MAKING THE CONNECTION

Using Transit Access to Opportunities for Planning

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RTA 2018 TRANSIT STRATEGIC PLAN

Strategic Planning Process

2015-2017
Foundational topics white papers
Initiate related studies

2017
Draft plan development
Public outreach and Board review

2018 (January)
Plan adoption
MEASURING ACCESSIBILITY
MAKING THE CONNECTION WITH T.O.D.
(TRANSIT-ORIENTED DATA)
LOTS OF INTEREST IN ACCESS

- Brookings Institution
- US Dept of Housing and Urban Development
- Chicago Metropolitan Agency for Planning (CMAP)
- Citilabs’ Sugar Access
- CNT AllTransit
- Access Across America (U. of MN)
TRANSIT ACCESS PLANNING TOOL

1. Choose case-specific origins and destinations

2. Adjust the network & service

3. Analyze multi-modal and off-peak access

4. Report relevant statistics and measures (and is sensitive enough to do so)

5. Create engaging and persuasive visuals for planning
About 135,000 people make a round-trip on Metra (commuter rail) every day

To get to their origin station:

- 2,000 bike (or other)
- 5,000 ride a bus
- 39,000 walk
- 89,000 drive*

*Includes driving alone, carpool, drop-off, and taxi
ACCESS TOOL DEVELOPMENT
RESOURCES

1) Scheduled Transit Service (GTFS)
2) Street Map
3) Origins & Destinations (shapes/data)
4) Analysis Tool
PROCESS

1. Identify all origins and destinations within a walkable distance of transit stops
2. Identify all transit stops that provide access via automobile
3. Calculate travel times and find the shortest route to every transit accessible destination:
   A. By walk access only
   B. By drive access only:
      i. drive times to nearest Park-n-rides, plus
      ii. Transit times from PnRs to destinations
4. Attach data and analyze
REGIONAL TRAVEL TIME TO WORK

Travel time to work by mode (minutes)

- less than 15
- less than 30
- less than 45
- less than 60

% of trips by mode

- Transit
- Drive Alone

1/3 of all transit trips
OPPORTUNITY VALUE & ACCESS SCORE

Opportunity Value = $1.2157e^{-0.017 \times \text{(Travel Time)}}$

- Regional Percentile of transit work trips (opportunity value)
- Minutes to Job on Transit

- 73% at 0 minutes
- 44% at 20 minutes
- 26% at 100 minutes
APPLICATIONS FOR PLANNING
CORRELATED FACTORS

AMS = -0.00007*(TAS)^2 + 0.0009*(TAS) + 0.8898
SUB-CATEGORY ACCESS

HEALTHCARE AND SOCIAL SERVICES

MANUFACTURING

% of all regional
HEALTHCARE opportunities accessible in 90 minutes
(2010 industry data)
- 0.1% - 5%
- 5.1% - 15%
- 15.1% - 30%
- 30.1% - 50%
- 50.1% - 100%
Healthcare Opportunity Clusters

% of all regional
MANUFACTURING opportunities accessible in 90 minutes (2010 industry data)
- 0.1% - 5%
- 5.1% - 15%
- 15.1% - 30%
- 30.1% - 50%
- 50.1% - 100%
Manufacturing Opportunity Clusters

GTA Rail
Metra Rail
SUMMARY

• Access measurement is an important tool in the planner’s toolbox
• Ability to adjust O’s and D’s, transit network, service characteristics, multi-modal access, off-peak access, reporting measures, and illustrations are all key elements for a planner’s tool
• Data & resources are probably already available, but take time and be vigilant w/ methods
• Build consensus around the measures and interpretations