COMMUNITY IMPACT & COMPLETE STREETS

STRATEGIES FOR SOCIALLY INCLUSIVE STREET REDESIGN

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"Complete Streets" is a concept that reimagines the existing auto-centric street paradigm indicative of North America's transportation system. Complete Streets are defined as streets for everyone, made to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets reimagine our streets as more than corridors of transportation; they are public spaces, and should be treated as spaces where all citizens have an equal right to space and to safe travel.

While this wide definition is meant to allow a breadth of players, places, and perspectives to enter the public conversation around street redesign, not all communities and population groups seem to be considered with equal value. In recent years, numerous papers, books, and articles have pondered whether the push for Complete Streets elements like bike lanes and street trees contribute to gentrification trends and displacement of long-term residents. This supervised research report seeks to answer the question: How can Complete Streets policies better address equity and social inclusion through their creation, implementation, and coordinated municipal planning? The report reviews three case studies of municipalities where local government has enacted a Complete Streets policy: Somerville, Massachusetts; Baldwin Park, California; and Portland, Oregon. The report also reviews existing literature to provide larger context for these cases, and concludes with analysis of key findings and a set of recommendations which city planners may use in coming years to inform and improve the completeness of their own Complete Streets.

«Complete Streets», ou «rues complètes», est un concept qui réinvente le paradigme de nos rues centrées sur l'automobile, un paradigme évident à notre système de transport de l'Amérique du Nord. Les rues complètes sont définies comme des rues pour tous, conçues pour permettre l'accèssibilité et confort pour tous: les piétons, les cyclistes, les automobilistes et les usagers des transports en commun de tous âges et de toutes capacités. Les rues complètes rédéfinent nos rues; elles devraient être créées comme des espaces où tous les citoyens ont même le droit à l'espace et à la sécurité des déplacements.

Bien que cette définition vise à permettre plusiers de perspectives d'entrer dans la conversation publique sur la construction des rues, toutes personnes n'ont pas être considérés comme relevant de la compétence. Au cours des dernières années, beaucoup d'articles, livres et journals se sont penchés sur la question si la promotion d'éléments de rues complètes contribuait au déplacement des résidents de longue durée. Ce document de recherche voudrait répondre à la question: comment les politiques de rues complètes peuvent-elles mieux aborder l'équité et l'inclusion sociale par leur création, leur mise en œuvre, et leur planification municipale? Ce document examine trois étudiées de municipalités où le gouvernement a adopté une politique de rues complètes: Somerville, Massachusetts; Baldwin Park, Californie; et Portland, Oregon. Ce document passe également en revue la littérature existante pour fournir un contexte plus grand et conclut par une analyse des constatations importantes et des recommandations que les urbanistes pourront utiliser dans le futur pour améliorer la complétude de leurs rues complètes.

This work would not have been possible without the support of my supervisor, Professor Julian Agyeman, who met me for countless coffees and always responded to my concerns with compassion and encouragement. I would also like to thank my second reader, Professor Lisa Bornstein, whose incisive and insightful comments brought this project to its final fruition. I am appreciative of the support offered by the faculty of the School of Urban 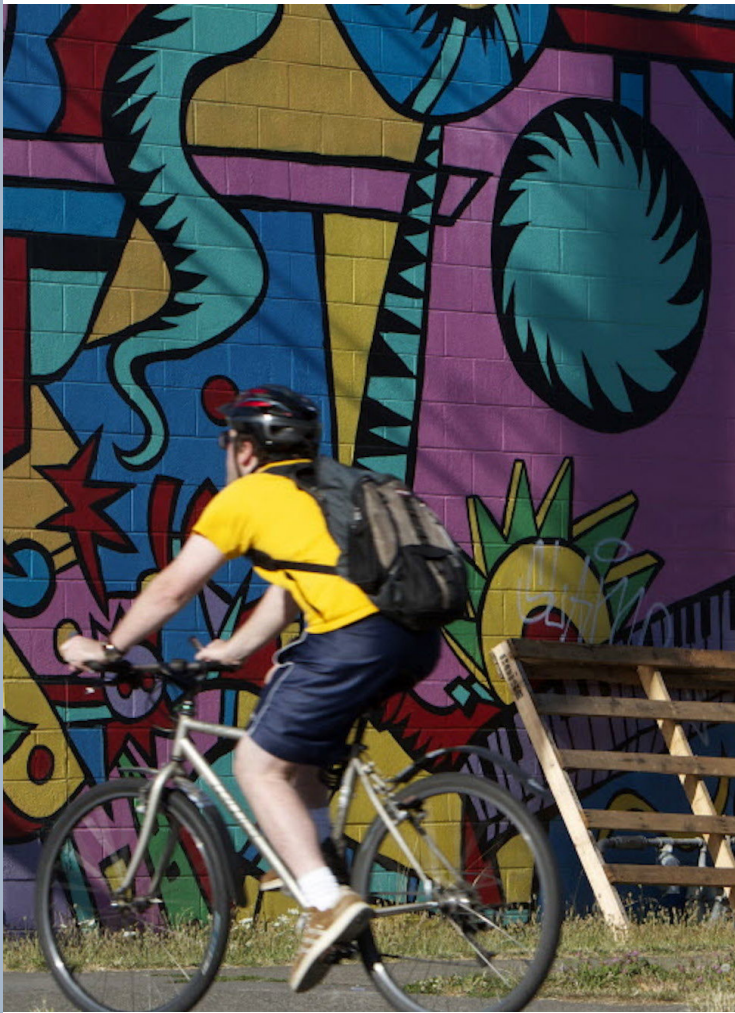Planning, whose courses and conversation continually pushed me to see the world with new perspective. I am especially thankful to the participants interviewed during this work's research: their openness and commitment to improving the wellbeing of their communities inspired me throughout my research. This work was also made possible thanks to the financial support from the Andrea Gabor/Urban Strategies Fellowship Award.

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Credit: Faith Cathcart.
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While cities, neighborhoods, and streets have existed for thousands of years, intentional and inclusive street design is a product of the modern era. In past centuries, streets were built to move people, animals, and goods from place to place. They also served as a central pillar of public life and citizen interaction. From twisting alleys in medieval cities to ordered Roman roads traversing continents, streets have held a vital place in the function and furthering of human civilization.

Over the past century, however, streets in North America have been characterized by a growing dependence on automobiles. With the rise of Fordism and a growing consumer class, cars moved from being available to only the upper echelons of society to being a status symbol accessible to the middle class American family (Zavestoski & Agyeman, 2015); the car industry and United States (US) federal government encouraged further reliance by painting a narrative of America's "love affair" with cars, introducing crimes associated with non-vehicular travel like "jaywalking," prioritizing funding for auto-related infrastructure over public transit, and supporting the development of suburban communities which necessitated reliance on automobiles for daily transport. (Hsu, 2012; Zavestoski & Agyeman, 2015). Streets were constructed and remodeled to optimize vehicular travel over all other needs and uses. The result is the society we see today: 85% of Americans commute to work by car, and 76% of Americans do so alone (Tomer, 2017). With a dominant car culture comes a myriad of safety, health, and environmental concerns: 4.5 million people were seriously injured and 40,100 people were killed in automobile collisions in the US in 2017 (National Safety Council, 2017); conditions

related to sedentary lifestyle and air quality like asthma, cardiovascular disease, and diabetes were among the top 10 causes of death for Americans in 2016 (Centers for Disease Control and Prevention, 2017); and the transportation sector now accounts for the majority of greenhouse gas emissions in the US, beating out electricity production, industry, agriculture, and emissions from businesses and homes (Centers for Disease Control and Prevention, 2017). Cars may be the driving force of America's transportation system, but their interrelated issues have also had detrimental effects on modern society and individual wellbeing.

"Complete Streets" is a concept that reimagines this prevalent auto-centric street paradigm. The National Complete Streets Coalition, a subset of Smart Growth America and the leading national resource on Complete Streets visioning and policy, defines the term Complete Streets as thus:

> **Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work... By adopting a Complete Streets policy, communities direct their transportation planners and engineers to routinely design and operate the entire right of way to enable safe access for all users, regardless of age, ability, or mode of transportation (National Complete Streets Coalition, 2018).**

Image 1:
Complete Streets treatment,
Before and After, on Grand Army
Plaza, New York City.

Credit: New York City
Department of Transportation.

Complete Streets redefine modern streets as more than corridors of transportation; they are public spaces, and should be treated as places where all citizens have an equal right to space and safe travel. When the term first emerged in the early 2000s, one of the movement's founding members and most vocal advocates, Barbara McCann, noted the term's immediate "stickiness" – a business expression defined by a brand's ability to "stick" with a customer through accessible messaging, which in turn creates long-term brand loyalty (McCann, 2013). The phrase "Complete Streets" stickily encapsulates the concept that streets should be physically and psychologically inclusive for all.

And stick it has: in the past twenty years, Complete Streets has gone from being a new and unknown concept to a cornerstone of municipal transportation policy. As of 2017, 1,348 communities have adopted Complete Streets related policies within the US (Atherton et al., 2018.). These range from municipal ordinances, resolutions, and design guidelines to state legislation, and they manifest in many ways, through grassroots community outcries and through leadership by elected officials. The primary outcomes of Complete Streets policies are physical features like bicycle accommodations, widened sidewalks, transit-oriented development, and greening efforts – all elements meant to foster a safer, more comfortable, and more equitable public streetscape.

These redesigns, however, can also lead to unintended consequences. While the vision of Complete Streets is noble, an improved streetscape does not exist in a vacuum. Streets are intrinsically tied to their built environment, and an improved streetscape can coincide with improved (and more expensive) housing and commercial market conditions. Over the past few years, numerous papers, books, and news articles have pondered whether the push for Complete Streets elements like bike lanes and street trees contribute to gentrification and displacement of long-term residents in their communities.

In their book, *Incomplete Streets,* Zavestoski and Agyeman frame this central question problematizing Complete Streets succinctly: "Complete for whom?" (Zavestoski & Agyeman, 2015: 4).

Complete Streets overhauls have the danger of creating streets designed for wealthier residents, developers, property investors, and commercial stakeholders, instead of creating streets designed for underserved and marginalized groups whose lives would be most improved by diverse transit options and an upgraded transportation network. So far, existing research (and lack thereof) supports some of these concerns: while Complete Streets policies have been part of national planning discourse for almost two decades, 2016 was the first time the National Complete Streets Coalition formally acknowledged that their methodology for grading policies failed to properly address equity (Atherton et al., 2017a). In this first look at income and racial demographics in their policy evaluation, they found that communities passing or updating Complete Streets policies were, on the whole, more wealthy and more white than the average American community (ibid.). While Complete Streets may aim to create more equitable spaces, if policies and projects have been primarily implemented in white and wealthy places, they have fallen short of achieving their goal of universal inclusion and benefit for all members of society. With these concerns in mind, this report seeks to answer the question: How can Complete Streets policies better address equity and social inclusion through their creation, implementation, and coordinated municipal planning?

The Introduction section introduces the topic of Complete Streets and their connection to issues of inequity in the urban environment. The next section reviews the methodology used to investigate Complete Streets and social inclusion, primarily accomplished through a series of case studies. The Literature Review section begins the research

portion with an overview of existing literature and resources that sets context for Complete Streets policies and explores connections between their programming and transportation equity. Three case study sections follow to investigate a series of Complete Streets case studies in municipalities across the US: Somerville, Massachusetts; Baldwin Park, California; and Portland, Oregon. Following the case studies is a Discussion and Analysis section, which identifies key elements of each case's Complete Streets current policies and projects. This section identifies strengths and gaps where planners could foster broader support for mitigating the effect improved streetscapes may have on resident displacement. The Lessons Learned and Recommendations section reflects on this research's findings and proposes recommendations for municipalities to improve their Complete Streets adoption and implementation in the future. The final chapter provides conclusionary remarks for this report's research.

This analysis of Complete Streets through a lens of social inclusion provides an intriguing window into the state of postmodern, new urbanist planning which rules today's praxis. Although its theory and practice aims to lessen gaps in existing socioeconomic and geographic divides, Complete Streets projects are still largely expert-led, driven by the wants and desires of mostly white middle- to upper-class individuals and, if not thoughtfully created and implemented, can unintentionally reinforce systemic oppression and displacement of lower classes and people of color. One hopes that, through this report, one can find a roadmap for cities to follow that will lead to more socially inclusive Complete Streets.

For this report, the primary research question is: How can Complete Streets policies better address equity and social inclusion through their creation, implementation, and coordinated municipal planning? To answer this question, this report investigates a series of case studies from across the US – the case studies are comprised of municipalities that currently use Complete Streets policies and programming. The case study research method is chosen in part for its ability to answer explanatory questions based on contemporary events or phenomena (Yin, 1981).

A case study, as defined in Yin's book *Case Study Research Design and Methods*, is "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (ibid.: 13). Complete Streets is still new in a field where change moves over the course of years and decades, and case studies provide a unique approach to evaluating policies and projects as they are built in recent years and continue to evolve in the present. The relationship between city governments, their residents, and their Complete Streets programming is dynamic and different in every context, and the case study method allows us to examine the variation in relationships and context that exist in modern-day municipal Complete Streets.

Yin also notes the ability of case studies to analyze situations where "there will be many more variables of interest than data points, and as one result relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result benefits from the prior development of theoretical propositions to guide data collection and analysis" (ibid.: 13). In the case of Complete Streets, this report uses multiple avenues to document conditions in each location including city records, local news sources, and personal accounts from interviews with city officials and members of the public who participated throughout the process. A total of twelve interviews were conducted for this report through a combination of in person meetings, phone, and email correspondence. This report also surveys empirical research through a review of existing literature meant to provide history, background, and theoretical context for Complete Streets processes. The review literature is comprised of a mix of articles, books, and academic and professional reports that discuss the foundation of Complete Streets, contemporary street redesign movements, the current state of Complete Streets policy development and ideals, and the possible issues with how these streets are presently designed and constructed. This literature review develops a comprehensive perspective on the overarching achievements and gaps that exist within present Complete Streets programming, which allows us to enter the case study section with perspective and nuance.

Data sources for the literature review and case studies include but are not limited to:

- **general information and reports made available from the National Complete Streets Coalition through Smart Growth America;**

- **academic articles on the subject of Complete Streets, contemporary movements related**

to Complete Streets, and the relationship of urban environmental changes to issues of racial and socioeconomic dispersal and population displacement;

- news articles about specific Complete Streets policies and projects that are relevant either to generating a comprehensive literature review or to illustrating the public process of one of the case studies;

- municipal records discussing each case city's historical context, economic and real estate conditions, transportation policies, and sources of transportation funding

- and semi-structured interviews with planning professionals and residential stakeholders who impacted the final design of a municipality's Complete Streets policy and programming.

Each case city is chosen for their historical and present-day context, their commitment to Complete Streets visioning, and the status of their Complete Streets policies, which have been completed and are now in implementation. Thus, the chosen case studies allow us to view the policy creation process in hindsight and implementation and construction challenges in their present-day context. The chosen cases exemplify the possible variety of experience in creating Complete Streets policies, both in representing different modes of transport and in addressing the needs of diverse populations through street redesign.

Key components discussed in each case study include:

- local community context to illustrate the culture in which a Complete Streets policy has been created;

- scope of Complete Streets policy and/or projects including timeline, project design, key players and stakeholders, and public engagement throughout the design and implementation process;

- community's relation to and satisfaction with its Complete Streets policy and implementation process through interviews with officials and residents who partook in the process;

- and key components that contributed to the project's overall reception and possibilities for improved Complete Streets programming moving forward.

The issues and key takeaways identified in the above research are then compiled in the Analysis and Discussion section. This section covers elements identified within both the literature review and case studies, and ventures further into questions and elements yet unexplored within existing cases and research. The combined methods described above develop a comprehensive view of how Complete Streets policies function in modern-day municipalities and the challenges they face in creating socially inclusive public processes and in protecting their newly improved

Image 2: Portland Bicycle Bridge.
Credit: Thierry Levenq / Getty Images

streets from residential and local commercial displacement. One hopes that municipalities can use this report to guide their own Complete Streets journey, to learn how to recognize existing conditions that hinder their own goals of equity and social inclusion in transportation planning, and to provide solutions to correct existing gaps in their own Complete Streets policy and community engagement process.

THE ORIGIN OF COMPLETE STREETS

The origin of Complete Streets is well documented in a 2013 book written by one of Complete Streets founding members, Barbara McCann, titled *Completing Our Streets: The Transition to Safe and Inclusive Transportation Networks* (McCann, 2013). She traces the name "Complete Streets" to the early 2000s, when the nationwide standard for successful road construction design was to optimize vehicular traffic flow (ibid.). Bicycle advocates in Washington D.C. were determined to change the priorities of America's existing transportation system, which prioritized vehicular travel over all other modes at the peril of people traveling by foot, bicycle, or public transit. This group of advocates sought to include a directive in federal law that mandated the inclusion of bicycle facilities as a routine feature of the planning process for all road projects. The original name of this directive, the "Routine Accommodation Policy," was not nearly catchy enough to receive the attention of federal lawmakers. (ibid.: 22). During an advocacy brainstorm meeting, David Goldberg of Smart Growth America came up with the name "Complete Streets," and the name had immediate clout, propelling Smart Growth America to own its branding and growth over the subsequent years.

McCann describes the allure of this newly named concept: "the framing of 'Complete Streets' may be most powerful in its implicit definition of the opposite. No one wants to build Incomplete Streets" (ibid.: 22). By cleverly reframing the issue of street construction as mobility thoroughfares for multiple forms of transportation, Complete Streets opened the road reconstruction dialogue to a new host of users who existed outside the prevailing auto-centric transportation paradigm. The movement grew slowly over the subsequent years and began to take off in the early 2010s as cities across the nation sought to diversify transportation modes, reduce greenhouse gas
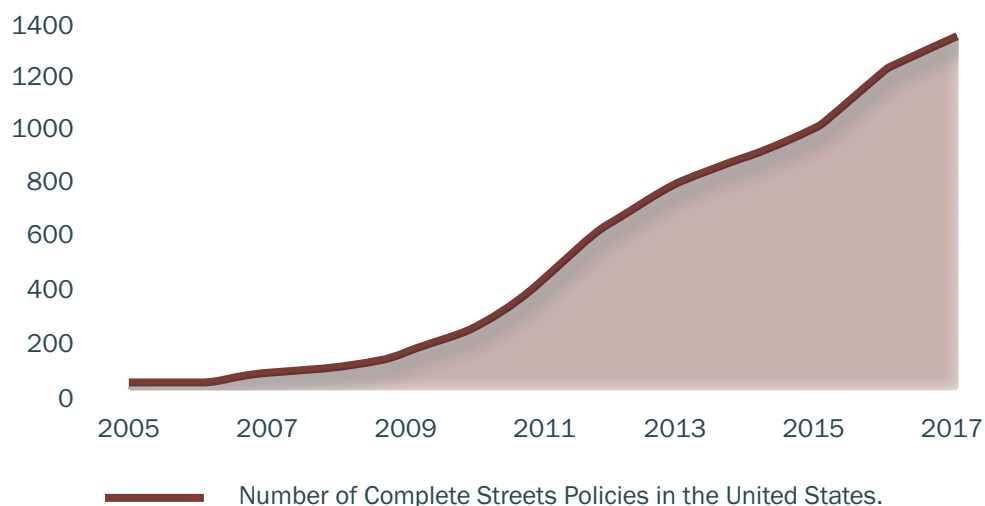

Figure i: Complete Streets Policies adopted in the United States over time.
Data source: Atherton et al., 2017; Atherton et al., 2018.

emissions, promote healthy and active living for residents, and create safer street environments for vulnerable users (McCann, 2013; Atherton et al., 2017; see figure i). As of the end of 2017, 1,348 communities within the US had adopted Complete Streets policies (Atherton et al., 2018).

