# 10. Metro Background

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# Introduction

This section contains background reference information about Metro, our organization, fleet, facilities, and some metrics about the services we provide.

## Links to Information

- 1. Metro website: <u>http://metro.kingcounty.gov/</u>
- 2. Service Guidelines Task Force Website: <u>http://www.kingcounty.gov/sgtaskforce</u>

### What is Metro?

King County Metro Transit (Metro) is the largest public transportation agency in Washington state, serving more than 2 million area residents in King County. In 2014, Metro operated a fleet of about 1,415 vehicles within a 2,134 square mile area. Metro's fleet includes standard and articulated clean diesel coaches, electric trolleybuses, and hybrid diesel-electric buses. Metro serves riders who are disabled or who have special needs with accessible fixed route service (all Metro buses have wheelchair lifts or ramps and all routes and trips are accessible), as well as paratransit van service and a taxi scrip program.

One of the 10 largest bus systems in the nation, Metro has over 8,000 bus stops and 130 park-and-ride facilities connecting riders to their destinations on 185 routes. In 2014, Metro's fixed route network had over 120 million boardings and carried passengers over 530 million miles. Metro is recognized as a leader in reducing pollution with its use of hybrid buses, electric trolleybuses, and cleaner fuels. All Metro buses are equipped with bicycle racks.

Metro also operates the largest publicly owned vanpool program in the country. By the end of 2014, Metro had about 1,450 vans serving on an average weekday approximately 6,100 people, eliminating approximately 5,000 vehicle trips a day. It also supports the regional Ridematch program which helps commuters form and sustain new vanpools and carpools in seven counties by matching names in a computer database. The agency provides extensive commute trip reduction services to 480 major employers and sells transit and commuter-van passes to more than 2,000 employers.

### **Regional Organization**

Metro is governed by state and regional policies that impact how the agency provides transit to the region. This includes state, regional, county, and local policies. Metro also works closely with other transit and transportation agencies to provide efficient, integrated travel options throughout the region. Metro is the contract operator of eight of Sound Transit's Express commuter bus services and Link light rail and the City of Seattle's South Lake Union streetcar.

### **King County Government**

Metro delivers transit service as part of many regional transportation services provided by King County under the County's Department of Transportation. Metro has been part of King County since the voter-approved merger of Metro and King County in 1993. Metro performs the "metropolitan public transportation function" as authorized in the Revised Code of Washington 35.58, in alignment with other applicable codes and the financial policies adopted by the Metropolitan King County Council. Metro is required to plan and operate transit services consistent with county, regional, state and federal planning policies, including the Washington State Growth Management Act (GMA). The GMA requires King County to consider population and employment growth targets and land uses when determining the future demand for travel and whether such demand can be met by existing transportation facilities. Metro contributes to the County's compliance with the GMA by focusing transit services in urban growth areas. Metro also works with WSDOT, the state agency responsible for the transportation system, to provide transit to the region.

The Metropolitan King County Council is the legislative branch of county government. It adopts laws, sets policies and holds final approval over the budget. Councilmembers represent geographic districts. Every county citizen, including city residents, has an opportunity to vote for a representative on the County Council.

The Regional Transit Committee (RTC) reviews and makes recommendations to the Metropolitan King County Council on policies for public transportation operated by King County. The RTC is comprised of County councilmembers as well as elected officials from Seattle, Bellevue, and the Suburban Cities Association.

### **Authorizing Environment**

Metro is required to plan and operate transit services that are consistent with state, regional and county planning policies. The list below illustrates the breadth of the laws and policies that influence King County Metro's policies and planning.

