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Bus Rapid Transit in the Metropolitan Puget Sound
version 1.28

Basic Elements

Complete the core freeway HOV lane network (funded by legislature), and convert these to HOT

>   300 Lane Miles

>   HOT technology provides congestion-free roadbed for BRT
>> 50-60 mph 24/7

>   HOT lanes on the center span of the I-90 floating bridge
>> Direct access to Bellevue Way SE using existing ramps
>> Mercer Island preferred access maintained

>   HOT lanes on 520
>> If GP lanes are tolled partially for flow maintenance
>> (as opposed to exclusively for revenue generation),
>> they become semi-HOT

>   HOT lanes on the now-reversible lanes of I-5 to Northgate
>> Possibly 2x2 south of 520, 1x1 north of 520

Off-line unloading / loading

>   Hugely increases capacity (potential through-put)
>> Several times that of LRT

HOT to HOT interchanges

>   Eventually
>> Typically when the interchange is being rebuilt anyway

Guided-busway along all or part of Initial Segment currently being constructed by Sound Transit between downtown Seattle and SeaTac Airport

       This construction is becoming a sunk cost

       Super-deluxe "arterial BRT" replaces LRT

Guided-bus technology in the DSTT (Downtown Seattle Transit Tunnel) allowing 4 lanes in stations

       Allows skip-stops, with consequent quadrupling of potential through-put from today's level

       Slight narrowing of platforms required

On guided-busway segments apply technology to make BRT as smooth as high-end LRT (eg Portland Max)

       Done today on the Adelaide (Australia) O-Bahn

Bus-only lanes on major arterials

       Rush-hours only or full-time

       Parking-garage-type arms keep out non-transit vehicles
          Right turns into businesses ok

       If full-time, then municipal lots more than make up for lost on-street parking
          200%?
          300%?

Special treatment of downtown Bellevue

       High end: tunnel similar to the DSTT

       Low end: dedicated bus streets, bus-only lanes, and transit mall

       Direct-access ramps to I-405 (existing) and SR520

       Possible use of BN ROW to connect to downtown Kirkland

Special treatment of University District

      High end: tunnel similar to the DSTT
            Possible extension to Capitol Hill

      Low end: dedicated bus streets and bus-only lanes

      Direct-access ramps to I-5 HOT (center) lanes
            North and south of the business district

Special Treatment of the Montlake Bridge area

      Second bridge with dedicated bus lanes?

      HOT tunnel?

      Other options being studies in 520 Bridge Project

<u>Optional Elements</u>

All or parts of the Ride Free Express program

      Reduced or eliminated bus fares
            Easiest/cheapest way to gain ridership
                eg Tacoma Link

      Major expansion of the vanpool program
            Extremely cost-effective

Overhead guided-busways on certain arterials

      eg Highway 99, north of Greenlake

      cf monorail
            Similar in footprint and impact
            Buses are much lighter than trains, therefore less bulky structure needed

      see parts of the Adelaide O-Bahn for earlier (bulkier) version of this

Other
        Smart cards figure out where people get on and off buses for better bus routes

Additional Optional Elements (Further in the Future)

Elements of on-demand carpooling

        A high-tech version of the "slug" program in DC
        and on the San Francisco Bay Bridge

        On-line PDA or similar allows people to indicate where they are
        and where they want to go

        Start with large employers such as Microsoft and Boeing

If in time all freeway lanes become congestion-priced (tolled for flow maintenance), then

        HOT lanes become truck lanes
            Separation of trucks from passenger vehicles increases safety

        Net revenues from tolling distributed per-capita to residents of the region
            cf Alaska General Fund annual distributions to state residents
                In effect gives everyone a "rush-hours budget" (keep or spend)
                    see PSRC federally-funded experiment with
                    "demand elasticities"
                "Progressive": net transfer from richer to poorer

            Alternatively net revenues used for
            Transit
            System expansion

        \BRTpugetsound