COMPLETE STREETS TODAY

The concept of Complete Streets advocates for a three-pronged approach to all road projects:

> **"(1) to reframe the conversation about transportation policy; (2) to build a broad base of political support for completing the streets; and (3) to provide a clear path to follow in transitioning to a multimodal process" (McCann, 2013: 3).**

It is a broad-sweeping approach that, in theory, is meant to turn the "business as usual" street redesign process on its head. Instead of advocating for a prescribed streetscape with exacting detail, the primary definition of Complete Streets seeks to improve streets for all through re-evaluating how municipalities perceive their streets and approach their redesign. As McCann describes, "[a]fter offering reassurance and hope, Complete Streets proponents can inspire by making the case for the tremendous value represented by an investment in multimodal streets. These values come through lives saved, healthier citizens, stronger local economies with more sustainable practices, and even through less traffic congestion" (ibid.: 141). Complete Streets are meant to shift the focus

away from single occupancy vehicles and towards values that more directly benefit people on both a personal and systemic level.

With over a thousand Complete Streets-related policies in the US, the breadth and scope of what these policies entail can vary widely depending on what type of policy is passed or enacted, who is involved in its creation, the level of government in which the policy is enacted, and how they are funded and eventually implemented. Types of policies range from council-driven ordinances and resolutions to design guidelines, and each has its own set of strengths and weaknesses.

According to data from the National Complete Streets Coalition, the most popular Complete Streets policy adoption strategy is a resolution issued by the locality's governing body (National Complete Streets Coalition, 2018; see figure ii). A resolution is a preliminary, non-binding statement from a locality's legislative branch, and is a great avenue for introducing a locality to the concept of Complete Streets (Atherton et al., 2017). Since resolutions need only be reviewed by a small group of individuals before being passed, they are especially useful in places where elected officials and other city departments are reticent about the idea of creating road infrastructure for people outside the auto-centric paradigm and need to dip their toes in the water before committing to a complete infrastructure overhaul. This non-binding statement, however, also makes it easy for localities to neglect their commitment and shirk accountability towards affecting real change beyond the written statement of their resolution.

Resolution Policy

Legislation/ Ordinance Transportation Plan

Design guideline Internal Policy

Executive order Tax ordinance

City

County

Region
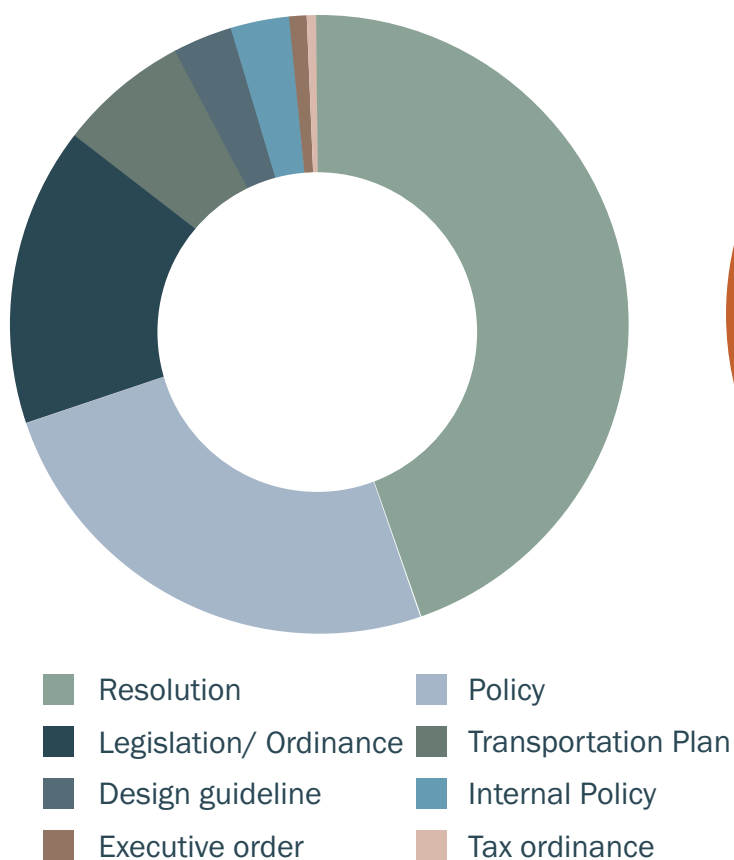
State

Figure ii: Types of Complete Streets-related policies adopted in the United States as of Junes 27, 2018. Data source: National Complete Streets Coalition, 2018.

Figure iii: Government level where Complete Streets-related policies are implemented in the United States as of June 27, 2018. Data source: National Complete Streets Coalition, 2018.

Policies are the next most popular type of Complete Street-related intervention: as defined by Atherton et al., "policies adopted by an elected board are statements, usually developed by a group of stakeholders, and are approved by an elected governing body via an adopting resolution or ordinance" (Atherton et al., 2017: 5). Since policies reach outside the governing body for input on their proposals, they should in theory reflect the desires of their community in a more tangible way than non-binding resolutions, yet as this report and others note (Hoffmann, 2016; Lubitow & Miller, 2013; Zavestoski & Agyeman, 2015), stakeholders involved in a public process do not always accurately reflect the makeup of a locality's community. Here, as well, policy statements passed through public consultation

risk excluding accountability measures that will bring the policy's vision to fruition.

Legislative ordinances take things a step further. An ordinance signs Complete Streets concepts into physical law, either for an internal department's function and programming, or for private developers who seek city approval for new projects. The success of an ordinance lies in its accountability through signed law. One example of such an ordinance comes from Prince George's County, Maryland (McCann, 2013). Developers were previously required to account for new vehicular traffic from their projects by installing lights and widening roads near projects; in 2012, the local government amended its subdivision code to require developers to provide adequate

bicycle and pedestrian facilities within a half mile of new developments (ibid.: 92). With an ordinance that includes binding language, Complete Streets elements become canon for new and revisited road construction projects instead of simple suggestion.

Beyond these most popular policy types, localities employ a number of alternative Complete Streets-related interventions that guide road reconstruction and development. One such alternative that is popularly discussed in related literature and in promoting Complete Streets adoption is the design guideline, which aims to incorporate Complete Streets elements directly into the planning process for urban designers and engineers. Design guidelines are an accessible, straightforward, and tactile way for local and regional departments to quantify Complete Streets concepts. Some articles and books focus on offering specific examples that illustrate the relationship between streetscape and improved experiences. New York City's publication, *Measuring the Street: New Metrics for 21st Century Streets,* illustrates different streetscape redesigns throughout the city and provides metrics on improved traffic safety and economic support for businesses, which all contribute to the publication's positive outlook on the role of Complete Streets in improving the urban environment (New York City, 2012). *Rethinking Streets,* by Marc Schlossberg, John Rowell, Dave Amos, and Kelly Sanford, offers perspectives on twenty-five different transformations from across the US and breaks them down into sections based on the mode prioritized in each context (Schlossberg et al., 2013). Larger influential organizations like the National Association of City Transportation Officials (NACTO, 2016) have created their own street design guides, again focused on various modes of transportation as individual priorities (NACTO, 2016). The creation of overarching standards by a national transportation entity has helped legitimize the concerns voiced by bicycle and pedestrian advocates surrounding the role of infrastructure design in street safety.

Yet, as McCann notes, design guidelines can also lead to overly prescriptive street designs that are not flexible or responsive to the context and conditions of a specific street or neighborhood (McCann, 2013: 71). When approaching design guidelines, McCann suggests a focus instead on decision-making tools that equip planning and engineering departments with the ability to balance competing transportation priorities within one project. McCann also cites the limited scope design guidelines provide in convincing people outside planning and engineering that Complete Streets are a practical and meaningful addition to municipal discourse (ibid.: 72). Despite possible drawbacks, design guidelines continue to be a popular way to spread the message of Complete Streets ideals, both in enacted policies and in general literature, and are used to encourage adoption Complete Streets-related policies in new localities. Other alternative Complete Streets-related policies include: incorporating Complete Streets-related concepts and elements into larger transportation plans; creating internal policies adopted by a governing body without action from elected officials; and passing tax ordinances either through support from voters or from elected officials aimed at funding Complete Streets elements (Atherton et al., 2017).

The majority of Complete Streets-related policies are enacted on a municipal level, and a handful of policies exist on a county, regional, or state level (National Complete Streets Coalition, 2018; see figure iii). Some places, such as Massachusetts, have created state-level incentive programs which encourage cities to adopt Complete Streets-related policies and provide financial backing for cities to implement their plans (MassDOT, 2016a). Creating state-level incentive programs has proven to be an effective tactic for getting more municipalities to pass local-level policies. In their review of Complete Streets policies passed in 2016, Atherton et al. noted that out of 222 policies adopted that year, 132 were passed in states with such an incentive program (Atherton et al., 2017: 10). Again, using Massachusetts as an example, only 32 localities had passed Complete Streets-related policies prior to the introduction of their incentive program – since the program's introduction, however, an additional 136 localities have passed Complete Streets-related policies (National Complete Streets Coalition, 2018). The availability of state-level support – in written commitment to Complete Streets ideals and particularly in financial commitment – can be seen as a crucial (if not entirely necessary) component in the proliferation of Complete Streets-related policies we see in recent years across the US.

CONTEMPORARY MOVEMENTS & ALLIES

The Complete Streets movement is not alone in its effort to re-evaluate how we design streets. Public health professionals and advocates share common interests with the Complete Streets movement, and consequentially are one of the most vocal groups outside urban planning to offer Complete Streets support and collaboration. In communities with high levels of obesity and asthma, active living is a commonly cited recommendation for improving individual health outcomes (Groenewegen, van den Berg, de Vries, & Verheij, 2006; Lee & Maheswaran, 2011). In 2010, the U.S. Department of Health and Human Services legitimized this recommendation as part of a larger program called Communities Putting Prevention to Work (CPPW), which targeted communities hoping to improve their health outcomes, fight obesity, and reduce tobacco use (Seskin, 2012). Partnering with the U.S. Centers for Disease Control and Prevention, sites participating in the CPPW program employ a powerful public health framework for creating healthier environments: Policy, Systems, and Environmental Change (ibid.). A key part of the "E," environmental change, is engaging in Complete Streets policy creation and making space in struggling communities for sidewalks and bike lanes to promote healthier living habits (ibid.). The overlap in interests has led to a long-term partnership between the National Complete Streets Coalition and the Centers for Disease Control and Prevention (ibid.). One literature review in the International Journal of Behavioral Nutrition and Physical Activity found that provision and improvement of active transportation infrastructure and neighborhood walkability correlated with "significant positive impact" on active transport and physical activity in 25 out of 28 reviewed studies (Smith et. al., 2017: 20). Another public health study by Robert Schneider goes so far as to broach a connection between Complete Streets, public health, and eliminating traffic fatalities (Schneider, 2018). Support from

public health has also been used as a tool for creating and funding Complete Streets policies and projects in places across North America. In the case of Sault Ste. Marie, Michigan, a Complete Streets policy grew from direct efforts to improve public health through physical activity, a policy made possible through a grant from the Centers for Disease Control and Prevention, distributed by the Healthy Communities' Division for the Strategic Alliance for Health (Clifton et al., n.d.). Public health professionals and advocates remain some of the staunchest allies for Complete Streets policies across the US, and their support is also visible in contemporary movements that view increased walking and biking as a viable method to improve community health outcomes.

Tied closely to both public health and urban planning, Complete Streets also benefit from overlapping interests with environmental advocates. A core principle of Complete Streets is to reduce the number of single occupancy vehicles that represent a large portion of America's existing transportation emissions (McCann, 2013). This principle coincides with goals of many environmental advocates to reduce

greenhouse gas emissions, including specific mention of personal vehicles as a danger to future sustainable consumption and production patterns, which was identified as one of the United Nations' sustainable development goals (United Nations, 2017). In her article *Perspectives from the Field: Complete Streets and Sustainability,* McCann notes that many communities are now pairing Complete Streets initiatives with "green streets" plans that aim to use street design to improve environmental conditions such as urban tree coverage and storm-water runoff (McCann, 2011). In Portland, Oregon, the city's Bureau of Environmental Services has made use of its Community Watershed Stewardship Program to add greening elements such as bioswales throughout the city's road network; such elements are apparent along many of the city's "bicycle boulevards" and serve as a further road-dieting effect, creating smaller street widths that discourage fast-moving traffic (Zavestoski & Agyeman, 2013: 176-178). Although both Complete Streets and environmental causes have separate overarching goals, the overlap provided by emissions as they relate to modal choice and support for related infrastructure

Image 3:
Green Street Bicycle Boulevard along Portland's SE Spokane Street.

Credit: Portland Bureau of Transportation.

makes sustainability advocates and allies of the environmental justice movement strong partners for Complete Streets initiatives.

Complete Streets is just one movement seen in modern-day urban transportation circles; several contemporary movements sprouted around the same time, all aimed at changing the conversation on how we structure our roadways. One of Complete Streets' greatest contemporaries is the "Vision Zero" movement, a concept that developed in early 1990s Sweden with a similarly simple yet sticky idea: the country envisioned a goal of zero traffic fatalities on their roads (Tingvall & Haworth, 1999). The government started to view collisions as more than a mere traffic accident; from a Vision Zero perspective, every fatality is a symptom of larger structural issues, including poorly designed streets and intersections and poorly managed government priorities. Vision Zero holds street designers and road users to the same level of responsibility when a collision occurs. In such a case, the Vision Zero approach uses the conflict as an opportunity to revisit street conditions which

contributed to the collision and to revise the street or intersection to discourage future incidents (ibid.). Vision Zero has had a widespread effect on transportation policy, and cities around the world have since developed their own Vision Zero policies and programs. Most famously, major cities such as New York City and Toronto have made Vision Zero policies part of their core programming in changing their transportation networks, and they employ strategies such as lowering speed limit standards and updating infrastructure design through data-driven methods (New York City, 2018; City of Toronto, 2017). Vision Zero overlaps with Complete Streets with its rhetoric towards using street design to promote traffic safety, but diverges with its technically-driven approach and its impetus on holding road users, municipal transportation departments, and elected officials directly responsible for resolving traffic safety through infrastructure.

Another movement related to traffic safety for vulnerable users is "Safe Routes to School," which advocates for safer walking and bicycling

conditions around schools and encourages more students and families to choose these modes to commute on a daily basis. According to Cradock et al., the purported inspiration for such a program can be attributed to Denmark, where federal legislation in the 1970s led local governments to introduce a number of initiatives around increased investment in safety and access for traffic near schools, especially for children and for pedestrians and bicyclists (Cradock et al., 2012; 17). In August, 2005, US Congress first ratified a federal Safe Routes to School program to distribute $612 million in federal dollars to every state based on the number of primary and middle school students enrolled, and the program aimed to encourage children to walk and bicycle to school, enable their ability to do so with improved safety and accessible infrastructure, and support these intents based on the health benefits of active living and reduced fuel consumption and air pollution (Safe Routes to School National Partnership, 2018; Cradock et al., 2012). The federal program provided a minimum funding guarantee of $1 million per state, and the funds were non-transferable and to remain available until fully spent (Cradock et al., 2012; 17).

Safe Routes to School pairs particularly well with Complete Streets for multiple reasons. Firstly, both movements focus attention on providing safety for vulnerable users – namely those traveling on foot or on bicycle, and especially children – who may garner the loudest public outcry and sympathy in cases of serious injury and fatal collisions. Secondly, both movements rely on background motivators derived from health outcomes, with each movement building on an active living ethos and the public health benefits associated with

reduced greenhouse gas emissions and airborne particulate matter. Finally, both movements rely on their accessible and "sticky" messaging to further their national and international reputation: no one wants incomplete streets, and no one wants dangerous routes to school. The overlap between these two movements is apparent in transportation departments and their programming across the US, so places which support Complete Streets may also have a Safe Routes to School program or pursue specific interventions which achieve goals set in both movements. Furthermore, since there is not yet federal funding for Complete Streets programming, municipalities may harness the funding power of Safe Routes to School to tackle projects which satisfy these movements' overlapping interests.

Another movement which has emerged in reaction to auto-centric planning trends is known under many names: call it a business improvement district (BID), business improvement area, urban regeneration, Main Street revitalization, or any number of other variations (Hoyt & Gopal-Agge, 2007; Silverman et al., 2008; Symes & Steel, 2003); for the purposes of this research, we will refer to them as BIDs. In their case, however, the underlying motivation differs from other contemporary movements discussed; BIDs are not so much focused on people, health, and safety as they are focused on real estate values, profit, and economic growth. The first BID grew from concerns of local businesses along Bloor Street in Toronto's Annex neighborhood in the late 1960s and early 1970s, they were concerned that commercial streets in urban centers were losing customers and revenue to the boom of suburban strip malls and commercial clusters further outside the city

(Symes & Steel, 2003; Yang, 2010). Seeing value in collective action to reignite the public's interest in shopping local, the businesses of Bloor Street combined funds and brought improved amenities to their portion of the street, including better street lighting, extra litter collection, and flower boxes (Symes & Steel, 2003; Yang, 2010). This model proved successful and led to an international wave of similar approaches, each with the priority to lure customers back to commercial city centers and away from suburban retail parks (Ruffin, 2010). While BIDs do not necessitate improved infrastructure for pedestrians and bicyclists, some places like Chicago and San Francisco have created "bicycle-friendly business districts" that expand bicycle infrastructure in ways that more closely align with Complete Streets principles (Peizer et al., 2015). A number of small-scale studies explore the relationship between active transportation modes and spending habits along commercial corridors, and one such study conducted by the Toronto Centre for Active Transportation and the Clean Air Partnership in 2009 analyzed the current condition of Toronto's original BID along Bloor Street (Sztabinski, 2009). Their findings concluded that only 10% of the street's patrons arrived by car, and that people arriving by foot and by bicycle were more likely to make multiple visits per month and, resultantly, spend more money than their car-driving counterparts (ibid.). Putting economic arguments behind active transportation makes restructuring streets in a Complete Streets style easier to propose and implement, both for elected officials and for neighbors that might be reticent to change their local main street. Some academic articles debate the moral nature of BIDs: their public accountability, their role in normalizing public-private partnerships in contemporary urban planning, and whether they create or exacerbate wealth-based inequalities in various neighborhoods and regions (Hoyt & Gopal-Agge, 2007; Silverman et al., 2008; Symes & Steel, 2003). While BIDs can be great allies to Complete Streets policies and projects, it is important to acknowledge the difference in underlying intent between these two movements and to address places where their intents may conflict, such as situations where one population group may be a BID's target demographic, but not one that stands to benefit significantly from increased transportation access and improved road infrastructure.

