CTOD CENTER FOR TRANSIT-ORIENTED DEVELOPMENT

The Typology and Strategic Plan: Tools for Regional Visioning and Implementation of TOD

Dena Belzer, Sam Zimbabwe, Abby Thorne-Lyman

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RECONNECTING AMERICA

CNT Sustainable Communities Attainable Results

STRATEGICECONOMICS

- *5-year old partnership dedicated to improving practice through technical assistance, research + policy reform*
- *Creating a national marketplace for TOD, working with cities, transit agencies, developers, investors + communities*
- *Developing new tools and collaborative and equitable planning models*
- *On-line Clearinghouse of TOD + Transit Best Practices*

How Can We Plan Strategically for Transit + TOD?

- No one-size-fits-all to TOD
- Multiple questions that we're trying to answer
- Transit + TOD planning and investment happen at different scales

Decisions need to be made within a framework and shared with multiple stakeholders.

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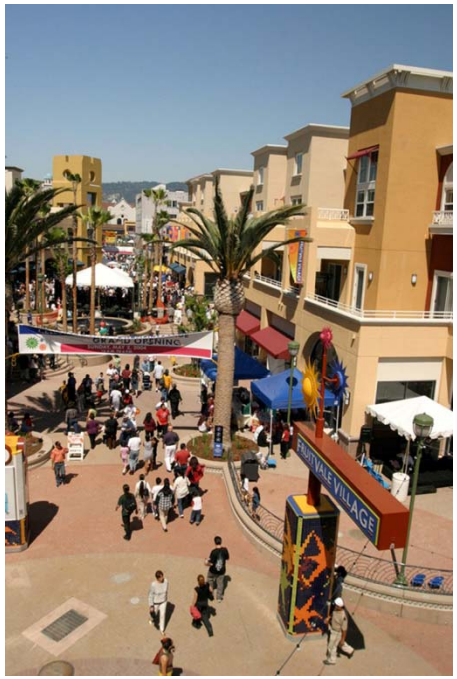
Why Consider Differences in TOD?

- Create aspirational vision of future land uses in station area
- Prioritize stations for investment
- Provide guidelines and actions for implementation
- Measure performance on a range of metrics



Fruitvale Transit Village

Midtown Manhattan

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Drawing from Existing Practice

- Center for TOD Typology Development
  - "Place" Types that support station area planning and benchmarking
  - Corridor Types that support land use and transit planning
  - Market and Opportunity Types that support strategic planning
- Typology Systems Developed By Others
- Implications for the Portland Region

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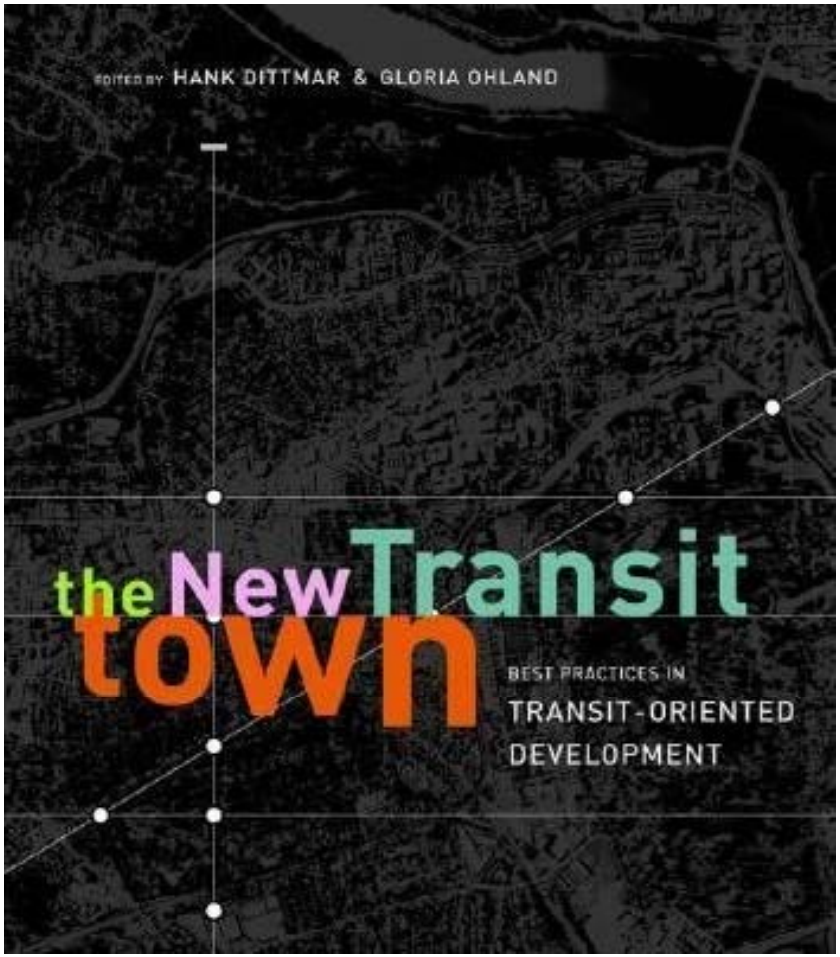
New Transit Town Typology

Goal: Illustrate "one size does not fit all" concept for TOD

- Provided density, use mix guidelines
- Mainly applicable to new development
- Qualitative approach



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New Transit Town Typology

TOD Type	Land Use Mix	Minimum Housing Density	Housing Types	Scale	Regional Connectivity	Transit Modes	Frequencies	Examples
Urban Downtown	Primary office center Urban entertainment Multifamily housing Retail	>60 units/acre	Multifamily Loft	High	High Hub of radial system	All modes	<10 minutes	Printers Row (Chicago) LoDo (Denver) South Park (San Francisco)
Urban Neighborhood	Residential Retail Class B office/retail	>20 units/acre	Multifamily Loft Townhome Single family	Medium	Medium access to downtown Subregional circulation	Light rail Streetcar Rapid bus Local bus	5 minutes peak 20 minutes off-peak	Markingbird (Dallas) Lakeview (Chicago) Barrio Logan (San Diego)
Suburban Center	Primary office center Urban entertainment Multifamily housing Retail	>30 units/acre	Multifamily Loft Townhome	High	High access to downtown Subregional hub	Rail Streetcar Rapid bus Local bus Paratransit	5 minutes peak 5-15 minutes off-peak	Arlington County (Virginia) Addison Circle (Dallas) Evanston (Illinois)
Suburban Neighborhood	Residential Neighborhood retail Local office	>12 units/acre	Multifamily Townhome Single family	Moderate	Medium access to suburban center Access to downtown	Light rail Rapid bus Local bus Paratransit	10 minutes peak 30 minutes off-peak	Orenco (Hillsboro, OR) Mountain View, CA) Old Town (Chula Vista, San Jose, CA)
Neighborhood Transit Zone	Residential Neighborhood retail	>7 units/acre	Townhome Single family	Low average residential density	Low	Local bus Paratransit	15-30 minutes Demand responsive	
Commuter Town Center	Retail center Residential	>12 units/acre	Multifamily Townhome Single family	Low	Low access to downtown	Commuter rail Rapid bus	Peak service Low and inexpensive	Park Forest (Illinois) Suisun City (California)

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Denver TOD Strategy

Goal: Provide a vision for future land uses in station areas without the expense of individual plans

- Prioritize stations for planning efforts

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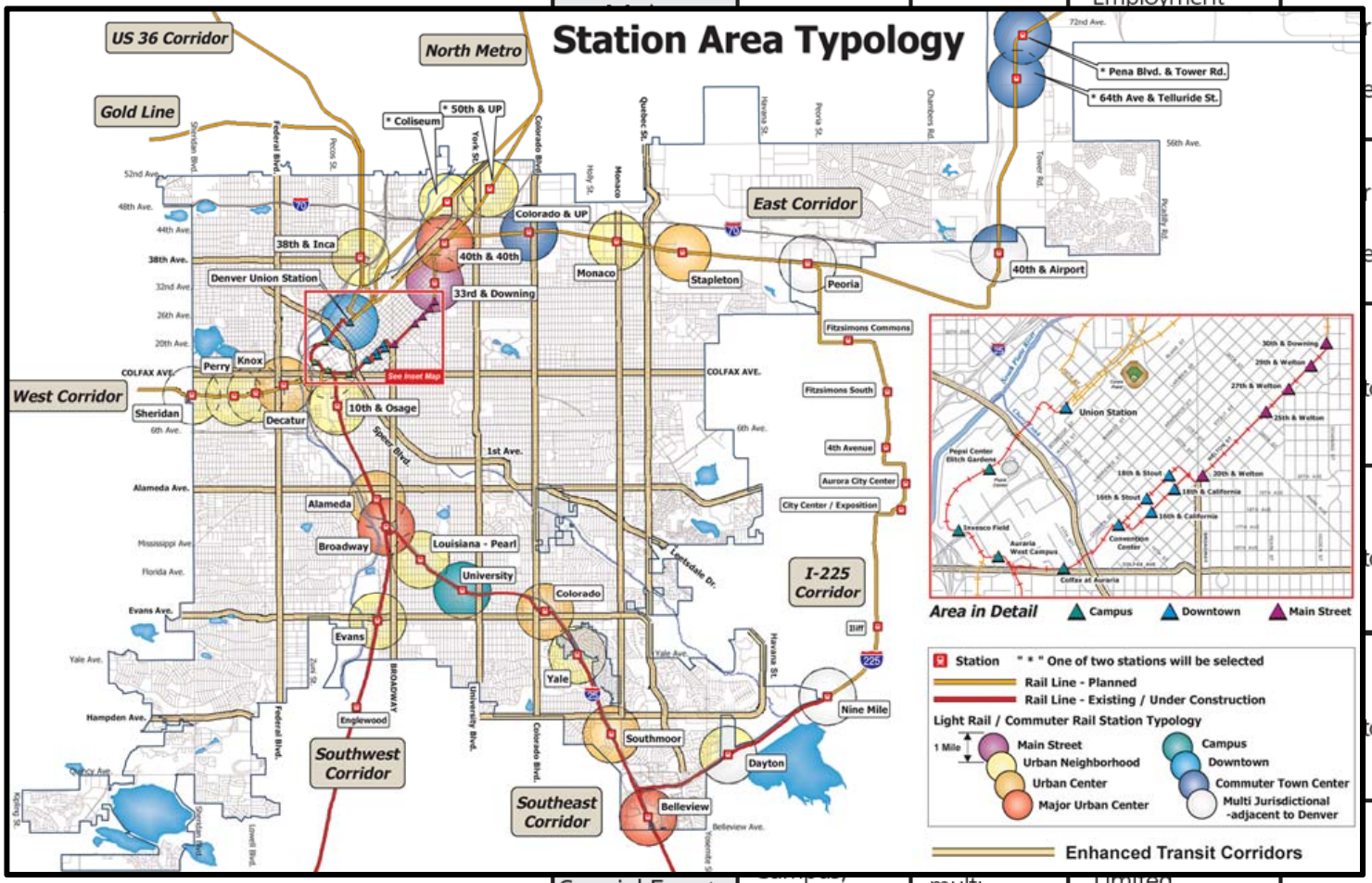
Denver TOD Place Types

TOD Typology	Desired Land Use Mix	Desired Housing Types	Commercial/ Employment Types	Proposed Scale	Transit System Function
Downtown	Office, retail, residential, entertainment, and civic uses	Multi-family and loft	Prime office and shopping location	5 stories and above	Intermodal facility/transit hub. Major regional destination with high quality feeder bus/streetcar connections.
			Employment	ries	Sub-Regional destination. Some Park-n-ride. Linked with district circulator transit and express feeder bus.
				ries	Sub-Regional destination. Some Park-n-ride. Linked with district circulator transit and express feeder bus.
				tories	Neighborhood walk-up station. Very small Park-n-ride, if any. Local bus connections.
				tories	Capture station for in-bound commuters. Large Park-n-ride with local and express bus connections.
				tories	Bus or streetcar corridors. District circulator or feeder transit service. Walk-up stops. No transit parking.
Special Events Station	Sports Facilities	multi-family	Limited office/retail	Varies	Large Commuter destination. Large parking reservoirs but not necessarily for transit.



