

Data-Driven Public Health Analysis: Route 128/I-95

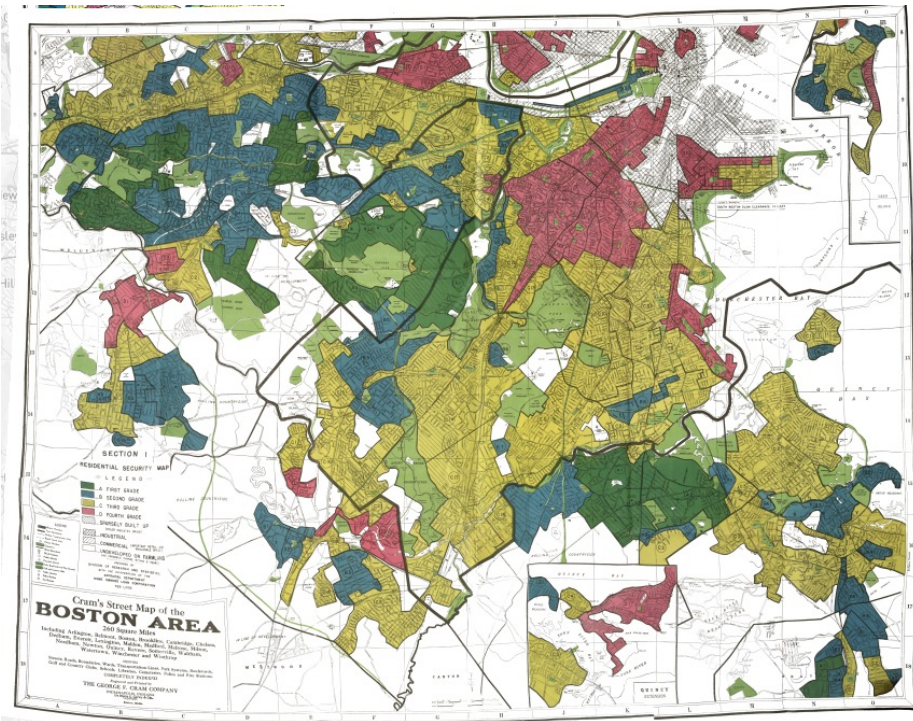
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VHB

Bringing Health into Planning Decision Making

- It is important for Planners and Designers to consider the impacts and benefits of their projects on community health and equity and our “responsibility to eliminate historic patterns of inequity tied to planning decisions” (APA Code of Ethics)
- Planners and agencies directly affect infrastructure and design in communities, such as transportation, open space and housing options, and these decisions are tied to public health outcomes
- VHB has developed the Healthy Mobility Model as a methodology to both assess health risk and consider the relationships between these factors and health outcomes in a given geography

Health Outcomes



Within the United States, health outcomes are largely dependent on socioeconomic and environmental factors with health care only shaping 20% of a community's overall health

