



VEHICLE ASSIGNMENT POLICY • 2021



SAN DIEGO METROPOLITAN TRANSIT SYSTEM

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Subject: VEHICLE ASSIGNMENT POLICY

Effective Date: July 1, 2021

Promulgated this 1st day of July 2021.

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TRANSIT SYSTEM

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1.0 Introduction

The Metropolitan Transit System (MTS) is the provider of public fixed-route bus and light rail transit services in the southern and eastern portions of San Diego County. MTS' area of jurisdiction is approximately 570 square miles of the **urbanized** areas of San Diego County, plus the rural areas of East County. Our total service area is 3,240 square miles, serving a population of nearly 3 million.

MTS can trace its roots back to 1886, when private companies began providing various rail transit services in San Diego. The current organization was created by the passage of California Senate Bill 101 and came into existence in January 1976 as the Metropolitan Transit Development Board (MTDB). In 2002, Senate Bill 1703 merged MTDB's long-range planning, financial programming, project development and construction functions into the regional metropolitan planning organization, the San Diego Association of Governments (SANDAG). In 2005, MTDB changed its name to MTS.

MTS directly or through private contractors operates 96 fixed bus routes, 4 light rail lines, and an Americans with Disabilities Act complementary paratransit service. All services are coordinated by MTS, which determines the routes, stops, frequencies and hours of operation. Light rail infrastructure includes 54 stations and 102.6 miles of rail. Various modes of bus routes are operated, including local, urban, express, Rapid, Rapid Express, and rural services.

Federal Transit Administration Circular FTA C 4702.1B requires that operators receiving federal financial assistance have policies ensuring the equitable distribution of vehicles and amenities as part of their compliance with Title VI of the Civil Rights Act of 1964. This document provides the policy guidelines for the distribution and operation of MTS vehicles throughout the MTS service area. It has also been distributed to MTS' outside contractors that provide transit services.

2.0 Buses

MTS bus services board approximately 51 million passengers per year, 170,000 on an average weekday (pre-pandemic figures). The fleet consists of nearly 800 buses operating on 96 fixed-routes and paratransit service. Modes operated include motorbus, commuter bus, and demand response. Approximately half of the service is directly operated by MTS employees, the remaining half is operated by private contractors using buses provided by MTS and operating from divisions owned by MTS. Most of the heavy-duty bus fleet is powered by natural gas, the culmination of an initiative started in 1994 to replace diesel with cleaner, alternative fuels. The last of MTS' diesel buses was retired in early 2021.

2.1 Bus Categories

- 2.1.A Standard Bus: Medium or Heavy-Duty urban transit buses manufactured by New Flyer, Gillig, etc. Passenger amenities are common throughout the fleet, with only minor year-to-year variations. All standard buses are powered by Compressed Natural Gas (CNG).

- 2.1.A.1 **Standard MTS:** The largest segment of MTS' fixed-route fleet. All standard buses



are 40' long. Seating is a standard transit shell seat product with fabric inserts.

- 2.1.A.2 **Standard Rapid:** The Standard Rapid bus differs from the Standard MTS bus by exterior branding and installation of Transit Signal Priority (TSP) transmitters. All other features and amenities are the same.



- 2.1.B **Articulated Bus:** Articulated transit buses are 60' long and all were manufactured by New Flyer Industries. There are three distinct fleets, all currently CNG-powered:

- 2.1.B.1 **Urban:** MTS branded with passenger amenities similar to MTS standard buses. These are assigned to higher volume routes that require additional capacity when added frequency isn't practical, feasible, or cost-effective.



- 2.1.B.2 **Rapid:** Branded for Rapid service with passenger amenities similar to MTS standard buses. These are assigned to TransNet-funded Rapid routes that operate primarily on surface streets. In 2022, this fleet will be expanded to the MTS-funded Iris Rapid project with twelve new battery-electric articulated Rapid buses.



