OAKLAND

ECONOMIC DEVELOPMENT AND URBAN DESIGN STUDIES

OCTOBER 2020

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OAKLAND

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AUGUST 2020

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Oakland is a community of almost 20,000 people across four city-designated areas: North, Central, South, and West Oakland. 6

Over two-thirds of Oakland's residents – 13,000 – are between 15-24 years old. They live in all neighborhoods of Oakland. 8

There are as many early career aged residents in Oakland as there are in Lawrenceville and the Southside Flats. 8

There are school-aged children in every neighborhood of Oakland. 8

Oakland has comparatively fewer residents age 55-74 than the city overall, but comparatively more residents over the age of 75. 8

Oakland residents are highly-educated. 11

Oakland is a center of learning for over 44,000 undergraduate, graduate, and medical students. 12

Oakland also hosts approximately 2,000 pre-K–12 and lifelong learning students over the course of the year. 12

There are 7,121 households in Oakland. 19

Overall, more of Oakland's population identifies as Asian and/or white and less of Oakland's population identifies as Black than the city overall. 21

The population of residents who identify as Black has been declining across all Oakland neighborhoods. 21

There are students from over 100 countries studying in Oakland. 21

Oakland has a higher share of very low-income households than the city overall. 23

Compared to the City overall, Oakland has relatively few households headed by someone of prime working age (25-64 years old) and more low income households. 24

The racial breakdown of homeownership and rental tenure varies widely across Oakland neighborhoods. 27

Oakland has areas of concentrated homeownership, but it is primarily a rental market focused on a high-turnover student population. 30

Most of the housing stock in Oakland is characterized as average to fair in condition. 30

While the number of housing units and the physical form of residential properties is smaller in Central and South Oakland, they are some of Oakland's most dense areas in terms of bedrooms. 30

For rental properties, the most critical issue in Oakland is the relative lack of housing availability. Rents of multi-bedroom homes are comparatively high, likely because of students renting by the bedroom. 32

CHAPTER TWO: OAKLAND THE WORKPLACE 33

There are an estimated 48,625 jobs in Oakland proper. 34

Most of Oakland's jobs are in West and North Oakland where the hospitals and universities are located. 34

Almost all the city's job growth between 2002 and 2010 occurred in Oakland proper. 38

Since 2010, the number of jobs in Oakland proper has declined slightly. 38

Unlike Oakland, jobs in Lawrenceville and South Side Flats grew between 2010 and 2017. The CBD lost over 2,780 jobs between 2010 and 2017. 38

While Oakland's job density is high compared to other Pittsburgh innovation neighborhoods, it is low compared to the national innovation neighborhoods analyzed. 39

Over one-quarter of Oakland's employees are over the age of 55. As compared to other Pittsburgh innovation neighborhoods, Oakland has the greatest share of its employees 55+ years old or older. 41

Almost two-thirds of employees who work in Oakland earn over $40,000 a year. 42

Oakland workers have a high level of educational attainment. 43

Approximately 28% of workers in Oakland live in the City of Pittsburgh. 44

63% of employees who work in Oakland live within 10 miles of Oakland. 45

Oakland employees with the lowest earnings are less likely to live within 10 miles of Oakland and more likely to live 50+ miles from Oakland. 46

Most employees reside within 10 miles of Oakland regardless of age. A higher percentage of younger employees live in the City. 48

A total of 1,761 workers in the education and healthcare sectors reside in Oakland. 49

Oakland has 257 residents who work in the information and professional fields, significantly fewer than the number of residents who work in the healthcare and education fields. 51

Oakland has an active property market. 53

Employment that requires office space is growing in Pittsburgh, including for technology-focused tenants. 57

There is ongoing growth and development in other innovation submarkets in Pittsburgh. 58

Despite the low vacancy rate for office space in Oakland, there have only been three significant office projects developed over the last five years. 60

There is almost 700,000 square feet of office space under-construction or approved for development in Oakland. 60

Transportation needs, small parcel sizes, and limited development capacity are constraining the growth of innovation neighborhood space in Oakland according to developers. 61

CHAPTER THREE: OAKLAND THE DESTINATION 63

Oakland's role as a civic center with major cultural institutions means that visitors are a significant presence in the neighborhood. 64

There are eight hotels and 1,168 hotel rooms in Oakland today. 66

Airbnb units currently on offer are concentrated in Central and South Oakland, with very few units in North Oakland. 66

As a neighborhood, Oakland is served by a variety of food stores but no full-service grocery. 68

Demand for child care facilities may continue to expand with the growth of Oakland as a job center. 68

Oakland's major healthcare facilities are a regional destination for patients. 70

Retail, dining, and other local amenities are clustered. 71

With students, residents, employees, and visitors, Oakland is a very busy place during the weekday and school year. 72

Most Oakland residents travel 20-29 minutes to work. 73

Oakland has high levels of pedestrian activity, but high-traffic streets make the area less safe. 74

Almost 19,000 people get off a Port Authority bus in Oakland every weekday. 76

104 out of the 123 bus stops in Oakland lack shelters. Of the 10 stops used by the highest number of trips, only 4 have shelters. 78

Most of the off-street parking in Oakland is provided in parking garages and structures. 82

Almost every street in Oakland has managed parking as part of the residential parking permit zone, on-street meters, special permit areas, or no parking allowed areas. 84

Oakland has high levels of pedestrian activity, but lacks appropriate facilities in many locations. 86

Oakland borders the junction of two expanding trail networks – Schenley Park and the Riverfront. 88

Because of strong community advocacy, Oakland has installed significant new bike infrastructure over the last decade. 88

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Oakland Street Character Typology 111

The tallest buildings in Oakland are clustered in the core of the institutional area, the Fifth and Forbes district, and Craig Street. 124

Additional height, along with the related measure of additional floor area ratio, has recently been requested as part of new development proposals. 124

The residential fabric of Oakland's historic neighborhoods remain largely intact. 126

As a cultural center, Oakland's landmark public destinations were built to embody the City Beautiful movement. 126

The largest land use in Oakland is residential, which occupies over 1/3 of the land area. 128

Existing zoning includes large areas of residential and educational/medical institutional. Only 100 acres are zoned for the highest-density, mixed-use development of the public realm districts. 130

Oakland's higher-density mixed use zoning districts include urban design standards for development. 132

Oakland's Institutional Master Plans detail future development sites, governing principles, and urban design and sustainability standards. 134

The total assessed value of property in Oakland is over $3.8 billion. 144

Approximately 40% of the land uses in Oakland are tax-exempt. 146

Current tax abatement programs support a variety of development projects, including two affordable housing projects and a performing arts venue, as well as larger housing, office, and hotel development. 148

Oakland is served by three major sewersheds, the M-19A/B, the M-29, and the A-22. 152

Green infrastructure strategies are the first choice for public and private stormwater management projects. 156

Oakland's tree canopy covers only 19% of its land area, primarily on hillsides surrounding the neighborhood. 159

Only 23% of Oakland's tree canopy is in the core and neighborhood areas. 159

Due to low tree canopy and high impervious surface, Oakland is an urban heat island. 160

Despite neighboring one of the City's signature open spaces, Schenley Park, Oakland overall is underserved for park and open space given its density, access constraints, and the suitability of existing park space to community needs. 162

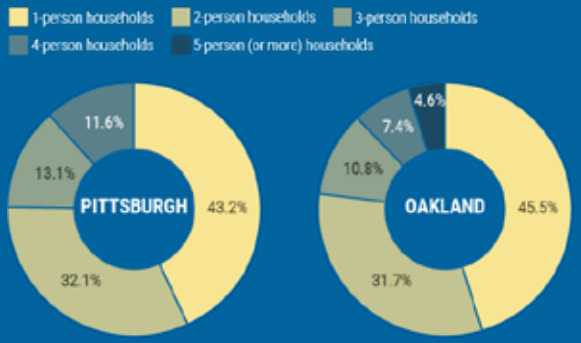
KEY TAKEAWAYS

Population Trends

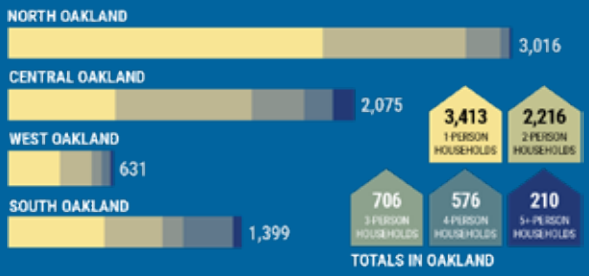
Oakland and National Innovation Neighborhoods, 2000–2019

Households by Household Size

Pittsburgh and Oakland, 2018



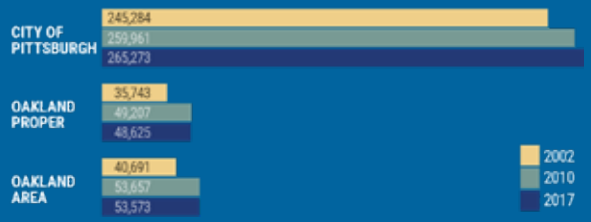
Oakland Areas, 2018



Source: U.S. Census 2000 and 2010; American Community Survey 2018 5-Year Estimates

Job Trends

The City, Oakland Proper and the Oakland Area | 2002–2017



Source: LEHD Origin-Destination Employment Statistics

Education and Healthcare Workers in Oakland

Source: LEHD Origin-Destination Employment Statistics

Oakland is 20% of Pittsburgh's overall job base, but 46% of its healthcare and education jobs.

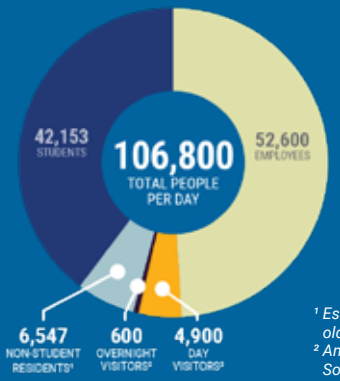
41,495 healthcare/ education jobs

66% of all education jobs in Pittsburgh

36% of all healthcare jobs in Pittsburgh

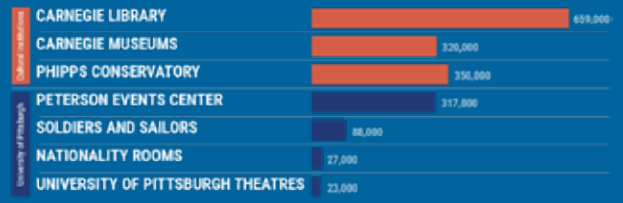
Daily Activity (During School Year)

Oakland, 2017



¹ Estimated population under 18 years old and over 25 years old.
² Annual visitation divided by 365 days.
Source: W-ZHA

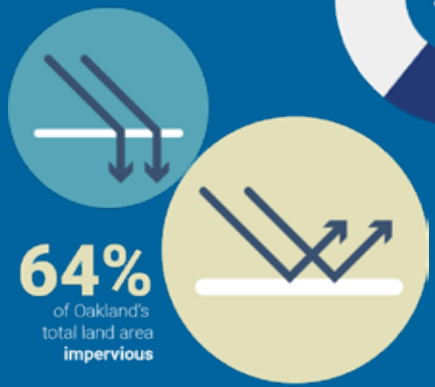
Annual Admissions to Oakland Attractions



Source: Oakland Business Improvement District, Retail Market Study (2015); University of Pittsburgh, Community and Governmental Relations; Visitorship confirmed in 2019 with organization representatives.

Top Land Uses in Oakland

Source: Land Use (2018), City of Pittsburgh



Acronyms and Abbreviations

AADT	Annual Average Daily Traffic
ACS	American Community Survey
ADA	Americans with Disabilities Act
AMI	Area Median Income
BRT	Bus Rapid Transit
CBD	Central Business District
CBRE	Coldwell Banker Richard Ellis
CMU	Carnegie Mellon University
CSO	Combined Sewer Overflow
DCP	Department of City Planning
DOMI	Department of Mobility and Infrastructure
FTE	Full-Time Equivalent
GAP	Great Allegheny Passage
HH	Household
HUD	Department of Housing and Urban Development
IMP	Institutional Master Plan
LED	Light-emmiting diode
LEHD	Longitudinal Employer–Household Dynamics
LERTA	Local Economic Revitalization Tax Assistance
MARTA	Metropolitan Atlanta Rapid Transit Authority
MBTA	Massachusetts Bay Transportation Authority
MIT	Massachusetts Institute of Technology
MUH	Montefiore University Hospital
NCAA	National Collegiate Athletic Association
NICU	Neonatal Intensive Care Unit
NIH	National Institutes of Health
OBID	Oakland Business Improvement District
OPDC	Oakland Planning and Development Corporation
PADEP	Pennsylvania Department of Environmental Protection
Pitt	University of Pittsburgh
PNC	PNC Financial Group Services
PTC	Pittsburgh Technology Center
PUH	Presbyterian University Hospital
PWSA	Pittsburgh Water & Sewer Authority
R&D	Research & Development
TBD	To be determined
TDM	Transportation Demand Management
UC	Under-Construction
URA	Urban Redevelopment Authority of Pittsburgh
UPMC	University of Pittsburgh Medical Center
VA	Veteran Affairs
WPIC	Western Psychiatric Institute and Clinic

INTRODUCTION

Purpose

This Existing Conditions Report for the Oakland Plan provides a common set of tools, baselines, and data for discussion during the neighborhood plan process, based on a variety of sources including the Census, market transactions, City and County data sources, site surveys, and analysis. Community members and participants will bring their own experiences, needs, history, and deeper understanding to many topics that data cannot fully address.

The City of Pittsburgh, led by the Department of City Planning (DCP) is working with the Oakland community to create a 10-year plan with a shared vision for Oakland's future and the projects and programs necessary to make that vision a reality.

Once adopted by the Planning Commission, the Oakland Plan will become City policy and guide public and private investments in the area. New land use regulations, transportation and infrastructure improvements, and public programs may also be recommended by the plan. The plan area generally includes the areas of North Oakland, Central Oakland, South Oakland, and West Oakland.

PHOTO COURTESY OF THE UNIVERSITY OF PITTSBURGH

The City of Pittsburgh conducts planning efforts based on the Neighborhood Plan Guide, which establishes standards for plans that will be adopted by the City Planning Commission. The Oakland Plan will establish vision statements that provide a shared description of what the neighborhood will be in 10 years if the plan is successful and determine goals that the plan will achieve by implementing programs, policies, and projects.

More information about this guide can be found at: ***https://pittsburghpa.gov/dcp/neighborhood-planning-guide.***

The Oakland Plan will address a core set of topics, including: Community, Development, Mobility, and Infrastructure. The Community topic focuses on meeting the needs of residents, employees, students, and stakeholders. The Development section focuses on maximizing the benefits of new development for the community. The Mobility section focuses on making it easier, safer, and healthier for people to get around. The Infrastructure section focuses on nourishing neighborhoods through new energy, stormwater, and open space systems.

The Department of Mobility and Infrastructure (DOMI) will be leading additional planning work for the Mobility Chapter to address transportation, in its various forms, and parking. As part of that effort, DOMI and its consultants will be collecting and analyzing new data on commute and travel patterns, parking, and transit use in the Oakland area to support a well-connected, safe, accessible, and multi-modal Oakland. Independent of this planning effort, DOMI and DCP will be conducting long-term, citywide planning efforts, including the 2070 Mobility Plan and Citywide Comprehensive Plan, that may offer additional context for the Oakland Plan and spur new ideas and evaluation during the community planning process.

The open data tools and analysis provided through the Western Pennsylvania Regional Data Center were an essential data source for this report and ongoing tool for community evaluation and analysis. Additional resources provided by the data center can be found: ***http://www.wprdc.org/.***

Previous Planning Studies

This Existing Conditions Report builds upon the findings of recommendations of several community planning efforts and research, including, among others:

- The Oakland Plan 2025 (Oakland Planning and Development Corporation, 2010)
- Innovation Oakland (2010)
- Oakland Retail Market Study (Oakland Business Improvement District, 2015)
- Green First Plan (Pittsburgh Water & Sewer Authority, 2016)
- Capturing the next economy: Pittsburgh's rise as a global innovation City (Brookings Institute Report, 2017)

In addition to several citywide planning and community development initiatives, including, among others:

PHOTO COURTESY OF THE UNIVERSITY OF PITTSBURGH

- The Affordable Housing Task Force Report (2016)
- City Steps Master Plan (2017)
- Open Space PGH (2013)
- Preserve PGH (2012)

Many community members, stakeholders, and leaders who participated in the neighborhood planning process and offered their expertise as part of interviews to inform this report.

CHAPTER ONE:

OAKLAND THE NEIGHBORHOOD

Key Takeways

- Oakland is a neighborhood of about 20,000 residents, representing about one of every fifteen Pittsburgh residents. It is also an employment and education center. Home to two major hospitals (with a third one adjacent), three universities, and several destination secondary schools and cultural institutions, Oakland's population swells to nearly 107,000 people each weekday during the school year. This includes over 42,000 university students and 2,000 primary or secondary school students. Later chapters address Oakland's workforce and visitors in more detail. Oakland's residential population is about the same as it was in 2000, having risen slightly until 2010 then declined.
- About two thirds of Oakland's residents are in the 15-24 age range dominated by university students. Most university students live in Central and North Oakland, but they also represent the largest age cohort in West and South Oakland. About one third of Oakland residents are not in the 15-24 age range; apart from some advanced graduate students, most are not university students, and represent a wide variety of short- and long-term resident households.
- Oakland's household count declined about 9% between 2010 and 2018, led by loss of 13% and 15% of households in Central and North Oakland respectively. Meanwhile, the number of households in West and South Oakland increased, concurrent with a loss of 29% and 26% of family households respectively. As little new housing was constructed in this period, this suggests a significant number of family dwellings were subdivided into apartments.
- The racial composition of Oakland's residents includes half the share of Black residents, twice the share of Asian residents, 20% more White residents, and about the same share of Hispanic residents as in Pittsburgh overall. These discrepancies have been widening. Racial composition varies considerably around Oakland, with Black residents most represented in West Oakland, Asians in North Oakland, and Whites in Central Oakland. South Oakland comes closest to the city's overall race and ethnicity breakdown.
- The average educational attainment level of Oakland residents is higher than the city as a whole, but lower than in the established or re-emerging neighborhoods of downtown, Strip District, South Side Flats, Shadyside, and Squirrel Hill.
- Other examples of neighborhoods with dominant university populations and employment include Philadelphia's University City, Cambridge's Kendall Square, and Midtown Atlanta. Unlike Oakland, each of those neighborhoods has had substantial population growth since 2010.

DATA SOURCES AND PEER NEIGHBORHOODS

- Unless otherwise noted, this analysis uses American Community Survey (ACS) 5-Year Estimates for 2014–2018, the most recent span available, to allow for consistent comparisons over time. The ACS is an ongoing survey from the U.S. Census Bureau. It is the premier source for detailed population and housing information about U.S. communities and how they change over time.
- To better understand Oakland's role in the city and the innovation economy, Oakland was compared to a set of mixed-use innovation neighborhoods both within the City of Pittsburgh and nationally.
- Within the city, these peer neighborhoods include the Central Business District, Strip District, Lawrenceville, and South Side Flats. These neighborhoods are all mixed-use areas with residential areas and significant employment, particularly in innovation-focused industries like research, technology, specialized manufacturing, and design. They also have been a destination for innovation-focused development and redevelopment in recent years.
- Nationally, the peer innovation neighborhoods include University City in Philadelphia, Kendall Square in Boston, and Midtown in Atlanta.

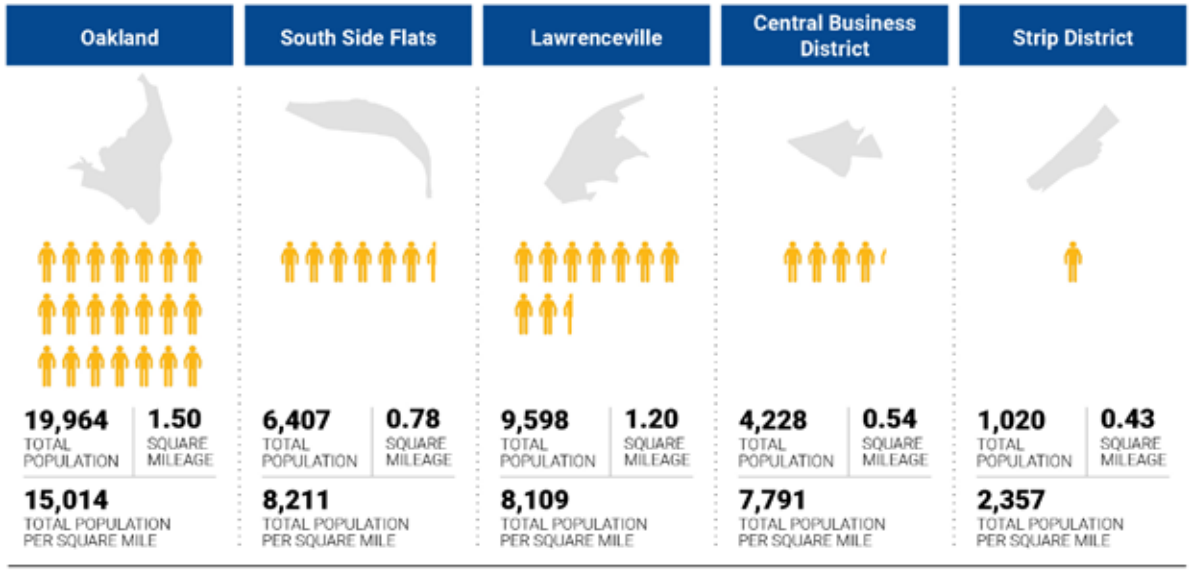
Oakland is a community of almost 20,000 people across four city-designated areas: North, Central, South, and West Oakland.

Oakland is approximately 1.5 square miles total in size. North Oakland is a half square mile. South Oakland, including the Pittsburgh Technology Center along the riverfront, is a similar size. Both Central Oakland and West Oakland are about half the size of the other areas.

The **majority of residents live in North and Central Oakland**. These areas have twice the population density of South and West Oakland. Oakland's population represents 6.6% of the City's population. Its population density – 15,000 people per square mile – is double that of other mixed-use innovation neighborhoods, including the Central Business District (CBD), Lawrenceville, and South Side Flats. Oakland has a much larger residential population than these other areas.

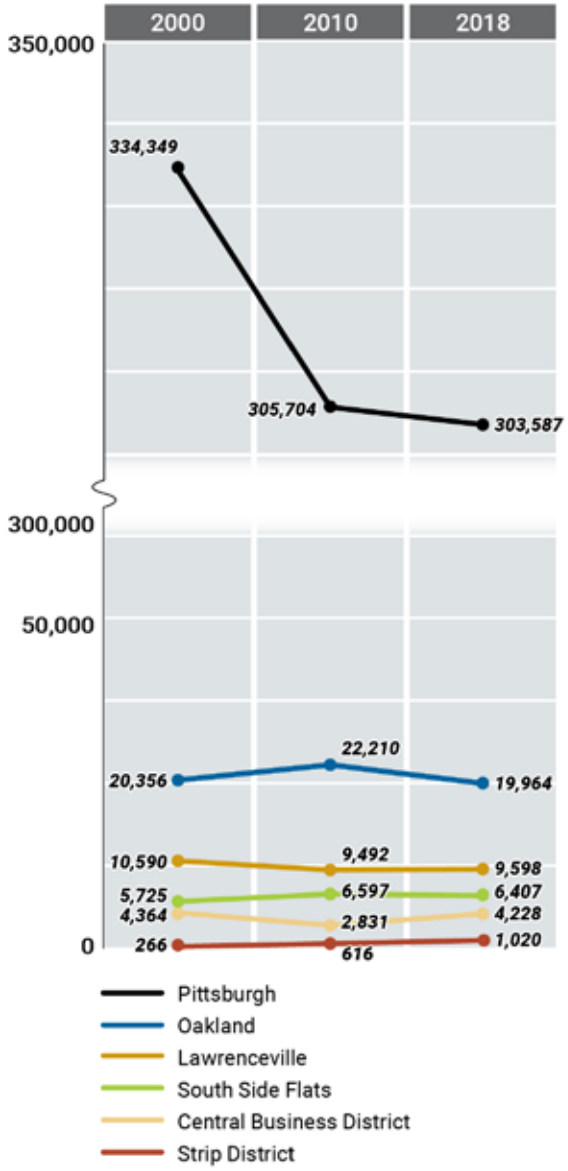
Oakland's population has been relatively stable over the last 20 years. Oakland gained almost 2,000 residents from 2000-2010, while the CBD, Lawrenceville, and the City of Pittsburgh overall were losing population. Since 2010, these trends have reversed. Oakland lost over 2,000 residents from 2010-2018; over the same time period, the CBD has gained 1,500 residents.

Oakland and Pittsburgh Innovation Neighborhoods Population and Density, 2018

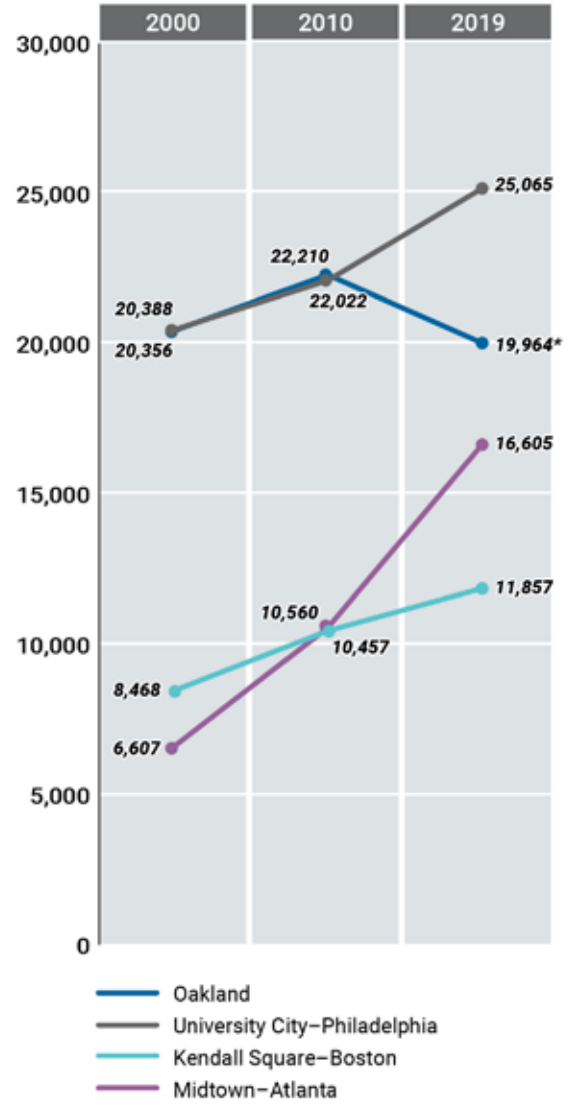


Note: The Allegheny and St. Mary's cemeteries were not included in Lawrenceville's land area for this analysis. Source: ESRI.

Population Trends | Pittsburgh, Oakland, and Pittsburgh Innovation Neighborhoods



Population Trends | Oakland and National Innovation Neighborhoods



Oakland's Population Compared to National Innovation Neighborhoods

Oakland has more neighborhood residents than Cambridge's Kendall Square or Atlanta's Midtown, but is similar in population to Philadelphia's University City. Residents are essential to sustaining a live-work-play environment and ensuring activity and vibrancy outside of business hours.

Each of these other innovation neighborhoods have grown consistently in population since 2000. Oakland lost population between 2010 and 2018.

* Oakland 2019 data is a 2018 5-Year estimate.
Sources: United States Census, 2000 and 2010; ESRI for Other InnovationNeighborhoods' 2019 population; American Community Survey 2018 5-Year Estimates

Over two-thirds of Oakland's residents – 13,000 – are between 15-24 years old. They live in all neighborhoods of Oakland.

This percentage is likely higher, as many students may claim their parents' home address as their place of residence during school and thus not be counted by the ACS. As would be expected from the presence of the University of Pittsburgh, Carnegie Mellon University, and Carlow University, Oakland has a population profile similar to a college town.

There are as many early career aged residents in Oakland as there are in Lawrenceville and the Southside Flats.

While considerably smaller in overall population size than Oakland, Lawrenceville and South Side Flats have more 25-34 year olds than Oakland. Oakland's residents are overwhelmingly young. Only 16% of Oakland's population is in the prime working age cohort of 25 to 54 years old. In other Pittsburgh innovation neighborhoods this cohort ranges from 40% to 76% of residents.

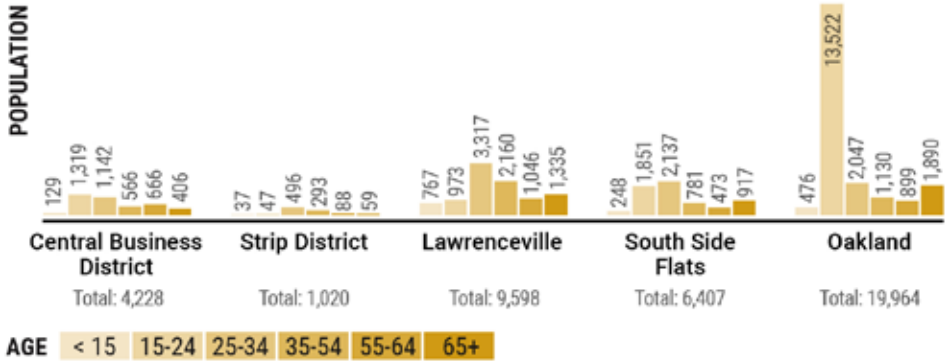
There are school-aged children in every neighborhood of Oakland.

South Oakland has the greatest number of school-aged children, while Central Oakland has the least. Overall, 2.4% of Oakland residents are children under the age of 15, compared to 8.7% for Pittsburgh overall.

Oakland has comparatively fewer residents age 55-74 than the city overall, but comparatively more residents over the age of 75.

Pittsburgh overall has 12.1% of residents aged 55 to 74 and 2.4% over the age of 75, compared to 8.3% and 5.7% for Oakland. Residents over the age of 75 are more likely to move in search of different housing or care types within ten years than residents aged 55-74.

Population by Age | Oakland and Pittsburgh Mixed-Use Districts, 2014-2018 5-year estimate



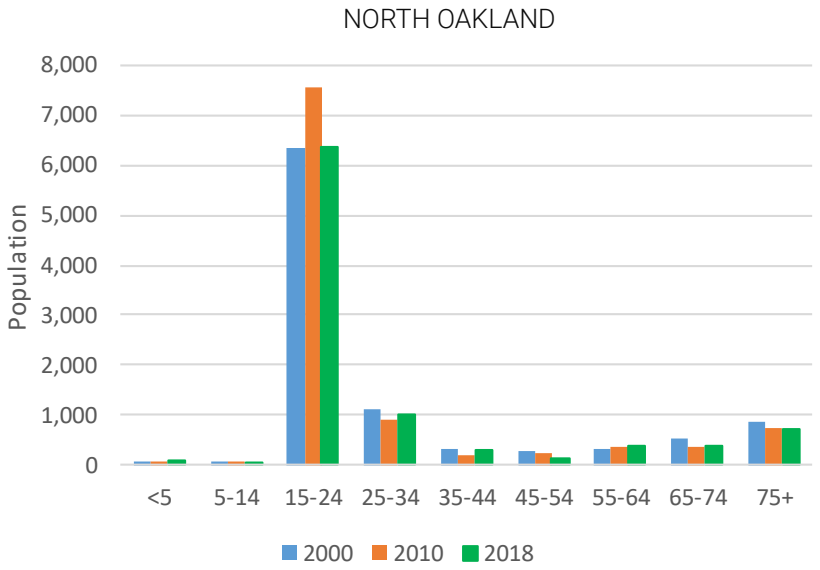
Source: American Community Survey 2018 5-Year Estimates

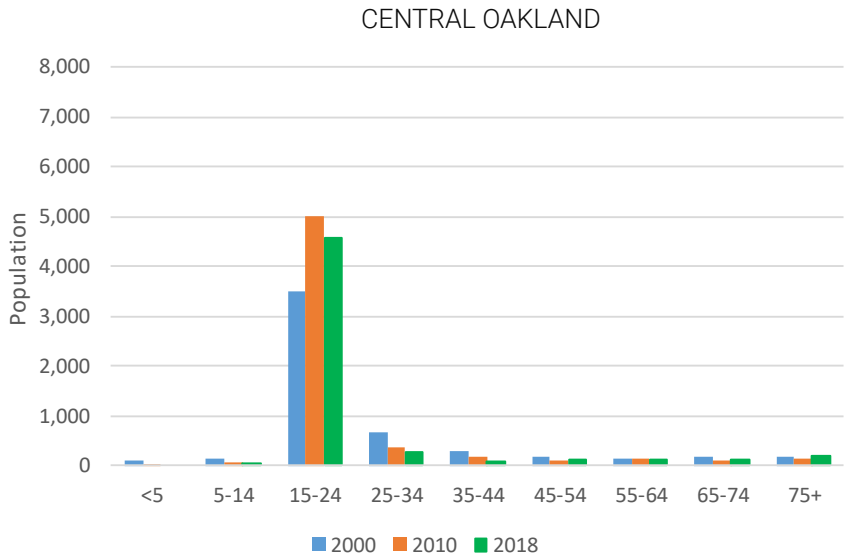
Age Distribution by Oakland Neighborhood, 2014-2018 5-year estimate

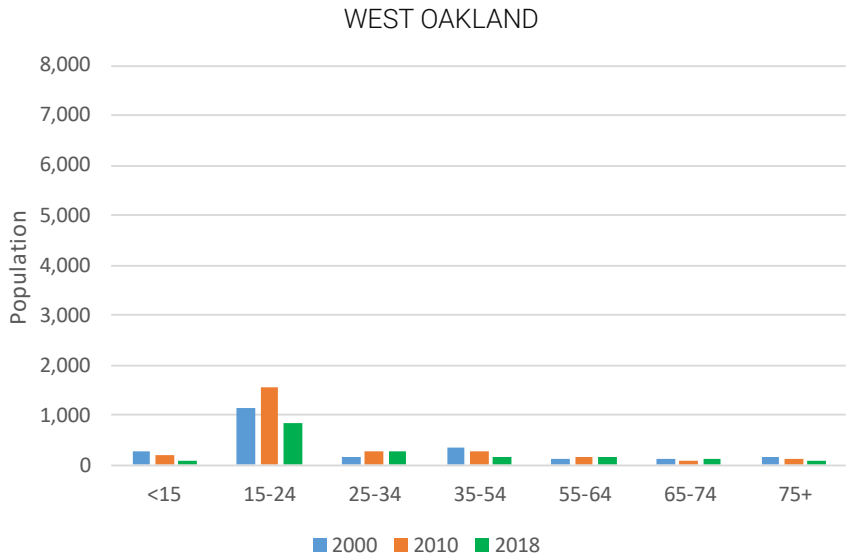
	North Oakland		Central Oakland		West Oakland		South Oakland	
	#	% of Total	#	% of Total	#	% of Total	#	% of Total
<5	66	0.7%	0	0.0%	47	2.8%	84	2.5%
5–14	50	0.5%	15	0.3%	42	2.5%	172	5.0%
15–24	6,357	67.9%	4,568	83.1%	817	48.0%	1,780	52.3%
25–34	996	10.6%	271	4.9%	263	15.4%	517	15.2%
35–44	280	3.0%	86	1.6%	53	3.1%	164	4.8%
45–54	110	1.2%	134	2.4%	119	7.0%	184	5.4%
55–64	387	4.1%	125	2.3%	169	9.9%	218	6.4%
65–74	380	4.1%	108	2.0%	100	5.9%	169	5.0%
75–84	731	7.8%	191	3.5%	93	5.5%	118	3.5%
TOTAL	9,357	100.0%	5,498	100.0%	1,703	100.0%	3,406	100.0%

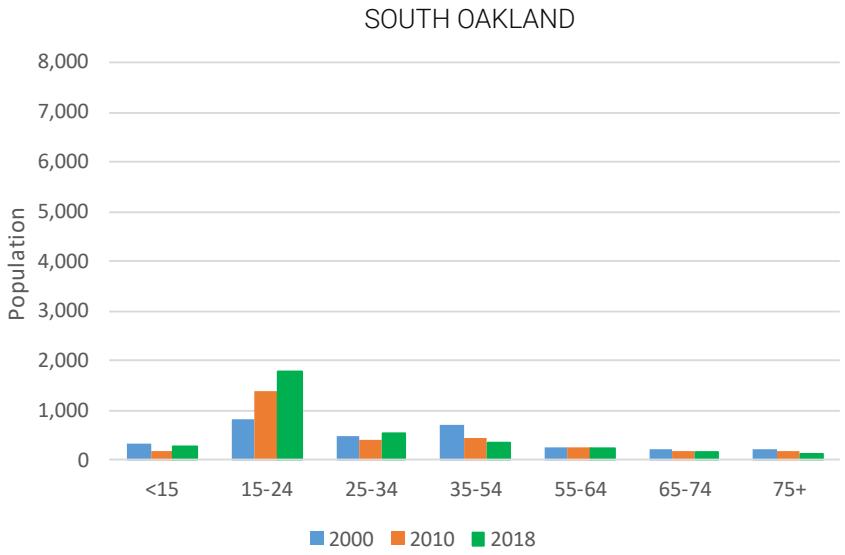
Source: American Community Survey, 2018 5-Year Estimates

Age Over Time









Source: American Community Survey, 2018 5-Year Estimates

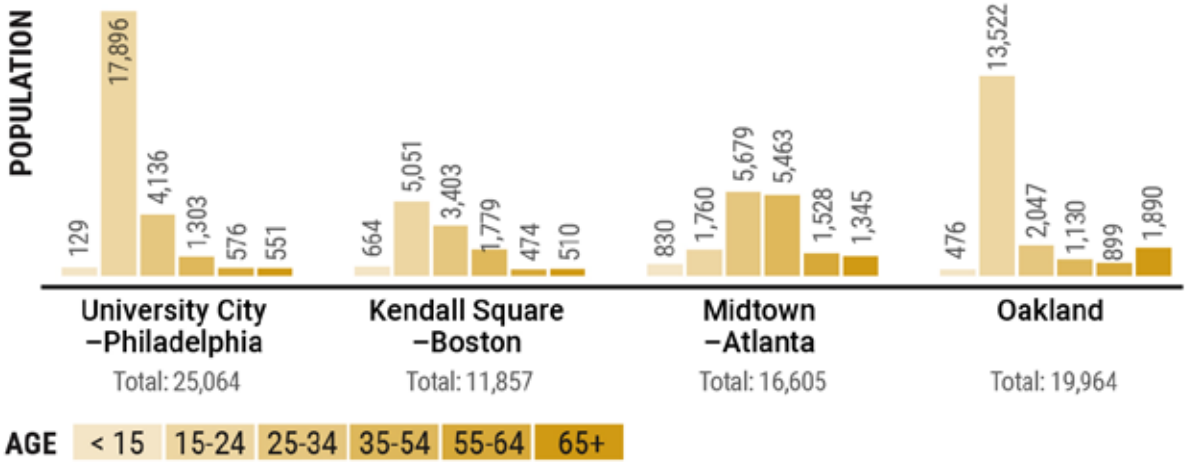
Oakland has the smallest number of residents age 25-34 years old of any of the national innovation neighborhoods.

Oakland has fewer 25-34 year olds in terms of absolute population and as a percentage of neighborhood population. Oakland and University City both have high concentration of students age 18-24, but University City has many more residents aged 25-34 years old as compared to Oakland – 4,136 to Oakland's 2,047. Over half of the population residing in Kendall Square and Midtown are over the age of 25.

POINT OF DISCUSSION

How can Oakland retain its young professionals after they graduate and start working?

Population by Age | Oakland and National Innovation Neighborhoods, 2019



Sources: ESRI; American Community Survey 2018 5-Year Estimates

Oakland residents are highly-educated.

The percentage of the population over 25 years of age with an advanced degree is considerably higher in Oakland than it is in the city as a whole. Over 56% of Oakland residents have completed at least a Bachelor's degree, compared to 43% of the city overall. Over 30% of those that live in Oakland have a graduate or professional degree.

Among the Pittsburgh innovation neighborhoods, Lawrenceville has the greatest absolute number of residents with a Bachelor's degree or higher. Moreover, the share of persons over the age of 25 with a Bachelor's degree is much higher in the CBD and the Strip than in Oakland. This indicates that other Pittsburgh innovation neighborhoods are attractive locations for well-educated young workers.

As a point of comparison, in both Shadyside and Squirrel Hill over 50% of the population aged 25 or older has a graduate or professional degree.

Compared to National Innovation Neighborhoods

Oakland has a markedly different profile in terms of age and educational attainment compared to other innovation neighborhoods. Oakland has comparatively fewer residents over the age of 25. Just over half of Oakland residents over the age of 25 have a Bachelor's degree or higher.

Educational Attainment | Population Over 25 Years Old | Oakland and Pittsburgh Districts, 2018

	Population Over 25 Yrs Old						
	Total Pop 25+	Bachelor's		Graduate/Prof Degree		Bachelor's or Higher	
Central Business District	2,780	872	31.4%	1,201	43.2%	**2,073**	**74.6%**
Strip District	936	415	44.3%	391	41.8%	**806**	**86.1%**
Lawrenceville	7,858	2,481	31.6%	1,692	21.5%	**4,173**	**53.1%**
South Side Flats	4,308	1,397	32.4%	1,225	28.4%	**2,622**	**60.9%**
Oakland	5,966	1,473	24.7%	1,876	31.4%	**3,349**	**56.1%**
Shadyside	11,209	3,834	34.2%	5,627	50.2%	**9,460**	**84.4%**
Squirrel Hill	5,754	1,536	26.7%	3.343	58.1%	**4,879**	**84.8%**

Source: American Community Survey 2018 5-Year Estimates

Educational Attainment | Population Over 25 Years Old | Oakland and Other Innovation Neighborhoods 2019

	Population Over 25 Yrs Old						
	Total Pop 25+	Bachelor's		Graduate/Prof Degree		Bachelor's or Higher	
University City–Philadelphia	6,558	2,059	31.4%	2,669	40.7%	4,728	72.1%
Kendall Square–Boston	6,150	1,888	30.7%	3,370	54.8%	5,258	85.5%
Midtown–Atlanta	14,017	5,438	38.8%	5,760	41.1%	11,200	79.9%
Oakland*	5,966	1,473	24.7%	1,876	31.4%	3,349	56.1%

** Oakland data is 2018 5-year estimate*
Source: Non-Oakland data ESRI 2019 estimates; American Community Survey 2018 5-Year Estimates

In the other innovation neighborhoods evaluated, over 70% of district residents have a Bachelor's degree or higher. This data suggests that Oakland is not as attractive a place to live for people with high educational attainment, compared to other innovation neighborhoods.

Oakland is a center of learning for over 44,000 undergraduate, graduate, and medical students.

The University of Pittsburgh's student population accounts for 64% of all of Oakland's full-time equivalent students. The 1,042 students at the School of Medicine are included in the University of Pittsburgh total. The number of full-time equivalent students at the Oakland Campus has increased by just 2% over the last seven years.

Graduate students now outnumber undergraduates at Carnegie Mellon. Carnegie Mellon's enrollment has increased significantly since 2010, growing by 30% or over 3,200 more students. The majority of this growth was in graduate students. Over the same time period, Pitt decreased graduate enrollment by 554.

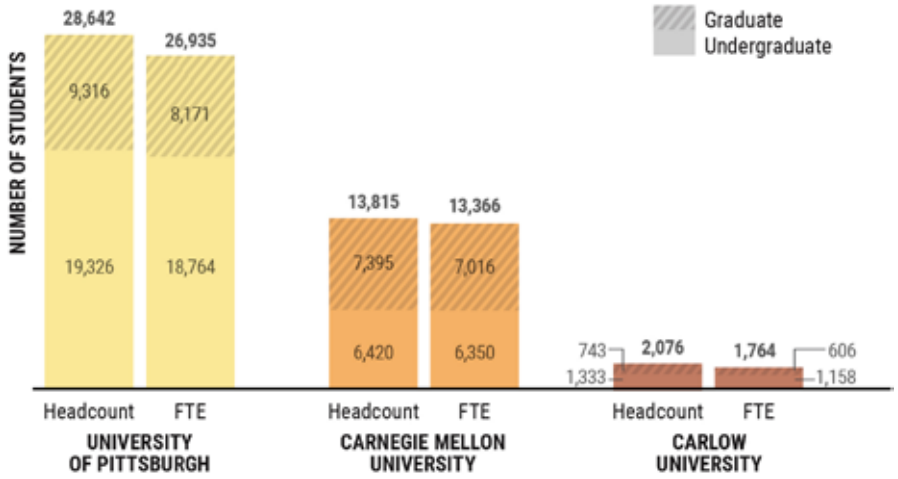
After this period of growth, both Pitt and Carnegie Mellon are planning for a consistent student population. Carlow University is a smaller institution of less than 2,000 students. Enrollment declined by almost 500 students from 2010-2017. According to their Institutional Master Plan (IMP), Carlow is actively seeking to grow enrollment back to 2010 levels.

Oakland also hosts approximately 2,000 pre-K–12 and lifelong learning students over the course of the year.

There are five private schools and one public school serving early childhood, elementary, middle, high school, and lifelong learning students.

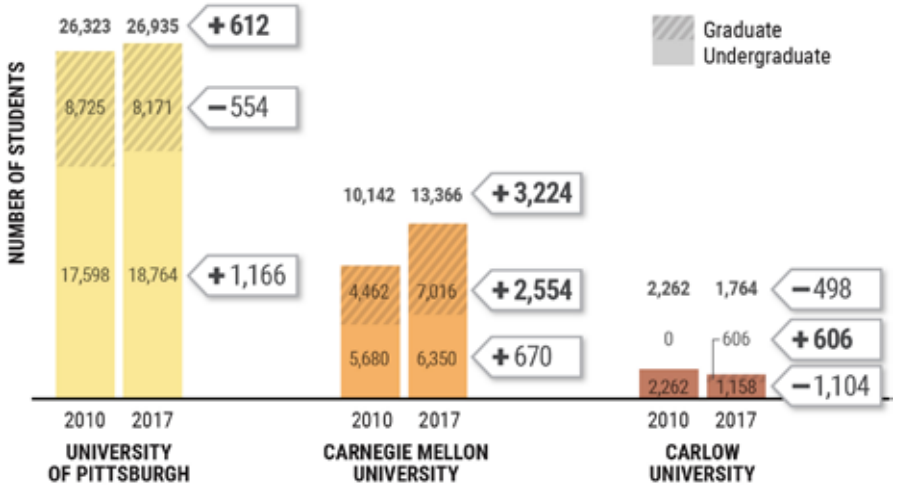
There are approximately 589 public school students in Oakland. There are a further 1,500 private school students in Oakland.

Higher Education Students in Oakland | 2017

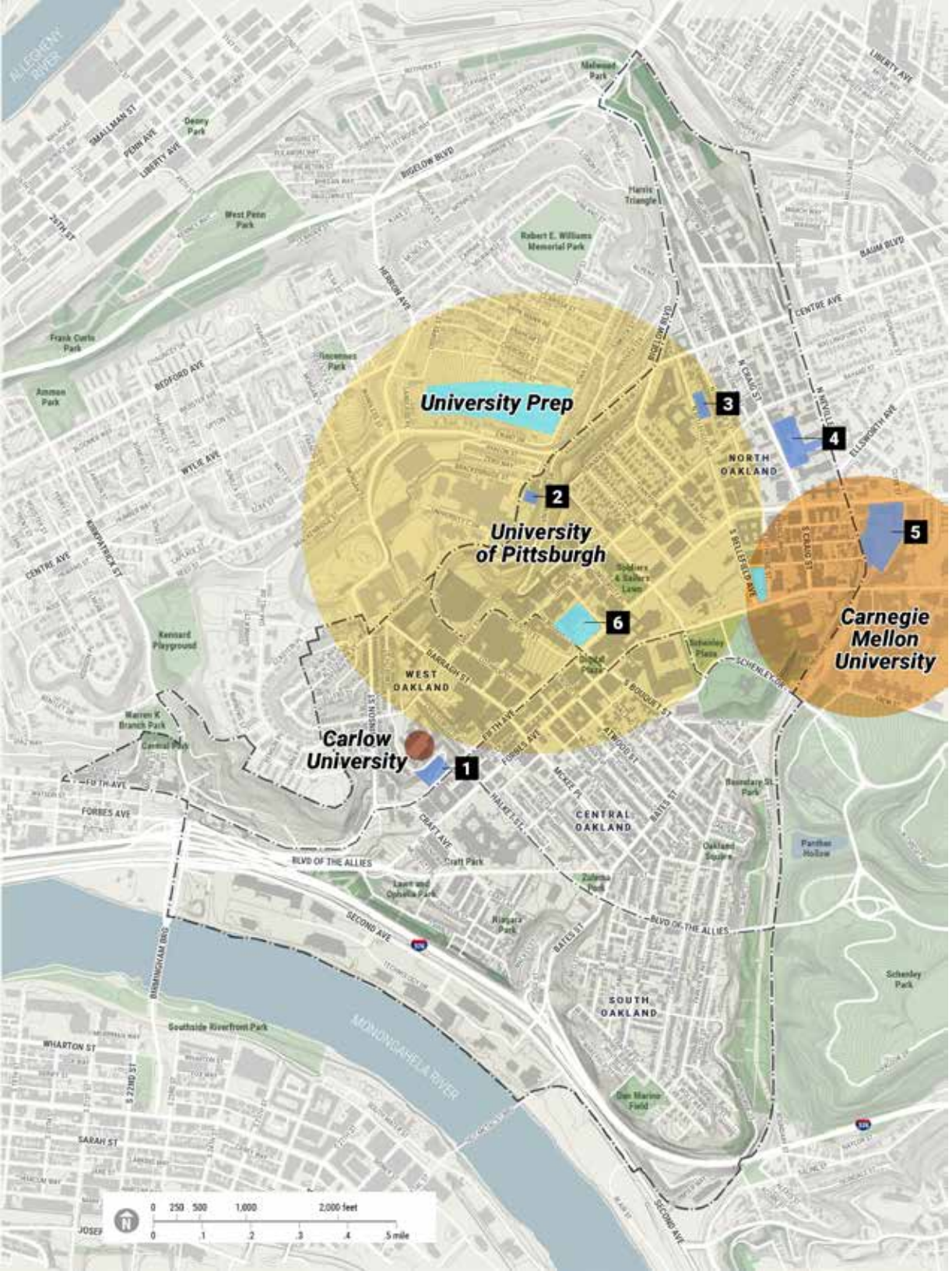


**Includes the School of Medicine with 1,042 students and 965 FTE.*
Source: University of Pittsburgh, Office of Institutional Research, "2018 Fact Book"; Carnegie Mellon University, "University Factbook 2017-2018"; Carlow University website.

Trends in Student Enrollment (FTE) | 2010–2017



Source: University of Pittsburgh, Office of Institutional Research, "2018 Fact Book" and "2011 Fact Book"; Carnegie Mellon University, "University Factbook 2017–2018" and "University Factbook 2010–2011"



Educational Institutions

K–12 SCHOOLS

Private Schools

1. *The Campus Laboratory School of Carlow University (Grades 0–8; 234 students)*
2. *Fanny Edel Falk Laboratory School (Grades K–8; 429 students)*
3. *Western Pennsylvania Institute for the Blind Children (Grades 0–Adult; 200 students)*
4. *Oakland Catholic High School (Grades 9–12; 555 students)*
5. *Central Catholic High School (Grades 9–12; 840 students)*

Public Schools

6. *Pittsburgh Science & Technology Academy (Grades 6–12; 589 students)*

HIGHER EDUCATION

- Carlow University *(1,764 FTE students)*
- Carnegie Mellon University *(14,058 FTE students)*
- University of Pittsburgh *(26,935 FTE students)*

Source: Private and Public Schools (208), Allegheny County

INNOVATION NEIGHBORHOODS

OAKLAND–PITTSBURGH

PHOTO COURTESY OF THE UNIVERSITY OF PITTSBURGH

Population	19,964
Employees	48,625
Size (Sq Mile)	1.5

Pittsburgh's Oakland is composed of four city-designated areas: West Oakland, North Oakland, Central Oakland and South Oakland. The neighborhood these four areas form possesses an unparalleled combination of academic, medical, and cultural institutions surrounded by a vibrant residential community. Oakland's academic institutions are also major employers and generators of economic activity throughout Western Pennsylvania, including the University of Pittsburgh, Carnegie Mellon University, the University of Pittsburgh Medical Center, and Carlow University. Oakland has an extraordinary complement of cultural institutions including the Carnegie Museum of Art, Carnegie Museum of Natural History, Carnegie Hall, the main branch of the Carnegie Library, and the nearby Phipps Conservatory. Activity extends to the riverfront portions of Oakland, where the Pittsburgh Technology Center continues to grow and add office and R&D buildings as well as parking, hospitality and other uses.

The University of Pittsburgh is one the country's top research universities with $750 million in federal research grants alone. Carnegie Mellon University has long been an international leader in computer science and robotics with research centers, institutes and spinoff companies located throughout the city. The endowments of these two universities alone total $5 billion.

A 2017 Brookings Institute report highlighted the potential for Oakland to become a global innovation hub, while also recognizing the many issues to be addressed before that potential can be realized and before it would lead to widespread workforce benefits for Pittsburgh.

Oakland has always been home to multiple residential communities providing housing for a diverse group of Pittsburghers. Recent discussions in Oakland have revealed an alignment between the universities, healthcare providers, and the residential community around increasing the district's supply of affordable housing for long-term residents including faculty and staff, as well as students. Oakland could also benefit from lessons learned from districts in other cities where highly productive district governance has resulted in pooling resources and focusing them on investments with collective benefits.

INNOVATION NEIGHBORHOODS

UNIVERSITY CITY–PHILADELPHIA

Population	25,065
Employees	85,000
Size (Sq Mile)	1.16

University City hosts major educational and medical institutions, including University of Pennsylvania, University of Pennsylvania Medicine and Hospitals, Drexel University, Wistar Institute, Children's Hospital of Philadelphia, University City Science Center (UCSC), and University of the Sciences. UCSC, a collaboration among the neighboring institutions, is both a real estate and programmatic entity focused on commercializing promising technology and cultivating talent. It has a has a substantial community engagement and youth engagement component. It administers and maintains 16 buildings and 27 acres of land, including several public parks. Population density is approximately 34 people per acre. 71% of the population is under 24 years of age. Less than 1% of the population are children. University City has 3 farmers markets and more than 40 cultural organizations call the area home.

University City is seeing expansion through redevelopment of lower scale buildings and increased vertical, denser development. Recent major developments have included the Schulykill Yards, a major redevelopment of the rail yard, and uCity Square, a joint development by Wexford, Ventas, and UCSC including office, lab, and innovation space. One of the keys to University City is the presence of 30th Street station which serves as a subway hub and provides access to regional commuter rail and Amtrak.

INNOVATION NEIGHBORHOODS

KENDALL SQUARE–CAMBRIDGE

Population	11,857
Employees	50,000
Size (Sq Mile)	0.7

Kendall Square is adjacent to the Massachusetts Institute of Technology (MIT) campus. It was formerly an industrial area, and has been planned for as an innovation and technology center since the 1950s. In 2003, Novartis moved its global research headquarters to Kendall Square launching a new phase of intensified redevelopment driven by large corporate research centers. Kendall Square is located around a Massachusetts Bay Transportation Authority (MBTA) Red Line subway station, which connects to Harvard University and downtown Boston. The Red Line has the highest ridership of all subway lines in Boston.

Kendall Square has a population density of 26 people/acre. 43% of the population is college age. About 5% of the population are children. There are long-established residential neighborhoods adjacent to Kendall Square. Kendall Square's few cultural amenities are primarily those housed by MIT.

In 2008, the City of Cambridge and MIT began planning to activate Kendall Square as a live-work-play district. Housing, restaurants and new streetscapes were added to the Kendall Square area helping transform it from an institutional/corporate tech park to a 24/7 neighborhood. The last major update the Kendall Square Urban Renewal Plan called for more than 5 million sf of development including 400,000 sf of housing, and 150,000 sf of public space in a variety of forms.

INNOVATION NEIGHBORHOODS

MIDTOWN–ATLANTA

PHOTO COURTESY OF MIDTOWN ALLIANCE

Population	16,605
Employees	65,000
Size (Sq Mile)	0.9

Midtown Tech Square sits within the Midtown section of Atlanta. The exact boundaries are nebulous and blend with the commercial district of Midtown. Midtown historically consisted of 5 discreet traditional neighborhoods with Tech Square becoming the 6th. Midtown sits along the north south spine of Atlanta with direct links to Downtown and Buckhead by Peachtree St and Interstate 85. It also has 3 Metropolitan Atlanta Rapid Transit Authority (MARTA) train stops for the red and gold line, providing direct train access to the Hartfield Airport. The announcement of the Technology Square project by Georgia Tech in 2000 was a key catalyst for development. Another key aspect of development of Tech Square was the construction of 5th Street Plaza over Interstate 85 which created a direct connection between Georgia Tech and Midtown. Initial projects were built on vacant parking lots and included two substantial adaptive reuse projects. Major institutions in Tech Square include Emory University Hospital, and Georgia Tech. Several significant Georgia Tech research labs, and corporate innovation centers are located in Tech Square.

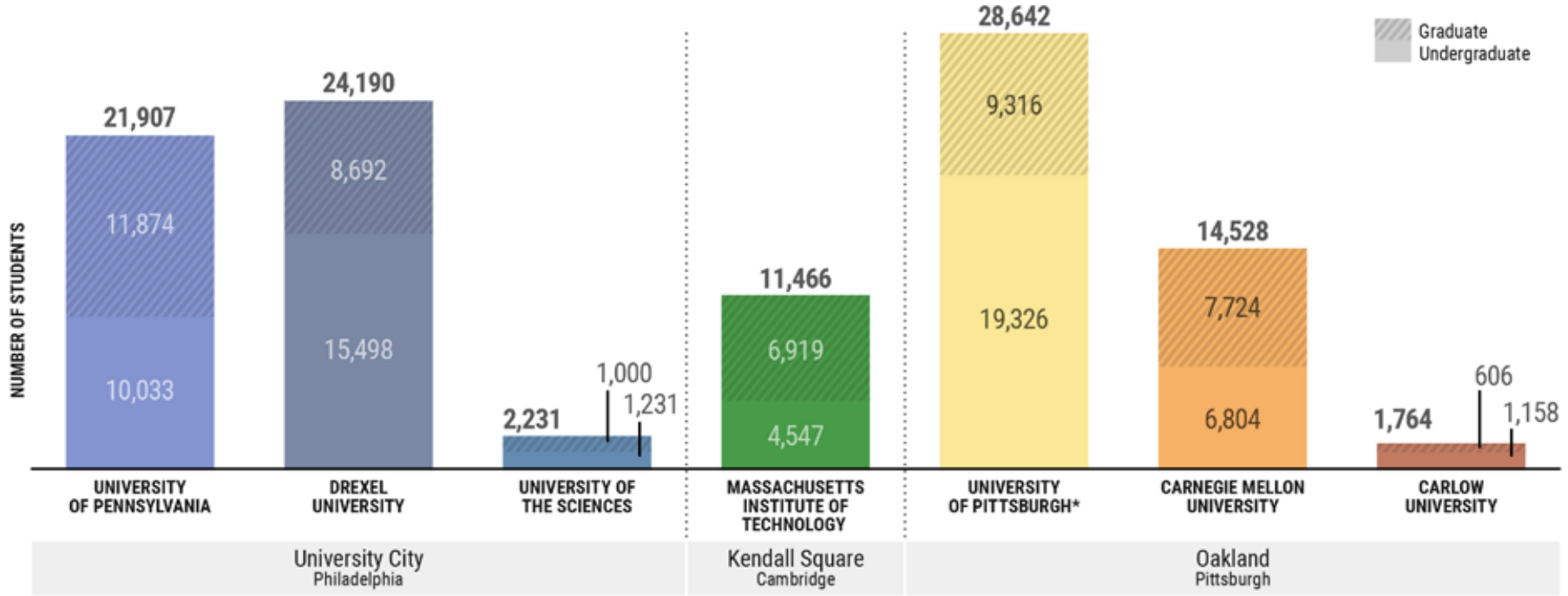
Midtown Tech Square has a population density of 29 people/acre. About 5% of the population is children. Midtown more broadly is home to significant elements of the city's cultural community. 8 major arts institutions call midtown home and the district abuts Piedmont Park, one of Atlanta's major parks. It is also connected to the Beltline trail system

Recent development has involved the replacement of 2-3 story buildings with taller and denser office buildings, student residences, apartments, lab spaces, and entrepreneurial launch spaces. In 2020, the development of two new towers, with Georgia Tech as a tenant, was announced.

Compared to National Innovation Neighborhoods

- The number of students in Oakland is comparable to the number of students in University City in Philadelphia.
- The Massachusetts Institute of Technology is the only university located in Kendall Square. Harvard University is nearby with 20,600 students enrolled in 2017.

Headcount Students in Oakland and National Innovation Neighborhoods | 2017



Includes the School of Medicine with 1,042 students and 965 FTE.

Source: University of Pittsburgh, Office of Institutional Research, "2018 Fact Book"; Carnegie Mellon University, "University Factbook 2017-2018"; Carlow University website; MIT Registrar's Office, "Statistics and Reports, 2017-2018"; Drexel University, "Common Data Set: 2017-2018"; University of Pennsylvania, "Common Dataset: 2017-2018"; University of the Sciences website.

There are 7,121 households in Oakland.

A household includes all the persons who occupy a housing unit as their usual place of residence, whether a family or a group of a roommates. People who live in housing units (a house, an apartment, mobile home or rented rooms) are classified as households by the Census.

