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PLANNING AND DEVELOPMENT

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Memorandum

To: Climate Action Plan Steering Committee
From: Amy Webster, Sustainability Intern
CC: Mayor Reynolds, Common Council
Date: December 1, 2021
Re: Using Transit-Oriented Development to Reach Carbon Emission Reduction Targets

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This memorandum outlines how transit-oriented development (TOD) can help fulfill goals in La Crosse's *Strategic Plan for Sustainability* (2009) and inform goal setting for La Crosse's Climate Action Plan. TOD is walkable places where residents can easily address most of their daily activities on foot, bus, or bicycle, and where automobile use is minimized by design. The *Strategic Plan for Sustainability* doesn't explicitly recommend TOD, but it does contain goals that support its implementation. These goals include enhancing the transportation system (1G) and working to ensure that neighborhoods are safe, integrated, and have a sense of community (4G).

Other Planning documents supports TOD in La Crosse. La Crosse's *Transportation Vision Memo* (2015) envisions a future of making alternate modes of travel safe for everyone, rather than just making driving faster and easier. It recommends TOD along Highway 53 from the La Crosse River to Losey Blvd. La Crosse's *Transportation Demand Management (TDM) Plan* (2018) builds on this vision by recommending incentives for TOD to maximize activity around transit stops to increase ridership and reduce automobile use.

Consumption of gasoline accounts for 20% of greenhouse gas emissions in the US, the largest single source in the county. Transit-oriented development could also help La Crosse achieve its carbon neutrality goal by 2050 since residents living in TOD were more likely to take the bus and much more likely to walk or bike than residents of non-TOD. These residents use fewer fossil fuels, and reduce their city's overall carbon footprint.

Current Conditions

Locally, developments in transportation have hurt the city of La Crosse. La Crosse's 2015 Neighborhood Revitalization Strategy Plan (NRSA) details the decline; disinvestment began when the construction of Interstate 90 in 1969 allowed for easier access to communities within commuting distance of the city. These fringe areas have seen higher valued housing and economic development, despite the central city being a regional hub of employment, entertainment, and education.

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This trend is not unique to La Crosse; the general shift towards automobiles in the 1960s has led to the immense consumption and reliance on fossil fuels. A 2016 study by Guthrie and Fan hypothesizes that this "automobile-dependent growth" has determined regulations that are in place today that limit density and create land use patterns that are incompatible with any other type of development. Specifically, they mention that building permit caps and low-density zoning continue to encourage this sprawling development.

Ibraeva, Almeida Correia, Silva, and Antunes, 2020 note that implementing TOD is a way to create developments that are similar to a city core, including the promotion of dense settlements in non-dense areas, like a suburb. These developments offer economic and environmental benefits to the community they are in. La Crosse is not, strictly speaking, a suburb, but it does have suburban elements. Its areas of large-lot housing and automobile-dependent commercial strips could benefit from such improvements.

La Crosse's goals of environmental sustainability and economic development can be achieved if the city encourages the reversal of these automobile dependent standards. The best way to do that while achieving many other of the city's goals is to implement transit-oriented development (TOD).

Case Studies

Much of TOD policy and planning is focused around on walkable, mixed-use communities surrounding high-speed rail and light rail stations. While this type of rail development in La Crosse is unlikely in the near future, the City can still benefit from walkable TOD that makes it easy for citizens to ride the bus. Bus TOD offers greater flexibility because it can take place at any point along a corridor due to more frequent stops.

The following research focuses on increasing bus ridership as a measurement of TOD success. Increasing bus ridership means attracting "choice riders," people that can choose between driving or taking the bus. When considering the shift from private vehicle to transit, people consider their time, money, and comfort. This includes the total time of the trip and how long they'll have to wait; the cost of the fares, parking, and even tolls; and the reliability of the bus, how easy it is to find information about it, and their safety and security throughout their trip (Prayogi and Satwikasari, 2019). Research has also determined that things like age, income, household size influence decisions to drive or take transit.

TOD can attract choice riders and overcome socioeconomic factors in several ways. TOD areas studied had an average of 1.16 parking spaces per unit, encouraging less driving. Central city TOD residents made 70%-90% fewer car trips, while suburban TOD residents made 15-25% fewer car trips than the national average. Areas that saw fewer car trips often included parking restrictions coupled with an expansion of their transit network. Other physical changes to increase ridership included designing street around transit stops, and improving the walk- and cycle-ability of the surrounding area.

TOD can also be described as compact development within a half-mile, or ten-minute walk, of a transit stop. This is an area where one should be able to find most of their daily needs; the transit stop at the center eases access to other areas. TOD typically contains "moderate-to-high residential densities, [with] local shops and services." This may sound very urban, but an analysis of TOD projects around the US showed that most were

only three or four floors high. Another study found that as the percentage of jobs that can be reached within 30 minutes by transit increases, driving declines and transit ridership and walking increases.

