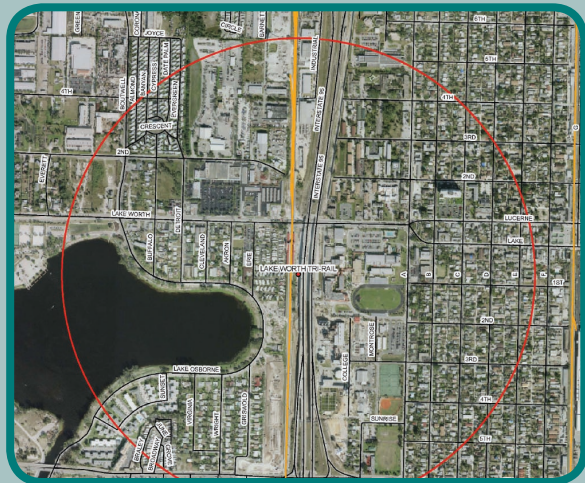
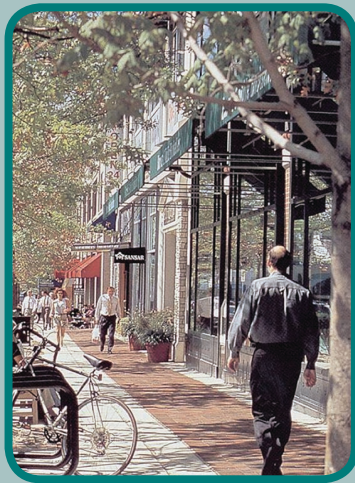


Lake Worth Station Area “Charrette”



November, 6 2007

Table of Contents

Summary Report.....1

 Process1

 Background.....2

 Recommendations9

 Notes13

SUMMARY PAPER

Process

Rail-Volution is a non-profit organization dedicated to helping communities achieve their economic development, quality of life and ecological sustainability goals through compact development around rail stations. Its 2007 annual conference was held in Miami October 31 – November 3, and as part of the conference 25 professionals from around North America gathered in Lake Worth to study the city's Tri-Rail station area. Attendees included real estate developers, city planners, economists, elected officials, transportation planners and architects. Staff from the City of Lake Worth and regional agencies also attended the entire workshop.

Four outside experts led the process:

- Jeffrey Tumlin and Tom Brennan of Nelson\Nygaard Consulting Associates, a transportation planning firm that specializes in Transit Oriented Development, transit and multimodal planning. Jeff leads the firm's TOD practice in its San Francisco office, and Tom oversees the firm's Portland, Oregon office. See www.nelsonnygaard.com.
- Otto Condon of Zimmer Gunsul Frasca Partnership, an architecture and urban design firm that specializes in infill development, TOD and streetscapes. Otto is a principal in their Washington, DC, office. See www.zgf.com
- Nadine Fogarty of Strategic Economics, an urban and regional economics and research firm focused on TOD and managed growth. She is in their Berkeley, CA, office. See www.strategiceconomics.com.

While over a dozen local staff people helped make the workshop possible, three individuals handled the bulk of the organizational logistics:

- Wes Blackman provided extensive background documentation and reviewed city issues and history with participants on the bus ride from Miami to the site.
- Sharon Jackson from the City of Lake Worth led on-the-ground logistics and provided background materials for the workshop.
- Lynda Westin from the South Florida Regional Transportation Authority helped coordinate the workshop strategy and provided extensive data.

The Lake Worth workshop had two sets of goals:

- The first set focused on conference attendees, helping them to understand how to run an integrated, interdisciplinary process to plan their own rail station back home. The workshop was designed to be an experiential alternative to the conventional panel of talking experts.
- The second set of goals focused on the community in Lake Worth, seeking to provide valuable input as the city moves forward updating its zoning codes and development strategies for the area around its station.

The workshop began with a bus tour of the station area, along with downtown Lake Worth and the beach. Following the tour, the group gathered at the Bizarre Avenue Café for presentations by a panel of experts. Four small groups then worked together with city maps and aerial photos to make recommendations for the station area. Finally, a summary presentation was made at City Hall to staff, planning commissioners and city councilmembers.



Small group discussion at the Bizarre Avenue Café.

Background

What is Transit Oriented Development?

Transit Oriented Development generally refers to specific types of development within a half mile radius of a rail or busway station or ferry terminal. People within a half-mile radius are five times more likely to walk to a major transit stop than others. Those who live further from a transit node are less likely to bother with the train

or bus. In addition to being near transit, Transit Oriented Development (TOD) has the following characteristics:

- **Walkability and Vibrancy.** Walkability is the most important characteristic of TOD – TOD is perhaps best described as pedestrian-oriented development that is near transit. TODs are active places, with more people walking and few people dependent upon automobiles.