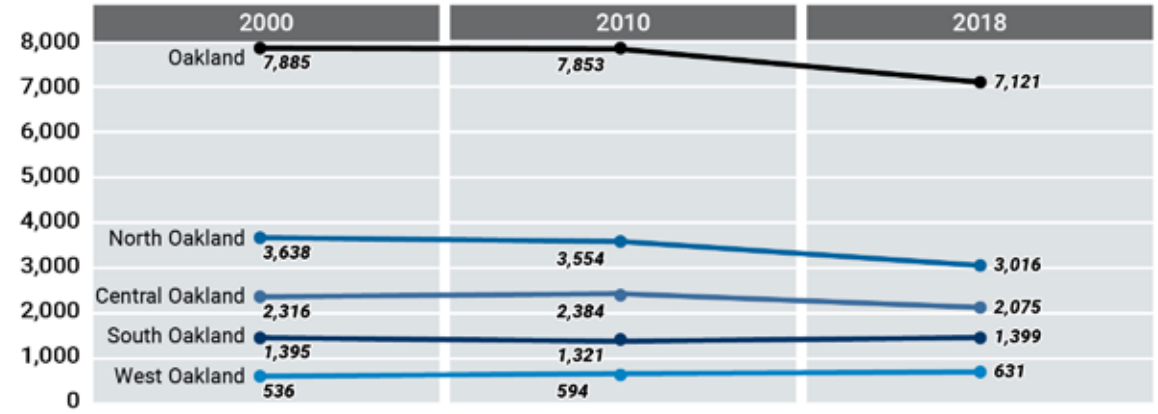
Those who do not live in a housing unit are classified as persons living in group quarters. Types of group quarters include institutional facilities (correctional facilities, nursing homes, mental hospitals) and non-institutional facilities like dormitories, military barracks, groups homes, and missions. Approximately 31% of Oakland's population lived in group quarters in 2018. More than likely these are students living in dormitories.

The number of households in Oakland declined from 2000 to 2018, reflecting the decline in population from 2010 to 2018. Most of the loss of households occurred in Central and North Oakland between 2010 and 2018.

Only 19% of Oakland households are family households. As would be expected given the University presence, Oakland households are mostly non-family and young households. Across the city overall, 43% of households are family households.

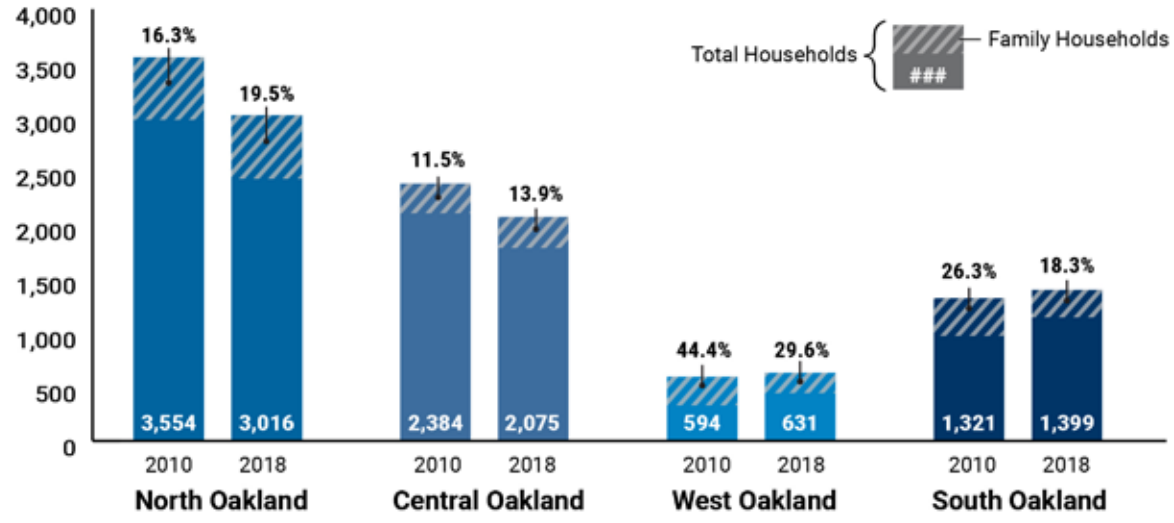
South and West Oakland lost a significant number of family households just between 2010 and 2018 – a drop of over 26% in South Oakland and over 29% in West Oakland, 168 units in total. Oakland overall saw a 10% drop in family

Household Trends | Oakland Neighborhoods | 2000, 2010, 2018



Source: U.S. Census 2000 and 2010; American Community Survey 2018 5-Year Estimates

Households and Family Households | Oakland Neighborhoods | 2010 and 2018

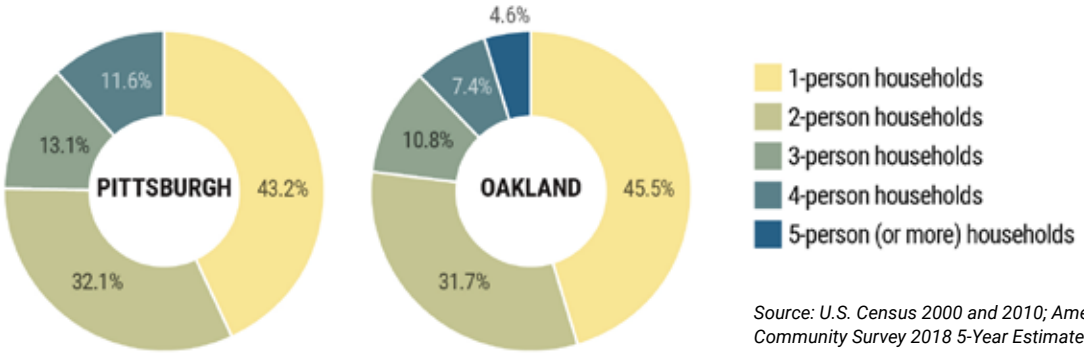


Source: 2010 Census; American Community Survey 2018 5-Year Estimate

households over the same period. The increase in the total number of households in West and South Oakland may reflect subdivision of family houses into apartments, as little new residential construction occurred over the time period. North Oakland and Central Oakland gained a small number of family households.

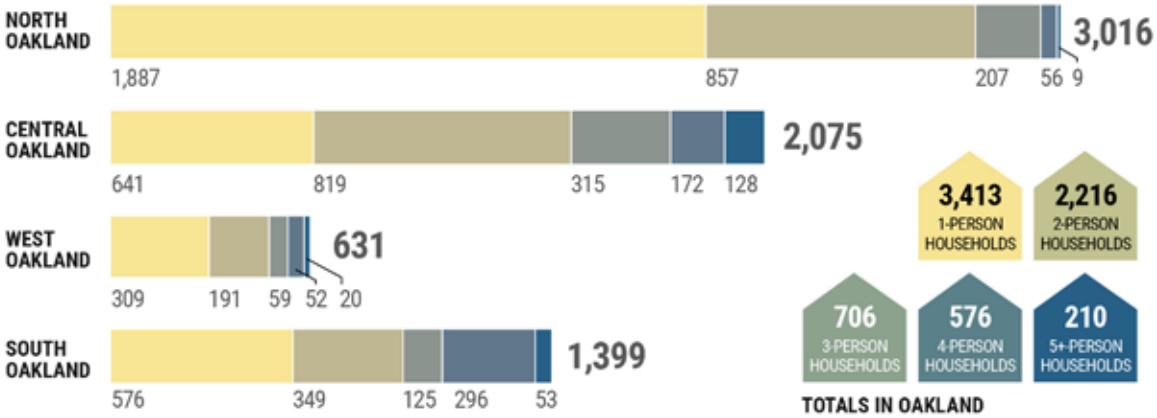
Oakland's household composition generally aligns with the City's in terms of household size. Oakland has slightly more 1-person households and less 3-person households as compared to the City. 60% of the households in North Oakland are 1-person households. Over 10% of Central Oakland's households contain 5 or more persons. 70% of these larger households live in Central Oakland.

Households by Household Size Pittsburgh and Oakland, 2018



Source: U.S. Census 2000 and 2010; American Community Survey 2018 5-Year Estimates

Households by Household Size Oakland Neighborhoods, 2018



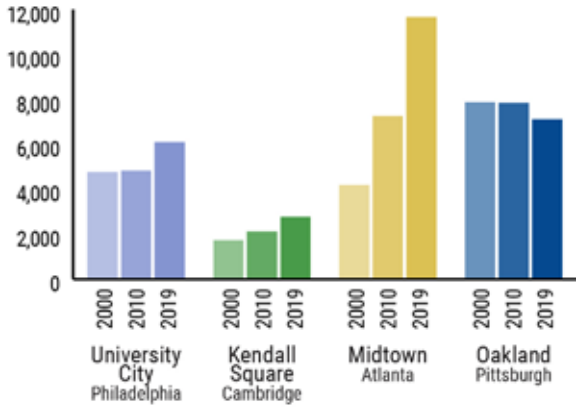
Source: U.S. Census 2000 and 2010; American Community Survey 2018 5-Year Estimates

Compared to National Innovation Neighborhoods

While the population of Midtown is only slightly higher than Oakland's, there are significantly more households in Midtown. Midtown Atlanta is a mixed use area where there is ample new housing construction, and so residents may be more easily able to access housing units that let them live alone or in smaller households than sharing with roommates.

The number of households in Oakland is comparable to University City, another student-centered district.

Household Trends | Oakland and Other Innovation Neighborhoods | 2000, 2010, 2018



Source: U.S. Census 2000 and 2010; American Community Survey 2018 5-Year Estimates

Overall, more of Oakland's population identifies as Asian and/or white and less of Oakland's population identifies as Black than the city overall.

Oakland's areas are quite different in terms of their racial composition. All of this data relies on self-reported Census data on racial identity. Central Oakland is the most homogeneous. Over 80% of the resident population identifies as white. West Oakland is the most diverse racially with almost half of the residents identifying as non-white.

The population of residents who identify as Black has been declining across all Oakland neighborhoods.

The number of residents that identify as Black has been declining in all areas, particularly in West Oakland.

The number of residents that identify as Asian has grown in all areas except Central Oakland. North Oakland has seen the greatest growth in residents who identify as Asian since 2000.

There are students from over 100 countries studying in Oakland.

Based on 2019 enrollment, there are over 3,000 international students at the University of Pittsburgh and over 850 employees with international citizenship.

Population by Race and Ethnicity | Oakland Neighborhoods | 2018

	North Oakland		Central Oakland		West Oakland		South Oakland	
	#	%	#	%	#	%	#	%
One Race								
White	6,565	70.2%	4,784	87.0%	778	45.7%	2,462	72.3%
Black	807	8.6%	191	3.5%	627	36.8%	554	16.3%
Asian	1,689	18.1%	334	6.1%	194	11.4%	142	4.2%
American Indian, Pacific Islander, Other	50	0.5%	50	0.9%	30	1.8%	43	1.3%
2 or More races	246	2.6%	139	2.5%	74	4.3%	205	6.0%
Hispanic	199	2.1%	152	2.8%	59	3.5%	107	3.1%

Source: American Community Survey 2018 5-Year Estimate

Population by Race and Ethnicity | Pittsburgh and Oakland | 2018

	Pittsburgh	Oakland
One Race		
White	66.9%	73.1%
Black	23.2%	10.9%
Asian	5.7%	11.8%
American Indian, Pacific Islander, Other	0.8%	0.9%
2 or More races	**3.5%**	**3.3%**
Hispanic	3.0%	2.6%

Source: American Community Survey 2018 5-Year Estimate

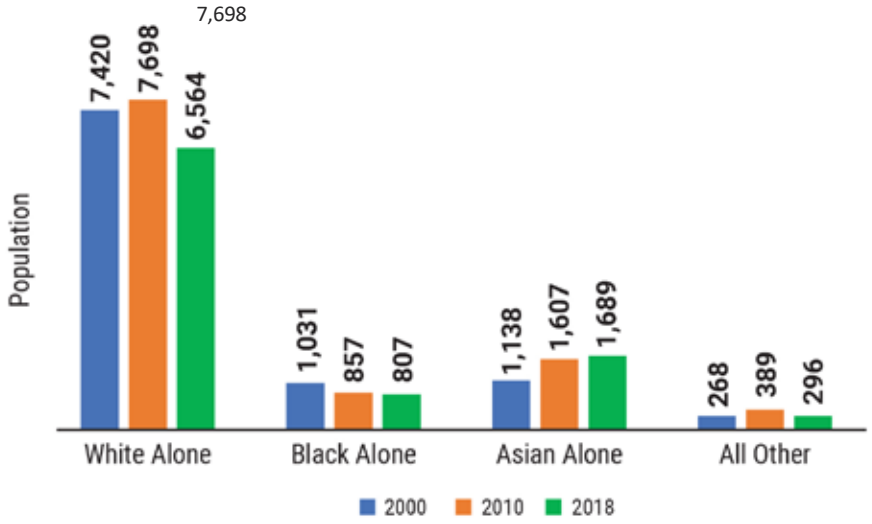
POINTS OF DISCUSSION

Oakland's student population comes from over 100 countries throughout the world. How can Oakland provide opportunities for them to stay and feel welcome?

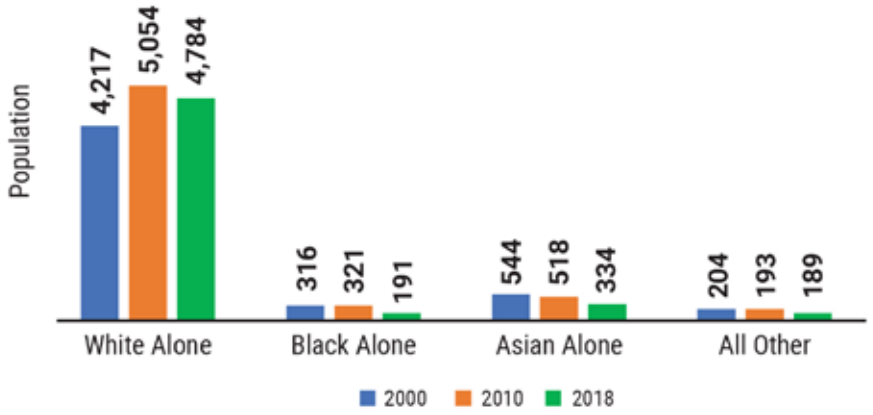
What can be done to retain and grow Oakland's Black population?

Race Over Time

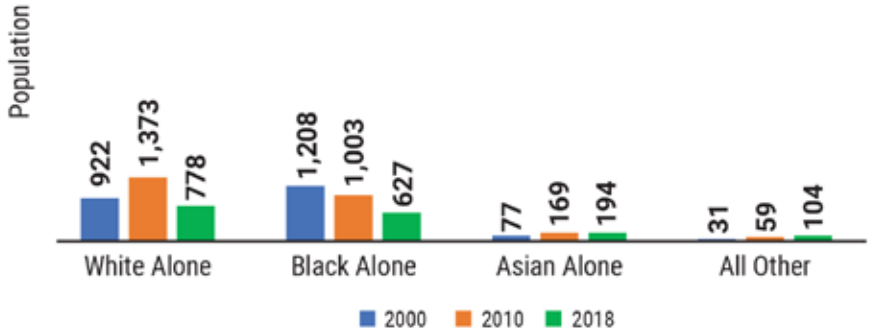
NORTH OAKLAND



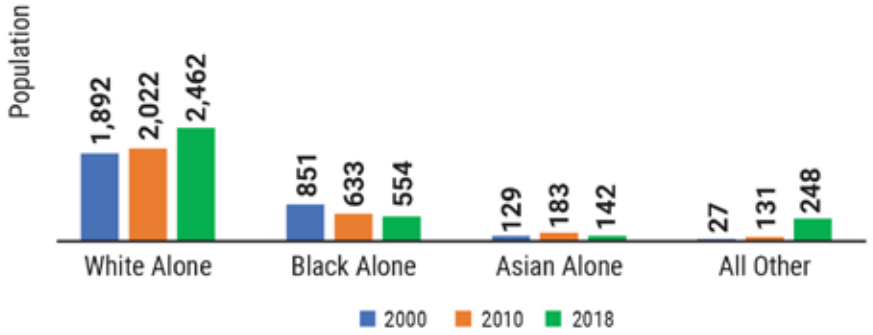
CENTRAL OAKLAND



WEST OAKLAND



SOUTH OAKLAND



Oakland has a higher share of very low-income households than the city overall.

In middle income ranges, a smaller share of Oakland households earn $50,000-$150,000 than in the city overall.

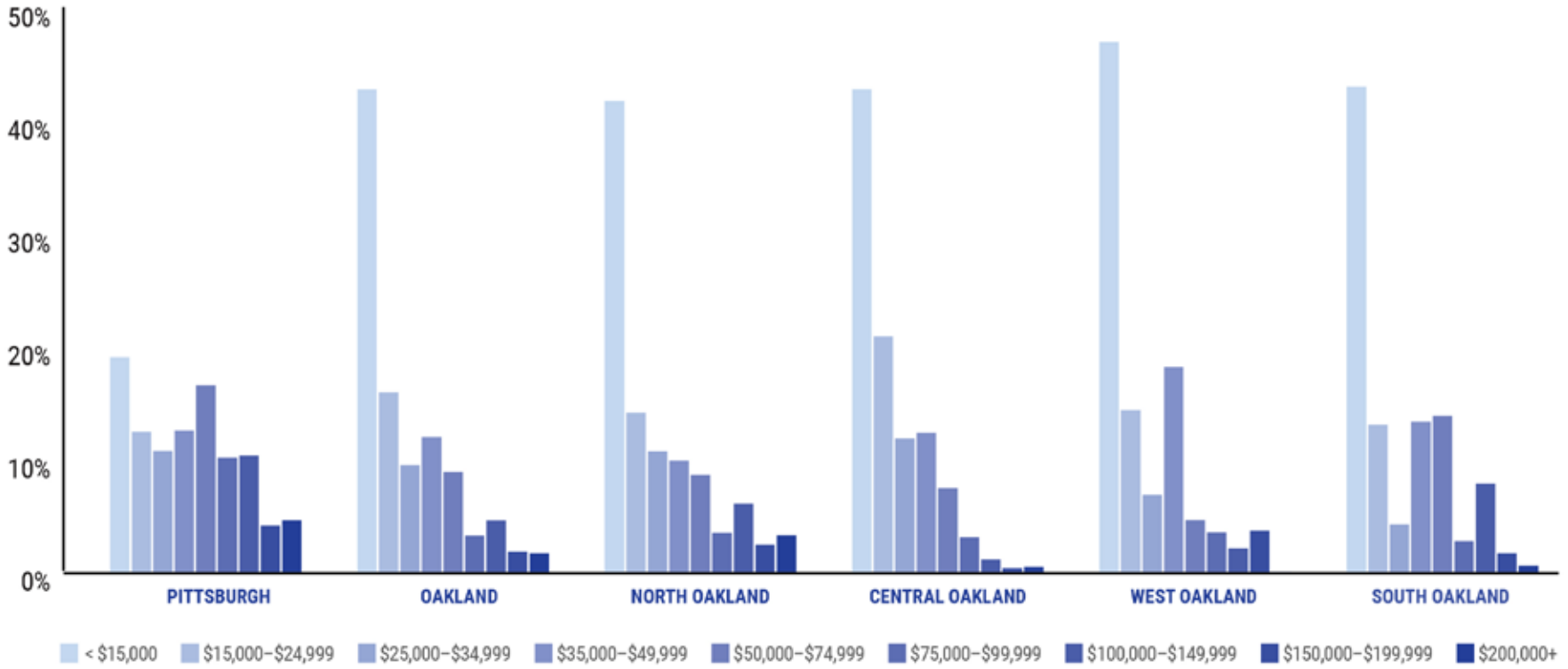
Over 40% of Oakland's households have incomes of less than $15,000 per year.

South Oakland is the most diversified in terms of income among Oakland's areas.

West Oakland has the highest concentration of low-income households, but also has a greater relative share of middle income households earning $35,000-$49,000.

North Oakland has the highest percentage of higher income households. There are comparatively few of the highest income households in South and Central Oakland comparatively.

Household Income Distribution, 2017



Source: American Community Survey 2018 5 Year Estimates

Compared to the City overall, Oakland has relatively few households headed by someone of prime working age (25-64 years old) and more low income households.

Households under 25 and over age 65 may earn less because they are more likely to be enrolled as full-time students or retired on a fixed income. In Oakland, almost 3/4 of households earning less than $25,000 are headed by someone either 65+ or 15-24. The majority of households headed by someone 15-24 or 65+ earn less than $25,000 a year. This is likely a significant effect on Oakland's household income.

Oakland also has comparatively fewer households earning the highest incomes than the City overall.

One of the important implications of Oakland's demography is that the relatively low incomes of the student population and many older households make it more difficult to sustain an amenity base dependent on disposable income. This is reflected in the current mix of retail and dining options available in Oakland.

Income by the Age of the Head of the Household | City of Pittsburgh | 2019

City of Pittsburgh

Householder Age	15-24			25-34			35-54			55-64			65+			Total	
Income	#	% of Income Bracket	% of Age Cohort	#	% of Income Bracket	% of Age Cohort	#	% of Income Bracket	% of Age Cohort	#	% of Income Bracket	% of Age Cohort	#	% of Income Bracket	% of Age Cohort	#	% of HH
< $25,000	6,169	14.7%	47.8%	6,589	15.7%	17.9%	7,453	17.7%	19.5%	6,596	15.7%	27.9%	15,191	36.2%	42.4%	41,998	30.1%
$25,000–$49,999	3,314	10.5%	25.7%	6,953	22.0%	16.1%	7,231	22.9%	18.9%	4,524	14.3%	19.2%	9,514	30.2%	26.5%	31,536	22.6%
$50,000–$99,999	2,316	6.2%	18.0%	8,483	22.7%	18.8%	12,152	32.5%	31.8%	7,519	20.1%	31.8%	6,944	18.6%	19.4%	37,414	26.8%
$100,000–$199,999	835	4.0%	6.5%	5,336	25.7%	24.2%	8,103	39.1%	21.2%	3,465	16.7%	14.7%	3,006	14.5%	8.4%	20,745	14.9%
$200,000+	260	3.4%	2.0%	1,521	19.8%	23.0%	3,229	42.0%	8.5%	1,506	19.6%	6.4%	1,180	15.3%	3.3%	7,696	5.5%
TOTAL	12,894	9.3%	100.0%	28,882	20.7%	100.0%	38,168	27.4%	100.0%	23,610	16.9%	100.0%	35,835	25.7%	100.0%	139,389	100.0%

Source: ESRI

ESRI estimates income by the age of a head of the household, to better understand how young, and thus likely student, households affect the analysis of household income. This data is not available from the American Community Survey Estimates. Because this is a 2019 estimate, the total household count is different than the ACS 2018 5-Year Estimate and should not be compared directly to ACS-based analysis.

Income by the Age of the Head of the Household | Oakland | 2019

Oakland

Householder Age	15-24			25-34			35-54			55-64			65+			Total	
Income	#	% of Income Bracket	% of Age Cohort	#	% of Income Bracket	% of Age Cohort	#	% of Income Bracket	% of Age Cohort	#	% of Income Bracket	% of Age Cohort	#	% of Income Bracket	% of Age Cohort	#	% of HH
< $25,000	2,395	54.9%	65.2%	496	11.4%	39.5%	329	7.5%	40.9%	299	6.9%	46.3%	843	19.3%	51.6%	4,362	54.4%
$25,000–$49,999	787	45.7%	21.4%	302	17.5%	24.0%	178	10.3%	22.1%	116	6.7%	18.0%	340	19.7%	20.8%	1,723	21.5%
$50,000–$99,999	312	27.9%	8.5%	254	22.7%	20.2%	151	13.5%	18.8%	134	12.0%	20.7%	267	23.9%	16.4%	1,118	14.0%
$100,000–$199,999	143	25.1%	3.9%	139	24.4%	11.1%	100	17.6%	12.4%	65	11.4%	10.1%	122	21.4%	7.5%	569	7.1%
$200,000+	36	15.0%	1.0%	65	27.1%	5..2%	46	19.2%	5.7%	32	13.3%	5.0%	61	25.4%	3.7%	240	3.0%
TOTAL	3,673	45.8%	100.0%	1,256	15.7%	100.0%	804	10.0%	100.0%	646	8.1%	100.0%	1,633	20.3%	100.0%	8,012	100.0%

Source: ESRI

The majority of households headed by someone 15-24 or 65+ earn less than $25,000 a year.

Compared to National Innovation Neighborhoods: Focus on University City

Of the national innovation neighborhoods, University City has the closest population to Oakland for a more detailed breakdown of households.

University City has significantly more households headed by someone between the ages of 25 and 34 years old. Where approximately 34% of Oakland's households are headed by someone of prime working age (25 to 64 years old), 45% of University City's households are in this age bracket. University City also has a higher proportion of its households earning over $100,000 per year; 14.6% compared to 10% for Oakland.

University City is similar to Oakland, in that as university districts with many students, over half of all households earning less than $25,000 per year are young. In University City, young households are followed by 25-34 year old households in terms of the percentage earning less than $25,000 per year. This may indicate the presence of more graduate students and early career households in University City.

In Oakland, it is more likely that households headed by someone aged 65+ have lower incomes, indicating they may have aged in place. In University City the 65-plus age cohort represents 4% of households earning less than $25,000 per year; there is a smaller and wealthier population of senior households than in Oakland.

Income by the Age of the Head of the Household | National Innovation Neighborhoods: University City | 2019

University City

Householder Age	15-24			25-34			35-54			55-64			65+			Total	
Income	#	% of Income Bracket	% of Age Cohort	#	% of Income Bracket	% of Age Cohort	#	% of Income Bracket	% of Age Cohort	#	% of Income Bracket	% of Age Cohort	#	% of Income Bracket	% of Age Cohort	#	% of HH
< $25,000	1,970	55.8%	72.6%	1,009	28.6%	45.0%	286	8.1%	42.7%	117	3.3%	52.7%	146	4.1%	59.8%	3,528	57.9%
$25,000–$49,999	399	42.5%	14.7%	387	41.2%	17.3%	97	10.3%	14.5%	25	2.7%	11.3%	31	3.3%	12.7%	939	15.4%
$50,000–$99,999	166	22.6%	6.1%	397	54.2%	17.7%	106	14.5%	15.8%	31	4.2%	14.0%	33	4.5%	13.5%	733	12.0%
$100,000–$199,999	107	20.6%	3.9%	270	51.9%	12.0%	92	17.7%	13.7%	27	5.2%	12.2%	24	4.6%	9.8%	520	8.5%
$200,000+	73	19.5%	2.7%	180	48.1%	8.0%	89	23.8%	13.3%	22	5.9%	9.9%	10	2.7%	4.1%	374	6.1%
TOTAL	2,715	44.6%	100%	2,243	36.8%	100%	670	11.0%	100%	222	3.6%	100%	244	4.0%	100.0%	6,094	100.0%

Source: ESRI

University City has fewer households headed by seniors in every income band.

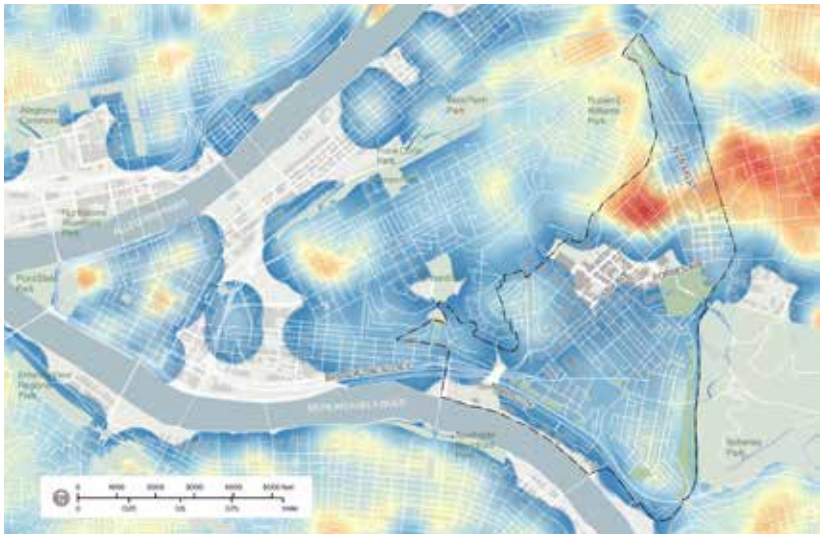
The racial breakdown of homeownership and rental tenure varies widely across Oakland neighborhoods.

- Two-thirds of the occupied housing units in Oakland are occupied by white households. Three-quarters of white households in Oakland rent.
- Fewer than a quarter of the occupied housing units in Oakland are owner-occupied. 73% of the owner-occupied housing units are owned by white households.
- 15% of the occupied housing units are occupied by Asian households. 84% of these households rent.
- 14% of the occupied housing units are occupied by black households. 78% of these households rent.
- Homeownership is the highest in North Oakland. Homeowners in North Oakland are predominantly white, although 15% are Asian. The population of renters in North Oakland is considerably more diverse, at 47% white, 19% black, and 31% Asian among others.
- West Oakland is among the most racially-diverse of Oakland's areas. Two-thirds of the homeowners in West Oakland are black. 20% of renters are Asian. White households are less than one-third of all households, renter or homeowner, in West Oakland.
- A small share of housing units in Central Oakland are occupied by homeowners; those homeowners are predominantly white. Central Oakland's renters are also predominantly white.
- South Oakland has approximately equal numbers of black households that rent and black households that are homeowners. Significantly more white households are renters in South Oakland than homeowners.

Occupied Housing Units by Race and Tenure

	Oakland			North Oakland			Central Oakland			West Oakland			South Oakland		
	% of all units	% of owned units	% of rented units	% of all units	% of owned units	% of rented units	% of all units	% of owned units	% of rented units	% of all units	% of owned units	% of rented units	% of all units	% of owned units	% of rented units
White Alone	67.2%	73.2%	65.5%	57.9%	83.9%	47.3%	87.3%	90.0%	87.0%	27.7%	24.2%	28.9%	75.4%	58.6%	81.6%
Black Alone	13.8%	13.4%	13.9%	13.6%	0.0%	19.2%	2.2%	5.7%	1.8%	49.4%	66.2%	43.9%	15.2%	27.5%	10.6%
Asian Alone	15.4%	10.6%	16.8%	26.5%	14.9%	31.2%	5.5%	4.3%	5.6%	17.3%	9.6%	19.8%	5.1%	4.8%	5.3%
American Indian, Pacific Islander, Other	1.3%	1.3%	1.3%	0.4%	1.3%	0.0%	2.4%	0.0%	2.7%	2.1%	0.0%	2.7%	1.4%	2.9%	0.9%
2 or More Races	2.3%	1.4%	2.6%	1.6%	0.0%	2.3%	2.6%	0.0%	2.9%	3.5%	0.0%	4.6%	2.9%	6.1%	1.7%
TOTAL NUMBER	7,121	1,636	5,485	3,016	875	2,141	2,075	230	1,845	631	157	474	1,399	374	1,025

Source: American Community Survey 2015–2018



Owner-occupied Parcels Percentage Heatmap

High owner-occupancy

Low owner-occupancy

Data Sources

Allegheny County Property Assessments

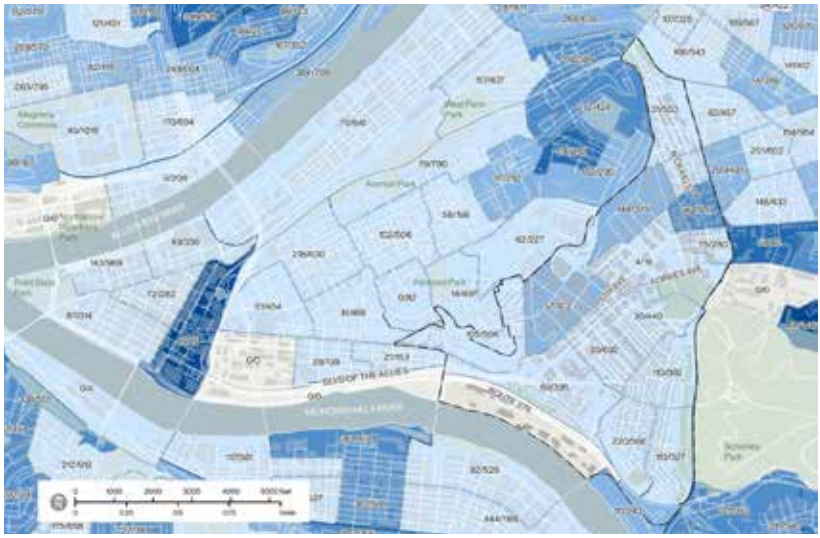
Property assessment data was joined by parcel ID to the parcels shapefile, and a subset of the dataset was created which only included residential (including mixed-use) parcels.

The physical property address and the 'change notice address' listed in the property assessment data were compared, under the assumption that matching addresses would imply an owner-occupied parcel.

The number of parcels with matching addresses, as well total parcel count, were spatially aggregated by hex.

The aggregated values were divided to approximate the number of owner-occupied per hex.

A point layer was created from the hex centroids and visualized using heatmap symbology, weighted by the percentage of parcels within the hex with matching addresses (and thus are assumed to be owner-occupied).



Owner-occupied Residential Units % –ACS Percentage

- 0%–20%
- 20%–40%
- 40%–60%
- 60%–80%
- 80%–100%

Data Sources

ACS 2015–2018

Oakland has areas of concentrated homeownership, but it is primarily a rental market focused on a high-turnover student population.

Using two different methods of measurement, Oakland has fewer than one-third of housing units occupied by homeowners. As mapped on page 47, American Community Survey estimates total homeownership levels across Oakland at approximately 1,700 housing units – or 24% of the total housing units in the neighborhood. This compares to approximately 48% homeowner occupancy in Pittsburgh overall.

A second strategy of measuring likely homeownership, by matching property tax records that were mailed to the same address, likely indicating that the owner lives in the unit, identified 1,322 parcels, or 27% of units, as owner-occupied.

Higher levels of homeownership exist in Oakland but are largely concentrated in pockets of North Oakland – as part of the Schenley Farms neighborhood and in a Census tract bound by Bellefield Avenue, Fifth Avenue, Neville Street, and Bayard Street where there are a number of significant condominium buildings. These areas are shown in the red/orange color scheme on the heat map. There are also slightly higher rates of homeownership in West and South Oakland than in Central Oakland.

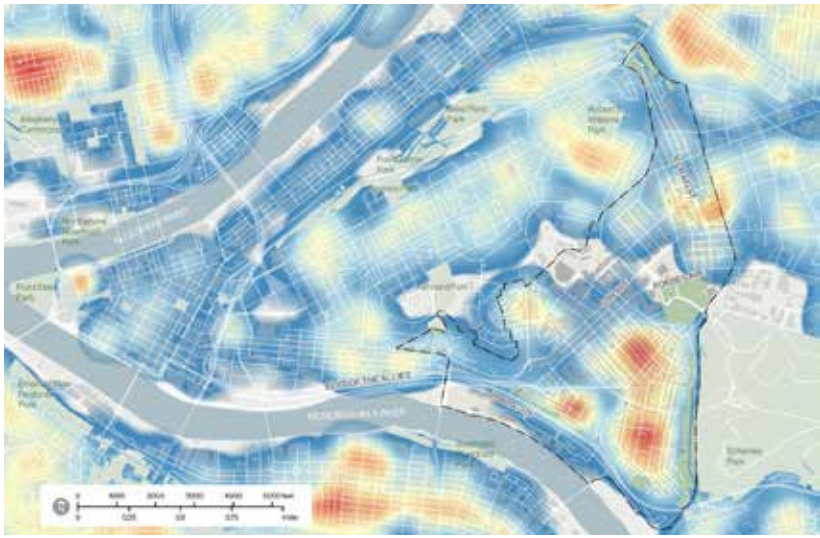
Most of the housing stock in Oakland is characterized as average to fair in condition.

Approximately 40% of the housing stock contains three or four bedrooms. There are over 230 properties that contain over seven bedrooms. There are more properties with five bedrooms, 475, than there are of either one-bedroom or two-bedroom properties, 432 and 268 respectively. 432 residential properties do not have data provided as part of the assessors files, and multi-family housing that is taxed as commercial property is not included in these totals. Overall, the breakdown of bedrooms is similar to the City of Pittsburgh overall.

The housing stock may require substantial renovation and rehabilitation to serve a market broader than students. 86% of the total housing stock captured in the assessor's files is in average to fair condition. There are more properties in good, very good, or excellent condition total than there are in poor, very poor, and unsound condition. Six properties are estimated to be in unsound condition.

While the number of housing units and the physical form of residential properties is smaller in Central and South Oakland, they are some of Oakland's most dense areas in terms of bedrooms.

Student housing is typically rented per bedroom, which makes number of bedrooms an important measure of density in a student-dominated rental market. Bedroom density in South Oakland and Central Oakland is high. Most of Central Oakland has a substantial level of bedroom density, with nearly 3,000 bedrooms in the area.



Bedroom Density Heatmap

Fewer bedrooms per parcel

More bedrooms per parcel

Data Sources

Allegheny County Property Assessments

The property assessment dataset has information on the number of bedrooms per parcel, though some large, multi-unit parcels (i.e. apartment buildings, college dormitories) did not have bedroom counts listed and may therefore be undercounted here.

The property assessment data was joined by parcel ID to the parcels shapefile, and the number of bedrooms per parcel was spatially aggregated to find the number of bedrooms per hex.

A point layer was created from the hex centroids and visualized using heatmap symbology, weighted by the number of bedrooms in each hex.

For rental properties, the most critical issue in Oakland is the relative lack of housing availability. Rents of multi-bedroom homes are comparatively high, likely because of students renting by the bedroom.

Based on a November 2019 snapshot of the rental market, only 26 units were available for rent. This is less than half of one percent of the total rental housing units in the neighborhood and less than 0.3% of the total housing units. Such a low level of availability indicates a very tight housing market. The available units ranged in price from $600-$1285 for a one bedroom; $830-$3,500 for a two-bedroom, $1,295-$3.150 for a three-bedroom, $2,000 for a four-bedroom, $2,000-$3,500 for a five-bedroom, and $2,100-$2,495 for a six-bedroom.

Approximately half of the units listed on the open rental market are affordable to households making 80% of Area Median Income (AMI).

The City of Pittsburgh Affordable Housing Task Force analyzes housing affordability based on households earning 30%, 50%, and 80% of AMI. The 2016 Affordable Housing Task Force report envisions establishing an affordable housing trust fund that would target 50% of funds to households earning at or below 30% AMI, 25% of funds to households earning at or below 50% AMI, and 25% of funds to households earning at or below 80% AMI. The report also envisions

Pittsburgh Income Limits (HUD) and Rents

Household Size	Extremely Low Income	Very Low Income	Low Income
	30% AMI Rent at 30%	50% AMI Rent @ 30%	80% AMI Rent @ 30%
1	$420.00	$700.00	$1,118.75
2	$480.00	$800.00	$1,278.75
3	$540.00	$900.00	$1,438.75
4	$643.75	$998.75	$1,597.50
5	$754.25	$1,078.75	$1,726.25
6	$864.75	$1,158.75	$1,853.75

that inclusionary housing should be targeted at households at or below 50% AMI for rental units and households at 80% AMI for homeownership.

Of the housing units listed as available at the time of the analysis, none of the units are affordable to very low income households earning 30% AMI or below. One unit listed at the time of this analysis is affordable to a 1 or 2 person households at 50% AMI; six units are affordable to a 1-2 person household at 80% AMI. Four units are affordable to a 3-4 person household at 80% AMI.

7 units are affordable to a 3 person household at 80% AMI; 9 units are affordable to a 4 person household at 80% AMI.

CHAPTER TWO:

OAKLAND THE WORKPLACE

Key Takeways

- **According to the Brookings Institution, Oakland produces more than a third of all of Pennsylvania's university research output. And while nearly 32% of Oakland's workers are in the education sector, nearly 45% are in the health care and social assistance sector. Oakland plus the adjacent VA Medical Center and Carnegie Mellon University account for more than 20% of Pittsburgh's jobs. These nearly 53,000 jobs are comparable to Kendall Square in Cambridge MA, but about 30,000 fewer than the job count in Philadelphia's University City.**
- **Oakland's total employment grew a robust 38% between 2000 and 2010 – representing most of Pittsburgh's job growth for that period. It has leveled off since then, however, with continued educational services, accommodations, and food services growth countered by relocation of some health care jobs to Lawrenceville. Professional, scientific, and technical services jobs, a mainstay of most innovation neighborhoods, have not grown markedly in Oakland since 2002. These have instead grown in neighborhoods like Lawrenceville, the Strip, and South Side Flats.**
- **Oakland's workforce is 60% female. It is more racially diverse than in other Pittsburgh neighborhoods with tech industries, but less diverse than the city's overall workforce. It is relatively older, with fewer employees in the 25-34 age range than Lawrenceville and South Side Flats.**
- **About 28% of Oakland's workforce live in Pittsburgh, a decline from 30% in 2010. About 64% of the workforce lives within ten miles. The share of Oakland's workforce commuting over 50 miles doubled to 7.5% between 2010 and 2017, led by its lowest-paid workers.**
- **Due to site constraints, development of new office and private research space has remained well short of demand.**

Note:

North Oakland's boundaries do not include a significant portion of Carnegie Mellon University's campus. Therefore, the number of jobs in North Oakland excludes most of Carnegie Mellon's jobs.

Job statistics that refer to Oakland's specific boundaries as defined by the City will be referred to as "Oakland Proper". When job statistics include an additional tract near Carnegie Mellon, it will be referred to as "Oakland Area".

The U.S. Census provides data on where people work and where people live through the LEHD Origin-Destination Employment Statistics. This data is available by census tract from 2002 to 2017. The data tracks jobs as the primary unit instead of people. The number of "primary jobs" should equal the number of workers in a location. "All jobs" include non-primary jobs.

The LEHD data provides data over time and jobs by industry. It also includes information on the sex, race, ethnicity and education of the job holder. Unless otherwise noted, this is the source of data for analysis in the following chapter.

There are an estimated 48,625 jobs in Oakland proper.

If the Census Block Group with most of Carnegie Mellon's campus is included, there are 53,573 jobs in the Oakland area. There are almost 2.5 times as many workers as residents in Oakland proper. Expanding Oakland further to include more of Squirrel Hill North and the VA Hospital increases the worker count to just over 57,700. The Oakland area is home to 6 of the 50 largest employers in Pittsburgh.

Most of Oakland's jobs are in West and North Oakland where the hospitals and universities are located.

Together, the institutions employ approximately 30,000 people, or 56% of all jobs in Oakland. While the majority of these jobs are in educational services and health care and social assistance, as coded by LEHD, other support services may be coded differently.

The educational institutions in Oakland employed approximately 19,500 people in 2017. This includes approximately 4,650 employees at the University of Pittsburgh School of Medicine and represents 36% of the total jobs in Oakland. While the total employment remained essentially the same in the Oakland area from 2010 to 2017, the educational institutions increased employment. Employment at Carnegie Mellon grew from 3,782 to 6,077 over the last two decades, or 60.7%. Employment at Carlow and Pitt also grew by over 30% in the same time period.

The hospitals are also a significant employment base. According to data included in OBID's Retail Market Study (2015), the 2014 employment was as follows:

- UPMC Presbyterian (which includes UPMC Montefiore) – 6,150 employees
- UPMC Magee-Womens Hospital – 2,478 employees
- Western Psychiatric Institute and Clinic – 2,270 employees
- VA Pittsburgh Hospital – 3,792 employees
- The larger UPMC system employees 53,000 locally and is the largest non-government employer in Pennsylvania.

The Pittsburgh Technology Center also hosts a number of major employers in a district along the riverfront. The Pittsburgh Technology Center has more than 1,000 workers, including major employers at Steel Dynamics, National Cyber-Forensics and Training Alliance, Braskem, the University of Pittsburgh Center for Biotechnology and Bioengineering, and Century Link.

The School District of Pittsburgh is among the largest employers in the city; while it is headquartered in Oakland, its 39,000 employees work throughout the city.

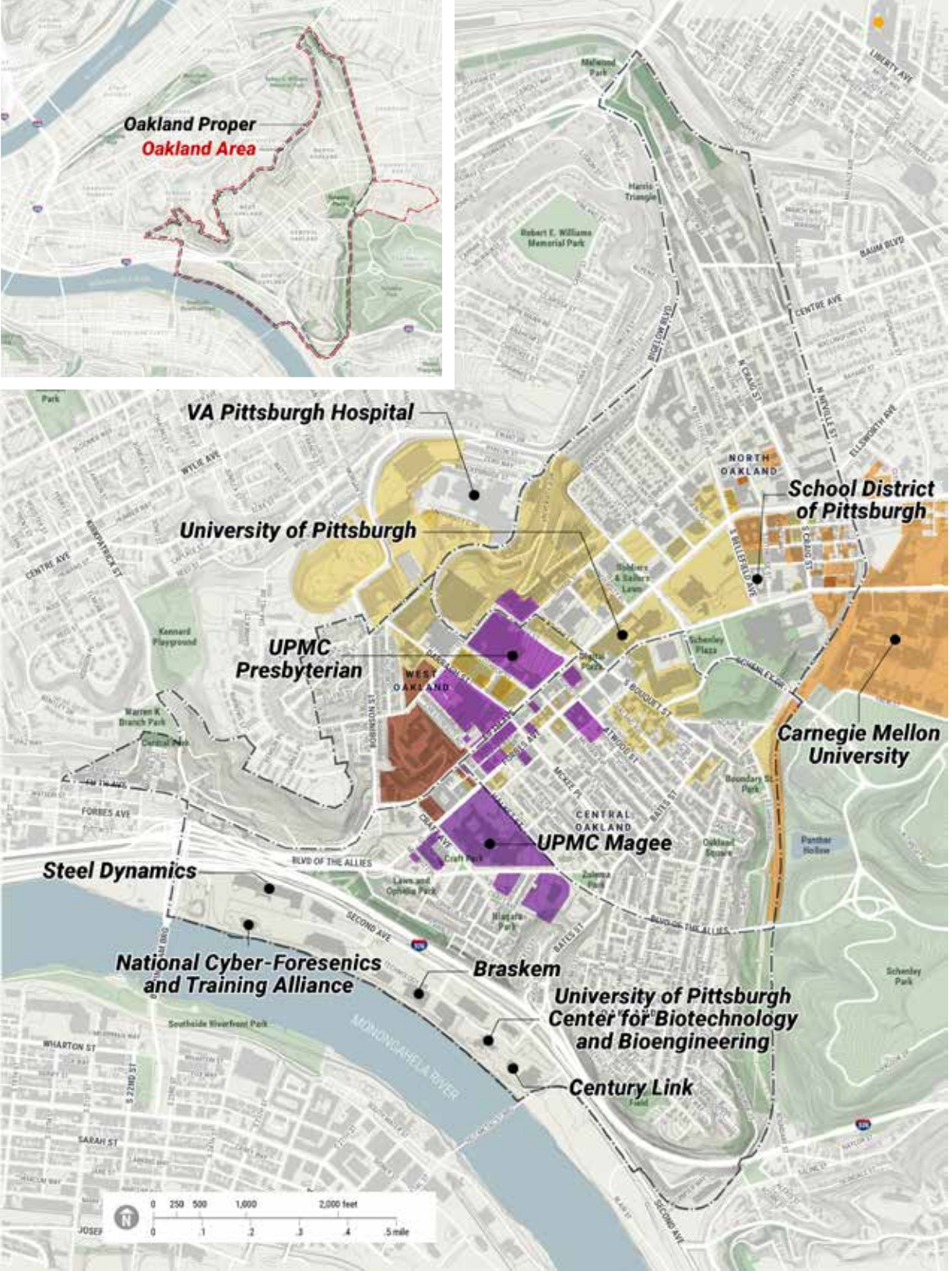
Overall Employment Number

- In 2012 SnapPGH indicated that there were approximately 72,000 jobs in Oakland. The EcoInnovation District Plan in 2017 indicated 79,000 jobs in Oakland.
- Because the LEHD data is a U.S. Census product, provides data over time by industry, and tracks the characteristics of job holders, this data has been used in this analysis. It provides a consistent baseline for comparison, even as it may undercount compared to other estimates.

Full-Time and Part-Time Job Trends at Educational Institutions | Oakland Area | 2010 and 2017

	2000	2010	2017	2000-2010		2010-2017		2000-2017	
				#	%	#	%	#	%
University of Pittsburgh	9,615	12,667	12,942	3,052	31.7%	275	2.2%	3,327	34.6%
Carnegie Mellon University	3,782	5,089	6,077	1,307	34.6%	988	19.4%	2,295	60.7%
Carlow University	378	547	494	169	44.7%	(53)	-9.7%	116	30.7%
TOTAL	13,775	18,303	19,513	4,528	32.9%	1,210	6.6%	5,738	41.7%

Source: University of Pittsburgh, Office of Institutional Research, "2011 and 2018 Fact Book"; Carnegie Mellon University, "University Factbook 2010-2011 and 2017-2018"; Carlow University institutional research department.



Major Employers

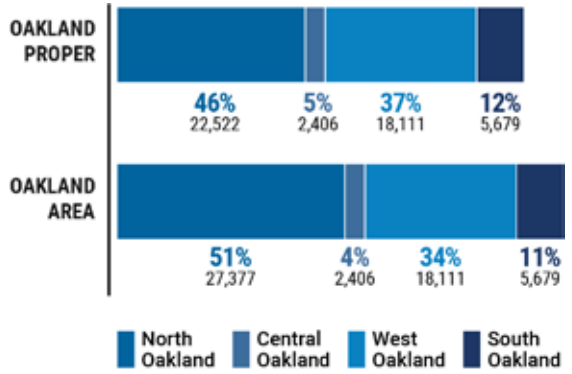
Major Employers

INSTITUTIONAL OWNERSHIP

- University of Pittsburgh
- Carnegie Mellon University
- Carlow University
- UPMC Magee
- UPMC Oakland

Sources: Major Employers (2019), PA Department of Labor and Industry

Jobs in Oakland by Neighborhood



70% of the Oakland area's jobs are in health care or educational services. The Oakland area contains 66% of all education jobs 40% of health care and social assistance jobs in Pittsburgh. The industry with the greatest number of jobs in the Oakland Area is health care and social assistance with 21,650 jobs. Educational services provides 19,849 jobs in the Area. Together this industries account for 70% of the jobs in the Oakland Area. As a point of reference, these two industries account for 78% of University City's jobs. There was rapid growth in jobs in these sectors from 2002-2010, but since then growth has slowed and, in the case of healthcare, the jobs in Oakland declined 2010-2017.

Oakland has also has over 3,000 jobs in management of companies and enterprises, a category that includes business headquarters and can be an important part of innovation.

The fastest growing sector in Oakland is information services which is comprised of software, digital media, publishing, and media. This sector grew by 55% from 2010 to 2017.

Oakland is 20% of Pittsburgh's overall job base, but 46% of its healthcare and education jobs.

41,495 healthcare/ education jobs

66% of all education jobs in Pittsburgh

36% of all healthcare jobs in Pittsburgh

People Who Work in Oakland Area and Oakland Proper by Industry | 2017

	Oakland Area			Oakland Proper		
Industry	Employees	% of Total	Oakland's % of City Jobs	Employees	% of Total	Oakland's % of City Jobs
Health Care and Social Assistance	21,653	41.1%	36.1%	21,649	44.5%	36.1%
Educational Services	19,842	29.1%	65.5%	15,347	31.6%	50.6%
Management of Companies and Enterprises	3,174	6.0%	26.0%	3,174	6.5%	26.0%
Accommodation and Food Services	2,785	4.7%	14.2%	2,490	5.1%	12.7%
Public Administration	1,683	10.9%	16.0%	1,683	3.5%	16.0%
Professional, Scientific, and Technical Services	953	1.6%	3.7%	838	1.7%	3.3%
Information	580	1.1%	8.8%	578	1.2%	8.8%
Arts, Entertainment, and Recreation	566	1.1%	8.4%	566	1.2%	8.4%
Other Services	535	1.0%	7.0%	535	1.1%	7.0%
Manufacturing	463	0.9%	7.3%	463	1.0%	7.3%
Retail Trade	405	0.8%	4.0%	405	0.8%	4.0%
Real Estate and Rental and Leasing	268	0.5%	7.3%	268	0.6%	7.3%
Administration & Support, Waste Management and Remediation	226	0.4%	2.4%	190	0.4%	2.0%
Wholesale Trade	221	0.4%	4.0%	221	0.5%	4.0%
Finance and Insurance	169	0.3%	0.5%	168	0.3%	0.5%
Construction	27	0.1%	0.4%	27	0.1%	0.4%
Utilities	14	0.0%	0.6%	14	0.0%	0.6%
Transportation and Warehousing	9	0.0%	0.2%	9	0.0%	0.2%
TOTAL	53,573	100.0%	20.2%	48,625	100.0%	18.4%

Source: LEHD Origin-Destination Employment Statistics as modified by W-ZHA, LLC

Jobs in Oakland by Industry | Oakland Proper | 2002, 2010, 2017

	2002		2010		2017		Change 2002 - 2010		Change 2010-2017		Change 2002-2017	
Industry	Jobs	% of Total	Jobs	% of Total	Jobs	% of Total	Jobs	% Change	Jobs	% Change	Jobs	% Change
These industries grew form 2002–2017.												
Health Care and Social Assistance	13,326	37.3%	22,783	46.3%	21,649	44.5%	9,457	71.0%	(1,134)	-5.0%	8,323	62.5%
Management of Companies and Enterprises	2,129	6.0%	2,995	6.1%	3,174	6.5%	866	40.7%	179	6.0%	1,045	49.1%
Educational Services	10,433	29.2%	14,870	30.2%	15,347	31.6%	4,437	42.5%	477	3.2%	4,914	47.1%
Accommodation and Food Services	1,766	4.9%	2,080	4.2%	2,490	5.1%	314	17.8%	410	19.7%	724	41.0%
Professional, Scientific, and Technical Services	861	2.4%	954	1.9%	838	1.7%	93	10.8%	(116)	-12.2%	(23)	-2.7%
Public Administration	1,760	4.9%	1,748	3.6%	1,683	3.5%	(12)	-0.7%	(65)	-3.7%	(77)	-4.4%
Information	615	1.7%	372	0.8%	578	1.2%	(243)	-39.5%	206	55.4%	(37)	-6.0%
Real Estate and Rental and Leasing	291	0.8%	224	0.5%	268	0.6%	(67)	-23.0%	44	19.6%	(23)	-7.9%
Manufacturing	648	1.8%	565	1.1%	463	1.0%	(83)	-12.8%	(102)	-18.1%	(185)	-28.5%
Other Services (excluding Public Administration)	829	2.3%	519	1.1%	535	1.1%	(310)	-37.4%	16	3.1%	(294)	-35.5%
Utilities	23	0.1%	16	0.0%	14	0.0%	(7)	-30.4%	(2)	-12.5%	(9)	-39.1%
Finance and Insurance	281	0.8%	352	0.7%	168	0.3%	71	25.3%	(184)	-52.3%	(113)	-40.2%
Retail Trade	714	2.0%	392	0.8%	405	0.8%	(322)	-45.1%	13	3.3%	(309)	-43.3%
Transportation and Warehousing	16	0.0%	13	0.0%	9	0.0%	(3)	-18.8%	(4)	-30.8%	(7)	-43.8%
Arts, Entertainment, and Recreation	1,035	2.9%	552	1.1%	566	1.2%	(483)	-46.7%	14	2.5%	(469)	-45.3%
Wholesale Trade	460	1.3%	215	0.4%	221	0.5%	(245)	-53.3%	6	2.8%	(239)	-52.0%
Administration & Support, Waste Management and Remediation	433	1.2%	496	1.0%	190	0.4%	63	14.5%	(306)	-61.7%	(243)	-56.1%
Construction	122	0.3%	57	0.1%	27	0.1%	(65)	-53.3%	(30)	-52.6%	(95)	-77.9%
TOTAL	35,743	100.0%	49,207	100.0%	48,625	100.0%	13,464	37.7%	(582)	-1.2%	12,882	36.0%

Source: LEHD Origin-Destination Employment Statistics as modified by W-ZHA, LLC

Health Care and Social Assistance and Educational Services dwarf others.

No net growth overall.

Information grew the most 2010–2017.

Job losses 2002-2010 outweigh recent stability.

Almost all the city's job growth between 2002 and 2010 occurred in Oakland proper.

Between 2002 and 2010, almost 13,500 jobs were added in Oakland proper. Jobs grew by 38% in this eight-year period.

Since 2010, the number of jobs in Oakland proper has declined slightly.

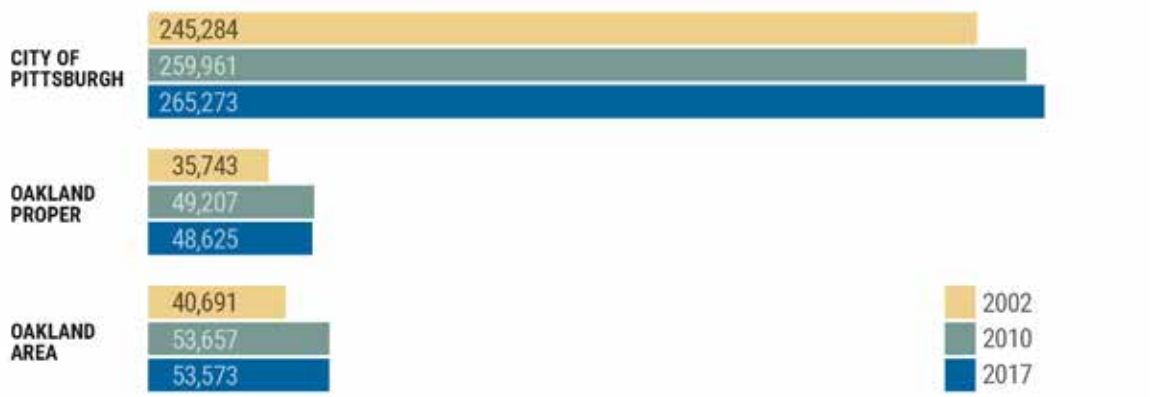
Across the Oakland area, jobs have remained essentially the same. According to the US Census LEHD Origin Destination Employment Statistics, Oakland lost over 1,000 health care and social service jobs between 2010 and 2017. The job loss is likely attributable to UPMC expanding Children's Hospital in Lawrenceville.

Between 2010 and 2017, meaningful job growth occurred in the education services, accommodations and food service, and management industries in Oakland. Professional, scientific, and technical services, typically a mainstay of innovation neighborhoods, has not grown markedly since 2002.

Unlike Oakland, jobs in Lawrenceville and South Side Flats grew between 2010 and 2017. The CBD lost over 2,780 jobs between 2010 and 2017.

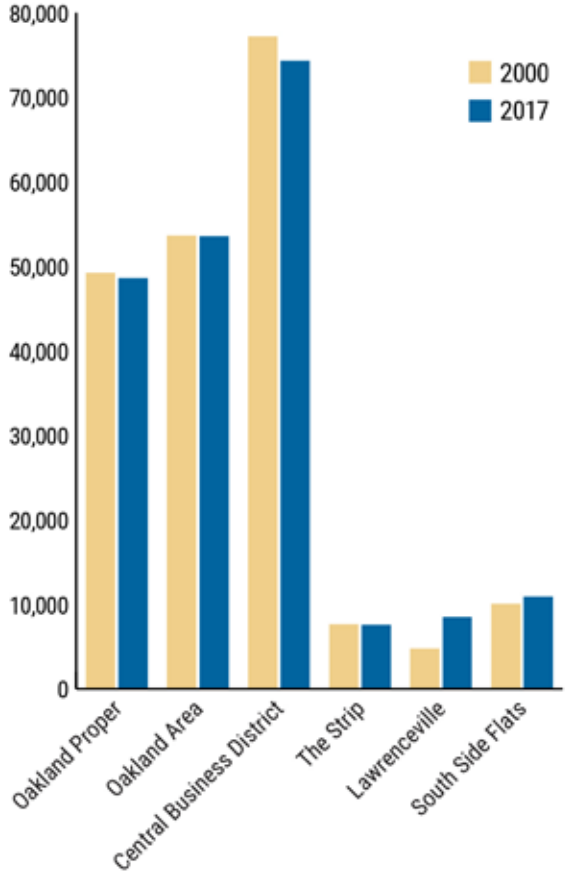
The Strip has the most diversified employment among the Pittsburgh innovation neighborhoods.

Job Trends | The City, Oakland Proper and the Oakland Area | 2002 - 2017



Source: LEHD Origin-Destination Employment Statistics

Number of Jobs | Oakland Proper & Area and Pittsburgh Innovation Neighborhoods | 2010 and 2017



Source: LEHD Origin-Destination Employment Statistics as modified; W-ZHA. These jobs occur within the geography of the Census tracts indicated; jobs conducted in a different location, even for a business located within the given area, are not counted because it is not the place of work.

Jobs by Industry | Oakland Area and Pittsburgh Innovation Neighborhoods | 2017

	CBD	The Strip	Lawrenceville	South Side Flats	Oakland Area
Retail Trade	760	526	439	1,062	405
Transportation, Warehousing, Utilities	1,260	36	142	328	23
Information	2,252	181	25	418	578
Financial Activities	28,753	1,512	137	476	436
Professional & Business Services	24,010	1,865	859	2,244	4,202
Education Services	1,270	271	171	469	15,347
Health Care & Social Assistance	2,342	231	3,458	1,836	21,649
Leisure & Hospitality	5,456	1,034	760	2,282	3,056
Other Services	2,341	271	431	314	535
Public Admin	4,353	0	5	0	1,683
Other Industries	1,518	1,670	2,072	1,490	711

Source: LEHD Origin-Destination Employment Statistics as modified; W-ZHA

While Oakland's job density is high compared to other Pittsburgh innovation neighborhoods, it is low compared to the national innovation neighborhoods analyzed.

Oakland proper has 18.4% of the city's jobs, more than any other district than the CBD. With its tall buildings and compact form, Pittsburgh's CBD has a very high concentration of jobs. Compared to other Pittsburgh innovation neighborhoods – the Strip, Lawrenceville, and South Side Flats – Oakland has a higher concentration of employees and more jobs overall.

The number of jobs in the Oakland area is comparable to Kendall Square in Cambridge. University City in Philadelphia has over 30,000 more jobs than the Oakland area.

