



U.S. Department
of Transportation



Advanced Public Transportation Systems Deployment in the United States

Update, January 1999

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PREFACE

This research was conducted by the Office of System and Economic Assessment at the Volpe National Transportation Systems Center, U.S. Department of Transportation, Research and Special Programs Administration and was sponsored by the Office of Mobility Innovation, U.S. Department of Transportation, Federal Transit Administration. This report is the second in what will be a series of biennial reports tracking the existing and planned deployments of Advanced Public Transportation Systems (APTS) technologies and services in the United States.

The information contained in this report was collected by personnel at the Volpe National Transportation Systems Center (Volpe Center) during the Fall of 1998. The data were obtained through contacts with one or more persons at each agency. The data contained in tables are only as accurate as the information provided, primarily verbally, by the agency contacts and have not been verified by the Volpe Center.

The objective was to reach all agencies who submitted information for the 1996 National Transit Database (NTD) Report Year, the latest year for which NTD data were available at the time. Some reporting agencies were not appropriate for inclusion in this compilation, and some could not be contacted. Nevertheless, a total of 551 agencies provided information for this study. Responding agencies with no existing or planned APTS systems are not included in this report.

Appreciation goes to Melissa Laube and Lawrence Labell of the Volpe Center, to Howard Eichenbaum, Edward Newhall, and Margaret Stevens of EG&G who collected the information contained in this report, and to Walter Zak of EG&G who assisted in the collection of data and also designed a program to sort, summarize, and present the data. Appreciation also goes to Darryl Gruen of EG&G who compiled the data. Finally, appreciation goes to all the agencies who supplied information for this report.

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LEGEND

Service Type	
FR	Fixed Route
DR	Demand Response
LR	Light Rail
HR	Heavy Rail
CR	Commuter Rail
FB	Ferry Boat
AG	Automated Guideway
MR	Monorail

Advanced Communications	
DIG	Digital Radio
TR	Trunked Radio

Automated Vehicle Location	
DGPS	Differential Global Positioning System
GPS	Global Positioning System
DK	Dead Reckoning
LC	Loran C
SO	Signpost/Odometer
OTR	Other

Automated Passenger Counters	
IB	Infrared Beam
TM	Treadle Mat

Automated Transit Information	
I	In Vehicle
P	Pre-Trip
T	In-Terminal
W	Wayside

Automated Fare Payment	
CC	Credit Card
DC	Debit Card
MS	Magnetic Stripe
SC	Smart Card

General	
U	Unspecified Technology

Status	
Any Letter(s)	Operational Phase
(Any Letter(s))	Implementation Phase
[Any Letter(s)]	Planning Phase

SECTION 1. SUMMARY OF APTS DEPLOYMENTS

A summary of APTS deployments is shown in Table 1. Table 1 is divided into 13 sections corresponding to the 13 Advanced Public Transportation System (APTS) elements covered in this report. The summary table sections show the number of responding transit agencies with present and future deployments of APTS elements and the number of service types these agencies operate using APTS technologies. Table 1-1, for example, reveals that 212 transit agencies operate 361 service types employing some form of advanced communications. The table sections also summarize the deployments by the technologies utilized (where applicable), and whether the element is operational, in the implementation phase, or actively being planned. The breakdown by service type will sum to the service type total. However, the breakdowns by technology and status frequently will not sum to the transit agency and service type totals because of the number of agencies which utilize multiple technologies (e.g., trunked *and* digital communications, magnetic stripe *and* smart card fare payment, etc.) or operate one type of technology but are implementing or planning an upgrade to another (e.g., from signpost to global positioning system automatic vehicle location, adding pre-trip or wayside information to automated telephone information, etc.).

The numbers cited below encompass only operational systems and do not include systems which are in the implementation or planning phases. In 9 of the 13 APTS categories, the number of agencies implementing or planning these systems exceeds those with operational systems.

By a considerable margin, the APTS element with the most extensive operational deployment is advanced communications with 233 service types operated by 140 agencies. Next are automated transit information with 102 service types operated by 89 agencies, paratransit computer assisted dispatching with 101 operational systems, and automatic vehicle location with 79 service types operated by 61 agencies. These are followed by automated fare payment (49 service types, 42 agencies), automated operations software (43 service types, 40 agencies), mobility manager (42 service types, 42 agencies), multi-carrier fare integration (32 service types, 27 agencies), multimodal traveler information (25 service types, 21 agencies), automated passenger counters (24 service types, 24 agencies), traffic signal priority (16 service types, 16 agencies), vehicle component monitoring (14 service types, 13 agencies), and transportation management centers (11 service types in 9 areas).

The number of operational APTS systems found during this study is considerably larger than the number found in the 1995 study. Comparison of the data from the two studies reveals the following increases: advanced communications (202%), automated transit information (108%), paratransit computer assisted dispatching (40%), automatic vehicle location (259%), automated fare payment (96%), automated operations software (72%), mobility manager (600%), multi-carrier fare integration (146%), multimodal traveler information (400%), automated passenger counters (118%), traffic signal priority (77%), vehicle component monitoring (180%), and transportation management centers (10%).

There were 90 more agencies contacted in this study than in the prior study. However, most of these additional agencies are small and not likely to have APTS systems.

TABLE 1. APTS DEPLOYMENT SUMMARY

Table 1-1. Advanced Communications		
	By Transit Agency	By Service Type
Totals	213	363
Service Type		
FR		186
DR		150
LR		13
HR		4
CR		5
FB		5
Technology		
Trunked	121	211
Digital	94	154
Other/Unknown	42	73
Status		
Operational	140	233
Implementation	20	30
Planning	61	106

Note: Breakdowns by technology, status, and location may not sum to transit agency and service type totals.

TABLE 1. APTS DEPLOYMENT SUMMARY

Table 1-2. Automated Vehicle Location		
	By Transit Agency	By Service Type
Totals	154	224
Service Type		
FR		127
DR		75
LR		7
HR		3
CR		5
FB		6
AG		1
Technology (Primary)		
GPS/DGPS	107	157
SignPost/Odometer	14	18
Loran-C	1	1
Dead Reckoning	2	2
Other	4	4
Unknown	32	46
Status		
Operational	61	79
Implementation	25	33
Planning	75	116

Table 1-3. Automated Passenger Counters		
	By Transit Agency	By Service Type
Totals	64	64
Service Type		
FR		64
Technology		
Treadle Mats	4	4
Infrared Beams	43	43
Other/Unknown	20	20
Status		
Operational	24	24
Implementation	6	6
Planning	34	34

Note: Breakdowns by technology, status, and location may not sum to transit agency and service type totals.

TABLE 1. APTS DEPLOYMENT SUMMARY

Table 1-4. Vehicle Component Monitoring		
	By Transit Agency	By Service Type
Totals	44	48
Service Type		
FR		44
LR		2
HR		2
Status		
Operational	13	14
Implementation	7	7
Planning	24	27

Table 1-5. Automated Operations Software		
	By Transit Agency	By Service Type
Totals	95	103
Service Type		
FR		84
LR		7
HR		5
CR		6
AG		1
Status		
Operational	40	43
Implementation	14	17
Planning	42	43

Note: Breakdowns by technology, status, and location may not sum to transit agency and service type totals.

