The Last Mile:
Transit Oriented Development and Transit Planning in the Madison Metro Area

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What is TOD?

- Transit-Oriented Development (TOD): "Transit-oriented development, or TOD, includes a mix of commercial, residential, office and entertainment centered around or located near a transit station. Dense, walkable, mixed-use development near transit attracts people and adds to vibrant, connected communities." (Federal Transit Administration)

First Principle of TOD: Transit Access

Developing good transit access does not just mean that a form of transit is present. Much like an unscrupulous landlord talking about transit at an apartment, from a birds eye planning perspective that would say things such as "that bus stop two blocks down is transit" fail to account for the realities of public transit. Public transit needs to be consistent and accessible for people across a broad variety of spectrums.

wavetransit.com

Second Principle of TOD: Density

Density means not just of the physical structures in a community, or the amount of residents in a certain demarcated area, but the density of services and activities that an area offers and can accommodate. This means that when you depart from transit into a community, you are not greeted by straight residential, commercial, or entertainment style development, but by a mix of them. The goal of TOD is to promote (by using zoning in conjunction) the development of "complete" communities that provide for a wide range of activities.

completecommunities.org

Third Principle of TOD: Connected Communities

Connected communities means that the most prominent and trafficked neighborhoods in a city are commutable in a quick and efficient fashion, boosting the economic and social activities in all communities. One major contributing factor for this is what form of active transportation exists in the areas where transit service terminates (think bus stops). In these areas there needs to be options for subsequent modes of transportation to navigate the community and surrounding communities in a safe, quick, and comfortable fashion. This means large commuter sidewalks, guarded crosswalks (not necessarily an actual guard) as well as options for biking and other self propelled transport (scooters, mopeds, skateboard, etc). By making simple tweaks, like bike racks on transit, stops can be made to practically service a much larger area, and increase the amount of services a rider can access from riding a single transit line to a single stop.

The State of TOD in Madison

- Madison has both positive examples and negative examples of TOD influenced planning.
- To help us understand the differing levels I created a scoring system that can be used to label neighborhoods in Madison based on their characteristics and the principles of TOD that they exhibit.

Types of Neighborhoods/Communities

A: Has TOD infrastructure in place conforming to all existing principles of TOD. Transit access is extensive in all directions, secondary modes of travel are accessible, and the community served is diverse and mixed-use.

B: Shows some aspects of complete TOD infrastructure, however it lacks one or more of the principles of TOD. To be considered a B classification a neighborhood must have the infrastructure in place to quickly expand into a complete (A) TOD neighborhood, with minimal investment from city planners and commercial developers.

C: Shows minimal aspects of TOD planning. Characterized by a lack of even the transit infrastructure required to implement TOD. Usually, but is not limited to, peripheral and suburban areas of the city that feature neighborhoods that are far more car-dependent than interior downtown neighborhoods.

D: Any area not suited for TOD implementation.

Examples of Neighborhoods

A. The State Street and Capitol communities in Madison best reflect the "A" grade. They have highly accessible transit that is located along wide pedestrian malls and expanded sidewalks. Dedicated bike lanes allow for the use of active transport. Building planning reflects mixed-use in almost all parts of these neighborhoods.

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WKOW.com

Examples of Neighborhoods Con

B. In comparison to "A" communities, Madison has many more neighborhoods that fall into the "B" classification. B communities often lack one of the three main principles of TOD while having the other two present. Some may even have aspects of all three but not to a degree commensurate with an A category community.

An example of a community that lacks a key principle is the Williamson Street/Marquette neighborhood on the near east-side of Madison. Williamson-Marquette (WM) has several very strong aspects of TOD. This includes a mix use of commercial and residential usage that is some of the best in the city. Most large structures conform to TOD, The only area where WM fails to achieve TOD principles is with active transport. Road congestion and a lack of pedestrian areas aside from standard city sidewalks makes moving around the area difficult for any resident who faces challenges with mobility.

H Hospitals	Single-Family and Two Units	Industrial
✈ Park	Multi-Family (3-4 units)	Education and Institution
★ Community Center	Multi-Family (5 or more units)	Park and Open Space
📖 Library	Commercial	Agricultural or Vacant Land
♪ School		
Neighborhood Boundary		

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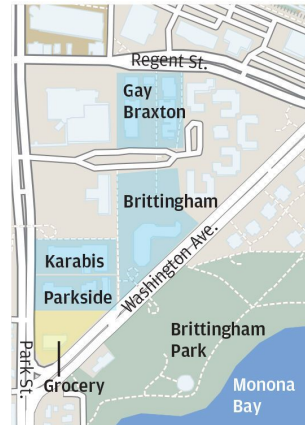
cityofmadison.com

Examples of Neighborhoods Con

C. An example of a C neighborhood is the Triangle Neighborhood. The triangle is located between Park Street, West Washington, and Regent Street in downtown Madison. Due to its advantageous positioning, the transit access to the Triangle is very good, with multiple bus stops on every bordering street. The Triangle also offers mobility for active transport, with bike lanes and walking paths easily accessible. Where the Triangle drastically fails is with mixed use. While the Triangle is home to some of the best affordable housing in the city, very little else has been added to the community. With mostly residential housing, the transit access in this community is largely pointless for anyone who does not live in or nearby the Triangle.

