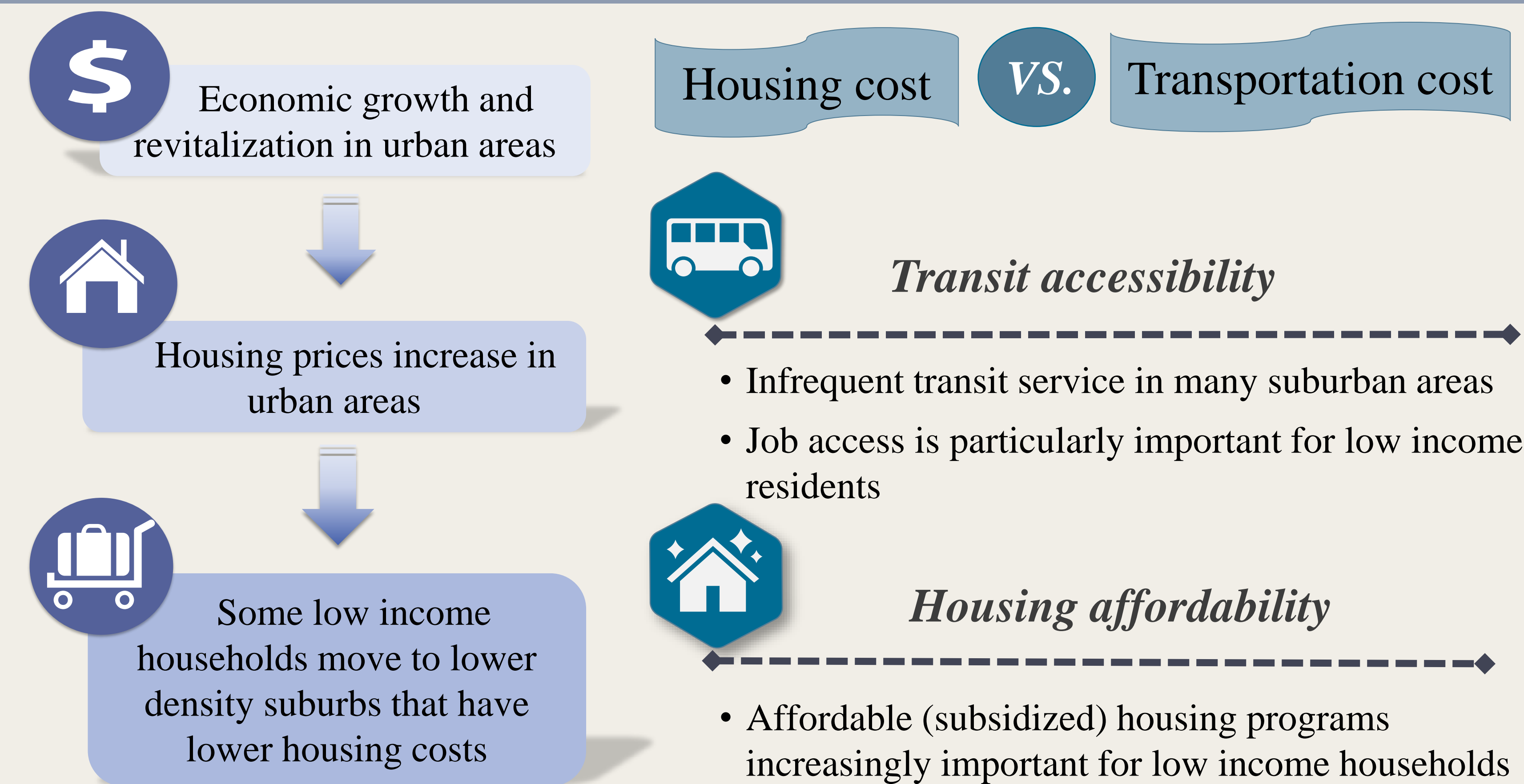


## 1. Background



- Prior research has given scant attention to regions with predominantly **automobile-oriented** transportation systems and **bus-based public transit systems**, like Tennessee.
- Transit accessibility levels of many existing affordable housing units have not been systemically evaluated in Tennessee.

## 2. Objectives

### Objective 1:

Evaluate transit equity of affordable housing programs at the city level;

### Objective 2:

Evaluate transit equity of individual affordable housing locations and identify specific affordable housing locations that have inequitable transit access within the city ; and

### Objective 3:

Propose short-term transit service modifications to potentially increase transit accessibility for existing individual affordable housing locations.

