

**WHERE HOUSES REPLACE WAREHOUSES:
MANAGING RESIDENTIAL AND
MIXED USE REDEVELOPMENT OF
DEINDUSTRIALIZED URBAN AREAS**

by

Gemma Tierney

A thesis submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Master of Arts in Urban Affairs and Public Policy

Winter 2017

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ABSTRACT

As many American cities have experienced significant population growth since the 1980s, their industrial areas often become the target of redevelopment pressure to meet rising demand for urban housing. This pressure comes from developers seeking to convert properties to higher rent land uses such as residential and mixed use, and municipal governments seeking to put vacant or underused properties into more active uses. Philadelphia's West Washington Avenue is a legacy industrial area that has begun to experience this pressure over the last five years. In other former urban industrial areas that have undergone this pressure, municipal governments managed this process in many different ways, including regulating private developers, forming public-private partnerships, and initiating urban design programs. These management strategies have served to advance a variety of stakeholder land use planning goals.

The built fabric of these legacy industrial areas offers a distinctive urban landscape grounded in its heritage as a place of industrial enterprise and labor. While many of these areas began as center for heavy industrial land uses such as foundries or coal yards, their contemporary built fabric conveys layers of industrial development. As city planning departments seek to manage the reinvestment and redevelopment activity that has appeared in these legacy industrial areas, the outcomes of their management strategies transform the area's layout, functions, users and, in turn, its distinct landscape.

This thesis argues that municipalities' tactics for managing residential redevelopment in their legacy industrial areas will advance particular planning goals and bolster particular land uses, consequently altering the area's built environment and physical heritage through selective restoration and new construction. Cities manage

residential and mixed use redevelopment pressure on their legacy industrial areas at varying levels of permissibility and to diverse, sometimes disparate, economic, social and political ends. However, these management strategies share the fact that they alter the character of the area's streets, sidewalks, and buildings. West Washington Avenue is analyzed to formulate recommendations for management tactics that consider not only stakeholder goals but also the physical and spatial impacts on a distinct urban landscape.

Chapter 1

INTRODUCTION

As many American cities have experienced significant population growth since the 1980s, their industrial areas often become the target of redevelopment pressure to meet rising demand for urban housing. This pressure comes from developers seeking to convert properties to higher rent land uses such as residential and mixed use, and municipal governments seeking to put vacant or underused properties into more active uses. As residential and mixed use development enters legacy industrial areas, cities become interested in the consequent major shift in land use because of its potential to affect the health, safety, welfare and economic stability of its citizens, and its own operations. Philadelphia's West Washington Avenue is a legacy industrial area that has begun to experience this pressure over the last five years. In other former urban industrial areas that have undergone this pressure, municipal governments managed this process in many different ways, including regulating private developers, forming public-private partnerships, and initiating planning programs. These management strategies have served to advance a variety of stakeholder land use planning goals.

The built fabric of these legacy industrial areas offers a distinctive urban landscape grounded in its heritage as a place of industrial enterprise and labor. While many of these areas began as center for heavy industrial land uses such as foundries or coal yards, their contemporary built fabric conveys layers of industrial development. These layers create a distinct visual experience that diversifies the city's landscape. As city planning departments seek to manage the reinvestment and redevelopment

activity that has appeared in these legacy industrial areas, the outcomes of these management strategies transform the area's layout, functions, and users and, in turn, its distinct landscape.

This thesis argues that municipalities' tactics for managing residential redevelopment in their legacy industrial areas will advance particular planning goals and bolster particular land uses. These outcomes of municipal decisions, including the decision to stand aside and consequently alter the area's built environment and physical heritage. Cities manage residential and mixed use redevelopment pressure on their legacy industrial areas at varying levels of permissibility and to diverse, sometimes disparate, economic, social and political ends. However, these management strategies share the fact that they alter the character of the area's streets, sidewalks, and buildings. West Washington Avenue is analyzed to formulate recommendations for management tactics that consider not only stakeholder goals but also the physical and spatial impacts on a distinct urban landscape.

The city of Philadelphia is currently undergoing a residential construction boom in response to rising demand for urban housing. This has brought redevelopment pressure to areas that are not traditionally residential but are relatively affordable, including some of the city's legacy industrial areas, such as West Washington Avenue (Figure 1.1). As Philadelphia's downtown expands farther north and south with the gentrification of edge neighborhoods,¹ West Washington Avenue grows closer to the downtown district, and its employment and recreational opportunities. Moreover, the demand for housing in Philadelphia has caused residential redevelopment momentum

¹ Adams et al., *Restructuring the Philadelphia Region*, 85.

to spill over from infill projects on the surrounding residential blocks into the Avenue’s large buildings and lots. These factors have positioned West Washington Avenue as an untapped site for investment in residential and mixed use redevelopment.

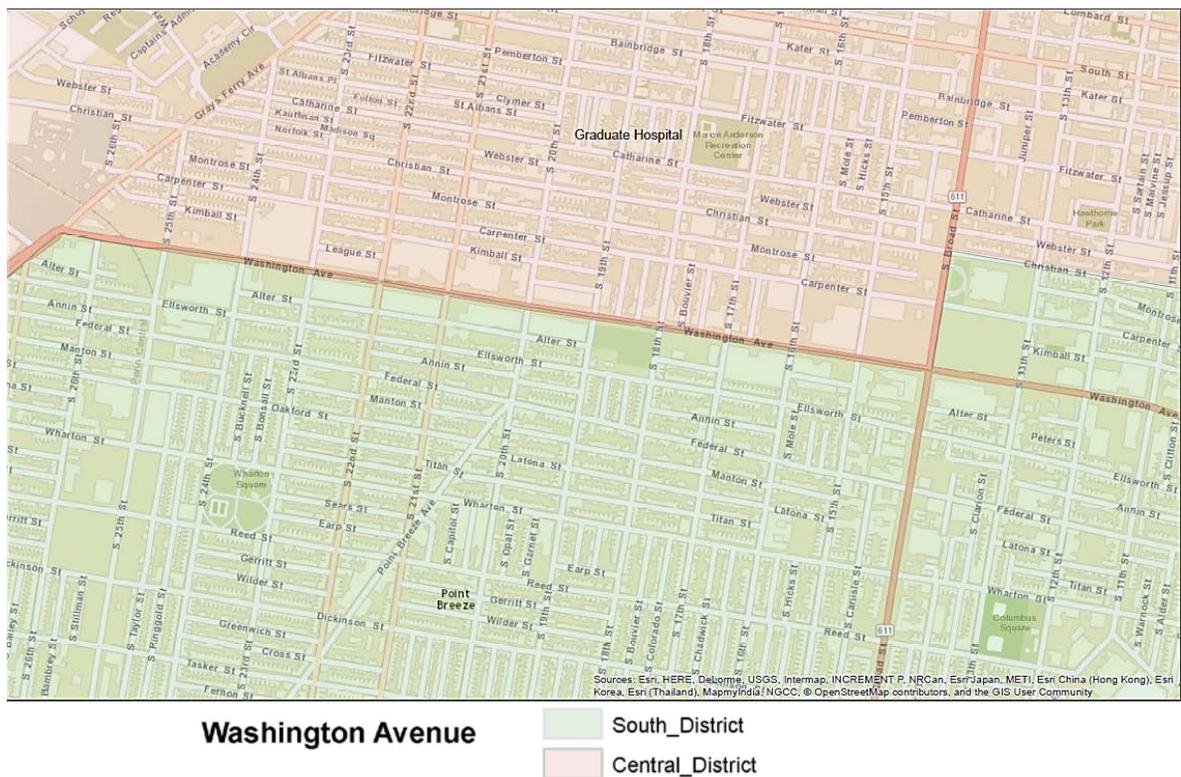


Figure 1.1 Map of West Washington Avenue and surrounding area, Philadelphia. West Washington Avenue divides two of Philadelphia’s urban planning districts: the Central District to the north and the South District to the south. It is also the border between the Graduate Hospital neighborhood to the north and the Point Breeze neighborhood to the south.

Source: Map created by author using parcel data from the City of Philadelphia.

Urban heritage scholar Heike Oevermann and geographer Harald Mieg explain that “historical [industrial] sites, their architecture and machines provide evidence of the past and are spatial resources for urban development. At the same time, these sites challenge planning practices through their loss of function, the large scale of the site, derelict fabric, and disadvantaged socioeconomic setting.”² Municipal governments recognize this combination of challenges and opportunities, and therefore many cities have actively managed these redevelopment processes. This thesis argues that Philadelphia, like other cities confronting similar redevelopment processes, can influence the outcomes of Washington Avenue’s residential redevelopment for major stakeholder groups, namely local residents, commercial property owners and commercial tenants, private developers, and city agencies such as the Philadelphia City Planning Commission, the Philadelphia Industrial Development Corporation, and the Chamber of Commerce

As part of these processes, both land use regulations and building stock are transformed to accommodate residential and mixed use developments. Municipal management of this reinvestment and redevelopment activity is likely to shift the area towards a predominant type of land use and population of users. For instance, if a city decides to promote the retention of industrial zoning and businesses, trends towards neighborhood-serving commercial uses, such as restaurants and convenience stores, will be halted, and the primary users will continue to be industrial firms. Alternately, if a city approves and encourages residential and neighborhood-serving commercial uses, the primary users will be households. This thesis uses the term sense of place to

² Heike Oevermann and Harald A. Mieg, *Industrial Heritage Sites in Transformation: Clash of Discourses* (New York: Routledge, Taylor & Francis Group, 2015). 12.

refer to this character, which includes the physical and functional features of the street, sidewalks, walls, fences, and the openings and exterior components of buildings within an urban area. Together, these features illustrate how the area has been designed for particular uses and how it is actually used. This thesis focuses on the sense of place that resides in exterior, publicly-visible features rather than building interiors. This choice was made because these physical features constitute the most widely accessible sense of place.

This thesis uses West Washington Avenue in Philadelphia as a case study to argue that municipal planning focused on residential redevelopment of legacy industrial areas can advance a variety of broader municipal and community goals. The development history of this corridor reveals a transition from an industrial hub of the nineteenth century to a mix of light industrial uses such as warehousing and distribution, repair services, and construction supplies by the late twentieth century. West Washington Avenue was selected because it has attracted significant development interest in the last four years, yet it offers numerous challenges for residential redevelopment, namely the number of existing businesses, presence of industrial zoning, the width of the Avenue, a limited number of vacant lots for new construction, and attractive industrial buildings that could be reused. The fact that it is an eleven-block corridor rather than a multi-block neighborhood also makes it possible to experience its physical character as a whole, conduct a survey of its physical features, and research property data for individual addresses. The Philadelphia City Planning Commission (hereinafter referred to as the PCPC) is currently faced with the challenge of managing a potential major shift in land use on the Avenue. Given the multitude of design challenges within its limited expanse, the processes that have been

carried out in other postindustrial areas will provide insight on scenarios for the future of Washington Avenue, and shape recommendations that take into account potential changes to the Avenue's sense of place.

A Brief History of West Washington Avenue

In order to properly explore West Washington Avenue's heritage as represented in its contemporary built fabric, a brief history of its industrial development is provided here. This history highlights some of the major companies that used West Washington Avenue for manufacturing or warehousing, and physical descriptions of extant historic buildings and infrastructure that represent key trends in the Avenue's land use development.

Washington Avenue runs from east to west, connecting Philadelphia's two rivers: the Delaware to the east, and the Schuylkill to the west. Its connection to two industrially active rivers meant that the Avenue was well-situated to become one of Philadelphia's busiest industrial areas in the nineteenth century. It was also supported by significant freight rail infrastructure. The Avenue's first link to the regional railway network occurred in 1837 when the Philadelphia, Wilmington and Baltimore Railroad (PW&B RR) extended across the Schuylkill River to the western end of Washington Avenue, then known as Prime Street. In 1838, PW&B RR expanded eastward on Prime Street to link with the Southwark Railroad at Broad and Prime Streets. In 1856, a passenger rail station was built at Broad Street and Prime Street/Washington Avenue.³ This station served soldiers during the Civil War and was a stopping point

³ Philadelphia City Planning Commission, "South District Plan" (Philadelphia, April 2015), <http://phila2035.org/home-page/district/south/>. 4.

for President Lincoln’s funeral train. In 1876, a Gothic Revival freight shed was constructed just north of the passenger station (Figure 1.2), as part of a general expansion of the station undertaken by the PW&B RR for the 1876 centennial exposition. The shed still stands today, and was added to the National Register of Historic Places in 2011 (Figure 1.3). The PW&B RR was purchased by the Pennsylvania Railroad Company in 1881.⁴ In 1925, an elevated rail line was constructed along 25th Street and across the Schuylkill River, to replace some of the at-grade freight rails at the western terminus of Washington Avenue.

⁴ “National Register of Historic Places Register Form: Philadelphia, Wilmington & Baltimore Railroad Freight Shed, Philadelphia, Pennsylvania,” September 8, 2011. 7.

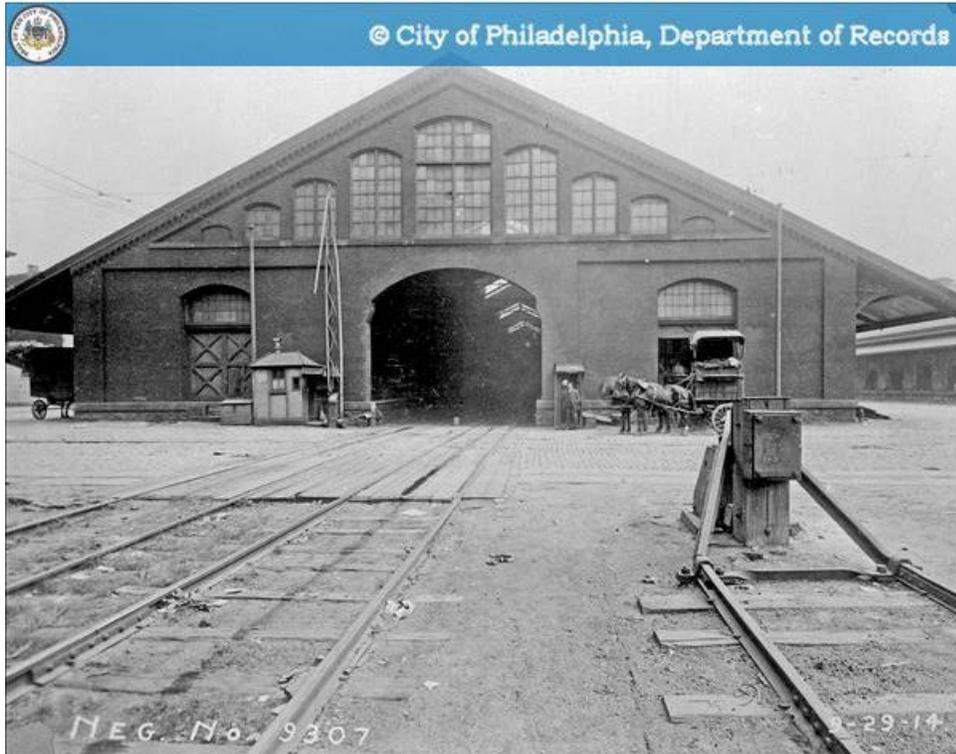


Figure 1.2 “Southeast Corner- 15th and Carpenter Streets,” September 29, 1914.
Source: Philadelphia Department of Records Archives,
<http://www.phillyhistory.org/PhotoArchive/Search.aspx>.



Figure 1.3 The 1876 train shed located on southwest corner of Broad and Carpenter Street, on north side of an otherwise-empty block-long lot that extends to West Washington Avenue.

Source: Photograph by author, November 8, 2016.

These two structures—the elevated railway on 25th Street (Figure 1.4) and train shed on Broad Street—are the only remaining buildings representing Washington Avenue’s heyday as a rail hub. There is comparatively little surviving physical evidence of the extent of West Washington’s rail infrastructure in the early twentieth century, when there were railroad-owned buildings on the 1500, 1600, 1800 and 2400 blocks and numerous sets of tracks and railroad sidings. Figure 1.3, a map from 1910, shows up to six sets of tracks at several points. Although the train tracks were removed in the 1990s,⁵ the width of the Avenue is another piece of evidence of its rail history.

⁵ Allyn Gaestel, “On Washington Ave, Competing Visions Clash,” *Next City*, November 14, 2012, <https://nextcity.org/daily/entry/on-washington-ave-competing-visions-clash>. Gaestel November 14, 2012.



Figure 1.4 The elevated rail that crosses Washington Avenue at an angle at 25th Street, built in 1925. The black netting is for catching falling concrete debris, because the structure is in need of repairs.

Source: Photograph by author, November 8, 2016.

The Avenue was home to several major Philadelphia industrial firms in the late nineteenth century and the first half of the twentieth century, as seen in Figures 1.5 and 1.6, maps of Washington Avenue in 1910 and 1942. For example, for much of the twentieth century, Wanamaker's Department Store used two buildings to warehouse their goods. One of these buildings is an extant four-story brick factory between 21st and 22nd Streets. Constructed in 1865, this building offers the oldest intact example of Washington Avenue's industrial buildings. The factory was built for the Howell and Brothers Paper Hangings Company, and was the largest wallpaper factory in the world at that time. Between 1910 and 1914, the building became a warehouse for Wanamaker's Department Store, as mentioned above. Figure 1.7 depicts the factory in

1914, with the name Wanamaker painted on the front. In the 1970s, Frankford Candy and Chocolate Company succeeded Wanamaker's. The name "Frankford Chocolate Factory" still graces the building facade. Frankford Chocolate Company closed in 2006, and the building remains vacant (Figure 1.8).⁶ The brick factory occupies an entire square block. Its oldest and largest portion is set back from Washington Avenue and is four stories high with slightly arched windows spaced approximately four feet apart and a brick dentil cornice. The front portion of the lot is occupied by shorter brick additions at either end of the block with parking in between, and a brick smokestack.

⁶ GroJLart, "Zophar, Tran, And The Chocolate Factory," *Hidden City Philadelphia*, August 20, 2012, <http://hiddencityphila.org/2012/08/zophar-tran-and-the-chocolate-factory/>. GroJLart is the alias of a Philadelphia resident and architecture journalist/blogger. He is the creator of the blog *Philaphilia* and has also written for several other Philadelphia news publications.

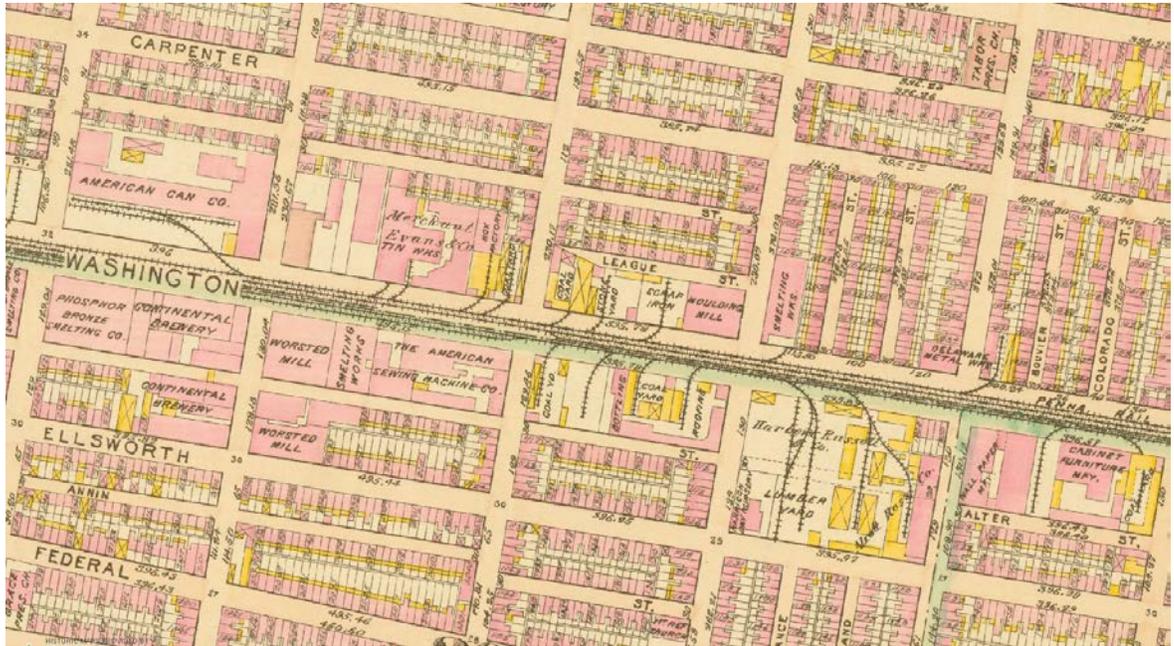


Figure 1.5 Map of Washington Avenue from 17th to 22nd Street, and surrounding blocks, 1910. From Geo. W. & Walter S. Bromley, “Atlas of the City of Philadelphia”, (New York, NY: G.W. Bromley and Co.: 1910).

Source: Athenaeum of Philadelphia,

<http://www.philageohistory.org/tiles/viewer/?SelectedLayers=Overlay,BRM1910Phila>

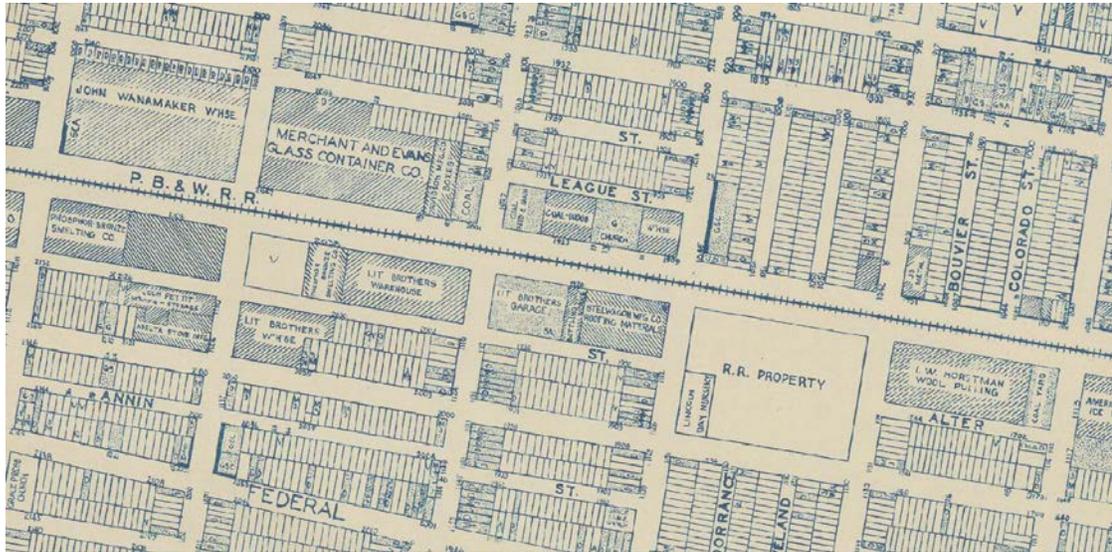


Figure 1.6 Map of Washington Avenue from 17th to 22nd Street, and surrounding blocks, 1942. From Plans & Registry Division, Bureau of Engineering Surveys & Zoning, Department of Public Works, Federal Works Progress Administration for Pennsylvania. "Philadelphia Land Use Map, 1942."

Source: Free Library of Philadelphia Map Collection.

<https://www.philageohistory.org/rdic-images/index2.cfm?w=LUM1942>.



Figure 1.7 “Northwest Corner - 21st Street and Washington Avenue,” September 28, 1914.

Source: Philadelphia Department of Records Archives,
<http://www.phillyhistory.org/PhotoArchive/Search.aspx>.



Figure 1.8 Frankford Chocolate Factory building today, with Washington Avenue in front of the building.
Source: Google Earth image used in Angelly Carrion, Something Might Be Happening With the Frankford Chocolate Factory, *Philadelphia Magazine*, November 10, 2015, <http://www.phillymag.com/property/2015/11/10/frankford-chocolate-factory-philadelphia-washington-avenue/>.

Two other buildings that a single tenant occupied from at least the 1890s to the 1960s flanked this building: Merchant and Evans Glass Container Company (originally Merchant and Company Tin Works) on the 2000 block, and Belmont Iron Works between 2200 block. During this time, both of these companies expanded to take up their entire block. Additionally, Lit Brothers Department Store (another Philadelphia-based department store that was less expensive than Wanamaker's was) occupied several warehouses on Washington Avenue from at least the 1940s to the 1960s. Horstmann and Sons Textile Company ran a mill on the Avenue from the 1920s to the 1960s. Buildings used by Wanamaker's, Merchant and Evans, Lit

Brothers, and Horstmann and Sons' (I. W. Horstman Wool Pulling) can be seen on the map provided in Figure 1.6, above.

The United States Marine Corps had a Quartermaster Depot on Broad Street and Washington Avenue through both of the world wars and until at least 1962. The military manufactured many different goods here, and the Marine Corps used the railroad lines on Washington Avenue to ship their supplies. This five-story, half-block-long brick Classical Revival building is another of the few surviving turn-of-the-century buildings. It was listed on the National Register of Historic Places in 1975. It was also successfully renovated to become condominiums, which opened prior to 2000. However, the building's main entrance is oriented towards Broad Street, while entrances to the parking garage and service areas are on Washington Avenue. Therefore, it did not introduce a residential character to the Avenue (Figure 1.9).



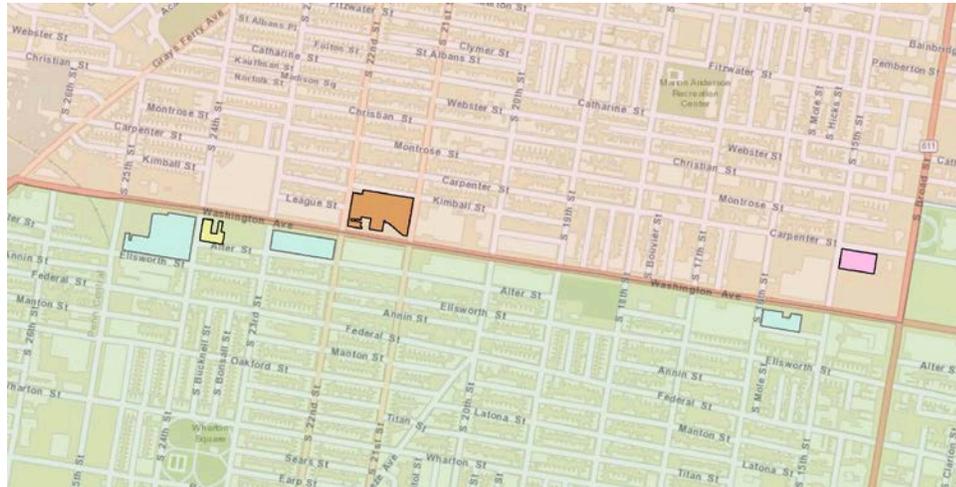
Figure 1.9 Marine Club Condominiums, on the southwest corner of Broad Street and Washington Avenue. This image shows the building’s Washington Avenue façade, with more recent addition to the left.
Source: Photograph by author, November 8, 2016.

In addition to the Frankford Chocolate Factory building and the Quartermasters Depot, the former Philadelphia Electric Company Substation (Figure 1.10) is another early building that would be well suited to adaptive reuse.⁷ Constructed circa 1927, the substation is an attractive double-height brick building with decorative brick insets and moldings. Figure 1.11 is a map indicating the buildings on Washington Avenue that are at least fifty years old.

⁷ Adaptive reuse is a term used to describe a building rehabilitation project that converts the building to a different use than the function for which it was built.



Figure 1.10 Washington Substation on the southeast corner of 24th Street and Washington Avenue.
Source: Photograph by author, November 8, 2016.



Washington Avenue

- Electrical_Substation
- Train_Shed
- Chocolate_Factory
- Historic_Warehouses
- South_District
- Central_District

Figure 1.11 Map of buildings on West Washington Avenue that are at least fifty years old.

Source: Map created by author using parcel data from the City of Philadelphia.

Most of West Washington Avenue’s current building stock consists of one- or two-story stucco buildings with modern signage sized for vehicle traffic, and most facades containing at least one garage door or loading bay (Figure 1.12). Table 1.1 presents the number of garage doors, loading bays, curb cuts, and entrances to lots on each side of each block of West Washington Avenue, as well as the total and average for all eleven blocks. These numbers derive from a walking survey of Washington Avenue conducted by the author on February 5, 2016. There is an average of 3.4

garage doors per block (for a total count of 75) and 3.9 curb cuts per block (for a total of 86).

Washington Avenue's current land use mix reflects these physical features because it consists largely of light industrial and Production-Distribution-Repair (PDR⁸) uses, particularly construction supply stores, showrooms for home remodels, warehouses, and auto repair shops. These land uses replaced the earlier heavy industrial companies through a combination of renovation of older industrial buildings and new construction. Close to eighty percent of the parcels between Broad and 26th Street (49 out of 62 parcels) are zoned I-2, which prohibits residential, retail, and prepared food uses.⁹

⁸ The acronym 'PDR' is frequently used to describe contemporary urban industrial areas, where light assembly, distribution and repair services have a much larger presence than does manufacturing.

⁹ Philadelphia City Planning Commission, "City of Philadelphia Zoning Code Quick Reference Guide" (Philadelphia, September 2012). Industrial Districts.



Figure 1.12 Streetscape of Washington Avenue, view of northeast and southeast corner of Washington Avenue and 16th Street, showing surface parking lot and low-lying concrete buildings with garage doors.
Source: Photograph by author, November 8, 2016.

Table 1.1 Sidewalk elements on each block of West Washington Avenue, from Broad Street to Grays Ferry Avenue.
Source: Survey conducted by author.

Block number	Avenue side	Garage doors	Curb cuts	Lot entrances
1400	South	4	3	0
1401	North	0	2	0
1500	South	4	6	2
1501	North	6	6	1
1600	South	0	2	2
1601	North	1	3	1
1700	South	0	3	3
1701	North	6	6	0
1801*	North	7	4	0
1900	South	5	5	0
1901	North	8	5	0
2000	South	3	5	1
2001	North	8	8	2
2100	South	4	4	0
2101	North	4	2	2
2200	South	6	5	0
2201	North	3	3	0
2300	South	0	3	3
2301	North	2	3	1
2400	South	0	3	1
2401	North	2	3	1
2501**	North	2	2	0
Average		3.4	3.9	0.9
Maximum		8	8	3
Total		75	86	20

*The south side of the 1800 block was not included in this survey because the entire block consists of a public park.

**The south side of the 2500 block was not included in this survey because the entire block is dedicated to an elevated rail line.

Twenty years ago, there was little pressure to change West Washington Avenue's industrial zoning because developers did not consider the strip an attractive site for residential redevelopment. Its lack of a waterfront and its scarcity of architecturally distinctive factory buildings meant that it held little potential for the common tactic of promoting residential developments in terms of industrial chic. Today, West Washington Avenue is poised for another major change in land use, from light industrial uses to residential, mixed use, and neighborhood-oriented commercial development. The PCPC affirmed this transition by recommending in the *Philadelphia2035 Comprehensive Plan*¹⁰ recommended rezoning the Avenue to allow residential and neighborhood-oriented commercial uses, such as convenience stores, grocery stores, hardware stores, bars and restaurants. In fact, the South District Plan, approved in 2015 as a subcomponent of the city's comprehensive plan, describes Washington Avenue as "a legacy industrial corridor" and dedicates four pages to tactics for the nonindustrial economic development of this corridor.¹¹

The PCPC considers Washington Avenue to be the current border between the city's Central and the South Planning Districts.¹² Philadelphia's current construction boom has pushed new residential and mixed use developments out from the downtown core to more affordable and less developed areas to the north and south of the Central District. Due to its proximity to the downtown and its relatively low property values,

¹⁰ Philadelphia City Planning Commission, "Central District Plan" (Philadelphia, June 2013), <http://phila2035.org/home-page/district/central/>; Philadelphia City Planning Commission, "South District Plan."

¹¹ Ibid. 64-67.

¹² Philadelphia City Planning Commission, "Central District Plan" (Philadelphia, June 2013), <http://phila2035.org/home-page/district/central/>.

West Washington Avenue has become an increasingly attractive potential site for residential development.

Following a pattern of developer-led gentrification first outlined by geographer Neil Smith in 1979,¹³ these development pressures have formed a ‘rent gap’ between the ‘capitalized ground rent’ of Washington Avenue’s existing buildings, and the ‘potential ground rent’ of the same buildings and parcels if they were put to different uses.¹⁴ Private developers have noticed that the one-story light-industrial uses are no longer the “highest and best use” for West Washington Avenue’s large lots. Private developers will seek to capitalize on a rent gap by increasing property values through development. In this way, developers become stakeholders in the land use transition in legacy industrial areas, and their stakes lie in closing the rent gap and thereby creating conditions for gentrification. Developers can take advantage of rent gaps in a variety of settings. However, legacy industrial areas offer particularly large rent gaps in the urban context. The following section discusses deindustrialization and disinvestment of urban industrial areas, which created the rent gap that helps to fuel development pressure today.

Deindustrialization

The major role played by manufacturing and distribution in the economies of American cities in the nineteenth and early twentieth century resulted in distinct

¹³ Neil Smith, “Toward a Theory of Gentrification: A Back to the City Movement by Capital, Not People,” *Journal of the American Planning Association* 45, no. 4 (October 1, 1979): 538–48, doi:10.1080/01944367908977002.

¹⁴ Loretta Lees, Tom Slater, and Elvin K Wyly, *Gentrification* (New York: Routledge/Taylor & Francis Group, 2008). 50-55.

spatial and land use patterns in many American cities. Urban deindustrialization in the United States has been a multi-decade process characterized by both push and pull factors, as political scientist Joel Rast's research on Chicago¹⁵ and the New York City Planning Department's Citywide Industry Studies¹⁶ have shown. Firms were *pulled to* both suburban and overseas locations by various cost-saving and regulatory advantages.¹⁷ They were also *pushed out of* the city due to insufficient space for expansion, and interrelated pressures of land use changes in surrounding areas, increasing rent and property taxes, nuisance complaints, and rezoning.¹⁸

Deindustrialization also increased wage disparities and decreased the diversity of employment opportunities in cities. This is part of a larger restructuring of employment patterns associated with sociologist Daniel Bell's Post-Industrial Societies thesis, which holds that American society in the late twentieth century underwent a multidimensional restructuring that included a shift from manufacturing to service-based and technical employment, as well as revaluations of capital, real

¹⁵ Rast, "Manufacturing Industrial Decline," 179; Adam Friedman, Joan Byron, and Jenifer Becker, "Making Room for Housing and Jobs" (New York: Pratt Center for Community Development, May 4, 2015), <http://prattcenter.net/research/making-room-housing-and-jobs>.

¹⁶ David N. Dinkins et al., *Citywide Industry Study* (New York, NY: Dept. of City Planning/New York City, 1993).

¹⁷ Laura Wolf-Powers, "Up-Zoning New York City's Mixed Use Neighborhoods: Property-Led Economic Development and the Anatomy of a Planning Dilemma," *Journal of Planning Education and Research* 24, no. 4 (2005): 382; Rast, "Manufacturing Industrial Decline," 179; Carol Berens, *Redeveloping Industrial Sites: A Guide for Architects, Planners, and Developers* (Hoboken, NJ: John Wiley & Sons, 2011), 1.

¹⁸ Karen Chapple, "Incomplete Streets, Complete Regions: In Search of an Equitable Scale," in *Incomplete Streets: Processes, Practices, and Possibilities* (Routledge, 2014), 292; Friedman, Byron, and Becker, "Making Room for Housing and Jobs."

estate, education, intellectual innovation, and connectivity.¹⁹ It is also seen in sociologist Saskia Sassen's Global Cities thesis, which describes the way that major cities in the Global North have shifted from exporting goods to exporting services, and to serving as the command and control centers for industries that have decentralized their more routine processes.²⁰ Today, we know Rust Belt cities such as Pittsburgh, Buffalo, Cleveland, Detroit, and Milwaukee for their disused industrial landscapes that resulted from the restructuring of the urban economy away from manufacturing towards the service sector in the latter half of the twentieth century.²¹ However, as many cities experience an uptick in their population, these disused landscapes come to represent more than just the area's industrial heritage; they also become potential sites for residential redevelopment.