- Washington state law
- Federal law and policy
- State and federal grant fund requirements
- State of Washington's Growth Management Act
- Puget Sound Regional Council's Transportation 2040 (metropolitan transportation plan)
- American Public Transit Association (APTA) standards and guidelines
- King County Code
- King County Executive policies and procedures



- King County countywide planning policies
- King County Comprehensive Plan
- Comprehensive Plan for Public Transportation (KC Metro)
- Strategic Plan for Public Transportation (KC Metro)
- Transportation Concurrency Management Program
- King County green building ordinance
- King County Climate Plan
- King County Energy Plan
- Sound Move

### **King County Metro Transit**

Metro is organized into the following sections: Operations, Rail, Vehicle Maintenance, Power and Facilities, Human Resources, Service Development, Design and Construction, Customer Communications and Services, Paratransit/Rideshare Operations, Finance and Administrative Services, and Systems Development and Operations. The General Manager oversees the entire Division; an organizational chart is shown on the following page.

Metro also coordinates with other local transit operators in the region. There are seven public transportation agencies in the Puget Sound Region –Metro, Sound Transit, Community Transit, Everett Transit, Pierce Transit, Kitsap Transit, and the Washington State Ferries. In addition, Metro collaborates with the Washington State Department of Transportation, the Puget Sound Regional Council, and various local and regional jurisdictions. Metro coordinates and forms partnerships with these different agencies and jurisdictions in the region to deliver integrated services, construct capital projects and enhance system continuity for the benefit of the region's public transportation users.



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### **Products and Services**

Metro provides a range of products and services to meet the transit needs of King County residents. This includes fixed-route service, paratransit, alternative services, Vanpools, Rideshare, contracted services, customer information technology, and market development.

Metro operates 185 fixed service routes with varying levels of frequencies, or service families. Service families are very frequent, frequent, local, hourly, and peak service. All of Metro's fixed route service is ADA accessible. There are 27 very frequent routes, 17 frequent routes, 50 local routes, 19 hourly routes, and 72 peak only routes.

RapidRide, Metro's bus rapid transit service, began operation in 2010. RapidRide provides faster, more frequent service along key corridors. Everything about RapidRide—the buses, the stops, the way it operates—is designed to keep people moving quickly throughout the day in these heavily used transit corridors. Buses arrive frequently—at least every 10 minutes during the busiest morning and evening travel hours. Stations have distinctive shelters, seating areas, and customer information. Electronic signs at the stations provide real-time information about when the next bus will arrive. Currently, RapidRide services capture 14 percent of all Metro riders.

Metro's zero-emission trolleybus system is another key service. There are 14 trolley routes on which over 150 trolley buses operate. New battery-equipped trolley vehicles will allow expanded use of the trolley fleet because they can operate off-wire for short distances. Currently, the trolley system carries 16 percent of all Metro riders.

DART, Metro's dial-a-ride service, allows variable routing in some areas within King County. DART service can go off regular routes to pick up and drop off passengers within a defined service area. It operates on a fixed schedule, but one that has more flexibility than regular Metro buses. Annual ridership on DART is approximately 1 million passengers.

Metro provides a range of paratransit services that include Access, Community Access Transportation (CAT), and Taxi Scrip, in addition the fully accessible fixed route network.

Vanpool and Rideshare are also provided as part of Metro's products and services. The Vanpool program is the largest publicly owned vanpool program in the nation, with nearly 1,400 vans on the road. Fares collected through the vanpool program pay for 100 percent of capital and operating costs, and 25 percent of administration costs.

Metro is the primary transit operator in the region and provides contracted services with Sound Transit and the City of Seattle. Metro operates approximately 250,000 annual service hours on 8 Sound Transit express bus routes. 190 Metro employees operate 16.5 miles of Sound Transit Link light rail service in King County. The South Lake Union Streetcar is Metro-operated, with 18 employees and 2.6 miles of streetcar rail.

Metro provides a variety of technologies to improve the customer experience. Metro along with six other transportation agencies (Sound Transit, Pierce Transit, Community Transit, Everett Transit, Kitsap Transit, and Washington State Ferries) offer a regional fare collection program called ORCA that enables customers to use one fare card on multiple systems throughout the four-county Central Puget Sound area. Smart card fare



collection technology allows linked trips between transit, ferries, and rail. ORCA also allows customers to use off-board fare payment on some Metro routes, improving customer convenience and system efficiency. Metro works with regional businesses to provide ORCA cards with reduced transit fare passes to employees. In 2013, there were a total of 74.1 million ORCA taps on Metro services. Nearly two-thirds of all boardings on Metro service are paid using ORCA cards.

