Bus Service Allocation Study

Land Use Advisory Committee 11/21/2019

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Agenda

- Introduction
- Transit System Overview
- Scope of Work
- Existing Conditions
- Alternative Scenario Analysis
- Workshops
- Service Allocation and Land Use

Introduction

- Understand the competing roles that transit is serving in the region
  - Geographic coverage
  - Ridership productivity
- Analyze the existing allocation of transit resources between roles and develop alternative scenarios to understand impacts of changing resource allocation
- The need for this study highlighted by:
  - Regional Solicitation
  - Regional Service Improvement Plan
  - Transit expansion funding discussions

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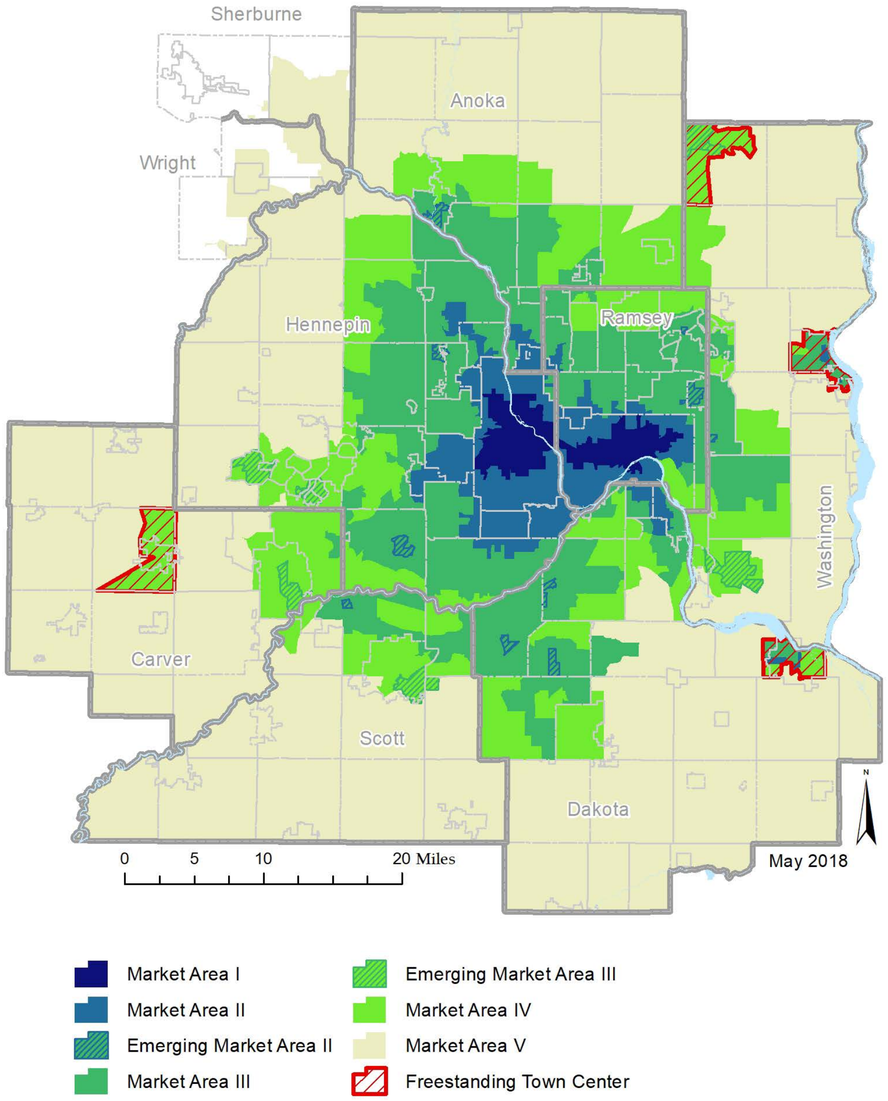
Existing Transit System – Market Areas



Transit Market Area Factors

- Population density
- Employment density
- Urban form (intersection density)
- Transit reliance (auto availability)