Distinctiveness and Imageability of Legacy Urban Industrial Areas

Urban industrial landscapes can vary considerably based on the type of industry and freight for which they were designed. Waterfront industrial cities have ports, piers and dockside staging areas; these facilities sometimes occupied the entire length of the urban waterway. When rails succeeded waterways as the predominant freight transportation mode, and later when truck transportation succeeded rail,

¹⁹ Daniel Bell, *The Coming of Post-Industrial Society: A Venture in Social Forecasting*, Reissue edition (New York: Basic Books, 1976).

²⁰ Saskia Sassen, *The Global City: New York, London, Tokyo*, 2nd ed. edition (Princeton, N.J: Princeton University Press, 2001).

²¹ Stefano Negri, "Cities' Elusive Quest for a Post-Industrial Future," *Private Sector Development*, (December 12, 2013), <http://blogs.worldbank.org/psd/cities-elusive-quest-post-industrial-future>. Stefano Negri is the Practice Manager of the Competitive Industries Global Practice at the World Bank. He also contributes to the World Bank's Private Sector Development Blog, cited here.

additional transportation infrastructure was added. In some cases, roads were built on top of railroad routes, thereby replacing rather than coexisting with the rail network. Other features of the freight truck era are parking lots, loading bays, and large garage doors.

Industrial heritage is an important part of many postindustrial communities' identities. Consequently, municipal approaches to planning for postindustrial areas must address the place of physical industrial heritage. In their introduction to *Industrial Heritage Sites in Transition* (2015), Oevermann and Mieg note that, while “heritage and heritage sites have become assets for urban development, often called heritage-led development,” this understanding does not necessarily mean that those involved in heritage-led development understand the extent to which “heritage values are deeply interwoven with the historical fabric of the sites and city.”²² This fabric includes even the “specific spatial structure and spatial structure relationships” of the heritage landscape,²³ which may be more subtle than the actual structures that can be associated with specific industrial tasks, such as factory buildings and smokestacks.

The distinctive sense of place offered by legacy industrial areas finds a useful description in the concept of ‘imageability’. Urban planner Kevin Lynch introduced the term imageability in his 1960 book *The Image of the City*. Lynch defines imageability as the quality of physical objects that allow them to evoke a strong image in the observer.²⁴ The strong image created by these objects or places means that they

²² Oevermann and Mieg, *Industrial Heritage Sites in Transformation: Clash of Discourses*, 4.

²³ *Ibid.*, 5.

²⁴ Kevin Lynch, *The Image of the City*, 1st ed. (Cambridge, MA: The MIT Press, 1960), 9.

are highly memorable and identifiable to their observer after the initial encounter.²⁵

West Washington Avenue is a highly memorable and identifiable corridor largely due to the physical forms stemming from its light industrial land uses. These forms contribute to an imageable sense of place

Lynch's discussion of imageability largely takes place at the citywide scale. However, he also describes five elements associated with individual parts of the city that together create an imageable city. These are nodes, edges, paths, landmarks, and regions.²⁶ Nodes that have strong imageability are those with a

singular and continuous quality of the walls, floor, detail...or skyline of the node. The essence of this type of element is that it be a distinct, unforgettable place, not to be confused with any other. Intensity of use strengthens this identity, of course, and sometimes the very intensity of use creates visual shapes which are distinctive...The node is more defined if it has a sharp, closed boundary.²⁷

This description of an imageable node closely aligns with the term 'sense of place' used in this thesis, which includes the way that land use affects that sense of place. The intensity of use on West Washington Avenue and in other legacy industrial areas, can determine their imageability. An area where industrial and light industrial activities still occur will be more distinct than one in which the industrial users serve to individualize the buildings and usage patterns. The industrial use also creates visual shapes that are distinctive, such as one-story buildings, loading docks, wide streets, and outdoor storage. The function of the buildings and staging areas causes them to

²⁵ Reid Ewing and Otto Clemente, *Measuring Urban Design: Metrics for Livable Places*, 2nd edition (Washington, D.C: Island Press, 2013), 5-6, 114-119.

²⁶ Lynch, *The Image of the City*, 95.

²⁷ *Ibid.*, 102.

stand out from nearby residential and commercial blocks, thereby creating a boundary around the node. Lynch's concept of the imageable edge is also applicable to West Washington Avenue as a legacy industrial corridor. The imageable edge "gains strength if it is laterally visible for some distance...its ends have definite termini, recognizable anchors which complete and locate the line." Furthermore, the fact that an edge can be "a seam rather than a barrier, a line of exchange along which two areas are sewn together"²⁸ indicates the possibility that West Washington Avenue could connect rather than divide the bordering residential neighborhoods.

The physical legacy of urban industry is still present in former industrial zones, visible as a distinctive urban landscape. Physical forms such as the scale of buildings and the layout of street grids often manifest the legacy of urban industry. Differences in types of industrial activities, connectivity, and the economic conditions under which a particular region deindustrializes yield different spatial conditions. These conditions shape the redevelopment trajectory of deindustrialized areas, and are therefore relevant to this thesis because they intertwine with municipal management strategies towards reinvestment in these areas.

Redevelopment Pressure

As the population of many American cities has increased over the last three decades (following urban population declines in the 1950s-70s), the resulting demand for urban housing is making a larger variety of urban properties attractive and

²⁸ Ibid., 100.

economically viable for residential development.²⁹ Redevelopment projects are spilling over into areas that developers traditionally did consider for residential use, such as underused industrial areas (although the advent of factory lofts in the 1970s revealed that there was a market for residential uses in these areas).³⁰ These areas become the target of redevelopment pressure from developers seeking to convert properties to residential and other higher rent land uses, and municipal governments seeking to put vacant or underused properties into more active uses.

The Effects of Urban Industrial Built Fabric on Redevelopment

Industrial districts tend to have relatively low property values compared to other urban areas, which makes them appealing for small businesses, startups, and businesses whose capital is concentrated in labor or equipment, rather than land. Additionally, some urban industrial areas offer physical and spatial characteristics that are particularly useful for residential and mixed use redevelopment projects, particularly as amenities for potential residents. For instance, many of the built features of industrial buildings and structures have come to be considered ‘industrial chic.’ Industrial chic is an aesthetic that became popular in the 1970s. At this time, artists began to convert industrial buildings into studios, galleries and, eventually, residences. As described by sociologist Sharon Zukin in *Loft Living: Culture and Capital in Urban Change*, which examines the SoHo neighborhood in downtown Manhattan, these buildings developed an allure through their association with the

²⁹ Adam Mallach, “The View from the United States,” in *Remaking Post-Industrial Cities: Lessons from North America and Europe*, ed. Donald K. Carter (Routledge, 2016), 16-19.

³⁰ Adams et al., *Restructuring the Philadelphia Region*. 85.

artists' bohemian subculture. The industrial buildings in SoHo and many other urban areas were not zoned for residential use when the residential conversions began. Furthermore, the in-movers often did not have the capital to pursue above-board renovation projects. Therefore, the earliest residential conversions entailed a guerrilla process of squatting and making minimal and gradual improvements. These early squatters helped to establish the appearance of industrial buildings as a desirable aesthetic. Therefore, as private developers realized that there was a demand for industrial spaces, these pioneers were quickly followed, and frequently outpriced, by private capital.³¹

The notion of 'industrial chic' has engendered a hierarchy among former industrial buildings, based on the presence or absence of particular features that comprise the quintessential industrial chic style. Architect Carol Berens' *Redeveloping Industrial Sites* and architects Paul Hardin Kapp and Paul Armstrong's *SynergiCity* bring together a variety of examples of industrial redevelopment that indicate recurring features that are aestheticized in adaptively reused industrial spaces. A warehouse with some decorative brickwork and large, regularly-placed windows on the exterior, and high ceilings, trusses and rafters and/or poured-concrete mushroom pillars on the interior represents the 'industrial chic' design standard.³² In contrast, a grimy stucco warehouse with few windows and no decorative features has more difficulty making the leap from 'utilitarian' to 'chic.' These differences affect the

³¹ Sharon Zukin, *Loft Living: Culture and Capital in Urban Change* (Rutgers University Press, 1989).

³² Berens, *Redeveloping Industrial Sites*, 40; Paul Hardin Kapp and Paul J. Armstrong, *SynergiCity: Reinventing the Postindustrial City*, Reprint edition (University of Illinois Press, 2015). 37.

likelihood that a developer would pursue an adaptive reuse project versus demolition and new construction.

There are several locational factors that make urban postindustrial areas attractive for residential and mixed use redevelopment. Waterfront industrial areas offer physical and visual access to the waterfront, which is often a significant asset in the eyes of redevelopers and future users. In *Redeveloping Industrial Sites*, Berens discusses the case of the Brooklyn side of the East River, where industrial activities have dominated the riverfront to such an extent that it could not be accessed by the public. Therefore, both the city and the public are eager to reclaim any available portions of the riverfront for public parks.³³ Riverfront areas are attractive for the residential, commercial and recreational uses, and they can therefore help make the redevelopment of an industrial district successful.

Even those industrial zones that are not located along waterfronts have another locational advantage: they tend to be located near to the urban core, which is attractive for the growing number of urban home seekers.³⁴ These areas are centrally-located because the industrial firms sought to take advantage of the opportunity to connect to the markets, transportation options and other services offered by the city.³⁵ Because of these advantages, the value of land is often directly related to its proximity to the

³³ Berens, *Redeveloping Industrial Sites.*, 257.

³⁴ David Ley, *The New Middle Class and the Remaking of the Central City* (Oxford: Oxford University Press, 1996), 38.

³⁵ Mark L. Gillem and Jill A. Schreifer, "New Urban Communities: Building on Brownfields for America's Next Generation," in *Reclaiming Brownfields: A Comparative Analysis of Adaptive Reuse of Contaminated Properties*, ed. Richard C Hula, Laura A. Reese, and Cynthia Jackson-Elmoore (New York: Routledge, 2012), 173.

Central Business District (CBD) and the downtown. An early explanation of this relationship between urban real estate prices and proximity to the CBD was the bid rent theory of land use, developed by the economist and planner William Alonso in the 1960s. Under this theory, a household's location choice is based on a tradeoff between accessibility (expensive land located close to the CBD and therefore requiring lower transportation costs) and space (less expensive land located further out but requiring high transportation costs).

Some industries located in areas that were originally outside of the urban core or even on the outskirts of the city. However, as architect and historic preservationist Mark Gillem and urban planner Jill Schreifer observe in their research on brownfield redevelopment, urban expansion has brought many industrial areas closer to the downtown.³⁶ When the boundaries of the CBD change, the transportation costs and land values of locations around the CBD will change relative to the change in their distance from the CBD.³⁷ Therefore, these industrial lots have also become valuable real estate due to their central location relative to the current boundaries of the city's CBD.

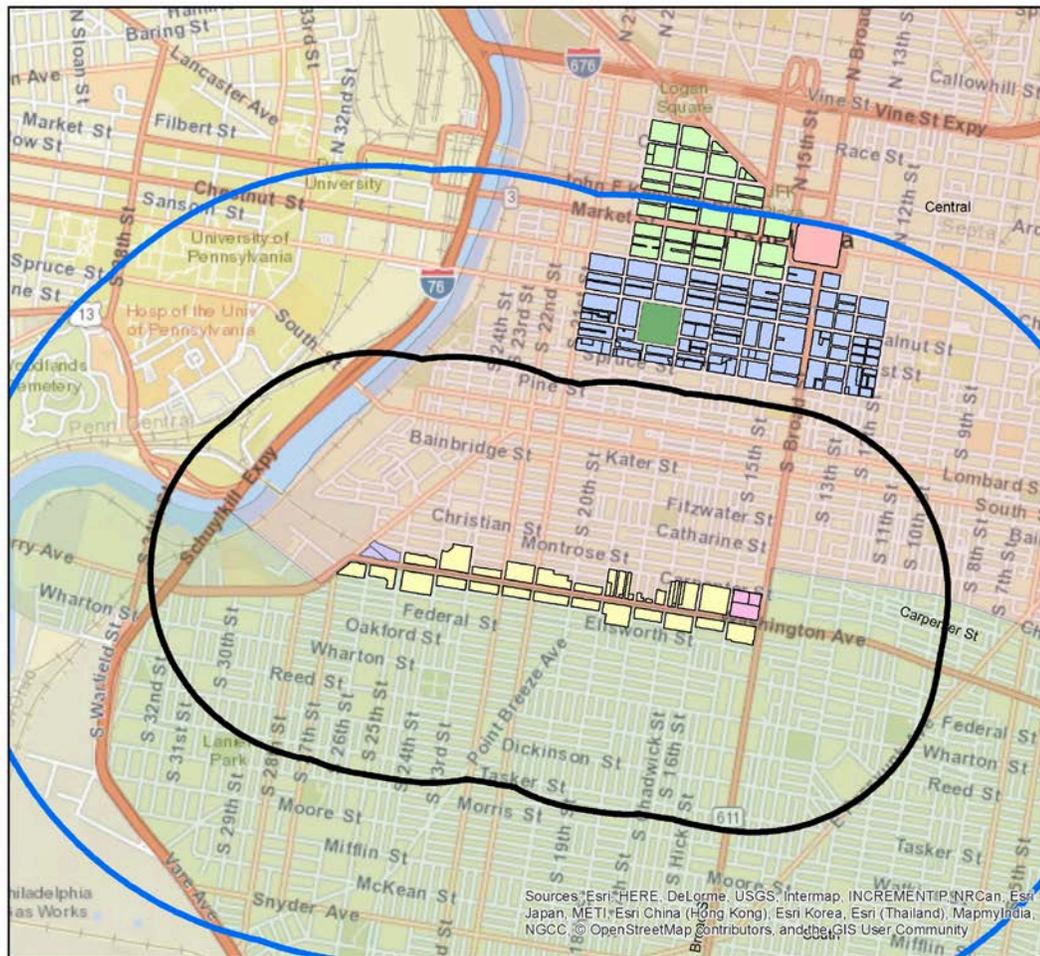
One of the limitations of the bid rent theory is that it only considers a single point from which to measure accessibility. In reality, individuals choose housing locations based on considerations of accessibility to more than one location.³⁸

³⁶ Ibid., 179.

³⁷ Helen Briassoulis, "Urban Land Market Theory," in *Analysis of Land Use Change: Theoretical and Modeling Approaches* (Morgantown, WV: Regional Research Institute, WVU, 2000), Section 3.3.1B, <http://www.rr.i.wvu.edu/webbook/briassoulis/contents.htm>.

³⁸ Ibid.

Households will also consider the locations of schools, recreational opportunities, extended family members, etc. In consideration of this expanded notion of accessibility, it is important to note that West Washington Avenue offers more than one locational advantage. Figure 1.13 illustrates the location of West Washington Avenue relative to several areas that may contribute to its attractiveness for residential redevelopment. West Washington Avenue forms the southern border of Philadelphia's Center City District and it is located a mile south of Market Street, which forms the spine of Philadelphia's current CBD. It is slightly over a half mile south of the Rittenhouse Square area, which was the city's major CBD from 1900 to 1950. Today, this area is a vibrant shopping district with high-end housing, centered around the extremely popular city park called Rittenhouse Square. West Washington Avenue is also located near two major interstate highways and several research facilities of the University of Pennsylvania and Drexel University, located to the west of Center City.



Washington Avenue

-  Half_Mile_Circle_WWA
-  One_Mile_Circle_WWA
-  Rittenhouse_Square_Park
-  City_Hall
-  CBD_Current
-  CBD_1900_1950
-  2501_WWA
-  Lincoln_Square
-  WWA_Parcels
-  South_District
-  Central_District

Figure 1.13 Map of Washington Avenue and one-mile and half-mile vicinities.
 Source: Map created by author using parcel data from the City of Philadelphia.

Industrial sites that are not located on waterfronts required access to other forms of transportation, and they are therefore frequently located near railroad stations and highway interchanges, which is appealing to the users of residential and mixed use developments. Additionally, historic industrial areas feature high-capacity infrastructure such as extensive transportation networks, wide streets, and sturdy sewer systems, which can be assets for redevelopment.³⁹ The large parcels required to house many manufacturing processes, such as assembly lines,⁴⁰ can also be attractive to developers, because these lots can be used for large-scale projects that are often difficult to locate elsewhere in a built-up city.

Legacy industrial areas also have physical features that challenge redevelopment. For instance, not all industrial buildings are equally amenable to adaptive reuse projects. The more flexible a building's design, the more easily it can be adaptively reused;⁴¹ the design of a foundry or a cannery reflects very specific use patterns, which may prohibit conversion to other uses. The simplest and swiftest adaption of factories was to lapse into warehouse space. The open floor plans and wide doorways of former factories and warehouses are also well suited to other light industrial activities such as auto repair shops and wholesale businesses. The transition from heavy to light industrial uses is common because it requires relatively little renovation and no regulatory changes. Because of the prevalence of this land use shift,

³⁹ Chapple, "Incomplete Streets, Complete Regions: In Search of an Equitable Scale."; Gillem and Schreifer, "New Urban Communities: Building on Brownfields for America's Next Generation."; Kapp and Armstrong, *SynergiCity*, 30.

⁴⁰ Rast, "Manufacturing Industrial Decline," 179.

⁴¹ Kapp and Armstrong, *SynergiCity*., 29.

some of the areas discussed in this thesis as legacy industrial areas are areas where heavy industries have left but light industries remain.

Large industrial buildings can also be converted to non-residential mixed use buildings, such as combined office and commercial space. Residential conversion requires significantly more effort. Nonetheless, developers are attracted to residential projects due to the higher return on investment associated with these projects.⁴² Although the buildings may present difficult hurdles to bring them to code for residential occupancy, the opportunity to obtain a large affordable parcel, and possibly an industrial chic building, in a central location, makes the conversion worthwhile in many cases.

While the high-capacity infrastructure found in urban industrial areas, as discussed above, can be useful for high-density residential development, some of the large-scale features make the area uncomfortable for the pedestrians that are an expected result of a residential or mixed use project. For instance, while high-capacity transportation infrastructure may be useful for accommodating the increased traffic that is a hoped-for outcome of a redevelopment project, wide streets are also uncomfortable and often unsafe for pedestrians, whose numbers are also expected to increase following residential or mixed use redevelopment. Additionally, many former industrial sites are brownfields, meaning that their soil has been contaminated by hazardous byproducts of an industrial process. These areas must be remediated, or cleaned up to eradicate any environmental or health risks. Remediation is expensive, and it is difficult to estimate the cost of remediation beforehand. In order to encourage

⁴² Andy Cook, "Manufacturing Isn't Dead; Stop Zoning Like It Is," *Next City*, June 2, 2016, <https://nextcity.org/daily/entry/baltimore-manufacturing-zoning-industrial-land-use-jobs>.

remediation of these areas, the EPA offers grants and loans to assist states, local communities and eligible property owners with all stages of the brownfield remediation process.⁴³ This funding has encouraged safer redevelopment and made many of these well-located spaces even more attractive for redevelopment. Additionally, neighborhoods that contain brownfields have often undergone significant disinvestment and become low-wealth neighborhoods. Therefore, the difference between the property values associated with the existing land use (often vacancy) and that associated with non-industrial redevelopment means that a developer can yield a significant return on their investment. This gap in existing versus potential property value is discussed in the following section. These regulatory and market responses to the disadvantages of brownfield are indicative of the strong interest among both developers (due to the potential to obtain grants or achieve major returns on investment) and municipalities (due to the opportunity to put underused, sometimes hazardous urban land to more active uses) in redeveloping legacy industrial areas.

Redevelopment Process

Residential and mixed use redevelopment or redevelopment pressure in disinvested urban areas, such as legacy industrial areas, has been explained through the rent-gap theory, first outlined by geographer Neil Smith in 1979. This theory states that urban real estate tends to shift towards the land use that is currently the ‘highest and best use’ for that land. In American cities, the highest and best use is defined within a capitalist framework as the use that yields the highest returns to the

⁴³ <https://www.epa.gov/brownfields>

developer, and the greatest revenue or savings for the city. The ‘rent gap’ pattern of land use change occurs because those who make the decisions regarding the redeveloped use of the property, i.e. private developers, prioritize profitability over public benefit.⁴⁴ In today’s cities, industrial land use is no longer the ‘highest and best use’ for private developers and for municipal tax revenue.

Cities often support redevelopment of areas where rent gaps have formed under the principle of property-led economic development. Sociologists John Logan and Harvey Molotch explained this stance by characterizing cities as ‘growth machines’ wherein real estate interests exert influence over municipal land use planning and policy through lobbying, campaign financing, revolving door relationships, and pursuit of public-private partnerships. Municipalities are often willing participants in the growth machine not only due to political kickbacks and their subscription in the ‘highest and best use’ philosophy, but also due to the effects of fiscal mercantilism. Logan and Molotch describe “fiscal mercantilism” as the system wherein metropolitan areas must compete with one another to attract private development. This competition exists because the tax revenue from this development will accrue to a single city rather than the greater region.⁴⁵ Considerations of fiscal mercantilism create different stakes for the city in comparison to other stakeholders in relation to the management of redevelopment pressure in disused industrial areas.

In “Up-Zoning New York City’s Mixed Use Neighborhoods: Property-Led Economic Development and the Anatomy of a Planning Dilemma,” Laura Wolf-

⁴⁴ Neil Smith and Peter Williams, *Gentrification of the City* (Boston: Allen & Unwin, 1986), 23.

⁴⁵ John R. Logan and Harvey Lusk Molotch, *Urban Fortunes: The Political Economy of Place* (Berkeley, CA: University of California Press, 2007), 148.

Powers, a scholar of urban planning and economic development, examines a specific instance of property-led economic development carried out in a postindustrial area. Wolf-Powers traces the land use planning steps taken by New York State and City for the then-still-active industrial areas of Greenpoint-Williamsburg in Brooklyn, and Long Island City in Queens. She demonstrates that city and state decisions in favor of rezoning portions of these industrial neighborhoods hastened the decline of industry in adjacent areas due to speculative property acquisition and use conversions. The planning department granted a large number of zoning variances⁴⁶ to these areas prior to their official mass rezoning in 2005 to MX, which is a mixed use zone that permits residential uses by right. Wolf-Powers demonstrates that ineffective enforcement of industrial protections can be a catalyst for residential redevelopment, making subsequent phases inevitable.⁴⁷ Wolf-Power's findings underline the importance of monitoring and managing land use transitions, because market-driven transitions can occur very quickly and bring unintended effects.

⁴⁶ A zoning variance is a mechanism for waiving certain zoning regulations for a specific property. In contrast to rezoning, which is initiated by the city, a zoning variance arises from a request by the property owner. The property owner must demonstrate their need for the requested variance to a zoning board, and the board rules on whether or not to grant the variance.

⁴⁷ Wolf-Powers, "Up-Zoning New York City's Mixed Use Neighborhoods," 384-391.

Research carried out by Wolf-Powers and others in large cities such as New York City,⁴⁸ Chicago⁴⁹ and Atlanta⁵⁰ and smaller cities such as Pittsburgh⁵¹ and Durham⁵² shows that there are powerful incentives for private developers to pursue redevelopment projects in legacy industrial areas, and for municipal governments to manage this redevelopment so as to best serve a variety of municipal planning goals and stakeholder goals relating to a variety of issues. These goals include job retention and creation, brownfield remediation, housing options, commercial mix, and historic preservation. In turn, the outcomes of these strategies can transform the appearance, function and users of these areas, which in turn alters their distinct landscape and character. While some of the physical features of legacy industrial areas are advantageous for residential and mixed use redevelopment, others will inevitably change in the face of these major land use changes. This thesis explores some of these

⁴⁸ In addition to Wolf-Powers, see Friedman, Byron, and Becker, “Making Room for Housing and Jobs”; Adam Friedman, “Transforming the City’s Manufacturing Landscape,” in *From Disaster to Diversity: What’s Next for New York City’s Economy* (New York: Drum Major Institute for Public Policy, 2009), 21–37, <https://www.scribd.com/document/55569610/From-Disaster-to-Diversity-What-s-Next-for-New-York-City-s-Economy>.

⁴⁹ See research by Joel Rast, such as “Curbing Industrial Decline or Thwarting Redevelopment? An Evaluation of Chicago’s Clybourn Corridor, Goose Island, and Elston Corridor Planned Manufacturing Districts” (Milwaukee, WI: University of Wisconsin- Milwaukee Center for Economic Development, November 2005),

⁵⁰ See Dan Cotter, “Putting Atlanta Back to Work: Integrating Light Industry into Mixed use Urban Development” (Atlanta, Georgia: Georgia Tech Enterprise Innovation Institute, 2012).

⁵¹ See Michael A. Stern, “INSIGHT: Redeveloping Downtown Pittsburgh - The Last 20 Years,” ArchNewsNow, January 21, 2010, <http://www.archnewsnow.com/features/Feature319.htm>; Maya Henry, “Strip District Riverfront Park Plan Prioritizes Greening and Our Industrial Heritage,” NEXTpittsburgh, May 23, 2016, <http://www.nextpittsburgh.com/city-design/strip-district-riverfront-park/>.

⁵² See Development Concepts, Inc., “Downtown Durham Master Plan” (Durham, North Carolina, January 2008), <http://www.downtowndurham.com/images/assets/FinalDraftWeb2-20-08.pdf>.

strategies, their purported goals in terms of balancing among stakeholder interests, and their potential effects on the physical character of postindustrial areas.

Methodology

The methodology used in the development of this thesis included an analysis of comparison postindustrial sites in other cities, which illuminated the processes and possibilities for West Washington Avenue. Additionally, a document analysis and unstructured interviews were used to access planning considerations specific to West Washington Avenue and Philadelphia.

The comparative analysis began with a literature review of news articles and scholarly articles to identify other large cities with strong housing markets and legacy industrial areas. The smaller cities of Durham, North Carolina, and Pittsburgh are included because of the survival of legacy industrial areas, and current economic development activities. A typology of strategies and tactics used by these other cities was developed based on the literature review and additional research of maps and municipal planning and zoning documents. By analyzing the specific efforts falling within the typology, and their associated outcomes, it was possible to associate general categories of activities with distinct and sometimes contradictory goals, and consider them in the context of West Washington Avenue.

Philadelphia-specific goals were unpacked through a document analysis of reports, plans and meeting proceedings of the PCPC, the Philadelphia Industrial Development Corporation (PIDC), the Philadelphia Chamber of Commerce, and the South of South Neighborhood Association (SOSNA). Newspaper coverage of meeting decisions was also consulted. Demographic changes indicated in 2000 and 2010

census data for the residential neighborhoods around West Washington Avenue was used to supplement newspaper accounts and reports on neighborhood trends.

In order to access the perspective of business owners on Washington Avenue, unstructured interviews were conducted with eight managers of businesses on Washington Avenue. A project proposal for these interviews was submitted to the University of Delaware's Internal Review Board, which determined the project to be exempt from IRB review (Appendix A provides the IRB letter of exemption). Newspaper accounts were used to identify different types of businesses and businesses that had been on the Avenue for different amounts of time. This information helped to structure some general interview prompts, although the interviews were largely unstructured. Newspaper quotes were also used to identify business owners who were also property owners. Six of the interviewees represented light industrial uses. Five of the six owned or managed light industrial businesses that had been on the Avenue for over a decade and three owned or managed businesses that had been on the Avenue for over three decades. Two of the light industrial business owners also owned other properties on West Washington Avenue, which they rented to other businesses. The remaining two interviewees were the manager of a bakery/pizzeria and the manager of a gym, both of businesses that had opened within the previous three years.

The information yielded from these research efforts demonstrate stakeholder goals, potential options and outcomes, likely scenarios, and recommendations relating to residential redevelopment pressure on West Washington Avenue.

Organization of Thesis

This thesis is organized to first present an overview of reasons why municipal governments are concerned with managing redevelopment pressures for postindustrial

areas. This is followed by a comparison and assessment of specific management activities that have been used in different urban planning contexts.

Chapter Two, “Goals,” reveals how popular goals and principles held by municipal planning departments and citizens can be advanced through the management of redevelopment pressure in legacy industrial areas. It begins with an overview of current planning goals relevant to deindustrialized areas. Next, the Philadelphia context is broken down in terms of specific goals for Washington Avenue expressed by the city of Philadelphia, the adjacent neighborhoods, and the businesses.

Chapter Three, “Strategies and Tactics,” describes three broad categories of redevelopment management strategies, delineated based on the goals motivating a municipality to pursue that strategy. Cities use diverse planning tactics to manage residential redevelopment pressure because they are responding to multiple land use goals from the city, residents and business stakeholders.

Chapter Four, “Scenarios,” analyzes the information presented in the previous two chapters relating to patterns in other cities and West Washington Avenue’s context. This analysis is used to develop scenarios for several components of West Washington Avenue’s sense of place in terms of likely near-term outcomes of residential redevelopment pressure.

Chapter Five concludes the thesis by recommending several policies and activities for the city to adopt in order to benefit from the redevelopment, balance between stakeholder goals, and adapt West Washington Avenue to new use patterns while protecting some of the components of its distinctive physical character. The four areas of recommendation are followed by a discussion of research limitations and suggestions for future avenues of research.

Chapter 2

GOALS

Municipalities have a stake in monitoring and managing redevelopment activity in legacy industrial areas. This is due to the major changes that this redevelopment brings to the physical appearance, land use mix, economic activity and affordability of the area. In our postindustrial society, market-driven redevelopment will shift away from industrial land uses towards other land uses that are more profitable for the developer and property owner. Deindustrialized areas are often composed of large lots – either vacant or developed. The scale of the lots and buildings is compatible with large multifamily buildings. This contrasts with older residential areas, where new residential construction often must occur within the footprint of a single-family house. The magnitude of the shift in land use from industrial to residential/mixed use and the large scale of the new development means that this kind of redevelopment in a legacy industrial area has greater impacts on a municipality’s planning goals for that area and its surroundings than would a residential/mixed use infill project in a residential area. These impacts can be both positive and negative. In either case, municipalities have developed tactics to steer the redevelopment, or redevelopment pressure, toward a desired outcome. These outcomes have a corresponding effect on the area’s sense of place, in terms of how the streetscape is organized and how the public space is used.

This chapter lays out some of the major outcomes that cities hope to achieve through their management of redevelopment in legacy industrial areas. Municipal goals include not only those specified in the city’s planning documents, but also the goals of city agencies dedicated to transportation, economic development and historic

preservation, business owners, local residents, private developers, and other stakeholders. The chapter begins by taking a broad view of common municipal goals and indicates how they might be advanced or protected during planning for legacy industrial areas. Next, the focus shifts to the context of Philadelphia, and city goals that relate to West Washington Avenue. Philadelphia's goals include not only those expressed by the Philadelphia City Planning Commission (PCPC) in the recent comprehensive plan updates for the South District and Central District, but also the goals and interests of Washington Avenue's business owners and managers and the residents of the surrounding neighborhoods, all of whom are stakeholders in the future of Washington Avenue. This chapter demonstrates that redevelopment of legacy industrial areas presents the opportunity to advance varied and sometimes contradictory goals. The outcomes depend in large part on the municipality's approach to managing the redevelopment process.

Municipal Goals

Many municipal goals for land use planning and economic development relate to potential changes in legacy industrial areas' physical character. Not every case of redevelopment pressure directed towards a deindustrialized area is relevant to the same set of municipal goals. However, the major changes in land use and construction that characterize redevelopment pressure in these areas mean that the municipality will have a stake in the outcome. In order to provide a general perspective on a variety of cities, this section discusses several planning goals that are frequently within the realm of potential effect when it comes to postindustrial redevelopment.

Smart Growth

Smart growth is an urban planning and development philosophy that prioritizes walkable and transit-oriented neighborhoods, compact and dense built forms, mixed uses, and the reuse of older structures and infrastructure that are compatible with walkability. This philosophy has become widely accepted in the urban planning profession over at least the last decade. The residential and mixed use redevelopment of underused industrial areas is clearly in keeping with smart growth principles, because it creates dense development in areas that are accessible to the downtown, transit options, and other land uses. If it includes ground floor retail and reuses existing buildings, even better.

The transformation of smart growth principles into planning regulations ensures that residential and mixed use redevelopment projects will have an impact on the character and usage of streets and sidewalks. In particular, smart growth principles can shape the resulting streetscape, commercial tenant mix, neighborhood landmarks, and community identity. The results of a successful implementation of smart growth plans might include sidewalks filled with pedestrians and retail displays, and streets that are friendly to pedestrians and cyclists. In contrast, legacy industrial areas' sense of place reflects special arrangements that are required for the staging, loading and unloading of supplies, products, and goods being serviced. This means that the cartway (the area of a thoroughfare dedicated to vehicular traffic) is designed to accommodate freight vehicles, rather than for the comfort of pedestrians and cyclists. Additionally, curb cuts, garage door entrances or lot entrances interrupt the sidewalks, as seen in Table 1.1, which presents the results of a visual survey of façade and sidewalk features on the eleven blocks of West Washington Avenue. The buildings also frequently lack display windows and other pedestrian-scale features that create

visual interest for sidewalk users. This suggests that cities that want to bring smart growth design to their deindustrialized areas often do so through significant physical modifications. For instance, Figures 2.1 and 2.2 show a postcard image of the Liggett and Myers Tobacco Building in Durham, North Carolina, from 1964, and a 2015 rendering of the building renovated for retail and offices. In Figure 2.2, three entrances have been added in order for pedestrians to access the first-floor retail. The entrance's glass doors will also create more visual interest for people passing by. West Washington Avenue's light industrial sidewalk activities, vacancies, delivery trucks, garage doors and parking lots also do not offer a welcoming environment to pedestrians. Residential and mixed use redevelopment in the area is likely to change the existing physical character.



Figure 2.1 Illustration of Liggett and Myers Tobacco Building in Durham, North Carolina.

Source: 1964 postcard, Durham County Library.



Figure 2.2 Elevation of proposed renovation of Liggett and Myers Tobacco Building in Durham, North Carolina. Three additional entrances were added to the ground floor, which will be dedicated to retail space.
Source: Wexford Science and Technology, 2015.

A city that supports smart growth redevelopment may encourage residential and mixed use projects with ground floors activated by store windows and street furniture.⁵³ In turn, planners might support the replacement of light industrial uses with smaller-scale neighborhood-oriented retail and restaurants. Furthermore, with the arrival of these commercial uses and residents comes conflict over the noise, smells, parking, pedestrian safety and aesthetics that are part of the deindustrialized area's sense of place. Therefore, to embrace a smart growth future for these areas, municipalities may choose to restrict the activities of the preexisting businesses. While

⁵³ Ewing and Clemente, *Measuring Urban Design*, 9-13, 119-130.

zoning changes are a forceful way of pushing out existing light industrial uses, they are also gradually displaced through restrictions on noise and vibration levels,⁵⁴ increased property taxes,⁵⁵ and parking regulations that favor residents over delivery trucks.⁵⁶

Smart growth-oriented development can also alter the sense of place in terms of the built fabric lining the streets and sidewalks. Parcels in legacy industrial areas are often large in order to accommodate industrial processes. Industrial buildings are also very wide, but they are not always tall, especially those built in the twentieth century. Earlier industrial processes were compatible with multistory buildings, many of which still exist. However, once assembly-line production methods became widespread, most companies only needed one or two stories. Therefore, newer buildings tended to be shorter.⁵⁷

However, a private developer will build out to the maximum height, density and other dimensions permitted by the zoning code, because building to the maximum size yields the highest number of rentable square feet, which can allow the landowner to make a higher return on their investment in the development. When these newly constructed, maximum-sized buildings provide compact housing and retail, they

⁵⁴ Joel Rast, “Preserving Our Industrial Land: Industrial Zoning in Milwaukee, 1998-2011” (Milwaukee, WI: University of Wisconsin- Milwaukee Center for Economic Development, May 2012), 13.

⁵⁵ Rast, “Manufacturing Industrial Decline,” 183.

⁵⁶ Thomas Donatucci, Interview with Mr. Thomas Donatucci, President of Washington Avenue Property Owners Association, March 22, 2016.; L. Dale Anderson, Interview with Mr. L. Dale Anderson, Cabinetry Design Specialist and sole on-site employee for Probuild Kitchen Design Studio, April 21, 2016.

⁵⁷ Rast, “Manufacturing Industrial Decline,” 179.

contribute to smart growth development. However, the maximum-sized buildings can also create a jarring contrast with the existing building stock, which may be shorter and have deeper and more varied setbacks. For instance, on West Washington Avenue and in other light-industrial districts, existing and historic building uses may have required only one or two stories, and required more open space relative to enclosed space on their lot for loading/unloading and outdoor storage.