Healthy Community Design Principles



Maximize the Opportunity for all Residents to Get Physical Activity



Increase Housing Opportunities



Promote a Healthy Environment and Social Well-Being



Empower Champions for Healthy Community



Encourage Mixed-Use Development



Make Education the Cornerstone of Community Development and Redevelopment



Improve Access to Job Opportunities



Invest in Active Transportation Solutions



Promote Access to Healthy Food



Drive Economic Development

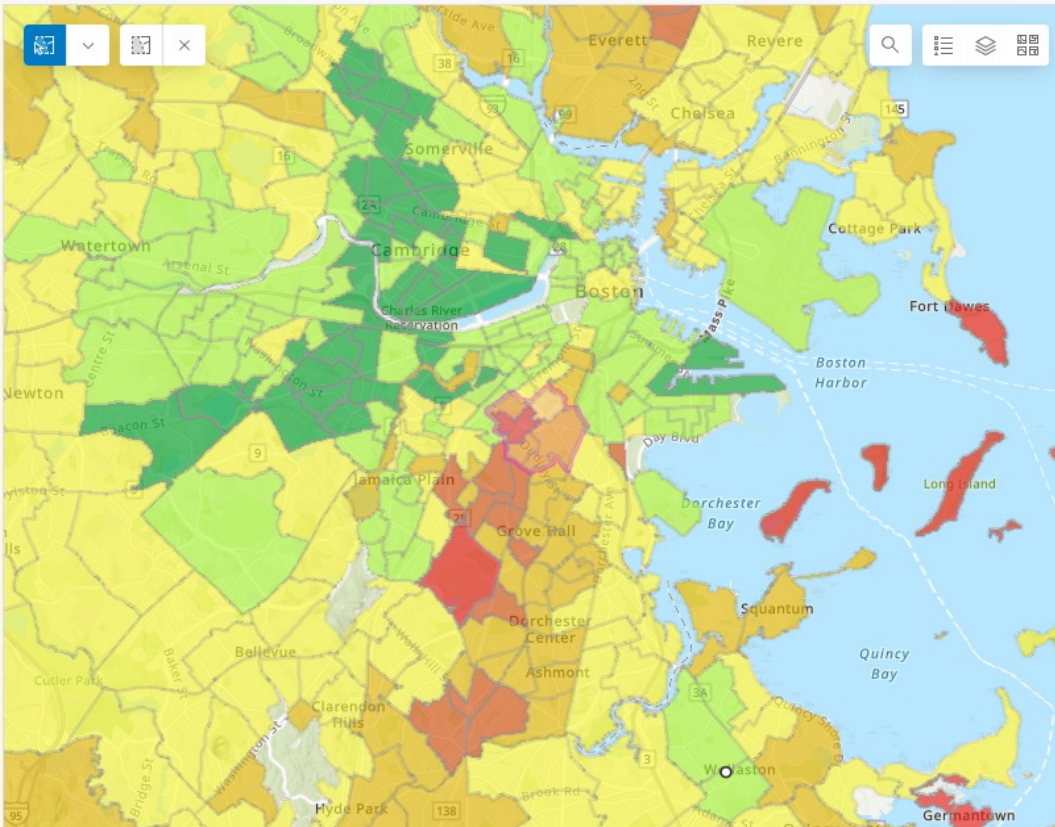
Use the below filter options to View Health by State, County or Risk Category or use the Map Select (top left in map) to select a specific tract or area.

Select by State
No category selected

Select a County
No category selected

Select by Risk Category
No category selected


To Select Tract or Area: Use the Map Selection option in the upper left of the map to activate or select draw area tool from dropdown. Please note select is only available when County Level is turned on.



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Average Prevalence (%) of Chronic Disease Indicator - Filtered (left) and Selected (map and right list)

Asthma
 **12.4%**
 National Average - 8.9%

High Blood Pressure
 **29.7%**
 National Average - 32.6%

Diabetes
 **12.3%**
 National Average - 11%

Coronary Heart Disease (CHD)
 **5.6%**
 National Average - 6.2%

Obesity
 **30.2%**
 National Update - 31.3%

High Cholesterol
 **25.2%**
 National Average - 33.6%

Census Tract Information (based on filter/selection)

Tract Information
 Tract: **25025080401**
 County: **Suffolk** - State: **Massachusetts**

Risk compared to County: Concern
 Risk compared to State: Concern
 Risk compared to Nation: Poor

Chronic Disease Prevalence (%) from CDC
Asthma: 14.0%
 (Asthma County Avg: 18.3%)

High Blood Pressure: 36.1%
 (HPB County Avg: 23.5%)

 **Diabetes: 16.9%**
 (Diabetes County Avg: 8.8%)

Coronary Heart Disease (CHD): 7.6%
 (CHD County Avg: 24.8%)

High Cholesterol: 28.4%
 (HC County Avg: 24.8%)

Obesity: 34.8%
 (Obesity County Avg: 24.0%)

Other Notable Measures by Tract
 Lack of Insurance: **20.9%**
 Mental Health Distress: **19.8%** - US Avg 13.6%
 Physical Health Distress: **19.3%** - US Avg 12.5%
 Physical Inactivity: **43.8%** - US Avg 26%

