

Southern New Hampshire Planning Commission Equity Analysis Report: Sections I & II

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SNHPC Technical Advisory Committee
September 15, 2022

What do we mean when we say equity?

What do we mean when we talk about equity in transportation?



Title VI and Environmental Justice Program
(Non-Discrimination in Federally Assisted Programs)

ADOPTED
September 22, 2020

Updated
August 31, 2021

Southern New Hampshire Planning Commission
438 Dubuque St.
Manchester, NH 03102

“Although Environmental Justice (EJ), Title VI, Non-Discrimination, and Equity are distinct elements, collectively they can contribute to the development of an equitable transportation system. These elements are regularly mistaken and used interchangeably...”

“Equity in transportation seeks fairness in mobility and accessibility to meet the needs of all community members. A central goal of transportation equity is to facilitate social and economic opportunities by providing equitable levels of access to affordable and reliable transportation options based on the needs of the populations being served, particularly populations that are traditionally underserved.”

[Federal Highway Administration](#)



SNHPC

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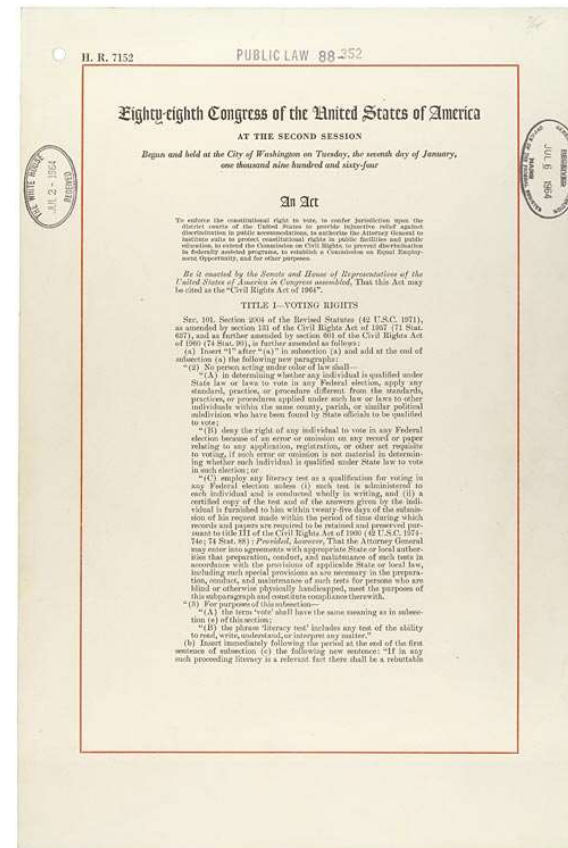
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“It is important to note that transportation equity does not mean equal. An equitable transportation plan considers the circumstances impacting a community's mobility and connectivity needs and this information is used to determine the measures needed to develop an equitable transportation network.”

[Federal Highway Administration](#)

Title VI of the Civil Rights Act of 1964

“No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”



Title VI of the Civil Rights Act of 1964

- “Transportation agencies are legally required to comply with Title VI, and FTA and FHWA monitor their compliance.”¹
- “Title VI requires agencies to ensure there is not discrimination based on race, color, and national origin, which involves
 1. analyzing whether design, construction, or future changes in service delivery for transportation projects have a disparate impact on those populations, and
 2. if disparate impacts are found, either demonstrating that these impacts are unavoidable or identifying ways to mitigate them.”¹



¹[National Academies of Sciences, Engineering, and Medicine 2020. *Equity Analysis in Regional Transportation Planning Processes, Volume 1: Guide*. Washington, DC: The National Academies Press.](#)

Executive Order No. 12898

- February 16, 1994

Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

“To the greatest extent practicable and permitted by law...each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States...”

Executive Order No. 13166

- August 16, 2000

Improving Access to Services for Persons with Limited English Proficiency

“The Federal Government provides and funds an array of services that can be made accessible to otherwise eligible persons who are not proficient in the English language....Each Federal agency shall also work to ensure that recipients of Federal financial assistance (recipients) provide meaningful access to their LEP applicants and beneficiaries.”

- Federal guidance is that discrimination against LEP populations may violate Title VI prohibition against national origin discrimination

Key elements in Title VI, E.O. 12898, and E.O. 13166.			
	Title VI	Environmental Justice	Limited English Proficiency (LEP)
Authorizing Directive	Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq.)	E.O. 12898 (1994)	E.O. 13166 (2000)
Required Populations	Race, color, and national origin	Minority persons and low-income persons	Individuals with a limited ability to read, write, speak, or understand English
Applicable Agencies/Programs	Programs receiving federal assistance	Federal agencies and recipients of federal financial assistance	Federally funded programs and activities
Guidance	23 CFR Parts 200 and 450; FTA Title VI Circular 4702.1B (2012)	FTA EJ Circular 4703.1 (2012)	U.S. DOJ Guidance to Federal Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons (2000)

[National Academies of Sciences, Engineering, and Medicine 2020. *Equity Analysis in Regional Transportation Planning Processes, Volume 1: Guide*. Washington, DC: The National Academies Press.](#)

TRANSIT COOPERATIVE RESEARCH PROGRAM

TCRP RESEARCH REPORT 214

**Equity Analysis in
Regional Transportation
Planning Processes**

Volume 1: Guide

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Subject Areas
Public Transportation • Planning and Forecasting • Policy

Research sponsored by the Federal Transit Administration in cooperation with the Transit Development Corporation

*The National Academies of
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TRANSPORTATION RESEARCH BOARD
2020

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“MPOs must assess the potential for disparate impacts and DHAE on underserved persons that may result from any activities involving federal funds.”

[National Academies of Sciences, Engineering, and Medicine 2020. *Equity Analysis in Regional Transportation Planning Processes, Volume 1: Guide.* Washington, DC: The National Academies Press.](#)

Disparate Impact

“...**a facially neutral policy or practice** that disproportionately affects members of a group identified by race, color, or national origin, where the recipient’s policy or practice lacks a substantial legitimate justification and where there exists one or more alternatives that would serve the same legitimate objectives but with less disproportionate effect on the basis of race, color, or national origin” [emphasis added].

[FTA. 2012. Title VI Requirements and Guidelines for Federal Transit Administration Recipients. FTA C 4702.1B.](#)

Disproportionately High and Adverse Effects (DHAE)

- “(1) is predominantly borne by a minority and/or low-income population, or
- (2) will be suffered by a minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effects that will be suffered by the non-minority population and/or non-low-income population.”

[U.S. DOT. 2012. Final DOT Environmental Justice Order 5610.2\(a\).](#)

[FTA. 2012. *Environmental Justice Policy Guidance for Federal Transit Administration Recipients*. FTA C 4703.1.](#)

