. About 20% of the trips are referred to the on-demand provider (cab company) based primarily on scheduling and efficiency criteria. The dedicated vehicle provider has productivity standards to meet so naturally selects trips based on scheduling efficiencies. The cab provider does 70-100 rides per day using a mix of cabs and accessible minivans. Trips need to be referred to the cab a minimum 45 minutes prior to the pick up time the majority of trips are referred a day in advance, which permits an overbooking. (George Sparks, PVTA)

Los Angeles, CA / Access Services

Access Services contracts with private companies and, in the case of the Santa Clarita and Antelope Valley areas, governmental entities, to provide ADA Complementary Paratransit Service. The contractors schedule, route, dispatch and perform primarily next day trips. They employ the driver, dispatcher, maintenance and reservationist staff and in the case of four of our contracts utilize non-employee taxi drivers. (Shelly Lyons, Access Services Inc.)

Madison, WI / Madison Metro Transit

Trip requests are taken by transit agency staff. Schedulers then schedule non-ambulatory trips onto two sets of dedicated accessible vehicles operated by Metro (13-16 runs per weekday) and Laidlaw (15 runs per weekday), respectively. Overflow non-ambulatory trips are assigned to one of Metro's non-dedicated providers, Transit Solutions. The schedulers then schedule ambulatory trips on the Metro and Laidlaw runs. Overflow ambulatory trips are assigned to Badger Cab or Transit Solutions. (Crystal Martin, Madison Metro Transit)

Medford, OR / Rogue Valley Transit District (RVTD)

RVTD intakes trip requests for its ADA paratransit service called Valley Lift and NEMT requests from Medicaid recipients for a five county region through its "TransLink" brokerage. Non-ambulatory ADA paratransit trips are sent (primarily) to two primary contractors (Yellow Cab and Valley Cab) for scheduling onto 16 dedicated accessible vehicles provided by RVTD. RVTD leases ten of these vehicles to Yellow and the other six to Valley. These two contractors operate these vehicles in a dedicated fashion, although they are allowed to co-mingle on these vehicles Medicaid trips that come through the TransLink brokerage or an occasional private pay trip - but on a space available basis only. All trips served on the 16 vehicles are non-ambulatory. For Yellow Cab, 82% of the trips served on the 10 vehicles are ADA trips, while the remaining 18% are Medicaid trips. For Valley Cab, 76% of the trips served on the 10 vehicles are ADA trips, while the remaining 24% are Medicaid trips. Overflow non-ambulatory ADA trips are sent to two other carriers, City Ride and Mobile Care, operating non-dedicated accessible vehicles of their own. Meanwhile, ambulatory ADA paratransit trips are first sent to two other taxi company contractors (Metro Cab and Ashland Taxi) based on their fleet capacity, for dispatching onto their non-dedicated taxi fleets. If there are other ambulatory ADA trips, they are assigned to Yellow Cab and Valley Cab for dispatching onto their non-dedicated taxi fleets. For the TransLink (Medicaid) brokerage, RVTD serves an estimated 246,205 per year. These are served on 5 public transit systems, 45 private carriers (taxis, wheelchair van and stretcher operators), and volunteer drivers throughout the 5 county region. Of the total 246,205 trips, there are 174,660 trips that involve ambulatory trips. Of these, 133,339 are assigned to (mostly) taxi companies, while 41,321 are served with public transit (and mostly on RVTD) In addition, there are another 57,953 trips served by wheelchair van vendors. With the exception of those Medicaid trips that get scheduled onto the RVTD-provided accessible vehicles, virtually all of the other paratransit trips are being served by non-dedicated service providers operating taxis, sedans and/or accessible vehicles. For ADA and Medicaid trips within the RVTD service area alone, the overall split: 19% of the combined 39,000 trips are scheduled onto the dedicated vehicles, and 81% of the trips are served with non-dedicated vehicles. (Julie Brown, RVTD)

Montgomery County, PA / TransNet and Buxmont Transportation

TransNet is a non-profit corporation which is responsible for the administration and coordination of paratransit services in Montgomery County, PA. We subcontract with 6 private companies to provide multiple services. Individuals register with TransNet for services to determine elgibility and direct service is provided by subcontractors. TransNet takes reservations for the (Medicaid) Medical Assistance Program only due to eligibility verification responsibilities. All other reservations are taken at the subcontractor sites. All trips are scheduled onto vehicles by the subcontrators. Some of our contractors (e.g., Buckmont Transportation) use a mixture of dedicated and non-dedicated vehicles. (Pat Moir, Suburban TransNet)

Medical Assistance Program calls come into our County organization (TransNet). The rest comes into our call takers. About 75% of our 700 weekday trips are scheduled onto dedicated vehicles. The rest (25%) are dispatched onto taxis. (Tony Valenza, Buxmont Transportation)

Nashville, TN / Metropolitan Transit Authority (MTA)

Nashville MTA operates a dedicated fleet (31 peak runs) for its ADA paratransit service, with overflow trips assigned to a taxi company, American Transportation. In addition to ADA trips, the program serves non-ADA trips (about 8% of the total) going to/from origins and/or destinations in broader (1-1/2 mile) service corridors. About 78% of its trips are served with the dedicated fleet, with the balance (22%) assigned to the taxi company. American Transportation does not have

any accessible vehicles, and thus the only non-ambulatory riders that they can take are those that can transfer into a sedan, and whose wheelchair folds up and can fit in a trunk. (Sherri Milliken, MTA)

Oshkosh, WI / Oshkosh Transit

Single taxi contractor, Oshkosh City Cab, provides both ADA paratransit and senior trips on its taxicabs and chair cars for Oshkosh Transit. (Mark Huddleston, Oshkosh Transit)

Ottawa, ON / Para Transpo

Para Transpo is Ottawa's (OC Transpo) door-to-door transportation service for persons with disabilities who are unable to use conventional transit services. The hours of service, geographic areas served and fare structure are similar to OC Transpo's conventional transit system. There are approximately 12,000 persons with disabilities registered with Para Transpo. Approximately 30% of registrants use either a wheelchair or scooter and therefore require a wheelchair accessible vehicle. The remaining 70% of registrants are ambulatory and can usually travel in either a passenger car or a wheelchair accessible vehicle. Private sector operators under contract deliver Para Transpo service and the operations (reservations, scheduling and dispatch functions) and administration (planning and policy development, client eligibility and certification and contract monitoring) are provided in-house. Para Transpo service in the City of Ottawa is currently provided through three distinct contracts, one using dedicated wheelchair-accessible vans; one using dedicated non-accessible sedans and one using non-dedicated/non-accessible taxies. (Pat Larkin, Para Transpo)

Ottawa County, OH / Ottawa County Transportation Agency

We operate a demand response service. We need 24-hours notice on all our trips. We are curb to curb, door to door upon request. We assign trips to non-dedicated vehicles when it is cost effective to do so. (Ottawa Co. Transportation Agency)

Pierce County, WA / Pierce Transit

More productive trips are scheduled on to directly operated and contracted dedicated vehicles (primary contractor). Trips in outlying area are dispatched to our supplemental provider at a zone to zone rate. (Kay Loverak, Pierce Transit)

Raleigh, NC / Accessible Raleigh Transportation (ART)

The ADA paratransit customers call the Accessible Raleigh Transportation office and schedule trips. The ART staff faxes the trip to the ART Taxi Vendors so that the ART Taxi Vendor will know who, what, when, where, and what time to complete the paratransit trip. (Mike Kennon, Accessible Raleigh Transportation)

San Mateo County, CA / SamTrans

We have a single contractor, who subcontracts to taxi in order to meet the peak overflow trips. (Bill Welch, SamTrans)

Santa Clara County, CA / VTA - Outreach

About 10% of our trips are assigned to taxi vendors. (Katey Heatley, Outreach)

Santa Cruz, CA / Santa Cruz Metropolitan Transit District (SCMTD)

Transit District directly operates service with supplemental/overflow service provided by contractors. (Steve Paulson, Santa Cruz Metropolitan Transit District)

Santa Fe, NM / Santa Fe Trails

Eligibility is performed at SF Ride administration and gives instructions on how to use providers for rides. Two contractors receive request and schedule and perform rides. Contractor uses real time dispatching using a mixture of dedicated sedans and non-dedicated taxis. Santa Fe Ride program purchases lift equipped vans and leases them to contractors to perform dedicated paratransit trips. (Annette Granillo, Santa Fe Trails)

Vista, CA / North County Lifeline

North County Lifeline is North County Transit District's ADA paratransit contractor for its ADA paratransit service, called LIFT. North County Lifeline operates a fleet of 34 vehicles out of 4 facilities. In 2003, 8% of the trips were assigned to two taxi subcontractors. (Stacy Zwagers, North County Lifeline, Inc.)

Wausau, WI / Wausau Area Transit System

WATS has a turnkey contract for the provision of ADA paratransit services. (Ann Keenan, Wausau Area Transit System)

Wenatchee, WA / Link Transit - LinkPlus

ADA paratransit. Primarily internal operations with limited use of taxis and Medicaid vans for peak trips and social service agencies. Also have a supplemental taxi program for ADA paratransit customers. (Richard DeRock, Link Transit/LinkPlus)

Worcester, MA / Worcester Regional Transit Authority (WRTA)

Transit agency provides enough paratransit (accessible) vehicles to handle demand that requires accessible vehicles. Other trips are scheduled with other contracted vehicles as an overflow (cabs, livery other w/c vendors), as this is more cost efficiency due to union costs, work rules, etc. of directly operated service. The number of vehicles used by the transit agency have been reduced over the years to improve cost efficiency (25 w/c accessible vans in 1994; 15 in 1998; now 10. (Nicole Rohan, Worcester Regional Transit Authority)

5. Are any of the following types of non-dedicated vehicles used in your service? (Check all that apply.)

☐ Taxicabs
☐ Livery vehicles, including limousines, sedans and black cars
☐ Privately-operated vans that also provide Medicaid or private for-hire wheelchair accessible transportation (e.g., ambulettes, chair cars, cabulances)
☐ Vehicles operated by public or private human service agencies that have some available time or capacity that can be used for paratransit trips.
☐ Accessible school buses
☐ Airport transportation vehicles
☐ Other. Please describe:_____

5. Are any of the following types of non-dedicated vehicles used in your service? (Check all that apply)	NUMBER OF RESPONSES	% RESPONSES	% QUESTION VALUE
Taxicabs	27	81%	43%
Livery vehciles, including limousines, sedans and black cars	5	15%	8%
Privately-operated vans that also provide Medicaid or private for-hire wheelchair accessible transportation	16	48%	25%
Vehicles operated by public or private human service agencies that have some available time or capacity	5	15%	8%
Accessible school buses	2	6%	3%
Aiport transportation vehicles	1	3%	2%
Other	7	21%	11%

Total # of surveys that answered this question: 33
Total # of survey filings: 34
Response ratio: 97%

Others:

1). Accessible Taxicabs (George Sparks-Pomona Valley Transportation Authority)
2). Contractor Vehicles Only (Kevin Kilpatrick-Williamsport Bureau of Transportation)
3). Wheelchair accessible vehicles and sedans. Privately owned. (Jerry Blair-Indi Go)
4). accessible taxi company-owned vehicles (Chris Colburn-Whatcom Transportation Authority)
5). leased wheelchair vans (Julie Brown-Rogue Valley Transit District)

6. What role or roles do non-dedicated vehicles play in your service? (Check all that apply.)

☐ Provide all service
☐ Provide all service in certain areas
☐ Provide all service at certain times of day
☐ Provide particular types of trips (for example to eligibility interviews, to specific agencies, etc.)
☐ Trips are assigned to non-dedicated vehicles as needed to meet peak demand or serve trips that do not fit efficiently onto dedicated vehicle schedules.
☐ Trips are assigned to non-dedicated vehicles to augment the dedicated fleet in low-demand area(s) and/or during low-demand times.
☐ Trips are assigned to non-dedicated vehicles to augment the dedicated fleet to meet spikes in demand caused by special events and/or seasonal fluctuations.
☐ Provide supplementary service directly available to riders (riders may directly call the non-dedicated service provider to use the service).
☐ Other. Please describe: _____

6. What role or roles do non-dedicated vehicles play in your service? (Check all that apply)	NUMBER OF RESPONSES	% RESPONSES	% QUESTION VALUE
Provide all service	6	18%	9%
Provide all service in certain areas	3	9%	5%
Provide all service at certain times of day	5	15%	8%
Provide particular types of trips (e.g., to eligibility interviews, to specific agencies)	1	3%	2%
Trips are assigned to non-dedicated vehicles as needed to meet peak demand or serve trips that do not fit efficiently onto dedicated vehicle schedules	22	66%	33%
Trips are assigned to non-dedicated vehicles to augment the dedicated fleet in low-demand areas and/or during low demand times	12	36%	18%
Trips are assigned to non-dedicated vehicles to augment the dedicated fleet in meet spikes in demand caused by special events and/or seasonal fluctuations	7	21%	11%
Provide supplementary service available to rides (riders may directly call the non-dedicated service provider to use the service)	6	18%	9%
Other	4	12%	6%

