

# National TOD Database



# CTOD Partnership

*Dedicated to providing best practices, research and tools to support market-based transit-oriented development*



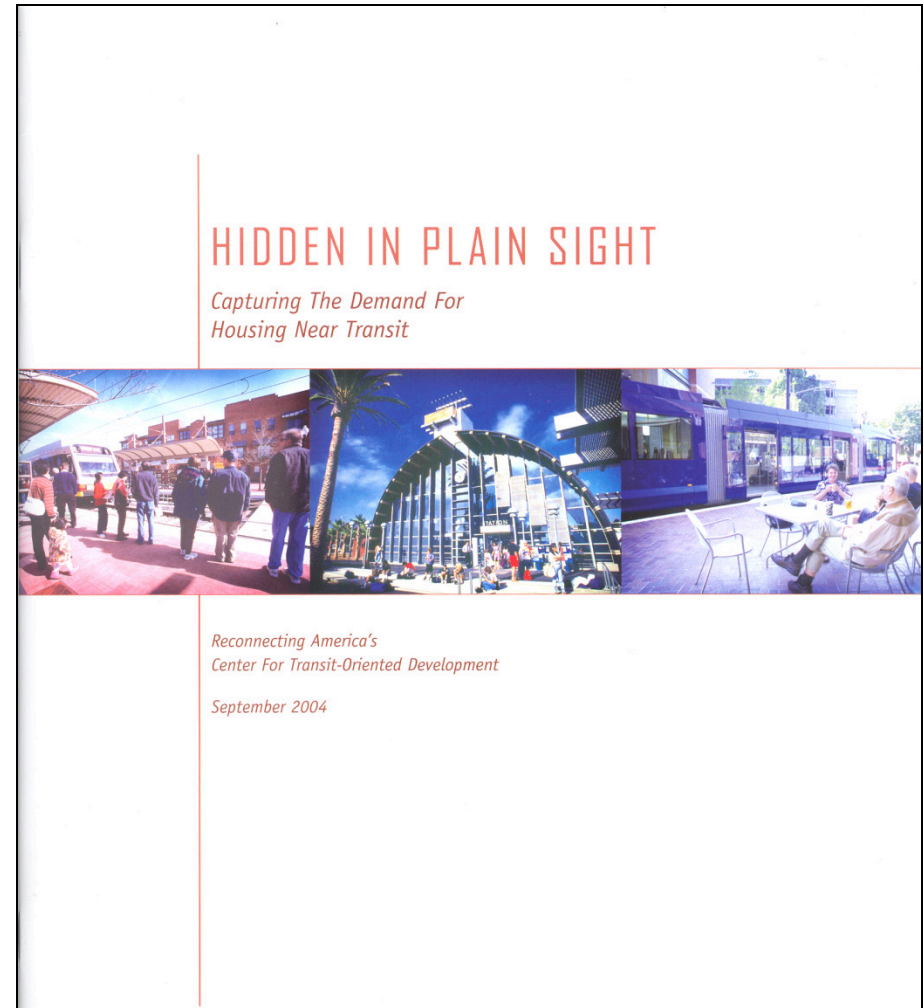
# Why a **TOD** Database?

- Revealing the value of transit requires data from many sources
- Need a tool that allows quick warehousing of data for the purpose of creating new knowledge and understanding
- Existing networks weren't dedicated to producing the tool

# Planning Tool for **TOD**

## History of **CTOD** Database

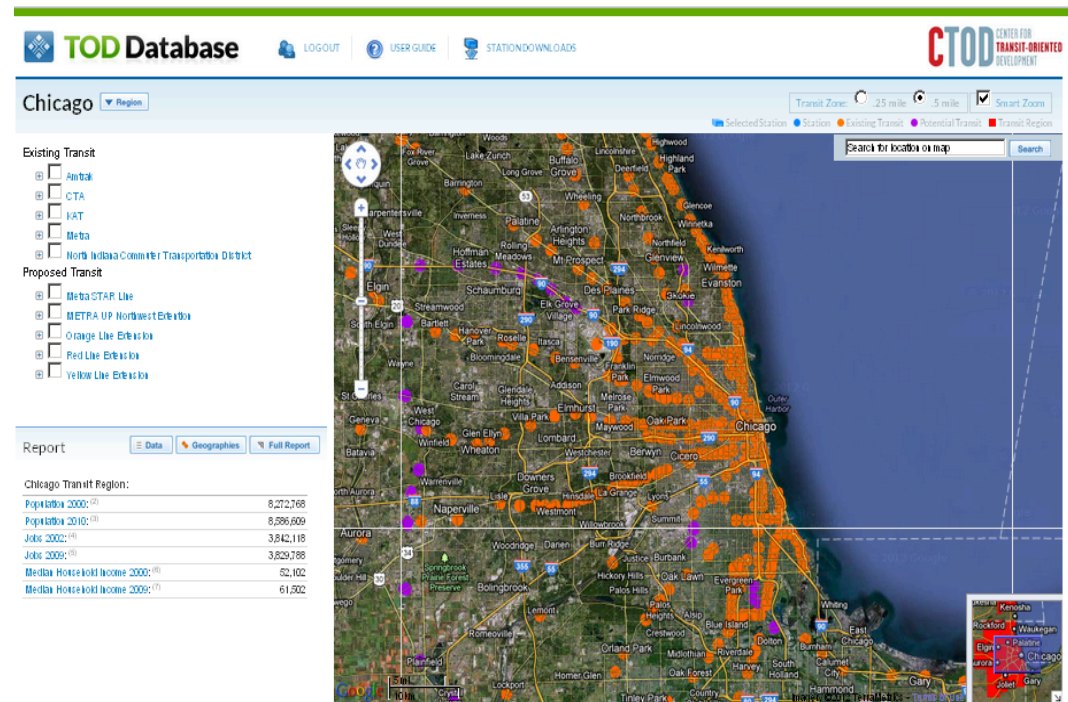
- Limited information at the transit area
- Initially funded by FTA (2005) then HUD & Surdna
- Tool to measure & project transit demand
- Identifies existing & potential **TOD** markets & their benefits



# Putting the **TOD** Database to Work

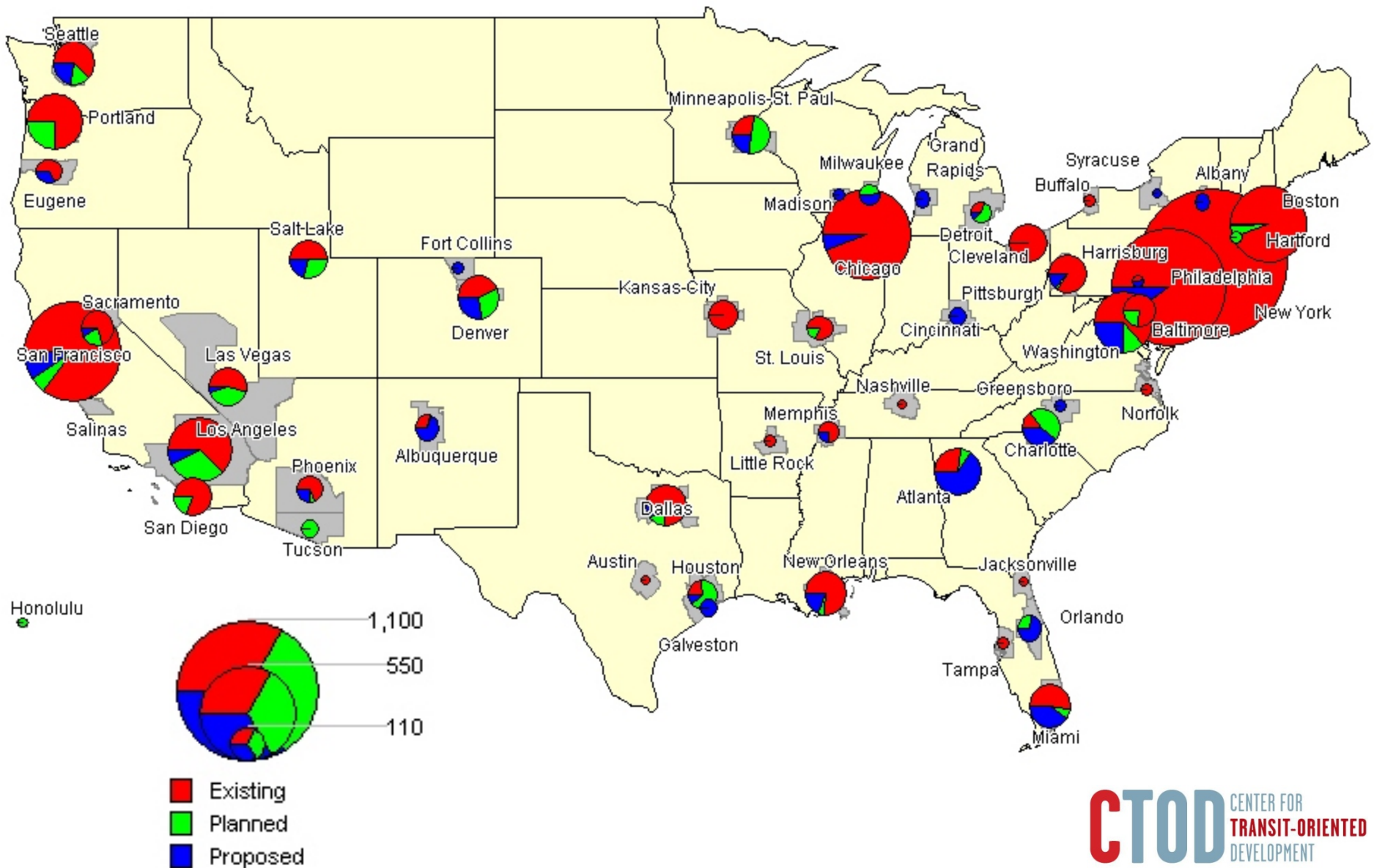
- Map-based website
- **Goal:** Accelerate practice & commitment to high performance **TOD**
- Make data easily accessible to practitioners

<http://toddata.cnt.org/>



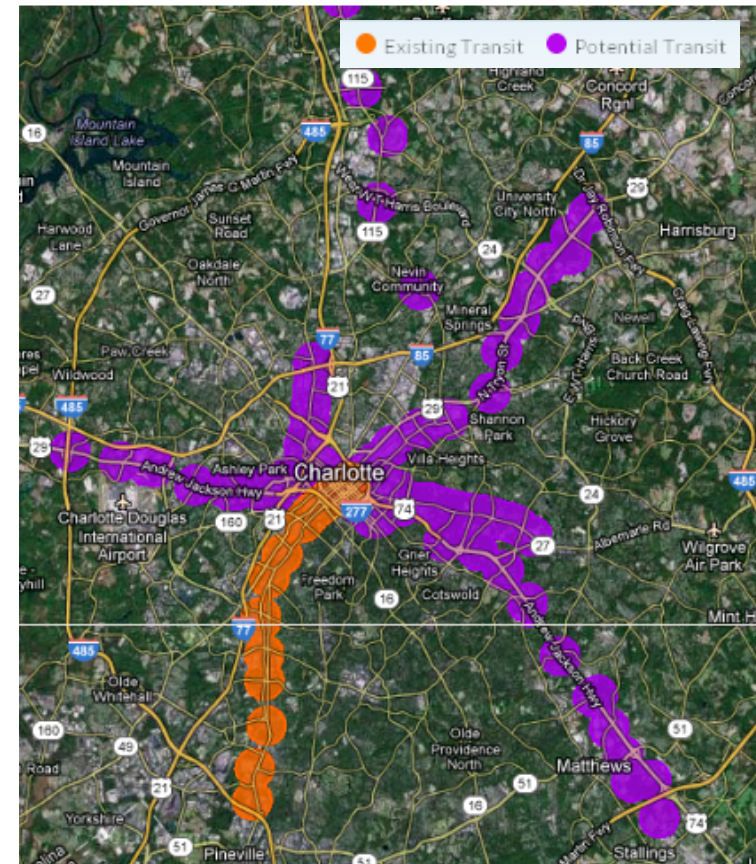
# CTOD TOD Database

(Total = 5,999 Transit Stations)