Station Area Prioritization

Denver TOD Typology and Activity Priorities

Stations	TOD Typology	Market Opportunity	Phasing Priority of City Action
Denver Union Station	Downtown	Strong	Underway
"D" Line, existing			
33rd & Downing (new station)	Main Street	Emerging	Monitor & Respond
Welton Street Stops	Main Street	Emerging	Monitor & Respond
16th Street Stops	Downtown	Strong	Monitor & Respond
10th & Osage	Urban Neighborhood	Emerging	Immediate
Alameda	Urban Center	Emerging	Immediate
Broadway	Major Urban Center	Strong	Underway
Evans	Urban Neighborhood	Long Term	Monitor & Respond

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Denver TOD Strategy

Implementation Lessons Learned:

- More community buy-in would have facilitated implementation + future station area plan process
- Typology should have included more detail on attributes of places
- Market feasibility could have played larger role

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MTC TOD Policy

Goal: Understand development potential across cities, and where investment can help generate more density

- Established corridor density minimums to secure funding
- Place types defined by quantitative analysis: density and actual station connectivity

TABLE 1: Resolution 3434 Transit Extension Projects Subject to Corridor Thresholds

Project	Sponsor	Type	Threshold is met with current development?
BART East Contra Costa Rail Extension	BART/CCTA	Commuter Rail	No
BART — Downtown Fremont to San Jose/Santa Clara (a) Fremont to Warm Springs (b) Warm Springs to San Jose/ Santa Clara	(a) BART (b) VTA	BART extension	No
AC Transit Berkeley/Oakland/ San Leandro Bus Rapid Transit: Phase 1	AC Transit	Bus Rapid Transit	Yes
Caltrain Downtown Extension/Rebuilt Transbay Terminal	TJPA	Commuter Rail	Yes
MUNI Third Street Light Rail Transit Project Phase 2 — New Central Subway	MUNI	Light Rail	Yes
Sonoma-Marin Rail	SMART	Commuter Rail	No
Dumbarton Rail	SMTA, ACCMA, VTA, ACTIA, Capitol	Corridor Commuter Rail	No
Expanded Ferry Service Phase 1: Berkeley, Alameda/Oakland/Harbor Bay, and South San Francisco to San Francisco (Note 1)	WTA	Ferry	No
Expanded Ferry Service Phase 2: Alameda to South San Francisco, and Hercules, Antioch, Treasure Island, Redwood City and Richmond to San Francisco (Note 1)	WTA	Ferry	No

Note 1: The WTA Ferry Expansion "Corridor" for the purposes of the TOD policy consists of all new terminals planned in Phase 1 and Phase 2.

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MTC TOD Strategy

- "Benchmarked" place types and targets for station area planning
- Potential criteria for regional funding priority

STATION AREA PLANNING MANUAL
DEVELOPMENT GUIDELINES

Development Guidelines

	Centers				Districts		Corridor
	Regional Center	City Center	Suburban Center	Transit Town Center	Urban Neighborhood	Transit Neighborhood	Mixed Use Neighborhood
Housing Mix (New Development) [2]	High rise & mid rise apartments/condos	Mid-rise, low-rise, some high-rise and townhomes	Mid-rise, low-rise, some high-rise and town-homes	Mid-rise, low-rise, townhomes, small lot single family	Mid-rise, low-rise, town-homes	Low-rise, townhomes, some mid-rise and small lot single family	Mid-rise, low-rise, townhomes, small lot sf off immediate corridor
Station Area Total Units Target [3]	8,000 - 30,000	5,000 - 15,000	2,500 - 10,000	3,000 - 7,500	2,500 - 10,000	1,500 - 4,000	2,000 - 5,000
Net Project Density (New Housing) [4]	75-300 du/acre	50 -150 du/acre	35 - 100 du/acre	20 - 75 du/acre	40 - 100 du/acre	20 - 50 du/acre	25 - 60 du/acre
Station Area Total Jobs Target	40,000 - 150,000	5,000 - 30,000	7,500 - 50,000	2,000 - 7,500	N.A.	N.A.	750 -1,500
Minimum FAR (New Employment Development)	5.0 FAR	2.5 FAR	4.0 FAR	2.0 FAR	1.0 FAR	1.0 FAR	2.0 FAR

MTC TOD Strategy

Implementation Lessons Learned:

- Approach offered way to attach accountability to allocation of regional funds
- Words used in typology mattered: added “suburban” to be more inclusive
- TOD Strategy responded primarily to housing need, less so to where jobs go

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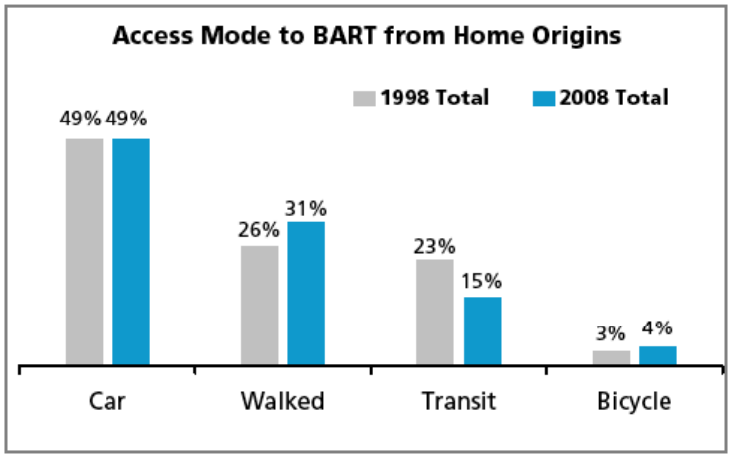
BART Access Study

Goal: Identify stations where small access improvements could leverage large changes in station access modes (from car to other)

- Classified stations based on both current and aspirational place types
- Considered potential for undeveloped land to transform place types
- Quantifiably integrated land use and access conditions



Access-Based Station Typology Matrix

Descriptors	Scale		Transportation Setting				
Characteristic:	**Ridership**	**Station footprint**	**Street network**	**Proximity to freeway off-ramp**	**Parking capacity**	**Parking fill time**	**Transit service types**
Measure:	Weekday Entries	Physical Size	Description	Distance from highway exit to station	Spaces	Time	Service Areas/Types
Description of Measures:	Low: < 5,000 Moderate: 5,000 - 10,000 High: > 10,000	Underground: 0 Small: < 10 Medium: 10 - 20 Large: > 20	Urban grid / historic grid Suburban grid Suburban residential Suburban hillside	Adjacent: <0.5 mi Nearby: 0.5-1.5 mi Far: >1.5 mi	No Parking Small: <700 Medium: 700 - 1,800 Large: >1,800	No parking Before 8 a.m. After 8 a.m. Does Not Fill	Local Corridor Regional All
Proposed Station Types							
Urban	High	Underground or Small	Urban grid/ historic grid	Far	No Parking	No parking	All
Urban w/ Parking	High	Underground or Small	Urban grid/ historic grid	Far	Small	Early	All
Balanced Intermodal	Moderate	Small or Medium	Urban grid/ historic grid, suburban grid	Far or Nearby	Small or Medium	Early	Corridor, Local
Intermodal - Auto Reliant	Moderate	Medium	Suburban grid, suburban residential	Adjacent or Nearby	Medium or Large	Morning	Local, Regional
Auto Dependent	Low - Moderate	Large	Suburban residential, suburban hillside	Adjacent	Medium or Large	Morning	Local

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BART Access Study

Implementation Lessons Learned:

- Place Types not accepted by all BART staff – ended up with access types instead
- Needed to be more explicit about purpose, and limitations of typology approach
- Quantifiable place types held more weight – but couldn't agree on aspirations

Is downtown Walnut Creek (a local downtown)…

…really like downtown Berkeley (a local downtown)?

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Initial Themes

Typology Approaches:

- Describing land use mix and intensity
- Moving from qualitative to quantitative information about land use
- Looking at long term development opportunity, but not more immediate market conditions

Early Typology Purposes:

- Communicate long term vision/expectation for individual stations
- Create framework for future land use plan
  - Illustrate that not all TOD is the same
  - Understand what's appropriate in given station context

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Corridor Level Analysis

- Helps us understand role of transit in shaping station areas
- Connectivity enhances understanding of what the “potential” is in any place
- Not so much about technology as about:
  - Frequency
  - Linking origins and destinations
- Development opportunities shape potential future roles for corridors

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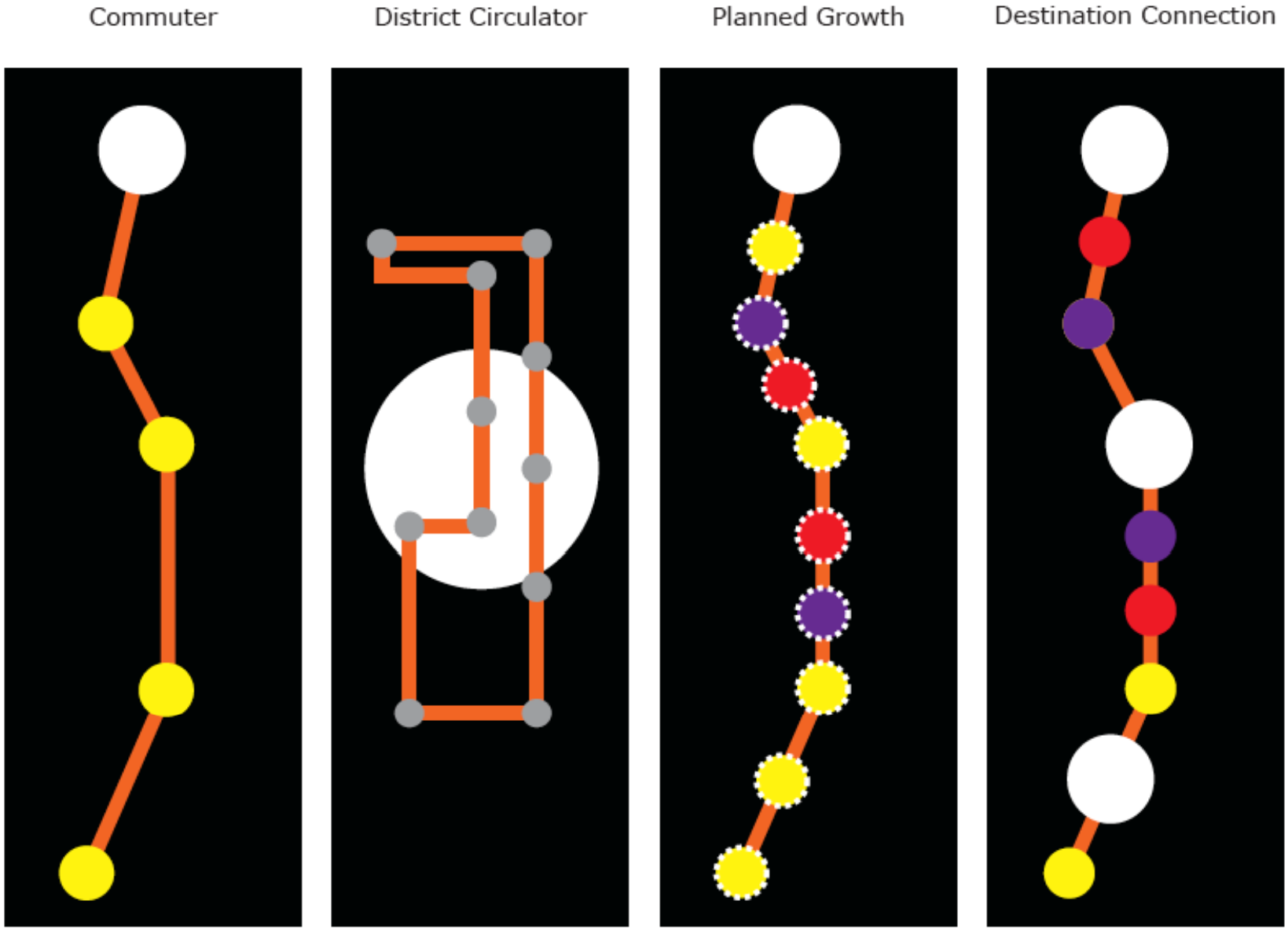
Corridor Typology