Used in Transit Service Design Guidelines and Performance Evaluation

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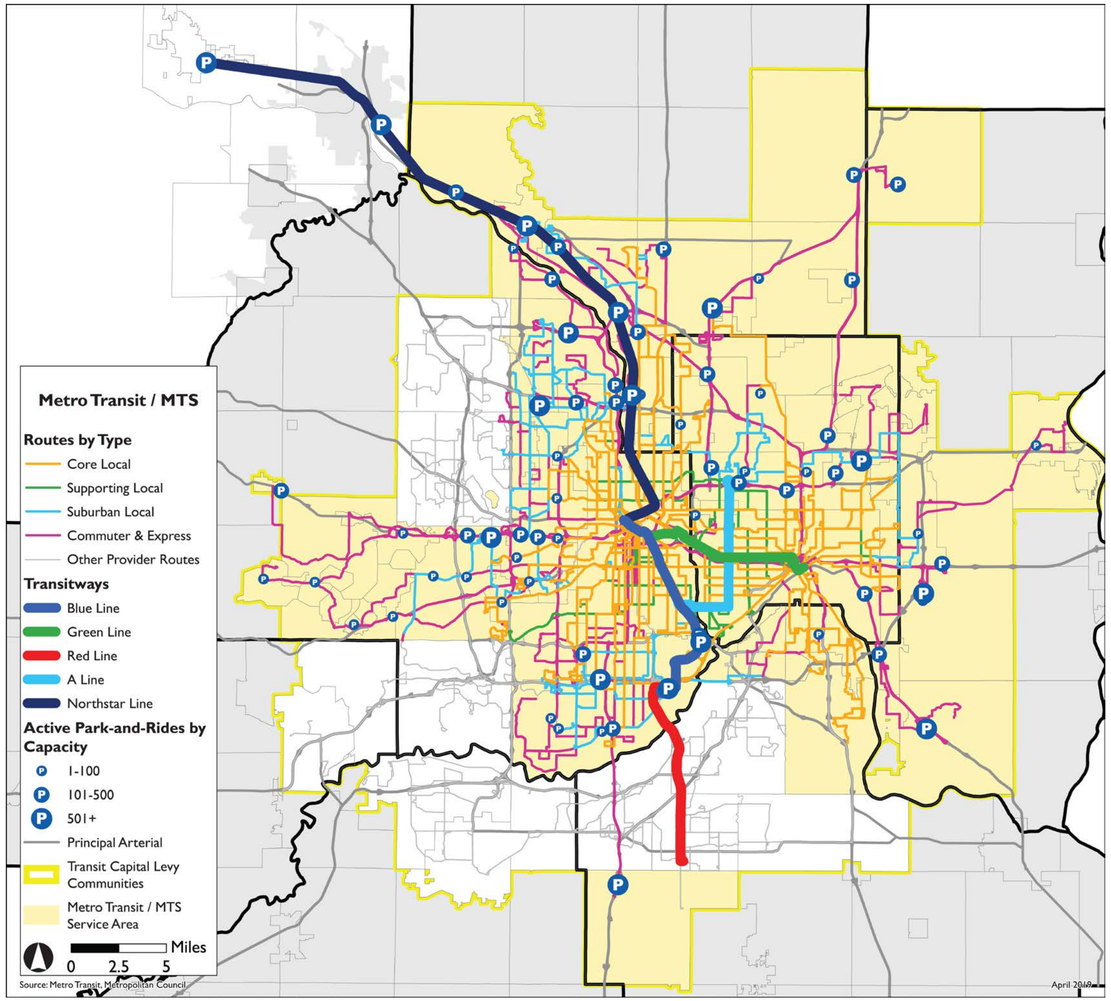
Existing Transit System – Route Types



Regular Route Bus

- Core local
- Supporting local
- Suburban local
- Commuter and express

Dial-a-ride

- Transit Link
- Metro Mobility

Van pool

Transitways

- Light rail
- Commuter rail
- Three types of bus rapid transit

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Scope of Work

- Public Outreach Analysis
- Existing Conditions Analysis
- Alternative Scenario Development and Analysis
- Coverage Service Guidelines
- Stakeholder Engagement Throughout
- Final Report