Tract Information
 Tract: **25025080100**
 County: **Suffolk** - State: **Massachusetts**

Risk compared to County: Below Average
 Risk compared to State: Average
 Risk compared to Nation: Below Average

Chronic Disease Prevalence (%) from CDC
Asthma: 12.0%
 (Asthma County Avg: 18.3%)

High Blood Pressure: 27.5%
 (HPB County Avg: 23.5%)

 **Diabetes: 10.3%**
 (Diabetes County Avg: 8.8%)

Coronary Heart Disease (CHD): 5.1%
 (CHD County Avg: 24.8%)

List of Selected

Click to learn more about VHB's Healthy Mobility Model

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Determinants of Health

Social Determinants

Income, employment, race and ethnicity, discrimination, social vulnerability, rent burden, public expenditures, school quality, educational attainment, age, food security, civic participation, language and literacy

Transportation Infrastructure

Sidewalk miles, highway miles, bike lanes, parking, transit, block length, commute mode, walkability, vehicle miles traveled, street width, safety

Institutions and Destinations

Parks and playgrounds, healthcare, schools, community gardens, cultural institutions, banking, libraries, business districts and jobs

Land Use

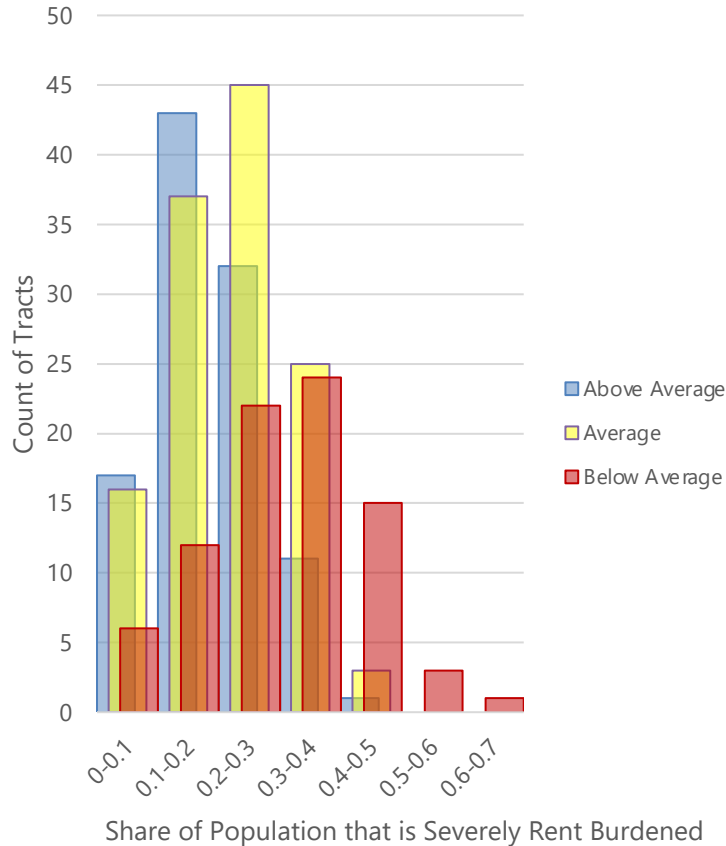
Density, housing mix and stability, polluting industries, brownfields, zoning, food retail options, housing age and quality, vacancy