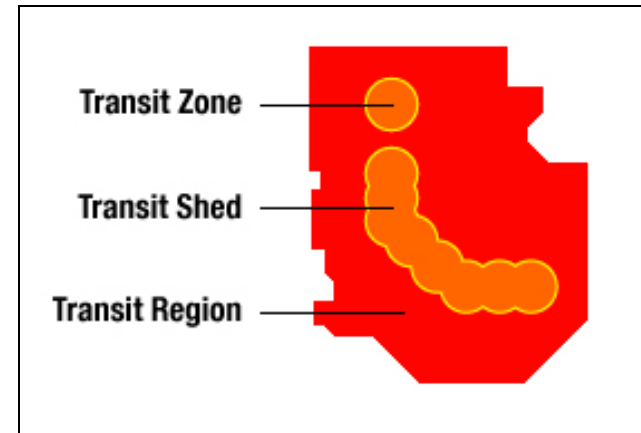
# Station Types

- **Existing**
  - Commuter Rail, commuter Amtrak, BRT with designated right-of-way, ferries
- **Planned**
  - FTA New Starts in Preliminary Engineering phase or beyond, Urban Circulator, TIGER 1&2, other federal funding, locally-funded projects under construction
- **Proposed**
  - FTA New Starts in Project Development phase, locally-funded projects, currently closed stations



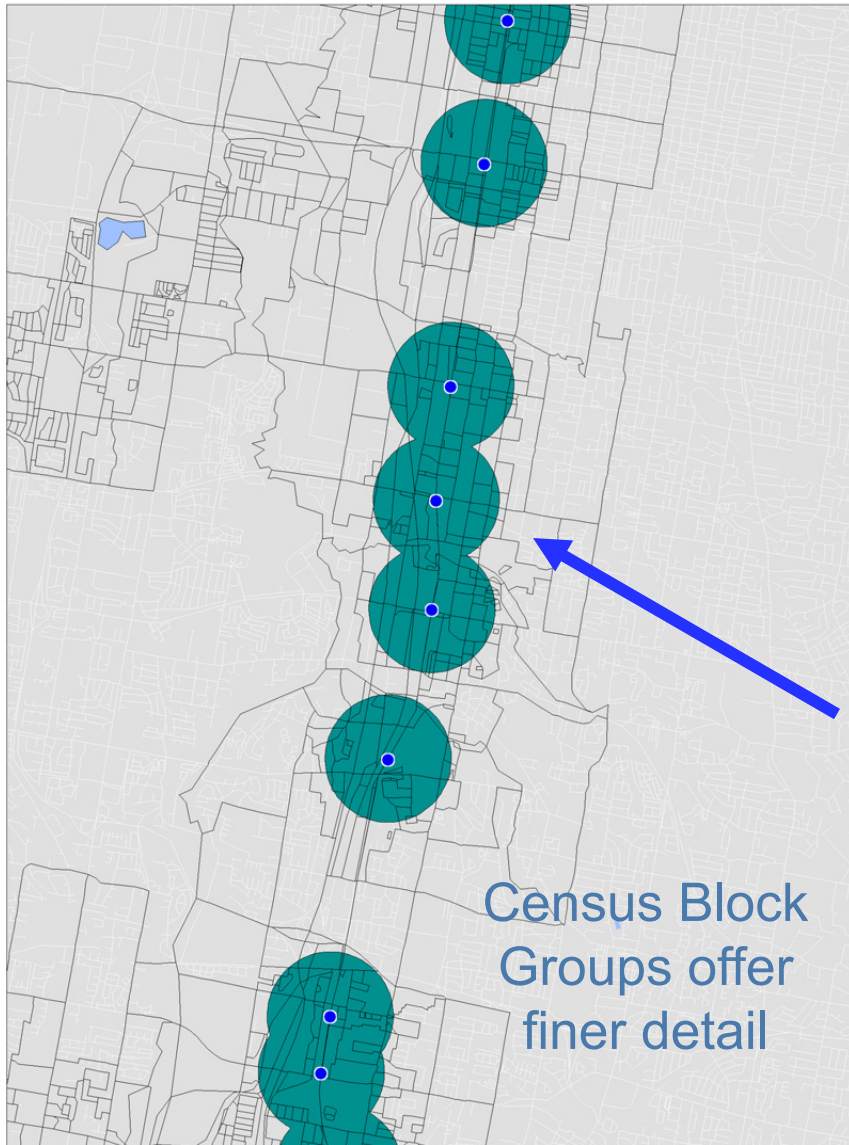
# User Friendly Features

- **One Stop Shop** - Nearly 70,000 characteristics for 5,999 stations
- **Data on 3 levels:**
  - Transit Zone ( $\frac{1}{2}$  and  $\frac{1}{4}$  mile buffer around each station)
  - Transit Shed (accounts for overlap between Transit Zones)
  - Transit Region
- Presented in **standard and custom report formats**
- Displayed on a **map-based website**
- Can be **downloaded** in Microsoft Word table or Excel spreadsheet
- **Station locations can now be downloaded**





# Data at a **Neighborhood** Level



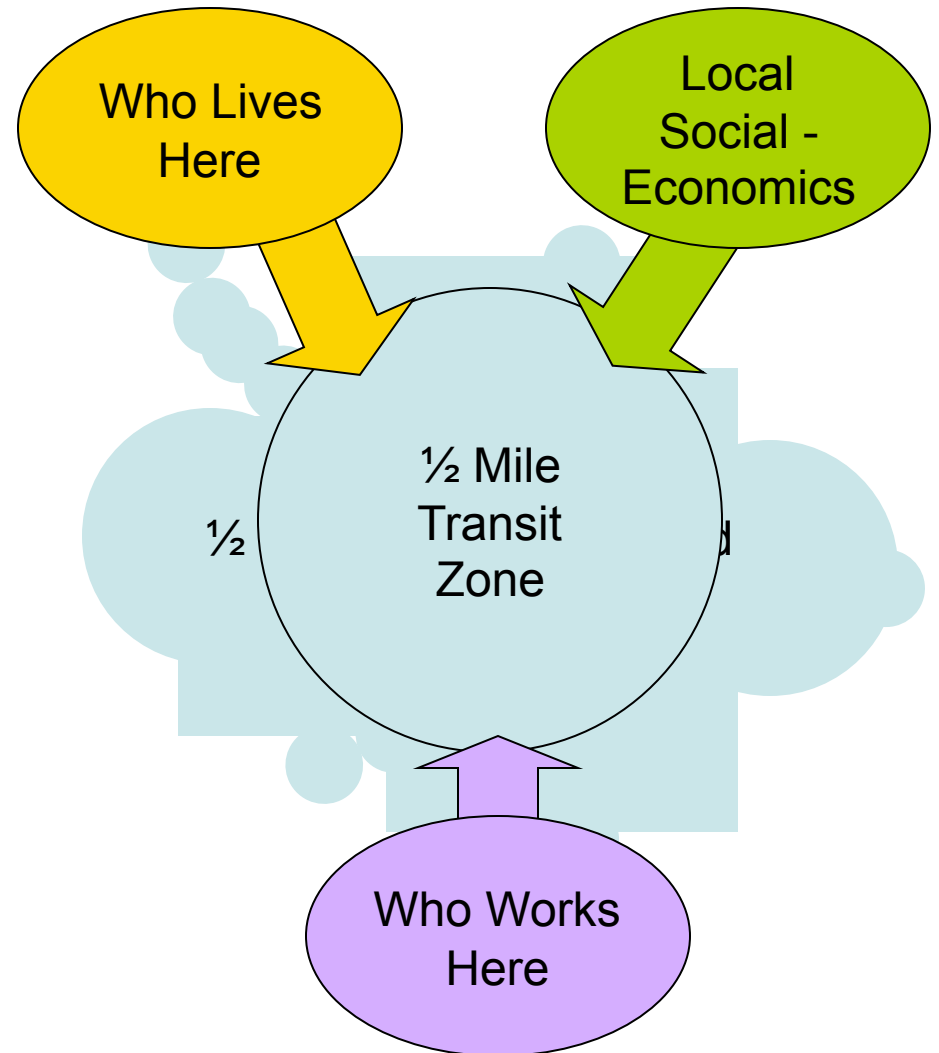
- Operates on GIS Platform
- Drills down to the neighborhood using census tracts, block groups and blocks
- Aggregate the data to transit geographies

Census Boundaries don't align perfectly with Transit Zones, particularly Census Tracts

Census Blocks allow us to really focus on the detailed characteristics of a neighborhood

# Data from Census 2000

- **Summary File 1**
  - Housing units, occupancy status, tenure, household size, race/ethnicity, gender
- **Summary File 3**
  - Income, median value of owner occupied housing, gross rent, vacancy status, vehicle ownership, mode to work, travel time to work
- **Census Transportation Planning Package (CTPP)**
  - Place of residence/work, and origin/destination



# New: 2005-09 American Community Survey Data

- Ongoing survey that gathers detailed **population and housing data** every year
- Replaced the **long form** of the Census
- **5 Year Estimates** are rolling averages of data collected 2005-09
- Aggregated from the Census block group or tract



South Lake Union Trolley in Seattle  
EPA Smart Growth

# New: Data from Census 2010

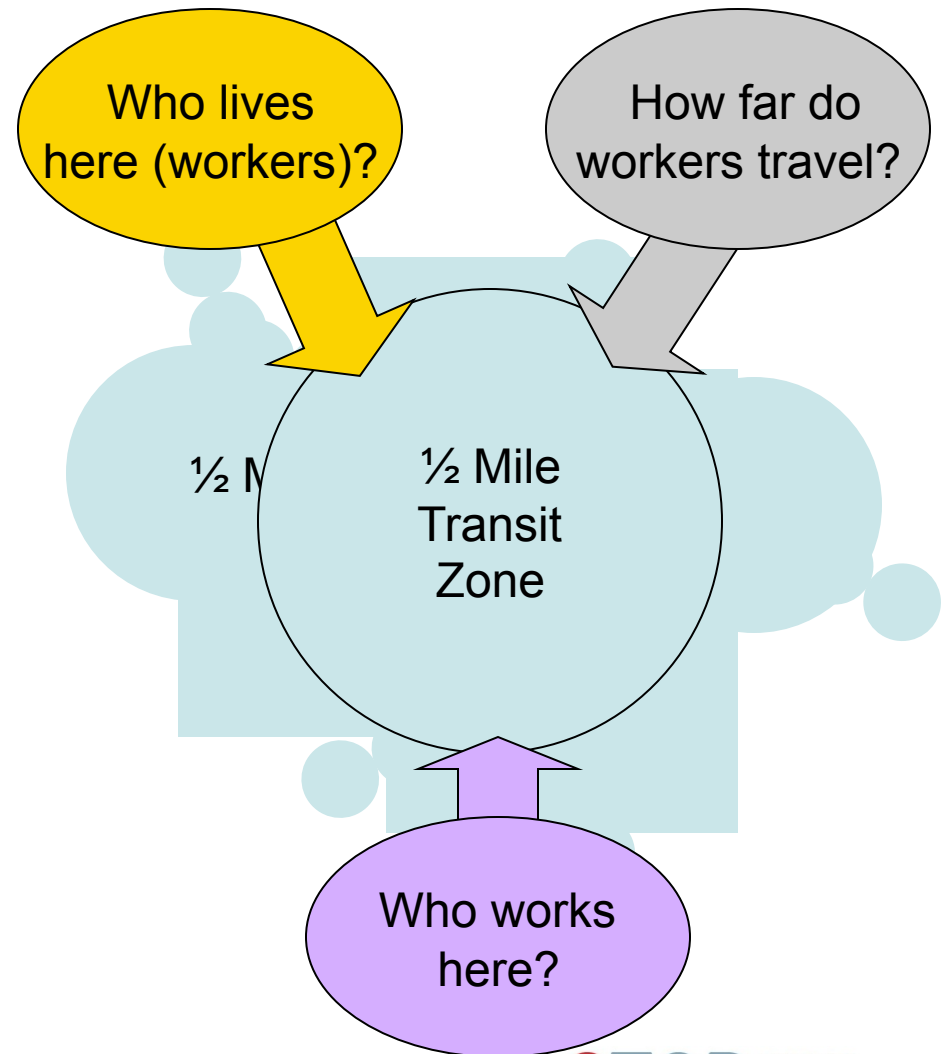
- **Summary File 1**
  - Age, sex, race and ethnicity, household relationship and housing tenure
  - Aggregated from Census blocks and tracts