## 3. Data

### Transit network:

General Transportation Feed Specification (GTFS) data in Feb. 2022

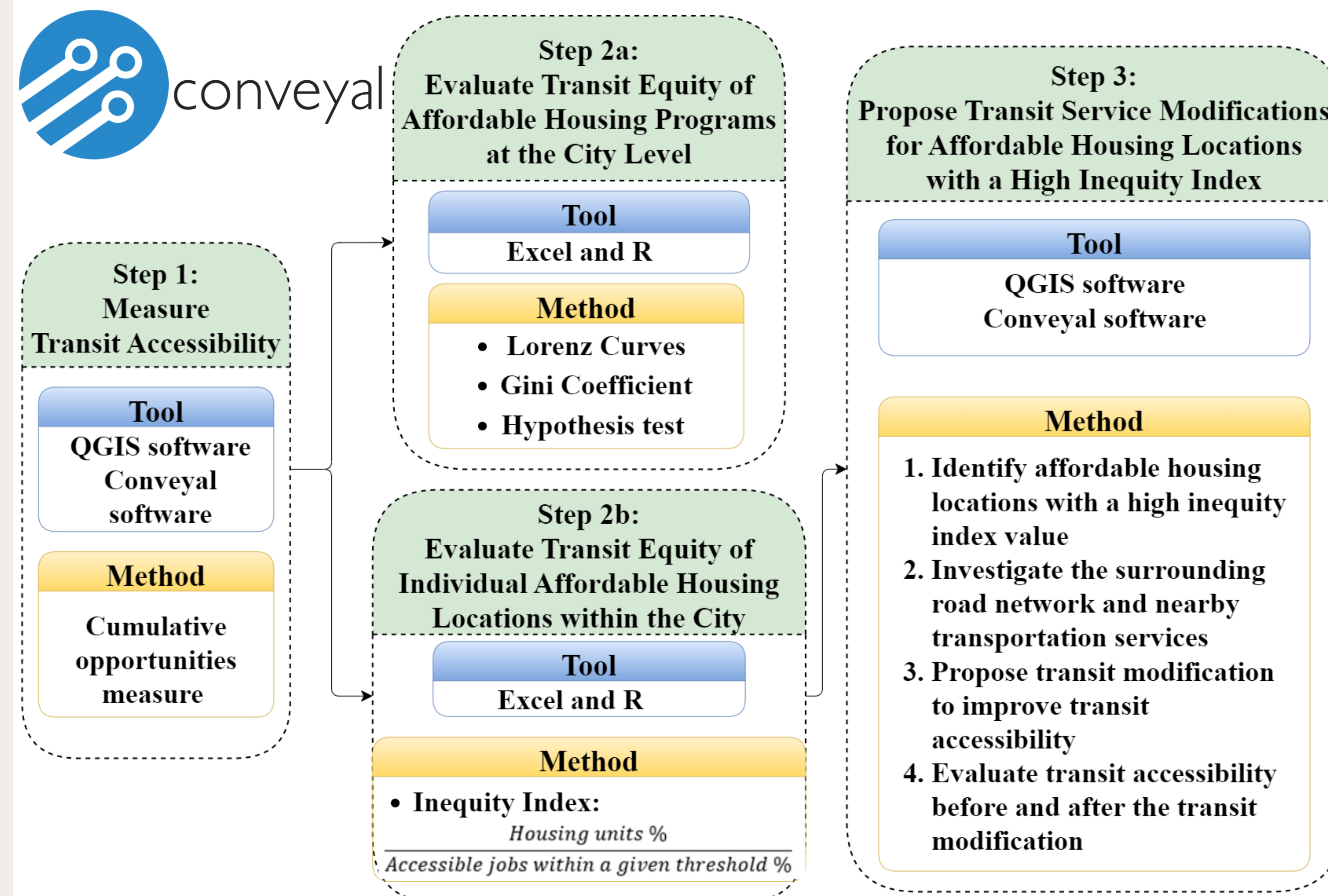
### Job opportunities:

Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics dataset in 2018

### Affordable housing locations:

- Low-Income Housing Tax Credit (LIHTC) (2022)
- Assisted Multifamily Housing (Multifamily) (include Section 8 Project Based Assistance; 2022)
- Public Housing (PH) (2022)