Total # of surveys that answered this question: 33
Total # of survey filings: 34
Response ratio: 97%

Other Roles:

1). Contractor Vehicles Only (Kevin Kilpatrick-Williamsport Bureau of Transportation)
2). Provide Medical Assistance Transportation Program (Jerry Blair-Indi Go)
3). Provide service throughout the day for certain contractors. ("Shelly Lyons,-Access Services Inc.)
4). To help increase revenue per Mile and present a lower fare. (Tony Valenza-Buckmont Transportation)

7. Please describe how non-dedicated vehicles are used in your own words:

80% - 100% of Trips Served by Non-Dedicated Vehicles (6)

Eau Claire, WI / Eau Clair Transit – 100%

All service is provided with non-dedicated vehicles, with customers from different programs co-mingled on same vehicle. (Gwen Van Den Heuvel, Eau Claire Transit System)

Oshkosh, WI / Oshkosh Transit – 100%

Taxicabs, vans and school buses provide all paratransit service for Oshkosh Transit. (Mark Huddleston, Oshkosh Transit)

Raleigh, NC / Accessible Raleigh Transportation (ART) – 100%

ADA Paratransit customers call the Accessible Raleigh Transportation (ART) office to schedule a trip. ART staff faxes trip requests to up to 26 different taxi vendors. (Mike Kennon, Accessible Raleigh Transportation)

Wausau, WI / Wausau Area Transit System (WATS) – 100%

All ADA paratransit trips. (Ann Keenan, Wausau Area Transit System)

Santa Fe, NM / Santa Fe Trails – 94% (estimated)

Contractor uses real time dispatching to provide service as taxi company and paratransit trips using sedans. Santa Fe Ride program purchases lift equipped vans and leases them to contractors to perform dedicated paratransit trips. (Annette Granillo, Santa Fe Trails)

Medford, OR / Rogue Valley Transit District - 81%

19% of our trips (ADA and Medicaid) are scheduled by our contractors onto 16 RCTD-provided dedicated vehicles that they operate, while 81% of the trips are assigned to contractors operating non-dedicated vehicles that include accessible vehicles (for overflow non-ambulatory trips) and sedans. (Julie Brown, Rogue Valley Transit District)

50% to 80% of Trips Served by Non-Dedicated Vehicles (6)

Ann Arbor, MI / AATA – 80%

Taxicabs provide more than 80% of trips. They provide service throughout the service area for seniors and people with disabilities who are able to ride in a taxicab. They provide service within Ann Arbor upon request (same-day service). Nearly 50% of trips are same-day service. In addition, they provide shared-ride taxi service for the general public at times when no bus service is operated (11 p.m. - 6 a.m.) (Chris White, AATA)

Indiana, PA / Indigo – 77%

About 23% of our 60,000 ADA, Senior, and Medicaid trips are scheduled onto our own dedicated fleet. The rest are sent to private for-profit and non-profit carriers operating non-dedicated accessible vehicles, and a airport shuttle service. (Jerry Blair, Indigo)

Arlington County, VA / STAR – 75%

Cabs are used to handle the excess trips after the dedicated vehicles as scheduled and filled. Also, on weekends, we use only cabs. (Eric Smith, Arlington County/STAR)

Fitchburg, MA / Montachusett RTA – 75%

Over 200 private operators are given specific trip assignments throughout Eastern Massachusetts. They provide the trips using their own vehicles. About 75% of our trips are provided with non-dedicated vehicles. (Mohammed Khan, Montachusett RTA)

Worcester, MA / WRTA – 63%

About 63% of our trips are served with non-dedicated vehicles. Transit agency serves all trips requiring accessible vehicles; other trips assigned to cabs, livery operators, and other w/c vendors. (Nicole Rohan, Worcester RTA)

Los Angeles, CA / Access Services – 52%

In our West Central, Southern and Eastern service areas non-dedicated vehicles provide a significant number of trips throughout the day. Based on trips statistics from July through September 2004, and estimates from our contractors, approximately 48% of the trips are served with dedicated vehicles, and 52% are served with non-dedicated taxis. (Shelly Lyons, Access Services Inc.)

20% to 50% of Trips Served by Non-Dedicated Vehicles (5)

Madison, WI / Madison Metro Transit – 43%

Trips are assigned to non-dedicated vehicles after the capacity of dedicated vehicles has been filled. (Crystal Martin, Madison Metro Transit)

Calgary, AB / Access Calgary – 40%

40% of our service requirement is provided by non-dedicated vehicles. (Karim Arayani, ACCESS Calgary)

Montgomery Co., PA / TransNet and Buxmont Transportation – 25%

TransNet owns some of the vans and the subcontractors own some vans and all sedans. All vehicles are used primarily in paratransit service. However, three of our six subcontractors also operate call & demand service and the sedans are used for this purpose. Almost all of the vehicles are used for multiple services (senior shared ride, medical assistance, school transportation, mentally handicapped service). All of these services are TransNet contracts with direct service provided by private carriers. Approximately 90% of the subcontractors business consists of our contract work. (Pat Moir, Montgomery County, PA/ TransNet)

About 25% of our 700 weekday trips are served by taxis or on-demand vehicles. They are mostly used for trips that are 20 to 30 miles away and where we have a taxi/on-demand vehicle on call, and where it is more efficient than sending a dedicated vehicle. (Tony Valenza, Buxmont Transportation)

Nashville, TN / MTA – 22%

They are used for overflow purposes when trips cannot be scheduled on MTA vehicles. (Sherri Milliken, Nashville MTA)

LaVerne, CA / Pomona Valley Transportation Authority – 20%

About 20% of our trips are served with non-dedicated taxis. The purpose of the non-dedicated vehicles is to cover trips at peak periods as well as trips at the edges of the service area which would consume a large amount of time on the dedicated vehicles causing on-time and ride time issues. Since a small number of the cabs are accessible low floor minivans, cabs are effective in serving isolated rides particularly for those in mobility devices. The cab is effective in covering the start and end of the day when demand does not justify pulling out a large number of dedicated vehicles. It also enables us to overbook on the dedicated service. (George Sparks, Pomona Valley Transportation Authority)

6% to 15% of Trips Served by Non-Dedicated Vehicles (6)

Ottawa, ON / Para Transpo – 11%

Efficient schedules are developed for the dedicated services and then all remaining trips are forwarded to the non-dedicated taxi contractor. (Pat Larkin, Ottawa/Para Transpo)

Boston, MA / MBTA – The Ride – 10%

Two of the MBTA's four Paratransit Contractors utilize non-dedicated vehicles. One uses its own taxis to do so (but does not mix passengers), while the other a Non-Profit Social Services Provider uses a number of its accessible vans in mixed service use to supplement its capacity to deliver service under our Contract and to enhance efficiency. (Bob Rizzo, MBTA)

San Mateo County, CA / SamTrans –10%

Taxis are used to meet peak demand and at times of very low demand when it is more economical to use taxi than to put out a driver on an 8 hour shift. The two taxi companies serve about 12% of our trips. (Bill Welch, SamTrans)

Santa Clara Co., CA / VTA – Outreach – 10%

About 10% of our trips are assigned to taxi vendors. (Katey Heatley, Outreach)

Haverhill, MA / Merrimack Valley Regional Transit Authority – 9%

Non-dedicated vehicles are used as back-up to meet peak demands. (Joe Constanzo, MVRTA

Vista, CA / North County Lifeline – 8%

Mainly for peak overflow trips: also used for late dialysis trips (between 5 and 7pm) when there are not a lot of LIFT vehicles in operation. (Stacy Zwagers, North County Lifeline)

1% to 5% of Trips Served by Non-Dedicated Vehicles (6)

Santa Cruz, CA / SCMTD – 5%

Limited use of non-dedicated vehicles when ride doesn't fit efficiently into dedicated schedule. (Steve Paulson, Santa Cruz Metropolitan Transit District)

Pierce County, WA / Pierce Transit, WA – 4%

About 4% of our trips are assigned to supplemental (non-dedicated) service provider. These are mainly trips in outlying areas, and do not fit in well on dedicated. (Kay Loverak, Pierce County Public Benefit Authority)

Charlottesville, VA / JAUNT – 3%

We use taxis for less than 3% of our trips - a small portion of the paratransit and welfare-to-work trips. (JAUNT, Inc.)

Bellingham, WA / WTA – 2%

We contract out a small amount of auxiliary service to a local taxi company on a ride-by-ride basis. Almost all our use of contracted service is in the small urban area but we use it occasionally to handle trips in outlying areas. When doing so, we pay agreed-upon minimum charges if the trips in those areas are short. (Chris Colburn, Whatcom Transportation Authority)

Wenatchee, WA / Link Transit – 2%

Limited use of taxis and Medicaid vans for peak trips and for long, inefficient trips. (Richard DeRock-Link Transit/LinkPlus)

Ottawa County, OH / OCTA – 1%

We assign trips to non-dedicated vehicles when it is cost effective to do so. (Director, Ottawa County, OH)

Supplemental Service Provided by Non-Dedicated Vehicles (3)

Decatur, IL / DPTS – 74% of total trips taken by ADA customers

Participants in our ADA complementary service are given a choice of using our wheel chair accessible vans or taxi cabs. Most ambulatory participants use the taxicabs. They have a choice of two taxi cab companies. The participants call directly to the taxi company to schedule their pick ups. (Richard Foiles, Decatur Public Transit System)

Houston, TX / Houston METRO – 16% of total trips taken by ADA customers

METROLift contracts with five taxicab providers for a supplemental non-dedicated taxicab programs called METROLift Subsidy Program (MSP), a subsidized taxi voucher program available to ADA certified patrons. The patron pays the first $1.00 of the taxicab meter, METRO pays up to the next $8.00; and, the patron pays any amount over a $9.00 meter fare. Each taxicab provider is given a specified number of trip voucher per day which are issued during specific time periods of the day (6AM, 10AM, 2PM, 6PM, and guaranteed late night between 10PM and 6AM. Customers call the taxis directly to arrange a ride on a first call first ride basis. Once the vouchers are allocated for a time slot the patrons are refused service and must call at the next slot. Each rider is guaranteed a ride home at any time if they receive a voucher on their origin trip. METRO is given a 4% discount on their meter fare portion. (Suzie Edrington, Houston METRO)

Wenatchee, WA / Link Transit – 14% of total trips taken by ADA customers

Taxis also used for supplemental trips (Richard DeRock, Link Transit/LinkPlus)

8. Please characterize the service area(s) in which the non-dedicated service is provided? (Check all that apply.)

☐ Metropolitan (250,000 population or more)
☐ Small Urban (50,000 population or more)
☐ Suburban (including part of metropolitan areas)
☐ Rural

8. Please characterize the service area(s) in which the non-dedicated service is provided? (Check all that apply)	NUMBER OF RESPONSES	% RESPONSES	% QUESTION VALUE
Metropolitan (250,000 or more population)	12	36%	24%
Small urban (50,000 or more population)	16	48%	32%
Suburban	11	33%	22%
Rural	11	33%	22%

Total # of surveys that answered this question: 33
Total # of survey filings: 34
Response ratio: 97%

Metropolitan (12) Arlington Co./STAR, Boston/MBTA, Calgary/Access Calgary, Fitchburg/Montachusett RTA, Houston/Houston METRO, LaVerne /PVTA, Los Angeles/Access Services, Madison/Madison Metro, Nashville/MTA, Ottawa/Para Transpo, Raleigh/ART, Santa Clara Co./Outreach,

Small Urban (15) Ann Arbor/AATA, Bellingham/WTA, Charlottesville/JAUNT, Decatur/DPTS, Fitchburg, MA/Montachusett RTA, Haverhill/Merrimack Valley RTA, Medford /RVTD, Montgomery Co./Buxmont Transportation, Oshkosh/Oshkosh Transit, San Mateo Co./Sam Trans, Santa Cruz/SCMYD, Santa Fe/Santa Fe Trails, Wausau/WATS, Wenatchee/Link Transit, Worcester/WRTA

Suburban (11) Arlington Co./STAR, Charlottesville/JAUNT, Fitchburg/Montachusett RTA, Montgomery Co./TransNet and Buxmont Transportation, Nashville/MTA, Pierce Co./Pierce Transit, Santa Cruz/SCMTD, Vista/North County Lifeline, Whatcom/WTA

Rural (11) Charlottesville/JAUNT, Fitchburg/Montachusett RTA, Montgomery Co./Buxmont Transportation, Indiana Co./Indigo, Oshkosh/Oshkosh Transit, Pierce County/Pierce Transit, Ottawa Co./OCTA, Santa Cruz/SCMTD, Vista/North County Lifeline, Wenatchee/Link Transit, Whatcom/WTA

9. What payment formulas and rates apply to your contracted services?
(If you have multiple contracts of each type, please provide a range or average for each type of contract.)