Planning departments can promote both larger, denser development on the one hand and design that is compatible with the existing building stock on the other, by using a design review process. Design reviews carried out by municipal planning bodies are instrumental in ensuring that the design of new development is sensitive to the existing or envisioned character of the area. However, design review processes must balance these considerations of aesthetic character with designs that adequately and sustainably meet housing needs, often through higher density construction. The combined pressure of developer preferences and the opportunity to advance smart growth goals can push cities to sacrifice compatible design in favor of dense new construction. These market considerations make it extremely unlikely that a legacy industrial area's sense of place will be preserved during higher-rent redevelopment. However, it is important for municipalities to manage the redevelopment to be sensitive to these distinct physical landscapes, so that some of the physical features that contribute to the visual and land use diversity of the city can be retained.

Adaptive Reuse and Industrial Heritage

A city's planning department may have goals relating to the preservation of existing buildings or features of the legacy industrial area. These goals will discourage the kind of development projects discussed in the previous section that is out of scale

with the existing building stock. However, they do not discourage development in general. In fact, residential and higher end redevelopment is often the most viable way to preserve and restore an old industrial building, as these land uses are the best candidates for generating enough income to afford required repairs, especially if the building has been unused for some time. Multistory brick buildings with many windows tend to be the best candidates for residential redevelopment. Figures 1.5 to 1.7 show that the adaptively reused Marine Corps Depot and the vacant Frankford Chocolate Factory on West Washington Avenue have these features. Figures 2.1 to 2.3, of the Liggett and Myers Tobacco Building in Durham, North Carolina, show that even an attractive, multistory brick building with regular windows may need more windows added for successful adaptive reuse office space.



Figure 2.3 Renovation of Liggett and Myers Tobacco Building, Durham, South Carolina. New windows are being added to adaptively reuse the building for offices. *Source: G. Kueber, for Open Durham, December 14, 2015.*

Some older industrial structures cannot be so flexibly reused, such as one-story buildings and buildings with few windows. These buildings are usually less architecturally distinctive and therefore garner less attention from preservation advocates. However, their lack of visual interest and their limited adaptability does not necessarily reflect their significance in terms of an area's industrial heritage. For instance, the National Park Service's "How to Apply the National Register Criteria for Evaluation" states that one of the ways that a historic district derives its significance is through the "concentration, linkage and continuity of features." It further states, "The identity of a district results from the interrelationship of its resources, which can convey a visual sense of the overall historic environment or be an arrangement of

historically or functionally related properties.” Moreover, an area “may even be considered eligible [to be a historic district] if all of the components lack individual distinction, provided that the grouping achieves significance as a whole within its historic context.”⁵⁸ Even existing low-rent light industrial uses can be an important part of industrial heritage because they are part of the living heritage⁵⁹ of an area’s industrial evolution. This is comparable to advocacy by preservationists and maritime industries to protect ‘the working waterfront,’ and the living heritage it contains, from higher-end redevelopment

The degree to which a city is interested in preserving a legacy industrial area’s existing sense of place (derived from its usage patterns and physical character) determines the forms of redevelopment they will support or oppose. On the other hand, the degree to which a developer is willing to retain existing visual characteristics is based on the marketability of these features. This sometimes allows the interests of the city and the developer to align. The popularity of the industrial chic aesthetic that is captured by former industrial buildings means that adaptive reuse projects provide developers with the opportunity to retain aspects of the industrial buildings architecture (such as exposed ceiling trusses and clerestory windows in a monitor roof) and highlight them when marketing the final product. Therefore, redevelopment

⁵⁸ National Park Service, “How to Apply the National Register Criteria for Evaluation,” National Register Bulletin 15 (Washington, DC: United States Department of the Interior, National Park Service, Cultural Resources Division, 1997), <https://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf>, 5.

⁵⁹ Kapila Silva, “The Image of the Historic City: Reconciling Challenges and Contradictions in Urban Conservation” (10th Cambridge Heritage Seminar: The Future of Historic Cities: Challenges, Contradictions, Continuities, Cambridge, England, 2009), https://www.academia.edu/12874166/The_Image_of_the_Historic_City_Reconciling_Challenges_and_Contradictions_in_Urban_Conservation, 1.

and spatial changes are more likely to occur in underused industrial areas with attractive building stock whether or not the city is a strong supporter of historic preservation. In some cases, however, municipal planners are interested in retaining the area's physical heritage even if it is not easily marketable as industrial chic. In these cases, they may be less willing to permit building renovations that change the character of the legacy industrial area.

Living Wage Jobs

Industrial jobs fall within the limited number of jobs in the United States that pay a living wage but have low educational barriers to entry. With deindustrialization came wage polarization, or the concentration of jobs in either high-paying sectors requiring advanced education, or low-paying sectors accessible to those with limited skill sets. Adam Friedman, Executive Director of the Pratt Center for Community Development, notes that this polarization has contributed to the shrinkage of the middle-class population in New York City.⁶⁰ The municipal goal of ensuring the availability of living wage jobs for a diverse population can therefore align with the retention of industrial jobs.

Research conducted by the Brooklyn-based Pratt Center for Community Development and a 2006 report prepared for the District of Columbia Office of Planning have demonstrated the large wage disparity between industrial and service/retail jobs, and have argued for the value of retaining industrial jobs. Using 2013 data from the New York State Bureau of Labor Statistics, the Pratt Center identified a wide gap in wages for these two occupational classes in New York City:

⁶⁰ Friedman, "Transforming the City's Manufacturing Landscape." 23-24.

industrial jobs paid an average annual wage of \$51,637, while the annual income from a retail job was \$37,584. These wage disparities highlight the role of economic shifts from industrial firms towards service sector companies in reducing living-wage employment opportunities for mid- and low-skilled workers. However, it is important to note that new development may provide a higher number of jobs, which may be preferable even if the jobs are low-paying and do not offer benefits or full-time work.

It is important to note that the light industrial jobs prevalent in many urban legacy industrial areas pay less than heavy industrial jobs like manufacturing.⁶¹ There are a number of reasons for this difference. For instance, because manufacturing is a high value-added activity and the value that manufacturing employees add to their products leads to higher wages, compared to non-manufacturing light industrial jobs such as car repair and wholesaling.⁶² Additionally, unions represent many heavy industrial trades and negotiate for higher wages. Nevertheless, light industrial employment covers a wide variety of enterprises, which still pay more than service job wages.⁶³ Therefore, municipalities may choose to protect industrial areas even if they largely consist of light industrial enterprises, especially when it is clear that new mixed use development will only provide service jobs, and that the existing light industrial businesses will find it difficult to coexist with the new land uses.

⁶¹ Rast, “Curbing Industrial Decline or Thwarting Redevelopment? An Evaluation of Chicago’s Clybourn Corridor, Goose Island, and Elston Corridor Planned Manufacturing Districts,” 22-23.

⁶² Friedman, “Transforming the City’s Manufacturing Landscape,” 25.

⁶³ Rast, “Curbing Industrial Decline or Thwarting Redevelopment? An Evaluation of Chicago’s Clybourn Corridor, Goose Island, and Elston Corridor Planned Manufacturing Districts,” 22-23.

Tax Revenue

Industrial land has lower property values than do other types of properties, and therefore there is an incentive for a city to bring higher rent land uses into legacy industrial areas.⁶⁴ In the first half of the twentieth century, industrial land uses represented a significant portion of city tax revenues, but the process of deindustrialization shifted the highest and best use of urban land from industrial activity to other land uses such as offices and multifamily housing.⁶⁵

Today, multi-unit residential buildings such as luxury condominiums represent the highest and best use for private developers. Metropolitan areas are also concerned with developing land for its highest and best use because they operate under a system of fiscal mercantilism, described in Chapter One, wherein metropolitan areas compete to attract high-rent development because of the tax revenue they will receive from it. Therefore, multi-unit residential and mixed use development

are important to any city's tax base and ability to compete in the national and global marketplace...public policy and private development have collectively favored these types of developed and increased real estate pressures on industrial land, even though industrial areas play just as important a role in strengthening and diversifying the District.⁶⁶

⁶⁴ Ibid., 8.

⁶⁵ Ibid., 4.

⁶⁶ Phillips Preiss Shapiro Associates, Inc., "Industrial Land in a Post-Industrial City: District of Columbia Industrial Land Use Study: A Detailed Investigation of Industrial Land in the District of Columbia and Role of Production, Distribution and Repair Industries in the District Economy," 41.

Cities that view their industrial areas as underused spaces with opportunities for growth may offer to facilitate redevelopment in these areas in order to compete with other municipalities for development projects.⁶⁷

Philadelphia Goals Relevant to Washington Avenue

This section focuses on the goals of the PCPC and other city agency stakeholders in relation to West Washington Avenue's developmental trajectory. In addition to the PCPC, the major relevant parties are the Philadelphia Industrial Development Corps, the Streets Department, the Mayor's Office for Transportation and Utilities, the Department of Commerce, and City Council. City goals were identified largely from city-produced reports and planning documents, meeting minutes and news coverage of land use-related public meetings. Some of the goals discussed in this section will clearly reflect those discussed in the previous section. However, others that are more specific to the context of particular legacy industrial areas will be newly introduced, as they do not lend themselves to the general overview of goals provided in the previous section.

Deindustrialization has transitioned West Washington Avenue to low-rent light industrial uses; meanwhile, Philadelphia's center city has extended southwards and the strong housing market has brought increased property values and higher-income residents to the surrounding residential areas. These processes have formed a rent gap between the one-story light-industrial uses that currently occupy most of the Avenue's

⁶⁷ Courtney E. Knapp and Justin B. Hollander, "Exploring the Potential for Integrating Community Benefit Agreements into Brownfield Redevelopment Projects," in *Reclaiming Brownfields: A Comparative Analysis of Adaptive Reuse of Contaminated Properties*, ed. Richard C. Hula, Laura A. Reese, and Cynthia Jackson-Elmoore (Burlington, VT: Ashgate Publishing Company, 2012), 132.

large lots, and several multi-story residential and mixed use buildings proposed by private developers. Redeveloping a one-story building or a vacant lot on West Washington Avenue into a multistory mixed use building translates into replacing one or two light industrial businesses with dozens of residential units and several retail spaces. This higher density development allows the developer to maximize their return on their initial investment in the property. It also boosts the tax revenue that the city receives from the space. Higher density housing may also be a desirable policy goal for cities because it can relieve residential demand that drives up prices.⁶⁸

Philadelphia's City Council, the City Planning Commission and the Zoning Board of Adjustments have shown support for these proposals in the last several years. This has coincided with the period following the implementation of Philadelphia's updated zoning code in August 2012 and with the city's ongoing comprehensive plan update, called *Philadelphia2035*, which consists of a citywide report and eighteen individually approved district plans. West Washington Avenue is divided between two of these district plans: the Central District Plan, which was approved in 2013 and encompasses the north side of the Avenue, and the South District Plan, which was approved in 2015 and encompasses the south side. Thompson, the founder of the Philadelphia urbanism blog "This Old City," explains that this is a relatively recent change in attitude on the part of the city: "Though the city once seemed to be fighting tooth and nail to retain Washington Avenue as an area of light industrial use, the Planning Commission has been responding to various stakeholders [i.e. residents and

⁶⁸ Friedman, Byron, and Becker, "Making Room for Housing and Jobs," 3.

business owners] in the area who wish to see the Avenue as something more mixed use industrial/commercial/residential in years to come.”⁶⁹

In 2010, the Philadelphia Industrial Development Corporation (PIDC) released a report, “An Industrial Market and Land Use Strategy for the City of Philadelphia,” that identifies the Washington Avenue industrial corridor as a ‘Transitioning Area.’ The PIDC describes the category of Transitioning Area as follows:

Some of Philadelphia’s industrially-zoned land is no longer suitable for industrial use, with many facilities only marginally viable for modern industrial formats or viable for smaller, niche or artisanal industry...In many instances, industrial land within these areas faces market pressure from residential or commercial activity...transitions should be managed in an organized manner in order to support viable and appropriate industrial business within the area...The Transitioning Areas should be encouraged to retain compatible industrial employment wherever possible, but underutilized and vacant parcels may be considered for redevelopment to alternative uses.⁷⁰

Table 2.1, adapted from the PIDC report, provides information on acreage and employment rates in several industrial areas in Philadelphia, as well as totals for all areas within each of the three categories identified in the report (Transitioning, Industrial Intensification, and Industrial Protection Areas). This table indicates that the Washington Avenue Industrial Corridor (which includes only West Washington Avenue) provided 468 jobs in 2009. The employment density (nine employees/acre) is relatively high, even compared to the averages of the Industrial Protection Areas (8.1

⁶⁹ Geoff Kees Thompson, “Renderings: Washington Avenue & Frankford Chocolate Factory, Ready For Renovation,” *This Old City*, November 11, 2015, http://thisoldcity.com/critique/renderings-washington-avenue-frankford-chocolate-factory-ready-renovation#.Voh23E_Hpo0.

⁷⁰ Philadelphia Industrial Development Corporation, “An Industrial Land Use and Market Strategy for the City of Philadelphia” (Philadelphia, September 2010), 64

employees/acre) and the Industrial Intensification Areas (3.4 employees/acre).
However, the absolute number of jobs on Washington Avenue is small compared to the median number jobs in the Industrial Protection Areas (468 compared to 2,240).

Table 2.1 Employment densities in Philadelphia industrial areas.
Source: Adapted from Philadelphia Industrial Development Corporation, 2010, “An Industrial Market and Land Use Strategy for the City of Philadelphia,” 64.

Industrial Area	Category	Size (acres)	# Employees	Employment Density (employees/ acre)	# Parcels	Average Parcel Size (acres)
Washington Avenue	Transitioning	50	468	9.32	500	0.1
Callowhill	Transitioning	65	656	10.07	247	0.3
American Street from Girard Ave to Diamond St	Transitioning	70	615	8.82	1035	0.1
DuPont Crescent	Intensification	51	48	0.9	9	5.7
Sunoco North Yard	Intensification	254	0	0	1	254.0
Kingsessing	Intensification	115	516	4.5	261	0.4
Totals for 8 Transitioning Areas Identified in Report	Transitioning	716	3805	6.3 (avg)	2993	0.2
Totals for 11 Intensification Areas Identified in Report	Intensification	1451	3722	3.4 (avg)	1353	1.1
Totals for 8 Protection Areas Identified in Report	Protection	4241	34263	8.1 (avg)	1307	3.2

In addition to specific numbers for Washington Avenue, this table provides information for the Callowhill and American Street Transitioning Areas. These neighborhoods are comparable to Washington Avenue in terms of their proximity to Center City and the presence of residential redevelopment pressure, although they differ in terms of the extent of that redevelopment pressure, and their access to transportation routes. This table indicates that they are also similar in terms of their acreage and employment density. The largest difference between them is in the number of parcels and the average parcel size (acres divided by parcels). However, the

average parcel size is less than one third of an acre in all three cases. Parcels this small are better suited to artisan-scale and high tech industries with a lower volume of products and often a smaller employment base, than they are to manufacturing or other heavy and medium industrial activities. Therefore, despite the difference in average parcel size, all three of these Transitioning Areas have few parcels that would be attractive to large manufacturing companies.

Table 2.1 also provides information for the three Intensification Areas closest to West Washington Avenue. These areas are relevant because they provide relatively convenient relocation space for those light industrial businesses on Washington Avenue that choose to or are forced to move. DuPont Crescent is closest to West Washington Avenue. It is also immediately across the Schuylkill River from the University of Pennsylvania. Therefore, the report recommends that this Intensification Area be targeted for mixed use development that would include office and research space, and potentially housing and retail as well, because, as the report explains, the waterfront location would be valuable to these uses. These recommendations are reminiscent of the PCPC's goals for Washington Avenue expressed in the Central and South District Plans from 2013 and 2015, respectively. The PIDC identifies the currently unused Sunoco North Yard as "an opportunity for new distribution and warehousing uses that will benefit from the site's rail infrastructure and proximity to the airport." This suggests that the Sunoco North Yard, located 1.5 miles southwest of 25th Street and Washington Avenue, may offer a better fit for relocating PDR businesses.⁷¹ The final Industrial Intensification Area, Kingsessing, also has very

⁷¹ Ibid., 71.

small parcels. Nevertheless, it offers relocation opportunities for Washington Avenue businesses. Some businesses that relocate may find it feasible to move even further away.

The Central and South District Plans also recommend a balance between industrial and new land uses for West Washington Avenue. They recommend rezoning the majority of the Avenue's parcels to one of two zoning classifications that were new to the updated 2012 Zoning Code. These two zones are Industrial Commercial Mixed Use (ICMX) and Industrial Residential Mixed Use (IRMX). ICMX "is primarily intended to accommodate commercial and industrial uses...[and] can provide a buffer between industrial districts and commercial and residential districts."⁷² IRMX "is primarily intended to accommodate a mix of very low-impact industrial uses, including artists and artisan industrial, residential, and neighborhood-oriented commercial uses." In IRMX, "an industrial use must account for a floor area equal to at least 50 percent of the ground floor area, or a non-residential use, excluding parking, must account for a floor area equal to at least 60 percent of the ground floor area."⁷³

The South and Central Districts each include one-half of Washington Avenue, as shown in Figures 1.9 and 1.12, where light orange represents the Central District and light green represents the South District. However, the South District Plan dedicates several pages to the south side, while the Central District Plan only indicates its recommendations through a Proposed Zoning map for the entire district (Figure

⁷² Philadelphia City Planning Commission, "Central District Plan" (Philadelphia, June 2013), <http://phila2035.org/home-page/district/central/>, 58.

⁷³ Philadelphia City Planning Commission, "South District Plan," 66.

2.4). The Central District Plan recommends rezoning seven of the block-long parcels on the north side of West Washington Avenue to ICMX. The Frankford Chocolate Factory building and a two-story brick garage building currently occupied by a glass company were recommended for IRMX (indicated in brown).

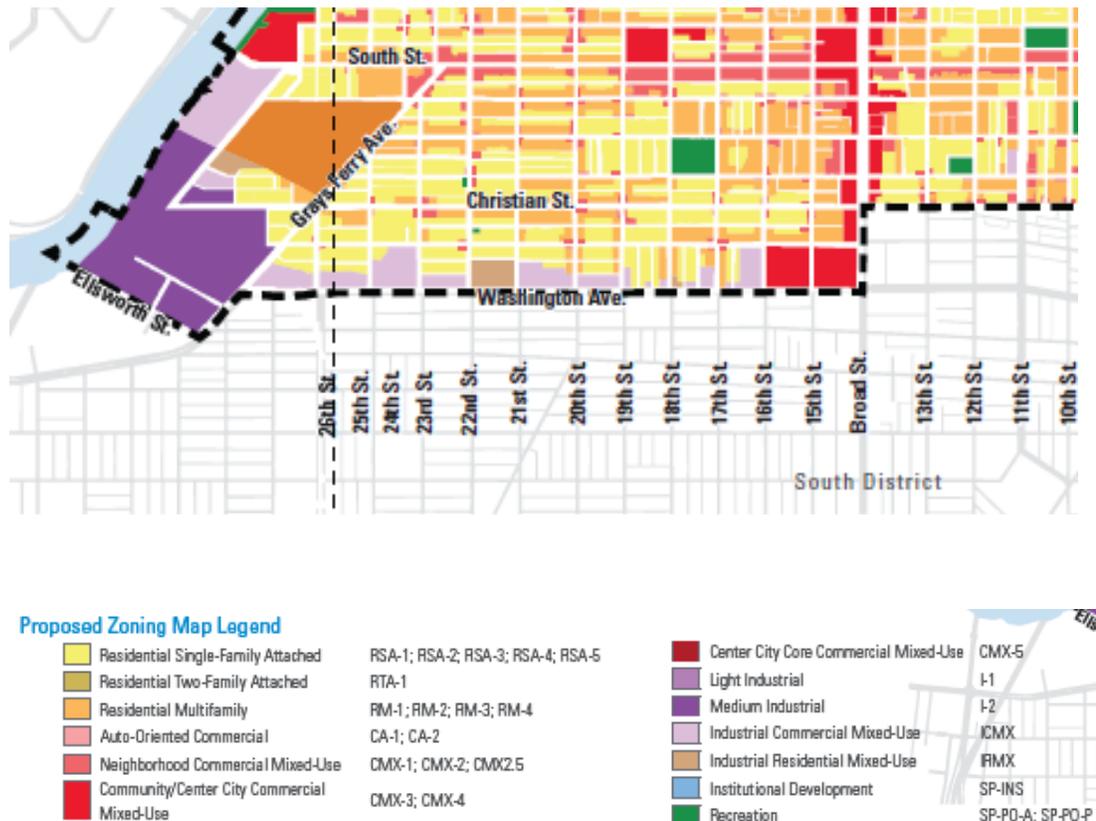


Figure 2.4 Proposed zoning for the north side of West Washington Avenue (left of Broad Street). The brown parcel (proposed for IRMX), is the Chocolate Factory. The two red parcels to the east are a block occupied by two two-story windowless buildings between 15th and 16th Streets, and the future site of the Lincoln Square mixed use project between Broad and 15th Streets.

Source: Philadelphia City Planning Commission, *Philadelphia2035: Central District*, 8.

Finally, the easternmost two blocks, which are closest to the subway station, were recommended to become CMX-3/4 (Community/Center City Commercial Mixed Use).⁷⁴ When the Philadelphia Rapid Transportation Authority added a subway station for the Broad Street Subway Line (the Ellsworth-Federal Station) one block south of Washington Avenue in 1938, employment opportunities on both sides of the Avenue became more accessible to workers living beyond the immediate residential neighborhoods.⁷⁵ Today, this subway station as well as four bus stops on Broad Street offer opportunities for the city to advance its Smart growth-related goal of Transit-Oriented Development (TOD), or the practice of concentrating compact residential and mixed use development around transit hubs in order to improve access to transit for a larger number of people.⁷⁶ The Central District Plan recommends creating TOD overlays “to incentivize mixed-income housing and reduce parking” at four transit stations.⁷⁷ The Ellsworth-Federal Station is not one of them. However, the Central District Plan introduces these overlays with a wider commitment to pursuing TOD throughout the District.⁷⁸ The District Plan’s recommendation to zone for dense commercial development on the two blocks of West Washington Avenue nearest to Broad Street demonstrates this broader commitment.

⁷⁴ Philadelphia City Planning Commission, “Central District Plan,” 95.

⁷⁵ Philadelphia City Planning Commission, “South District Plan,” 5.

⁷⁶ Federal Transit Administration, “Transit-Oriented Development,” *United States Department of Transportation*, n.d., <https://www.transit.dot.gov/TOD>.

⁷⁷ Philadelphia City Planning Commission, “Central District Plan,” 52.

⁷⁸ *Ibid.*, 51.

The South District Plan recommends rezoning the south side of West Washington to IRMX. Figures 2.5 and 2.6 depict existing and proposed zoning for the south side of Washington Avenue and the surrounding area. The plan explains this recommendation by stating, “The changing nature of the businesses along the [West Washington Avenue] corridor, in conjunction with residential growth and redevelopment pressures, both north and south of Washington Avenue, is affecting land use demands.”⁷⁹ The authors of the District Plan also acknowledge the benefits of existing industrial structures. They state that the “[m]odernization and reuse of unique industrial assets such as piers and related warehouses on the Delaware waterfront, the ‘Innovation District’ parcels along the Schuylkill River, [and] Washington Avenue...can help strengthen and diversify the district’s economy while providing job opportunities accessible to nearby residents.”⁸⁰

⁷⁹ Philadelphia City Planning Commission, “South District Plan,” 66.

⁸⁰ *Ibid.*, 13.

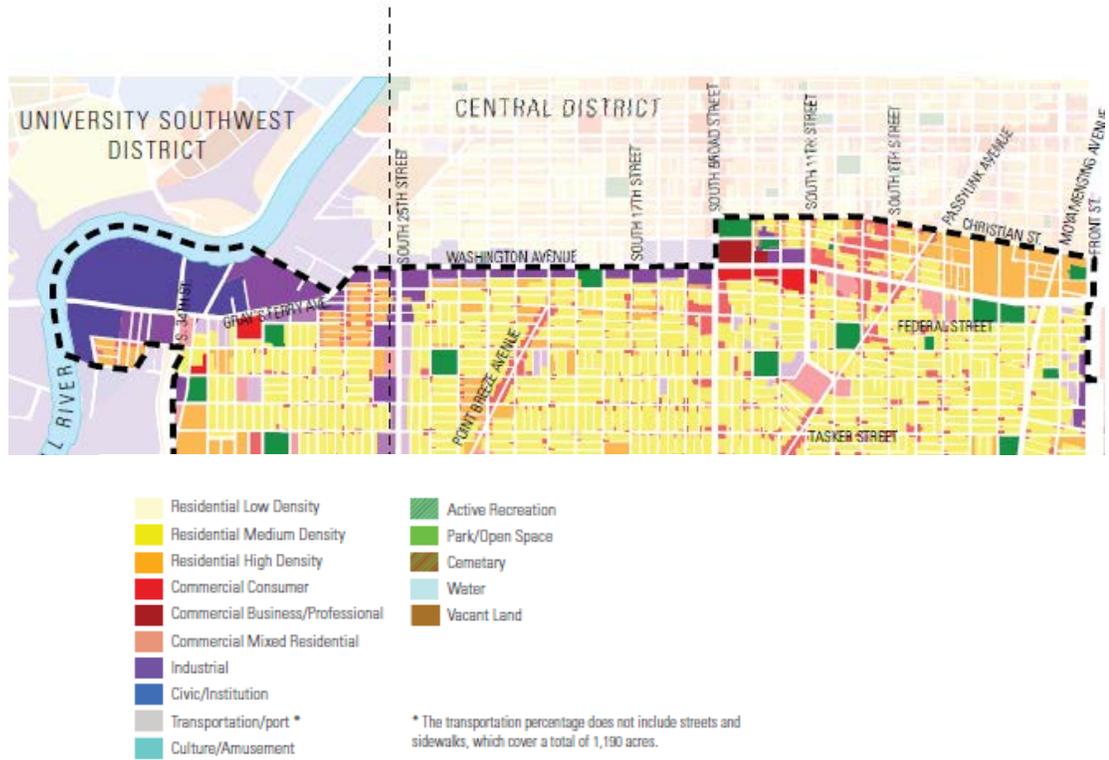


Figure 2.5 Existing zoning (as of 2014) in the South District. West Washington Avenue is near the middle of the map.

Source: Philadelphia City Planning Commission, *Philadelphia2035: South District*, 23.

2. Proposed Zoning | Point Breeze North

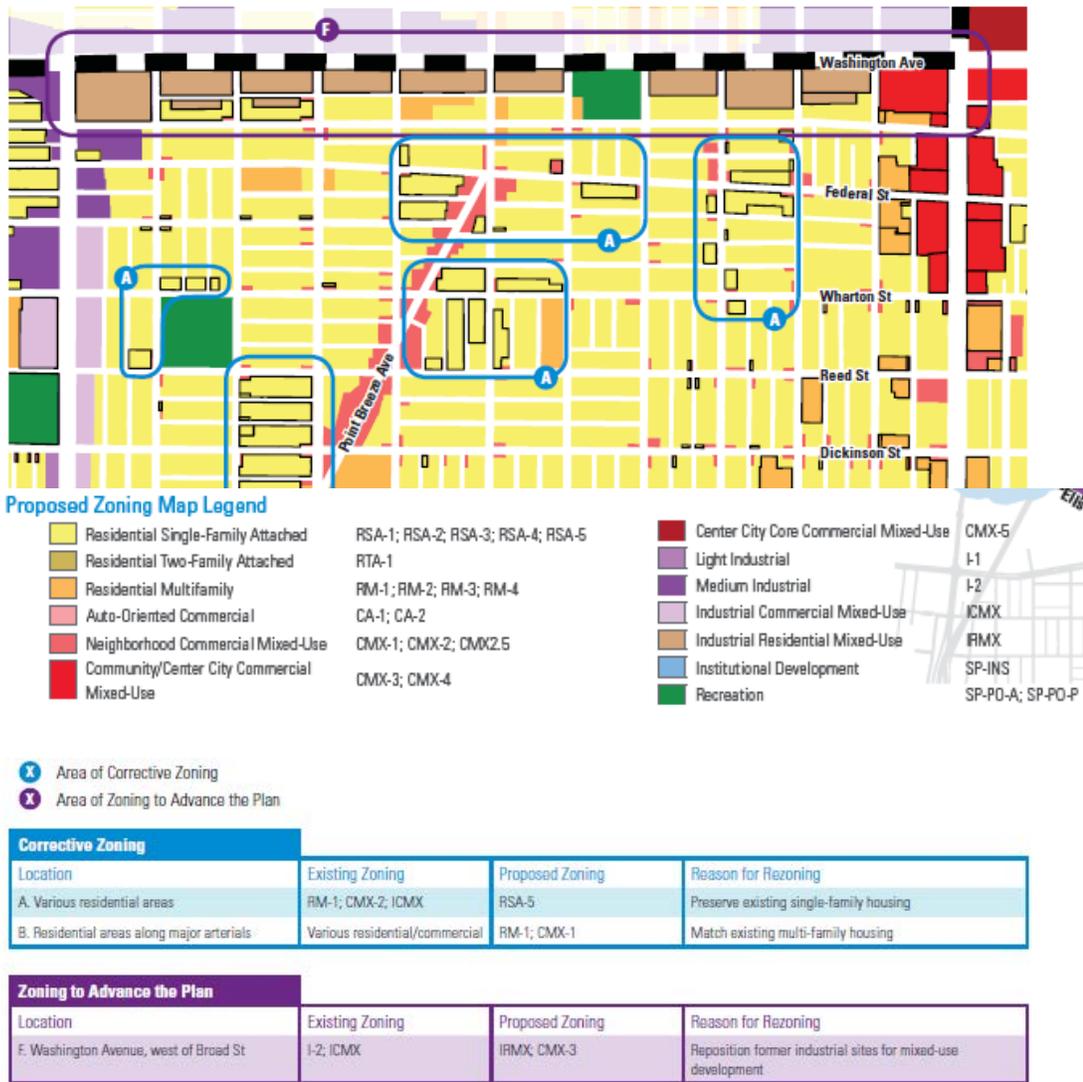


Figure 2.6 Proposed zoning for the south side of West Washington Avenue. The Avenue is circle in purple, which on the key below indicates that the rezoning recommendations are to “advance the plan,” or encourage particular land uses, rather than corrective zoning, which is undertaken to make the zoning better match the land uses that exist.

Source: Philadelphia City Planning Commission, *Philadelphia2035: South District*, 91.

Later in the South District Plan, the authors share results of a survey of residents conducted during the development of the district plan. The survey asked where they would prefer to see multifamily housing built in the district, to which respondents predominantly identified West Washington Avenue and South Broad Street. This section of the report also recommends redeveloping the district's "obsolete" industrial buildings as senior and affordable housing.⁸¹ Therefore, the city views underused industrial areas in South Philadelphia as areas that can contribute to the goal of increasing affordable housing options. However, there is no corresponding mention of affordable housing in the several pages dedicated to West Washington Avenue, which indicates that this may not be a primary goal for the redevelopment of West Washington Avenue specifically.

Neighborhood Residents

This section presents some general insights on the goals of the residential neighborhoods around Washington Avenue. The goals described here do not constitute an exhaustive list, because it would be impossible to capture the goals and desires of every resident. However, the South of South Neighborhood Association (SOSNA), which represents the neighborhood immediately north of West Washington Avenue (Figure 2.7), proved to be an excellent source of information about the goals and desires of neighborhood residents. Particularly relevant were the results of a SOSNA-conducted neighborhood survey, some of SOSNA's reports, SOSNA committee meetings and public presentations of development projects held by SOSNA.

⁸¹ Ibid., 58-59.



Figure 2.7 Map of streets forming the Graduate Hospital/South of South neighborhood in Philadelphia. Washington Avenue forms the southern edge of the neighborhood.

Source: South of South Neighborhood Association, *South of South Walkability Plan*, April 2009, 12.

In 2005, SOSNA released a report recommending marketing West Washington Avenue as a “Design District.” The logic behind this promotional concept was the fact that the construction supply wholesalers and showrooms provided everything that one could find at a chain construction supply store such as Home Depot.⁸² This recommendation seems to indicate that SOSNA supported the status quo on West Washington Avenue at that time. However, since the release of this report, most of the

⁸² Dan Eldridge, “The Battle for the Future of Washington Avenue West in South Philadelphia,” *Flying Kite*, February 6, 2014, <http://www.flyingkite.com/features/washingtonavenue021114.aspx>.

new business openings have not contributed to this Design District. One notable exception is the opening of a makerspace⁸³ called NextFab at 2025 Washington Avenue at the end of 2012. Not only does NextFab provide a complementary land use to the light industrial and building supply businesses, the owners of NextFab renovated the space in a way that maintains aspects of its former usage as an iron workshop,⁸⁴ allowing it to remain integrated with the largely unadorned light industrial buildings around it (Figure 2.8).

⁸³ A makerspace is a facility that provides workspace and a large variety of tools wherein private individuals can pay to use the space and tools for a set period to work on their own art, design and manufacturing projects. Oftentimes, makerspaces will provide large, industrial-level tools, which can be noisy and dangerous. Additionally, the buildings are typically large open spaces where users can freely move between machinery and access materials. In these ways, makerspaces are similar to manufacturing buildings.

⁸⁴ Patrick Kerkstra, "On Washington Avenue, a Playground for Philadelphia's Urban Makers," *Next City*, April 15, 2013, <https://nextcity.org/daily/entry/on-washington-avenue-a-playground-for-philadelphias-urban-makers>.



Figure 2.8 The middle building, at 2025 Washington Avenue, is currently occupied by a makerspace. This building and its neighbors are unified by their similar heights and façade colors, but their distinct rooflines contribute to a complex and memorable streetscape.

Source: Photograph by author, November 8, 2016.

Perhaps in recognition of the fact that new businesses were not contributing to a “design district” and were attracting new types of customers, SOSNA includes the intersection of 19th Street and Washington Avenue in their 2009 “South of South Walkability Plan.”⁸⁵ SOSNA values pedestrian-oriented design in general, and as new businesses that cater more to pedestrians, such as restaurants and martial arts gyms, have appeared on Washington Avenue, creating safe conditions on the Avenue for pedestrians has become an important goal for SOSNA.

The plan focuses on the intersection of Washington Avenue at 19th Street where there is a block-long park called Chew Playground on the south side of the

⁸⁵ Michael Baker Jr. Inc. et al., “South of South Walkability Plan” (Philadelphia, PA: Philadelphia City Planning Commission, April 2009), <http://southofsouth.org/resources/south-south-walkability-plan>, 16-19.

Avenue. The “playground” includes soccer fields and a basketball court in addition to a playground. The plan recommends adding a highly visible decorative crosswalk and larger corner curb extensions than those that currently exist at this intersection (Figure 2.9) to make it safer for Graduate Hospital residents to cross to the park. Figure 2.10 shows the current conditions of the intersection at the corner of the park, and Figure 2.11 shows a rendering of SOSNA’s recommended improvements for the intersection.⁸⁶

⁸⁶ Ibid., 17.



Figure 2.9 Existing curb extension on West Washington Avenue, with stormwater planter.

Source: Photograph by author, February 5, 2016.



Figure 2.10 Intersection of 19th Street and Washington Avenue, looking south down the east side of 19th Street. Chew Playground is to the left.
Source: South of South Neighborhood Association, *South of South Walkability Plan*, April 2009, 17.



Figure 2.11 Rendering of intersection improvements recommended by SOSNA, overlaid on Figure 2.5. The yellow dots and lines highlight, from left to right: street furniture such as bike racks and trashcans, Chew Playground, a decoratively painted crosswalk, and larger curb extensions with trees.

Source: South of South Neighborhood Association, *South of South Walkability Plan*, April 2009, 19.

SOSNA notes that creating more green space is a major goal expressed by its constituents, and hopes that a safer crossing to the park will help to meet this goal.⁸⁷ In subsequent years, two pocket parks were upgraded in lower Graduate Hospital. Julian Abele Park, the larger of the two, is shown in Figure 2.12⁸⁸ and two more are in the works. The site of Carpenter Green, which will be the larger and greener of the

⁸⁷Ibid., 16.