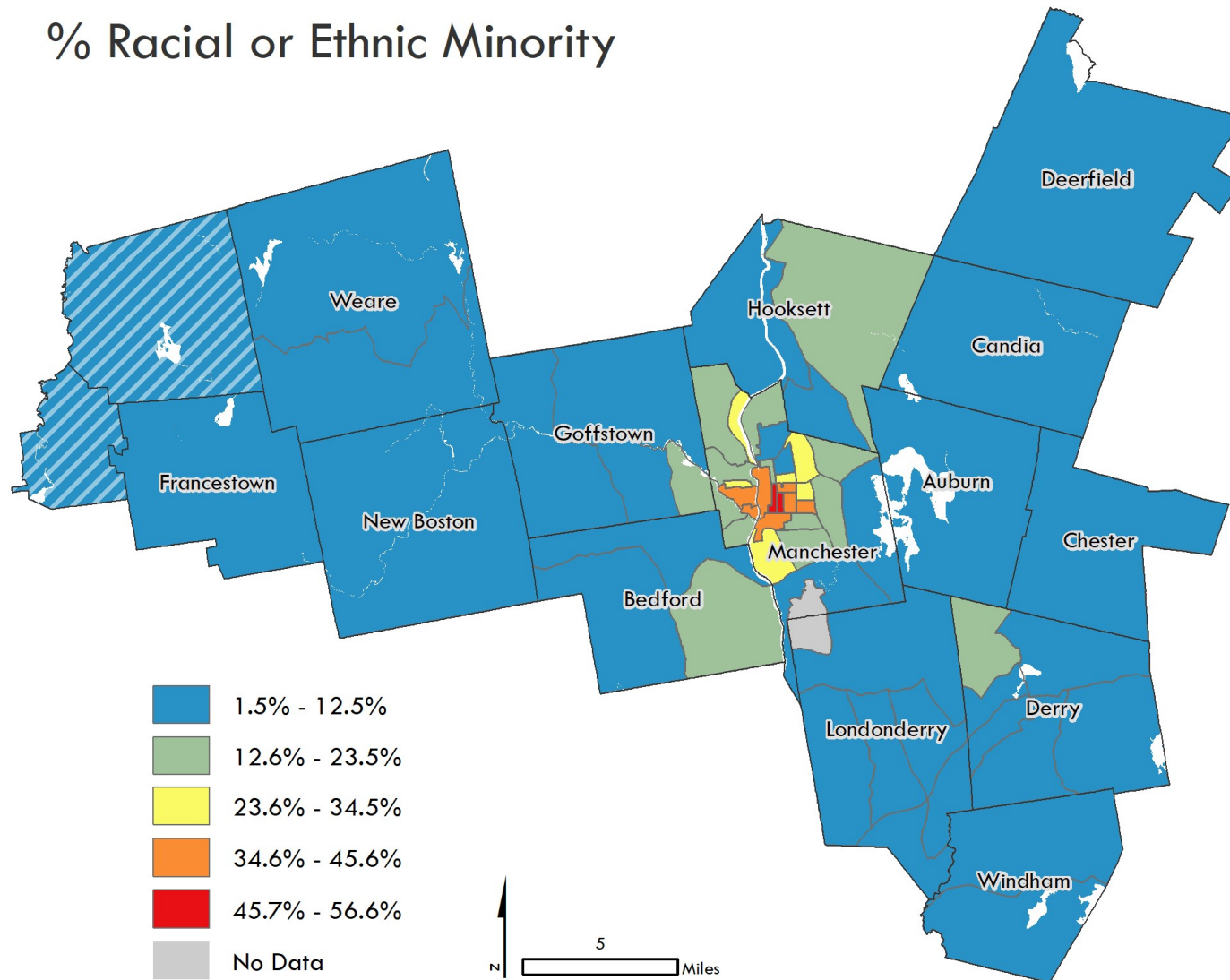
Identifying Populations for Analysis

Part I

Identifying Populations for Analysis

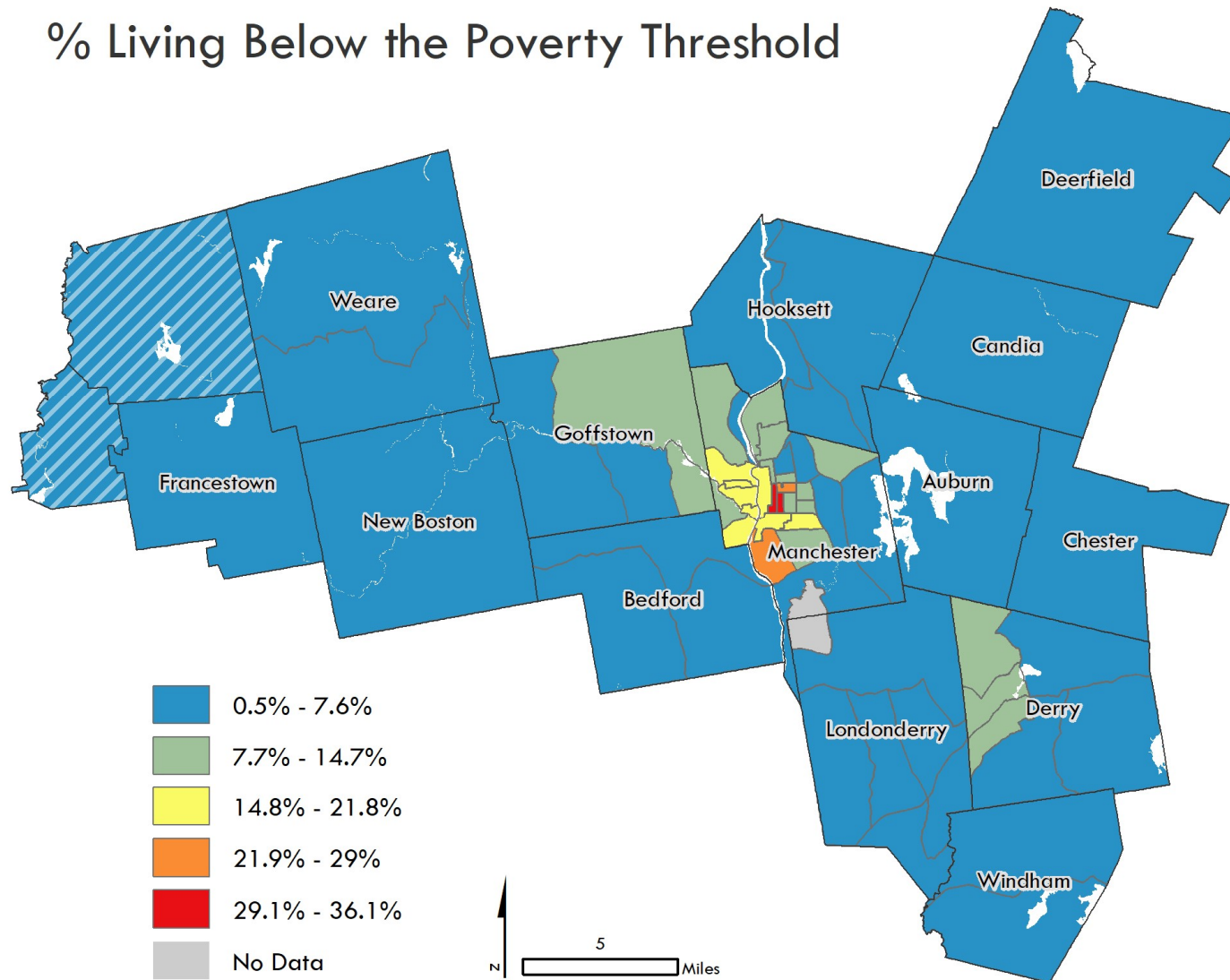
- Title VI/EJ Populations
 - Racial & Hispanic/Latino Minority
 - Low-Income/Poverty
 - Limited English Proficiency (LEP)
- Other Populations
 - Seniors (65+)
 - Disability
 - No Vehicle Households

