

MegaRail[®] & MicroRail[™] Mass Transit Technical Data 5/20/05

Data Category	MegaRail[®] MT	MicroRail[™] MT
General Operation		
Initial Operating Mode	Coupled train In-train operator Manual operator control	
Final Operating Mode	Coupled train Automated control (No in-train operators)	
Signaling	In cab/digital	
Signal Communications	Digital/rf, inside rails	
Maximum Speed	65-mph	
Guideway		
Type	Elevated, open-center Enclosed rail tubes (patented) Enclosed wheels (patented) Enclosed power rails (patented) Open-mesh center walkway (patented)	
Material	Stainless-steel	
Class	Factory-built (On-site assembly)	
Size	126-inches wide 36-inches high	76-inches wide 34-inches high
Minimum turn radius (Radius must be greater as speed increases.)	50-feet	30-feet
Typical pier location	Median or parking lane	Street center or walk edge

Guideway switches

Class	Passive (no moving parts) (Car-based switching)
Operate time	Not applicable (zero)

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Support Piers		
Pier type	Reinforced concrete (On-site construction) 30-inch diameter (larger diam. for high wind or earthquake areas) Min. height - 48-inches (higher for high wind areas)	Reinforced concrete (On-site construction) 24-inch diameter Min. height - 48-inches
Support Spacing	50-feet (25-feet in turns)	
Support Columns		
Type	Welded tubular	
Material	Stainless-steel	
Propulsion (electric)		
Motor type	Brushless Permanent magnet	
Motor location	Inside wheels (Wheel motors)	
Propulsion	Individual car	
Braking		
Type	Motor & friction (regenerative)	
Friction brake actuation	Electric (battery back-up)	
Electical Power		
Power type	Electric grid power 480-vac, 3 phase	Electric grid power 240-vac, 3 phase
Power distribution (Hi-voltage)	Inside guideway enclosed rails (patented)	
Step-down transformers	Guideway-mounted	
Power feed to cars	Electrified rails inside rails (patented) Power shoes on cars (Individual car feeds)	
Electrified rails location	Inside guideway rail tubes (patented)	

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Cars		
Wheel type	Electric motor-wheels	
Traction	Rubber tires	
Tire types	High-pressure/flat free	
Suspension	Air cushion	
Structure & exterior	Stainless-steel	
Capacity (passengers/car)	16 - standard 30 - crush conditions (16 seated - 14 standing)	4 - standard 13 - crush conditions (4 seated - 9 standing)
Seat Type	Individual fold up seats	
Number of seats & arrangement	Four wide - Face to face (facing center aisles)	Two - Face to face (facing center aisles)
Fast entry & exit features	15 pass per door	13 pass per door
Wheelchair capacity	Up to four/car	Up to two/car
Car floors	Platform level	
Doors/car	Two per side	One per side
Door width	42-inches	
Door style	Split, sliding power	
Emergency doors/car	One at each end	
Emergency door type	Sliding (fold-down door/ramp at train ends) (patented)	
Emerg. door width	36-inches	
Maximum gross weight	8,000-pounds	4,080-pounds
Empty weight	3,200-pounds	2,000-pounds
Length (body)	15.5-feet	8.6-feet
Length (with train couplings)	18-feet	10-feet
Width	91-inches	76-inches
Height (body)	94-inches	94-inches

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Train Consist & Passengers		
Cars/train (<i>200-ft platforms</i>)	Up to 11	Up to 20
Train capacity (<i>200-ft plat.</i>)	Up to 330 passengers	Up to 260 passengers
Cars/train (<i>300-ft platforms</i>)	Up to 16	Up to 30
Train capacity (<i>300-ft plat.</i>)	Up to 480 passengers	Up to 390 passengers
Train Operation		
Max. Acceleration rate	0.25g	
Standard braking rate	0.25g	
Maximum braking rate	0.33g	
Stopping distance @ 0.33g braking		
30-mph speed	90-feet	
65-mph speed	420-feet	
Maximum full-speed grade	10%	
Station dwell time	25-seconds	
Minimum train interval (Includes station dwell time)	36-seconds (38-sec for 300-ft platforms)	
Trains per hour	97.3 (94.7 for 300-ft platforms)	
Passenger Capacity (maximum - crush load - mix of seated and standing)		
Passengers/hr/direction (pphd)		
(<i>200-ft.</i> platforms)	33,000	26,000
(200-ft. platforms) (All seated)	17,600	8,000
(<i>300-ft.</i> platforms)	45,473	36,947
(300-ft. platforms) (All seated)	24,252	11,368

Capacity calculation basis:

Maximum capacities are based upon on-line stations at 2/3-mile (3,520-feet) intervals. Maximum train speed reached between stations is 65-mph and both acceleration and deceleration rates are 0.25g (8 ft/s/s).

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Emergency Escape		
Rescue category	Unaided - passenger initiated (Including unaided wheelchair user escape)	
Car provisions - seats	Fold-up seats (Center walkway access)	
Escape doors	Fold-down ends of train doors (Walk ramp to center walkway) (patented)	
Guideway	Center mesh walkway (Between side rails) (patented)	
Stations		
Location	Elevated over street	
Construction	Factory-built	
Exterior Material	Stainless-steel/glass	
Access from street	Escalators & elevators	
Access to trains from platform	Elevator-type doors (No open platforms)	
Train Storage		
Storage location	Elevated storage rails	
Maintenance Facilities		
Routine maintenance	Special guideway section	
Major maintenance	Off-guideway building On guideway car lift - Move cars to/from trucks (Cars trucked to maintenance site)	