⁸⁸ Friends of Julian Abele Park, "Julian Abele Park," *SOSNA*, 2015, <http://southofsouth.org/julian-abele-park>; South of South Neighborhood Association, "Catharine Park," *SOSNA*, 2015, <http://southofsouth.org/content/catharinepark>.

two parks, is shown in Figure 2.13.⁸⁹ Privately funded public spaces have also appeared: a ‘parklet’⁹⁰ on 22nd and Catherine sponsored by the coffee shop behind it, and a community garden at 15th and Christian.



Figure 2.12 Julian Abele Park in the Graduate Hospital neighborhood, Philadelphia. *Source:* Photograph by author, November 8, 2016.

⁸⁹ Taylor Farnsworth, “Get a Preview of the Future of Carpenter Green at a Backyard BBQ Event,” *Passyunk Post*, June 8, 2016, <http://www.passyunkpost.com/2016/06/08/get-a-preview-of-the-future-of-carpenter-green-at-a-backyard-bbq-event/>; John Geeting, “Committee Proposes Permanent Redesign for Grays Ferry Triangle Plaza at 23rd and South,” *PlanPhilly*, October 16, 2015.

⁹⁰ Parklets are on-street parking spaces that have been repurposed as public seating areas.



Figure 2.13 The site of the future park known as Carpenter Green, in Philadelphia.
Source: Photograph by author, November 8, 2016.

However, a 2015 survey conducted by SOSNA of mostly Graduate Hospital residents and some Point Breeze residents found that only seventeen percent of respondents used Chew Playground. A vast majority of respondents indicated that they would like more green space in their neighborhood, a common response in many urban neighborhoods.⁹¹ When asked about the kind of additional green space they would want, 77 percent selected passive green space. Respondents were able to select multiple answers for this question, and 53 percent indicated their preference for a dog park.

⁹¹ Berens, *Redeveloping Industrial Sites*, 229.

Chew Playground is neither of these things. All of its green space is dedicated to sports fields, and seating is for spectators or around the playground. One business owner and owner of multiple properties mentioned that some Graduate Hospital residents wanted to turn a portion of Chew Playground into a dog park. This reflects some of the demographic differences between Point Breeze and the Graduate Hospital. The Graduate Hospital was a low-income, predominantly African-American community until the 1980s. It has since gone through a process of gentrification that has significantly increased home prices and made educated white young professionals the predominant demographic group in the neighborhood.⁹² Point Breeze is currently a low-income, predominantly African-American neighborhood in an early stage of gentrification.⁹³ It has been a working class neighborhood throughout its history,⁹⁴ and its predominantly two-story housing stock reflects this difference,⁹⁵ versus a much larger proportion of three-story houses in Graduate Hospital. The sports fields at Chew Playground are currently well used by African-American youth. These users are more likely to be residents of Point Breeze than Graduate Hospital, given the current racial

⁹² Governing, “Philadelphia Gentrification Map: 1990 Census - 2000 Census,” February 2015, <http://www.governing.com/gov-data/philadelphia-gentrification-maps-demographic-data.html>.

⁹³ City-Data, “Philadelphia, Pennsylvania Neighborhood Map - Income, House Prices, Occupations, Boundaries” (Philadelphia: Urban Mapping, Inc., 2016), <http://www.city-data.com/nbmaps/neighborhood-Philadelphia-Pennsylvania.html>; Governing, “Philadelphia Gentrification Map: 2000 Census - Present,” February 1, 2015, <http://www.governing.com/gov-data/philadelphia-gentrification-maps-demographic-data.html>.

⁹⁴ Steven Ujifusa, “Point Breeze,” *PhillyHistory Blog*, August 5, 2010, <http://www.phillyhistory.org/blog/index.php/2010/08/point-breeze/>. Steven Ujifusa is a maritime historian based in Philadelphia and a frequent contributor to the *PhillyHistory Blog*.

⁹⁵ Brawer and Hauptman, Architects, “Point Breeze Neighborhood Conservation District Study” (Philadelphia, PA: Preservation Alliance for Greater Philadelphia, June 2012), <http://www.preservationalliance.com/wp-content/uploads/2014/09/PointBreeze.pdf>.

makeup of the neighborhoods. Graduate Hospital's young professionals are more likely to be childless or have children who are too young to play sports. This would translate into a preference for passive recreational space and dog parks over sports facilities.

SOSNA's 2009 Walkability Plan offers an additional reason for improving pedestrian safety at the 19th and Washington intersection: "The design would create a clear visual and physical connection to Chew Playground and help unite the two neighborhoods located on either side of Washington Avenue."⁹⁶ However, if the two neighborhoods have different goals for the use of Chew Playground, then a safer crossing on Washington Avenue may increase conflict over the use of the park. As mentioned earlier, more pocket parks are appearing in Graduate Hospital, and a dog park could be a future park project for a different site, perhaps elsewhere on Washington Avenue.

Despite the differences between the neighborhoods in how they would prefer to use Chew Playground, SOSNA meeting participants and others support the idea of leveraging changes on Washington Avenue to better connect the two neighborhoods. While this could speed up the forces of gentrification currently acting on Point Breeze, it could also bring such benefits as increased business for stores and restaurants on both side of Washington Avenue, and increased social capital deriving from a united community of diverse income groups.

One goal around which the two neighborhoods are united is bringing a full-service grocery store to the area. Both neighborhoods lack a full-service grocery store,

⁹⁶ Michael Baker Jr. Inc. et al., "South of South Walkability Plan," 17.

although there are grocery stores on the northern border of Graduate Hospital and just east of Broad Street on Washington Avenue. The SOSNA survey indicated that 57 percent (431 out of 755) of respondents indicated that a grocery store was the business they would most like to see on Washington Avenue, while 83 percent identified it among the top three businesses they would like to see. Neighborhood residents also vocalized this wish at SOSNA meetings. West Washington Avenue's large lots, surface parking, and proximity to two neighborhoods with high demand for a grocery store would seem to make the Avenue an ideal location for a full-service grocery store.

The goal of attracting a grocery store is among the reasons that some residents would like to see commercial rather than residential development on West Washington Avenue, as well as in the surrounding neighborhoods where a great deal of new residential development has already occurred.⁹⁷ For instance, when a developer proposed a residential project for a nearby site in Point Breeze in early 2016, neighborhood residents expressed their strong preference for a grocery store rather than more houses.⁹⁸ At a 2013 PCPC Meeting to review a mixed use proposal for 1601 Washington Avenue, a Point Breeze resident stated that her neighborhood objected to the high-density housing and wanted West Washington Avenue to be a

⁹⁷ Jared Brey, "Plans Shaping up for Apartment Complex at 24th and Washington," *The Philadelphia Inquirer*, February 5, 2015, sec. Business- Real Estate.

⁹⁸ Jared Brey, "Planning Commission Called Racist after Voting to Support Point Breeze Housing Development," *PlanPhilly*, January 29, 2016, <http://planphilly.com/articles/2016/01/19/planning-commission-called-racist-after-voting-to-support-point-breeze-housing-development>.

commercial corridor.⁹⁹ This lack of agreement suggests that there will be continued debate over whether to rezone West Washington Avenue's parcels to IRMX or ICMX.

Residents have also opposed some of the residential development proposals due to their scale. In general, when design review boards at the municipal level assess development proposals, they do so with different priorities than do the residents living near the development site. For instance, municipal planning officials may approve a well-designed taller building, because it allows for denser development and greater property tax revenue.¹⁰⁰ Neighbors, on the other hand, are likely to oppose buildings taller than their own, both because of the visual dominance and because in some cases it could reduce the value of their own property.

An example of this occurred on West Washington Avenue, where a 2009 proposal to add additional stories on top of the Frankford Chocolate Factory as part of its redevelopment as a residential building had been well received by the PCPC. However, residents living on Kimball Street (the very small street immediately north of Washington Avenue) were opposed to the proposed additional stories on top of the 1866 portion of the building.¹⁰¹ Kimball residents' current view directly across the street consists of the rear walls of the Washington Avenue businesses, which are

⁹⁹ Sylvia Wilkins, *Review of ZBA Case No. 21336 for 1601 Washington Avenue* (Philadelphia, PA, 2013), sec. Philadelphia City Planning Commission.

¹⁰⁰ Donald Leffers, "Conflict in the Face of Planning? Power, Knowledge and Hegemony in Planning Practice," in *Planning and Conflict: Critical Perspectives on Contentious Urban Developments*, ed. Enrico Gualini (New York: Routledge, 2015), 129.

¹⁰¹ GroJLart, "Zophar, Tran, And The Chocolate Factory"; Donatucci, Interview with Mr. Thomas Donatucci, President of Washington Avenue Property Owners Association.

mostly blank cement expanses (Figure 2.14). However, they preferred the status quo to having sunlight cut off from their block for much of the day.



Figure 2.14 Kimball Street between 21st and 22nd Streets, looking east, with rear of Chocolate Factory building to the right.

Source: Photograph by author, November 8, 2016.

Then in 2015, the North of Washington Avenue Coalition (NOWAC), another neighborhood association representing roughly the same area as SOSNA,¹⁰² objected

¹⁰² NOWAC and SOSNA both represent the same geographic area (the Graduate Hospital neighborhood). However, SOSNA is a larger group that includes multiple committees. It has a very active media and web presence. It has traditionally supported new development opportunities and has taken a leading role in reviewing and recommending changes for new development projects. NOWAC has a limited web presence and there is very little information available about its membership and structure. It has traditionally fought for ensuring continued affordability for existing residents. Therefore, it has frequently opposed new development projects.

to a proposed five-story, 113-unit residential project for an empty lot at 2401 Washington Avenue because it contained too many units. They appealed the zoning approval and have successfully held up the project for six months so far and possibly much longer. Neighborhood resistance to high-density and mid-rise construction indicates that some residents oppose changes to the scale of their neighborhood, whether it be for aesthetic reasons (retaining the character of the block), practical reasons (to retain current property values and levels of sunlight), or both.

The proposal for a self-storage facility on the southwest corner of 23rd Street and Washington Avenue (currently under construction) also revealed some of the goals held by local residents, as well as business managers and property owners (discussed in the next section). This project was able to move forward quickly because its proposed use and massing are permitted by-right under I-2 zoning. However, SOSNA and Councilman Johnson, whose district includes Washington Avenue, Point Breeze, and Graduate Hospital, opposed this use because it detracted from efforts to make Washington Avenue a more vibrant, pedestrian-friendly space. Furthermore, self-storage facilities tend to be unpopular because they do not require many employees while the jobs they do provide lie more in the service sector, and therefore do not offer living-wage job opportunities. The ease with which this project moved forward spurred Councilman Johnson to introduce a bill in early 2015 for the creation of an overlay district for West Washington Avenue. Specifically, the overlay covered the area from Broad Street to 25th Street and from Ellsworth Street to the south to Carpenter Street to the north. Within this overlay, I-2 zoning would remain for the time being, but the following by-right uses would be prohibited (with a grandfather clause for existing uses):

- Detention, correction, and re-entry facilities,
- Pawn shops,
- Non-accessory parking lots and garages (parking areas that aren't attached to businesses),
- Moving and storage facilities,
- Junk yards,
- Strip clubs,
- Auto body shops, gas stations, car sales lots, and other car-oriented uses.¹⁰³

The “/WWA Overlay,” as it is denoted in city documents, was supported by SOSNA, Washington Avenue Property Owners’ Association (WAPOA, an organization representing many of the property owners on West Washington Avenue) and South Philadelphia H.O.M.E.S. Inc, a community group in Point Breeze. This indicates that, although residents may have conflicting views on the appropriate scale of redevelopment and the proportion that should be dedicated to residential land use, there is agreement on unwanted land uses. The overlay is also significant because it makes investment in uses appropriate to IRMX and ICMX more attractive to developers, even if the actual rezoning to IRMX/ICMX does not occur in the near future.

Taken together, this series of events indicate that neighbors on both side of the Avenue are cautious about the redevelopment of Washington Avenue, but they also

¹⁰³ Jared Brey, “Johnson Introduces Temporary Zoning Rules for Washington Avenue,” *PlanPhilly*, February 12, 2015, <http://planphilly.com/articles/2015/02/12/johnson-introduces-temporary-zoning-rules-for-washington-avenue>.

see great potential for achieving goals such as pedestrian safety and access to a greater diversity of commercial uses.

Washington Avenue Business Owners and Managers

In interviews and statements at PCPC meetings, Washington Avenue's business owners and managers express a mix of visions for the future of West Washington Avenue. Some of the Production-Distribution-Repair (PDR) businesses have accepted that Washington Avenue is no longer the best home for PDR land use. There seemed to be consistent support for making Washington Avenue safer for the users of the streets and sidewalks, although some PDR businesses were frustrated with having to navigate around pedestrians and bikers. There was also consistent frustration over decreased availability space for parking and loading.

Many of the property owners on West Washington Avenue are represented by the Washington Avenue Property Owners Association (WAPOA). This organization first formed in the 1980s, and has about two dozen members.¹⁰⁴ WAPOA supports the prospect of higher-rent redevelopment; they are the “property owners and business owners along the corridor [who] are increasingly realizing the development pressures on the Avenue and have been a strong force in making city leadership realize the area has a brighter future as commercial/residential mixed use than it does light industrial alone.”¹⁰⁵ WAPOA also supported the “/WWA Overlay” discussed in the last section, which prohibited many industrial and non-neighborhood-oriented businesses.

¹⁰⁴ Eldridge, “The Battle for the Future of Washington Avenue West in South Philadelphia.”

¹⁰⁵ Thompson, “Renderings.”

Thomas Donatucci, the president of WAPOA, accepts that Donatucci Kitchens, Baths and Appliances at the northwest corner of 19th and Washington, is no longer a good fit for Washington Avenue. Therefore, although his family has had the business for two generations, he preemptively shuttered it and put it up for rent in early 2015 (Figure 2.15). He also put a double-height warehouse on the southeast corner of 22nd and Washington on the market. However, due to the current state of zoning limbo, he and other property owners are frustrated that they cannot sell or redevelop their property for nonindustrial uses. Donatucci explains that he has passed up on an offer for his building from a light assembly company even though the building will not be generating any income until it is rezoned, because he supports the vision of a Washington Avenue that has moved on from its industrial roots.¹⁰⁶

¹⁰⁶ Donatucci, Interview with Mr. Thomas Donatucci, President of Washington Avenue Property Owners Association.



Figure 2.15 The building on the northwest corner of Washington Avenue and 19th Street, occupied for several decades by Donatucci's Kitchens, Baths and Appliances, with signs advertising its availability for lease.
Source: Photograph by author, November 8, 2016.

The fact that a light assembly company was interested in Donatucci's building suggests that there is still demand for space on West Washington Avenue from new PDR businesses. This interest remains despite the decreasing availability of parking and loading space on Washington Avenue and the increasing number of pedestrians and cyclists making it more difficult for fork trucks and delivery trucks to maneuver. Other indications of the continued viability of certain PDR businesses is the success of the makerspace in the former iron workshop, and the 2015 opening of a ReStore (part of a chain of furniture resale stores run by Habitat for Humanity), which brings in frequent delivery trucks to unload furniture.

As part of their research in developing the South District Plan, the PCPC and the Philadelphia Department of Commerce conducted a survey of West Washington Avenue business owners to gauge what kind of land uses they preferred and whether they had plans for relocating. The results were published in the South District Plan. A majority of respondents (58 percent) indicated that they would like to see residential and mixed uses, with the remaining portion of respondents preferring industrial and commercial uses. A majority of respondents (60 percent) also stated that they had no plans to move in the next five years. While the majority response groups for each question do not necessarily overlap, the responses do seem contradictory, as eighty percent of West Washington Avenue's existing businesses are light industrial. However, it may instead indicate that these businesses do see themselves as part of a mixed use future of Washington Avenue.

For most of the newer businesses on Washington Avenue, this makes sense. In addition to the makerspace, a carryout and delivery pizzeria/bakery opened in a one-story garage-like building (that had previously been a seafood shop¹⁰⁷) in the summer of 2013, and a beer distributor moved next door to the bakery that fall (Figure 2.16). CrossFit and Martial Arts gyms have also leased space in former construction supply stores over the last few years.¹⁰⁸ All of these businesses are compatible with residential and mixed use development, although the makerspace may be subjected to stricter noise regulations.

¹⁰⁷ Vicky Joy, Interview with Ms. Vicky Joy, manager of Kermit's Bake Shoppe, April 22, 2016.

¹⁰⁸ Khoa Cao, Interview with Mr. Khoa Cao, manager of Daddis Mixed Martial Arts Academy, April 21, 2016.; Donatucci, Interview with Mr. Thomas Donatucci, President of Washington Avenue Property Owners Association.



Figure 2.16 Pizzeria/bakery and beer distributor that moved in to one-story industrial buildings on the south side of Washington Avenue West in 2013. *Source:* Photograph by author, November 8, 2016.

Most of the residential and mixed use redevelopment projects so far proposed renovate existing buildings or are on vacant lots. However, if the city rezones Washington Avenue to ICMX and/or IRMX, there will be proposals for the demolition of existing buildings, which means that some businesses will have to close or relocate. Businesses that lease their space rather than own it will be ones most harmed by this displacement, as property owners can still benefit from a shift away from light-industrial uses by selling or leasing their property to a new land use. For instance, the pizzeria/bakery is currently located in a windowless one-story industrial building, which the building owner may want to redevelop in the future.

The increasing conflicts with pedestrian and bicycle traffic, as well as tighter parking regulations and increased enforcement, have taken their toll on some of the

existing businesses. These tighter regulations have made it more difficult for delivery trucks to stop for unloading, as well as for employees to find parking.¹⁰⁹ Tony Bisicchia, owner of Kerrs Building Materials (sic), explained that he plans to move his business to Southwest Philadelphia because traffic congestion on Washington Avenue was creating too many difficulties for his business operations.¹¹⁰ At a PCPC meeting in December 2013, property/business owners Henry Mazzola and Mario Carosella also stated that they were moving some or all of their operations off West Washington Avenue; Mazzola specified a new location in Southwest Philadelphia.¹¹¹ However, as of December 2016, both men still operate businesses and own property on West Washington Avenue. Developer Rory Scerri-Marion, whose company proposed a mixed use residential project at 1601 Washington, also noted that many of the manufacturing firms already have plans to move to industrially zoned areas in Southwest Philadelphia, where rent is much lower.¹¹² However, some businesses have conducted renovations in recent years, indicated that they are invested in their current location.

Like the neighborhood residents, Washington Avenue's business managers and property owners showing varying levels of uncertainty about Washington Avenue's

¹⁰⁹ Donatucci, Interview with Mr. Thomas Donatucci, President of Washington Avenue Property Owners Association.; Anderson, Interview with Mr. L. Dale Anderson, Cabinetry Design Specialist and sole on-site employee for Probuild Kitchen Design Studio.

¹¹⁰ Tony Bisicchia, Interview with Mr. Tony Bisicchia, Owner of Kerrs Building Materials Inc, April 29, 2016.

¹¹¹ Mario Carosella, and Henry Mazzola, *Review of ZBA Case No. 21336 for 1601 Washington Avenue* (Philadelphia, PA, 2013), Philadelphia City Planning Commission.

¹¹² Eldridge, "The Battle for the Future of Washington Avenue West in South Philadelphia."

development. This is unsurprising given that the businesses represent a diverse array of light industrial and low-rent commercial uses tied to different customer bases and affected by different market conditions. Some businesses may feel that they align well with a changing Washington Avenue, while others may determine that they can better carry out their operations in another part of the city.

Pathways to Goals

This chapter demonstrated that major goals of contemporary municipal planning departments, such as smart growth and tax revenue-producing development, could overlap with the management of redevelopment pressure in legacy industrial areas. This concept was used to consider the opportunities offered by West Washington Avenue's potential land use changes for municipal management strategies to advance goals held by the city of Philadelphia, local neighborhood organizations and business managers. The Washington Avenue Property Owners' Association, which represents about two dozen West Washington Avenue property owners including many of the oldest light industrial companies, also accepts a rezoned future of higher density mixed use development. This acceptance has developed in combination with increased competition for the use of the sidewalk, parking spaces, and vehicular lanes, and increased frustration. Therefore, even those businesses who plan to coexist with or cash in on the introduction of residential land uses on Washington Avenue are frustrated with the current state of affairs, as there have so far been very few physical changes to the Avenue, yet the way it is used has already changed. The city has positioned other industrial areas in the city as areas for industrial growth, which may open new locational opportunities for those light

industrial businesses that are unable to stay on West Washington Avenue. In this way, the city is responding to the potential displacement caused by this land use shift.

Both the city and some neighborhood residents view the redevelopment of West Washington Avenue into a pedestrian-friendly residential and neighborhood-serving retail corridor as a way to better connect the bordering residential neighborhoods of Point Breeze and Graduate Hospital. In this respect, they share a vision with the private developers who have proposed residential projects on as-yet industrially zoned parcels. However, some businesses and residents are concerned about the impact on affordability of both the surrounding neighborhoods (through new build gentrification) and the industrial and commercial properties (through commercial gentrification) that may come very quickly with new construction. Some residents are also concerned about the construction of mid-rise buildings on Washington Avenue dominating the two- and three-story row houses on the adjacent blocks. So far, city planning authorities seem to have given less attention to these concerns over spatial and affordability changes. However, as the PCPC approves additional residential projects for the Avenue, the city will undoubtedly need to respond to these issues, and their responses will further change the Avenue's physical character.

The city of Philadelphia can look to a variety of other examples for guidance on how to manage this process of land use change. The next chapter analyzes tactics and categories of strategies implemented in several cities, and frames them in relation to the diversity of stakeholder goals discussed in this chapter.

Chapter 3

STRATEGIES AND TACTICS

An underlying goal in many instances of municipal land use planning is to devise a compromise over how land uses will change that yields the least harm to the most stakeholders. In the case of legacy industrial areas, cities may choose their management strategy based on a vision for the economic structuring of the entire city, rather than a compromise among opposing views held by more localized groups. For instance, a city may choose to protect existing industrial firms and the jobs they provide, despite the drawbacks for their tax revenue or housing supply, or neighboring residents' desire for a less noisy, more pedestrian-friendly land use.

This chapter analyzes particular tactics and overarching strategies employed by municipalities, in response to residential redevelopment pressure in legacy industrial areas. These strategies and tactics can respond to a variety of stakeholder concerns, because, as Chapter Two demonstrated, residential redevelopment management of legacy industrial areas is often interconnected with broad planning objectives. Some tactics used by cities are mutually exclusive while others are complementary. Some are targeted and others are broad-based. A successful outcome deriving from a tactic or tactics is often a matter of perspective because different stakeholders will view the outcomes differently. Therefore, municipalities must carefully consider how the outcome of efforts to advance a certain set of goals will affect other goals and stakeholders.

Municipalities are concerned with the land use outcomes in their deindustrialized zones because of the potential impact on employment opportunities, environmental conditions, population growth, connectivity, and tourism, among other

issues. In this chapter, a series of examples demonstrates that cities have used many different tactics to advance their particular set of priority goals, yet the tactics all have an impact on the deindustrialized zone's character. Some of the tactics clearly target spatial elements, such as urban design and the creation of micro-businesses in existing light industrial buildings and structures. However, even those tactics not based on physical interventions will shape the area's sense of place. However, the physical characteristics of the postindustrial area, such as its building forms and thoroughfare design, offer opportunities and challenges for the strategies presented here. The sense of place resulting from the outcomes of management strategies will in turn shape the opportunities and challenges for subsequent processes of redevelopment management.

The examples presented here are drawn mostly from big cities because, like Philadelphia, their strategies for a particular legacy industrial area are balanced by considerations of other such areas throughout the city. Big cities have multiple opportunities to manage redevelopment pressures because they tend to have more than one deindustrialized or underused industrial district. Therefore, it is possible to manage each district, as it experiences pressure to redevelop, in favor of different stakeholders and goals. However, some smaller cities and places with less active housing development are also included in order to provide a wider breadth of the strategies employed across the full context of postindustrial redevelopment.

This chapter presents three overarching strategies, and within each strategy, examples of cities' specific tactics are discussed. The first type of strategy is industrial retention. This section examines ways that cities have tried to keep legacy industrial areas viable for some degree of industrial land use in the future. The second type of strategy is to plan for new uses. This section includes examples of municipalities

accommodating new development as well as municipalities leveraging the development for broader benefits. The third type of category is to strike a balance between existing and new uses. This includes tactics that combine elements of examples in the previous two sections, as well as changing definitions of urban industrial activity to include technology, renewable energy, and individual artisan production. Within each of the three strategy sections, the examples are also grouped together based on similarities between mechanisms used by the cities as part of their strategy. For instance, examples using zoning are grouped together.

Strategy Type 1: Industrial Retention

Many cities have embraced industrial retention as a way to protect well-paying low- and mid-skill jobs. These jobs are under threat in the deindustrialized city, as the labor market exhibits a dichotomy between high-education, high-wage jobs (e.g. finance and technology), and low-skill, low-wage jobs (i.e. retail and service). Wolf-Powers observes that the goods produced by manufacturing firms are often essential for the city's service sector to be successful.¹¹³ For instance, a 1993 Industry Study conducted in New York City concluded that, although the city should encourage office construction in the outer boroughs, printing and construction industry remain important due to their utility to the service sector, and should therefore be maintained.¹¹⁴

Cities have designed a variety of policy and program strategies intended to protect existing industrial firms as well as to attract new firms into the city. In the last

¹¹³ Wolf-Powers, "Up-Zoning New York City's Mixed Use Neighborhoods," 382.

¹¹⁴ Dinkins et al., *Citywide Industry Study*.

thirty years, these industrial retention strategies have targeted certain areas of the city, rather than citywide industry. Therefore, the retention strategies are carried out in conjunction with policies focused on other parts of the city that encourage the type of redevelopment that so often threatens light industrial areas. In other words, a city might be concerned with a drop in industrial activity in the targeted retention area, but not with a citywide drop.

This strategy relates to the West Washington Avenue context in that there are many businesses on West Washington Avenue offering light industrial jobs that pay more than would the neighborhood serving commercial jobs that are likely to come with mixed use projects. Additionally, many of the businesses on West Washington Avenue have no plans to move, and they offer a critical mass of construction services that cannot be found in many other places.

The two industrial retention strategies highlighted below are defensive districting and financial incentives. Defensive districting is a land use regulation mechanism that can be overlaid on or substituted for existing zoning regulations. City planning agencies can closely tailor this tactic to the particular set of industrial land uses that a city seeks to retain. Offering financial incentives is a less precise tactic and cities are less able to regulate its success. Nonetheless, it can be extremely useful in negotiating over new development and land use changes and forming an understanding with private developers, rather than prohibiting their activity and increasing enforcement efforts.

Defensive Districting

One of the most common industrial retention strategies employed by municipal governments is the designation of areas that have a high proportion of industrial uses

and creating regulations to protect these areas from redevelopment for other uses. In 2001, San Francisco created Industrial Protection Zones (IPZs), which prohibited the construction of new buildings or conversion of existing buildings to housing, live/work spaces, and offices, in certain industrial areas. The city's zoning code permits all land uses in industrial zones. However, the IPZ is a special use district that overlays onto existing industrial zones.¹¹⁵ Portland's comprehensive plan provides for industrial sanctuaries, which translate in the zoning code into three industrial zones that prohibit group living and require a special review and approval process for household living.¹¹⁶

An early example of the protective districting strategy is the Planned Manufacturing District (PMD) program begun in Chicago in the late 1980s. Chicago modelled the PMD program after earlier initiatives in New York and Portland, Oregon.¹¹⁷ A 2005 study of economic changes in the three oldest PMDs revealed that they experienced an increase in jobs and businesses. While the PMD was not part of the zoning code, it prevented these industrially zoned areas from rezoning. However, like in Philadelphia and many other cities, these zoning categories allowed manufacturing (heavy to middle-level industrial uses), light industrial uses, as well as some non-industrial uses such as retail and service.

¹¹⁵ San Francisco City Planning Commission, *Resolution No. 16224*, 2016, http://default.sfplanning.org/legislative_changes/new_code_summaries/R19548_Mission_Interim_Contrls-2016.pdf.

¹¹⁶ City of Portland, Oregon, *Title 33, Planning and Zoning, Section 140*, 1991.; City of Portland, Oregon Bureau of Planning, "Comprehensive Plan Goals and Policies," Comprehensive Plan (Portland, OR: City of Portland, Oregon Bureau of Planning, 2006).

¹¹⁷ Rast, "Manufacturing Industrial Decline," 183.

The study showed that the majority of the growth in the PMDs did not occur in manufacturing. In two of the PMDs, the largest amount of growth occurred in retail, service, finance, insurance and real estate. In the third PMD, Goose Island, the largest amount of growth occurred in light industrial uses.¹¹⁸ Other cities may view this latter case as a victory, especially those where residential redevelopment drove out even relatively compatible light industrial uses. However, the PMD Program was more rigorous than many other protective districts in that it sought to bolster manufacturing specifically, rather than industrial uses in the broad sense, and this goal of manufacturing growth did not occur. Therefore, the economic growth of all three PMDs has not sustained manufacturing jobs, with the majority of the losses occurring in the years 2000 and 2001.¹¹⁹

¹¹⁸ Rast, "Curbing Industrial Decline or Thwarting Redevelopment? An Evaluation of Chicago's Clybourn Corridor, Goose Island, and Elston Corridor Planned Manufacturing Districts," 17.

¹¹⁹ *Ibid.*, 10-12.



Figure 3.1 A former toy factory on Clybourn Avenue in Chicago, which was renovated to house multiple retail tenants, parking and a self-storage center. *Source:* Payton Chung, “Clybourn & Wisconsin (exterior),” uploaded May 6, 2007 to Flickr, <https://www.flickr.com/photos/paytonc/487609512>.

As cities have continued to deindustrialize since the early 1990s, Chicago’s PMDs remain home to several heavy industries, and the Goose Island PMD has attracted technology firms.¹²⁰ Mike Holzer, Executive Director of North Branch Works (a community development corporation whose jurisdiction includes the Clybourn, Elston, Goose Island, and Chicago-Halsted PMDs), states that although the

¹²⁰ Ryan Ori, “This Neighborhood Could Be a Model for Urban Planning by 2025,” *Crain’s Chicago Business*, June 20, 2015, <http://www.chicagobusiness.com/article/20150620/ISSUE01/150619838/this-neighborhood-could-be-a-model-for-urban-planning-by-2025>.

PMD program has not increased the number of manufacturing jobs, it has created jobs in science, engineering, and research and development.¹²¹ Rast's 2005 study indicated that the three original PMDs fared differently in terms of achieving the program's goals: from 1988 to 2004, the Clybourn Avenue PMD lost the largest number of manufacturing companies and jobs while the number of retail jobs greatly expanded.¹²² The Goose Island PMD performed the best in terms of the PMD program's goals: although it experienced a net loss in manufacturing jobs and businesses, the number of warehousing, distribution and transportation companies and jobs increased. It is difficult to determine the extent to which this pattern was determined by the PMD designation versus broader shifts in economic activity.¹²³ The Clybourn Avenue PMD's relatively poor performance has continued into the present, with several of its oldest industrial firms relocating in the last few years and the number of retail businesses continuing to increase (Figure 3.1). Moreover, the alderman whose ward includes Clybourn Avenue supports the removal of the PMD designation. Chicago mayor Rahm Emanuel and the Department of Planning and Development (DPD) initiated an 'Industrial Corridor Modernization' community planning process for the North Branch in May 2016. This initiative takes a more balanced approach, with the following goals:

1. Maintain the North Branch as a job center

¹²¹ Chuck Sudo, "Are Chicago's PMDs Getting in the Way of Development?," *Bisnow*, June 16, 2015, <https://www.bisnow.com/chicago/news/commercial-real-estate/are-chicagos-pmds-getting-in-the-way-of-development-46924>.

¹²² Rast, "Curbing Industrial Decline or Thwarting Redevelopment? An Evaluation of Chicago's Clybourn Corridor, Goose Island, and Elston Corridor Planned Manufacturing Districts," 13-14.

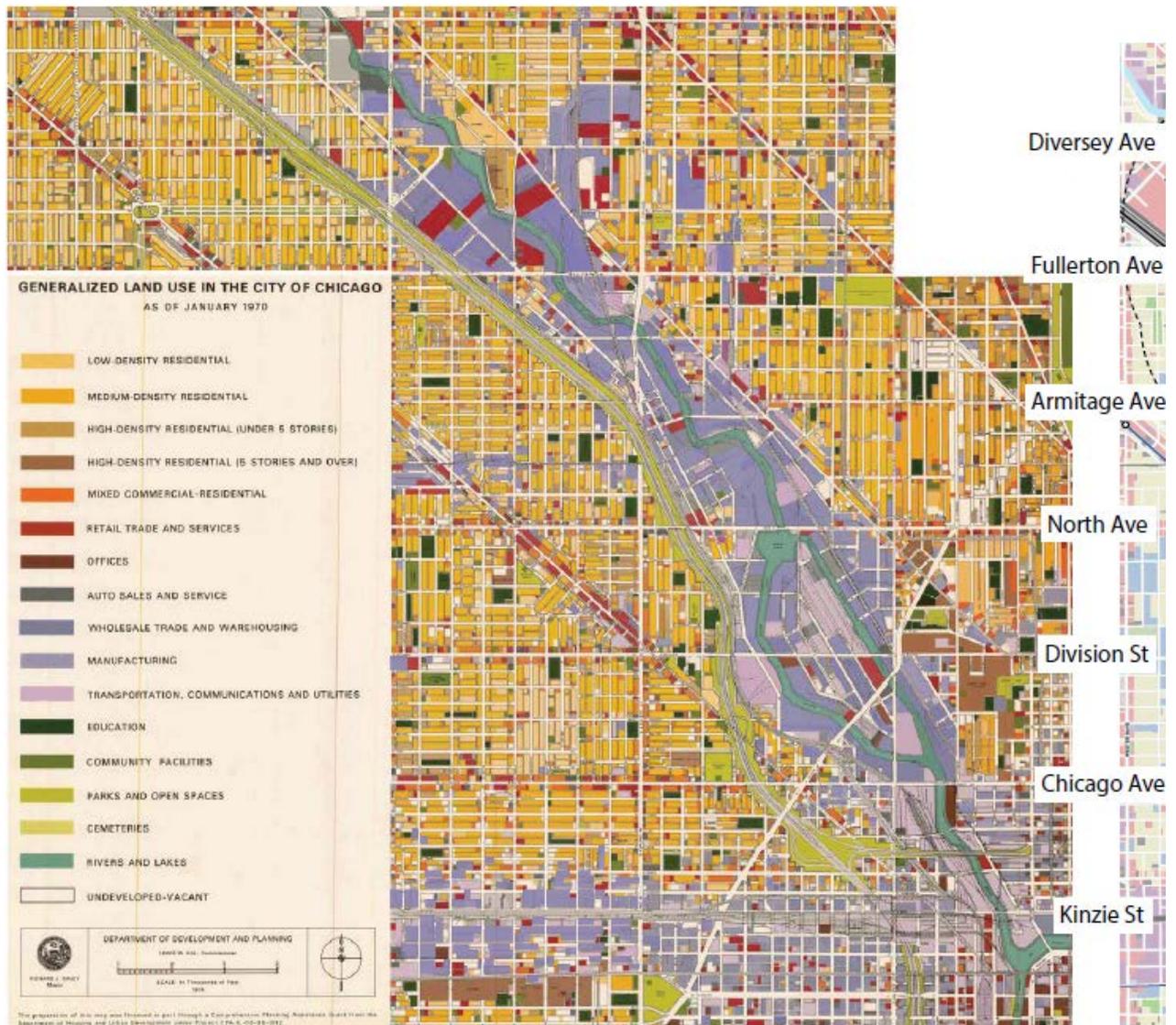
¹²³ *Ibid.*, 17.

2. Build on the North Branch’s unique built environment
3. Improve the streets and sidewalks to better accommodate all modes of transportation¹²⁴
4. Planning for mixed use development and buffer zones “to accommodate market demand for potential technology, research, residential or retail development.”¹²⁵

Figures 3.2 and 3.3, presented at one of the North Branch public meetings, show the composition of the North Branch’s land uses in the 1970s and today. The DPD also presented maps dividing the North Branch into three different zones based on future scenarios for land uses: a dynamic zone, a stable zone and a transitioning zone (Figure 3.4). The maps show a large increase in the amount of new mixed use development in the dynamic zone over time.

¹²⁴ Department of Planning and Development, “Mayor Emanuel’s Industrial Corridor Modernization: North Branch,” Industrial Corridor Modernization: North Branch: Community Meeting Summary (Chicago, September 29, 2016), https://www.cityofchicago.org/content/dam/city/depts/dcd/supp_info/industrial/09292016_Meeting_Summary_pp1_5_V2.pdf.