% Racial or Ethnic Minority



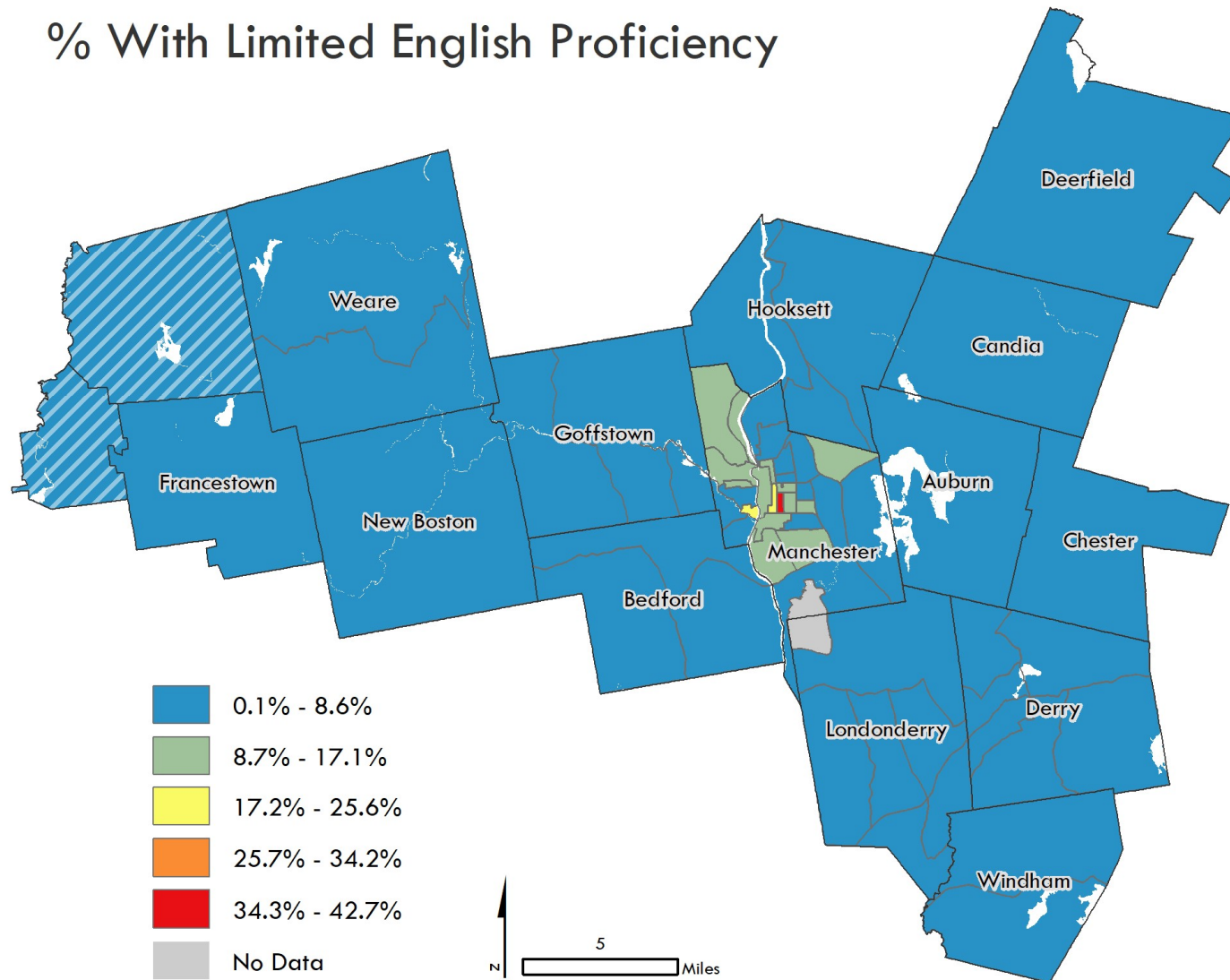
Created by SNHPC, 2022. Sources: NH Department of Transportation; US Census Bureau; US Geological Survey.

% Living Below the Poverty Threshold



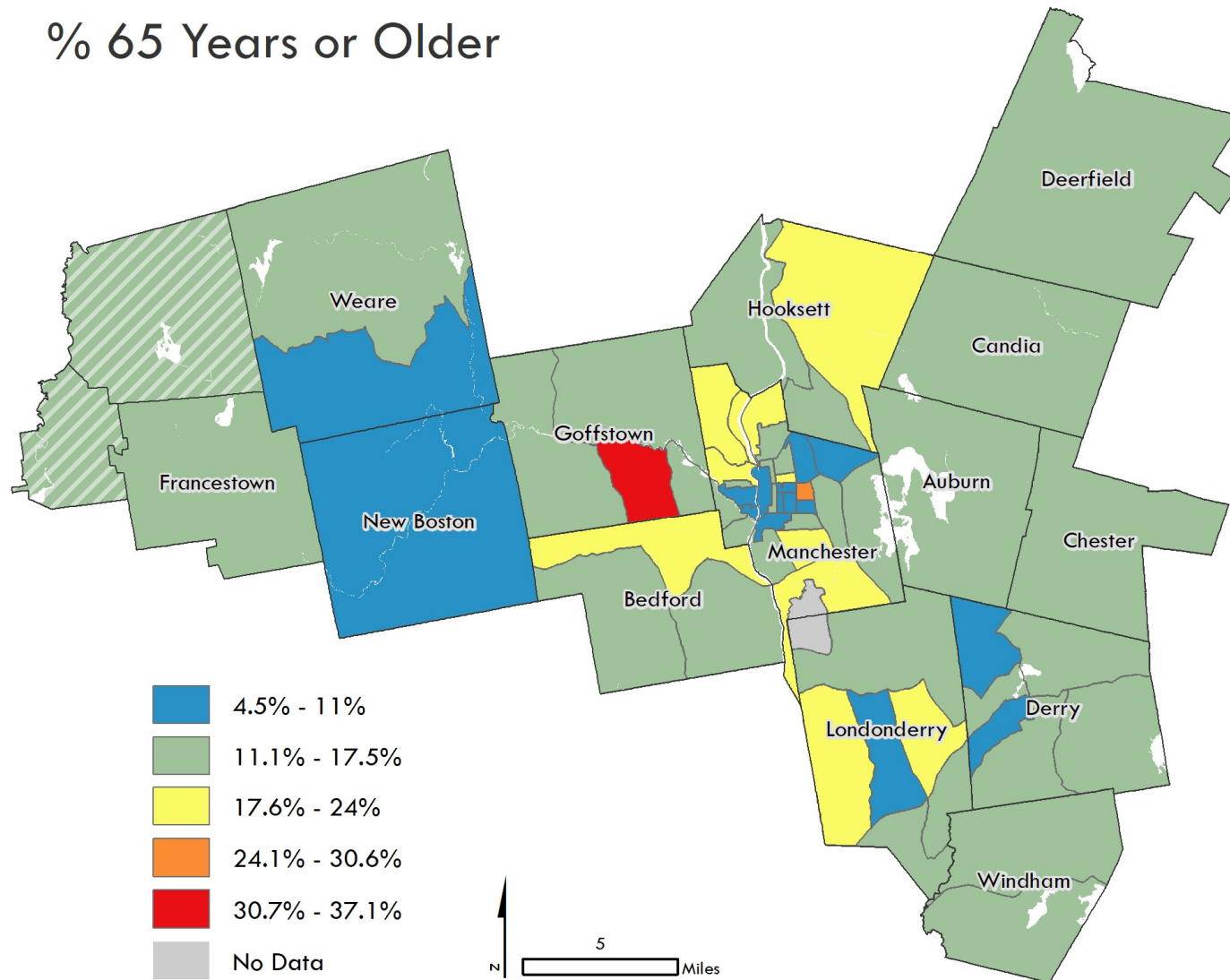
Created by SNHPC, 2022. Sources: NH Department of Transportation; US Census Bureau; US Geological Survey.