Number of Employees and Employees per Square Mile | Oakland Proper & Area and Pittsburgh Innovation Neighborhoods | 2017

Neighborhood	Employees	Employees per Square Mile
Central Business District	74,315	136,741
The Strip	7,597	12,351
Lawrenceville	8,499	6,700
South Side Flats	10,919	11,458
Oakland Proper	48,625	
Oakland Area	53,573	34,505

Source: LEHD Origin-Destination Employment Statistics as modified; W-ZHA

Number of Employees and Employees per Square Mile | National Innovation Neighborhoods

	Employees	Employees per Square Mile
University City–Philadelphia[1]	85,000	85,000
Kendall Square–Cambridge[2]	50,000	72,464
Midtown–Atlanta[1]	65,000	72,222
Research Triangle Park[1]–Raleigh-Durham	39,000	
Oakland Area[2]	53,573	32,855

[1] 2019 data | [2] 2017 data.

Source: University City, 2019 Annual Report; Midtown Atlanta, "Only In Midtown"; Discover Durham, "Research Triangle Park (April 2019); The Boston Globe 12/14/2017, "Booming Kendall Square will get a long-sought supermarket as MIT projects advance"; LEHD data.

POINT OF DISCUSSION

Philadelphia's University City has 30,000 more jobs in an area similar to Oakland. How can Oakland pack more employees into its commercial areas in ways that improve the livability of the neighborhood and without bringing more cars?

The Oakland workforce is predominantly female.

60% of the workers in the Oakland area are female. In West Oakland, where the healthcare industry predominates, almost 70% of workers are female! As a point of reference, women comprised 49% of the city's workforce in 2017.

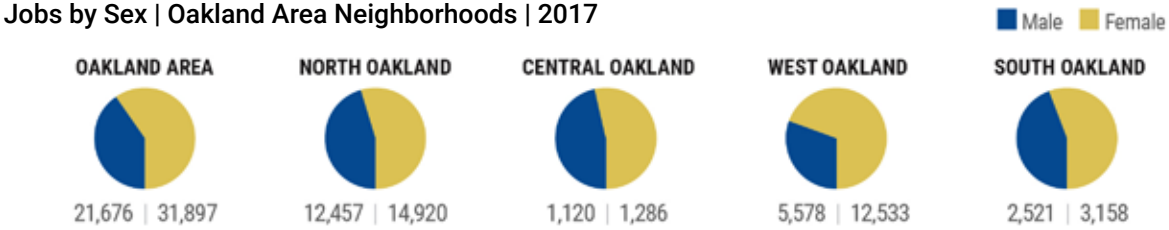
Oakland's workforce is the most diverse in terms of race of the neighborhoods analyzed.

There are more Asian workers in Oakland than there are in any of the Pittsburgh innovation neighborhoods. Over 6% of workers in Oakland are Asian. Oakland also has a higher percentage of Black or African-American employees than the CBD, but less than Lawrenceville and Southside Flats.

Oakland's workforce is less Black or African-American than the city's workforce overall, and less than the city's population.

11.4% of Oakland's residents are Black or African-American, and 11.2% of workers in Oakland are Black or African-American. The city's overall population is 23.6% Black, while its workforce is 12.8% Black.

Jobs by Sex | Oakland Area Neighborhoods | 2017



Source: LEHD Origin-Destination Employment Statistics; W-ZHA

Oakland Employees by Race | Oakland Area | 2010–2017

	2010		2017		2010-2017	
	#	%	#	%	#	%
White Alone	44,270	83%	43,470	81%	(800)	-1.8%
Black or African American Alone	5,897	11%	5,987	11%	90	1.5%
Asian Alone	2,887	5%	3,357	6%	470	16.3%
Other Race Alone	124	0%	88	0%	(36)	-29.1%
Two or More Race Groups	479	1%	672	1%	193	40.2%
TOTAL	53,657	100%	53,573	100%	(84)	-0.2%

Source: LEHD Origin-Destination Employment Statistics

Jobs by Worker Race | Oakland and Pittsburgh Innovation Neighborhoods | 2017

Worker Race	CBD		The Strip		Lawrenceville		South Side Flats		Oakland		City	
White Alone	63,074	84.9%	6,506	85.6%	7,125	83.8%	9,138	83.7%	43,470	89.4%	203,265	66.6%
Black or African American Alone	7,733	10.4%	734	9.7%	1,076	12.7%	1,303	11.9%	5,987	12.3%	72,073	23.6%
Asian Alone	2,586	3.5%	243	3.2%	181	2.1%	325	3.0%	3,357	6.9%	17,153	5.6%
Other Race Alone	88	0.1%	17	0.2%	22	0.3%	13	0.1%	88	0.2%	2,077	0.7%
Two or More Race Groups	834	1.1%	97	1.3%	95	1.1%	140	1.3%	672	1.4%	10,444	3.4%
TOTAL	74,315		7,597		8,499		10,919		53,573		305,012	

Source: LEHD Origin-Destination Employment Statistics; W-ZHA

Over one-quarter of Oakland's employees are over the age of 55. As compared to other Pittsburgh innovation neighborhoods, Oakland has the greatest share of its employees 55+ years old or older.

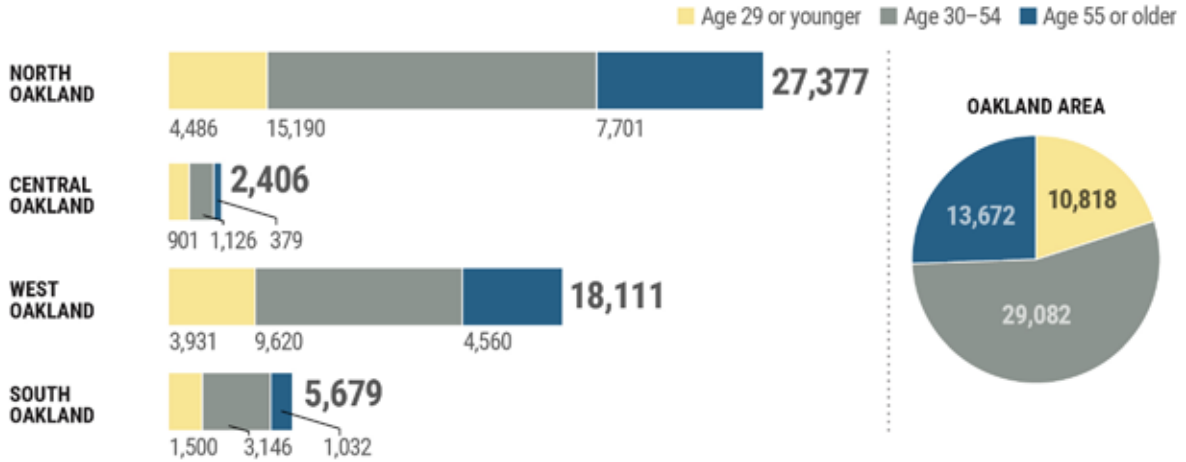
Oakland is comparable to the CBD in terms of the share of young workers – 19% to Oakland's 20%. Lawrenceville and South Side Flats have a much higher percentage of their workforce under the age of 29.

Central Oakland has the highest proportion of its workers 29 years old or less. Central Oakland has a concentration of its jobs in accommodation and food service and healthcare.

South Oakland also has a relatively high proportion of its workforce age 29 or younger. Half of South Oakland's jobs are in healthcare. Approximately 13% of South Oakland's jobs are in manufacturing and professional services. These industries may require young talented workers.

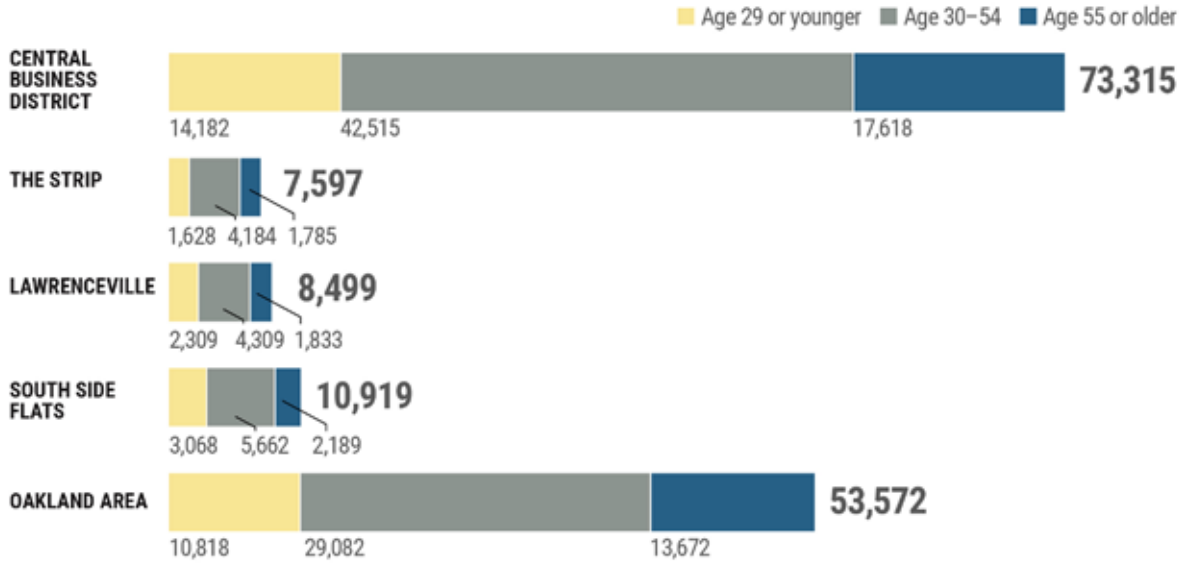
With education the dominant industry in North Oakland, it has the highest concentration of workers over 55 years old. North Oakland captures 56% of the Oakland area's workforce over 55.

Employees by Age | Oakland Area and Neighborhoods



Source: LEHD Origin-Destination Employment Statistics; W-ZHA

Distribution of Employees by Age | Oakland and Pittsburgh Innovation Neighborhoods | 2017



Source: LEHD Origin-Destination Employment Statistics; W-ZHA

Almost two-thirds of employees who work in Oakland earn over $40,000 a year.

Most of the Oakland area's workers who earn over $40,000 per year work in the North Oakland area. Approximately two-thirds of the employees in West and North Oakland earn more than $40,000 per year.

One-third of Central Oakland's 2,400 employees earn less than $15,000 per year.

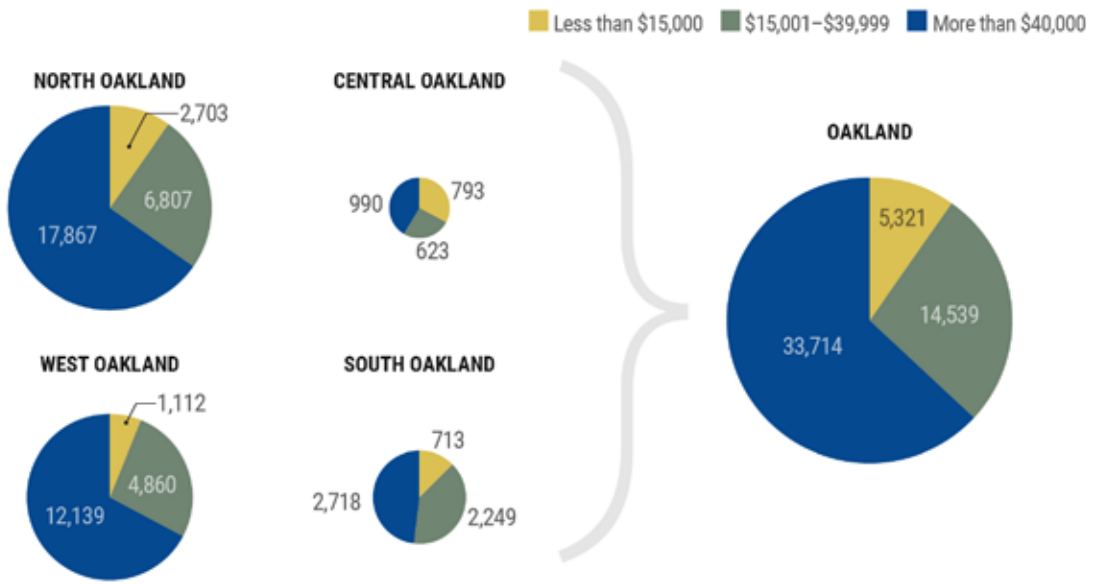
The Pittsburgh Metropolitan Area's 2017 Area Median Income (AMI) was $58,521. The lowest earning bracket includes those workers who earn up to $15,000 per year or 26% of AMI. 10% of Oakland's workers fall into this bracket.

The middle earning bracket includes those workers who earn between $15,000 and $40,000 per year. Over a quarter of Oakland's workers are in this bracket. The high-end of this bracket is 68% of AMI.

Oakland's employees most closely resemble the Central Business District in terms of earnings distribution. Both the CBD and Oakland have a high percentage of employees with earnings above $40,000 per year.

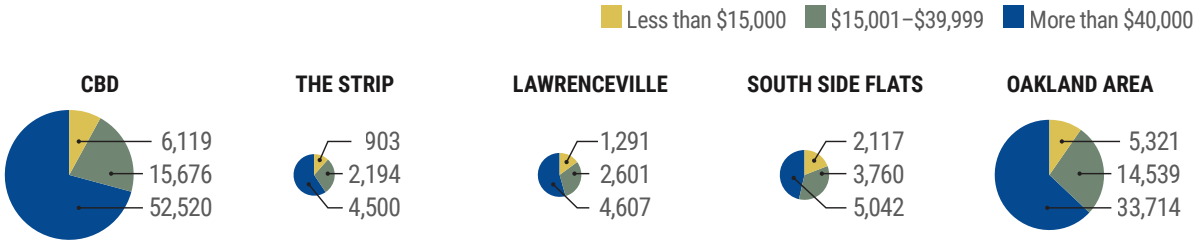
Note that earnings by worker in an area comes from the Census LEHD program, and is provided only for these income brackets. The Census provides greater detail about the income of households that live in Oakland, as covered previously, but less about the incomes of employees who work in Oakland.

Distribution of Employees by Earnings | Oakland Neighborhoods | 2017



Source: LEHD Origin-Destination Employment Statistics; W-ZHA

Distribution of Employees by Earnings | Oakland Area and Pittsburgh Innovation Neighborhoods | 2017



Source: LEHD Origin-Destination Employment Statistics; W-ZHA

Oakland workers have a high level of educational attainment.

43% of Oakland area workers that reported on their education has a Bachelor's degree or higher. Oakland area workers are very similar to CBD workers in terms of educational attainment. Oakland area workers represent 23% of all city workers with a Bachelor's degree or higher.

As would be expected with its concentration of employment in higher education, approximately half of all North Oakland employees reporting educational attainment had a Bachelor's degree or higher. A high concentration of employees with Bachelor's degrees and above is an asset and can also pose challenges. Employees are needed to support the retail, service, and entertainment industries as well as large employers. Many of these jobs do not require a Bachelor's degree. To maintain a robust and balanced economy, a variety of industries and workers need to be present in Oakland.

As compared to other national innovation neighborhoods, Oakland's employees have very high educational attainment. Increasing the number of jobs in Oakland accessible to residents with lower educational attainment will involve trade-offs. For example, having more corporate offices or distribution facilities would create a wider range of job opportunities. However, to accommodate that in Oakland would mean substantially more height and larger footprints to accommodate a broader range of employment uses. Additionally both uses would create additional burdens on Oakland's transportation infrastructure.

Educational Attainment of Those Workers Reporting on Educational Attainment | Oakland Neighborhoods | 2017

Education Attainment	North Oakland		Central Oakland		West Oakland		South Oakland	
< High School	1,460	6.4%	138	9.2%	915	6.5%	346	8.3%
High School, No College	4,138	18.1%	365	24.3%	3,113	22.0%	1,083	25.9%
Some College or Associates	5,909	25.8%	454	30.2%	4,848	34.2%	1,426	34.1%
Bachelor's-Plus	11,384	49.7%	548	36.4%	5,304	37.4%	1,323	31.7%
Not Reported	4,486	16.4%	901	37.4%	3,931	21.7%	1,500	26.4%
Total Workers	27,377	100.0%	2,406	100.0%	18,111	100.0%	5,679	100.0%

Source: LEHD Origin-Destination Employment Statistics; W-ZHA

Educational Attainment of Those Workers Reporting on Educational Attainment | Oakland Area and Pittsburgh Innovation Neighborhoods | 2017

Education Attainment	CBD		The Strip		Lawrenceville		South Side Flats		Oakland Area	
< High School	3,961	6.6%	496	8.3%	614	10.0%	235	9.5%	2,859	6.7%
High School, No College	13,069	21.7%	1,628	27.3%	1,790	29.1%	755	30.5%	8,699	20.3%
Some College or Associates	17,788	29.6%	1,772	29.7%	2,094	34.1%	707	28.5%	12,637	29.6%
Bachelor's-Plus	25,315	42.1%	2,073	34.7%	1,644	26.8%	781	31.5%	18,559	43.4%
Not Reported	14,182	19.1%	1,628	21.4%	2,357	27.7%	730	6.7%	10,818	22.2%
Total Workers	60,133	100.0%	5,969	100.0%	6,142	100.0%	2,478	100.0%	42,755	100.0%

Source: LEHD Origin-Destination Employment Statistics; W-ZHA

Percent of Employees with a Bachelor's Degree or Higher in National Innovation Neighborhoods

Oakland Area	43.4%
Raleigh-Durham (Research Triangle Park)	42.6%
Cambridge (Kendall Square)	40.4%
Boston (Innovation Neighborhood)	37.3%
Philadelphia (University City)	35.9%
Seattle (South Lake Union)	34.3%
Atlanta (Midtown)	34.1%
San Francisco (Mission Bay)	33.8%
Austin (Downtown)	28.8%

Source: For other districts University City Annual Report 2019; Oakland data ACS 2018 5-Year Estimates

POINT OF DISCUSSION

How can we shape the mix of employers in Oakland so that there are more jobs for those with lower educational attainment? How can we grow Oakland's workforce in ways that overcome longstanding wage and opportunity disparities? What trade-offs are acceptable?

Approximately 28% of workers in Oakland live in the City of Pittsburgh.

The number of workers living in the City of Pittsburgh has fell in recent years. In 2010, approximately 30% of employees that work in Oakland lived in the city.

Of the Oakland employees that live in the city, more live in the adjacent neighborhoods to the east of Oakland. Squirrel Hill has the zip code where the highest percentage of Oakland employees live – nearly 5%.

A higher percentage of Oakland's workers live in the city as compared to the Pittsburgh innovation neighborhoods. The Central Business District, which has almost 21,000 more jobs than Oakland, has 17,000 workers who live in the city, or 23%, compared to13,000 in Oakland, or 28%.

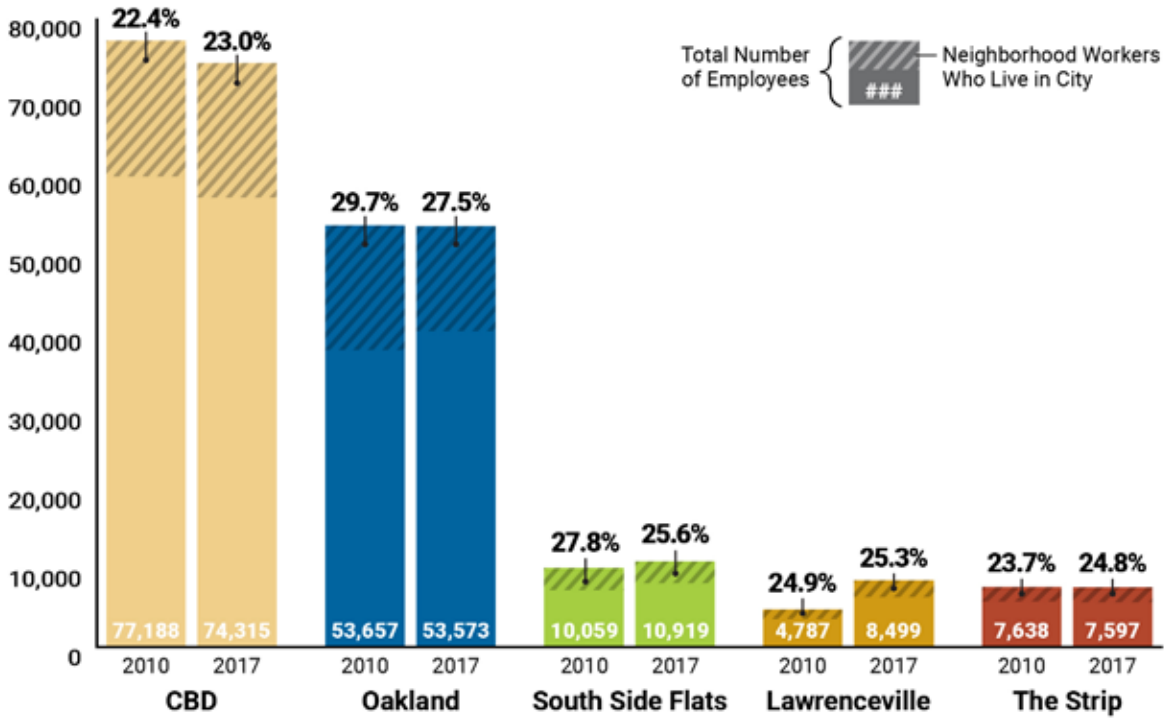
Lawrenceville, which had dramatic growth in employment from 2010 to 2017, nearly doubling the number of jobs and growing employees by over 3,700, added an additional 952 employees who live in the city over the same time period. Lawrenceville is known for its high quality of life.

Top 10 Zip Codes for Where Oakland Workers Live | Primary Workers | 2017

Zip Code	Neighborhood/Place	% of Workers
15217	Squirrel Hill South	4.6%
15206	Larimer	3.9%
15221	Wilkinsburg Borough	3.0%
15237	McKnight (Ross Township)	2.7%
15235	Penn Hills	2.5%
15213	North Oakland	2.4%
15218	Swissvale Borough	1.9%
15232	Shadyside	1.9%
15227	Brentwood	1.8%
15236	West Mifflin Borough	1.7%

Source: LEHD Origin-Destination Employment Statistics

Workers Who Live in the City | Oakland and Pittsburgh Innovation Neighborhoods | 2010 and 2017



Source: LEHD Origin-Destination Employment Statistics as modified by W-ZHA, LLC.

63% of employees who work in Oakland live within 10 miles of Oakland.

This is a decrease from 2010, when 71% of employees lived within 10 miles of Oakland. The number of Oakland employees residing over 50 miles away from Oakland has increased from 1,400, or 4.3%, in 2010 to over 4,000, or 7.5%, in 2017. People who work in Oakland live in areas widely dispersed throughout the region.

Central Oakland, where there is a higher proportion of employees with earnings below $15,000 per year, has the highest proportion, 12.6%, of its workforce traveling over 50 miles to work.

The North Oakland area has the greatest share and number of workers earning over $40,000 per month. 68% of employees in North Oakland live within 10 miles.

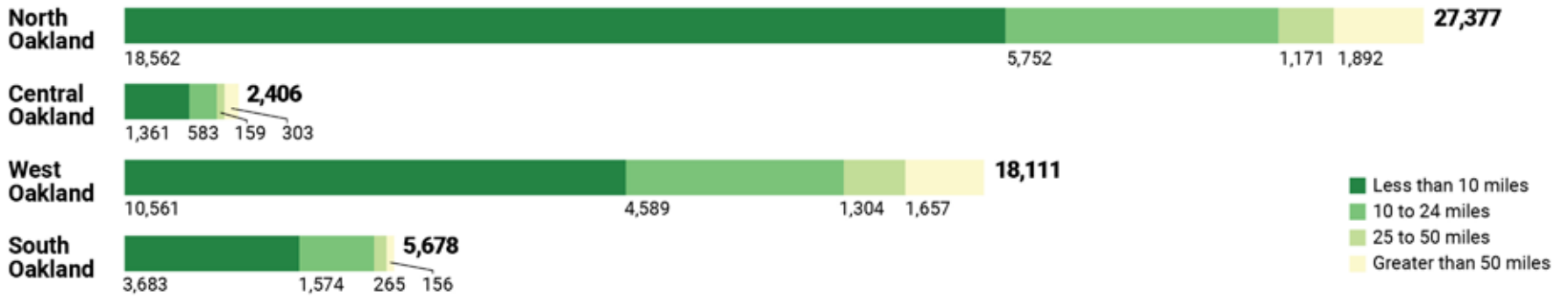
Top 10 Places for Where Oakland Employees Live | All Primary Workers | 2017

	2002		2010		2017	
Place	Employees	%	Employees	%	Employees	%
Pittsburgh City	10,984	30.7%	15,863	29.7%	14,985	28.2%
Monroeville Municipality	288	0.8%	817	1.5%	784	1.5%
Plum Borough	691	1.9%	678	1.3%	696	1.3%
West Mifflin Borough	482	1.3%	596	1.1%	596	1.1%
Bethel Park Municipality	461	1.3%	680	1.3%	667	1.3%
Wilkinsburg Borough	588	1.6%	874	1.6%	759	1.4%
Allison Park CDP[1]	483	1.4%	548	1.0%	582	1.1%
Baldwin Borough	382	1.1%	355	0.7%	400	0.8%
Franklin Park Borough	408	1.1%	357	0.7%	423	0.8%
Swissvale Borough	227	0.6%	276	0.5%	260	0.5%

[1] *Census designated place.*

Source: LEHD Origin-Destination Employment Statistics as modified by W-ZHA

Home's Distance from Employee's Work | Employees in Oakland Area Neighborhoods | 2017



Source: LEHD Origin-Destination Employment Statistics

Oakland employees with the lowest earnings are less likely to live within 10 miles of Oakland and more likely to live 50+ miles from Oakland.

The percentage of Oakland employees residing over 50 miles away from Oakland has increased from 4.3% in 2010 to 7.5% in 2017.

POINT OF DISCUSSION

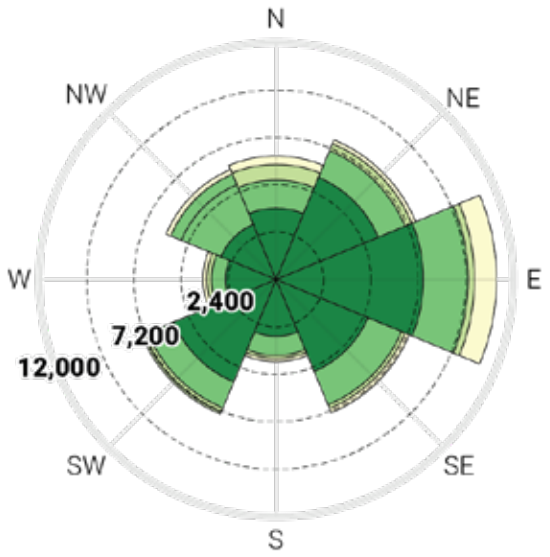
How can Oakland provide opportunities for those who make the least to live nearer to their jobs?

Home's Distance from Employee's Work | Employees in the Oakland Area | 2002, 2010, 2017

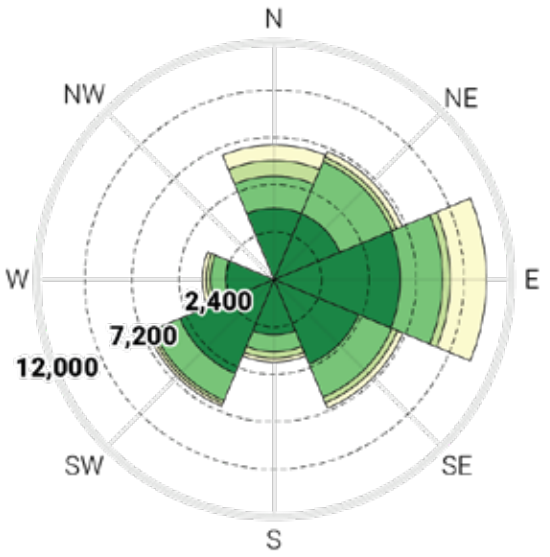
	2002		2010		2017	
SHARE OF TOTAL JOBS	39,573	100%	53,657	100%	53,573	100%
Less than 10 miles	27,929	70.6%	35,924	67.0%	34,167	62.9%
10 to 24 miles	8,134	20.6%	12,455	23.2%	12,498	24.1%
25 to 50 miles	2,108	5.3%	2,957	5.5%	2,899	5.5%
Greater than 50 miles	1,402	3.5%	2,321	4.3%	4,008	7.5%

Source: LEHD Origin-Destination Employment Statistics

Job Counts by Distance/Direction | All Workers



2010



2017

Home's Distance from Employee's Work | Oakland Employees by Earnings | 2017

	< $1,250		$1,251–$3,333		$3,333+	
SHARE OF TOTAL JOBS	5,127	9.1%	14,504	26.3%	37,977	64.6%
Less than 10 miles	3,031	58.2%	9,687	66.2%	24,192	62.2%
10 to 24 miles	1,121	22.4%	2,741	19.1%	9,687	26.4%
25 to 50 miles	284	5.8%	829	5.9%	1,950	5.3%
Greater than 50 miles	691	13.7%	1,247	8.7%	2,148	6.1%

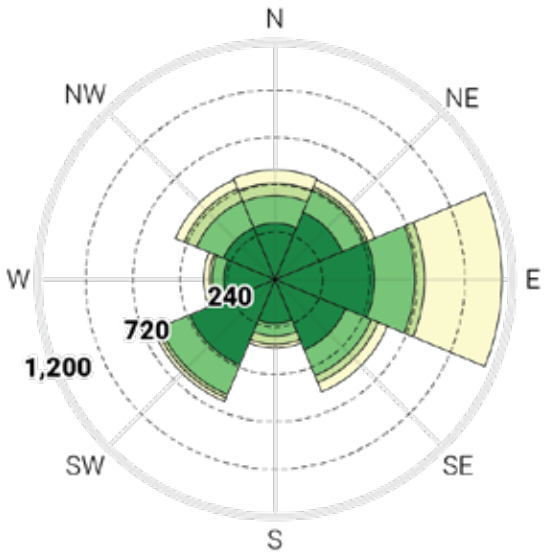
Source: LEHD Origin-Destination Employment Statistics

<$15,000
part time worker

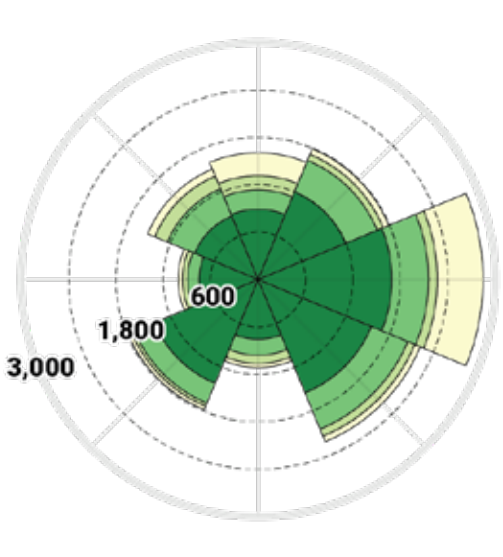
$15,001-$39,999
waiter (City mean wage $25,670)

$40,000+
lab tech, nurse

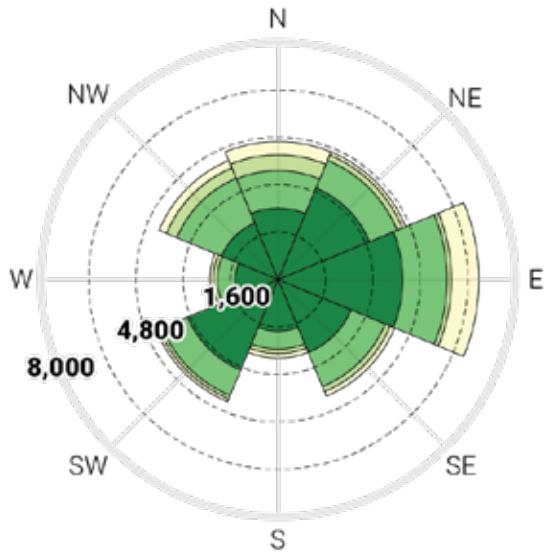
Job Counts by Distance/Direction in 2017



$1,250 per month or less



$1,251–$3,333 per month

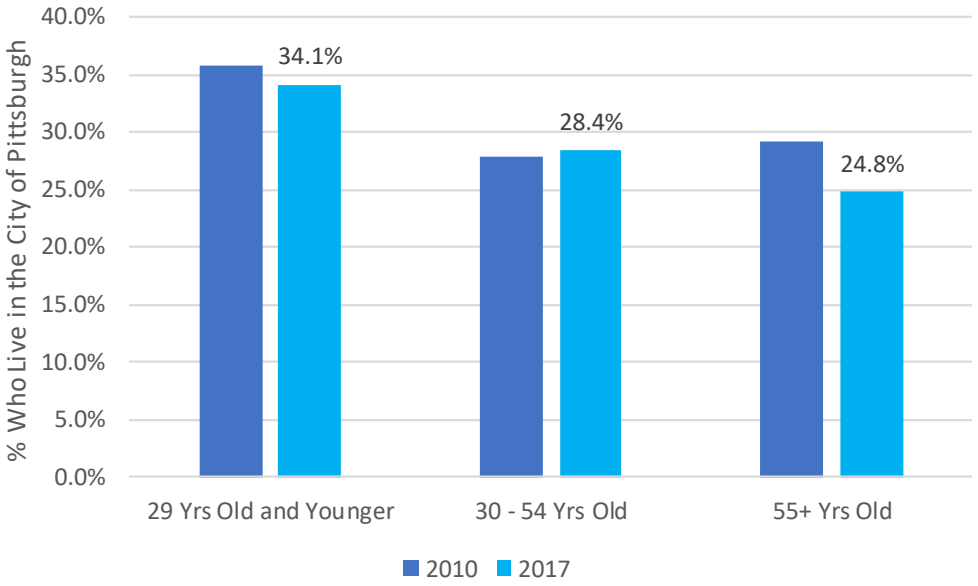


$3,333 per month or more

Most employees reside within 10 miles of Oakland regardless of age. A higher percentage of younger employees live in the City.

- Oakland's younger employees are more likely to live in the city as compared to older Oakland employees. 32.4% of employees under 30 live in the city, as compared to 25.7% of those 30-54 years and 23.1% of those 55+.
- The percentage of employees living within the city declined across all age groups from 2010 to 2017, but most significantly by those 55+.
- Most employees reside within 10 miles of Oakland regardless of age.
- Young and older employees are more likely to live within 10 miles of Oakland as compared to their counterparts aged 30 to 54 years old.
- The 30 to 54 year old employee cohort, potentially full-nest households, are widely dispersed in terms of distance from home to work.

Employees Who Live in the City, 2010 and 2017



Home's Distance from Employee's Work By Employee Age, 2017

	29 Yrs & Under		30–54 Yrs		55+ Yrs	
Share of Total Jobs	**10,818**	**20.2%**	**29,082**	**54.3%**	**13,672**	**25.5%**
Less than 10 miles	7,018	64.9%	18,546	63.8%	8,766	64.1%
10 to 24 miles	2,070	19.1%	7,039	24.2%	3,447	25.2%
25 to 50 miles	577	5.3%	1,613	5.5%	663	4.8%
Greater than 50 miles	1,154	10.7%	1,884	6.5%	797	5.8%

Source: LEHD Origin-Destination Employment Statistics

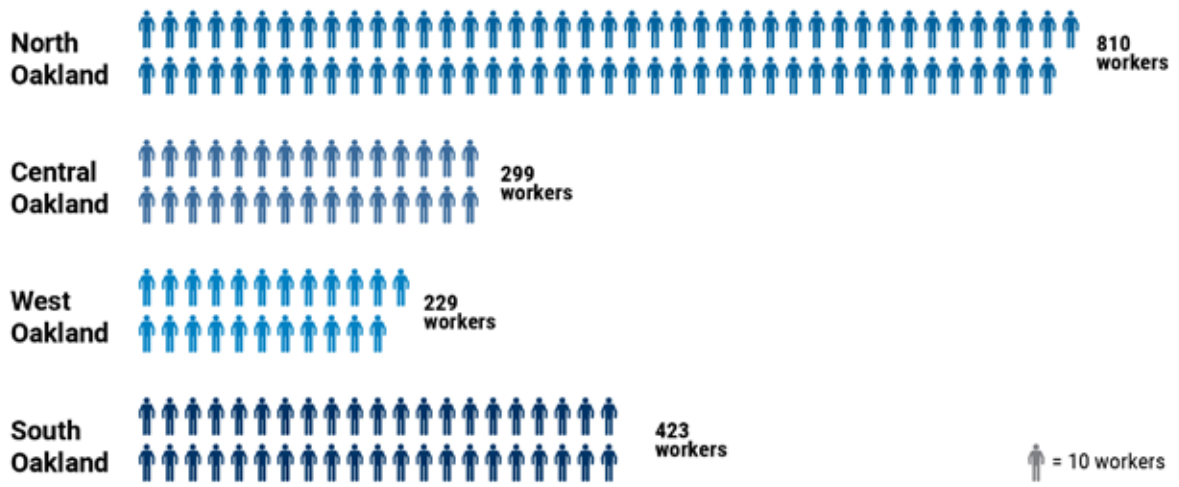
A total of 1,761 workers in the education and healthcare sectors reside in Oakland.

By far the greatest number of education and healthcare workers live in North Oakland, at 810 workers. South Oakland has the second-highest count at 423 workers.

Health and education are the largest source of employment for Oakland residents. These workers may or may not work for the related industry employers in that neighborhood. LEHD resident area characteristics data was mapped to gain a sense of the number of potential workers by industry who may live in the neighborhood. Health and education sector workers include any staff who may work at a hospital, physician's office, nursing home, social services agency, school, university, or similar category.

While health and education is a key industry employer for Oakland residents, it appears likely that Oakland residents represent a low percentage of the total jobs in these employers based in Oakland. If all of the Oakland residents who worked in the health education sector in Pittsburgh worked close to home in Oakland, it would only represent 6% of the estimated 30,000 employees tied to those sectors. It is important to remember that health and education goes beyond university and hospital employment but includes a wide range such as doctors' offices, nursing homes, parochial schools, and pre-K education in different parts of the city.

Education and Healthcare Workers in Oakland



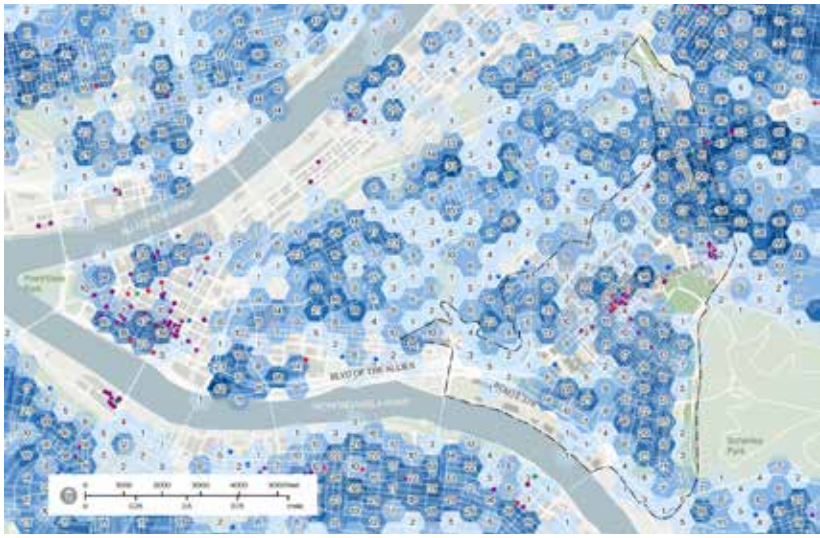
Source: LEHD Origin-Destination Employment Statistics

NORTH OAKLAND
810 workers

WEST OAKLAND
229 workers

CENTRAL OAKLAND
299 workers

SOUTH OAKLAND
423 workers



Education and Healthcare Worker Residences

- 1 - 5
- 5 - 10
- 10 - 15
- 15 - 30
- 30 - 67

Local Amenities

- Bar/Pub
- Cafe
- Entertainment
- Restaurant

Data Sources

LEHD Origin-Destination Employment Statistics
OpenStreetMap

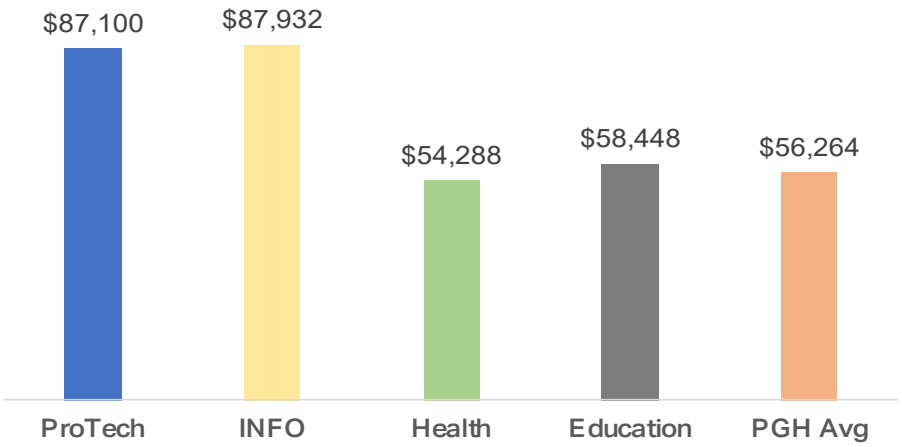
Oakland has 257 residents who work in the information and professional fields, significantly fewer than the number of residents who work in the healthcare and education fields.

The greatest number of workers in information and professional fields live in North Oakland; similar number of workers in these fields live in South and Central Oakland.

Information and professional / technical workers are used as proxies for an innovation economy type workforce. Information industries include digital media and software publishing. Professional technical industries include engineering, computer design, research and development (including biotech) as well as creative professionals in marketing, advertising, and related industries. It also includes more traditional professional services such as accountants and lawyers.

Significantly increasing the number of information and professional/technical workers who live in the neighborhood could alter the economics of housing in Oakland. Information and professional technical workers on average make:

Average Annual Wages | Pittsburgh Metro 2Q2019 (ES202)



- 60% more than health workers
- 55% more than the average employee in the Pittsburgh metro
- 50% more than the education industry

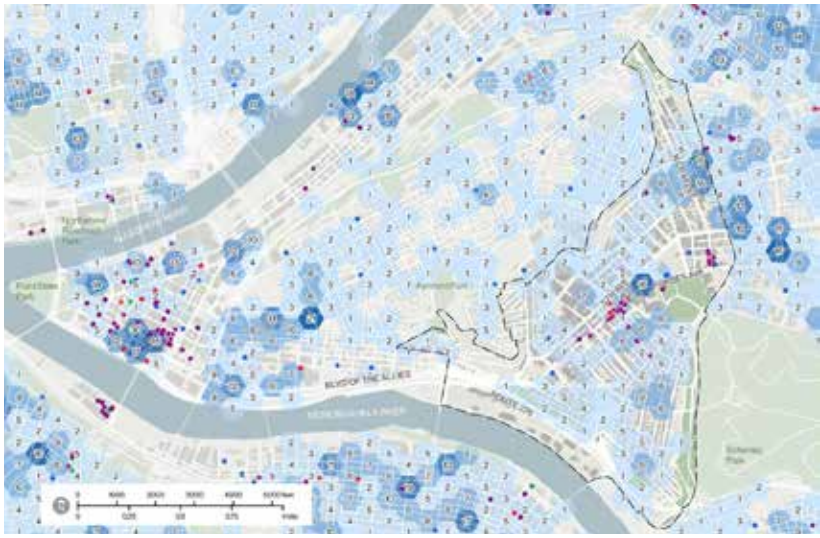
For a single person household, the salary premium for working in a information and professional field means that household could have as much as an additional $820 a month to spend on housing costs, assuming that 30% of income is spent on housing costs.

NORTH OAKLAND
112 workers

WEST OAKLAND
24 workers

CENTRAL OAKLAND
63 workers

SOUTH OAKLAND
58 workers



Information and Professional Worker Residences

- 1 - 5
- 5 - 10
- 10 - 15
- 15 - 30
- 30 - 45

Local Amenities

- Bar/Pub
- Cafe
- Entertainment
- Restaurant

Data Sources

LEHD Origin-Destination Employment Statistics
OpenStreetMap

Oakland has an active property market.

Four to six percent of properties in Oakland are sold every year. In 2018, a single large purchase price influenced the average purchase price, which has otherwise varied between $120,061 to $328,200 per property.

For-sale housing prices vary considerably. Based on a market snapshot in November 2019, there were eight one-bedroom units, nine two-bedroom units, seven three-bedroom units, four-bedroom units, and two five-bedroom units for sale. One-bedroom units ranged in listing price from $127,000-$184,999; two-bedroom units ranged from $89,000-$399,000; three-bedroom units ranged from $144,999-$359,000; four-bedroom units ranged from $50,000-$325,000; five-bedroom units ranged from $229,000-$799,000.

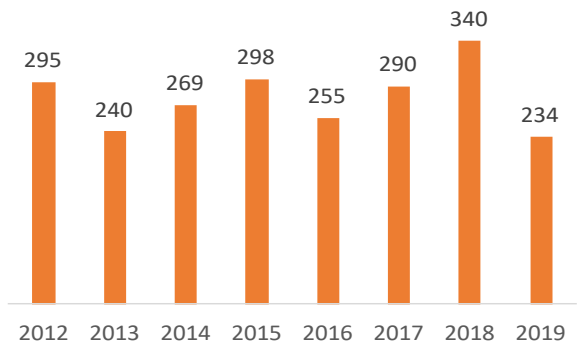
On average, for-sale asking prices in Oakland were $168.30/sq. ft., but there is significant variation across Oakland. Converting housing prices to value per square foot allows for comparisons of value regardless of the size of unit. North Oakland was at the average with asking prices of $168.47/sq. ft. West Oakland was 23% below the Oakland average with average price per square foot of $129.29. Central Oakland was the most expensive market area with asking prices 11% higher than the Oakland average. Central Oakland asking prices averaged $187.59/sq. ft. The proximity to Pitt may be a key driver of the differences in housing prices across Oakland.

At the time of the analysis, there were no properties listed for sale in South Oakland.

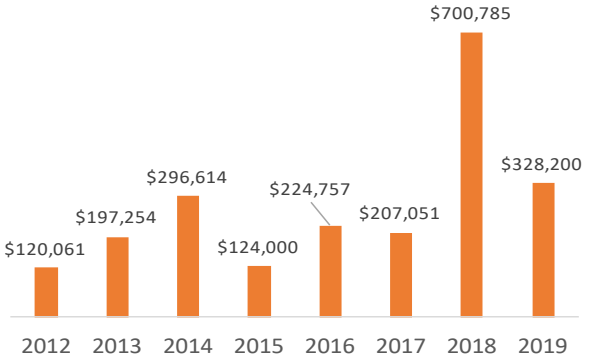
The sales activity could be showing potential assembly based on how it is concentrated. More residential property sales appear to be happening in South and North Oakland, compared to West and Central Oakland. Commercial property sales are clustered at the Pittsburgh Technology Center, the Fifth and Forbes Corridor, the gateway to Oakland on Fifth Avenue, the Fifth and Forbes Avenue Corridor, and the N. Craig Street and Centre Street corridors in North Oakland.

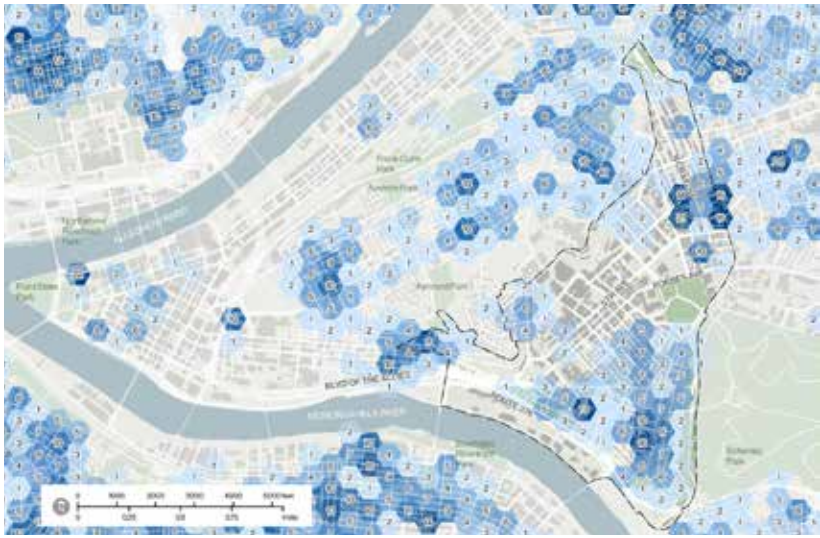
Recent residential building permits show activity in each neighborhood, with the highest level of activity in North Oakland.

Number of Property Sales



Average Purchase Price per Property





Residential Property Sales, 2018

- 0 - 3
- 4 - 6
- 7 - 9
- 10 - 12
- 13 - 28

Data Sources

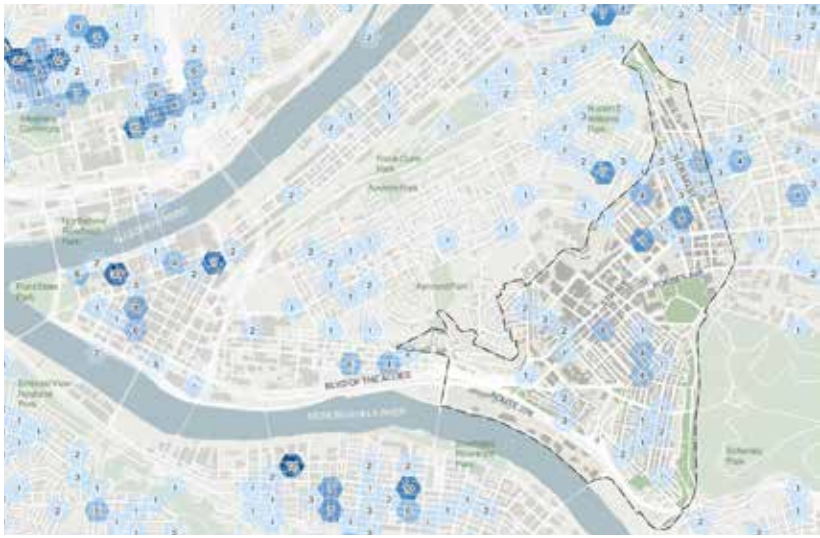
Allegheny County Property Sale Transactions
Allegheny County Property Assessments

Commercial Property Sales, 2018

- 0 - 3
- 4 - 6
- 7 - 9
- 10 - 12
- 13 - 29

Data Sources

Allegheny County Property Sale Transactions
Allegheny County Property Assessments



Residential Building Permits, 2018 (>$10k)

- 1 - 3
- 4 - 6
- 7 - 9
- 10 - 12
- 13 - 39

Data Sources

City of Pittsburgh Building Permit Summary
Allegheny County Property Assessments

Employment that requires office space is growing in Pittsburgh, including for technology-focused tenants.

According to CBRE, office-inclined employment grew 12.2% over the last 10 years. Recent office development has occurred in the Strip, Lawrenceville, East Liberty, and, to a lesser extent, Oakland. According to Jones Lang LaSalle, one-third of office leasing activity in 2018 was attributable to technology tenants.

Oakland supply of office space, with a vacancy rate of 1%, is full. There is 3.1 million square feet of office space in Oakland. Oakland's office space has been fully occupied (having less than 5% vacancy), for at least 10 years.

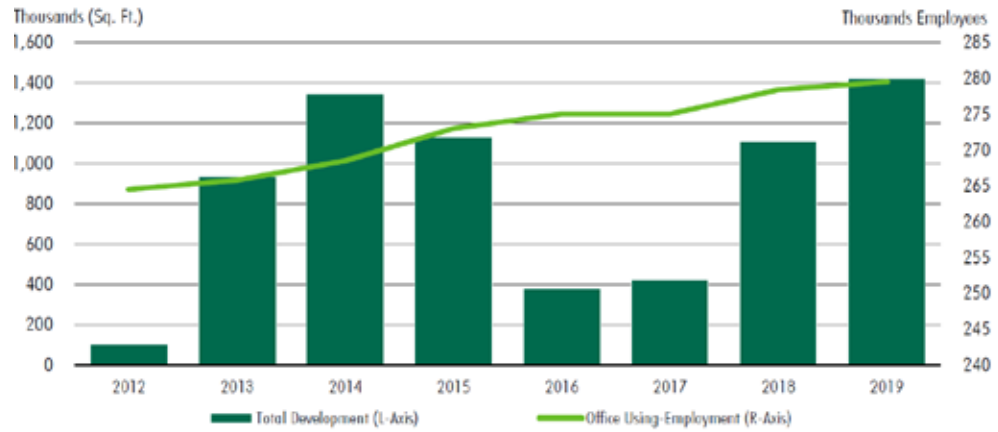
For new office, Oakland commands the highest rents in Pittsburgh at $40-$50 per square foot. Older Class B office space in Oakland goes for less. As a snapshot, in the 3rd Quarter of 2019, the average asking rent in Oakland was the cheapest out of the CBD, Strip District/ Lawrenceville, and East End. Given that office space is effectively full, this means that for-lease spaces are likely lower cost, poor quality, and smaller.

Companies want to be in Oakland; there is not enough office space available to accommodate demand. Because of the lack of available space in Oakland, tenants have spread to other innovation submarkets, including Bakery Square, The Strip, Lawrenceville, Southside, Hazelwood Green, and Bloomfield. These submarkets are profiled on page 56–57.

"Peeling back the layers of the technology ecosystem in Pittsburgh reveals that the universities are at the core. Without the intellectual property coming from the universities and the entrepreneurs receiving the training from the post-secondary institutions in the region, the local technology industry would not be where it is today."

Jones Lang LaSalle, "2019 Pittsburgh Technology Report"

Office-Inclined Employment Growth Driving Office Construction in Pittsburgh



Source: BLS.gov – Pittsburgh MSA; CBRE Research, Q4 2019.

Office Market Conditions | 3rd Quarter 2019

Submarket	SF	Vacancy Rate	3rd Qtr 2019 Average Asking Rent
Central Business District	26,000,000	13.9%	$26.74
The Strip/Lawrenceville	2,100,000	11.5%	$33.00
East End	1,800,000	4.7%	$29.21
Oakland	3,100,000	1.0%	$22.86

Source: Grant Street Associates; W-ZHA

There is ongoing growth and development in other innovation submarkets in Pittsburgh.

East Liberty and the East End: Bakery Square

Bakery Square and East Liberty advertise their proximity to Carnegie Mellon, UPMC and the University of Pittsburgh. Shuttle services provided by CMU and Pitt run between Oakland and Bakery Square during core business hours. According to a Walnut Capital representative, Bakery Square's developer, Google and other tenants would have preferred Oakland, but it was not an option – Oakland is still considered "Ground 0" for tech space.

Bakery Square offers tech office product with high floor-to-ceilings, flexible floor layouts, lots of natural light, amenities within the buildings, and "soft lab" space, or space that includes workbench space, not wet lab space with more extensive ventilation needs.

Bakery Square 2.0, a second phase 12-acre mixed-use project, is under-construction with 400,000 square feet of office space and 307 apartments and townhomes.

Bakery Square 3.0 is a third phase that will bring 320,000 square feet of additional office space with a new parking garage.

Bakery Office Four is an adaptive re-use of the Mathews building, 60,500 square feet, to office space and is currently under-construction.

East Liberty Center is a 60,000 square foot, Class A office building under-construction in East Liberty.

Liberty East is a mixed-use project containing 246,000 square feet of office space (as well as new Whole Foods) in East Liberty's Penn Avenue business district.

Bloomfield

Biotechnology development is happening in Bloomfield beyond an easy walking distance to UPMC's hospitals in Oakland.

5000 Baum, an old 200,000 square foot Ford factory is under-construction in Bloomfield.

5000 Baum will house Pitt's Immune Transplant and Therapy Center and $200 million of UPMC investment.

Development in Bakery Square has included multiple phases of adaptive reuse and new construction.

5000 Baum Street, Bloomfield

The building will contain research and wet-lab and office space for clinical and industry partners.

The plan is to develop a second phase with additional lab space for private companies.

5000 Baum is designed to be a world-class space for labs, offices, startup companies and industry partners with the major focus on creating new drugs and treatments in transplantation, cancer, autoimmunity, aging and chronic disease.

The Strip and Lawrenceville

There has been a considerable amount of new office and tech investment in the Strip District.

Tech-Flex has been a popular product in this submarket because there is a supply of older warehouse buildings. With their large floorplate and high bay space these buildings are a good fit for robotics and advanced manufacturing companies.

Tech office development is also happening in the Strip with Oxford Development's 3 Crossings, District 15, Waterfront Place and a number of adaptive re-use projects.

Available land and buildings make the Strip ripe for additional tech investment.

Hazelwood Green and Southside

Redevelopment of Hazelwood Green offers larger sites for new construction.

Mill 19 is a 265,000 square foot adaptive re-use of the original shed building on the former LTV Steel mill site.

There are three buildings planned within Mill 19. One building is complete and houses CMU's Manufacturing Initiative, Advanced Robotics Manufacturing and Catalyst Connections as tenants. A second building is under-construction for Aptiv Autonomous Vehicles. The third building (not yet built) is 112,000 square feet of flex tech space.

Recently, Hazelwood Green announced their intention to renovate the Round House building for use as a technology accelerator and co-working space.


PHOTO: WWW.CBRE.US

3000 Smallman Street, The Strip


PHOTO: RIDC

The adaptive reuse of Mill 19 is one of the first projects in Hazelwood Green.

Despite the low vacancy rate for office space in Oakland, there have only been three significant office projects developed over the last five years.

Oakland saw its multi-tenant office supply increase by 241,000 square feet over this time period, while East Liberty and the Strip/ Lawrenceville submarkets together added more than 1 million square feet. The three projects in Oakland include new construction at Schenley Place along Bigelow Boulevard/Bayard Street in North Oakland and the Murdoch Building on Forbes Avenue in Central Oakland, as well as adaptive reuse of a former Cadillac Dealership for Craft Place on Boulevard of the Allies.

There is almost 700,000 square feet of office space under-construction or approved for development in Oakland.

Oakland's approved and planned buildings would increase office supply by 30%.

The Pittsburgh Athletic Association is the renovation and repositioning of an historic building, which includes significant office space as part of a mixed use project. The Riviera is a new construction project in the Pittsburgh Technology Center.

In addition to these building Wexford Science + Technology proposed a 200,000-250,000 square foot office/lab building at 3440 Forbes. The project was not approved due to excessive height.

All of these buildings are speculative office buildings financed without an anchor tenant. Purely speculative office is a rarity in most U.S. markets.

Oakland Recent Office Investment

Building	Year Complete	SF	Type	Parking Spaces
Schenley Place	2015	105,000	Office	117
Murdoch Building	2018	95,000	Office	55
Craft Place	2019	41,000	Office	87
TOTAL		241,000		259

Source: Pittsburgh Business Journal; Strada Craft Place Plans; W-ZHA

Under-Construction (UC) and Approved Office | Oakland

Project Name	Oakland Neighborhood	Open	SF	Product Type
Pittsburgh Athletic Association (UC)	North Oakland	2020	85,000	Office
The Rivera (UC)	South Oakland/PTC	2020	160,200	Office
Innovation Research Tower (Approved)	Central Oakland	2022	286,000	Office/"Light Lab"
Elmhurst Innovation Center	South Oakland	2020	156,000	2 Flex-Tech Bldgs
TOTAL			687,200	

Source: Pittsburgh Business Journal; W-ZHA

Transportation needs, small parcel sizes, and limited development capacity are constraining the growth of innovation neighborhood space in Oakland according to developers.

There is currently very little lab space that is not institutional; with the research, NIH funding, and patents in Pittsburgh there should be a market for private-sector development. The new 500 Baum Street will have more speculative lab space in Phase II of its development.

Oakland is a highly desirable office, tech and lab location, but access, parking, and height limits are constraints. Many developers and brokers interviewed suggested a series of access and parking improvements, including district parking, public parking, and the need for creative and effective transit solutions. The value of future BRT, frequent transit connections to East Liberty, and access to Hazelwood Green were mentioned in interviews.

The relatively low height limits of existing zoning, including in the high-density public realm districts, are constraining redevelopment. Lab space often requires higher floor-to-floor heights than office space, resulting in a taller building in feet as compared to number of floors. Lab space often also has major ventilation infrastructure on the top of the building, further increasing height in feet while not increasing rentable floor space. The as-of-right height limit for the Fifth and Forbes Public Realm District is 85 feet, allowing up to 120 feet by special exception provided the building has frontage on Fifth Avenue. In the other public realm districts that permit significant office development on Craig Street and Boulevard of the Allies, the as-of-right height limit is 60 feet, with 85 feet allowed by special exception. The standards for additional height by special exception require that it not create detrimental impacts on neighboring properties. It is challenging to accommodate significant lab development under the 85' height limit.

The challenges of land assembly and small parcel sizes limit Oakland's development potential. Significant amounts of land and parcels in key locations are owned by the institutions. Assembling sites of sufficient size and at a price point able to accommodate tech office and/or lab space is not easy.

In interviews, developers expressed that bold ideas and investment are necessary to fully leverage Oakland's development potential and grow the Pittsburgh economy. Developers see the evolution of Oakland as a key to Pittsburgh's future growth and economic development. The lack of consensus on issues of density, transit, land-use mix are challenges.

Recent development to the maximum height allowed on Forbes Avenue has included major student housing projects and hotel development.

The design of use of first floor spaces - particularly for outdoor dining - has been a significant focus in Mid-town Atlanta. Photo courtesy of Midtown Alliance.