Pasadena light rail del mar station  
EPA Smart Growth

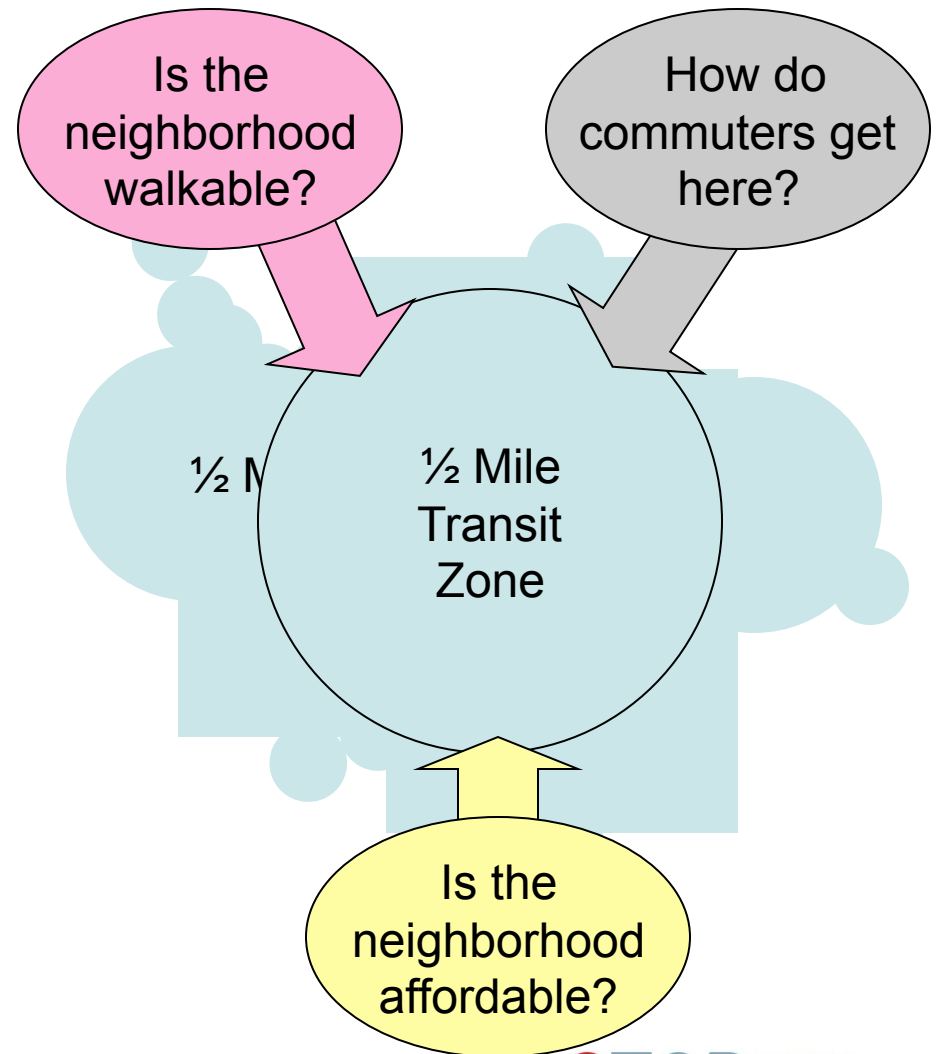
# Local Employment Dynamics (LED)

- Joint effort – US Census and Bureau of Labor Statistics – 2002-09
- **New: Data from On the Map v.5**
- Residence area characteristics
  - Count of workers by sector, quarterly earnings, worker age, median distance traveled to work
- Work area characteristics
  - Count of workers where they work by sector
- Median commute distances
  - Derived from origin and destination data



# Derived Statistics

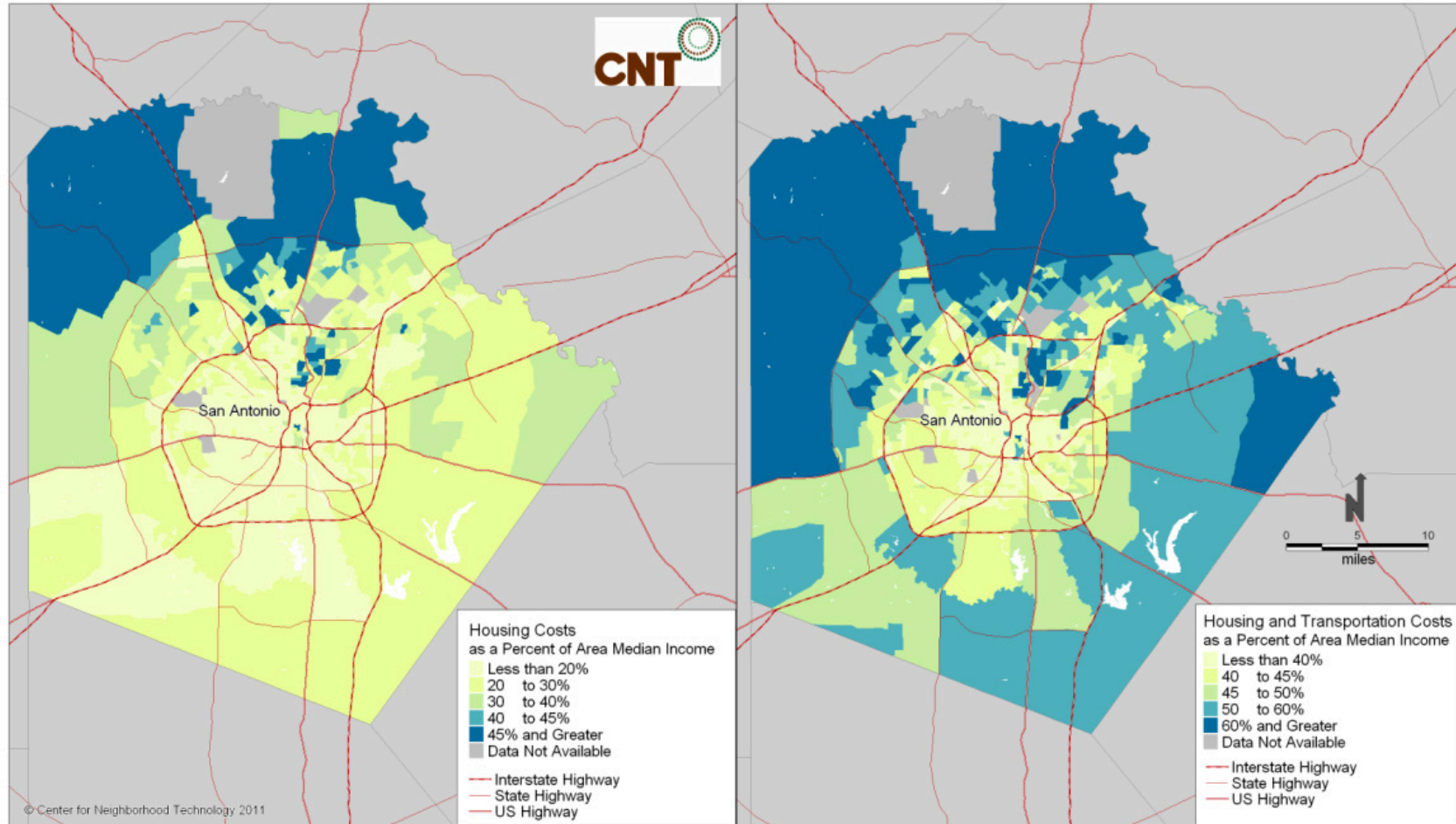
- **Walkability** (block size)
  - Derived from census Tiger files
- **Mode Split %**
  - For commuters from CTPP
- **Housing and Transportation Affordability**
  - Using CNT's H+T® Affordability Index
  - **2005-09 H+T data coming in March**



# Housing + Transportation Affordability Index

A new standard of affordability

<http://htaindex.cnt.org>



# Standard Reports

Reports Custom Report

## Reports

Select a report below or build a custom report.

[Auto and Non-Auto Commute to Work by Industry](#)

[Densities](#)

[Employment \(2002 - 2009\)](#)

[Household Income](#)

[Housing + Transportation Affordability Index](#)

[Journey to Work](#)

[Journey to Work by Public Transportation](#)

[Population and Employment](#)

[Race](#)

[Tenure](#)

[TOD Typology Variables](#)

[Trends Analysis](#)

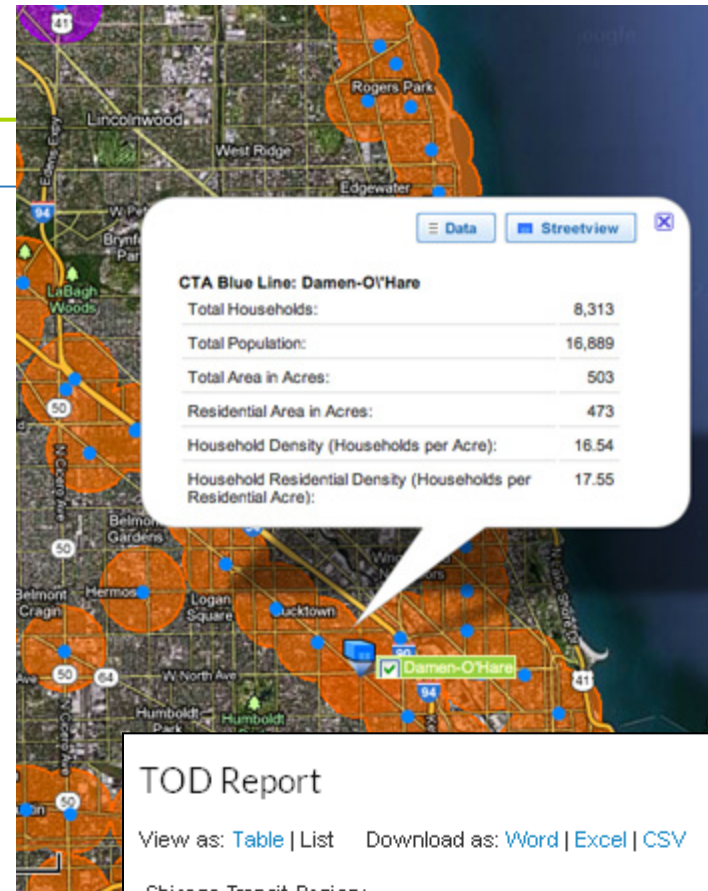
[Vehicle Ownership](#)

[Where Workers Live by Occupation](#)

[Where Workers Work by Industry](#)

All data are proportionally aggregated to transit zone, transit shed and transit region geographies.

- Census 2000 Summary File 1 data are aggregated from Census 2000 blocks and tracts
- Census 2000 Summary File 3 data are aggregated from Census 2000 block groups and tracts
- Census Transportation Planning Package (CTPP) 2000 data are aggregated from Census 2000 tracts
- Longitudinal Employment Data (LED) 2002 - 2008 data are aggregated from Census 2000 blocks



## TOD Report

View as: [Table](#) | [List](#)    Download as: [Word](#) | [Excel](#) | [CSV](#)

Chicago Transit Region:

Population 2000: <sup>(2)</sup>	8,272,768
Population 2010: <sup>(3)</sup>	8,586,609
Jobs 2002: <sup>(4)</sup>	3,842,118
Jobs 2009: <sup>(5)</sup>	3,829,788
Median Household Income 2000: <sup>(6)</sup>	52,102
Median Household Income 2009: <sup>(7)</sup>	61,502



# Build Custom Reports

The image displays two screenshots of a web application interface for building custom reports. The left screenshot shows the 'Custom Report' page with a search bar and a list of data sources. The right screenshot shows the same page with a search bar containing 'vehicles tenure' and a list of selected database columns.