Existing Conditions

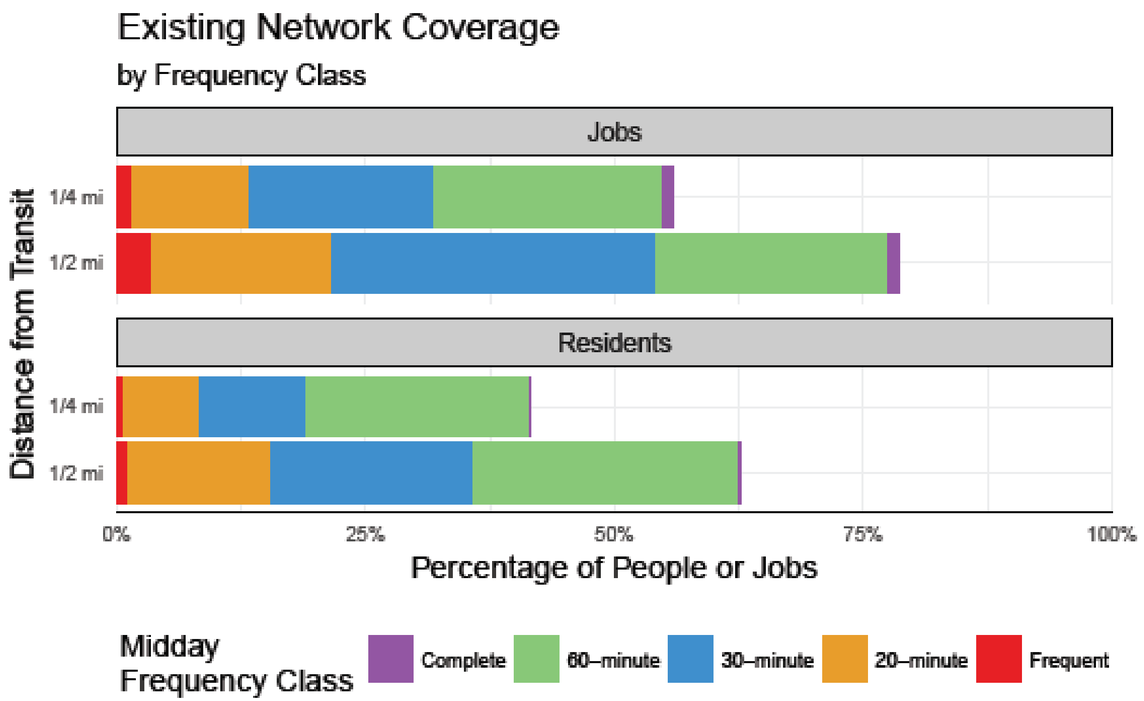

Table 3.2 Current Coverage Estimates						
Coverage Area	**Population**	**Pop %**	**Jobs**	**Jobs %**	**Service Area Higher Population Density[3]**	**High Pop. Density %**
METRO Service Area	3.5 Million	100%	1.8 Million	100%	1.1 Million	100%
Within 1/4 mile of all-day stop	1.6 Million	46%	1.2 Million	65%	752,000	70%
Within 1/4 miles of local stop, 5 miles P&R[1]	4.0 Million	115%	2.5 Million	111%	1.05 Million	97%
Within 1/2 mile of 2014 light rail	105,700	3%	302,000	16%	54,000	5%
Within 1/4 mile of all-day frequent[2] stop	289,500	8%	475,000	26%	156,000	15%

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Alternative Scenarios

Key Outcomes of the High Frequency Alternative:

Access to jobs with typical trips

5,700 more jobs are accessible in 45 minutes for the average person, a **36% increase** over the Existing Network

12,800 more jobs are accessible in 60 minutes for the average person, a **29% increase** over the Existing Network

Access to jobs with very long trips

37,300 fewer jobs are accessible within 2 hours of travel time for the average perso a **16% decrease** compared to the Existin Network

People near high-frequency transit

250,000 more people are within 1/2 mi v of high-frequency service, a **285% increa** over the Existing Network

94,000 more jobs are within 1/2 mi walk high-frequency service, a **151% increase** over the Existing Network

People near any transit

209,000 fewer people are near a transit served at any frequency, a **24% decrease** compared to the Existing Network.