CHAPTER THREE:

OAKLAND THE DESTINATION

Key Takeways

- Oakland is a regional destination for culture and education. Its Carnegie Library, Carnegie Museums, and Phipps Conservatory together attract over 1.3 million visitors annually, and University of Pittsburgh event venues attract another 455,000. 217,000 visitors stay in Oakland's eight hotels each year. All told, Oakland hosts 5,500 visitors on an average day. On an average weekday when universities are in session, they are joined by over 44,000 university and primary/secondary school students, over 6,500 non-undergraduate residents, and over 52,000 employees.
- Three primary nodes of restaurant and retail establishments are present in Central and North Oakland. A smaller cluster is present around Bates and Semple. Various small food and convenience stores are present, but no full-service grocery.
- Oakland's topography channels transportation into a limited set of primary street corridors. Parallel Forbes Avenue and Fifth Street form the major spine through Oakland's core, with Boulevard of the Allies, Centre St, and North Craig Street also serving as important spines.
- Oakland depends heavily on the 23 Port Authority bus routes serving it. It has Pittsburgh's second highest transit ridership after downtown, and this ridership has grown. Consequently, new high-frequency bus rapid transit routes are planned through Oakland with connections to Downtown, Lawrenceville, and Squirrel Hill. Oakland's medical and educational institutions supplement public transit with extensive shuttle networks.
- UPMC, Pitt, and CMU together control nearly 13,000 garage parking spaces in Oakland. At least 6,300 off-street parking spaces are available to the public. Parking is in heavy demand, with years-long waiting lists at some institutions, and growing outpatient volume at Oakland's medical facilities. Yet existing parking locations also represent some of the most desirable sites for major new academic, medical, office, and residential development. Pitt's IMP proposes to offset removal of 2,000 parking spaces with increased incentives to use transit, bike, or walk.
- As a compact urban district with an extensive street grid, Oakland sees high levels of pedestrian activity among its many proximate destinations. Although most streets offer functional sidewalks, many streets warrant additional street trees, improved crosswalks, or other features to enhance comfort and safety. The Boulevard of the Allies has particularly poor pedestrian facilities and a vast width dedicated to vehicles, inhibiting connections among portions of South and Central Oakland.
- Bike infrastructure in and around Oakland has improved significantly in the past decade, but still lacks connections through the core of Oakland necessary to complete a continuous network of safe, inviting routes.

OAKLAND THE DESTINATION

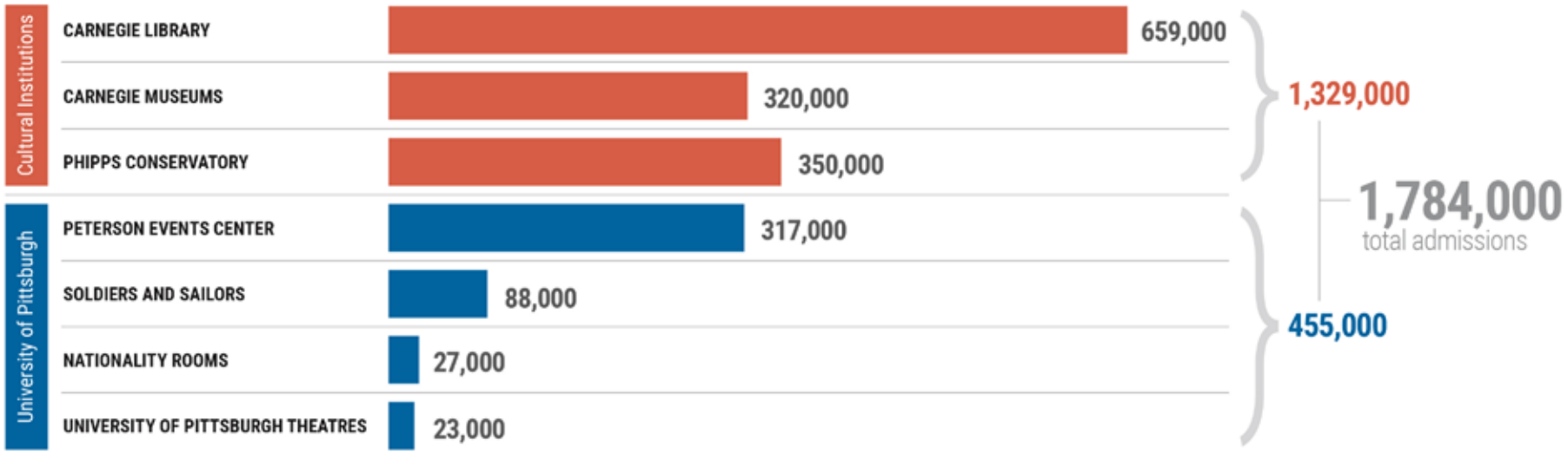
Oakland's role as a civic center with major cultural institutions means that visitors are a significant presence in the neighborhood.

In total, attractions in Oakland admit approximately 1.8 million visitors a year. Oakland contains a number of significant visitor attractions, including the Carnegie Library, Carnegie Museum of Natural History, Carnegie Museum of Art, and Phipps Conservatory. Together these major cultural institutions have over 1.3 million visits a year. University of Pittsburgh venues attract another half million visitors to Oakland each year.

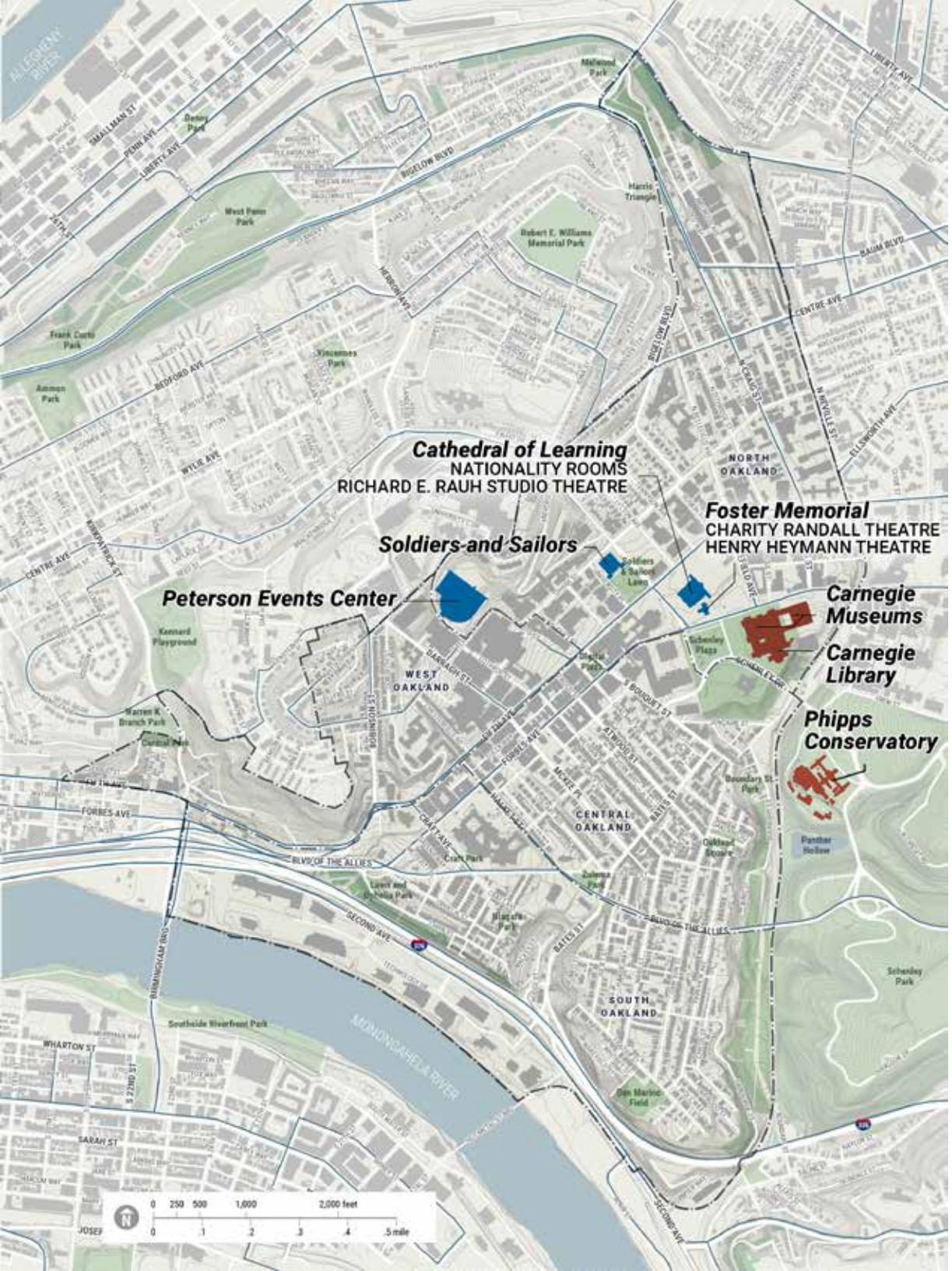
The universities also generate significant visitor activity for admissions activities, athletic events, alumni gatherings, conferences, and other academic and campus events such as commencement. CMU reports that they host a total of 671 events per year that accommodate over 80,000 visitors. They estimate that almost 83% of these visitors are from outside of Pennsylvania.

Academic conferences and convenings can be particularly important to supporting a culture of innovation. Together, the universities host over 28,000 visitors for academic conferences. In Fiscal Year 2019, Pitt hosted 256 events with over 17,631 attendees. CMU hosted 216 conferences for 10,832 visitors, and estimate that approximately half of conference attendees are attending from out of state. The healthcare institutions also generate visitors to Oakland as patients and visitors.

Annual Admissions to Oakland Attractions



Source: Oakland Business Improvement District, Retail Market Study (2015); University of Pittsburgh, Community and Governmental Relations; Visitorship confirmed in 2019 with organization representatives.



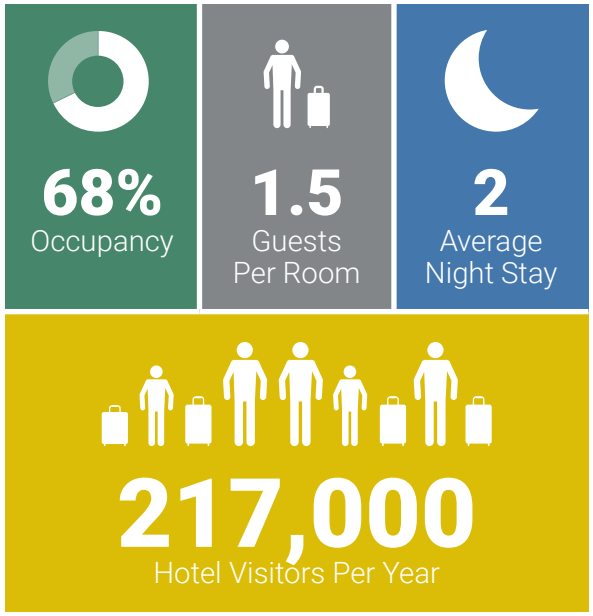
Oakland Attractions

- Bus Routes
- Cultural Institutions
- University of Pittsburgh

There are eight hotels and 1,168 hotel rooms in Oakland today.

There are an estimated 217,000 hotel visitors to Oakland annually. There has been recent hotel development in Oakland, including the higher-end Oakland Hotel, as well as in other nearby neighborhoods. In addition to business, academic, and leisure travel, some hotels accommodate patients and their caregivers who are traveling for outpatient healthcare services at UPMC. With many different customer bases, hotels are spread throughout North, South, East, and West Oakland.

Hotel Visitation Estimate



Source: Hotels.com; Hotel Interview

Hotel Supply in Oakland

Hotel	Number of Rooms
Hampton Inn Pittsburgh University/ Medical Center 3315 Hamlet Street	132
Hilton Garden Inn University Place 3454 Forbes Avenue	202
Hotel Indigo Pittsburgh–Technology Center 329 Technology Drive	111
The Oaklander Hotel 5130 Bigelow Boulevard	167
Quality Inn University Center 3401 Boulevard of the Allies	119
Residence Inn by Marriott Pittsburgh/ Medical Center 3896 Bigelow Boulevard	174
Residence Inn Oakland/University Place 3341 Forbes Avenue	144
Wyndham University Center 100 Lytton Avenue	251
TOTAL	**1,168**

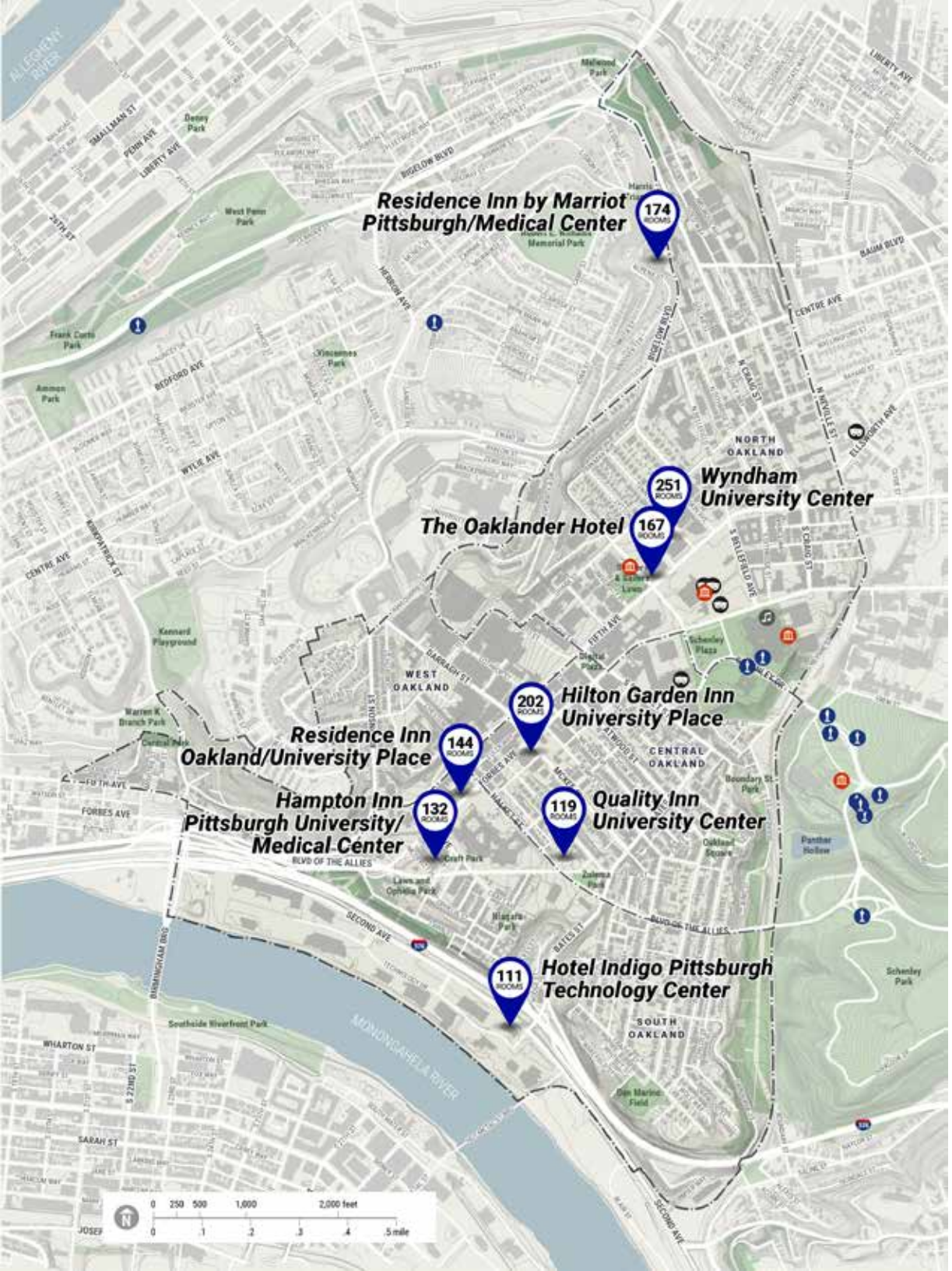
Source: Hotels.com; Hotel Interview

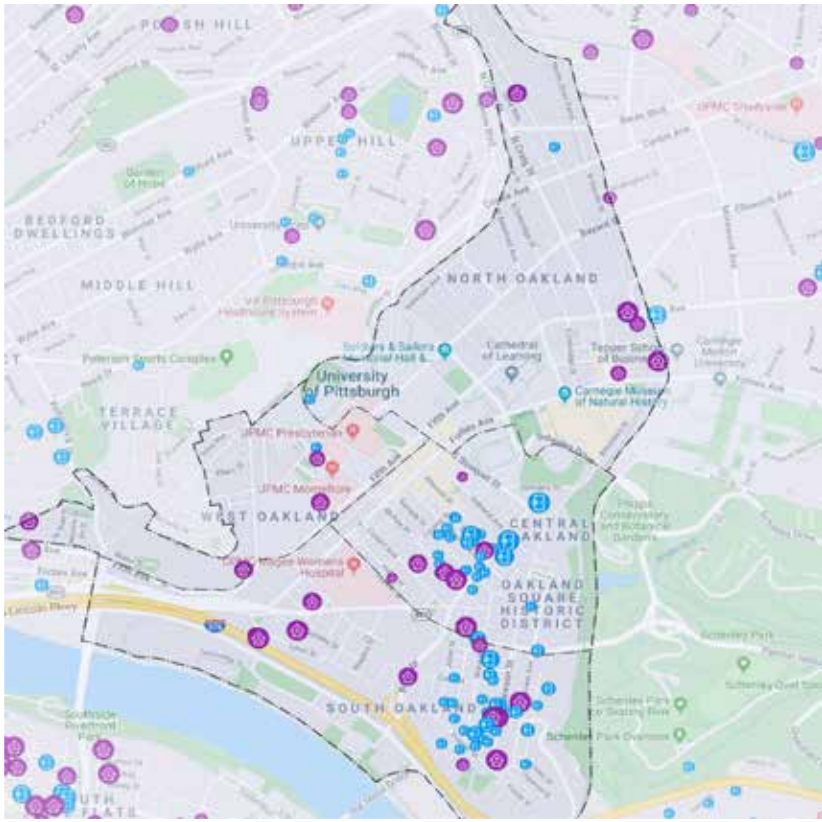
Airbnb units currently on offer are concentrated in Central and South Oakland, with very few units in North Oakland.

In a search for an October 2019 Airbnb rental, 65 places were listed in Oakland. The majority are offerings for a private room, rather than a whole unit rental.

Generally, whole unit Airbnb rentals have a greater effect on communities than the private room accommodations most prevalent in Oakland because whole unit rentals remove long-term rentals from the housing supply in a neighborhood, replacing neighbors with visitors, and attract larger groups of visitors with less on-site supervision. If Airbnb rentals become a quality of life concern in Oakland, restricting whole unit rentals may be necessary.

Based on reviews on the Airbnb platform, the use of whole unit rentals appear to closely correlated with commencement activities at Pitt and CMU, where there are significant numbers of family visitors who may be seeking different types of accommodations like Airbnb units and hotel capacity is full.





Hotels

ROOMS Number of Rooms

- Concert Hall
- Museum
- Theatre
- Public Art

Sources: hotels.com, Hotel Interview

Airbnb

RENTAL TYPE

- Entire Home
- Private Room

Source: https://www.airdna.co/

As a neighborhood, Oakland is served by a variety of food stores but no full-service grocery.

Oakland does not have a full-service grocery, although it does have five specialty markets. It also has a half dozen convenience stores that offer food items, two seasonal farmers markets, and a food pantry run through Community Health Services. Specialty markets include one focused on Italian products, two focused on Indian products, one on Korean products, and one student-oriented market on Pitt's campus. Another market with fresh produce is planned for a new CMU building on Forbes Avenue. There are full-service grocery stores in nearby areas, including East Liberty, Shadyside, Bakery Square, Greenfield, and Southside. Current grocery trends include smaller format specialty stores like those found in Oakland and expanded grocery delivery and pick-up services.

Farmers Markets

Name/Location	Schedule
Pitt Farmers Market William Pitt Union	Aug–Oct Thursday 10:30–2
Oakland Farmers Market Schenley Plaza	Jul–Oct Friday 2–6pm

Demand for child care facilities may continue to expand with the growth of Oakland as a job center.

Based on state licensing data for child care facilities, there are at least 10 facilities in Oakland with approximately 720 slots. The largest are the Children's Center of Pittsburgh, which is associated with UPMC and includes a Get-Well room for mildly-ill children and Small Wonders at the UPMC in North Oakland. The University of Pittsburgh Child Development Center provides childcare services only to those affiliated with the University of Pittsburgh. There are also early learning centers at the Campus Laboratory School of Carlow University and Chartiers Early Childhood Center that provide childcare services as part of a larger school or program.

While the amount of child care slots exceeds national standards for designating a child care desert, due to the low number of resident children in Oakland, there are less child care slots in Oakland than there are in downtown.

Small-scale convenience stores and specialty markets are located in Central Oakland, North Oakland, and along the Fifth and Forbes Corridors.

State-Licensed Child Care Facilities

Name	Provider Type	Capacity
Children's Center of Pittsburgh (UPMC)	Early Learning Center	159
Small Wonders at the UPMC	Early Learning Center	154
University of Pittsburgh Child Development Center	Early Learning Center	140
Oakland Sunshine Daycare and Learning Center	Child Care Center	72
Matilda Theiss Child Development Center	Child Care Center	71
A Child's VIEW	Child Care Center	63
Matilda Theiss Hill House	Child Care Center	25
Monroe's Clubhouse Childcare Center	Child Care Center	18
ACATL Family Daycare	Group Child Care Home	12
Ms Bee's Day Care Home	Family Child Care Home	6

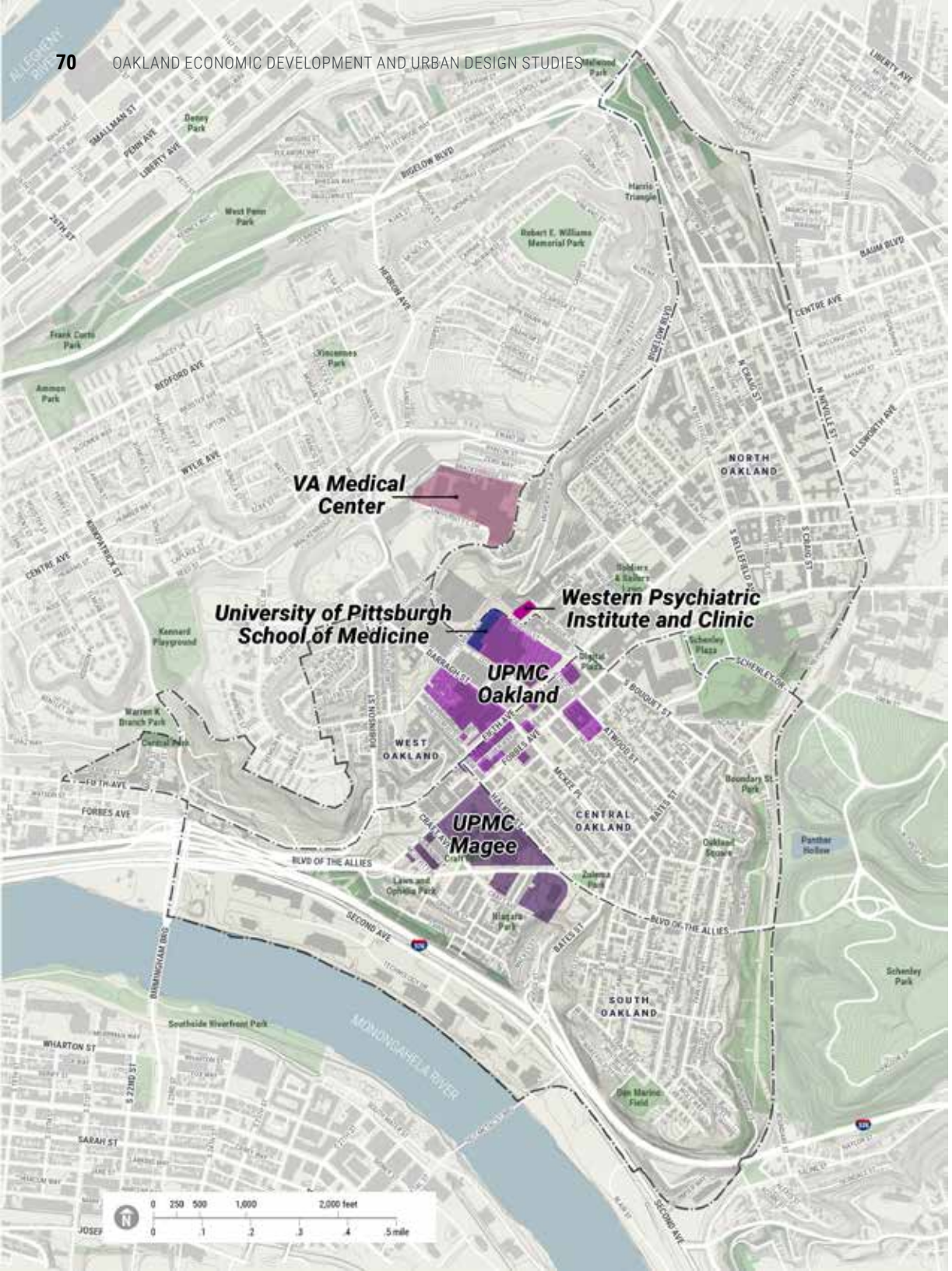
Support Facilities

- Bus Routes
- Child Care

FOOD STORES

- Convenience Store
- Market
- Full-Service Grocery
- Farmers Market
- Food Pantry

Sources: Farmers Market (2017), Food Stores (2016) from WPRDC, corrected 2019. Child Care (Commonwealth of Pennsylvania, Human Services, 2019).



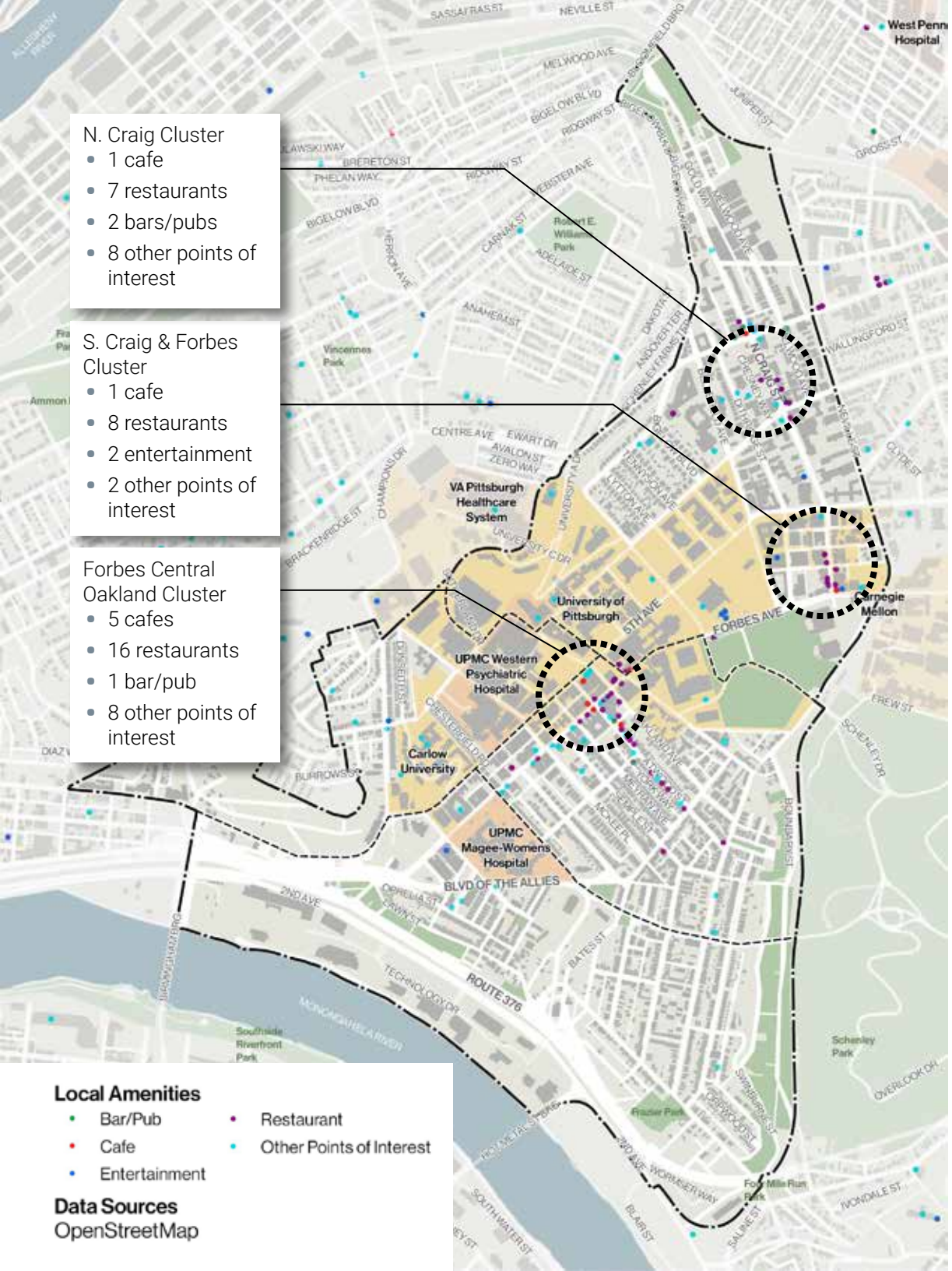
Oakland's major healthcare facilities are a regional destination for patients.

Patients seeking care and their visitors travel to Oakland from across the region. As part of interviews, hospital officials expressed that they are moving to provide more outpatient services at their Oakland facilities. Over time, this transition could increase the number of patients in Oakland on a given day, while holding the number of inpatient beds constant.

Major Healthcare Facilities

- Pitt School of Medicine
- UPMC Magee-Womens Hospital
- UPMC Oakland Hospital
- Western Psychiatric Institute and Clinic
- VA Medical Center

Sources: Parcels owned by each university from Magee–Women's Hospital of UPMC, University of Pittsburgh, and UPMC Oakland.



Retail, dining, and other local amenities are clustered.

The residents of the Oakland neighborhood have approximately $170 million to $185 million in consumer spending capacity. Approximately $160 million of that is in non-automotive retail, with an additional $20 million in restaurant spending.

Estimated retail sales in Oakland are $247 million, annually with $72 million for dining. Estimated sales far exceed the consumer spending capacity, demonstrating how Oakland functions as a destination for spending by visitors and workers. However, most of the retail amenity base is student-focused and dominated by fast casual restaurants and sundry-focused retail.

Retail, dining, and entertainment amenities are clustered most intensely on the Fifth and Forbes Avenue Corridors and Craig Street.

Local Amenities

	North Oakland	Central Oakland	West Oakland	South Oakland	Oakland Total
Bars/Pubs	4	2	–	–	**6**
Cafes	3	4	–	–	**7**
Restaurants	23	24	–	–	**47**
Entertainment	6	–	2	1	**9**
Other Points of Interest	20	23	7	5	**55**
TOTAL	56	53	9	6	124

OpenStreetMap data was used to locate and categorize local amenities, symbolized as colored points. OpenStreetMap is a volunteer crowdsourced effort, so there are likely amenity locations missing from this dataset. There were many additional amenity types in the dataset, as well as many uncategorized data points. Amenity types other than those listed above were grouped into a generic category labeled "Other Points of Interest".

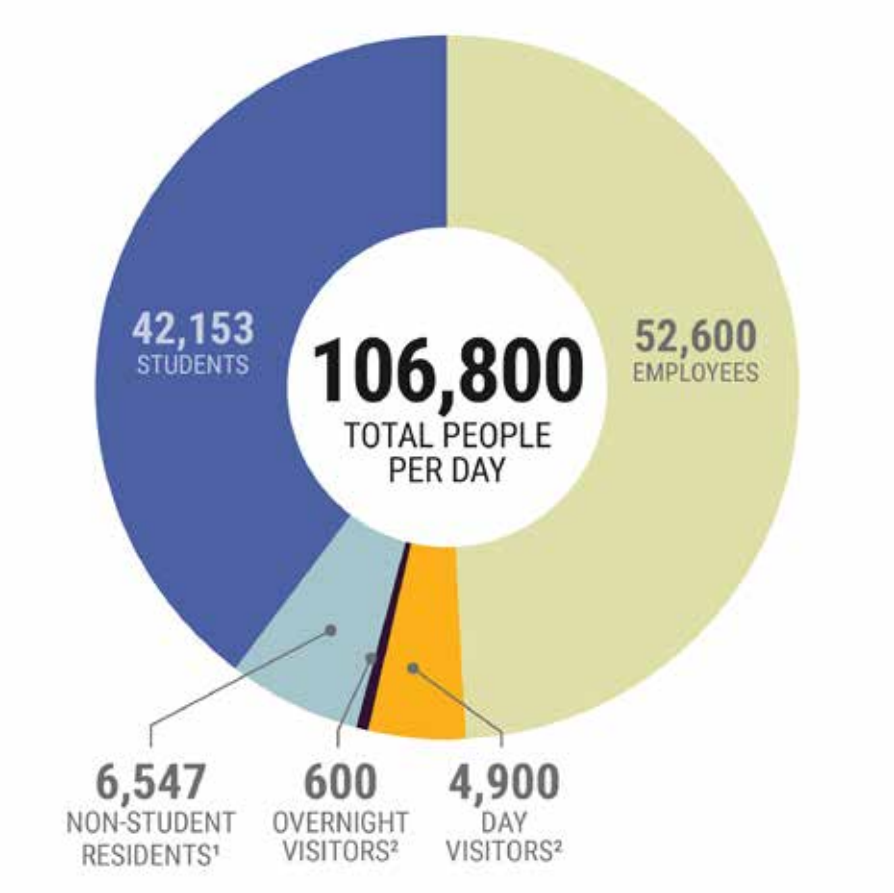
POINT OF DISCUSSION

Can redevelopment along the Boulevard of the Allies and near the intersection of Craft Street and Fifth Avenue be incentivized to provide neighborhood-serving amenities for the adjacent residential areas in Central, South, and West Oakland?

With students, residents, employees, and visitors, Oakland is a very busy place during the weekday and school year.

There are an estimated 106,800 people in Oakland on a given weekday of the school year. The greatest single number of people in Oakland during peak times are workers, who are almost 49% of the daytime population.

Daily Activity (During School Year) in Oakland, 2017



¹ Estimated population under 18 years old and over 25 years old.
² Annual visitation divided by 365 days.

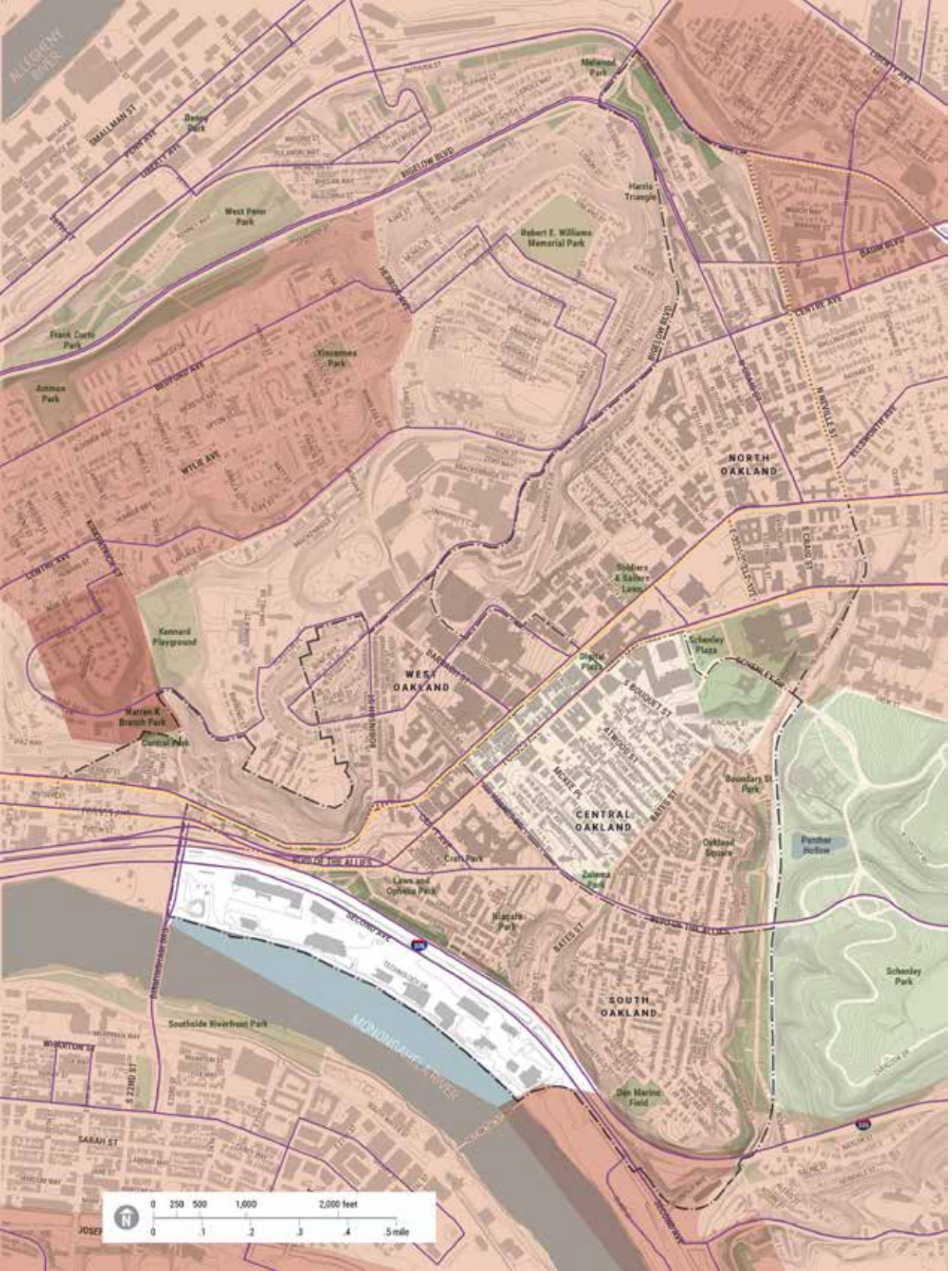
Source: W-ZHA

Most Oakland residents travel 20-29 minutes to work.

Residents of Central Oakland have the shortest commutes, with residents traveling less than 20 minutes. For residents who walk to work, 20 minutes represents approximately a mile walk. Given how closely located Central Oakland is to major job centers at UPMC, Pitt, and CMU it has an average shorter commute. There is not data for the Pittsburgh Technology Center due to the lack of residents.

POINT OF DISCUSSION

The Hill District is adjacent to Oakland, but has longer travel times. Making it easier to get between these two areas could improve access to jobs for Hill District residents.



Sources: Travel Time from the 2013–2017 5-Year American Community Survey, US Census Bureau, Bus Routes, Stops, and Proposed BRT (2019),Port Authority of Allegheny County; Shuttle Routes (2019), CMU and University of Pittsburgh.

Oakland has high levels of pedestrian activity, but high-traffic streets make the area less safe.

The topography and street grid of Oakland channel traffic onto a few major corridors. Key entrances to Oakland, including Baum Boulevard and gateway segments of each major corridor, carry some of the highest average annual daily traffic in Oakland. The major corridors of Oakland – Boulevard of the Allies, Fifth Avenue, Forbes Avenue, and Craig Street all have high-traffic volumes . Bates Street, which provides additional gateway access and is a key north-south connection across South and Central Oakland, also carries high volumes as a result.

The top 10 highest traffic street segments in Oakland each carry over 14,000 vehicles a day. The top 4 carry over 20,000 a day.

Vehicle to vehicle crashes tend to occur most densely along corridors with high volumes of traffic, with concentrations along portions of Forbes Avenue, Baum Boulevard, Fifth Avenue, Boulevard of the Allies, and Bates Street. There is also a more widespread pattern of vehicle to vehicle collisions at intersections throughout North and Central Oakland. Crashes on local neighborhood streets tend to be more dispersed. There were 275 total reported crashes in Oakland in 2018. The vast majority, 233, were vehicle-vehicle or solo-vehicle crashes. A solo-vehicle crash involves one vehicle and the surrounding environment, such as a pole, tree, median, or other structure. Three crashes involved a bus and a vehicle.

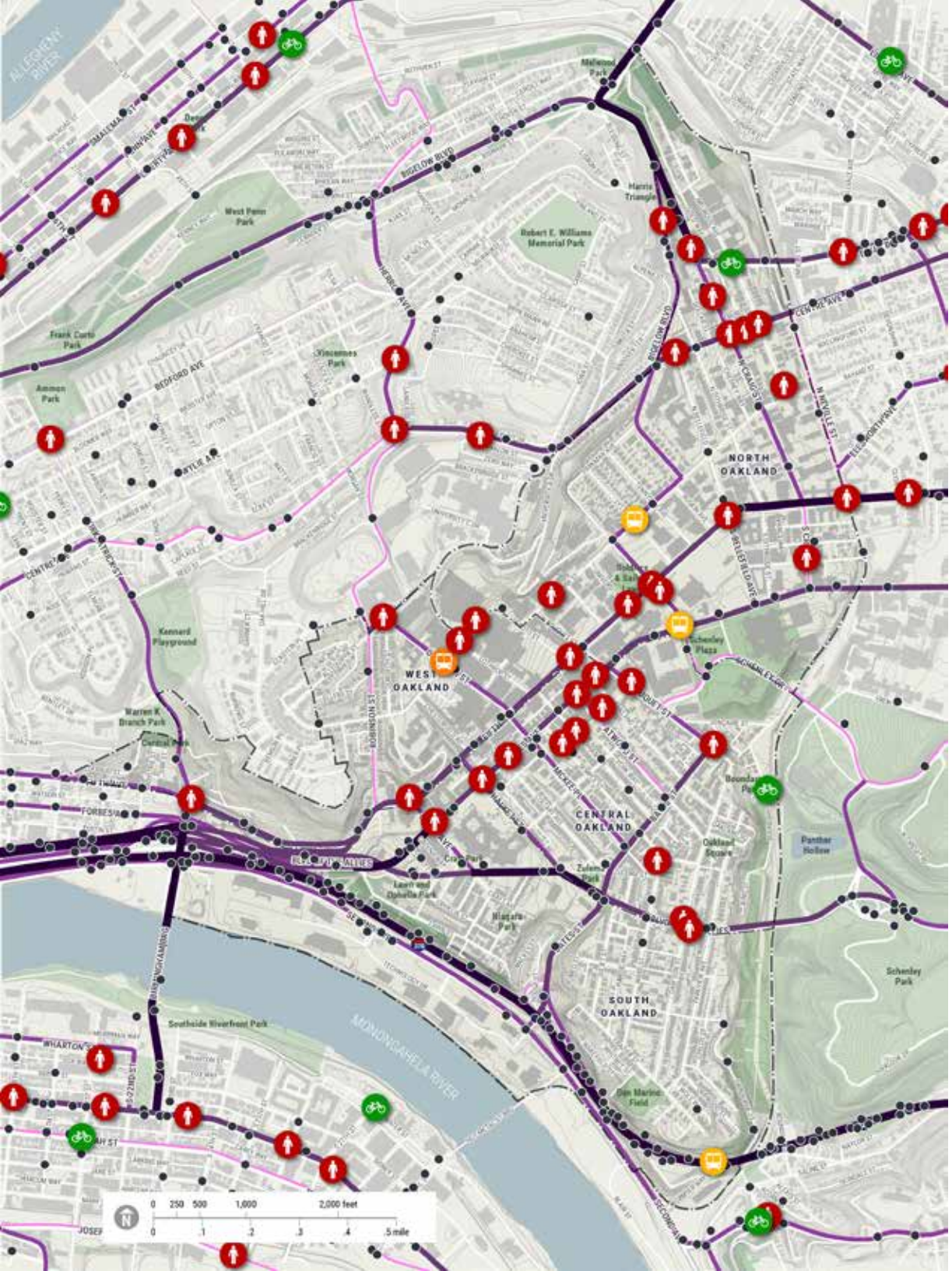
Most crashes involving a pedestrian were located in high-density corridors with high levels of pedestrian activity. There were 37 pedestrian-vehicle crashes in Oakland in 2018 and one pedestrian-bus crash. There were crashes throughout the Fifth Avenue and Forbes Avenue corridors, and approaching areas of high-activity along Terrace Street and Sennott Street. Segments with crashes on Baum Boulevard and Centre Avenue extend into the adjacent Shadyside neighborhood. In the case of Baum Street, most pedestrian crashes occurred in the Shadyside segment.

There were two bicycle-vehicle crashes in Oakland in 2018, with one located just past the end of the Junction Hollow Trail along Boundary Street, an important corridor for accessing the trail network by cycling. The second was located at the corner of Baum Boulevard and Melwood Avenue. Melwood Avenue includes sharrows as part of an on-street bike route. There were also two vehicle crashes in this location during the same time period.

Highest Traffic Street Segments (2018)	Annual Average Daily Traffic (AADT)
Boulevard of the Allies (Bates Street to Craft Avenue)	24,814
Craig Street (Bloomfield Bridge to Baum Boulevard)	21,682
Forbes Avenue (Craft Avenue to Ophelia Street)	21,614
Fifth Avenue (S. Bellefield Avenue to Wilkins Avenue)	21,480
Baum Boulevard (N. Craig Street to Busway)	19,393
Boulevard of the Allies (Craft Avenue to Forbes overpass)	18,723
Bates Street (376 Highway to Boulevard of the Allies)	18,394
Bates Street (Boulevard of the Allies to S. Bouquet Street)	14,891
Forbes Avenue (Craft Avenue to S. Bellefield Avenue)	14,830
Boulevard of the Allies (Bates Street to Overlook Drive)	14,495

Top Street Segments for Crashes (2018)	Number of Crashes
Vehicle-Vehicle Crashes	
Forbes Avenue (Birmingham Bridge to S. Negley Street)	23
Baum Boulevard (S. Negley Avenue to N. Craig Street)	23
Fifth Avenue (Birmingham Bridge to N. Negley Avenue)	18
Boulevard of the Allies (Birmingham Bridge to Panther Hollow Trail)	16
Bates Street (Second Avenue to S. Bouquet Street)	8
Vehicular-Pedestrian and Cyclist Crashes	
Baum Boulevard (S. Negley Avenue to N. Craig Street)	5
Fifth Avenue (Birmingham Bridge to N. Negley Avenue)	5
Sennott Street	4
Centre Avenue (Bigelow Boulevard to N. Negley Avenue)	4
Terrace Street	3

Note: I-376 is not included in the charts above due to its unique status as an interstate highway. It carries higher volumes and results in more vehicle crashes than any other road in the network. It is included in the total crash number.



Traffic Volume and Crashes

AVERAGE ANNUAL DAILY TRAFFIC

- < 2,000 Vehicles
- 2,001–5,000 Vehicles
- 5,001–10,000 Vehicles
- 10,001–20,000 Vehicles
- > 20,001 Vehicles

CRASHES (275 TOTAL IN 2018)

- Vehicle-Vehicle or Vehicle-Only Crash (233 total)
- Vehicle-Pedestrian Crash (37 total)
- Bus-Vehicle Crash (3 total)
- Vehicle-Bicycle Crash (2 total)
- Bus-Pedestrian Crash (1 total)

FATALITIES

There were no fatal crashes within the neighborhood of Oakland in 2018.

INJURIES

140 people were injured in crashes.

117 out of 275 total crashes resulted in injuries.

Sources: Crashes (2018), PennDOT; Traffic Volumes (2019), PennDOT.

Almost 19,000 people get off a Port Authority bus in Oakland every weekday.

According to the Port Authority's most recent annual report, routes that enter Oakland are responsible for increases in bus ridership overall from 2017–2018. This growth is particularly impressive given the service cuts to Oakland routes that occurred in 2011.

Oakland has the second-highest transit ridership in Pittsburgh, after downtown, with average weekday disembarking at 19,000 and befitting its role as a major employment center. The Port Authority provides rapid, commuter, and local bus service as part of 23 routes that have stops in Oakland. The overwhelming majority of these routes, 19 out of 23, connect Oakland with downtown as part of the Downtown – Oakland – East End Corridor. Paratransit services are also provided.

High-frequency bus service is concentrated on the Fifth Avenue and Forbes Avenue Corridor, and Craig and Centre Streets. High-frequency bus service includes routes where the bus comes more often, at least every 15 minutes during the weekday, which means riders have shorter waits and faster overall travel times. Routes on Second Street and Boulevard of the Allies have lower frequencies. Additional routes serve the UPMC area and connect to the Hill District. In addition to local bus service, there are three commuter routes, including one to the airport.

Due to current high ridership along the corridor, potential to link neighborhoods and employment centers, and goal to improve public transit travel time and capacity, bus service on Fifth Avenue and Forbes Avenue has been selected for improvements to BRT service in the future. Implementing BRT will achieve a key recommendation of the Oakland 2025 Plan.

Oakland Routes – Type of Service

Route	Route Name	Service
Commuter		
28X	Airport Flyer	Daily Service
65	Squirrel Hill	Weekdays
P3	East Busway–Oakland	Weekdays

Route	Route Name	Service
Local		
54	North Side–Oakland–South Side	Daily Service
56	Lincoln Place	Daily Service
57	Hazelwood	Daily Service
58	Greenfield	Daily Service
61A	Swissvale	Daily Service
61B	Braddock–Swissvale	Daily Service
61C	McKeesport–Homestead	Daily Service
61D	Murray	Daily Service
67	Monroeville	Daily Service
69	Trafford	Daily Service
71A	Negley	Daily Service
71B	Highland Park	Daily Service

Route	Route Name	Service
Local		
71C	Point Breeze	Daily Service
71D	Hamilton	Daily Service
75	Ellsworth	Daily Service
77	Penn Hills	Daily Service
81	Oak Hill	Daily Service
82	Lincoln	Daily Service
83	Bedford Hill	Daily Service
93	Lawrenceville–Oakland–Hazelwood	Weekdays

Source: Bus Stops, Routes, and Ridership; Port Authority (2019)

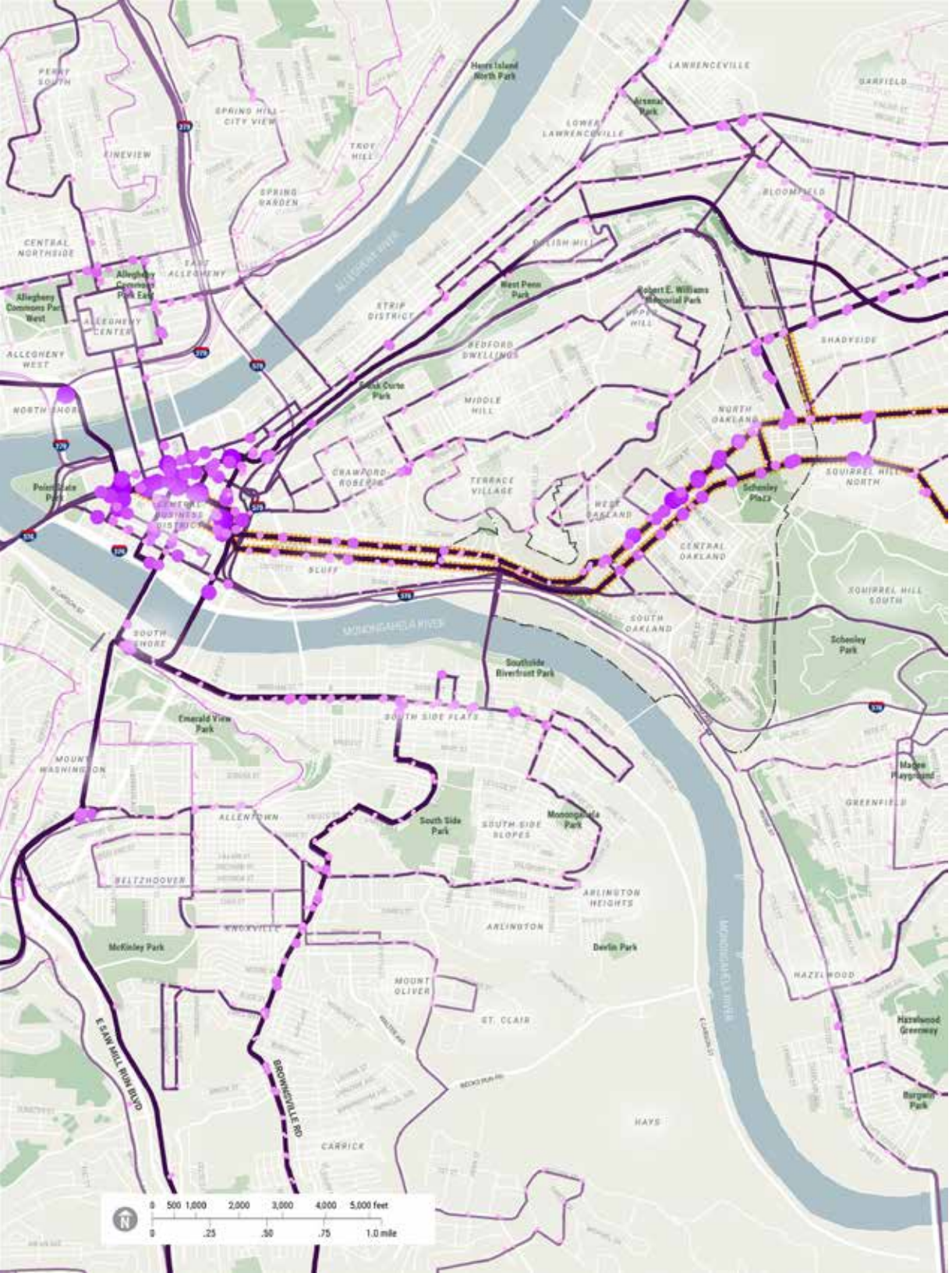
Key Corridors in Oakland with Multiple Bus Routes

Street	# of Routes	Average Daily Riders Weekdays		
		Minimum	Maximum	Sum
Fifth Avenue	18	1,065 (58)	6,314 (61C)	**65,789**
Forbes Avenue	10	1,065 (58)	6,314 (61C)	**32,147**
N. Craig Street *(between Fifth/Bayard)*	4	2,010 (93)	6,814 (71A)	**17,724**

Oakland Routes – Ridership Ranking

Route	Route Name	Type of Service	Avg Wkdy
61C	McKeesport–Homestead	Local	6,314
71A	Negley	Local	5,814
71C	Point Breeze	Local	5,812
61D	Murray	Local	5,451
71B	Highland Park	Local	5,199

All of the highest ridership routes in Oakland travel along Fifth Avenue.



Public Transportation Ridership

Proposed Bus Rapid Transit (BRT)

AVERAGE WEEKDAY BOARDINGS PER STOP

- 1–50
- 51–100
- 101–200
- 201–400
- 401–800
- 801–1,200
- 1,201–2,000
- 2,001–3,000
- 3,001–5,000
- > 5,001

AVERAGE WEEKDAY BUS RIDERSHIP OF HIGHEST ROUTES

- < 500 Riders
- 501–1,000 Riders
- 1,001–2,000 Riders
- 2,001–5,000 Riders
- > 5,001 Riders

Note: On key corridors with multiple bus routes, such as sections of Downtown, Fifth and Forbes Avenues, and Brownsville Road, the cumulative ridership is higher. The highest ridership route is represented.

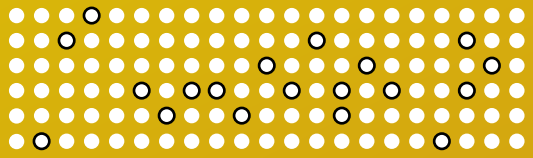
Sources: Bus Routes, Stops, and Proposed BRT (2019); Port Authority of Allegheny County.

Bus stops on Fifth and Forbes Avenues serve multiple routes, with up to 18 routes using stops at Fifth Avenue at Chesterfield Road and Fifth Avenue at Thackeray. Outside of the Fifth Avenue and Forbes Avenue corridors, stops are served by one to four routes.

Most shelters are provided by the City of Pittsburgh; a small number are provided by the Port Authority. They are clustered along the high-volume Fifth Avenue and Forbes Avenue corridors. Shelters along Boulevard of the Allies and Second Avenue are along bus routes with more infrequent service where waits may be longer.

Bus stops on the Fifth Avenue corridor serve 1,000–4,000 trips a day, with the highest use in the center of Oakland. These locations serve routes in both directions as part of a pair of inbound and outbound stops because of a contraflow bus lane on Fifth Avenue. Routes along the Forbes Avenue corridor, which only travel east after Halket Street, serve between 500–1,000 riders.

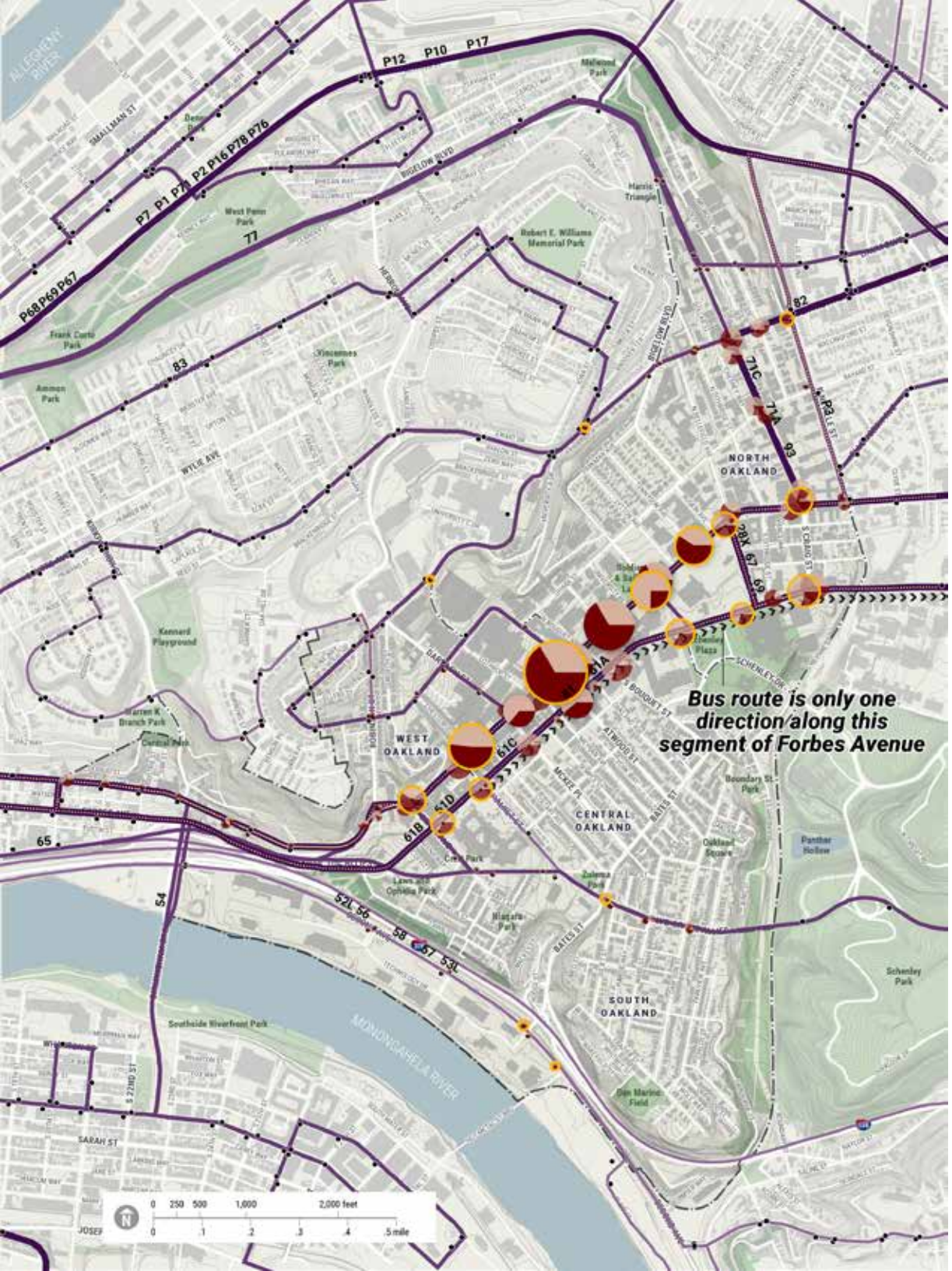
Most stops on Craig Street serve between 200–500 riders; stops on Boulevard of the Allies serve approximately 20–100 trips and other stops average less than 20 trips.



104 out of the 123 bus stops in Oakland lack shelters. Of the 10 stops used by the highest number of trips, only 4 have shelters.