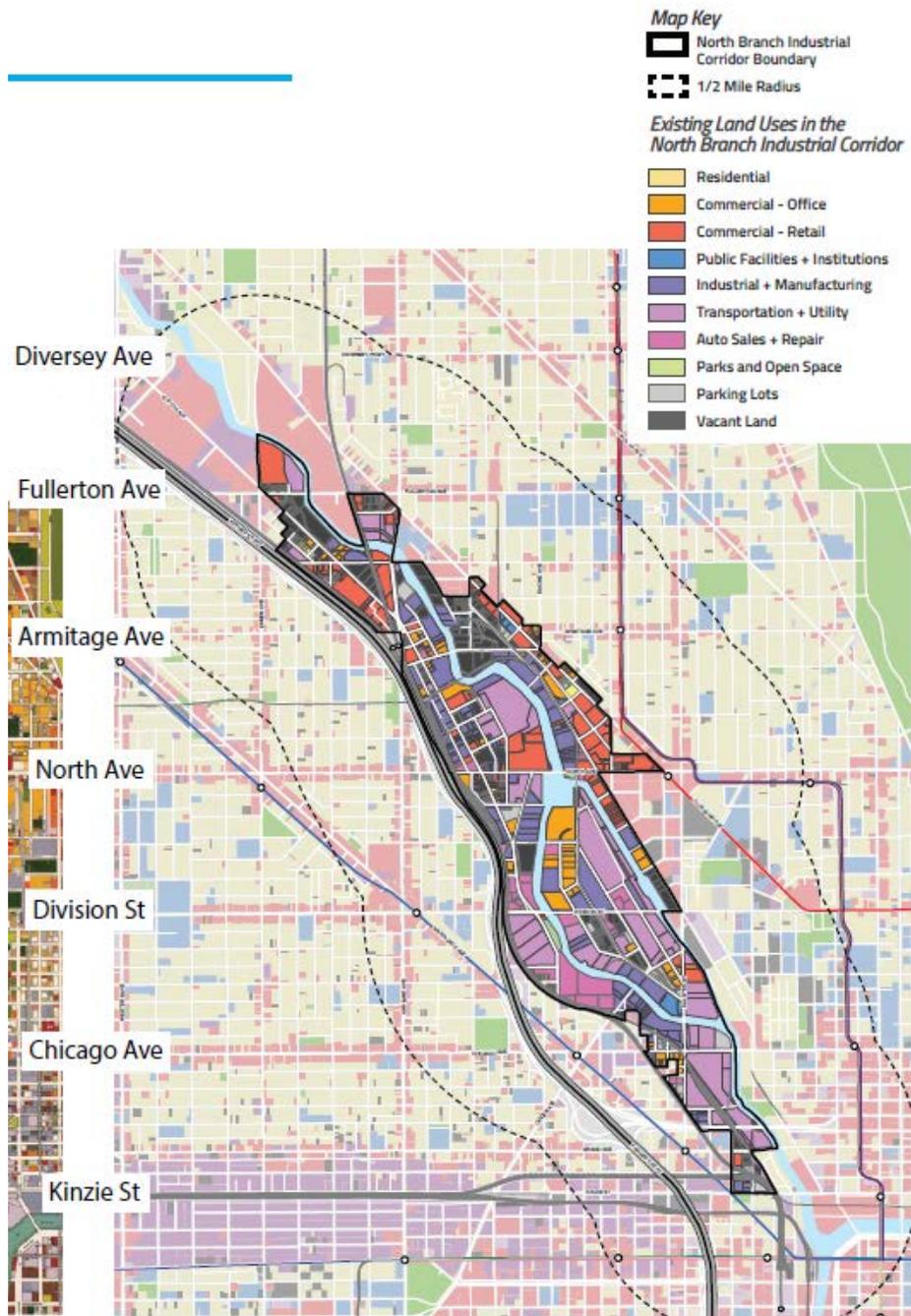
¹²⁵ Mayor’s Press Office, “Mayor Emanuel Announces Plan to Modernize Industrial Corridors,” *Office of the Mayor, City of Chicago*, April 4, 2016, <https://www.cityofchicago.org/content/dam/city/depts/mayor/Press Room/Press Releases/2016/March/4.4.16MayorAnnouncesModernizeIndustrialCorridors.pdf>.



1970's Land Use

Figure 3.2 “1970's Land Use”

Source: Chicago Department of Community Development, slide 16 of presentation for North Branch Kickoff Meetings, June 6-8, 2016.



Today's Land Use

Figure 3.3 “Today's Land Use”

Source: Chicago Department of Community Development, slide 16 of presentation for North Branch Kickoff Meetings, June 6-8, 2016.

Long-term Scenario: All Zones



Figure 3.4 Long-term scenarios for land use shifts in North Branch Industrial Corridor, Chicago.

Source: Chicago Department of Community Development, slide 10 of North Branch Industrial Corridor Modernization Open House Presentation, September 29, 2016.

Financial Incentives

Urban planners have developed, implemented and revised a number of key mechanisms for incentivizing particular types of development and land use. The goals of the incentives can vary significantly, but the mechanisms are often similar. For instance, Transfer of Development Rights (TDR) and property easements can preserve both historic buildings and green space, by allowing property owners to recoup the cost of forgoing new, higher density construction on their properties. Cities can offer tax credits for hiring local companies and residents to carry out the development

project. They can also offer density bonuses in exchange for the inclusion of affordable housing and publicly accessible amenities in development projects.

Tax credits and density bonuses are also well suited to encouraging developers to design their spaces for particular uses and find tenants connected to those units. Cities can offer density bonuses and tax credits to encourage developers of multistory buildings in industrially owned areas to dedicate and design their ground floors for industrial uses and commit to leasing the space to industrial tenants. New York City moved to protect industrial uses in the South Bronx and Dutch Kills, Queens, not only by limiting conversions to other uses, but also by offering density bonuses to development that expanded manufacturing in those areas.¹²⁶ Chicago offers several Property Tax Incentives that provide a twelve-year property tax assessment reduction for new construction, rehabilitation or re-occupancy of existing buildings for industrial use.¹²⁷

The PCPC also seemed to be considering a density bonus to incentivize industrial land uses in areas zoned for Industrial Residential Mixed Use (IRMX). The South District Plan states that the IRMX zoning classification offers a density bonus “to developers who provide industrial space equal to at least 60 percent of the ground floor area” of the building. Developers who meet this requirement may receive a lot coverage bonus or an additional story (Table 3.1).¹²⁸ This provision indicates the

¹²⁶ Friedman, “Transforming the City’s Manufacturing Landscape,” 34.

¹²⁷ Department of Planning and Development, “Economic Development Incentives,” *City of Chicago*, 2016, https://www.cityofchicago.org/city/en/depts/dcd/supp_info/economic_developmentincentives.html.

¹²⁸ Philadelphia City Planning Commission, “South District Plan,” 66.

PCPC’s interest in retaining industry in its IRMX zones, which potentially includes West Washington Avenue.¹²⁹ However, there is no other mention of this density bonus in the actual Zoning Code or the Zoning Code Quick Reference Guide produced by the PCPC. Therefore, it seems that the city did not officially adopt this concept.

Table 3.1 A comparison of the dimensional requirements of Philadelphia’s IRMX and I-2 zoning classifications.

Source: Philadelphia City Planning Commission, *Philadelphia2035: South District Plan*, June 2015, 66.

	IRMX	I-2
Lot Coverage	75% mid block / 80% corners	100%
Max Floor Area Ratio	500%	500%
Height Limit	60' *	60'
Building Setbacks on Narrow Streets	Yes, portions of buildings above 38'	No
Parking for Residential Uses	3/10 units	Residential uses not allowed
Off-Street Loading Spaces	Required at 100,000 sf and above for office, civic / institution, visitor accomodation, and residential uses.	Required at 10,000 sf and above for all permitted uses.
Mixed-Use Development	An industrial use must account for a floor area equal to at least 50% of the ground floor area, or a non-residential use, excluding parking, must account for a floor area equal to at least 60% of the ground floor area. Any retail sales uses must be located on the ground floor of a building, but other uses may be located on any floor of a building.	Residential and many commercial uses not allowed
* In IRMX, a lot coverage bonus or an additional story is given to developers who provide industrial space equal to at least 60% of the ground floor area		

¹²⁹ Friedman, “Transforming the City’s Manufacturing Landscape,” 34.

Strategy Type 2: Planning for New Land Uses

Cities often decide that legacy industrial areas no longer provide enough well-paying low-skill industrial jobs and that redeveloping the land to a higher rent use is preferable to the status quo. However, such a transition is best undertaken with careful planning. As Berens notes, “many of these industrial sites are vacant or abandoned, encompass large swaths of land, or are lonely outposts in changing districts- factors that necessitate a comprehensive approach, rather than a simple or discrete renovation.”¹³⁰ Therefore, the involvement of city agencies such as planning departments is key to ensuring that redevelopment from vacant and light industrial land uses to higher rent uses or green space brings a net benefit over the status quo of what the city decides is an underused space. Moreover, as discussed in Chapter Two, cities can advance specific goals through management of this redevelopment pressure.

There are three general tactics discussed as examples of Planning for New Uses. Public-private partnership can be similar to the financial incentives discussed above in that it is based on effective communication and cooperation to resolve differences between the city and the private development community. However, the goal in these partnerships is not industrial retention. The second tactic, rezoning, is similar to defensive districting in that it affects land use regulations. However, because the goal is to plan for new uses rather than retain existing ones, a city can rezone the subject area to a new category, rather than creating additional regulations to preserve its currently permitted land uses. The third tactic, urban design, can involve public-private partnerships or it can take the form of unilateral actions. Urban design interventions change the appearance of the streets and sidewalks to accommodate new

¹³⁰ Berens, *Redeveloping Industrial Sites*, 47.

uses. This tactic has the most direct and immediate impact on the physical character of a legacy industrial because it is specifically geared toward shaping that character.

Public-Private Partnership

While large-scale transportation infrastructure such as rail stations and ports are often quasi-publicly owned,¹³¹ individual industrial properties frequently remain in private hands. Therefore, given the profitability of converting a low-rent industrial property to residential or mixed use, often the private sector initiates residential redevelopment projects. However, given the scale and significant land use shift of these projects, cities may seek to be involved through public-private partnerships. Public-private partnerships typically take on one of two dynamics: either the city is facilitating the negotiation, financing and approval processes to assist the developer, or the city is requiring the developer to provide certain additional amenities or fees in exchange for granting permission for the projects. The following paragraphs share examples of both of these types of partnerships, both involving the furniture store IKEA.

City offices dedicated to economic development may offer financial incentives or an expedited development approval process in to order to attract redevelopment to postindustrial districts. They may also market the areas as redevelopment-ready, as the Philadelphia Industrial Development Corps did for the former industrial neighborhood of Northern Liberties,¹³² a neighborhood north of Center City at a distance similar to

¹³¹ Patricia A. Dalton, *Physical Infrastructure: Challenges and Investment Options for the Nation's Infrastructure: Congressional Testimony* (DIANE Publishing, 2008), 5.

¹³² R. A. Beauregard, "Trajectories of Neighborhood Change: The Case of Gentrification," *Environment and Planning A* 22, no. 7 (July 1, 1990): 855–74, doi:10.1068/a220855, 866.

that of West Washington Avenue, which has now become a residential neighborhood. Cities can offer financial subsidies to attract developers to sites that offer particularly challenging redevelopment conditions, such as brownfield sites.¹³³ Additionally, municipalities typically gear their overtures to private developers towards proposals expected to yield a large number of jobs. This concern for jobs is evinced in the measures that cities have taken to attract big box stores. Cities hope that the new job opportunities will not only support economic development, but also help households that had once relied on the industrial jobs to find new jobs.

In 2004, IKEA approached the city of Philadelphia about rezoning a former railroad yard to commercial and allowing a complex of big box stores to move in, with IKEA as the anchor store. The railroad yard was located on the Delaware Riverfront, which still features active industrial activities today, along with a large number of big box stores that followed in IKEA's path. When the IKEA threatened to locate in nearby Cherry Hill, New Jersey, instead of Philadelphia, the city conceded to the rezoning, despite some protests about retaining the land for industrial uses.¹³⁴ Today, this enormous shopping center, named Columbus Commons, does provide hundreds of retail jobs (Figure 3.5). IKEA is one of the top employers in South Philadelphia with 400 employees.¹³⁵ Additionally, industrial activities connected to the surrounding waterfront and rail infrastructure have survived.¹³⁶

¹³³ Knapp and Hollander, "Exploring the Potential for Integrating Community Benefit Agreements into Brownfield Redevelopment Projects."

¹³⁴ Adams et al., *Restructuring the Philadelphia Region*, 61.

¹³⁵ Philadelphia City Planning Commission, "South District Plan," 12.

¹³⁶ *Ibid.*, 21.



Figure 3.5 Aerial view of Columbus Commons and Snyder Plaza shopping centers in South Philadelphia.

Source: Goldenberg Development, “Columbus Commons” brochure, 2010, <http://www.goldenbergdevelopment.com/gg-prop/columbus-commons/>.

In addition to encouraging and facilitating redevelopment in legacy industrial areas, cities can restrict redevelopment opportunities in these areas to projects where the developer agrees to offer certain concessions, or exactions. Development approval processes provide cities with the leverage to require the developer to dedicate a portion of their budget towards the public good. These developer exactions include in-lieu fees for environmental and economic impacts, affordable housing requirements, installing public art, and developing a portion of their land for public use.

For instance, in Red Hook, Brooklyn, IKEA wanted to open a location on the still-active industrial riverfront. In exchange for the rezoning from industrial to commercial that IKEA would need, the city required IKEA to provide a number of

exactions to the city. The major concession required of IKEA was to develop the actual riverfront portion of their lot into a riverside park that IKEA would own and maintain, but would be open to the public.¹³⁷ Additionally, IKEA was required to hire local residents, improve bus service to the store and offer free ferry service from Manhattan's Wall Street Pier.¹³⁸ IKEA met these requirements, and the store opened in 2008 along with the public park it had developed, Erie Basin Park (Figure 3.6).

¹³⁷ Jayne O. Spector, "From Dockyard to Esplanade: Leveraging Industrial Heritage in Waterfront Redevelopment" (University of Pennsylvania, 2010), http://repository.upenn.edu/hp_theses/150/, 97.

¹³⁸ Berens, *Redeveloping Industrial Sites*, 85.



Figure 3.6 Erie Basin Park, next to IKEA in Red Hook, Brooklyn.
Source: Nathan Kensinger, “Exploring Red Hook’s Ikea-Owned Erie Basin Park,”
Curbed New York, August 23, 2012,
<http://ny.curbed.com/2012/8/23/10336234/exploring-red-hooks-ikea-owned-erie-basin-park>.

In the case of residential redevelopments, private developers may also be required to provide public space such as courtyards and plazas, the cost of maintaining these quasi-public spaces would likely fall on the building owner or homeowners’ association, rather than the city, as these are privately-owned space. This will be the case with the public walkway that is to be included in the Lincoln Square development, one of the mixed use projects approved for a parcel on West

Washington Avenue.¹³⁹ However, because these public or quasi-public spaces are attached to private property, they may not be as welcoming or as well known to the broader public as are city-provided parks. Therefore, the people who are most likely to make use of these public spaces are the people using the private space, i.e. the residents and tenants who have allowed the developer to earn a profit.

The added expense of exactions can push developers to minimize their risk as much as possible in all other areas of their project. For instance, requiring a residential developer to provide a public park may make the developer decide to build high-end residential units in order to recapture some of the exaction costs. For instance, in 2013, a developer acquired a former heating plant located in Washington D.C.'s fashionable Georgetown neighborhood in order to turn it into a residential building. Because of the building's canal-side location, the developer generously planned to turn the building's waterfront area into a public park. However, in order to fund this undertaking, the developer is building only luxury condominiums, which will be the most expensive condominiums in the city.¹⁴⁰ Like other public spaces built as part of private developments, it is likely that this park will not be as well known to the general public as it is to the condominium residents, yielding a situation that is likely preferable to the property owners that will be maintain the park. Additionally, there is little empirical evidence that CBAS result in net benefits for the community.¹⁴¹ For

¹³⁹ Lincoln Square Property, L.P., "Public Presentation: Lincoln Square" (SOSNA Architectural Review Committee Meeting, Philadelphia, PA, April 13, 2016).

¹⁴⁰ Aaron Wiener, "Georgetown Heating Plant Set to Become D.C.'s Most Expensive Condos 'by Far,'" *Washington City Paper*, October 22, 2013.

¹⁴¹ Knapp and Hollander, "Exploring the Potential for Integrating Community Benefit Agreements into Brownfield Redevelopment Projects."

instance, developers are sometimes able to use their exactions to substitute for other impact fees that the state might require.¹⁴²

Rezoning

Rezoning can also be a facet of public-private collaboration. However, in some cases, municipalities will unilaterally change their zoning code or rezone particular areas in the absence of a redevelopment proposal. Therefore, this section provides a more in-depth discussion of this tactic.

There are two main goals in rezoning, which the *Philadelphia2035* South District Plan describes as follows:

1. **Corrective zoning:** To bring zoning into closer alignment with what is actually happening in an area (this is usually a response to a rising number of variance applications and approvals, as the variances suggest that the land uses in the area are shifting away from what is permitted by their zoning¹⁴³) and
2. **Zoning to Advance the Plan:** To encourage particular development or land use goals (e.g. if a city wants to encourage transit oriented development, it might rezone areas around transit stations to allow high-density, mixed use construction).¹⁴⁴

Zoning code updates and the rezoning of parcels are lengthy processes, and therefore zoning maps do not always reflect the current highest and best use for an area. Therefore, the redevelopment of 'obsolete' industrial properties to shift their land

¹⁴² Nicholas Marantz, "What Do Community Benefits Agreements Deliver? Evidence from Los Angeles," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, November 24, 2015), <https://papers.ssrn.com/abstract=2695217>.

¹⁴³ Wolf-Powers, "Up-Zoning New York City's Mixed Use Neighborhoods," 384.

¹⁴⁴ Philadelphia City Planning Commission, "South District Plan," 88.

use to the ‘highest and best use’ is difficult if current zoning has not changed along with succeeding highest and best uses. Spot zoning is a practice adopted by some cities that allows for the individual rezoning of small areas. This mechanism can help cities keep pace with changing land use needs, as well as market conditions that lead to new ‘highest and best uses’. Some cities also use zoning variances and special use permits to offer flexibility in the interim between zoning updates.¹⁴⁵

The case of Greenpoint-Williamsburg's rezoning discussed in Chapter One is exemplary of the swiftness by which a rezoning decision can transform the land use composition of an area when it has long been out of sync with what the market has determined is the highest and best use. New York City had been granting variances for residential development and overlooking illegal residential conversions in the industrial neighborhoods for many years. According to Wolf-Powers, this was part of the city’s decision to take no action following a 1993 Industry Study that indicated the neighborhoods’ continued vitality as industrial zones.¹⁴⁶ This lack of enforcement later justified the massive rezoning away from industrial uses.¹⁴⁷ Wolf-Powers goes on to explain that:

MX enables unrestricted, as-of-right residential conversions. With the potential value of land officially increased (and the ability to realize returns on it formalized) on more than 100 city blocks as a result of the rezoning, it is unlikely that industrial properties would survive as such since their occupants would be unable to afford the rents that the properties could command if put to residential or retail uses. The MX zone, then, is more accurately seen as a transitional area that industrial

¹⁴⁵ Rast, “Preserving Our Industrial Land: Industrial Zoning in Milwaukee, 1998-2011,” 5-6.

¹⁴⁶ Wolf-Powers, “Up-Zoning New York City’s Mixed Use Neighborhoods,” 384-386.

¹⁴⁷ *Ibid.*, 388.

users are gradually being priced out of. If the rezoning were to be approved as proposed in the current policy context, future mixed use in these areas would likely be limited to housing, retail, and offices.¹⁴⁸

As Joel Rast points out in his study of Milwaukee's industrial zoning, a city's decisions relating to variances and rezoning send a signal to existing property owners and tenants and to prospective developers and investors. If a city turns down an opportunity for new (nonindustrial) development in an industrially zoned area, it may be perceived as anti-development. If the city allows this project, the existing industrial firms may begin to doubt whether the area will remain industrial. This can create a self-fulfilling prophecy, whereby a city might decide that an industrial area is on the downturn, and therefore begin to permit a limited number of residential developments. In turn, property owners will begin to hold their land for speculation rather than keeping industrial tenants, while the tenants may be unwilling to invest in the expansion of their business.¹⁴⁹

Urban Design

Urban design interventions initiated by the city also play a major role in attracting and facilitating residential redevelopment to legacy industrial areas. Urban design can take a variety of scales, from large parks or stadiums requiring decades of planning, to painting sidewalk murals.

Parks and green space constitute a major component of urban design. Because disinvested industrial areas often have vacant lots and other large expanses of empty

¹⁴⁸ Ibid., 386.

¹⁴⁹ Rast, "Preserving Our Industrial Land: Industrial Zoning in Milwaukee, 1998-2011," 6-7.

space associated with piers and rails,¹⁵⁰ they offer many opportunities for developing a public park, trail, or recreation area. In many cases, such as Seattle’s Gaslands Park (Figure 3.7), park designs can retain industrial relics such as cranes, docks and piers to highlight a community’s industrial heritage and to create a unique aesthetic.¹⁵¹

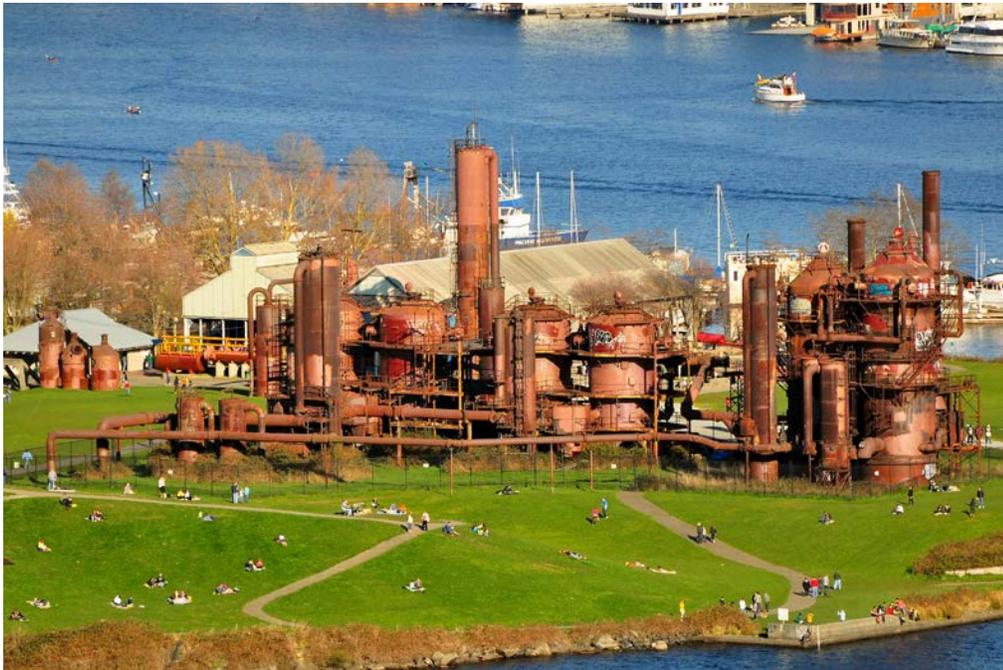


Figure 3.7 Gasworks Park in Seattle, which retained the industrial structures that remained on the site since its deindustrialization.

Source: Tony Cyphert, “Gasworks Park,” uploaded February 20, 2010 to Flickr, <https://www.flickr.com/photos/tony717/4374005717>.

¹⁵⁰ Kapp and Armstrong, *SynergiCity*, 30.

¹⁵¹ Berens, *Redeveloping Industrial Sites*, 247.

Many port areas and other surface transportation-related properties are publicly or quasi-publicly owned.¹⁵² This ownership pattern, in addition to the fact that parks do not typically offer a financial return, means that public entities often take charge in planning and constructing this type of urban amenity.¹⁵³ However, municipalities often in these parks and trails can in order to leverage private investment in the surrounding area. Therefore, a city's decision to redevelop industrial facilities as parks can have a transformative effect that extends beyond the limits of the park by sparking private redevelopment projects. This was the case with the Highline Park in the formerly industrial neighborhood of Chelsea in Manhattan.¹⁵⁴

Industrial activity dominated many urban waterfronts, and roads and rail lines cut them off from the rest of the city.¹⁵⁵ However, once these areas deindustrialized, the concept of waterfront green space began to gain credence among the public and planners, and some cities have committed to "reopening" their formerly industrial waterfronts.¹⁵⁶

Many other urban design tactics are far less expensive and can be implemented relatively quickly in comparison to creating a new park. Developers and municipalities may view the aesthetic conditions of the sidewalks and streets in industrial areas as

¹⁵² Dalton, *Physical Infrastructure*, 5.

¹⁵³ Berens, *Redeveloping Industrial Sites*, 229.

¹⁵⁴ *Ibid.*, 70.

¹⁵⁵ Spector, "From Dockyard to Esplanade: Leveraging Industrial Heritage in Waterfront Redevelopment," 10.

¹⁵⁶ Berens, *Redeveloping Industrial Sites*, 258.

unwelcoming to pedestrians. Therefore, streetscaping is a popular municipal urban design tactic. Streetscaping consists of the installation of features to improve the aesthetic experience and comfort levels for those using the streets and sidewalks. These features commonly include landscaping, street furniture such as benches and trashcans, decorative paving, public art, and bicycle locks. In order to shape the design of the privately-owned building facades that front on the public sidewalk, municipalities can use a design review process to encourage or require developers to design their ground floor facades and signage at a pedestrian-scale, with large display windows for commercial businesses, and welcoming, accessible pedestrian entranceways.¹⁵⁷

Downtown Durham, North Carolina, consists of many former tobacco factories and warehouses, many of which sat vacant for years. Over the past decade, the municipal government has welcomed the adaptive reuse of these industrial buildings to contemporary ‘highest and best uses,’ such as offices for design and technology firms. One of their major tactics to shift their downtown to new land uses has been urban design measures. The city’s 2008 Downtown Master Plan indicates that they have invested millions of dollars in streetscape improvements for areas around disused industrial buildings.¹⁵⁸ These streetscaping initiatives indicates the city’s interest in making the area more appealing for a new set of users, namely people walking, relaxing, eating, drinking, and shopping in the downtown. Through the addition of benches, landscaping and wayfinding signs, the city has altered the sense of place of

¹⁵⁷ Philip Habib and Associates, “Greenpoint-Williamsburg Rezoning EIS” (New York: New York City Department of City Planning, 2004); Ewing and Clemente, *Measuring Urban Design*.

¹⁵⁸ Development Concepts, Inc., “Downtown Durham Master Plan.” 7.

what were once industrial areas in order to welcome and plan for the new uses that are moving into the former industrial buildings.

Strategy Type 3: Striking a Balance

The final strategy type presented in this chapter involves striking a balance between existing industrial uses and land uses brought by new development. This strategy is often the most politically palatable to elected officials, as it does not appear to be anti-manufacturing jobs or anti-growth. However, maintaining this balance can be extremely difficult and may require more enforcement than anticipated. If given the choice, property owners, developers and investors will shift to residential and mixed uses because these uses offer the highest potential profit. Once these uses become more prevalent in a “balanced” district, industrial uses will experience increasing opposition from the more recent uses as the balance tips the street usage away from industrial activities towards pedestrian uses.¹⁵⁹

It was noted in the introduction to the first strategy type that industrial retention strategies are usually not citywide policies, but are instead targeted to particular areas. That may also be considered ‘striking a balance.’ However, the difference between the first strategy type and the present one lies in their scope. Striking a balance refers to policies intended to harmonize existing and new uses within a specific area. Industrial retention, on the other hand, seeks to protect rather than dilute the industrial character of a particular area, although it may be pursuing other strategies in other parts of the city.

¹⁵⁹ Chapple, “Incomplete Streets, Complete Regions: In Search of an Equitable Scale,” 292.

This strategy type is highly relevant to Washington Avenue because of its high proportion of existing businesses, which would be displaced by a course of action that plans primarily for new uses. Additionally, with the new commercial businesses that have appeared under the current zoning, West Washington Avenue’s current business mix does seem to strike a balance between light industrial and commercial, although the I-2 zoning prohibits residential uses. This situation has arisen over many years of deindustrialization, during which the variety of light industries expanded to include smaller-scale commercial uses.

Innovation Districts

Earlier in this chapter, defensive districting was presented as an industrial retention tactic, and rezoning as a tactic for the strategy of planning for new uses in legacy industrial areas. Cities can also use zoning and special use districts to promote a land use balance that preserves industrial uses while allowing a greater variety of new uses. These types of districts are often categorized as “Innovation Districts,” due to the logic underlying them that the intermingling of commercial and industrial uses would produce creative synergies.¹⁶⁰

In 2006, New York City created an Innovation District designation known as Industrial Business Zones (IBZs). The IBZ designation was not a formal rezoning measure. Instead, it provided assurance the areas designated as IBZs would not be rezoned to residential, and that nonindustrial development proposals in these areas would undergo careful scrutiny to consider their compatibility with the existing Production-Distribution-Repair (PDR) firms. The city designated 16 areas as IBZs

¹⁶⁰ Friedman, Byron, and Becker, “Making Room for Housing and Jobs,” 10.

when the program began, and added five more in 2013.¹⁶¹ However, urban planning researchers at the Pratt Center for Community Development found that the IBZs were largely unsuccessful in preserving industrial uses, due to building owners' preference to redevelop their land for higher rent uses (Figure 3.8). The fact that most industrial firms rented rather than owned their buildings made industrial land uses especially vulnerable to displacement. They recommend that the IBZs be redesignated as Industrial Employment Districts (IEDs), which would provide additional protections to the industrial uses by banning or requiring special use permits for many nonindustrial uses. They also recommend that the city codify the IED into the zoning code “so that landowners and businesses have the assurance of relative permanence.”¹⁶²

¹⁶¹ Ibid., 8.

¹⁶² Ibid., 10.

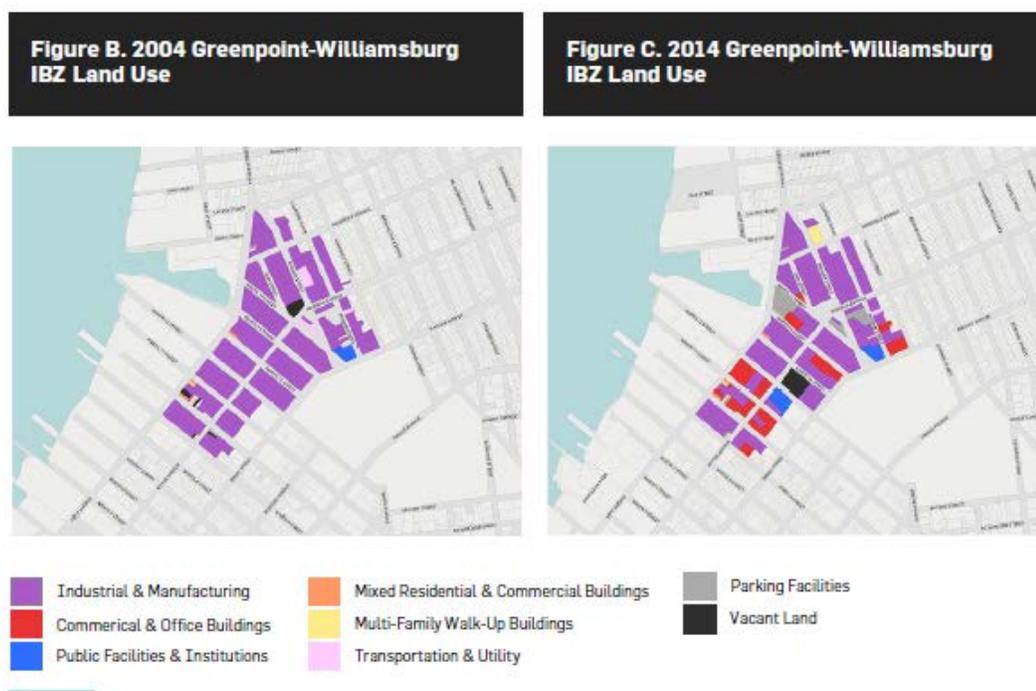


Figure 3.8 Land use changes in Greenpoint-Williamsburg IBZ, Brooklyn, from 2004 to 2014.

Source: Friedman et al., “Making Room for Housing and Jobs,” 8.

Other studies have shown that urban industrial districts are attracting new types of industry today, which may be more compatible with dense, mixed use development. These industries are generally small-scale, independent, new, and artisanal in their production methods. Like existing light industrial uses, these new industries benefit from the large buildings, freight transportation options, and access to supplier networks and customer bases. Additionally, because these small industries are generally independent startups, affordable rent is essential to their existence. Curran points to the high number of artisan manufacturers and industries catering to young urban professionals that have survived in the rapidly gentrifying, formerly industrial

Williamsburg neighborhood. In particular, breweries, coffee roasters, ethnic food production facilities, and artisan wood and metal working companies, have found a ready clientele among Williamsburg's changing demographics.¹⁶³

Manufacturers and sellers of construction supplies and furniture can experience a boost from residential and mixed use redevelopment if contractors buy supplies from them, although this may not be a long-term source of revenue. For instance, a Washington Avenue business manager noted that he had experienced an increase in door and window sales from contractors building new housing in Point Breeze and Graduate Hospital. However, he believed that this new source of revenue would end once the majority of infill projects in Graduate Hospital and Point Breeze had been completed.¹⁶⁴ However, if additional residential development occurs on West Washington Avenue, and Ivan Roofing is able to remain in their current location despite increasing property taxes,¹⁶⁵ these sales can become a longer-term boost.

In addition to artisan manufacturing, technology-related industrial activities are relatively compatible with dense, mixed use urban areas because their products may be low- or no volume. People working in the tech industry also value urban locations,

¹⁶³ Winifred Curran, "In Defense of Old Industrial Spaces: Manufacturing, Creativity and Innovation in Williamsburg, Brooklyn," *International Journal of Urban and Regional Research* 34, no. 4 (December 1, 2010): 871–85, doi:10.1111/j.1468-2427.2010.00915.x, 873.

¹⁶⁴ Mike, Interview with Mike, manager of Ivan Roofing and Siding Supply, Phone, April 28, 2016.

¹⁶⁵ Mike commented that his taxes had increased on the scale of \$800 to \$6000 in recent years. His business, Ivan Roofing, rents their building (2100 Washington Avenue). City of Philadelphia property data (<http://property.phila.gov/>) indicates that the assessed value of this property more than doubled from 2013 to 2014, and the value of taxable improvements went up ten-fold. However, these changes coincide with the modification of the formula used to assess property values in Philadelphia (Stephen N. Huntington, "Updated Primer on Philadelphia Real Estate Taxes" [Philadelphia, PA: Center City Residents' Association, April 8, 2013], http://www.centercityresidents.org/page-1599927#_ftnref1.)

which was encouraged some tech companies and startups to reuse large, disused factories and warehouses in legacy urban industrial areas.

Tech industries and ‘Eds and Meds’ industry can also catalyze enough economic activity as to recreate a viable market for other industrial activities. Often, these are more ‘modern’ industries, such as technology, industrial design, renewable energy, and research and development. While small former industrial cities such as Cleveland have struggled to recover from deindustrialization and population loss, Pittsburgh’s has been aided in its redevelopment by ‘Eds and Meds’ economic activity provided by the several major universities in the Pittsburgh area.¹⁶⁶ The ‘Eds and Meds’ and technology jobs provided by these institutions are highly effective in attracting a young professional demographic, which can spur redevelopment, especially in centrally-located urban areas. Pittsburgh has also benefitted from leadership committed to diversifying the economy¹⁶⁷ and sustaining urban industry. The city views these strategies as important for keeping the local job market afloat beyond the current shale gas boom.¹⁶⁸ Carter also notes that, “While manufacturing declined steadily in the Pittsburgh [Metropolitan Statistical Area], the manufacturing that has remained is fueled by research and development from Carnegie Mellon University and the University of Pittsburgh.”¹⁶⁹ In 1996, the “Strategic Investment Fund” was created through a partnership of corporations and foundations, to provide

¹⁶⁶ Mallach, “The View from the United States,” 19.