**Left Screenshot:**

- Page title: Custom Report
- Search bar: Search
- Selected Database Columns: None selected.
- Data Sources:
  - American Community Survey 2005-2009 5 Year Estimates
  - Census 2000 Summary File 1
  - Census 2000 Summary File 3
  - Census 2010 Summary File 1
  - Census Transportation Planning Package (CTPP) 2000 Part 1 (Place of Residence)
  - Census Transportation Planning Package (CTPP) 2000 Part 2 (Place of Work)
  - Census Transportation Planning Package (CTPP) 2000 Part 3 (Origin/Destination)
  - Housing + Transportation Affordability Index
  - Local Employment Dynamics (LED) Origin/Destination 2002 - 2008
  - Local Employment Dynamics (LED) Residential Area Characteristics 2002 - 2009
  - Local Employment Dynamics (LED) Work Area Characteristics 2002 - 2009
- Update button
- Footnote: All data are proportionally aggregated to transit zone, transit shed and transit region geographies.

**Right Screenshot:**

- Page title: Custom Report
- Search bar: Search: vehicles tenure Go Clear
- Selected Database Columns:
  - Tenure by Vehicles Available: Occupied housing units: Total:
- Data Sources:
  - American Community Survey 2005-2009 5 Year Estimates
    - ACS 2009 5-Year Estimates B25044: Tenure by Vehicles Available
      - Tenure by Vehicles Available: Occupied housing units: Total:
      - Tenure by Vehicles Available: Occupied housing units: Total: Owner occupied:
      - Tenure by Vehicles Available: Occupied housing units: Total: Owner occupied: No vehicle available
      - Tenure by Vehicles Available: Occupied housing units: Total: Owner occupied: 1 vehicle available
      - Tenure by Vehicles Available: Occupied housing units: Total: Owner occupied: 2 vehicles available
    - ACS 2009 5-Year Estimates B25045: Tenure by Vehicles Available by Age of Householder
    - ACS 2009 5-Year Estimates B25046: Aggregate Number of Vehicles Available by Tenure
  - Census 2000 Summary File 3
    - Census 2000 SF3 H044: Tenure By Vehicles Available
    - Census 2000 SF3 H045: Tenure by Vehicles Available by Age of Householder
    - Census 2000 SF3 H046: Aggregate Number Of Vehicles Available By Tenure
  - Census Transportation Planning Package (CTPP) 2000 Part 1 (Place of Residence)
    - CTPP Part 1 Table 078: All Households; for All 5 Categories of Household Size; for All 6 Categories of Vehicles Available; for All 5 Categories of Tenure
- Update button
- Footnote: All data are proportionally aggregated to transit zone, transit shed and transit region geographies.

# Download Data and Stations

## TOD Report

View as: [Table](#) | [List](#) Download as: [Word](#) | [Excel](#) | [CSV](#)

Buffer	Agency	Line(s)	Station Name	Latitude <sup>(1)</sup>	Longitude <sup>(1)</sup>	Population 2000 <sup>(2)</sup>	Population 2010 <sup>(3)</sup>
Chicago Transit Region						8,272,768	8,586,609
Station .5 Mile Transit Zone CTA	Brown Line		Southport	41.943744	-87.663619	19,051	19,595
Station .5 Mile Transit Zone CTA	Brown Line, Purple Line, Red Line		Belmont	41.939751	-87.65338	23,901	24,139
Station .5 Mile Transit Zone CTA	Red Line		Addison-Red	41.947428	-87.653626	24,303	26,329

<sup>1</sup> Station location, current as of January 1, 2012. Station locations are updated (as necessary) on a quarterly basis which may result in changes in aggregated data.  
<sup>2</sup> Census 2000 Summary File 1 p001001 aggregated from Census 2000 Blocks  
<sup>3</sup> Census 2010 Summary File 1 p0010001 aggregated from Census 2010 Blocks  
<sup>4</sup> 2002 LED Work Area Characteristics total aggregated from Census 2009 Blocks  
<sup>5</sup> 2009 LED Work Area Characteristics total aggregated from Census 2009 Blocks  
<sup>6</sup> Census 2000 Summary File 3 p053001 weighted average from Census 2000 Block Groups  
<sup>7</sup> American Community Survey 2005-2009 5-Year Estimates b19013\_001 aggregated from Census 2009 Block Groups

- Download **data** to Excel, Word or CSV
- **Station locations** can be downloaded by region or for the entire US
- **Print** map and data

The screenshot shows the TOD Database web application. The main content area displays a 'TOD Report' for Chicago. On the left, there are navigation options: 'View as: Table | List | Download List'. Below this, a list of statistics is provided for the Chicago Transit Region, including 'Workers 16 years and over: Total' (3,817,402), 'Public transportation' (475,821), and 'Subway or elevated' (137,350). On the right, a map of Chicago is shown with various transit zones and station locations marked. The interface includes a search bar, a 'Log Out' button, and a 'CNT' logo. The URL in the top right corner is 'http://184.73.196.48/toddata.cnt.org/db\_tool.php'.