TABLE 1. APTS DEPLOYMENT SUMMARY

Table 1-6. Automated Transit Information		
	By Transit Agency	By Service Type
Totals	163	179
Service Type		
FR		142
DR		3
LR		9
HR		6
CR		9
FB		10
Location		
In Vehicle	26	32
Pre-Trip	74	86
In Terminal	41	46
Wayside	17	20
Other/Unknown	57	60
Status		
Operational	89	102
Implementation	25	26
Planning	50	52

Table 1-7. Multimodal Traveler Information		
	By Transit Agency	By Service Type
Totals	43	51
Service Type		
FR		37
DR		2
LR		3
HR		3
CR		3
FB		3
Status		
Operational	21	25
Implementation	7	7
Planning	15	19

Note: Breakdowns by technology, status, and location may not sum to transit agency and service type totals.

TABLE 1. APTS DEPLOYMENT SUMMARY

Table 1-8. Automated Fare Payment		
	By Transit Agency	By Service Type
Totals	108	140
Service Type		
FR		87
DR		26
LR		5
HR		8
CR		7
FB		7
Technology		
Magnetic Stripe	45	57
Smart Card	46	65
Credit Card	10	12
Debit Card	6	6
Other/Unknown	16	20
Status		
Operational	43	50
Implementation	8	9
Planning	60	84

Table 1-9. Multi-Carrier Fare Integration		
	By Transit Agency	By Service Type
Totals	58	77
Service Type		
FR		50
DR		14
LR		3
HR		5
CR		3
FB		2
Status		
Operational	27	32
Planning	31	45

Note: Breakdowns by technology, status, and location may not sum to transit agency and service type totals.

TABLE 1. APTS DEPLOYMENT SUMMARY

Table 1-10. Paratransit CAD		
	By Transit Agency	By Service Type
Totals	152	152
Service Type		
DR		152
Status		
Operational	101	101
Implementation	13	13
Planning	38	38

Table 1-11. Mobility Manager		
	By Transit Agency	By Service Type
Totals	58	58
Service Type		
DR		58
Status		
Operational	42	42
Implementation	3	3
Planning	13	13

Table 1-12. Transportation Management Centers		
	By Transit Agency	By Service Type
Totals	28	33
Service Type		
FR		27
DR		1
LR		2
HR		2
CR		1
Status		
Operational	9	11
Planning	19	22

Note: Breakdowns by technology, status, and location may not sum to transit agency and service type totals.

TABLE 1. APTS DEPLOYMENT SUMMARY

Table 1-13. Traffic Signal Priority		
	By Transit Agency	By Service Type
Totals	55	56
Service Type		
FR		53
LR		2
CR		1
Status		
Operational	16	16
Implementation	7	7
Planning	33	33

Note: Breakdowns by technology, status, and location may not sum to transit agency and service type totals.

SECTION 2. APTS DEPLOYMENT IN THE U.S. BY TRANSIT AGENCY

Table 2 lists present and future deployments of APTS elements by transit agency and service type, as well as the number of vehicles operated (by the agency or under contract) in each service type. In some instances, not all vehicles in each service type are, or would be, equipped with APTS elements. These agencies are arranged alphabetically, first by state and then by agency name.

As indicated in the table legend, items enclosed by parentheses and brackets are in the implementation and planning phases, respectively. All others are operational elements. Where multiple entries exist in any table cell, two or more technologies are utilized, sometimes in different phases of deployment. With one possible exception, the transit elements contained in the column headings are those that involve some form of automation or electronics, and are therefore considered Advanced Public Transportation Systems. The possible exception is the mobility manager, which may or may not incorporate automation.

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
Anchorage Public Transportation, Anchorage, AK	FR	50	TR					P							[X]
	DR	31	TR									X	X		
Birmingham-Jefferson County Transit Authority, Birmingham, AL	FR	76		[GPS]		[X]	[X]			[MS], [SC]					
	DR	14		[GPS]								[X]			
City of Gadsden, Gadsden, AL	DR	11	TR, DIG							[SC]		X	[X]		
City of Huntsville Department of Transportation, Huntsville, AL	FR	15	TR												
	DR	15	TR												
Demand and Response Transit (DART), Montgomery, AL	DR	43	DIG									X			
East Alabama Regional Planning and Development Commission, Anniston, AL	FR	11	(DIG)												
Lee-Russell Council of Governments, Opelika, AL	FR	6	TR												
	DR	12	TR										X		
Mobile Transit Authority, Mobile, AL	FR	42	TR												
	DR	8	TR												
Northwest Alabama Council of Governments, Muscle Shoals, AL	DR	53											X		
Wiregrass Transit Authority, Dothan, AL	DR	17	DIG									(X)			
Central Arkansas Transit Authority, North Little Rock, AR	FR	60													(X)
	DR	12													
Intra City Transit, Hot Springs, AR	FR	11													
	DR	5										X			
Pine Bluff Transit, Pine Bluff, AR	FR	6	TR												
	DR	2	TR												
City of Mesa, Mesa, AZ	FR	25		(U)				(T)		MS, CC	X				
	DR	30										X			

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
Glendale Dial-A-Ride, Glendale, AZ	DR	15										X			
Maricopa County Transportation Services, Phoenix, AZ	DR	70	TR, DIG												
Peoria Transit, Peoria, AZ	DR	8										X			
Regional Public Transportation Authority (Valley Metro), Phoenix, AZ	FR	75		GPS			X			CC	X				
Scottsdale Connection, Scottsdale, AZ	FR	12						[U]		CC, DC	X				
Sun Tran, Tucson, AZ	FR	203	TR, DIG	GPS	IB		(X)	(I), (T)							
Access Service Incorporated (ASI), Los Angeles, CA	DR	750	TR, DIG	GPS, [U]				(P)	(X)			X			
Alameda Contra Costa Transit District, Oakland, CA	FR	705	[U]	[GPS]	IB	[X]	[X]	[I], [T]		[MS]	[X]				
	DR	38													
Antelope Valley Transit Authority, Lancaster, CA	FR	42	[U]	[GPS]		[X]									[X]
	DR	13	[U]									X			
Arcadia Transit, Arcadia, CA	DR	18		GPS								X	X		
Benicia Transit, Martinez, CA	FR	8	DIG												
	DR	5	DIG									X			
Camarillo Area Transit, Camarillo, CA	FR	1		GPS	IB					SC	X				
	DR	3		GPS						SC	X				
Central Contra Costa Transit Authority, Concord, CA	FR	112		GPS				P	X						
	DR	44										X			
Chico Area Transit System, Chico, CA	FR	13	[U]												
	DR	8	[U]												
City of Alameda Ferry Services, Alameda, CA	FB	4		DGPS				U		[SC]	[X]				
City of Commerce Municipal Bus Lines, Commerce, CA	FR	12						(U)							
	DR	3											X		

