

Vision Statement for the Local Travel Network

The Local Travel Network (LTN) promises to be a low cost, fast deploying street adaptation that will accelerate the market for electric vehicles, help reduce street congestion and, importantly, improve safety in the South Bay of Los Angeles County. Co-benefits envisioned for implementation of the LTN will provide for affordable high-quality door-to-door, on-demand mobility services to create a more personalized option for residents of disadvantaged neighborhoods – mobility options that will minimize the environmental impact of state mandated housing growth while, at the same time, make it possible for the South Bay to meet the target of 50% decrease in greenhouse gas emissions before 2030. The LTN will positively affect the character of local neighborhoods, shaping future travel patterns across the South Bay through a network of safe routes to local destinations. The infrastructure will accommodate the vast majority of short trips that are taken every day by South Bay residents.

Short Term Vision

Trips in the South Bay sub-region are short. Today, probably 99% of trips are driven in large, fast, fossil-fueled motor vehicles. In the future, South Bay residents will get around using just the mode that the trip requires. Providing for safe infrastructure to support local travel using micromobility modes (for short trips) will break the decades-long monopoly of auto-mobility. Not replacing it but co-existing. A culture of *right-sized mobility* is our grand vehicle vision.

The South Bay Local Travel Network is the key to that transition. The LTN is formally a 243-mile route overlaid on the South Bay's 2,150 miles of streets to provide safe and efficient paths for residents to reach frequent destinations when using a micromobility mode – this includes the universe of slow-speed zero-emissions vehicles from pedal bikes to e-bikes, to e-scooters, to Neighborhood Electric Vehicles (NEVs), as well as other gyroscopic devices like segues.

Representing a small fraction of the total road miles and slow-speed neighborhood streets, the Local Travel Network is envisioned to provide micromobility users connectivity from neighborhood to neighborhood to local destinations - both close to home and across the sub-region.

The vision for implementing the Local Travel Network is based on the working assumption that the South Bay cities will be responsible for implementing their respective sections of the 243-mile network. SBCCOG will facilitate inter-city corridors as required. Operationally, formal use of the LTN will begin once continuous multi-city segments are completed. The new Network will provide South Bay residents with many co-benefits including:

Stimulating the Market for Micromobility Devices

Very few benefits will be captured if residents do not purchase the micromobility devices. Incremental use could come from the installed base, mostly bicycles, but the bigger impact will depend on increasing that base.

The COVID quarantine has led to dramatic increases in micromobility device purchases. Pedal bikes, e-bikes and NEVs all experienced record same-month sales increased 2019-20.

The LTN will build on that momentum, particularly if the institutional innovations to support local or neighborhood programs for telework, e-retail, distance education and tele-medicine are sustained in some form, post-pandemic.

Reducing Congestion

The street hierarchy of primary, collector, and local roads was designed in the 1930s so that 80% of vehicle traffic is carried by 20 percent of the road mileage. This is the case in the South Bay, where 22% of the streets have relatively fast speeds with 10 major arterials in each direction carrying approximately 80% of the traffic. Those routes are congested because the planners failed to anticipate that their design would not scale-up to handle the volume of motor vehicles in the South Bay today – That number is 665,000 vehicles and counting.

Our Vision is that the formal LTN and its informal feeder system (all 25 MPH streets) will convert motor vehicle trips to micro device trips which are diverted so that 20% of the road mileage carries only 60% of the trips, with the slow speed traffic spread out over the under-used 80% of streets.

Serving Residents

Once local travel defined by many short trips is carried by micromobility devices, the only fast-moving traffic will be that which is moving into, out of, or through the South Bay. The LTN will separate the fast inter-subregional traveler from local residents that live, work and play in the South Bay.

Implementation of the LTN will provide congestion free access to most South Bay destinations. When those destinations provide priority parking for micromobility devices and Level 1 (L1) charging, the LTN will deliver an even higher-quality travel experience designed specifically to serve South Bay residents.

Increasing Safety

Recent efforts to reduce auto-involved accidents have not succeeded. In general, those efforts have relied on road diets to slow traffic while the LTN relies on a vehicle diet.