Others

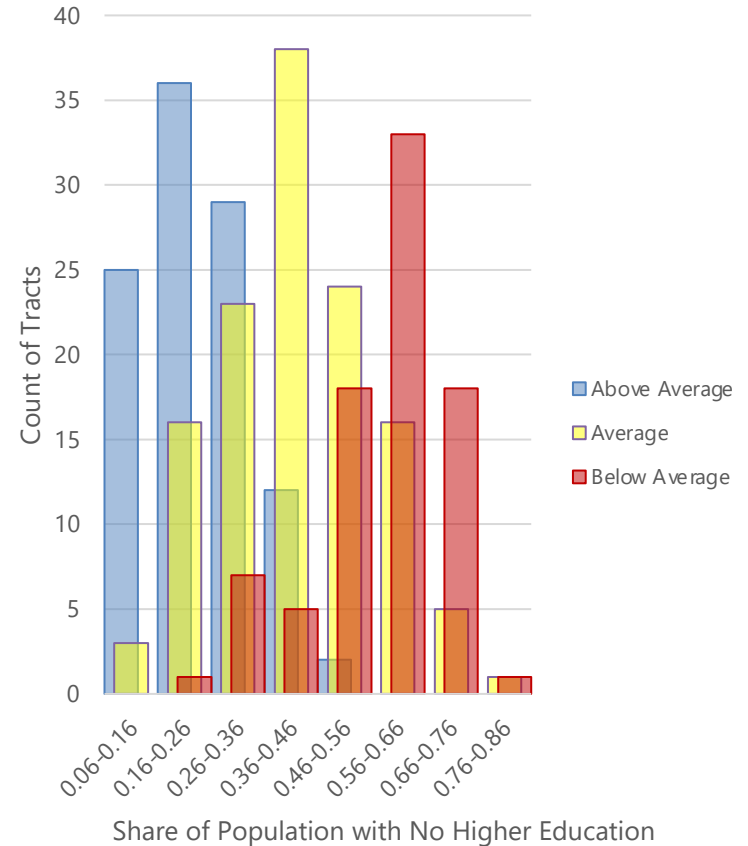
Tree cover, internet access, noise, air quality, impermeable surface, water quality, universal accessibility

Assessing Existing Conditions

Distribution of Health Outcomes for Severely Rent Burdened Households



Distribution of Health Outcomes by Educational Attainment



Applications

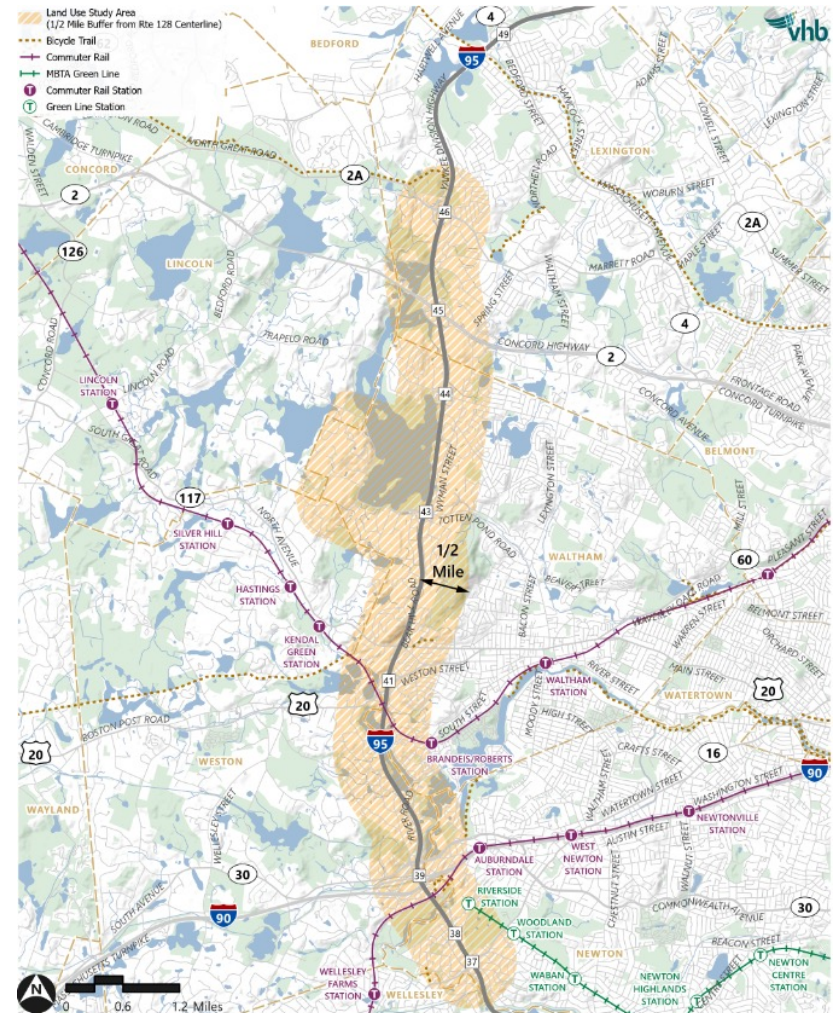
- Baseline Health Profiles
- Neighborhood Studies
- Transportation Studies
- Alternatives Assessment
- Prioritization