# Using the Database for Economic Development to Create Sustainable & Livable Communities

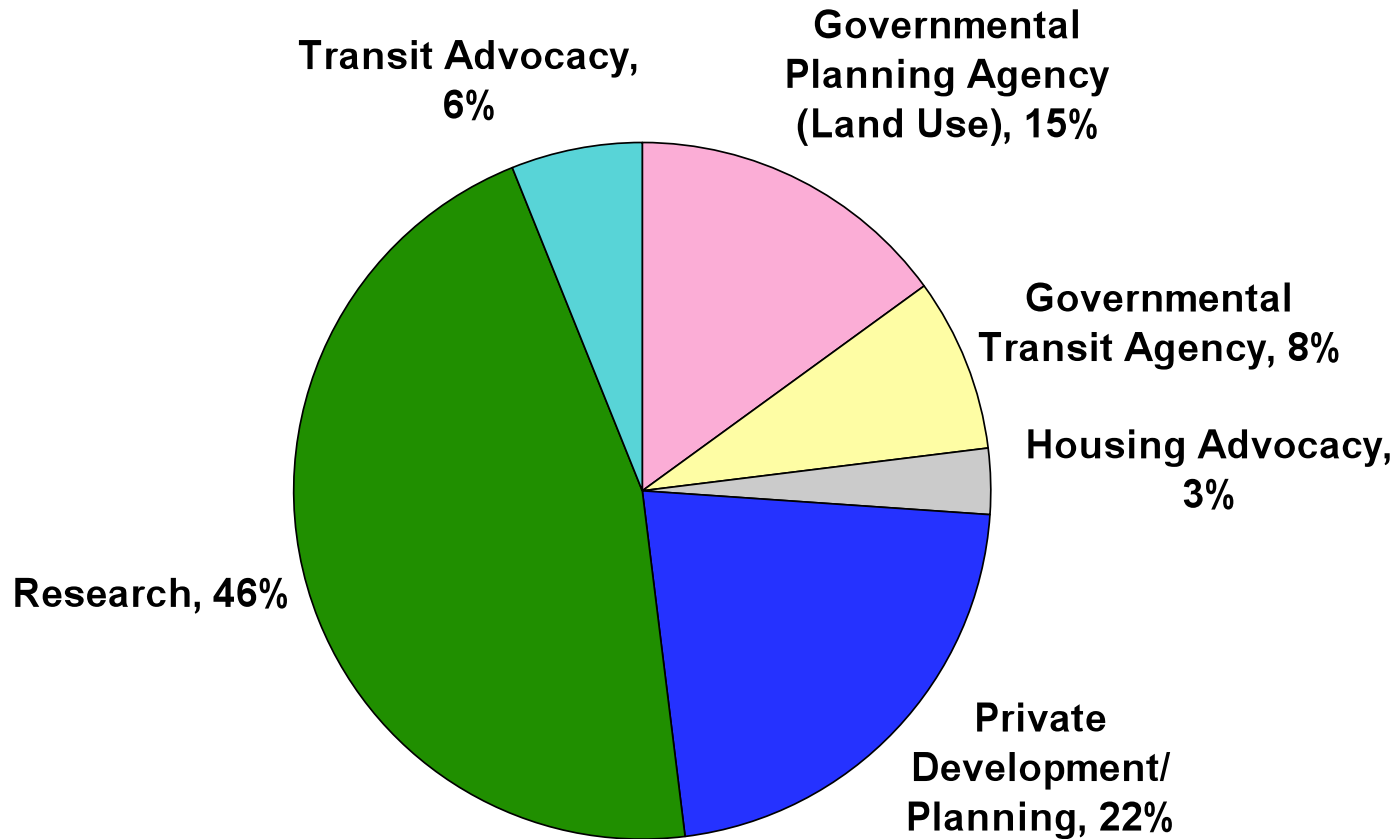


San Diego Light Rail Station  
EPA Smart Growth



PDX Museum South Safeway 7 Streetcar  
EPA Smart Growth

# Users of the **TOD** Database



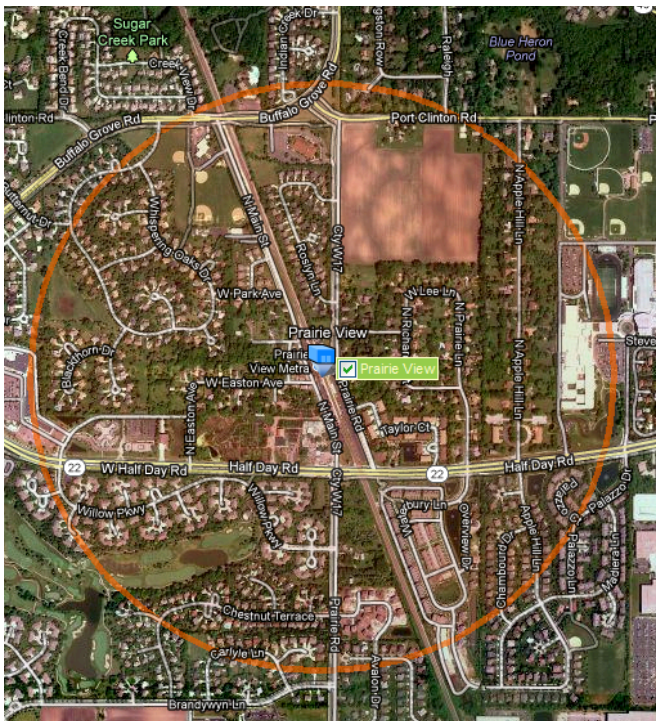
1,169 Registered Users

# Urban Form Transect

## Prairie View

Total Jobs = 447  
Retail Jobs = 2  
Households = 682  
T% of Income = 21.6%

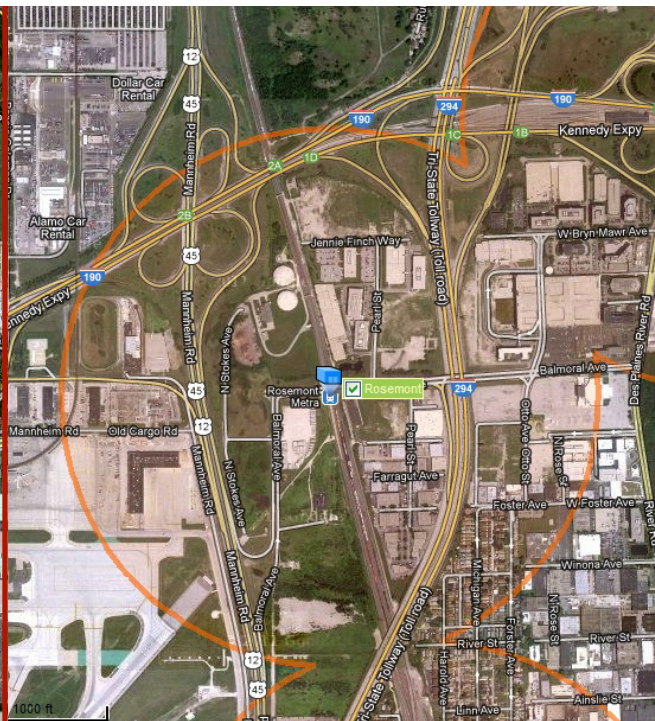
## Exurban



## Rosemont

Total Jobs = 2,600  
Retail Jobs = 20  
Households = 126  
T% of Income = 18.9%

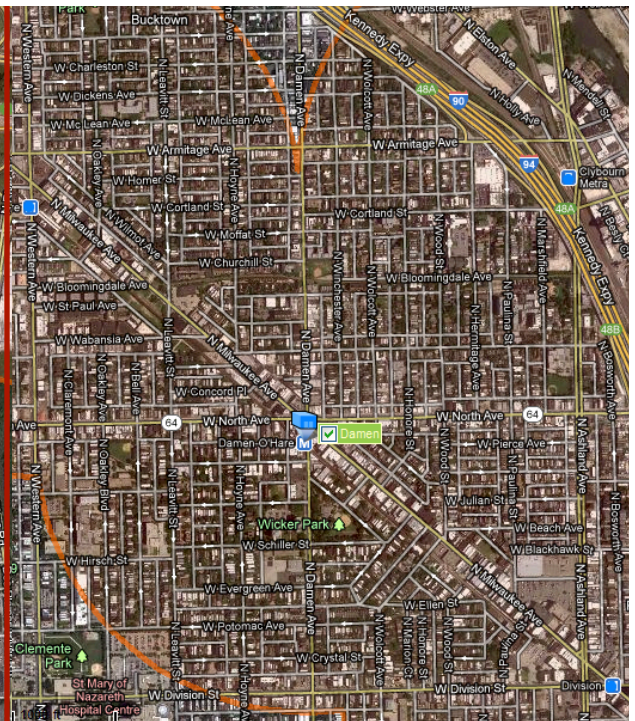
## Suburban



## Damen

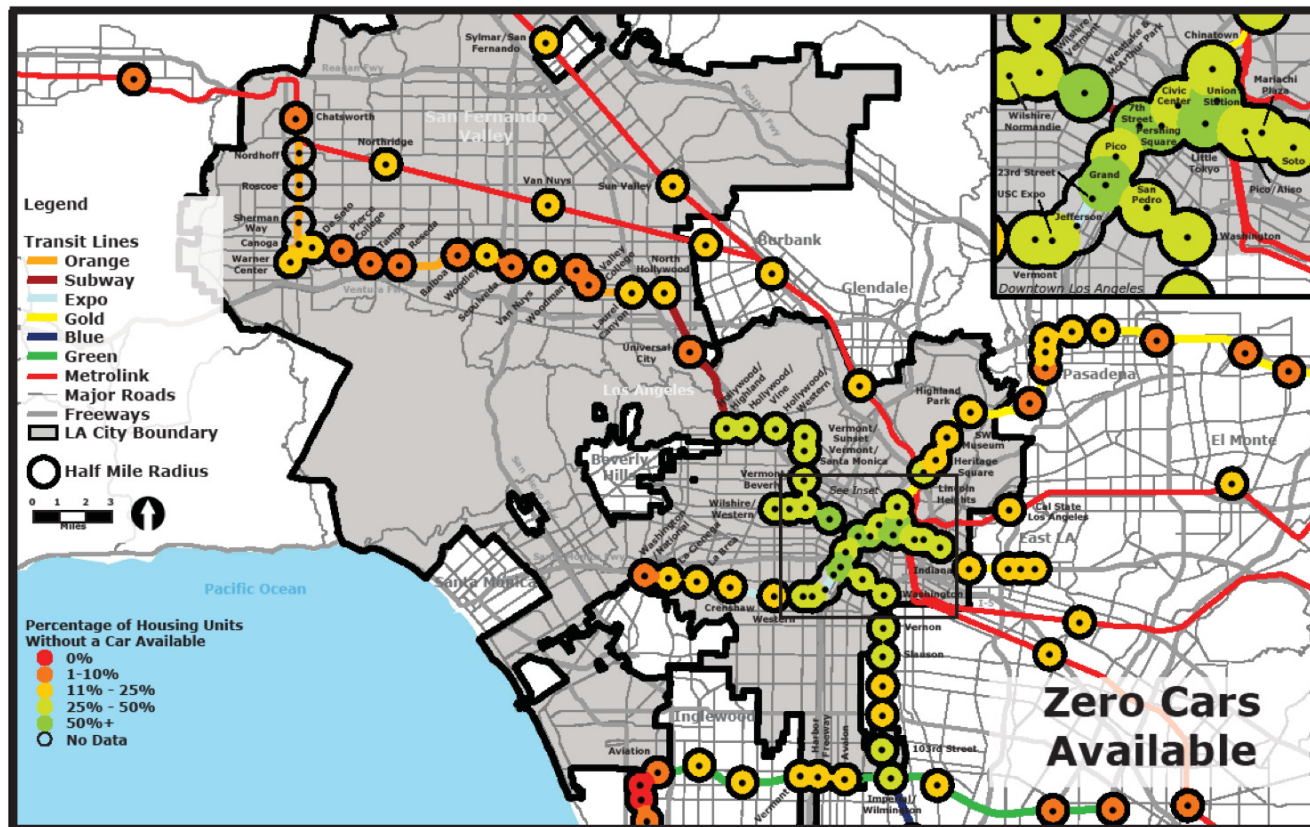
Total Jobs = 5,451  
Retail Jobs = 950  
Households = 8,335  
T% of Income = 14.7%

