Making Transit Work

Most people say they would use transit if it was fast, frequent, dependable, easy to use, and went where they need to go, when they need to go. Local urban and suburban transit options include scheduled, fixed route service (Charlottesville Transit Service or University Transit Service) and on-demand service (JAUNT). Other types of transit under discussion include Bus Rapid Transit (BRT), Enhanced Bus, Trolleys, Light Rail, and commuter rail [Figure 1].

Fortunately, in Albemarle County, we don’t have to decide on new technology right away. The biggest factor in making transit work is the density, quality, mix of uses, and walkability of the development (and redevelopment) along the main transit routes.

In concert with the City’s efforts to focus development and enhance transit along the West Main Street corridor, the Places29 Master Planning process is exploring whether changing how we develop along US 29 could be the missing link that makes regional transit a real option. In combination with strategies to keep transit from being stuck in traffic - exclusive lanes, priority at signals, vehicles with multiple doors and low floors for quick boarding - a combined transit and development strategy makes sense.

Making transit work also requires a safe, comfortable customer delivery system around each stop. Most regular transit customers walk (or wheel) a few blocks to the station, and then do the same at their

![Figure 1. This graphic illustrates many transit options. Though we don’t have to decide on new transit technology right away, we can start to change how our area develops to ensure many modes of transportation are available.](image-url)
destination. This requires a completed network of sidewalks, safe street crossings, and lighting. Though the majority of adults make most of their trips by auto, a world-class transit system would improve mobility for the nearly one-third of us who can't drive - our children and aging parents, those with disabilities, and those who can't afford a car.

Two development types designed to maximize potential transit ridership are transit-oriented development and transit-ready development.

**What is transit-oriented development?**
A transit-oriented development (TOD) is a mixed-use residential and commercial area focused around a major transit station. It is designed to maximize access by transit, walking, and bicycling. A TOD has a center with a bus or rail station surrounded by relatively high-density development for a few blocks around each station, or along the route. This is similar to how downtown Charlottesville works today, and why more than a third of adults in some downtown and UVA neighborhoods can walk to work.

As part of a coordinated land use and transportation program, a TOD encourages transit ridership. But in addition to shifting car trips to transit, a TOD:

- Increases accessibility and transportation options by mixing residential and commercial buildings
- Reduces the need for automobile use and excessive parking lots
- Encourages walking and cycling, both for single trips and as part of a transit trip
- Allows some households to reduce their car ownership by providing real options for getting around

**Figures 2 & 3.** Many streets and highways are at capacity, can’t fit more cars, and can’t be widened (above left). If we think in terms of moving people, not cars, existing streets have plenty of room (above right).

**Figures 4 & 5.** Saving a lane for transit (above left) would increase the capacity of our streets without widening. People walking and biking (above right) fill just a fraction of existing sidewalk and bike lane capacity.
What is transit-ready development?
While transit-oriented development is built around existing transit stations, transit-ready development prepares for future transit expansion with neighborhoods and road networks designed for maximum efficiency of all transportation modes. Elements of transit-ready communities include:

- A mix of land uses
- Pedestrian-friendly layout with sidewalks buffered from traffic by planting strips with street trees
- Appropriate locations and routes for transit, either incorporated into current development or factored into future plans
- An "urban" street grid (providing plenty of connections instead of cul-de-sacs)
- Public facilities designed as transit targets
- Appropriate housing densities to support transit

Working with area transit providers, transit-ready developers could also help subsidize peak-hour commuter express buses in the early years, in order to provide a competitive market advantage and allow families to reduce the number of cars required.

We can't pave our way out of congestion. How can operational solutions help?
Improving system efficiency and reducing travel demand can be equally (or more) effective than adding travel lanes and building new roads. Transportation operational solutions can provide immediate benefits, get more results for the dollar, and offer flexibility for future system changes. Two such tools are Transportation System Management (TSM) and Travel Demand Management (TDM).

What is Transportation System Management?
Transportation System Management (TSM) provides lower-cost improvements, such as adding turn lanes, straightening curves, improving intersections, repairing bridges, improving technology, and implementing traffic calming. TSM strategies can bring immediate improvements without major change in the road's function or character. Other TSM strategies include signal synchronization, access management, intelligent transportation systems (ITS), and incident management.

Signal Synchronization coordinates traffic signals along a street so that vehicles can move through several signals without stopping. Traffic signals are synchronized so that when you're released from one intersection the signal at the next will be green by the time you reach it. Signal synchronization reduces a driver's overall delay and the frustration of waiting for a green at one intersection only to encounter a red light at the next.
Access Management can improve the capacity, safety and efficiency of major roads while maintaining or improving access to adjacent land uses. A good access management program improves the 'customer delivery system' for businesses and transit and improves the capacity of the primary roadway. While an access management strategy will be developed for the entire 29N Corridor, it will typically be implemented over time as individual properties develop, expand, or change use. A good example is the new connection between the 'Shoppers World/Whole Foods' center and the adjacent 'Starbucks' center, which improved circulation for both drivers and pedestrians. Access management addresses the:

- Spacing of streets and driveways
- Connections between businesses, parking, and the roadway network
- Use of turn lanes, acceleration lanes and medians
- Frequency and location of traffic signals or roundabouts

Intelligent Transportation System (ITS) uses computer information technology to manage vehicles and routes, control signals and signs, and provide traveler information. ITS can enhance safety, reduce travel time, and greatly improve transit service. An effective ITS system can let a transit vehicle hold a traffic signal longer to get through, or get a head start when it turns green, while displays at each transit stop let you know exactly when the next bus will arrive.

Incident Management coordinates multi-agency, multi-jurisdictional responses to traffic disruptions such as accidents and breakdowns. Efficient and coordinated management of accidents and breakdowns limits such incidents’ impact on public safety, traffic conditions and the local economy.

How can Travel Demand Management help?
Travel Demand Management (TDM) strategies provide more choice in travel through carpooling, vanpooling, carsharing, transit use, biking, and walking. Other techniques include encouraging telework and alternative work schedules, designating park and ride lots, and instituting parking management.

In our region, RideShare [www.rideshareinfo.org] provides a carpool matching service for commuters, helping them find others who live and work in the same area, and work similar hours. RideShare also organizes vanpools and SchoolPools and administers the Guaranteed Ride Home program. In the near future, Virginia is launching a new web-based ridesharing program (NuRide) that will be focused on working with employers.

TDM strategies are also effective for shopping, recreation, and pleasure trips. Future travel demands will change, requiring creative strategies to maximize our existing system investment. TDM strategies can be extremely cost-effective, providing real choice with minimal public investment.