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
City of Glendale, Glendale, CA	FR	25		[GPS]		[X]		[P]						[X]	[X]
	DR	4													
City of La Mirada, La Mirada, CA	DR	13											X	[X]	
City of Riverside Special Transportation, Riverside, CA	DR	21		GPS								X	[X]		
City of Roseville Transit, Roseville, CA	FR	12	TR												
	DR	11	TR												
City of Torrance Transit System, Torrance, CA	FR	57			IB			I		SC					
	DR	6													
Culver City Municipal Bus Lines, Culver City, CA	FR	35	[U]							MS	X				
Davis Community Transit, Davis, CA	DR	2											X		
Eastern Contra Costa Transit Authority (Tri-Delta Transit), Antioch, CA	FR	33		[GPS]			[X]			[SC]	[X]				[X]
	DR	16		[GPS]						[SC]	[X]	X			
Emery-Go-Round, Oakland, CA	FR	5		(GPS)				(U)							
Fairfield-Suisun Transit, Fairfield, CA	FR	26		[GPS]		[X]	[X]	[T], [W], [P]		[SC]	[X]				
	DR	11		[GPS]								[X]			
Foothill Transit, West Covina, CA	FR	259	[DIG]							MS	X				
Fresno Area Express, Fresno, CA	FR	100	DIG	GPS		X		U					X	X	
	DR	25	DIG	[GPS]											
Gardena Municipal Bus Line, Gardena, CA	FR	45		GPS		X									
	DR	9													
Golden Empire Transit District, Bakersfield, CA	FR	72	TR	[U]	[IB]										[X]
	DR	9	TR	[U]								X			
Golden Gate Bridge, Highway and Transportation District, San Francisco, CA	FR	280	DIG	[U]				[P]	[X]	[SC]	[X]				
	FB	5	DIG	[U]				[P]	[X]	[SC]	[X]				

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
Laguna Beach Municipal Transit Lines, Laguna Beach, CA	FR	10	[DIG]												
Livermore/Amador Valley Transit Authority, Livermore, CA	FR	60	TR	[GPS]	[IB]	[X]	[X]	[U]	[X]	[SC]	[X]				
	DR	9	TR	[GPS]						[SC]	[X]	X			
Long Beach Public Transportation Co., Long Beach, CA	FR	216					(X)								
	DR	20													
Los Angeles County Metropolitan Transportation Authority, Los Angeles, CA	FR	2278	TR, DIG	SO, [DGPS]	IB	[X]		I, T, P	[X]	[MS], [SC]	[X]				[X]
	LR	54	TR	SO			[X]	I, T, P	[X]	[MS], [SC]	[X]				X
	HR	30		SO			X	I, T, P	[X]	[MS], [SC]	[X]				
Los Angeles Department of Transportation, Los Angeles, CA	FR	140													
	DR	256										X			
Mendocino Transit Authority, Ukiah, CA	FR	19						P	X						
	DR	27													
Modesto Area Express, Modesto, CA	DR	10		[GPS]								X			
Montebello Bus Lines, Montebello, CA	FR	54	[U]							MS	X				
	DR	5	[U]												
Monterey-Salinas Transit, Monterey, CA	FR	71	[DIG]												[X]
	DR	25	[DIG]												
North San Diego County Transit District, Oceanside, CA	FR	154	[U]	[GPS]			X	U	X					[X]	
	DR	31													
	CR	21						U	X	CC				[X]	
Norwalk Transit System, Norwalk, CA	FR	25		[GPS]			[X]			MS	X				
	DR	4								MS	X	[X]			
Omnitrans, San Bernardino, CA	FR	153	DIG	[DGPS]	[IB]	[X]	X	P	X	[MS]	[X]				
	DR	88		[DGPS]								X			
Orange County Transportation Authority, Orange, CA	FR	460	TR, [U]	[GPS]		[X]		[I, T], [W], [P]		[U]	[X]				
	DR	230	TR, [U]	[GPS]						[U]	[X]				
	CR	30	TR							[U]	[X]				

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
Outreach and Escort Inc., San Jose, CA	DR	150	DIG	DGPS						[SC]	[X]	X			
Peninsula Corridor Joint Powers Board (Caltrain), San Carlos, CA	CR	73	TR				X			[SC]	[X]				
Petaluma Transit, Petaluma, CA	FR	8													
	DR	3										X			
Redding Area Bus Authority, Redding, CA	FR	24	TR												
	DR	25	TR												
Riverside Transit Agency, Riverside, CA	FR	97	[U]	DK				[I], [T], [W], [P]	[X]	[SC]	[X]			[X]	[X]
	DR	66	[U]							[SC]	[X]	X	X		
Sacramento Regional Transit District, Sacramento, CA	FR	211	TR												[X]
	DR	84	TR												
	LR	36	TR												
San Benito County Transit, Hollister, CA	FR	4	[DIG]												
	DR	12	[DIG]												
San Diego Transit Corporation, San Diego, CA	FR	307	TR, DIG	[GPS]	[IB]	[X]		[I], [T], [W], [P]	[X]					[X]	[X]
	DR	14													
San Diego Trolley, San Diego, CA	LR	123		[GPS]				P	X						
San Francisco Bay Area Rapid Transit District (BART), Oakland, CA	HR	669	(TR)				X			MS, [SC]	X				
San Francisco Municipal Railway, San Francisco, CA	FR	945		SO											[X]
	LR	157		SO							X				
San Joaquin Regional Transit District, Stockton, CA	FR	98	DIG	DGPS	(IB)	X	X	(P)		MS					
	DR	41	DIG	DGPS						MS		X			
San Luis Obispo Regional Transit Authority, San Luis Obispo, CA	FR	14													
	DR	9										X			
San Mateo County District (Samtrans), San Carlos, CA	FR	314	[TR]	[GPS]	[IB]		X	[I]							
	DR	58	[TR]	[GPS]											

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
Santa Barbara Metropolitan Transit District, Santa Barbara, CA	FR	90						U							
Santa Clara Valley Transit Authority, San Jose, CA	FR	471	[U]	[DGPS]	[IB]		(X)	T, W, P	X	[SC], [CC]					
	LR	56	[U]	[DGPS]			(X)	T, W, P	X	[SC], [CC]					X
Santa Cruz Metropolitan Transit District, Santa Cruz, CA	FR	93								[MS]					
	DR	6													
Santa Monica Municipal Bus Lines, Santa Monica, CA	FR	141	[U]	OTR						[MS]	[X]				[X]
Santa Rosa City Bus, Santa Rosa, CA	FR	24	[DIG]							[U]	[X]				[X]
Simi Valley Transit, Simi Valley, CA	FR	9		[U]	IB					SC	X				
	DR	5										X			
Sonoma County Transit, Santa Rosa, CA	FR	57		GPS				T, P							X
	DR	10													
South Coast Area Transit, Oxnard, CA	FR	44	TR		IB					SC	X				
	DR	4	TR												
Southern California Regional Rail Authority (Metrolink), Los Angeles, CA	CR	152	DIG, [U]					P							
Stanislaus Regional Transit, Modesto, CA	FR	4		GPS			X	P							
	DR	5		GPS								X			
Sunline Transit Agency, Thousand Palms, CA	FR	40	[U]	[GPS]	[U]										(X)
	DR	26	[U]	[GPS]								X			
The Bus-Merced Country Transit, Merced, CA	FR	22	TR												
	DR	22	TR									X			
The Vine/Napa Valley Transit, Napa, CA	FR	19		GPS		X				[SC]	[X]				X
Thousand Oaks Transit, Thousand Oaks, CA	FR	5	TR, DIG	(GPS)	U			[I]		SC	X				
	DR	6	TR, DIG										X		