Metro provides several other services to improve the customer experience. Metro's new Trip Planner app, transit signal priority (TSP), and real-time information signs all work to improve customer satisfaction. The app and real-time information signs allow customers to know when the next bus will arrive at a stop. TSP improves transit travel times and on-time arrival.

Metro also provides market development services to expand transit ridership. This includes service partnerships, business services, and community programs. Transit Now Direct Financial and Speed and Reliability partnerships with 13 public and private partners have enabled Metro to add over 85,000 annual hours of service on 33 routes.

Employer, school, and Commute Trip Reduction programs are part of the business services that Metro provides. These services help to attract ridership to transit and vanpool, and reduce drive alone travel. Currently, there are over 1,900 active business accounts. These accounts bring in \$125 million in regional ORCA revenue or 65% of all regional ORCA revenue. In 2014, regional ORCA Passport revenue accounted for \$92 million and 50 million boardings: increases of 9% and 8% compared to 2013.

The U-Pass Program, a regional ORCA Passport product that provides the University of Washington staff, faculty, and students a reduced transit pass, brings in 29% of the regional ORCA Passport revenue. The U-PASS has been so successful that today fewer cars arrive to campus each day compared to 1991, while the student, faculty, and staff populations have grown.

#### Service Area and Delivery

Metro provides transit service to a large, diverse service area including dense urban neighborhoods and small rural communities. King County is the most populous county in Washington with just over 2 million residents, substantially more people than the next largest county, Pierce, which has just over 800,000 residents. More than 1.3 million jobs are in King County.

King County also has a large land area, with more than 2,100 square miles. However, much of King County is undeveloped, with nearly 83 percent of the population and more than 93 percent of the jobs located in the county's 39 incorporated cities.

Metro also serves a broad range of customers. Based on the 2013 Rider/Nonrider Survey, Metro customers are 49 percent female and have an average age of 43. Many of Metro's customers are choice riders and are not dependent on transit for transportation. Nearly 90 percent of regular customers own a vehicle and although the median income of customers is nearly \$65,000, 27 percent of riders earn more than \$100,000 annually. More than 60 percent of riders are employed, 10 percent are students, and 13 percent are retired. Metro customers ride transit not only to save money but for ease of commuting and to protect the environment.

### **Capital and Fleet Infrastructure**

Metro invests in and operates a number of capital and fleet infrastructure to support service delivery to the region. This includes coaches, vehicles, and passenger and operating assets. Metro strives to maintain a strong focus on environmental stewardship by encouraging a "Green Fleet" and green buildings consistent with Metro's Strategic Plan.

Metro's building and real property assets include both passenger and operating assets:

- Passenger assets
  - o 130 park and rides 64 permanent, 66 leased; including 14 garages
  - o 15 transit centers
  - More than 8,000 stops, 1,670 with shelters
  - o Downtown Seattle Transit Tunnel
- Operating assets
  - o 7 bus maintenance facilities
  - o 1 bus overhaul/rebuild facility (Component Supply Center)
  - o 6 operations facilities
  - o 1 communications control building (Transit Control Center)
  - o 1 training facility with training track
  - o 2 facilities maintenance buildings
  - o 1 power distribution building
  - o 1 information distribution building
  - o 1 revenue processing facility
  - 1 non-revenue vehicle maintenance facility
  - o 1 transit police facility (main and auxiliary locations)
  - o Approximately 70 miles of overhead trolley wire and 36 active substations

#### **Park and Rides**

Park-and-ride lots within King County are built, owned and maintained by many different agencies. Metro provides transit service to park-and-ride lots owned by the County, WSDOT, Sound Transit, cities, and private owners. As of the fourth quarter of 2014 there were 130 park-and -ride facilities operating within the King County Metro Transit service area. Roughly half of these facilities are permanent facilities that are publicly owned or operated under a long-term lease with a private owner. The other half are leased lots where Metro leases parking spaces from churches, public jurisdictions, or shared private parking lots. Park and Ride facilities are well suited for collecting people in lower-density areas and connecting them to the transit network in a single location.