Top Bus Stops by Use	# Routes Served	Routes Served	Shelter	Average Boardings (FY19)	Average Drop-offs (FY19)	Average Total (FY19)
Fifth Avenue at Atwood Station	13	28X, 54, 61A, 61B, 61C, 61D, 67, 69, 71A, 71B, 71C, 71D, 75	PAAC Shelter	1,375	2,734	**4,109**
Fifth Avenue at Thackeray Avenue	18	28X, 54, 58, 61A, 61B, 61C, 61D, 67, 69, 71A, 71B, 71C, 71D, 75, 81, 83, 93, P3	No Shelter	951	1,876	**2,826**
Fifth Avenue at Chesterfield Road	18	28X, 54, 58, 61A, 61B, 61C, 61D, 67, 69, 71A, 71B, 71C, 71D, 75, 81, 83, 93, P3	City of Pittsburgh Shelter	1,003	1,093	**2,096**
Fifth Avenue at Oakland Avenue	8	54, 71A, 71B, 71C, 71D, 75, 93, P3	No Shelter	1,402	656	**2,059**
Fifth Avenue at Tennyson Avenue	16	28X, 54, 58, 61A, 61B, 61C, 61D, 67, 69, 71A, 71B, 71C, 71D, 75, 93, P3	City of Pittsburgh Shelter	613	885	**1,498**
Fifth Avenue at Bigelow Boulevard (Pitt)	8	54, 71A, 71B, 71C, 71D, 75, 93, P3	No Shelter	1,058	359	**1,417**
Fifth Avenue opposite Thackeray Avenue	8	54, 71A, 71B, 71C, 71D, 75, 93, P3	No Shelter	986	406	**1,392**
Fifth Avenue at Bigelow Boulevard (Pitt)	16	28X, 54, 58, 61A, 61B, 61C, 61D, 67, 69, 71A, 71B, 71C, 71D, 75, 93, P3	City of Pittsburgh Shelter	458	912	**1,370**
Forbes Avenue at Atwood Street	8	28X, 58, 61A, 61B, 61C, 61D, 67, 69	No Shelter	730	462	**1,192**
Fifth Avenue at McKee Place FS	8	54, 71A, 71B, 71C, 71D, 75, 93, P3	No Shelter	713	401	**1,114**

Source: Bus Stops, Routes, and Ridership; Port Authority (2019)



Bus Ridership and Bus Stops Usage

- Proposed BRT
- Bus Stop
- Bus Stop with Shelter

AVERAGE WEEKDAY BUS STOP USAGE

- 4,000 Riders
- 2,000 Riders
- 1,000 Riders
- 200 Riders
- 50 Riders
- Boardings
- Drop-Offs

AVERAGE WEEKDAY BUS RIDERSHIP OF HIGHEST ROUTE

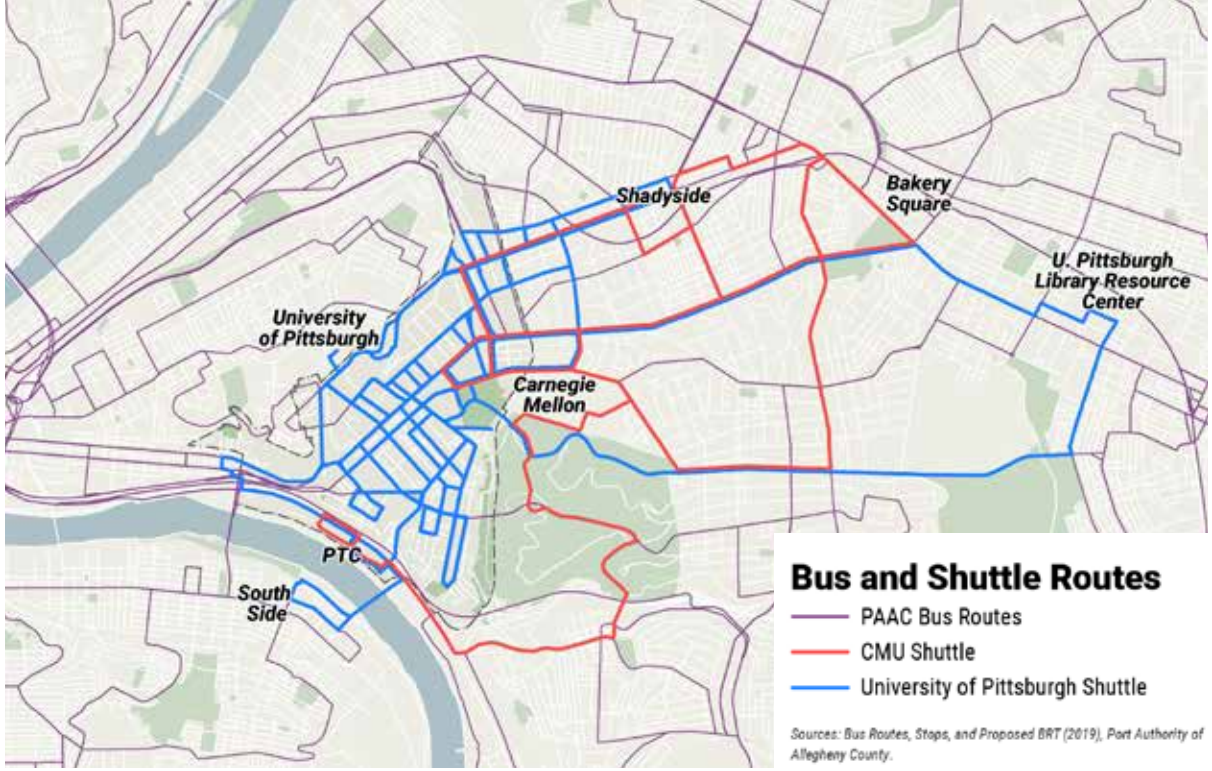
- < 500 Riders
- 501–1,000 Riders
- 1,001–2,000 Riders
- 2,001–5,000 Riders
- > 5,001 Riders

Note: On key corridors with multiple bus routes, such as sections of Fifth and Forbes Avenues, the cumulative ridership is higher. The highest ridership route is represented.

Sources: Bus Routes, Stops, and Proposed BRT (2019); Port Authority of Allegheny County.

The University of Pittsburgh operates 13 shuttles connecting the Southside, Pittsburgh Technology Center, hospitals, campus, parking, and residential facilities. The shuttles travel throughout the West, South, Central, and North Oakland areas.

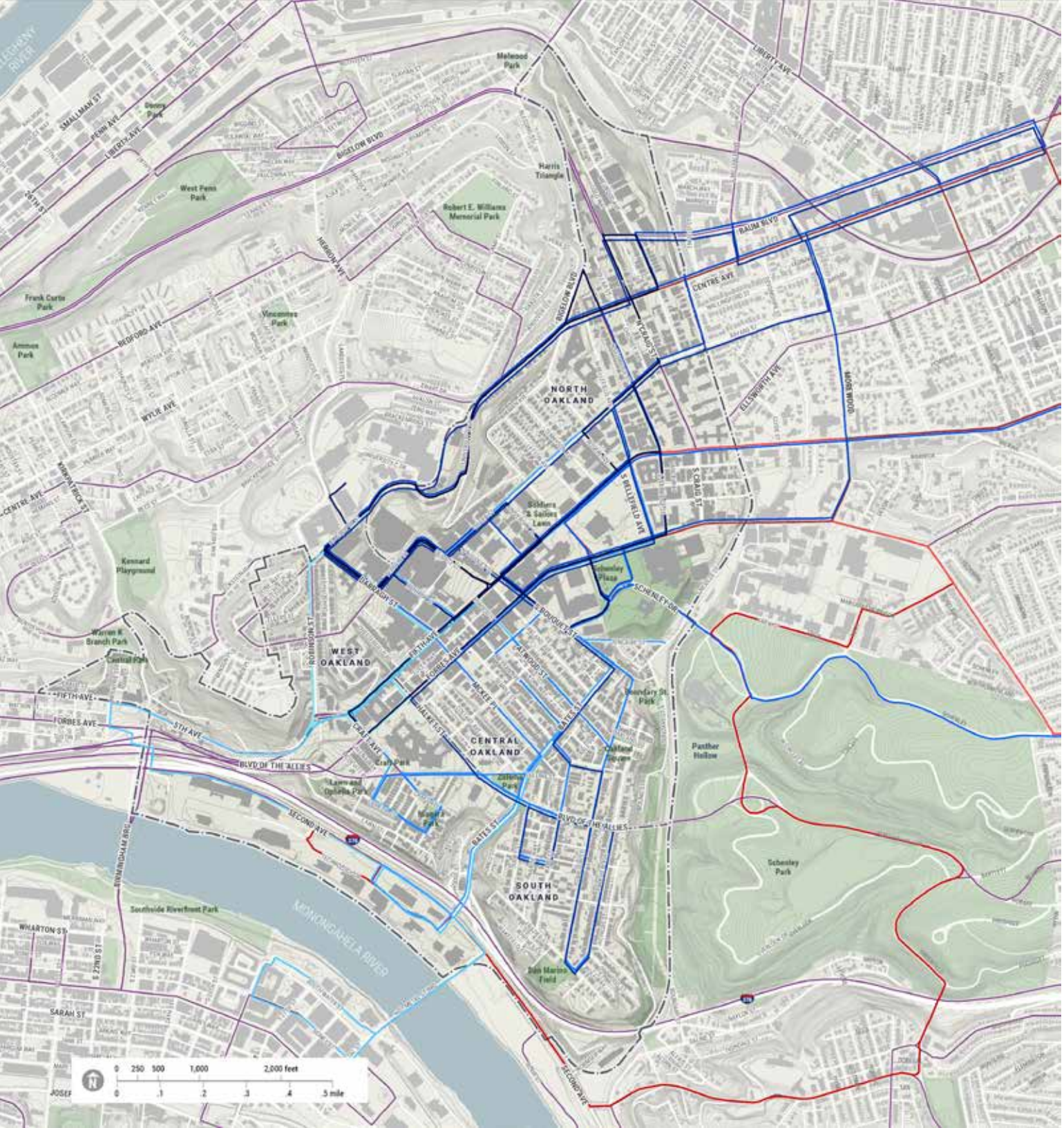
Carnegie Mellon operates six shuttles connecting their campus at the edge of Oakland with Pittsburgh Technology Center, Bakery Square, and surrounding neighborhoods.



Shuttle Service Schedules

Route Name	Effective	Service	Schedule1	Schedule2	Schedule3
University of Pittsburgh					
10A Upper Campus	Nov–July	Daily Service	M-F 7:00AM - 3:35AM	Sat 9:45AM - 3:45AM	Sun 9:20AM - 3:45AM
10B Upper Campus	Nov–July	Weekdays	M-F 5:50AM - 2:28AM		
15A OC Lot Shuttle	Nov–July	Weekdays	M-F 6:00AM - 9:58AM / 3:10PM - 7:08PM		
20A N Oakland	Nov–July	Daily Service	M-F 6:55AM - 7:00PM	Sat 5:25PM - 2:50AM	Sun 5:25PM - 2:50AM
20B N Oakland	Nov–July	Weekdays	M-F 6:45AM - 7:10PM		
25A Library Resource		Weekdays	M-F 9:00AM - 4:30PM		
30A S Oakland	Nov–July	Weekdays	M-F 5:55AM - 7:10PM		
30B S Oakland	Nov–July	Weekdays	M-F 6:50AM - 7:00PM		
30CS Oakland	Nov–July	Late Nights			
40A Biotech Center	Nov–July	Weekdays	M-F 7:00AM - 7:25PM		
Bridgeside Point II		Weekdays	M, W, Th, F 6:00AM - 7:00PM	Tue 6:00AM - 8:30PM	
The Bridges Residence Hall					
1U North South Loop	Nov–July				

Route Name	Service	Schedule1	Schedule2
Carnegie Mellon University			
A Route – North Oakland, Lower Shadyside	Weekdays	M-F 7:15AM - 10:45AM / 4:30PM - 6:00PM	
B Route – Upper Shadyside	Weekdays	M-F 7:15AM - 6:00PM	
A/B Route – North Oakland, Shadyside	Daily Service	M-F 11:15AM - 4:30PM / 6:30PM - 11:00PM	Sat&Sun 7:15AM - 12:30PM / 1:30PM - 6:45PM / 7:30PM - 11:15PM
PTC Route – Morewood Gardens Turn around PTC	Daily Service	M-F 7:45AM - 8:45PM	Sat&Sun 8:45AM - 12:15PM / 1:15PM - 5:45PM
Bakery Square Shuttle (Long Route) – CIC - Bakery Square	Weekdays	M-F 8:30AM - 10:00AM / 4:30PM - 6:00PM	
Bakery Square Shuttle (Short Route) – CIC - Bakery Square	Daily Service	M-F 10:30AM - 1:45PM	Sat&Sun 10:30AM - 1:45PM



Bus and Shuttle Routes

PAAC Bus Routes

CMU SHUTTLE ROUTES

- A/B Route
- Bakery Square Shuttle (Long Route)
- Bakery Square Shuttle (Short Route)
- PTC Route

UNIVERSITY OF PITTSBURGH SHUTTLES

- 10A / 10B Upper Campus
- 15A OC Lot Shuttle
- 1U North South Loop
- 20A / 20B N Oakland
- 25A Library Resource
- 30A / 30B / 30C S Oakland
- 40A Biotech Center
- Bridgeside Point II
- The Bridges Residence Hall

Sources: Bus Routes, Stops, and Proposed BRT (2019),Port Authority of Allegheny County; Shuttle Routes (2019), CMU and University of Pittsburgh.

POINT OF DISCUSSION

There is significant overlap between PAAC routes and the university shuttle routes. How could changes to either system make transportation in Oakland more effective and equitable?

Most of the off-street parking in Oakland is provided in parking garages and structures.

There are at least 6,300 off-street parking spaces provided in parking structures and lots with access to the public. Parking lots and parking garages that allow public access are clustered near the Fifth and Forbes Corridors and near the hospitals on Terrace and O'Hara Streets.

The institutions – including University of Pittsburgh, UPMC, and Carnegie Mellon together – control most of the off-street parking inventory in Oakland. In its most recent 2010 IMP, CMU reported 2,900 spaces in its garages and lots in Oakland. The parking inventory shared between Pitt and UPMC totals nearly 10,000 spaces in Central Oakland.

There is a major parking lot on Second Avenue served by Pitt/UPMC shuttle service, part of a strategy to enhance park 'n' ride services and develop intercept parking outside of the core of Oakland.

In interviews, UPMC staff reported that increasing outpatient services in Oakland is increasing demand for patient parking during the day.

Institutional parking largely serves employees, with limited spaces set aside for visitors and patients. Demand for parking permits far exceeds supply, with the most desirable locations featuring waitlists of 10 years.

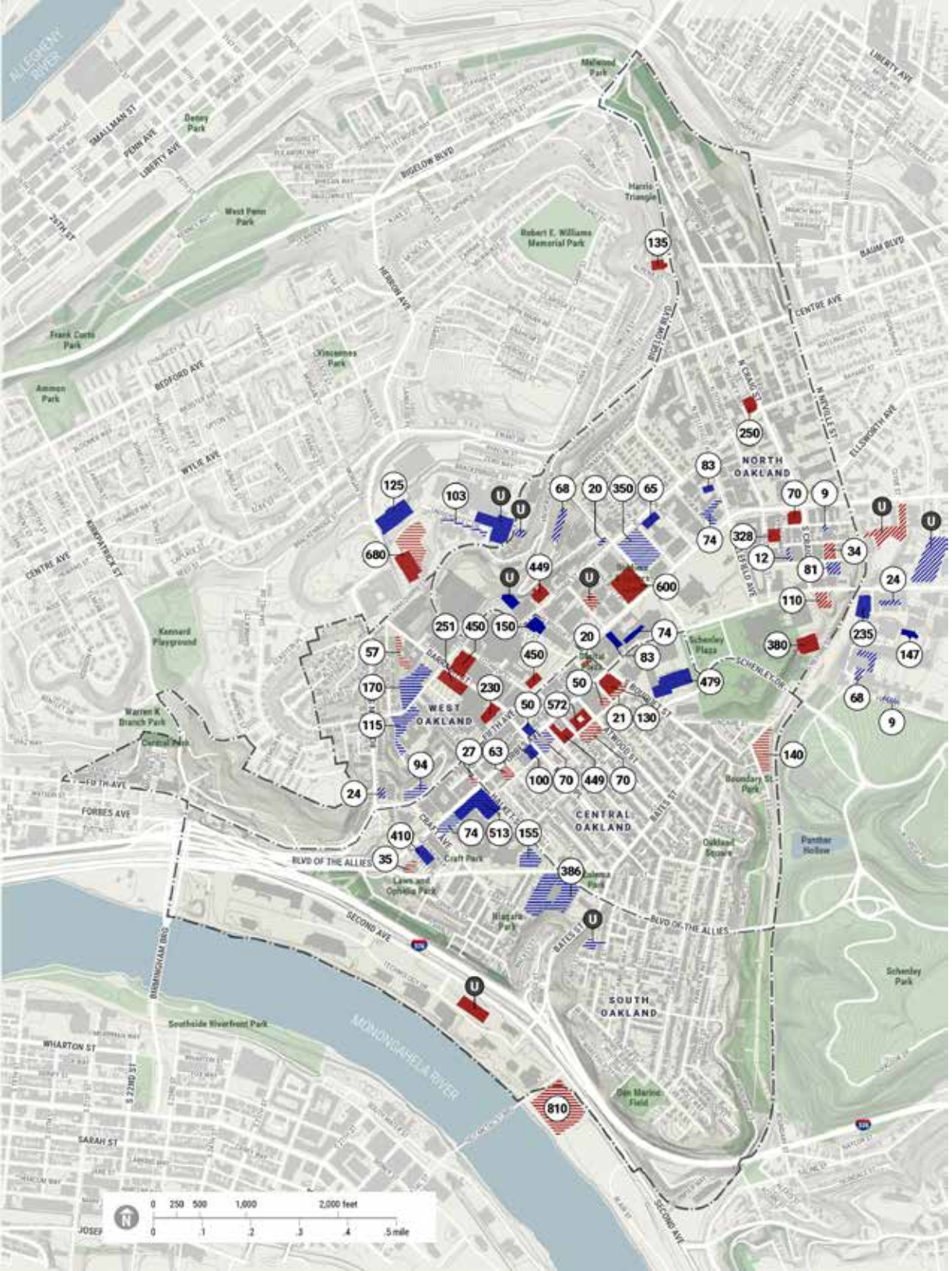
Pitt identifies a potential loss of 2,000 parking spaces in its most recent IMP. Pitt plans to pursue Transportation Demand Management (TDM) strategies to mitigate this loss and ensure that they right-size their parking supply in the future.

Transportation Demand Management (TDM) is a program of information, encouragement and incentives to help people know about and use all their transportation options to optimize all modes in the system – and to the need for parking and congested traffic. The Oakland Transportation Management Association helps administer TDM in Oakland, working with employers, businesses, community organizations, local government agencies, and regional transportation planners and providers.

In high-demand locations near the Fifth and Forbes Corridors and the hospitals, there is some leasing of off-street residential parking spots to employees, as indicated in interviews and in ads on peer-to-peer marketplaces. This reflects the high demand for employee parking in Oakland and the regulation of on-street parking.

Improved wayfinding to and from public access parking and for pedestrians is a goal of existing Oakland Plans. Institutional Master Plans for CMU and UPMC and the Innovation Oakland Plan all cite the need to improve wayfinding to make public parking easier to access and use in Oakland and encourage easy transitions to and from other modes of travel.

Wayfinding should be oriented towards key routes of travel —including cyclists as well as pedestrians, vehicles, transit, and vehicles. Cyclist wayfinding in London helps show preferred travel routes.



Parking

PUBLIC ACCESS

- Surface Parking Lot
- Parking Garage

LIMITED ACCESS

- Surface Parking Lot
- Parking Garage

(##) Number of Parking Spaces

(U) Unknown/Unpublished Number of Parking Spaces

Note: Some parking structures or lots did not have publicly available space counts, and not shown with a total but are shown in location and type.

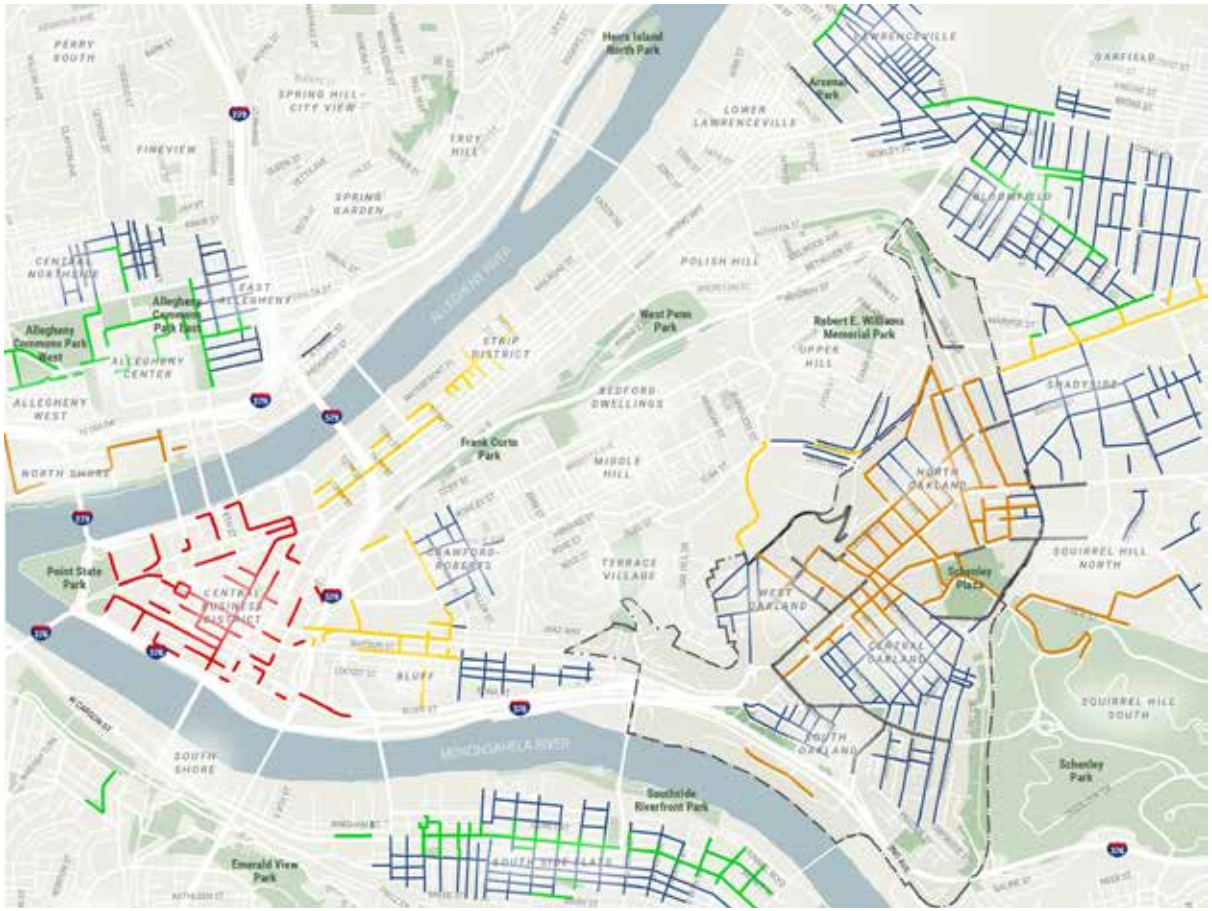
Sources: Parcels (2019), Parking (2019), Land Use Data (2019), Allegheny County. Institutional parking from Carnegie Mellon University (2012), Carlow University (2017), Univeristy of Pittsburgh (2019), UPMC Magee (2011), and UPMC Oakland (2014) Master Plans, Additional data from Parkopedia ad OTMA.

Almost every street in Oakland has managed parking as part of the residential parking permit zone, on-street meters, special permit areas, or no parking allowed areas.

Large sections of Central and South Oakland are covered by the residential parking permit program. A residential permit costs $20 annually. There is currently no limit to how many permits a household can use.

Oakland has 1,576 metered public on-street parking spaces, more than any other neighborhood in the city. This number includes the parking spaces in Schenley Park, which the Parking Authority includes in the Oakland total. Parking costs $3.00/hour in Oakland; downtown has higher rates. There are an additional 48 metered parking spaces on Technology Drive.

The Pittsburgh Parking Authority estimates that on-street parking is most heavily utilized near UPMC, and that there are more transactions during the weekday.



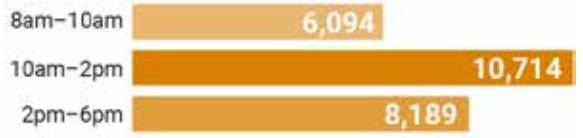
On-Street Parking

PARKING TYPE

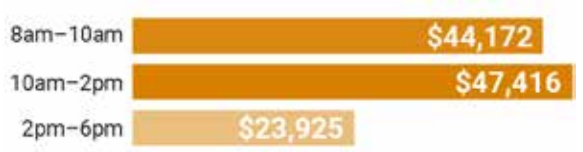
- Metered On-Street Parking
- $1.00 per hour
- $1.50 per hour
- $3.00 per hour
- $4.00 per hour
- Residential Permit
- Parking Not Permitted

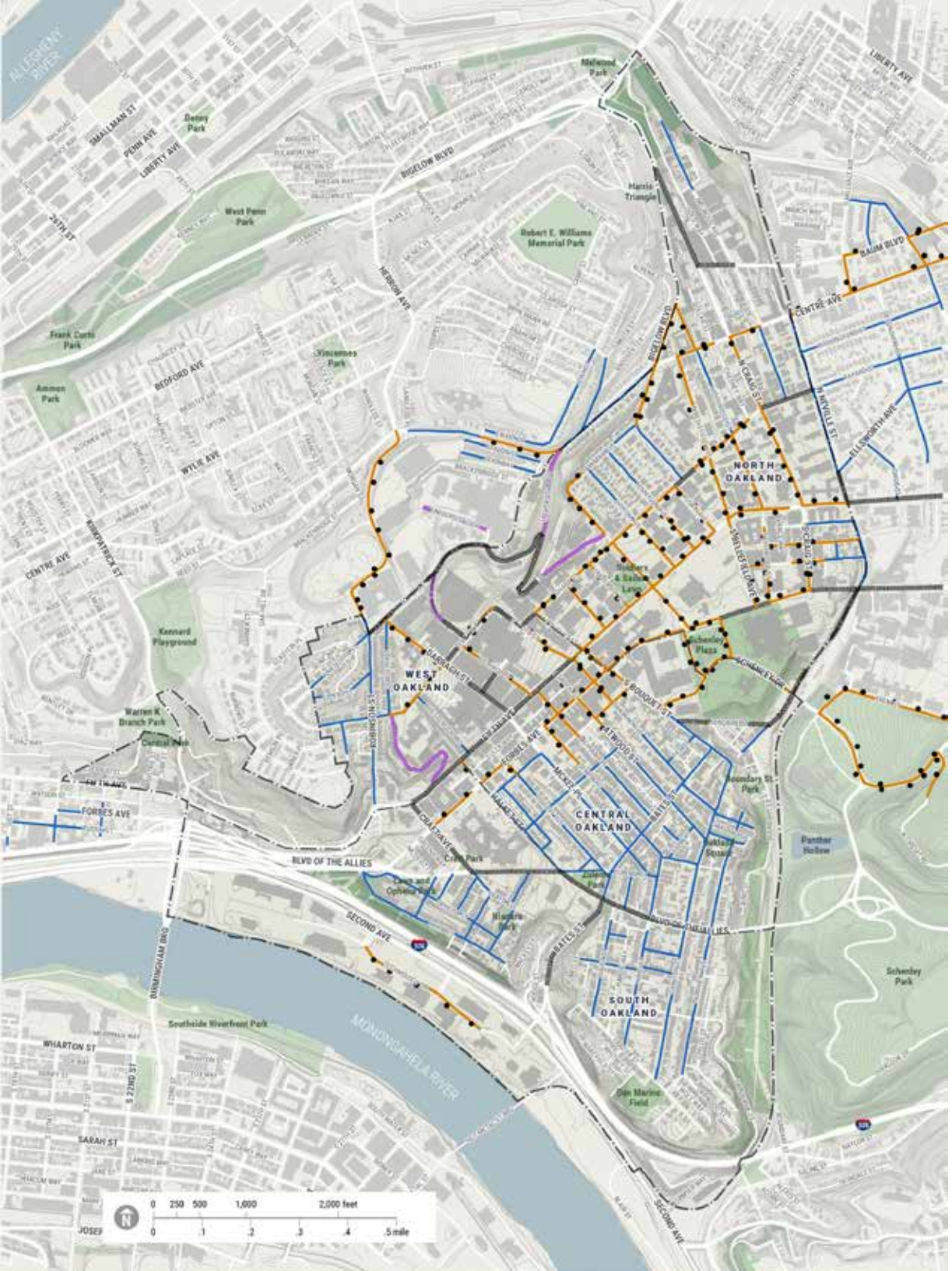
Sources: Parks (2017) and Slopes (2018), City of Pittsburgh; Parcels (2019), Parking (2019), Pittsburgh Boundary (2019), Rivers (2015), Streets (2017), Land Use Data (2019), Allegheny County. Institutional parking from Carnegie Mellon University (2012), Carlow University (2017), University of Pittsburgh (2019), UPMC Magee (2011), and UPMC Oakland (2014) Master Plans.

Number of Transactions in Oakland, Sample Weekday



Parking Payments in Oakland, Sample Weekday





On-Street Parking

PARKING TYPE

- Metered Public On-Street Parking
- Residential Permit
- Special Permit
- Parking Not Permitted

- Parking Pay Station

Sources: Parking (2019), Pittsburgh Parking Authority. Institutional parking from Carnegie Mellon University (2012), Carlow University (2017), University of Pittsburgh (2019), UPMC Magee (2011), and UPMC Oakland (2014) Master Plans.

Oakland has high levels of pedestrian activity, but lacks appropriate facilities in many locations.

Existing sidewalks, particularly in neighborhood areas, are narrow and compete for space with street trees and utility poles. Property owners are responsible for maintaining sidewalks adjacent to their property. Additional information on sidewalks and surrounding environments can be found on page 101, Oakland Street Character Typology.

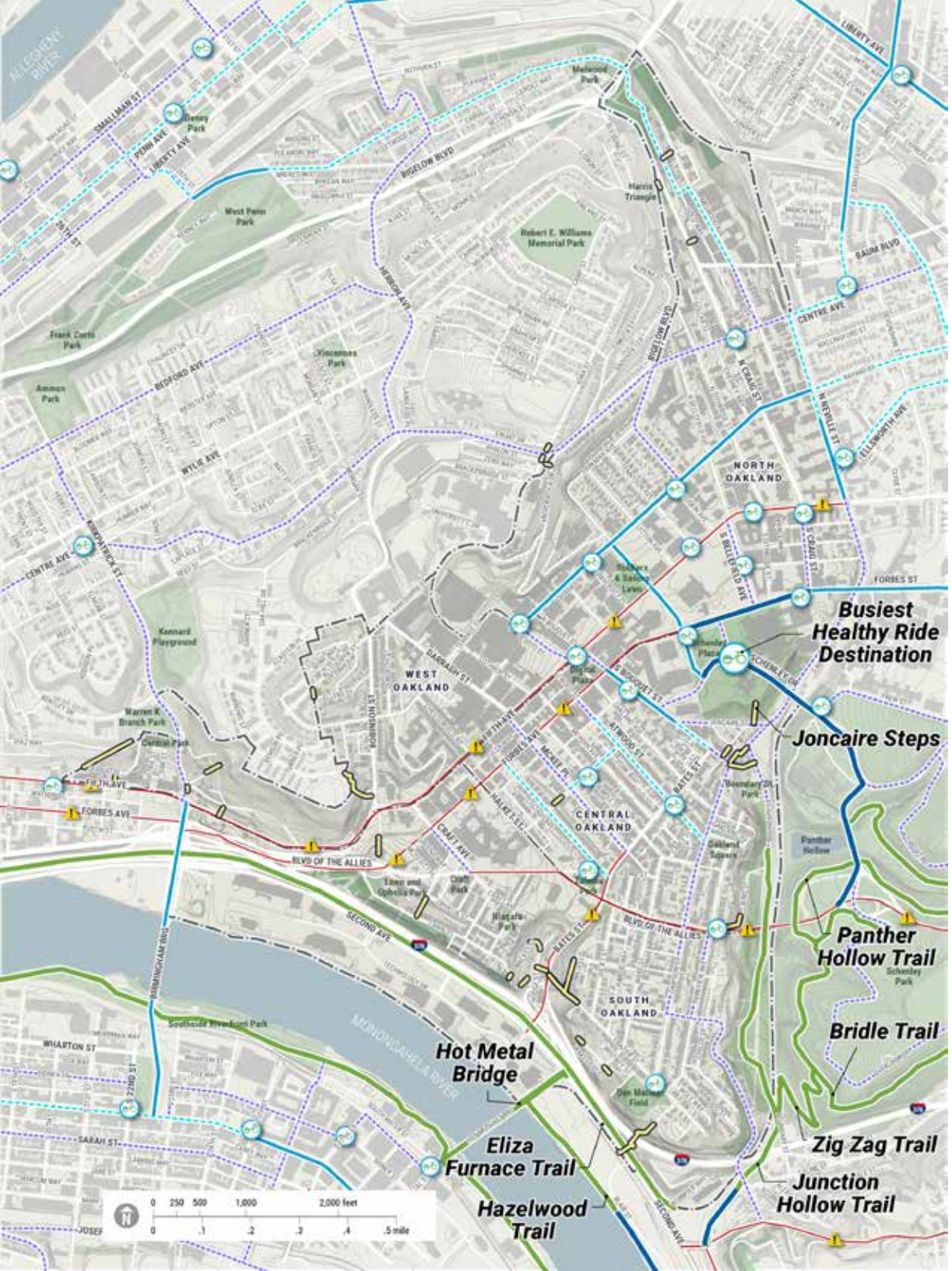
Sidewalks on Forbes Avenue are wider than in most of Oakland, but still can be congested at times. Recent streetscape projects by OBID have installed planters and additional street furniture.

There are 26 sets of public steps in Oakland, ranging in length from 5 steps to 157 steps. Due its steeply-sloping topography and historic development patterns, Pittsburgh has more public steps than any other city in the United States; there are more than 800 total sets of steps across the city. Most of these public steps were constructed in the 1940s and help provide pedestrian connections across the steep slopes of Oakland to other sections of the neighborhood, transportation, and other amenities. Over the last few decades many of these steps, in Oakland and the City at large, have deteriorated and require maintenance.

Narrow sidewalks, obstacles including poles and signs, and poor maintenance limits the accessibility of many sidewalks in Oakland.

In 2017, the City of Pittsburgh conducted a planning analysis to evaluate public steps for their usefulness to the City's pedestrian network and contributions to community urban design. Steps evaluated and scored in Oakland, shown on the map on page following page, include:

- North Oakland: Cluster of three staircases connecting University Drive, Allequippa Street, and Iowa Street
- Central Oakland: Louisa Street from Coltart Avenue to McKee Place, Diulus Way from Boundary Street to Bouquet Street, and Boulevard of the Allies from Parkview Avenue to Juno Street
- South Oakland:
  - A group of staircases near Bates Street, including Romeo Street from Frazier Street to Cato Street, Frazier from Bates Street, and other smaller sections
  - **The Joncaire Steps – a set of 136 steps traveling 216 feet from Joncaire Street up to the Frick Art Museum – were rebuilt in 2018 with new lighting, newly planted trees, railings, and durable concrete steps.** These stairs are an important pedestrian amenity and destination for exercise. The new stairs include a runnel, a ramp that runs alongside the steps and allows cyclists to easily push their bicycle up or down the stairs while they walk up them. This connection helps link the protected bike infrastructure along Schenley Drive to Boundary Street and the Junction Hollow Trail.



Bicycle and Pedestrian Infrastructure

- Trails—*off-street trail that allows bicycles*
- Protected Bike Lane—*bike lane protected bollards, buffer, planters, etc.*
- Bike Lane—*painted on-street bike lane*
- Sharrows—*on-street arrows showing where bicycles should be on the road*
- On-Street Bike Route—*route that can be biked, may or may not have infrastructure*
- Bikeable Sidewalk—*bicycling allowed on sidewalk (i.e., on bridges)*
- Cautionary Bike Route—*route that may be dangerous, difficult to avoid*
- Public Steps
- Healthy Ride Stations

Source: Bike Share Stations (2019), Healthy Ride; Bike Lanes (2019), Bike PGH.

Additional information about public steps can be found at https://pittsburghpa.gov/citysteps/. There are also other sets of steps, including ruins of steps, that were not included in the analysis because of their condition, limited usefulness, or location.

The rebuilt Joncaire Steps include a runnel for bikes and new lighting.

Oakland borders the junction of two expanding trail networks – Schenley Park and the Riverfront.

Once accessed, the trail system provides safe connections to Downtown, Southside, and other neighborhoods. The Junction Hollow Trail provides access from Boundary Street to both of these systems. The riverfront trails – including the Eliza Furnace Trail and Three Rivers Heritage Trail – provide strong connections to downtown. By crossing the Hot Metal Bridge, the Three Rivers Heritage Trail also provides access to Southside. New trail connections and protected bicycle infrastructure are being constructed in Hazelwood Green, heading upriver from the terminus of the Junction Hollow Trail and providing key connections to future development.

Trail Name	Connects To
Hazelwood Trail	Hazelwood Green
Junction Hollow	Eliza Furnace Trail; Boundary Street
Zig Zag Trail, Bridle Trail, and Panther Hollow Trail	Schenley Park Trail System
Three Rivers Heritage Trail via Eliza Furnace Trail	Downtown
Three Rivers Heritage Trail via Hot Metal Bridge	Southside

Because of strong community advocacy, Oakland has installed significant new bike infrastructure over the last decade.

Recently-installed bike infrastructure achieves a key recommendation of the Oakland 2025 Plan. Protected bike lanes use posts, parked cars, planters, or other barriers to physically separate bicyclists from other traffic. Because they include a physical barrier, they also help prevent auto traffic from parking, loading, or driving in the bike lane. They can be one-way or two-way and are the safest, most comfortable form of on-street bicycle infrastructure for most riders. State laws currently prevents parking-protected bike infrastructure from being installed in Oakland.

Despite improvements, there are still significant gaps in Oakland's bicycle network. The high traffic volumes and speeds on Oakland's busiest corridors – Fifth Avenue, Forbes Avenue, Boulevard of the Allies, and Bates Street – means they are designated as cautionary bike routes. These corridors can be dangerous, but because they also host the highest concentrations of uses and destinations can be difficult to avoid.

The proposed BRT project on Fifth Avenue and Forbes Avenue will include additional protected bike infrastructure. DOMI will soon release the Bike(+) Plan, the first citywide bike plan in 20 years and a Pedestrian Safety Action Plan to guide investment in pedestrian and bicycle infrastructure. As part of the City's complete streets policy, DOMI is also developing Complete

Protected Bike Lanes	Connects	Distance	Year Installed
Schenley Drive	Schenley Plaza to Anderson Playground	1.40 miles	2014
Forbes Avenue	Bigelow Street to Craig Street	0.50 miles	2017
Blair River Road	Hazelwood Trail to Hazelwood Avenue	1.13 miles	2019

Bike Lanes	Connects	Distance	Year Installed
Neville Street	Fifth Avenue to near Ellsworth Avenue	0.17 miles	2012
S Bouquet Street	Joncaire Street to Sennott Street	0.18 miles	2013
O'Hara Street to Bayard Street	DeSoto to Morewood Avenue	0.78 miles	2015
Bigelow Boulevard	Parkman Avenue to Roberto Clemente Drive	0.40 miles	2015
Forbes Avenue	Craig to Margaret Morrison	0.62 miles	2019

Streets Design Guidelines for how improvements should be constructed.

Oakland has 18 Healthy Ride bikeshare stations containing 181 bikes for short-term rental. Pricing varies based on 15-min, 30-min, and 60-min rides, although longer rides are possible for higher fees. Two-thirds of the Healthy Ride stations are installed on sidewalks in plazas, parks, and other public spaces, while six are located within the street right-of-way. In the first quarter of 2019, the Healthy Ride station in Schenley Plaza had the greatest number of trips ending there, reflecting its status as a community destination.

Healthy Ride Stations	Number of Bikes	Street or Sidewalk
O'Hara Street and University Place (Soldiers and Sailors Memorial)	21	ST
Schenley Drive at Schenley Plaza (Carnegie Library Main)	19	SW
Boulevard of the Allies & Parkview Avenue	19	SW
Fifth Avenue & S. Bouquet Street	19	SW
Zulema Street & Coltart Avenue	19	SW
Atwood Street & Bates Street	14	ST
Fifth Avenue & S. Dithridge Street	8	SW
Schenley Drive & Forbes Avenue (Schenley Plaza)	7	SW
S. Bouquet Avenue & Sennott Street	6	SW
Tennyson Avenue & Fifth Avenue	6	ST
Ruskin Avenue & Bigelow Boulevard	6	ST
S. Craig Street & 5th Avenue	6	SW
Centre Avenue & N. Craig Street	6	SW
Frazier Street & Dawson Street	5	SW
Semple Street & Louisa Street	5	ST
O'Hara Street & DeSoto Street	5	ST
S. Bellefield Avenue & Filmore Street	5	SW
Forbes Avenue & S. Craig Street	5	SW

CHAPTER FOUR:

URBAN DESIGN AND DEVELOPMENT

Key Takeaways

- **This chapter addresses Oakland's urban form – its context of sites, buildings, streets and public places – as physical places of activity and identity.**
- **Oakland's urban form is highly developed, dense, and complex. In the foreseeable future, urban form changes may occur on relatively few sites, but with prominent impacts.**
  - This density and complexity is inherent to its longtime success as a place attracting people to live, work, learn, and play, but is also responsible for internal tensions.
  - There is great variation in types and levels of activity, topography, building scale, eras of development, character of streets and public spaces, place identity. That said, residential and institutional uses dominate, together occupying over 60% of land area, with residential occupying modestly more land area than institutional uses.
  - There is redevelopment pressure on certain parcels that are relatively small in number and total area, but high in impact in terms of visibility and potential intensity of use. These are mainly along prominent corridors including Fifth, Forbes, Boulevard of the Allies, and Baum, but also adjoin traditional neighborhoods.
  - There is a significant body of regulatory policy that helps manage development in a predictable manner. Zoning, Institutional Master Plans, and related development regulations aim to balance owner opportunities to realize property value, with minimizing negative impacts and promoting positive impacts on the broader community of stakeholders. There may be potential to update this regulatory policy to more effectively support Oakland's vision for its future.
- **Oakland's urban form is full of outstanding assets, from overall development patterns to individual facilities, and yet its qualities of place are compromised in some important ways.**
  - The impact of accommodating vehicle traffic, parking, and servicing – at levels not present or anticipated when Oakland was originally developed – detracts from Oakland's qualities as a place for people.
  - Despite some outstanding park resources in or adjacent to Oakland, much of Oakland is underserved by parks, and its streets offer scant tree canopy, compromising human comfort.
  - Difficult scale and/or land use transitions occur among some traditional residential, institutional, and/or commercial uses.

Oakland Urban Character Typology Areas

Overview of Typology Categories

Oakland varies considerably in its character, with a wide variety of conditions influenced by street design and traffic levels, the scale, use, ownership and age of buildings, and the character of unbuilt site areas that may contain parks, other landscaping, parking, or woodlands. The following diagram identifies 15 distinct character areas in Oakland (some present in more than one location), and the accompanying tables summarize their major characteristics. In some cases, the areas have important relationships with adjacent areas outside of the Oakland study area, as noted. Portions of West Oakland west of the convergence of Fifth Avenue, Forbes Avenue, and Boulevard of the Allies are not addressed here. Refer to the Uptown/West Oakland EcoInnovation Plan which covers this area in detail.

To inform planning that may seek to promote or prevent changes, the tables include an overview of the potential for change of streets, public places, and development parcels – whether driven by current trends or a known desire for change. Selected Points of Discussion on potential change are highlighted.

NEIGHBORHOOD CHARACTER AREAS

Predominantly residential areas with small to moderate scale homes, originally built to serve non-student households

DISTRICT CHARACTER AREAS

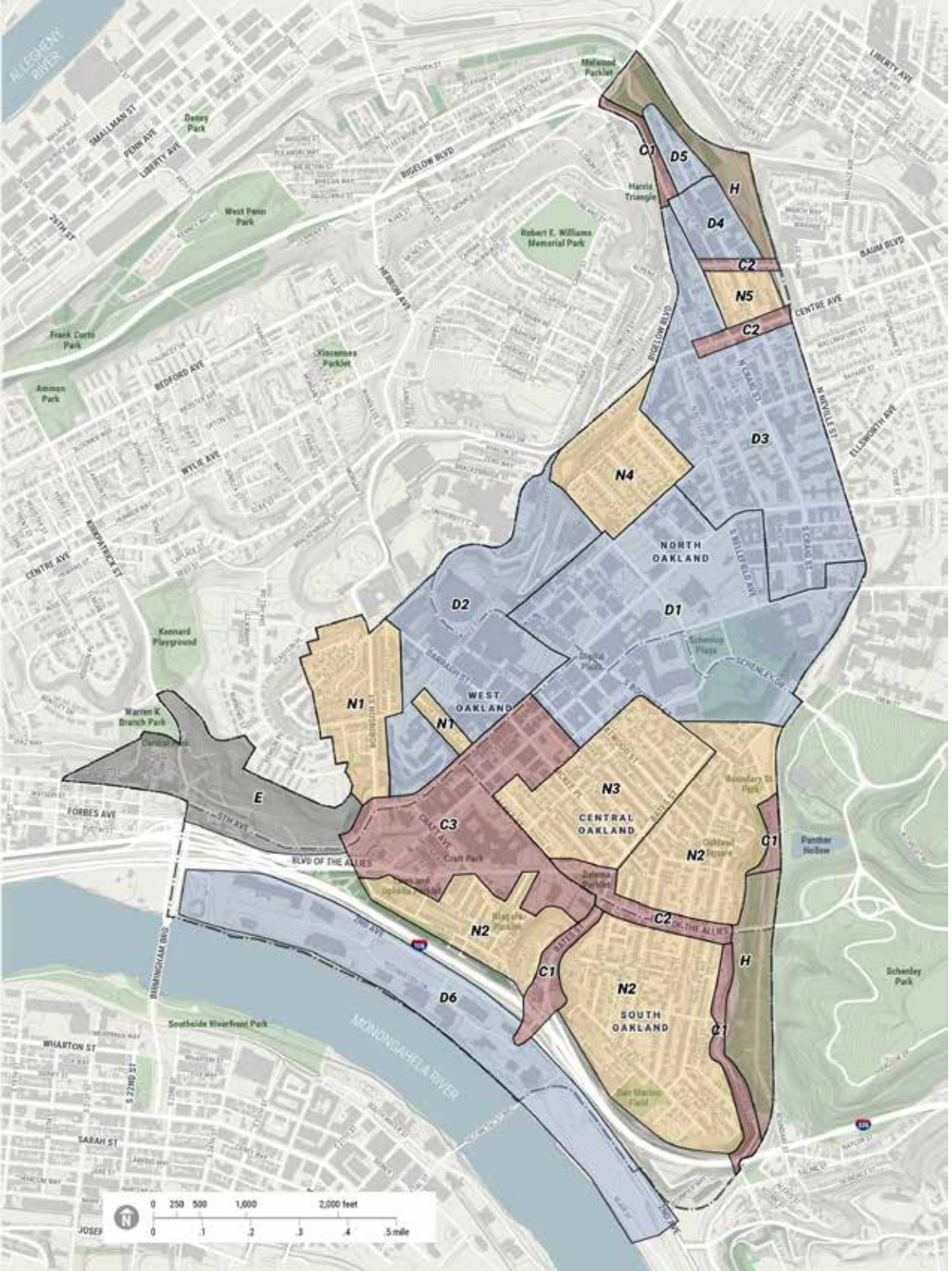
Mix of residential, commercial, institutional and/or light industrial uses. Building type and height diverse in most areas, more consistent in others

CORRIDOR CHARACTER AREAS

Development patterns and urban form heavily influenced by role of street as important transportation corridor. Development frontage predominantly commercial, institutional, or light industrial and highly varied; pedestrian environment challenging; frequent potential or desirability for change

HILLSIDE CHARACTER AREAS

Areas of steep topography that traditionally have not been feasible for development. Mostly wooded, with some street corridors passing through.



Urban Character Typology Areas

- **Corridors:** C1, C2, C3
- **Neighborhoods:** N1, N2, N3, N4, N5
- **Districts:** D1, D2, D3, D4, D5, D6
- **Hillside:** H
- Area addressed by Uptown/West Oakland Ecoinnovation District Plan: E

NEIGHBORHOOD CHARACTER AREAS
Predominantly residential areas with small to moderate scale homes, originally built to serve non-student households

N1 West Oakland Hilltop

(Chesterfield Street slightly separated from rest of area)

Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
Traditional residential neighborhood with mix of vernacular homes. Contiguous with redeveloped Oak Hill public housing in Hill neighborhood. Distinctive streets with sweeping views running across and along hillside contours.	Limited	Generally stable building stock including traditional single- and small multi-family homes. Some vacant parcels available for redevelopment. Community concern about household displacement from student and/or general housing market.	Traditional Residential	R1A-H, R1A, LNC	Traditional single- and small multi-family homes, rowhouses, 4-story garden apartments. Small neighborhood retail and church buildings at Robinson & Terrace Streets. Firehouse at Allequippa and Whitridge Streets.	Is there a need for greater connection to other neighborhood areas in Oakland and the Hill?

NEIGHBORHOOD CHARACTER AREAS
Predominantly residential areas with small to moderate scale homes, originally built to serve non-student households

N2 South and East Central Oakland

(Three sub-areas separated by street corridors and topography)

Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
Traditional residential neighborhood with variety of single- and small multifamily housing types. Student residents present but not so dominant as in area N3. Limited neighborhood services, primarily located along Semple Street and certain corners of Bates, Boulevard of the Allies. See character area C2 for Zulema Park, a centrally located amenity for the N2 area.	Desirable changes to poor public realm conditions that fracture the neighborhood include: pedestrian and bike improvements along Boulevard of the Allies; widespread planting of street trees where missing (utilities and scarce space present challenges); traffic mitigation along Bates. See character area C2 for desirable Zulema Park improvements.	Continued student housing market pressure may displace non-student residents. Previous planning suggests that community members would welcome change of non-residential parcels along Boulevard of the Allies to new development with expanded housing and/or neighborhood service options. Neighborhood retail district along Semple Street could be reinforced through physical improvements and/or additional businesses. Poor maintenance and management of rental housing a concern. Local historic district at Oakland Square helps preserve physical character.	Traditional Residential Autocentric Mixed-Use (Boulevard of the Allies) Neighborhood Mixed-Use (Bates)	R1A-VH, R1A-H, Oakland Square local historic district	Traditional single- and small multi-family homes, rowhouses, 4-story garden apartments. Most retail is in small mixed-use buildings with housing above; some single-use retail. Some religious and commercial buildings in dispersed locations.	Are there strategies at hand that could maintain area N2 as a neighborhood inhabited primarily by longer-term residents, not college students? What improvements to streets, green spaces, services, or other elements would do the most to improve neighborhood quality of life?

NEIGHBORHOOD CHARACTER AREAS
Predominantly residential areas with small to moderate scale homes, originally built to serve non-student households

N3 Central Oakland

Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
Traditional residential neighborhood with variety of single- and small multifamily housing types. Student residents predominate due to Pitt campus proximity. Neighborhood retail prevalent on Atwood Street. See character area C2 for Zulema Park, an amenity for the N3 area.	Desirable changes to poor public realm conditions include: widespread planting of street trees where missing (utilities and scarce space present challenges); traffic mitigation along Bates; improved access to park space in or near the area. New pedestrian connections and walkability improvements parallel to Forbes desirable where missing (such as between Atwood and Bouquet Streets) to reduce barrier of long blocks. See character area C2 for desirable Zulema Park improvements.	Dominant housing occupancy by college students expected to continue and intensify. Redevelopment pressure likely on underutilized sites adjoining Forbes corridor. Redevelopment could be leveraged to improve urban design transitions and address land use priorities (potentially housing options, research space, and/ or other uses). Bouquet Gardens student housing to be redeveloped by Pitt with additional student housing. Community concerns include poor maintenance and management of private rental housing, and commuter parking on residential parcels.	Traditional Residential Neighborhood Mixed-Use (Bates) Service Alley (Iroquois, Fresco, Sennett)	R3-M, R1A-H, RM-H, R2-H, LNC	Traditional single- and small multi-family homes, rowhouses, 4-story garden apartments. Most retail is in small mixed-use buildings with housing above; some single-use retail. Firehouse and OPDC community center on Semple Street and McKee Place at Louisa Street.	Could higher-density residential development (for students and/ or non-students) on selected sites provide useful benefits for Oakland as a whole?

NEIGHBORHOOD CHARACTER AREAS
Predominantly residential areas with small to moderate scale homes, originally built to serve non-student households

N4 Schenley Farms

Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
Traditional residential neighborhood, with its own dedicated historic district	Limited. Improved crosswalks may be desirable at bus stops at Alequippa Street/ University Drive A intersection	Limited; local/national historic district helps preserve physical character.	Traditional Residential	R1D-L	Principally large single family detached homes; several religious or social institutions.	Is Schenley Farms' historic character at risk? Could this character be leveraged to enhance neighboring areas?

NEIGHBORHOOD CHARACTER AREAS
Predominantly residential areas with small to moderate scale homes, originally built to serve non-student households

N5 Upper Crain & Melwood

Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
Traditional residential neighborhood with variety of single and small multifamily buildings.	Limited. Additional street trees desirable where missing.	Some potential for higher-density redevelopment of parking areas and/or parcels aggregated with adjacent commercial corridors.	Traditional Residential	R3-M	Mix of large single-family and three-unit apartment buildings, two to three stories.	With significant institutional, commercial, and student residential redevelopment taking place on nearby Centre Avenue and Baum Boulevard sites, is this neighborhood area vulnerable to major change? What qualities should be maintained?

DISTRICT CHARACTER AREAS
Mix of residential, commercial, institutional and/or light industrial uses. Building type and height diverse in most areas, more consistent in others

D1 Cultural Hub: Schenley Plaza University of Pittsburgh core campus, Carnegie Museums and Library

Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
An historic center for destination civic activities serving Pittsburgh and the region, as well as the bustling center of the Pitt campus.	Streetscape, pedestrian safety, and pocket park improvements desirable where lacking. Redevelopment along south edges of Forbes and Fifth could significantly reduce access to direct sun on sidewalks along the north side of these streets. Significant academic development planned by Pitt along O'Hara/Bigelow corridor and on other selected sites could change street character.	Underdeveloped parcels along Forbes are targeted for redevelopment by Pitt and private student housing and research redevelopment. Smaller parcels are being aggregated to create larger redevelopment sites. Properties on these parcels with historic and/or other cultural value may be vulnerable. Opportunity to rebuild Parking Authority structure at Forbes/Meyran and include other uses. Oakland Civic Center local/national historic district helps preserve physical character.	Civic Destination Neighborhood Mixed-Use Urban Mixed-Use – Pedestrian Amenities Urban Mixed-Use – Pedestrian Challenges Service Alley Institutional Campus – Pedestrian Amenities Institutional Campus – Pedestrian Challenges	EMI, OPR-C, Oakland Civic Center local/national historic district	Mix of larger, formal institutional buildings serving educational and cultural uses, and smaller commercial buildings with storefront retail lining certain blocks of Forbes Avenue and adjoining streets. Distinct and historic architectural character present for some buildings.	What sites and land uses are most desirable for redevelopment to add valuable urban design qualities or activities? Where should redevelopment be prevented?

DISTRICT CHARACTER AREAS
Mix of residential, commercial, institutional and/or light industrial uses. Building type and height diverse in most areas, more consistent in others

D2 Medical and Hillside campus area

Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
Exclusively institutional campus development (Pitt, UPMC, Carlow) stretching from Fifth Avenue up steep hillsides to hilltop with panoramic views	5th Avenue BRT will bring station and lane changes. Enhanced streetscape with street trees, improved pedestrian buffers, and active, visible ground floor building program highly desirable on all streets. Sloped streets present challenges for pedestrian-friendly building frontage.	Pitt and UPMC properties heavily developed already. Specific building development & renovation projects planned as part of Pitt campus master plan. Carlow plans joint private/ campus development at St. Agnes site. Terrace Street development influenced by agreements between Carlow and community.	Institutional Campus – Pedestrian Amenities Institutional Campus – Pedestrian Challenges	EMI	Large, often interconnected institutional buildings serving educational and medical uses. Building service areas and structured parking dominate some street segments.	Are there project opportunities that would both advance institutional goals and enhance streets and green spaces as welcoming, safe places for people?

DISTRICT CHARACTER AREAS
Mix of residential, commercial, institutional and/or light industrial uses. Building type and height diverse in most areas, more consistent in others

D3 North Oakland

Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
Not only a higher-density residential neighborhood with significant graduate student population, North Oakland is home to several community religious and educational institutions, and clusters of retail and restaurants.	North-south streets generally have good pedestrian infrastructure, except for northern blocks of North Craig meriting street trees and other traffic buffers. East-west streets – particularly Centre, Bayard and Fifth – have busy vehicular traffic and merit improved pedestrian conditions such as street trees and enhanced street crossings.	District is heavily developed with numerous high-rise residences and large institutional buildings. Several dispersed parking lots and lightly-developed parcels adjoining Centre St corridor could present redevelopment opportunities – (recent One on Centre apartment tower is one example).	Neighborhood Mixed-Use Mid-rise Multifamily Residential Urban Core Mixed-use –Pedestrian Challenges Traditional Residential Autocentric Mixed-use	EMI, OPR-B, RIA-H, RM-VH, SP-7, OPR-B	North of Fifth Avenue, mix of multifamily residential buildings five to 20 stories tall, smaller two to three story single and multifamily residential, and institutional buildings serving religious and education uses (most not affiliated with area universities). Smaller-scale mixed retail, commercial, and residential buildings present south of Fifth Avenue.	Might some sites attract redevelopment with high-value residential, institutional, private research, or other uses? Would this present an opportunity or challenge for North Oakland?

DISTRICT CHARACTER AREAS
Mix of residential, commercial, institutional and/or light industrial uses. Building type and height diverse in most areas, more consistent in others

D4 Melwood Factory District

Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
Low-rise industrial buildings with active mix of commercial, university, health care, and arts uses.	Sidewalks needed at several driveway gaps. Street trees, public art and/or other pedestrian amenity highly desirable.	Industrial buildings reflect mixed occupancy, with some adapted for institutional or arts use while others maintain light industry or auto-oriented use. Proximate to recent intensive research and residential development along Baum and Centre corridors. Two-story buildings and commercial uses may present compelling opportunity for higher-density, higher-value redevelopment. CMU and UPMC have recently invested in parcels in the area.	Revitalization/ Transitional Service Alley	UI	Vernacular brick industrial and warehouse buildings, one to two stories tall. Most converted to non-industrial uses.	Is this an appropriate place for more intensive development serving innovation? Should existing historic character, arts uses, or other qualities be preserved in face of potential change?

DISTRICT CHARACTER AREAS
Mix of residential, commercial, institutional and/or light industrial uses. Building type and height diverse in most areas, more consistent in others

D5 Melwood Mixed-Use

Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
Mix of small industrial and residential parcels	Sidewalks needed at several driveway gaps. Gold Way/Melwood Avenue connection to north may merit improvement or traffic calming depending on context sensitivity.	Industrial and/or residential properties may present redevelopment opportunity if aggregated. Otherwise, small parcels and residential presence likely to limit change.	Revitalization/ Transitional Service Alley	UI	Mix of vernacular single family homes and small light industrial or commercial buildings, one to two stories.	Is this an appropriate place for more intensive development serving innovation? Are there existing qualities that should be preserved?

DISTRICT CHARACTER AREAS
Mix of residential, commercial, institutional and/or light industrial uses. Building type and height diverse in most areas, more consistent in others

D6 Monongahela Riverfront

Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
Newly developed office and research space with river and trail amenity and substantial mixed-use development potential, but access and service constraints	Auto-oriented streets require pedestrian streetscape improvements to support mixed-use walkable setting. Three Rivers Heritage Trail would be more useful with more frequent access points.	Several undeveloped sites offer substantial development opportunity. Pedestrian-oriented ground level use and design desirable, particularly around Technology Drive access from Second Avenue.	Autocentric mixed-use Vehicular corridor with development constraints	SP-1	Institutional and commercial office and hotel buildings up to six stories, and two free-standing parking structures. Current development all built since 1990 on site of former smelting works.	Would improved access options, amenities, and/or other improvements attract development that could pose benefits to Oakland as a whole?

CORRIDOR CHARACTER AREAS
Development patterns and urban form heavily influenced by role of street as important transportation corridor. Development frontage predominantly commercial, institutional, or light industrial and highly varied; pedestrian environment challenging; frequent potential or desirability for change

C1 Hillside Roadway
(4 instances in study area)

Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
Street corridor running across steep hillsides, typically amidst wooded undeveloped land.	Swinburne Street requires addition of a sidewalk or alternative parallel hillside trail/path. Informal parking along Boundary Street may merit reconfiguration. Buffers and removal of overgrown vegetation desirable to improve sidewalks along fast/heavy traffic on Fifth, Bates, Bigelow.	No significant development parcels present	Vehicular corridor with development constraints		Generally undeveloped; occasional small residential or commercial buildings; large former industrial building with self-storage on Bigelow at Bloomfield Bridge.	Are improved transit, biking, or walking facilities warranted to expand Oakland's access options?

CORRIDOR CHARACTER AREAS
Development patterns and urban form heavily influenced by role of street as important transportation corridor. Development frontage predominantly commercial, institutional, or light industrial and highly varied; pedestrian environment challenging; frequent potential or desirability for change

C2 Neighborhood Commercial Corridor

(3 instances in study area)

Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
Traditional commercial corridors with wide variety of neighborhood and/or regional service destinations, mixed with some residential and institutional use. Through-traffic tends to overwhelm adjoining neighborhood character, especially along Boulevard of the Allies and Baum Boulevard segments. Most parcels are small, limiting redevelopment options.	Roadways, especially Fifth Ave, Boulevard of the Allies and Baum Boulevard (all numbered state highways), are primarily designed for vehicle flow and offer poor pedestrian amenity/ safety. Along Boulevard of the Allies, past plans and current conditions suggest changes to poor public realm conditions including pedestrian and bike improvements, and transformation of Zulema Park into a more accessible, useable neighborhood park serving the N2 and N3 neighborhood areas.	More pedestrian-friendly building frontage and neighborhood-serving uses desirable along all corridors. Past plans suggest community interest in expanded presence of neighborhood retail and services on sites around Zulema Park. Larger parcels along Baum Blvd. could accommodate additional development intensity as part of Melwood Factory District. Most other corridor parcels likely face redevelopment constraints owing to small size or fragmented ownership, though aggregation and/or omission of on-site parking would open options.	Neighborhood Mixed-use Autocentric Mixed-use Revitalization/ Transitional	UPR-B, OPR-D, OPR-B	Primarily one to three story commercial and auto service buildings; some residential on upper floors and on dedicated parcels; occasional religious buildings.	What changes would best help these corridors connect, rather than divide, the neighborhood and district areas to either side of them?