9a. Dedicated Vehicles
Per vehicle hour:_____ + Per month:_____
Per vehicle mile:_____ + Per month:_____
Per trip:_____ + Per month:_____
Other:_____

Dedicated Vehicles - Per Vehicle Hour Rates (+ Fixed Rate Per Month) (12)

$48.00/hour (van), $38.70 per hour (sedan) (Canadian) (Pat Larkin, Ottawa/Para Transpo)

$45.00/hour (Crystal Martin, Madison Metro Transit)

$44.00/hour **(Canadian)** (Karim Arayani, ACCESS Calgary)

$42.50/hour (Steve Paulson, Santa Cruz Metropolitan Transit District)

$39.12/hour - $31.43/hour + $28.6K-$31.5K per month (Shelly Lyons, LA/Access Services)

$36.00/hour (Kay Loverak, Pierce County Public Benefit Authority)

$35.00/hour (Nicole Rohan, Worcester Regional Transit Authority)

$35.00/hour (Tony Valenza, Buxmont Transportation)

$32.00/hour (Eric Smith, Arlington Co./STAR)

$31.18/hour (Chris White, Ann Arbor)

$25.00/hour (Director, Ottawa County, OH)

$22.00 plus fares collected + $42,000 per month (George Sparks, PVTA)

Dedicated Vehicles – Per Vehicle Mile Rates (+ Fixed Rate Per Month) (4)

$2.50/mile (Tony Valenza, Buxmont Transportation)

$2.48/mile - $2.25/mile + $63.3K-$129.7K per month (Shelly Lyons, LA/Access Services)

$1.80/mile (Director, Ottawa County Transportation Agency)

$1.11/mile (Jerry Blair, Indigo)

Dedicated Vehicles – Per Trip Rates (+ Fixed Rate Per Month) (5)

$35.00/trip - $5.00/trip (Pat Moir, Montgomery County/TransNet)

$29.00/trip - $18.50/trip + $0 to $49.6K per month (Shelly Lyons, Direc-Access Services Inc.)

$25.00/trip - $18.00/trip per Registered Customer (excludes PCA's, etc) plus a fixed cost for admin/ overhead range of $250k to $400k per month per scale of operation (2 deliver 30-40,000 trips/mo and 2 deliver 20-25,000 trips per month) (Bob Rizzo, Boston/MBTA)

$12.51/trip (Annette Granillo, Santa Fe Trails)

$12.50/trip (Director, Ottawa County Transportation Agency)

Dedicated Vehicles – Other Rates (2)

$35.42/rev. hour + $0.5531/per mile (Stacy Zwagers, North County Lifeline)

$4.79/ "live mile" (miles with passengers on board) as calculated by Trapeze (Katie Heatley, OUTREACH of Santa Clara County)

9b. Non-Dedicated Vehicles – Ambulatory Trips :

Ambulatory
Per pick-up ("drop change")_____ + Per-mile_____
Per trip:_____
Other:_____

Non-Dedicated Vehicles – Ambulatory Trips -- Drop Charge + Per Mile Rate (15)

$6.00 per drop + $2.25 per mile (Steve Paulson, Santa Cruz Metropolitan Transit District)

$3.00 per drop + $2.20 per mile (Julie Brown, Rogue Valley Transit District)

$3.00 - $2.50 per mile (Tony Valenza, Buxmont Transportation)

$2.85 per mile (Mike Kennon, Accessible Raleigh Transportation)

$2.52 per drop + $1.84 per mile + $10,495 per month administrative fee and a $1.50 per no show (Chris White, Ann Arbor)

$2.50 per drop + $2.50 per mile; $1.80 per drop + $2.10 per mile (Pat Moir, Montgomery Co., PA/TransNet)

$2.50 per drop + $1.23 per kilometer **(Canadian $)** (Karim Arayani, ACCESS Calgary) + $0.40 cents/minute boarding time for multiple pickups

$2.00 per drop + $2.20 per mile (Yellow) and $1.60 per drop plus $2.20 per mile (Courtesy Cab) (Stacy Zwagers, North County Lifeline)

$2.00 per drop + $1.70 per mile; minimum charge $5.00 (Sherri Milliken, Metropolitan Transit Authority)

$2.00 per drop + $1.15 per mile less the passenger charge of $1.50 (Richard Foiles, Decatur Public Transit System)

$2.00/mile (Eric Smith, Arlington Co./STAR)

$1.90 per drop + $1.90 per mile (George Sparks, Pomona Valley Transportation Authority)

$1.80 per drop + $2.00 per mile also $5.00 no show fee & 14% admin fee on top of approved monthly base charges (including wc trips) (Chris Colburn, Whatcom Transportation Authority)

$1.60 per mile out of county (Director, Ottawa County, OH)

$1.00 per mile (Jerry Blair, Indigo)

Non-Dedicated Vehicles – Ambulatory Trips – Per Trip Rate (9)

$25.00-$18.00/trip per Registered Customer (excludes PCA's, etc) (Bob Rizzo, Boston/MBTA)

$16.00/trip (effective June 2005) (George Sparks, Pomona Valley Transportation Authority)

$15.00-$7.00/trip (Nicole Rohan, Worcester Regional Transit Authority)

$13.75/trip (Crystal Martin, Madison Metro Transit)

$13.70/trip (Ann Keenan, Wausau Area Transit System)

$11.00/trip + $2.00 co-pay (Gwen Van Den Heuvel, Eau Claire Transit System)

$7.00/trip (Mark Huddleston, Oshkosh Transit)

$7.00/trip (average) (Director, Ottawa County Transportation Agency)

$3.00/person for group trips, no duplicate mileage (Julie Brown, Rogue Valley Transit District)

Non-Dedicated Vehicles – Ambulatory Trips – Other Rates (6)

Average $29.50 per trip is based on a flat payment for travel between zones, each zone pair has a different rate (Kay Loverak, Pierce County Public Benefit Authority)

Zone charges from $10.00 + $70.00 + fixed subsidy (Richard DeRock, Wenatchee/Link Transit

According to zone (Joe Constanzo, Merrimack Valley Regional Transit Authority)

$2.43 per live mile as calculated by Trapeze (Katie Heatley, OUTREACH of Santa Clara County)

MSP program-paid on a meter fare basis. The patron pays the first $1.00, METRO pays up to the next $8.00, and the patrons pays any amount over a $9.00 meter fare. METRO is given a 4% discount on their meter fare portion. (Suzie Edrington, Houston METRO)

One provider gets $0.20 per mile supplement for independent taxi trips. (Shelly Lyons, LA/Access Services)

9c. Non-Dedicated Vehicles – Non-Ambulatory Trips:

Non-ambulatory (wheelchair trips)
Per pick-up ("drop change")_____ + Per-mile_____
Per trip:_____
Other:_____

Non-Dedicated Vehicles – Non-Amb. Trips -- Drop Charge + Per Mile Rate (9)

$20.00 per drop + $2.00 per mile + $10.00 no-show fee (Chris Colburn, Whatcom Transportation Authority)

$6.00 per drop + $2.25 per mile (Steve Paulson, Santa Cruz Metropolitan Transit District)

$5.00 per mile (Eric Smith, Arlington Co./ STAR)

$3.50 per drop + $1.23 per kilometer + 40 cents/minute boarding time for multiple pickups **(Canadian)** (Karim Arayani, ACCESS Calgary)

$3.00 per drop + $2.20 per mile (Julie Brown, Rogue Valley Transit District)

$2.52 per drop + $1.84 per mile + $1.50 per wheelchair/walker (Chris White, Ann Arbor)

$2.00 per drop + $1.70 per mile; minimum $5.00 (Sherri Milliken, Nashville MTA)

$1.90 per drop + $1.90 per mile (George Sparks, Pomona Valley Transportation Authority)

$1.10 per mile (Jerry Blair, Indigo)

Non-Dedicated Vehicles – Non-Ambulatory Trips – Per Trip Rate (6)

$27.00 per trip (Crystal Martin, Madison Metro Transit)

$26.00 - $12.00 per trip (Nicole Rohan, Worcester Regional Transit Authority)

$25.00 - $18.00 per trip per Registered Customer (excludes PCA's, etc) (Bob Rizzo, Boston/MBTA)

$13.70 per trip (Ann Keenan, Wausau Area Transit System)

$13.50 per trip (Mark Huddleston, Oshkosh Transit)

$3.00 per person for group trips, no duplicate mileage (Julie Brown, Rogue Valley Transit District)

Non-Dedicated Vehicles – Non-Ambulatory Trips – Other Rate (3)

$45.00 per hour (Tony Valenza, Buxmont Transportation

$20.00-$35.00 per hour (Nicole Rohan, Worcester Regional Transit Authority)

METRO pays an additional $2.00 per voucher for wheelchair accessible taxicab trips. (Suzie Edrington-Houston METRO)

Zone charges from $10.00 to $78.00 + fixed subsidy (Richard DeRock, Wenatchee/Link Transit)

10. Why did you select that rate structure for non-dedicated service?

Mirrors Taxi and/orLivery Rates (12)

Ann Arbor, MI / AATA

It fit the taxi company's cost structure. That is, their cost varies by mile, and a cost for each pickup. Their administrative cost is relatively fixed. (Chris White, AATA)

Bellingham, WA / WTA

The drop charge & mileage rate charges have generally been close to the rates charged to the general public. Over the three year term just ended September 30th, charges to general public had risen above the base rates of our contract. The administrative fee was agreed upon as a way to address WTA's additional requirements of the contractor, such as random drug testing for drivers, higher insurance limits, & reporting requirements. (Chris Colburn, Whatcom Transportation Authority)

Calgary, AB / Access Calgary

Current meter rate system as regulated by the Livery bylaws. (Karim Arayani, ACCESS Calgary)

Decatur, IL / DPTA

It copied the rate structure for taxi cabs as approved by the City of Decatur (Richard Foiles, Decatur)

Houston, TX / Houston METRO

Easy for taxicab drivers to follow meter rates and promotes short trips to be taken on the non-dedicated service. (Suzie Edrington, Houston METRO)

LaVerne, CA / PVTA

We use a mileage rate because it is consistent with the way cabs bill and we wanted to use the cabs on-demand and not pay for dead time. (George Sparks, Pomona Valley Transportation Authority)

Madison, WI / Madison Metro Transit

Offered vendors choice in bidding process. (Crystal Martin, Madison Metro Transit)

Medford, OR / RVTD

Rate structure based on Taxi-rate (Julie Brown, Rogue Valley Transit District)

Montgomery Co., PA / TransNet

These fares are regulated by the Pa. Public Utility Commission. (Pat Moir, Montgomery Co., PA/Suburban TransNet)

Raleigh, NC / ART

The City of Raleigh Taxi Inspectors sets the rate for the taxi companies. (Mike Kennon, Raleigh)

San Mateo Co., CA / SamTrans

Flag drop and $.50 "on-time" incentive fee. (Bill Welch, SamTrans' Redi-Wheels)

Vista, CA / North County Lifeline

General public meter rates for both companies (Stacy Zwagers, North County Lifeline)

Improve Cost Efficiency and/or Rate of Lowest Bidder (9)

Arlington Co. / STAR

Only pay for revenue service - no deadhead costs (Eric Smith, Arlington Co./STAR)

Eau Claire / Eau Claire Transit

It was the lowest bid. (Gwen Van Den Heuvel, Eau Claire Transit System)

Fitchburg / Montachusett RTA

Competitive bidding process. (Mohammed Khan, Montachusett RTA)

Haverhill, MA / MVRTA

Because it is cost efficient. (Joe Constanzo, Merrimack Valley RTA)

LaVerne, CA / PVTA

We are moving to a fixed per trip rate to make the cab management responsible for monitoring shared ride taxi routing rather than the agency. (George Sparks, PVTA)

Ottawa / Para Transpo

Options were given in the RFP and this is the rate structure used by the successful bidder. (Pat Larkin, Ottawa)

Ottawa County, OH / OCTA

This is the company's fare structure (Director, Ottawa County Transportation Agency)

Wenatchee, WA / Link Transit

Fixed subsidy for supplemental service-limits exposure (Richard DeRock, Link Transit/LinkPlus)

Worcester, MA / WRTA

We use a different rate structure depending on availablilty of vehicles vs. demand for service. If I need the vehicles I pay by the hour and create the schedules otherwise I use trip cost. (Nicole Rohan, Worcester Regional Transit Authority)

Administrative Ease (6)

Arlington Co. / STAR

Because it's easier to use. (Eric Smith, Arlington Co./STAR)

Charlottesville, VA / JAUNT

Simplicity. (JAUNT)

Oshkosh, WI / Oshkosh Transit

We bid it out as a "per ride" cost because that is the easiest to track for accuracy, and it eliminates the temptation to put additional miles on to increase the cost of the trip. (Mark Huddleston, Oshkosh Transit)

Pierce County, WA / Pierce Transit

Easy to administrate-low change of fraud (Kay Loverak, Pierce County Public Benefit Authority)

Santa Cruz, CA / SCMTD

Ease of billing/monitoring (Steve Paulson, Santa Cruz Metropolitan Transit District)

Wenatchee, WA / Link Transit

Ease of Administration- (zone charges) (Richard DeRock, Link Transit/LinkPlus)

Same Rate for Dedicated & Non-Dedicated Service (3)

Boston, MA / MBTA The Ride

Product of negotiations and RFP design to address fixed costs and operations costs separately. Also, MBTA decided to purchase 90% of dedicated fleet over 5-year Contract term starting in FY05. FY00-04 Contractors owned 70% of fleet. (Bob Rizzo, MBTA the RIDE Program)

Los Angeles, CA / Access Services

Rate structure same as for dedicated service. (Shelly Lyons, Access Services Inc.)