Route 128/I-95 Land Use and Transportation Study

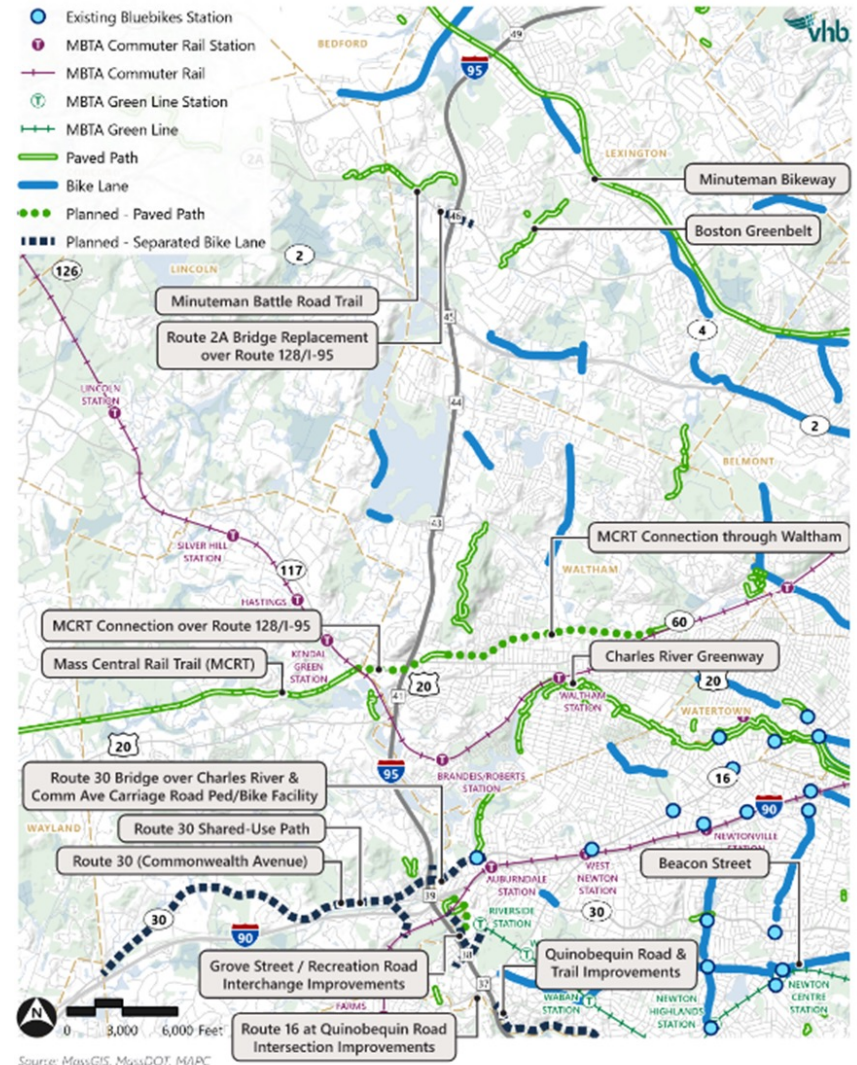
- 8.5-mile segment of Route 128/I-95 from Newton to Lexington
- Establishes future land use, housing, and economic development assumptions
- Makes recommendations intended to address current and anticipated transportation issues

Review the draft final report now on the MassDOT project website:
www.mass.gov/route-128i-95-study