## 4. Method



## 5. Results – Step 2b & Step 3

Table: Affordable Housing Locations with Top Five Inequity Index in Memphis

Inequity Index Rank	Measures		
	Inequity Index	Accessible jobs	Housing units
1	1,092	94	158
2	1,057	123	200
3	963	135	200
4	709	99	108
5	331	171	87

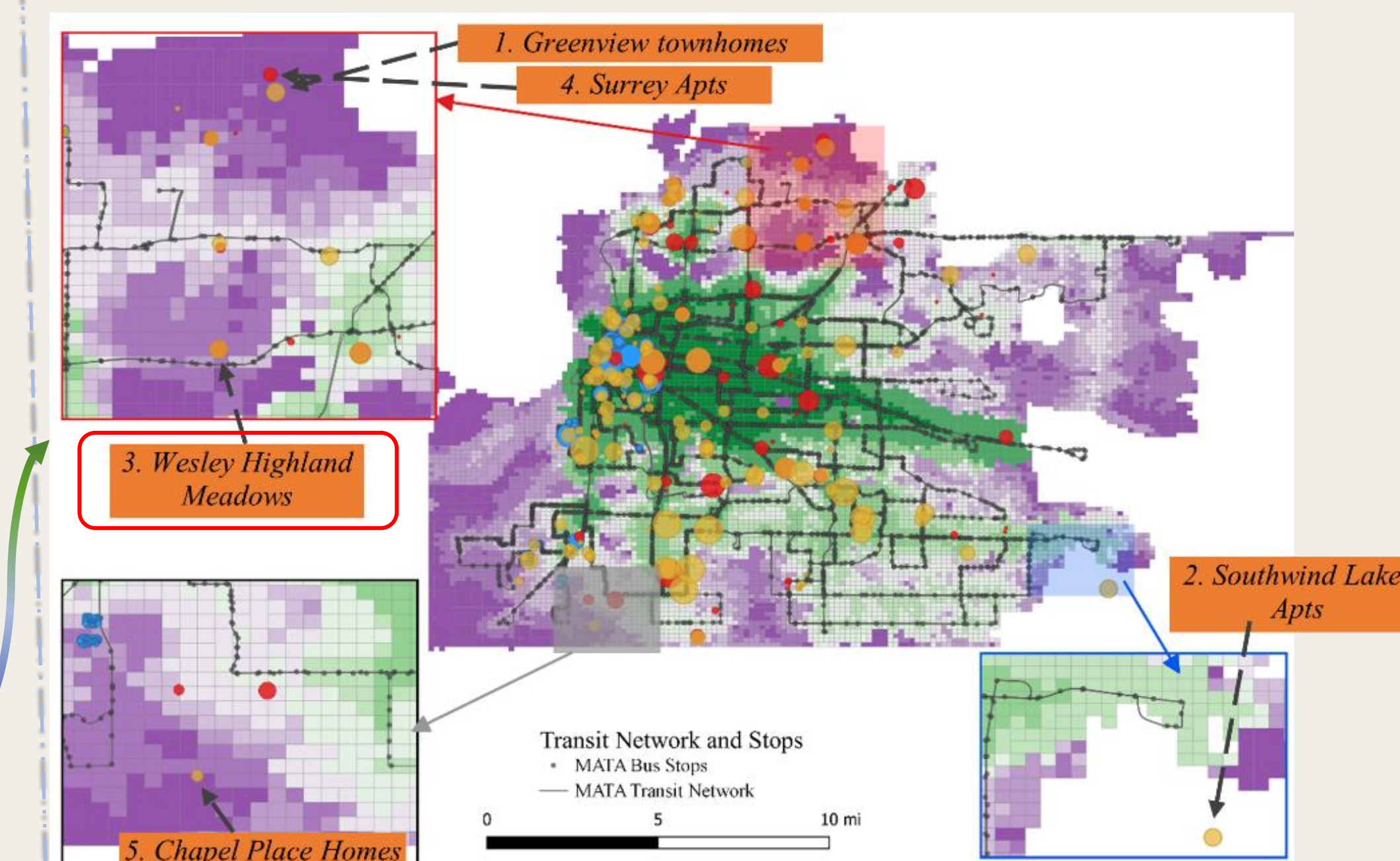


Figure: Top Five Affordable Housing Locations with Limited Transit Access in Memphis