- **Expanded Mobility, Shopping and Housing Choices.** In a TOD, not only can you walk to transit, but you can also walk to get a quart of milk. Hav-

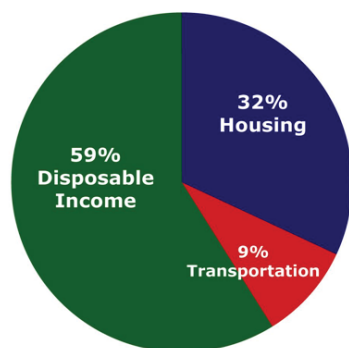
ing more people closer together means that locally serving retail can thrive within walking distance of all residents. A mix of housing types appeals to young people, new families, established families and older people, including families with a range of incomes.

- **Regional Connectivity.** Access to transit in TODs means access to jobs markets, shopping and recreation throughout the region.
- **Financial Return and Value.** Designed properly, TODs tend to have a higher long-

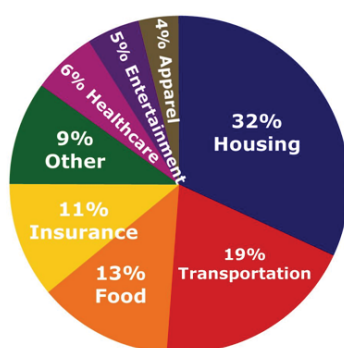


Transit Oriented Development could be better called pedestrian-oriented development near transit.

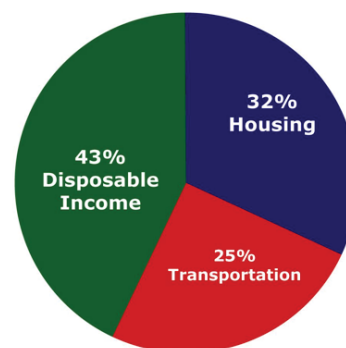
Location Efficient Environment



Average American Family



Auto Dependent Exurbs



Source: Center for TOD Housing + Transportation Affordability Index, 2004 Bureau of Labor Statistics

term financial return and increase in value more than conventional, auto-dependent developments.

- **Productive Transit.** Development-oriented transit systems that focus more on compact communities at their stations and less on sterile parking lots tend to have higher productivity and lower costs. TOD stations tend to generate more ridership and spread their ridership throughout the day.

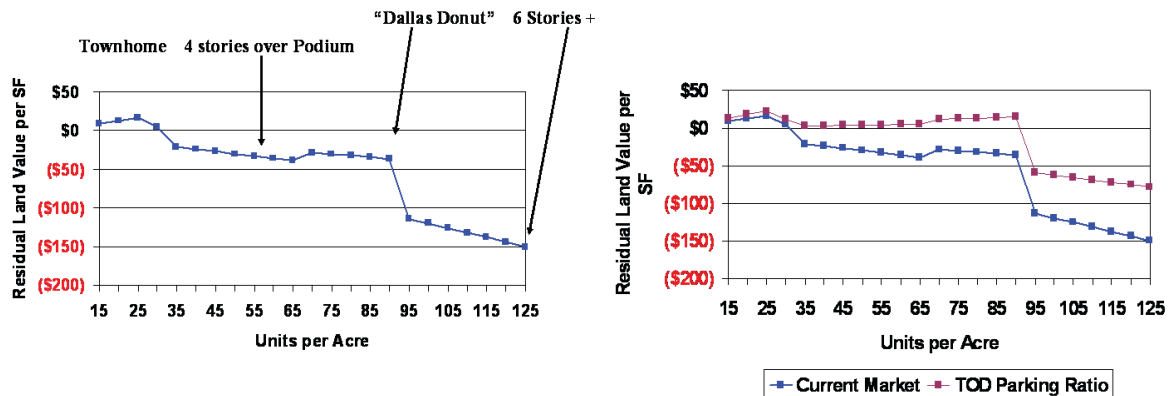
TOD and Housing Affordability

Transit Oriented Development is also key to what is called "Location Efficiency." According to 2004 US Bureau of Labor statistics, the average American family spends about 50% of their household income on housing and transportation. In more auto-dependent neighborhoods far from transit and jobs, Americans' transportation costs increase significantly, to about 57% of household income, leaving less money for food, health care, education and other purchases.

TODs, on the other hand, significantly reduce household transportation costs, allowing some trips to be made by transit, and many other trips to be made by walking. After all, only 20% of household trips are trips to work. The remainder, 80%, are trips to school, shopping, recreation and

other errands, many of which can be made on foot in a well designed TOD. Every car a household can eliminate translates into an extra \$100,000 in mortgage they can afford, according to analyses by the Center for Neighborhood Technology.