COMPLETE STREETS & INCORPORATING EQUITY

The primary outcomes of Complete Streets policies result in more and higher quality bicycle lanes, widened sidewalks, and greening efforts – all of which are meant to foster an urban environment appropriate for all modes of transportation. Yet emerging literature supports the theory that Complete Streets elements may disproportionately benefit certain population groups over others. In Smith et al.'s literature review on built environment effects on physical activity and active transport, their findings indicate that while improvements to the built environment led to a positive effect on physical activity, active transport, and increased use of such facilities, there was also "some indication that infrastructure improvements may predominantly benefit socioeconomically advantaged groups" and that this should be explored more fully in future studies (Smith et al.: 1; 22). Another study

focuses on gender inequality in the context of Complete Streets (Wyatt et al., 2017); while streets considered "high-walkable" did show higher numbers of women present compared to streets with lower walkability, women were outnumbered by men across all street types studied (ibid.).

One of the few academic papers that refers directly to hearing marginalized voices within the context of Complete Streets was completed by Portland State University researcher Kelly Clifton (Clifton et al., n.d.). Using case examples of community efforts tied to Complete Streets on a national scale, this text does directly discuss how each community was able to harness different funding sources and factions of the public to achieve Complete Streets policies (ibid.).

Susannah Bunce (2018) discusses the impact community-level organizations can have in challenging the conversation taking place around social and environmental equity and justice (Bunce, 2018). While Complete Streets are not part of her research, Bunce provides examples regarding community-based organizations and their ability to influence governmental policy and planning involvement – examples that could help inform more effective public processes in future Complete Streets initiatives. While not directly concerned with Complete Streets elements either, Anguelovski's 2018 publication on the occurrence of green gentrification in neighborhoods with new or improved green spaces in Barcelona found evidence that the city's improvements led to "a form of green goods polarization and re-segregation – privileged residents living in greener and desirable neighborhoods versus socially vulnerable groups confined into greener yet more socially fragmented and isolated neighborhoods" which showed uneven changes to the social landscape surrounding interventions in the urban environment (Anguelovski, 2018: 486). The study is unique for its combination of spatial descriptive analysis and regression analysis; a similar study exploring Complete Streets-designed roadways and their correlation with factors indicating gentrification has not yet been published, and it would be a welcome addition to current literature.

2016 was the first year the National Complete Streets Coalition decided to evaluate equity issues in their annual report on the year's most successful policies, and the Coalition noted some distinct concerns in the geospatial distribution of Complete Streets policies (Atherton, Emiko, et al., 2017: 6–10). As stated in the report, 77 percent of the 222 localities that adopted Complete Streets policies in 2016 had white populations higher than the national average, and the two states with the largest number of Complete Streets policies – Massachusetts and Washington – were states marked by predominantly white populations (ibid.). Additionally, the data showed that localities which passed Complete Streets policies had a median income roughly 10 percent higher than the national average(ibid.). The data presented by the National Complete Streets Coalition supports the argument that despite progress in recent years towards more equal representation amongst road users, equal representation of low-income communities and communities of color within Complete Streets policies has been neglected and deserves further attention in future targets.

Following the findings of their 2016 report, the

Coalition's Steering Committee adopted its first strategic plan and placed strong emphasis on their commitment to including equity across the Coalition's scope of work (Atheron et al., 2018). The Coalition has now released a revised list of ideal Complete Streets elements and policy evaluation framework that emphasizes equity through specific measures, including, "project selection criteria, considering the impacts of transportation projects on vulnerable communities, community engagement, and a greater emphasis on binding legislation" (ibid.: 5). This updated evaluation framework will go into effect in 2018, and it will hopefully guide the nation's leading source on Complete Streets to become a more prominent champion for improving streetscapes across diverse neighborhood populations.

In her 200-page book documenting the process of creating, developing, and building future support for Complete Streets, McCann spends approximately one page addressing the possible equity disparities that remain prevalent in street design processes (McCann, 2013: 164). While inequity is not directly addressed in McCann's book, one example of Complete Streets policies in Louisville, KY speaks loudly towards the lack of perspectives when incorporating equity into conversations on Complete Streets elements:

"Barry Barker, of the Louisville Transit Agency, says that when he was preparing to put bike racks on the city's buses years ago, he would make jokes about serving 'the spandex crowd.' But once they were installed, he says, 'what we quickly learned was the extent to which year-round, the bike is a form of transportation for minority, low income individuals in Louisville. This is probably the most significant thing we've done for access to jobs'" (McCann, 2013: 154).

This example highlights the incongruence between the world in which planning officials live and the world of their city's many different and diverse residents. The Complete Streets movement grew directly out of bicycle advocacy, so many of its core principles and most visible outcomes appear tailored to the stereotypical cyclist – namely, the spandex-wearing, fixie-riding, liberal-leaning upper-middle class bicycle rider. This image was popularized and perpetuated in the now infamous book *The Rise of the Creative Class: And how it's Transforming Work, Leisure, Community and Everyday Life,* released in 2002 by Richard Florida. In his book, Florida describes the new 'creatives' who drive today's economy as hip, funky, and essential to the success of any city's future (Florida, 2002). According to Florida, "to climb onto a bicycle and become the engine is a truly transformative experience — a creative experience" (Florida, 2002: 181–182). This image of the modern urban bicyclist has spread across North America, and for some, is the only image they know. This was certainly the case for Barker. The Louisville Transit Agency's decision to move forward with bike racks on buses serendipitously benefited minority, low-income individuals, but their limited perspective on who could benefit from bicycle accommodations discounted this large and important population as part of the project's initial scope. It is telling that the city's "most significant [project improving] access to jobs" was, in fact,

accidental (McCann, 2013: 154). How many Complete Streets policies or projects that could benefit marginalized communities have been overlooked based on this lack of perspective?

The prevailing narrative in the Louisville example is echoed in other communities across North America. In her book *Bike Lanes are White Lanes,* Melody Hoffman expands on the perception of bicycle lanes as harbingers of white residents and gentrification (Hoffman, 2016). Her writing positions the advent of bicycle-oriented planning within the important and oft-ignored context of historical, systemic discrimination against minority and low-income populations – both within a broader societal context and specifically in the urban planning field. In a country where residents were displaced and segregated through discriminatory policies like redlining and Modernist urban revitalization schemes, recognizing historical context is imperative. In many cases, to simply be black in America means following a different set of social norms in order to feel a basic level of safety. While this narrative is prevalent throughout a plethora of subjects

in the US, Hoffman uses the example of the Complete Streets contemporary, Vision Zero, to highlight how a very well-meaning policy might have unintended and potentially dangerous ramifications for marginalized communities. She cites the importance of acknowledging the American context when implementing these schemes:

> **"The NYPD was one of the first police forces to adopt a Vision Zero program, but given the department's deplorable Stop and Frisk track record and its strained relationship with Mayor Bill de Blasio, the program's impact remains unclear. Many U.S. bicycle advocates are interested in Vision Zero for their cities because of the program's focus on prosecuting drivers who injure or kill bicyclists ... But the Vision Zero initiative runs a high risk of being used by police to target and profile young people of color walking or bicycling through their neighborhoods"** (ibid.: 158).

Image 5: Incident captured by documentary photographer Natalie Keysarr:

"July 28th, 2015. Philadelphia, PA. First year officer Jonathan Dedos (a "foot beat") questions a group of young men, after a shooting suspect was described as an African American wearing white and on a bike, a description which would imply the majority of young men in the neighborhood."

Credit: Natalie Keysarr

Hoffmann's book is one of the most provocative and profound texts supporting a connection between Complete Streets interventions and unforeseen consequences for differing populations. The most comprehensive literary source which discusses inequities stemming from Complete Streets style policies and street redesigns is Zavestoski & Agyeman's 2015 book *Incomplete Streets: Processes, Practices and Possibilities* (Zavestoski & Agyeman, 2015). This book features chapters from a diverse group of urban planning professionals, including a chapter by Hoffmann which shares an abridged version of her other text, and takes a more wide-ranging angle on the fittingness of the name "Complete Streets":

> **"While we certainly agree with its challenge to auto-normativity, the aim of this book is to problematize the Complete Streets concept in ways that might provoke its more critical use and application by urban planners, policy-makers, and academics... What mistakes might we be making in assuming that redesigning streets with the goal of providing safe access to all users of streets can sufficiently address the broader historical, political, social, and economic forces shaping the socioeconomic and racial inequalities embedded in and reproduced by the spaces we call streets?"** (ibid.: 4).

This statement is a powerful critique on the perspective Complete Streets advocates and planning professionals have taken when designing streets for "all users." When "users" are flat, characterless walkers, bicyclists, and public transit riders, it's tough to provide an argument for considering inequity as a core tenant of redesigning streets. Zavestoski & Agyeman's sprawling coverage of this topic ranges from the effect of Fordist suburbanization on exacerbating geospatial social exclusion and segregated regions to the bicycle's synonymy with the "creative class" and neoliberal justifications for bicycle infrastructure (ibid.: chapter 4; 16). In addition to the works of Hoffmann and Zavestoski & Agyeman, many news articles refer to the potential connections and risks of bicycle infrastructure as a harbinger of gentrification (Geoghegan, 2016; Maus, 2011; Walljasper, 2013).

The above literature provides a vast range of context for which to now build a series of case studies showing how different communities across North America have chosen to include concerns of inequity and social exclusion when conducting Complete Streets policies and projects. Through these case studies, one aims to find specific techniques and planning practices that will lead to more comprehensive, equitable, and Complete Streets.

Image 6:
Somerville's Prospect Hill Tower, also known as Prospect Hill Memorial Flag Tower, an emblem for the City and the site of the first raising of the Grand Union Flag.

Credit: Eric Kilby / CC BY SA 2.0

Figure iv: Case-relevant demographics for Somerville, MA.

COMPLETE STREETS POLICY ENACTED: May 8, 2014

TYPE OF POLICY: Ordinance

CITY GEOGRAPHIC SIZE: 4 square miles

(City of Somerville, 2017: 2)

80,318
TOTAL POPULATION
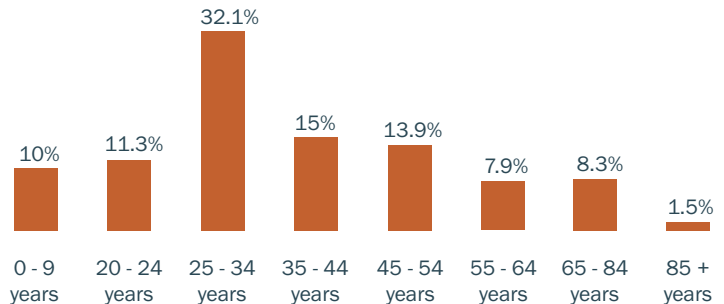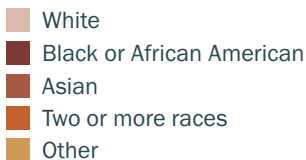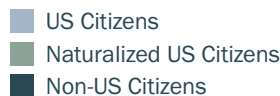
POPULATION BY AGE GROUP

Age Group	Percentage
0 - 9 years	10%
20 - 24 years	11.3%
25 - 34 years	32.1%
35 - 44 years	15%
45 - 54 years	13.9%
55 - 64 years	7.9%
65 - 84 years	8.3%
85 + years	1.5%

POPULATION BY RACE

- White
- Black or African American
- Asian
- Two or more races
- Other

POPULATION BY IMMIGRATION STATUS

- US Citizens
- Naturalized US Citizens
- Non-US Citizens

9.4%
OF POPULATION IDENTIFIES AS HISPANIC

ANNUAL HOUSEHOLD INCOME

Income	Percentage
$150k+	17.5%
$100k - $150k	21.1%
$75k - $100k	14.1%
$60k to $75k	22.5%
$40k - $60k	22.2%
$20k - $40k	12.1%
Under $20k	12.9%

DAILY COMMUTE BY TRANSPORTATION MODE

Mode	Percentage
Other	0.9%
Work from home	3.9%
Bicycle	5.9%
Walk	11.5%
Public transport	33%
Drive	44.8%
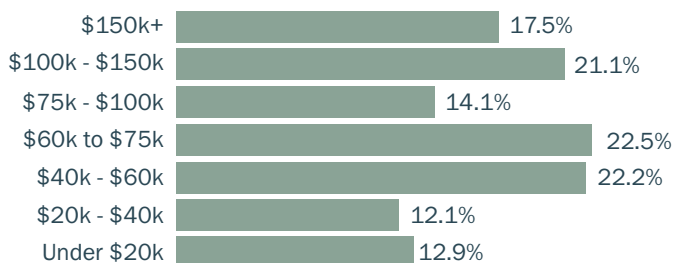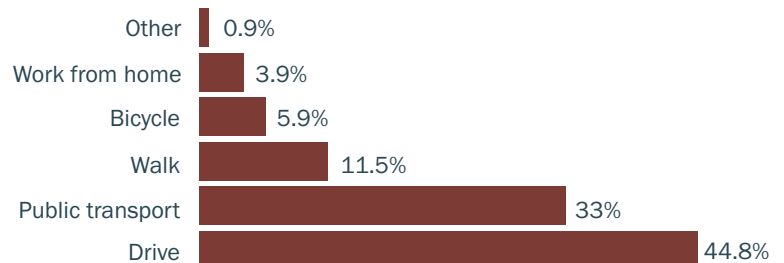
All data retrieved from the 2016 5-year American Community Survey unless otherwise stated.

CITY CONTEXT

SOMERVILLE,

Massachusetts is a city bordering the municipalities of Boston and Cambridge, Massachusetts, and was first settled in 1630 as a continuation of the Boston neighborhood Charlestown (Ostrander, 2013; see figure v). Somerville has historical significance as home of the first raising of the Grand Union Flag and for its role as part of Paul Revere's midnight ride in the American Revolution

Figure v: Map of Somerville, Massachusetts and surrounding region. Credit: Snazzy Maps, map data courtesy of Google Maps.

(City of Somerville, 2017; City of Somerville, n.d.). Somerville has experienced multiple periods of rapid growth and has been home to many demographic groups over the decades; it was a landing point for European immigrants at the turn of the century, including populations from Ireland, Italy, Portugal, and Greece (Ostrander, 2013). In present day, Somerville is now home to a mix of young professionals, blue-collar families, and immigrants from places across the world including Brazil, El Salvador, and Haiti (ibid.). The Irish and Italian populations that moved to Somerville in previous decades are still noticeable, with 19% of residents tracing their origin to Ireland and 15% tracing their origin to Italy (ibid.). The city's legacy as an immigrant landing point has led to over 50 languages being spoken by students in the city's public schools today (Somerville, 2017). The city's proximity to major educational institutions

such as Harvard University, Massachusetts Institute of Technology, and Tufts University makes it a desirable location for students, who make up approximately one-fifth of the population (ibid.). An elevated artery known as the McGrath Highway separates a small borough known as East Somerville from the majority of the city, and this boundary serves as a major division between the city's population of immigrants, concentrated in East Somerville, and the whiter, wealthier populations that inhabit other areas (Ostrander, 2013).

While Somerville's economy was once primarily fueled by an urban industrial economy, the city's population is now employed across a mix of industries in addition to a small percent of more traditional blue-collar jobs such as operators and fabricators (ibid.); today's major

employment industries include technical and administrative support, sales, and household and craft services (ibid.). The city's squares (an ironic term as none of the squares are, in fact, square) serve as commercial clusters throughout the city (Somerville, 2017). In the mid 1980s, the regional transit system (the Massachusetts Bay Transit Authority, or MBTA) expanded one of its subway lines to reach one such square, Davis, which led to an increase in its popularity and, consequentially, its real estate prices (ibid.). Residents have shown concern about increasing symptoms of gentrification over the years, which has been documented by news articles (Kesslen, 2013; Teitell, 2013; Florida, 2013) and by the Somerville Gentrification Project, a community-university partnership project between the city's Tufts University and several local community based organizations (Cho et. Al., 2016).

More recently, Somerville's Assembly Square became home to the newest MBTA station in 2014, and the new station was financed through a mix of federal, state, and private funding (City of Somerville, 2017). Assembly Square, a 145-acre area, holds historical importance as the once-home of Somerville's Ford Motor Company assembly plant which was operational from 1928 to 1958, and is also one of New England's largest urban areas primed for redevelopment (Ostrander, 2013, City of Somerville, 2017). Its location adjacent to East Somerville, however, has made some residents wary of ramifications on their neighborhood's affordability (Logan, 2018). Somerville will also be the primary beneficiary of a new line of six subway stations, known as the Green Line Extension, which many people consider a catalyst to the precipitous rise in rental and real estate prices over the past few years, in spite of multiple setbacks in the project's cost estimate, planning, and construction timeline (Teitell, 2013; Chin, 2017; MassDOT, 2016b). Concerns of gentrification in the area have passed fever pitch and Somerville is now considered a highly desirable location, receiving accolades such as "the best run City in the Commonwealth" from

Image 7: Somerville's newly redeveloped Assembly Square, an old 145-acre industrial site now receiving renewed investment from the City.

Credit: Development Management Association.

Boston Globe Magazine and an "All-America City" from the National Civic League (City of Somerville, 2017).