## Urban



# Transportation Planners

## Justifying Reduced Parking in TOD Areas

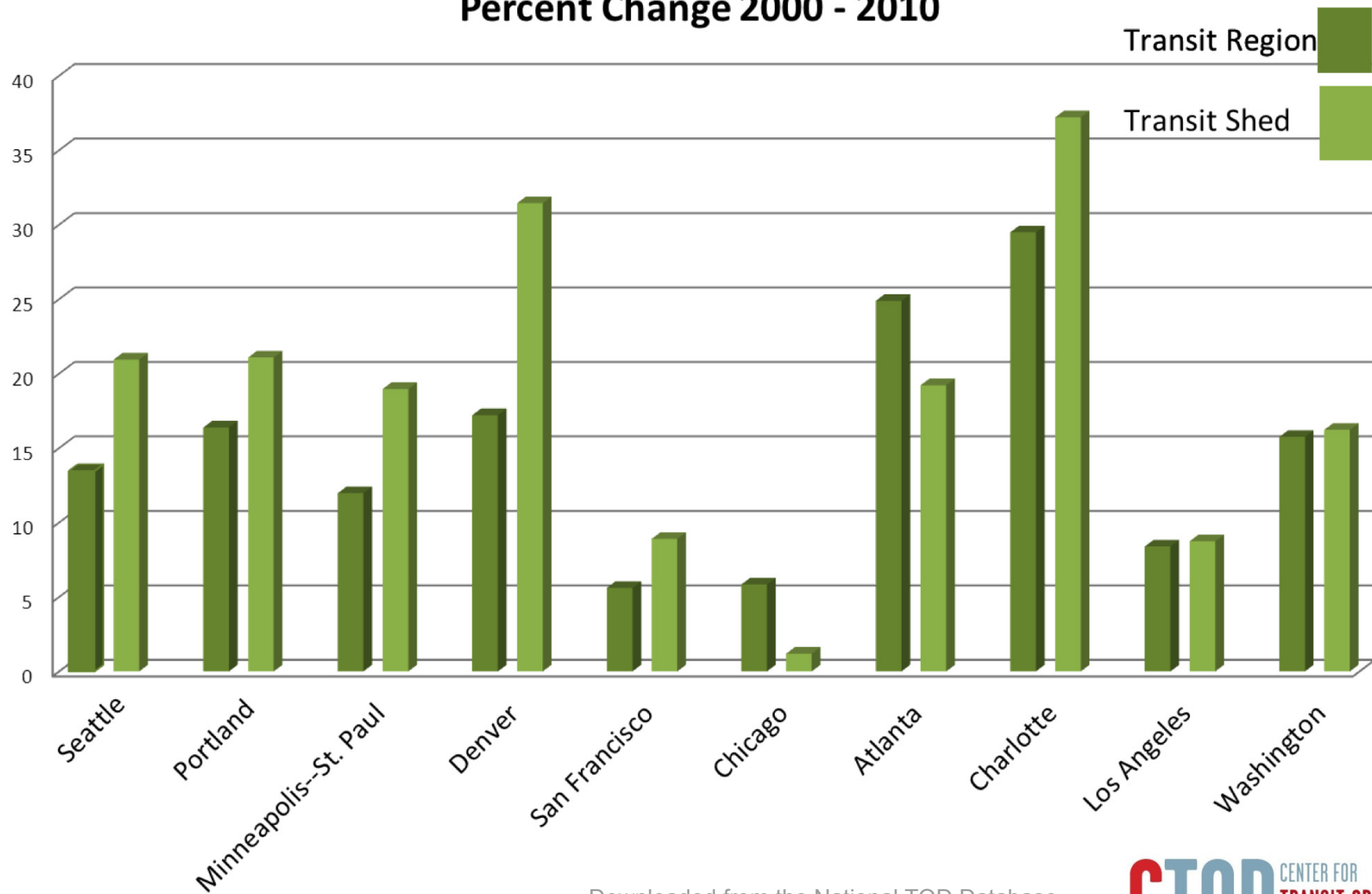


Los Angeles  
Parking  
Study

Planning for  
Demand

# TOD Trends

## Total Households Percent Change 2000 - 2010

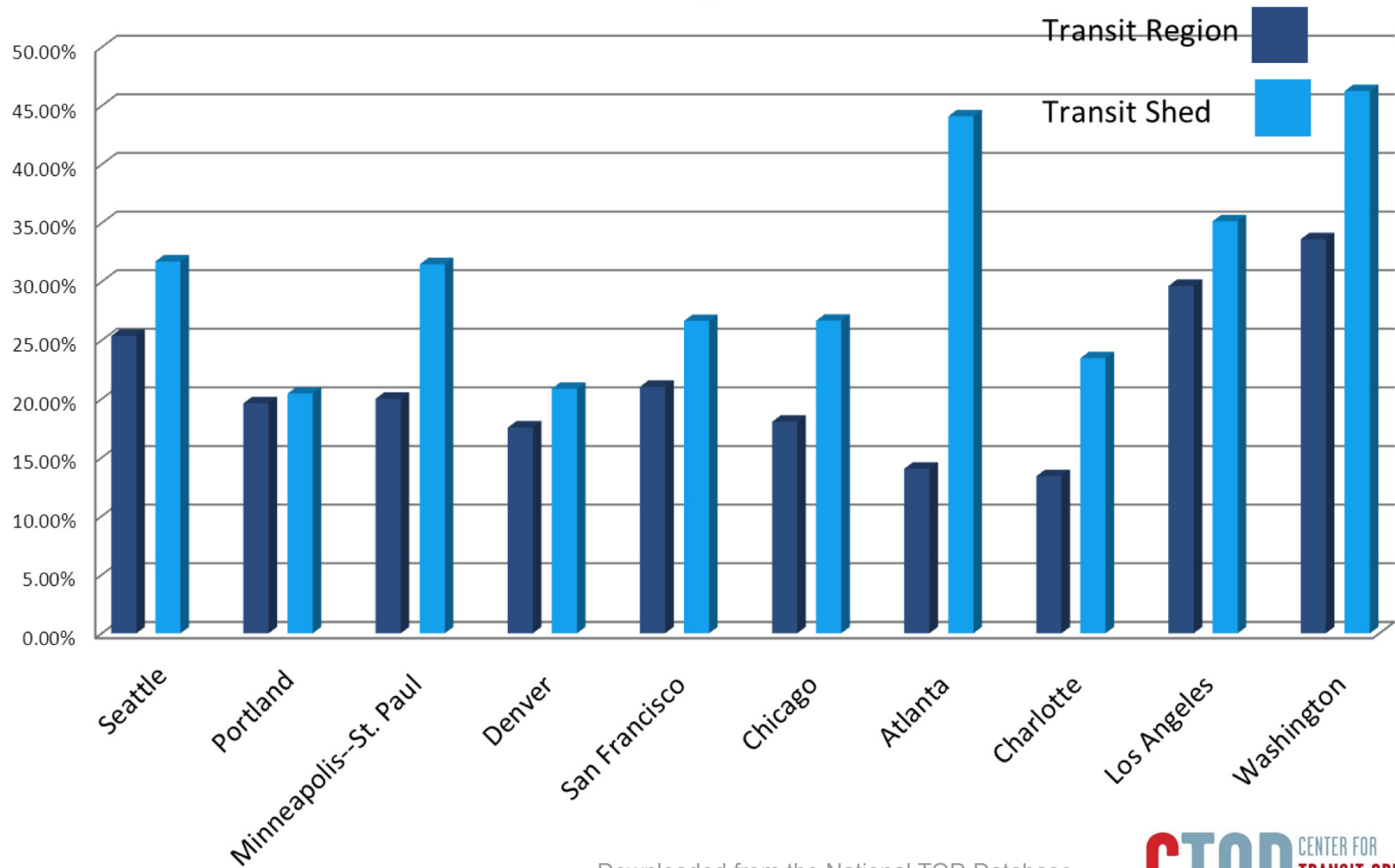


\*Preliminary Findings

Downloaded from the National TOD Database  
Data: Census 2000, Census 2010

# TOD Trends

## Median Household Income Percent Change 2000 - 2009



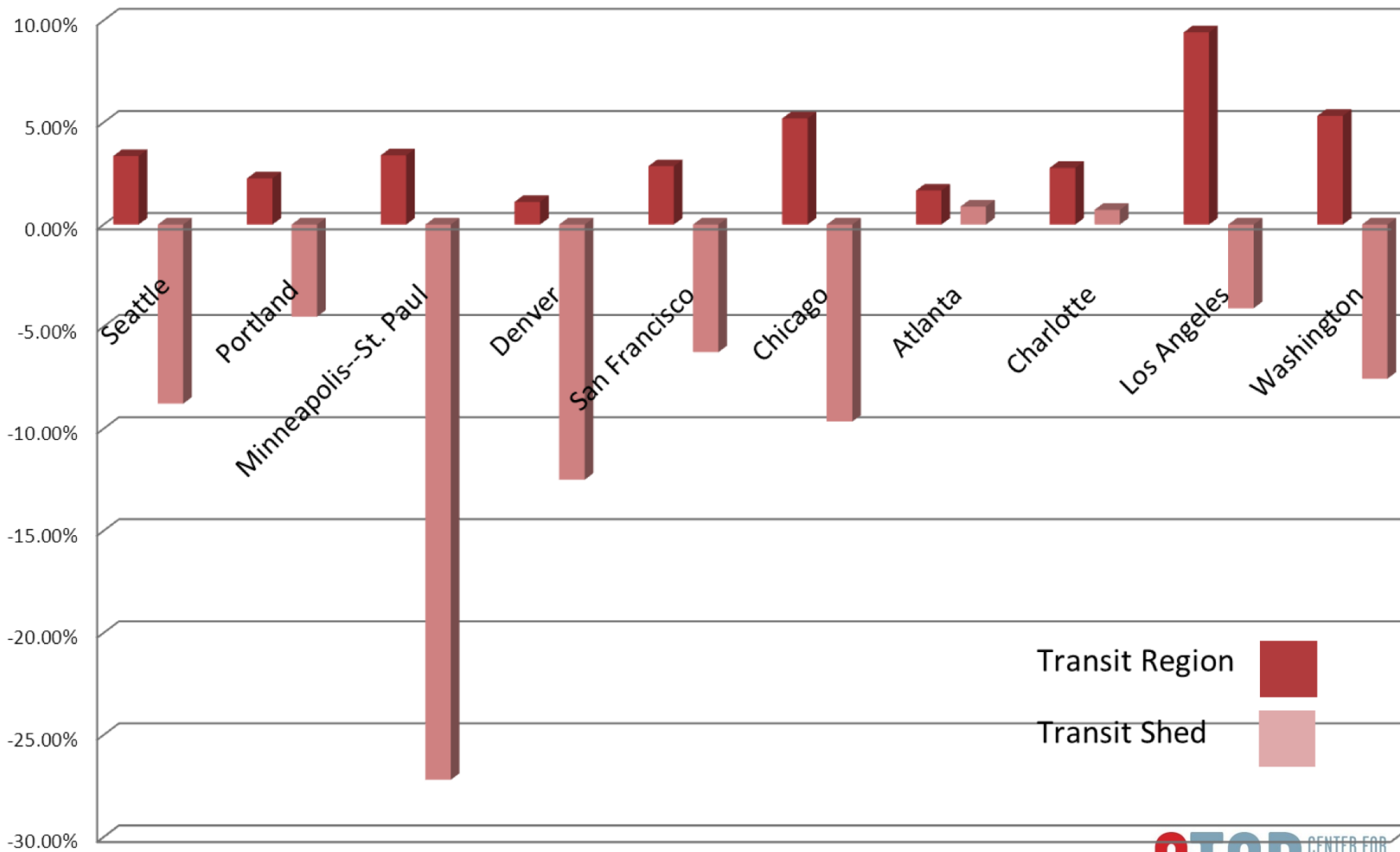
\*Preliminary Findings

Downloaded from the National TOD Database  
Data: Census 2000, ACS 2005-09



# TOD Trends

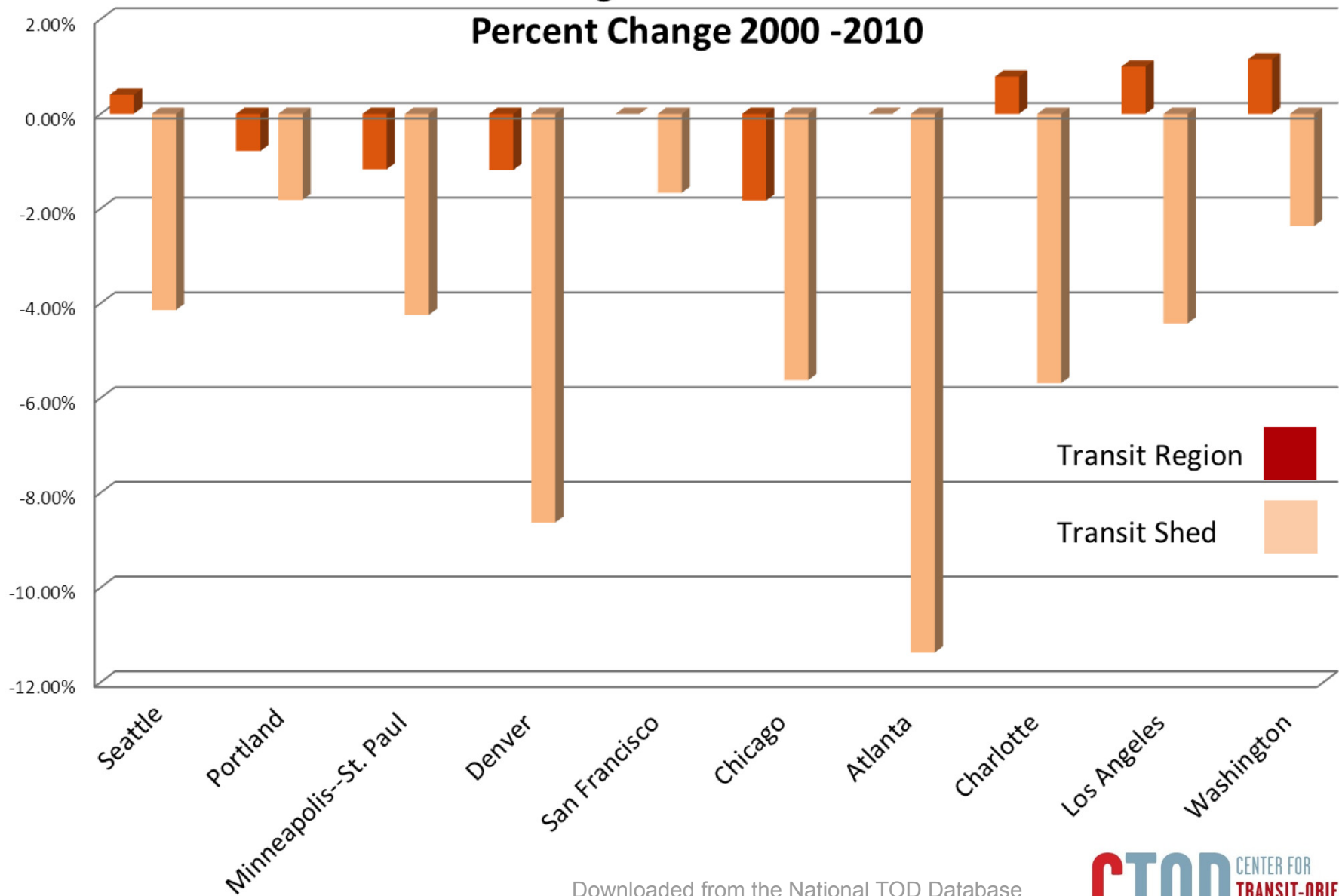
Average Number of Vehicles available per Household  
Percent Change 2000 to 2009