By minimizing the operation of micromobility devices on fast streets (as in bike lanes on major arterials); by expanding the universe of qualified devices from pedal bikes to the growing marketplace of electric 2- and 3-wheel, slow speed devices; and by aggregating their travel onto a route shared with micro devices and slow-moving motor vehicles, there will be safety in numbers. No micromobility device can speed and full speed motor vehicles are less likely to speed.

Supporting Lessons Learned From COVID-19

The LTN will support the pandemic adaptations that have become manifest, keeping them going and possibly extending them. Telework especially can reduce the need to travel to a distant central office, replacing that with some local facility-based options. Spending more time at home increases local errands that were formerly chained to the journey to work. E-retail has expanded into groceries and restaurant meals.

Long Term Vision

The formal LTN will evolve as the volume of micromobility devices passes a threshold and travelers create their own routes based on familiarity, congestion aversion, and “pain point” aversion. Cities will respond to requests by micromobility device users to address remaining pain points on the most direct routes.

The LTN will interact with other mobility innovations, environmental and equity factors expected now and into the next decade. Anticipated areas where this interaction will occur include:

Support for the Adoption of Automated Vehicles (AV)

Fully automated vehicles are coming. Innovations in the types of vehicles and types of services they will support are being tested today. Some will be introduced as shared vehicles, with faster speeds, that will serve consumers for long trips. Other AV and delivery robot systems are being designed as slow-speed vehicles that will address local demand for delivery of services or goods from nearby commercial or retail centers. When you want to get a bottle of milk, one can envision a zero-emission slow speed vehicle will safely traverse the community, travelling from the local store, to bring it right to your door with no wait and no fuss.

Depending on the size and type of automated vehicle, the type of service and the mode that will facilitate it will be one of choosing between what right of way it will use - local sidewalks or travel in the street. When that choice is to use the street, the Local Travel Network will become a valuable asset for this growing delivery sector. Individuals will still have the sustainable choice of using their personal micromobility devices for local trips to commercial and retail destinations even as experiments in delivery robots will soon begin to appear on the Local Travel Network.

Providing for Equity

For disadvantaged communities, inequities in mobility are experienced in conditions of poor air quality and access to transportation. This is true now and will likely be so in the future. A robust Local Travel Network, supporting zero-emission vehicle travel, will play a significant role in making disadvantaged communities' healthier places to live and work.

Inequities also exist in the disparate access to affordable vehicles. Micromobility devices are the least expensive form of personal mobility on the market. A developing marketplace of micromobility vehicles – encouraged and supported by the robust use of the Network including, Slow-Speed Ride & Drive events, will encourage mobility ownership for those in disadvantaged neighborhoods.

Meeting GHG Reduction Goals

GHG emissions must decline by 50% from current rates by 2030 or society will experience the destruction of the planet's life support systems. The LTN provides a new approach to reducing carbon emissions that will have important implications now and into the future.

The LTN can lead the reduction of GHG emissions in the South Bay. SBCCOG vehicle demonstration projects have shown that 27% of the VMT is generated from trips shorter than 3 miles and 63% from trips shorter than 10 miles (36% between 3 and 10 miles). Our vision of the LTN, will enhance mode shift and become a catalyst to expand upon VMT and GHG reduction numbers.

If zero emission micromobility usage can be expanded before 2030 to include all trips less than 3 miles and half the trips between 3 and 10 miles, then the LTN will have played a significant role in the sub-region's efforts to meet and exceed its climate action goals for lowering GHG emissions.

Being a Catalyst to a South Bay Green Economy

To remain sustainable, the South Bay sub-region should develop strategies for transitioning to a "green economy."

Carbon free mobility should be considered as an option for leading that transition. As residents choose micromobility devices, ultimately, reducing the number of household internal combustion engine (ICE) motor vehicles, the opportunity to attract any element of the supply chain – from manufacturing, to assembly, to distribution, as well as the retail sales for all (or parts) of those devices in the sub-region increases. The LTN will be a catalyst for initiatives to de-carbonize the economy and grow these businesses in the South Bay.