- 2.1.B.3 **Rapid Freeway:** Branded for Rapid service with an upgraded seating product. These are assigned to TransNet-funded Rapid routes that operate significant freeway segments, with the upgraded seating intended to improve the ride quality at higher speeds.

- 2.1.C **Minibus:** Single-door, high-floor, body-on-chassis cutaway buses, 29'-34' in length; generally fewer seats than standard buses; propane- or gasoline-powered; all are equipped with a wheelchair lift at the curbside rear. These are assigned to demand response service and fixed-routes with lower ridership. They are also used on other routes during lower-demand periods such as weekends.



- 2.1.D Over-the-Road Coach: Single-door, 45' long, high-floor highway coach; upgraded seating product and some additional passenger amenities such as parcel racks and reading lights; all are equipped with a curbside midship wheelchair lift. These are assigned to the higher-fare *Rapid Express* service on the Interstate 15 corridor.



- 2.1.E ADA Paratransit Minibus: All Americans with Disabilities Act (ADA) complementary paratransit buses are Type II cutaway minibuses. There is no variation in passenger amenities from year-to-year, and vehicles are dispatched equally throughout the region based on ride demands.



- 2.1.F Zero Emission Bus (ZEB): As of July 2021, MTS operates a fleet of eight Battery Electric Buses (BEBs) as a pilot that are being deployed throughout the system.

The California Air Resources Board (CARB) is requiring that transit bus fleets convert to Zero Emission Buses by 2040, and MTS' plan was approved by the MTS Board of Directors and submitted to CARB in late 2020.

The plan prioritizes the deployment of BEBs in disadvantaged communities, as defined by California Senate Bill 535 using the State's CalEnviroscreen tool.



The transition plan starts with five additional standard BEBs to be purchased in 2021, twelve Rapid articulated BEBs in 2022, then a gradual conversion of all orders, with the last internal combustion bus being purchased in 2028. All combustion buses would be retired by 2040.

Challenges include the need for significant electrical grid and charging infrastructure installed at all divisions, insufficient range with current battery technology, and lack of viable BEB options on some fleet types. MTS anticipates that most of these will be resolved over the next several years, but the CARB plan is a dynamic document that will be updated as new information becomes available.

MTS is currently designing electrical charging infrastructure at two of its divisions – South Bay and Imperial Avenue. Chargers will be placed on overhead gantries with drop-down pantographs that charge the buses as needed for service, while optimizing charging times to avoid peak periods on the grid.

- 2.2 Divisions: MTS bus service is operated from five bus divisions, with a sixth being planned:

- 2.2.A Imperial Avenue Division (IAD): Directly operated by MTS. Located at 100 Sixteenth Street, San Diego, CA 92101 (Downtown San Diego); operates standard and articulated buses. Maintains CNG-powered and battery-electric buses. The BEB pilot is supported at IAD with pedestal chargers.

- 2.2.B Kearny Mesa Division (KMD): Directly operated by MTS. Located at 4630 Ruffner Street, San Diego, CA 92111 (Kearny Mesa); operates standard and articulated buses. Fuels and maintains CNG-powered buses. The BEB pilot is supported at KMD with pedestal chargers.
- 2.2.C South Bay Division (SBD): Owned by MTS and operated by a contractor (currently Transdev). Located at 3650A Main Street, Chula Vista, CA 91911 (southern Chula Vista); operates standard and articulated buses. Fuels and maintains CNG-powered buses. The BEB pilot is supported at SBD with pedestal chargers.
- 2.2.D East County Division (ECD). Owned by MTS and operated by a contractor (currently Transdev): 544 Vernon Way, El Cajon, CA 92020; operates standard buses, minibuses, and over-the-road coaches. Fuels and maintains CNG- and gasoline-powered buses. The BEB pilot is supported at ECD with pedestal chargers.
- 2.2.E Copley Park Division (CPD): Owned by MTS and operated by a contractor (currently First Transit). Located at 7490 Copley Park Place, San Diego, CA 92111 (Kearny Mesa); operates minibuses. Fuels and maintains propane- and gasoline-powered buses.
- 2.2.F Division 6. MTS has begun work on a sixth bus division that will accommodate expansion of the fleet, as well as free up space in existing divisions to add the necessary electrical charging infrastructure. Division 6 will be designed from the ground-up as a primarily ZEB division, though some natural gas fueling capabilities may still be needed during the fleet transition period.