Downloaded from the National TOD Database  
Data: Census 2000, ACS 2005-09

# TOD Trends

## Average Household Size Percent Change 2000 -2010

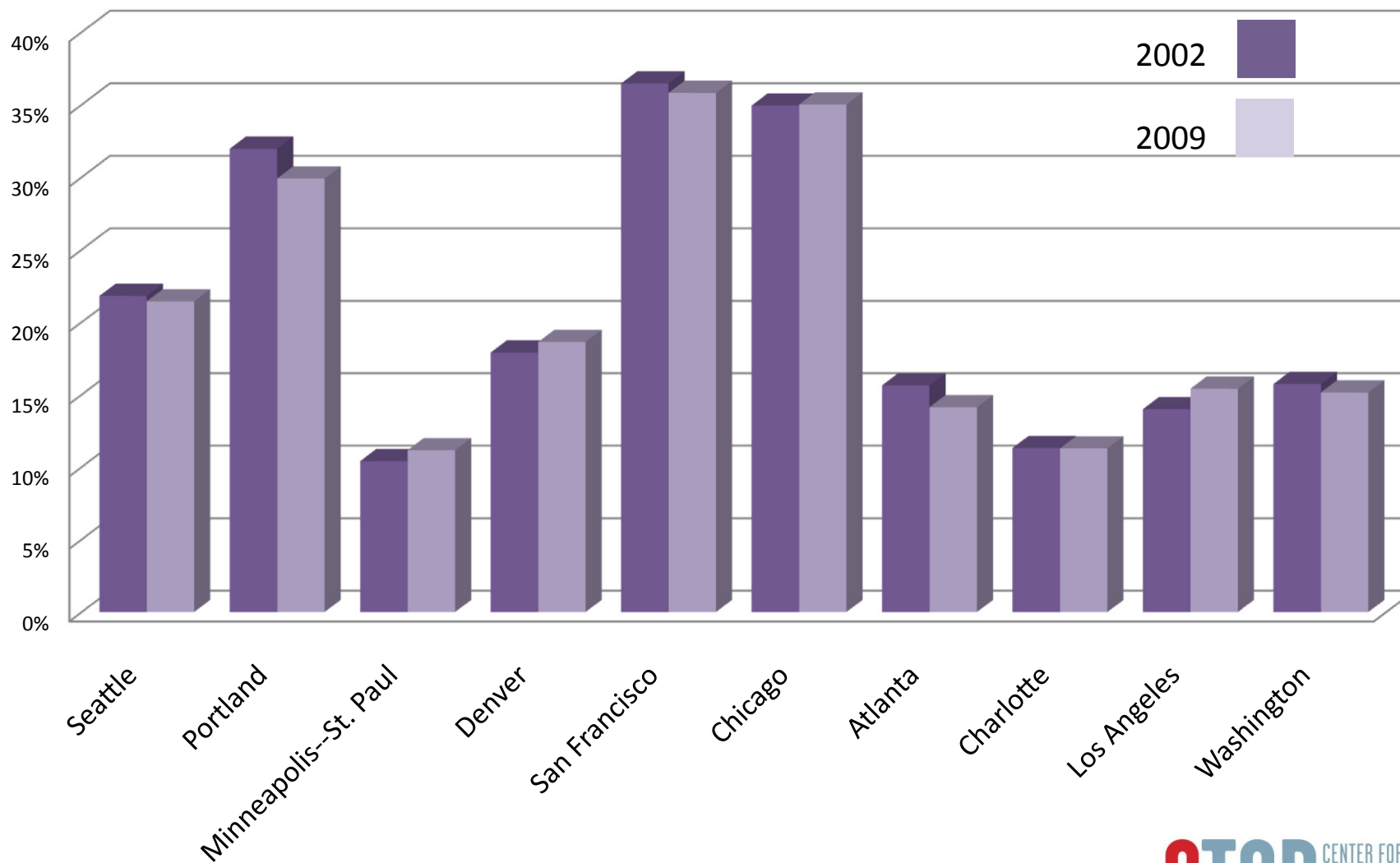


\*Preliminary Findings

Downloaded from the National TOD Database  
Data: Census 2000, Census 2010

# TOD Trends

## Percent of Total Regional Jobs Located in Transit Shed 2002 & 2009



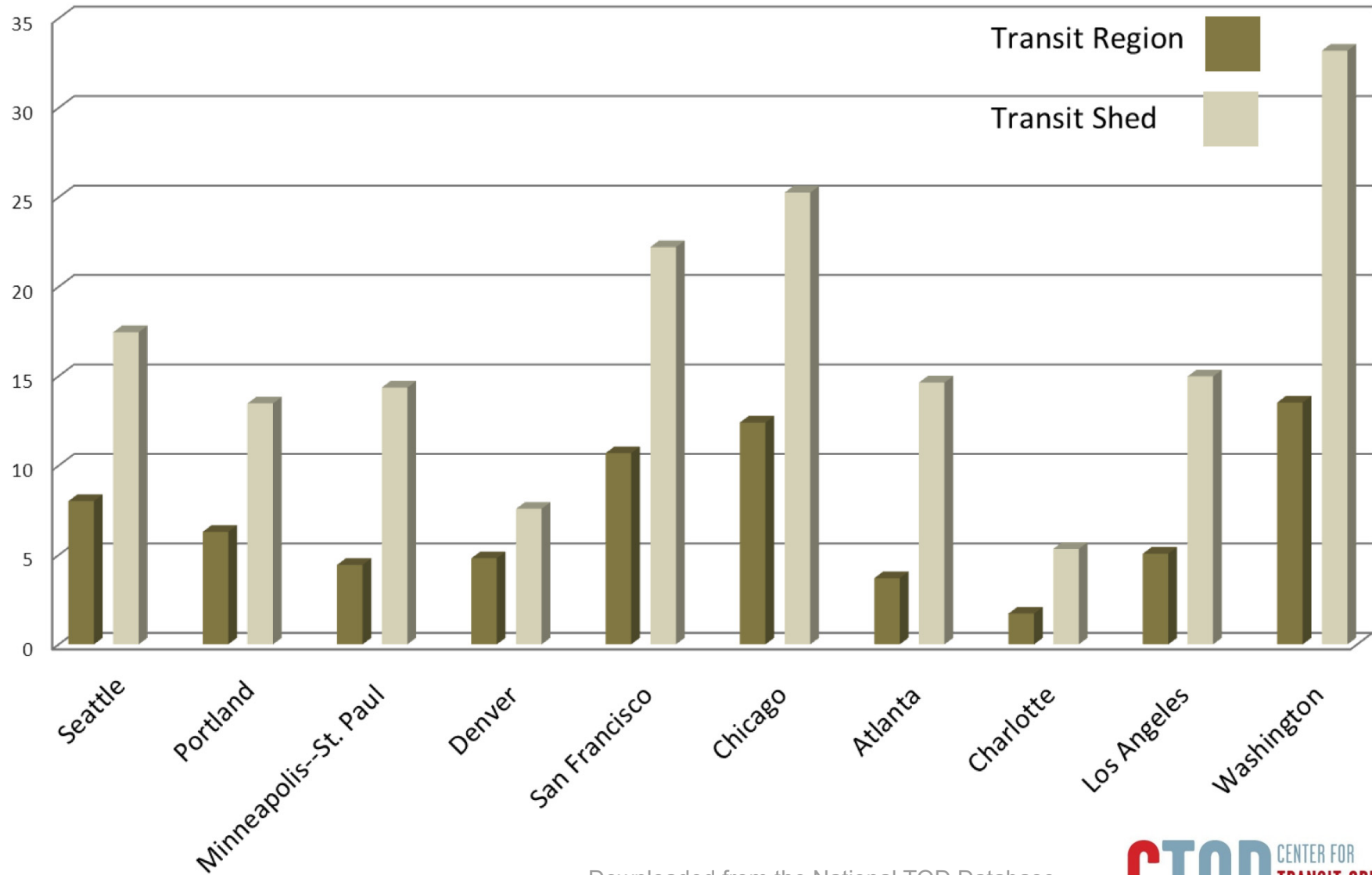
\*Preliminary Findings

Downloaded from the National TOD Database  
Data: LED Work Area Characteristics 2002 & 2009



# TOD Trends

## Percent of Workers Taking Public Transit to Work 2009

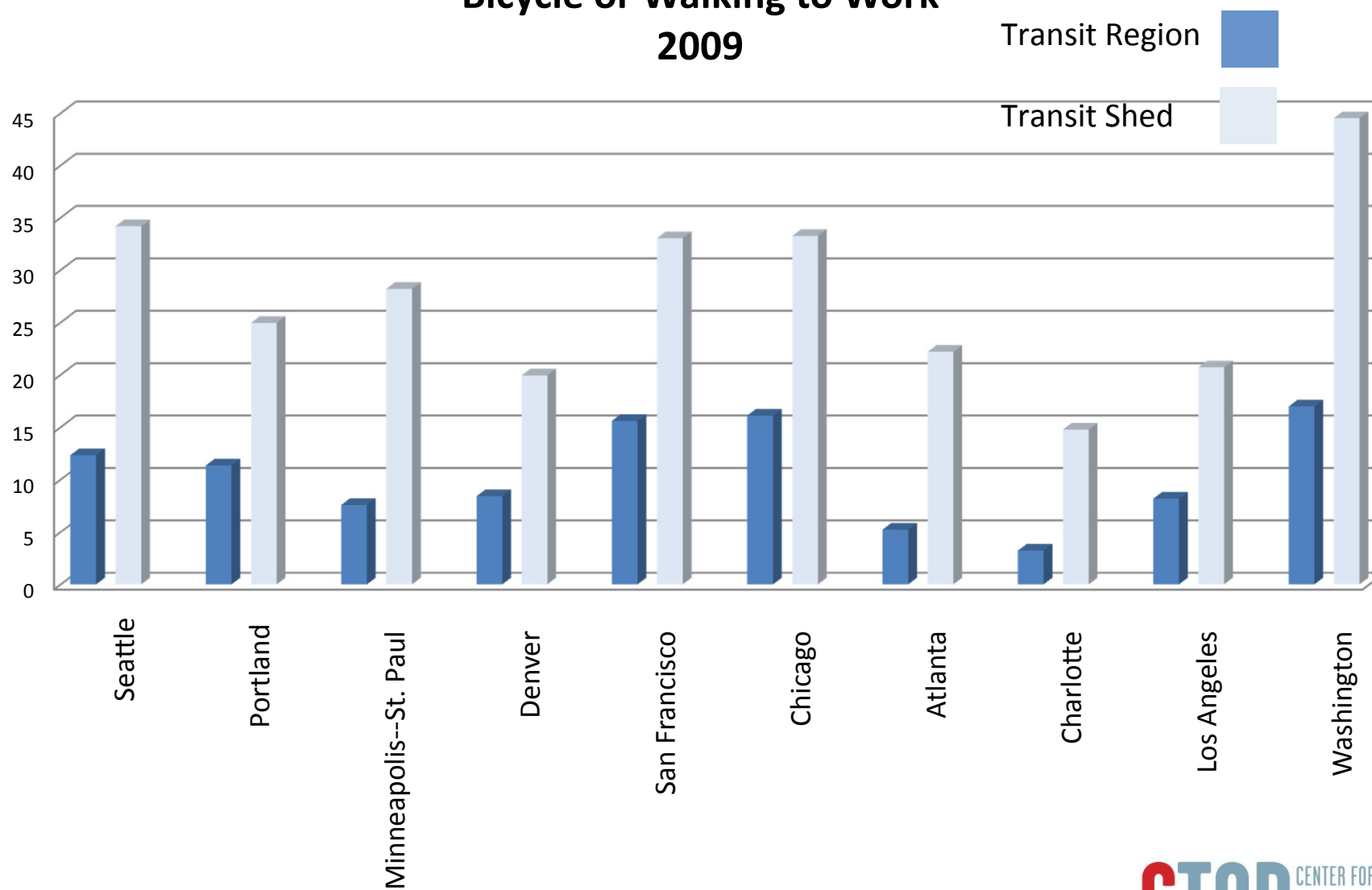


\*Preliminary Findings

Downloaded from the National TOD Database  
Data: Census 2000, ACS 2005-09

# TOD Trends

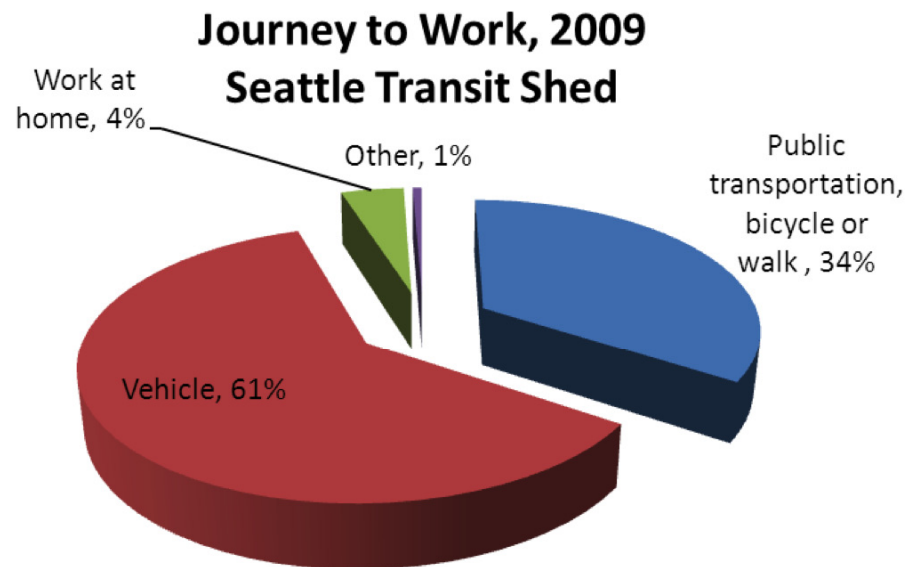
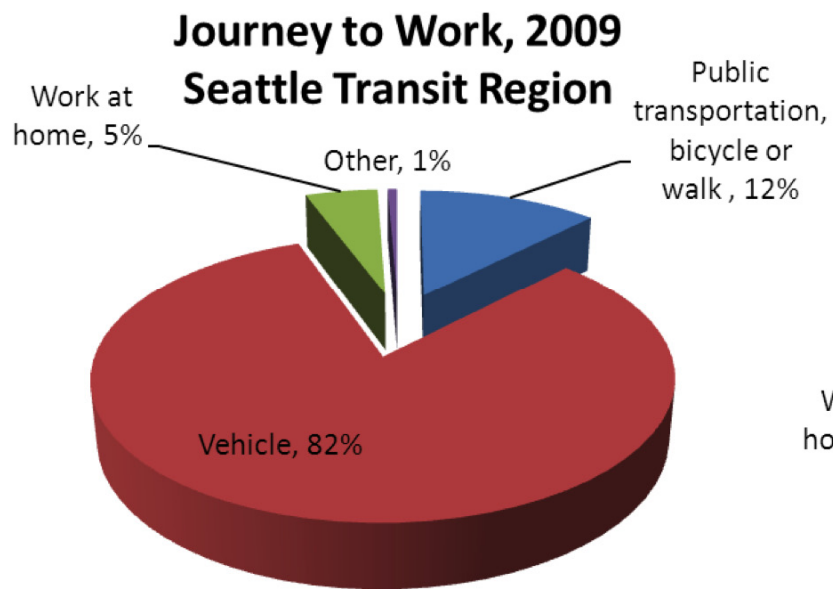
## Percent of Workers Taking Public Transportation, Bicycle or Walking to Work 2009



