

Olneyville Street Audit Baseline Report

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I. Background

Physical inactivity is the risk factor with potentially the greatest public health impact.¹ Lack of regular physical activity increases the risk of heart disease, some cancers, cerebrovascular disease, and diabetes, all of which rank among the ten leading causes of death in the United States.² Inactivity can reduce quality of life by contributing to the development of osteoporosis, anxiety, and depression.¹ Physical inactivity is also a risk factor for obesity,¹ which has also been implicated in the development of myriad diseases as well as psychological distress.³ More than one-third of U.S. adults and almost 17% of youth were obese in 2009-2010.⁴

Despite the benefits of regular physical activity for reducing chronic disease morbidity and mortality, less than half of the U.S. adult population (48%) attains recommended levels of physical activity and approximately one quarter (23%) reports being completely inactive.⁵ The low level of physical activity among Americans is costly in terms of quality of life and economic resources needed to provide medical care. An estimated 200,000 to 300,000 premature deaths occur each year because of physical inactivity, second only to tobacco-related deaths among preventable causes of death.⁶⁻⁹ The annual cost directly attributable to physical inactivity in the U.S. is an estimated \$24 billion - \$76 billion, or 2.4%-5.0% of national healthcare expenditures.¹⁰⁻¹² This estimate does not take into account indirect costs, such as lost productivity from the physical and mental disability to which sedentary behavior contributes.

Specific recommendations for promoting physical activity have emerged over the past several years. Approaches to raise population-wide rates of physical activity, rather than individually focused behavior and lifestyle modification strategies, have gained increasing attention. Environmental and policy interventions for increasing physical activity, in particular, are emphasized as they provide environmental opportunities and build social support for greater activity, which may directly affect behavior or alter social norms.¹³⁻¹⁵ The Guide to Community Preventive Services¹⁶ recommends environmental and policy interventions at two levels: community-scale and street-scale. Community scale recommendations include zoning regulations and building codes, and environmental changes brought about by government policies or builders' practices. Street-scale policies and practices include features such as improved street lighting or infrastructure projects that increase the ease and safety of street crossing, ensure sidewalk continuity, introduce or enhance traffic calming such as center islands or raised crosswalks, or enhance the aesthetics of the street area, such as landscaping.¹⁷

Several movements, namely Smart Growth¹⁸ and New Urbanism,¹⁹ provide a foundation for incorporating these recommendations to promote population-wide health and well-being. By embracing compact, transit-oriented, walkable/bikable land use design and planning principles they aim to create great public places and an interconnected network of streets, sidewalks, and paths that reduce automobile use and increase recreational activity and pedestrian-oriented travel.¹⁹ The national Smart Growth Network²⁰ and the Congress of New Urbanism¹⁹ have articulated principles that help define each movement's objectives (Appendix 1).

II. Environmental Audit

Evidence regarding the association between the environment and individual or group behavior

has been limited in scope by available archived data that is aggregated to a large area such as a census tract. These large-scale or macroscale measures fail to capture characteristics of the built environment experienced during recreational and transport-related physical activity. Thus, self-report data has increasingly been used to capture perceptions of the environment at a microscale level.^{21,22} A growing source of data for identifying smaller scale elements of the built environment are environmental audit tools, which are designed to assess factors in the physical and social environment that hinder or facilitate physical activity.²³⁻²⁶ Currently, the audit tools range in purpose, target population, and method of administration.^{24,25,27,28} They require trained individuals to walk or drive through the area being audited, such as a neighborhood, park, or trail, and systematically code characteristics using definitions and a standard form. The “street segment” comprising two facing sides of one street block is the typical unit of observation. The majority of audits are intended for research purposes, can be long, and can require extensive training.