% With Limited English Proficiency



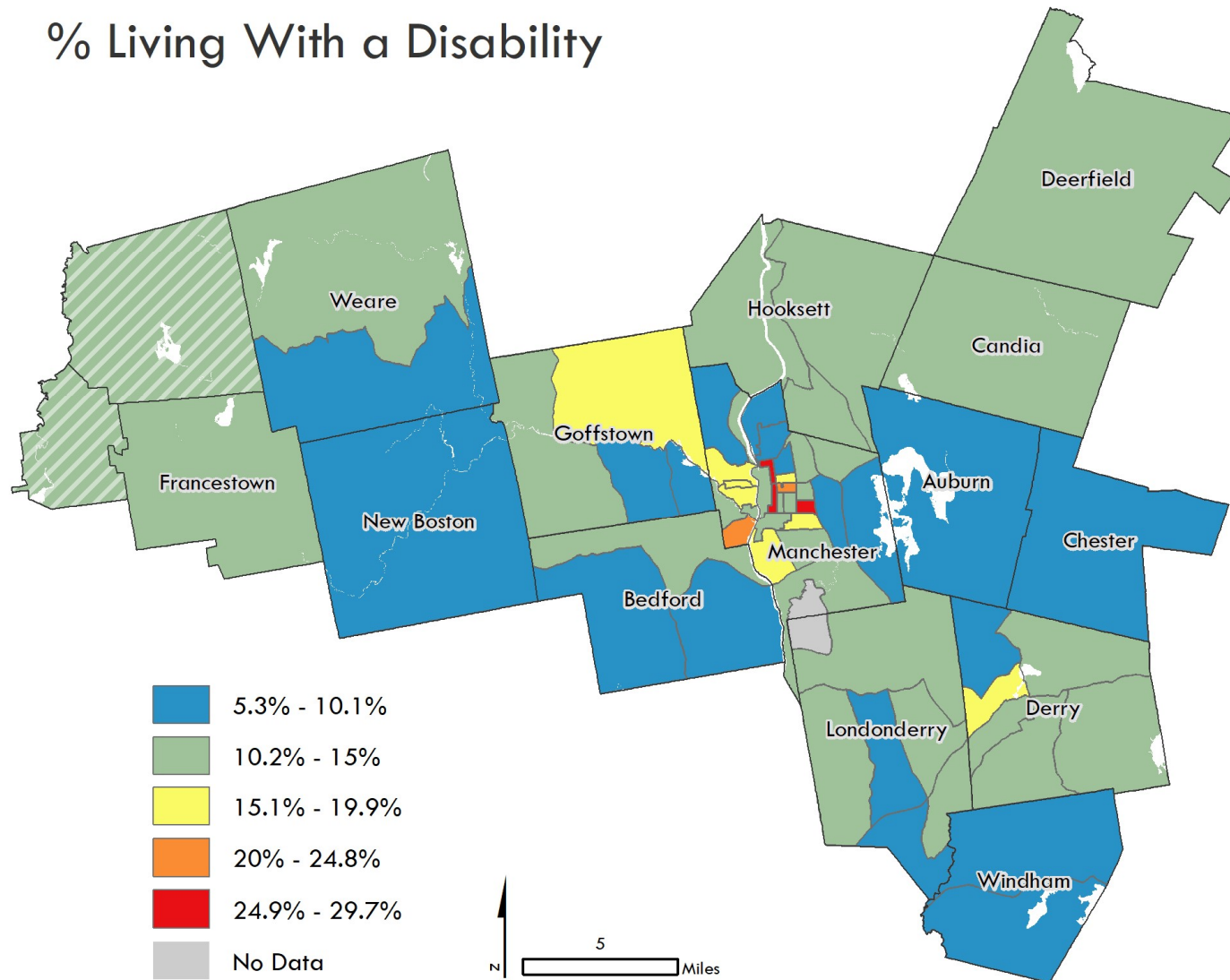
Created by SNHPC, 2022. Sources: NH Department of Transportation; US Census Bureau; US Geological Survey.

% 65 Years or Older



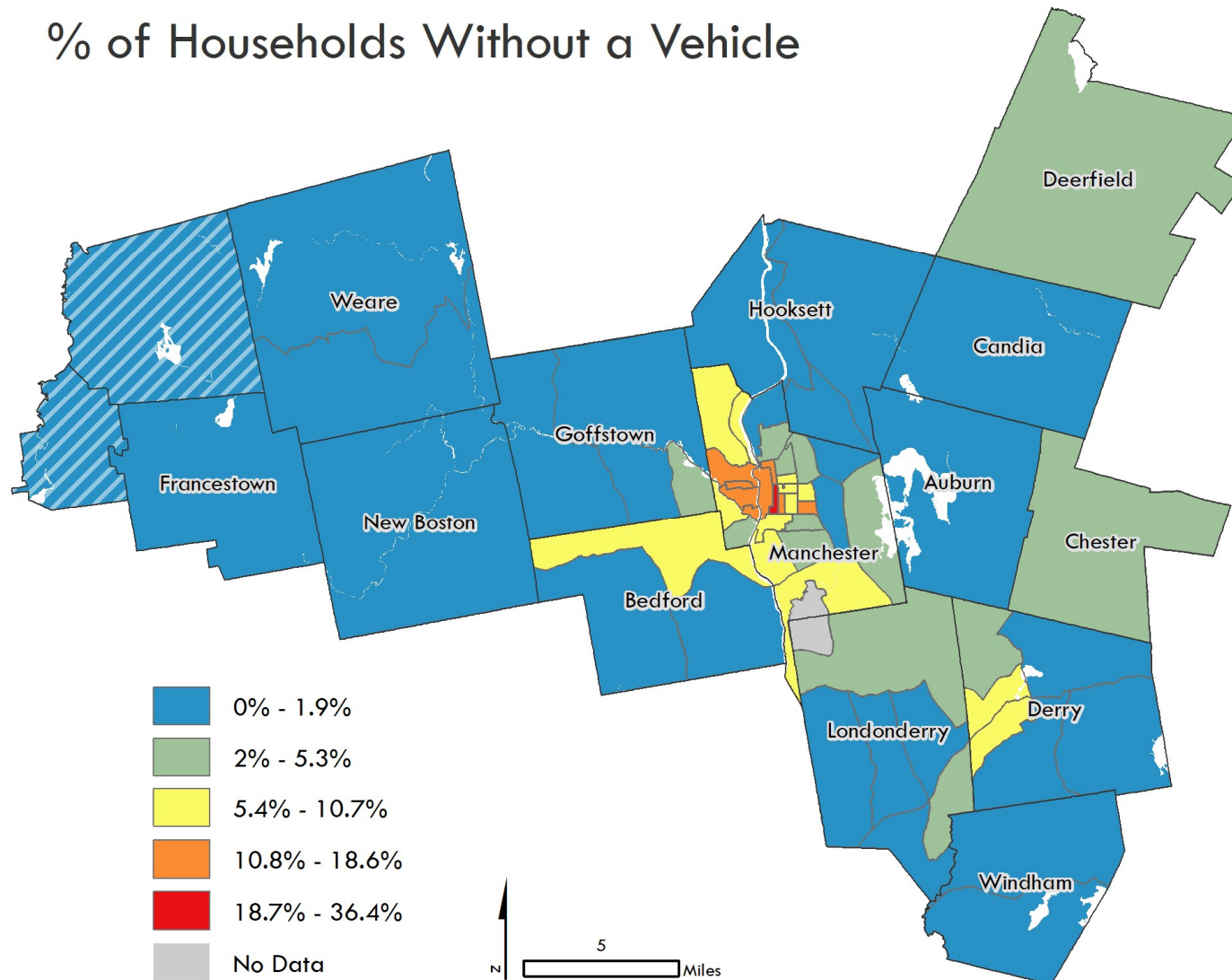
Created by SNHPC, 2022. Sources: NH Department of Transportation; US Census Bureau; US Geological Survey.

% Living With a Disability



Created by SNHPC, 2022. Sources: NH Department of Transportation; US Census Bureau; US Geological Survey.

% of Households Without a Vehicle



Created by SNHPC, 2022. Sources: NH Department of Transportation; US Census Bureau; US Geological Survey.