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
Union City District, Union City, CA	FR	13	TR, DIG												[X]
	DR	5	TR, DIG										X		
Unitrans, Davis, CA	FR	41	TR, DIG					U							
Vacaville City Coach, Vacaville, CA	FR	7	[DIG]												
	DR	3	[DIG]												
Vallejo Transit and Baylink Ferry, Vallejo, CA	FR	52								[SC]					[X]
	DR	10											X		
	FB	3		GPS						[SC]					
Ventura Intercity Service Transit, Ventura, CA	FR	14	TR, DIG		IB			I, T, P	X	SC	X				
	DR	8	TR, DIG							SC	X				
Visalia City Coach, Visalia, CA	FR	21													[X]
	DR	6													
Western Contra Costa Transit Authority, Pinole, CA	FR	29						[U]	[X]	[SC]	[X]				
	DR	12								[SC]	[X]	X			
Yolo County Transportation District, Woodland, CA	FR	25	TR, DIG								X			[X]	
	DR	7	TR, DIG										X		
Yuba-Sutter Transit Authority, Marysville, CA	FR	13	TR												
	DR	9	TR												
Avon/Beaver Creek Transit, Avon, CO	FR	52	[U]	[GPS]	[U]	[X]		[T]	[X]	[DC]	[X]				
	DR	1	[U]	[GPS]											
City of Greeley, Greeley, CO	FR	12													
	DR	6										[X]			
Colorado Springs Transit, Colorado Springs, CO	FR	66	[U]	[DGPS]	[IB]	[X]		[T], [P]		[SC]					[X]
Eagle County Regional Transportation Authority, Avon, CO	FR	32	TR, DIG	[U]			[X]			[U]				X	
	DR	3	TR, DIG	[U]						[U]		[X]			
Mesa County, Grand Junction, CO	FR		DIG	[GPS]	[U]		[X]			[SC]	[X]				
	DR	14	DIG												

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Regional Transit District, Denver, CO	FR	800	DIG	DGPS	(TM), (IB)		X	(T), (W), (P)		[SC]	[X]				
	DR	205										X			
	LR	17	DIG	DGPS				(T), (W), (P)		[SC]	[X]				
Transfort, Fort Collins, CO	FR	24	DIG	[U]	[U]		[X]				[X]				
	DR	40	DIG	[U]								[X]			
City of Stamford DAR, Stamford, CT	DR	8	DIG									(X)			
Connecticut Limousine, Milford, CT	FR	150	DIG	(DGPS)	[U]	(X)	X	U	X						
Connecticut Transit, New Haven, CT	FR	372					(X)	T	X	MS	X				
Cross Sound Ferry Services Inc., New London, CT	FB	6						U		CC					
Greater Bridgeport Transit District, Bridgeport, CT	FR	53													
	DR	24										X			
Greater Hartford TD, Hartford, CT	DR	150	TR									X			
Greater New Haven Transit District, Hamden, CT	DR	112	DIG	(GPS)								X			
Greater Waterbury Transit District, Waterbury, CT	DR	15						U	X			X	[X]		
Housatonic Area Regional Transit, Danbury, CT	FR	20						(U)							
	DR	32										X			
Milford Transit District, Milford, CT	FR	6													
	DR	12										[X]			
Northeast Transportation Company, Waterbury, CT	FR	41								MS	X				
	DR	6													
Norwalk Transit District, Norwalk, CT	FR	36	TR, DIG					U	X						X
	DR	15	TR, DIG									X			
South East Area Transit, Norwich, CT	FR	25	TR							MS					
	DR	6	TR												
The New Britain Transportation Company, Berlin, CT	FR	14						U		MS	X				
	DR	1													

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Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
Washington Metro Area Transit Authority, Washington, DC	FR	1300	[U]												X
	HR	764								MS (SC)					
DART First State, Delaware Transit Core, Dover, DE	FR	154	[U]	[GPS]	[IB]	[X]	(X)	[U]						[X]	
	DR	112	[U]	[GPS]								(X)			
Arc Transit, Palatka, FL	FR	18	(U)	GPS			X	P							
	DR	13	(U)	GPS								X	X		
Bay County Council on Aging, Panama City, FL	FR	3													
	DR	38										[X]	X		
Broward County Mass Transit, Pompano Beach, FL	FR	202	(DIG)	(GPS)		(X)	(X)	U		[U]					[X]
	DR	197											[X]		
Central Florida Regional Transportation Authority (LYNX), Orlando, FL	FR	225		GPS	(IB)			(P)		[MS]				[X]	X
	DR	116													
City of Tallahassee TALTRAN, Tallahassee, FL	FR	56	(TR)												
	DR	17	(TR)										X		
Escambia County Area Transit, Pensacola, FL	FR	32								[SC]					
	DR	12											X		
Gainesville Regional Transit System, Gainesville, FL	FR	58	[U]	[U]			[X]								
	DR	2	[U]										[X]		
Hillsborough Area Regional Transit Authority (HART), Tampa, FL	FR	179		SO			X	U		[MS]	[X]			X	
	DR	46											X		
Indian River County Council on Aging, Vero Beach, FL	FR	7	DIG												
	DR	17	DIG									X			
Jacksonville Transportation Authority, Jacksonville, FL	FR	183			IB		X			MS					
	DR	8	TR												
Lakeland Area Mass Transit District, Lakeland, FL	FR	30	[TR]												
	DR	13	[TR]												
Lee County Transit, Ft Myers, FL	FR	50	TR												
	DR	15	TR										X		

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Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
Manatee County Transit, Bradenton, FL	FR	16	TR				[X]	P							
	DR	17	TR									[X]			
Okaloosa County Coordinated Transportation Inc., Fort Walton Beach, FL	DR	48										X			
Palm Tran Inc., West Palm Beach, FL	FR	151			[U]			U							
	DR	66													
Pasco Co. PTD, Port Richey, FL	FR	8	TR, DIG				[X]			[U]					
	DR	40	TR, DIG									[X]	X		
Sarasota County Transportation Agency, Sarasota, FL	FR	38	TR, DIG				[X]								
Space Coast Area Transit, Cocoa, FL	FR	27	TR												
	DR	30	TR									X			
St. Lucie County Council on Aging, Port St. Lucie, FL	DR	33		[GPS]				P					X		
Tri-County Commuter Rail Authority, Ft Lauderdale, FL	CR	34	DIG	GPS			[X]	T		CC					
Volusia Transportation Authority (VOLTRAN), South Daytona, FL	FR	55	TR												
	DR	38	TR									[X]			
Albany Transit System, Albany, GA	FR	11	[U]												
	DR	8	[U]												
Athens Transit System, Athens, GA	FR	23	[U]												
	DR	5	[U]										[X]		
Augusta Public Transit, Augusta, GA	FR	35	[TR]				[X]								
	DR	8											(X)		
Cobb County Transit, Marietta, GA	FR	53			[U]										
	DR	15											X		
Department of Transportation (METRA), Columbus, GA	FR	35						T							
	DR	6													