2.3 Vehicle Amenities: Passenger amenities vary by bus type, as shown in the table below:

Vehicle Amenity	Standard Bus	Articulated Bus	Minibus	OTR Coach
Alternative Fuel-Powered	X	X	X	X
Zero-Emissions	X	X		
Air conditioning	X	X	X	X
Lift for accessibility			X	X
Ramp for accessibility	X	X		
Wheelchair Tie-Down Locations	2	2	2	2
Bicycle Rack (2-3 positions)	X	X	X	
Bicycle Underfloor Storage				X
Seating: shell seats with fabric or vinyl inserts	X	X		
Seating: standard transit padded seating			X	
Seating: upgraded high-back seats		X		X

2.4 Bus Assignments by Route: Bus types are assigned by route based on the following:

- 2.4.A Capacity needs: Articulated buses are assigned to higher volume routes that require additional capacity when added frequency isn't practical, feasible, or cost-effective. Minibuses are assigned to the lowest ridership fixed-routes – routes which generally could not be economically operated with a larger bus.
- 2.4.B Route type: Vehicles are assigned by route type in the specifications below. Temporary exceptions to these assignments may be made in an unanticipated, emergency, or standby situation when service would otherwise be lost.
- 2.4.B.1 *Rapid* Express routes between the Interstate 15 corridor and Downtown San Diego are assigned over-the-road coaches; these routes have a higher fare and pass price accordingly.
- 2.4.B.2 High-demand TransNet-funded Rapid/SuperLoop routes are assigned Rapid articulated buses. (These may be supplemented as needed with other MTS buses for capacity purposes.) Rapid routes or trips that operate significant freeway segments are assigned the Rapid “freeway” articulated buses, with upgraded seating intended to improve the ride quality at higher speeds.
- 2.4.B.3 Standard-demand TransNet-funded Rapid/SuperLoop routes are operated using Rapid articulated buses, Standard Rapid buses, or regular MTS-branded standard buses, depending on availability.
- 2.4.B.4 Urban Frequent routes are operated using MTS-branded articulated and standard buses.
- 2.4.B.5 Urban Standard, Circulator, and Rural routes are operated using MTS-branded standard buses and minibuses, depending on the capacity needs of the individual route.

- 2.5 **Route Assignments by Division:** Routes are assigned to each division based on the number and types of buses available, proximity to the service, and opportunities to complement other nearby routes for efficiency, interlining, driver familiarization, supervision, and incident response. State law limits MTS' ability to reassign directly-operated routes to divisions operated by MTS contractors.
- 2.6 **Bus Assignments by Division:** Bus types are assigned to each division based on division space capacity, and the capability of the division to fuel, operate, and maintain any specialized equipment (alternative fuels, articulated buses, etc.). Buses are currently assigned to the divisions according to the following table:

Bus Category	IAD	KMD	SBD	ECD	CPD
2.1.A.1 Standard MTS Bus	X	X	X	X	
2.1.A.2 Standard Rapid Bus		X			
2.1.B.1 Articulated Urban Bus	X	X	X		
2.1.B.2 Articulated Rapid Bus	X				
2.1.B.3 Articulated Rapid Freeway Bus		X	X		
2.1.C Minibus				X	X
2.1.D Over-the-Road Coach				X	
2.1.E ADA Paratransit Minibus					X
2.1.F Zero Emission Bus	Pilot	Pilot	Pilot	Pilot	

- 2.7 **Future Procurements:** All heavy-duty buses are alternative fuel, hybrid-electric, or zero-emission. Heavy-duty buses will be low-floor, except for buses used for Rapid Express, standby, or tripper services, or on special or low-ridership routes.