Identifying Populations for Analysis

Community Group	US Rate	New England Rate	Regional Rate	Regional Standard Deviation	Threshold Rate to Score
Minority	39.9%	25.7%	14.6%	12.9%	27.5%
Poverty	12.8%	9.9%	7.7%	7.7%	15.4%
LEP	8.2%	7.2%	4.5%	7.2%	11.6%
Senior	16.0%	17.4%	14.2%	5.0%	19.2%
Disability	12.7%	12.3%	12.0%	4.9%	16.9%
No Vehicle	8.5%	9.7%	4.7%	6.4%	11.1%
Source: Census					

Tracts Scoring on One or More Criteria

The map displays the following townships and their associated scores (where applicable):

- Goffstown:** 23.01
- Manchester:** 29.02
- Londonderry:** 33.02

Other townships shown include Weare, Hooksett, Candia, Deerfield, Auburn, Chester, Derry, Windham, Bedford, and Francetown. A scale bar indicates 5 miles.

Identifying Populations for Analysis

- Title VI/EJ Populations
 - Racial & Hispanic/Latino Minority
 - Low-Income/Poverty
 - Limited English Proficiency (LEP)
- Other Population
 - Seniors (65+)
 - Disability
 - No Vehicle Households

Community Group	Scoring Threshold	Points Assigned
Minority	One Standard Deviation Above the SNHPC Regional Rate	2 Points (Title VI/EJ Class)
Poverty		2 Points (Title VI/EJ Class)
LEP		2 Points (Title VI/EJ Class)
Senior		1 Point (Vulnerable)
Disability		1 Point (Vulnerable)
No Vehicle		1 Point (Vulnerable)

Source: Census

Tracts scoring for at least one population (scoring rates in **bold**)

Tract ID	Minority	Poverty	LEP	Senior	Disability	No Vehicle
14	46.5%	36.1%	20.6%	15.4%	24.8%	36.4%
13	35.7%	24.3%	11.8%	6.6%	21.6%	10.3%
15	56.6%	33.4%	42.7%	9.4%	14.1%	17.2%
20	36.7%	21.8%	19.6%	8.4%	12.1%	17.9%
24	30.5%	22.5%	12.3%	14.9%	17.1%	8.4%
3	32.8%	17.6%	11.3%	15.0%	18.5%	13.4%
17	38.9%	9.8%	15.8%	9.4%	26.0%	13.7%
19	36.3%	19.8%	15.7%	4.5%	12.4%	7.5%
2004	39.9%	19.0%	11.0%	8.3%	10.5%	15.5%
2.02	23.4%	16.2%	10.6%	17.7%	18.8%	11.9%
16	44.0%	13.2%	14.6%	7.4%	14.7%	6.7%
21	37.7%	14.8%	4.8%	6.2%	18.1%	12.2%
Census Tracts Above Are Within the Equity Analysis Area, Tracts Below Are Not						
2.03	23.5%	4.8%	12.3%	19.9%	14.6%	9.2%
18	19.0%	15.4%	7.1%	12.8%	17.1%	3.5%
23	12.8%	16.3%	5.0%	12.5%	24.2%	4.5%
2.04	22.6%	12.1%	12.5%	17.9%	10.1%	9.7%
6	13.0%	11.9%	9.6%	13.3%	29.7%	18.6%
9.01	28.9%	7.0%	4.7%	9.0%	10.4%	4.3%
8	26.4%	11.3%	2.4%	22.2%	16.4%	7.3%
12	23.9%	8.4%	6.9%	24.1%	11.1%	5.9%
28.01	3.2%	2.0%	0.4%	37.1%	8.2%	0.0%
29.02	10.5%	3.2%	2.1%	23.3%	10.7%	9.1%
38.02	4.4%	2.8%	0.1%	19.8%	11.7%	0.0%
Note: Bold Values Exceed the Regional Average by One Standard Deviation. Source: US Census Bureau, https://data.census.gov						

Created by SNHPC, 2022. Sources: City of Manchester; NH Department of Transportation; University of NH; US Census Bureau.

		Minority	Poverty	LEP	Senior	Disability	No Vehicle
	Equity Area	38%	20%	15%	10%	17%	13%
	Remainder of the SNHPC Region	11%	5%	3%	15%	11%	3%

		Minority	Poverty	LEP	Senior	Disability	No Vehicle
	Equity Area	3.99	2.11	1.48	1.07	1.77	0.57
Density (per acre)	Remainder of the SNHPC Region	0.07	0.04	0.02	0.1	0.07	0.01

		Minority	Poverty	LEP	Senior	Disability	No Vehicle
Difference between Equity Area & Remainder of the SNHPC Region	%	27%	15%	12%	-5%	6%	10%
	Density (per acre)	3.92	2.07	1.46	0.97	1.7	0.56

Source: Census

Identify Needs and Concerns

Part II

Survey

Part II

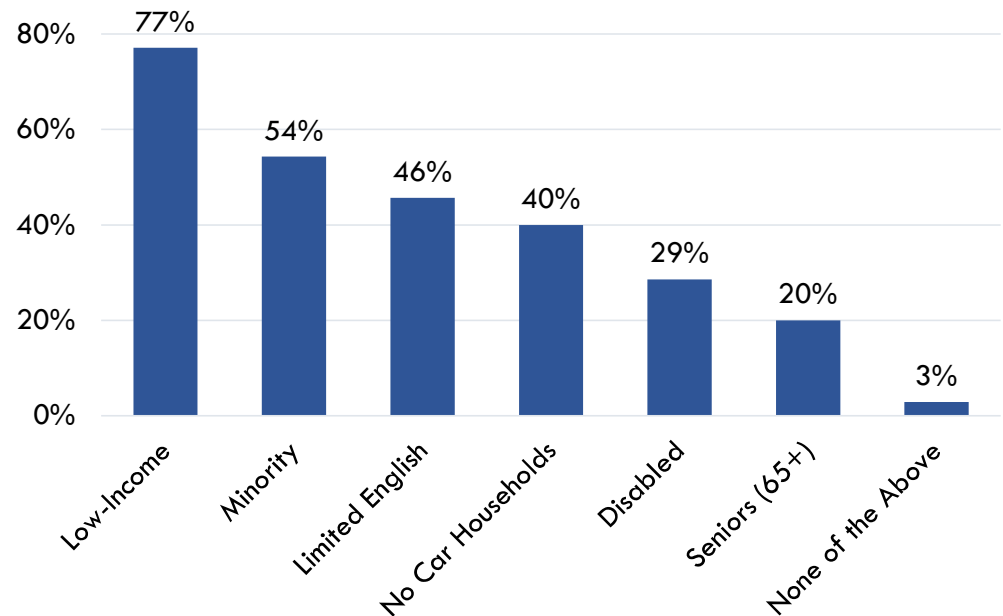


Short survey sent out to **70** contacts from organizations within the region which were known to provide services to the identified groups or were community organizers

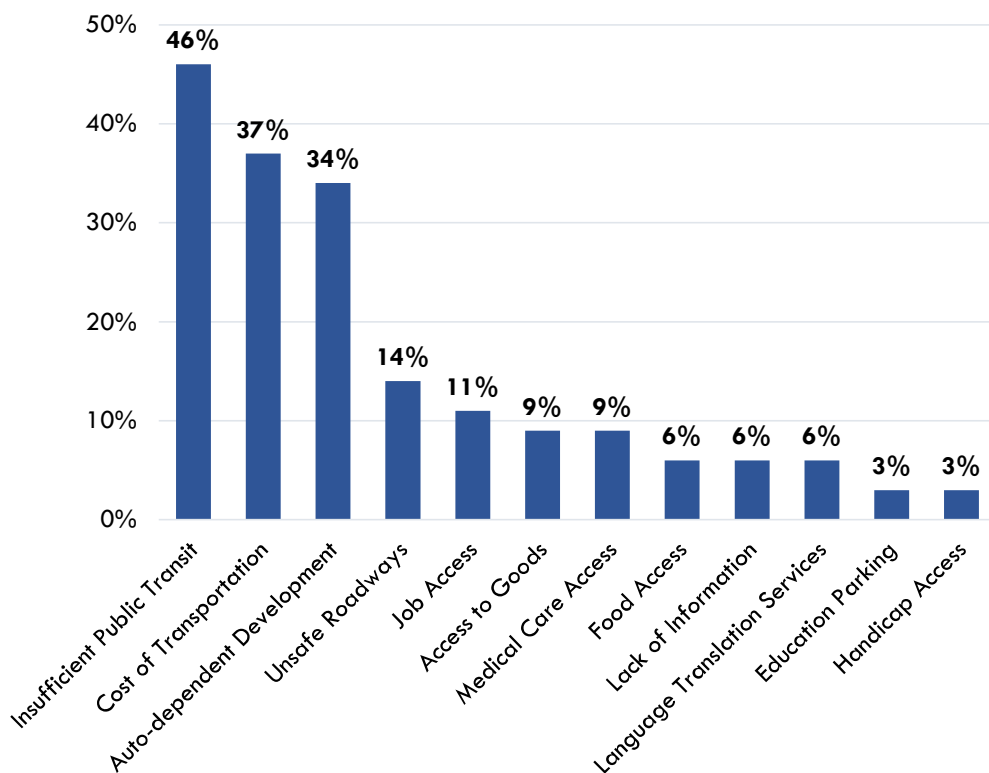
→ **36** people ultimately took the survey