Compact, pedestrian oriented development is often not possible or financially viable under conventional zoning codes. Even if higher densities are allowed, they may not be achievable if codes require the same parking ratios as auto-dependent neighborhoods. In the example below from a Houston TOD study, financial viability declines as density increases due to the high costs of structured parking. In a TOD, however, some three-car households can become two-car households, and some two-car households can choose to have just one car. If parking requirements take into account the modest reduction in parking demand in a TOD, different development types become possible.



Different development types become viable in a TOD if parking ratios are adjusted to reflect actual demand.

TOD and Urban Design

Transit Oriented Development requires a higher degree of urban design attention than conventional development, particularly given TOD's emphasis on walkability. In a TOD, the most important role of buildings is how they relate to each other in order to create a high quality "public realm." The public realm shapes the experience pedestrians have of a city as they walk through it, and it is largely defined by how buildings relate to

the street and sidewalk, along with the details of the sidewalk itself. A high quality public realm generally includes the following elements:

- **Buildings that front onto the sidewalk.** In a TOD, buildings and their front doors must relate directly to the sidewalk, rather than to a parking lot. For retail buildings, this typically means front doors and storefronts directly meeting the sidewalk, and storefronts uninterrupted by driveways or blank walls on each retail block. In residential areas, this means front doors, windows and landscaping facing the street, with garages often facing alleys at the back. Eliminating blank walls creates makes the walk more interesting for pedestrians and improves both real and perceived personal security.
- **Buildings that shape the street.** TODs generally try to create a sense of "enclosure" in each street, giving pedestrians the feeling of being in a series of outdoor rooms. To do this, it is important that buildings be not too high and not too low. Academic research and visual simulations all over the country have shown that most pedestrians prefer streets where buildings are higher than half the width of the street and lower than twice the width of the street. (Allan Jacobs, et al, Great Streets, etc.) Taller buildings can "step back" upper floors in order to achieve these ratios.



Storefronts shape the street in a TOD.

- **Pedestrian oriented design.** Lighting, landscaping and pavement materials in TODs should always put the pedestrian first. Roadway intersection treatments should focus on pedestrian comfort and safety, using tools like intersection bulbouts.

TOD and Transportation Performance

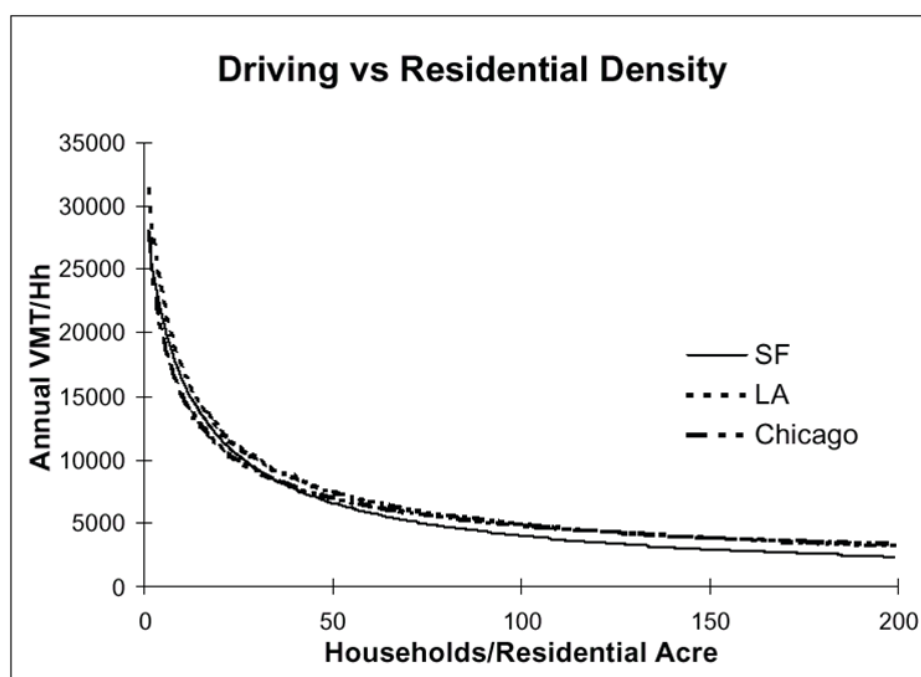
Rail stations are often at the center of communities and in places that may suffer from existing traffic congestion. Many citizens and policymakers are therefore concerned that additional development in their station areas will exacerbate their traffic problems. To a certain degree this is true: Compact, transit oriented development may produce additional localized traffic. Many transportation professionals, however, will argue that TOD is the best solution to regional traffic congestion since it produces significantly less traffic than conventional, auto-dependent neighborhoods.