CORRIDOR CHARACTER AREAS
Development patterns and urban form heavily influenced by role of street as important transportation corridor. Development frontage predominantly commercial, institutional, or light industrial and highly varied; pedestrian environment challenging; frequent potential or desirability for change

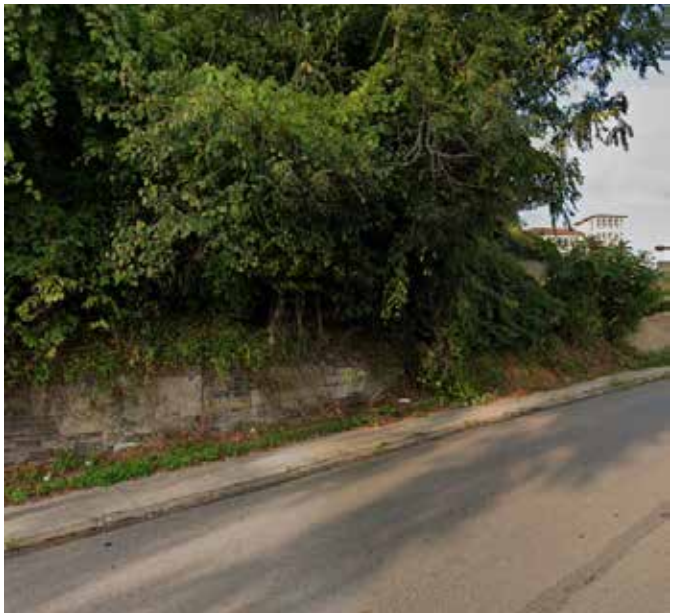
C3 West Oakland Gateway Corridors

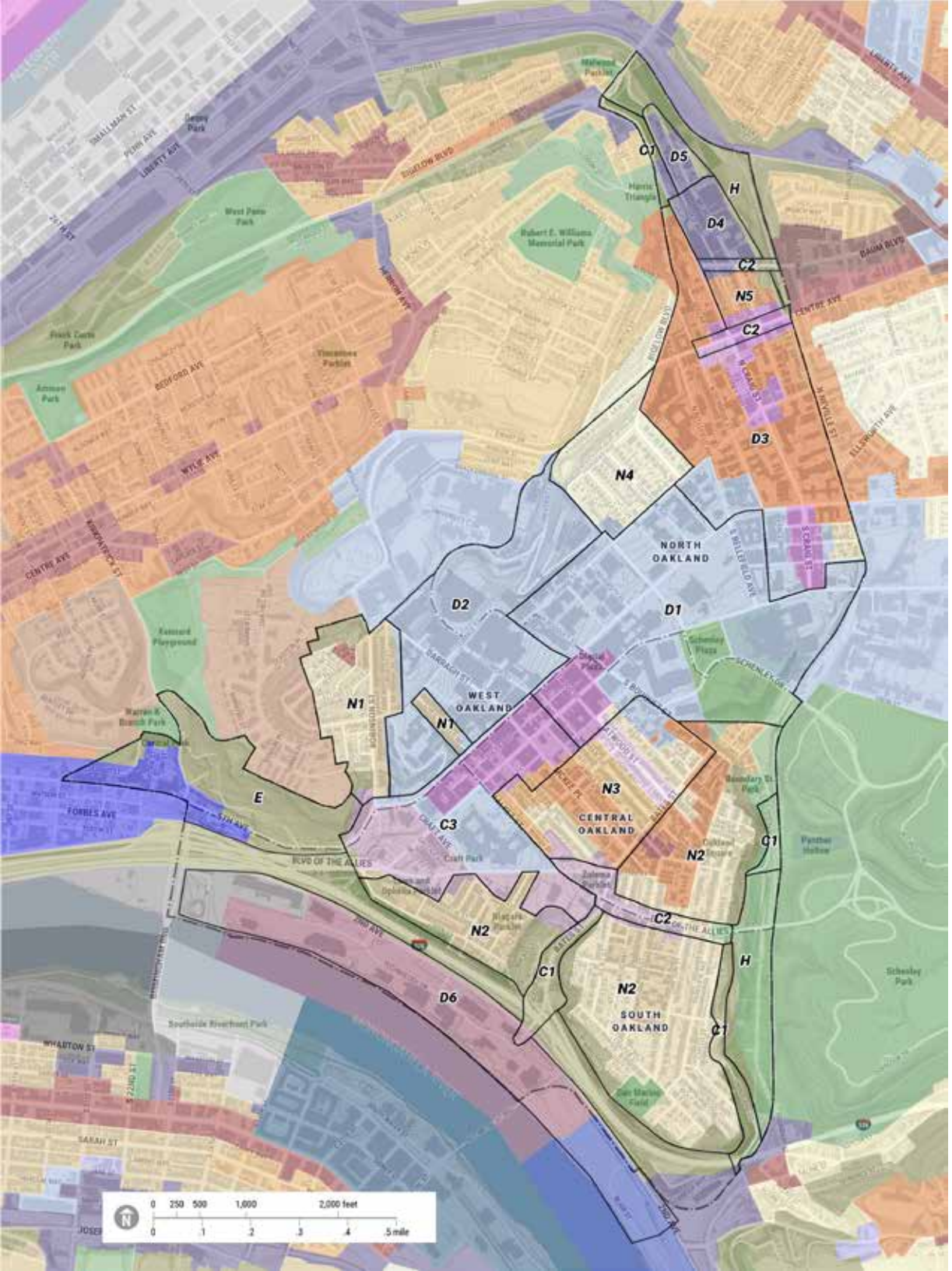
Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
Highly varied area where the urban form of Oakland's core transitions to scale of busy highways and regional vistas over the Monongahela valley. Urban form of development and streets predominantly oriented to vehicles, not people. Potential for redevelopment of underutilized parcels and/or streetscape improvements to transform character.	Pedestrian-friendly streetscape and crossing improvements highly desirable along all corridors in this area, particularly Fifth, Forbes, and Boulevard of the Allies. Landmark public space highly desirable between Fifth and Forbes near Craft Avenue (as recommended in Oakland 2025 Plan) to establish sense of place in this western subdistrict of Oakland.	Area contains some of Oakland's largest and most visible underutilized sites offering apparent development opportunities. Large recent development projects in the area include SkyVue Apartments, Residence Inn, Bridge on Forbes, and Craft Place. With new development and improved public realm, this area could gain a more distinct identity and market position, and/or become a coherent part of the Cultural Hub (D1) or other adjacent areas.	Urban Core Mixed-use –Pedestrian Challenges Revitalization/ transitional Autocentric Mixed-use Institutional Campus – Pedestrian Amenities Institutional Campus – Pedestrian Challenges	EMI, OPR-D, OPR-C	Eclectic mix of large institutional medical, vernacular commercial, hotel, and multifamily residential buildings. Broad age range from century old to brand-new.	What are the most important opportunities to transform this area's fragmentation into strong internal cohesion and beneficial connections with adjacent areas?

HILLSIDE CHARACTER AREAS
Areas of steep topography that traditionally have not been feasible for development. Mostly wooded, with some street corridors passing through.

H Hillside

Predominant Characteristics	**Potential for Change –** Streets and Public Places	**Potential for Change –** Development Parcels	**Street Typology** *Predominant* Present	**Zoning Districts** *Predominant* Present	**Building Typology**	**Points of Discussion**
Steep topography traditionally prevented development. Hillsides commonly protected as conservation areas. Auto-dominated streets moving between more urban development areas.	Limited. Improved bike and/or pedestrian infrastructure desirable in selected areas to unify broader network.			H	No buildings typically present.	Do Hillside areas offer additional opportunities to support resilience, recreation, or access choices?



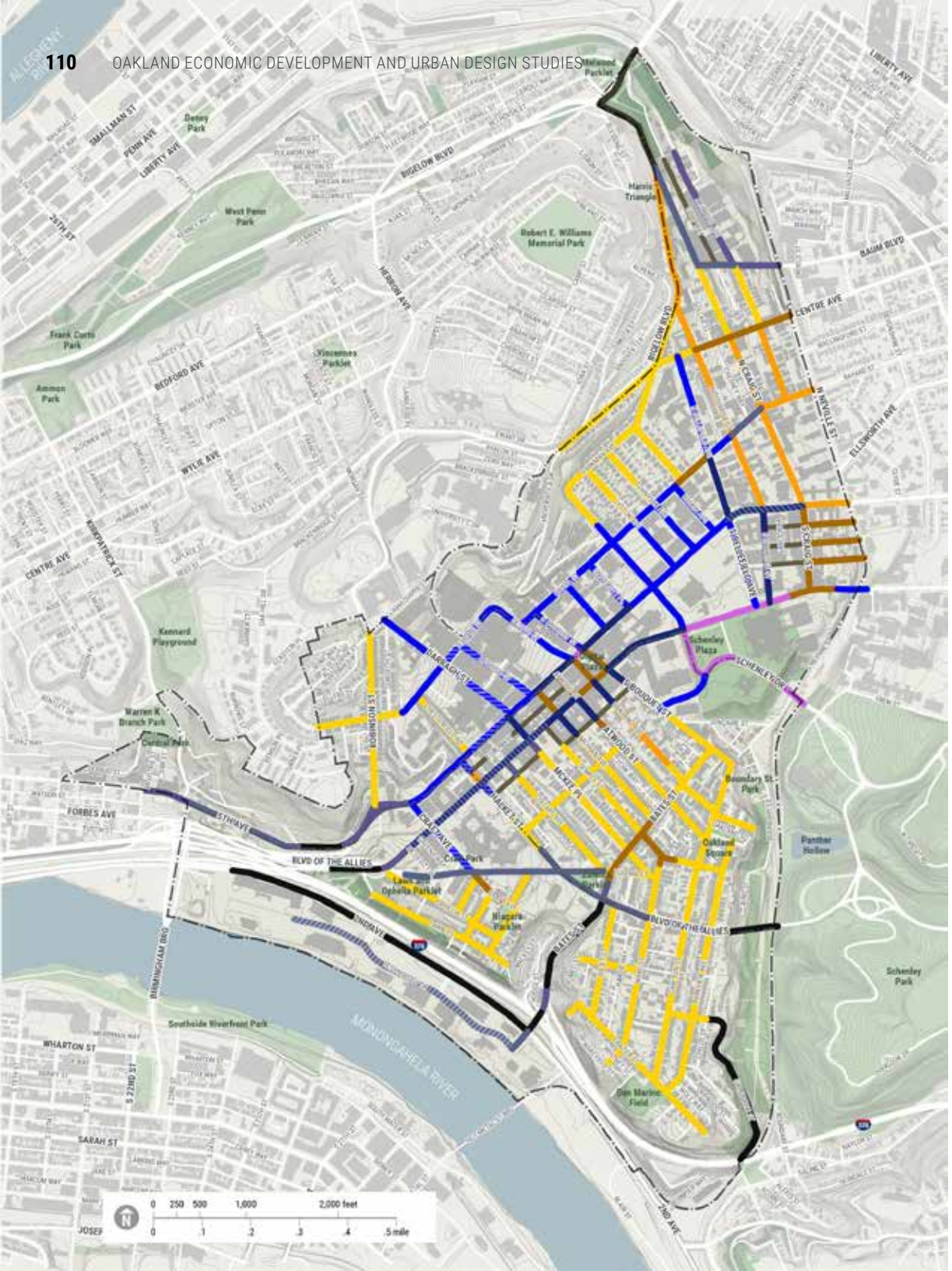


Urban Character Typology Areas with Zoning District Overlay

Corridors: C1, C2, C3
Neighborhoods: N1, N2, N3, N4, N5
Districts: D1, D2, D3, D4, D5, D6
Hillside: H
Area addressed by Uptown/West Oakland Ecoinnovation District Plan: E

ZONING

- **R1D-VL** Single-Unit Detached Residential very Low Density
- **R1D-L** Single-Unit Detached Residential Low Density
- **R1A-H** Single-Unit Attached Residential High Density
- **R1A-VH** Single-Unit Attached Rseidential very High Density
- **R2-L** Two-Unit Residential Low Density
- **R2-M** Two-Unit Residential Moderate Density
- **R2-H** Two-Unit Residential High Density
- **R2-VH** Two-Unit Residential very High Density
- **R3-M** Three-Unit Residential Moderate Density
- **RM-M** Multi-Unit Residential Moderate Density
- **RM-H** Multi-Unit Residential High Density
- **RM-VH** Multi-Unit Residential very High Density
- **RP** Residential Planned Unit Development
- **EMI** Educational / Medical Institution
- **OPR-A** Oakland Public Realm District A–Atwood Street
- **OPR-B** Oakland Public Realm District B–Craig Street
- **OPR-C** Oakland Public Realm District C–Fifth & Forbes District
- **OPR-D** Oakland Public Realm District D–Boulevard of the Allies
- **SP-7** Oakland Area Planned Development District
- **UPR-B** Uptown Public Realm District
- **LNC** Local Neighborhood Commercial
- **UNC** Urban Neighborhood Commercial
- **UI** Urban Industrial
- **NDI** Neighborhood Industrial
- **RIV-GI** Riverfront General Industrial
- **RIV-IMU** Riverfront Industrial Mixed Use
- **RIV-MU** Riverfront Mixed Use
- **SP-1** Pittsburgh Technology Center
- **SP-10** Almono
- **SP-5** Southside Works
- **P** Parks and Open Space
- **H** Hillside



Street Character

- Traditional Residential
- Mid Rise Multifamily Residential
- Neighborhood Mixed Use
- Urban Core Mixed Use – Pedestrian Amenity
- Urban Core Mixed Use – Pedestrian Challenge
- Service Alley
- Autocentric Mixed Use
- Autocentric Business Campus
- Civic Destination
- Institutional – Pedestrian Amenity
- Institutional – Pedestrian Challenge
- Vehicular Corridor with Development Contraints
- Revitalization / Transitional

Oakland Street Character Typology

Overview of Typology Categories and Existing Street Sections

Traditional Residential

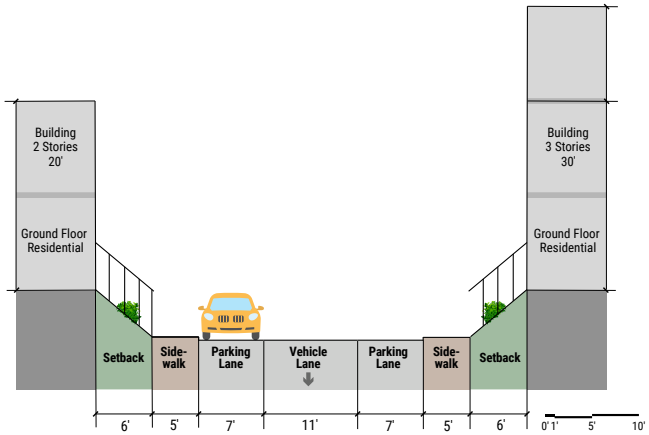
Multiple streets throughout North, Central, South, and West Oakland, including: portions of N. Craig St., Melwwod Ave., Centre Ave., Bigelow Blvd., Parkman Ave., Lytton Ave., Tennyson Ave., S. Bouquet St., Oakland Ave., Atwood St., Bates St., Meyran Ave., Semple St., McKee Pl., Coltrart Ave., Zulema St., Halket St., Louisa St., Dawson St., Parkview Ave., Ward St., Juliet St, Cato St., Swinburne St., Frazier St., Lawn St., Ophelia St., Joe Hammer Sq., Kennet Sq., Niagara St., Craft Ave., Chesterfield Rd., Robinson St., and Terrace St.

Traditional residential streets occur throughout the interior of residential neighborhoods in West, South, Central, and North Oakland. Traditional residential streets are characterized by predominantly 2- to 3-story single-family or conversion residential buildings with historic architecture, buildings up to the sidewalk, narrow to medium width sidewalks, good walkability, on-street parking, street trees, and low traffic volumes. There are frequent driveways and front yard parking on many streets in Central Oakland compared to segments in South, North, and West Oakland.

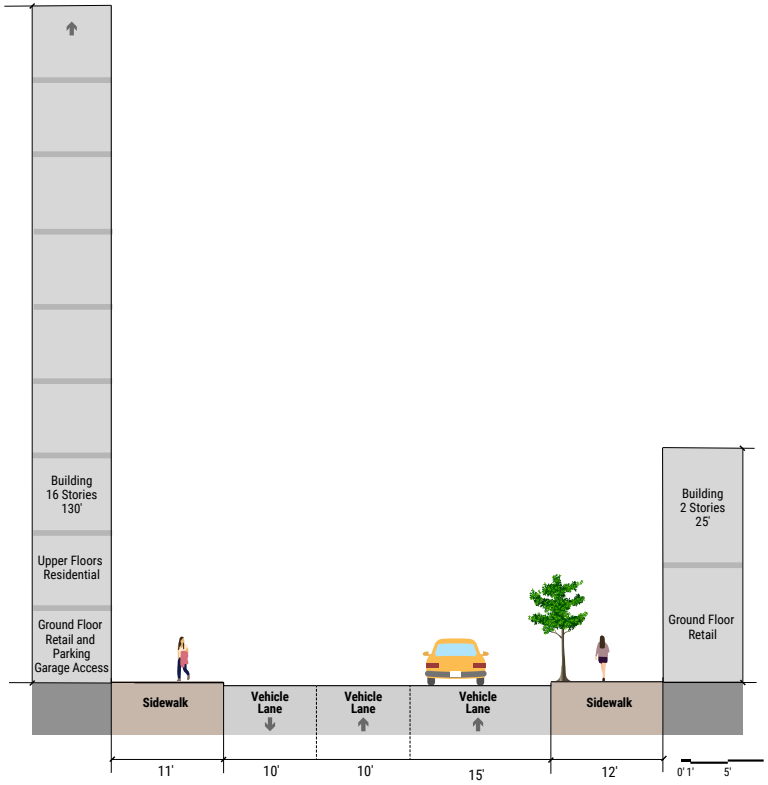
Mid-Rise Multi-Family Residential

Segments of Melwood Ave., N. Craig St., Bayard St., N. Dithridge St., Bigelow Blvd., Fifth Ave. between N. Craig St. and N. Neville St., Oakland Ave., and Halket St.

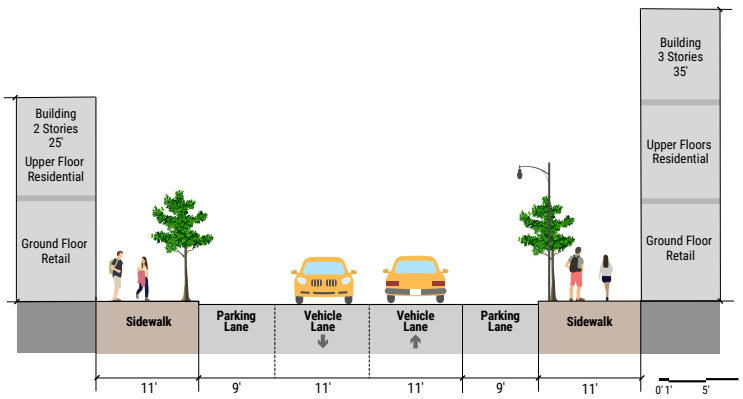
Mid- to high-rise multi-family residential streets are characterized by predominantly mid to high rise single use multi-family residential buildings on streets with narrow to medium width sidewalks, good walkability, on-street parking, and street trees. There are typically some driveways and some intermittent single family, commercial, or institutional uses mixed in. The typology exists predominantly within North Oakland, with the exception of a segment of Oakland Ave within Central Oakland.



***Oakland Avenue** (between Piers and Bates Streets)*



***Craig Street** (between Centre Avenue and Bayard Street)*

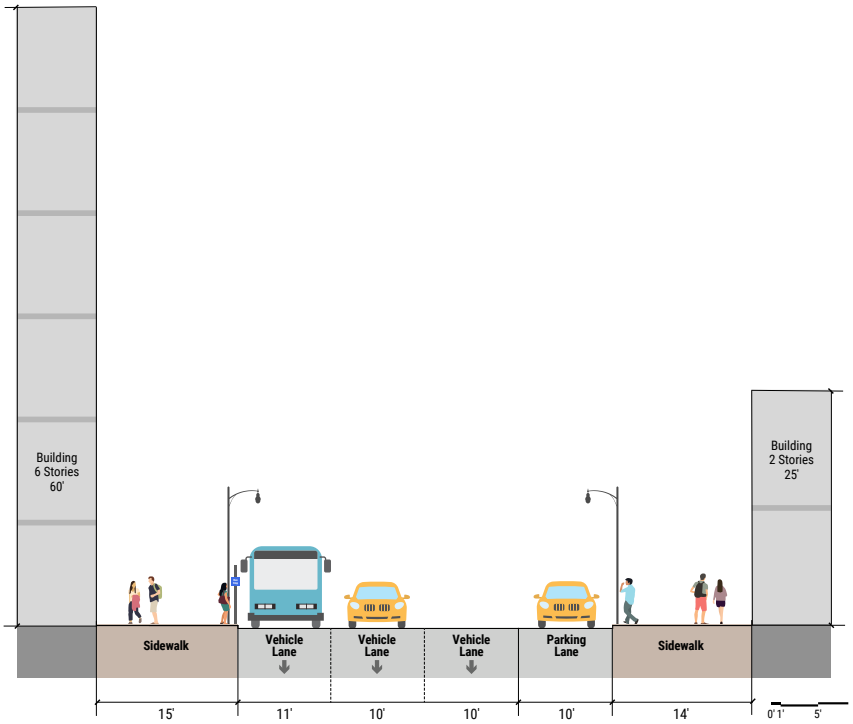


Centre Avenue *(between Melwood Avenue and Neville Street)*

Neighborhood Mixed Use

Segments of Centre Ave., Bayard St., S. Craig St., Forbes Ave., Henry St., Winthrop St., Filmore St., S. Bouquet St., Oakland Ave., Atwood St., Forbes Ave., Meyran Ave., Bates St., Semple St., and Craft Ave.

Neighborhood mixed-use typology is characterized by transparent ground floor storefronts with low- to mid-rise apartments above. Traffic is not as heavy as urban core mixed-use streets. Generally, amenities and markings include sidewalks, signalized or marked crosswalks, on-street parking on both sides, and transparent storefronts. Most segments provide good walkability. Bicycle infrastructure is generally limited to sharrows on these streets. On Centre Avenue, for example, the heavy traffic can be uncomfortable for pedestrians, but there are wide sidewalks, signalized crosswalks, on-street parking on both sides of the street, transparent storefronts, and recently planted street trees to alleviate some the traffic impacts and provide reasonably good walkability. Street lighting is generally utilitarian.

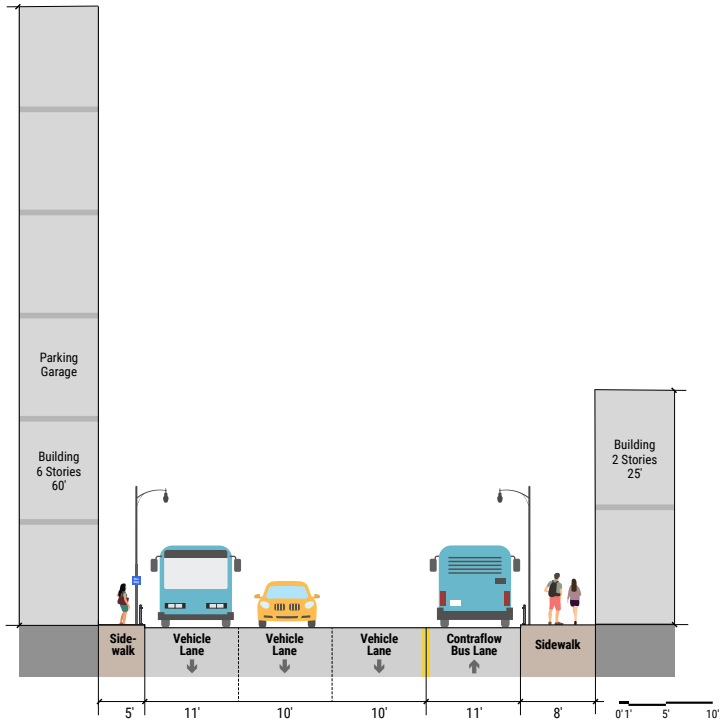


Forbes Avenue *(between Meyran Avenue and Semple Street)*

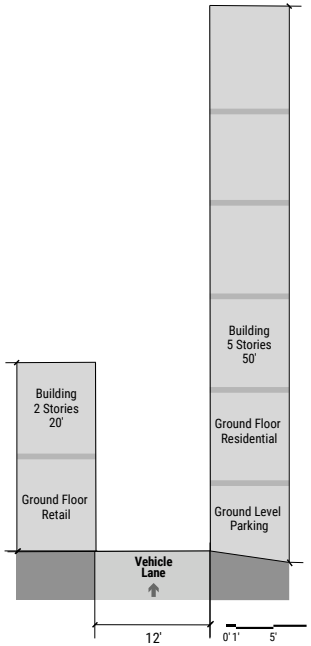
Urban Core Mixed Use – Pedestrian Amenity

Segments of Forbes Ave., Fifth Ave., Dithridge St., N. Bellefield Ave., S. Bouquet St., Oakland Ave., Atwood St., Meyran Ave. and McKee Pl.

These corridors represent the core downtown environment of Oakland and provide a high quality, walkable downtown environment with a variety of eating establishments and retail opportunities mixed with multi-family living and office/academic employment. Ground floor businesses have attractive facades and are mostly occupied, with only one or two vacancies. Streetlights are traditional style embellished with planter baskets and banners but are very tall and are more functional street lighting than pedestrian scale. Sidewalks are in generally good condition but lack a cohesive streetscape design. Because of relatively tight sidewalk conditions, there are relatively few street trees, bike racks, or planters on the sidewalks as might otherwise be expected.



***Fifth Avenue** (between Halket Street and McKee Place)*



***Euler Way** (between Meyran Avenue and McKee Place)*

Urban Core Mixed Use – Pedestrian Challenge

Forbes Ave. between McDevitt Pl. and Semple St., and Fifth Ave. between S. Bellefield Ave. and S. Craig St.

This typology has a dense array of mid to high rise buildings, ground floor commercial uses, upper floor apartments and offices, and transparent ground floor storefronts and form major transportation and economic spines of the Oakland neighborhood. However, in the pedestrian challenge segments the quality of the pedestrian environment is challenged by narrower sidewalks, pedestrian barriers, higher traffic speeds, and disruptions of the streetscape.

Service Alley

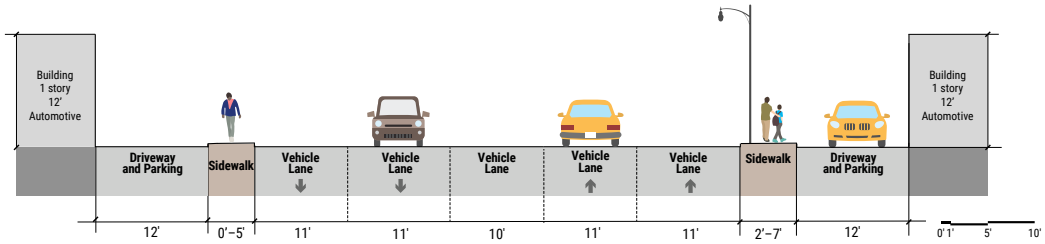
Euler Way, Iroquois Way, Fresco Way and Gold Way. Segments of Sennott St., Filmore St., Winthrop St., and Henry St. between Dithridge and S. Craig Streets

Service alleys are primarily used for off-street loading and parking access and have narrow cartways, minimal to no sidewalks, poor walkability, limited pedestrian egress, and are mostly located to the rear and side of urban core mixed use buildings.

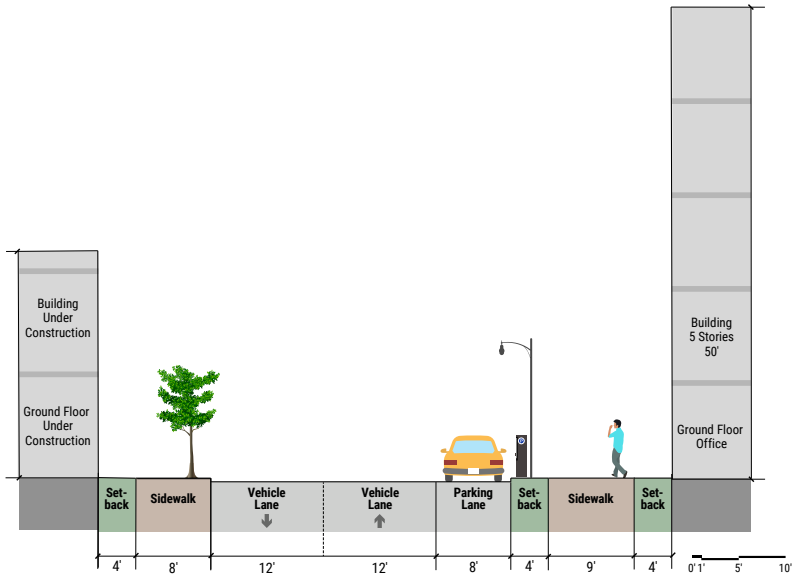
Autocentric Mixed Use

Fifth Ave. between Kirkpatrick St. and Branham St., Boulevard of the Allies between Forbes Ave. and Parkview Ave. Segments of Halket St., Zulema St., Coltart Ave., Bayard St., Baum Blvd., N. Craig St. and Technology Dr.

These roads are high-volume connectors to the regional road and highway system, with higher speeds, multiple and wider traffic lanes, and few and/or inadequate pedestrian facilities compared to other typologies. Land uses vary along the corridors through Oakland, including light industrial uses, a vacant building and parking lot with large billboards, a large vacant warehouse, hotels, apartment buildings, commercial uses, residences, Zulema Park, the Craft Avenue triangular green space, Bates Street Park, and hospital/healthcare facilities.



Boulevard of the Allies *(between Bates Street and Ward Street)*



***Technology Drive** (between Middle Access and Bates Street)*

Autocentric Business Campus

Technology Dr.

The Pittsburgh Technology Center (PTC) is a state-of-the art office park and regional center for research and development located along the northern bank of the Monongahela River in South Oakland. The office park is incorporated into the city's grid via Technology Drive, a slightly winding two-lane roadway that runs mostly parallel to Second Avenue and the river. Technology Drive represents the only corridor in Oakland designated as the Autocentric Business Campus typology, which is characterized as primarily auto-oriented across a campus-like environment. While there are new eight-foot sidewalks, lush landscaping, and attractive medium-scale lighting, this green office park is generally auto-oriented with large garages and parking lots instead of on-street parking. Pedestrian accommodations are incorporated within the campus, but there is a lack of pedestrian-oriented uses and lack of connectivity to adjacent areas.

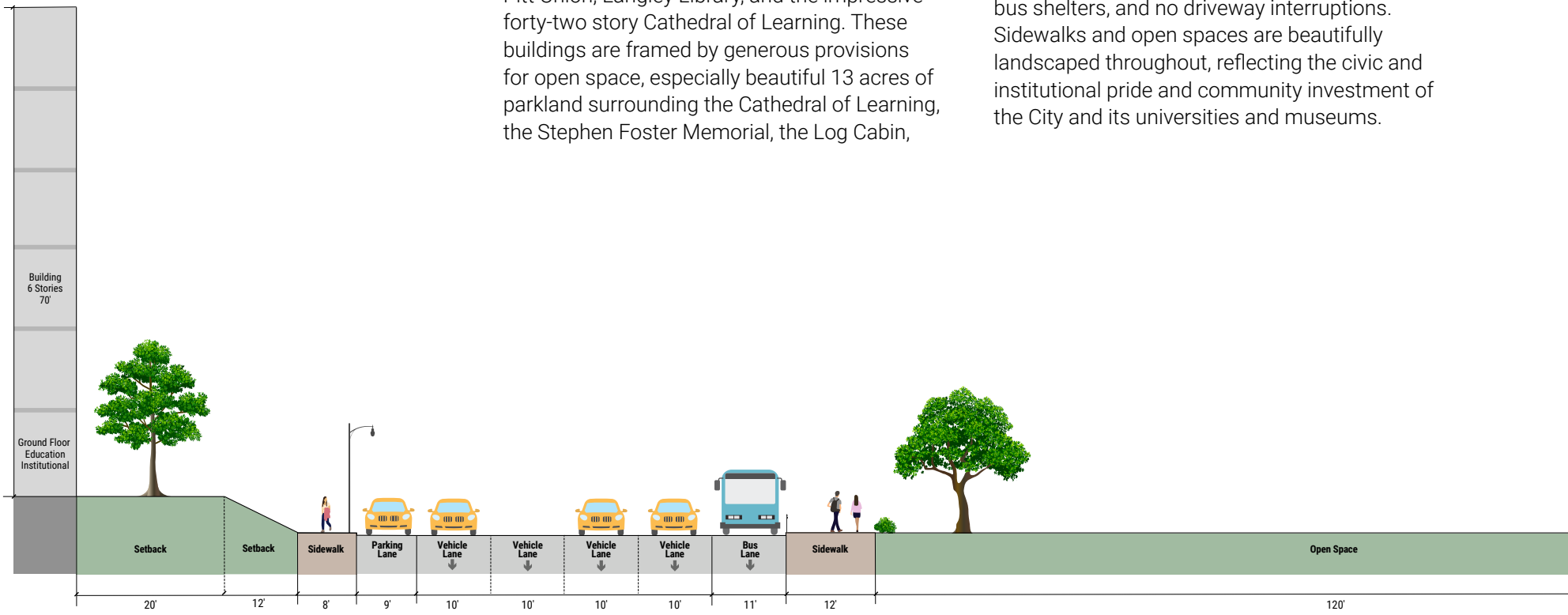
Although relatively separated from the Oakland neighborhood by the I-376 highway, the office park along Technology Drive is connected to the neighborhood by Bates Street via Second Avenue. This connection is primarily vehicular. There is pedestrian access along Bates Street, but sidewalks and crosswalks vary in condition, comfort level, and safety. The sidewalk under the I-376 overpass is particularly dark and daunting. The crosswalk on Second Avenue is signalized with landscaped edges that provide a safe and attractive path across a high traffic volume road into the technology center. There are connections to the regional trail network from the southeastern end of Technology Drive to the Hazelwood Trail and the Three Rivers Trail and Great Allegheny Passage via the Hot Metal Bridge pedestrian ramp.

Civic Destination

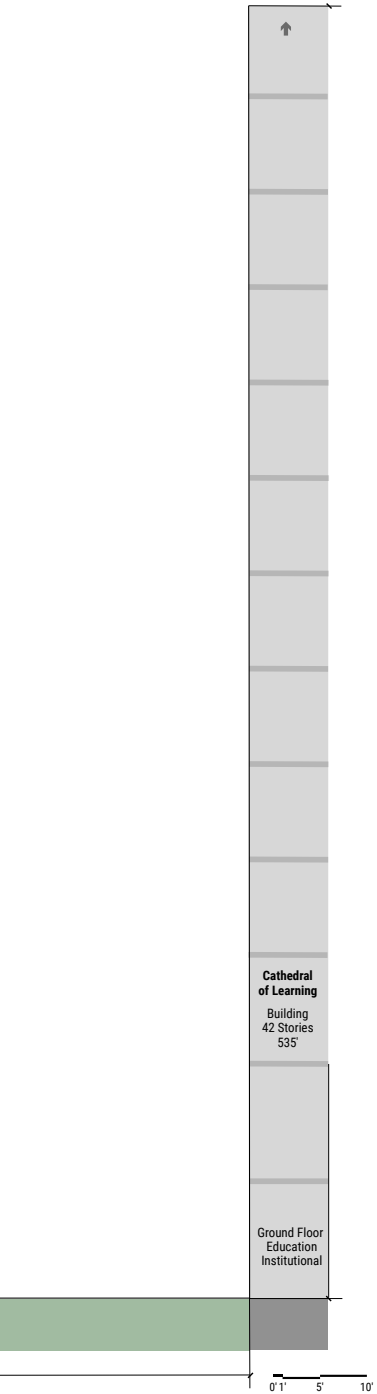
Fifth Ave. between De Soto St. and N Bouquet St., Forbes Ave. between Schenley Dr. and CMU Museum of Art entrance, and Schenley Dr..

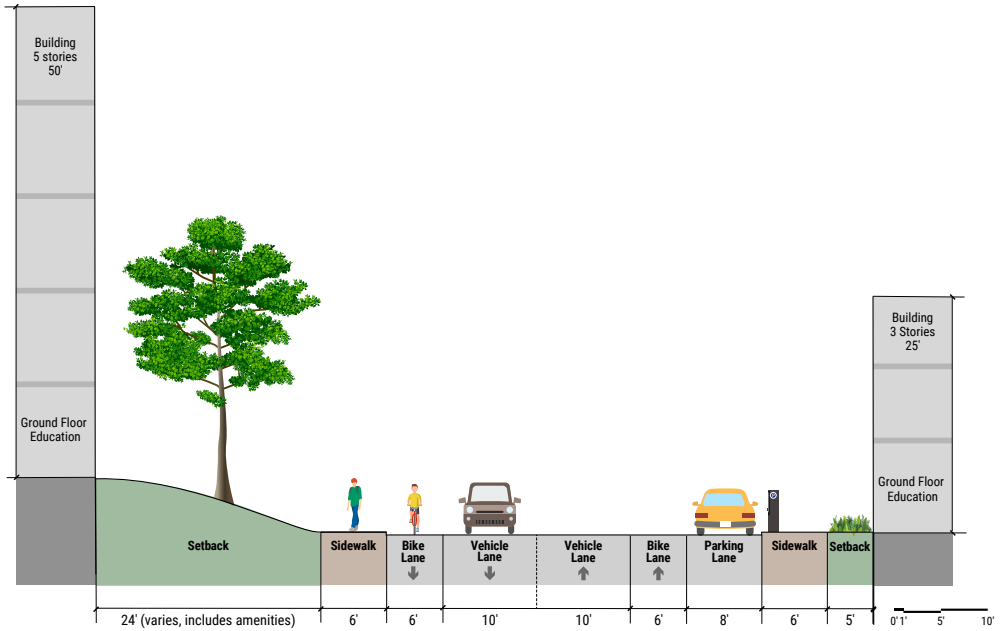
Fifth Avenue is a major transportation and institutional spine through the Oakland neighborhood and represents multiple urban design street typologies, including Autocentric Commercial, Education Campus, Healthcare Campus, Urban Core Mixed Use, and Open Space. The block between University Place and Belfield Avenue epitomizes the Open Space typology with its showcase of expansive public plazas and green spaces surrounded by Pittsburgh's monumental and historic institutional architecture. The iconic structures found here include Soldiers and Sailors Hall, the Pittsburgh Athletic Club, and several University of Pittsburgh buildings, including Alumni Hall, The William Pitt Union, Langley Library, and the impressive forty-two story Cathedral of Learning. These buildings are framed by generous provisions for open space, especially beautiful 13 acres of parkland surrounding the Cathedral of Learning, the Stephen Foster Memorial, the Log Cabin, and Heinz Memorial Chapel. This continues on Schenley Drive across the bridge to Schenley Park.

Despite the vehicular prominence of Fifth Avenue and Schenley Drive as major corridors and gateways, pedestrian accommodation along this typology segment is excellent, with several signalized crosswalks, wide tree-lined sidewalks, bus shelters, and no driveway interruptions. Sidewalks and open spaces are beautifully landscaped throughout, reflecting the civic and institutional pride and community investment of the City and its universities and museums.



Fifth Avenue *(at Cathedral of Learning)*



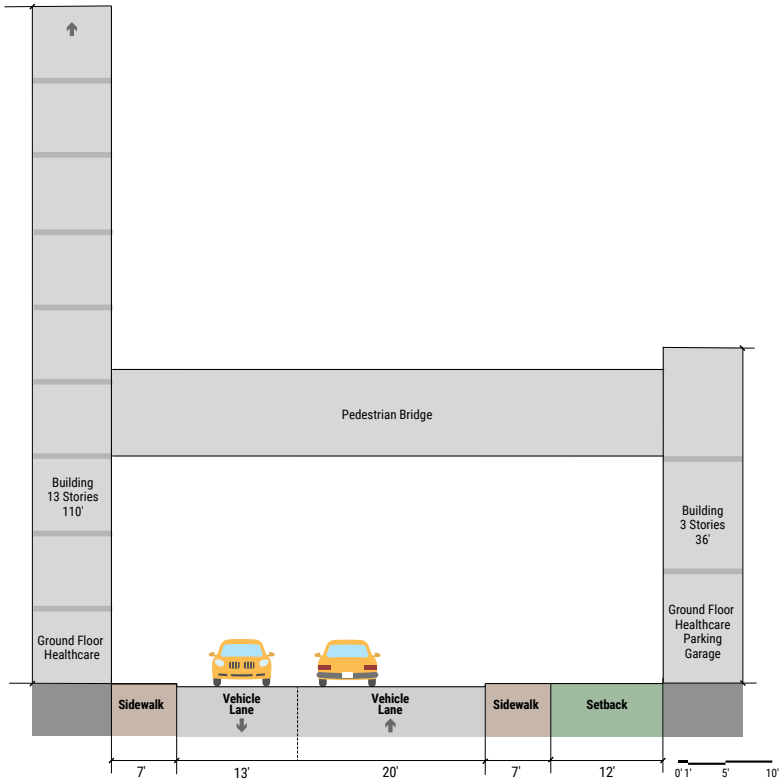


O'Hara Street *(between Thackeray Avenue and University Place)*

Institutional – Pedestrian Amenity

Segments of N Bellefield Ave, S Bellefield Ave, Bayard St, Bigelow Blvd, O'hara St, Ruskin Ave, Tennyson Ave, Lytton Ave, Parkman Ave, University Pl, Thackery Ave, N Bouquet St, S Bouquet St, Roberto Clement Drive, FIfth Ave, and Forbes Ave.

Institutional – Pedestrian Amenity street typology features predominantly low- to mid-rise buildings, large parcels and building footprints, large single use education buildings, frequent garage or parking lot access points, and less frontage transparency than Urban Core Mixed Use areas. Generally, sidewalks are moderate width and are in good condition with street lighting, street trees, and a few driveway disruptions, but overall, walkability is good. Institutional – Pedestrian Amenity streets also include pedestrian-oriented amenities, including plazas, green spaces, and public art.

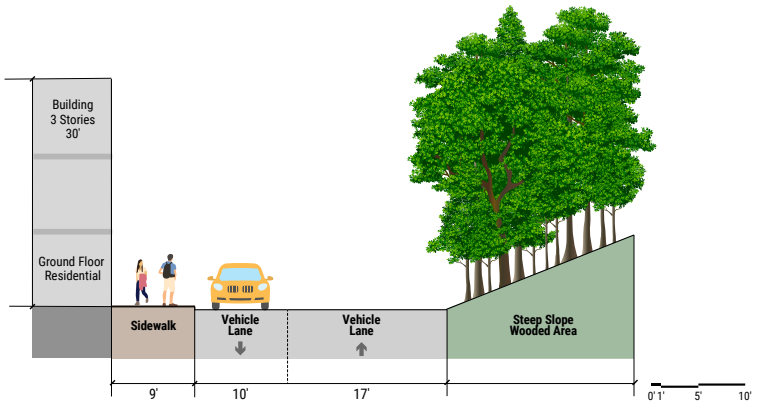


Darragh Street *(between Terrace Street and Victoria Street)*

Institutional – Pedestrian Challenge

Segment of Lothrop St., Darragh St., Terrace St., Halket St., Craft Ave., Fifth Ave. between Chesterfield St. and Darragh St.

Institutional – Pedestrian Amenity street typology features predominantly low- to mid-rise buildings, large parcels and building footprints, large single use education buildings, frequent garage or parking lot access points, and less frontage transparency than Urban Core Mixed Use areas. These corridors frequently include loading, parking access, blank walls, and constrained pedestrian environments.

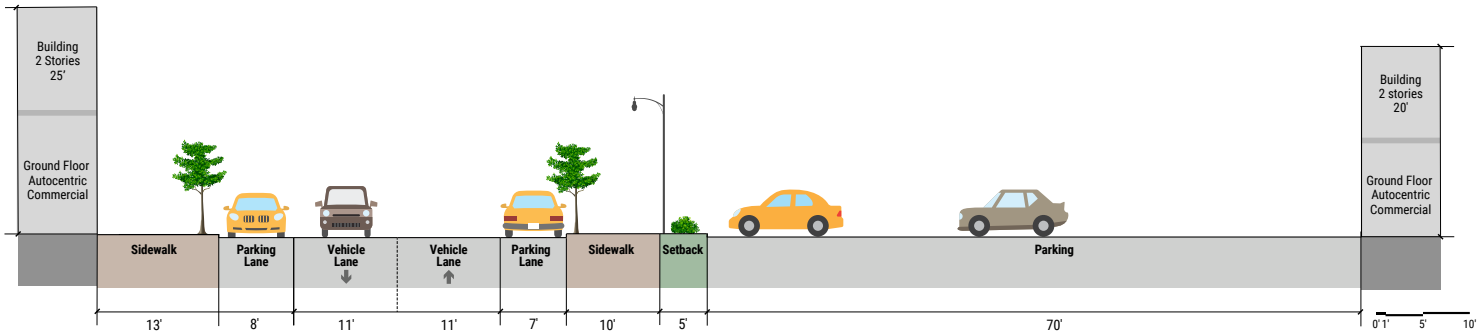


Bates Street *(between Frazier Street and Cato Street)*

Vehicular Corridor with Development Constraints

Segments of Bigelow Blvd., Bloomfield Bridge, Boulevard of the Allies, Fifth Ave. between Breham St. and Boulevard of the Allies, Second Ave., Bates St., and Swinburne St.

These segments represent high-volume roadways through areas with little surrounding development potential. In most cases, this is due to constraints from topography, the highway right-of-way, or park spaces. When not congested, vehicle speeds are high. Pedestrian comfort along these roadways is limited.

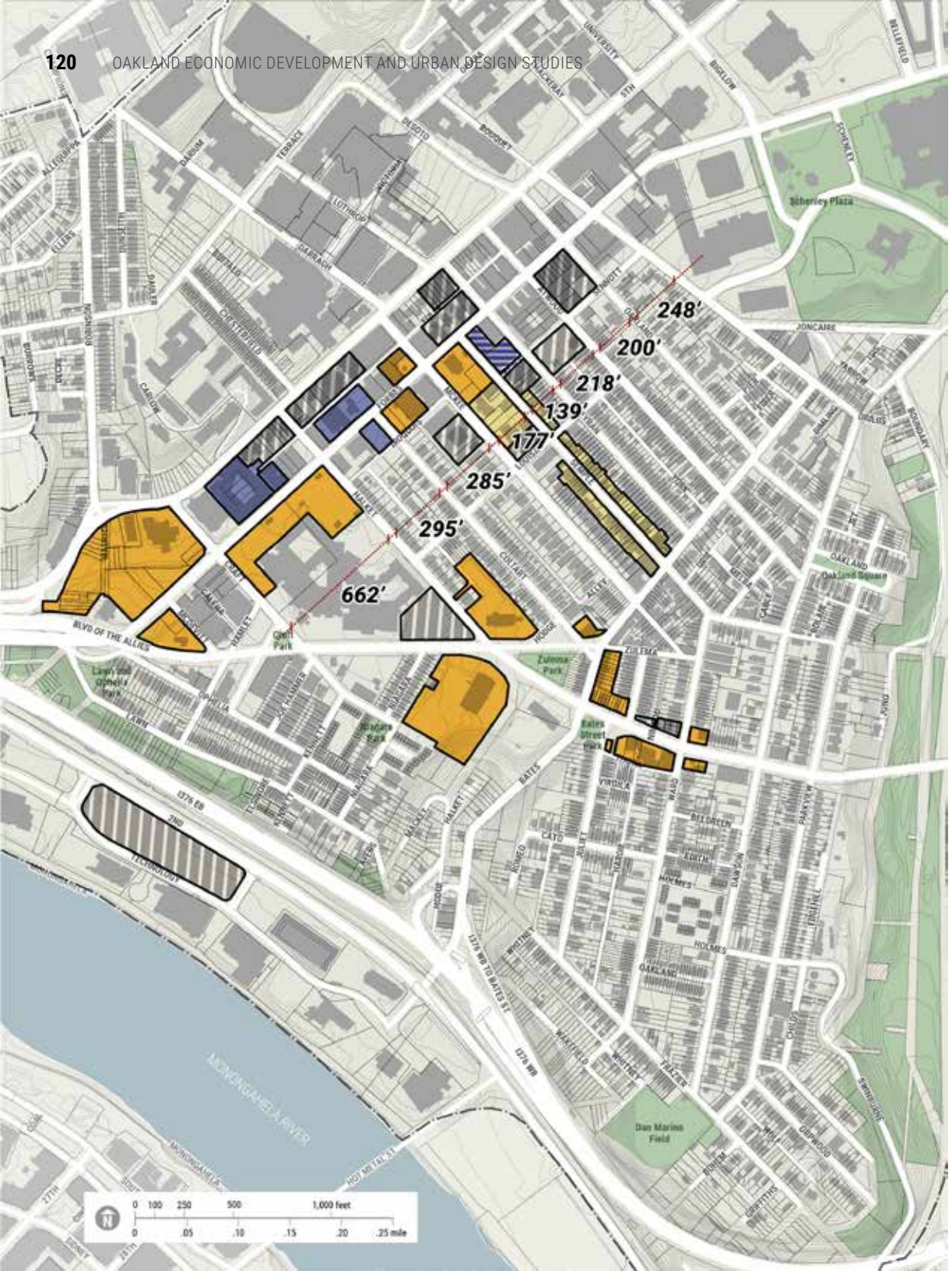


***Melwood Street** (at Baum Boulevard)*

Revitalization/Transitional

Segments of Melwood Ave., Baum Blvd., McKee Pl., Bates St., Forbes Ave. between Boulevard of the Allies and McDevitt Pl., and Fifth Ave. at the gateway to Uptown.

Revitalization/Transitional streets are former industrial areas transitioning to commercial, industrial, and/or residential through adaptive reuse. Buildings are predominantly low-rise and have limited commercial frontage transparency. Sidewalks are typically narrow or in fair to poor condition and there are frequent sidewalk interruptions with surface parking lots and loading areas.



Parcels with Potential for Change

- Oakland 2025 Plan: Recommended Student Housing Redevelopment
- Oakland 2025 Plan: Recomended Mix-Use Redevelopment
- Other apparent underutilized sites (FAR 2 or less)
- Recently Redeveloped
- Known Owner Interest in Redevelopment

Sources: Zoning (2018), City of Pittsburgh; Pittsburgh Boundary (2019), Property Assesment Parcel Data (2019), Rivers (2015), Streets (2017), Allegheny County; The Oakland 2025 MAster Plan (2012), Pfaffmann + Associates, Studio for Spatial Practice.

The Oakland 2025 Plan envisioned catalytic redevelopment on some of Oakland's major corridors, including Forbes Avenue and Boulevard of the Allies. There has been significant redevelopment on the Forbes Avenue corridor since the completion of the Oakland 2025 Plan, including ongoing owner interest in redevelopment. Some of these parcels with potential for change are shown on the opposite page.

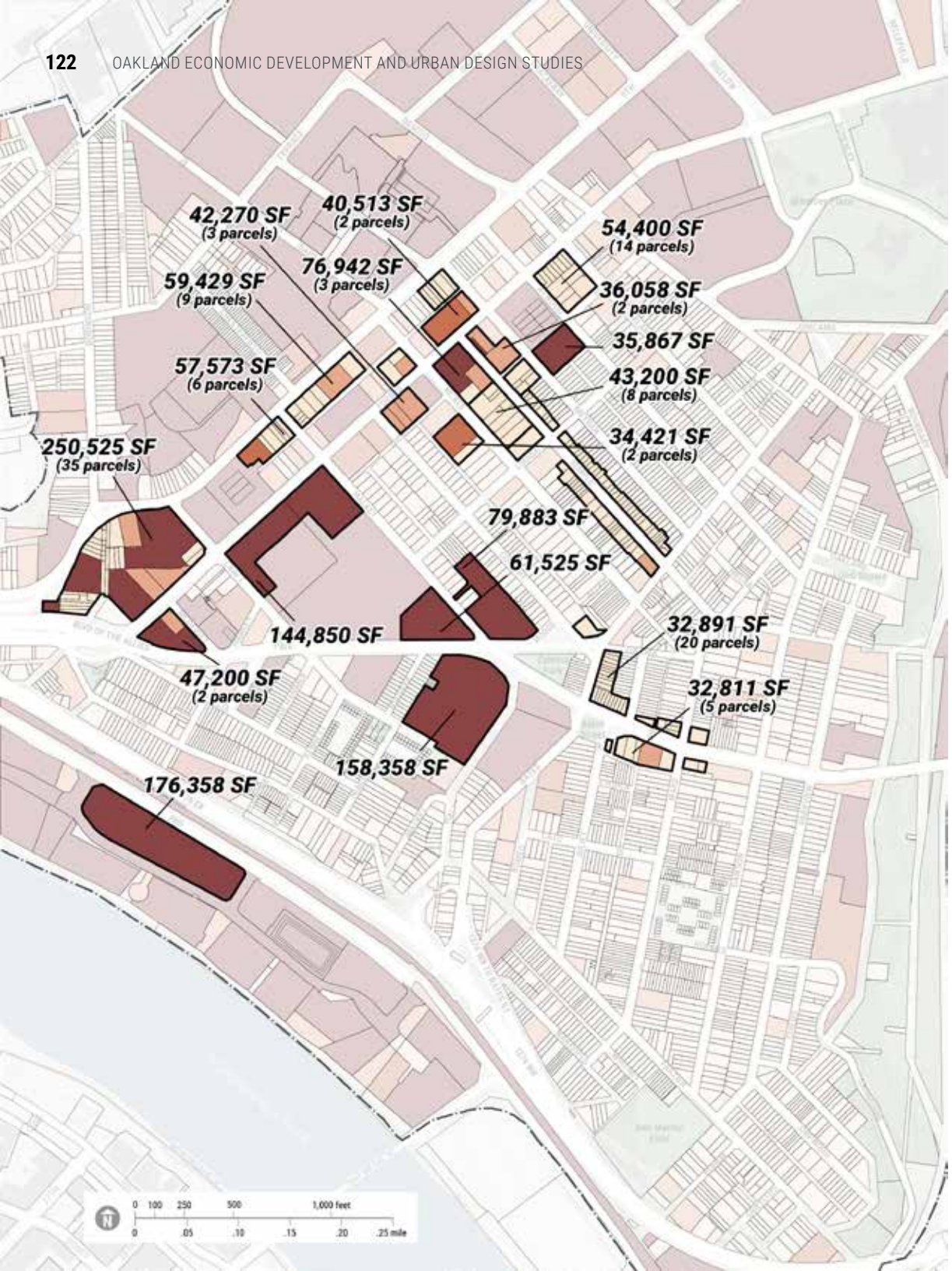
Parcels along Bates Street near Zulema Park

Parcels at the intersection of Zulema and Halket Streets

330 Halket Street

2 McDevitt Place

Forbes Avenue between Halket Street and Craft Avenue



Parcel size greatly affects what type and scale of building can feasibly be built upon it. As shown in this diagram, there are many possibilities for aggregation of smaller parcels to create larger ones. On parcels under 10,000 SF, elevators are usually not cost-effective; thus buildings tend to be walk-up residential or single-story commercial or institutional. Multifamily residential with elevator access is generally feasible on parcels over 10,000 SF. Research and office buildings generally require parcels at least 20,000 SF in area, with 25,000 to 30,000 SF or more sometimes preferred. Ramped parking structures commonly require at least 25,000 SF area.

Parcels with Potential for Change: Site Area

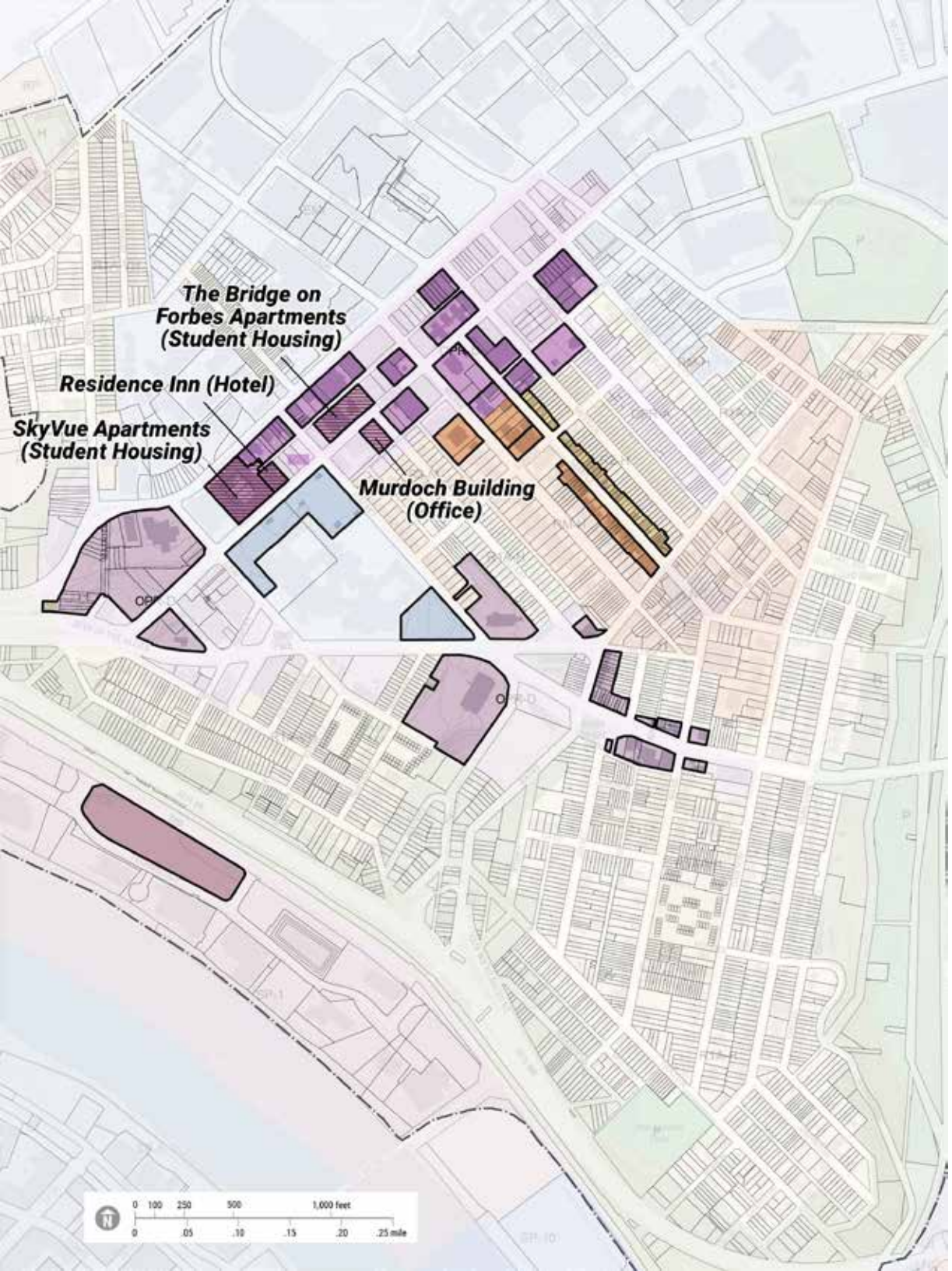
Parcels with Potential for Change

SITE AREA

- < 10,000 SF
- 10,000SF - 19,999 SF
- 20,000 SF - 29,999 SF
- > 30,000 SF

Sources: Zoning (2018), City of Pittsburgh; Pittsburgh Boundary (2019), Property Assessment Parcel Data (2019), Rivers (2015), Streets (2017), Allegheny County; The Oakland 2025 MAster Plan (2012), Pfaffmann + Associates, Studio for Spatial Practice.

Many parcels with potential for change are within one of the Oakland Public Realm zoning districts, which allow for larger-scale development. Four parcels in the Oakland Public Realm District on Forbes Avenue have recently been redeveloped, two as student housing development, one as office, and one as hotel.



Parcels with Potential for Change: Zoning

Parcels with Potential for Change

ZONING

- R1A-H Single-Unit Attached Residential High Density
- R1A-VH Single-Unit Attached Rseidential very High Density
- R2-L Two-Unit Residential Low Density
- R2-H Two-Unit Residential High Density
- R3-M Three-Unit Residential Moderate Density
- RM-H Multi-Unit Residential High Density
- RP Residential Planned Unit Development
- EMI Educational / Medical Institution
- OPR-A Oakland Public Realm District A–Atwood Street
- OPR-C Oakland Public Realm District C–Fifth & Forbes Districts
- OPR-D Oakland Public Realm District D–Boulevard of the Allies
- LNC Local Neighborhood Commercial
- UI Urban Industrial
- SP-1 Pittsburgh Technology Center
- SP-10 Almono
- SP-5 Southside Works
- P Parks and Open Space
- H Hillside

Sources: Zoning (2018), City of Pittsburgh; Pittsburgh Boundary (2019), Rivers (2015), Streets (2017), Allegheny County; The Oakland 2025 MAster Plan (2012), Pfaffmann + Associates, Studio for Spatial Practice.