Survey respondents included government, social service nonprofits, hospitals, business owners, & advocacy groups

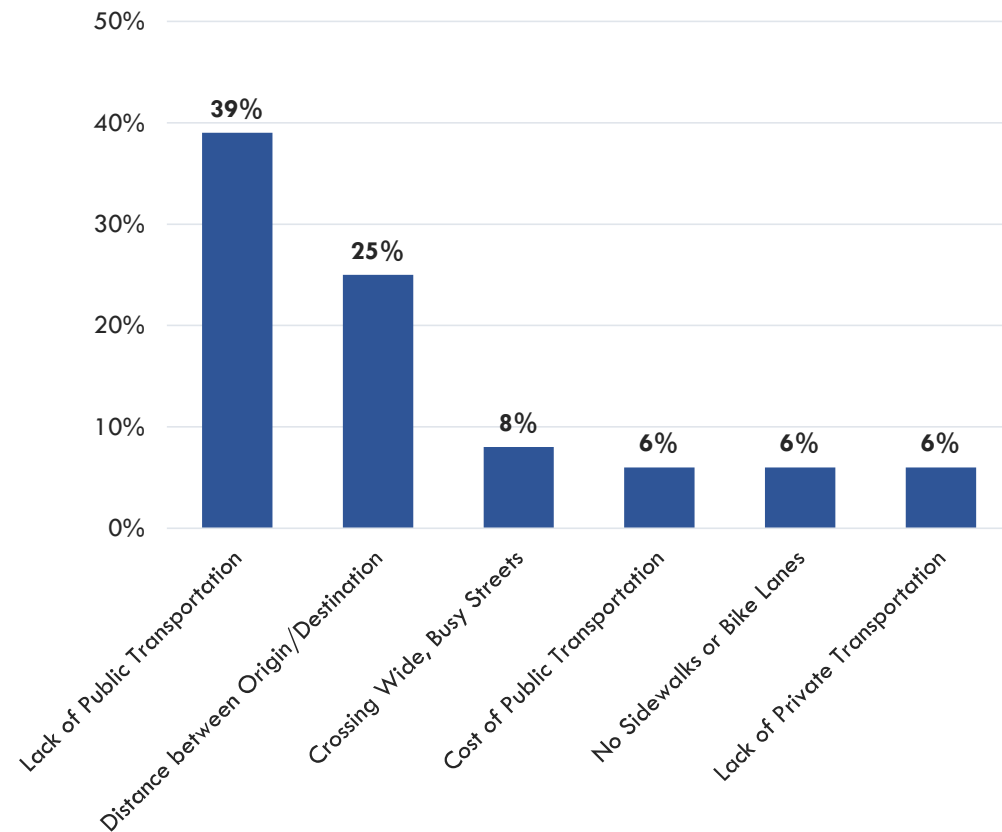
Which of These Groups Do You Primarily Work With?
(Closed Ended Question)



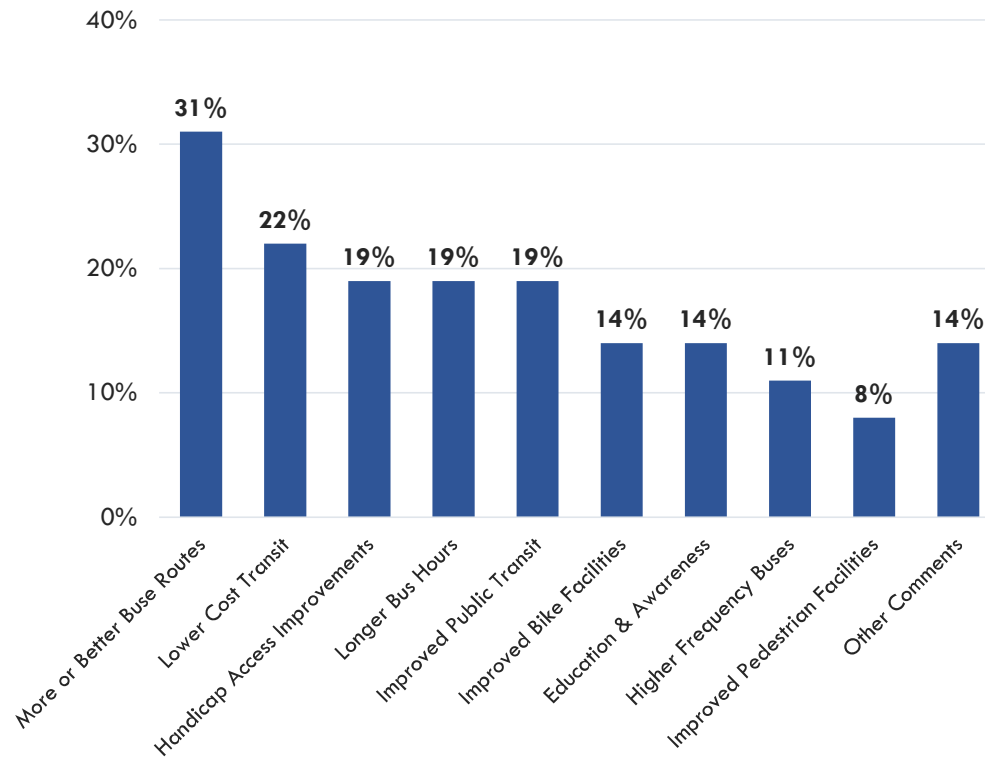
Observations of Biggest Transportation Challenges?
(Opened Ended Question)



Most Common Observed Transportation Barriers?
(Closed Ended Questions)



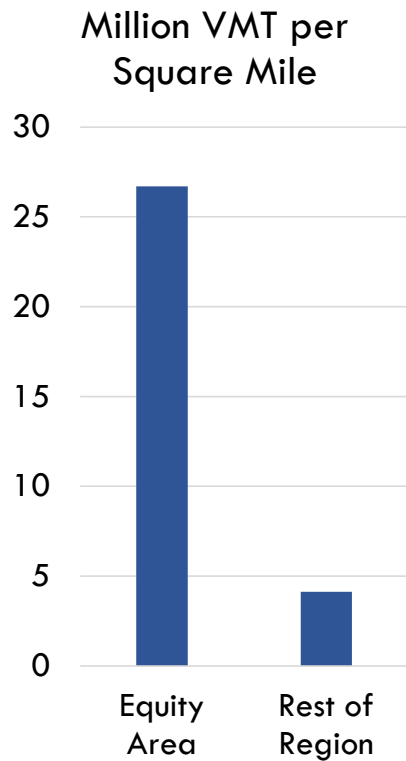
Suggested Improvements to the Transportation System? (Opened Ended Question)



Transportation Measures

Part II

Traffic Volume



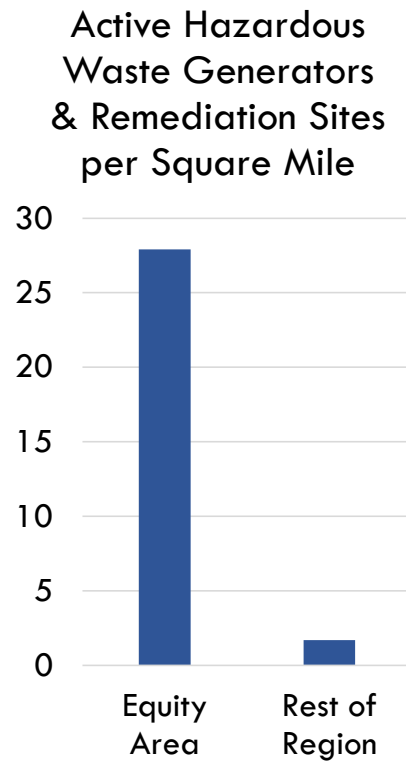
Source: NHDOT

Equity Area: **26.7** million VMT/sq. mi.