The *Active Neighborhood Checklist* (Checklist) environmental audit²³ was chosen for the Healthy Olneyville Project. It is a refined version of existing audit tools²⁴ and is designed to be a short, objective instrument for both community stakeholders and researchers. The Checklist consists of six categories: land use characteristics, sidewalks, shoulders and bike lanes, street characteristics, quality of the environment for pedestrians, and specific destinations (e.g., schools, grocery stores). It demonstrates high reliability when completed by researchers and community stakeholders across diverse street segments.

The purpose of conducting the audit is to portray a picture of Olneyville as developed today. The findings will serve as a baseline for comparison to future audits and will allow the progress of development and consistency with principles supportive of healthy communities to be monitored.

III. Methods

The streets in Olneyville were divided into 114 street segments (Appendix 2). Segments were marked between intersections or approximately ¼ mile long, depending on the circumstance. Segments on the following streets were audited at baseline: Hartford Avenue, Westminster Street, Broadway, San Souci, Valley Street, Manton Avenue, Atwells Avenue, Harris Avenue, Delaine Street, Appleton Street, Chaffee Street, Aleppo Street, Bowdoin Street, Putnam Street, Julian Street, Florence Street, Kossuth Street, Pope Street, Hyatt Street, and Amherst Street. Limited resources prevented all 114 street segments to be audited. Forty-eight segments on these 20 streets were audited because the activities described in the Healthy Olneyville Community Action Plan could impact these segments.

Under a contract with the Rhode Island Department of Health to provide evaluation services, JSI Research and Training Institute, Inc. (JSI) trained three community stakeholders to conduct the audits, entered and analyzed the data, and created this report. The audit training lasted two hours and included a site visit prior to the audits. These individuals audited the 48 segments; one audited 28 segments, another audited 17 segments, and the last audited 3 segments. Each individual had a clipboard with the Checklist. Audit sheets from each segment were entered into an Excel spreadsheet and analyzed by JSI. Initial results from the audit are reported below.

In addition, JSI compared the Olneyville findings to the Smart Growth and New Urbanism Principles and made preliminary recommendations.

IV. Baseline Results from Audit Tool

Audits were conducted on one of seven days during the months of April and September of 2012. A total of 48 street segments were included in the audit.

Construction

Among the 48 segments, 23 percent had a building or section of the sidewalk or roadway under construction demonstrating new development or redevelopment (Figures 1-4).

Figure 1



Figure 2



Figure 3



Figure 4



Land use

Residential land uses were present in 60.4 percent of the segments. This included all residential (Figure 5) and a mix of residential and non-residential such as retail and commercial buildings (Figure 6). Among the segments with residential land use, 77.1 percent had multi-family homes (2-4 units), 20.8 percent had single family homes, and 16.7 percent had abandoned homes (Figure 7).

Figure 5



Figure 6



Figure 7



Sixty percent of the segments contained at least one destination that might generate walking trips such as restaurants, a school, churches, and stores (Figures 8-11).

Figure 8



Figure 9



Figure 10



Figure 11



Overall, 6 percent of the segments included undeveloped land, 4 percent had designated green space (Figure 12), 21 percent contained a large number of vacant lots (Figures 13 and 14), 17 percent were occupied with parking lots (Figure 15), and 6 percent had a park with exercise/sports facilities or playground equipment (Figure 16). Thirty percent of segments had a public transportation stop.

Figure 12



Figure 13



Figure 14

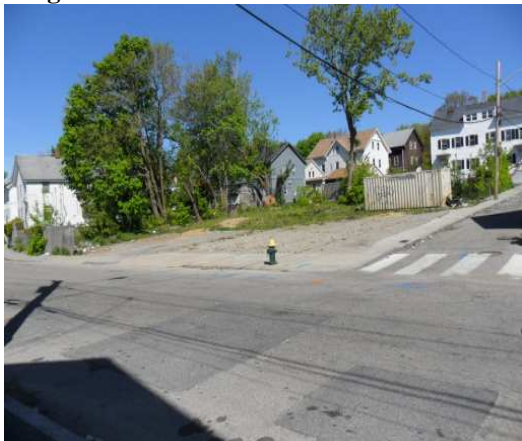


Figure 15



Four percent of the segments had an accessible off-road walking/biking trail. Six percent had a sports/playing field; 4 percent had a basketball, tennis or volleyball court, and 6 percent had a playground (Figure 16).