Santa Fe, NM / Santa Fe Trails

Currently we provide payment to contractor on a per trip bases. Verification of completed trip on dedicated or non-dedicated vehicles are reviewed and completed. (Annette Granillo, Santa Fe Trails)

Previous Structure (2)

Arlington Co., VA / STAR

Rate structure was in place when I came in 1997. (Eric Smith, Arlington Co./STAR)

Nashville, TN / MTA

Non-dedicated vehicles were already structured when MTA assumed service of taxi overflow. (Sherri Milliken, Nashville MTA)

Share Risk (1)

Boston, MA / MBTA The Ride

Product of negotiations and RFP design to address fixed costs and operations costs separately. Also, MBTA decided to purchase 90% of dedicated fleet over 5-year Contract term starting in FY05. FY00-04 Contractors owned 70% of fleet. (Bob Rizzo, MBTA The RIDE Program)

11. Do you have a contract with the non-dedicated service provider(s)? If yes, what is the contract term? Could you please send us a copy of the contract?

3 to 8 Year Contracts, including extensions (14)

Arlington Co., VA / STAR

Yes, for 5 years (all 3 carriers have same time terms). I'll have to check on the contract sending. (Eric Smith-STAR)

Bellingham, WA / WTA

Yes. The present contract had a three-year term, with two one-year extension options. We are now in the first one year extension. I'll try to send a copy. (Chris Colburn, Whatcom Transportation Authority)

Boston, MA / MBTA The Ride

Yes. 2 of 4 Contractors operate both dedicated and non-dedicated vehicles under same 5-year Contract. (Bob Rizzo, MBTA the RIDE Program)

Calgary, AB / Access Calgary

Yes. 3 year contracts (Karim Arayani-ACCESS Calgary)

Eau Claire, WI / Eau Claire Transit

Yes. We bid a two-year contact with the extension to renew up to three years. We are currently in year 3. (Gwen Van Den Heuvel, Eau Claire Transit System)

Houston, TX / Houston METRO

Yes. We contract with four taxicab companies. The term is five years. A copy will be sent to your address listed. (Suzie Edrington, Houston METRO)

LaVerne, CA / PVTA

Yes. Two years with options for up to eight, one year terms. Will send copy. (George Sparks-Pomona Valley Transportation Authority)

Los Angeles, CA / Access Services

Yes. Two of the four major service areas (i.e. excluding North County) are contracted to taxicab cooperatives. In one area, the majority of trips are contracted to a taxicab cooperative and a small number of trips is performed by a transportation management firm. The fourth area is contracted to a transportation management firm that has a taxicab subcontractor. The contractors operate a mix of dedicated and non-dedicated vehicles. (Shelly Lyons, Access Services Inc.)

Madision, WI / Madison Metro

Yes. 5 year terms. (Crystal Martin-Madison Metro Transit)

Oshkosh, WI / Oshkosh Transit

Yes, we have contracts. The term is for 5 years. (Mark Huddleston, Oshkosh Transit)

Ottawa, ON / Para Transpo

Yes. The contract term is July 2002 to June 2005. A copy of the RFP will be e-mailed to you separately. (Pat Larkin, Para Transpo)

Santa Clara Co., CA / VTA - Outreach

Yes. 5/1/02 thru 6/30/04 with two one-year extensions and another six-month extension (OUTREACH of Santa Clara County)

Wausau, WI / WATS

Yes. The original contact was 3 years and we've negotiated 2 additional years. (Ann Keenan, Wausau Area Transit System)

Worcester, MA / WRTA

Yes. 3 years with option to extend annually for 2 years. In the process of rebidding. Will send latest contract after bid completed. (Nicole Rohan, Worcester Regional Transit Authority)

1 to 2 Year Contracts (4)

Charlottesville, VA / JAUNT

Yes. One-year contract. We issue an RFP every year. (JAUNT, Inc.)

Medford, OR / RVTD

Yes. Contract is 1 year, copy attached (Julie Brown, Rogue Valley Transit District)

Montgomery Co., PA / TransNet

Yes. All contracts are 1 year, July1-June 30, to match government funding cycles. (Pat Moir, TransNet)

Ottawa Co., OH / OCTA

Yes. 1 year (Ottawa County Transportation Agency)

Contracts – No Expiration Date (1)

Decatur, IL / DPTS

Yes. The term is on going until one party or the other gives notice. Yes (Richard Foiles, Decatur Public Transit System)

Contracts – No Length Specified (4)

Fitchburg, MA / Montachusett RTA; Haverhill, MA / MVRTA; Santa Cruz, CA / SCMTD; Santa Fe, NM / Santa Fe Trails

Subcontracts – No Length Specified (1)

San Mateo Co., CA / SamTrans

The contractor subcontracts with taxi. (Bill Welch, SamTrans' Redi-Wheels)

In the Process of Contracting – No Length Specified (1)

Nashville, TN / MTA

We are in the bid process for usage of non-dedicated service providers. (Sherri Milliken, Metropolitan Transit Authority)

Letters of Agreement (1)

Wenatcheee, WA / Link Transit

A letter of agreement (Richard DeRock, Link Transit/LinkPlus)

No Contract (2)

Indiana, PA / Indigo; Raleigh, NC / ART

Discontinuing Non-Dedicated Service (2)

Ann Arbor, MI / AATA

The contract ended on September 30, 2004. A copy of the contract will be sent. (Chris White, AATA)

Pierce County, WA / Pierce Transit

Contract expired Sept. 30, 04. Agency decided to absorb this service into hourly routes rather than renew the contract. (Kay Loverak, Pierce County Public Benefit Authority)

12. Please provide summary statistics for your dedicated and non-dedicated service for the most recent full fiscal year:

	Dedicated	Non-dedicated	Notes
Total active vehicles			
Passenger Trips			
Vehicle revenue hours			
Vehicle revenue miles			
Operating Cost			
Number of providers			

13. What costs are included/excluded in "Operating Cost" identified in Question #12?

	Dedicated		Non-dedicated	
	Included	Excluded	Included	Excluded
Reservations	☐	☐	☐	☐
Scheduling	☐	☐	☐	☐
Dispatching	☐	☐	☐	☐
Vehicle operation	☐	☐	☐	☐
Maintenance	☐	☐	☐	☐
Operating facility	☐	☐	☐	☐
Vehicles	☐	☐	☐	☐
Fuel	☐	☐	☐	☐
Insurance	☐	☐	☐	☐

14. Why do you use non-dedicated vehicles?

To Improve Cost Efficient/Cost Control (23)

Ann Arbor, MI / AATA

Cost. (Chris White, AATA)

Arlington Co., VA / STAR

Costs less for cabs (Eric Smith, STAR)

Bellingham, WA / WTA

Primarily to enhance cost-effectiveness during low-demand hours. (Chris Colburn, Whatcom Transportation Authority)

Boston, MA / MBTA-The Ride

The last 6 cost categories for non- dedicated in #13 above, while included in costs, are only a fraction of the total costs that would be incurred to gain the additional capacity. So it helps contain costs in those instances. (Bob Rizzo, MBTA The RIDE)

Calgary, AB / Access Calgary

Lower cost. (Karim Arayani, ACCESS Calgary)

Fitchburg, MA / Montachusett

Use private/Commercial Operators to provide Brokerage Service spreading over 2/3 of the State. We select operators based upon competitive bidding process that includes drivers and vehicles. (Mohammed Khan, Montachusett RTA)

Houston, TX / Houston METRO

The MSP service takes many trips off of the traditional paratransit services resulting in a cost savings for the agency (the taxi trips are cheaper than the paratransit trips). (Suzie Edrington, Houston METRO)

LaVerne, CA / PVTA

To improve efficiency. We also use it to increase dedicated vehicle productivity. (George Sparks, PVTA)

Los Angeles, CA / Access Services

Because of the dynamic nature of our service and the size of our service area, not to mention budget constraints and the cost of operating a service based on a fully dedicated fleet we have chosen to make the use of non-dedicated vehicles part of our service model. (Shelly Lyons, Access Services Inc.)

Madison, WI / Madison Metro

It is most cost efficient for the transit utility. (Crystal Martin, Madison Metro Transit)

Montgomery Co., PA / TransNet and Buxmont Transportation

Non-dedicated vehicles are used by carriers when dedicated vehicles are not available or it is more cost effective to use a non-dedicated vehicle (sedan). (Pat Moir, TransNet)

Oshkosk, WI / Oshkosh Transit

The service providers all perform transportation other than just our programs. The service area does not warrant the additional expense it would cost to have dedicated vehicles. (Mark Huddleston, Oshkosh Transit)

Ottawa, ON / Para Transpo

The use of non-dedicated vehicles reduces the overall cost of delivering the service. While the cost per trip of the non-dedicated service may be high, had the trips been delivered by hourly rate dedicated vehicles, the costs would have been higher. (Pat Larkin, Para Transpo)

Ottawa County, OH / OCTA

Trips are assigned to non dedicated vehicles when it is cost effective to do so. (Director, OCTA)

Pierce County, WA / Pierce Transit

For long distance, unproductive trips (Kay Loverak, Pierce County Public Benefit Authority)

San Mateo County, CA / SamTrans

To meet demand at "peak of the peak" times and at times when it is mere economical to put out a taxi than a driver on an 8-hour shift. (Bill Welch, SamTrans' Redi-Wheels)

Santa Clara Co., CA / VTA - Outreach

Lower operating cost per mile with good service quality as long as economic conditions in the taxi industry are favorable. (OUTREACH of Santa Clara County)

Santa Cruz, CA / SCMTD

When it would be completely inefficient to provide a ride on a dedicated vehicle. (Steve Paulson, Santa Cruz Metropolitan Transit District)

Santa Fe, NM / Santa Fe Trails

The contractors are able to utilize the vehicles that are performing other programs or private fares for paratransit rides. This is efficient and subsidy payments are low. (Annette Granillo, Santa Fe Trails)

Vista, CA / North County Lifeline

Less expensive in early evening (compared to extending runs or putting a new run into service). (Stacy Zwagers, North County Lifeline, Inc.)

Wausau, WI / WTA

The theory is that by combining our trips with other trips, the contractor's efficiency is improved and our cost per trip it reduced. (Ann Keenan, Wausau Area Transit System)

Wenatchee, WA / Link Transit

Cost control. (Richard DeRock, Link Transit/LinkPlus)

Worcester, MA / WRTA

Cheaper. (Nicole Rohan, Worcester Regional Transit Authority)

To Improve Capacity (e.g., at Peak Periods) / Insufficient Dedicated Fleet Capacity / Insufficienf Funds to Purchase Vehicles (11)

Boston, MA / MBTA

Expanded capacity, assist in off loading trips if route behind schedule, reduced costs for this extra capacity gets factored in when negotiating with the 2 companies that offer this as an additional capability to their overall services. (Bob Rizzo, MBTA the RIDE Program)

Charlottesville, VA / JAUNT

The non-dedicated fleet (i.e. subcontracted taxis) helps with overflow. (JAUNT, Inc.)