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Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
Metropolitan Atlanta Rapid Transit Authority (MARTA), Atlanta, GA	FR	704	[U]	DGPS	IB	X		T, W, P	X					X	[X]
	DR	77	[U]												
	HR	238	[U]	DGPS		X		T, W, P	X						
University of Georgia Campus Transit System, Athens, GA	FR	41	[DIG]		U										
	DR	5	[DIG]												
City and County of Honolulu Department of Transportation Services, Honolulu, HI	FR	525													
	DR	90										X			
Oahu Transit Services (The Bus), Honolulu, HI	FR	525	[DIG]												[X]
	DR	102	[DIG]	GPS											
Bettendorf Transit System, Bettendorf, IA	FR	7													X
	DR	4											X		
City of Davenport, Davenport, IA	FR	19		[U]	[IB]										
	DR	6													
City of Dubuque-Keyline Transit, Dubuque, IA	FR	19	[U]	[GPS]			[X]			[SC]	[X]			[X]	
	DR	6	[U]	[GPS]						[SC]	[X]	[X]	[X]		
Coralville Transit, Coralville, IA	FR	9						(P)	(X)						
	DR														
Des Moines Metropolitan Transit Authority, Des Moines, IA	FR	98	TR	GPS			X	P		(MS), (SC)				[X]	[X]
	DR	26	TR	GPS									X		
Five Seasons Transportation and Parking, Cedar Rapids, IA	FR	40	TR	GPS	IB	X	X			[MS]					
	DR	11		GPS						[MS]		X	X		
Metropolitan Transit Authority of Black Hawk County, Waterloo, IA	FR	17			[U]					[MS], [SC]					
	DR	15		[GPS]								X			
Sioux City Transit System, Sioux City, IA	FR	26	(TR)	(U)		(X)	(X)							[X]	
	DR	17	TR	(U)								(X)			
Siouxland Regional Transit System, Sioux City, IA	DR	47	[TR]												

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University of Iowa, CAMBUS, Iowa City, IA	FR	29	TR	[GPS]		[X]		[T]	[X]						
	DR	4	TR	[GPS]								[X]			
Boise Urban Stages, Boise, ID	FR	39	TR							[U]					
	DR	6	TR												
C.A.R.T. Inc., Idaho Falls, ID	FR	3													
	DR	29											X		
Pocatello Regional Transit, Pocatello, ID	FR	9						(U)							
	DR	14													
Chicago Transit Authority, Chicago, IL	FR	1853	(U)	(DK)	(TM), (IB)	(X)	(X)	[U]	[X]	MS	X				(X)
	DR	292													
	HR	1140						[U]	[X]	MS	X				
Cook-Dupage Transportation Company, Inc., Chicago, IL	DR	140		OTR											
Greater Peoria Mass Transit, Peoria, IL	FR	53	(U)					[P]							
	DR	10										X			
Madison County Transit District, Granite City, IL	FR	76	TR, (DIG)											[X]	
	DR	30	TR, (DIG)									X			
Northeast Illinois Regional Commuter Rail Corporation (METRA), Chicago, IL	CR	1100					X	P							
PACE Suburban Bus, Arlington Heights, IL	FR	640	TR	[GPS]	IB	[X]	[X]	(P)	(X)	MS, [SC]	X			X	X
	DR	350										X			
Pekin Municipal Bus Service, Pekin, IL	FR	3													
	DR	1										[X]	[X]		
Rock Island County Mass Transit (METROLINK), Rock Island, IL	FR	63	[U]	[GPS]		[X]	[X]	(T), (W), (P)	(X)						[X]
	DR	5	[U]	[GPS]								[X]	[X]		
Rockford Mass Transit District, Rockford, IL	FR	38	DIG												
	DR	14	DIG									X			

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Urbana Champaign Mass Transit District, Urbana, IL	FR	85	DIG	[GPS]	[IB]	[X]	X	(U)							
	DR	4	DIG	[GPS]											
ACE Cab, South Bend, IN	DR	42										X			
Bloomington Public Transportation Corporation, Bloomington, IN	FR	23	TR, DIG	[GPS]		[X]									
	DR	5	TR, DIG												
Fort Wayne Public Transportation Corporation, Fort Wayne, IN	FR	46													
	DR	9										[X]			
Gary Public Transportation Corporation, Gary, IN	FR	47													[X]
	DR	2													
Greater Lafayette Public Transportation, Lafayette, IN	FR	41	TR, DIG					[P]							(X)
	DR	9	TR, DIG									X			
Hammond Transit System, Hammond, IN	FR	12	TR												(X)
	DR	24													
Metropolitan Evansville Transit, Evansville, IN	FR	25	DIG					T		MS, SC					
	DR	12	DIG									[X]			
Muncie Indiana Transit System, Muncie, IN	FR	27													
	DR	11		(U)								X			
Northern Indiana Commuter Transportation District, Chesterton, IN	CR	58		[U]											
Terre Haute Transit Utility, Terre Haute, IN	FR	7	TR, DIG												
	DR	1	TR, DIG												
Johnson County Transit, Olathe, KS	FR	23													
	DR	40										(X)			
Wichita Metropolitan Transit Authority, Wichita, KS	FR	53		[GPS]	[U]			[U]							
	DR	17		[GPS]											
LEXTRAN, Lexington, KY	FR	48	TR, DIG					[T], [P]	[X]						
	DR	28											[X]		

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Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
Transit Authority of Northern Kentucky, Fort Wright, KY	FR	117												X	
	DR	11													
Transit Authority of River City, Louisville, KY	FR	280	TR	SO	IB	X		U						X	
	DR	75											(X)		
City of Alexandria, Alexandria, LA	FR	11		[U]											
	DR	4										X			
Crescent City Connection Division, New Orleans, LA	FB	6	DIG	U											
Louisiana Transit Co. Inc., Harahan, LA	FR	29	DIG												
Shreveport Area Transit System, Shreveport, LA	FR	45	TR, DIG												
	DR	13	TR, DIG												
Terrebonne Parish Good Earth Transit System (GET), Houma, LA	FR	8	TR, DIG												
Brockton Area Transit Authority, Brockton, MA	FR	40										X			
	DR	35													
Cape Cod RTA, Dennis, MA	FR	50	(DIG)	GPS			X	T, W, P		[MS], [CC]	[X]				
	DR	9	(DIG)	GPS						[MS], [CC]	[X]	X			
Cape Island Express Lines Inc., New Bedford, MA	FB	1		U				U		U					
GATRA, Attleboro, MA	FR	20	TR, DIG	[DGPS]				[U]							
	DR	45	TR, DIG	[DGPS]								X			
Lowell Regional Transit Authority, Lowell, MA	FR	35						U							
	DR	35										X			

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Massachusetts Bay Transportation Authority (MBTA), Boston, MA	FR	1119	TR, DIG											X	
	DR	362	TR, DIG												
	LR	173	TR, DIG				X	I, P						X	
	HR	408	TR, DIG				X	I, P						X	
	CR	346	TR, DIG				X								
Merimack Valley Regional Transit Authority, Haverhill, MA	FR	45						(I)							
	DR	5													
Montachusset Regional Transit Authority, Fitchburg, MA	FR	28													
	DR	100										X			
Pioneer Valley Transit Authority (PVTa), Springfield, MA	FR	268	TR					(P)	(X)	(MS)					
Southeast Regional Transit Authority, New Bedford, MA	FR	72						[U]							
Worcester Regional Transit Authority, Worcester, MA	FR	52						P		MS					
	DR	50											X		
Frederick County Transit, Frederick, MD	FR	5	TR												
	DR	19	TR												
Harford County Transportation, Abingdon, MD	FR	12					[X]	P							
	DR	13										[X]			
Maryland Transit Administration (MARC Train Service), BWI Airport, MD	CR	132		OTR				T, P	X						X
Montgomery County Transit, Rockville, MD	FR	291		(DGPS)			(X)	(W), (P)						[X]	[X]
Casco Bay Island Transit District, Portland, ME	FB	5						U	X						
Chebeague Transportation Co., Chebeague Island, ME	FR	3						U	X						
	FB	2						U	X						