109,000 fewer jobs are near a transit sto served at any frequency, a **22% decrease** compared to the Existing Network.

Key Outcomes of the Coverage Alternative:

Access to jobs with typical trips

About the same number of jobs would be accessible in 45 minutes for the average person.

1,600 fewer jobs would be accessible in 60 minutes for the average person, a **4% decrease** compared to the Existing Network

Access to jobs with very long trips

18,000 more jobs would be accessible within 2 hours of travel time for the average person, an **8% increase** over the Existing Network

People near high-frequency transit

28,000 fewer people would be within 1/2 mi walk of high-frequency service, a **21% decrease** compared to the Existing Network

5,200 fewer jobs would be within 1/2 mi walk of high-frequency service, a **3% decrease** compared to the Existing Network

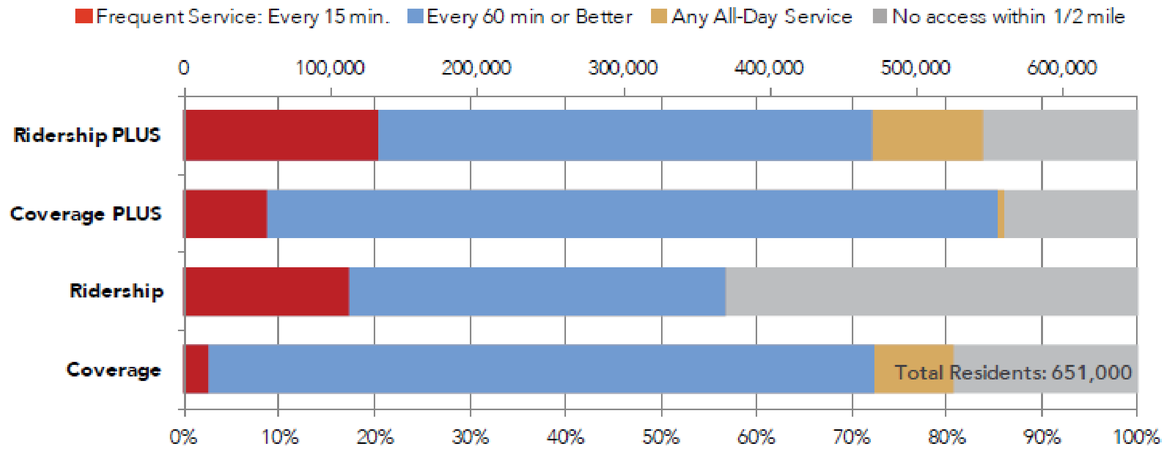
People near any transit

25,600 more people would be near a transit stop served at any frequency, a **3% increase** over the Existing Network

25,000 more jobs would be near a transit stop served at any frequency, a **5% increase** over the Existing Network