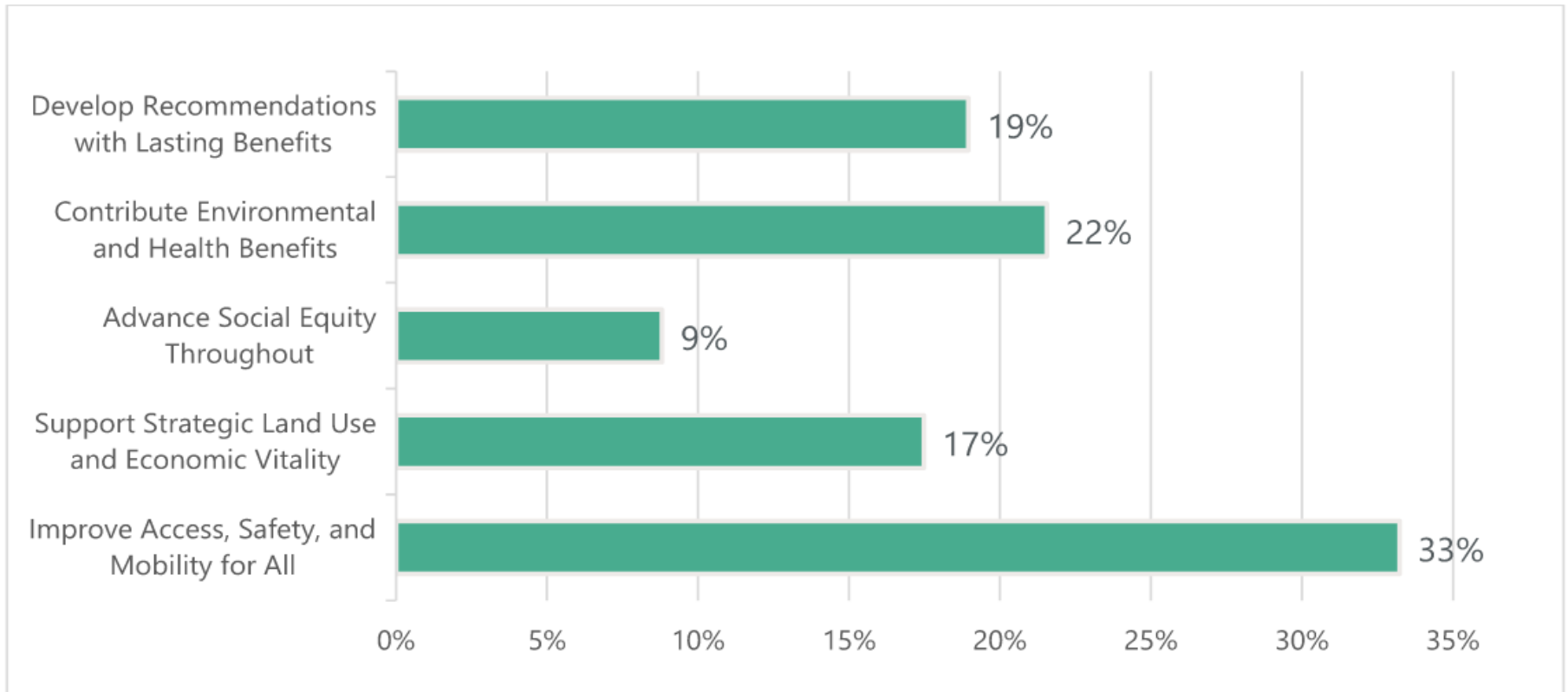


Corridor Conditions

- Strong jobs center
- Low residential density
- Workers live outside the study area
- Vehicle congestion and reliability issues
- Limited transit options
- Active transportation network gaps



