Understanding the Fundamentals of TOD

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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
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 TOD Report

Available on-line:

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

Santa Ana Joint Development

Santa Ana TOD
Evolution of TOD

Advocacy & Planning

Early Adaptors

Into the Main Stream
UNDERSTANDING THE FUNDAMENTALS OF TOD

TOD

Demographics
Understanding your market

- **Emerging Trends in Real Estate ’06:**
  - TOD a top investment prospect
  - Holds value well
- Majority of TOD residents are childless
  - Empty-nesters & young urban professionals
- TOD households tend to be higher income
  - Reflects newer construction
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

*Metro 1994 Travel Behavior Study*

<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>
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<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>
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<td>Difference</td>
<td>94.2%</td>
<td>230%</td>
<td>45%</td>
<td>48%</td>
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</table>

*Mixed use + good transit results in much lower automobile use*
The TOD Parking Puzzle

- TODs behave differently, yet
  - No definitive industry TOD parking ratios exist
  - Lenders tend to require conventional ratio’s in TODs
  - Developers tend to build TODs w/ conventional ratio’s

Changing parking key to TODs benefits being fully realized
Parking a Huge Challenge

- The difference between TOD & TAD
- Often a deal breaker financially
  - Structured space costs 4 to 10 fold more
- Parking a barrier to urbanism / walkability

San Jose, CA
Dallas, TX
Portland, OR
Washington, DC

**Form follows Parking**

Michael Eisner, Disney CEO
Right Sizing TOD Parking

- ITE trip & parking generation underestimate automobile trip reduction for TOD housing
- New standards to reflect TOD should result in:
  - Developers paying lower fees and extractions
  - Transit agencies realizing increased ridership
  - The public paying less for TOD housing
  - Less land being consumed for development

Portland TODs included in H-27A TCRP TOD research
TODs generate 50% less traffic than predicted

ITE Trip Manual
6.67 trips per unit

Detailed counts of 17 residential TODs
3.55 trips per unit

Results from TCRP H-27A based on counts in Washington, DC; San Francisco; Portland, OR; and Philadelphia / N. New Jersey
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%

Ohlone-Chynoweth, San Jose, Ca
Orenco Station

Fundamentals for TOD
... a great neighborhood

• Safe streets
• Strong center
• Local services
• Parks & open space
• Housing choices
• Good jobs
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
    800 Park & Ride
    12 Bus Transfer
  ▶ Same cost

• One encourages TOD at the station
• One separates the station from the community
The Round at Beaverton Central

Build a Place, not a Project

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
UNDERSTANDING THE FUNDAMENTALS OF TOD

TOD

Examples
Eastside Village
Plano TX

Station and TOD linked by a plaza

- City assembled
  3.6 site & issued RFP
- Up zoned to 100 DU
  acre, 234 units
- 5 levels of parking
- $17.7m project
- $2m public investment
Holly Street Village Pasadena

- $56m Urban Infill
- $16m subsides
- 374 units
- 55 DU acre
- Podium parking
- Built over future Pasadena LRT
- 11,000 SQ Ft retail
DelMar Transit Village
Old Town Pasadena

- TOD surrounds station
- Air-rights over 1,200 space P&R
- 4.2 acre site
- 346 units –
  - parked @1.76 space per unit
- 20k sq ft retail
Gresham Civic Neighborhood

Former lumber mill site

- City leadership key
- "big box" in a grid
- Office, retail, residential
- 2nd LRT stop tied to ridership
- 82 DU per acre w/ underground parking
- City Hall
Center Commons
Portland, OR

- Former DOT Maintenance Yard
- 4.9 acre site
- 319 Units
- No car families
  + 42% after move in
- Mixed-income for sale & rental

46% of commuters & 32% of non-work trips take transit
Pearl District Portland

Former rail yard & warehouses

- Clear plan in place
- Public & private development agreement
  - Housing
  - Infrastructure
  - Parks

- Since 1997 $750m+ in development
- 2700+ units built
- 131 units per acre minimum density
Courthouse Hill
Arlington, VA

Urban Infill TOD
- 69 for sale units
- 29 DU acre
- 3 story townhomes
- Alley parking
Downtown Dadeland, Miami Fl.

- 2nd generation of Metrorail development
- Designated Regional Urban Center
- 1m sq ft mixed-use
  - Office
  - Residential
  - Hotel
  - Retail
Planning for TOD
"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
Walking & TOD Planning

- Density & quality of walk big drivers to consider

- Different walk catchments for:
  - Office / retail - tighter
  - Residential - further

- Office / retail
  - Clear density peaks
  - Most w/in 5 minute walk

- Residential
  - Flatter density curve - high across 10 minute walk
Density, Distance & TOD

- Two density dimensions
  - Horizontal – distance from station
  - Vertical – development intensity

- Density & use
  - Concentrate office & retail near station
  - Increasing % of residential away from station
Station Area Planning

- Develop and adopt plans
  - $\frac{1}{4}$ to $\frac{1}{2}$ mile around stations
  - Local Government plan
- Address four key elements in station area plans
  - minimum densities
  - parking maximums
  - building orientation
  - prohibited uses
Community-Based Planning

- Citizen-generated plan
- Broad-based consensus building
- A “developer reality check” ensures applicability
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
Process of Continual Refinement

- Citizen Plans
- 1st Night Plan
- 3rd Night Plan
- Final Plan

Concept Plan
Revise
Revise
What will it look like?

• Visualizing the future
  ▶ Helps citizens understand what is planned
• Follow-up with urban design guidelines
  ▶ Assure the character of future development

Tysons Corner, VA
Urban Design & Transportation Plan
Focus on Implementation

- Reduce uncertainty & risk
- Develop a package of incentives –
  - Financial
  - Regulatory
- Assemble key sites
- Leverage the power of partnerships

City of Arvada, CO
Olde Town TOD Plan
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