Residents with Access to Transit

within 1/2 mile of a Transit Route in Memphis, TN



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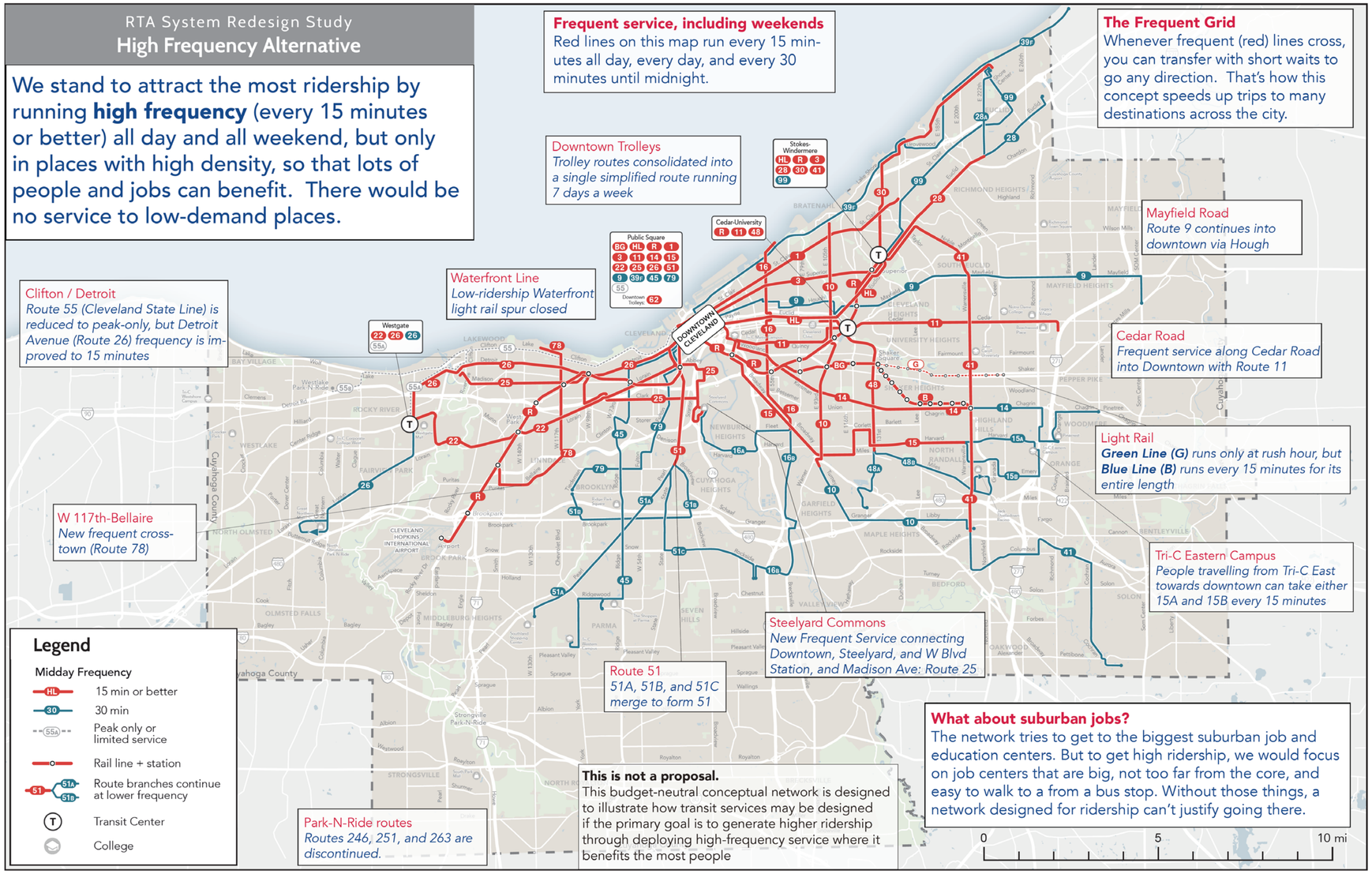
Alternative Scenario



Workshops

- Workshops held at various points of the project
  - Existing Conditions and Methodology Review
    - Focus on what's important to know about existing system and framework for evaluation of scenarios
    - Two two-hour workshop opportunities
    - January/February 2020
  - Scenario Development and Analysis
    - Review scenario analysis and discuss trade-offs
    - Two workshops
    - March/April 2020

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Service Allocation Study and Land Use

- Scenario development
  - **What types of land uses or demographic areas are important to serve with coverage?**
  - **How can cities support transit through their land use plans?**
- Evaluation
  - Land development patterns could strongly determine evaluation factors, among other things
  - Land development patterns influence transit system routing efficiency (e.g. circuitous road network limits options)
  - **What evaluation factors should be used to assess whether the transit network is accomplishing regional goals?**

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Questions?

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