Understanding the Fundamentals of TOD

Transit-Oriented Development

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What will we cover today

- TOD defined
- TOD benefits
- TOD demographics
- TOD principles

West Hyattsville TOD Master Plan, Hyattsville, MD
UNDERSTANDING THE FUNDAMENTALS OF TOD

TOD Defined
T O D Defined

T ransit-O riented Development (T O D) is moderate to higher density development, located within an easy walk of a major transit stop, generally with a mix of residential, employment and shopping opportunities designed for pedestrians without excluding the auto . . .

Caltrans T O D Study
When we say TOD . . . what do we mean?

- A 5 minute walk to everything
- Close to home, office, shopping and civic spaces
- A place where transit greets special places
TOD or TAD?

Transit-Oriented Development or Transit Adjacent Development?

- Majority of development at US transit stations are not TODs
- TOD is still illegal in at most of US transit stops
- Not enough to be next to transit, must be shaped by transit
A Major New TOD Report

Available on-line:

• TOD Development in the US Today
• The Policy Environment
• The Impacts of TOD
• Case Studies (10)
• Lessons & Conclusions

Free copies at the Tradeshow from PB & APTA
Scope of TOD in the US

We found a rich mix of TOD in America

- Over 100 built TODs
- Over 100 built Joint Development projects
- Vast majority around rail
- Bus TOD more concept than reality

Rail TOD Elmhurst, IL
Bus TOD King County, WA
Development Around Transit

Two types of projects:

• Transit-Oriented Development
  ▶ Area w/in a 5 minute walk
  ▶ Transit Villages / Town Centers / urban infill / greenfield

• Joint Development
  ▶ On publicly owned land
  ▶ Primarily with rail systems
Evolution of TOD

Advocacy & Planning

Early Adaptors

Into the Main Stream
Understanding your market

• Majority of TOD residents are childless
  ▶ Empty-nesters & young urban professionals

• TOD households tend to be higher income
  ▶ Reflects newer construction

• TOD households own fewer cars
  ▶ Twice as likely to be car-less than US households
Future Demand for TOD

14.6 million US TOD Households (2025)

64% of demand:
- Single households
- Couples without children

20% of demand:
- Households with children

Source: Center For Transit Oriented Development
Residents Near Transit Want

From Transit Community Resident Surveys:

- Well designed communities
- Easy access to a center
- High quality residence
- Quality transit service
- Pedestrian Friendly
- Good price value

“The ability to walk to a pint of milk”
Understanding the Fundamentals of TOD

TOD Benefits
TOD & Property Values

- Washington, DC
  + $2 to $4 per foot for commercial
- San Jose
  + 23% for commercial
- Portland
  + 10% rent premiums
- Dallas
  + 39% for residential
  + 53% for office values
TODs create less traffic

• TOD residents are:
  ▶ Twice as likely not to own a car as US Households
  ▶ 5 times more likely to commute by transit than others in region

• Self-selection:
  ▶ Responsible for up to 40% of TOD ridership bonus
### Portland Travel Behavior

<table>
<thead>
<tr>
<th>Area</th>
<th>Transit Modal Share</th>
<th>Non-auto Modal Share</th>
<th>VMT per Capita</th>
<th>Auto Ownership per Household</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed Use/ Good Transit</td>
<td>11.5%</td>
<td>41.9%</td>
<td>9.80</td>
<td>0.93</td>
</tr>
<tr>
<td>Remainder of Region</td>
<td>1.2%</td>
<td>12.7%</td>
<td>21.79</td>
<td>1.93</td>
</tr>
<tr>
<td>Difference</td>
<td>942%</td>
<td>230%</td>
<td>45%</td>
<td>48%</td>
</tr>
</tbody>
</table>

Metro 1994 Travel Behavior Study

*Mixed use + good transit results in much lower automobile use*
Rosslyn Ballston Corridor

- Development since 1980
  - 25m square feet office
  - 14,400 residential units
- Station areas
  - 25% county housing
  - 37% county jobs
- Transit Access
  - Arlington: 73% walk, 13% by car
  - Fairfax: 15% walk, 58% by car