3.0 Rail Vehicles

- 3.1 **Trolley Car Categories:** Three different types of cars are operated:

- 3.1.A **High-Floor Cars:** Siemens SD100 cars with high floors, steps inside the car to access 0"-8" station platform, wheelchair and bike space at the ends of each car, and a wheelchair lift next to the driver compartment in the lead car. These cars have a flip seat that allows space for three wheelchairs. These 52 cars were manufactured in 1995. Passenger amenities are identical on the fleet.



- 3.1.B **Low-Floor Cars:** Siemens S70 and S70US cars are 70% low-floor. They include inside steps only up to seating areas at far ends of the car, wheelchair and bike space in the middle of the car, and passenger-activated ramps at two of four doors on each side of each car. Cars were manufactured between 2005 and 2020. Passenger amenities are nearly identical for all models and vintages, with minor improvements in seating configurations in later production cars.



- 3.1.C **Vintage Cars:** MTS deploys three historic cars on its Silver Line loop in Downtown San Diego: two Presidents Conference Cars (PCCs) dating from 1946; and one 1980-vintage Siemens-



Duewag U2 car preserved from the original San Diego Trolley fleet. These are high-floor vehicles with a wheelchair lift for accessibility.

- 3.2 **Divisions:** MTS operates one rail division, from which all light rail ("Trolley") service is operated: 1341 Commercial Street, San Diego, CA 92113 (Downtown San Diego).

- 3.3 **Vehicle Amenities:** Passenger amenities vary by car type, as shown in the table below:

Vehicle Amenity	Low-Floor	High-Floor	Vintage
Air conditioning	X	X	
Lift for accessibility		X	X
Ramps for accessibility	X		
Wheelchair Spaces	Not limited	3	1
Bicycle Spaces (limited by policy for safety)	2	2	0
Seating: shell seats with fabric or vinyl inserts	X		
Seating: standard transit padded seating		X	X

- 3.4 **Trolley Assignments by Line:** Trolley cars are assigned primarily based on four factors:

- 3.4.A **Station infrastructure limitations:** Low floor cars require a minimum 8" station platform height in order for the ramp to maintain an ADA-compliant slope. All stations on all four lines now have 8" platforms. Most Trolley stations can accommodate four-car trains, except for 12th & Imperial, City College, Fifth Ave, Civic Center, Courthouse, and America Plaza, which can only accommodate three-car trains.

- 3.4.B **Fleet constraints:** MTS currently owns 121 low-floor cars. When additional cars are needed for a full peak schedule, the difference is made up by inserting a high-floor car in the middle of three-car consists. Some occasional tripper and special event trains may operate with all-high-floor consists.

- 3.4.C **Vintage Car constraints:** Due to their high floor and limited capacity, the three vintage cars are used only on the Silver Line loop in Downtown San Diego, where they supplement other existing services. Two of the vintage vehicles only have an operating cab on one side, and can therefore can only operate in one direction and limiting them to loop services.

- 3.5 **Future Procurements:** Except for vintage cars, all Trolley cars will be a minimum of 70% low-floor; existing high-floor cars will be replaced by low-floor cars upon retirement. MTS has an order for new Siemens S70US cars that will begin replacing the high-floor Siemens SD100 fleet; the first cars in this order should start arriving in late 2021.