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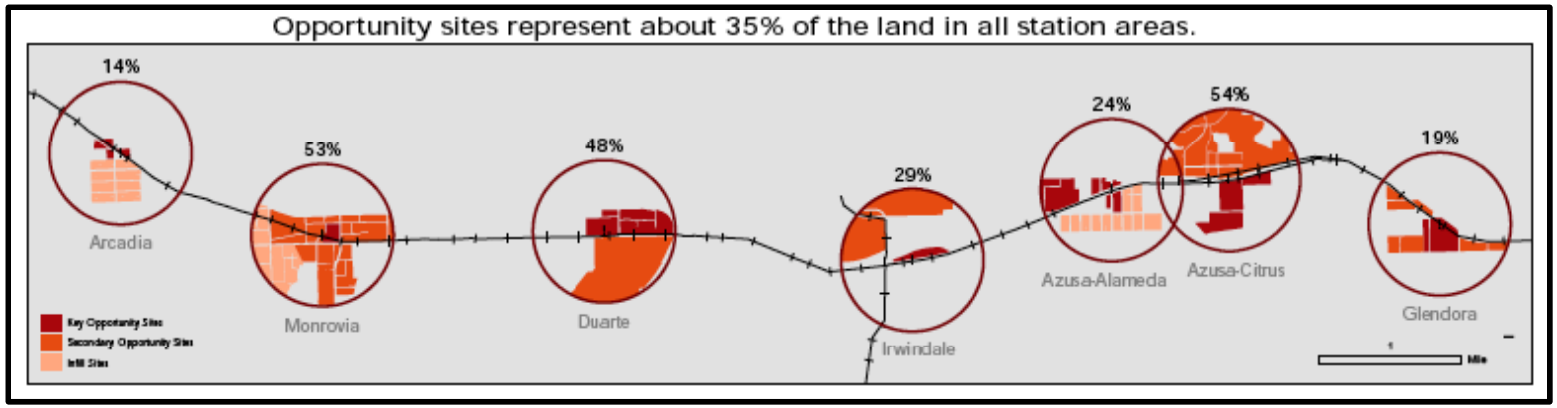
Los Angeles Corridor Studies

- Goal: Understand how transit could change station area market potential
- Began to consider how one station area could influence its neighbors in terms of:
  - Market Strength + Development Opportunity
  - Origins and Destinations



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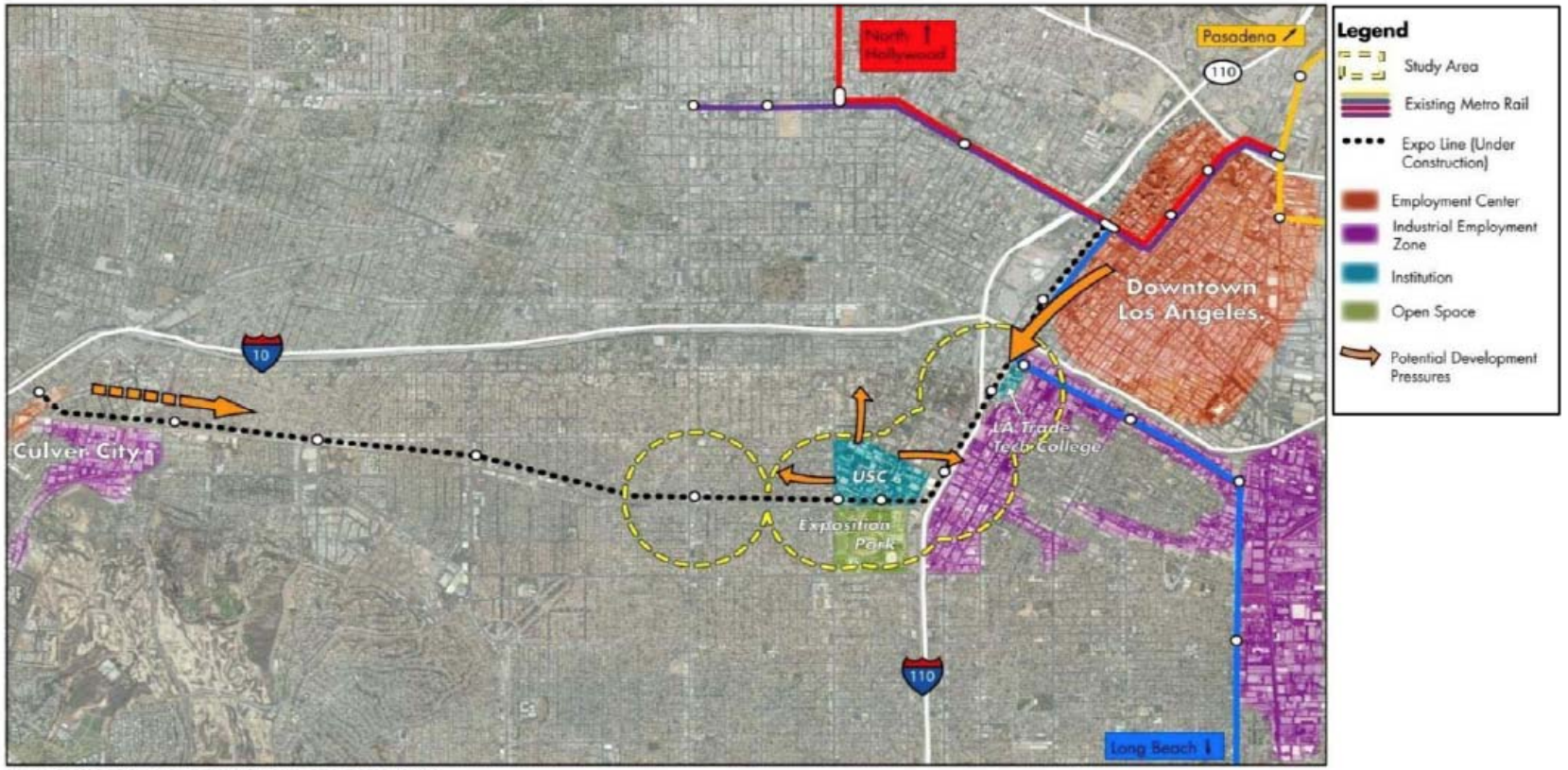
Los Angeles Corridor Studies

Potential to change market by

Expanding reach of strong market trade areas

Improving access to destinations

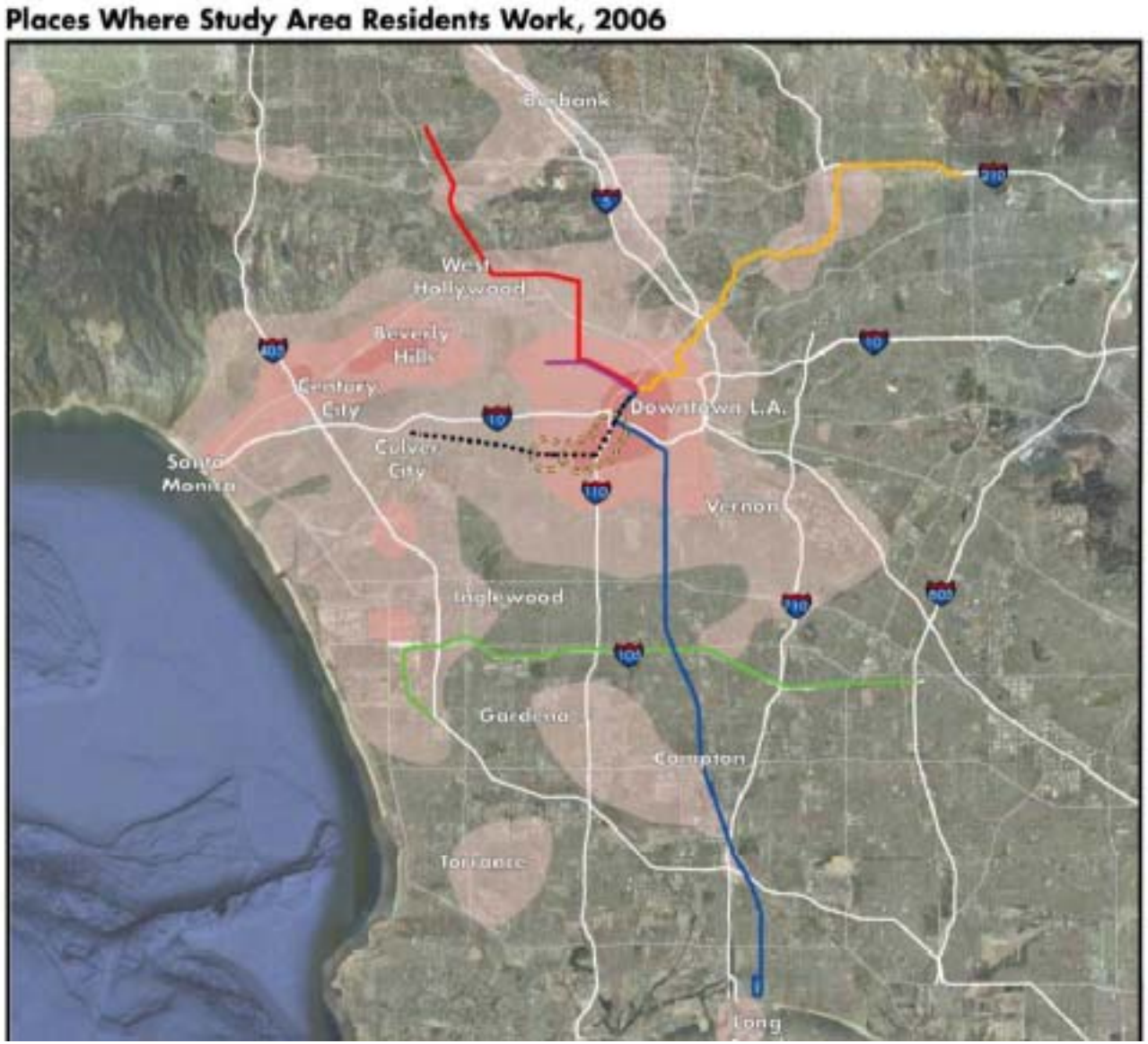
Potential Development Pressures Affecting the Study Area



Sources: GoogleEarth Pro, 2008; Strategic Economics, 2009.