As density increases and transit accessibility improves, household travel surveys from all over the nation have found that households drive less. Some people will take transit to work. Some kids will be able to walk to school. Some



TODs are a solution to regional traffic congestion problems.

shoppers will be able to drop off their dry cleaning, pick up groceries and drop off the mail with one driving trip instead of three. In aggregate, the results are significant: A compact TOD can produce 80% fewer miles driven per household than a family living in an auto dependent neighborhood. So while a TOD may produce some additional localized traffic congestion, its regional traffic benefits may be five times as great. Even at



Rates of driving decline significantly as density increases, especially between 15 and 80 units per acre, typically ranging from two stories to around six. TOD can cut auto trips by 80% compared to auto-dependent sprawl. (Source: Holtzclaw, J. Smart Growth – As Seen From the Air (NRDC, 2000))

the most modest scale, TODs produce about half of the traffic as conventional development.

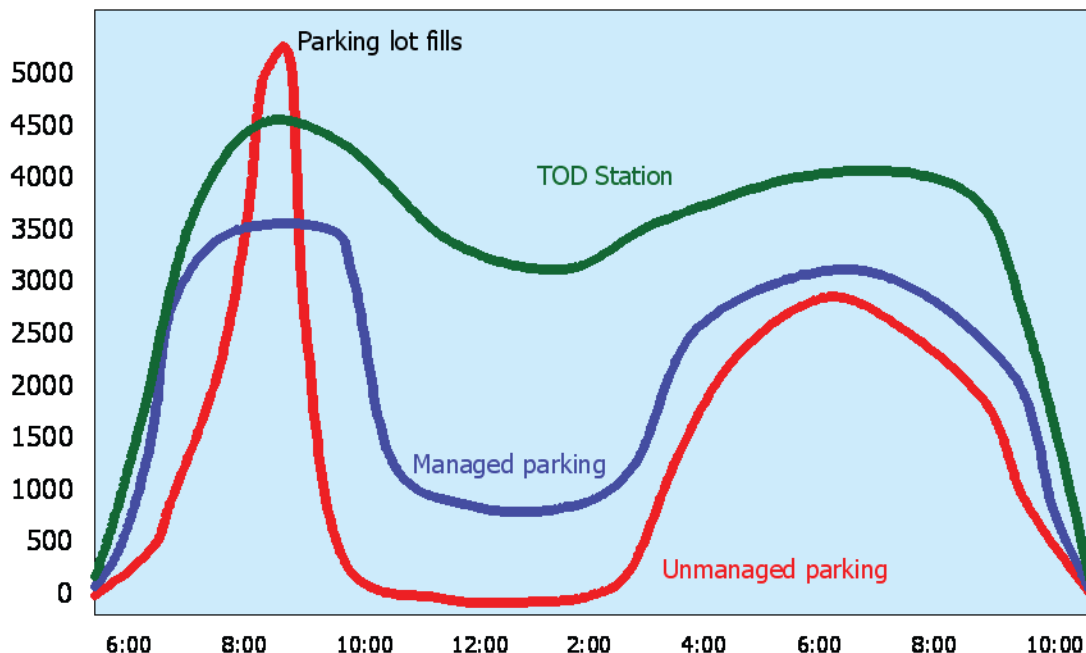
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It is important that local transportation analyses factor in the traffic benefits of TODs into their models. For the localized analysis, TOD projects should use national data and tools to adjust the vehicle trip generation and parking demand assumptions. Similarly, regional traffic analyses should compare the impacts of transit oriented in-fill development against auto-dependent development at the suburban edge. These considerations are important in traffic analyses for environmental documents and traffic concurrency standards.

TOD and Transit Ridership

Because households who want to use transit tend to self-select into transit-oriented projects, TODs often generate significantly higher transit ridership than a parking lot would. As importantly, TODs tend to generate more midday and reverse-peak ridership than parking lots do, improving the overall cost effectiveness of transit.

Park-and-ride oriented transit tends to produce a high ridership peak in the morning, with little ridership during the middle of the day. Where parking lots fill every morning, this morning peak is especially sharp, since riders quickly learn exactly when the lot fills and many rush to the station just before, creating platform and railcar crowding problems. Managing parking to avoid this rush alleviates the crowding problem and improves efficiency somewhat. Development-oriented transit systems, however, tend to generate more peak riders and significantly more midday riders, as people use transit to get to school, go shopping and visit friends, rather than just go to



work. The result is that development-oriented transit can offer greater service for lower fares, and requires less operating subsidy.