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City of Bangor/Bangor Bus, Bangor, ME	FR	14	DIG					U							
Coastal Trans, Rockland, ME	DR	18										X			
CYR Bus Line, Old Town, ME	FR	1						U							
Frye Island Ferry, Raymond, ME	FB	2						U							
Greater Portland Transit District, Portland, ME	FR	24						[T], [W], [P]	[X]						
Isle Au Haut Stonington, Stonington, ME	FB	2						[U]							
Kennebec Valley Community Action Program, Waterville, ME	FR	6													
	DR	19										X			
Monhegan-Thomston Boat Line, Port Clyde, ME	FB	2		GPS				U							
South Portland Bus Service, S. Portland, ME	FR	8	DIG					U							
The Regional Transportation Program, Portland, ME	DR	75										X			
Waldo Co. Comm. for Social Action (Waldo Co. Transportation), Belfast, ME	DR	10										X			
Western Maine Transportation Pine Tree, Auburn, ME	FR	8													
	DR	35										(X)			
Western ME Transportaton Services Inc., Mexico, ME	FR	6													
	DR	35										X			
Ann Arbor Transportation Authority, Ann Arbor, MI	FR	77	DIG	SO	IB	X	X	I, T, P		[SC]	[X]				
	DR	10	DIG	SO								X			
Battle Creek Transit, Battle Creek, MI	FR	20		[U]											
	DR	10		[U]								[X]			

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Bay Metro Transportation Authority, Bay City, MI	FR	47	TR												
	DR	9	TR									X			
Capital Area Transportation Authority, Lansing, MI	FR	66		GPS				I		(U)					
	DR	52													
City of Detroit Department of Transportation, Detroit, MI	FR	601					[X]	(P)							
City of Jackson Transportation Authority, Jackson, MI	FR	28													
	DR	36										X			
Detroit Transportation Corporation, Detroit, MI	AG	12		U			X								
Grand Rapids Area Transit Authority (GRATA), Grand Rapids, MI	DR	23											X		
Kalamazoo Metro Transit System, Kalamazoo, MI	FR	42	TR												
	DR	5	TR												
Mass Transportation Authority, Flint, MI	FR	221	(TR)							DC					
	DR	95	(TR)												
Muskegon Area Transit System, North Muskegon, MI	FR	12	TR												
	DR	6	TR												
Suburban Mobility Authority for Regional Transportation (SMART), Detroit, MI	FR	291		GPS		X	X								
	DR	109		GPS								X			
City of Moorhead Transit, Moorhead, MN	FR	12										X	X		[X]
	DR	2													
City of Rochester, Rochester, MN	FR	26						[P]	[X]					[X]	
	DR	5										X			
Duluth Transit Authority, Duluth, MN	FR	75	[U]				[X]			[U]					
	DR	6	[U]									[X]			
Mankato Heartland Express, Mankato, MN	FR	15		[U]				[T]			X				[X]
	DR			[U]								[X]			

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Metro Transit, Minneapolis, MN	FR	900	[U]	(GPS)	IB		X	P	X	MS	X				X
St. Cloud Metropolitan Transit Commission, St. Cloud, MN	FR	29	[U]	(GPS)			(X)			[U]	[X]			[X]	[X]
	DR	13	[U]	(GPS)						[U]	[X]	(X)			
Bi-State Development Agency, St. Louis, MO	FR	624			IB										
	DR	63	DIG									X			
	LR	28													
City Utilities of Springfield, Springfield, MO	FR	23	[TR, DIG]												
	DR	5	[TR, DIG]									X			
Kansas City Area Transit Authority, Kansas City, MO	FR	260		SO			[X]	[I]							
St. Joseph Transit, St. Joseph, MO	FR	5	[TR, DIG]				[X]								
	DR	15	[TR, DIG]									[X]			
Jackson Public Transportation Company, Jackson, MS	FR	41			[U]										
	DR	13													
Mississippi Coast Transportation Authority, Gulfport, MS	FR	18						P							
	DR	22													
Billings Metro, Billings, MT	FR	23	TR												
	DR	13	TR												
Great Falls Transit District, Great Falls, MT	FR	17						[U]							
	DR	15													
Asheville Transit Authority, Asheville, NC	FR	16	TR	(SO)										[X]	
Capital Area Transit, Raleigh, NC	DR	15		[U]											
Charlotte Department of Transportation, Charlotte, NC	FR	163	(TR), DIG				[X]	U		(MS), (SC)					
	DR	50	DIG							(MS), (SC)		X			
Greensboro Transit Authority, Greensboro, NC	FR	25	(TR, DIG)	[GPS]		[X]				[SC]					
	DR	22	(TR, DIG)	[GPS]						[SC]		[X]			
Greenville Area Transit, Greenville, NC	FR	7	DIG		[U]			[I]		[U]					

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Highpoint Transit, Highpoint, NC	FR	16													
	DR	6										X			
Piedmont Wagon, Hickory, NC	FR	6													X
	DR	2													
Rocky Mount Transit, Rocky Mount, NC	FR	6	TR	[GPS]				I		(MS), (SC)					
	DR														
Winston-Salem Transit Authority, Winston-Salem, NC	FR	54	TR	[U]				[U]							
	DR	20	TR	U								[X]			
Bis-man Transit Board, Bismarck, ND	DR	23	DIG												
Grand Forks City Bus, Grand Forks, ND	FR	17													
	DR	2								[DC]	[X]	X			
StarTran, Lincoln, NE	FR	68	TR		[IB]										
	DR	38	TR												
Transit Authority of City of Omaha, Omaha, NE	FR	149		[GPS]		[X]	X								
	DR	25		[GPS]											
COAST, Portsmouth, NH	FR	13		[GPS]			[X]	[I]							
	DR	1		[GPS]								(X)	(X)		
Greater Laconia Transit Agency, Laconia, NH	FR	29					(X)								
	DR	29										(X)			
Nashua Transit System, Nashua, NH	FR	8	DIG												
	DR	10	DIG									X			
North County Transportation, Berlin, NH	DR	14	TR												
Coach USA Hudson Transit Lines, Inc., International Bus Services Inc., Mahwah, NJ	FR	140						P							

TABLE 2. APTS DEPLOYMENT IN U.S. BY TRANSIT AGENCY

Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
New Jersey Transit, Newark, NJ	FR	1900	TR	SO	(IB)		X	I							
	DR	101										(X)	X		
	LR	23	TR												
	CR	700		GPS				I							
PATH, Jersey City, NJ	HR	345					(T)		MS						
Port Authority Transit Corp, Lindenwold, NJ	LR	121	[U]				X	[T]		U					
Rockland Coaches Inc., Bergenfield, NJ	FR	160						P							
City of Santa Fe (Santa Fe Trails), Santa Fe, NM	FR	28	TR	[U]											
	DR	6										X			
Lead Runner Transit City of Las Cruces Transit Department, Las Cruces, NM	FR	15	TR												
	DR	11	TR												
SunTran, Albuquerque, NM	FR	118	TR, DIG		[TM], [IB]			[P]	[X]						
	DR	50	TR, DIG	GPS								X			
Citizen Area Transit, Las Vegas, NV	FR	227	[TR, DIG]	(DGPS)		(X)	[X]								
	DR	126	[TR, DIG]	(DGPS)								[X]			
Regional Transportation Commission of Washoe County, Reno, NV	FR	60	[U]	[U]											
	DR	38	[U]	[U]											
Broome County Department of Public Transportation, Vestal, NY	FR	43													
	DR	17										X			
Capital District Transportation Authority, Albany, NY	FR	232		SO	U	X	X	P							
	DR	28										X			
Central New York Regional Transportation Authority, Syracuse, NY	FR	180	[DIG]				[X]			MS					
	DR	16	[DIG]							MS		[X]			
City of Poughkeepsie Transit System, Poughkeepsie, NY	FR	8	TR												