Somerville's governance has also benefitted considerably from strong mayoral leadership. The current Mayor, Joseph Curtatone, was inaugurated in 2004 and is by many accounts a crucial player in the City's progressive planning vision and its data-driven approach to governance (City of Somerville, 2018; Morrison, 2018; Rawson, 2018). Under his leadership, the City's Office of Strategic Planning and Community Development (OSPCD) worked for years with the community to create a set of aspirational goals, which were published in a report called SomerVision (SomerVision Comprehensive Plan, 2012). SomerVision identifies shared values for the future across many different sectors, including economic growth, sustainability, celebrating diversity, and creating an improved urban streetscape. For this last goal, SomerVision illustrates a vision that lends itself towards the creation of Complete Streets, stating that Somerville will "[p]romote a dynamic urban streetscape that embraces public transportation, reduces dependence on the automobile, and is accessible, inviting and safe for all pedestrians, bicyclists and transit riders" (SomerVision Comprehensive Plan, 2012: 4). The City's OSPCD uses SomerVision to guide its priorities for planning policies and projects from 2010 to 2030, and its adoption led Somerville down the path of becoming the sixth city in Massachusetts to ratify a Complete Streets policy (Somerville by Design, 2017).
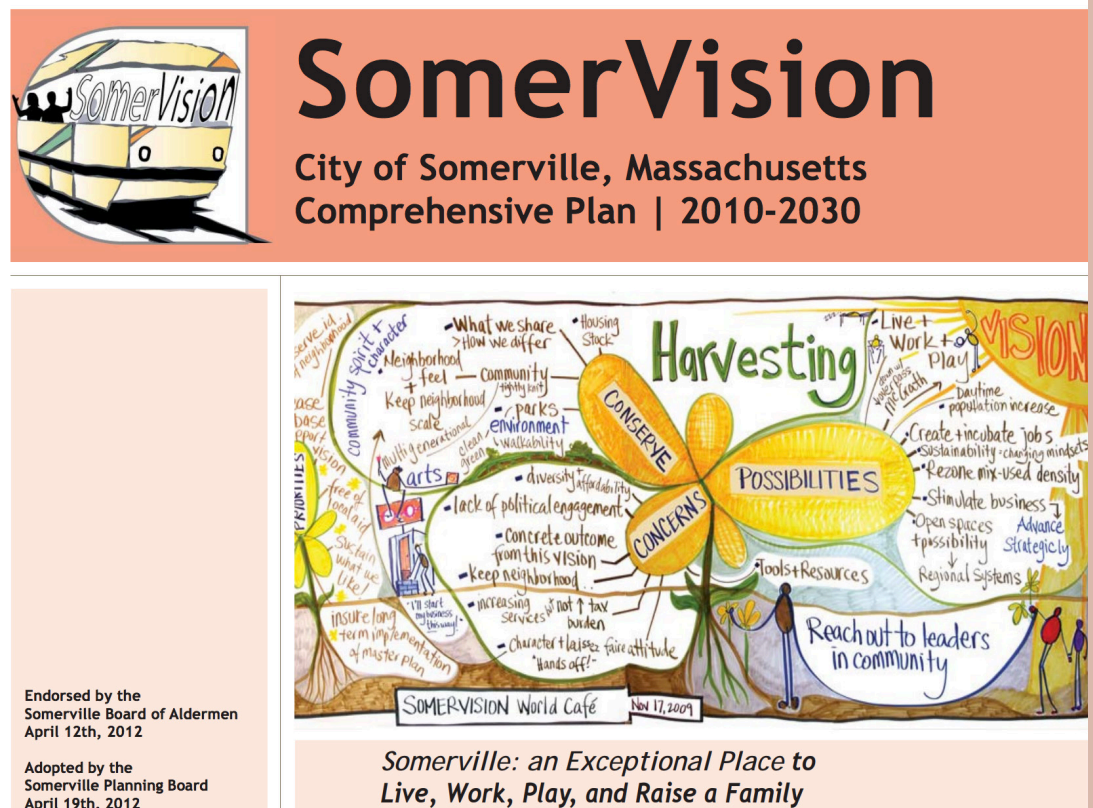

Image 8: Cover page of Somerville's SomerVision Comprehensive Visioning Plan for 2010-2030.

Credit: City of Somerville.

COMPLETE STREETS IN SOMERVILLE

Somerville began its journey to a Complete Streets policy in 2012 (Epstein, 2018). The move to create a new policy was influenced by the city's SomerVision plan, which recommended the adoption of a Complete Streets ordinance in accordance with its desire to develop a street network that was multimodal and safe for all users (SomerVision Comprehensive Plan, 2012). The City cited that the creation of such a policy aligned with other goals such as enhancing safe walking and biking options for school-age children, supporting economic growth and stability through improved transportation access, and reducing greenhouse gas emissions and improving air quality (ibid.). Furthermore, Somerville prided itself on being a top city for bicycling in the US (Park Somerville, 2018), and in 2011 the League of American Bicyclists stated that adopting a Complete Streets ordinance would be the most important step Somerville could take to improve its conditions for active transportation (City of Somerville, 2014a).

Somerville's Bicycle Advisory Committee (BAC), a very vocal community group on street infrastructure that works closely with the City's planning department, played a highly influential role in the City's policy creation (Morrison, 2018; Rawson, 2018; Epstein, 2018). It was at their pressing that the City first moved to enact a Complete Streets policy; as one representative phrased it, the BAC was "getting frustrated at the lack of progress and uniformity" in Somerville's bicycle infrastructure design and implementation (Epstein, 2018). For the BAC, a Complete Streets policy offered a codified commitment to improved bicycle facilities across the city, and when they broached the topic with the City's planning

department it had positive reception (Morrison, 2018; Epstein, 2018). At the time, only a handful of municipalities in Massachusetts had passed Complete Streets-related policies, and the state had just passed a new directive which supported cities who wished to enact such policies (Morrison, 2018; Epstein, 2018; MassDOT, 2016a). As his governance style lent itself to trying new ideas in city planning, Mayor Curtatone was also highly receptive to the proposal (Morrison, 2018). While the concept intrigued City staff, however, they felt that to appeal to members of the City's Board of Alderman, they would need "something to react to" (Epstein, 2018). With the City's blessing, the BAC created a first draft of what would become Somerville's Complete Streets ordinance (Morrison, 2018; Epstein, 2018).

To write this first draft, the BAC referenced numerous existing documents on Complete Streets, including a policy template from the state department of transportation and existing policy language from "defensively comparable" cities such as Rockville, Maryland and Buffalo, New York (Epstein, 2018). The BAC presented their draft to the Board of Alderman after approximately six months of drafting and preparation, and the Board in turn asked for a second version with changes to the language to directly address the needs of specific transportation modes and include further public input, which would round out the ordinance's reflection of community values (Epstein, 2018; Morrison, 2018). Following this request, the City built off its community engagement model known as "Somerville By Design" and held a series of community workshops in the spring of 2013 to educate the public on defining Complete Streets and explore its impact on designing street

Developed and maintained by the City of Somerville Mayor's Office of Strategic Planning and Community Development.   f y ✉   Search   Q

Somerville by DESIGN   Neighborhood Planning ⌄   Public Spaces ⌄   SomerVision   Mailing List   Events   Zoning Overhaul   Contact Us
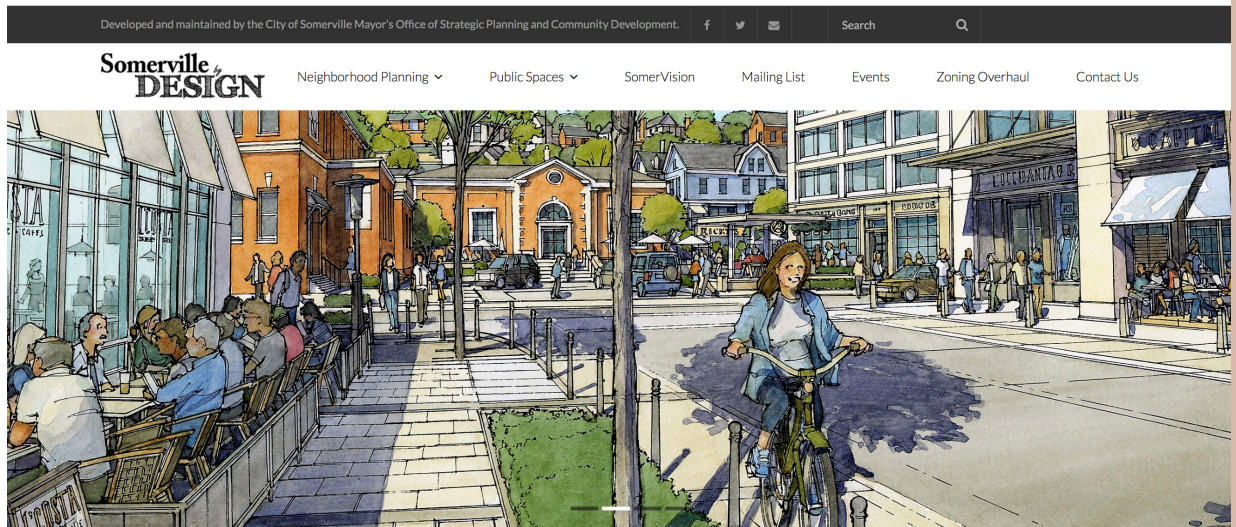
Image 9:
Somerville By
Design Webpage.

Credit: City of
Somerville.

infrastructure (Somerville By Design, 2017; Rawson, 2018; Lockwood, 2018). The City brought in Ian Lockwood, a transportation consultant known nationally for his expertise on Complete Streets, and workshops featured presentations and an interactive brainstorming activity on creative streetscape design solutions (Somerville by Design, 2017). Although the City provided this avenue for public feedback, it is unclear from this research how much effort went into seeking input from diverse members of the community, and the community engagement portion of the policy's creation only lasted a few months; in fact, the BAC representative contacted for this project did not recollect a public process at all (Epstein, 2018). The City's former Director of Transportation and Infrastructure, who held the position during this process, expressed the opinion that a more thorough public process would only have served to extend the policy's timeline for passage while expending limited staffing resources and providing very little change to the document's final language (Morrison, 2018).

After the City's workshop series, further changes to the document's language, and two months of legislative review, Somerville's Complete Streets ordinance was unanimously passed in May, 2014, by the city's Board of Alderman (City of Somerville, 2014b). Somerville's ordinance was the first such ordinance to be passed in the state, which is still a point of pride for the city's employees and residents (City of Somerville, 2014b; Morrison, 2018; Rawson, 2018; Epstein, 2018). The document's final language discusses using a Complete Streets lens to evaluate its application for all future transportation projects and projects, in addition to incorporating Complete Streets infrastructure into existing streets (ibid.). Instead of providing a specific design guideline, Somerville's ordinance instead cites several state and national guides which provide design parameters (City of Somerville, 2014b); a BAC representative noted that Somerville often refers to design standards laid out in the NACTO Street Design Guide, as the City is an affiliate member of the association (Epstein, 2018). While the ordinance mentions planning projects and infrastructure for all users in multiple places, it does not contain any language that speaks to diversity between users beyond

transportation mode, and it does not include any language on further public engagement or discussion in project design and implementation (City of Somerville, 2014b).

The City of Somerville also benefitted from state-level support of Complete Streets; as noted in this report's literature review, Massachusetts is one of a handful of states that offer funding programs for Complete Streets projects (MassDOT, 2016a). Current projects that may seek funding from the state's Complete Streets Funding program include: improved design features on residential streets where bicycles and pedestrians are given priority; intersection redesigns; traffic calming treatments and ADA compliant sidewalks; and improved pedestrian and bicycle facilities providing connections to new and existing transit stations along the MBTA network (ibid.). The Boston Region Metropolitan Planning Organization (MPO) also has a Transportation Equity Program, which helps the state dispense funding for transportation projects including Complete Streets (Harvey, 2018; Boston Region MPO, 2018). The Transportation Equity Program tracks locations in the Greater Boston Region that exceed the regional threshold for minority households and uses this information to inform its funding strategy (ibid.). Approximately half of the City of Somerville falls within this definition (ibid.: 41) and the City has successfully applied and received funding for infrastructure projects guided by the City's Complete Street Ordinance (MassDOT, n.d.).

In research for this report, multiple interviewees expressed the opinion that the implementation of Complete Streets projects in Somerville has benefitted substantially from strong mayoral support, which has made it easier to work across departments when new projects need approval by engineering or when roadwork by public works are meant to include new Complete Streets elements (Morrison, 2018; Rawson, 2018; Epstein, 2018). Interviewees also expressed the opinion that Somerville's Complete Streets policy creation and project implementation was swift and effective, yet limited by the City's staffing resources and lack of diversity amongst the community members from which it received feedback (Morrison, 2018; Rawson, 2018; Epstein, 2018).

> Somerville's BAC was by far the most influential community group to provide input on the city's ordinance, and one representative noted that the issue of equity within the group's perspective "is an uphill battle, because the committee is still majority white and majority male" (ibid.). He continued, noting that "these are typically the people who have the extra bandwidth to take on this priority" and that the group is actively seeking to diversify its members by gender, ethnicity, socioeconomic background, and age (ibid.).

When asked if they would make any changes to the Complete Streets policy creation process, the former Director of Transportation and Infrastructure commented that they would have liked to involve local high school students and, in present day, would seek input from a community

group called SomerViva that works with new non-English speaking immigrants to help their transition (Morrison, 2018). The group did not exist at the time of the policy's creation, but other similar groups have worked in Somerville for many years and their involvement would have added a different perspective to the City's policy and overall vision (ibid.).

It appears that the City has used its experience with Complete Streets to inform its more recent work creating and implementing a Vision Zero initiative, which was launched in September 2017 and has benefitted from a longer and more extensive community engagement process (Rawson, 2017; City of Somerville, 2018b). The City is still working through the development of its new program, and they plan to use their famous data-driven approach to inform infrastructure changes that will occur from its new program (ibid.). While Somerville has some of the strongest requirements for its Affordable Housing Agenda in Massachusetts, it does not appear that housing conditions have been monitored using the city's data systems to see if at-risk residential areas coincide with Complete Streets projects and

elements. When questioned, interviewees were uncertain that Complete Streets project locations were being monitored in conjunction with issues of displacement in their immediate area, instead citing that the City has been gentrifying for a long period of time and that other transportation projects such as the new Assembly Square MBTA Station and the Green Line Extension served as a greater catalyst for the area's changing populations (Morrison, 2018; Rawson, 2018; Epstein, 2018).

The City of Somerville has been at the forefront of Complete Streets planning within Massachusetts, and should certainly receive recognition for creating precedent for the state's subsequent proliferation of similar policies. Its limited ability to incorporate a more representative cross-section of the city's population in its policy design and in its limited efforts to monitor possible correlations between improved streetscape conditions and population displacement, however, deserves further scrutiny.

Image 10:
Baldwin Park's
MetroLink Station,
located in their city
center.

Credit: City of
Baldwin Park &
MetroLink Downtown
TOD Specific Plan.

Figure vi: Case-relevant
demographics for
Baldwin Park, CA.

COMPLETE STREETS POLICY ENACTED: July 20, 2011

TYPE OF POLICY: Resolution

CITY GEOGRAPHIC SIZE: 6.7 square miles
(Baldwin Park, 2016).

76,511
TOTAL POPULATION
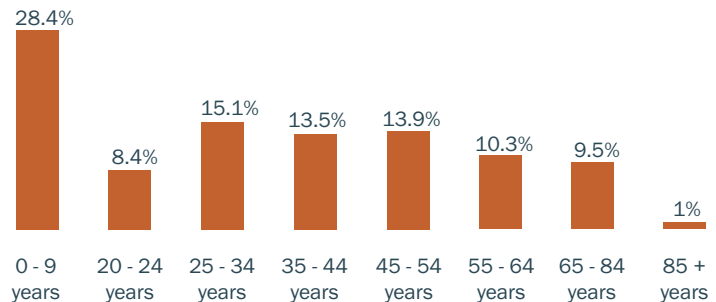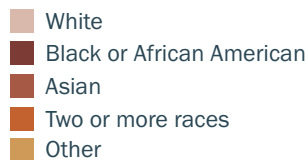
POPULATION BY AGE GROUP

Age group	Percent
0 - 9 years	28.4%
20 - 24 years	8.4%
25 - 34 years	15.1%
35 - 44 years	13.5%
45 - 54 years	13.9%
55 - 64 years	10.3%
65 - 84 years	9.5%
85 + years	1%

POPULATION BY RACE

- White
- Black or African American
- Asian
- Two or more races
- Other

POPULATION BY IMMIGRATION STATUS

- US Citizens
- Naturalized US Citizens
- Non-US Citizens

75.5%
OF POPULATION IDENTIFIES AS HISPANIC

ANNUAL HOUSEHOLD INCOME

Income	Percent
$150k+	5.3%
$100k - $150k	11.9%
$75k - $100k	14.3%
$60k to $75k	13%
$40k - $60k	19.9%
$20k - $40k	22.4%
Under $20k	13.2%

DAILY COMMUTE BY TRANSPORTATION MODE

Mode	Percent
Other	0.006%
Work from home	3.9%
Bicycle	0.6%
Walk	1.1%
Public transport	3.9%
Drive	89.8%
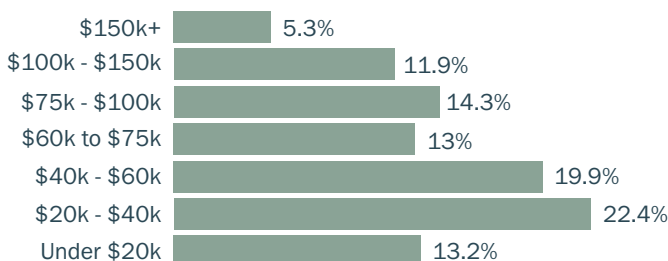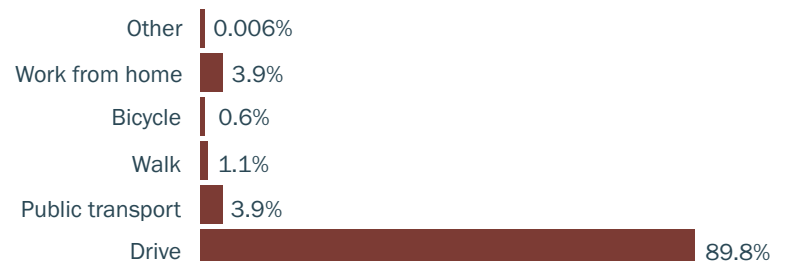
All data retrieved from the 2016 5-year American Community Survey unless otherwise stated.

CITY CONTEXT

BALDWIN PARK,

California is located in the central San Gabriel Valley area, approximately 20 miles from downtown Los Angeles, California (see figure vii). It was founded as a cattle grazing area belonging to the San Gabriel Mission in 1887, and became an incorporated city in 1956 (City of Baldwin Park, 2015; City of Baldwin Park, 2016). Baldwin Park grew substantially in

Figure vii: Map of Baldwin Park, California and surrounding region. Credit: Snazzy Maps, map data courtesy of Google Maps.

both residential development and population from the 1980s, and is now a dense urban area home to over 75,000 residents, a large proportion of whom are of Hispanic or Latinx origin and primarily Spanish-speaking (Lopez, 2018). There is a growing population of Asian immigrants including individuals of Chinese, Vietnamese, and Indian origin, and the city makes efforts to have all documents and communications available in Spanish and Chinese (ibid.).

The population is comprised of blue collar, working class individuals and families, many of whom work in office and administrative support, personal care and service, transportation and moving, protective services, food prep and serving, building grounds maintenance, and construction and extraction (City of Baldwin Park, 2018). Major employers in the city include Kaiser Permanente, Home Depot, Walmart, United Parcel Service,

UPM Plastic Molding, and In N Out Burgers, which was also founded in Baldwin Park (ibid., City of Baldwin Park, 2016).