Rest of Region: **4.2** million VMT/sq. mi.

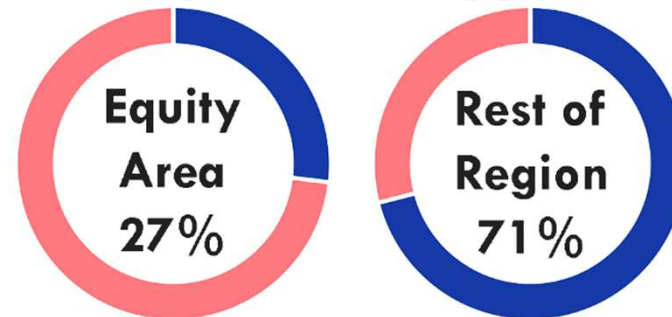
- Equity area residents experience a level of traffic intensity approximately **6 and 1/2** times higher than those outside the region
 - but are **4** times as likely to not own a car
 - and **3** times as likely to have fewer vehicles available per household than workers

Hazardous Waste



Source: NHDES

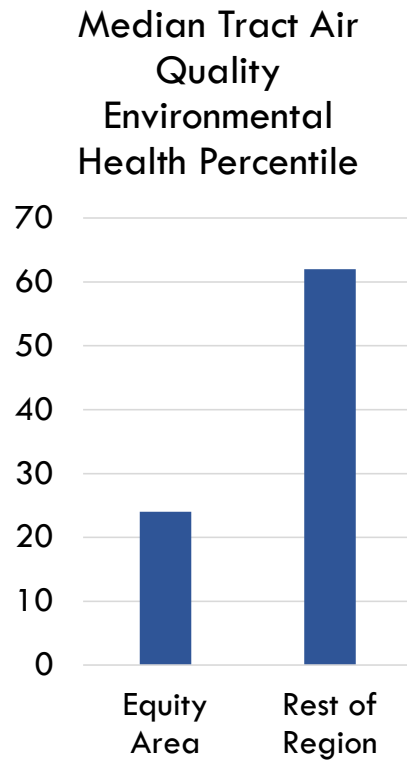
Average Tree Canopy Cover



Source: NOAA

Green Infrastructure

Air Quality



Source: HUD

Equity Area: **24th** air quality environmental health percentile

Rest of Region: **62nd** air quality environmental health percentile

- Adult asthma is **17%** higher for the median equity area tract than the median tract in the rest of the region
- Tracts 14, 15, & 20 are in the top **5%** nationally for adult asthma prevalence

Impervious Land Coverage

Developed-Impervious Land



Source: NHFGD

Equity Area: **69%** developed-impervious land cover

Rest of Region: **12%** developed-impervious land cover

- The % of land used for parking is 7 times greater in the equity area than outside it

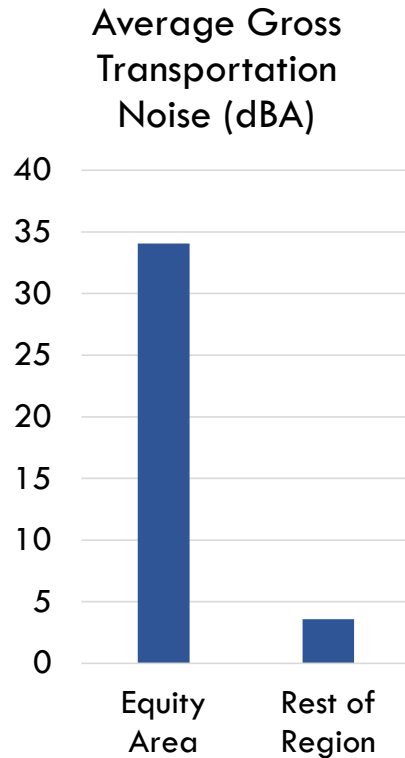


Within one mile of downtown Manchester, **820 acres (1.2 square miles)** are used exclusively for off-street parking and driveways.

The equity area boundary is in red, parking in yellow, and water bodies are shown in blue.

Sources: Esri; Google Maps; Manchester; USGS.

Average Gross Transportation Noise



Source: BTS

Equity Area: **31.8** dBA

Rest of Region: **2.7** dBA

- Gross background transportation noise levels in the equity area are **11** times higher than the rest of the region
- Gross background transportation noise levels are **1.2** times as high within 500 ft. of an interstate or expressway
- and **11** times as high in places more than 500 ft. from an interstate or expressway

Commuting Modes

	Drive Alone to Work	Carpool to Work	Walk, Bike, or Transit	Work from Home
Equity Area	75.8%	11.8%	6.0%	4.4%
Rest of Region	80.2%	7.3%	2.6%	9.1%
Source: Census				

- Equity area residents are less likely to drive alone to work or work from home
- More likely to carpool, walk, bike, or take public transportation

Manchester, NH: Means of Transportation to Work by Title VI/EJ Classes			
Comparison to the general population	Minority	Poverty	LEP
times as likely to commute by driving alone	0.91	0.79	0.8
times as likely to commute by carpooling	1.64	3.69	4.03
times as likely to commute by public transportation	1.36	10.03	2.68
Source: Census			

- Within Manchester¹, Title VI/EJ populations are much less likely to drive alone to work and much more likely to commute by carpooling or taking public transportation