Figure 16



Street Characteristics

Twenty-three percent of the street segments had a posted speed limit sign of 25 miles per hour. Speed limit postings were not found on other streets. Eighty-five percent of the street segments had two-lanes (Figure 17). Ten percent of the street segments had one lane, and two percent had two lanes merging into one. Forty-six percent of the streets were marked. Six percent of the segments had median/pedestrian islands, 14.6 percent had turn lanes, 2.1 percent had traffic calming devices, 20.8 percent had “walk” “don’t walk” signals and 68.8 percent had crosswalks (Figure 18).

Figure 17



Figure 18



Quality of the Environment

Thirty street segments had commercial buildings adjacent to the sidewalk (Figures 10 and 11). Graffiti or broken windows were seen at sixty-nine percent of street segments (Figures 19 and 20), and litter was seen on 23 percent of segments.

Figure 19



Figure 20



Sidewalks

Ninety-eight percent of the street segments had a sidewalk on both sides and two percent had a sidewalk on one side. Eleven percent of the segments had a buffer between the curb and sidewalk on both sides, and 41 percent did not have a buffer on either side (Figure 21). When a buffer was present, trees were found in the buffer on both sides of the streets in 8.7% of the segments (Figures 22 and 23).

Figure 21



Figure 22



Figure 23



Eighty-three percent of the sidewalks were continuous on both sides, 13 percent were continuous on one side, and 4 percent were not continuous on either side (Figure 24). Eighty-one percent of the segments were continuous between segments at both ends, 13 percent were continuous between segments at one end, and 6 percent were not continuous at either end. In some places where there was not a sidewalk, as in Figure 25, there was a place to walk such as the grassy area or street. However, these places bring pedestrians very close to cars.

Figure 24



Figure 25



Shoulders

Shoulders provide a safe place for cyclists. Thirteen percent of segments in Olneyville had a paved and marked shoulder on both sides.

V. Comparison between Smart Growth and New Urbanism Principles and Olneyville and Subsequent Recommendations

Smart growth and New Urbanism support the development and promotion of walkable, compact, vibrant communities that enhance public health and environmental sustainability. Though Smart Growth and New Urbanism have different origins and constituencies, they complement and reinforce each other. Where applicable, the principles of each will be combined for the comparison to Olneyville. Individual principles are found in Appendix 1. Recommendations are provided for each principle, many of which are adapted from the Smart Growth Network's 100 Policies for Implementation¹⁸ and The Community Guide.¹⁶

Mixed Land Uses & Diversity

A mix of land uses such as residential, commercial, recreational, and educational in a neighborhood creates a diverse community and promotes pedestrian-oriented travel. In addition, an increased number of people on the streets can enhance the vitality and perceived security of an area. Furthermore, a mix of land uses helps streets, public spaces and retail stores become places where people meet, thus helping to revitalize community life.

Olneyville: Offers mixed land use.

Recommendations:

- Continue to ensure mixed-land use to provide opportunities to walk to retail shops, restaurants, cafes, entertainment, and public-serving uses.
- Provide incentives through government or business funds to employees working within and around Olneyville to live in Olneyville, close to work.
- Ensure a policy framework is in place to ensure future development is consistent with smart growth codes.

Take Advantage of Compact Building Design/Increased Density

Compact building design creates the convenient neighborhood centers people want and presents opportunities to absorb growth and development in a way that uses land more efficiently. When buildings, residences, shops, and services are closer together, it eases walking/biking, enables a more efficient use of services, and creates a more convenient, enjoyable place to live. Furthermore, compact communities result in dense populations that support viable transportation alternatives and reduce costs associated with providing and maintaining services. Other benefits accrue as well.