Like many other places in the US, Baldwin Park saw a decline in operating revenues following the economic recession of 2008 and has taken years to recover (City of Baldwin Park, 2014); 2016 was the fifth year of modest growth in operating revenue following previous years of decline. While the early 2010s held a stagnated housing market due to a difficult house financing environment for homeowners, there are now several market rate housing units in development that will bolster the city's population and future revenue stream (ibid.).

Baldwin Park was historically linked to downtown Los Angeles via the Pacific Electric Red Car rail system in the first half of the twentieth century;

following the system's dismantling in the early 1950s, strip commercial development oriented towards automobile use ate away at the fringes of the city's walkable downtown core (City of Baldwin Park & MetroLink, 2016). The Los Angeles Metrolink's San Bernadino Line reconnected Baldwin Park's downtown to Los Angeles in the early 1990s, and the local station is now sited in the center of town next to City Hall along Maine Avenue and Ramona Boulevard (ibid.). The City also adopted a Downtown Transit Oriented Development Specific Plan to bolster development near the Metrolink station and to re-establish itself as a walking, biking, and transit-oriented city (City of Baldwin Park & Metrolink, 2016).

COMPLETE STREETS IN BALDWIN PARK

Baldwin Park and its community partnered together to create a comprehensive and influential Complete Streets policy which has served as a catalyst for other cities in Southern California to adopt similar ideals and initiatives (Killen, 2018). Baldwin Park's journey began in 1999, when the City first began to look more deeply into its public health status and data on childhood obesity (ibid.). The City was chosen to participate in a program called Healthy Eating Active Communities in 2005, funded in part by the Kaiser Permanente Community Benefit program (Institute for Local Government, 2015); Kaiser Permanente, one of the area's biggest employers, was noted by some as a constant source of support through public health grants and alternative strategies meant to strengthen their ties to the community (City of Baldwin Park, 2014; Killen, 2018). A study by the UCLA Center for Health Policy Research in 2010 found that almost half the children in Baldwin Park were obese, and part of the City's wide-ranging response was to implement a Complete Streets policy (ibid.).

A former city employee who worked as a program supervisor in the Recreation and Community Department noted that Baldwin Park featured a

Image 11:
The Kaiser Permanente Medical Center, located in Baldwin Park, CA.

Credit: Tony Hoffarth / Flickr

"tightknit community" of people who were vocal about improving pedestrian safety, especially around the city's primary and secondary schools (Killen, 2018). In the years before the City's Complete Streets policy creation, a few notable deaths occurred in close proximity to local schools, and these deaths occurred in preventable circumstances where people were simply driving too fast and breaking laws (ibid.). These incidents served as a turning point for the community who demanded a more walkable street network, and in 2009 the City received their first grant allowing the creation of a Complete Streets policy that would address concerns of public health and public safety (ibid.; National Complete Streets Coalition, 2012b).

One of Baldwin Park's strengths was its heavy community involvement throughout the policy's creation (ibid.; Lopez, 2018; Killen, 2018). While community engagement was a mandated portion of the City's grant, the City went out of its way to receive input from over 300 residents and a variety of community-based organizations, including: the Baldwin Park Unified School District; the California Center for Public Health Advocacy; and the Los Angeles County Department of Public Health's RENEW LA County initiative (Institute for Local Government, 2015; BPRAC, 2018; Lopez, 2018). A former employee noted that, "we partnered within the City and had ongoing communications with the planning department," which worked most directly with outreach to businesses and the community (Killen, 2018).

One community group, the Baldwin Park Resident Advisory Committee (BPRAC), had some of the heaviest involvement throughout policy

creation; one city official referred to such active participants as "community champions," and BPRAC representatives stated that they helped the City apply for grants related to their Complete Streets work, volunteered to expand outreach to different members of the community, and worked to involve others through cold calling and advertising at various community meetings (Lopez, 2018; BPRAC, 2018). The City held multiple public meetings to both introduce the public to the Complete Streets vision and to receive their input, and sought responses from specific groups to collect diverse perspectives (Lopez, 2018; BPRAC, 2018; Killen, 2018).

In addition to traditional public meetings, the City also partnered with community youth members at the Baldwin Park Cycler Leadership Program to conduct bicycle audits throughout the area and at met students at local schools, where they held workshops during lunch and after classes to get middle school and high school students involved in policy creation (Carmona Jr., 2012; Lopez, 2018; BPRAC, 2018).

One BPRAC representative interviewed for this report spoke of their experience, as they were in high school during this period and were active participants in the City's youth outreach; they expressed great satisfaction with their experience, stating that the process changed their perspective on how citizens can interact with local government and that their experience helped them develop confidence in voicing their own concerns to officials and other people in positions of power (ibid.).

The representative also noted that some student participants are now pursuing degrees in municipal planning and that their time working with the City influenced their future career choices (ibid.). They also stated that this type of policy creation process was the perfect time commitment for introducing young people to city planning; the process took two years, and students were able to see the process move from start to finish and even witness its first effects on the built environment (ibid.).

Following two years of work, the City passed a Complete Streets resolution on July 20, 2011, cementing its pledge to "provid[e] high quality pedestrian, bicycling, and transit access to all destinations throughout the city," and was followed shortly by a larger umbrella policy called "Living Streets," which encompassed a number of related policies and initiatives including Safe Routes to School, Access & Mobility, Safety Improvements at Railroad Crossings, and Quiet Zone Implementation (City of Baldwin Park, 2011; Lopez, 2018). The resolution's text also mandates an inter-departmental advisory committee comprised of members of the Department

of Public Works, Community Development, Recreation and Community Services, the local Police Department, representatives from the Los Angeles County Metropolitan Transportation Authority, and community members representing advocacy organizations and individuals who are cyclists, disabled, youths, and seniors (City of Baldwin Park, 2011). This committee meets on a quarterly basis to discuss progress and current issues regarding the City's implementation of its Complete Streets resolution (ibid.).

Baldwin Park's Complete Streets policy was lauded as one of the nation's strongest policies in the years following its passage, and was featured as a top-scoring policy in the National Complete Streets Coalition's 2011 Policy Analysis Report (National Complete Streets Coalition, 2012a). The high-ranking policy has also been a catalyst for the city to receive several new grants related to street infrastructure and encouraging walking and biking, which in turn improves air quality and individual health outcomes (Carmona Jr., 2011; Institute for Local Government, 2015).

Image 13: Roadwork being completed on Baldwin Park's Maine Avenue.

Credit: City of Baldwin Park Department of Public Works

As the City moved from policy creation to project implementation, it continued to seek community input through public meetings on specific construction projects (Lopez, 2018). For new projects, the city conducts community outreach during the design phase and before construction; once projects get underway, however, the City instead focuses on keeping the public educated on the previous public process and consensus built during that time (ibid.) One of the city's main arteries, Maine Avenue, is one of the largest projects receiving Complete Streets updates and is still under construction (BPRAC, 2018; Lopez, 2018). Members of the BPRAC conveyed that Maine Avenue was a key intervention site beyond its central location and proximity to the city's Metrolink station; three elementary schools are located nearby, and it is for this reason that the project ranked in high importance amongst members of the public (BPRAC, 2018). Representatives also expressed some frustration that the City's public communication broke down around the same time that construction was delayed due to lack of funding (ibid.); representatives noted that limits to the project based on finance were not stated as a potential obstacle to the project's completion, and that this break in communication from the

City caused a noticeable rift in the carefully built relationships that marked the early stages of Baldwin Park's Complete Streets journey (ibid.). BPRAC representatives stated the City is now rebuilding trust as pieces of the project are visibly under construction, and that future public communication should include explicit timeline information, project limitations based on funding, and potential risks that affect the project's overall timeline and completion (ibid.). From the City perspective, one official stated that due to understaffing, they were unable to maintain the level of public engagement and accountability that made their policy creation so successful (Lopez, 2018). As the City is highly dependent on external grants to fund their Complete Streets network, they must continue to design and implement specific elements piecemeal and implement these elements based on the parameters oulined in their funding sources (ibid.).

A City official also noted their commitment to monitoring increases in housing prices as streetscapes and access to public transit is improved; this commitment is in part codified through the City's TOD Specific Plan (Lopez, 2018; City of Baldwin Park & Metrolink, 2016).

The official voiced concern that the city is understaffed and thus unable to fully monitor of how the housing market is changing in relation to its transportation network, but that they do have a tentative map that aims to track changes to the real estate landscape parcel by parcel (Lopez, 2018). The biggest problem voiced with this system, however, is that it is difficult to keep up to date and that department money is slim (ibid.). As with the City's other efforts to implement its Complete Streets resolution and subsequent street projects, their reliance on external funding has proven to be an ongoing hindrance to their ideal tracking strategy (ibid.).

The City official interviewed for this project did not express strong concern that potential increases house and rental prices would place residents at risk for displacement, stating that the city's population has shrunk slightly in recent years and is the site of multiple new housing and mixed-use developments which will help city growth and housing supply (City of Baldwin Park, 2016; Lopez, 2018). Representatives from BPRAC, however, stated that displacement has become an increasing concern over recent years (BPRAC, 2018). While there was little concern of such issues during the early years of Baldwin Park's Complete Streets journey, residents have observed community displacement in nearby areas and are concerned a similar process will occur in their neighborhoods (ibid.). Representatives noted that some longtime residents who raised their families in Baldwin Park have begun to move out, and that the new developments downtown appear to be for higher-income individuals instead of existing residents (ibid.). This juxtaposition of opinions is important to note as the City continues

its work to improve quality of life for its citizens while balancing the affect such improvements will possibly have on displacement.

While Baldwin Park has continually acted on its overall vision and commitment to improved streetscapes and transportation infrastructure, it relies on key staff members and their ability to write and receive grants from external forces to maintain its funding and implementation (Lopez, 2018). Its strong community participation has been a crucial part of the City's success, yet as time moved forward, continued support for this important partnership has been strained by irregular communication patterns and differing perspectives on which projects benefit which residents. Baldwin Park must continue to listen and react to their resident community and find ways to financially support their shared vision for a safer, more walkable and transit-friendly environment in order to maintain their successful Complete Streets programming in the future.

CASE STUDY:
PORTLAND, OREGON & NORTH WILLIAMS AVENUE

Image 14:
Residents bicycle along the Willamette River in Portland, Oregon.

Credit: Lincoln Barbour

Figure vii: Case-relevant demographics for Portland, OR.

COMPLETE STREETS POLICY ENACTED: 1971
(National Complete Streets Coalition, 2018)
TYPE OF POLICY: State Legislation
CITY GEOGRAPHIC SIZE: 145 square miles
(City of Portland, 2017).

620,589
TOTAL POPULATION
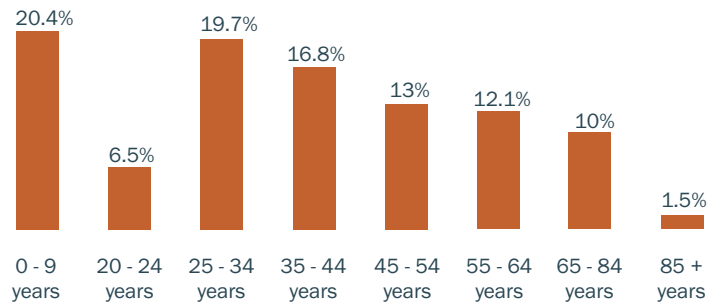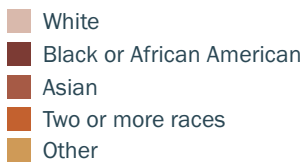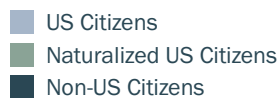
POPULATION BY AGE GROUP

Age	%
0 - 9 years	20.4%
20 - 24 years	6.5%
25 - 34 years	19.7%
35 - 44 years	16.8%
45 - 54 years	13%
55 - 64 years	12.1%
65 - 84 years	10%
85 + years	1.5%

POPULATION BY RACE

- White
- Black or African American
- Asian
- Two or more races
- Other

POPULATION BY IMMIGRATION STATUS

- US Citizens
- Naturalized US Citizens
- Non-US Citizens

9.7%
OF POPULATION IDENTIFIES AS HISPANIC

ANNUAL HOUSEHOLD INCOME

Income	%
$150k+	14.6%
$100k - $150k	16.1%
$75k - $100k	11.4%
$60k to $75k	9.5%
$40k - $60k	15.9%
$20k - $40k	17%
Under $20k	15.5%

DAILY COMMUTE BY TRANSPORTATION MODE
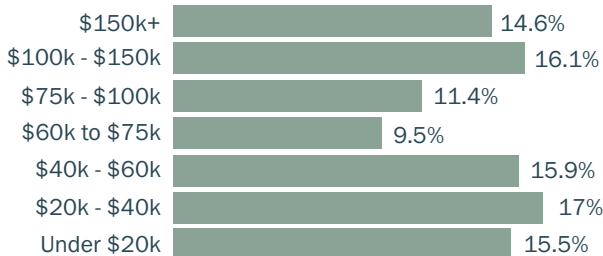
Mode	%
Other	0.01%
Work from home	7.5%
Bicycle	6.5%
Walk	6%
Public transport	12.1%
Drive	66.7%
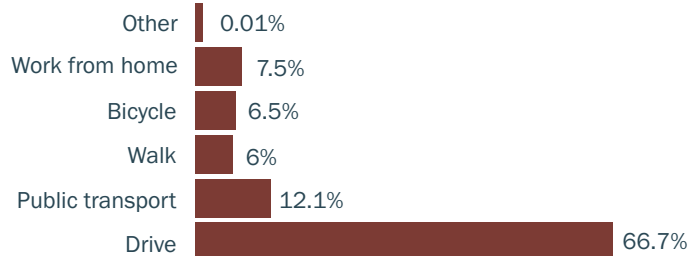
All data retrieved from the 2016 5-year American Community Survey unless otherwise stated.

CITY CONTEXT

PORTLAND, Oregon is the largest city in the state of Oregon and the second largest city in the Pacific Northwest region of the US (Abbott, 2018). Its location at the confluence of the Willamette and Columbia Rivers led to early success as a port city exporting timber and wheat to the growing California Gold Rush population (ibid.; see figure ix), and the city itself was incorporated in 1851 (City of Portland, 2017). The city's population is majority white, which has remained constant since European settlers first colonized the region in their rush to move West in the nineteenth century (Abbott, 2018). While the city has marginally diversified over the past 50 years, Portland remains a relatively homogeneous place (Gibson, 2007). Like many US cities, Portland entered a period of urban renewal and discriminatory real estate practices in the second half of the twentieth century, resulting in disinvestment in and demolition of certain inner city and centrally located neighborhoods (Gibson, 2007). This trend began reversing in the 1990s and coincided with lower house prices, a growing local economy increasing individual access to capital, and a renewed interest in dense urban neighborhoods. Recent financial analysis shows that Portland is currently undergoing a period of sustained growth and has a flourishing local economy (City of Portland, 2017). Unemployment in Portland's county (Multomah) is at a historic low of 3.2%, and employment growth has seen modest but consistent increases in recent years (City of Portland, 2018). The area's housing market has seen significant changes over this same period; 2017 marked the third year in a row with prices rising by more than 10% over the year prior (ibid.). With an increase in housing prices on a citywide level, concerns of gentrification are widespread and are taken seriously by both residents and city government (ibid., Bell, 2018).

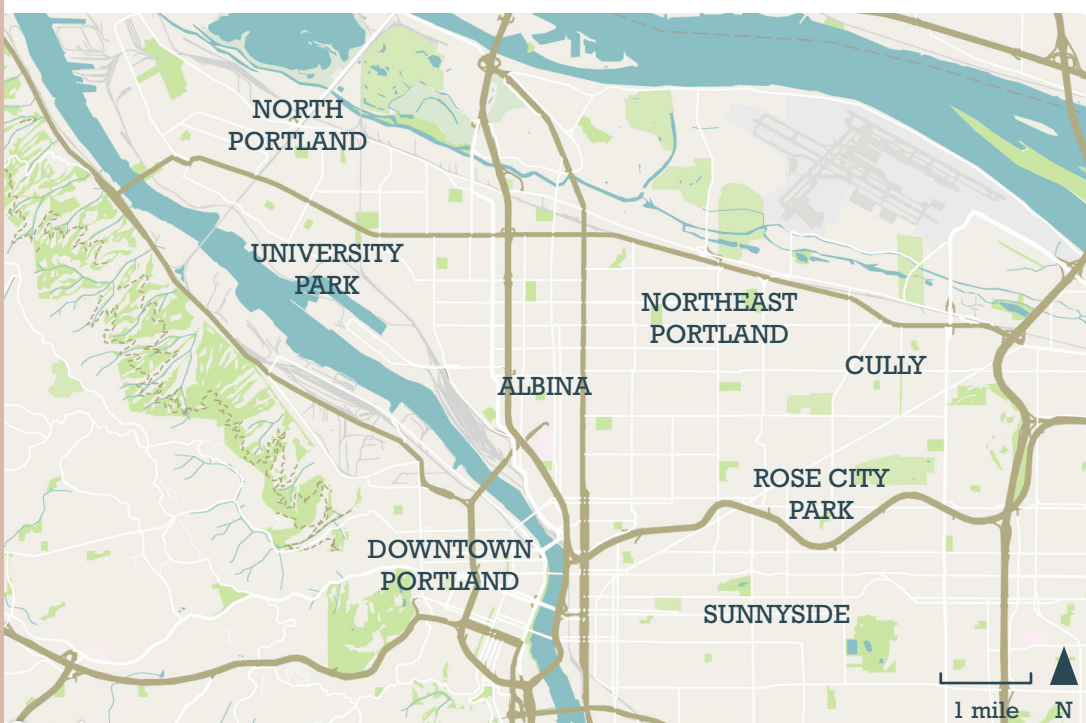The homogenous nature of the city, paired with

Figure ix:
Detailed map of Portland, Oregon and its northern and central neighborhoods.

Credit: Snazzy Maps, map data courtesy of Google Maps.

its progressive lean on politics, has led to rather unique governance structures and leadership priorities. The area's regional system, Metro, is run by members directly elected by local residents (Berg, 2012). The city also has organized neighborhood associations for every part of the city, which provides easy access to citizens when the City seeks community feedback on projects (City of Portland, 2018). The city of Portland and the state of Oregon have a long history of supporting the overarching ideals of Complete Streets, even before the concept itself was born. The State of Oregon passed new legislation in 1971 called the "Bicycle Bill," which mandated bicycle and pedestrian accommodations on all new road projects and also required transportation agencies to allocate at least one percent of their money from the state highway fund to accomplish this new goal (Igarta, 2018; Mapes, 2018). The bill was the first of its kind in the US, and was further validated by a lawsuit from the Bicycle Transportation Alliance against the City of Portland in 1993, where judicial powers upheld the bill's intent (ibid.).

The City of Portland has incorporated guiding principles similar to Complete Streets ideals in numerous official documents, including their transportation department's first comprehensive 20-year visioning plan (the Transportation System Plan, or TSP), which was originally published in 2002, updated in 2007, and is now receiving another round of updates (Portland Bureau of Transportation, 2018). Despite its history as an overwhelmingly white place, Portland's commitment to progressive planning practices places its governance strategies closer to bridging the gap between street design and community engagement and impact than many places in the US.