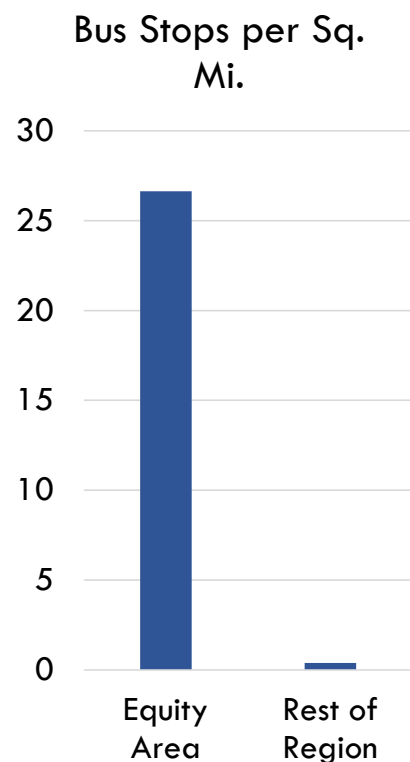
¹ Data not available at a tract level

Commuting Modes

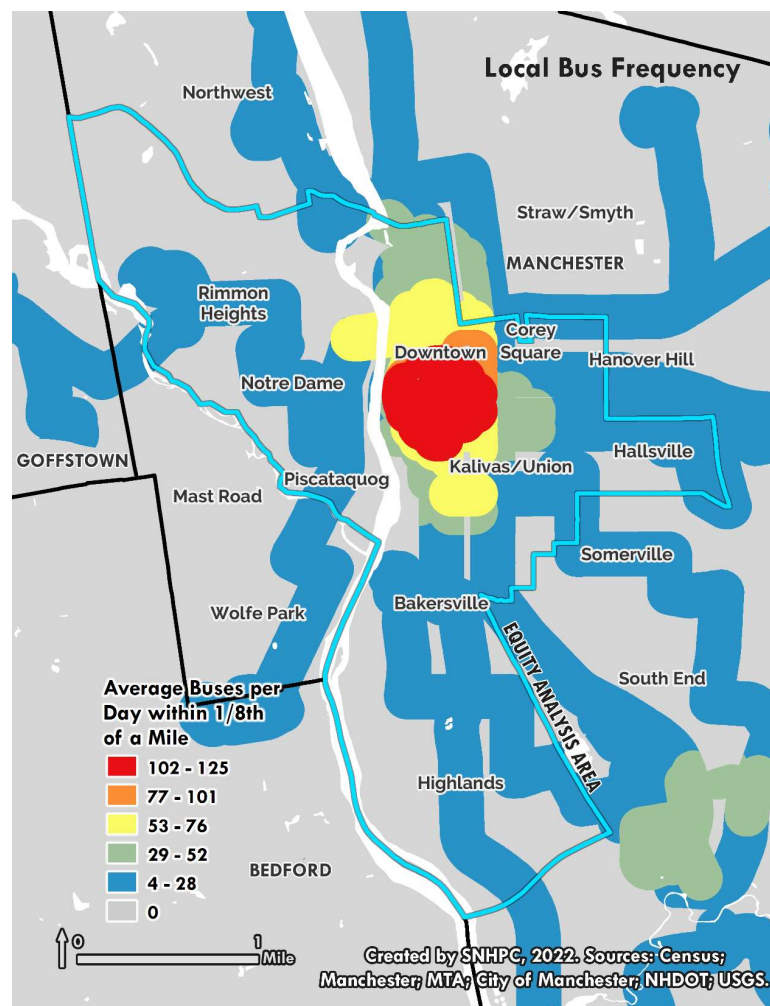
	Driving Alone		Carpool		Public Transit	
	% of all workers	% of low-income workers	% of all workers	% of low-income workers	% of all workers	% of low-income workers
Manchester, NH	79.3%	62.5%	9.5%	21.9%	0.6%	1.3%
Nashua, NH	79.4%	70.6%	8.7%	7.0%	2.2%	6.6%
Portland, ME	62.3%	53.1%	8.0%	7.6%	2.5%	4.7%
Brockton, MA	74.5%	57.9%	11.5%	19.1%	6.5%	13.5%
Lawrence, MA	70.3%	64.0%	15.6%	13.9%	3.7%	6.3%
Lowell, MA	76.8%	52.6%	9.2%	12.9%	3.1%	6.4%
Springfield, MA	76.6%	59.0%	9.4%	16.4%	4.4%	9.5%
Worcester, MA	71.2%	44.4%	11.2%	16.5%	3.1%	8.6%
Source: Census						

Source: Census

Access to Transit



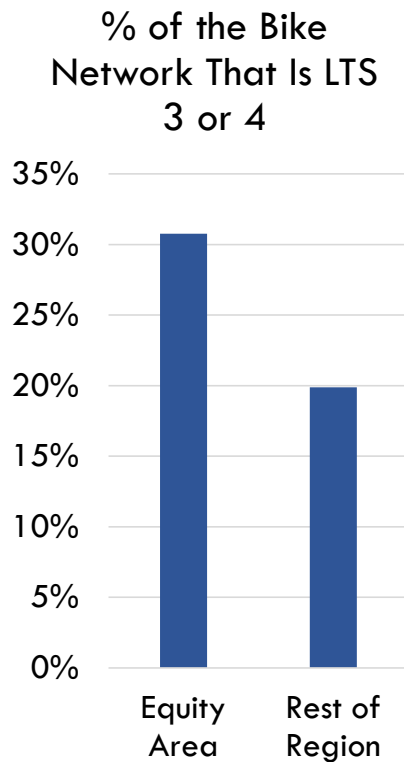
Source: BTS



Majority of residents in the equity area live within **1/8th of a mile** from a transit route providing **4 to 28** buses per day on average.

- Within **1/8th of a mile** of transit
 - Equity Area: **67%** of the minority population, **66%** of the low-income population, & **68%** of the LEP population
 - Rest of the Region: **16%** of the minority population, **18%** of the low-income population, & **23%** of the LEP population

Bicycle & Pedestrian Infrastructure



Source: SNHPC

Equity Area: **31%** of the bikeable network is LTS 3 or 4

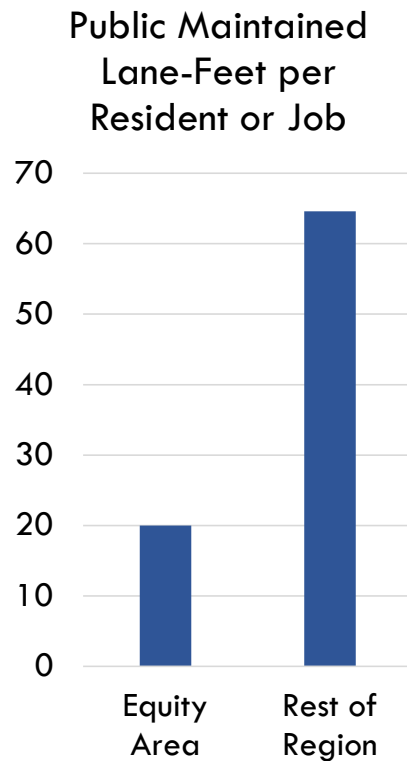
Rest of Region: **20%** of the bikeable network is LTS 3 or 4

Equity Area: **16%** of the bikeable network is LTS 1

Rest of Region: **29%** of the bikeable network is LTS 1

- Comprehensive sidewalk data do not exist for the region; infrastructure likely much better in the equity area than outside it

Road Infrastructure



Source: NHDOT

Equity Area: **20** public lane-feet of road for each resident or job

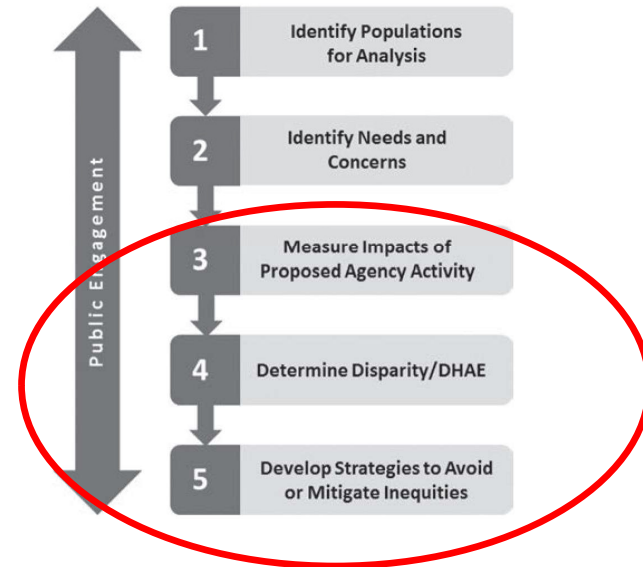
Rest of Region: **64** public lane-feet of road for each resident or job

Equity Area: **17%** of public lanes-miles are fed-aid

Rest of Region: **28%** of public lanes-miles are fed-aid

Next Steps

- Next phase will measure impacts of proposed MPO activity and determine whether disparate impacts/DHAEs exist
- If disparate impacts/DHAEs are found, strategies to avoid inequities will need to be developed
- Like previous sections, these analyses will be focused on comparing the equity area and the rest of the region



Questions?

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