¹⁶⁷ Donald K. Carter, *Remaking Post-Industrial Cities: Lessons from North America and Europe* (Routledge, 2016), 112.

¹⁶⁸ *Ibid.*, 118-119.

¹⁶⁹ *Ibid.*, 111.

loans to projects that reuse former industrial sites for technology development, and invest in the core.¹⁷⁰

The former tobacco powerhouse of Durham has similarly benefitted from being home to Duke University, and being located near to two other major universities in the larger city of Raleigh and the smaller city of Chapel Hill. Because of the concentration of research talent that these universities have drawn, the region now called the Research Triangle, after Research Triangle Park (RTP), which lies between the three cities. In addition to RTP, the cities themselves have increased their populations and tax base by attracting new firms and young professionals.¹⁷¹ In the last two decades, Durham's economic revival has led to the redevelopment of former industrial buildings for housing and office space for technology and design firms in the downtown core. Raleigh's downtown Warehouse District is also undergoing redevelopment pressure and parcel-by-parcel rezoning to allow for high-density residential and office construction, much like the pattern on West Washington Avenue West.¹⁷²

¹⁷⁰ Ibid., 112-113.

¹⁷¹ Christopher M. Cirillo, "Birth of an Idea: The Creation of Research Triangle Park and Its Sustained Economic Impact on the Research Triangle Area" (Durham, North Carolina: Duke University, 2013), <https://sites.duke.edu/urbaneconomics/?p=899>.

¹⁷² Development Concepts, Inc., "Downtown Durham Master Plan," 14; Paul A. Specht, "Kane Realty Project Could Transform Downtown Raleigh's Warehouse District," *News & Observer* (Raleigh, North Carolina), July 5, 2015; Amanda Hoyle, "Kane Approved for Big Building Project in Downtown Raleigh," *Triangle Business Journal*, September 1, 2015, <http://www.bizjournals.com/triangle/blog/real-estate/2015/09/kane-approved-the-dillon-downtown-raleigh-nc.html>.

Micro-Businesses

Municipal governments interested in retaining existing industrial and light industrial uses while also spurring new development have also looked to the option of micro-businesses. Micro-businesses are very small commercial spaces (sometimes as small as 150 square feet) that provide space for small startup businesses that are not yet able to afford the cost of a typical commercial business. Micro-businesses can provide a stepping-stone for these companies to promote their name and fine-tune their operations before they move to a traditional storefront. Because of their small size, several micro-businesses can cluster in the same amount of space traditionally considered necessary for a single business. A large lot in a postindustrial area can host an even greater number, while a vacant lot or side lot could provide shared outdoor seating for a series of micro-restaurants.

For instance, a former car dealership building in Northeast Portland was redeveloped into a pod of micro-restaurant spaces ranging from 500 to 15,000 square feet. Rechristened ‘the Ocean’, roll-up multi-pane wooden windows replaced many of the dealership building’s garage doors (Figure 3.9). The spaces cost more than a food truck but less than a traditionally sized restaurant. They also cost less per square foot than similarly sized food preparation spaces located elsewhere in the city. The building is located on a high-traffic avenue lined with parking lots and one-story buildings, with warehouses and residential areas on adjacent blocks, like Washington Avenue. Neighboring businesses include a pawnshop, furniture stores and other car dealerships.¹⁷³

¹⁷³ Michael Russell, “Diving into Northeast Portland Micro Restaurant Pod The Ocean,” *The Oregonian/Oregon Live*, November 9, 2012.



Figure 3.9 Portion of “The Ocean” Micro-restaurant development. Restaurant tenants adapted garage door openings as windows and doors. Some window panels can be rolled up like garage doors.

Source: Brian Libby, *Portland Architecture*, November 15, 2012, <http://chatterbox.typepad.com/portlandarchitecture/2012/11/15/>.

A retail example of this type of initiative is Salt Lake City’s Granary Row, a seasonal popup marketplace where retailers can rent shipping containers equipped to serve as small shops (Figure 3.10). The concept grew out of a community charrette held in 2012, where business owners and residents of the neighborhood expressed their desire for the neighborhood to retain the “grit” deriving from its industrial land uses. The neighborhood viewed an outdoor market of micro-businesses housed in shipping containers as a new use that would be compatible with the industrial grit. The Granary District is composed of very wide streets and very long blocks. A midblock vacant lot was chosen for Granary Row so that it could break up one of these long

blocks.¹⁷⁴ The marketplace initially received half of its funding from the city, but it transitioned to entirely private sponsorship in its second season.¹⁷⁵



Figure 3.10 Pop-up shop made out of shipping containers at Granary Row, Salt Lake City.

Source: Katie David, "Granary Row: Shipping Container Pop-up Market Jump Starts Industrial Neighborhood in Salt Lake City," *Inhabitat*, July 31, 2013, <http://inhabitat.com/granary-row-shipping-container-pop-up-market-jump-starts-industrial-neighborhood-in-salt-lake-city/>.

¹⁷⁴ Kathy Stephenson, "Salt Lake's Granary Row Street Festival Returns," *Salt Lake Tribune*, June 8, 2015.

¹⁷⁵ Isaac Riddle, "Granary Row Returns for 2015 Season," *Building Salt Lake*, May 28, 2015, <http://www.buildingsaltlake.com/granary-row-2015-season-opens-next-week/>.

Much of West Washington Avenue's existing fabric would be suitable for a micro-business initiative. Strip mall-style parking lots and empty lots currently used to store construction supplies could host food trucks or other popup businesses, while the one-story buildings could be split into smaller spaces (some of the building owners have already carved out very small spaces to be rented to additional tenants). Like the Ocean, the price per square foot would be lower than for spaces on established small restaurant rows. Although a comparatively large space, the highly successful pizzeria/bakery that opened on West Washington Avenue in 2013 offers a model for this type of initiative, as it occupies a section of a larger building and has retained the former windowless cement façade as its storefront (as seen in Figure 2.15).

A Toolbox of Tactics

Cities that decide in favor of one of the strategies presented in this chapter (or more than one for different deindustrialized areas) will typically explore and implement several different tactics. They may also pursue different strategies for different areas of the city. Cities choose between different tactics in the name of different goals and strategies, and the impact of these tactics on the area's sense of place, shape the opportunity for subsequent tactics to advance specific goals. It is important for cities to reflect on their goals and strategies and carefully plan their management approach. Philadelphia's West Washington Avenue is no exception to this advice, and the next chapter explores several scenarios for the corridor as a whole, as well as for specific buildings or blocks. The scenarios are based on potential tactics that the city may employ to manage the redevelopment to advance planning goals.

Chapter 4

SCENARIOS

Building on the discussion of stakeholder goals in Chapter Two and planning strategies in Chapter Three, this chapter presents potential scenarios for the near-term future of West Washington Avenue's sense of place, given the outcomes of tactics that city is likely to employ. These scenarios are based on an analysis of actions that have so far been proposed to, or explored by, the city. This analysis is structured around different components of the Avenue's sense of place, with connections drawn between them where appropriate. In the course of this chapter, some of the scenarios will also include the surrounding neighborhoods of Point Breeze and Graduate Hospital. Additionally, this chapter explores scenarios for specific blocks and buildings for which there is enough differentiating information to forecast a more detailed scenario.

Overall, the scenarios presented in this chapter illustrate a future West Washington Avenue with a radically different streetscape in terms of both the streets and sidewalks, and the buildings next to them. While the residential presence will increase significantly and will mostly occur in the form of new, higher-rise construction, some of the existing businesses and land uses will remain, permitting a diverse land use mix but one that is oriented towards the interests of a residential neighborhood. A large number of the buildings will be new construction, due to the fact that they low-lying existing building stock is unsuitable for high-density residential use. However, a few of the more architecturally interesting or industrial chic buildings, such as the Chocolate Factory, are likely to be adaptively reused. Although these buildings are taller than the average building on today's Washington Avenue, they will be smaller than the newly constructed buildings and thus they will

serve as a reminder of the former, smaller scale physical character of the Avenue. Finally, the city will focus on making the streets and sidewalks more hospitable to pedestrians and cyclists, which will restrict the movement of forklifts and delivery trucks, thereby changing the usage patterns of the shared public spaces. However, the wide cartway and sidewalks create a distinct landscape in comparison to the surrounding residential blocks. Therefore, although West Washington Avenue will look remarkably different in terms of both its building stock and the users and uses of the streets and sidewalks, it will hold onto to some key aspects of its imageability and industrial heritage.

This chapter proceeds through two interrelated discussions of West Washington Avenue's sense of place. First, scenarios are presented for the land use mix, scale, and density that may result from the introduction of residential redevelopment. The addition of residential land use will affect the viability of other land uses, both existing and new. Land use mix is an important determinant of urban spaces' sense of place because land uses dictate certain forms and usage patterns of the built fabric, and vice-versa. Also covered in this section are considerations of building facades, based on development proposals that have received some or all of the required approvals.

The second major section looks at urban form and fabric relating to the realm of public space on Washington Avenue; that is, the streets and sidewalks. This clearly relates to the preceding discussion of land use mix, as land uses interact with public spaces. However, this chapter treats urban form and fabric as a separate topic because the agents of change differ: whereas land use mix is a result of the agency of the city,

developers, investors, entrepreneurs and business owners, cities largely decide the form of public spaces, though not without input of other stakeholders.

Land Use Mix

As seen in prior descriptions of Washington Avenue's current conditions, its land use mix is a major determinant of its physical character, due to the special requirements of the light industrial uses, e.g., garage doors, forklifts, one-story buildings, and outdoor storage. Additionally, given the weight and volume of their merchandise, construction supply stores rely on vehicles—either their own delivery trucks or customers' personal vehicles—to carry out sales transactions. Therefore, convenient parking and loading areas form an important feature for these businesses.

Increased residential density will affect the future commercial land use mix in a number of respects. First, there will be a larger customer base for commercial businesses. Residential density is increasing and will continue to increase because the recent residential development in Point Breeze and Graduate Hospital is providing more dwelling units per lot than the existing housing stock (Figure 4.1). Along with the residential construction on Washington Avenue, the resultant increased population density can sustain some existing businesses and support additional commercial businesses.



Figure 4.1 A south-facing view of the future site of Carpenter Green, with a block of newly constructed, multi-unit houses in the background.
Source: Photograph by author, November 8, 2016.

Higher local residential numbers will bring more foot traffic to Washington Avenue, thereby making neighborhood-serving small businesses more viable on the Avenue. The types of businesses that have most recently opened on Washington Avenue, such as the takeout pizzeria/ bakery, the sit-down restaurant (Figure 4.2), and the gyms, reflect this shift in the land uses considered most viable for West Washington Avenue. It should be noted that these businesses could also serve the employees of the light industrial businesses. In particular, the manager of the pizzeria/bakery explained that her business was a very popular lunch destination for people who worked on the Avenue.¹⁷⁶ In turn, the increased residential density will

¹⁷⁶ Joy, Interview with Ms. Vicky Joy, manager of Kermit's Bake Shoppe.

create challenges for light industrial businesses, especially those that receive frequent deliveries from large trucks. Their operations will be constrained by the increasing number of pedestrians and greater competition with residents for parking spaces.



Figure 4.2 The sit down restaurant that opened in part of the makerspace on West Washington Avenue. The restaurant offers two two-seat outdoor tables.
Source: Photograph by author, November 8, 2016.

It is clear from these general observations that the rezoning of parcels on Washington Avenue from I-2 to Industrial Commercial Mixed Use (ICMX), Industrial Residential Mixed Use (IRMX), and Community Commercial Mixed Use (CMX-3), and the subsequent introduction of residential development, will have an impact on the non-residential land uses. The number of new residential units and their rental rates is relevant to this cause and effect relationship. The next two sections examine the two processes that alter the land use mix: succession (i.e. the disappearance of existing

businesses and the appearance of new businesses and spaces for businesses, and retention (i.e., the survival of existing businesses).

Introduction of Residential Uses

Two mixed use residential projects on Washington Avenue have recently received approvals of SOSNA and the Civic Design Review Committee, and the required zoning revisions from City Council (which is an alternative to seeking zoning variances from the ZBA). These approvals indicate that these projects can break ground, barring any heretofore-unvoiced objections. One of these projects is Lincoln Square, whose developers plan to adaptively reuse the nineteenth-century train shed on the north side of the lot for a grocery store tenant, thereby helping to preserve a piece of Washington Avenue's railroad-oriented industrial heritage and providing a neighborhood amenity to two residential neighborhoods that do not have easy access to a full-service grocery store. Lincoln Square is being built at Broad and Washington, which is the eastern end of West Washington Avenue. The site is also across Washington Avenue from the condominiums in the National Register-listed Marine Corps Depot. This condominium building's pedestrian entrance is on Washington Avenue; it only introduced vehicular entrances on Washington Avenue. In contrast, the mixed use Lincoln Square building will have pedestrian entrances to both residential and retail on Washington Avenue, thereby increasing the likelihood for conflict between pedestrians and light industrial activities on Washington Avenue.

The second project is at the western end of Washington Avenue, extending from 25th Street to Grays Ferry Avenue. It includes a five-story sixty-four-unit apartment building, as well as two duplexes and seventeen single-family townhouses. It proposes two retail entrances on Washington Avenue, entrances to the duplexes on

Grays Ferry Avenue, and a pedestrian entrance to the multi-unit building's lobby on 25th Street. An internal driveway from Grays Ferry to 25th Street will also be constructed, to provide access to pedestrian and garage access for each townhouse and open parking for the multi-unit building. The driveway is also equipped with sidewalks for pedestrian access to the townhouses and to two green spaces alongside the driveway. In reviewing the required Complete Streets Checklist submitted by the developers, the PCPC stated that this combination of internal driveway and sidewalks does not provide sufficient or safe enough space for pedestrians. However, the project is moving forward without significant modifications to address these concerns, likely because the physical constraints of the site make alternative layouts difficult.

Appendix C provides details and approval dates for these two projects, as well as two ZBA-approved mixed use projects at 1601 and 2401 Washington Avenue that have been appealed. Also included are 2118 and 1731 Washington Avenue. Both of these sites are owned by members of the Washington Avenue Property Owners Association who have operated businesses on Washington Avenue for decades, own multiple properties on Washington Avenue, and support the idea of a mixed use, pedestrian-oriented future for Washington Avenue. While only Lincoln Square and 2501 Washington Avenue are currently moving forward, these other projects provide a sense of the scale and land use mix of future development proposals.

Succession

The rent gap function, introduced in Chapter One, explains that redevelopment pressure arises in legacy industrial areas when there is a difference between the capitalized ground rent associated with low-rent uses and vacancies on the one hand, and the potential ground rent associated with the 'highest and best use' for the land, on

the other.¹⁷⁷ This redevelopment pressure will come from outside developers as well as some of the long-time property owners on Washington Avenue. These property owners are interested in capitalizing on the rent gap attached to their property, by either selling it to a developer or redeveloping it themselves.

As new zoning and land uses are introduced to individual properties on Washington Avenue, it will become more likely that the remaining parcels will be rezoned to accommodate redevelopment proposals, provided that the city does not decide to pursue a retention policy for some or all of the remaining blocks. With this increased assurance that the city will rezone additional parcels and that redevelopment interest will increase, their property values will also increase, even prior to redevelopment.

The increased property taxes will force some property owners to make changes in the use or ownership of their property. Options include restructuring their business operations to reduce expenses on labor and capital in order to have more to spend on property. Owners can also redevelop or sell their land for a higher rent use. Finally, property owners who rent to business tenants can try to pass on the increased property costs to their tenants by raising rents. Tenants who cannot afford the increased rent will be displaced. Likewise, displacement occurs in cases where property owners are forced for financial reasons to sell their property.

In processes of urban development, displacement is frequently associated with processes of gentrification. Scholars have debated the definition of gentrification for decades. This discussion employs the concept employed by urban geographers Mark

¹⁷⁷ Lees, Slater, and Wyly, *Gentrification*, 50-55.

Davidson and Loretta Lees, “that the defining characteristics of contemporary gentrification should include in the widest sense: (1) reinvestment of capital; (2) social upgrading of locale by incoming high-income groups; (3) landscape change; and (4) direct or indirect displacement of low-income groups.”¹⁷⁸

Since the late 1980s, multiple scholars such as geographers Neil Smith and Caroline Mills have extended the concept of gentrification to processes of neighborhood change that differ from the earliest definition’s criteria.¹⁷⁹ The earliest application of the term was to the buying and renovating of older housing stock by new owners with greater capital than existing residents have. This drives up property values throughout the neighborhood, making homes less affordable for existing residents. It has been expanded in terms of the types of property towards which reinvestment is directed, the land uses of those properties, the socioeconomic characteristics of existing and new residents, and the economic, political and cultural causes and effects.¹⁸⁰ Recognizing that the term gentrification applies to a wider variety of circumstances than its original usage, it is important to consider two types of gentrification that are particularly relevant to residential redevelopment of legacy industrial areas. These are commercial gentrification and new build gentrification, and they are both potential scenarios for Washington Avenue.

¹⁷⁸ Mark Davidson and Loretta Lees, “New-Build ‘Gentrification’ and London’s Riverside Renaissance,” *Environment and Planning A* 37 (2005): 1165–90, doi:10.1068/a3739., 1170.

¹⁷⁹ Mark Davidson and Loretta Lees, “New-Build Gentrification: Its Histories, Trajectories, and Critical Geographies,” *Population, Space and Place* 16, no. 5 (September 1, 2010): 395–411, doi:10.1002/psp.584, 395-396.

¹⁸⁰ Davidson and Lees, “New-Build ‘Gentrification’ and London’s Riverside Renaissance.” 1165-1168.

The commercial redevelopment that has already occurred on Washington Avenue suggests a trend towards commercial gentrification. Commercial gentrification occurs through the alteration of an area's commercial mix to meet the shopping demands of a population other than the long-time occupants of the surrounding neighborhood.¹⁸¹ This demand can come from new neighborhood residents or people visiting the commercial area from elsewhere. This shift often raises commercial property values enough to displace long-established businesses that catered to existing residents.¹⁸²

In her research on commercial gentrification in Williamsburg and Harlem, Zukin outlines the shifting prospects for three types of businesses as commercial gentrification occurs: "strong growth in 'new entrepreneurial' retail capital (boutiques); a notable increase in 'corporate' retail capital (chain stores), especially in Harlem; and deep decline in old, 'local' retail stores."¹⁸³ While Zukin speaks specifically about retail stores and boutiques, a similar process is likely to occur on West Washington Avenue, though there is still very little retail presence on the Avenue. Just as the 'new entrepreneurial' boutiques catered to the young white in-movers to Harlem and Williamsburg, West Washington Avenue's gyms and restaurants have appeared in response to the market created by more recent residents of Point Breeze and Graduate Hospital.

¹⁸¹ Sharon Zukin, "Consuming Authenticity," *Cultural Studies* 22, no. 5 (September 1, 2008): 724–48, doi:10.1080/09502380802245985, 731.

¹⁸² Sharon Zukin et al., "New Retail Capital and Neighborhood Change: Boutiques and Gentrification in New York City," *City & Community* 8, no. 1 (March 1, 2009): 47–64, doi:10.1111/j.1540-6040.2009.01269.x, 49.

¹⁸³ *Ibid.*, 58.

Additionally, the category of arts-related functions, such as studios and galleries is relevant to industrial areas, as Zukin has discussed elsewhere.¹⁸⁴ On West Washington Avenue, the makerspace is the only land use that is arts-related. Because the one-story buildings are largely occupied, there was little space for arts functions like there was on the upper floors of SoHo's multistory buildings. Furthermore, the residential and mixed use development proposals are also not offering space for artistic activities.

West Washington Avenue differs from Zukin's examples because most of its long-term light industrial and commercial uses served a market that extended beyond the nearby neighborhoods. Customers also included contractors arriving in vehicles from a variety of places. Therefore, a significant demographic change in the surrounding neighborhoods will not necessarily destroy the customer bases of the construction supply stores. However, displacement of some businesses will nonetheless occur due to rising rents and increasing conflicts over public space (more pedestrians and cyclists, less parking). Displacement will occur in tandem with the establishment of new businesses eager to take advantage of low property values and the changing residential density and demographics of the area.¹⁸⁵

In turn, as rents continue to rise, chain stores that can pay higher rents than the local entrepreneurial businesses and art spaces will displace those land uses. Figure 4.3, created by Zukin, demonstrates the land use succession for SoHo between 1980 and 2005. In 1980, when artists had begun to move into the neighborhood,

¹⁸⁴ Zukin, "Consuming Authenticity."

¹⁸⁵ Zukin et al., "New Retail Capital and Neighborhood Change," 58.

manufacturing constituted the plurality of businesses at 44 percent. The second largest category was for art-related functions, at 31 percent. There were no chain stores. By 2005, the business mix consisted of 52 percent chain stores, versus 25 percent locally owned businesses and two percent manufacturing businesses.¹⁸⁶

¹⁸⁶ Zukin, "Consuming Authenticity," 732-734.

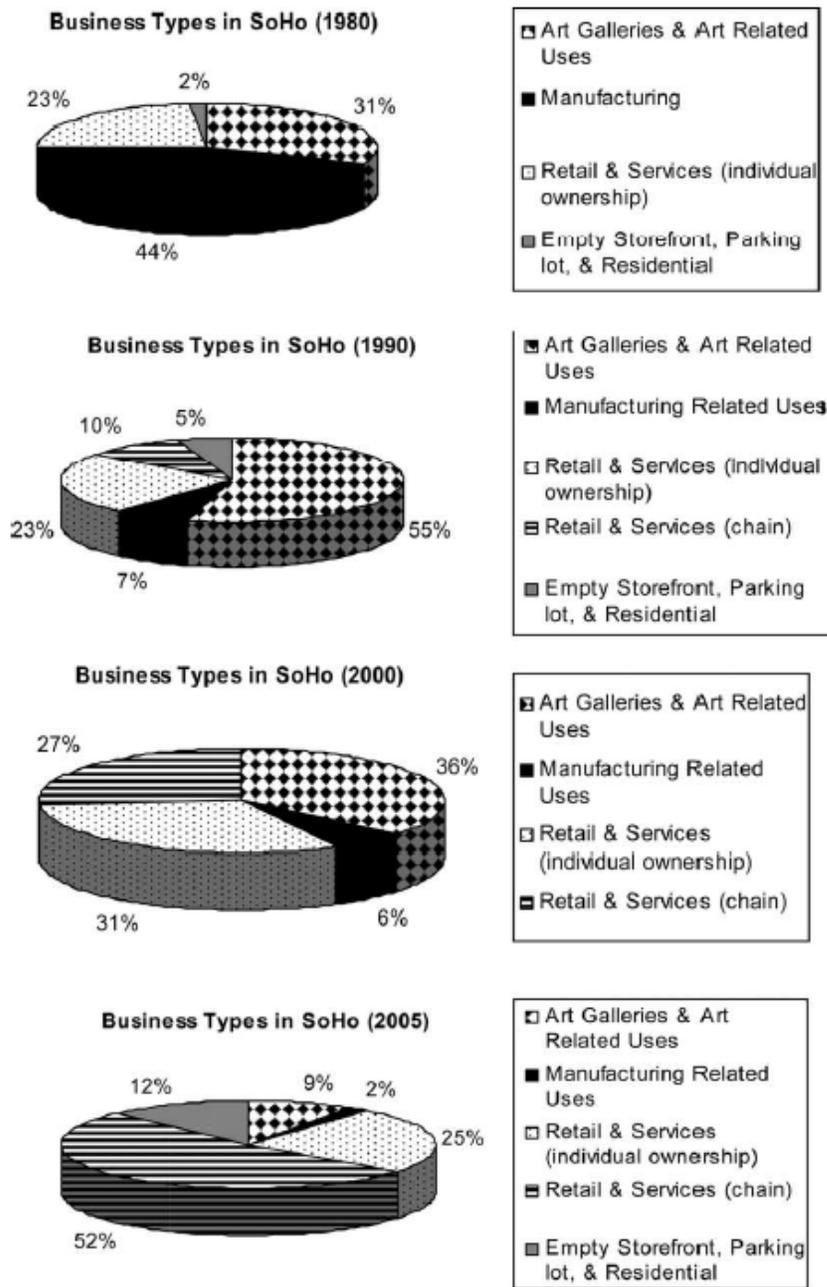


Figure 4.3 “SoHo storefronts by year.”
 Source: Sharon Zukin, “Consuming Authenticity,” *Cultural Studies* 22(5), 733.

In addition to commercial gentrification, the concept of ‘new build gentrification’ means that Washington Avenue’s redevelopment has implications for residential gentrification. New build gentrification differs from traditional gentrification in that it does not entail the removal or renovation of existing houses. Instead, real estate developers redevelop vacant or nonresidential land as dwelling units that are more expensive than the houses found nearby. Therefore, new build gentrification is highly relevant to nearly all cases of residential redevelopment of underused industrial areas.

As discussed by Davidson and Lees, the process of new build gentrification can result in one or more of three types of displacement, one of which is a direct form of displacement and two that are indirect. First, when new residential units appear on previously nonresidential land, they spur investment and economic development in the surrounding neighborhoods, thereby raising property values and rents in these neighborhoods. Some of the existing occupants may no longer be able to afford the increased property taxes and rents, which may result in direct displacement. For instance, Figure 4.4 shows the change in price per square foot in each neighborhood in Brooklyn, before and after the mass rezoning from industrial to mixed use in 2005. Greenpoint is the neighborhood farthest to the north, which experienced a 47 percent increase in price. Williamsburg is immediately below it, showing a 174 percent increase. Second, indirect 'exclusionary displacement' can occur if people living in the surrounding residential areas, or with similar incomes as the surrounding areas, cannot afford to live in the newly constructed housing. Finally, everyday displacement occurs

when the large population influx into the new houses diminishes the sense of ownership that adjacent residential communities feel about their neighborhood.¹⁸⁷

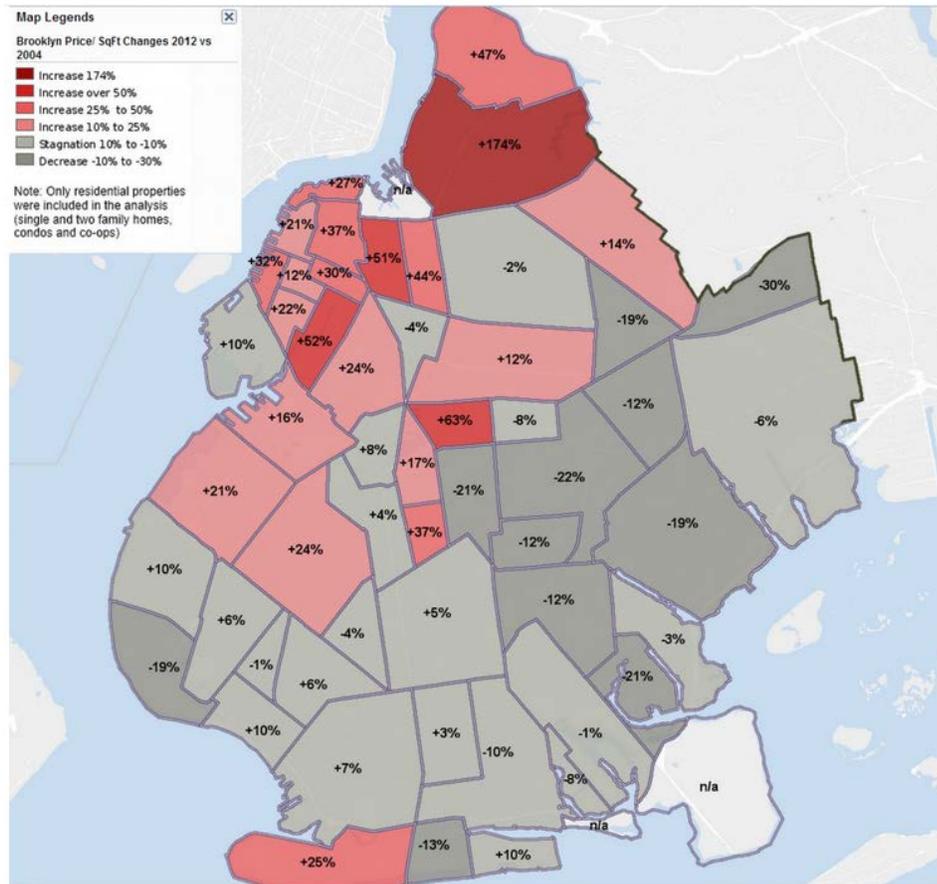


Figure 4.4 Map of Brooklyn neighborhoods, showing change in price per square foot for houses, from 2004 to 2012.

Source: City Limits, “Brooklyn Gentrification Map: Increase, Decrease in Home Values 2004 vs. 2012,” January 3, 2013, <http://visual.ly/brooklyn-gentrification-map-increase-decrease-home-values-2004-vs-2012>.

¹⁸⁷ Davidson and Lees, “New-Build Gentrification,” 398.

All three of these forms of displacement are possible scenarios for West Washington Avenue and its surrounding neighborhoods. In particular, residents of the lower-income Point Breeze neighborhood are likely to experience exclusionary displacement from the new residential construction on the Avenue. As for the other two types of displacement, it will be difficult to determine the extent to which redevelopment of Washington Avenue contributes to this displacement, versus the ongoing redevelopment of the neighborhoods themselves. For instance, in the ten census block groups adjacent to West Washington Avenue, the median household income for the ten block groups has increased by 42 percent between 2000 and 2014.^{188, 189} The number of residential units has increased¹⁹⁰ and the proportion of vacant units has decreased between 2000 and 2010.¹⁹¹

The non-light industrial businesses that have appeared on Washington Avenue in the last five years indicate a trend of commercial gentrification, although the services they offer may benefit the employees of light industrial firms as well as residents. Restaurants and bars are likely components of the business mix because they will find a ready customer base among the new residents on Washington Avenue, and in the predominantly residential neighborhoods of Point Breeze and Graduate

¹⁸⁸ United States Census Bureau, “P053: Median Household Income in 1999,” 2000 Census; United States Census Bureau, “B19013: Median Household Income in the Past 12 Months (in 2014 Inflation Adjusted Dollars),” 2010-2014 American Community Survey 5-Year Estimates. All dollars adjusted to 2014 dollars.

¹⁸⁹ In contrast to the general increase in income, the median household income for two block groups on the south side of Washington Avenue decreased by 19 percent and 43 percent.

¹⁹⁰ United States Census Bureau, “H001: Housing Units,” 2000 Census; United States Census Bureau, “H1: Housing Units,” 2010 Census.

¹⁹¹ United States Census Bureau, “H005: Vacancy Status,” 2000 Census; United States Census Bureau, “H5: Vacancy Status,” 2010 Census.

Hospital. Because ICMX and IRMX both permit artisan industry, it is also likely that artist- and maker-oriented businesses similar to the makerspace will appear; for instance, a kitchen incubator or a ceramics center. However, additional makerspaces are less likely to appear because this demand has already been met, at least partially.

Eating and drinking establishments and higher-end retail and artisan industry are a likely future scenario for Washington Avenue, based on an analysis of Washington Avenue's current trajectory and a comparison to the examples from other cities discussed in the previous chapter. Further evidence that there will be more eating and drinking establishments in Washington Avenue's near future stems from the fact that a sit-down restaurant has opened in the last three years. Although restaurants are not permitted by I-2 zoning,¹⁹² it seems that this restaurant has been permitted because it is an accessory use within the makerspace on 20th and Washington Avenue. Additionally, the developers of Lincoln Square stated that the grocery store they have planned for the nineteenth-century train shed may include a café, and they are designing some of the additional retail spaces for a restaurant and a coffee shop.¹⁹³ Based on redevelopment patterns that have occurred in other legacy industrial areas, and the details of proposals for Washington Avenue, it is likely that there will be an increased number of dine-in eating and drinking establishments. The current accessory-use restaurant even has two small sidewalk tables, which currently look quite out of place and therefore have little impact on the overall landscape of the Avenue (Figure 4.5). However, additional restaurants and bars will bring more

¹⁹² Philadelphia City Planning Commission, "City of Philadelphia Zoning Code Quick Reference Guide" (Philadelphia, September 2012), 13.

¹⁹³ Lincoln Square Property, L.P., "Public Presentation: Lincoln Square."

outdoor seating and more diners using the outdoor seating. In addition to outdoor dining tables, the large windows, evening foot traffic, increasing number of bicycles locked on poles on the Avenue will all reshape West Washington Avenue's light industrial sense of place.

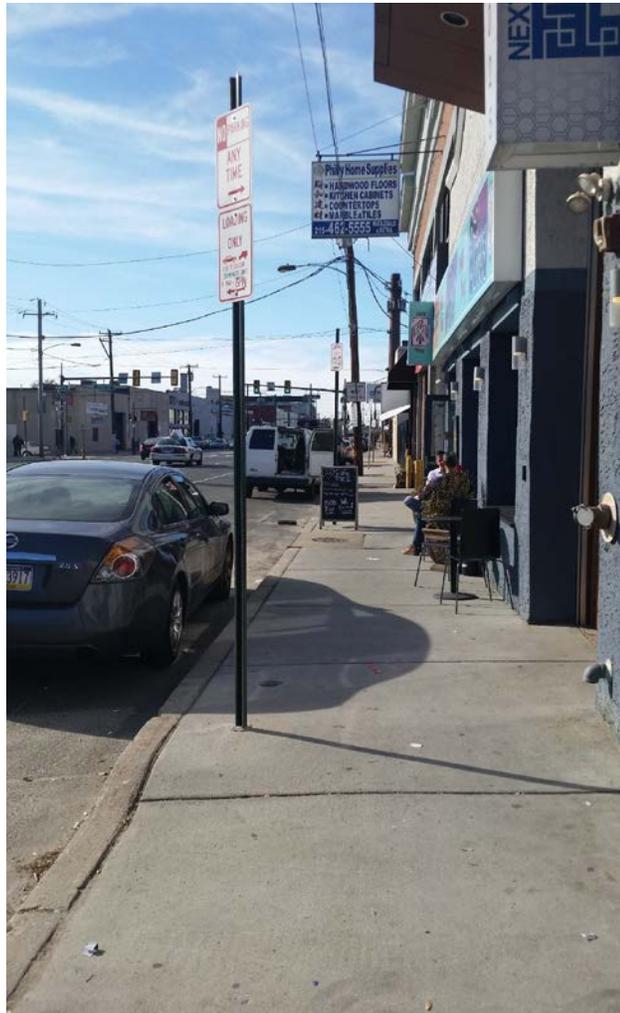


Figure 4.5 Outdoor dining tables in front of the restaurant connected to the makerspace on West Washington Avenue.
Source: Photograph by author, November 8, 2016.

Retention

Given the strength of residential redevelopment pressure, it will be difficult for many of the existing businesses on Washington Avenue to remain there. However, it is unlikely that all of them will want to or be forced to leave, given the Avenue's high occupancy rate and the investments that some property owners have made in their spaces.¹⁹⁴ Survival will depend on a business's compatibility with the more recently introduced residential and neighborhood-servicing commercial uses, and with the real estate that is available. The real estate must be compatible with the light industrial businesses' needs and capacities, and therefore needs to meet certain requirements in terms of the price of land, requirements for floor area, ceiling heights, loading and staging zones, and noise and vibration levels.

The development proposals have so far been for adaptive reuse or new construction on vacant lots, rather than demolition (with the exception of the removal of one warehouse on Grays Ferry Avenue, which lies on the proposed site for the approved project at 2501 Washington Avenue). Therefore, these will not displace existing businesses. However, they will raise property values to the point that some of the light industrial uses are no longer viable. This will create a snowball effect as an increasing number of current property owners seek to sell or redevelop their properties, and as more outside developers follow in the tracks of the property groups developing the two approved projects.

The residential development proposals have all included at least some commercial space on their ground floor. It is possible that some of the existing light

¹⁹⁴ Donatucci, Interview with Mr. Thomas Donatucci, President of Washington Avenue Property Owners Association.

industrial uses will move into this ground floor space if the property owner demolishes their current space or if they are otherwise displaced. If the IRMX zoning designation does offer a density bonus for projects that dedicate a percentage of their floor area to industrial uses, as is stated in the South District Plan, this will incentivize some developers to provide space for certain PDR uses. Additionally, current property owners who decide to redevelop their properties as higher-rent mixed use buildings may want to retain their existing light industrial tenants. For instance, the bakery/pizzeria that opened in 2013 is located in a leased windowless, one-story box, which the property owner may wish to demolish and redevelop at a higher density. However, the bakery has quickly become a neighborhood favorite among residents and Washington Avenue employees, so it is likely to be welcomed in a new space, should its current location be demolished or refurbished.