While the total number of facilities is approximately evenly split, because of the size difference between permanent and leased facilities, permanent facilities provide almost 90 percent of the more than 25,500 total parking spaces. Compared to leased lots, most permanent facilities also tend to be more highly utilized. Two-thirds of the 64 permanent facilities average utilization rates of 80 percent or higher while only one-fifth of the leased lots average utilization rates 80 percent or higher.



# **Transit Centers**

Transit Centers support multiple routes coming together to enable transfers between services and modes. They also provide pedestrian amenities such as bike lockers and racks, bus shelters, route terminals, and bus layover areas. Metro currently serves 15 transit centers, which include:

- Aurora Village Transit Center
- Bellevue Transit Center
- Burien Transit Center
- Kirkland Transit Center
- Northgate Transit Center
- Redmond Transit Center
- Renton Transit Center
- Auburn Commuter Rail Station
- Federal Way Transit Center
- Issaquah Transit Center
- Kent Station Transit Center
- Mt. Baker Transit Center
- Overlake Transit Center
- Totem Lake Transit Center
- Tukwila International Boulevard Station

### Passenger Shelters and Bus Stops

King County Metro owns thousands of shelters and facilities to provide refuge to its passengers. As of 2014, Metro maintained over 8,000 bus stops with 1,670 stops with shelters. Bus stops with passenger shelters provide a covered space with features like public art and scheduling information for passengers to wait for the bus and make transfers. Some RapidRide stations include additional features such as real time arrival signs and off-board fare payment equipment.

### **Transit Bases and Support Facilities**

Metro's seven bus bases are located throughout King County. The number of buses assigned to each base varies depending on the capacity of a given base. Metro's bases vary in the number of coaches they can support from roughly 125 buses to about 270 buses.

Bases also provide for bus maintenance and repair. The types of services include preventative maintenance, repair, inspection, fueling, interior and exterior washing, and minor paint and body work. To support maintenance and repair work, bases are equipped with maintenance bays, inspection bays, brake bays, bus parts storage areas, and fuel and wash facilities. Larger bases also have paint, upholstery, body work and tire shops. Atlantic Base, which operates and maintains Metro's fleet of electric trolley buses, has overhead wire and an electronics shop. Vehicle Maintenance staff perform routine preventive and repair maintenance 24 hours per day, seven days per week.



It is critical that Metro maintain its bases and support facilities in a state of good repair. Metro uses a variety of tools to maintain a state of good repair including Enterprise Asset Management, condition assessments, systematic programming and planning via the Transit Asset Management Program (TAMP). TAMP provides a coordinated process to plan the replacement or refurbishment of transit facilities. The main focus of Metro's capital program is to maintain existing infrastructure.

In addition to bases, Metro owns or maintains several support facilities, usually located near bases. These facilities provide additional training facilities, vehicle storage, trolley power operations, and other critical services for Metro operations. In addition to these facilities, Metro also operates 36 traction power substations and approximately 70 miles of wire for trolley bus service throughout King County.

# **Trolley Infrastructure**

The Metro electric trolley system is comprised of overhead wire, electric substations to provide power to the wire, switches which enable trolley buses to connection from one set of overhead wire to another, and poles to support the overhead infrastructure. Currently, there are approximately 70 miles of overhead wire and 36 substations.

# **Downtown Seattle Transit Tunnel**

Metro operates the Downtown Seattle Transit Tunnel (DSTT), a 1.3 mile transit-only facility with five stations. Four stations are served by bus and Link light rail, while Convention Place Station is served by buses only. Joint bus-rail operations began in the DSTT in 2009 with the start of Central Link light rail service. The DSTT is one of few facilities in the world with joint bus-rail operations. DSTT operating hours are 5 a.m. to 1 a.m. Monday to Saturday, and 6 a.m. to midnight on Sundays.