Los Angeles Corridor Studies

Improving access to destinations: a look at current commutes relative to transit



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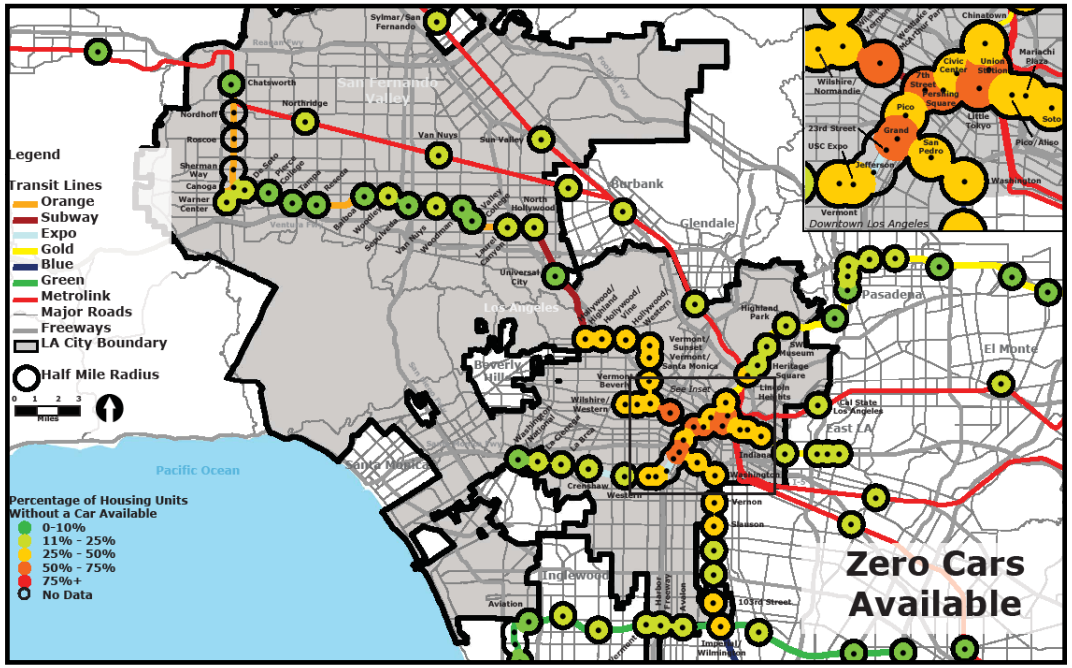
Los Angeles TOD Analysis

- Goal: Convene TOD stakeholders around multiple TOD goals to understand issues and determine next steps
- Not just new development, but access, environmental, and equity considerations



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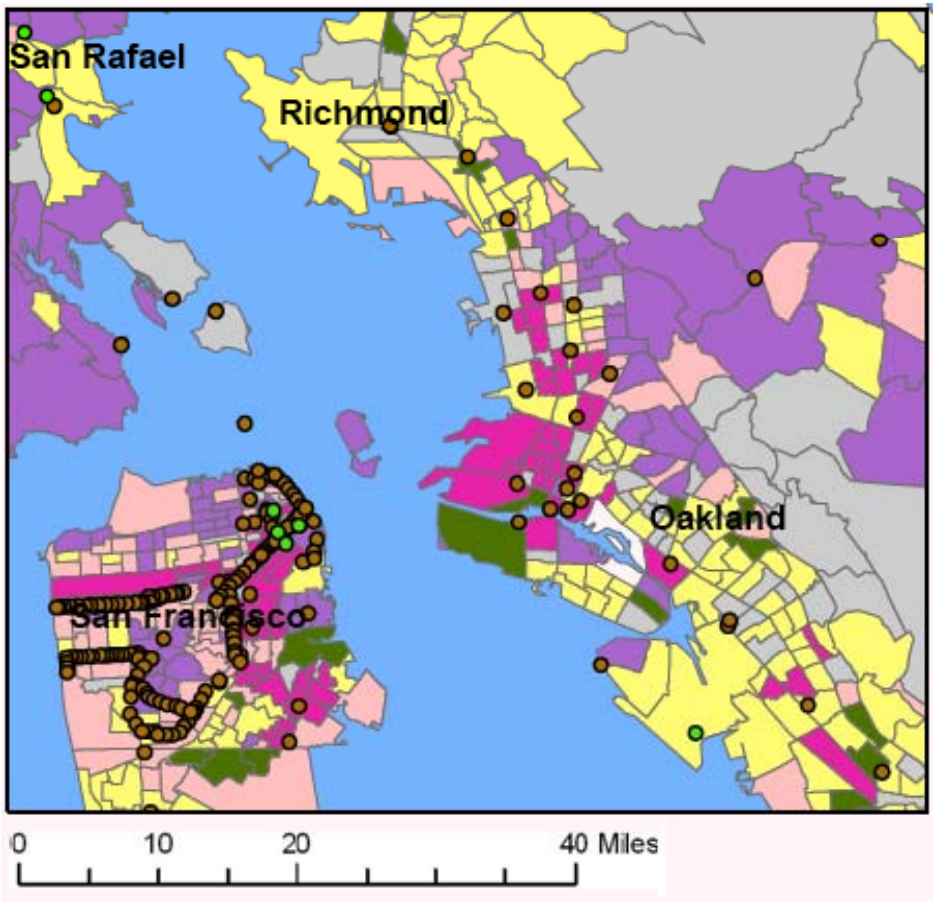
Los Angeles TOD Analysis

Bringing Equity into the Picture



Neighborhood Type

- Becoming bipolar
- Gentrifying
- Becoming middle income
- Becoming lower income
- Other
- Becoming upper income

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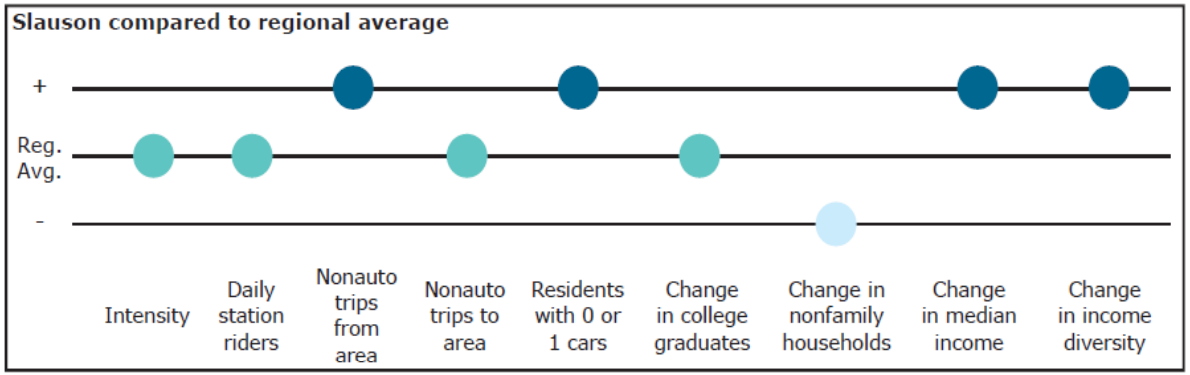
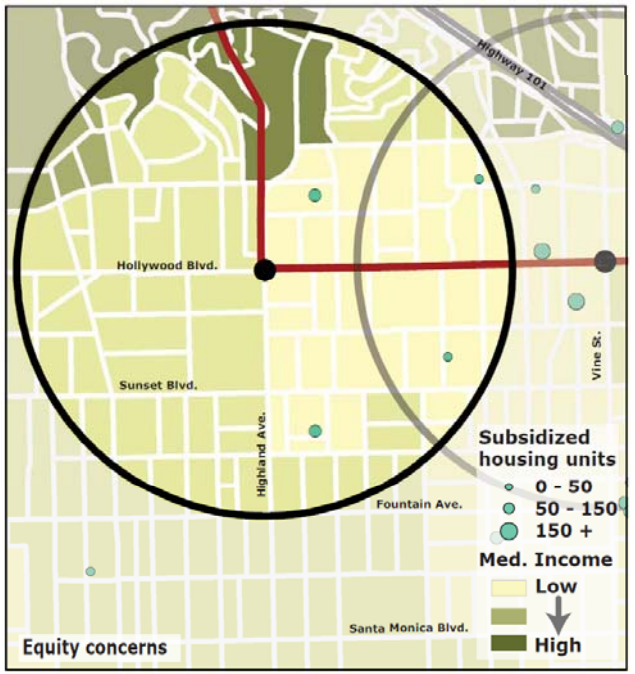
CENTER FOR COMMUNITY INNOVATION
at the Institute of Urban and Regional Development

Los Angeles TOD Analysis

Neighborhood Change	College graduates (1990-2000)	+4.3%	Nominal change
	Nonfamily households (1990-2000)	-15.6%	Rapid decrease
	Median Income (1990-2000)	+8.4%	Increase
	Income diversity (1990-2000)	+3.5%	Increase
	Affordable Units (2009-2015)	0 units, 0% expiring	No change
Development Opportunity	Underutilized Land	85 acres	Small, clustered
	Avg. commercial & industrial parcel	0.55 acres	Moderate





Metric	Value	Evaluation
Daily Station Boardings	4,018 riders	High
Mobility Barriers	Block size	Semi-walkable
Non-Auto Work Trips from Area	26.2%	High
Non-Auto Work Trips to Area	14.1%	Moderate
Residents with 1 or 0 cars	78%	High

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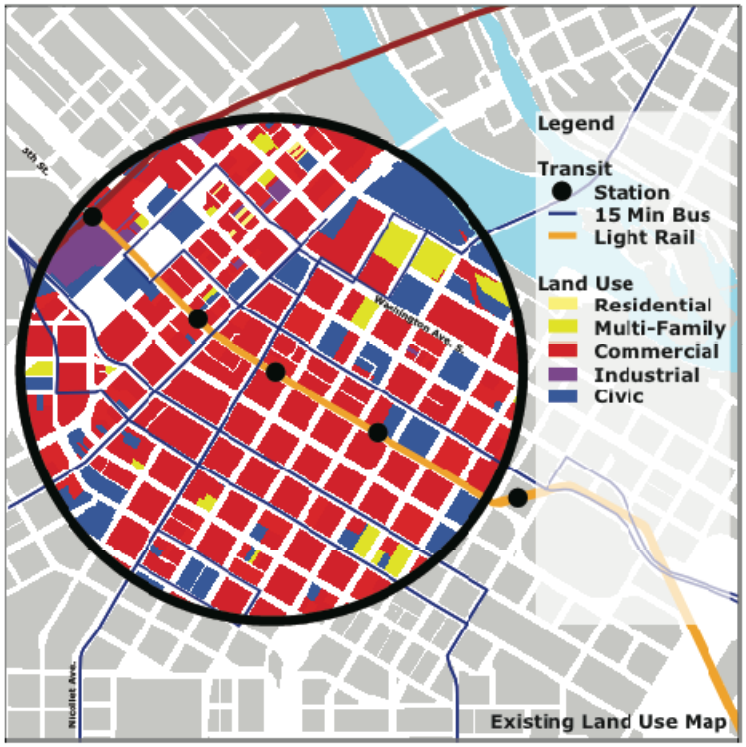
New Ways to Look at Stations in Relation to Each Other

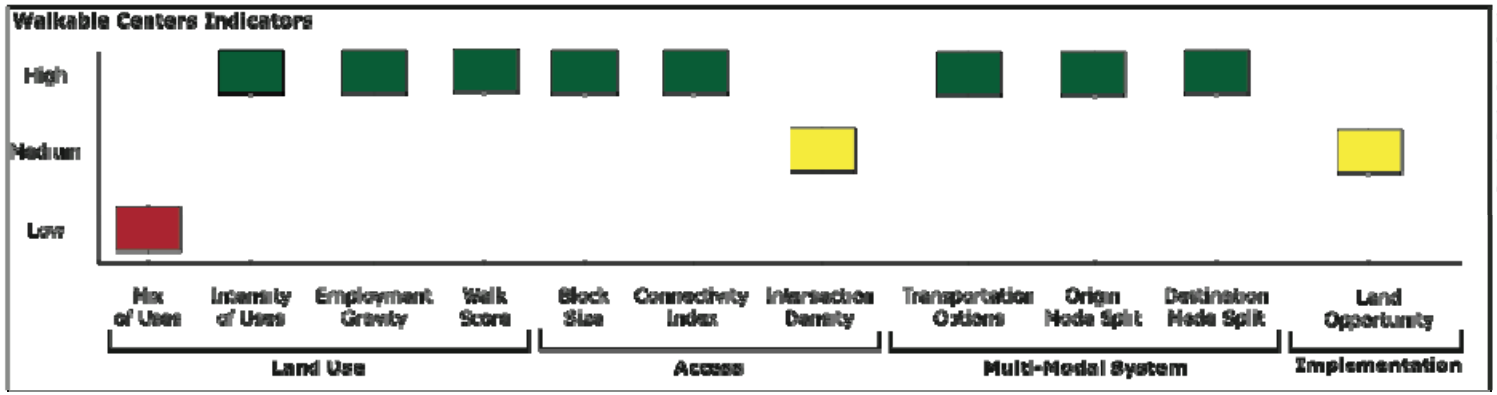
Benchmarking Performance



Twin Cities Region Walkable Centers Analysis

Downtown Minneapolis
(Nicollet Mall @ 5th Street S)