In order to achieve the best traffic management results, the following general guidelines should be implemented at TODs:

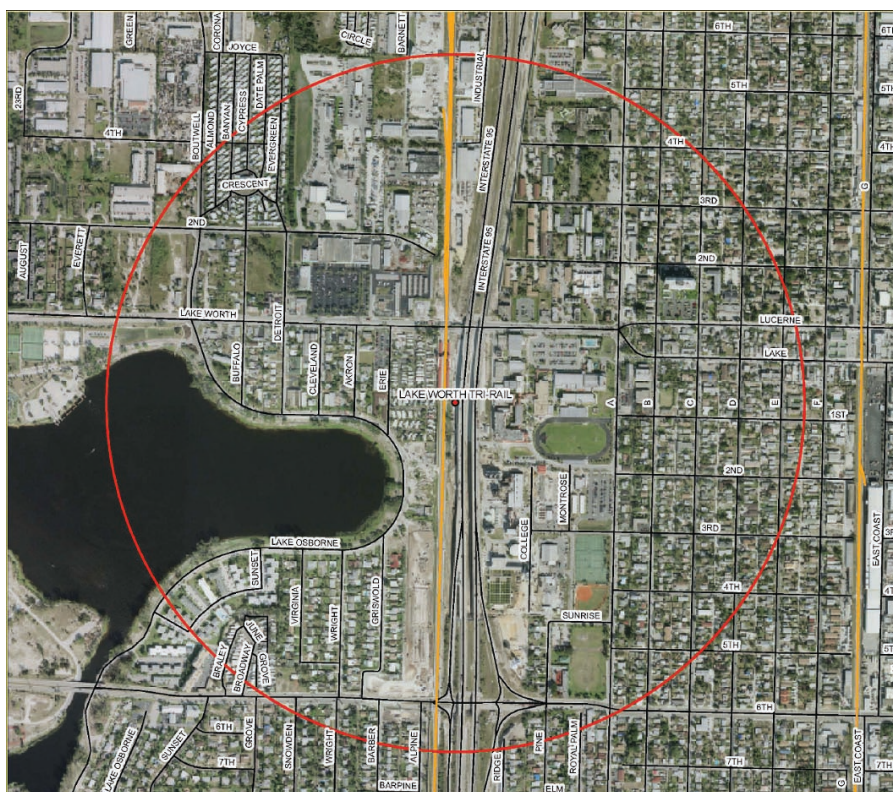
- **Street connectivity.** In walkable communities, more, narrower streets are always better than fewer, wider streets. Small blocks increase the amount of land area within the half mile radius is actually within a half mile walk. Small blocks are also essential in the station area to allow room for buses and cars to turn around, without having to set aside separate parcels for this purpose.
- **Parking management.** Reducing parking requirements increases the need for managing parking. Different land uses should be encouraged to share parking, particularly office buildings that have peak demand during the workday, and retail, restaurant and entertainment uses that peak during evenings and weekends. Transit patron spaces should also be shared as much as practicable in order to increase parking efficiency and reduce costs. Front-door spaces should generally be reserved for short-term, high-turnover parking. Parking fees should be set to ensure that about 15% of spaces – no more and no less -- are

always available at every parking lot, garage, and block face.

- **Access planning.** Parking at rail stations is just one form of access, along with walking, bicycling, feeder buses and other modes. Cities and transit agencies should invest in all forms of access, seeking the most cost effective mix of investments to optimize ridership and revenue. Lifecycle costing techniques should be used in order to compare the high operating cost of feeder transit against the high capital cost of parking, including the opportunity cost on the land that parking consumes.

Lake Worth Issues and Challenges

The aerial photograph below shows Lake Worth’s Tri-Rail station, and the half mile radius -- or ten minute walk – around it. Several issues are appar-



This aerial photo of the station area shows how the street pattern is interrupted by the freeway.

ent on the aerial and become even more evident on the ground:

Assets

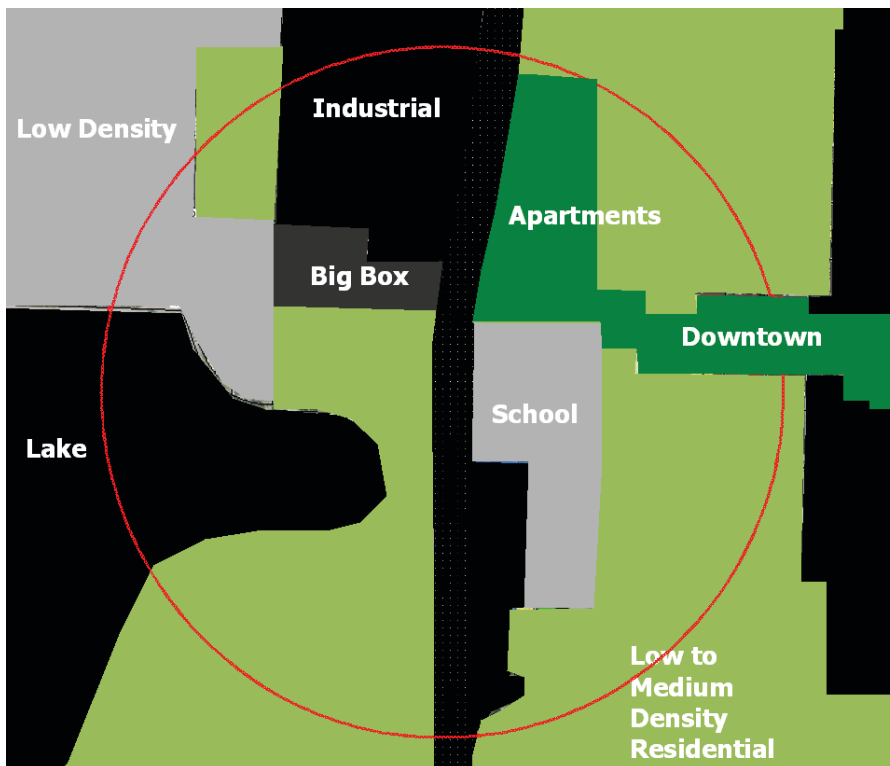
- East of A Street, Lake Worth exemplifies a walkable, transit oriented community, particularly in its historic downtown. The blocks are small, the streets are narrow, and buildings with few exceptions relate to sidewalks rather than parking lots.
- Lake Worth's downtown is an especially powerful asset, with a unique character, continuous storefront retail and an interesting mix of local services. Lake Worth's downtown demonstrate that moderate densities can have a positive impact on the community, with many buildings taking up the entire block, and some, like the Biscayne Hotel (?) exceeding six (?) storeys.
- The station is sited on Lake Worth Road, which is anchored by the most important

destinations in the city, including the Community College, the high school, downtown, beach and Municipal Casino.

- A grocery store and other retails sit across the street from the station, and the edge of downtown is within walking distance.
- The area underneath the freeway offers ample land for parking, land that would be difficult to put to any other use.
- The freeway ramps are far from the station, reducing the traffic impacts on the immediate station area.

Challenges

- The freeway is a major barrier, preventing all east-west circulation except at Lake Worth Road. It also consumes some of the most valuable land immediately adjacent to the station and brings down property values as a result of its noise impacts.
- The light industrial park north of the station is the opposite of pedestrian oriented design, with bland buildings oriented entirely toward big parking lots. With buildings designed to accommodate machinery rather than people, the area represents a lost opportunity to attract more transit-compatible jobs.
- The Publix market area is also oriented entirely around the automobile, with little accommodation for pedestrians.
- Other land uses in the immediate station vicinity include a self-storage facility and the power and water treatment plant south of the high school.



The areas in dark green are both transit supportive and transit oriented. Black areas are obstacles to TOD. Light green areas are mildly transit supportive and gray areas are mild obstacles.

These uses do not contribute toward walkability or transit ridership.

- Lake Osborne consumes a significant portion of the half mile radius. Not only does it offer no transit riders, its natural advantages are not fully used.
- Street connectivity west of A Street is poor.
- Sidewalks are missing throughout much of the half mile radius, most noticeably along Lake Worth Road itself.
- Most of the residential neighborhoods in the station area are too low density to be considered transit supportive. The locations with sufficient density, including the mobile home parks and the few garden apartments, are not of high quality design.
- In sum, only a small portion of the half mile radius is currently both transit oriented and transit supportive, as shown in dark green in the figure below. Most of the half mile radius does not support transit or walking, particularly the areas shown in black.
- Few bicycle facilities are provided in the study area.



Focus investments on pedestrian oriented design and amenities along Lake Worth Road, and plan for new infill development immediately west of the freeway.

Recommendations

While each group had different detailed recommendations, most agreed on the following major themes:

- **Community Character.** TOD is never a one-size-fits-all solution. TOD in Lake Worth should not look anything like TOD in West Palm Beach. TOD can maintain a scale that looks and feels like Lake Worth. This means building upon the historic character and patterns of Lake Worth, particularly in the downtown area. It does not necessarily mean imitating historic architecture, but rather the friendly relationship between buildings and sidewalks, with midrise buildings along the major streets and near the station, ramping down to the existing lowrise residential neighborhoods.
- **Look for incremental change.** Lake Worth can avoid the boom-and-bust cycles of its neighbors by starting small and investing in quality rather than quantity. It should identify key investments that will attract the type of development it seeks,



New connections to Lake Osborne will improve access to the college, and new streets in the Park of Commerce will improve access to the station.

particularly investments in the public realm much as it has already done in the downtown.