Image 15:
Governor Tom McCall signs the 1971 Bicycle Bill into law on a bicycle seat.

Credit: The Stathos Family

COMPLETE STREETS IN PORTLAND & THE TALE OF NORTH WILLIAMS AVENUE

While modern literature paints Portland's reputation as a progressive and inclusive city, the city is home to one of the more infamous cases of conflict between community members and incoming Complete Streets elements: the North Williams Avenue reconstruction project, which was first proposed in 2010 (Lubitow & Miller, 2013) and was completed in 2014 (Hoffmann, 2016). North Williams Avenue is located to the northeast of downtown Portland and runs north-south, providing a key route for residents in North and Northeast Portland to reach central destinations (Lubitow & Miller, 2013; see figure x).

The group of neighborhoods surrounding North Williams Avenue, known collectively as Albina, have been an enclave for black residents since the era of redlining and other discriminatory housing practices led to high concentrations of black households in pockets around the city; while Portland's overall black population has never been above 7% of the total population, the Albina area was comprised of 43% black residents in the era following World War II (Gibson, 2007). The neighborhood suffered major disinvestment in the 1950s into the 1980s, including the razing of large chunks of the neighborhood for construction of the Veteran's Memorial Coliseum, Interstate 5/ Highway 99, the Oregon Convention Center, and the Emanuel Hospital (ibid.; see figure x). In the late 1980s, the neighborhood reached a low point that coincided with a rise in crime and drug use and a significant decline in the area's population, resulting in abandoned properties and low housing prices (ibid.). The City focused on rehabilitating
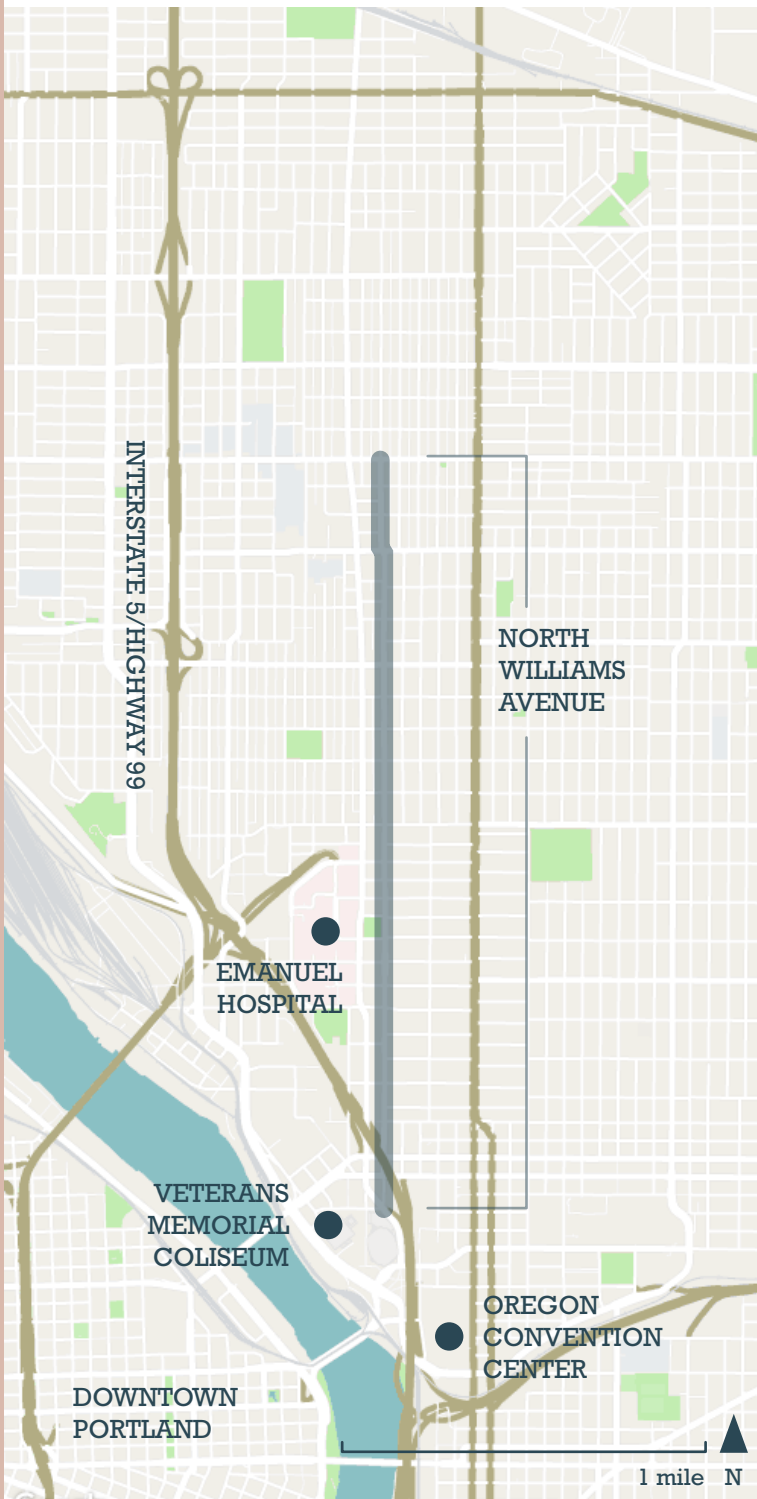
the district; this focus, coupled with national economic and housing trends, played into a rapid reversal of the area's housing circumstances in the 1990s (ibid.). Albina's inexpensive housing stock quickly became popular with white homebuyers, and the area saw a swift shift in its racial makeup and in its affordability for both residents and local business owners (ibid., Lubitow & Miller, 2013).

North Williams Avenue sits in the middle of this geographic and historical context. In 2011, the City's transportation department, the Portland Bureau of Transportation (PBOT), received $370,000 in funds from their Cycle Track Development fund to create what they considered a "bikeway development project" on North Williams Avenue (ibid.). The street redesign was meant to address the influx of bicycle riders now using North Williams as a major commuting route, so while concepts featured some elements indicative of a holistic Complete Streets approach, accommodations for bicyclists were at the heart of the scheme (ibid., Hoffmann, 2016). As part of the City's standard outreach process, PBOT

organized the North Williams Stakeholder Advisory Committee (SAC) to monitor and maintain the possible connections and conflicts between the neighborhood's new streetscape, and the effects the project may have on the surrounding area (Lubitow & Miller, 2013). The committee was to convene over the course of four to six months, culminating in final recommendations for PBOT on behalf of the public (ibid.). The City hired an independent consultant to organize SAC member recruitment, and when contacted, she spoke of exhaustive efforts to attract diverse representation including tactics ranging from mailing postcards to residents and businesses to door-to-door canvassing along N. Williams Avenue (ibid.; Independent Consultant – name redacted, 2018). Despite these wide-ranging efforts, when the committee finally convened, only four out of eighteen members were people of color, a ratio that did not accurately reflect the makeup of the area's surrounding residential demographics (PBOT, 2011).

Following this development, many community

members spoke out about their concerns with the underrepresentation of the neighborhood's historically black population and the City decided to slow down their public engagement process (Lubitow & Miller, 2013; Maus, 2011). PBOT held a public meeting in July, 2011, that was meant to provide an update on their new outreach strategy, and instead the meeting devolved into a larger conversation about the divide between newer residents who adamantly wanted upgraded bicycle facilities and longtime residents who were disheartened at the project's lack of perspective concerning the area's legacy as a historically black neighborhood (ibid.). Longtime resident Donna Maxey shared a personal story of her childhood friend who was killed along North Williams Avenue when they were still children, and her words poignantly captured some of the complex feelings expressed by the area's long-term residents:

> "What is causing the anger and resentment is that it's only an issue of safety now that whites are the ones who are riding bicycles and walking on the streets. Because we have been in this community for years and it has not been an issue and now it's an issue. So that's the resentment you're hearing... years of people being told, you don't count, you don't matter... but now that there's a group of people who's coming in that look like the people who are the power brokers — now it's important. That's the anger. That's the hurt" (Maus, 2011).

At an SAC meeting held in August of the same year, committee members formally addressed the lack of diversity and suggested an expansion of the committee to include more people of color and small business owners – two groups identified as important to the neighborhood and underrepresented on the current committee (PBOT, 2011). New members were then sought out through additional avenues like active recruitment during other public city events and thorugh outreach at local community hubs like churches (Lubitow & Miller, 2013). When the enlarged SAC reconvened, they made cultural heritage a top priority in discussion for remodeling North Williams Avenue and developed a guiding statement which recommended critical reevaluation of the City's public participation efforts (North Williams Stakeholder Advisory Committee, 2012). The SAC wrote that the City "needs to be responsible to all communities, especially those which are underserved communities, or culturally disadvantaged communities, when considering project sites, and that the history, land use, and prior planning efforts [need to] be considered and questioned while engaging in these projects" (ibid.). The SAC also identified a series of project objectives with which they could evaluate the final plan, and created a list of thirteen recommendations for how the project could be improved (ibid.). In 2013, the Oregon Transportation Commission increased project funding to $1.47 million to address some of these additional improvements that would benefit all travelers, not just those who stood to benefit the most from improved bike facilities (Hoffmann, 2016).

What began as a simple safety and road improvement project for the City of Portland morphed into a more nuanced process with goals

far beyond basic infrastructure. Towards the end of the process, the committee who once received such scrutiny became a network of residents who, through tense and trying moments advocating for the future of their street, felt that they had built new relationships with their neighbors which would help reknit the fabric of their community (Lubitow & Miller, 2013). Portland's experience renovating North Williams Avenue has served as an example of possible conflict, and also resolution, as localities seek to balance the goals of Complete Streets with concerns of community representation and possible displacement.

While further city and community representatives were contacted to speak on Portland's Complete Streets programming and commitment to transportation equity, many were unable to comment based on lack of resources, support staff, and limited time for subjects beyond their scope of work and advocacy. It proved especially difficult for this researcher to find individuals willing to discuss their direct experience with the North Williams Avenue project.

A City official noted that in recent years, however, Portland has become much more intentional in its document language around vulnerable users, accurate community representation, and understanding the historical impact of previous projects in areas receiving new interventions (Igarta, 2018). The TSP is an example of such efforts; the latest updates to this document involved extensive public process and outreach to different stakeholder groups outside the regular participants who routinely show up to public meetings (ibid.). The official also stated that the City has been working to reach citizens who are

Figure x:
PBOT's Five-Year Racial Equity Plan Key Themes.

Credit: Portland Bureau of Transportation.

not actively engaged in the existing Neighborhood Associations, which tend to attract and retain a small subsect of community members which may or may not accurately reflect the rest of their neighborhood's population (ibid.). PBOT also released a five-year racial equity plan resulting from a series of community engagement activities including focus groups, work sessions, and both digital and physical open houses (Treat & Gibbs, 2016). The plan includes a new racial equity matrix that prioritizes locations for new projects based on the neighborhood's race, income level, and non-English speaking population (Igarta, 2018). While focused on addressing racial inequity in PBOT and Portland's transportation system, the plan also acknowledges citywide racial equity goals and strategies and identifies goals that target both internal changes in government organization, perspective, and hiring practices and external changes around outreach to communities of color,

immigrants, and refugees (Treat & Gibbs, 2016). PBOT has also made monitoring at-risk neighborhoods a central part of future transportation planning, asking themselves which communities are actively seeing gentrification or are likely to see such trends in subsequent years and coordinating with other departments to make concurring changes in transportation infrastructure and rezoning that will support the longevity of existing community residents (Igarta, 2018). The official noted that the Cully neighborhood, located in Northeast Portland, was a current hot point for gentrification and is receiving transportation improvements to its commercial corridor and local street plan (ibid.). In the City's first document proposing new interventions to the Cully area, they spent time exploring neighborhood context and existing conditions related to the area's gentrification; this new approach also sets a baseline from which the City can monitor the area's development and population shift in the coming years (ibid.).

The strength of Portland's new documents and their apparent commitment to implementing their guiding visions in planning practices shows optimism for improved streetscape projects in the future; whether the City will successfully achieve its goals of improved transportation equity is a subject for further research in coming years.
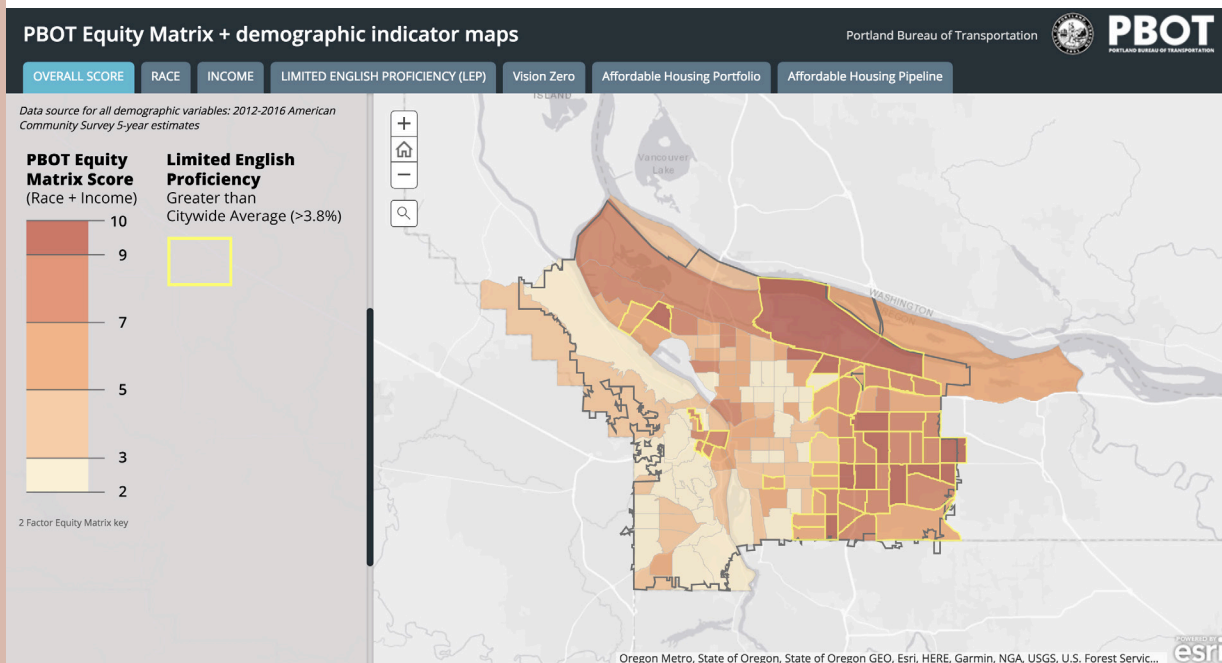

Figure xii: Snapshot of PBOT's interactive equity matrix & demographic indicators map.

Credit: Portland Bureau of Transportation

In the cases of Somerville, Baldwin Park, and Portland, each scenario highlights a different set of contexts and dynamic factors that led to the creation of Complete Streets policies and projects. Now that they have been reviewed, it is possible to enter a deeper level of analysis around specific elements that contributed to each community's present Complete Streets conditions.

SOMERVILLE

In Somerville, Complete Streets emerged out of direct desire from the city's BAC (Epstein, 2018; Morrison, 2018). As noted in previous sections, this is not unusual for Complete Streets; the very term, in fact, came from a group of national bicycling advocates (McCann, 2013). What is less usual, in this case, was the level to which the BAC had power in shaping the ordinance's language. The BAC brought the idea from vague concept to first draft, while its second iteration then incorporated input from the larger public – whether the workshops that addressed public input were fully representative of the city's demographics is still subject for debate. The public process, while revisited to incorporate more diverse community voices, was still identified as a pain point where the city would like to bring in new outreach practices to widen the pool of voices in the future (Rawson, 2018). Somerville is in the process of supporting this goal by hiring new employees focused on community outreach, which they are luckily able to do thanks to additional funds from the city's Board of Aldermen (ibid.).

The top down visioning and governance style put forth by Mayor Curtatone has been key for allocating the additional municipal funds for new positions that will continue to improve community outreach in the future, and has been a driving factor for successful interdepartmental relationships which respect the vision put forth by Complete Streets (Morrison, 2018; Rawson, 2018). When the planning department occasionally has trouble negotiating with the fire, engineering or public works departments, they are able to receive direct support from the Mayor who sets a hard line in support of the City's Complete Streets vision (ibid.). Part of the Mayor's attitude and commitment is also codified in the city's SomerVision comprehensive plan, which sets the goals of better quality of life through improved transportation options and safe facilities (SomerVision Comprehensive Plan, 2018). For Somerville, their Complete Streets ordinance does not drive the City's overall street redesign process; rather, the ordinance is a symbolic gesture of the city's larger commitment to safe, comfortable, and equitable transport.

Somerville is a hotbed of gentrification, regardless of the city's fast-moving development and reputation as a progressive place (Rawson, 2018). The region of Boston is experiencing massive growth and an extreme shortage of housing; in addition to Somerville's proximity to major employment hubs and diverse transit options, the city also has excellent public schools which are currently being renovated and improved (ibid.; City of Somerville, 2017). Municipal attitude on the possible correlation between improved streetscapes and rising house prices is that City staff will continue to tackle each separately, and maintaining affordable housing stock "shouldn't

be held hostage by subpar transportation networks" (Rawson, 2018). The City does have one of the strictest affordable housing policies in the state, but there does not appear to be any focus on tracking affordable housing locations and proximity to Complete Street-designed roadways in a coordinated fashion. In a housing market as tight and expensive as the Boston region, the effort to mitigate displacement of vulnerable communities is seen as a full and separate battle in its own right. This disconnect may prove a risk in coming years, as large-scale transportation projects such as the Green Line Extension continue to exacerbate local housing market conditions.

BALDWIN PARK

Baldwin Park faced a different set of successes and hurdles on their path to a Complete Streets policy and implementation. Its location further from the Los Angeles's center, coupled with available infill, has led to smaller concern of gentrification from City officials; a representative noted that space downtown is now being developed and is seen as a boon to the city's economic growth (Lopez, 2018). They are dedicated to keeping track of both housing prices and their proximity to Complete Streets projects, but lack of funding is a critical barrier for implementing their tracking system (ibid.). For residents, the worry of gentrification is more present; from their standpoint, the new developments downtown and their modern-looking appearance threaten to attract a new, wealthier demographic that did not previously exist and may affect the city's overall affordability (BPRAC, 2018). Residents are also beginning to see that other cities and neighborhoods nearby are experiencing gentrification and, as it creeps

closer, the concern weighs on their minds (ibid.). Given residential concern and the trend of development seen downtown, it would behoove Baldwin Park to find funding to implement its tracking plan as soon as possible and convey this work to members of the public.

