# TRANSIT MODES AND APPLICATIONS

| MODE | Regional Rail * | Rail Rapid Transit - RRT ** | Light Rail - LRT | Streetcar / Tram | Bus Rapid Transit | Electric Trolley Bus | Bus Transit | Paratransit |
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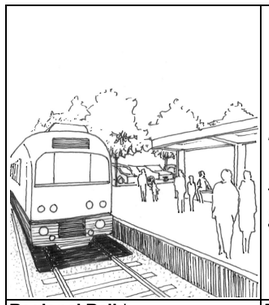
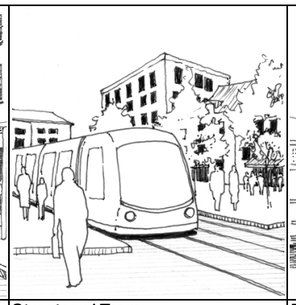
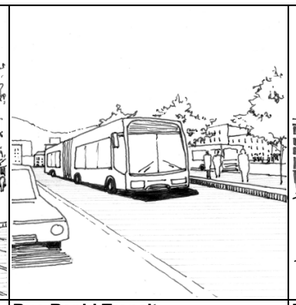
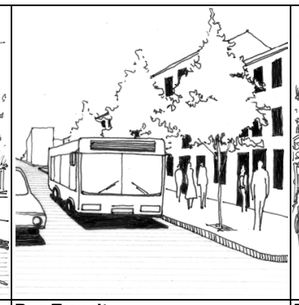
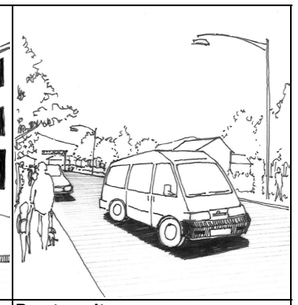
| |  |  |  |  |  |  |  |  |
| **DEFINITION** | Railway for urban passenger train service consisting of local short distance travel operating between a central city and adjacent suburbs and towns. | Typically consist of steel-wheeled, electric powered vehicles operating in trains of two or more cars on a fully grade-separated right-of-way. | Local or metropolitan rail system operating mainly in dedicated ROW but sometimes, mixed with other traffic. The term light is intended for flexibility, light loads and fast movement rather than refering to physical weight. Ususally lower frequency and/or shorter trains than RRT systems. | Urban rail system that runs mainly on city-center streets, providing a local service and picking up and discharging passengers at short-distanced stations. (Stops at every block) | A rubber tired system with its own right-of-way or dedicated lane at least 70% of its route, providing transit service that is faster than a regular bus. Featuring both articulated and single vehicles. | An electric, manually steered, rubber-tired system powered by two overhead supplier wires. | Rubber-tired vehicles in mixed traffic | Small vans running in mixed traffic. |
| **OPERATING SPEED** | 70 to 100 mph (110 to 160km/h) | 50 to 80 mph (8O to 120 Km/h) | 20 - 60 mph (30 - 95 km/h) | 8 - 12 mph (12 - 20 km/h) | 8 - 12 mph (12 - 20 km/h) | 8 - 12 mph (12 - 20 km/h) | 8 - 12 mph (12 - 20 km/h) | Covered by general traffic code. |
| **APPLICATION & SETTING** | Regional and Interurban service type connecting suburb to city center. Generally built on existing tracks at grade street crossings. | High density corridors. Mainly underground or elevated ways. (Exclusive Rights-of-way) | With an overhead power supply, light rail systems can operate in mixed traffic and widely ranging alignment configurations. Applications: urban to suburban | Alignment in street with traffic, no grade separation. Unlike LRT, streetcars City center, Urban circulators. | Less dense environments, urban to suburban. May be a building block to rail. Applications: Regional, Urban. | Better performance than other modes on steep hills . Operate in mixed traffic and, have a good range of movility on both sides of the wires' edge. New systems are known as the most silent of all transit modes. | All settings. Connection to rail or BRT, local transportation. | Common application on suburban or rural environments and, for specialized transportation. |
| **STATION SPACING** | 2 - 5 miles. Limited Stations, City center serving | Urban core 1/2 mile - 1 mile, Periphery 1 - 5 miles. | 1/4 mile - 2/3 mile | Block to block (0.25 miles) | Limited stations, short to long. | 0.10 to 0.35 miles | Urban core < 1/4 mile Periphery <1/2 mile | On-demand |
| **TYPICAL POWER SOURCE** | Diesel, electric, dual mode | Electric | Electric, DMU (Diesel Multiple Unit) | Electric | Diesel, Electric, Natural Gas | Electric (by overhead wires). Some vehicles can run on batteries for a short distance. | Diesel, Natural Gas | Natural Gas, Petrol |
| **EXAMPLES** | SEPTA, Philadelphia. METRA, Chicago. Caltrain, SF Bay area.<br>Regionalbahn in Berlin, Suburban Rail Services in London. | MARTA in Atlanta, BART in Bay Area, CTA Washington Metro.<br>Paris METRO, London UNDERGROUND | Sacramento, Portland OR, Salt Lake City, Boston green line.<br>Strasbourg (France), Zurich (Switzerland) | Portland Streetcar, F line San Francisco, Memphis.<br>Helisnki (Finland), Prague and Plzen (Czech Republic) | Brisbane, Pittsburgh, Silverline - Boston.<br>Curitiva (Brasil), Bogota (Colombia), Cambridge (United Kingdom), Adelaide (Australia) | San Francisco USA, Philadelphia USA<br>Vancouver (Canada), Salzburg (Austria), Milan (Italy). | Most cities | Most cities |

* AKA Commuter Rail ** AKA Heavy Rail

**DMU Diesel Multi Unit** Consisting of multiple carriages powered by one or more on-board diesel engines.