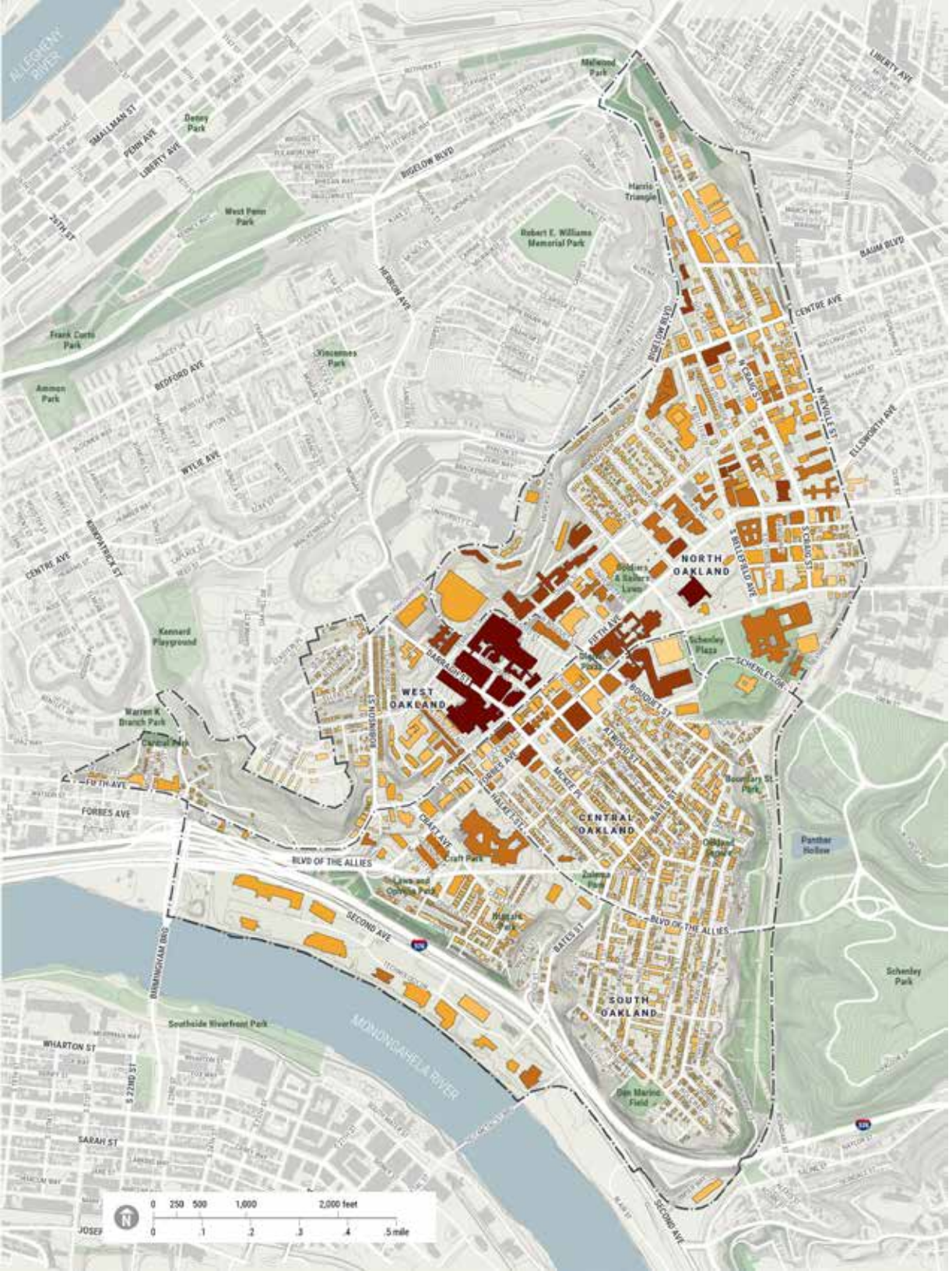
The tallest buildings in Oakland are clustered in the core of the institutional area, the Fifth and Forbes district, and Craig Street.

Even within these corridors, heights currently vary significantly within a single block. Other areas have more uniform building height. The core of UPMC facilities from Fifth Avenue to Terrace Street contains a number of buildings over 200 feet. This area also slopes significantly. Residential areas in West, South, and Central Oakland are largely 2-3 floors of height. The Pittsburgh Technology Center on the riverfront has mid-rise heights from 3-8 floors.

The Cathedral of Learning is the tallest building in Oakland and a major visual landmark. It is surrounded by lower-rise buildings and open lawns. Other areas of concentrated height along the Fifth and Forbes Corridors have a more consistent scale and less open space than the area surrounding the Cathedral of Learning.

Additional height, along with the related measure of additional floor area ratio, has recently been requested as part of new development proposals.

The Oakland Public Realm districts have varying height limits. On Atwood Street, it is 40 feet, in keeping with the neighborhood context. On Craig Street and Boulevard of the Allies, the public realm districts have a maximum height of 60 feet, with 85 feet allowed by special exception. The Fifth and Forbes District has a maximum height of 85 feet, with 120 feet allowed by special exception if the property has frontage on Fifth Avenue. In all instances, additional height is only granted if it does not create detrimental impacts on residential properties.



Building Height

- < 15 ft (1 floor)
- 16 ft–29 ft (2–3 floors)
- 30 ft–49 ft (3–5 floors)
- 50 ft–79 ft (5–8 floors)
- 80 ft–119 ft (8–12 floors)
- 120 ft–199 ft (12–20 floors)
- > 200 ft (> 20 floors)

Sources: hotels.com, Hotel Interview

The residential fabric of Oakland's historic neighborhoods remain largely intact.

The city has established three local historic districts in Oakland: Schenley Farms, Oakland Civic Center, and Oakland Square.

The Oakland Civic District encompasses an area of landmark civic, educational, and cultural buildings constructed as part of the City Beautiful movement. Many structures have become part of the University of Pittsburgh campus and adaptively reused.

The Schenley Farms Historic District was constructed as a planned residential development near the civic and cultural institutions of Oakland. Most of the structures in the Schenley Farms District (local) were built between 1900-1939 across a variety of architectural styles. The area was planned with a consistent vision for shade trees, ornamental street lights, and sidewalks. The combined Schenley Farms-Oakland Civic District is a National Register Historic District, shown in blue on the map, that largely covers the same area as the combined two local historic districts and recognizes their significance to the City Beautiful style.

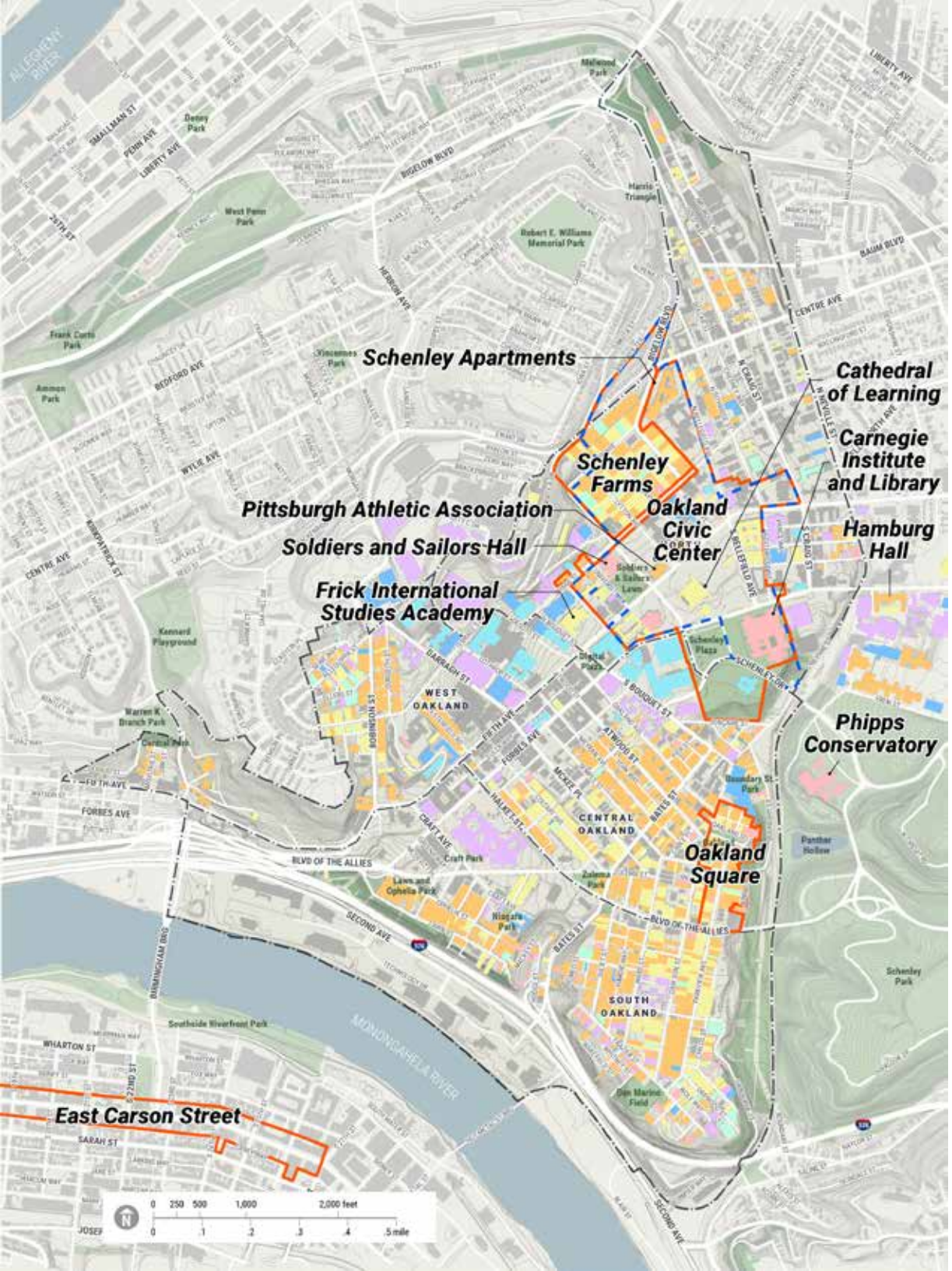
The Oakland Square Historic District encompasses historic residential properties in Central Oakland. While the Assessor data indicates that most buildings were constructed between 1900 to 1910, the City's nomination cites that the original structures were built 1889 to 1896. Oakland Square is located off Dawson Street, with houses fronting a central public green. Parkview Avenue parallels Dawson Street and includes a central median planted with trees as a notable feature.

Beyond these designated areas, there are significant sections of intact historic residential buildings in West Oakland along Robinson and Dunseith Street; in South Oakland between Lawn and Ophelia Streets; and in Central Oakland. The Oakland 2025 Plan identified these areas for continued investment in housing rehabilitation. The PreservePGH Plan recommended expanding Oakland Square to include historic properties along Dawson Street from Oakland Avenue to Semple Street. In addition to this expansion, the Oakland 2025 Plan recommended designating early 20th century apartment buildings with deep setbacks on McKee Place, early 20th century apartment buildings on Bellefield, and post-World War II buildings on Neville Street as potential historic districts.

As a cultural center, Oakland's landmark public destinations were built to embody the City Beautiful movement.

There are six nationally registered historic places in Oakland; of these sites, all but one are still used for their original civic and educational purposes. Schenley High School has been adapted into multi-family housing, and the Pittsburgh Athletic Association is currently undergoing renovations to incorporate office and dining uses in addition to continued recreation space.

- Carnegie Institute and Library
- Cathedral of Learning
- Henry Clay Frick Training School for Teachers (Currently hosts Pittsburgh Science and Technology Academy)
- Phipps Conservatory
- Pittsburgh Athletic Association*
- Schenley High School *(Now Schenley Apartments)



Historic Districts and Sites and Building Age Throughout Oakalnd

Pittsburgh Historic Districts

National Historic District

YEAR BUILT

- Before 1900
- 1900–1919
- 1920–1939
- 1940–1959
- 1960–1979
- 1980–Present
- No Data

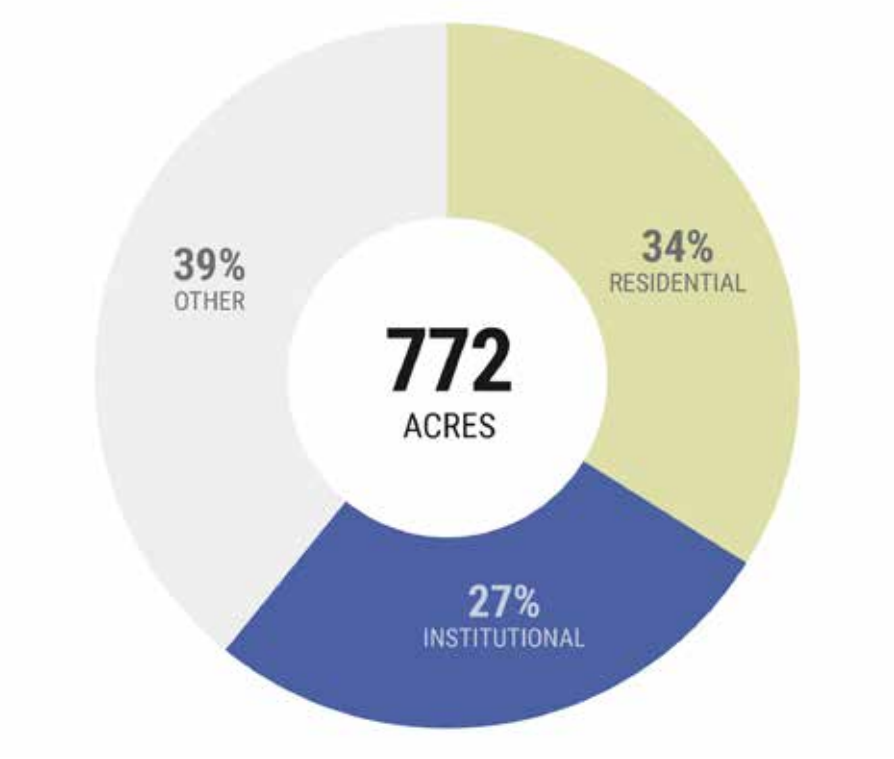
Sources: Historic Districts (2017), Historic Sites (2018), City of Pittsburgh; Parcels (2019), Allegheny County.

The largest land use in Oakland is residential, which occupies over 1/3 of the land area.

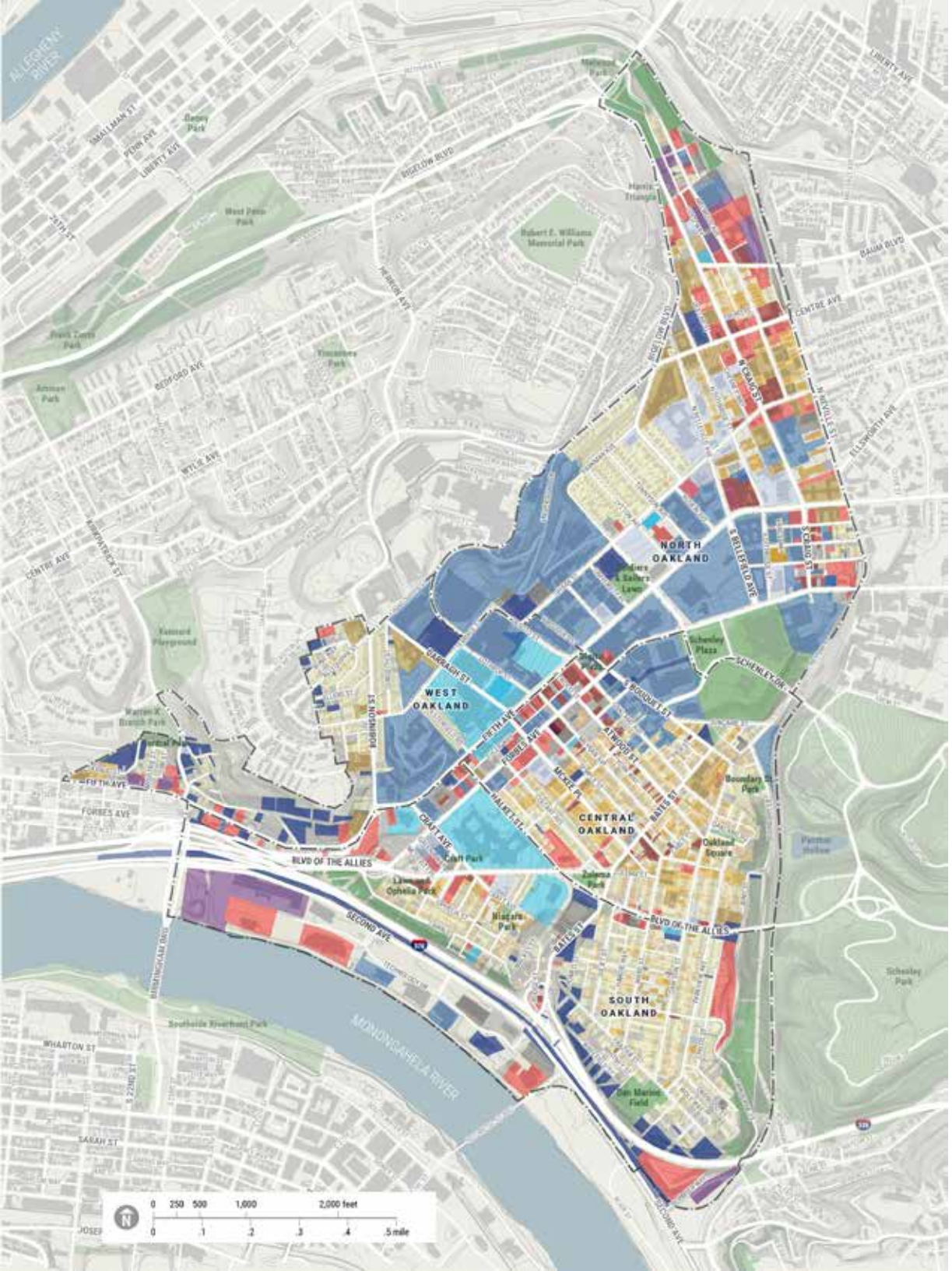
Altogether, 34% of the total parcel area in Oakland is used for residential purposes. Apart from right-of-way, there are 772 acres of parcels in Oakland with a land use. The largest use of land in Oakland as measured by lot area is for residential purposes. This calculation excludes student dorms but includes student multifamily housing projects, by including multifamily housing that is classified for tax purposes as commercial. By this method, approximately 30% of Oakland's land area apart from right-of-way is devoted to residential uses. Adding in land owned by the public housing authority and HUD uses, that are classified as government uses but ultimately developed for residential purposes, increases acreage with a residential use by a further 38 acres for a total of 34% of land area.

The second highest land use is institutional uses, including government, academic, museums, and hospitals. Institutional uses account for 27% of the land area in Oakland.

Top Land Uses in Oakland



Source: Land Use (2018), City of Pittsburgh



Land Use

- Single Family
- Multi-family (2-4)
- Multi-family (5-19)
- Multi-family (20+)
- Commercial
- Mixed Use Commercial
- Public Park
- Government
- Education
- Medical
- Other Institution
- Industrial
- Utility / Parking
- Vacant

Sources: Land Use (2018), City of Pittsburgh; Pittsburgh Boundary (2019), Rivers (2015), Streets (2017), Allegheny County.

Existing zoning includes large areas of residential and educational/medical institutional. Only 100 acres are zoned for the highest-density, mixed-use development of the public realm districts.

Together, the 197 acres zoned for small-scale residential uses are essentially equal to the area of Educational/Medical Institutional (EMI) zoning within the boundaries of Oakland. Approximately 180 acres of the land in Oakland is zoned for single-family residential uses of varying lot sizes in three districts, R1D-VL, R1A-H, and R1A-VH. An additional 17 acres are zoned for two- and three-family uses in the R2-H or R3-m district.

A further 111 acres are zoned for multi-family housing development of increasing density through the RM-M, RM-H, and RM-VH districts in Central and North Oakland. This multi-family district does not have the same requirements for building form as the neighboring public realm districts and Baum-Centre Overlay. The Local Neighborhood Commercial, or LNC, districts in Central and West Oakland, and just outside the boundaries of North Oakland, provide for a rich diversity of small-scale neighborhood-serving commercial uses, such as retail, dining, and other services.

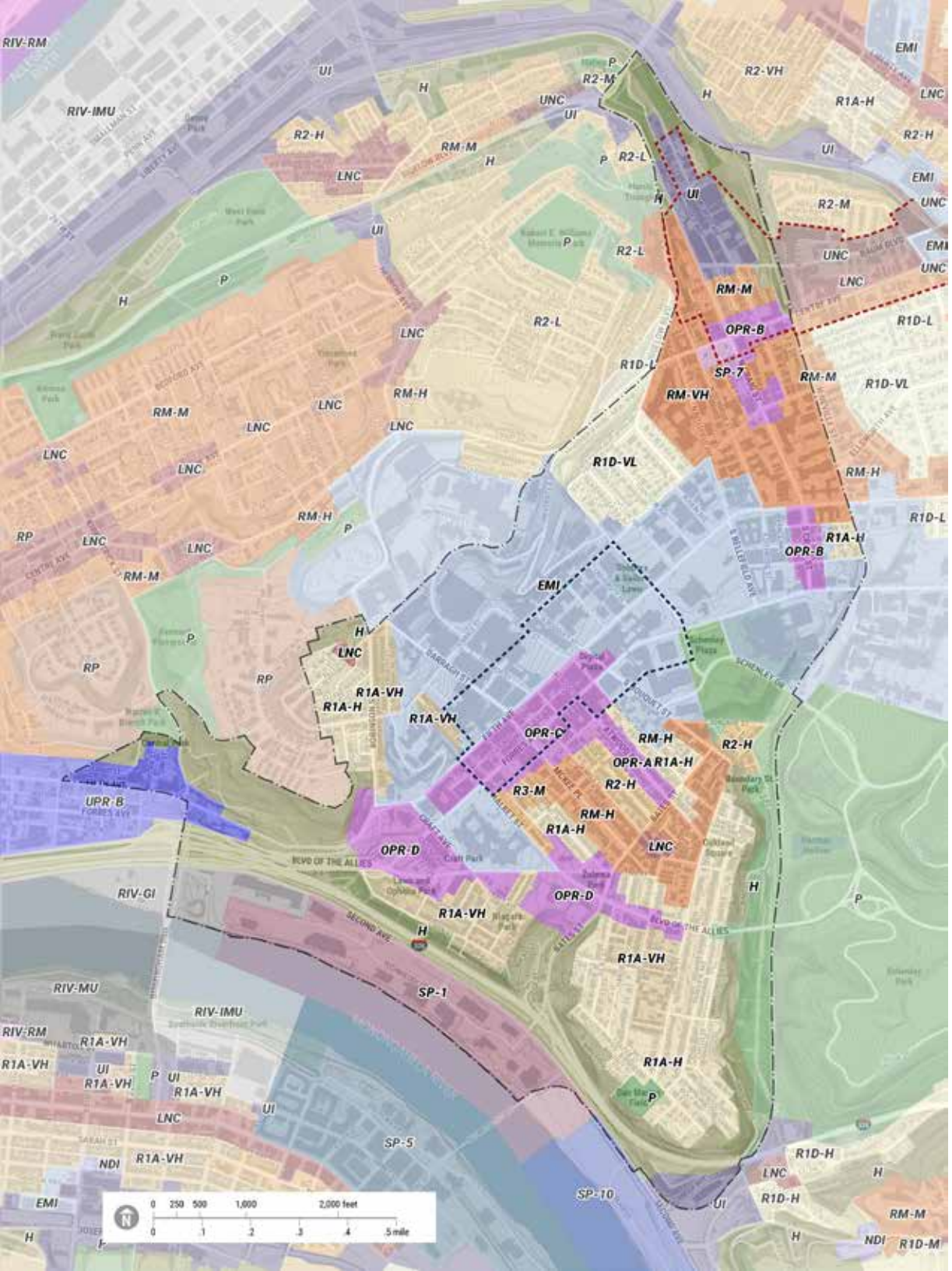
There are four different Oakland Public Realm Districts. This zoning district allows for higher-density mixed-use development in areas of strategic importance. They are envisioned to capture the majority of significant development in Oakland. These areas are located on key corridors on Atwood Street, Boulevard of the Allies, Fifth and Forbes Avenue, and Craig Street. Together, they total 100 acres. The public realm districts are located in places where it is important that private development have a supportive relationship with the adjoining public realm of sidewalks, streets, and green spaces. The district includes site development standards for residential compatibility, environmental performance, and contextual building heights and setbacks. Notably, the Craig Street District does not include the entire Craig Street corridor and has two non-continugous areas.

There are two special districts that set out additional regulatory standards for larger development areas. Educational/Medical Institutional, or EMI, are areas where development is regulated by Institutional Master Plans (IMPs). In Oakland there are IMPs for the UPMC Hospitals, University of Pittsburgh, Carnegie Mellon University, and Carlow University. The Special Permit area for the Pittsburgh Technology Center is a specially planned district, befitting its riverfront location and legacy as a redevelopment site. There is also a special permit area at the corner of Craig Street and Centre Street.

The Urban Industrial, or UI, district in North Oakland is a flexible district allowing a mix of uses including manufacturing, office, and residential uses.

There are two districts in Oakland that do not allow for development to protect open space and parks. The Hillside, or H, district is a special district for areas that are not suitable for intensive development because of the presence of environmental or scenic resources and because of the difficulty of providing essential public facilities and services. In Oakland, this district is present on the steep slopes surrounding the neighborhood. The Parks, or P, district supports a system of passive and active recreational uses in dedicated park areas. In Oakland this district covers the Schenley Park system and Frazier Park.

There are also two overlays in Oakland: the parking reduction overlay and Baum-Centre Overlay. The Baum-Centre Overlay provides criteria that development is evaluated against, including addressing compatibility with residential uses, continuing commercial retail corridors, prioritizing safe pedestrian circulation and attractive parking, preserving historic structures, and supporting open space and architectural quality among other goals. The parking reduction overlay provides a 50% reduction in the parking required for non-residential uses in the corridor bound by Halkett Street, O'Hara Street, Bigelow Boulevard, and Sennott Street/Iroquois Way.



Zoning Districts

- Parking Reduction Zoning
- Baum/Centre Overlay

PRESENT IN OAKLAND

R1D-VL	Single-Unit Detached Residential Very Low Density
R1A-H	Single-Unit Attached Residential High Density
R1A-VH	Single-Unit Attached Rseidential Very High Density
R2-H	Two-Unit Residential High Density
R3-M	Three-Unit Residential Moderate Density
RM-M	Multi-Unit Residential Moderate Density
RM-H	Multi-Unit Residential High Density
RM-VH	Multi-Unit Residential Very High Density
EMI	Educational / Medical Institution
OPR-A	Oakland Public Realm District A—Atwood Street
OPR-B	Oakland Public Realm District B—Craig Street
OPR-C	Oakland Public Realm District C—Fifth & Forbes District
OPR-D	Oakland Public Realm District D—Boulevard of the Allies
LNC	Local Neighborhood Commercial
UI	Urban Industrial
SP-1	Pittsburgh Technology Center
SP-7	Oakland Area Planned Development District
P	Parks and Open Space
H	Hillside

PRESENT IN SURROUNDINIG AREAS

R1D-L	Single-Unit Detached Residential Low Density
R2-L	Two-Unit Residential Low Density
R2-M	Two-Unit Residential Moderate Density
R2-VH	Two-Unit Residential Very High Density
RP	Residential Planned Unit Development
UPR-B	Uptown Public Realm District
UNC	Urban Neighborhood Commercial
NDI	Neighborhood Industrial
RIV-GI	Riverfront General Industrial
RIV-IMU	Riverfront Industrial Mixed Use
RIV-MU	Riverfront Mixed Use
SP-10	Almono
SP-5	Southside Works

Sources: Zoning (2018), City of Pittsburgh; Pittsburgh Boundary (2019), Rivers (2015), Streets (2017), Allegheny County.

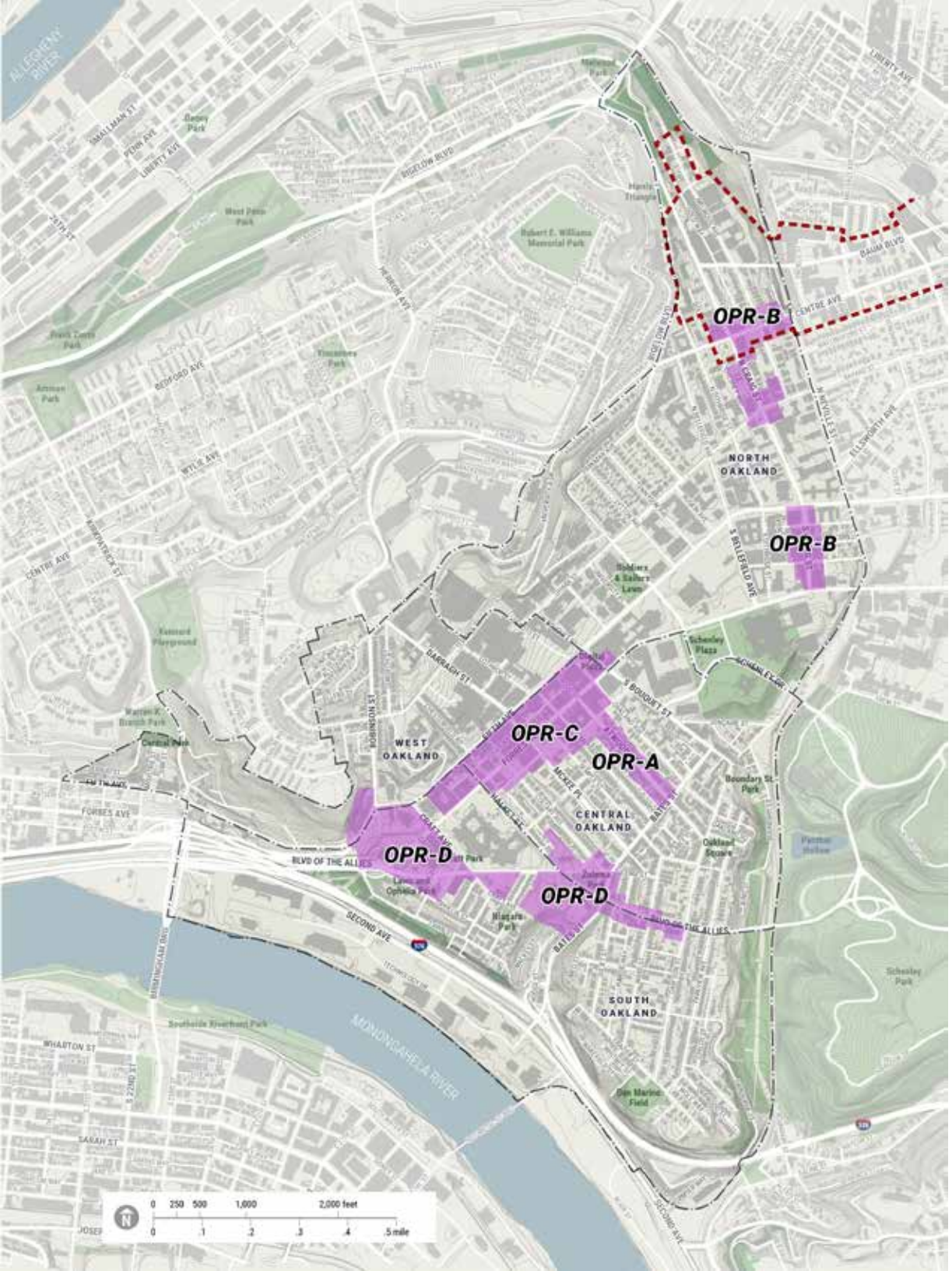
Oakland's higher-density mixed use zoning districts include urban design standards for development.

The public realm districts include a number of urban design standards, administered through the Project Development Plan. While they vary by sub-district in requirement, they include:

- Accessory surface parking is not allowed without a demonstration of alternatives and why they are not suitable for the site and project. Parking as a principal use of a property is only allowed to be provided in structures in the district; it cannot be provided as a surface lot.
- New construction must build-to the existing setback line of the surrounding buildings and neighborhood context. This line varies by each public realm subdistrict and area within it.
- Transparency is prioritized for ground floor uses. Transparent horizontal facades at pedestrian height are required along sidewalks or other public ways.
- Prominent and highly visible entrances are required on the building facade on the primary street of the public realm area – such as Craig Street, Forbes or Fifth Avenues, Boulevard of the Allies, or others as determined by the location of a property.

The Baum/Centre Overlay area also includes general design standards addressing planning goals. These standards are listed on page 130.

New development in the public realm districts such as these recent projects on Forbes Avenue must be constructed to meet urban design standards to match the setback line of the surrounding context, prioritize transparency on the ground floor, and include highly visible entrances.



Zoning District with Additional Urban Design Standards

- Baum/Centre Overlay

- OPR-A Oakland Public Realm District A—Atwood Street
- OPR-B Oakland Public Realm District B—Craig Street
- OPR-C Oakland Public Realm District C—Fifth & Forbes District
- OPR-D Oakland Public Realm District D—Boulevard of the Allies

Sources: Zoning (2018), City of Pittsburgh; Pittsburgh Boundary (2019), Rivers (2015), Streets (2017), Allegheny County.

Oakland's Institutional Master Plans detail future development sites, governing principles, and urban design and sustainability standards.

Institutional Master Plans provide a framework for development, open space, and circulation enhancements of institutions, such as hospitals and universities, which control large areas of land and are major employers within the City. All institutions located in Education Medical Institutional zoning districts are required to have a current Institutional Master Plan.

The purpose of the Institutional Master Plans is to provide a level of understanding to the community about planned growth and potential impacts on surrounding neighborhoods. The Institutional Master Plans also allow institutions the flexibility to plan and develop standards for building height, building density, parking, public open space, and transportation improvements to mitigate neighborhood impacts and also, in some cases, improve neighborhood conditions.

These Institutional Master Plans govern areas within Oakland:

- UPMC Presbyterian and Montefiore Hospitals (Oakland) Project Area Master Plan (2014)
- Magee-Womens Hospital of UPMC Project Area Master Plan (2011)
- Carnegie Mellon University Institutional Master Plan (2012–2015 Amended, 2019 update in progress)
- University of Pittsburgh Institutional Master Plan (2019)
- Carlow University Institutional Master Plan (2017)

The Institutional Master Plan Map includes an overall view of the locations of proposed expansion development projects for each of the five institutions with IMPs in the Oakland neighborhood.

UPMC Presbyterian and Montefiore Hospitals (Oakland) Project Area Master Plan (2014)

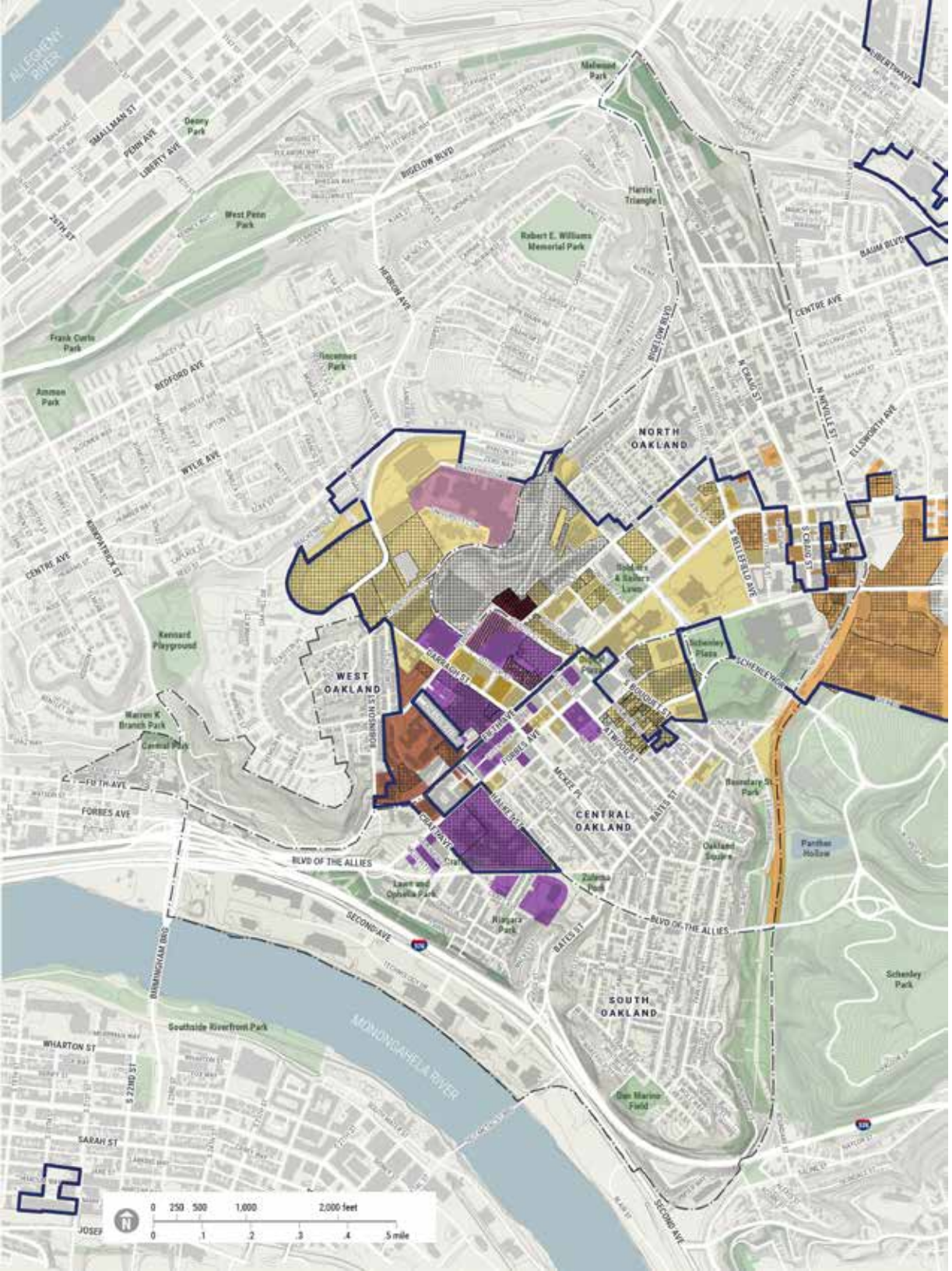
UPMC Presbyterian and Montefiore Hospitals (Oakland) is an adult medical-surgical referral hospital group and a site of ongoing research and graduate programs in conjunction with the University of Pittsburgh School of Medicine. UPMC Oakland provides a full range of health care services, including inpatient, outpatient, and emergency care, as well as highly specialized diagnostic and treatment procedures. The UPMC Oakland plan focuses on three primary hospitals: Montefiore University Hospital (MUH), Presbyterian University Hospital (PUH), and Western Psychiatric Institute and Clinic (WPIC).

Institutional Needs

- Re-alignment and renewal of the hospitals
- PUH patient care units and surgery are in need of new facilities. The needs are met by constructing a new facility that incorporates new patient care units and base floors
- As a result of inpatient consolidation at PUH, MUH would be transformed over time to primarily outpatient functions
- Maximize parking capacity – current parking deck will be expanded vertically, will allow for a better distribution of patient and required staff/physician parking

UPMC Oakland Development Projects

Development Project	Size (SF)	Type	Uses
10 Year Envelope			
PUH Facilities Expansion	900,000	Addition	Inpatient/outpatient care, diagnostic, parking garage
25 Year Envelope			
MUH Parking Garage Expansion	140,000	Addition	Parking garage
WPIC Addition	200,000	Addition	Patient Care Units
Kaufman Parking Garage Addition	200,000	Addition	Parking Garage



Educational and Medical Institutions

- EMI - Educational / Medical Institution
- Proposed Development

INSTITUTIONAL OWNERSHIP

- Carlow University
- Carnegie Mellon University
- Commonwealth of Pennsylvania (Lease/Maintain by UPMC)
- University of Pittsburgh
- University of Pittsburgh (Lease by UPMC Oakland)
- UPMC Magee and Oakland
- VA Medical Center

Sources: Parks (2017), City of Pittsburgh; Pittsburgh Boundary (2019), Private and Public Schools (2018), Rivers (2015), Streets (2017), Allegheny County. Parcels owned by each university from Carnegie Mellon University, Carlow University, Magee-Women's Hospital of UPMC, University of Pittsburgh, and UPMC Oakland

- Transportation Improvements: modify traffic signal at Fifth and Atwood to include new entry drive to UPMC Presbyterian Garage; Provide traffic calming measures (bike racks, enhanced pedestrian crossings, bump-outs, street trees); add structured parking as part of the PUH facilities expansion; expand Kaufman Garagein 25-year plan.
- Open Space and Pedestrian Improvements: new landscaping at Fifth and DeSoto intersection; new bus stop, new walkways, landscaping, and a shelter planned for Fifth Ave; remove street parking spaces on Lothrop, replace with bump outs and add bike racks, benches, trees and other site amenities

Magee-Womens Hospital of UPMC Project Area Master Plan (2011)

Magee-Womens Hospital of UPMC is a National Center of Excellence in Women's Health, providing women's health care, neonatal care, and research and comprehensive medical surgical care. The Neonatal Intensive Care Unit (NICU) is the largest in Pennsylvania. Magee serves as the teaching facility for obstetrics, gynecology, gynecologic oncology, and neonatology for the University of Pittsburgh.

Institutional Needs

- Meet growing needs for services
- Support technology advances to provide services in a comfortable environment for patients and staff

- Transportation Improvements: optimize traffic signal timings at Forbes and Craft; Forbes and Halket; Blvd. of the Allies and Craft; Blvd. of the Allies and Halket; expand existing Forbes/ Halket parking garage to increase parking supply
- Open Space and Pedestrian Improvements: Install pedestrian signal count down equipment, pedestrian audible crossing equipment, and ADA-compliant ramps at Blvd of the Allies and Halket Street/Zulema/ Isaly's Driveway; post signage at pedestrian access doors to Lot 3 and Zone 3 Lot indicating "No Mid-Block Crossing" with arrows directing pedestrians to appropriate signalized crossing locations

UPMC Magee Development Projects

Development Project	Size (SF)	Type	Uses
10 Year Envelope			
800 Wing Vertical Expansion	41,500	Expansion	Acute care and critical care areas
25 Year Envelope			
Parking Garage Expansion	95,240	Addition	Parking garage
New Ambulatory Care Facility	320,000	New Construction	Medical building and parking garage
East Wing Addition	120,000	Addition	Medical building

Carnegie Mellon University Institutional Master Plan (2012–2015 Amended)

Carnegie Mellon University is a global research university with more than 12,000 students, 84,000 alumni, and 4,000 faculty and staff. Carnegie Mellon University consists of seven schools and colleges: Carnegie Institute of Technology (College of Engineering), College of Fine Arts, Dietrich College of Humanities and Social Sciences, Heinz College, Mellon College of Science, School of Computer Science and the Tepper School of Business. The Carnegie Mellon University Institutional Master Plan is currently in the process of being updated. Current draft information is provided where available.

Institutional Needs

- Develop all-purpose, high-tech classrooms and interdisciplinary spaces
- Create additional academic and research space in engineering, arts and professional programs
- Improve and expand athletic, fitness and recreational facilities
- Optimize the potential of development sites, including the Morewood lot, recent acquisitions along Forbes Avenue, and the tennis courts
- Improve pedestrian safety on Forbes Avenue and improve bicycle facilities throughout campus
- Enhance campus open spaces, especially at Forbes and Morewood Avenues, to create identity and a sense of arrival
- Pedestrian Safety Improvements: Pedestrian safety improvements on Forbes including wider sidewalks and street trees; New Forbes pedestrian crossings to North Quad; Urban design improvements on S Craig; Safety improvements on Neville including sidewalks, trail extension and transit; Enforcement of traffic regulations
- Traffic Calming Recommendations: Traffic calming on Forbes and Fifth Ave; Bicycle connections to and through campus; Intersection reconstruction on Fifth Ave
- Parking Recommendations: Parking management and enforcement; New structured parking resources at North Quad and in Forbes & Craig area; New parking meters on Margaret Morrison; Wayfinding and signage for campus parking; Support for public transportation

Carnegie Mellon Open Space and Pedestrian Improvements

- Town Square: Redevelop to create a clear front door to the campus; Take advantage of the strength of the space (i.e. Walking to the Sky Sculpture & the Cut); Establish future connections to new growth areas, especially the North Campus
- Tepper Quad & North Green: New Tepper Quad will be the defining green center of the redevelopment of the Morewood parking lot; New quad will connect to the open space in front of the Hillman Center and will also connect to Forbes and Morewood Avenues; Future North Green will extend from the Tepper Quad towards Fifth Ave creating pedestrian connections to properties on Fifth Ave
- Cross-Hollow Connections: Three new pedestrian crossings across Junction Hollow; One north of Forbes Avenue, connecting the North Campus to the Campus Neighborhood; Two south of Forbes, completing the cross-campus pedestrian spine, the East-West Walkway
- Wayfinding: Improving signage throughout Oakland; Improving the legibility of gateways; Integrating digital technology into transportation and pedestrian navigational systems.

Carnegie Mellon Development Projects

	Size (SF)	Type	Uses
10 Year Envelope			
Historic Core			
Scaife Replacement Engineering Building	120,000	New Construction	Academic, research, office, retail/restaurant
Addition to Wean Hall	10,000	Addition	Classroom
Addition to Porter Hall	50,000	Addition	Academic, research, office
New Academic Building	125,000	New Construction	Academic, office
Below-Grade Academic Facility	40,000	New Construction	Below grade academic, performance under tennis courts
Margaret Morrison Extension	110,000	Addition	Academic, research, office, performance, shops
East Campus			
Skibo Gym Improvements	200,000	Addition	Gymnasium
Cohon University Center Addition	75,000	Addition	Fitness facility
West Wing Addition	NA	NA	NA
West Campus			
South of Forbes Development Site (Under Construction)	425,000	New Construction	Academic, research, office, hotel, retail, residential, parking garage
FMS Building Expansion	100,000	Addition	Academic, research
Warner Hall & Loggia Expansion	70,000	Addition	Academic, admin., dining, student support
Below Ground Purnell Expansion	100,000	Addition	Below grade academic, performance
Morewood			
Capstone Building	200,000	New Construction	Administrative, research, parking garage

Carnegie Mellon Development Projects

	Size (SF)	Type	Uses
Relocation of Greek House	25,000	New Construction	Residential
Garage Relocations	10,000	New Construction	Relocation of 20 garages
Doherty Apartments Site	120,000	New Construction	Residential, academic, research, parking
Morewood Gardens Addition	80,000	Addition	Residential, academic, student use, dining
Forbes/Beeler	120,000	New Construction	Residential, academic, research, parking
North Campus			
North of Forbes Development	385,000	New Construction	Office, research, hotel, academic, retail, residential, parking garage
Tepper School of Business	400,000	New Construction	Academic, research, parking garage
New Academic Building/Parking Structure	180,000	New Construction	Academic, research, parking garage
New Academic Building	200,000	New Construction	Academic, research, residential, administrative, parking
New Academic Building	200,000	New Construction	Academic, research, residential, athletics, parking
Campus Neighborhood			
S Neville Support Building & Parking (Under Construction)	50,000	New Construction	University support and parking
Mellon Institute Entry & Infill	30,000	Addition	New entry pavilion

Carnegie Mellon Development Projects

	Size (SF)	Type	Uses
Residence of Fifth	70,000	Renovation	Existing building - Residential office, administrative, dining, parking garage
North of Fifth Multi-Use Renovation	25,000	Renovation	Existing building - Academic, research, residential, conference e, administrative, childcare, parking garage
Fifth/Clyde Residence	120,000	New Construction	Academic, research, residential, conference, administrative, parking garage
25 Year Envelope			
Donner House/Donner Dell	TBD	TBD	TBD
Margaret Morrison St. Housing	TBD	TBD	TBD
Northwest Cut Site	TBD	TBD	TBD
Greek Quad Housing	TBD	TBD	TBD
Morewood Garden Housing Site	TBD	TBD	TBD
Winthrop/Filmore Infill Sites	TBD	TBD	TBD

University of Pittsburgh Institutional Master Plan (2019; Draft for Approval)

The University of Pittsburgh (Pitt) is a premier urban research university located in the heart of the Oakland's booming tech and innovation cluster. Pitt consists of 16 schools and multidisciplinary centers all located in a condensed urban environment. Its proximity and relationship to a world-class health care system, the University of Pittsburgh Medical Center, enables close ties between teaching, research, and clinical efforts. The primary goal of the Campus Master Plan is to leverage these strengths and the University's unique characteristics and competitive advantages to provide a top value education for a cost-conscious student population.

Institutional Needs

- Create an east-west connection which will create synergies among teaching, research, and clinical uses
- Create a cohesive network of student life facilities that link south campus to north campus
- Improve open space, streetscape, and wayfinding
- Better attract talent and improve accessibility and the quality of life in Oakland and Pittsburgh by partnering with neighbors
- Seek synergy and efficiency by renewing aging facilities and building on a strong legacy of sustainability planning. New facilities will be interdisciplinary and meet Pitt's most pressing space needs
- Establish a network of barrier-free routes, pathways, and facilities for use by all members of the campus community
- Pedestrian and Bicycle Mobility: Implement two pedestrian "braids" - one along O'Hara St. and one connecting areas of campus separation by topography - to enhance pedestrian mobility and connectivity; Work with Pittsburgh Department of Mobility & Infrastructure (DOMI) to promote and study new dedicated bike lanes on key high traffic streets; Explore ways to expand secure bicycle storage
- Transit: Leverage existing and proposed transit connections; Enhance park and ride options; Explore arrangement with ride-share services to remove need for dedicated shuttle dispatch
- Parking: Identify core and Greater Oakland parking locations that can be secured through lease arrangements for intercept parking; Create temporary or semi-permanent parking facilities that convert easily to other uses for future development; Reduce number of parking permits available to residential students; Implement a marketing and incentive program to encourage permit holders to switch to Park and Ride alternatives; Lobby Port Authority to establish direct routes to Oakland from select Park and Ride locations; Adjust parking demand by aligning fees with market rates
- Open Space and Pedestrian Improvements: New academic quad at One Bigelow; New green space integrated with the proposed Recreation and Wellness Center; Lawn adjacent to Petersen Events Center raised to increase size and suitability for recreation and open space in the South Campus Housing Hub; smaller open space interventions throughout campus

Pitt Development Projects

	Type	Uses
Short Term (1 to 7 years)		
Victory Heights Athletic Complex	New Construction, Addition, Redevelopment, Renovation	Athletics
Scaife Hall Expansion	Addition	Health Sciences
Recreation and Wellness Center	New Construction	Recreation
North Campus Housing Hub	New Construction	Residential
One Bigelow	New Construction	Academic
South Campus Housing Hub	New Construction, Redevelopment	Residential
Forbes-Craig Apartments Redevelopment	Redevelopment	Auxiliary
UPMC Garage Expansion	New Construction	Parking
Mid-Term (8 to 15 years)		
O'Hara Street Development	New Construction	Academic
Crabtree Hall Redevelopment	Redevelopment	Health Sciences
Litchfield Towers Plaza Improvements	Renovation	Residential, Student Life
Integrated Health Sciences Complex	Redevelopment	Health Sciences
UPMC Heart and Transplant Hospital	New Construction	Health Sciences
Academic Success Center (Library Infill)	New Construction	Student Life
Long Term (15+ years)		
East Campus Hub	New Construction, Redevelopment	Residential
Frick Fine Arts Expansion	Addition	Academic
Innovation Neighborhood Development	New Construction	Academic, Research, Labs, Office
Potential Innovation Neighborhood Partner	Redevelopment	Academic, Research, Labs, Office

Carlow University Institutional Master Plan (2017)

Carlow University is a liberal arts university rooted in Catholic values with programs offering traditional, graduate and online students access to career preparation under three colleges: Health and Wellness, Leadership and Social Change and Learning and Innovation. Current enrollment is 2,254 students, with over half coming from Allegheny County, however Carlow projects growth of a more diverse population. Carlow University's goals for future growth include expanding enrollment, enhancing the Carlow brand, improving the student experience and accelerating the growth of community partnerships.

Institutional Needs

- Define the Fifth Ave. campus gateway
- Optimize campus circulation
- Create classroom environments that reflect planned changes in pedagogy
- Study possible relocation of The Campus School
- Optimize the locations of the colleges
- Transform residence halls into living-learning centers
- Provide a variety of dining options throughout the campus
- Provide on-campus health & wellness facilities
- Create an athletics facility on campus
- Transportation Recommendations: Enhance bicycle parking facilities on campus; Add on-campus wayfinding signage; Campus driveway modifications and signage; Increase parking to 650 spaces with new structured garages on surface Lots A and C; Add surface parking to Aidan Hall, Trinity Hall, McCauley Hall, Dougherty Hall, Tiernan Hall; Reconfigure surface parking on Lots B and D
- Carlow Open Space and Pedestrian Improvements: New landscaping at Lower Campus (Robinson and Fifth Av; New event break-out space from St. Agnes Center; New plaza at the upper level of the new Academic Building; New open space to replace Aquinas Hall; Additional open space and plaza amenities to replace relocated Campus School; Gateway enhancements at Craft Ave, Fifth Ave, and Terrace St.; Plaza and entry enhancements along Fifth Ave. in front of St. Agnes Center, New Academic Building, Frances Ward Hall; New pedestrian entrances at Fifth and Craft Ave, Fifth Ave at Frances Ward Hall, and Terrace St. near Parking Lot B

Carlow Development Projects

	Size (SF)	Type	Uses
10 Year Envelope			
Academic Building with Structured Parking	157,500	New Construction	Mixed institutional
St. Agnes Center Addition	2,700	Addition	Catering, ADA compliance
Residence Hall Connector	1,200	Addition	Residence Hall
Athletics Building with Structured Parking	191,300	New Construction	Athletics, events, parking garage
St. Joseph's Hall	42,729	Renovation	Recreation/Fitness
Frances Warde Hall & Dougherty Hall	68,826	Renovation	Residence Hall
St. Agnes Center	29,918	Renovation	Event Venue
CLAM to Alumni Center	10,387	Renovation	Support
Antonian Hall	93,431	Renovation	Academic
Curran Hall	18,840	Renovation	Residence Hall
Tiernan Hall	54,165	Renovation	Academic
Forbes Ave Fitness Center	5,000	Lease Termination	Fitness
3356 Fifth Ave.	6,000	Lease Termination	Office
Kiln	400	Demolition	Art
25 Year Envelope			
Campus Edge Improvements	NA	Renovation	Streetscape

Carlow Development Projects

	Size (SF)	Type	Uses
Aquinas Green Space	NA	Renovation	Open Space
St. Agnes Green Space and Parking Lot	NA	Renovation	Open Space
Parking Lot B Reorganization (w/ Sisters of Mercy)	NA	Renovation	Parking
Sisters of Mercy Green Space and Passage	NA	Renovation	Open Space
Aquinas Hall	NA	Demolition	Residence Hall
St. Agnes School	NA	Demolition	Academic

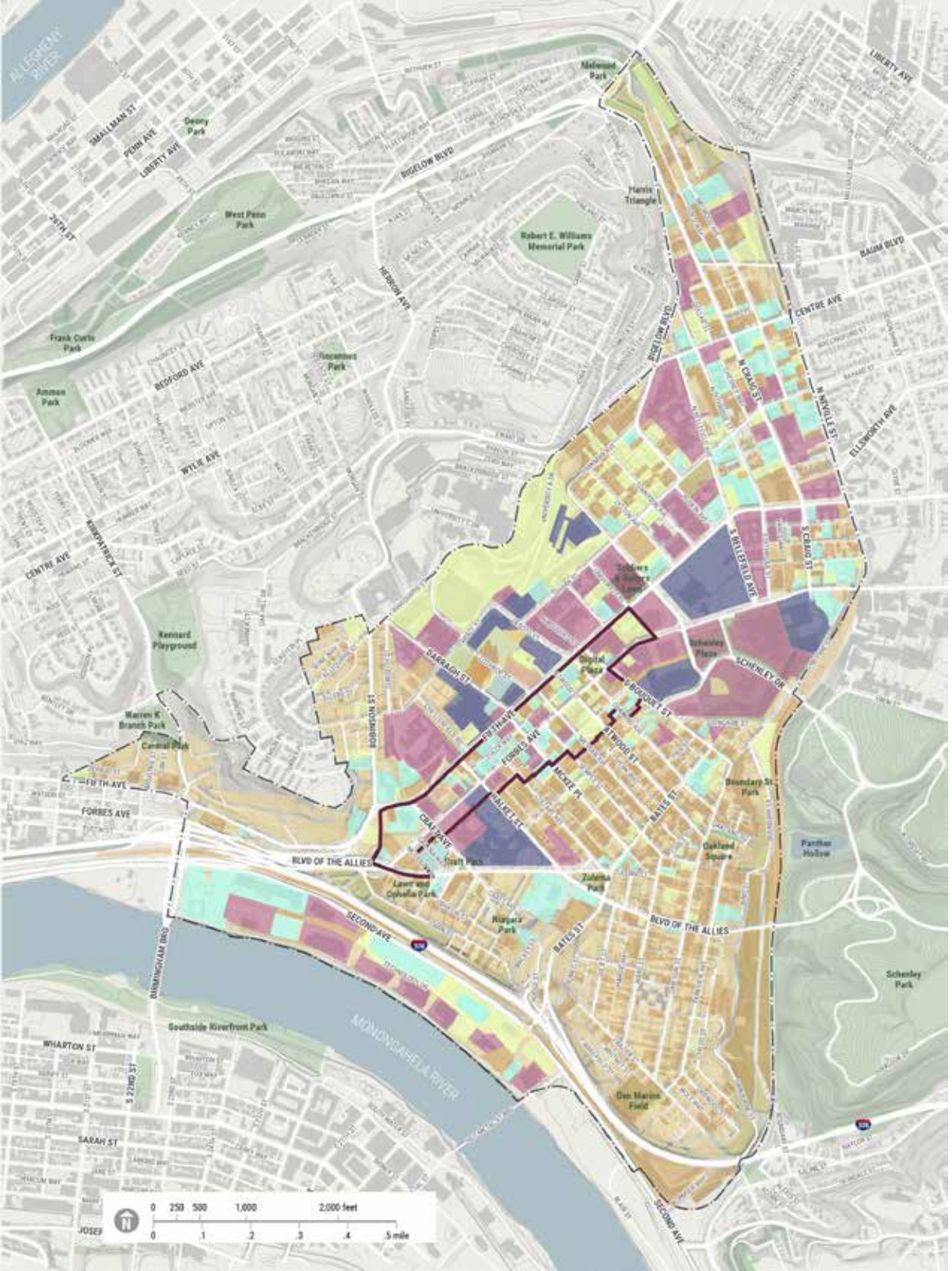
The total assessed value of property in Oakland is over $3.8 billion.

Many of the highest value areas are for large, institutional uses that are tax exempt, likely complicating the total assessed value of the district.

Residential properties in Central Oakland tend to be assessed at a higher value than residential properties in South and West Oakland. The value of properties in North Oakland is highly dependent on both the size of the parcel and the scale of development on the land.

The Oakland Business Improvement District (OBID) provides additional services and place-management in the core of Oakland, centered on the greater Forbes Ave corridor. They are the second-largest organization of this kind in Pittsburgh, after downtown.

OBID is funded in part by a special assessment on properties within the district, subject to a cap. Tax-exempt property owners also help fund the organization and their services.



Total Assessed Value

Oakland Business Improvement District

ASSESSED VALUE

- < $100,000
- $100,000 - $499,999
- $500,000 - $999,999
- $1,000,000 - $4,999,999
- $5,000,000 - $49,000,000
- > $5,000,000

Tax Assessment Data (2019), Allegheny County.

Approximately 40% of the land uses in Oakland are tax-exempt.

Government non-academic uses, such as parks, schools, and the Carnegie Library as well as the Pittsburgh Technology Center, represent 46% of the total exempt property. Institutions represent another 43%. Institutional exempt property equals 24% of the total land area of Oakland.

Pittsburgh's colleges and universities have been developing property near their campuses to provide amenities for students and to promote economic development in their respective neighborhoods. The university-owned parcels on this exhibit that are not shown on the Institutional diagram reveal retail, housing, and streetscape investments that are not exclusively for academic purposes. These include some of the highest value tax exempt properties.

The Religious category includes houses of worship, gathering places, and schools. The nonprofit parcels includes some nonreligious schools, community centers, affordable housing, and other service organizations.

The "Other" category includes utilities as well as parcels that are in the process of being aggregated for redevelopment or public use by the Oakland Planning and Development Corporation.

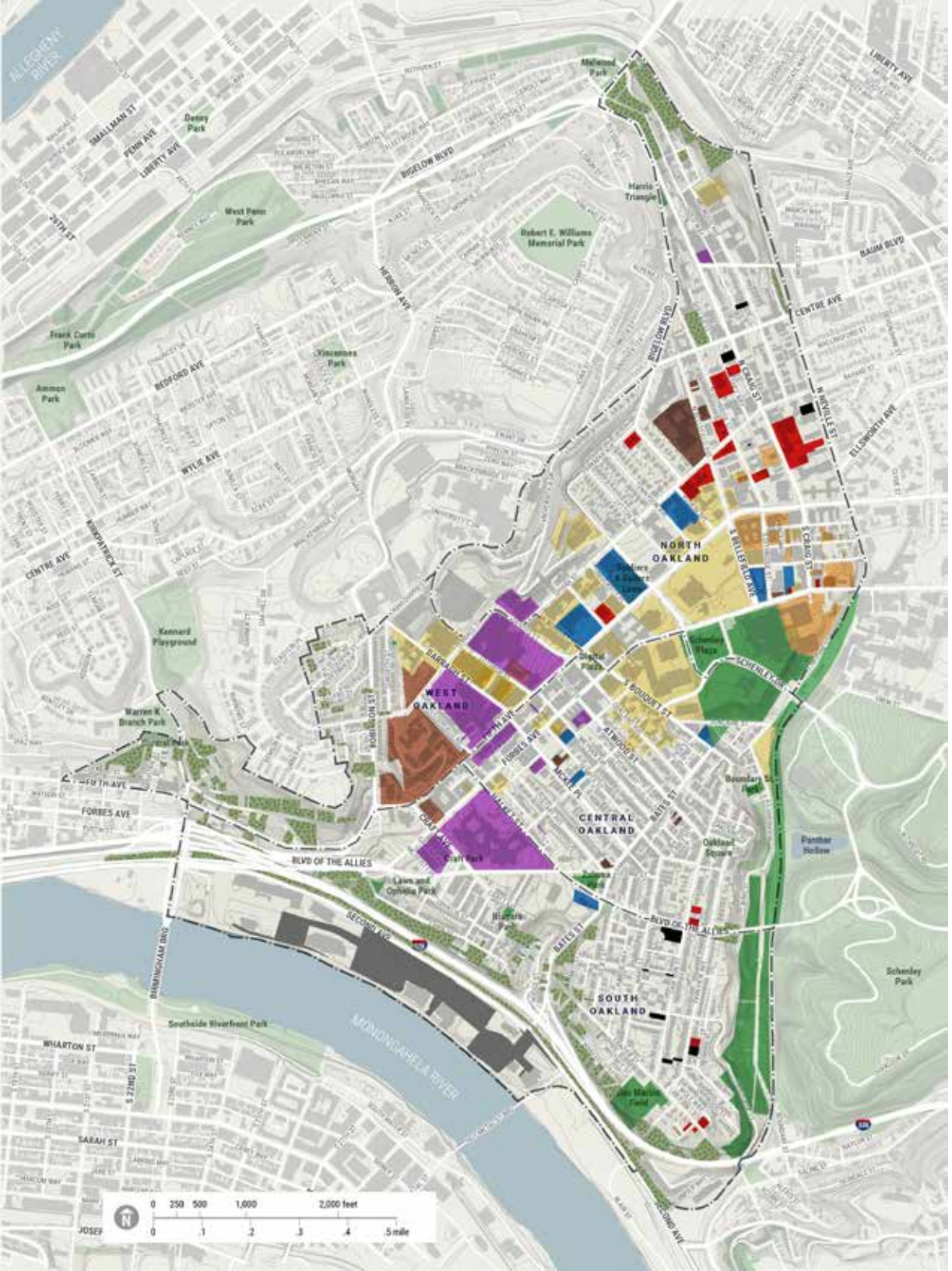
The Pittsburgh Technology Center is a significant redevelopment project underway in South Oakland along the Monongahela River.