### **SODO Busway**

Metro utilizes and maintains elements of the state-owned SODO busway. Metro operates service on this busway between South Spokane Street and Royal Brougham Way in south Seattle. This facility runs parallel to the Link light rail line through the South Downtown area (SODO) and connects to the south end of the DSTT.

### Technology

Metro owns a variety of technology capital assets that support transit service. This includes technology and programs to operate the agency, such as human resources tools and office software to transit signal priority (TSP) systems and ORCA card readers. TSP helps improve transit travel times and reliability. Metro works with local jurisdictions to integrate TSP at intersections along busy corridors. Local jurisdictions also own and manage TSP locations additional to those owned by Metro.

Other technologies that support Metro operations include the OneBusAway app, maintained by a third party. The OneBusAway app allows customers to access real time arrival information for their route from their smartphone. This is complemented with real time arrival information signs that are located at Metro RapidRide stations and some bus stops in downtown Seattle.

### **2014 Annual Performance**

Metro assesses its performance using a variety of tools and methods on a regular basis. Some performance measures are monitored monthly and some are annual measures. Metro also completes an annual Strategic Plan Progress Report, which provides information about Metro's performance as it aligns with the eight Strategic Plan goals. Below are several charts that summarize Metro's 2014 year-end performance.



**Overall Rider Satisfaction** 



Average Weekday Ridership on Metro's Buses and Trolleys

RapidRide Weekday Ridership Growth 2014 v. Baseline



King County Metro – Service Development

King County METRO



# **Access Boardings (in thousands)**



**Total King County Ridership** 





### **Glossary of Terms**

#### **Products and Services**

**Fixed-Route Service**: Scheduled transit routes in which trips are required to follow the same fixed routing on every trip.

**Dial-a-ride (DART) Service**: Scheduled transit routes in which individual trips may deviate from the fixed route to pick up or drop off a passenger closer to their origin or destination. DART routes may only deviate into pre-specified "DART areas." All current DART routes include a fixed route portion in which passengers can access service from regular bus stops.

**Paratransit (ACCESS) Service**: Van-operated service which has no fixed route or schedule and which provides trips to customers who have difficulty using Metro's fixed-route or DART service. Passengers must apply to use Access service in advance of making a trip.

### The Anatomy of a Transit Trip

**Origin**: The location where a passenger begins their trip.

Destination: The location where a passenger ends their trip.

Boarding: A single passenger getting on a transit vehicle. Also referred to as an "on."

Alighting: A single passenger getting off a transit vehicle. Also referred to as an "off."

**Ride**: A single passenger using a single transit vehicle for a segment of their trip.

Trip: A single passenger movement from their origin to their destination. A trip may include several rides.

**Transfer**: Occurs when a passenger alights one transit vehicle and boards another in order to reach their destination.

**Example of a Transit Trip:** A transit customer boards a bus in Wedgwood and rides to Stevens Way on the University of Washington campus where they alight, walk to NE Pacific Street, and transfer to another bus destined for downtown Bellevue (their final destination).

"Origin" in Wedgwood and "destination" in downtown Bellevue.

One "Trip" (Wedgwood to Bellevue)

Two "boardings" (Wedgwood and NE Pacific Street)

Two "alightings" (Stevens Way and Bellevue)

Two "rides" (Between Wedgwood and Stevens Way and between NE Pacific Street and Bellevue)

One "transfer" (in the University District)



### Service Planning

**Headway**: The amount of time between consecutive vehicle trips in the same direction of travel. Headway is usually expressed in minutes. On routes with uneven headways (i.e. variation in times between buses), this measure is expressed as an "average headway."

If Route A departs at: 5:00, 5:30, 6:00, then between 5:00 and 6:00, the headway of route A is 30 minutes and the frequency of route A is 2 buses/hour or 1 bus every 30 minutes.

**Frequency**: The number of vehicle trips in the same direction of travel within a specified time period. Frequency is usually expressed as the number of trips per hour. Frequency is also sometimes expressed in minutes, when referring to a single trip within a specified time period.

If Route B departs at: 6:00, 6:15, 6:30, 6:45, and 7:00, then between 6:00 and 7:00, the average headway of route A is 15 minutes and the frequency of route B is 4 buses/ hour.