Many of Washington Avenue's existing light industrial businesses are low-impact enough that they could occupy this new first floor commercial space, if the spaces met their requirements for floor area, ceiling heights, and loading zone requirements. The businesses that could remain would have to be compatible with the demands for parking spaces, sidewalk access, and noise and vibration levels that would come with the residential presence. Of Washington Avenue's existing businesses, the most compatible are the home remodeling showrooms, gyms, the makerspace, and food services. An even greater variety of the existing businesses could use the new spaces if the ground floor layout provides loading and unloading zones that minimized conflict with the increased residential and pedestrian presence.

Adaptive Reuse

The developers of Lincoln Square have ensured the continued presence of the nineteenth-century train shed on the eastern edge of West Washington Avenue through their proposal to repurpose it as a grocery store. Figures 1.2 depicts its current appearance, while Figures 4.6 and 4.7 show renderings of the design approved by Philadelphia's Civic Design Review Committee in November 2016. These images demonstrate that its distinct monitor roof and the brick arches around the windows and doors on one of its gable ends will continue to contribute to the industrial heritage of Washington Avenue. Additionally, the exterior of the new construction residential building will be clad in grey metal panels, chosen by the architects to harmonize with Washington Avenue's industrial history.¹⁹⁵

¹⁹⁵ Melissa Romero, "Lincoln Square Renderings, Video Released ahead of Civic Design Review," *Curbed Philadelphia*, October 20, 2016, <http://philly.curbed.com/2016/10/20/13344200/lincoln-square-renderings-civic-design-review>.



Figure 4.6 Rendering of main entrance to grocery store proposed for historic train shed.
Source: Kelly/Maiello Architects and Planners, November 1, 2016 Civic Design Review Presentation.



Figure 4.7 Rendering of rear of proposed grocery store at Lincoln Square, with proposed mixed use building in background.
Source: BLT Architects, November 1, 2016 Civic Design Review Presentation.

At the corner of 22nd and Washington Avenue (2118 Washington Avenue), there is another high-ceiling brick building with a monitor roof. It was constructed before 1981, and building permits suggest that its construction began in 1968. The

building owner contracted a real estate marketing company to create a mockup of the building adaptively reused as a beer hall. Selected pages from the marketing brochure created by the marketing company are provided in Appendix B. The first page presents renderings of the building renovated as a beer hall. The exterior rendering exposes the building's brick walls and uncovers the clerestory windows in the monitor roof. The interior rendering, on the cover of the brochure, shows that the ceiling's metal truss system is left exposed. There are also photographs of the building's current interior and exterior appearance. This property is still for sale, and the owner admitted that he no longer thinks that a beer hall would be the best use for the building. However, when he or a future owner does redevelop the building, the proposed design will likely retain or restore these features because they create an industrial chic aesthetic.

The Chocolate Factory building has also been previously proposed for adaptive reuse, though there are currently no concrete plans. The late Tran Dinh Truong, property developer and owner of the Alphonse Hotel Corporation based in New York City, was the first person to take an interest in redeveloping the Frankford Chocolate Factory after its 2006 closure. Tran bought the former factory in February 2007 for \$5.75 million.¹⁹⁶ He hired Philadelphia architectural firm Campbell Thomas & Co. to design a plan to redevelop the factory building as a mixed use space oriented towards West Washington Avenue. The firm specializes in adaptive reuse of historic buildings, and Jim Campbell, the firm's principal, had ties with the Graduate Hospital

¹⁹⁶ GroJLart, "Zophar, Tran, And The Chocolate Factory."

neighborhood.¹⁹⁷ The project was to include retail, storage, up to 15 restaurants catering to the local Vietnamese community, and up to 50 residential units Tran intended to call the development the New Vietnamese Center, and in the meantime, he hung a large banner with his face on the side of the building facing Washington Avenue.¹⁹⁸

The Philadelphia Zoning Board of Adjustments (ZBA) rejected this proposal in 2009. This rejection was likely due to the size of the project, which many neighbors opposed, especially those living on Kimball Street, the small street directly behind the building. In 2012, Tran submitted a scaled-down proposal that included only 30 residential units in addition to other modifications. Figures 4.8 and 4.9 show the façade and a cross-section of the revised project. The ZBA approved this proposal, but Tran passed away a few months later, and the building once again sat in limbo.¹⁹⁹ In November 2015, a real estate development company based outside of Philadelphia purchased the property for \$7.8 million.²⁰⁰ The new developers also plan to pursue a mixed use project, but have not provided details.

¹⁹⁷ Thompson, “Renderings.”

¹⁹⁸ GroJLart, “Zophar, Tran, And The Chocolate Factory.”

¹⁹⁹ Ibid.

²⁰⁰ Jacob Adelman, “Frankford Chocolate Factory Site Sold to Developers,” *The Philadelphia Inquirer*, November 10, 2015.



2101 WASHINGTON AVENUE

CT & C ARCHITECTURE, PLANNING, COMMUNITY AND TRANSPORTATION DESIGN
Copyright 2010 Campbell Thomas & Co., Inc. All Rights Reserved.

CAMPBELL THOMAS & CO., 1504 SOUTH STREET, PHILADELPHIA, PA. 19146

SKYLINE VIEW Scale: Date: 11/24/2010 2:36:00 PM

Figure 4.8 Façade of proposed redevelopment of Chocolate Factory building. *Source:* Campbell Thomas & Co., “2101 Washington Avenue,” November 24, 2010.

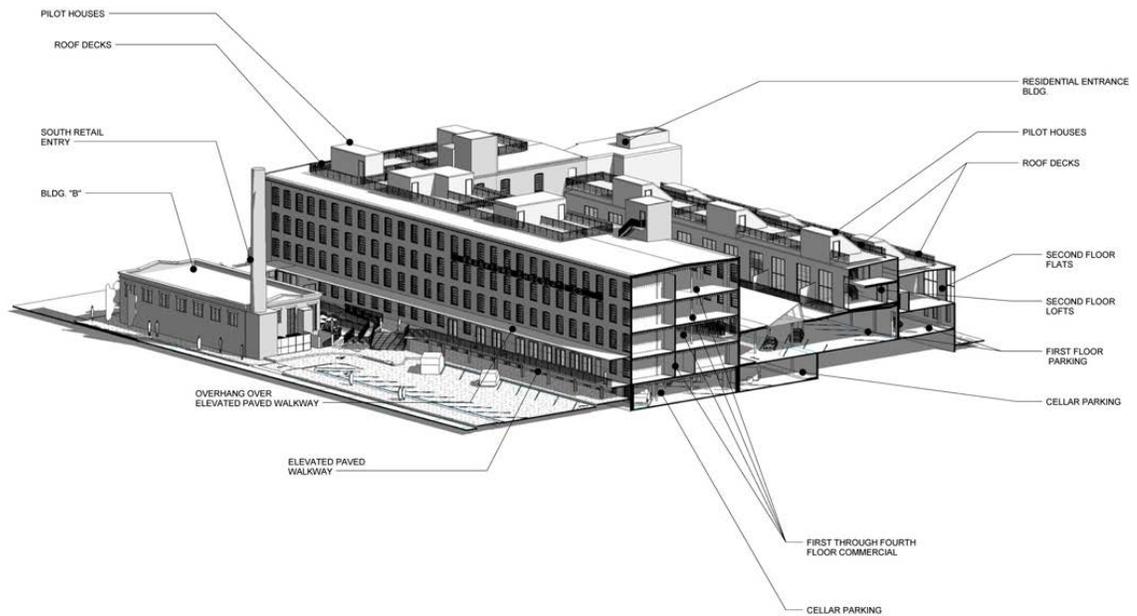


Figure 4.9 Cross-Section of proposed redevelopment of Chocolate Factory building. *Source:* Campbell Thomas & Co., No Date.

Tran and Campbell Thomas & Co. seem to have recognized the value of the Chocolate Factory’s industrial chic architecture because both of their proposals were for adaptive reuse. The factory is the most intact and arguably the most attractive industrial building on West Washington Avenue. Therefore, a private developer can more easily capitalize on its industrial heritage than they could for many of the other buildings on West Washington Avenue. Furthermore, Thompson points out that because the community accepted the adaptive reuse plans proposed by Campbell & Thomas Co., stakeholders have come to expect the building to remain. Neighbors are likely to oppose a proposal to build a taller building in place of the factory, especially those living on narrow Kimball Street immediately behind the building (Figure 2.10). In order to profit from the construction of a new building at the same size, the developer would seek to build only luxury condominiums. This route would also meet resistance from the community due to its impact on neighborhood affordability. Therefore, although the present owners have not released any designs, it is highly likely that they will preserve the building because the neighborhood and the city have already approved this course of action.²⁰¹

Public Space

Production-Distribution-Repair (PDR) businesses offer services that are better oriented to customers arriving in personal vehicles, than to pedestrians. Additionally, PDR districts offer little pedestrian-scale visual interest, because businesses usually lack window displays, and the main entrances to buildings are often designed for trucks and forklifts. With these garage doors come curb cuts in the sidewalk to allow

²⁰¹ Thompson, “Renderings.”

vehicles to pass over the sidewalk. Therefore, curb cuts tend to fragment the sidewalk as a pedestrian space. The wide streets often found in industrial areas also make pedestrian crossings less comfortable. These features indicate that the way that PDR land uses occupy the public and purportedly multi-modal travel ways around them is a major determinant of their sense of place.

This section elaborates on some of the common physical characteristics of legacy industrial areas that manifest in public space, and presents scenarios for how the usage and physical appearance of this public space is likely to change with the introduction of residential and mixed use development.

Streetscape

The current streetscape of Washington Avenue lacks many of the features considered essential to the design of inviting, pedestrian-friendly spaces. One-story garages, windowless warehouses, parking lots, outdoor storage areas, and vacant parcels border the sidewalks. Business owners use the open lots for outdoor storage of construction supplies, such as wood, bricks, and countertops. These land uses do not offer visual interest in the traditional sense of quaint Main Street storefronts. Furthermore, the parking lots and outdoor storage areas detract from a sense of enclosure for those on the sidewalks, which urban design researchers consider a pedestrian-friendly feature.²⁰²

However, Washington Avenue also offers some inherent advantages for streetscaping initiatives. For instance, the sidewalk on the south side of the Avenue is twelve feet wide. This spacious sidewalk has been useful for accommodating trucks

²⁰² Ewing and Clemente, *Measuring Urban Design*, 6-9, 104-114.

and forklifts moving through garage doors. The width of this sidewalk is also a significant potential pedestrian amenity because it provides space for benches, tables and landscaping. The sidewalk on the north side is eight feet wide, offering less room for these additions.²⁰³ Nonetheless, the city is likely to use this sidewalk space to pursue a streetscape program that creates a cohesive identity for the Avenue. Already, the public BigBelly trashcans in Point Breeze and on the south side of Washington Avenue are wrapped in matching designs, which creates a visual unification and serves as a reminder that the neighborhood is a single community, and a destination (Figure 4.10). Local businesses in Graduate Hospital, including the Washington Avenue Property Owners Association (WAPOA), have designed wrappers for BigBelly trashcans in the Graduate Hospital (Figures 4.11 and 4.12). Their colorful designs also create a unifying theme. As Washington Avenue shifts to new uses, the city is likely to consider creating a visual identity for Washington Avenue itself, which could include street pole banners and public benches, as well as trashcans. Though the precise design decisions are impossible to predict, it is likely that Philadelphia, like Durham, will fund streetscape improvements, either to signal to developers that the area is ready for residential land uses, or to make the area more comfortable for the residents when they arrive.

²⁰³ However, the northern sidewalk's adjacency with the higher-income, young professional Graduate Hospital neighborhood will likely counterbalance the constraints of the narrower sidewalk.



Figure 4.10 A public trashcan with wrapper advertising the Point Breeze neighborhood, on the southeast corner of Washington Avenue and 19th Street. *Source:* Photograph by author, November 8, 2016.



Figure 4.11 A set of BigBelly trash cans on the outside of Donatucci's Kitchens, Baths and Appliances, on the northwest corner of Washington Avenue and 19th Street. The receptacles advertise both the Washington Avenue Property Owners Association, and Ferguson Plumbing, which is located across the street on the northeast corner of the intersection.

Source: Photograph by author, November 8, 2016.



Figure 4.12 Another set of trashcans wrapped in a design advertising a yoga studio in Graduate Hospital.

Source: Photograph by author, November 8, 2016.

Washington Avenue's sense of place offers another potential asset, in that it constitutes an imageable node in Philadelphia. It has distinct physical features such as the one- and two-story buildings that make up its walls and the immediate skyline, and spatial relations, such as the wide cartway and sidewalks. Its intensity of light industrial uses created distinct shapes, such as the garage doors and outdoor storage items, such as the stone slabs in Figure 4.13. Finally, there are clear boundaries between it and the residential neighborhoods of Point Breeze and Graduate Hospital. According to urban design researchers Ewing and Clemente, imageability helps make a place enjoyable and memorable for pedestrians.²⁰⁴ In this sense, Washington

²⁰⁴ Ewing and Clemente, *Measuring Urban Design*, 5-6, 114-119.

Avenue's imageability is an asset. If this quality is retained during redevelopment, it will be an important feature of Washington Avenue streetscape.

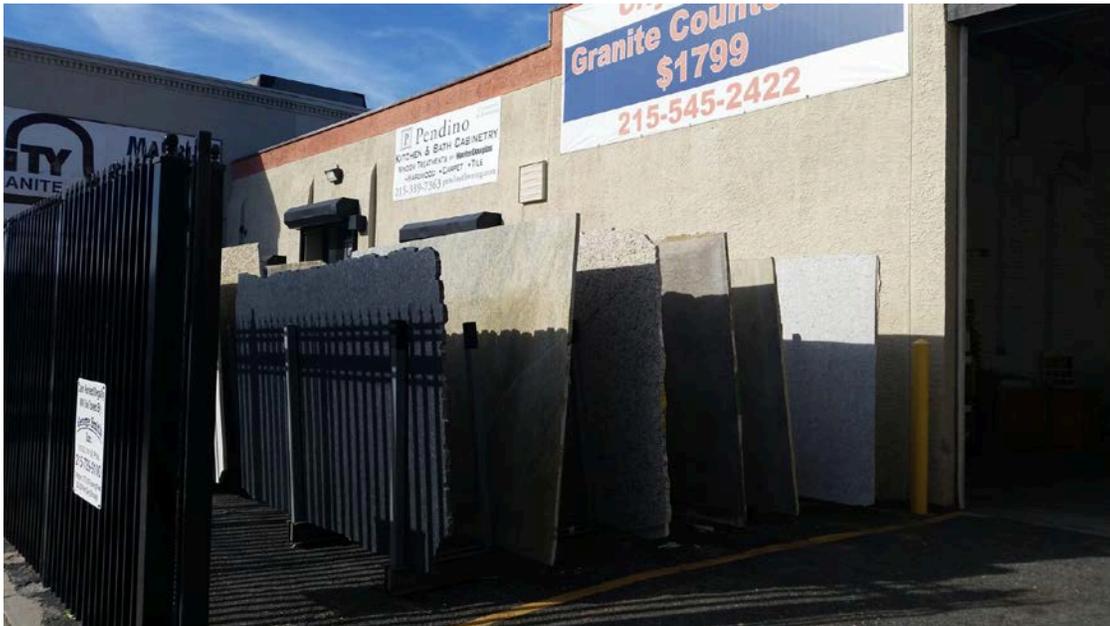


Figure 4.13 Stone countertop slabs being stored in front of a Washington Avenue construction supply business. The building's setback, and the use of the front space for outdoor storage/display, contributes to West Washington Avenue's imageability. *Source:* Photograph by author, November 8, 2016.

Thoroughfare Design

Transportation infrastructure in former industrial areas was built to handle a large volume of shipments to and from the local industrial firms. Because this infrastructure was designed at a very high capacity for a highly active industrial area, the legacy urban industrial areas of today underuse this infrastructure. However, the high capacity of roads and other transportation networks is appealing to developers who hope their projects will bring a higher traffic volume back into the area. For

instance, Detroit’s railways, ports and roads are a major asset for redevelopment.²⁰⁵ Washington Avenue is a wide street because it used to accommodate up to six rail lines as well as numerous railroad sidings. The tracks were paved over in the 1990s, and the roadway now consists of two traffic lanes in each direction, a two-way left turn lane between them, and parallel parking on both sides of the Avenue. Broad Street, one of Philadelphia’s most important arterial streets, divides West Washington Avenue from the eastern portion. To the west, it ends at Grays Ferry Avenue, an active industrial corridor. It is also conveniently located to Interstate 76 to the northwest and Interstate 95 to the east.

In 2014, the Delaware Valley Regional Planning Commission (DVPRC, the metropolitan planning organization for the Philadelphia region) released the Washington Avenue Traffic and Parking Study. According to the study, Washington Avenue’s Average Annual Daily Traffic (AADT) volume is low in comparison to “similarly scaled streets,” as shown in Table 4.1, adapted from the study. The report also found that during peak periods, the Traffic Level of Service (LOS) for most of West Washington Avenue is A or B. LOS levels A and B are uncommon in urban areas, where large numbers of drivers and frequent stops inhibit the flow of traffic.²⁰⁶ Therefore, the numbers suggest that the Avenue’s traffic lanes have excess capacity. On the other hand, the study found that parking demand exceeded supply, which led to

²⁰⁵ Ben Austen, “The Post-Post-Apocalyptic Detroit,” *The New York Times*, July 11, 2014.

²⁰⁶ Kittleson and Associates, Inc., “Washington Avenue Transportation and Parking Study Community Meeting” (Philadelphia, March 11, 2014), 7-8.

double parking, parking and loading/unloading in the median, and angled and ninety-degree head-in parking in areas designated for parallel parking.²⁰⁷

Table 4.1 Average Annual Daily Traffic (AADT) for Washington Avenue and “Similarly Scaled” arterials.

Source: Kittleson and Associates, Inc., “Washington Avenue Transportation and Parking Study Community Meeting” (Philadelphia, March 11, 2014), 8.

Street	AADT	Number of Lanes
Washington Avenue	9,800	4 + 2-way left turn lane
Oregon Avenue	15,000	4 + 2-way left turn lane
S. Broad Street	22,000	4
Passyunk Avenue	12,000	2

The study recommended restriping West Washington Avenue to address these issues. Specifically, the study authors recommended reducing the traffic lanes to one lane in each direction, and using the freed-up space for angled parking and five-foot-wide bike lanes on either side of the Avenue (Figure 4.14), with dedicated space for loading zones and passenger-pickup zones for the public bus that runs down Washington Avenue to drop off and pick up passengers.²⁰⁸ The report also recommends installing bike boxes at some intersections. Bike boxes provide space for cyclists in front of vehicles while they are waiting at traffic lights to complete a two-part left turn (Figure 4.15).²⁰⁹

²⁰⁷ Ibid., 10-11.

²⁰⁸ Ibid., 23, 27.

²⁰⁹ Ibid., 29.

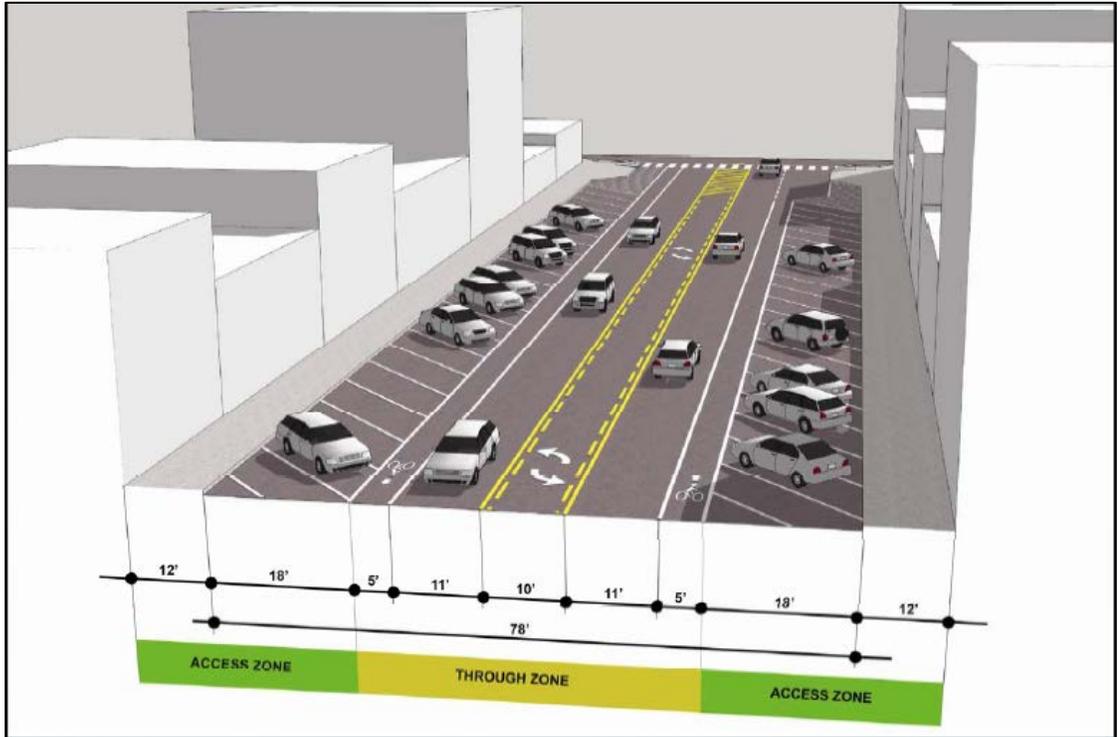


Figure 4.14 Recommended restriping plan for West Washington Avenue and a portion of East Washington Avenue.

Source: Kittleson and Associates, Inc., "Washington Avenue Transportation and Parking Study Community Meeting" (Philadelphia, March 11, 2014), 23.



Figure 4.15 Bike box on 18th Street and Washington Avenue.
Source: Photograph by author, November 8, 2016

Many of the businesses that receive regular deliveries find cyclists to be a nuisance and think that Washington Avenue is not (and by extension, should not have to be) a safe space for bikers. Washington Avenue already has bike lanes in both travel directions. However, the lane markings have faded to the point of invisibility in many places, and sand and gravel from construction supply stores obscure the markings in some places (Figure 4.16). Personal vehicles and delivery trucks often block portions of the bike lane, forcing cyclists to move out into traffic.²¹⁰

²¹⁰ Michael Baker Jr. Inc. et al., “South of South Walkability Plan,” 8.

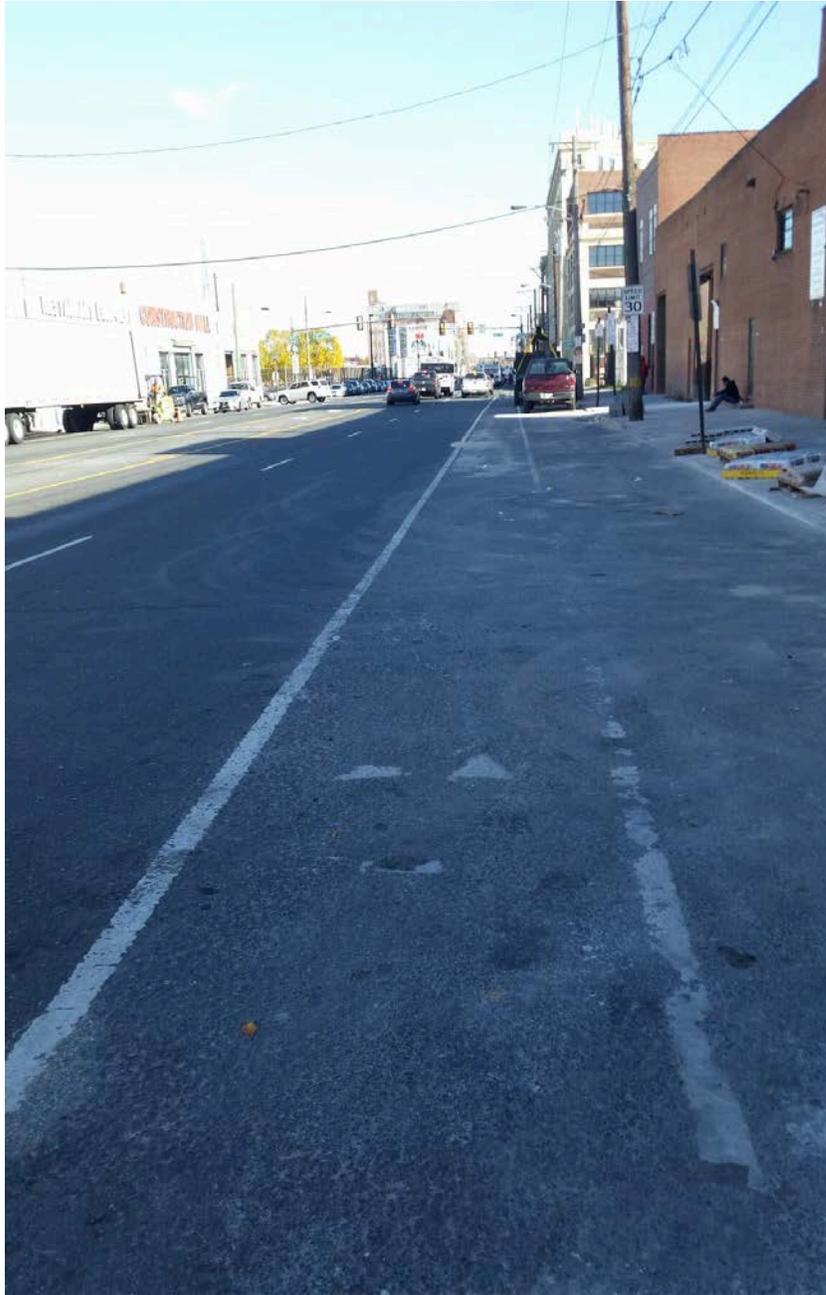


Figure 4.16 Faded eastbound bicycle lane on Washington Avenue. The outer edge, to the left, was repainted in 2016, while the rest of the repainting has been delayed pending further decisions on the restriping of Washington Avenue.
Source: Photograph by author, November 8, 2016.

Additional bicycle infrastructure is important for South Philadelphia. The 2015 South District Plan reports that the district has very little infrastructure despite the fact that seven percent of district residents use bicycles as their primary means of transportation, and that close to 20 percent of the population in some census tracts ride their bike to work, which is among the highest rates in the country.²¹¹ Therefore, many other stakeholders are advocating for more clearly marked lanes and parking regulations that would forestall vehicles from blocking the bike lanes. The Philadelphia Bicycle Coalition, the South of South Neighborhood Association (SOSNA), and the council member whose district includes West Washington Avenue, have advocated for safer bike lanes on Washington Avenue. The Avenue is due to be repainted, and Philadelphia’s Streets Department, the department in charge of maintaining the streets and sidewalks, will likely be tasked with altering the lane markings to reflect many of the recommendations in the Traffic and Parking Study funded by the DVRPC. These factors strongly suggest that there will be a clearly marked five-foot-wide bike lane on the whole of Washington Avenue in the future.

From Implications to Recommendations

This chapter predicted that the introduction and densification of residential development on West Washington Avenue will bring restaurants and neighborhood-serving retail establishments to the ground floors of the mixed use buildings that have and will continue to be proposed, thereby changing the land use mix. The physical appearance of public spaces will also change as the city responds to current traffic issues and new users on the streets and sidewalks. These changes in the land use and

²¹¹ Philadelphia City Planning Commission, “South District Plan,” 16, 72.

the design of public space will pull Washington Avenue away from its current sense of place that results from the light industrial uses. However, due to the current high business occupancy rates and marketability of industrial chic, Washington Avenue will retain some of its distinct and memorable physical characteristics, which contribute to its imageability. This chapter described scenarios for several components of West Washington Avenue's land use future. It is difficult to determine how the various scenarios presented here might interact and affect one another. However, it is highly likely that the addition of entrances to residential buildings and neighborhood-serving retail and restaurant establishments will increase the number of pedestrians and cyclists, and that the cartway restriping and restrictions on light industrial loading and unloading activities will make the Avenue's sidewalks and cartway safer and more inviting for those pedestrians and cyclists. In this way, these two processes—the land uses that will occupy the private indoor spaces, and the way that the public outdoor spaces will be used—are mutually reinforcing. Both of these sets of outcomes will have a significant impact on the Avenue's sense of place, although this sense of place will remain distinct from that found in the surrounding neighborhoods.

The following chapter concludes the thesis by providing recommendations applicable to the actions of the PCPC and other city agencies involved with the land use and planning decisions for Washington Avenue. These recommendations are more specific than the scenarios presented in this chapter. In some cases, the recommendations reinforce aspects of the likely scenarios presented in this chapter. In other cases, they depart from the most likely scenario to an outcome that the previous chapters have indicated will better serve both the existing and future community members of the Washington Avenue area.

Chapter 5

CONCLUSION

This chapter reflects on West Washington Avenue's potential to respond to various stakeholders and recommends actions and programs that Philadelphia agencies such as the PCPC, the PIDC, the Department of Commerce, the Streets Department and the Mayor's Office on Transportation and Utilities can initiate or encourage. These recommendations are responses to the scenarios presented in the previous chapter, and include both broad, ongoing strategies and discrete actions.

This chapter also demonstrates how these recommendations were identified. Recommendations were assessed based on Chapter Two's analysis of general and Philadelphia-specific municipal planning goals and the goals of West Washington Avenue stakeholders, the outcomes of strategies and tactics employed elsewhere unpacked in Chapter 3, and considerations of the likely scenarios and their impacts on West Washington Avenue's sense of place in other cities analyzed in Chapter Four.

Some of the recommendations that follow depart more so than others from the current planning trajectories of both the city and private developers. However, West Washington Avenue is at a significant crossroads, and there is considerable room to maneuver- both in terms of the size of the Avenue and the range of possibilities-in responding to stakeholder goals. The next section introduces these recommendations are introduced with a review of those aspects of West Washington Avenue's planning context that can be considered to be in flux, where there are logical opportunities to implement recommendations as time goes on. The recommendations are followed by overviews of research limitations and fruitful directions for future research, and finally by some final thoughts that wrap up the analysis presented in this thesis.

Recommendations

The following recommendations have been selected based on the analysis yielded from the previous chapters, which established important goals and outcomes of actions to pursue those goals. In particular, the development proposals detailed in Appendix C, and their fit with the stakeholder goals presented in Chapter Two, were used to form recommendations that would benefit these stakeholders. They also represent the types of decisions and planning opportunities that will be presented to the city as it manages West Washington Avenue's redevelopment. Additionally, because the "WVA Overlay" that was also introduced in Chapter Two received broad-based support from residents and businesses, it has shaped the following recommendations.

The recommendations that follow are presented in four sections. However, they address a range of issues, including West Washington Avenue's building stock, land use mix, heritage, transportation planning and infrastructure, affordability, and the potential for redevelopment activity to yield public benefits.

Recommendation 1: Maintain Land Use Diversity

The Importance of Land Use Diversity

In cities with strong housing markets like Philadelphia, it is often unfeasible for the city to disallow higher density construction in certain low-density areas. The legacy industrial and Production-Distribution-Repair (PDR) districts in American cities are often underutilized in terms of the amount of space that is occupied by active businesses. They are therefore prime targets for higher density construction to meet development pressures.

West Washington Avenue fits this pattern. However, it is still home to numerous businesses, with vacancies limited to the western end of the Avenue. In 2009, the estimated industrial employment was over 450 employees.²¹² This number most likely has fallen since 2009, but West Washington Avenue's PDR businesses still offer numerous jobs. As discussed in Chapter Two, PDR jobs tend to pay living wages. Wage levels are higher than the service and retail jobs that are offered by typical commercial tenants of mixed use buildings, such as retail stores, cafes and restaurants. Additionally, Chapter Four demonstrated the contribution of the current land use mix to Washington Avenue's imageability, which expresses its industrial heritage and offers a visually distinct node within Philadelphia's street grid.

Washington Avenue's current light industrial businesses offer varying levels of compatibility with high-density residential uses and increased pedestrian and bicycle traffic. The light industrial uses that will remain compatible with a residential Washington Avenue are those that do not produce strong odors or high noise and vibration levels, and that do not require a high volume of delivery trucks throughout the day. Viable businesses include makerspaces, home remodeling showrooms, auto parts stores and construction supply shops with low delivery volumes, bakeries and commissary kitchens, small-scale manufacturing such as furniture and sign makers, as well as takeout restaurants and convenience stores that can serve both residents and employees.²¹³ West Washington Avenue has already been through land use shifts from heavy to light industry. These shifts have allowed for diverse land uses to

²¹² Philadelphia Industrial Development Corporation, "An Industrial Land Use and Market Strategy for the City of Philadelphia," 64.

²¹³ Curran, "In Defense of Old Industrial Spaces," 873.

coexist. It is hoped that this next major land use shift will allow that diversity to continue.

This thesis recommends that the city support opportunities to retain the current light industrial businesses on West Washington Avenue. Several specific measures are outlined below.

Recommended Actions to Maintain Land Use Diversity

- A. **Broad Participation in Development Proposal Review:** The involvement of existing business owners and residents in reviewing major development proposals will help to guide the city in supporting projects that are compatible with the existing land uses. Thus far, SOSNA has played a very active role in reviewing the design and scale of development proposals for Washington Avenue. Their review activity should be supplemented by the participation of business owners and Point Breeze residents. If the city is aware of residents' and businesses' concerns and preferences, and developers see that the city values these concerns, West Washington Avenue will have a better chance of maintaining a land use mix that is diverse and compatible with public concerns.
- B. **Placing Residential Entrances Off of West Washington Avenue:** In order to reduce conflict between PDR-related activity of forklifts and delivery trucks on the one hand, and pedestrians on the other, it is recommended that the city should encourage or require the placement of residential entrances to mixed use buildings on the residential streets adjacent to Washington Avenue, rather than on Washington Avenue. While residential entrances for pedestrians should be placed off the Avenue, entrances to off-street parking and service vehicle entrances should be located on West Washington Avenue. By steering pedestrians to the side

streets and vehicles to Washington Avenue, there will be fewer conflicts on both streets. Additionally, the small residential streets will only experience an increase in pedestrians, not vehicles.

The two development proposals that are currently on track to be constructed place retail and residential entrances on Washington Avenue, as well as Grays Ferry Avenue and Broad Street, which are also major streets. Service entrances are placed on narrower cross streets. This trend suggests that developers prefer to place residential entrances on Washington Avenue and the CDR Committee is accepting of this choice. Therefore, this recommendation may be overridden by other concerns. However, future redevelopment proposals that occur on blocks that have more PDR activities may warrant a reconsideration of this recommendation.

- C. Retain Cultural Diversity Imbued in Current Land Use Diversity: Hoa Binh Plaza is a strip mall of Vietnamese businesses that opened on the corner of 16th Street and Washington Avenue in the 1990s. It is set about 60 yards back from Washington Avenue and its businesses use 1601 Washington Avenue as their address. However, the owners of Hoa Binh Plaza do not own the front portion of the parking lot, adjacent to Washington Avenue (Figure 5.1). A mixed use project was proposed by developer Rory Scerri-Marion for the front parcel.²¹⁴ He received ZBA approval in 2014 to construct a five-story, thirty-five-unit residential building (see Appendix C for details on the proposed building). Figure 5.2 depicts

²¹⁴ Jared Brey, "Planning Commission Supports Apartment Complex at 16th and Washington.," *PlanPhilly*, December 10, 2013, <http://planphilly.com/articles/2013/12/10/planning-commission-supports-apartment-complex-at-16th-and-washington>.

the proposed floor plan, and Figure 5.3 depicts the proposed Washington Avenue elevation. The proposed building would block off the strip mall from Washington Avenue, both physically and visually, which would very likely reduce their business, perhaps to the point of closure.



Figure 5.1 Nam Son strip mall, northwest corner of Washington Avenue and 16th Streets, with parking area in front of stores.
Source: Photograph by author, September 12, 2016.