Decatur, IL / DPTS

Decatur Public Transit System, a division of the City of Decatur, IL does not have the capital funds to acquire the necessary fleet to handle all of the demand. (Richard Foiles, Decatur Public Transit System)

Haverhill, MA / MVRTA

Non-dedicated vehicles are used only as back-up to help meet peak demands. (Joe Costanzo, Merrimack Valley Regional Transit Authority)

Indiana, PA / Indigo

Capacity for the Medical Assistance Transportation Program (Jerry Blair, Indigo)

LaVerne, CA / PVTA

We use it to increase dedicated vehicle productivity and therefore capacity. (George Sparks. PVTA)

Nashville, TN / MTA

Taxi overflow for day to day operations of paratransit service (when there are not enough vans to transport consumers). (Sherri Milliken, Metropolitan Transit Authority)

Ottawa County, OH / OCTA

Trips are assigned to non dedicated vehicles as needed to meet peak demand. They are also used when trips do not fit into dedicated vehicles routes. (Director, Ottawa County Transportation Agency)

Raleigh, NC / ART

There are no vehicle, maitenance, operating facility, fuel, or insurance charges to the city of Raleigh (Mike Kennon, ART)

Santa Cruz, CA / SCMTD

Peak overflow trips. (Steve Paulson,-Santa Cruz Metropolitan Transit District)

Vista, CA / North County Lifeline

Not enough capacity in peak periods (Stacy Zwagers, North County Lifeline, Inc.)

To Improve Level of Service / To Enhance Ability to Handle Demand Increases (7)

Ann Arbor, MI / AATA

Flexibility. (Chris White, AATA)

Bellingham, WA / WTA

Primarily as an overflow valve. (Chris Colburn, Whatcom Transportation Authority)

Calgary, AB / Access Calgary

More flexibility and able to react quicker if demand exceeds projections (Karim Arayani, ACCESS Calgary)

Houston, TX / Houston METRO

The taxicab backup program provides a means to meet spikes in demand and provide better ontime performance when interruptions in service occur. (Suzie Edrington, Houston METRO)

LaVerne, CA / PVTA

To improve on-time performance particularly at peak, and to serve remote locations, hard to reach facilities and people with special needs. We also use it to improve our service quality and responsiveness throughout the service area. (George Sparks, Pomona Valley Transportation Authority)

Los Angeles, CA / Access Services

Because of the dynamic nature of our service and the size of our service area, not to mention budget constraints and the cost of operating a service based on a fully dedicated fleet we have chosen to make the use of non-dedicated vehicles part of our service model. (Shelly Lyons, Access Services Inc.)

Medford, OR / RVTD

Contractors provide a level of service that traditional union labor may or may not provide. Contractors presently provide door to door service vs. curb to curb. (Julie Brown, Rogue Valley Transit District)

Same-Day Service / Expanded Service Hours (2)

Arlington, VA / STAR

Can schedule same day for problems. (Eric Smith, STAR)

Houston, TX / Houston METRO

The non-dedicated taxi subsidy program (METROLift Subsidy Program-MSP) provides same day service and late night service not provided by the dedicated Paratransit service. (Suzie Edrington, Houston METRO)

Customer Preference (2)

Houston, TX / Houston METRO

Many customer prefer to use the taxi service. (Suzie Edrington, Houston METRO)

Santa Clara Co., CA / VTA - Outreach

Customers in South County prefer to receive the majority of service with these vehicles. (OUTREACH of Santa Clara County)

Compliance with ADA and Federal Regulations (2)

Charlottesville, VA / JAUNT

The non-dedicated fleet (i.e. subcontracted taxis) follows old federal guidelines to use private enterprise in the provision of public transportation (JAUNT, Inc.)

Wenatchee, WA / Link Transit

ADA compliance (Richard DeRock, Link Transit/LinkPlus)

15. Following is a list of things sometimes claimed as advantages of using non-dedicated vehicles. To what extent is the ability to do these things an advantage of using non-dedicated vehicles for you?

	Major Adv.		Minor Adv.		Not an Issue	
More responsive to fluctuations in demand	24	73%	5	15%	4	12%
Improve over-all cost efficiency	20	61%	9	27%	4	12%
Eliminate/reduce denials	18	55%	6	18%	9	27%
Improve productivity of dedicated fleet	17	53%	5	16%	10	31%
More efficiently serve low-demand times	15	45%	9	27%	9	27%
More efficiently serve outlying areas	13	41%	8	25%	11	34%
Better manage growth	13	39%	10	30%	10	30%
Provide same-day and/or will-call service	8	24%	11	33%	14	42%
Expand service w/o buying new vehicles	8	24%	10	30%	15	45%
Overbook trip requests	6	18%	8	24%	19	58%
Coordinate with human service transportation	4	12%	6	18%	23	70%
Respond to customers' desire for car-like service	2	6%	9	27%	22	67%
Test demand in new areas or at new times	2	6%	4	12%	27	82%

Major Advantages

More responsive to fluctuations in demand (24)

Ann Arbor, Arlington, Boston, Calgary, Eau Claire, Indiana, Haverhill, Houston, LaVerne, Los Angeles, Madison, Montgomery Co. (T & BT), Nashville, Oshkosh, Ottawa, Ottawa Co., Raleigh, Rogue Valley, San Mateo, Santa Fe, Vista, Wenatchee, Worcester

Improve over-all cost efficiency (20)

Ann Arbor, Arlington, Boston, Calgary, Decatur, Eau Claire, Indiana, Haverhill, Houston, Los Angeles, Madison, Montgomery Co. (T & BT), Oshkosh, Ottawa, Ottawa Co., Raleigh, Santa Clara, Vista, Worcester

Eliminate/reduce denials (18)

Ann Arbor, Boston, Calgary, Charlottesville, Eau Claire, Indiana, Haverhill, Houston, LaVerne, Los Angeles, Madison, Montgomery Co. (T), Nashville, Raleigh, San Mateo, Santa Cruz, Vista, Worcester

Improve productivity of dedicated fleet (17)

Arlington, Bellingham, Boston, Decatur, Eau Claire, Haverhill, Houston, LaVerne, Los Angeles, Madison, Montgomery Co. (T & BT), Ottawa, Ottawa Co., Pierce, Vista, Wenatchee

More efficiently serve low-demand times (15)

Ann Arbor, Arlington, Bellingham, Fitchburg, Indiana, Madison, Medford, Montgomery Co. (T), Oshkosh, Ottawa Co., Pierce, San Mateo, Santa Fe, Vista, Wenatchee

More efficiently serve outlying areas (13)

Charlottesville, Eau Claire, Fitchburg, Haverhill, Indiana, LaVerne, Medford, Montgomery Co. (T & BT), Pierce, Raleigh, Santa Clara, Wenatchee

Better manage growth (13)

Ann Arbor, Boston, Calgary, Eau Claire, Indiana, Haverhill, Houston, LaVerne, Los Angeles, Nashville, Raleigh, Santa Fe, Worcester

Provide same-day and/or will-call service (8)

Ann Arbor, Arlington, Medford, Montgomery Co. (T & BT), Oshkosh, Raleigh, Santa Fe

Expand service w/o buying new vehicles (8)

Boston, Eau Claire, Houston, Los Angeles, Medford, Montgomery Co., (BT), Nashville, Raleigh

Overbook trip requests (6)

Boston, Houston, LaVerne, Madison, Montgomery Co. (BT), Nashville

Coordination with human service transportation (4)

Eau Claire, Fitchburg, Indiana, Montgomery Co. (BT)

Respond to customers' desire for car-like service (2)
Fitchburg, Raleigh

Test demand in new areas or time periods (2)

Montgomery Co. (BT), Santa Fe

16. Of the MAJOR advantages you specified in Question 15, which provided only one-time or short-term benefits and which have also provided continued benefits to the system?

Continuing / Long Term Benefits (20)

Ann Arbor, Arlington, Bellingham, Charlottesville, Decatur, Eau Claire, Haverhill, Houston, LaVerne, Los Angeles, Madison, Montgomery Co., Oshkosh, Ottawa, San Mateo, Santa Clara, Santa Fe, Wenatchee

Nashville / MTA

Continuous benefits: reduce/eliminate denials, better manage growth. (Sherri Milliken, Nashville MTA)

Ottawa Co. / OCTA

The continued benefit is we can improve our productivity on dedicated vehicles. (Director, OCTA)

Initial / Short-Term Benefits (3)

Nashville, TN / MTA

One time/short term benefits: Ability to expand service without buying vehicles. Continuous benfits-Reduce/eliminate denials, better manage growth (Sherri Milliken, Metropolitan Transit Authority)

Ottawa Co., OH / OCTA

Short term benefit: having non dedicated vehicles to use during seasonal Saturday and Sunday peaks. (Director, Ottawa County Transportation Agency)

Wenatchee, WA / Link Transit

The cost-effective item really only saved money intially. However, having this option has improved efficiency of dedicated operations. (Richard DeRock, Link Transit/LinkPlus)

Problems (1)

Medford, OR / RVTD

Presently #2 (responsiveness to demand fluctuations) has worked, but with growth of program we are having capacity and/or response time problems. #8 (will-calls) has become problem due to capacity. #11 (expand service w/o buying vehicles) has worked but as population/clients in program are either needing higher level (wheelchair, walker) we are having problems buying enough wheelchair vehicles. (Julie Brown, Rogue Valley Transit District)

17. Has the introduction of non-dedicated service to your program benefited the community-at-large in any way, i.e., beyond your program? If yes, how?

More accessible taxis and taxi options for community (10)

Ann Arbor, MI / AATA

Significant expansion of taxi options in this medium-sized town. (Chris White, AATA)

Arlington, VA / STAR

Yes, the addition of wheelchair cabs has helped individuals who need one to get around. (Eric Smith, STAR)

Calgary, AB / Access Calgary

Access Calgary put an RFP for accessible taxis. This led to a taxi company purchasing accessible vans for as part of their taxi fleet. These vehicles are used for Access Calgary service and also on-demand service by the taxi company. (We had been without accessible taxis in Calgary for 10 yrs) (Karim Arayani, ACCESS Calgary)

Houston, TX / Houston METRO

Yes, METRO provides an additional $2.00 per trip for wheelchair taxicabs which offsets the wheelchair ramp conversion cost. This has provided an incentive to the taxicab driver and has increased the number of wheelchair accessible vehicles in the community. (Suzie Edrington, Houston METRO)

Medford, OR / RVTD

Clients now have access to taxi wheelchair service after 8 pm and on weekends. In the past providers (taxi service) did not have accessible vehicles. (Julie Brown, Rogue Valley Transit District)

Montgomery Co., PA / TransNet

Seniors are able to be more mobile and independent. (Pat Moir, TransNet)

Ottawa Co., OH / OCTA

This has given the general public other options for transportation outside of our service times. (Director, Ottawa County Transportation Agency)

Raleigh, NC / ART

Yes because another service was started that allows the city of Raleigh to serve individuals living in the city limits of Raleigh. (Mike Kennon, Accessible Raleigh Transportation)

San Mateo Co., CA / SamTrans

In theory it draws attention to the need for wheelchair accessible taxis for "regular" taxi service. (In practice, however, it hasn't had this impact). (Bill Welch, SamTrans' Redi-Wheels)

Wenatchee, WA / Link Transit

The supplemental services have expanded availability of services. (Richard DeRock, Link Transit/LinkPlus)

Stabilization of taxi companies (1)

Wenatachee, WA / Link Transit

The program stabilized cab services and has ensured the continuation of cab service in our rural communities. (Richard DeRock, Link Transit/LinkPlus)

Better taxi drivers for community (1)

Ottawa, ON / Para Transpo

It has improved the level of customer service provided by the non-dedicated taxi drivers when they are serving taxi customers outside of the Para Transpo contract. (Pat Larkin, Para Transpo)

Enhanced service quality / resources available to human service transportation programs (1)

Bellingham, WA / WTA

The primary benefit I can think of is enhanced ability and experience for the taxi company to take on contract-based work, i.e. Medicaid transportation. (Chris Colburn, Whatcom Transportation Authority)

Co-mingling trips and vehicle sharing benefit human service transportation (1)

Eau Claire, WI / Eau Clair Transit

All the community transportation programs are well-coordinated and benefiting from cost sharing. (Gwen Van Den Heuvel, Eau Claire Transit System)

Provides insurance against dedicated fleet service disruptions (1)

Worcester, MA / WRTA

Dedicated service has union drivers who were on strike from July 7, 2004-September 12, 2004. (With F/R drivers). We kept the denial rate less than 1% during this period, thanks to the efforts of the non-dedicated service providers. (Nicole Rohan, Worcester Regional Transit Authority)

Helps integrate more persons with disabilities into the community (1)

Madison, WI / Madison Metro

Helps integrate people with disabilities into the general community. (Crystal Martin, Madison Metro)

Increase awareness of transit / paratransit services in community (2)

Indiana, PA / Indigo

The Human Service coordinated transportation effort has boosted the awareness of our Transit Authority in the County. (Jerry Blair, Indigo)

Santa Fe, NM / Santa Fe Trails

Yes, the contractors have become marketing agents for the paratransit program. (Annette Granillo, Santa Fe Trails)

No / Don't Know / Not Sure (10)

Charlottesville, VA / JAUNT; Decatur, IL / DPTS; Haverhill, MA / MVRTA; Indiana, PA / Indigo; Los Angeles, CA / Access Services; Nashville, TN / MTA; Oshkosh, WI / Oshkosh Transit; Pierce County, OR / Pierce Transit; Santa Clara Co., Ca / VTA-Outreach; Wausau, WI / WATS

18. To what extent have any of the following been a problem for you in using – or precluding the purchase of -- non-dedicated service?