**Span of Service**: The length of time each day in which the route operates. Span of service can be expressed generally in terms of hours per day, or more specifically by stating the time of the first and last trips of the day. For example, route A has a span of service of 18 hours between the first trip at 5:00 AM and the last trip at 11:00 PM.

**Layover/Recovery Time**: The scheduled time spent at a route's terminal between consecutive trips by a single bus. Example: A bus is scheduled to arrive at its terminal at 2:15 PM and is scheduled to leave its terminal at 2:30 PM. The "layover" or "recovery" time for this bus would be 15 minutes. "Layover" or "recovery" time is necessary to allow bus drivers a break and provide a time cushion in event the preceding trip is delayed.

**Deadhead Time**: The scheduled time spent driving to and from the base or between trips on different routes. Passengers may be conveyed on deadheading trips but in general this is considered to be a time when a bus is not collecting fare revenue

**Inbound/Outbound**: Every bus trip is classified as an "inbound" or an "outbound" trip depending upon the direction the bus is heading. A trip is classified as an "inbound" trip if it is headed toward the route's major market orientation. "Outbound" trips are trips heading away from the route's major market orientation.

### Service Guidelines

**Routes:** Routes are the actual services provided. Service within a single corridor might be provided by multiple bus routes. For example, the corridor from Fremont to downtown Seattle via Dexter Avenue North is served by two different bus routes, 26 and 28, and both of these routes extend beyond Fremont. Some routes also cover multiple corridors. For example, Route 271 serves three distinct travel markets: Issaquah-Eastgate, Eastgate-Bellevue, and Bellevue-University District. The service guidelines evaluate routes for productivity and service quality.



**Seattle Core Routes:** Route productivity is analyzed in the peak, off-peak, and night periods based on the market the route serves. Seattle core routes serve downtown Seattle, First Hill, Capitol Hill, South Lake Union, the University District, or Uptown.

**Non-Seattle Core Routes:** Route productivity is analyzed in the peak, off-peak, and night periods based on the market the route serves. Non-Seattle core routes service other areas of Seattle and King County.

**Passenger Crowding:** Overcrowding is defined as a trip that on average has 25 to 50 percent more riders than seats (depending on service frequency) or has people standing for longer than 20 minutes. When service is chronically very crowded, it is poor quality and has a negative impact on riders. The passenger load thresholds are set so that we accept standing passengers on many of our services, but take action where crowding is at an unacceptable level and where it occurs regularly.

**Schedule Reliability:** Schedule reliability is measured as the percent of trips that arrive between 1 minute early and 5 minutes late. Routes that are on time less than 80 percent of the time (65 percent for weekday PM peak) are candidates for investment of service hours. This threshold allows for variations in travel time, congestion, and ridership. In our 2014 report, we used reliability data from June 2013 – May 2014. We use a longer time period for this analysis when possible to ensure that schedule reliability needs are not understated by using data from just the four-month spring period.

**High Productivity Routes:** Route productivity is assessed using two measures: rides per platform hour or passenger miles per platform mile. High-productivity routes are defined as those that perform in the top 25 percent of comparable routes on one or both measures in at least one time period. Investing in high-productivity routes in areas where there is latent demand for transit will result in higher ridership.

**Alternative Services:** Metro has identified a range of potential new alternative services, some of which have not yet been tested. These services may be modified, or new options developed, during the planning and design processes. Some of the current alternative services include: Community Shuttles, Community Hubs, and Flexible Rideshare. The Alternative Services program brings service to parts of King County that don't have the infrastructure, density, or land use to support traditional fixed-route bus service. In such areas, alternative transportation services may be a better match for community transportation needs. We'll offer alternative services in areas where they can help make the public transportation system more efficient, more productive, and more effective at getting people where they want to go — including areas where regular bus service has been discontinued or is not available.

**Corridor:** Corridors are major transit pathways that connect regional growth, manufacturing/industrial, and activity centers; park-and-rides and transit hubs; and major destinations throughout King County. The 2014 Service Guidelines Report uses the corridor analysis to evaluate and set target service levels for the 112 corridors of the All-Day and Peak Network.