Madison.com

Madison to create vision for housing on 'the Triangle'

Madison's Community Development Authority is starting a process to redevelop its housing and commercial properties in an area bounded by South Park and Regent streets and West Washington Avenue.

■ Housing sites   ■ Commercial site

Regent St.

Gay Braxton

Brittingham

Karabis

Parkside

Washington Ave.

Park St.

Grocery

Brittingham Park

Monona Bay

maps4news.com/©HERE, Lee Enterprises graphic

Comparative Study

- For the purposes of comparison, I realized it would be very important to contrast the efficacy and use of TOD planning in Madison with another city of comparable characteristics.
- For this I arrived at the conclusion that Tucson, AZ would be a good comparison city.
- Criteria for choosing Tucson:
  - Presence of a large research institution and undergraduate class.
  - Climate challenges.
  - City Size.
  - Geographic Constraints.
  - Tucson and TOD.

Images of Tucson Transit

Tucson SunLink headed down Congress Street. Note mixed use of streets. (wikipedia)

Sun Link Station/Bus Stop: Note covered roofs, benches, and info desk.

Tucson TOD

- Tucson has demonstrated a long-standing appreciation of TOD.
  - Handbook
  - Comprehensive planning
- Integrated Systems:
  - Tucson does an excellent job of using their bus transit to support their light rail. The Tucson Sunlink light rail is only a 3.8 mile track. But connects the busiest downtown communities together, busses are then used to connect the Sunlink to the larger transportation system.
  - Redesigns of transit and pedestrian amenities at the same time. (covering bus stops and expanded the sidewalks around them)
- Access:
  - Route system allows Tucson to service over 3 million additional rides than Metro in the average year (12 vs 15 million)
  - Prevalence of covered stops and shelters.
  - Free service? (increased ridership during COVID)

Lessons to be Learned from Tucson

- The main takeaways from Tucson are two-fold when comparing with Madison.
1. The value of planning ahead: Tucson has demonstrated the value of planning ahead when designing transit and development planning. Their TOD handbook provides an easy guide to planners and developers about what is encouraged and what is not, leaves out guesswork.
   a. Allows for strong top-down leadership in transit.
   b. Proactionary versus reactionary.
2. Multi-Faceted Transit Solutions
   a. Tucson does a good job of looking at their city as a whole unit. While individual neighborhoods and communities will differ in their demands for transit and development, what you do in one will affect others.
   b. To counteract this, Tucson has planned in such a way as to implement multiple forms of transit, to service different communities.
      i. SunLink: college students, professionals, leisure trips
      ii. Bus System: commuters and shoppers moving long distances
      iii. Van System: Serves the elderly, those with disabilities, and anyone else who may struggle with conventional transit

Recommendations in Madison

The end goal of this project was to create several recommendations in the form of a policy memo that could be use to inform planning decisions in Madison to better implement TOD.

1. Comprehensive plan based on TOD principles
   a. Comparable to Tucson "handbook"
   b. Goes beyond individual project goals to further longer term work.
2. Considerations of other kinds of transit
   a. Madison is handling incredible capacity for a system built only on bus networks.
   b. Future is expanding to other forms of transit like trolley car systems.
3. Increasing TOD infrastructure through Planning and Zoning
   a. Without the proper zoning, TOD is ineffective or outright impossible.
   b. Mixed-Use becomes emphasis, pushing back on NIMBY attitudes.
4. Using TOD principles to promote other city programs like affordable housing
   a. Answers the principle issues of affordable housing planning

Final Thoughts

- The future is bright for TOD in Madison.
  - TOD represents an opportunity for the city to modernize an aging network and better prepare for future growth.
- BRT and Route Redesign
  - With BRT and route redesign coming soon to Madison, there has never been a better time to imagine new ideas for planning and transit.
- Influx of Money
  - The proposed federal infrastructure bill gives the possibility and hope for new funding to become available soon for everything from network maintenance to design grants.

Conclusion

Questions can be answered by email at: johneswindle@gmail.com