	Major Prob.		Minor Prob.		Not an Issue	
Lack of accessible vehicles	7	23%	7	23%	17	55%
Difficulties in contract compliance and oversight	6	19%	7	23%	18	58%
Substandard on-time performance / service reliability	5	16%	12	38%	15	47%
Few non-dedicated service providers	5	16%	8	26%	18	58%
Non-dedicated service not available when needed	4	13%	7	23%	20	65%
Substandard driver training / sensitivity / assistance	3	10%	12	39%	16	52%
Substandard vehicle quality / maintenance	3	9%	11	34%	18	56%
Inability to meet insurance requirements	3	9%	4	13%	25	78%
Difficulties with complaint investigation/resolution	2	7%	10	33%	18	60%
Difficulties with invoice reconciliation	2	6%	10	32%	19	61%
Poor record keeping	2	6%	8	26%	21	68%
Inability to meet drug testing requirements	1	3%	7	22%	24	75%
Pressures from union labor	1	3%	6	19%	25	78%
Instability of taxi companies	1	3%	6	19%	24	77%
Limitations on taxis' coverage area	1	3%	5	16%	26	81%
Problems with farebox reconciliation	0	0%	3	10%	28	90%

19. Could you please describe the underlying obstacles associated with your most significant problem(s), if any, and how they were overcome? (Please also provide your insights on how to avoid potential problems.)

Lack of Accessible Vehicles (5)

Fitchburg, MA / Montachusett RTA

Providers do not always have an adequate supply of wheelchair accessible vehicles -We sometimes have to loan them a few. (Mohammed Khan, Montachusett Regional Transit Authority)

Medford, OR / RVTD

Our biggest obstacle presently is on time performance due to lack of accessible vehicles or drivers who meet contract standards. We are considering sole searching with one provider, but keeping contract compliance, ride reservations and quality assurance under the brokerage. (Julie Brown, Rogue Valley Transit District)

Nashville, TN / MTA

Lack of accessibility for wheelchair users. (Sherri Milliken, Nashville Metropolitan Transit Authority)

Ottawa Co., OH / OCTA

The biggest problem is that the one non-dedicated service provider has no accessible vehicles. (Director, Ottawa County Transportation Agency)

Wenatchee, WA / Link Transit

Lack of accessible vehicles has limited the value of the non-dedicated providers. (Richard DeRock, Link Transit/LinkPlus)

Much Administrative Oversight Needed (6)

Decatur, IL / DPTS

Our biggest problem is oversight of the taxi cab companies; i.e. drug & alcohol program, preventative maintenance program, sensitivity training, etc. The problem is manpower and hours to do a good job of oversight. (Richard Foiles, Decatur Public Transit System)

Eau Claire, WI / Eau Claire Transit

Our separate and challenging reporting requirement drove our contractor nuts! We've worked with our funding sources to streamline the reporting requirements as much as possible. (Gwen Van Den Heuvel, Eau Claire Transit System)

Los Angeles, CA / Access Services

The most significant problems related to having non-dedicated vehicles and drivers who work for a subcontractor involve oversight, monitoring and accountability. When trips are assigned to a subcontractor, it is necessary for the prime contractor to follow these trips until they are completed. Unfortunately, some drivers refuse trips and others are assigned trips too late to service them on time. Our primes have to be vigilant in keeping tabs on trips assigned to the subs and must make sure that when the sub can't perform a trip that they are informed of this in time to dispatch it to one of their own vehicles. Better communication is helping to resolve these problems, as are improvements in technology that allow for better monitoring of trips and better access to trip data. To the extent that penalties are imposed for poor performance, the subs know that they are financially responsible for reimbursing the primes for penalties incurred by the latter because of the former. (Shelly Lyons, Access Services Inc.)

San Mateo Co. / Sam Trans

A great deal of oversight is needed on an on-going basis. (Bill Welch, SamTrans' Redi-Wheels)

Wausau, WI / WATS

We have hired additional staff to oversee our contractor. We have taken over their substance abuse program. (Ann Keenan, Wausau Area Transit System)

Worcester, MA / WRTA

In addition to vewndor turnover, there is big turnover of back office staff among the 6-10 outside vendors. We revert back to square one on issues regarding billing, contract oversight, complaint resolution, etc. With the vendors we've had the longest, we've spent more time training the owners. (Nicole Rohan, Worcester RTA)

Driver Training Issues (3)

Medford, OR / RVTD

Our biggest obstacle presently is on time performance due to lack of accessible vehicles or drivers who meet contract standards. We are considering sole searching with one provider, but keeping contract compliance, ride reservations and quality assurance under the brokerage. (Julie Brown, Rogue Valley Transit District)

Nashville, TN / MTA

Lack of trained taxi operators being professional. (Sherri Milliken, Nashville Metropolitan Transit Authority)

Santa Clara Co. / VTA - Outreach

During the boom years, taxi drivers preferred other work and were not reliable. Has not been a significant issue recently. Outreach provides driver sensitivity training. (OUTREACH of Santa Clara County)

On-Time Performance (3)

Madison, WI / Madison Metro

On-time performance is difficult to maintain consistently with taxi providers. (Crystal Martin, Madison Metro Transit)

Medford, OR / RVTD

Our biggest obstacle presently is on time performance due to lack of accessible vehicles or drivers who meet contract standards. We are considering sole searching with one provider, but keeping contract compliance, ride reservations and quality assurance under the brokerage. (Julie Brown, Rogue Valley Transit District)

Oshkosh, WI / Oshkosh Transit

The most complaints we received regarding paratransit service was the timeliness; people experiencing long waits for rides. When the contractor purchased new software, we were able to go into the computer and see how long the wait actually was for a customer. In most cases, customers exaggerated the wait time. We also do random checks of the service provider for timeliness. Many people responded in a customer survey how the service had improved after we started monitoring them for timeliness. (Mark Huddleston, Oshkosh Transit)

Equivalence of Service Standards (2)

Boston, MA / MBTA The Ride

Virtually all the issues raised in question number 18 would be show stoppers for us. But we do not entertain contracting with entities that are not Paratransit providers. This avoids pitfalls with poor training or customer service, regulatory compliance, etc. (Bob Rizzo, MBTA The RIDE Program)

Montgomery Co., PA / TransNet

Our subcontractors have both dedicated and non-dedicated vehicles. As a result, since the non-dedicated vehicles/drivers may be used to provide service for us at any time, we subject them to the same requirements as our dedicated vehicles/drivers. As long as this is the standard, I really don't see any disadvantages in using non-dedicated vehicles. I believe it only enhances our service provision and efficiency. (Pat Moir, TransNet)

Limited Number of Non-Dedicated Service Providers (2)

Bellingham, WA / WTA

More competition among proposing contractors would be nice; we're a fairly small community so it isn't such a competitive environment. Good procurement process, good contract, good relationship with contractor are best help to avoid problems. (Chris Colburn, Whatcom Transportation Authority)

Ottawa Co., OH / OCTA

The biggest problem is there is only one company for us to contract with. (Director, Ottawa County Transportation Agency)

Fraud Control (2)

Houston, TX / Houston METRO

Fraudulent vouchers are an obstacle that should be avoided through electronic invoicing procedures and voucher sampling. Electronic invoicing provides a means to check vouchers for the following: 1) Non-eligible patrons-patrons that have lost their eligibility or never obtained eligibility 2) Duplicate vouchers (patron or driver that have two vouchers within the same address at the same time on the same day; or, with the same voucher number) 3) Overlapping vouchers (vouchers that have overlap times in the same day) 4) Impossible trip vouchers (vouchers where the drop location and the next pickup location are impossible to achieve due to distance) 5) Driver/patron collusion-where the same driver picks up the same patron daily 6) Meter fare reasonableness check. A sample of vouchers is taken to ensure patron signatures match the Customer Service patron file signature. (Suzie Edrington, Houston METRO)

LaVerne / PVTA

Our most significant problem is the tendency of trip length to grow over time requiring constant monitoring. We have had good success by switching to a fixed cost per trip. The opposite end of the problem is if the rate is too low, coverage and availability becomes a problem. (George Sparks, Pomona Valley Transportation Authority)

Management Ability (2)

Ann Arbor, MI / AATA

The quality of the taxicab company was the most important factor in the success. It has been a very businesslike, professional organization. (Chris White, AATA)

Charlottesville, VA / JAUNT

No ability from taxis to manage their operation. We end up dealing directly with the drivers most of the time - lots easier. (JAUNT, Inc.)

Higher Levels of Insurance Needed (1)

Charlottesville, VA / JAUNT

Getting higher levels of insurance from the taxis was an issue. The taxi company ended up splitting off a small portion of the company to form a separate company. Made getting the higher level of insurance more manageable. (JAUNT, Inc.)

Union Pressure (1)

Ottawa, ON / Para Transpo

Pressure from Union: Solution: Gradual introduction of non-dedicated service. Acceptable to the Union representing the employees of the dedicated service because the bulk of the service remains dedicated. (Pat Larkin, Para Trans)

20. Did you provide accessible vehicles to any service providers for non-dedicated service? If so, what type and how many?

Yes (4)

Fitchburg, MA	Loan them a few on occasion
LaVerne, CA	5 accessible minivans
Medford, OR	2-cutaways and 17 low floored mini vans (all accessible)
Santa Fe, NM	10 accessible vans to 2 vendors

No, but considering it (3)

Bellingham, WA / WTA

No, although we may re-visit this as a possibility in the future. (Chris Colburn, Whatcom Transportation Authority)

Wenatchee, WA / Link Transit

Not currently-am considering leasing of accessible vehicles (Richard DeRock-Link Transit/LinkPlus)

Worcester, MA / WRTA

Not yet, but I think we will be leasing our accessible vans (9 passengers) in the next year and probably 2-3 vehicles. (Nicole Rohan, Worcester Regional Transit Authority)

No (17)

Ann Arbor, Arlington, Charlottesville, Decatur, Eau Clair, Haverhill, Indiana, Los Angeles, Madison, Montgomery Co., Nashville, Oshkosh, Ottawa, Ottawa Co., Pierce County, San Mateo Co., Santa Clara Co.

Provide Incentives (1)

Houston, TX / Houston MTA

We provide an incentive of $2.00 per trip to drivers that provide wheelchair accessible vehicles. (Suzie Edrington, Houston METRO)

21. Have you encountered any other problems associated with purchasing or using non-dedicated vehicles?

Ensuring vehicle maintenance and cleanliness complies with standards (3)

Los Angeles, CA / Access Services

Because the non-dedicated vehicles often are garaged off site, it can be tricky to ensure that these vehicles are properly maintained/cleaned. (Shelly Lyons, Access Services Inc.)

Medford, OR / RVTD

Unless vehicle lease has a financial penalty associated for infractions or incentives for good performance, it is hard to maintain vehicles in good working order. Quality control with good contract management is needed or vehicles will need to be replaced sooner. Lack of replacement plans with impact performance. (Julie Brown, Rogue Valley Transit District)

Worcester, MA / WRTA

I'd like them to be uniformed and have everything neat and clean all the time for the same cost. (Nicole Rohan, Worcester Regional Transit Authority)

Ensuring service quality and driver training (1)

Santa Fe, NM / Santa Fe Trails

Unable to monitor quality and training or re-training of employees. (Annette Granillo, Santa Fe Trails)

Keeping costs and service quality in balance (1)

Medford, CA / PVTA

Keeping costs and service quality in balance. (George Sparks, Pomona Valley Transportation Authority)

22. Any other comments?

Bellingham, WA / WTA

I feel WTA has been very fortunate to work with our current contractor. I've watched, worked with, & managed contracts with maybe a dozen taxi companies (in both larger & smaller communities) & this is the best taxi company I've known. Honest, responsible, cooperative, smart, communicative, problem solving. (Chris Colburn, Whatcom Transportation Authority)

Eau Claire, WI / Eau Claire Transit

We believe we have an incredible program here in Eau Claire County. It could be used as a model. Our next step is to purchase software to aid in the dispatch and record keeping. (Gwen Van Den Heuvel, Eau Claire Transit System)

San Mateo Co., / SamTrans

We went through several taxi sub-contractors. when they failed to meet our service or insurance requirements. (Bill Welch, SamTrans' Redi-Wheels)

Santa Fe, NM / Santa Fe Trails

We are in the process of bringing Paratransit services in-house. We will keep the cab service on retainer to be able to provide additional service if demand may peak. (Annette Granillo, Santa Fe Trails)

Wausau, WI / WATS

I would like to bring the contractor in-house or provide the service ourselves. (Ann Keenan, Wausau Area Transit System)

Worcester, MA / WRTA

We've tried to groom a few outside vendors to be more of a "stand-in-the-shoes" type of vendor as far as reliability, quality of service and that has worked. I feel having a partnership with them rather than broker vs. contractor relationship has helped the most. (Nicole Rohan, Worcester Regional Transit Authority)

Appendix E
Contract

CONTRACT

This CONTRACT is between Ann Arbor Transportation Authority, AATA or the Authority, and SelectRide, Inc., or Contractor. Contract is to provide transportation services as described in AATA Request for Proposal #00-11. The effective date of this Contract is October 1, 2002.