Olneyville: Supports walkability by allowing on-street parking to help minimize the need for large surface lots. However, there are numerous large surface lots in areas. Large surface spaces between the street and the front door of the home or business undermines the walkability that compact communities support.

Recommendations:

- Continue to reserve open space to ensure Olneyville meets the environmental and recreation needs of those who live, work, and play there.
- Reduce the negative impacts of surface lots by financing incentives such as city funds, the use of special tax districts, or tax increment financing to build parking structures.
- Ensure future commercial/retail building on streets tall (i.e. four stories) to support a pedestrian-friendly environment that offers a sense of place and increases the demand for more stores, restaurants, offices, and homes.
- Employ a design review board to ensure that future development reflects desirable design standards. A design review can help ensure that the proposed projects meet the community's vision for growth.

Create a Range of Housing Opportunities and Choice

Providing quality housing for people of all income levels can help create a better jobs-housing balance and generate a strong foundation of support for neighborhood transit stops, commercial/retail centers, and a pedestrian-oriented community.

Olneyville: Offers a range of housing choices.

Recommendations:

- Offer housing through an Affordable Homes Program.

Create Walkable Neighborhoods

Walkable communities enhance mobility, reduce negative environmental consequences, strengthen economies, and support stronger communities through improved social interaction. In addition, narrower streets, on-street parking instead of off-street parking, and other pedestrian-friendly features (e.g., trees, benches, artwork, drinking fountains, crosswalks) help provide economic and social benefits associated with walkable communities such as improved personal health, expanded consumer choice, and economic benefits.

Olneyville: Has short blocks, some on street parking, pedestrian calming, and through streets that promote walkability.

Recommendations:

- Improve the walkability of local streets, streetscapes, sidewalks, and street crossings around Olneyville.
- Continue building design that makes commercial areas walkable. Ensure diverse streetscapes with retail shops, restaurants, public art, and other amenities to encourage pedestrian traffic. A lively and inviting street is viewed as safe and attractive. Buildings must incorporate designs that create a sense of place and security.
- Continue to build short blocks, landscaping, on-street parking, through streets and walkways.
- Pedestrians will cross streets at crossing points as long as it requires no more than 150 feet out of their way. Provide convenient crossing points every 300 feet, especially on main streets to increase pedestrian traffic. This is important to increase pedestrian traffic in and out of surrounding neighborhoods.
- In future commercial and school development, sidewalks should be eight to twelve feet to increase pedestrian traffic.
- Require traffic-calming techniques (e.g., roundabouts, speed bumps, raised crosswalks, textured pavements, median barriers, speed limit signing, turn prohibitions, multi-way stop controls) where traffic speed is excessive.

Foster Distinctive Attractive Communities With a Strong Sense of Place

Placing emphasis on beauty, aesthetics, and human comfort creates a sense of place and supports a more cohesive community.

Olneyville: Some areas within Olneyville have unique features, including trees and flowers.

Recommendations:

- Engage residents and public and private sectors to add to the tree stock in the community. Trees help to create distinctive and healthy communities by making retail areas more inviting, providing shade, filter noise and pollution from nearby traffic, mitigate erosion that may cause damage to sidewalks and streets, provides a sense of safety for pedestrians walking on sidewalks.
- Permit regulations to allow vendors to offer sidewalk service. Allowing sidewalk service will encourage customers to stroll and the increased foot traffic will create a vital neighborhood shopping area that will benefit the entire community.

- Offer opportunities for community interaction such as farmers markets with local produce, walks, and other events.
- Increase education to raise awareness of social and economic impacts of graffiti and enhance citizen reporting for private property.
- Increase eradication of graffiti by enhancing removal programs with utility companies, community groups, inmates, etc. and using graffiti resistant paints or graffiti removal alternatives.
- Increase enforcement in hot spots, develop/enhance efforts with Police and Juvenile Court to enhance alternative sentencing programs.