Baldwin Park's ability to create and implement new portions of its Complete Streets vision is closely tied to personal commitment from a handful of employees and their ability to procure funding from alternate resources (Lopez, 2018). The initial Complete Streets policy creation and public outreach was explicitly reliant on the public health grant received from RENEW LA, both in terms of project scope and in mandated interaction with the public (Institute for Local Governance, 2015). Although community engagement was a required portion of their grant, Baldwin Park stands out for taking initiative to seek out and involve diverse members of their community in new ways. The city's targeted outreach towards middle school and high school students made it less intimidating for young people to get involved, and this approach has had long term effects on the lives of their city's youth (BPRAC, 2018). The City's outreach and dialogue structure built a strong level of trust with members of the community, but following policy creation the City had to procure a new round of funding to implement larger construction projects. The lack of financial and human resources plays a big factor in the City's capacity to manage more frequent communication with the public; this weakness was identified both by City staff and by community representatives (Lopez, 2018; BPRAC, 2018). If the city of Baldwin Park had more stable and consistent funding streams aimed at attracting and retaining staff and building out their

Complete Streets implementation, their ability to create a comprehensive transportation network that supports its many diverse citizens would be uninhibited.

PORTLAND

Portland's public engagement around North Williams Avenue is one of the most well-covered cases of conflict between longtime residents and incoming residents viewed as gentrifiers over Complete Streets related infrastructure. In a city like Portland, which prides itself as a hub for progressive America, the tale of North Williams Avenue shows that even places with a strong community engagement structure can struggle to ensure diverse representation reflective of population demographics and historical context. The City relied on stable contact with residents through its neighborhood association network but, in doing so, returned to the same small sample of residents for input on new projects.

In the case of North Williams Avenue, the City finally reached a place where residents of multiple backgrounds felt heard and included when they expanded their outreach tactics to meet new representatives in their own space (Lubitow & Miller, 2013; Independent Consultant, 2018). Similar to Baldwin Park's outreach to students by providing meetings on their turf, Portland succeeded in reaching a stronger representation of Albina's black community by attending their local community gatherings and taking engagement directly to the population they most needed to hear. This appears to be a crucial step in the City's reworking of its community engagement for the SAC and members of the public, but also in the SAC's ability to then create project objectives and accountability standards that guided the final project.

The SAC addressed the public's outcries around historical context by developing an Honoring History Subcommittee, which focused on adding historical landmarks along North Williams Avenue. The SAC focused on including local shops and meeting places that once had a more meaningful significance for residents. In her book, *White Lanes are Bike Lanes*, Melody Hoffmann notes that this way of addressing the past on North Williams Avenue has nuanced issues that may or may not aid in the continuing process of neighborhood turnover:

> **"While they remind us of what once was, historical landmarks do not require visitors to contend with their role in making the space 'historical.' Landmarks can separate us from history while simultaneously confirming their place in the past"** (**Hoffmann, 2016: 108**).

From this perspective, the landmarking of North Williams Avenue serves less to correct the imbalance of old and new residents, and more to recognize and acknowledge the ways in which the neighborhood has already changed and to which it may never return. In this sense, while the historical landmarks may appease some concerns from the area's longtime residents, they do little to staunch the flow of gentrification that now marks the area.

Perhaps in the case of North Williams Avenue, the gentrification process which began in the 1990s was too far gone to have any successful strategy from planners that would assuage its resident displacement. Given the abandoned state of the neighborhood in the 1980s, it is logical that the City encouraged new residents to move in through accessible home lending financing (Gibson, 2007). It is also problematic that this financing was targeted towards primarily white residents in a neighborhood known as a black enclave in a sea of white neighborhoods, and that the neighborhood's black residents had previously suffered from neglect and outright rejection from these same home financing strategies. The renovation of North Williams Avenue was the final catalyst for neighborhood outrage over the coopting of Portland's historically black center; as one SAC member phrased it, the sentiment of these residents to the city and new residents was that, "[f]irst you took our businesses, then you took our homes, and now you want to take our street"

(Lubitow & Miller, 2013: 4). In the case of North Williams Avenue, recognition of past wrongs did help longtime residents sort through some of their anger with past injustices; it is unclear, however, if this public process and street reconstruction achieved anything that addresses present issues around continuing resident displacement. Perhaps if the street redesign process had begun a decade or two earlier, as longtime residents desired, the City could have maintained a better balance of supporting new infill while also supporting existing residents and established local commerce.

Despite the contention along North Williams Avenue, the City of Portland shows signs of an upwards trajectory to improve diverse representation in both their local government and in their public outreach and engagement. The new five-year racial equity plan offers hope by formally calling out the imbalance of diverse representation that exists in both groups yet, at the time of this writing, PBOT has one staff

member orchestrating the implementation of its plan; this is not enough to achieve the actual goals of changing hiring practices and incorporating more internal education on shifting perspectives and speaking more honestly and openly about racial injustice. To achieve the goals outlined in its racial equity plan, Portland will have to invest much more strongly in filling out new positions aimed at implementing its vision and actively seek out candidates who are more diverse than current staff. The City also shows hope in employing lessons learned on North Williams Avenue by proactively addressing historical context in at-risk neighborhoods, continuing to diversify their public outreach strategies, and monitoring existing conditions so that they may track changes in neighborhood composition in the future.

In each of the cases above, we see varied conditions that have affected each locality's Complete Streets programming. Deep commitment from transportation planning staff, strong interdepartmental relationships, local leadership, reliable funding conditions, innovative community outreach strategies, and constant inclusion of resident feedback throughout the process all feature as important elements to the perceived success of each locality's Complete Streets network. From this point, it is possible to derive a series of lessons and recommendations for planning and transportation departments to better address their own inclusion of community and equitably designed Complete Streets.

Through investigation of existing literature and analysis of the cases of Somerville, Baldwin Park, and Portland, one may extrapolate some answers to if and how Complete Streets presently address social inclusion and equity in their policy creation and related projects. Complete Streets grew from the lack of diversity in America's transportation modes, and its principles of expanding transportation options should, theoretically, advocate for the expansion of transportation modes in conjunction with the expansion of access for a larger spread of the socioeconomic spectrum. There are still many ways, however, in which Complete Street policies and projects can be strengthened by methods across local, regional, state, and federal government.

GOVERNANCE & FINANCES
INTERNAL SUPPORT & CULTURAL COMPETENCY

One of the crucial components McCann lists in a successful Complete Streets policy is coordination across municipal departments – a well-functioning Complete Streets policy incorporates public works and engineering departments in addition to the community's transportation department, and seeks to maintain healthy communication practices so efforts to implement Complete Street designs are consistent and efficient (McCann, 2013). In the case of Somerville, strong leadership from the city's mayor strengthened the resolve of all departments to commit to the City's vision of inclusive streetscapes (Rawson, 2018; Morrison, 2018). In Portland, state-level commitment to inclusive transportation options paved the way for progressive streetscape and transit planning on a local level (Igarta, 2018; Mapes, 2018). A unified vision from the highest level of local, regional, and state government to create diverse, affordable, and culturally complete neighborhoods beyond its streets, and repeated statements committing to this vision, motivates departments across the board to follow their leaderships' example.

In order to create culturally Complete Streets, local government should also focus on creating more diverse and inclusive staffing practices and promote those who display strength in their commitment to implementing projects that reflect the city's vision. Portland's five-year racial equity plan sets a good standard for creating strategies around diversifying its internal structure and reevaluating a paradigm that reinforces division between planning employees and neighborhood residents for which they plan. The success of Portland's plan would be strengthened further by hiring more staff devoted to diversity, equity and inclusion – at the time of this writing, PBOT has one staff member managing equity for an 800-person department, and the staff member was unable to participate in this research because of limited time and limited assistance to achieve their vision. Every effort should be made to hire staff members who more closely identify with the demographic groups present in the community for which they will work.

For existing staff members, cultural competency education should be a required component of improved internal programming. Cultural competency, as described by Agyeman & Erickson, cultural competency is the "range of awareness, beliefs, knowledge, skills, behaviors,

and professional practice that will assist in planning in, for, and with multiple publics" (Agyeman & Erickson, 2012: 2); while training in cultural competency is required in other fields that must interact with the public in an ethical manner such as public administration, healthcare, and social work, there is no such requirement for professionals in the field of urban planning (ibid.). Furthermore, cultural competency training should be revisited on a regular to ensure it becomes an integral part of the planning process and not a simple check-box on a longer list of planning priorities.

INTERDEPARTMENTAL COORDINATION: MOVING BEYOND ENGINEERING & PUBLIC WORKS

If communities seek to simultaneously improve their streets and negotiate the effects such improvement could have on resident displacement, Complete Streets policies and their related planning staff should move beyond interdepartmental coordination between planning, engineering, and public works. They also need to coordinate with local and regional housing authorities and agencies to identify locations at risk for population displacement and proactively work with these entities to develop concurring housing and transportation infrastructure strategies that will support existing residents. Planning staff also need to develop relationships with local programs and community groups focused on supporting homeowners and tenants - especially programs and groups which help historically marginalized populations receive home ownership financing.

While all cases reviewed in this report cited concern about elevated housing prices in conjucntion with improved transportation networks, none of the cases cited direct coordination with housing departments or external agencies to help residents near incoming Complete Street projects maintain their current location and housing affordability.

In the case of Baldwin Park, municipal representatives mentioned that they were working towards better tracking of housing conditions and development near Complete Streets projects, but cited limited financing and staff resources as reasons for the lack of present awareness of how these two issues intersect (Lopez, 2018). In Portland, planning staff seemed closer to integrating research on at-risk populations and their housing conditions into Complete Street project selection and design strategies, but it is unknown if this effort is coordinated with actionable housing strategies on the local, regional, or state level (Igarta, 2018).

In addition to coordinated housing strategies, City staff working on Complete Streets should also establish close ties with the city's economic development department and local actors in small local business; changes in the real estate market also affect the ability of small businesses to maintain their rent at their present location, and issues surrounding business displacement were prevalent in the case of North Williams Avenue. Whether financing between transportation,

housing, and economic growth departments needs to be renegotiated to include joint funds, or financing needs to be won from higher levels of government or external sources to aid coordinated strategies, communities should prioritize backing new initiatives that attempt to close this knowledge gap and provide solutions for existing residents to remain in their neighborhoods once their surrounding transportation network is upgraded.

FINANCING STRATEGIES

This point leads into the next key issue identified in the case studies, which is access to consistent financing to bring Complete Streets networks from vision to fruition. For Complete Streets to reach their full potential, funding needs to be sustained over a period of many years so that complete networks meet citizen expectations, which are generally set following a long and arduous policy creation process. The states of Massachusetts and Washington have strong incentive strategies to encourage communities to pass Complete Streets policies and construct their related projects (MassDOT, 2016; Atherton et al., 2017). It is therefore not surprising that these states have some of the highest concentrations of Complete Street policies in the US (ibid.). In places that lack state level funding or incentives, as is the case for Baldwin Park, communities are heavily reliant on their ability to procure funding through grants from external sources. These grants are typically tied to a finite amount of funds, timing, and project scope in which they can be spent. Baldwin Park's Complete Street policy creation process was financed through such means, but after their very successful public engagement process,

citizens felt frustrated that their new network's implementation lagged for years following its passage (BPRAC, 2018). The City needed to find, apply for, and receive further external grants to move their Complete Streets from policy to project; this process prolongs the time period from when a project is first proposed to when it is fully constructed and expends limited staff resources which could be used on other planning priorities. This issue could be resolved with more long-term state- or federal-level funding programs which could be awarded to communities both to finance policy creation and to provide an annual budget for project implementation five to ten years following a policy's creation. Complete Streets policies mean very little if they remain words on a piece of government paper; their strength lies in their completed construction and in their reception by members of the public. In neighborhoods that have experienced systemic discrimination, the disjoint between policy and implementation can cause distrust between citizens and government and, in cases such as Baldwin Park, cause rifts in even the most trusting and interconnected citizen-government relations (BPRAC, 2018).

It is also imperative that funding programs make every effort to award grants to places that have been historically overlooked *before* they start to see drastic demographic shifts symptomatic of gentrification, or at least attempt to award grants in places that display early warning signs.

In the case of North Williams Avenue, community outcry centered less on the fact that the area was receiving improved bikes lanes – it was centered on the *timing* of its funding and implementation, which was decades after residents identified street safety as an issue and more than a decade after the neighborhood began to experience an influx of wealthier, whiter residents. Through commitment to identifying populations and neighborhoods at risk for displacement, funding new policies and projects in these locations that support resident retention, and continuing to fund streetscape and transit improvements for years after a Complete Streets policy is passed, government can build a stronger coalition of diverse neighborhoods that have comprehensive and inclusive transit options.

PUBLIC ENGAGEMENT & OUTREACH
WHEN PUBLIC MEETINGS ARE NOT ENOUGH

Moving away from government restructuring and finance, trust and communication are twin pillars upon which strong public engagement is built. When designing Complete Streets projects with input from the community, it is extremely important to investigate and acknowledge the area's local, historical context – especially in communities that have been underrepresented, ignored, underfunded, and disenfranchised in the past. This was the major sticking point in Portland's redesign of North Williams Avenue, and is now a key feature of new neighborhood development plans for the city of Portland.

In the cases covered in this report, all communities had established practices for community outreach that included public meetings, workshops, and educational programming around Complete Streets messaging. In Somerville, the city's swift and direct public engagement process was both a blessing and a curse. Somerville's then-Director of Transportation & Infrastructure felt that while further public engagement would have been helpful for incorporating communities who are not part of the usual outreach process, she also felt it would have spent a significantly longer time in its policy creation with minimal change to the final policy (Morrison, 2018). At the same time, she felt it would have been beneficial to incorporate community groups that work to represent new immigrants, refugees, and non-English speakers, and a BAC representative noted that these groups are continually underrepresented in their local bicycle advocacy community (ibid., Epstein, 2018). Although Somerville's ordinance displays a commitment to Complete Streets elements, their public engagement process is noticeable lacking in community representation compared to other cases reviewed in this report.

BRING THE POWER TO THE PEOPLE

Somerville's former Director of Transportation & Infrastructure also stated that the Complete Streets policy creation process would have benefitted from involvement of local high school students; as policy creation can be a relatively fast and self-contained process, she felt that it was a perfect project in which to engage students in a high-school governance class and allow them to

witness a public process from start to finish (ibid.). In Baldwin Park, community representatives from BPRAC stated that the City's outreach to middle-school and high school students was one of the best and most innovative forms of citizen outreach included in their policy creation (BPRAC, 2018). As noted in earlier sections, one BPRAC representative felt that the inclusion changed their perspective on how citizens can interact with local government and, furthermore, felt that outreach at schools had positively affected the career trajectories of high school graduates with little to no previous interest in municipal planning.

> Key to the outreach's success was bringing engagement directly to students, in their cafeteria and in their classrooms; the City made it as convenient as possible for students to become involved, and this convenience led to higher participation and successful integration of the needs of this younger population in the final Complete Streets policy (BPRAC, 2018).

Bringing engagement directly to the people also proved a more successful strategy in Portland following the desired expansion of the North Williams Avenue SAC. This is a tip that can be applied when seeking input from other underrepresented population groups, both in Complete Streets programming and in public engagement processes beyond this topic. Instead of hosting all public engagement components at city facilities, Complete Streets program coordinators should seek out community groups that represent underserved populations and host public outreach at times and locations

that are frequently visited by these groups. One example of innovative community engagement beyond the cases examined in this report is Boston's recent transportation visioning process, GoBoston 2030, which employed a bespoke city-owned vehicle similar in style to a food truck and travelled to different locations around the city far from conventional sites of public meetings (City of Boston, 2017). This is especially important in neighborhoods that lack good access to transit, where long or complex commutes may influence the ability and likelihood of individuals to attend traditional public meetings. It is also imperative that city staffing seek to include feedback from non-English speakers in this process, and that they employ multilingual staff to address this need, develop consulting practices supporting multilingual feedback, or develop relationships with community groups which can assist in filling this gap.

CONTINUITY, CONSISTENCY, & TRANSPARENCY

In addition to innovative public outreach strategies, it is essential to have continual, consistent, and transparent communication with the public in all phases of Complete Streets programming. City officials should aim for total transparency in a project's financial constraints, their prioritization of elements based on those constraints, and the estimated timeline of constructing the project elements. In the case of Baldwin Park, both city and community representatives identified inconsistent communication as a weak point in the continued development of their Complete Streets

network. Although Baldwin Park created a very successful policy using external financing, this financing did not extend to the actual construction of its Complete Streets network (Institute for Local Governance, 2015; Lopez, 2018). Implementation subsequently moved slowly, sporadically, and, at one point, was completely halted due to lack of finance (Lopez, 2018; BPRAC, 2018). From the residents' perspective, they felt like the city had gone back on their commitment to creating Complete Streets (BPRAC, 2018); from the city's perspective, they felt underfunded, understaffed, and unable to keep up with the amount of communication established during the policy creation phase (Lopez, 2018). Perhaps more important than pushing city departments to have the most robust public engagement they can possibly manage is ensuring a steady and consistent outreach strategy that is realistic for staff to maintain so residents do not feel bewildered by fluctuations in communication.

To rebuild their relationship with residents, Baldwin Park staff got realistic about what elements could be achieved quickly within their limited resources (BPRAC, 2018).

> Schools were important to the policy's creation and identified as high priority areas for citizens, so Baldwin Park began making small changes to the sidewalks and intersections around three main schools in town (ibid.). These small but meaningful changes were noticeable to the public and helped reestablish trust and commitment from both sides moving forward.

This is a useful tactic for communities who wish to commit to Complete Streets visioning but do not yet have the capital to build the major components of their network redesigns. Baldwin Park's success with small interventions stems both from smart choices in targeted locations and from listening to community priorities and honoring the voices of its citizens.