1.0 AATA PROJECT MANAGER

AATA's Project Manager shall be responsible for overseeing all daily activities of the Contractor and its representative (s) with regard to performance of work under this Contract, and ensuring that the Contractor performs as promised in its proposal and as accepted by AATA. The Project Manager for this Contract is Chris White, Service Development Manager.

2.0 AATA CONTRACTING OFFICER

AATA's Contracting Officer shall have the authority to administer or terminate a contract, execute change orders, and make related determinations and findings, to the extent delegated by the Authority, acting through its Board of Directors and Executive Director. The Authority's Contract Administrator is responsible for ensuring the Contractor's compliance with the Terms and Conditions of the Contract, and safeguarding the best interests of the Authority. The Contracting Officer for this Contract is Jean Smith, Purchasing Agent.

3.0 SCOPE OF WORK

3.1 Fare Collection

A. The Contractor must verify that passengers have a valid AATA-issued identification card for using the service and will collect $2.00 for each trip. A trip is defined as a vehicle trip made from one origin to one destination by one to three individuals who have made a joint reservation.

B. The Contractor will accept an AATA issued scrip ticket in lieu of cash payment for the fare.

C. The Contractor shall collect an additional fifty cents for each passenger who is riding with an eligible passenger. A Personal Care Attendant or a child under the age of 5 years, may also ride with the eligible passenger at no charge. If a Personal Care Attendant is riding, the eligible passengers identification card must indicate that they are authorized a Personal Care Attendant.

D. The service shall be provided at the prescribed fare level for up to three (3) persons so long as one person of the three possesses a valid identification card.

E. The Contractor will collect fares from all passengers according to the fare structure.

3.2 Reservations

A. AATA will receive all advance reservations. An advance reservation is one which is received by 4:00 p.m. on the day before the requested trip date. AATA will transmit to the Contractor by electronic mail the list of the next day's trips by 6:00 p.m. the evening before. The Contractor is responsible for providing equipment that can accept AATA's electronic mail listing.

B. The Contractor will receive all same-day trip requests. A same-day trip request is one that is received on the day of the requested trip. The Contractor will accept same-day orders only for trips with an origin and a destination in the City of Ann Arbor, and for will call requests.

C. The Contractor will maintain a separate telephone line to receive requests for this service.

3.3 Service Area

AATA reserves the right to add or delete service areas during the term of the contract in the form of a change order.

3.4 Shared Ride Trips

The Contractor is encouraged to consolidate unrelated passenger trips into one vehicle. The Contractor should attempt to consolidate trips whenever origins, destinations, and scheduled pick-up times are such that reasonable service quality can be maintained. A trip is defined as one or more people with the same origin and destination. If two people have different origins, but the dame destination, it is considered two trips.

3.5 Accessibility

A. AATA will provide A-Ride service for passengers requiring wheelchairs within Ann Arbor. The Contractor must provide A-Ride service for wheelchair users in accessible vehicles traveling outside the City of Ann Arbor. If the Contractor elects to use non-accessible vehicles for a portion of the service, the Contractor may be required to provide service in these vehicles to wheelchair users who are able to transfer without assistance from the driver and whose wheelchair can be folded to fit in a standard sedan trunk.

B. Contractor drivers are required to provide assistance in pushing wheelchairs to and from the building entrance. Drivers are not permitted to take wheelchair passengers up or down more than one step, or up or down snow-covered ramps or sidewalks. For wheelchairs that are less than 50 pounds, and a sedan type vehicle is used to transport the passenger, the driver is required to stow the wheelchair in the trunk.

3.6 Radio Communications

The Contractor shall have available in the dispatch center a two-way communication system to allow for timely and efficient communication between the dispatch center and all vehicles providing service for the Contract. The system may be of the Contractor's choice, but must have the performance characteristics to allow for immediate communications throughout the entire service area. The Contractor will be responsible for ensuring the maintenance of the communication system and that repairs are done in a timely manner.

4.0 VEHICLES AND DRIVER REQUIREMENTS

4.1 Vehicles

A. Service is to be operated using vehicles provided by the Contractor. The vehicles are to be licensed by the State of Michigan, and, if operating as a taxi service, must be licensed by the City of Ann Arbor. Sufficient vehicles must be available to provide a minimum of ninety (90) trips per hour on weekdays and thirty (30) trips per hour on evenings and weekends.

B. The vehicles shall be able to carry in a comfortable manner no less than four passengers. The Contractor must provide at least four vehicles that are accessible to wheelchair users via a lift or ramp and which have at least one wheelchair position onboard. AATA reserves the right to define areas and times that these vehicles must operate.

C. The Contractor must maintain a system of regular inspections of all vehicles as to proper operating condition. A record of all inspections shall be kept by the Contractor and be submitted to AATA monthly.

D. The vehicles shall be maintained in a safe and sanitary condition at all times while performing services under the contract. AATA reserves the right to remove any vehicle from service if it is not maintained in a safe, and clean condition.

E. Vehicles shall be operated in accordance with applicable Federal, State of Michigan, and local laws. Due regard for safety, comfort, and convenience of passengers and for the safe and careful transportation of property and for the safety of the general public at all times while in service under the Contract.

F. All drivers will present a neat, professional and clean appearance and maintain courteous attitude when in contact with service passengers. There is no smoking on board the vehicles by drivers or passengers. This policy for passengers is to be enforced by drivers. Drivers shall be expected to treat all passengers in a professional and courteous manner. Drivers must be sufficiently proficient in English to be able to communicate with passengers and to prepare required reports and logs.

4.2 Drivers Licensing and Training

A. The drivers of the vehicles for this service shall hold a current Class "C" license issued by the State of Michigan. If the service is also being operated as a taxi service, the driver's must hold a current taxicab driver's license and shall meet all requirements of the City of Ann Arbor.

B. AATA does not require that drivers by pre-screened by AATA before hire; however, AATA reserves the right to screen driver qualifications and performance and to accept or reject individuals as drivers for this service. AATA retains the right, in consultation with the Contractor, to prescribe driver training procedures for participation in this service. Such training will be conducted in such a manner as to not disrupt the Contractor's normal operations. AATA will reimburse the Contractor for reasonable costs incurred for mandated training. AATA does not have specific requirements for training.

C. The Contractor will be required to provide a disclosure of driver's criminal conviction records, if any, for those drivers assigned to operate vehicles under the Contract. Failure to disclose will disqualify the driver from operating a vehicle, and may result in termination of Contract. In addition, the Contractor will be required to report to AATA any drivers operating under the Contract who are arrested for public offenses during the course of their employment, including being cited for traffic violations.

5.0 DRUG AND ALCOHOL TESTING PROGRAM

5.1 The Contractor agrees to establish and implement a drug and alcohol testing program that complies with 49 CFR Parts 653 and 654, produce any documentation necessary to establish its compliance with Parts 653 and 654, and permit any authorized representative of the United States Department of Transportation or its operating administrations, the State Oversight Agency of Michigan, or AATA, to inspect the facilities and records associates with the implementation of the drug and alcohol testing program as required under 49 CFR Parts 653 and 654 and review the testing process. The Contractor agrees further to certify annually its compliance with Parts 653 and 654 before January 1 of each year and to submit the Management Information System (MIS) reports before February 15 each year to the AATA Manager of Human Resources. To certify compliance the Contractor shall use the "Substance Abuse Certifications" in the "Annual List of Certifications and Assurances for Federal Transit Administration Grants and Cooperative Agreements," which is published annually in the Federal Register.

5.2 AATA shall provide assistance to the Contractor in the establishment, implementation, and administration of the drug and alcohol-testing program. The Contractor shall cooperate with AATA in developing a program that meets all legal requirements. AATA will reimburse the Contractor for any reasonable costs associated with training for the program.

6.0 REPORTING REQUIREMENTS

6.1 Monthly Reports

On or before the fifth working day of each month, the Contractor shall deliver to AATA the following information for the previous month.

A. Activity report in electronic format acceptable to AATA, which includes the following.

1. For each day of the month, a record of each trip provided, including:

a. AATA ID Card number
b. Pickup location
c. Drop off location
d. Vehicle number
e. Driver
f. Advanced reservation or same-day request
g. Trip request time for same-day trips
h. Scheduled pickup time for advanced reservations

i. Time vehicle was dispatched
j. Pickup time
k. Drop off time
l. Fare payment (cash or scrip)
m. Personal attendant
n. Number of passengers
o. Trip mileage

2. For each day of the month, a record of each trip not provided, including:

- Trip denials including, AATA ID card number, pickup location, drop off location, and time of request.
- No-Shows, include all applicable information in 1. above

B. Summary report of trips by day and total for the month, including:

- Number of passengers
- Number of trips
- Number of no shows
- Number of trip denials
- Total miles, including dead-head
- Revenue miles (miles with passengers on board)
- Total cost

C. Scrip tickets collected for the previous month

D. Vehicle inspection records, summaries only

6.2 Trip Sheets

A. Each vehicle providing an A-Ride service shall maintain trip sheets containing the following information.

- Date
- Vehicle number assigned
- Origin and destination of trip
- Time of pick-up
- Time of drop-off
- Serial number of cardholder
- Signature of cardholder
- Number of riders

B. The trip sheets are to be kept by the Contractor for three (3) months after the month of service. Trip sheets shall be available to AATA for inspection upon request. The format for the trip sheets will be jointly developed by the Contractor and AATA.

6.3 National Transit Database

The AATA is required to submit an annual report to the Federal Transit Administration. The Contractor will be required to provide information to AATA on vehicles, accidents, service provided and costs necessary to complete this report.

6.4 Capital Cost of Contracting

The Contractor will annually be required to submit to AATA information on use of and depreciation of vehicles necessary to document the portion of the contract cost attributable to providing vehicles.

6.5 Accidents and Incidents

A. The Contractor is required to report all accidents that involve serious personal or property damage to AATA immediately. All other accidents must be reported within three working days. An accident is defined as any occurrence where a vehicle comes into contact with another vehicle, object or person, causing property damage or personal injury. All rear-end collisions, all collisions resulting from backing of vehicles, and all collisions with people will be considered as accidents regardless of the degree of resulting damage or injury. A passenger accident is defined as any occurrence where passengers in the vehicle, or getting into or out of the vehicle, stumble or fall or are thrown by the movement of the vehicle.

B. During regular business hours, accidents should be reported to the Contract Manger, Chris White at 734-677-3922. Outside of normal business hours, accidents should be reported to AATA's Control Center at 734-677-3927.

C. The Contractor is required to report all incidents monthly. An incident is defined as any unexpected event or condition that causes a disruption or normal services or the normal operation of daily activities of vehicles and does not involve a vehicle collision. An incident is also includes a safety problem or a mechanical failure that threatens physical harm or affects the safe operations of the vehicle.

7.0 COMPLAINT PROCEDURES

Complaints regarding service performed by the Contractor received by AATA will be promptly transmitted in writing to the Contractor. The Contractor shall investigate all complaints received by the AATA or directly by the Contractor, and report findings and action taken to AATA within ten (10) days following receipt of the complaint.

8.0 PERFORMANCE STANDARDS

8.1 The following performance indicators shall be compiled by the Contractor and submitted to AATA each month. These standards will be used to measure the Contractor's performance of the services provided under the Contract.

A. Denial rate is defined as the percentage of trips that are requested, but service cannot be provided due to capacity constraints or other factors. The denial percentage for same-day trip requests shall be reported.

B. The percentage of advance reservations in which the vehicle arrives at the specified pickup location within the specified twenty minute period (pickup window).

C. The percentage of same-day trip requests for immediate service in which the vehicle arrives at the pickup location within twenty minutes of receiving the pickup locations.