Virginia's Implementation Strategies for Successful Bus TOD Projects is centered around adaptive land use strategies that ensure transit-supportive land uses are created in the vicinity of the bus station. It recommends local governments take into consideration the 5 Ds for bus TOD: density, diversity, design, distance, and destination. The strategies suggest that elected officials and City leaders focus on shared vision. It also suggests the planning and transportation departments be well connected to achieve these goals through the planning, design, and construction phases. There are even bus TOD strategies for private/public partnerships with consulting firms, land surveyor firms, design companies, real estate agents, and lending institutions.

This document recommends creating a TOD or pedestrian overlay zoning district in the immediate vicinity of planned bus TOD. It also suggests offering density bonuses for transit integration and pedestrian facilities. Other incentives include latitude in project design, allowing a mix of uses, streamlining permit approval and traffic impact assessments, and providing cost sharing options. The document says ensuring public participation in the whole process helps improve the public's bias against bus transit as well. The Columbia Pike project in Arlington, VA, is a good example of implementing the strategies recommended.

Capitol Region Council of Governments drafted a TOD fact sheet that provides the helpful insight that "A busway — with a dedicated right-of-way and fixed stops — would function in the same way as a rail transit system, and therefore, busway-oriented planning could be approached in the same way as TOD along a rail line." Treating a bus line like a rail line is beneficial, since the majority of research and TOD efforts have been focused around rail so we can use existing research strategies here in La Crosse along the busways.

St. Louis created a TOD Toolbox that has a variety of suggestions they call "essential zoning strategies for TOD". Pedestrian strategies include requiring an adequate sidewalk width, pedestrian-scale and pedestrian-oriented building and parking lots, and a 600-foot limit on block length. Density strategies include establishing minimum or average densities and setting minimum building heights in transit areas. The toolbox suggests using a of a form-based code to make these changes. Transit integration strategies includes physical infrastructure like pedestrian-friendly environment and comfortable bus stops that provide sufficient information.

This Toolbox promotes larger commercial/office buildings as close to the central station as possible. Additionally, it suggests that community services--libraries, schools, childcare, and museums--be connected with pedestrian-friendly infrastructure to each other and the transit station. Other public spaces like parks and courtyards should be versatile, maintained, and safe to promote community building. Lastly, the toolbox says that "Transit and parking facilities should accommodate retail or other active uses at the ground floor."

Recommendations

The Climate Action Plan Steering Committee should consider transit-oriented development changes in land use and zoning to reduce greenhouse gas emissions. These goals should result in higher choice ridership on buses may increase in property values along transit lines.

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The committee may recommend zoning improvements that could take the shape of a form-based code, a TOD overlay district, design standard amendments, or individual regulations. Current design standards for pedestrians are lacking and are only concerned with connecting pathways to the parking lot and street with no mention of transit stops. Regulations for TOD could include reducing or eliminating parking minimums, charging for public parking, and making parking lots that cater to pedestrians and bus riders.

They could require a minimum building height of three stories and set a minimum or average density. Most of the densest areas in La Crosse's population density map (Appendix A) already have transit nearby. Virginia recommends a minimum density of 7 units/acre for intermediate bus and 15 units/acre for frequent bus service.

Block lengths could be limited to 600' and sidewalk widths could be increased to improve the pedestrian network. The pedestrian infrastructure around malls, parks, stores, and other places that are part of one's daily life could be made more safe, comfortable, and fun. Commercial zoning districts could be added along transit routes or routes could be altered to serve existing commercial centers. The convenience of routes going to and from large places of employment should be considered.

The committee could recommend that existing transit routes be improved by providing more transit information at stops, making stops feel safer and more comfortable, and connecting to the pedestrian network. Also, they could suggest ways to reduce trip times and frequency between buses.

The committee may even want to propose a Bus Rapid Transit (BRT) along TOD corridors suggested in the Transportation Vision Memo. This may entail a dedicated right-of-way, fixed stops with payment at the stations, and route redesign. People are more willing to accept bus TOD if it's treated like rail transit. Studies have found that the density required to support BRT is about 17 people and jobs per acre which means that much of La Crosse already has the required density to support BRT.

City of La Crosse
Population Density

Based on 2010 Census Data

People Per Square Mile

>0 - 3,000	9,000 - 12,000
3,000 - 6,000	12,000 - 15,000
6,000 - 9,000	15,000 and Greater

0 0.125 0.25 0.5 0.75 1

Miles

Map created on April 4, 2017. City of La Crosse Department Information Technology.