BE OPEN, FLEXIBLE, & RESPONSIVE

Perhaps the best advice for any community wishing to incorporate equity and social inclusion into Complete Streets is to be open, flexible, and responsive. Every community has a different story to tell; as urban planners, it is our role to listen and facilitate plans that empower communities to tell their own stories and become their own agents of change. The only way to ensure we as planners are addressing the needs of a community is to listen, listen, and listen again. While establishing long-term, high levels provides excellent guidance, planners should also keep their ears to the ground and adapt to shifting needs and desires. While Baldwin Park residents were not initially concerned with gentrification surrounding their improved transportation network, it has since emerged as a concern for the coming years (BPRAC, 2018). Although the City of Baldwin Park does not share the same level of concern as its citizens, they are being procative to address the public's concerns. When community members spoke out about the imbalance of representation in the North Williams Avenue SAC and public engagement process, the City listened, slowed their process, and reexamined their committee – moves that were perceived as important actions

CULTURAL COMPETENCY TRAINING

HIRING PRACTICES & INTERNAL RESTRUCTURING

FUNDING IMPLEMENTATION EARLY IN AT-RISK NEIGHBORHOODS

PROACTIVE MONITORING OF AT-RISK NEIGHBORHOOD POPULATIONS

ESTABLISH CONSISTENT & LONG TERM FUNDING STREAMS

STRONG LEADERSHIP VISIONING

GOVERNANCE

FINANCE

INTER-DEPARTMENTAL COORDINATION

CREATING SOCIALLY INCLUSIVE COMPLETE STREETS STRATEGIES

BE TRANSPARENT ABOUT POSSIBLE RISKS & BARRIERS TO COMPLETION

PROVIDE MULTILINGUAL ENGAGEMENT OPPORTUNITIES

PUBLIC OUTREACH

BRING INPUT OPPORTUNITIES TO THE PUBLIC ON THEIR OWN TURF

PUBLIC ENGAGEMENT

EMPLOY DEEP LISTENING STRATEGIES & RESPOND STRATEGICALLY

ENGAGE YOUNG PEOPLE AT THEIR SCHOOLS

MAINTAIN COMMUNICATION AT A CONSISTENT & SUSTAINABLE LEVEL

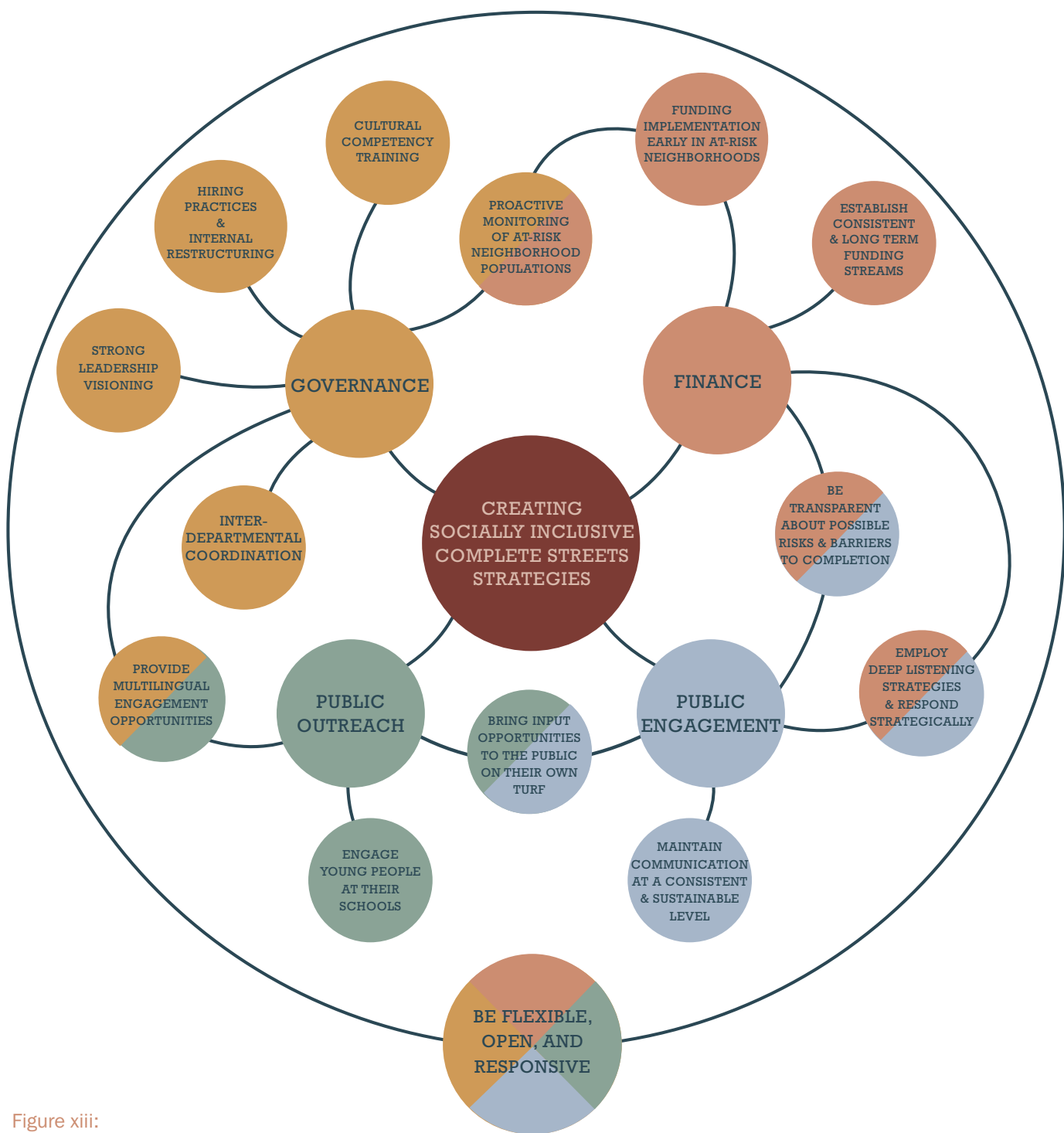BE FLEXIBLE, OPEN, AND RESPONSIVE

Figure xiii:
Multivariate flow chart of contributing factors to creating socially inclusive Complete Street Strategies.

by community members in developing a sense of trust that had thus far been remiss (Lubitow & Miller, 2013). With good listening practices and adaptable strategies, a city should be able to flex and flow with its residents' changing concerns. It is for this reason that planners should not have a Complete Streets checklist; rather, they should develop a continual discourse with the public and establish long-term visioning goals as well as a set of flexible short- and medium-term priorities that can follow the twists and turns of time.

CONCLUDING THOUGHTS

Complete Streets in the modern city is but one narrow concept in a wide field of urban planning and development, yet its achievements and shortfalls are symptomatic of a larger period in urban planning where even the most noble ideals can be hampered by unconsidered consequences. Since the birth of planning as a proper profession, city planners have struggled to balance what their expertise and instincts tell them is right for an area with the realities of an often vastly diverse, differing, and sometimes contradictory public realm. The field has come a long way since it first began razing slums to create new boulevards for nobles and members of the bourgeoisie, but it still stands a far distance from fostering a wholly inclusive and culturally competent society and transportation network. The research outlined in this report examined just one facet of this larger dichotomy and, in focusing on the nascent and well-intentioned concept of Complete Streets, intended to provide answers to if and how this street redesign method can avoid some of the errors of its predecessors.

This report has explored the question of social inclusion in modern street redesign through three case cities, each facing their own unique contexts and challenges. As with the field at large, there are no simple answers to their complex set of conditions; urban planning is a field of wicked problems, and creating successfully equitable Complete Streets is no different. In their quest to create socially inclusive streets, neighborhoods, and regions, planners must work with limited resources under exacting constraints while simultaneously honoring the historical contexts, present-day desires, and future concerns of their ever-changing population. Ideally, federal transportation strategies would be completely overhauled to incorporate better support for public transit, walking, and biking, and for programs like Complete Streets which encompass improved transportation infrastructure for vulnerable and marginalized members of the public; at the time of this writing, however, this appears to be an idealistic goal which could possibly take decades, if not longer, to achieve.

In lieu of such drastic and lofty changes, planners must focus their efforts on their local context and develop meaningful connections across the breadth of their area's populace to achieve solutions that support their locality's growth and its resilience. This must be done with a comprehensive, intentional, and collaborative spirit, and must proactively seek to define, address, and anticipate potential consequences their interventions will have beyond the physical environment. For the case of Complete Streets, proactive steps must be taken to ensure that improvements to transportation infrastructure do not coincide with or reinforce existing systems of marginalization, displacement, and socioeconomic stratification. This is done through consistent work improving funding streams, exploring new avenues to engage citizens yet unheard, engaging in deep listening and honoring its resonance, collaborating across teams, departments, and regions, and partnering with other fields, programs, and interventions to accomplish shared and interrelated goals. If planners consistently work to develop this complex hydra of social strategy, Complete Streets will, one day, be complete.

Image 18: The Community Cycing Center, located in Northeast Portland, OR.

Credit: Community Cycling Center

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APPENDIX I: INTERVIEW FORMAT

Research conducted for this project included interviews with twelve individuals who participated in Complete Streets policy and project processes in each of the three localities explored as case studies. The interviewees chosen for this research were comprised of: local planning staff involved in Complete Street policy creation and related project planning; planning professionals with expertise in Complete Streets on a regional and national level; city officials from other departments who worked directly on their city's Complete Street policy creation and its related projects; and community representatives who also engaged with their City's employees to create Complete Street policies and continue to engage with their city on these subjects. Interviews were conducted through a mixture of in-person and on-phone communication; in one case, the interviewee declined a phone call but was instead willing to share a written response to questions.

As per the McGill Guidelines for Research Ethics Involving Human Participants, interviewees were provided with information on the subject of this report's research upon first contact, and were also provided with information on the interview's procedure, its potential risks and benefits, and the possibility for their participation to remain confidential. Following this procedure, participants who agreed to interviews received a consent form detailing the above information and were given the opportunity to either consent or decline to the inclusion of their full name, their title and organization, their direct quotes, or any identifying information in the final report. Some interviewees preferred their names be redacted; this is reflected in their contributions' citation both in text and in the reference section of this report.

The full list of interview participants includes:

Baldwin Park Resident Advisory Committee (BPRAC), three representatives - names redacted. (2018, May 17).

Epstein, Alex, Community Representative for the Somerville Bicycle Committee. (2018, June 13.)

Igarta, Denver, Complete Streets Supervising Planner for the Portland Bureau of Transportation. (2018, May 10).

Independent Consultant, contracted on behalf of Portland Bureau of Transportation (PBOT) - name redacted. (2018, June 12).

Killen, Monica, Former Program Supervisor, Department of Recreation and Community Services for the City of Baldwin Park. (2018, June 16).

Lockwood, Ian, Livable Transportation Engineer at Toole Design Group and Independent Consultant to the City of Somerville. (2018, May 16).

Lopez, David, Engineer, Department of Public Works for the City of Baldwin Park. (2018, May 9).

Morrison, Hayes, Former Somerville Director of Transportation and Infrastructure. (2018, May 11).

Rawson, Brad, Director of Transportation and Infrastructure, City of Somerville Office of Strategic Planning and Development. (2018, June 11).

APPENDIX II: INTERVIEW QUESTIONS

Each interviewee was asked a similar line of questions; exact wording or specific questions varied based on human error (failing to repeat the written questions below verbatim) and based on the individual's relationship to the Complete Streets process under review - city officials, as opposed to resident representatives, for example, had slight variations to their questions to reflect their roles and responsibilities in the Complete Streets process. Each interview lasted approximately 45 minutes.

Below is the list of template questions that were asked of all participants:

1. What do Complete Streets mean to you?

2. Tell me about what actions were taken to include a representative sample of the community in Baldwin Park's Complete Streets process.

3. Do you feel that the community was able to influence the final design of Baldwin Park's Complete Streets policy and subsequent projects? If so, how would you say the community influenced the design?

4. What other forces (political, economic, etc.) do you think influenced the street redesign's final outcome?

5. Do you think there has been a rise in rents and/or housing prices since the policy was implemented? If not, is this a concern being considered for the future, and why or why not?

6. Is there anything you or the City does to monitor the locations of housing prices or affordable housing as they relate to new or potential Complete Streets projects?

7. If you were to undertake this process again, what would you like to do differently?

8. Is there anything else you would like to add that hasn't been covered in previous questions?

APPENDIX III: INTERVIEW CONSENT FORM TEMPLATE

McGill

School of Urban Planning

Participant Consent Form: Interviews for SRP Community Impact & Complete Streets: Strategies For Socially Inclusive Street Redesign

Researchers: Cecelia Cobb, Masters of Urban Planning Student, McGill University, School of Urban Planning
Cecelia.cobb@mail.mcgill.ca
617.599.2650
Supervisor: Julian Agyeman, Professor, School of Urban Planning
Julian.agyeman@mcgill.ca
617.913.1165
Title of Project: Community Impact & Complete Streets: Strategies for Socially Inclusive Street Redesign
Sponsor(s): None

Purpose of the Study: You are invited to participate in a supervised research project on Complete Streets projects which explores their use of community engagement to improve issues of equity throughout the street redesign process. The results from this research will aim to inform better community engagement processes in future Complete Streets initiatives and lead to more equitable street networks.

Study Procedures: As a participant in this research, you will be asked to participate in an interview lasting approximately 30 minutes. The interview is meant to better identify individuals' personal experiences with Complete Streets policies and projects, and how these experiences can be used to improve outcomes of Complete Streets policies and projects in the future. These phone interviews will not be recorded; however, notes will be taken by the researcher throughout the call and important lines may be asked to be repeated. Specific permission will be asked if the researcher would like to quote a line in their final publication.

Voluntary Participation: Participation in this research is completely voluntary. As a participant, you may decline to answer any questions asked throughout the interview process, and you may withdraw your consent to participate at any time and for any reason.

Potential Risks & Benefits: There is small potential risk identified with this study. Questions asked during the interview process will ask you to reflect on both the positive and negative aspects associated with your personal experience in Complete Streets policies and projects; it is necessary to collect information that accurately reflects these existing policies and projects to provide meaningful and relevant recommendations for future improvements. It is possible that negative comments will conflict with the opinions of other employees and public officials in your line of work, and these comments may be reflected or included in the final paper associated with this research. If you perceive that the inclusion of such opinions could negatively affect you in any way, please note that it is possible to remain confidential in your participation and you may also withdraw your consent to participate at any time.

In thanks for participation, you will be provided with a copy of the final paper resulting from the research. Participating in the study might not personally benefit you, but we hope to learn about how Complete Streets policies can positively affect their communities and ways in which policies can be developed and implemented in more equitable ways in the future. Your participation will help make this possible. You will not receive monetary compensation for participating in this research.

Confidentiality: In consenting to participate, you will allow the researcher access to your full name, phone number, email address, your place of profession and your professional title. This information will be stored in a password-encrypted Microsoft Word document on the researcher's personal computer for a minimum of seven years after the final paper has been completed. There is a small risk that the personal computer could be lost, stolen, and/or hacked into; beyond these circumstances, there is no perceived risk in your personal information becoming available beyond this document. If you consent to the inclusion of your name and/or the name of your organization/employer in the paper, your personal information will also be available to the researcher's supervisor upon request. Participants have the choice to remain confidential in all comments and quotes that will be included in the research and its final publication. If you would like your participation to remain confidential, your personal information will only be accessible to the researcher.

Please indicate your preferences below:

Yes:_____No:_____You consent to be identified by name in the final report.
Yes:_____No:_____You consent to have your organization's name used.
Yes:_____No:_____You consent to have your statements used as quotes in the final report.

Questions:
If you have any further questions about this study, please feel free to contact the researcher (Cecelia) or the project's supervisor, Julian Agyeman.
    Cecelia Cobb
    Cecelia.cobb@mail.mcgill.ca
    617.599.2650
    Julian Agyeman
    Julian.agyeman@mcgill.ca
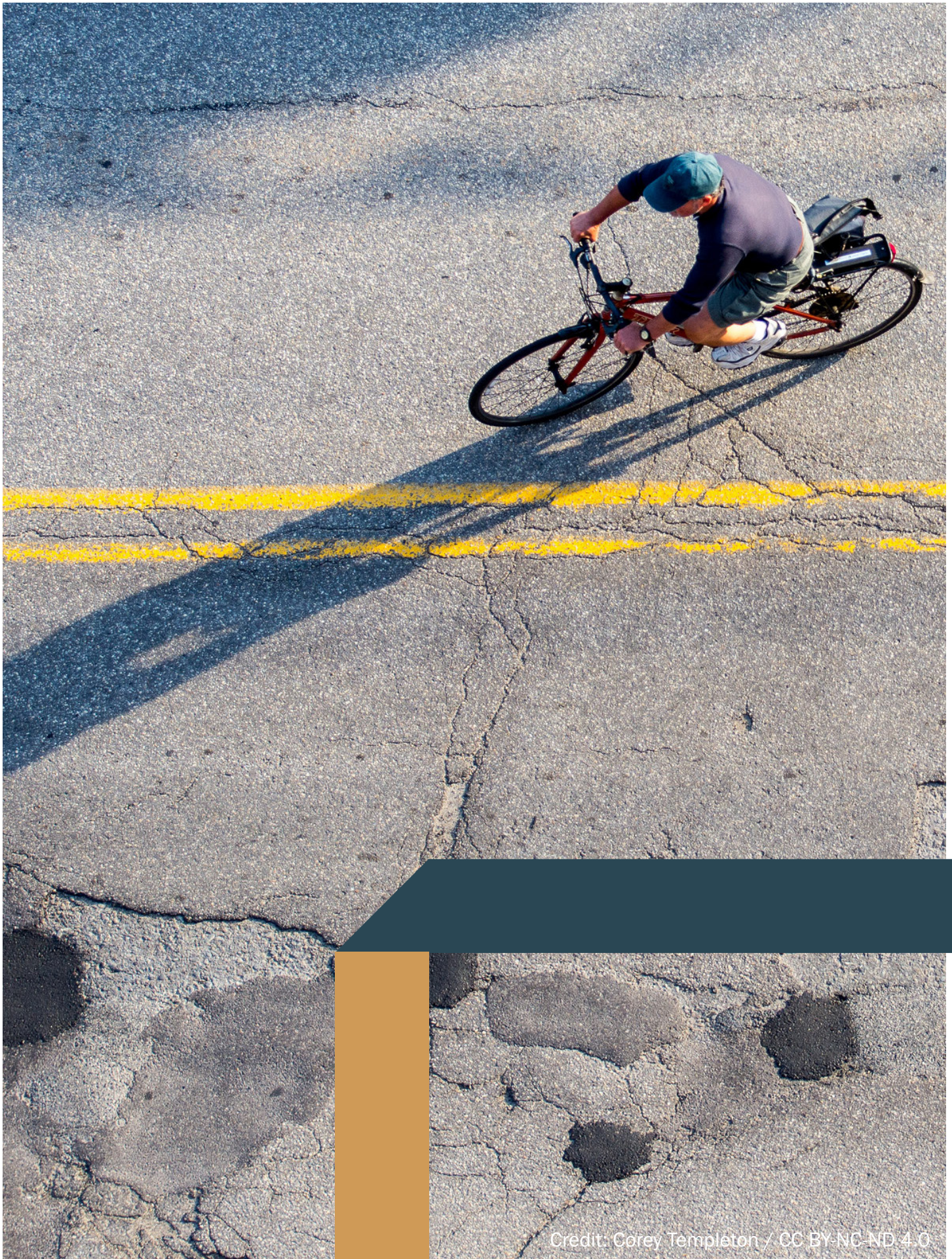   617.913.1165
If you have any ethical concerns or complaints about your participation in this study, and want to speak with someone not on the research team, please contact the McGill Ethics Manager at 514-398-6831 or lynda.mcneil@mcgill.ca.

Please sign below if you have read the above information and consent to participate in this study. Agreeing to participate in this study does not waive any of your rights or release the researchers from their responsibilities. A copy of this consent form will be given to you and the researcher will keep a copy.

Participant Name: _____

Participant Signature: _____ Date: _____