D. The percentage of same-day trip requests for immediate service in which the vehicle arrives at the pickup location forty minutes of receiving the pickup locations.

E. The percentage of same-day trip time orders (i.e. a trip request for a specific time later on the same day) in which the vehicle arrives at the pickup location within twenty minutes of the requested time.

8.2 AATA and the Contractor will review the performance standards annually.

9.0 PERFORMANCE MONITORING

Monitoring is the process AATA will use to oversee and check the Contractor's performance to be sure that it meets the performance standards. AATA reserves the right to use any or all of the below monitoring techniques.

- Financial Audits
- Customer Surveys
- U.S. DOT National Transit Database (NTD) Reports
- Monthly Management Performance Reports

- Random Phone Calls
- Unannounced Visits
- Undercover rides
- Vehicle/Maintenance Records

10.0 STAFFING

The Contractor will designate a Project Manager who will oversee the operation of the service. The Project Manager will not be substituted without the approval of AATA. The Project Manager will supervise all personnel providing the service, and manage the program's accounts and operating records. This individual will serve as the point of Contact for communication with AATA; meet monthly with AATA staff for contract coordination, and attend regularly scheduled meeting of the Local Advisory Committee and other community meetings as designated by AATA.

11.0 DISTRIBUTION OF PROMOTIONAL MATERIALS

Upon request from AATA for specific promotions or research, drivers will be required to hand out AATA promotional materials or surveys to passengers, to be supplied by AATA. Any materials distributed by the Contractor must be approved in advance in writing by AATA.

12.0 DISPATCHERS

12.1 Dispatchers must be knowledgeable in all aspects of service operations, including computerized dispatching procedures and use of Telephone Devices for the Deaf (TDD's). Dispatchers must be adequately trained in customer service to serve the volume of incoming requests for service in a timely manner.

12.2 In the Project's Manager's absence, dispatch and operations management personnel are responsible for operational problems and passenger complaints. Dispatchers must maintain a daily log of all problems, complaints and passenger suggestions.

12.3 The Contractor must assign personnel to cover the telephone lines for during all hours of service operation sufficient to receive same day trip requests, and will call requests.

13.0 DRIVER SUITABILITY REQUIREMENTS

13.1 A driver will be disqualified from operating a vehicle under the Contract for criminal misconduct if they have been convicted upon a charge of a disqualifying public offense listed below. This list is a representation, and is not all-inclusive.

A. Operating a motor vehicle while under the influence of alcohol, a narcotic drug, or derivatives of narcotic drugs.

B. A crime involving the transportation, possession, sale or possession for sale, or unlawful use of a narcotic drug, or derivatives of narcotic drugs.

C. A felony or misdemeanor involving moral turpitude.

D. A felony or misdemeanor involving violence.

E. Leaving the scene of a traffic accident, which resulted in personal injury or death.

F. A felony involving the use of a motor vehicle.

13.2 A driver is disqualified from operating a vehicle under the Contract for conduct listed below. This list is a representation, and is not all inclusive

A. Any person determined to be a mentally disordered sex offender under Michigan law or under similar provision of law of any state.

B. Any person required to register as a sex offender under Michigan law or under similar provisions of law of any other state.

13.3 Drivers must also meet the following minimum criteria to participate in the Contract.

A. Must have no more that three (3) moving violations within the last three years prior to application to provide service.

B. Drivers with a suspended or revoked license may not provide service under the Contract.

14.0 CONTRACT TERM

14.1 The Contract term for the first year is nine (9) months from the effective date of the Contract. Possible renewals will be decided on a year-to-year basis for up to a total of four (4) additional years. Any renewal years exercised will be for a one-year term effective from October 1st through September 30th. If any option year is exercised, AATA will notify the Contractor in writing at least thirty (30) days prior to the new Contract effective date.

14.2 If the option years are exercised, all terms and conditions of the Contract will remain in effect unless changed by mutual agreement of both parties.

14.3 If either party decides that an option year will not be considered, that party must notify the other party a minimum of ninety (90) days prior to the renewal date.

15.0 CONTRACT PRICE

15.1 AATA will pay the Contractor the following amounts for the services provided:

Description	Cost
Fixed fee per trip for non-accessible vehicle	$2.52 per trip
Rate per mile for non-accessible vehicle	$1.84 per mile
Rater per revenue hour for accessible vehicle	$31.18 per hour*
Fixed cost administration fee per month	$10,495
Cost per wheelchairs and walkers	$1.50 each
Cost per no-show passengers	$1.75 each

* Note: $4.94/hour of this amount represents the capital cost of the contract.

15.2 The cost for no-go charges in certain areas of Pittsfield Township, Ypsilanti Township, Superior Township and Ypsilanti shall be negotiated between the Contractor and AATA.

15.3 A prompt payment discount of $1,000 will apply if AATA pays the invoice within five days from the date of delivery and acceptance of the invoice delivered by the Contractor.

15.4 Taxes

AATA is exempt from payment of all Federal and State of Michigan taxes in connection with the Contract. AATA will furnish a Certificate of Exemption and its Federal Employer Identification Number, upon request, to the Contractor.

16.0 PRICE ESCALATION OR REDUCTION FOR CONTRACT YEARS 2-5

The price shall be firm for the first year of the Contract. If AATA chooses to exercise its option to renew the Contract for additional one-year periods, AATA will allow changes to the Contract prices after the first contract year following the below conditions.

16.1 The Contractor shall be responsible for initiating any request and subsequent negotiations for a price increase.

16.2 The Contractor or AATA may initiate any request and subsequent negotiations for a price decrease.

16.3 A price increase to the previous year's contract prices may be requested only at the renewal date and must be submitted in writing to AATA's Contracting Officer for approval ninety (90) days prior to the renewal date of the Contract. The reason for the request must be stated and accompanied by supporting documentation (letter documenting price increase from equipment and supplies distributors or manufacturers; proof of increased operation costs, etc.).

16.4 AATA's Contracting Officer shall provide a written response to the Contractor within ten (10) business days of receipt of the request. In general, price increases will be approved for no greater than the percentage change in the Consumers Price Index (CPI) for the prior twelve-month period, as reported by the U.S. Department of Labor for the Detroit-Ann Arbor area, unless the Contractor's case is compelling enough for AATA to approve a greater increase.

16.5 All approved price increases shall go into effect on the renewal date of the Contract, and a change order to the Contract will be executed.

16.6 The above assumes that no significant modifications to the Scope of Services are made to the original Contract. If significant modifications are made or both parties agree that additional factors reflected in the CPI have affected the Contractor's costs, the parties will enter into negotiations to determine a new fair and reasonable Contract price.

16.7 If, following a cost and/or price analysis, AATA finds that the Contractor's originally-proposed pricing for a particular year is substantially higher than existing market prices, AATA shall reserve the right to decline its option to renew the Contract, and, instead, competitively re-procure the service.

17.0 PAYMENT TO CONTRACTOR

17.1 The Contractor shall invoice AATA only once per month for services rendered in the prior month. The invoice must be billed and payable in U.S. dollars, and be addressed to Accounts Payable.

17.2 The AATA's Project Manager will review the invoices and the monthly reports submitted, and shall certify the amount due to the Contractor.

17.3 Certified amounts shall be paid net thirty (30) days by AATA. A prompt payment discount of $1,000 may be taken if an invoice is paid within five days after receipt and acceptance.

18.0 CONTRACT DOCUMENTS AND ORDER OF PRECEDENCE

18.1 Contract Documents

The Contract Documents consist of the following in order of precedence from highest to lowest:

A. All change orders issued after the Contract execution.
B. Contract, including all certifications signed by Contractor.
C. AATA RFP #00-11 and the Contractor's Proposal, as accepted by AATA, including subsequent negotiations and communications.

18.2 Change Orders Take Precedence

Any Change Order, which may be executed, shall take precedence over any other part of the Contract Documents wherever they conflict. A Change Order more recently executed shall take precedence over any prior Change Order if it conflicts.

19.0 INSURANCE REQUIREMENTS

19.1 The Contractor will secure and maintain during the term of the contract insurance from an insurance company authorized to do business in the State of Michigan that will protect Contractors and Subcontractors and the AATA from all liability (public liability, person injury and property damage) claims which may arise from operations under the contract. The Contractor may not start work until evidence of all required insurance has been submitted to and approved by the AATA's Purchasing Agent. The Contractor must cease work if any of the required insurance is canceled or expires.

19.2 Two (2) copies of certificates of insurance shall be submitted to AATA prior to the execution of the contract. To the extent of the contractor's negligence the Certificate shall specifically name the Ann Arbor Transportation Authority (AATA) as an additional insured party and held harmless. The certificates must contain the agreement of the insurance company to use best efforts notifying the AATA in writing ten (10) days prior to any cancellation or material alteration of the policy.

19.3 The limits of insurance will not be less than the following, unless otherwise approved by the AATA in writing:

(A) Workers Compensation Insurance in the amount required by Michigan Law.

(B) Comprehensive General Liability:

Bodily injury and property damage, $1,000,000
maximum combined single limit including: Personal injury products and completed operations-all as covered under broadened CGL.

(C) Automobile Insurance for Vehicles:
Liability, including standard no-fault maximum $1,000,000

20.0 TERMINATION

20.1 Termination for the Authority's Convenience

The Authority may terminate the Contract, in whole or in part, upon thirty (30) days written notice to the Contractor. The Contractor shall be paid its allowable costs, including contract closeout costs, and profit on work performed up to the time of termination. The Contractor shall promptly submit to the Authority its termination claim for payment. If the Contractor has any property in its possession belonging to the Authority, the Contractor will account for same, and dispose of it in the manner the Authority directs.

20.2 Termination for Contractor's Breach or Insolvency

A. For the purpose of the Contract, breach shall be failure of the Contractor to perform any one or more of its obligations under the Contract.

B. For the purpose of the Contract, insolvency shall be defined as: the filing of a voluntary petition to have the Contractor declared bankrupt, provided it is not vacated within thirty (30) days from the date of such appointment; the execution by the Contractor of an assignment for the benefit of the creditors; or any other comparable event.

C. In the case of breach by the Contractor, the Authority shall notify the Contractor in writing of its breach of Contract. The Contractor shall be given a minimum of thirty (30) days, or a longer specified time period should both parties mutually agree on same, to cure this breach.

D. If the Contractor fails to cure the breach within the specified time period or becomes insolvent or bankrupt or if its property or affairs are placed in the hands of a receiver or trustee, the Authority shall be entitled:

a. To have any work completed, either by itself or through others.

b. To cancel the Contract as to all or any part of the uncompleted portion and pay Contractor for all work completed in accordance with the Contract.

c. To exercise any appropriate right or remedy at law or in equity.

21.0 RESTRICTIONS ON LOBBYING

21.1 Contractors who apply or propose for an award of $25,000 or more shall file the certification required by 49 CFR part 20, "New Restrictions on Lobbying." Each tier certifies that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, a State legislator on legislation appropriations, except through the use of proper, official channels, officer of employee of AATA, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352. Such disclosures are forwarded from tier to tier up to AATA.

21.2 The Contractor is required to complete and submit a Certification of Compliance with Federal Lobbying Regulations. Pursuant to federal regulations, the Contractor is required to have all subcontractors (at any tier) providing more than $25,000 towards the Contract also complete with this Certification and forward to AATA.

22.0 BREACHES AND DISPUTE RESOLUTION

22.1 Disputes

Disputes arising in the performance of this Contract, which are not resolved by agreement of the parties, shall be decided in writing by the authorized representative of the Authority's Executive Director. This decision shall be final and conclusive unless within ten (10) days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to the Authority's Executive Director. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the Authority's Executive Director shall be binding upon the Contractor and the Contractor shall abide by the decision.

22.2 Performance During Dispute

Unless otherwise directed by the Authority, the Contractor shall continue performance under this Contract while matters in dispute are being resolved.

22.3 Claims for Damages

Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the other party or of any of his employees, agents or others for whose acts he is legally liable, a claim for damages therefore shall be made in writing to such other party within a reasonable time after the first observance of such injury of damage.

22.4 Remedies

Unless this contract provides otherwise, all claims, counterclaims, disputes and other matters in question between the Authority and the Contractor arising out of or relating to this agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the County of Washtenaw, State of Michigan, in which the Authority is located.

22.5 Rights and Remedies

The duties and obligations imposed by the Contract Documents and the rights and remedies available hereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by the Authority or the Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach hereunder, except as may be specifically agreed in writing.

IN WITNESS WHEREOF, the parties have duly executed two (2) identical counterparts of this Contract, each of which shall be for all purposes deemed an original thereof, on the dates set forth below.

Ann Arbor Transportation Authority

By: _____
Gregory E. Cook
Executive Director

Dated: _____

SelectRide, Inc.

By: _____
William Berger
President

Dated: _____