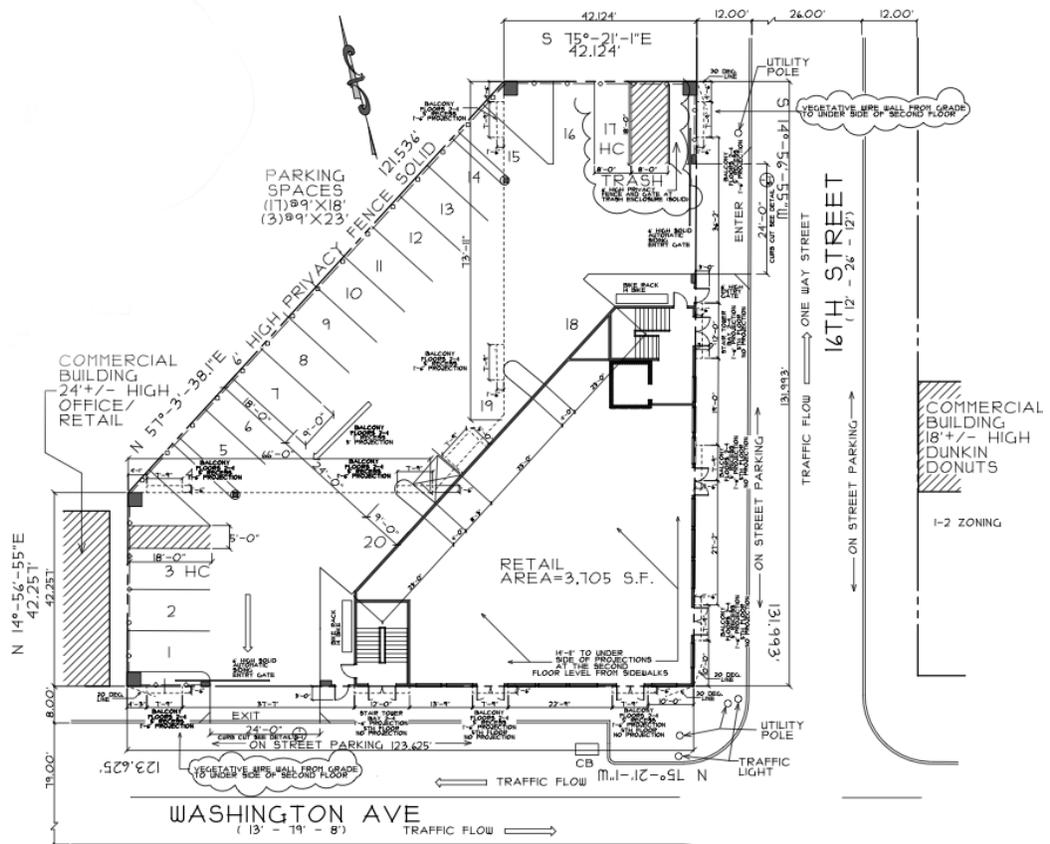


Figure 5.2 Site plan for proposed mixed use building at 1601 Washington Avenue.
 Source: Mr. Fox, "Some New Details on 1601 Washington Avenue. Also Pictures!,"
Naked Philly, August 23, 2013, <http://www.ocfrealty.com/naked-philly/graduate-hospital/some-new-details-1601-washington-avenue-also-pictures>



Figure 5.3 Washington Avenue elevation for proposed mixed use building at 1601 Washington Avenue.

Source: Mr. Fox, “Some New Details on 1601 Washington Avenue. Also Pictures!,” *Naked Philly*, August 23, 2013, <http://www.ocfrealty.com/naked-philly/graduate-hospital/some-new-details-1601-washington-avenue-also-pictures>.

Hoa Binh Plaza is an important component of Washington Avenue’s distinctive sense of place because it represents the diversity of the neighborhood and the entrepreneurialism of Vietnamese immigrants who have moved into the area in the last few decades.²¹⁵ Additionally, the small Vietnamese grocery in this strip mall provides specialty food products that the full-service chain grocery store that is part of the Lincoln Square development is unlikely to provide. Therefore, Hoa Binh Plaza’s businesses meet the needs

²¹⁵ Allyn Gaestel, “For Vietnamese Businesses, Washington Ave Is Little Saigon,” *Next City*, November 14, 2012, <https://nextcity.org/daily/entry/for-vietnamese-businesses-washington-ave-is-little-saigon>.

of a particular market, and contribute to a more diverse and interesting Washington Avenue.

The owners of the strip mall appealed the project's approval, which has so far prevented it from moving forward.²¹⁶ However, should a high-density project move forward on this site in the future, it is recommended that the owners of the two parcels work together to design the first floor as new space for the current tenants of the strip mall so that they will still be visible from Washington Avenue. Their current building, or the lot it is on, could then be reused to benefit the owners of both parcels.

Similar to the suggestion regarding residential entrances, this recommendation also seems unlikely to be implemented, given the planning decisions that have so far been made for West Washington Avenue. Additionally, the owner of the front lot has no obligation to the strip mall businesses, and would make a greater profit by renting commercial space to higher-rent commercial businesses, such as a sit-down bar and restaurant or a retail store.

Recommendation 2: Prioritize Adaptive Reuse and Preservation of Built Fabric that Embodies Industrial Heritage

A Promising Focus on Adaptive Reuse

The PCPC and other planning agencies should prioritize the adaptive reuse of Washington Avenue's industrial buildings whenever possible because many of these

²¹⁶ Brey, "Plans Shaping up for Apartment Complex at 24th and Washington."

buildings represent the history of what was once one of Philadelphia's most important industrial areas. The previous chapters discussed the planned adaptive reuse of the 1876 train shed as a grocery store and the potential adaptive reuse of the Chocolate Factory and the double-height warehouse across the street at 2118 Washington Avenue. The Chocolate Factory is the oldest and largest industrial building on Washington Avenue. Because it is a multistory brick building, it is an appealing site for residential redevelopment. Although it only has one story, the nineteenth-century train shed at Broad Street and Washington Avenue is being preserved and adaptively reused as a major neighborhood amenity. These are both distinctly industrial buildings that contribute to Washington Avenue's imageability. Moreover, they are both important components of Washington Avenue's industrial heritage. The Chocolate Factory was used by a succession of businesses representing a large range of the industrial activities that have occurred on Washington Avenue. The freight train shed represents the importance of rail for connecting Washington Avenue's industrial firms to the greater market of suppliers and buyers. Therefore, their proposed adaptive reuse is a promising sign for the preservation of the Avenue's industrial heritage.

The Chocolate Factory and the train shed are two of the more architecturally compelling historic buildings on Washington Avenue. For this reason, it is not surprising that they have been proposed for adaptive reuse. The following two sections recommend other aspects of West Washington Avenue's physical character and heritage that should be preserved.

Recommended Additional Adaptive Reuse and Preservation Opportunities

- A. Preservation of Urban Fabric as Heritage of Industrial Transportation: While industrial buildings are often the most prominent representations of urban

industrial history, this history is also conveyed in distinct physical patterns left after early buildings have disappeared, such as the width and distribution of streets and the subdivision of parcels. These physical and spatial features provide clues as to when an area underwent its periods of growth and decline. Areas that industrialized very early on may be oriented towards waterways rather than along rail lines, even if they were served by rail later on. Areas that deindustrialized later in the twentieth century had more time to transition from rail to truck infrastructure, and their curb cuts, garage doors and loading bays represent this transition phase in industrial history. By extension, contemporary PDR uses such as vehicle repair and distribution centers that make use of this freight truck infrastructure are part of a living industrial heritage. Therefore, although Washington Avenue's more recently constructed light industrial businesses may be less amenable to adaptive reuse for residential use than the adaptive reuse projects discussed in previous chapters, they contribute an important component of Washington Avenue's sense of place.

Together, these building and street features represent the transition from a rail-oriented to a truck-oriented industrial corridor, which was an important stepping stone in the Avenue's history and was a preliminary stage of urban deindustrialization. Due to the heritage significance of the scale of the cartway and sidewalks, this thesis recommends that their width be maintained and a large proportion of garage door facades and curb cuts be preserved to convey the Avenue's heritage and imageability. Some pedestrian-safety features, such as a

refuge island or chicanes,²¹⁷ would detract from the impact of the wide street. However, many other pedestrian safety measures, such as curb extensions at intersections, narrower travel lanes, midblock crossings, better street lighting and more clearly painted lane demarcations, would not take away from the Avenue's distinct size. While the width of the cartway is important to both the rail and truck transportation periods, the shapes of some lots are palimpsests of the rail history exclusively. For instance, the triangular lot at 1601 Washington Avenue, where a mixed use project was proposed and approved in 2014 (Figure 5.2) is shaped that way due to the fact that there used to be a building on the lot, with a railroad siding that entered the building at a diagonal.²¹⁸ Retaining and acknowledging the provenance of these kind of distinct features also expresses the area's industrial heritage.

Evidence for the likelihood of maintaining these heritage components can be found on the eastern portion of Washington Avenue, which is separated from West Washington Avenue by Broad Street. Some of the eastern blocks have been redeveloped as small storefronts and strip malls, and the popular outdoor food market known as "the Italian Market" brings a large volume of pedestrian traffic. However, several older industrial buildings, as well as the wide, unbroken thoroughfare and the presence of delivery trucks, remain a part of its changed landscape.

²¹⁷ Chicanes are small curves that are added to a cartway to slow down motor vehicles.

²¹⁸ Alan Greenberger and Sylvia Wilkins, *Review of ZBA Case No. 21336 for 1601 Washington Avenue*, sec. Philadelphia City Planning Commission. Mr. Greenberger was the chair of the Philadelphia City Planning Commission in 2013. Sylvia Wilkins is a resident of Point Breeze.

B. Preservation of Mixed Income Housing Opportunities: Residential streets around deindustrialized districts can also contain other important elements of the area's industrial heritage narrative. In many cities, housing for low-paid workers took the form of tenement buildings and single-room occupancy buildings. In contrast, company owners and managers would live in single-family homes. Around Washington Avenue, the residential neighborhoods of Point Breeze and Graduate Hospital are composed of two- or three-story rowhouses that once housed many of the workers that worked in Washington Avenue's coal and steel factories.²¹⁹ The neighborhood's predominantly small, two-story housing stock reflects this history.²²⁰ Graduate Hospital has a greater proportion of three-story rowhouses, revealing a greater mix of income levels.²²¹

This thesis recommends that the city ensure that the residential units on West Washington Avenue represent a mix of incomes by requiring or encouraging developers to set aside a percentage of the housing units in their multi-unit development for affordable housing. The city could implement this requirement or incentive system as a condition for rezoning individual parcels at the request of developers. Alternately or additionally, the city could modify the "WVA Overlay District" to require a certain percentage of affordable units in all residential

²¹⁹ Ron Hoess, "Washington Avenue: A Representative Example of Philadelphia's Industrial Past, Part II," *The PhillyHistory Blog*, January 26, 2010, <http://www.phillyhistory.org/blog/index.php/2010/01/washington-avenue-a-representative-example-of-philadelphias-industrial-past-part-ii/>. Ron Hoess is a contributor to the PhillyHistory Blog, which publishes articles written by historians and history enthusiasts that draw on primary sources. Ron Hoess' research focuses on Philadelphia's railroad history.

²²⁰ Ujifusa, "Point Breeze."

²²¹ Thompson, "Renderings."

projects. This mix of housing carries on the income diversity of the factory workers and the owners and supervisors of Washington Avenue’s historic industrial firms, and therefore retains another aspect of its industrial heritage.

An additional benefit of providing housing for a variety of incomes can help to create a more diverse neighborhood area, thereby reducing the divide, described by Point Breeze resident Sylvia Wilkins as an “invisible line,”²²² between the gentrified Graduate Hospital,²²³ and the lower-income Point Breeze.

The width of Washington Avenue and its lack of pedestrian attractions has also been discussed as constituting a physical divide that reinforces the social divide between the neighborhoods.²²⁴ The next section recommends measures to design Washington Avenue as a more complete street in terms of safety and comfort for various modes of transit, while retaining the width of the Avenue as an aspect of its heritage, as recommended above.

Recommendation 3: Accommodate All Users of the Streets and Sidewalks

Parking Problems

Since the 2013 release of the Central District Plan’s recommendation to rezone Washington Avenue to ICMX, the Philadelphia Parking Authority has increased its enforcement of parking regulations on West Washington Avenue. As the DVRPC’s

²²² Sylvia Wilkins, *Review of ZBA Case No. 21336 for 1601 Washington Avenue*, sec. Philadelphia City Planning Commission.

²²³ City-Data, “Philadelphia, Pennsylvania Neighborhood Map - Income, House Prices, Occupations, Boundaries”; Governing, “Philadelphia Gentrification Map: 2000 Census - Present.”

²²⁴ Michael Baker Jr. Inc. et al., “South of South Walkability Plan,” 16-19.

Transportation and Parking Study discussed in Chapter Four highlights, West Washington Avenue has long been known for parking and loading/unloading in the center left-turn lane, and illegal parking of cars and delivery trucks in the parking lane, as well as cars, forklifts and pallets on the sidewalks. This lax state of enforcement perpetuated itself because loading zones were being used for parking, and delivery trucks had to unload elsewhere. With the increased enforcement of parking regulations, businesses owners and managers attested to an increasingly stressful parking situation, for employees, delivery trucks and customers.²²⁵ This was due in part to the fact that employees sometimes used loading zones for parking if their business could share a loading zone with a neighboring business. One of the interviewees also stated that parking had become more constrained due to all-day parking by center city employees who walked up from Washington Avenue to their jobs.²²⁶ Philadelphia's required minimum parking ratio for multifamily residential developments in IRMX districts is seven parking stalls for every ten units. In CMX-3 (the zoning designation for Lincoln Square, the required ratio is six stalls for every ten units.²²⁷ This means that the residential developments will further increase the competition for on-street parking that businesses are currently facing.

²²⁵Donatucci, Interview with Mr. Thomas Donatucci, President of Washington Avenue Property Owners Association; Anderson, Interview with Mr. L. Dale Anderson, Cabinetry Design Specialist and sole on-site employee for Probuild Kitchen Design Studio; Mike, Interview with Mike, manager of Ivan Roofing and Siding Supply, Phone, April 28, 2016.

²²⁶ Donatucci, Interview with Mr. Thomas Donatucci, President of Washington Avenue Property Owners Association.

²²⁷ Councilmember Jannie Blackwell, *AN ORDINANCE Amending Title 14 of The Philadelphia Code, Entitled "Zoning and Planning," by Amending Parking Requirements in Certain Districts, All under Certain Terms and Conditions, The Philadelphia Code*, 2016, secs. 14-802-802-2-802-3. This bill

Competition for parking spaces and other types of conflicts between the users of Washington Avenue’s public space will only grow with additional higher-density development. The following sections recommend specific actions to address this growing problem.

Recommended Actions for Accommodating All Users of West Washington Avenue’s Streets and Sidewalks

- A. Loading Zone Regulations: ‘The Transportation and Parking Study’ included a recommendation for designating loading zones as well as managing loading/unloading times to allow some loading zones to be used for parking at other times of days. In addition to these actions, this thesis recommends that any project to reconfigure West Washington Avenue’s streets and sidewalks balance between the increased number of pedestrians and the operations of light industrial uses. To adequately accommodate and manage the delivery requirements of businesses, transportation planners and Streets Department officials must pay careful attention to the provision of loading zones during the street restriping process. Chapter Two shared the frustration on the part of West Washington Avenue business owners regarding decreasing parking availability and the city’s regulation of parking restrictions. Therefore, loading zones and short-term customer parking should be clearly marked and conveniently placed. Additionally, the Philadelphia Parking Authority should regulate or incentivize a specific time window for deliveries to occur, thereby reducing competition for parking spaces.

increased the minimum required parking for residential uses in several zones, including IRMX and CMX-3. Previously, the minimum for both zones had been three stalls for every ten units.

- B. **Non-Accessory Parking Structure:** In addition to improving the turnover on existing on-street parking, this thesis recommends that the city explore the option of building a parking structure on Washington Avenue, which could provide shared off-site parking for businesses and residents. Parking structures are prohibited in the “/WWA Overlay” and they are unwelcome in many parts of cities because their large size, single use, self-contained design tend to deaden the space around them, creating uninviting expanses of sidewalks. However, parking structures are arguably as compatible with the built fabric of an urban deindustrialized PDR area as they are with dense downtown districts where they are most often permitted. Much like self-storage facilities, parking structures provide only a small number of permanent jobs and therefore they do not offer the employment advantages that can sway cities to retain light industrial businesses. However, a parking structure offers a solution to Washington Avenue’s significant frustration over on-street parking constraints and the loading/unloading activities of forklifts and trucks. Furthermore, the parking structure could also be a mixed use building, like the other development proposals for West Washington Avenue. The first floor of a four-story parking structure could be designed as commercial space. Light industrial land use would be particularly appropriate for this ground floor location because many of the structure’s entrances would already be designed for vehicles.
- C. **Road Diet Measures that Retain Width of Avenue:** As discussed in Chapter Four, the design of West Washington Avenue’s thoroughfare should offer a safer place for pedestrians and cyclists. To address this issue, this thesis

recommends that the city adopt a ‘road diet’ program for the Avenue. A road diet is a set of interventions that creates a safer street by reducing the speed and increasing the attentiveness of drivers. Road diet features include curb extensions, narrower vehicle lanes, and midblock crossings. In the case of West Washington Avenue, it is important to consider the needs of delivery vehicles in the design of these interventions. For instance, delivery trucks require smaller turning radii at corners, while large corner curb extensions can increase the turning radius of a corner. Therefore, curb extensions at key intersections should be designed to accommodate the smaller turning radius of delivery trucks. Fortunately, Washington Avenue’s width provides enough space to accommodate the needs of both pedestrians and delivery trucks, which will allow the Avenue to maintain a diverse land use mix that includes certain light industrial activities and features.

Recommendation 4: Stipulate Developer-Provided Public Benefits

Leveraging the Interest of Private Developers

In light of West Washington Avenue’s relatively low property values, the private development community is very interested in capitalizing on the rent gap that exists under the Avenue’s current land uses. Therefore, the PCPC and the PIDC do not need to offer incentives to bring development to the Avenue, which are sometimes required to stimulate economic development and private investment. Instead, the city can engage in the other type of public-private cooperation discussed in Chapter Three; that is, requiring exactions, concessions or fees from a private developer in exchange for the necessary rezoning and other approvals for their parcel of interest. It is

important for the city to take advantage of this opportunity now, because of the significant leverage they have in their control of the rezoning of West Washington Avenue's parcels to permit residential uses. Additionally, it is unclear how the introduction of residential buildings will affect employment opportunities and wages, the affordability and community identity of surrounding neighborhoods, and the sharing of public amenities such as Chew Playground and on-street parking.

There is a wide range of exactions that the city could leverage from private developers. However, it is recommended to prioritize among these exactions based on the particular conditions of the Avenue and its surrounding neighborhoods. The following sections provide more specific recommendations relating to public benefits.

A. Community Benefit Agreements: The South of South Neighborhood

Association (SOSNA) has established itself as a key voice in the approval of new development in the Graduate Hospital neighborhood. SOSNA and other neighborhood organizations can wield this power to exert pressure on developers to provide public benefits. Specifically, they could negotiate with developers to create one or more community benefit agreements (CBAs) attached to individual development projects, with the city playing a moderator role. City officials and neighborhood stakeholders should explore the potential for using CBAs to protect specific land uses and physical heritage features, ensure local employment opportunities, preserve and provide affordable housing, and provide public amenities such as parks

and street furniture.²²⁸ Already, the developers of 2501 Washington Avenue have stated that they will hire at least 32 percent of the project's construction crew from the local community, and contract with a minimum of 20 percent minority-owned construction companies.²²⁹ While construction projects often provide temporary employment only, it sets a positive precedent that can help to create the expectation that developers that want to work on Washington Avenue are to provide community benefits.

- B. Focus on Housing Affordability: The lower income neighborhood of Point Breeze has experienced a large amount of higher-end residential development in recent years. This has led to an increase in property values throughout the neighborhood. In addition to trends of commercial gentrification through the addition of bars, restaurants and cafes marketed towards young professionals, the decreasing affordability of the neighborhood has begun to threaten some residents, especially renters, with both direct and indirect forms of displacement. The residential redevelopment of West Washington Avenue may exacerbate these trends. Therefore, the final recommendation in this chapter is that government exactions for community benefits and community-initiated CBAs prioritize requirements and incentives for affordable housing units in new residential

²²⁸ Knapp and Hollander, "Exploring the Potential for Integrating Community Benefit Agreements into Brownfield Redevelopment Projects," 133; Marantz, "What Do Community Benefits Agreements Deliver?" 256-257.

²²⁹ Hightop Washington, LLC, "City of Philadelphia Economic Opportunity Plan: 2501 Washington Avenue" (Philadelphia: City of Philadelphia Office of Economic Opportunity, June 1, 2015), 3.

developments, or in-lieu fees to provide or maintain affordable housing units in the surrounding neighborhoods. This is an important measure to retain the income diversity of the neighborhoods, which also supports racial, ethnic and socioeconomic diversity. Furthermore, income diversity can be a component of the area's industrial heritage, because factory workers as well as factory owners and supervisors often lived nearby their place of work and therefore near one another, yielding a variety of housing types and affordability levels. In many cases, these homes still conveyed these employment-based class differences; the smallest and plainest homes are associated with rank-and-file workers, while the homes of their bosses were larger and more stylish. Around Washington Avenue, the workers lived in the two-story brick rowhouses in Point Breeze and parts of Graduate Hospital, while the higher-income managers lived in the large, stylish and individually distinctive brownstones on South Broad Street. If the affordability of some areas around Washington Avenue is lost and larger houses replace smaller ones, the current income diversity that parallels the industrial corridor's historical income diversity will be lost. Protecting and expanding the supply of affordable housing on West Washington Avenue and in its surrounding neighborhoods serves to preserve a component of the area's industrial labor heritage as well as create a more equitable housing market. West Washington Avenue provides an excellent opportunity to do so because the large rent gap and the Avenue's proximity to Philadelphia's CBD makes it a highly desirable location for developers, some of whom will be willing to provide

concessions such as affordable units than to seek out a more expensive and/or less conveniently located site.

Limitations

The above recommendations are made with the acknowledgement that the research process for this thesis encountered several limitations. First, interviews with stakeholders in Washington Avenue's redevelopment were limited to business owners and managers. If time had permitted, interviews with developers and planning commission members would have provided a broader set of perspectives. Secondly, the SOSNA neighborhood organization representing the Graduate Hospital has a strong web presence and accessible plans and reports, while similar neighborhood associations for Point Breeze have not produced as many documents and individual members were difficult to identify and contact. The analysis of neighborhood association positions and goals was based largely on information from SOSNA. Third, it was difficult to identify a comparable level of quantitative information for the example cities such as Chicago and Brooklyn as was analyzed for Philadelphia and Washington Avenue. This was due to limited familiarity with the geography and neighborhood boundaries of these cities and the challenge of selecting time periods in the redevelopment trajectories of other cities that best corresponded with West Washington Avenue's phases of disinvestment and reinvestment. Additionally, the amount of information available about the costs of rehabilitation versus new construction in the example legacy industrial areas limited the analysis of the potential for adaptive reuse and heritage conservation.

However, the range of cities and redevelopment processes and management strategies explored in the course of this thesis provides a level of assurance that a

balance has been achieved between themes that yielded more limited or more general information with those that provided a greater level of detail. Therefore, the thesis provides a viable assessment of municipal management strategies towards redevelopment pressure in legacy industrial areas, and analysis of priorities and trajectories for West Washington Avenue.

Future Research

There are several significant avenues for future research on determinants of what makes a redevelopment management strategy more compatible with the context of one city's legacy industrial areas than that of another city. This thesis relied on qualitative research methods, and therefore quantitative research will yield different insights that could supplement or complicate the analysis presented here. A statistical analysis of quantitative data on the socioeconomic characteristics and consumer preferences of the new residents of a residential development and existing residents in surrounding neighborhoods would provide a framework for identifying nonresidential land uses that can most viably contribute to the land use mix of a legacy industrial area following the introduction of residential uses. This information could reshape the analysis and recommendations presented here by providing a better understanding of the range of business types that could contribute to a viable land use mix on West Washington Avenue.

Additionally, Chapter Three indicated that some of West Washington Avenue's business owners had plans to relocate, while others saw themselves as continuing to be a part of Washington Avenue's redevelopment. Future research should focus on understanding the forces that shape the relocation plans of existing businesses in cases of higher-rent redevelopment of legacy industrial areas. This

information could alter recommendations for how a city can best support existing businesses. For instance, there may be situations where providing technical and financial assistance to help businesses relocate is the most appropriate form of support.

Both of these areas of research entail an analysis of movement (of individuals or businesses) in and out of a redeveloping former industrial area. The analytical method of Agent-Based Simulation/Modeling (ABS or ABM) is a promising tool for this analysis because it allows researchers to simulate decision-making processes of individuals, organizations, businesses, etc., based on empirical data and decision-making rules.²³⁰ This analytical model is useful to extrapolate from limited information regarding new residents and existing businesses to a broader understanding of decision-making patterns and determinants of viability for particular land uses.

Additionally, as noted in the Limitation sections, a greater level of quantitative data for the comparison legacy industrial areas shared in prior chapters would enhance the analysis presented in this thesis. The recommendations in this chapter emphasized the importance of resolving parking pressures on West Washington Avenue. The Transportation and Parking Study discussed in the previous chapter provided quantitative data on traffic volume, parking spaces and parking turnover for Washington Avenue. Similar data for other legacy industrial areas before and after a parking intervention could be used to tailor appropriate measures for West Washington Avenue.

²³⁰ Jeremy Jackson, Raja Sengupta, and Benjamin Forest, "Agent-Based Simulation of Urban Residential Dynamics and Land Rent Change in a Gentrifying Area of Boston," *Transactions in GIS* 12, no. 4 (August 2008): 475–91, doi:10.1111/j.1467-9671.2008.01109.x.

Future research should include the construction and implementation of quantitative data collection and analysis. Statistical analyses of quantitative data relating to land uses, socioeconomic characteristics of residents, parking issues, and changes in employment opportunities would contribute to the qualitative analyses presented in this thesis.

Final Thoughts

Legacy industrial areas in cities with strong housing markets will increasingly experience residential redevelopment pressure as the number of infill development opportunities in traditionally residential areas decreases. Philadelphia's West Washington Avenue provides a current example of this redevelopment pressure. The city of Philadelphia is currently formulating its strategy for managing this pressure in such a way as to contribute to broader planning goals and respond to the varied stakeholder goals coming from current business owners and residents. Because the redevelopment of legacy industrial areas has been occurring for three decades, Philadelphia can learn a great deal from other cities in its approach to West Washington Avenue specifically, and its urban industrial areas generally. This thesis demonstrated the relevance of land use change in legacy industrial areas to many municipal planning goals and stakeholder desires. In particular, a pattern of spatial change was revealed in connection to the outcomes of strategies and tactics used to manage redevelopment pressure.

Like other legacy industrial areas, West Washington Avenue has a distinctive sense of place that bears its industrial heritage, offers an imageable node in the cityscape and establishes an identity for the area. It can also be conceptualized as industrial chic and therefore be an asset to encouraging adaptive reuse of buildings

during redevelopment. Because of its unique building stock, its proximity to the downtown, and the rent gap between its current land rents and the potential rents of redeveloped parcels, the Avenue is an extremely attractive site for developers. The desirability of Washington Avenue as a development site provides considerable opportunities for the city to use the redevelopment process to achieve the goals described above, by leveraging exactions from private developers, and rethinking the organization and usage of the streets and sidewalks.

Just as Philadelphia's planning entities can benefit from lessons learned by other cities, the management of Washington Avenue's redevelopment will be informative to other cities, particularly in the case of deindustrialized zones that are not on waterfronts. As American cities continue to move through phases of residential redevelopment, it is important to better understand how they can manage each phase to coordinate and advance the goals of the municipal government and other stakeholders. West Washington Avenue's history and character are tied to its street features, its businesses and the residents that live around it. Its redevelopment requires careful consideration and planning on the part of the city to respond to diverse stakeholder goals and retain aspects of West Washington Avenue's imageable character.

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Appendix A

IRB LETTER OF EXEMPTION FOR INTERVIEWS



RESEARCH OFFICE

210 Hullihen Hall
University of Delaware
Newark, Delaware 19716-1551
Ph: 302/831-2136
Fax: 302/831-2828

DATE: March 1, 2016

TO: Gemma Tierney, B.A.
FROM: University of Delaware IRB

STUDY TITLE: [873460-1] Audio-Recorded Interviews and Digital Photographs for Washington Avenue Thesis

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS
DECISION DATE: March 1, 2016

REVIEW CATEGORY: Exemption category # (2)

Thank you for your submission of New Project materials for this research study. The University of Delaware IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office. Please remember to notify us if you make any substantial changes to the project.

If you have any questions, please contact Nicole Famese-McFarlane at (302) 831-1119 or nicolefm@udel.edu. Please include your study title and reference number in all correspondence with this office.

cc:

Appendix B

SELECTED PAGES FROM MSC MARKETING BROCHURE FOR 2118 WASHINGTON AVENUE



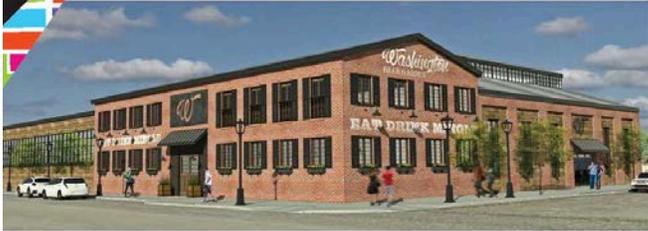
Philadelphia, PA

2118 WASHINGTON AVENUE

24,000 SF Warehouse Space Available for Lease

For more info, please contact:

JACOB COOPER
 jcooper@MSCretail.com
 215.568.2600 x714



PROPERTY DETAILS

- ▶ Open Industrial space for lease with 25'+ ceiling heights ideal for entertainment or large format food use
- ▶ Located in the heart of Washington Avenue's burgeoning commercial corridor between affluent Graduate Hospital and gentrifying Point Breeze neighborhoods
- ▶ Corner visibility with ±300' of linear frontage

▶ Regional accessibility via I-95, I-76 and I-676

JOIN THESE AREA RETAILERS





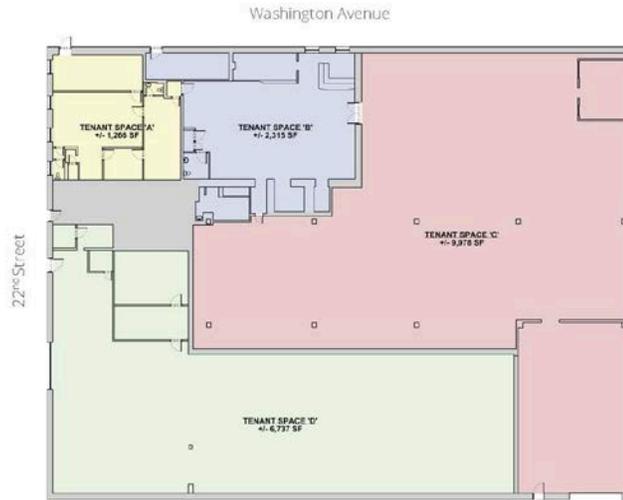
Philadelphia, PA

2118 WASHINGTON AVENUE

Site Plan

For more info, please contact:

JACOB COOPER
jcooper@MSCretail.com
215.568.2600 x714



EXISTING CONDITIONS

The information contained herein has been obtained from sources deemed reliable. MSC cannot verify it and makes no guarantee, warranty or representation about its accuracy. Any projections, opinions, assumptions or estimates provided by MSC are for discussion purposes only and do not represent the current or future performance of a property, location or market.



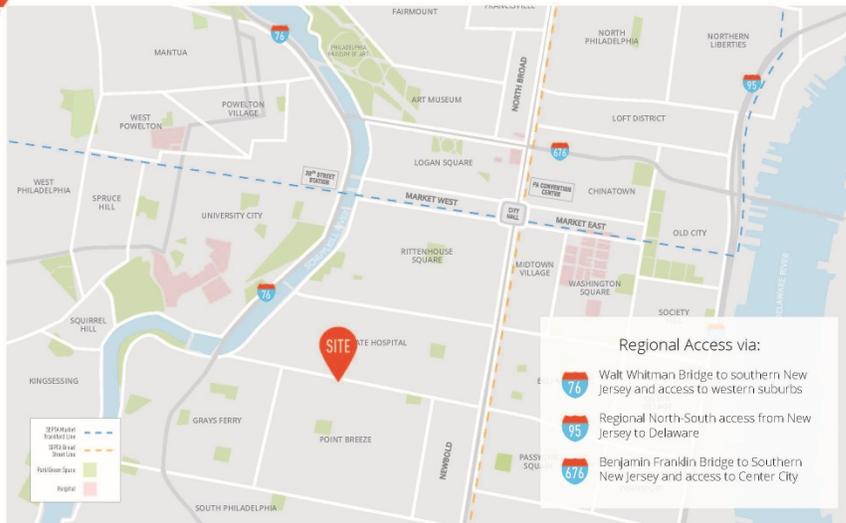
Philadelphia, PA

2118 WASHINGTON AVENUE

Aerial

For more info, please contact:

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Philadelphia, PA

2118 WASHINGTON AVENUE

Pictures

For more info, please contact:

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215.568.2600 x714



Existing Conditions

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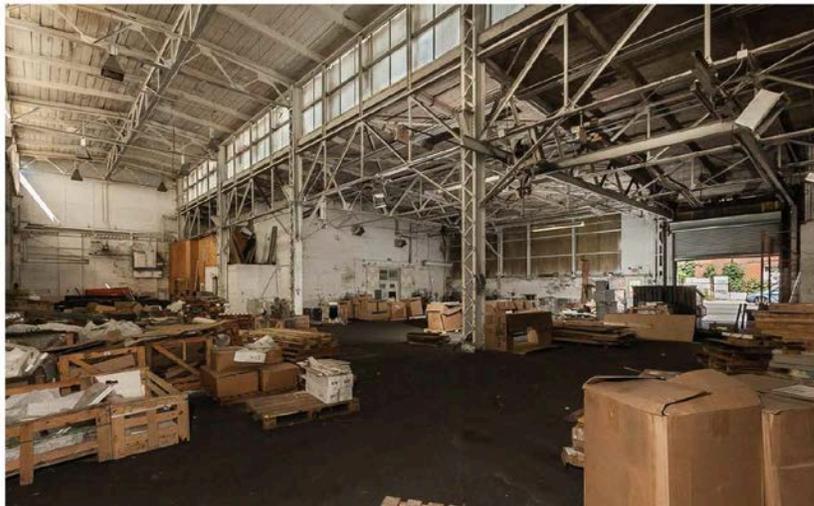
Philadelphia, PA

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Pictures

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Appendix C

DEVELOPMENT PROPOSAL DETAILS

Address	Zoning	Proposed Use	Owner	Approved by CDR	Variations granted by ZBA	Rezoning approved by City Council	Status	# Stories	# Residential units	# Parking spaces	# Bike parking spots	Other
1001. S. Broad St.	CMX-3	Residential and commercial	Lincoln Square LP (partnership of Alterra Property Group and MIS Capital)	November 2016	Not needed	June 2016	Moving forward	9	156	360	144	Internal walkway, grocery store in existing train shed
1601 WWA	I-2	Residential and commercial	Anthony Bisicchia	December 2013	January 2014		ZBA approval overturned	5	35	20		
1731 WWA	ICMX	Residential and commercial	1702 Alter Street LP (includes Mario Carosella)	N/A*	July 2011		Unknown	4	15	16		
2101 WWA	I-2	Residential, commercial, offices	2101 Washington Avenue Associates	N/A*	March 2012		Currently no proposal	4	30	80		
2113 WWA	I-2	Commercial	Thomas Donatucci				For sale/lease	1 (double height)	0	0		Marketing renderings of bar space
2300 WWA	I-2	Self-storage facility		Not needed	Not needed	Not needed	Under construction	5	0	50		No longer a by-right land use following introduction of WWA Overlay in March 2015
2401 WWA	I-2	Residential and commercial	Green Construction LLC	February 2015	June 2015		Appealed	5	113	57	53	Small park
2501 WWA	IRMX	Residential and commercial	Hightop Washington LLC	October 2016	Not needed	June 2016	Moving forward	5	85	48	22	2 nd floor terrace facing WWA

*The city's Civic Design Review (CDR) Committee did not exist until October 2012.