3.6 Trolley System Map:

3.6.1. Current Trolley System Map (July 2021)



3.6.2. Future Trolley System Map (eff. November 2021)



4.0 MTS Fleet List (as of 7/1/2021)

Motorbus - Directly Operated						
Division	Quantity in Fleet	Fleet Series	Year	Make	Model	Vehicle Assignment Policy Category
IAD	2	1600	2020	Gillig	Low-Floor	Zero Emission Bus
IAD/KMD	38	1700	2020	Gillig	Low-Floor	Standard MTS Bus
IAD	26	1800	2020	New Flyer	XN60	Articulated Bus - Urban
Various	6	1500	2019	New Flyer	XE40	Zero Emission Bus
IAD	10	1400	2017	Gillig	Low-Floor	Standard MTS Bus
KMD	23	200	2015	Gillig	Low-Floor	Standard MTS Bus
KMD	13	1300	2015	New Flyer	XN60	Articulated Bus - Urban
KMD	12	900	2014	Gillig	Low-Floor	Standard MTS Bus
IAD	18	1200	2013	New Flyer	XN60	Articulated Bus - Rapid
KMD	29	1100	2013	New Flyer	XN60	Articulated Bus - Rapid Freeway
IAD	26	800	2013	Gillig	Low-Floor	Standard MTS Bus
IAD	31	700	2012	New Flyer	C40LFR	Standard MTS Bus
IAD	26	600	2011	New Flyer	C40LFR	Standard MTS Bus
KMD	12	339-350	2008	New Flyer	C40LF	Standard Rapid Bus
TOTAL: 272						
Motorbus - Purchased Transportation						
SBD	5	2790	2020	Gillig	Low-Floor	Standard MTS Bus
ECD	6	8350	2019	Gillig	Low-Floor	Standard MTS Bus
SBD	7	2780	2018	Gillig	Low-Floor	Standard MTS Bus
ECD	3	3506-3508	2018	Starcraft	Allstar XL	Minibus
SBD	17	7500	2017	New Flyer	XN60	Articulated Bus - Rapid Freeway
SBD	10	7400	2017	New Flyer	XN60	Articulated Bus - Urban
SBD	36	2100	2017	Gillig	Low-Floor	Standard MTS Bus
ECD	38	8300	2016	Gillig	Low-Floor	Standard MTS Bus
CPD	31	3100	2016	El Dorado Nat'l	AeroElite 320	Minibus
ECD	13	8200	2015	Gillig	Low-Floor	Standard MTS Bus
SBD	14	2000	2015	Gillig	Low-Floor	Standard MTS Bus
SBD	38	2400	2014	Gillig	Low-Floor	Standard MTS Bus
CPD	6	3000	2014	El Dorado Nat'l	AeroElite 320	Minibus
SBD/ECD	24	2300	2013	Gillig	Low-Floor	Standard MTS Bus
SBD	22	2900	2012	New Flyer	C40LFR	Standard MTS Bus
SBD	75	2800/7300	2009	New Flyer	C40LF	Standard MTS Bus
TOTAL: 345						
Commuter Bus - Purchased Transportation						
ECD	24	8530	2020	MCI	D4500	Over-the-Road Coach
TOTAL: 24						
Demand Response - Purchased Transportation						
CPD	35	3630	2018	Starcraft	AllStar	ADA Paratransit Minibus
CPD	26	3200	2017	Starcraft	AllStar	ADA Paratransit Minibus
CPD	46	3300	2016	Starcraft	AllStar	ADA Paratransit Minibus
CPD	5	3970	2015	Starcraft	AllStar	ADA Paratransit Minibus
CPD	6	3900	2014	Starcraft	AllStar	ADA Paratransit Minibus
TOTAL: 118						
Light Rail - Directly Operated						
SDTI	45	5000	2020	SDU	S70US	Low-Floor Car
SDTI	65	4000	2011	SDU	S70US	Low-Floor Car
SDTI	11	3000	2005	SDU	S70	Low-Floor Car
SDTI	52	2000	1995	SDU	SD100	High-Floor Car
SDTI	1	1001	1980	SDU	U2	Vintage Car
SDTI	1	529	1946	SLC	PCC	Vintage Car
SDTI	1	530	1946	SLC	PCC	Vintage Car
TOTAL: 176						