**Target Service Level:** Each corridor in the All-Day and Peak Network is assigned a target service level based on productivity, social equity, and geographic value. The All-Day and Peak Network analysis compares the target service levels to existing service to determine whether a corridor is below, at, or above the target levels.



**Rides Per Platform Hour:** total ridership divided by the total hours a bus travels from the time it leaves its base until it returns.

**Passenger Miles Per Platform Mile:** total miles traveled by all passengers divided by the total miles the bus operates from its base until it returns.

### **Performance Management**

**Revenue Hours**: The number of hours buses are operating scheduled trips for a given route. Layover and deadhead time are not considered revenue hours.

**Platform Hours**: The total number of hours buses are on the road for a given route, including revenue time, layover time and deadhead time.

**Annual Platform Hours**: The number of platform hours operated during a calendar year for a given route. For example, if a route operates 10 platform hours of service each day of the year, there are 3,650 (= 10 \* 365) annual platform hours on the route.

**Passenger Load**: The number of passengers on the bus. Passenger load is sometimes expressed as a ratio comparing the load and the number of seats provided, or load factor. Load is measured at points along each route. Planning staff is interested in the maximum passenger load and where along the route it occurs. A maximum passenger load ratio above 1.0 indicates that sometime in the bus trip at least one passenger is standing. Metro considers a trip to be 'overcrowded' if the average load factor exceeds 1.25 or 1.5, meaning that it is acceptable for some passengers to stand. Metro is considering measuring passenger load relative to the floor area of buses instead of the number of seats.

### **Capital Facilities**

**Transit Center**: A facility where numerous bus routes converge to provide a convenient and safe location for transferring. Bus schedules are often coordinated at transit centers to minimize transfer times between certain routes.

**Park and Ride**: A facility where transit passengers may park their automobile and catch a bus, vanpool or carpool to reach their final destination. Sometimes co-located with transit centers to provide many route options; such as the Northgate Transit Center and park-and-ride lots.

**Freeway Station**: Bus stops located along a limited access freeway. Examples include the Montlake and NE 45th/I-5 Freeway Stations.

**Bases**: a building where buses are stored and maintained. Bases include parking, fuel storage, cleaning and maintenance facilities. Metro has seven bases located throughout King County.

Stops: a designated place where buses stop for passengers to board or alight from a bus.

**Shelters**: a covered structure at a bus stop providing protection against the weather for people waiting for a bus. They can have lighting, route information, real-time information, or other passenger amenities.



### <u>Fleet</u>

**Trolley bus**: An electrically powered bus with trolley poles that connect to an overhead wire system suspended above the roadway. The overhead wire transmits power through the system. Metro will be implementing new low-floor electric trolleybuses in 2015.

**Diesel bus**: A diesel powered bus. Power is generated by the diesel engine carried on board the vehicle.

**Hybrid bus**: A diesel-electric powered bus. A diesel-electric engine carried on board the vehicle generates power. This bus has higher fuel economy than a standard diesel bus.

**Articulated bus**: A 60-foot long bus, which consists of a front and rear section, connected by an accordion-like fabric. Metro articulated buses have seats for 48 to 64 passengers.

Standard bus: A 40-foot long single body bus. Metro standard buses have seats for 34 to 44 passengers.

**Small bus**: A 30-foot long single body bus. The small buses are slightly narrower than typical buses and have significantly better maneuverability than standard or articulated buses. Metro small buses have seats for 30 passengers. The new small buses will be 35-feet long and low floor and have 30 seats.

**DART vehicle**: A vehicle similar to a large passenger van. These vehicles are used exclusively on DART routes, and have seats for about 20 passengers. DART is subcontracted service.

**Low-floor bus**: A vehicle that has no stairs at the doorways. This provides much easier access to all riders, especially those with mobility difficulties, and can help to reduce the time for riders to get on and off the bus, thereby reducing the time at stops. Because the wheel wells take up space within the passenger compartment, low-floor buses tend to have fewer seats.