Study Goals and Priorities



Source: Working Group and Public Informational Meeting Feedback

Use of the Healthy Mobility Model Risk Assessment

Table 2-7 Chronic Disease Existing Conditions

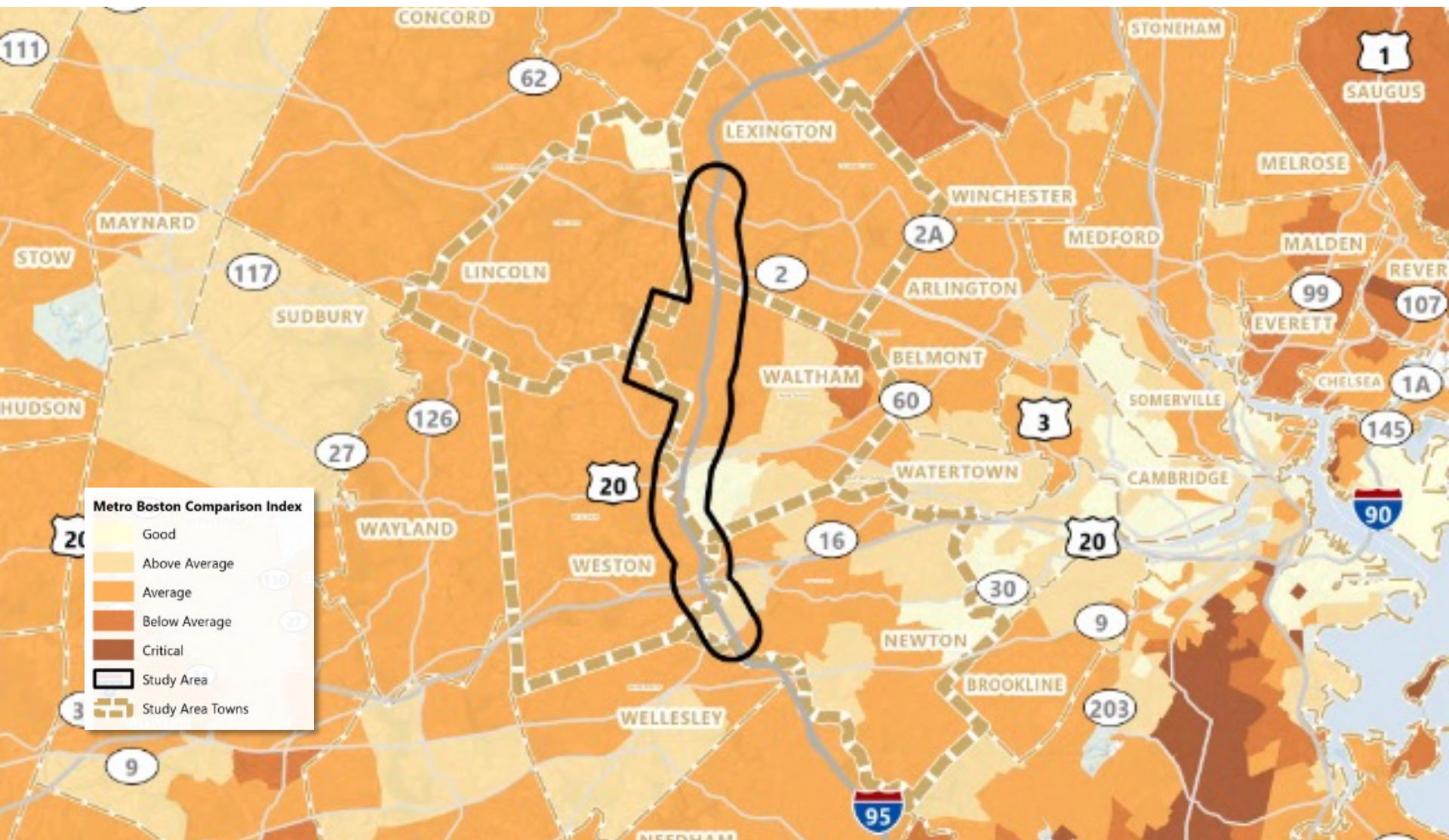
Health Indicator	Weighted Average Prevalence (%)		
	Metro Area	Study Area Municipalities	Study Area
Coronary Heart Disease	5.0	5.0	5.0
Asthma	10.0	9.0*	9.0*
High Blood Pressure	27.0	25.5*	26.0*
Diabetes	8.0	7.0*	7.0*
Obesity	24.0	20.0*	19.5*
High Cholesterol	31.5	30.0*	31.0*

Note: Numbers rounded to nearest 0.5 percent.