Indicator	
Mix of Uses (Workers/Residents)	23.7
Intensity of Uses (Work. + Res./Acre)	214.7
Employment Gravity	High
Walk Score	98
Average Block Size	3.94 Acres
Connectivity Index	1.89
Intersection Density	167/sq mi
Origin Mode Split	56% Non-auto
Destination Mode Split	35% Non-auto
Land Opportunity	109 Acres



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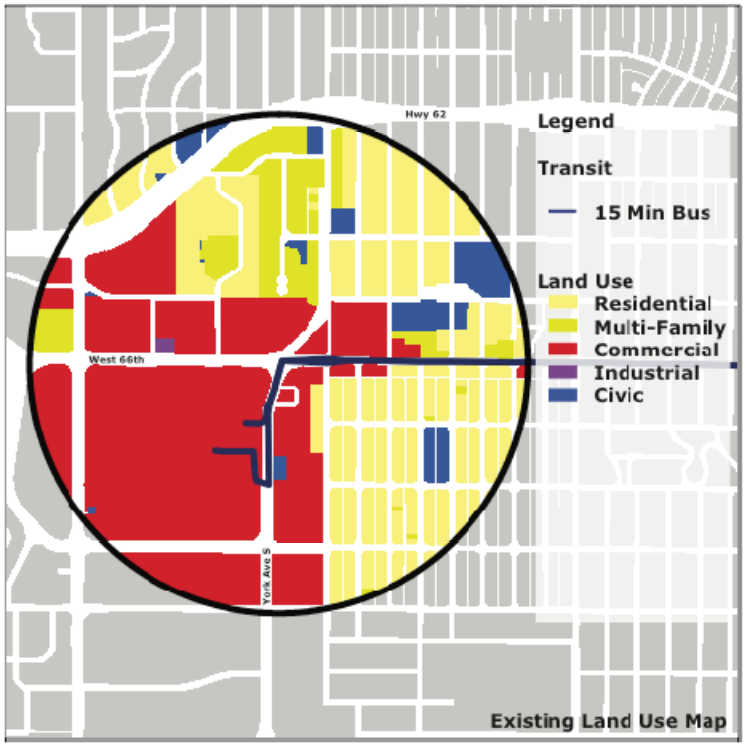
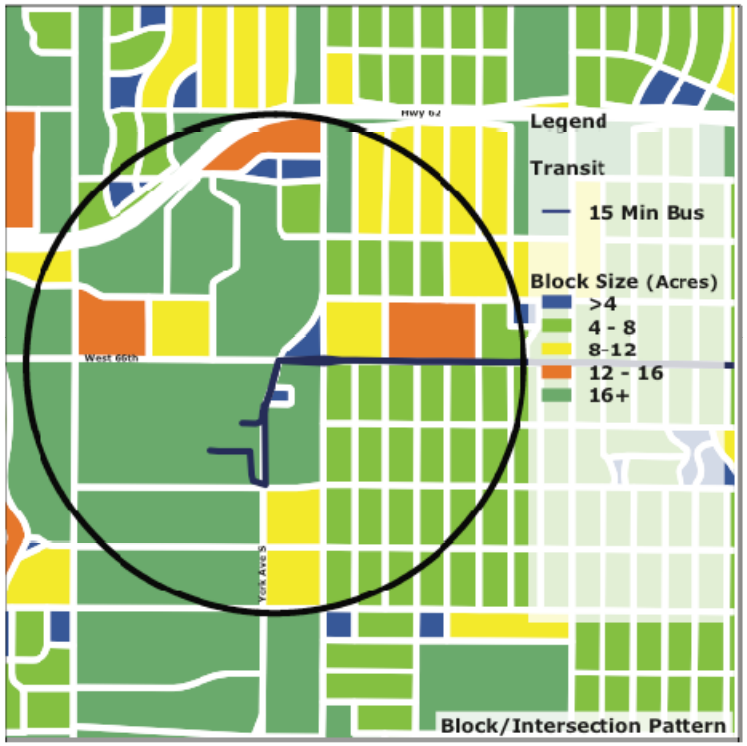
June 30, 2009

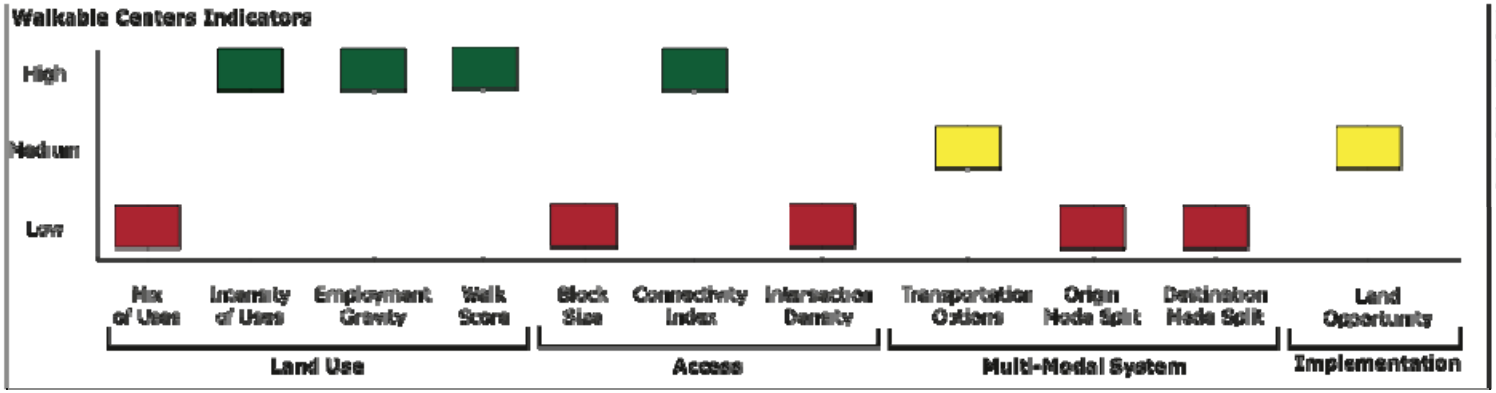
Benchmarking Performance





Twin Cities Region Walkable Centers Analysis

Southdale Area
(W 66th Street @ York Ave S, Edina)



Indicator	
Mix of Uses (Workers/Residents)	6.0
Intensity of Uses (Work. + Res./Acre)	46.4
Employment Gravity	High
Walk Score	92
Average Block Size	10.0 Acres
Connectivity Index	1.8
Intersection Density	40/sq mi
Origin Mode Split	9% Non-auto
Destination Mode Split	4% Non-auto
Land Opportunity	116 Acres

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June 30, 2009

Central Maryland TOD Strategy

- <u>Goal:</u> prioritizing investment and coordinating stakeholders to become more proactive
- "Place types" didn't suggest how to deal with *implementation*
- Regional scale creates new challenges of jurisdiction and collaboration

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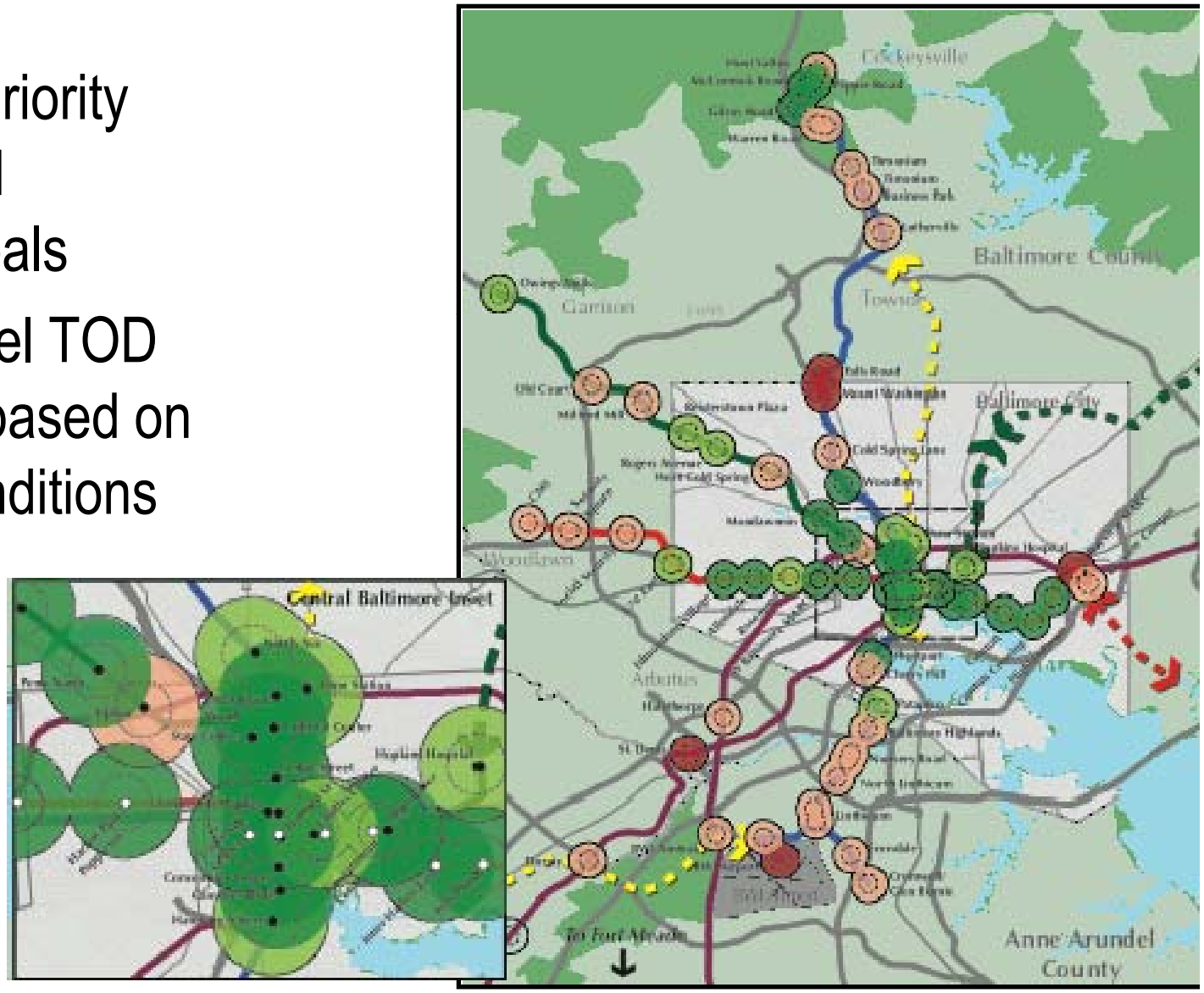
Central Maryland TOD Strategy

1. Regional Priority Map based on TOD goals
2. Station-level TOD approach based on current conditions



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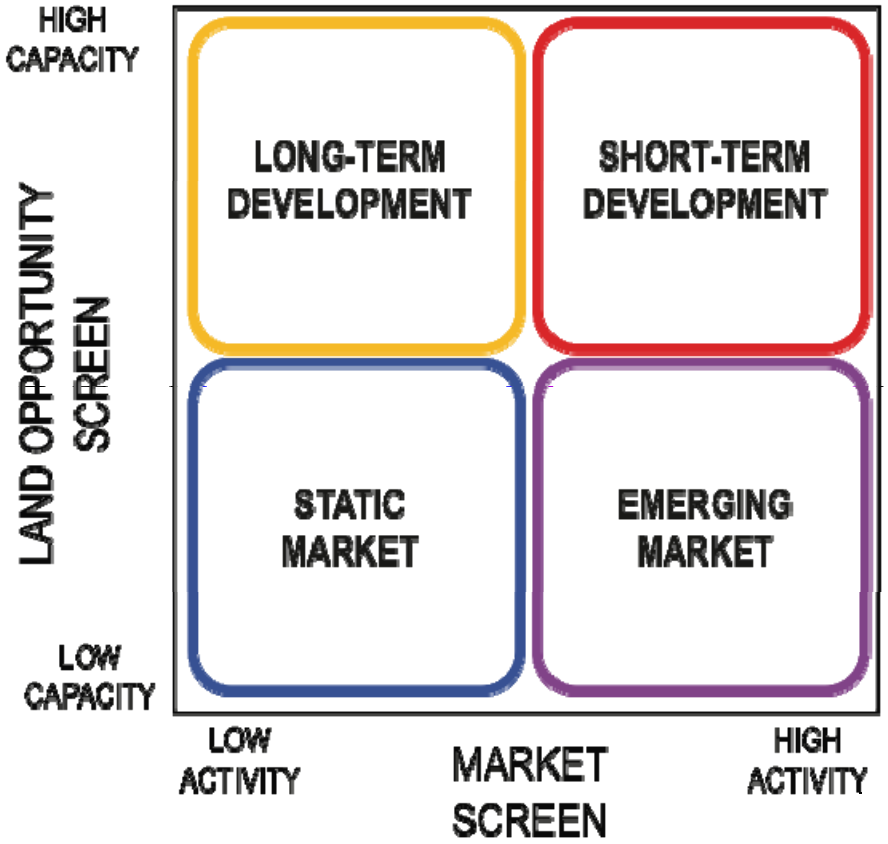
TOD OPPORTUNITY ANALYSIS

KEY QUESTIONS

- Is there land available for development?
- Is there the potential for some uses to transition to others?
- Are the opportunities to intensify existing residential or employment concentrations?