- **Focus on Lake Worth Road.** The Community College, station, high school, downtown and beach are all directly connected by Lake Worth Road, providing an excellent spine connecting the most important destinations in the city. The quality of the road should match its importance for the city, with high quality pedestrian paths and ample landscaping on both sides, much as has been done in the downtown. At 120' wide, Lake Worth Road can provide a very gracious cross section east of A Street, with two 11' travel lanes in each direction, 17' landscaped sidewalks, 8' parking lanes, 5' bike lanes and a 16' landscaped median that would form a 10' turn lane and 6' pedestrian refuge at intersections. Since Lake Worth Road does not connect directly to the freeway ramps, the City should resist converting it to a pedestrian-unfriendly, six-lane highway.
- **Create new transit options.** Lake Worth's simple urban structure suggests three primary transit corridors:

North-south high frequency bus service on Dixie Highway

North south commuter rail service either on the CSX or Florida East Coast rail corridors (or some combination of the two).

East-west high frequency bus service between the Community College and beach on Lake Worth Road.

Bus service on Lake Worth Road should focus on frequency, comfort and reliability rather than nostalgia, with high quality

standard motor coaches. This could be a short-run of the existing Palm Tran #61, running between Congress Ave and the beach, supplementing the existing hourly service to half-hourly or 15-minute headways, timed with the trains. Ideally, the Community College would participate in a universal student transit pass program covering all Palm Tran routes. Developers in the corridor could also be required to purchase universal transit passes for all future residents and employees in perpetuity as part of development agreements or traffic mitigation requirements.

- **Capitalize on existing amenities.** Lake Worth should protect, enhance and take better advantage of its major assets and amenities:
 - **Lake Osborne** is an underutilized resource, offering the opportunity for lake trails connecting the community college to the station, high school and downtown. Views toward the lake should be protected and enhanced.

- **Downtown** Lake Worth sets the city apart from its neighbors, with a scale and charm unique in South Florida. Downtown’s retail success should continue to be cultivated, taking care not to lose local services as the area gentrifies.
- **Historic buildings** throughout the east side of the station area should be protected and enhanced, with new buildings contributing to the quality of the area.
- **Strong neighborhoods** and neighborhood organizations are important for maintaining neighborhood safety, security and sense of community. Lake Worth should protect the character of existing, established neighborhoods, allowing a tapered increase in height and density closer to the station.
- **Complete the street grid.** New streets should be platted west of A Street, similar to the block pattern of the neighborhoods east of A. This is especially important in the industrial area and in the north-south corridor immediately west of the freeway. Smaller blocks will allow the area to be more pedestrian friendly and reduce the traffic burden on the major corridors. A new north-south street west of the freeway allows for more development opportunities along it.
- **Redevelop the Publix Market and Self Storage Area.** The retail buildings at the Publix Market will soon reach the end of their useful life, requiring a major renovation. At that time, it is important that the city have rules and incentives in place to allow the market to redevelop as a more street- and pedestrian-oriented mixed use center, ideally expanding into the self storage site.
- **Manage Traffic.** The City should include Transportation Demand Management requirements and incentives in its zoning code to help reduce the traffic impacts of new development. Useful tools include:
 - Forming a Transportation Management Association among existing and new developments in the area, tasked with traffic reduction and management
 - Parking cash-out requirements, in which employers that provide free parking also offer the cash value of that parking to employees who do not drive.
 - Universal transit pass programs, where employees and residents in new development projects get free transit passes in perpetuity
 - Reduced minimum parking requirements and the establishment of parking



The Publix Market area can be improved to relate better to the street. If the mobile homes near the station can be relocated, the area could become a new mixed use center for the city.

maximums matched to vehicle trip reduction goals.

- “Unbundling” the cost of parking from the cost of housing in rental units.
- Carshare program incentives, though organizations such as Zipcar.
- **Plan for the future of the Park of Commerce.** The industrial area requires special attention due to the value it current has for the Lake Worth economy, as well as the jobs that it provides local residents. Lake Worth should strive to increase the number of jobs in the park in order to take better advantage of its transit accessible location, and it should increase the pedestrian accessibility of the area.
- **Involve everyone, including the skeptics, in planning for the future.** TODs are complex, and designing the station area will require extra involvement from citizens and stakeholders in order to get agreement on the many difficult issues that will arise. Because of the proximity of the college and high school, students should be especially encouraged to participate in the planning process.