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Dutchess County Division of Mass Transport, Poughkeepsie, NY	FR	29	TR					[T], [W], [P]	[X]						
	DR	39	TR									X			
Liberty Lines Transit, Yonkers, NY	FR	294		SO		X				[MS]	[X]				
Long Island Bus, Garden City, NY	FR	300	TR	(GPS)		(X)	[X]	T, P	X	MS	X				
	DR	50	TR	(GPS)											
Long Island Rail Road, Jamaica, NY	CR	1100					X	U	X	MS	X				
Metro North Commuter RR Co., New York, NY	CR	906					X			[CC]					
Monsey New Square Trails Corporation, Spring Valley, NY	FR	52						P							
New York City Department of Transportation, New York, NY	FR	1150		[GPS]	[IB]			[I], [W]		MS	X				
New York City Transit, Brooklyn, NY	FR	3800	(TR)	(DGPS)		(X)	[X]	(T), (W), (P)	(X)	MS	X				
	DR	200										X			
	HR	5807					[X]			MS	X				
Newburgh Beacon Bus Corp, Newburgh, NY	FR	2	DIG					P							
Niagara Frontier Transportation Authority, Buffalo, NY	FR	355	(TR, DIG)	(GPS)			(X)								
	LR	27	[TR, DIG]				(X)								
Rochester-Genesee Regional Transportation Authority, Rochester, NY	FR	244	[U]							U					
	DR	36										X	[X]		
Rockland County DO Public Transport, Pomona, NY	FR	30		[U]				W	X					[X]	
	DR	13		[U]								X			
Staten Island Rapid Transit Operating Authority, Staten Island, NY	HR	64					[X]			MS	X				

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Suffolk County Department of Public Works-Transportation Division, Yaphank, NY	FR	141	TR	[U]			[X]			[MS]					
	DR	32	TR	[U]						[MS]		[X]			
Tompkins Consolidated Area Transit, Ithaca, NY	FR	58					[X]	U		[MS]					
	DR	4								[MS]		[X]			
Westchester County DOT, White Plains, NY	FR	352		SO, [GPS]	[IB]			U							
	DR	53											X		
Allen County Regional Transit Authority, Lima, OH	FR	10													
	DR	4										[X]	X		
Campus Bus Service, Kent, OH	FR	27													X
Central Ohio Transit Authority, Columbus, OH	FR	306	[U]	SO	IB										
	DR	38	[U]												
Greater Cleveland Regional Transit Authority, Cleveland, OH	FR	800	[U]	[DGPS]		[X]	X	P						[X]	
	DR	82	[U]	[DGPS]								X			
	LR	48	[U]	[DGPS]		[X]		P		[SC]				[X]	
	HR	60	[U]	[DGPS]		[X]		P		[SC]				[X]	
LakeTran, Grand River, OH	FR	34	TR, DIG	(GPS)											
	DR	54	TR, DIG	(GPS)								X			
Metro Regional Transit Authority, Akron, OH	FR	141		GPS	IB			I, T							X
	DR	54													
Miami Valley Regional Transit Authority, Dayton, OH	FR	244	[U]	[U]	[IB]		X	I							
Middletown Transit System, Middletown, OH	FR	6													
	DR	1										X	[X]		
Portage Area Regional Transportation Authority (PORTA), Kent, OH	FR	1	[U]				X								
	DR	19	[U]									X	X		
Richland County Transit, Mansfield, OH	FR	8													
	DR	5											X		

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Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
Southwest Ohio Regional Transit Authority, Cincinnati, OH	FR	391	(TR)	(GPS)			(X)								
	DR	40	(TR)	(GPS)								(X)			
Toledo Area Regional Transit Authority, Toledo, OH	FR	184	DIG												
	DR	18	DIG												
Western Reserve Transit Authority, Youngstown, OH	FR	44	TR, DIG	(GPS)			X								
	DR	6	TR, DIG	(GPS)								X			
Central Oklahoma Transit and Parking Authority, Oklahoma City, OK	FR	85													
	DR	16								(MS)		X			
Metropolitan Tulsa Transit Authority, Tulsa, OK	FR	90		[GPS]											
	DR	30	TR, DIG	[GPS]								X	X		
Lane Transit City Bus, Eugene, OR	FR	116		[GPS]	TM		[X]	[U]		[SC]					
Rogue Valley Transit District, Medford, OR	FR	25	DIG												
	DR	7													
Salem Area Mass Transit District, Salem, OR	FR	55					[X]	P							
Tri-County Metropolitan, Portland, OR	FR	700	[TR]	DGPS	IB			P							[X]
	DR	160	[TR]	DGPS											
Altoona Metro Transit, Altoona, PA	FR	26					X	[T]		[SC]					
	DR	28													
Area Transportation Authority of North Central Pennsylvania, Johnsonburg, PA	FR	56	[U]	[U]			[X]	[U]							
	DR	18	[U]	[U]								[X]			
Beaver County Transit Authority, Rochester, PA	FR	13	[U]	[GPS]			[X]	[U]							
	DR	27	[U]	[GPS]								[X]			
County of Lackawanna Transit System (COLTS), Scranton, PA	FR	31		GPS		X		I							
Luzerne County Transportation Authority, Kingston, PA	FR	39		(GPS)				(I), (T)							
	DR	4													

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Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
Port Authority of Allegheny County, Pittsburgh, PA	FR	911					(X)								
	LR	59	[TR]				(X)								
Southeastern Pennsylvania Transportation Authority, Philadelphia, PA	FR	1476	[U]	[DGPS]	[U]	[X]	[X]								
	DR	441		[DGPS]											
	LR	198	[U]	[DGPS]		[X]									
	HR	396													
	CR	279													
Williamsport Bureau of Transportation, Williamsport, PA	FR	25	TR, DIG					[T]							[X]
	DR	2													
Metropolitan Bus Authority, San Juan, PR	FR	168	[TR, DIG]	SO, [GPS]		[X]	X								
	DR	24	[TR, DIG]									X			
Puerto Rico Highway and Transportation Authority, San Juan, PR	FR	29		OTR											
Rhode Island Public TA, Providence, RI	FR	221	TR	[GPS]				U							
	DR	92										X			
City of Charleston Transit Administration, Charleston, SC	FR	38										X			
	DR	13										X			
Pee Dee Regional Transportation Authority, Florence, SC	FR	50		[GPS]	[U]			[U]		[SC]					[X]
	DR	150		[GPS]								[X]			
Santee Wateree Regional Transportation Authority, Sumter, SC	FR	40	[TR, DIG]	[GPS]			[X]					[X]			
	DR	60	[TR, DIG]	[GPS]								[X]			
Spartanburg County Transportation, Spartanburg, SC	DR	35										X			
Rapid Transit System, Rapid City, SD	FR	7	TR												
	DR	11	TR												
Sioux Falls Transit, Sioux Falls, SD	FR	23													
	DR	22										(X)			