Preserve Open Space, Farmland, Natural Beauty, and Critical Environmental Areas

The preservation of open space and associated benefits contribute positively to a community's quality of life. Parks, natural areas, and scenic landscapes increase property values, provide opportunities for recreation, and protect drinking water from pollution. In addition, communities with open spaces provide opportunities for residents to be outside thus increasing social interaction among neighbors.

Olneyville: Has preserved some open spaces and has a distinctive landscape.

Recommendations:

- Ensure that future trails and greenways form a continuous network of pathways for biking and walking/running.
- Continue to create and/or enhance access to open spaces where people can engage in physical activity and do informational outreach to ensure people are aware of the opportunities.

Strengthen and Direct Development Towards Existing Communities

Development in communities already served by infrastructure utilizes existing neighborhood resources, contributes to a stronger tax base, allows people to live near work, increases density and opportunities for public transportation, and helps to preserve open space and farmland.

Olneyville: An example of how cities can strengthen and direct development towards existing communities.

Recommendations:

- Offer economic incentives for businesses and home owners to locate to Olneyville and surrounding neighborhoods.

Provide a Variety of Transportation Choices/Smart Transportation

A pedestrian-friendly design offers a variety of transportation choices and encourages a greater use of bicycles, rollerblades, scooters, public transit, and walking as daily transportation. Streets should be designed to support cars but also to be safe and inviting for pedestrians, cyclists, and transit users. Appropriate speeds, street widths, sidewalks, buildings, trees, and benches are part of a pedestrian-friendly design.

Olneyville: Designed to support cars, pedestrians, and cyclists.

Recommendations:

- Provide incentives to Olneyville employees to walk, bike, or take public transit.
- Improve the sidewalks to increase the number of residents who walk.
- Improve signage for speed limits, turn prohibitions, to ensure appropriate speeds.
- Improve the aesthetics to include trees, artwork, benches, drinking fountains, and other features that make the streetscape more appealing.

Make Development Decisions Predictable, Fair, and Cost Effective

The development and promotion of walkable, compact, vibrant communities that enhance public health and environmental sustainability is reliant upon the government. For these types of communities to flourish, the government must support innovation in a timely, cost-effective, and predictable way for developers.

Olneyville: Provides an example of how diverse stakeholders can work together.

Recommendations:

- Continue to support the development and promotion of Olneyville and surrounding areas and ensure they are walkable, compact, vibrant communities that enhance public health and environmental sustainability.

Encourage Community And Stakeholder Collaboration In Development Decisions

A key to developing walkable, compact, vibrant communities that enhance public health and environmental sustainability is to have community and stakeholder collaboration in the development decisions.

Olneyville: Provides an example of how diverse stakeholders can work together.

Recommendations:

- Continue with frequent involvement from a diverse group of stakeholders (e.g., residents, developers, urban planners, transportation engineers, public health, environmental groups, community advocates, commuters, students, employees, parent-teacher associations).
- Conduct meetings to determine how and where the community will grow.
- Continue to develop relationships with the Universities, Health Department, and companies like JSI to develop, implement, and evaluate programs and policies that will enrich the community.

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Appendix 1. Smart Growth and New Urbanism Principles

Smart Growth	New Urbanism
<ol style="list-style-type: none"> 1. Mix land uses 2. Take advantage of compact building design 3. Create a range of housing opportunities and choices 4. Create walkable neighborhoods 5. Foster distinctive, attractive communities with a strong sense of place 6. Preserve open space, farmland, natural beauty, and critical environmental areas 7. Strengthen and direct development towards existing communities 8. Provide a variety of transportation choices 9. Make development decisions predictable, fair, and cost effective 10. Encourage community and stakeholder collaboration in development decisions 	<ol style="list-style-type: none"> 1. Walkability 2. Connectivity 3. Mixed-use and diversity 4. Mixed housing 5. Quality of architecture and urban design 6. Traditional neighborhood structure 7. Increased density 8. Smart transportation 9. Sustainability 10. Quality of Life

Appendix 2. Street Segments of Olneyville