KEY INDICATORS

- Underutilized Comercial/Industrial Land
- Holding Capacity
- Non-programmed public land



KEY QUESTIONS

- Is there development happening now?
- Are values going up quickly?
- Is there a lot of transaction activity?

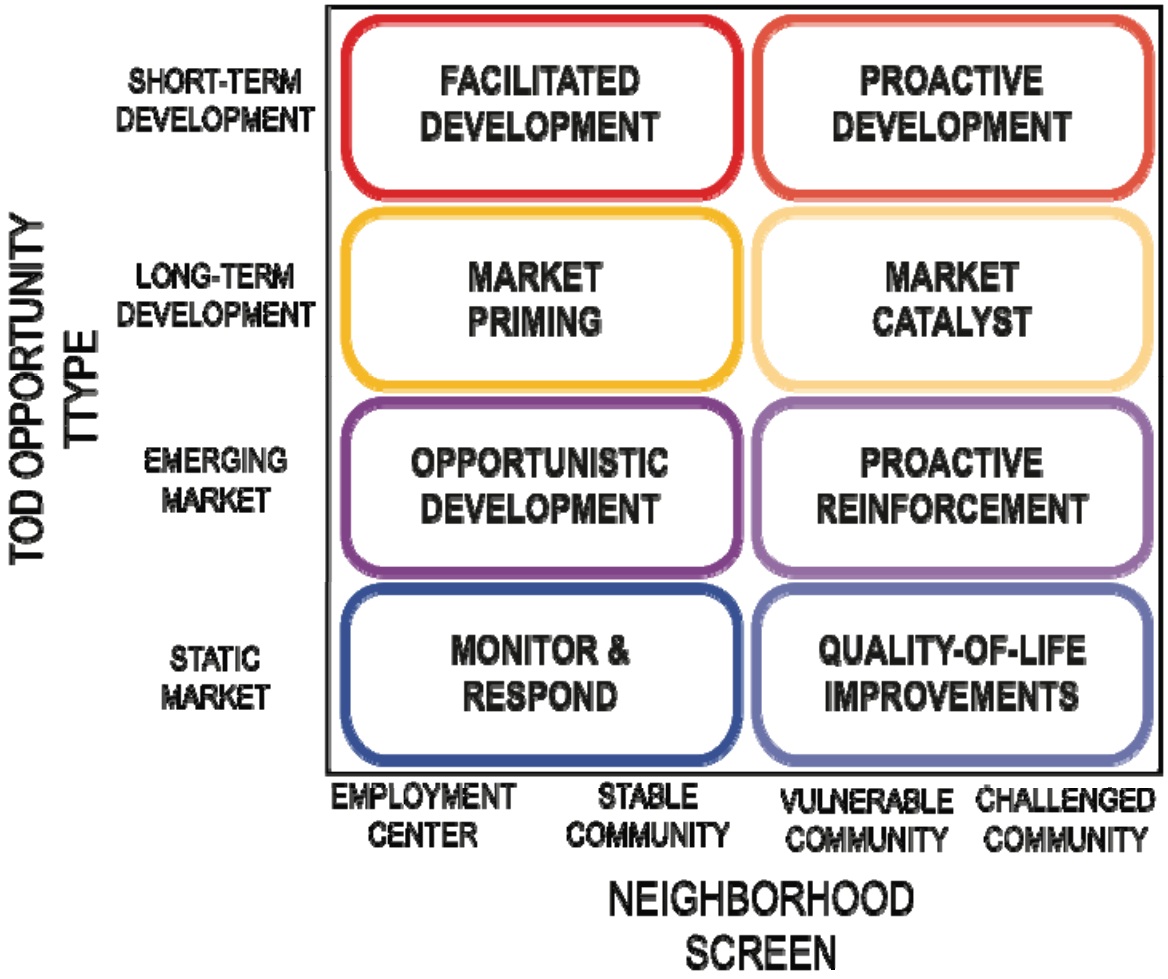
KEY INDICATORS

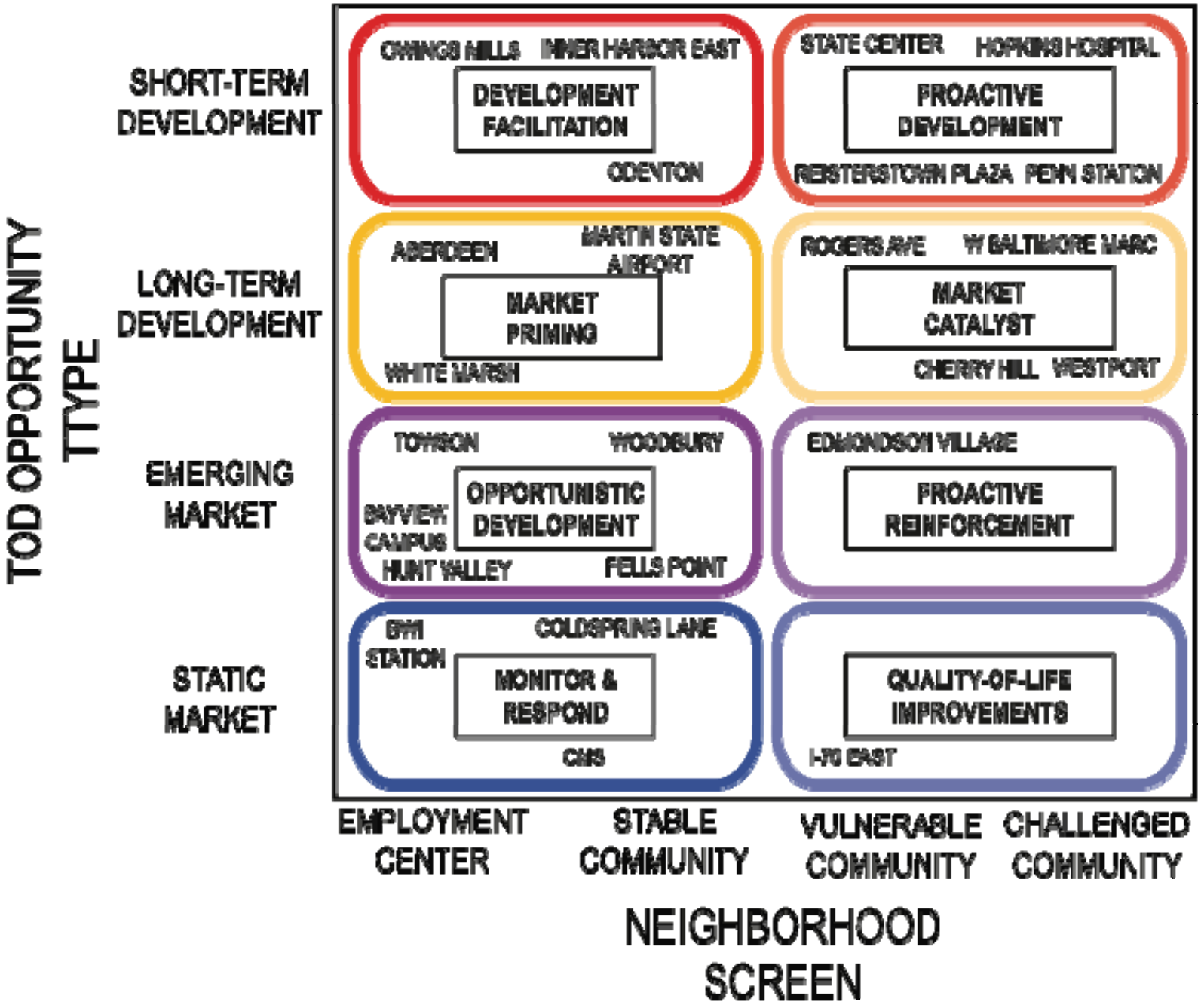
- Permit activity
- Sales Activity
- Median Income

NEIGHBORHOOD STRATEGY ANALYSIS

KEY QUESTIONS
- Who is living in the station area currently?
- What is the strength of the housing market?
- Are there challenges of gentrification or disinvestment?

KEY INDICATORS
- Market Value Assessment
- Jobs Housing Balance
- Income Diversity and Median Income




TOD OPPORTUNITY TTYPE
SHORT-TERM DEVELOPMENT
LONG-TERM DEVELOPMENT
EMERGING MARKET
STATIC MARKET
OWINGS MILLS
INNER HARBOR EAST
DEVELOPMENT FACILITATION
ODENTON
STATE CENTER
HOPKINS HOSPITAL
PROACTIVE DEVELOPMENT
REISTERSTOWN PLAZA
PENN STATION
ABERDEEN
MARTIN STATE AIRPORT
MARKET PRIMING
WHITE MARSH
ROGERS AVE
W BALTIMORE MARC
MARKET CATALYST
CHERRY HILL
WESTPORT
TOWSON
WOODBURY
OPPORTUNISTIC DEVELOPMENT
BAYVIEW CAMPUS
HUNT VALLEY
FELLS POINT
EDMONDSON VILLAGE
PROACTIVE REINFORCEMENT
BWI STATION
COLDSPRING LANE
MONITOR & RESPOND
CIMS
QUALITY-OF-LIFE IMPROVEMENTS
I-70 EAST
EMPLOYMENT CENTER
STABLE COMMUNITY
VULNERABLE COMMUNITY
CHALLENGED COMMUNITY
NEIGHBORHOOD SCREEN

Central Maryland TOD Strategy

Implementation Lessons Learned:

- Need to find the right methodology to define priorities and bring stakeholders together
- Typology can address process as well as places, but it can be difficult conceptually
- In a weak real estate market, sometimes you just have to wait