1). Investigate surrounding road network and nearby transit services

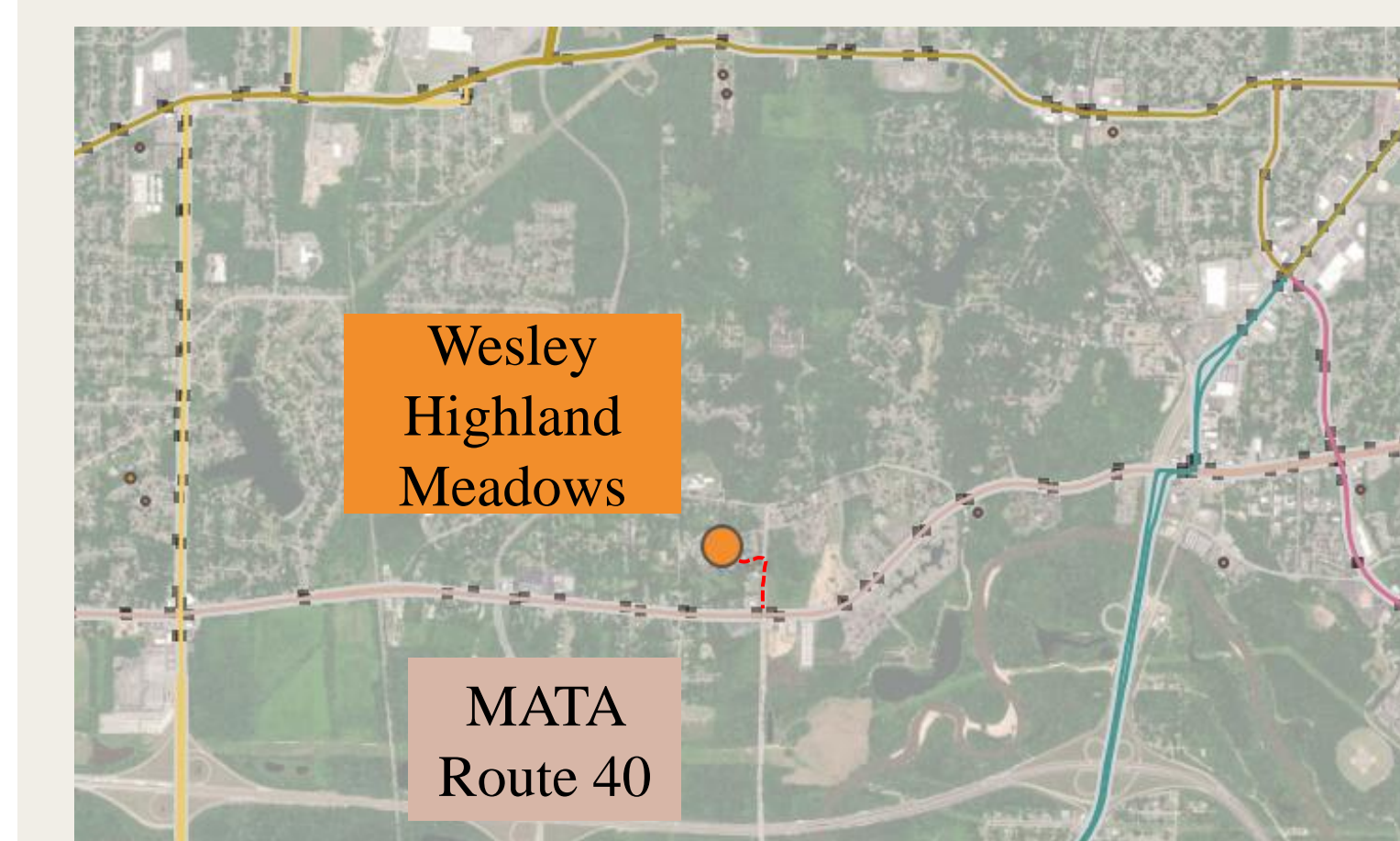


Figure: Satellite view of Wesley Highland Meadows, the surrounding road and the transit network

### Draft recommended network from Transit Vision Memphis:

- Rename Route 40 to Route 14
- Route 14: **60-minutes frequency**

2). Propose transit modifications in Conveyal software

**Proposed transit modification:**

- Possibly **increase frequency** in AM-peak hours (from 90 minutes to 60 minutes)