\*Preliminary Findings

Downloaded from the National TOD Database  
Data: Census 2000, ACS 2005-09

# TOD Trends



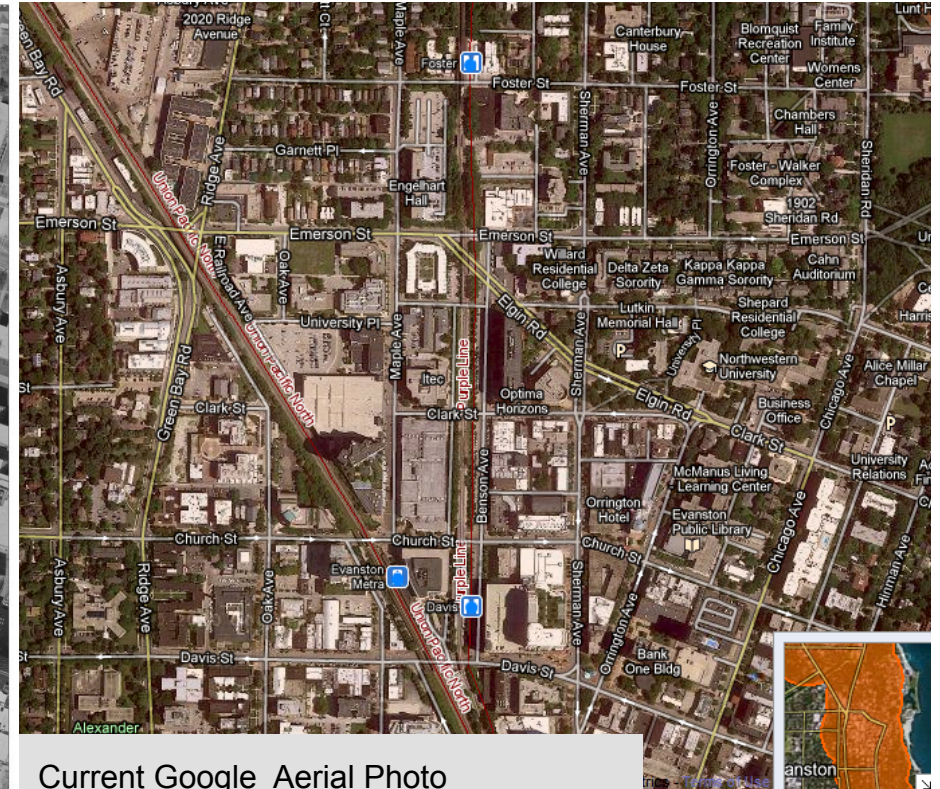
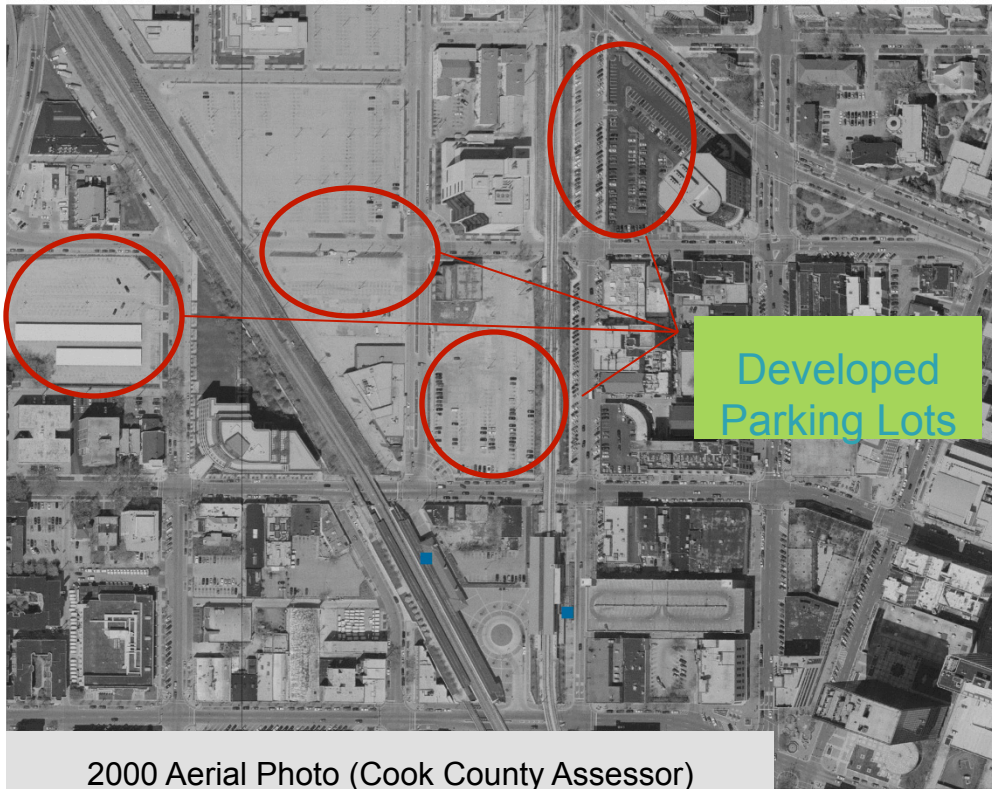
# TOD's Impact on **Infill Development** Davis Transit Station in Evanston, IL

**Drilling Down to the  
Transit Zone**

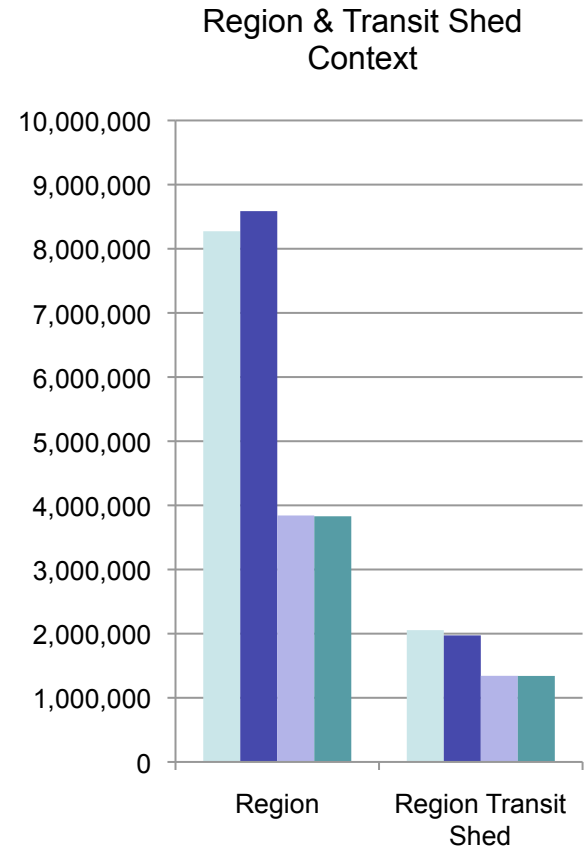
## Davis Station Transit Zone

Households (2000-10) ↑ 12%  
Jobs (2002-09) ↑ 23%

2010 Households = 6,115  
2009 Jobs = 21,889

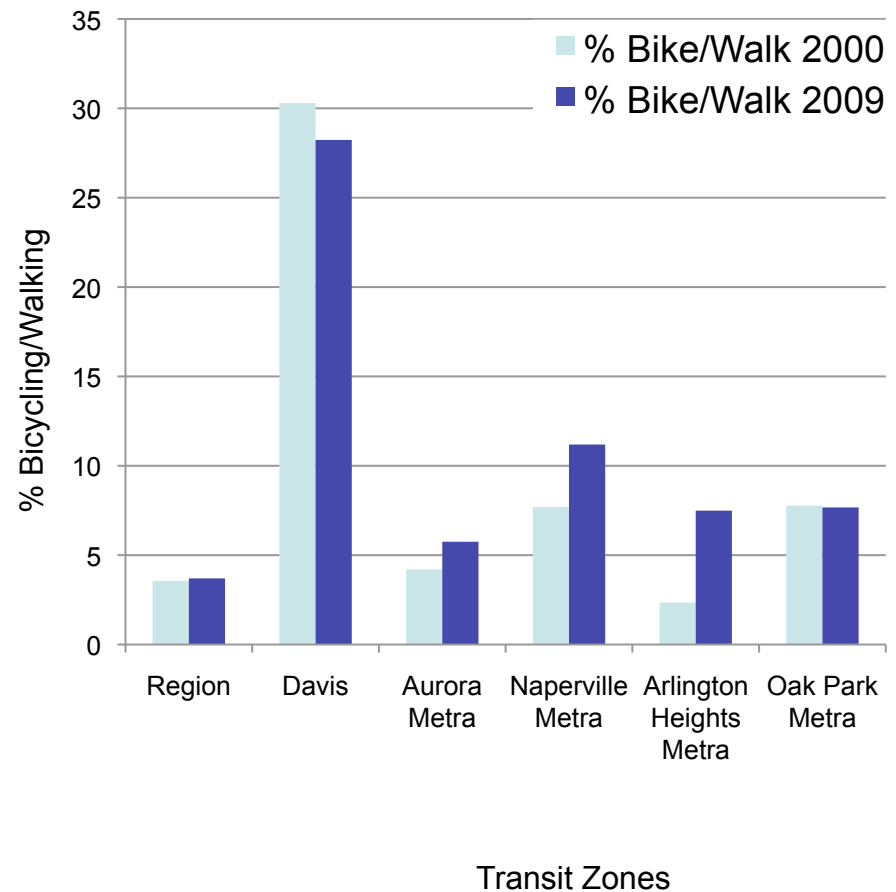
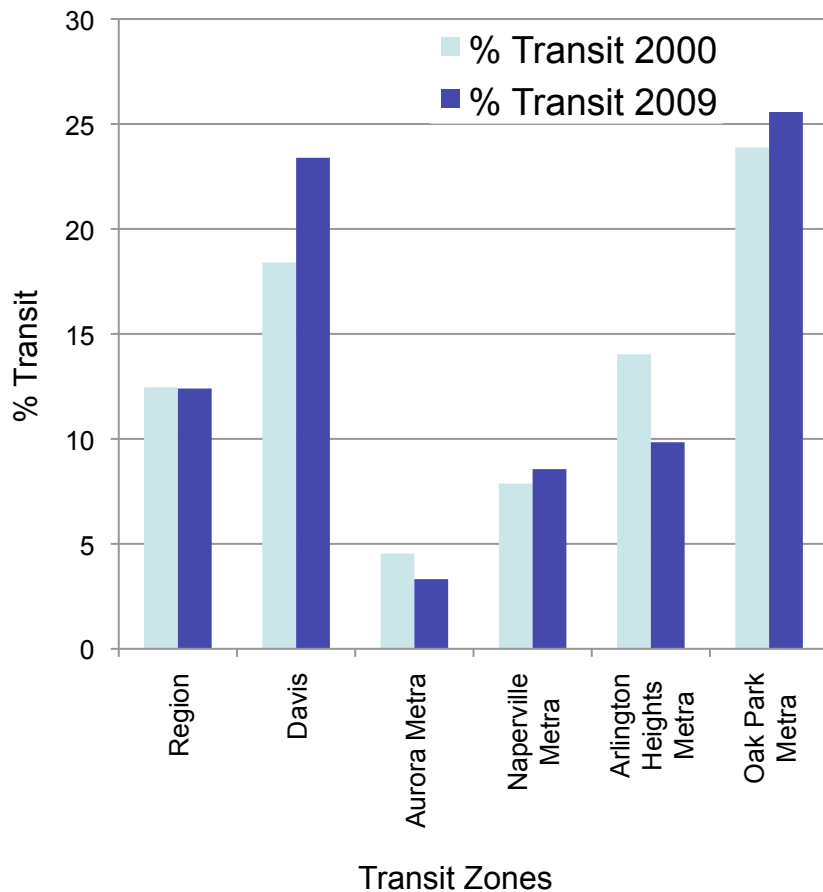


# Suburban Chicago Examples of TOD





# Transit & Bicycling/Walking are Heavily Utilized at TOD's



Source: 2000 Census & ACS 2009 5 Year Average Data on Journey to Work Trends

# CTOD Contacts

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