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Chattanooga Area Regional Transportation Authority, Chattanooga, TN	FR	76	TR												
	DR	15	TR												
City of Kingsport (Kingsport Area Transit Lines), Kingsport, TN	FR	3	TR												
	DR	3	TR												
Clarksville Transit System, Clarksville, TN	FR	19	[U]												
	DR	5	TR												
Johnson City Transit System, Johnson City, TN	FR	10	(DIG)				[X]	[T], [W], [P]							[X]
	DR	7	(DIG)	[GPS]											
Knoxville (KAT), Knoxville, TN	FR	80						(P)							
	DR	20										(X)			
Memphis Area Transit Authority, Memphis, TN	FR	202	TR				X	P		[U]					
	DR	28	TR									X			
	LR	14	TR				X	P							
Metropolitan Transit Authority, Nashville, TN	FR	150		[U]				(W), (P)							
Amarillo Transit System, Amarillo, TX	FR	17													
	DR	4										X			
Bryan College Station, Bryan, TX	FR	8													
	DR	4	TR												
BVCAA-Brazos Transit System, Bryan, TX	FR	8	TR												
	DR	4													
	CR	15													
Capitol Metropolitan Transportation Authority, Austin, TX	FR	388	[DIG]					[P]							
	DR	75	[DIG]												
City Bus, Lubbock, TX	FR	51	TR, DIG												
	DR	17	TR, DIG									[X]			
City of Brownsville Urban System, Brownsville, TX	FR	19	DIG					[U]							
	DR	8	DIG												

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Agency	Service Type	Service Vehicles	Advanced Communications	Automated Vehicle Location	Automated Passenger Counters	Vehicle Component Monitoring	Automated Operations Software	Automated Transit Information	Multimodal Traveler Information	Automated Fare Payment	Multi-Carrier Fare Integration	Paratransit CAD	Mobility Manager	Transportation Management Centers	Traffic Signal Priority
City of Denton, Denton, TX	FR	6	TR												
	DR	10	TR												
City of Mesquite Parks and Recreation, Mesquite, TX	DR	15										[X]			
City of San Angelo, San Angelo, TX	FR	7	DIG					U							
	DR	7	DIG												
City of Temple, Temple, TX	DR	5								DC					
Corpus Christi Regional Transportation Authority, Corpus Christi, TX	FR	73	TR	[U]	[IB]					[SC]					(X)
	DR	36	TR							[SC]			[X]		
	FB	1	TR							[SC]					
Dallas Area Rapid Transit (DART), Dallas, TX	FR	1200		GPS	[U]		X	I, P						X	
	DR	600		GPS											
	LR	14						I, P							
	CR	1						I, P							
Fort Worth Transportation Service Department Authority, Fort Worth, TX	FR	171								[SC]	[X]			[X]	
	DR	33								[SC]	[X]				
Lewisville Dial-A-Ride, Lewisville, TX	DR	6										X			
Metro Transit Authority of Harris County, Houston, TX	FR	1112	TR	[U]	[U]			U						X	[X]
	DR	115	TR	[U]									X		
Sun Metro, El Paso, TX	FR	159		[U]	[U]	[X]									
	DR	55		[U]											
Transportation Services Department, Grand Prairie, TX	DR	11	DIG												
Via Metropolitan Transit, San Antonio, TX	FR	494	(U)	(DGPS)	(IB)			P							
	DR	134	(U)	(DGPS)											
Waco Transit System, Waco, TX	FR	16	TR												
	DR	5	TR												
Logan Transit District, Logan, UT	FR	12	DIG												
	DR	3	DIG												

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Utah Transit Authority, Salt Lake City, UT	FR	550	[U]												
	DR	60	[U]												
	LR	23	[U]												
Blacksburg Transit, Blacksburg, VA	FR	31		(GPS)				(P)							
	DR	9													
Charlottesville Transit Service, Charlottesville, VA	FR	19								U					[X]
	DR	7													
Potomac and Rappahannock Transportation Commission, Woodbridge, VA	FR	75	TR	GPS			X	I, T							
Tidewater Transportation District Commission (TTDC), Norfolk, VA	FR	198		U		X									
	DR	156													
	FB	3													
Virginia Railway Express, Alexandria, VA	CR	65		(U)				T, P	CC, DC						
Addison County Transit Resources, Middlebury, VT	FR	1										X			
	DR	2													
Green Mountain Express, Bennington, VT	FR	3											X		
	DR	7													
Lake Champlain Transport Co., Burlington, VT	FB	10							[U]						
SEVCA Transportation, Westminster, VT	FR	7						U	X						
	DR	5											X		
Ben Franklin Transit, Richland, WA	FR	58	DIG					U							X
	DR	44	DIG	(GPS)											
CTTRAN, Vancouver, WA	FR	105	(TR)		[U]		[X]	[T]							
	DR	41	TR												
Everett Transit, Everett, WA	FR	43	TR							[SC]	[X]				
	DR	14	TR												

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Intercity Transit, Olympia, WA	FR	80													
	DR	25										X	X		
King County Metro, Seattle, WA	FR	1343		SO	IB			T, P	X	[SC]	[X]				
	DR	279	TR	[GPS]											
Kitsap Transit, Bremerton, WA	FR	120	TR	GPS				U		[SC]	[X]				X
	DR	40	TR	GPS											
Pierce County Public Works and Utility, Tacoma, WA	FB	2						U							
Pierce Transit, Tacoma, WA	FR	200	TR					(U)	(X)						(X)
	DR	92	TR									X			
Spokane Transit Agency, Spokane, WA	FR	144	DIG												
	DR	60	DIG	GPS								X			
Valley Transit, Walla Walla, WA	FR	17						P							
	DR	5											X		
Washington State Ferries/DOT, Seattle, WA	FB	27	DIG												
Whatcom Transportation Authority, Bellingham, WA	FR	34	TR, DIG												
	DR	31	TR, DIG									X			
Janesville Transit System, Janesville, WI	FR	23						P							
Kenosha Transit, Kenosha, WI	FR	47	[U]	[GPS]											
	DR	4													
LaCrosse Municipal Transit Utility, LaCrosse, WI	FR	22	TR												
	DR	6													
Madison Metro Transit, Madison, WI	FR	195	[TR]				[X]	P							
	DR	30	[TR]									[X]	X		
Milwaukee County Department of Transportation, Milwaukee, WI	FR	550	TR, DIG	DGPS	[IB]		X	[U]							
	DR	500										[X]			

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Sheboygan Transit System, Sheboygan, WI	FR	29		LC											
	DR	8													
Transit Management of Racine, Racine, WI	FR	50						[P]							
Waukesha Transit System Utility, Waukesha, WI	FR	23						[P]	[X]	(MS)					
	DR	3										[X]			
Kanawha Valley Regional Transit Authority, Charleston, WV	FR	54	(TR, DIG)												
	DR	11	(TR, DIG)									X			
Mid-Ohio Valley Transit Authority, Parkersburg, WV	FR	6								[SC]					
	DR	3													
City of Casper, Casper, WY	DR	9	TR												

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