3). Evaluate transit modifications in Conveyal software

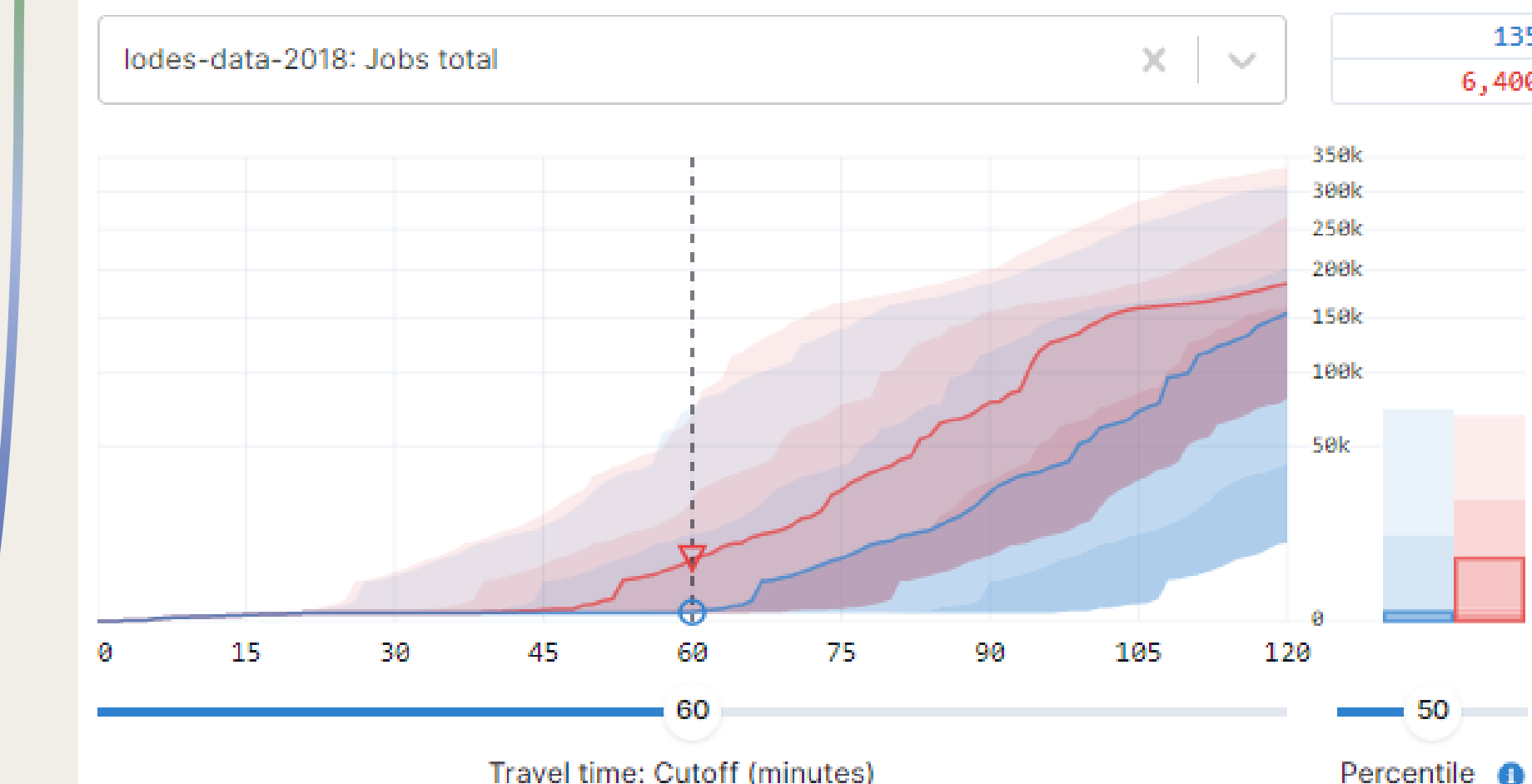


Figure: Charts of transit accessibility results before and after modifying MATA transit route 40 Wesley Highland Meadows

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- Perrey, R. M. (2022). Low-Income Housing Credit 2022 Qualified Allocation Plan. Retrieved from <https://www.novoco.com/sites/default/files/atoms/files/tennessee-lihtc-qap-final-2022-amended-02172022.pdf>

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