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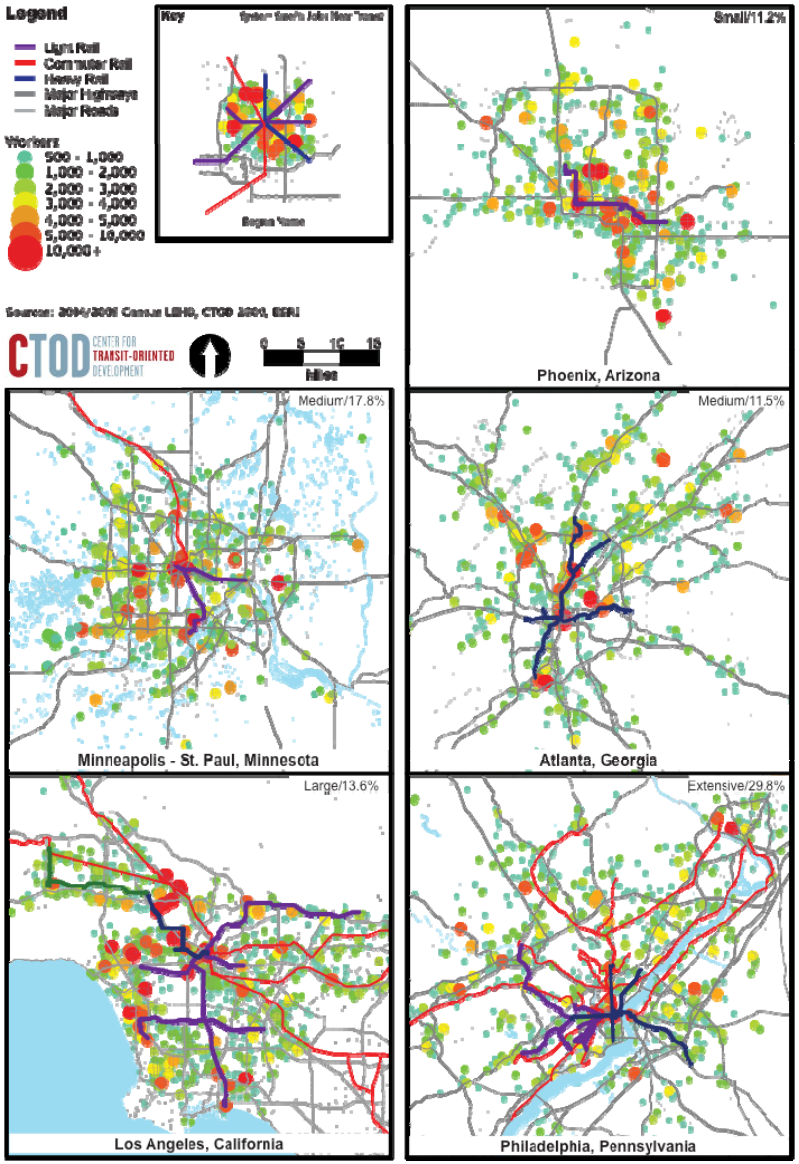
Still questions to be answered

- GHG Emissions benchmarks
- Employment patterns and performance
- Economic development and jobs



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Influential Non-CTOD "Place Type" Efforts

- New Urbanist Transect - CNU
- Station Design/Function Typology – PB Place Making
- Glatting Jackson Access Types
- Arup Transportation Access Types
- Portland Centers and Corridors Work

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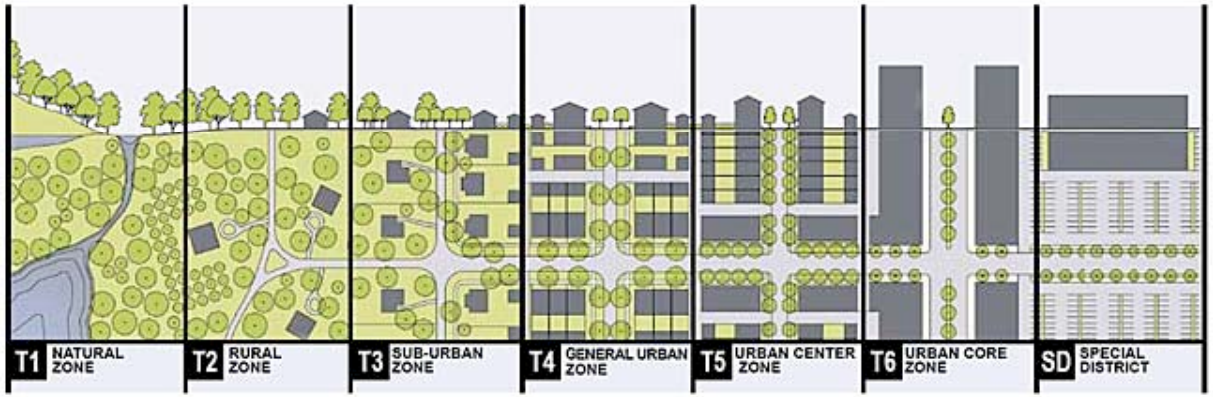
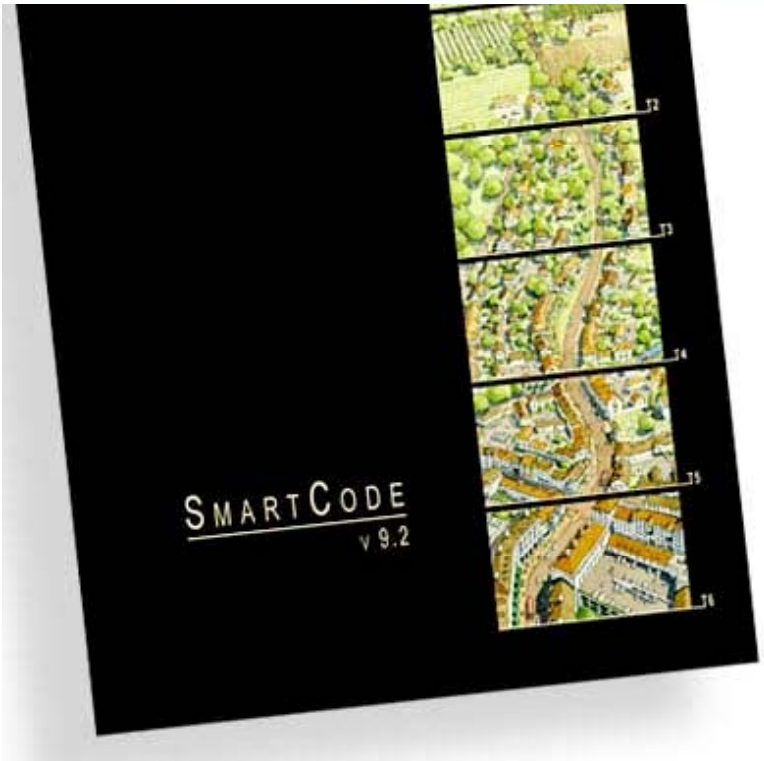
CNU Transect/SmartCode

- Categorizes places along a continuum from rural to urban
- SmartCode codifies an approach to land use regulation based on the transect
- Provides clear standards and guidelines





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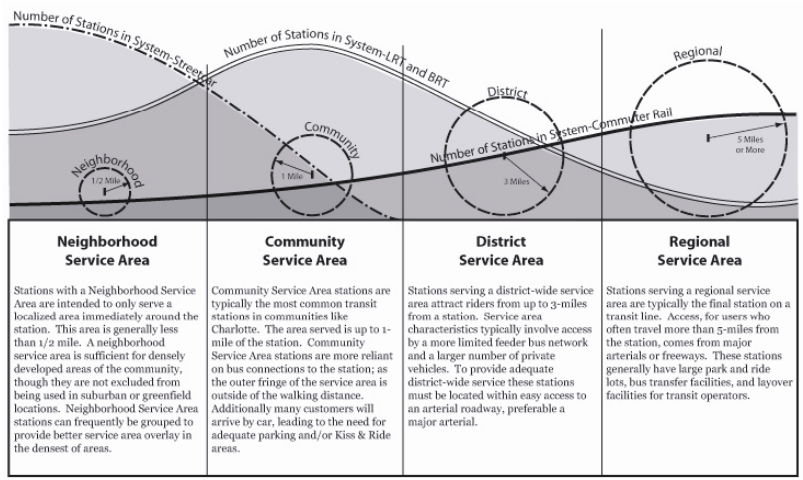
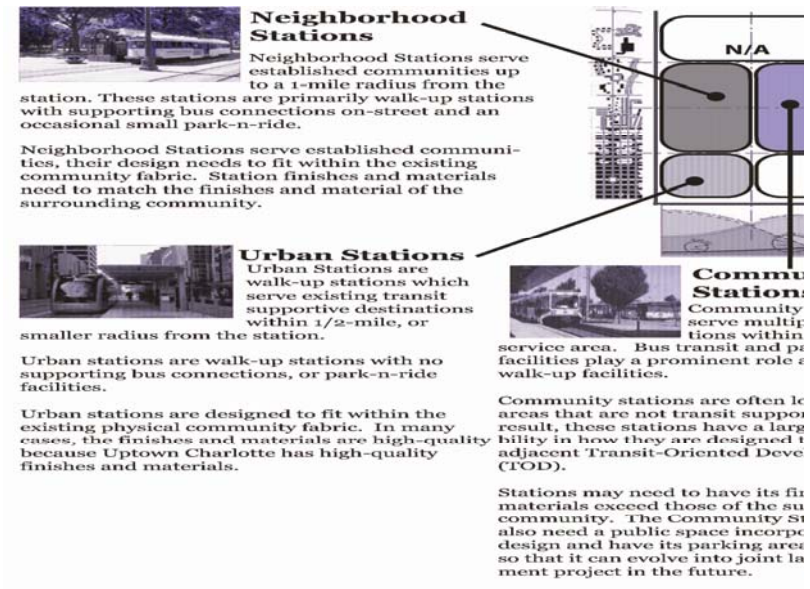
Charlotte Station Types

- Outlines City/Transit Agency responsibilities at each type of station
- Combines access type and community context
- Developed prior to completion of first segment of regional transit plan





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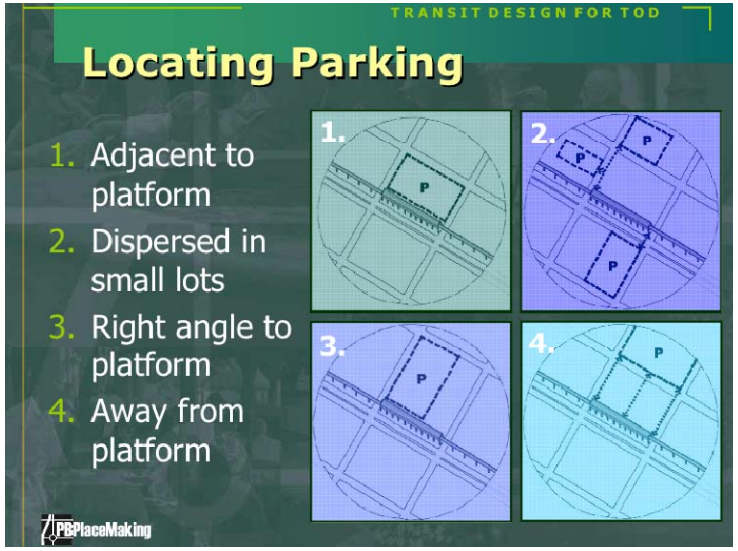
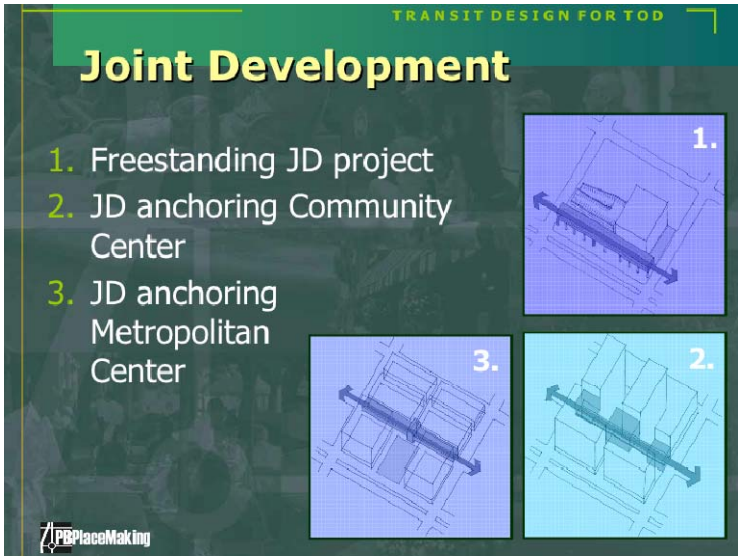
Implications of Transit Design

- Decisions in transit design have impact on TOD potential
- Transit agencies need to be willing partner in catalyzing TOD