Land use can change transportation behavior
Transit & Affordability

- Expenditure of US families
  1. Housing: 33%
  2. Transportation: 19%
  3. Food: 14%

- Poorer American families
  - transportation: 30 to 50%
UNDERSTANDING THE FUNDAMENTALS OF TOD

TOD Principles
Great Neighborhoods

• Safe streets
• Strong center
• Local services
• Parks & open space
• Housing choices
• Good jobs

Orenco Station, Hillsboro, Or
Planning Principles

- Greater Density than Community Average
- Quality Pedestrian Environment
- A Mix of Uses
- A Defined Center
- Transit designed for TOD

Stations help define the most important places
Auto or Development Oriented?

- Both designs:
  - Same land uses
  - Same transit Rail station
  - Same cost
  - One encourages TOD at the station
  - One separates the station from the community
Build a Place, not a Project

The Round at Beaverton Central

Plaza surrounds station
- 240 units
- 125k retail
- 375k office

Beaverton, OR
Density Matters

Density rules of thumb:

- 6 to 7 DU acre for bus
- 9 to +25 DU acre for rail
- +50 DU acre: auto & non-auto trips are equal

▶ Major increase in walking

- 10% more density = 5% more transit trips
**Link to a Broader Strategy**

*TOD as “means to an end” to achieving community objectives*

- Part of community’s vision for growth
- Basis to gain greater broader support & success
- More than transit
- Building partnerships essential
Mixed Use

- Vertical or Horizontal
- Most difficult TOD element
- Great TOD benefits
  - More walking
  - More ridership
  - Reduced auto-use
- Experienced developer is critical to success
Market Common
Clarendon, VA

- US Best practice
  - 240k retail
  - 100k office
  - 300 apartments
  - 87 townhomes
- Opened in Nov ‘01
  - 100% leased
- Worked closely with neighborhoods
Keys To TOD Success

• Get the planning right
• Apply the power of partnerships
• Market driven, not transit driven TOD
• Design for the pedestrian

Dubai Metro TOD Master Plans, UAE
Planning for TOD
Planning for TOD Matters

“Build it and they will come” has not happened

Planning building blocks:

- Regional Vision
- Local Leadership
- Help w/ Funding
- Station Area Plans
- Streamlining TOD

Pleasant Hill BART, Contra Costa, CA
Unlocking the key to each stations identity

- TOD in Region
  - Where does the station fit in?
- TOD in Corridor
  - Stations relationship to other stations?
- TOD in Community
  - How will TOD add value? Be a place?
TOD Typology: a range of scales for successful TOD
Core Center Edge

- **Core:**
  Up to 600 ft greatest intensity

- **Center:**
  600 to 1500 ft intermediate intensity

- **Edge:**
  1500 to 2600 ft greater than community average of intensity
Station Area Planning

- Develop and adopt plans
  - ¼ to ½ mile around stations
  - Local Government plan
- Address four key elements in station area plans
  - minimum densities
  - parking maximums
  - building orientation
  - prohibited uses

North Corridor Station Area Planning
Miami, Florida
Developing Alternatives

- Crash-test dummies
- 5 step process
  - Charrette: 2 to 3 alternatives
  - Ground truth w/ developers
  - Test & refine w/ local gov’t
  - Initial traffic & circulation
  - Recommended alternative

Test & Evaluate
Focus on Implementation

- Assemble key sites
- Develop a package of incentives –
  - Financial
  - Regulatory
- Complete a few demonstration projects
Your TOD Plan

- The final plan:
  - Vision
  - Land use plan
  - TOD zoning
  - Amendments to Comp Plan
  - Urban design guidelines
  - Station access /circulation
  - Parking strategy
  - Implementation
Conclusions

• Market for TOD established
• Benefits of TOD are real
• Build transit and they will come does not work
• Need to make TOD legal
• Focus on implementation
• Design for the pedestrian

New Carrollton TOD Strategy
UNDERSTANDING THE FUNDAMENTALS OF TOD

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