* Indicates a lower prevalence when compared to the Metro Area for each health indicator, also shaded green.

Source: 2020 CDC Places Data

Comparing to Metro Boston



Model Key Takeaways

Socioeconomic Factors

Populations over 65, without a bachelor's degree or higher, and living below the poverty line all correlate with a higher the prevalence of chronic disease.

Travel Characteristics

Commuting time and commute mode were found to have a strong correlation with all the chronic diseases except for asthma.

Infrastructure

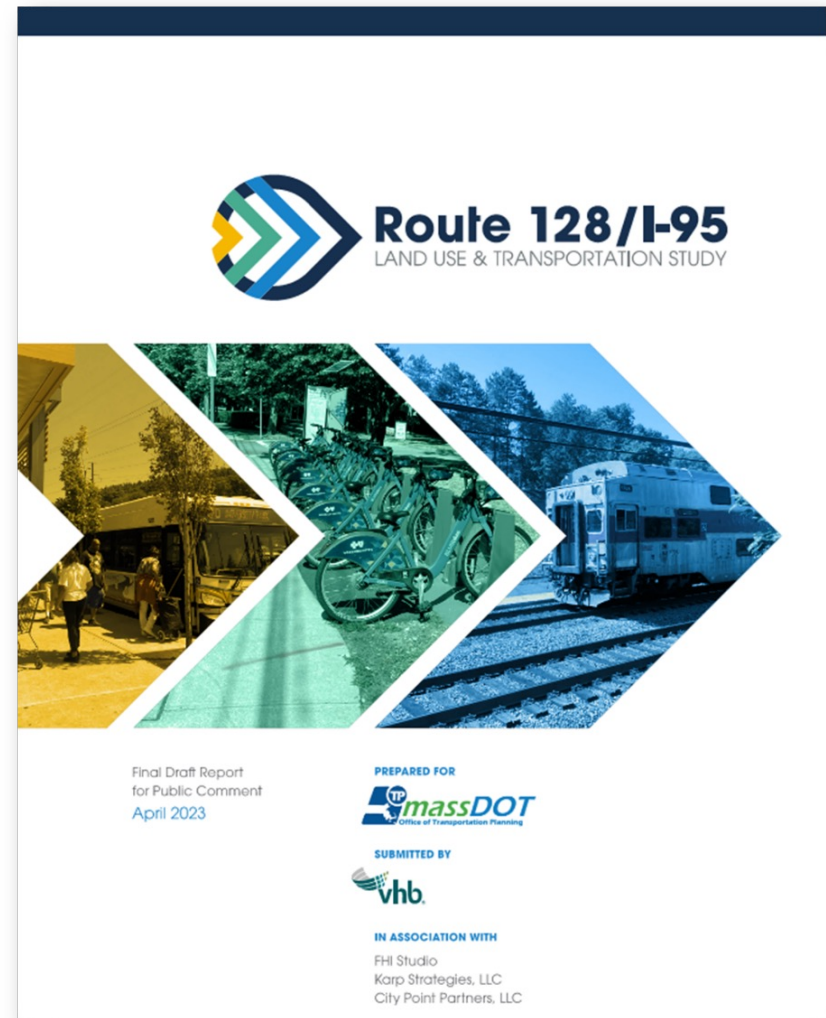
Higher average right-of-way (ROW) width and higher number of lanes on roads strongly associated with higher shares of the population with some chronic diseases.

Asthma Prevalence

Asthma prevalence in the assessed areas is greater than it is nationally, and therefore may be important to focus on through improved walkability and decreased vehicle miles travelled/emissions.

Recommendation Themes

- Improve regional mobility
- Expand transportation choice
- Align policies with mobility goals
- Plan for the future
- Address congestion and improve safety



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