Notes

The following are more detailed notes taken by group members

Group 1

- Community Strategies
 - Do SWOT analysis
 - Build on the existing assets
 - » Lake
 - » Lake Worth Road
 - » Existing residential neighborhoods
 - » Industrial area
- Taper down development (i.e. height and density) as you go west from the tracks toward the lake
- Improve the intensity and potential of the industrial area north of Lake Worth Road, establish a job center
 - Potential for “back office” business
 - Increase the number of jobs per acre, not necessarily the amount of square footage per acre
- Underutilized property along the rail corridor is an asset
- Establish a mix of uses
 - Retail/outdoor market
 - Service (i.e. daycare)
 - Hotel
 - Conveniences (retail, news stand, coffee shop)
 - Active water uses adjacent to and on the lake
 - Residential
 - » Senior housing
 - » Affordable housing
- » Housing for community college students
- Establish a pedestrian connection between the station and the community college – utilize the lakefront
- Focus the multifamily along the rail and automobile corridors
- Preserve and protect the existing single family residential neighborhoods, especially east of I-95
- Establish a higher density in the area between Lake Worth Road, the lake, I-95
- Improve pedestrian connections across Lake Worth Road
- Focus commercial area along the north side of Lake Worth Road, utilize street-frontage buildings
- Ensure pedestrian bike links across Lake Osborne Drive to provide access between the TOD area and the assets of the lake (recreation, pedestrian travel, etc.)
- Greatest potential for development is immediately along the railroad tracks (higher density residential)
- Affordable senior housing in the area immediately surrounding the station
- Create a 2-sided station – utilize both ends
- Provide a pedestrian/bike connection between the neighborhoods/school east of I-95 and the station...this should be a bike/ped connection only...no automobiles...connection should bisect somewhere between 6th Avenue South and Lake Worth Road
- Improve pedestrian connection throughout – improved sidewalks, etc.
- Create a connector (i.e. trolley) that connects the station to downtown to the beach. The beach and the station should be the terminus of the route. Keep the route basic...only expand if found to be successful and resources available. Headways along

the major route (Lake Worth Road) should be very frequent (5-10 minutes at most)

- Provide multiple signal crossings for Lake Worth Road to allow pedestrian access from the south to the commercial corridor to the north.
- Preserve the character, yet take advantage of Lake Osborne Drive
- Limit the amount of automobile traffic along Lake Osborne Drive (i.e traffic calming)

Notes from "individual" group presentation:

- People are not taking advantage of the existing assets
 - Lake path – need connection to the community college
- Create a vehicular north/south connection along the west side of I-95 to relieve some of the congestion within the surrounding neighborhoods
 - Allows for development to occur along the entire west side of I-95 near the tracks
 - Opens up the south end of the Tri-Rail platform to be utilized
- Intensification, not a reuse, of the industrial area
- Don't create more retail.....existing retail is not fully utilized
- Create stronger edges and pedestrian connections
- Bicycle lanes
- Wider sidewalks
- Need to improve pedestrian connections along Lake Worth Road
- Trolley connection between the station and downtown, possible extensions to the college and the beach

Group 2

Ideas (Focus on northeast corner of lake):

- Spine: from rail station west through trailer park, pedestrian path/plaza and bus route centralized through residential, creating new bus circulation
- Residential: courtyard style 4-story multi-family residential with views of lake
- Small amount of retail-neighborhood services (don't want to take away from economy of downtown)
- Density up to 40 around station, stepping down as you move away
- Bus to connect Community College to beach
- Dress up sound wall through landscaping and/or murals (high school students)
- Shopping Center: too much parking, needs to be redone, 2 gas stations as outparcels
- Self-storage facilities
- Lake Worth Road right-of-way 120': 2-lanes each direction 12' each, 15' sidewalks, 15' median and on-street parking
- School: bus pull-off connectivity into parking lot
- Parking under free-way best solution
- Treatment of columns
- Industrial-brownfield possibility, \$, clean up
- Office space need?
- Creating enclaves
- Paved, big crosswalks

Completestreets.com

Group 3

LAKE WORTH TRI-RAIL STATION

The PIMP – People Improvement Mobility Project – Group

- Design Lake Worth corridor to become a dedicated transit corridor
- Engage College/High School students in future visioning of transit corridor
- Provide free transit passes to new developments (residential units and businesses) to in order to encourage the usage of transit, resulting in increased ridership
- Include Transit Oriented Development (TOD) area in the existing Community Redevelopment Area (CRA)
- Improve pedestrian connections to increase station/system ridership
- Transit improvements need “buy-in” from the CAVE (Citizens Against Virtually Everything) people in the community
- New TOD projects impact fee to help fund transportation improvements
- Re-introduce rapid bus system along the east-west corridor
- Expand and link up existing pedestrian/ bike system throughout area
- Ensure regional collaboration among the transit agencies and jurisdictions
- Form a Transportation Management Association (TMA) for the area (to include the College)
- Restrict truck traffic within project area
- Install traffic calming devices in the neighborhoods