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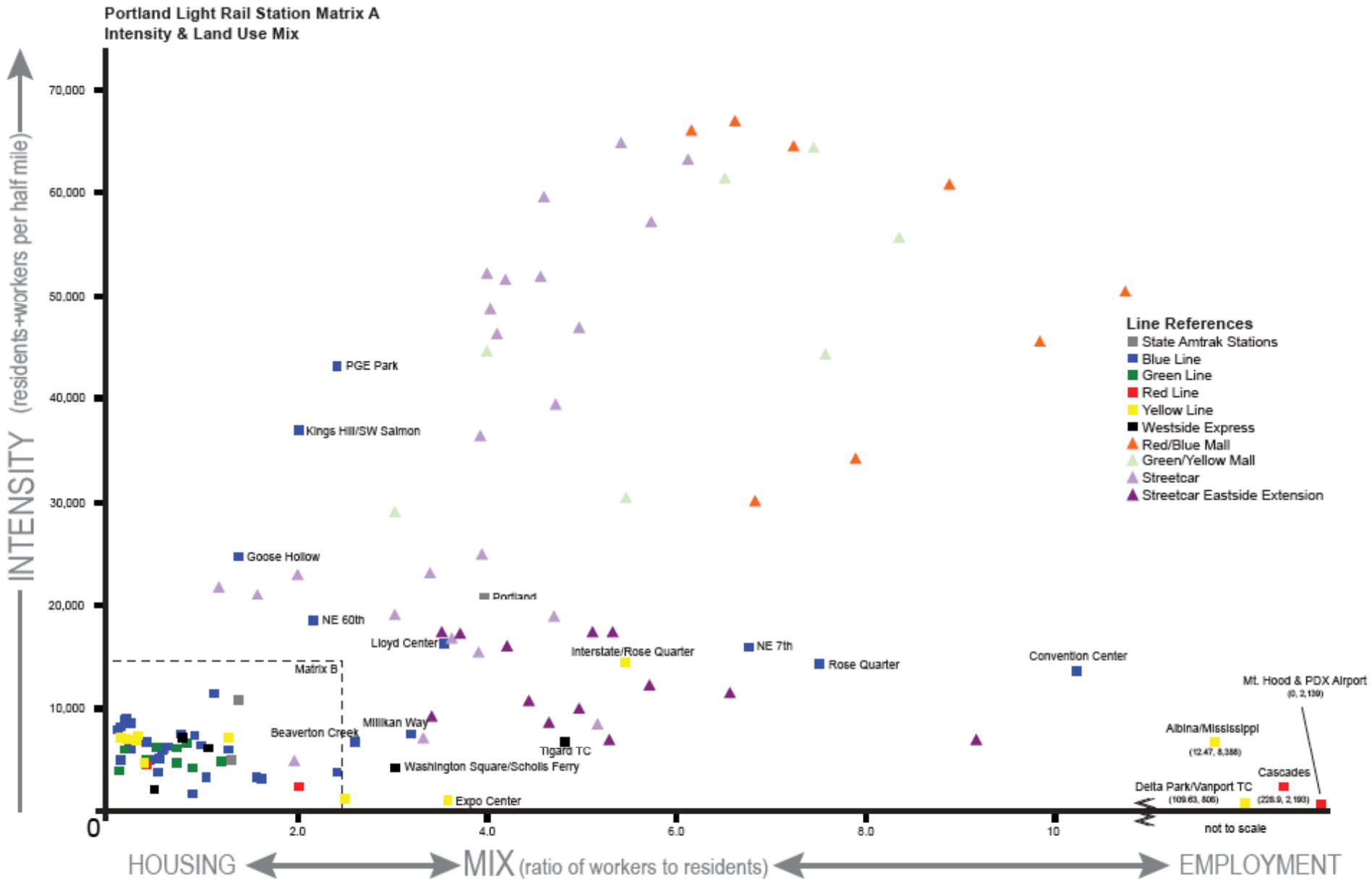
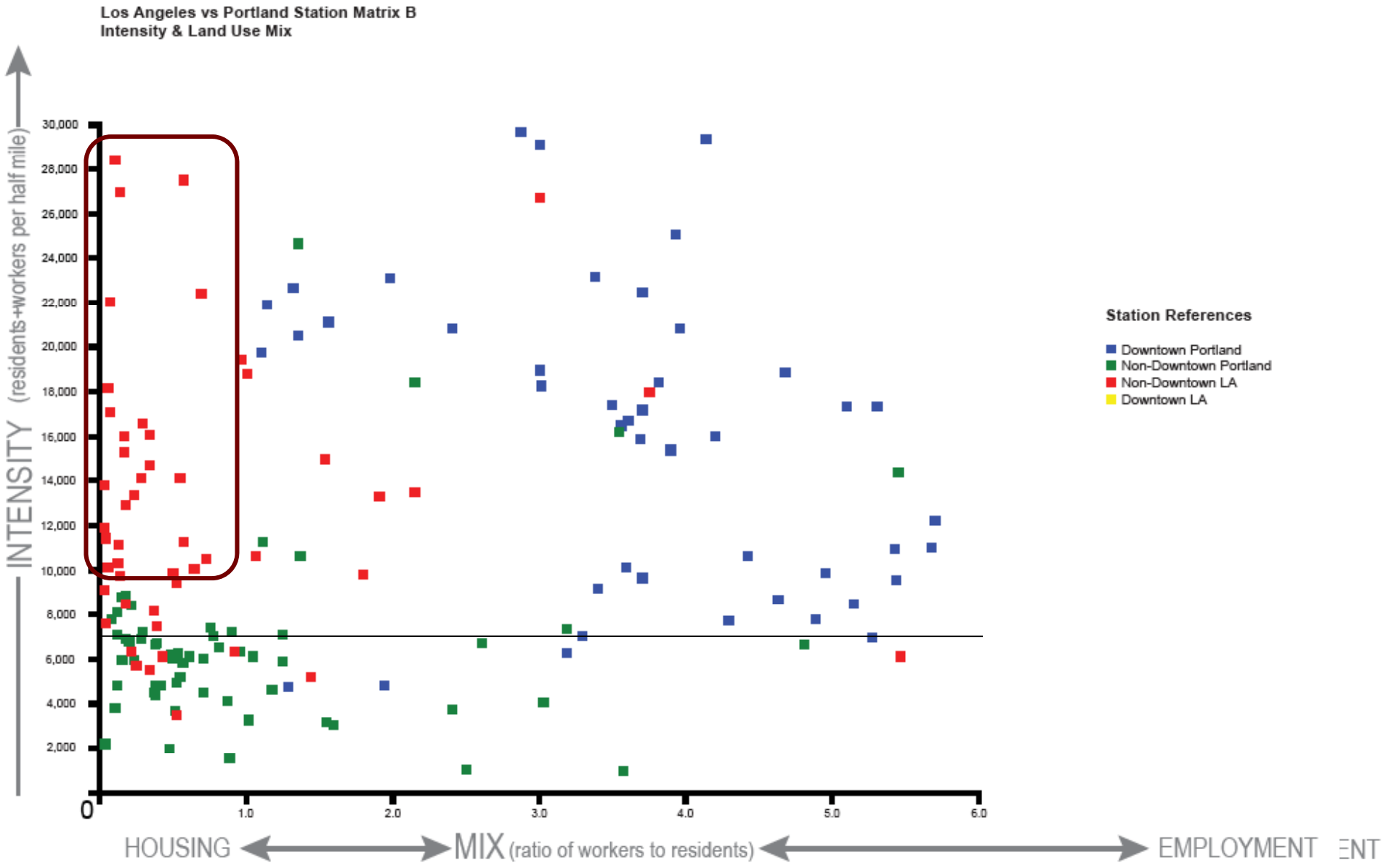
Portland Mix + Intensity Matrix



Comparison of Portland and LA



Reflections for Portland

Typology / TOD Strategic Plan Can:

- Frame issues around transit and affordability, environment, economic performance
- Establish aspirational place types for station areas to guide development, implementation
- Measure current performance, identify areas of strength / improvement
- Layer information to prioritize investments

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Reflections for Portland

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✓ Layer information to prioritize investments

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Reflections for Portland

Focus on Prioritizing Investments, Measuring Outcomes

- Well performing CBD and Streetcar stations, but suburban areas in need of catalytic efforts
- What vision makes sense for more outlying areas?
- Strong foundation of data to benchmark performance

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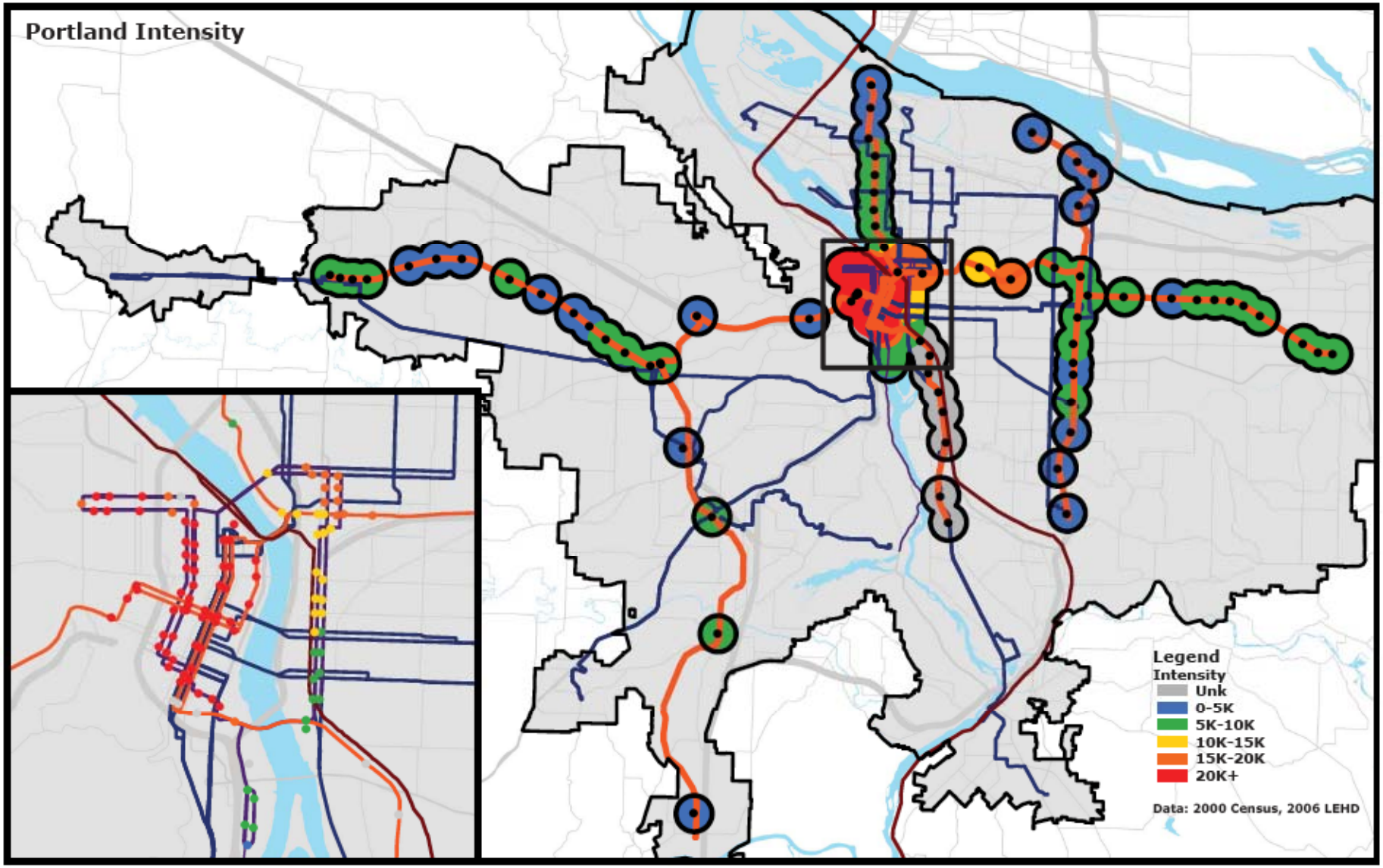
Intensity (Workers + Residents)



Land Use Mix (Workers/Residents)