The other government-owned properties include a US Post Office, City of Pittsburgh office buildings, School District buildings, and Allegheny County properties in addition to parks.

The City of Pittsburgh has taken ownership of land located on or adjacent to steep slopes to protect nearby properties and waterways from erosion. While some housing, mostly vacant, can still be found on these tracts, these parcels are generally undesirable for new development. Most of these parcels are transitioning into space for restoring the tree canopy or establishing new recreational uses. The most notable areas with steep slopes are found above the Monongahela River and Second Street, above Bates Street, and above and below Melwood Avenue. These areas have some of the lowest value of tax exempt property.

Altogether, the value of tax-exempt property in Oakland is over $2.4 billion dollars.

Tax Exempt Properties	Acres	Value
Carlow University	16.35	$77,100,700
Carnegie Mellon University	14.87	$204,916,180
University of Pittsburgh	72.97	$1,033,709,500
University of Pittsburgh Medical Center	44.48	$826,445,400
Pittsburgh Technology Center	24.04	$52,762,900
Religious Institution	10.02	$36,152,080
Government	14.23	$101,061,700
Nonprofit Organization	6.44	$34,616,000
Steep Slope	49.24	$14,025,600
Park	57.75	$21,366,300
Other	2.71	$6,447,600
TOTAL	313.12	$2,408,603,960



Tax Exempt

- Carlow University
- Carnegie Mellon University
- University of Pittsburgh
- University of Pittsburgh Medical Center
- Pittsburgh Technology Center
- Religious Institution
- Government
- Nonprofit Organization
- Steep Slope
- Park
- Other

Sources: Tax Assessment Data (2019), Alegheny County.

Current tax abatement programs support a variety of development projects, including two affordable housing projects and a performing arts venue, as well as larger housing, office, and hotel development.

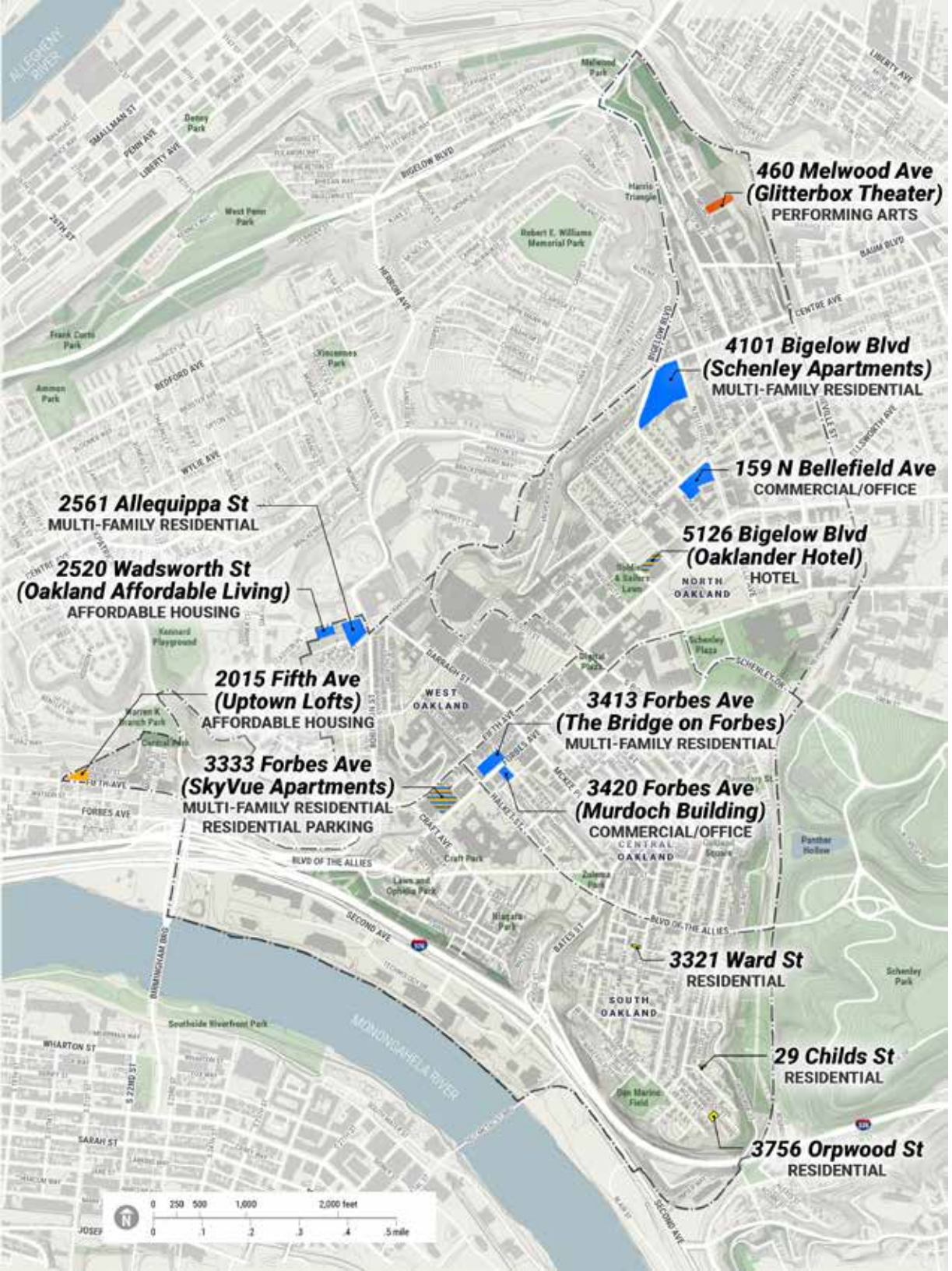
The total assessed value of the tax abated properties in Oakland is $134,835,580. For the 3 to ten year abatement periods, the City will have foregone tax revenue of about $429,125.The City of Pittsburgh, in partnership with Allegheny County and the Urban Redevelopment Authority of Pittsburgh (URA), administers several tax abatement programs to promote economic development and community revitalization. The tax abatement programs exempt developers and homeowners from paying real estate taxes on new construction or the value of improvements made to existing buildings for a limited time to encourage investment in neighborhoods throughout the City. According to the City of Pittsburgh Property Tax Abatements GIS data, as of Tax Year 2019, there were 17 properties that received tax abatements in Oakland. Properties with approved tax abatements are included on the Tax Abated Properties Map. The programs, described below, are administered by the City's Department of Finance-Real Estate Division in conjunction with the URA and Allegheny County's Office of Property Assessments.

There are three properties in South Oakland that are part of the Act 42 Residential Tax Abatement program, which is targeted at residential properties in distressed neighborhoods. The City of Pittsburgh administers the Act 42 Residential and Act 42 Enhanced Residential programs. Act 42 Residential is an assessment reduction, available for three years, for rental or for sale residential renovations or new rental or for sale residential construction in distressed neighborhoods. The total reduction amounts are limited to $86,750 of assessed value on new construction and $36,009 of assessed value for renovations. Act 42 Residential is applied citywide. Act 42 Enhanced Residential offers the same structure as the above program, except the assessment reduction is available for ten years and up to $250,000.

The Local Economic Stimulus abatements is for developments over $1 million in value; there are eight projects across Oakland with this abatement. Projects include major multi-family housing, affordable housing, hotel, and office investments for both rehabilitation and new construction. The Local Economic Stimulus Abatement Program, administered by the City of Pittsburgh, is an annual real estate tax abatement of up to $250,000 for ten years. The tax credit is applied to the incremental increase in taxes as a result of construction or improvements costs in excess of one million dollars. The program has a sliding scale for the abatement, with years one and two at 100% of the incremental increase in taxes up to the $250,000 cap; years three and four at 90%; years five and six at 80% and so on for up to ten years. Typically, the current use of property is commercial, industrial or vacant land and the future use of property is for residential, commercial or industrial.

There are three projects in Oakland with Residential LERTA (Local Economic Revitalization Tax Assistance) abatements, including the Oaklander Hotel, Uptown Lofts Affordable Housing Project, and the SKyVue Apartments. LERTA is a tax credit program that provides a tax exemption for renovation and new construction in deteriorated areas of economically depressed communities. The Residential LERTA is administered by URA, the City of Pittsburgh's economic development agency. The tax credit is limited to $150,000 and is available for a period of ten years. The program has a sliding scale for the abatement, with years one and two at 100% of the incremental increase in taxes up to the $150,000 cap; years three and four at 90%; years five and six at 80% and so on for up to ten years. Typically, the current use of property is commercial or industrial and the future use of property is for residential rental or hotels.

There is one project in North Oakland with a Commercial LERTA abatement, the renovation of 460 Melwood Avenue into the Glitterbox Theatre a performing arts space and open venue. Commercial LERTA – The Commercial LERTA program is administered by Allegheny County and is applied to new construction or renovation of commercial, industrial, or vacant land for the use of commercial or industrial land. The tax credit is available for five years with an annual abatement



Tax Abated Properties

- ACT 42 Residential
- Residential LERTA
- Commercial LERTA
- Local Economic Stimulus

Sources: Tax Abated Parcels (2019), City of Pittsburgh; Tax Assessment Data (2019), Allegheny County.

Pittsburgh Oakland Tax Abated Properties - Tax Year 2019

ADDRESS	PROGRAM NAME	PROPERTY TYPE	START YEAR	NO. YEARS	ABATEMENT AMOUNT	TOTAL ASSESSED VALUE	TAXABLE VALUE AFTER CREDIT	ESTIMATED TAX REVENUE*
2561 Allequippa St.	Local Economic Stimulus	Multi-Family Residential	NA	10	$250,000	$840,200	$590,200	$4,757
159 N Bellefield Ave.	Local Economic Stimulus	Commercial/Office	NA	10	$250,000	$2,784,280	$2,534,280	$20,426
4101 Bigelow Blvd.	Local Economic Stimulus	Multi-Family Residential	NA	10	$250,000	$26,978,900	$26,728,900	$215,435
5126 Bigelow Blvd.	Local Economic Stimulus	Hotel	NA	10	$250,000	$671,900	$421,900	$3,401
	Residential LERTA	Hotel	NA	10	$150,000	$671,900	$521,900	$4,207
29 Childs St.	Act 42 Residential	Residential	NA	3	$86,750	$34,200	–	–
3413 Forbes Ave.	Local Economic Stimulus	Multi-Family Residential	NA	10	$250,000	$423,000	$173,000	$1,394
3420 Forbes Ave.	Local Economic Stimulus	Commercial/Office	NA	10	$250,000	$429,800	$179,800	$1,449
3333 Forbes Ave.	Local Economic Stimulus	Multi-Family Residential	NA	10	$250,000	–	–	–
3333 Forbes Ave. Unit Res	Local Economic Stimulus	Multi-Family Residential	2017	10	$250,000	$39,636,100	–	–
	Residential LERTA	Multi-Family Residential	2017	10	$150,000	$39,636,100	$39,336,100	$317,049
3333 Forbes Ave. Unit Retail	Local Economic Stimulus	Multi-Family Residential	2017	10	$250,000	$3,771,000	–	–
	Residential LERTA	Multi-Family Residential	2017	10	$150,000	$3,771,000	$3,621,000	$29,185
3333 Forbes Ave. Unit Parking	Local Economic Stimulus	Residential Parking	2017	10	$250,000	$6,714,500	$6,214,500	$50,089
	Residential LERTA	Residential Parking	2017	10	$150,000	$6,714,500	–	–
2015 Fifth Ave.	Residential LERTA	Affordable Housing	2016	10	$150,000	$541,900	$391,900	$3,159
460 Melwood Ave.	Commercial LERTA	Performing Arts	NA	5	$50,000	$800,000	$750,000	$6,045
3756 Orpwood St.	Act 42 Residential	Residential	NA	3	$86,750	$159,700	$72,950	$588
2520 Wadsworth St.	Local Economic Stimulus	Affordable Housing	NA	10	$250,000	$112,000	–	–
3321 Ward St.	Act 42 Residential	Residential	2019	3	$86,750	$144,600	$57,850	$466

Sources: Allegheny County Property Assessments, City of Pittsburgh Property Tax Abatements

** Estimated tax revenue is based on the assessed value after applied tax credit multiplied by the Pittsburgh millage rate of 8.06 (0.00806)*

limit of $50,000. There is not sliding scale for the commercial abatement, the abatement applies to 100% of the incremental value of improvements for the five year period.

Single developments may combine multiple tax abatements based on the variable use of different parcels of land and requirements of each program. For example, the SkyVue Apartments mixed-use development at 3333 Forbes Ave. includes subdivided parcels for the multi-family, retail, and parking portions of the property. The development was able to combine the Local Economic Stimulus and Residential LERTA for the different sub-parcel uses to receive maximum benefit. The table includes the list of properties in Oakland receiving tax abatements, including the program name, property use, address, abatement period, and abatement amount. The table also includes information on the current assessed value of each property from the Allegheny County property assessments database and the estimated amount of tax revenue the City would receive after the tax abatement is applied.

With the City's tax rate of 8.06 mills applied to the assessed value, the City would expect to receive estimated annual tax revenue of at least $1,086,775 after the abatements expire. This amount could increase accordingly if tax rates and assessed values were to increase during the abatement periods. With the applied abatements, the taxable value of the properties is $81,594,280 for a period ranging from 3 to ten years from the start year, resulting in annual tax revenue of $657,650. For the three to ten year abatement periods, the City will have foregone tax revenue of about $429,125. This seems to be a manageable amount of foregone revenue given the temporary status of the abatements and the positive impact the incentives have on economic growth in the City.

Oakland is served by three major sewersheds, the M-19A/B, the M-29, and the A-22.

Both the M-19A/B and M-29 drain to the Monongahela River as part of a combined sewer system for both sewage and stormwater. The A-22 drains to the Allegheny River. The M-19A/B are subsidiary sewersheds in South and Central Oakland to the larger M-19 area, which also covers areas of Uptown and the Hill District. The M-19A has 143 directly connected impervious acres and 318 million gallons of wet weather volume flowing through it annually. The smaller M-19B has 32 impervious acres and 76 million gallons of wet weather volume.

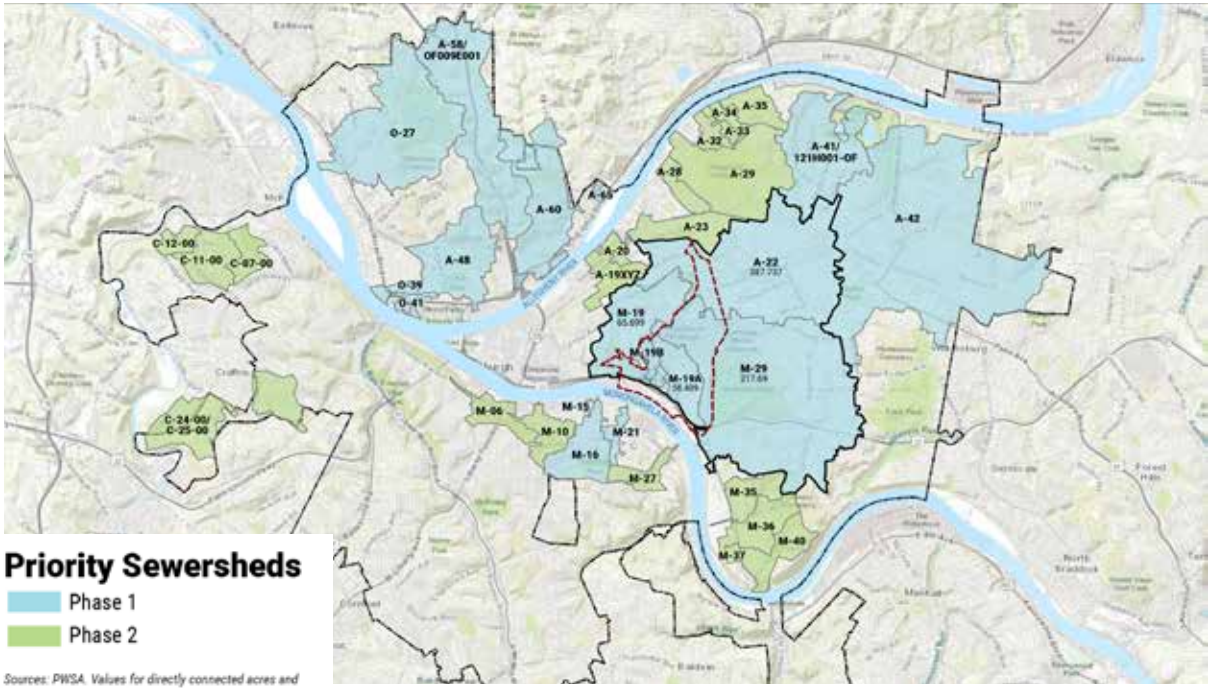
The M-29 is a sewershed encompassing the Oakland, Squirrel Hill, Greenfield, and Shadyside neighborhoods across an area approximating the watershed of Four Mile Run. It includes Junction Hollow and Panther Hollow stream and Panther Hollow Lake. The M-29 sewershed includes approximately 362 impervious acres and 1.426 billion gallons of annual wet weather flowing through it.

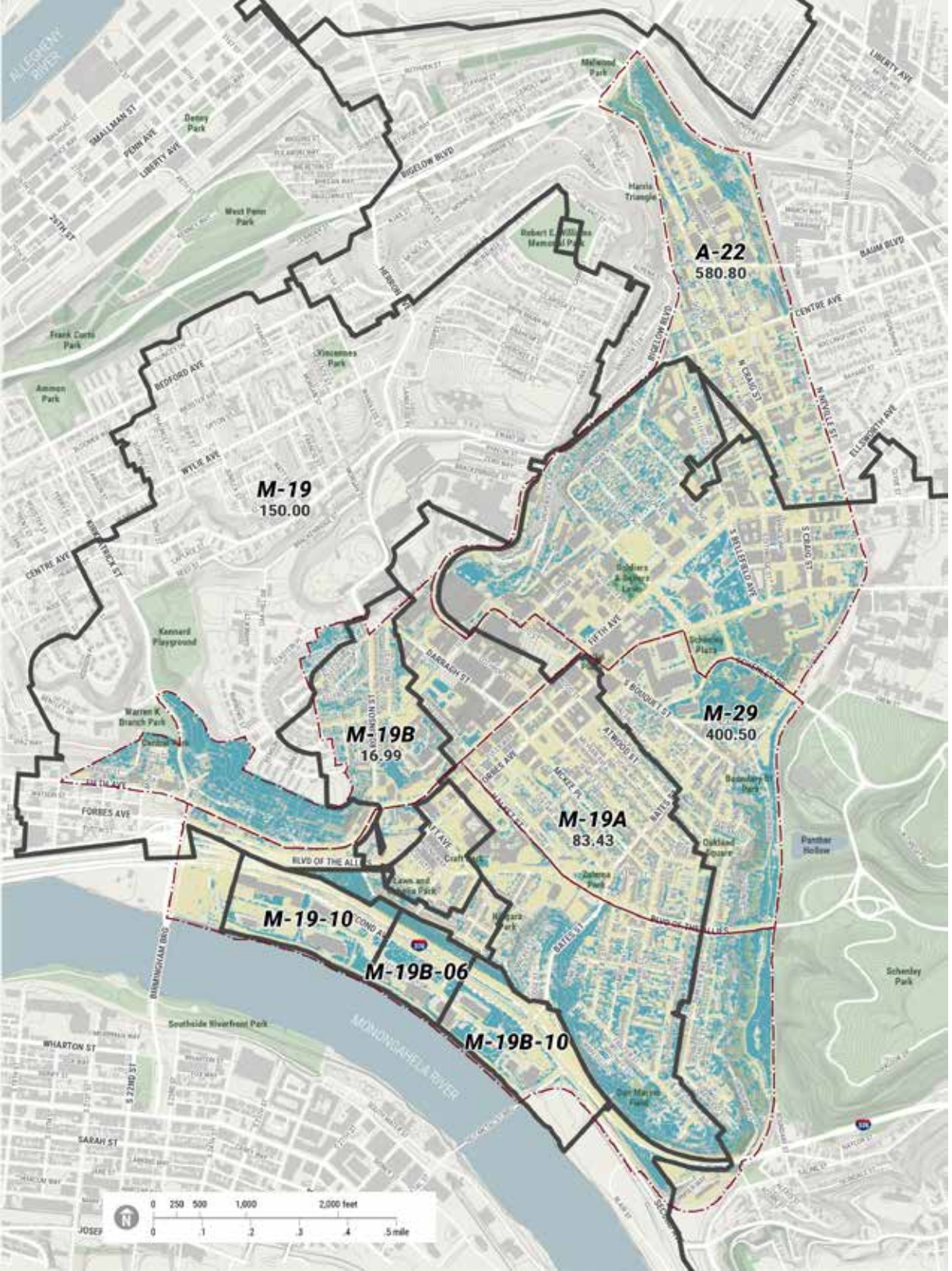
The A-22 watershed is one of the largest sewersheds, containing portions of North Oakland, Shadyside, Squirrel Hill North, Bloomfield, Friendship, East Liberty, and Garfield neighborhoods with 898 impervious acres. There are approximately 1.595 billion gallons flowing through in annually. The A-22 produces the third most combined sewer overflows based on volume within the sewer system.

The M-19A/B, M-29, and A-22 are three of the of thirty high priority sewersheds that have been analyzed by PWSA for improvements that address potential CSO reductions, flood hazards, and direct stream inflow locations across the City. During storms, the combined sewage and stormwater can exceed the system capacity and discharge directly into the river, degrading water quality, and contributing to street flooding and basement backups. Among other strategies, PWSA is pursuing green infrastructure strategies under the Green First Plan to manage stormwater runoff and reduce overflow events.

Out of the 30 high-priority sewersheds, the M-29 was of one of six selected for strategic urban planning opportunities for green infrastructure and is currently moving forward as part of the Four Mile Run project. More information about public green infrastructure projects can be found at *https://www.pgh2o.com/projects-maintenance/green-stormwater-projects.* The Shadyside/A-22 Sewershed Flooding Solutions and Green Infrastructure Assessment is a detailed evaluation of opportunities in the A-22.

Oakland has over 600 acres of impervious area or an estimated 64% of total land area. Central Oakland has the most impervious surface, at 74% of land area. Pervious areas are concentrated in open space, lawns, parks, and the hillsides surrounding Oakland. Increases in impervious

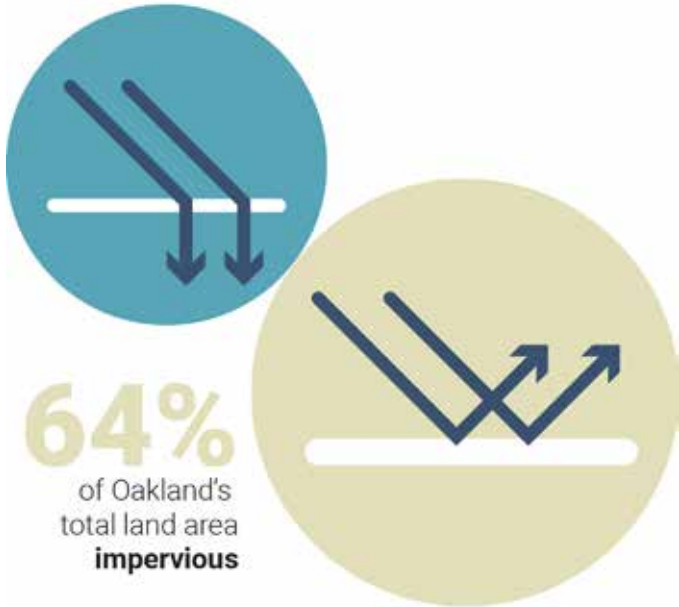




Priority Sewershed

- Neighborhoods' Boundaries
- Sewershed
- Pervious Area
- Impervious Area

Sources: PWSA. Values for directly connected acres and annual wet weather volume can be found in Table 3-3 and Appendix C of the Green First Plan, available on PWSA's website.



64% of Oakland's total land area **impervious**

surfaces, such as roads, parking lots, and rooftops, are the main contributor to increased stormwater runoff. However, pervious surfaces in parks, lawns, and green infrastructure, can reduce stormwater runoff through retention and infiltration. Managing land cover types within Pittsburgh is key to managing stormwater runoff quantity and water quality as it flows to Pittsburgh's sewers and rivers.

Oakland is a highly urbanized area with many impervious surfaces, making it a great candidate for innovative ways to manage stormwater. Whether it is a private or public development adding pervious areas through green infrastructure or other stormwater management practices such as swales, underground detention systems, and green roofs can abate pollution and flooding within the neighborhood.

By code, new development is required to retain as much stormwater runoff on site and release it to the sewer system at the same rate or less than the pre-development rate. Projects that disturb more than 10,000 square feet of land or add more than 5,000 square feet of impervious surface are required to obtain stormwater management permits. The first inch and half of stormwater must be managed with green infrastructure strategies unless it is technically infeasible on the site. Green infrastructure strategies used as a part of new development may include bioretention areas and green roofs, but many projects use underground storage tanks and other non-green techniques to meet the pre-development release rate and volume requirements. The majority of projects have on-site stormwater management, but larger landowners like the institutions in Oakland are working with the City to pilot district-scale stormwater projects that would treat larger volumes from multiple sites.

The stormwater management code is currently undergoing a second phase of updates to regulate development consistent with the watershed based stormwater plan. The first phase of updates, previously completed, ensured base compliance with Act 167 (the Pennsylvania Stormwater Management Act). The second phase is a more comprehensive code update in order to meet the challenges posed by increasing urban development and intensifying rainfall events in Pittsburgh. The second phase of code updates also incorporates the Green First Plan.

A new stormwater management fee, based on the amount of impervious acreage on the property, will soon be assessed on all property owners, likely beginning in 2021. Reducing impervious acreage will reduce the fee, and there will be credits for managing additional stormwater beyond the requirements.

The water distribution system throughout Oakland is managed by PWSA water lines and institutions' district water lines. There is large demand for water in Oakland, but the infrastructure in place has the capacity to provide safe, reliable water to all entities. To improve water distribution infrastructure even further, PWSA is replacing lead lines connecting to homes and businesses.

2020 Lead Service Line Replacement Target Area

Project In Progress

Source: PWSA

Central Oakland is currently one of four areas targeted for lead service line replacements for residential water service. PWSA maintains a water service line replacement map here that provide more information about residential properties and how to apply for a replacement at no cost to the customer.

http://lead.pgh2o.com/your-water-service-line/planned-water-service-line-replacement-map/

Green infrastructure strategies are the first choice for public and private stormwater management projects.

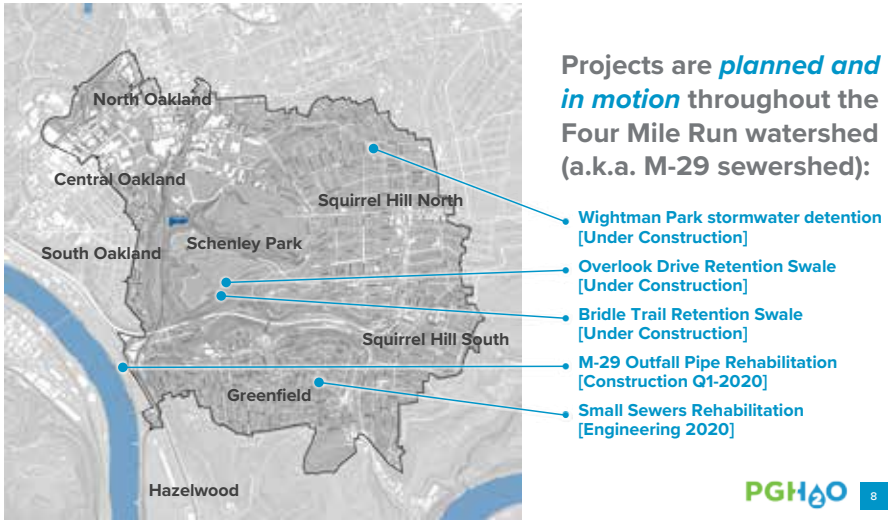
Under PWSA's Green First Plan, PWSA and the City of Pittsburgh are pursuing green infrastructure projects that manage stormwater flows during a storm to reduce PWSA combined sewer outflows. These projects also offer positive benefits to improve water quality, restore local habitats, and enhance neighborhood settings. As part of the green infrastructure design process, PWSA analyzes criteria including volume loading ratios, runoff volume, and rain capture and quantifies project performance based on multiple factors, including cost effectiveness and CSO volume reduced in a total year.

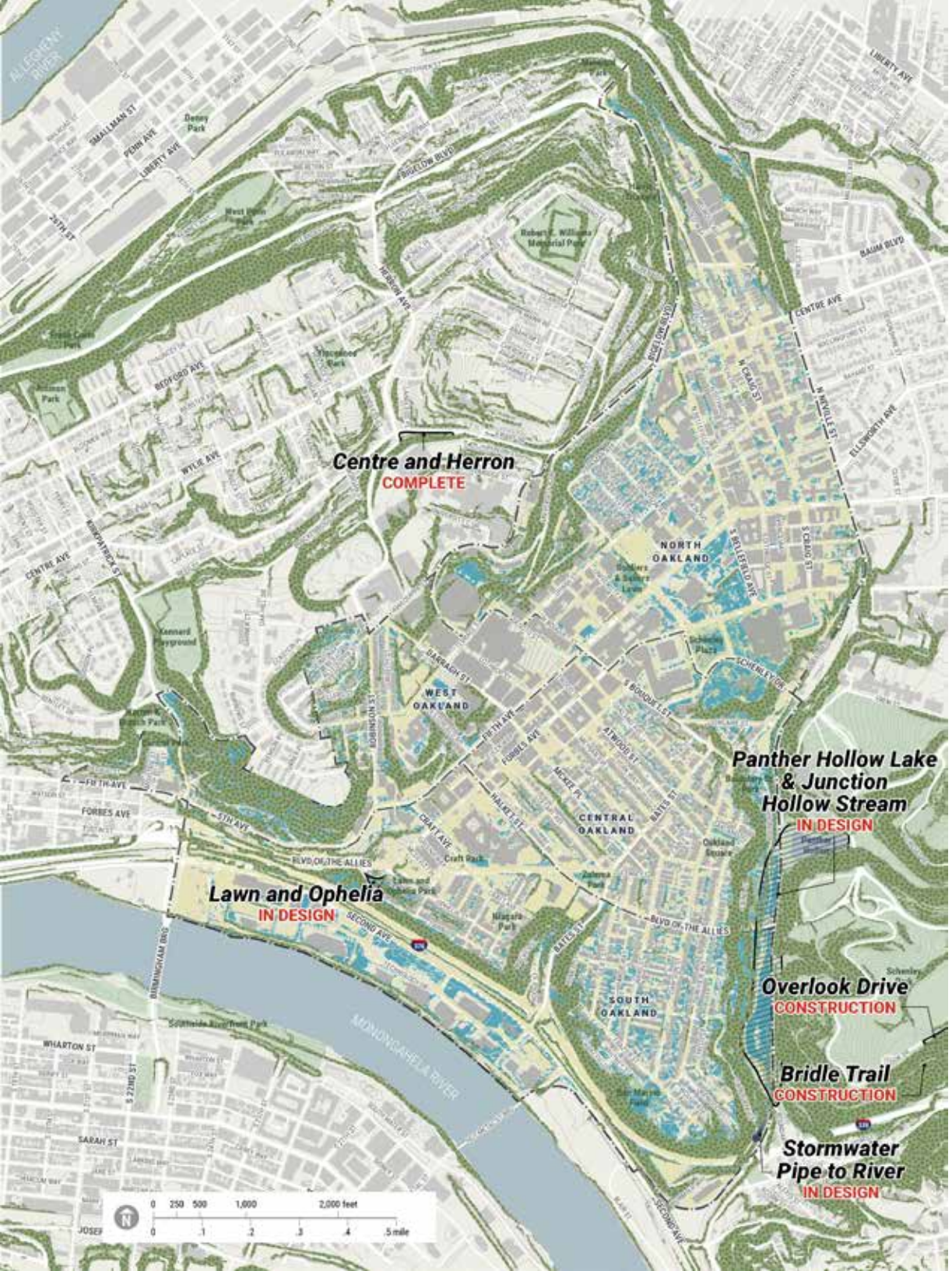
The award-winning Centre and Herron stormwater project is a green infrastructure project in the Hill District above Oakland. The project is estimated to manage one million gallons of stormwater runoff annually. As an already-built project, Centre and Herron in maintained and monitored to manage its effectiveness and offer lessons learned for future green infrastructure projects.

The Four Mile Run Stormwater Project is a major green infrastructure effort encompassing a number of projects in Schenley Park, Greenfield, Hazelwood, Oakland, and Squirrel Hill. Two drainage channels are currently under construction in Schenley Park along Overlook Drive and the Bridle Trail as early action projects. Panther Hollow Lake will be reconfigured to maximize the depth of the lake to provide more storage. PWSA is working with the PADEP to obtain a dam permit to convert the lake into a dam that can hold a 100 year storm. It will also include amenities such as a walking path, stone jetties, and constructed wetlands and a forebay area to help manage sediment.

Stormwater will be directed into a new surface channel that will mimic the path of historic streams in Junction Hollow and Panther Hollow from Panther Hollow Lake to the Monongahela River, allowing the lake to discharge to the river instead of the combined sewer. The stream will include features like constructed riffles that will help control grade and simulate natural stream features. The project will be phased to ensure consistent trail access. Piped connections, currently under evaluation, will convey water to the river at the beginning and end of Junction

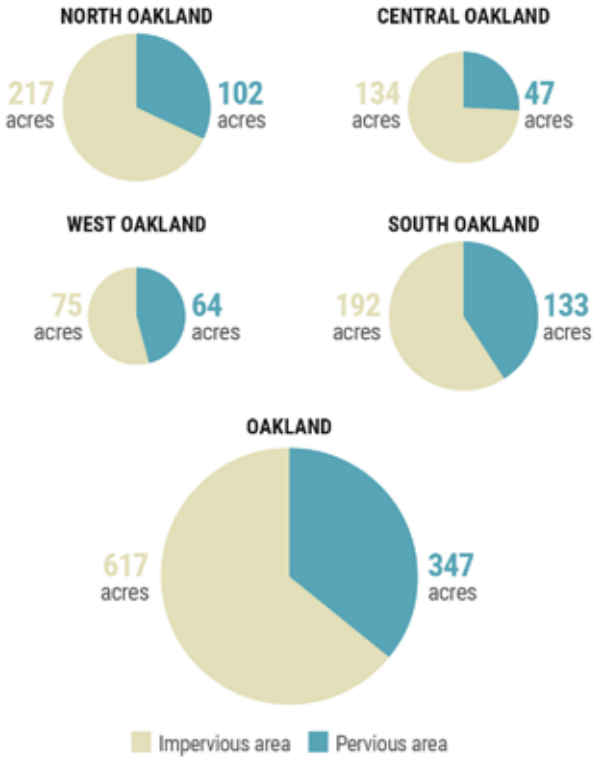
Centre and Herron green infrastructure: Stormwater runoff from surrounding roads is directed into a 585-foot long bioswale that runs alongside the side-walk of Centre Ave and helps prevent street flooding. Water moves through a series of cascading pools and is absorbed by the ground and plantings. The excess flows into underground storage tanks before being slowly released into the sewer system to reduce overloading of the combined sewer system.





Topography and Green Infrastructure Projects

- Steep Slopes (25%+)
- Green Infrastructure Project In Progress
- Pervious Area
- Impervious Area



Hollow. Additional stormwater improvements will be designed for Saline Street and Naylor Run on the boundary of Schenley Park and Greenfield.

Within Oakland, PWSA is in the planning phase for a green infrastructure project in the park at Lawn and Ophelia that will capture, detain, and filter stormwater from the surrounding area. More information about the project design can be found on page 180.

Stormwater management is included as a facet. The University of Pittsburgh and Carlow University are examples of institutions developing their institutional master plans (IMPs) with the department of city planning. These IMPs have various facets to them, including stormwater management. Large institutions throughout Oakland are analyzing opportunities to manage stormwater on a campus-wide scale and decrease contributions to sewer overflows

Green infrastructure is required for new development. In order to meet stormwater management code, new development projects must manage the first 1.5 inch of stormwater through green infrastructure. Recent projects have used landscaped bioswales, rainwater catchment basements for street trees, and green roofs to achieve and exceed this requirement. The code will be updated in 2020, and requirements may become more specific and stringent.

The Lawn and Ophelia green infrastructure project will re-grade the park to create planted areas that will capture stormwater. Pedestrian access through the park will be maintained.

Many historic residential areas of Oakland have high levels of impervious surfaces.

This parking area just off Forbes Avenue is part of a large concentration of impervious surface.

Oakland's tree canopy covers only 19% of its land area, primarily on hillsides surrounding the neighborhood.

Tree canopy covers approximately 19% of Oakland. The City of Pittsburgh has set a goal in its Urban Forestry Master Plan of increasing tree canopy cover to 60% of the city's overall land area by 2032.

The vast majority of Oakland tree canopy is provided as part of steep sloping areas covered in passive forestland. These forested hillsides help provide slope stability, water management, and habitat across the city while providing views prized by many Pittsburghers. The slopes below Lawn Street in South Oakland have been designated as a greenway, and the western slope of Junction Hollow is protected as part of Schenley Park. The Open Space PGH Plan recommends acquiring additional wooded slopes in South Oakland for designation as greenways where they connect to parks, other greenways, provide desired trail connections, or where the highest and best use of the property is undeveloped open space. Slopes that do not meet this criteria, such as in West and North Oakland, may be designated green network land.

Only 23% of Oakland's tree canopy is in the core and neighborhood areas.

Outside of Schenley Farms, Oakland's residential neighborhoods have negligible tree canopy compared to the adjacent neighborhoods. Limited setbacks and smaller lot sizes mean there is less space for trees to grow on residential properties. The high demand for parking in the neighborhood results in lots being paved rather than planted with trees. In some blocks of Central Oakland, there is almost no tree canopy. Tree canopy covers less than 5% of developed block, on average.

Yards that have been converted to parking areas reduce the amount of overall tree canopy and pervious surface.

Small setbacks and yards can meaningfully increase tree canopy.

Where present, tree canopy growth can be limited by overhead wires and narrow sidewalks.

Trees in the core of Oakland compete for space with underground vaults and utilities, including those no longer in use.

Due to low tree canopy and high impervious surface, Oakland is an urban heat island.

Oakland's overall tree canopy is highly concentrated on steep slopes at the edges of the neighborhood. Both City of Pittsburgh data and TreePittsburgh analysis indicate that Oakland is losing tree canopy overall. According to TreePittsburgh, over 2010-2015, the largest amount of tree canopy loss occurred on institutional properties and along main roads, likely reflecting institutional development and larger capital projects. Canopy gain occurred in steep slope areas. The trees making up this canopy are significantly more likely to be vigorous invasive species and other nuisance trees rather than higher-quality canopy.

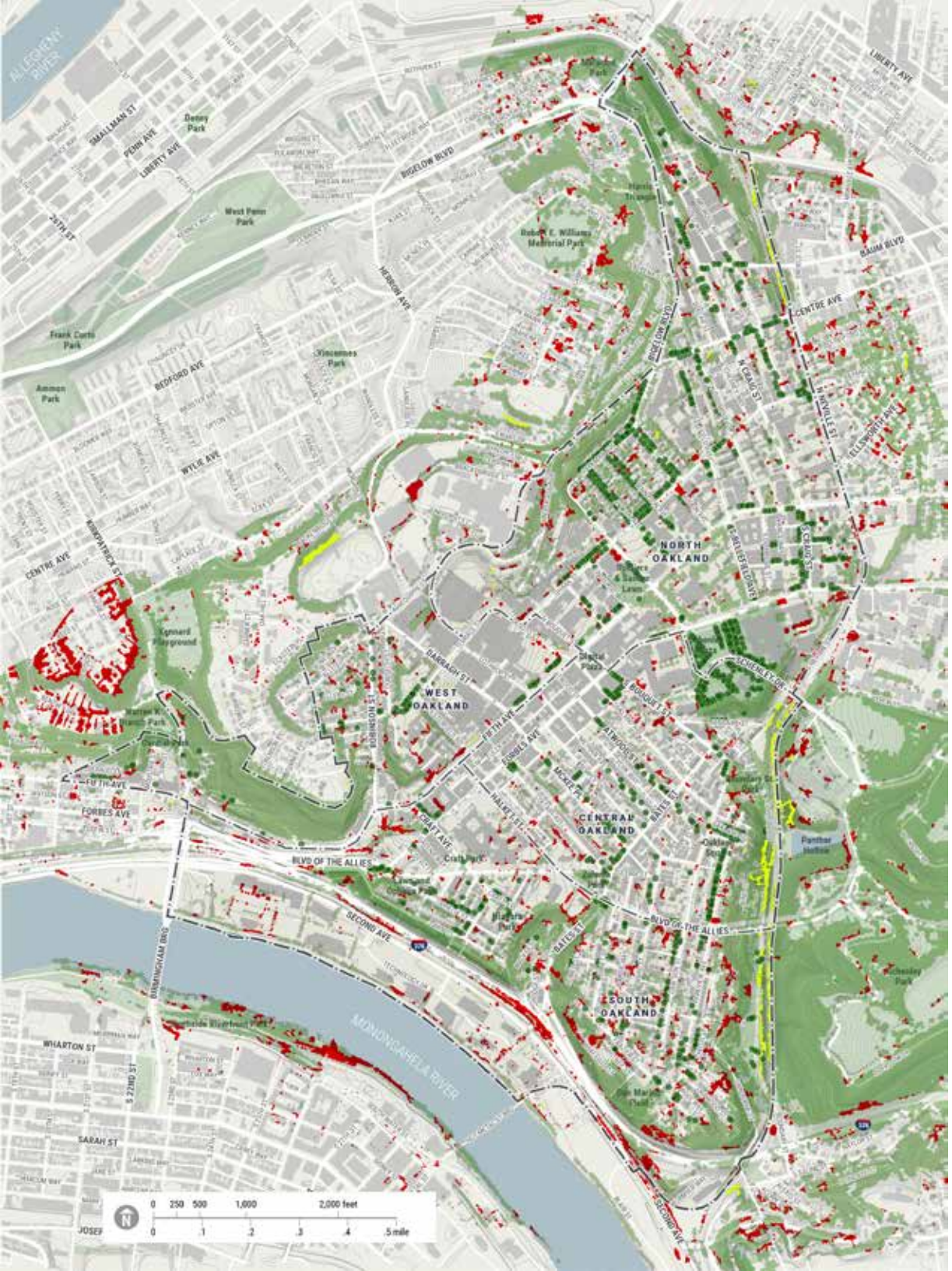
Most of the tree canopy in Oakland's neighborhoods and core comes from trees in the public right-of-way, which are limited in how large they can grow by sight lines, utilities, and available space. Many areas of Oakland have narrow sidewalks and little excess public right-of-way in which to plant additional street trees. Underground vaults and tanks for utilities, data networks, and stormwater management can also make it difficult to locate additional street trees within higher-density areas of Oakland. Without the shade and cooling provided by tree canopy, Oakland's core and neighborhoods are more susceptible to heat island effect. Some resdiental blocks of Central Oakland have no tree canopy, versus the 10% that would be acceptable in a highly-developer area. The heat map provided by TreePittsburgh shows the highest temperatures are in areas with the least tree canopy throughout Oakland.

There are approximately 1,500 trees in Oakland currently owned and maintained by the City of Pittsburgh in public right-of-way and on public property. Approximately 8% are slated for removal due to tree death or disease. While many of these locations may be suitable for replanting, others may represent poor locations for tree growth in their current format.

The City of Pittsburgh requires tree planting to increase canopy as part of zoning requirements for development. New street trees are required at a rate of one tree for every 30 feet of frontage. The City has developed minimum standards for tree pits (30 sq. ft., 3' by 10' as possible), recommended species to address utility wires, and is developing standards for soil. Institutional Master Plans for Oakland address increasing tree canopy. Pitt maintains tree canopy on their campus, including street trees and areas of significant canopy at the Student Union and Cathedral of Learning.

Major infrastructure projects in the area include tree planting. The BRT and Boulevard Betterment Project include tree planting as a part of transit improvements and repaving, respectively. The City has installed stormwater bump-outs in other parts of the city that can include trees among other plantings.

Oakland Planning and Development Corporation and community partners support tree planting and maintenance. OPDC has organized to fill empty tree pits across the neighborhood and support residents applying for TreeVitalize grants, which support planting at least ten trees per block on private property. The TreePGH program offers training and assistance with maintenance.



Tree Canopy

- Trees Owned and Maintained by City (1,500 trees)

CANOPY CHANGE (2010–2015)

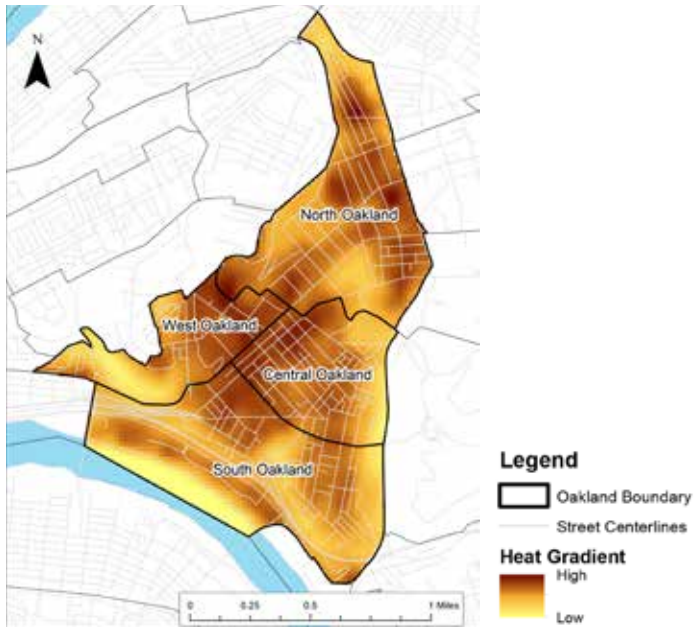
- No Change (180 acres)
- Gain (+2.4 acres)
- Loss (-34 acres)

Total canopy is estimated at 183 acres.

The majority of tree canopy in Oakland—77% of the total—is found on steep slopes at the edges of the neighborhood.

Source: LiDAR Imagery of Tree Canopy (2010–2015) Trees, City of Pittsburgh.

Oakland Temperature Map–September 2015



Source: Tree Pittsburgh

Despite neighboring one of the City's signature open spaces, Schenley Park, Oakland overall is underserved for park and open space given its density, access constraints, and the suitability of existing park space to community needs.

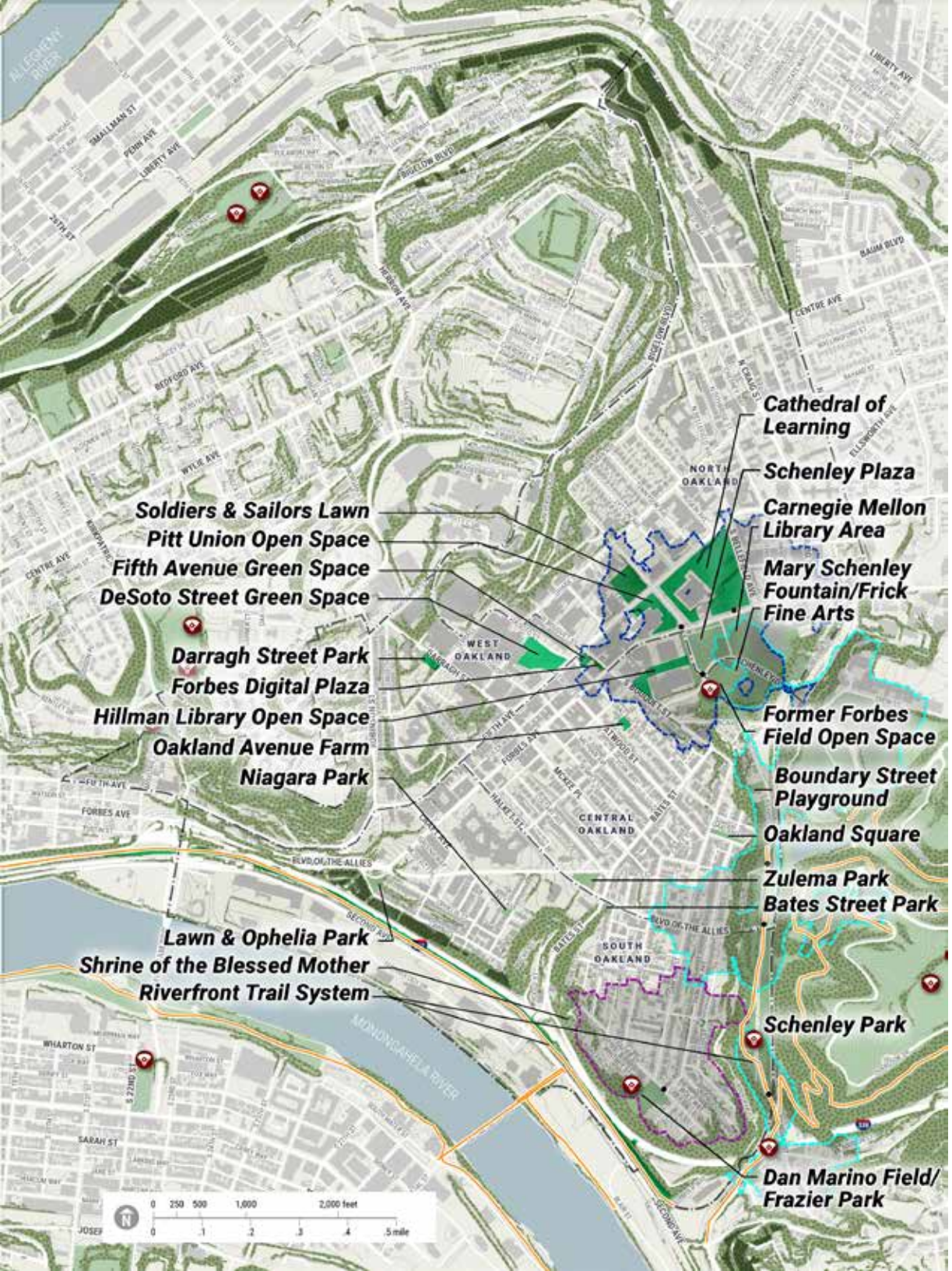
Despite improvements to access points to Schenley Park, including new bike lanes and the restoration of the Joncaire Steps, the steep topography of Junction Hollow and limited access points on Schenley Drive and Boulevard of the Allies means that only limited areas near these access points are within a 1/4 mile walk. Schenley Park is a major regional park and destination. It includes the core parcel of historic Schenley Park adjacent to Oakland, trails and green spaces in Junction Hollow, and Schenley Plaza and other spaces in Oakland as part of an expansive park network. The 2012 update to the Regional Parks Master Plan identified traffic calming and pedestrian safety within the park and the need to build sidewalk and trail connections to surrounding neighborhoods as the top priority for Schenley Park.

Pedestrian access to Schenley Plaza is excellent, but its location at the center of Oakland's cultural institutions means that it is outside of a 1/4 mile walk and easy access for most residents.

Parks and Open Spaces by Ownership

Park Name	Primary Use/ Typology	Size (SF)
Children's Hospital of Pittsburgh		
DeSoto Street Green Space	Small Park	115,656
City of Pittsburgh		
Schenley Park	Regional Park	18,164,520
Carnegie Library Area	Campus Green/ Plaza	543,351
Schenley Plaza	Campus Green/ Plaza	159,987
Mary Schenley Fountain / Frick Fine Arts	Campus Green/ Plaza	52,680
Former Forbes Field Open Space	Community Park/Baseball Field	25,247
Dan Marino Field/ Frazier Park	Community Park	181,689
Riverfront Trail System	Trail/Greenway	
Zulema Park	Beautification Site/Small Park	31,679
Bates Street Park	Beautification Site/Small Park	12,120
Oakland Square	Beautification Site/Small Park	24,796
Lawn & Ophelia Park	Conversion to Green Infrastructure	13,097
Niagara Park	Neighborhood Park	9,561

Park Name	Primary Use/ Typology	Size (SF)
Allegheny County		
Soldiers & Sailors Lawn	Campus Green/ Plaza	181,014
Allegheny County, City of PGH, School District of City of PGH		
Boundary Street Playground	Neighborhood Park	19,500
University of Pittsburgh		
Cathedral of Learning	Campus Green/ Plaza	479,865
Forbes Digital Plaza	Small Park	160,344
Pitt Union Open Space	Campus Green/ Plaza	86,281
Hillman Library Open Space	Campus Green/ Plaza	64,800
Darragh Street Park	Small Park	15,927
Fifth Avenue Green Space	Small Park	12,930
Oakland Avenue Farm	Community Garden	10,905
St. Jochims Church		
Shrine of the Blessed Mother	Informal Shrine	1,872



Parks and Open Space

- Steep Slopes (25%+)
- Parks
- Greenways (Preserved Steep Slopes)
- Public Spaces
- Athletic Fields
- Ballfields
- Trails

1/4-MILE WALKING DISTANCE

- Park Access Points
- Frazier Playground
- Schenley Park
- Schenley Plaza

Sources: Trails (2019), Bike PGH; Ballfields (2017), Greenway (2017), Parks (2017), and Public Spaces (2019), City of Pittsburgh; Athletic Fields (2006), Pittsburgh Boundary (2019), Rivers (2015), Streets (2017), Allegheny County.

Frazier Park provides a neighborhood park and recreation space for most of South Oakland, but is located at the very edge of the plateau and so has a smaller walking radius than it would otherwise. Other open spaces in Oakland are small in scale; many exist only because of "leftover" space from the intersecting streetgrid and topography.

Central Oakland and North Oakland are well-outside an easy walking radius of these significant public spaces. North Oakland contains no significant public open spaces, and spaces in Central Oakland are small and primarily. New development, particularly of multi-family housing in these areas, will need to provide additional open space and park amenities to serve additional residents.

In addition to Schenley Park and Frazier Park, Oakland contains the following open space types:

- **Campus Green or Plaza:** ***Hillman Library Open Space, Soldiers & Sailors Lawn, Cathedral of Learning Green, Pitt Union Open Space, Mary Schenley Fountains, and Carnegie Library and Museums Green Space.*** In addition to serving as major landowners and employers in Oakland, the institutions own and maintain significant open spaces, including campus greens and plazas, that support their mission and operations while providing public access. The format of campus greens or plazas varies based on the institutional need and surrounding operations and can included paved or green areas and public art features such as sculpture or fountains.

  The institutions have also partnered with the City to create new open spaces in Oakland, such as at Forbes Digital Plaza and Darragh Street Park, that function as public spaces with less of a direct tie to campus operations.

  A number of adjacent public park areas that are part of the greater Schenley Park system in Oakland – including Schenley Plaza, Mary Schenley Fountain, and the area surrounding the area surrounding the Carnegie Library and Museums – function like campus greens and plazas in support of these major cultural destinations.

- **Beautification Sites:** ***Zulema Park, Bates Street Triangle, Craft Triangle, Oakland Square, and Parkview Median.*** Beautification sites are smaller areas that provide space for visual amenities such as planted medians, landscaping areas, and monuments or art that are not part of a larger park or public space. Many beautification sites have been created because of the city's topography and transportation network; in Oakland a series of triangular beautification sites – including the Zulema Park, Bates Street Triangle, and Craft Triangle – occur where neighborhood street grids intersect on the diagonal. Other beautification sites include Oakland Square and the planted median of Parkview Avenue. These wooded medians and squares are part of the original development of historic Oakland Square.
- Historically, most of these sites have had limited recreational purpose but can contribute to the aesthetic quality and identity of the urban environment. Some have since been improved as small parks, with seating or additional features for public use and enjoyments. Because they are frequently located in areas of significant right-of-way change and topography, they are also potential sites for green infrastructure improvements.
- **Smaller Park Spaces:** ***Zulema Park, Darragh Street Park, 5th Avenue Green Space, Forbes Digital Plaza, Oakland Square, Bates Street Triangle).*** These are small green spaces or paved areas for passive public enjoyment. They frequently include public art features and seating; some beautification sites, such as Zulema Park, have been improved to become small park spaces, and others such as the 5th Avenue Green Space are smaller versions of campus greens or plazas.

  Oakland also includes notable community spaces – the Oakland Avenue Farm, a community garden, and the Shrine of the Blessed Mother, an informal shrine – that do not fall into any of these categories. The Oakland Avenue Farm is a temporary use that will be replaced by future development.

There are other smaller open spaces that were not fully inventoried as part of this effort, including the Dunseith Playground in West Oakland. The Dunseith Playground is a small space that fits within the pattern of houses and residential lots lining Dunseith Street and contains simple playground equipment.

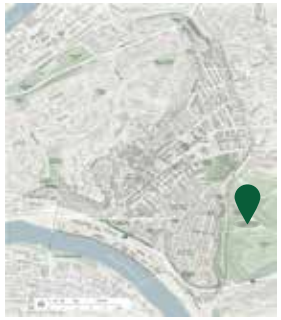
During the 2020 Coronavirus Pandemic, new public spaces were created to allow for social distancing by temporarily closing roads to vehicle access. Photos courtesy of The University of Pittsburgh.

Craft Park, a beautification site formed by the triangular intersection of Boulevard of the Allies, Craft Place, and Craft Avenue functions as part of the road design and traffic control.

Many of the green spaces in Oakland are primarily grass lawns which often lack design elements and amenities that make spaces more usable for people, and also lack the kinds of plantings that provide greater environmental benefit and animal habitat. Open spaces could be better designed and programmed to provide for more outdoor learning, pollinator and bird forage and cover, play areas, gathering spaces, quiet seating areas, and other features that would meet recreational and environmental needs. Improving access to and amenities in existing spaces can also help expand the open space network in Oakland. The following pages discuss context, setting, access, and amenities for Oakland's open spaces.

REGIONAL PARK

SCHENLEY PARK



Schenley Park is a 417 acre regional park that is owned by the City of Pittsburgh and operated by the Pittsburgh Park Conservancy. Schenley Park draws patrons from across Pittsburgh and Allegheny County, providing multiple indoor and outdoor active and passive recreation opportunities; entertainment venues; and special events. The numerous varied resources include the Phipps Conservatory & Botanical Gardens; Bob O' Connor Golf Course; Schenley Park Café and Visitor Center; skate rink, track and field, tennis courts, swimming pool, disc golf, hiking/bike trails, volleyball, restrooms, playgrounds, soccer field, picnic areas, scenic views, dog park, programmed runs, programmed auto racing (Vintage Grand Prix), scenic views, concerts, movie nights, and many open green spaces, memorials, streams corridors, lakes, ponds, and ornamental gardens for passive natural enjoyment.

As a regional park, Schenley Park must provide good vehicular access and parking. Parking lots and on-street parking are provided throughout the park. Primary regional access is from I-376 via Blvd. of the Allies and Panther Hollow Rd. Access to Schenley Park from the surrounding Oakland neighborhood is somewhat constrained by the steep topography and presence of the rail line. There are a few local roads that connect through the Carnegie Mellon campus directly into the park, but access from the west is primarily limited to Schenley Drive Bridge and Blvd. of the Allies Bridge. These bridges do have sidewalks and Schenley Drive has a protected bike lane that extends into the park. There is a HealthyRide bike share station at the park entrance at Schenley Drive and Frew St. Within the park, main streets are wide and cater to automobiles, but most have wide sidewalks that connect to the numerous trails. Several roads, however, have inadequate or no sidewalks or bike lanes, including Beacon St., Prospect Drive, Overlook Drive, W. Circuit Rd., and parts of Schenley Drive. These roads provide on-street parking, but limited pedestrian access to get from the parked car to other areas of the park.

Ownership	City of Pittsburgh
Size	18,164,520 sf
% Green Space	95%
% Hardscape	5%
Activities/ Programming	Active and Passive Uses, Green Areas, Public Art, Lawn, Ornamental Gardens, Golf Course, Skating, Tennis, Baseball, Disc Golf, Swimming Pool, Hiking/Bike Trails, Sportsplex & Skate Rink, Restrooms, On-Leash Dog Playground, Playgrounds, Programmed runs, Programmed auto racing, Scenic Views, Track & Field, Tennis Courts, Disc Golf, Soccer Field, Picnic Tables, Bike Parking, Phipps Conservatory & Botanical Gardens
Posted Hours	6 am to 11 pm daily. Extensions by permit only.
Posted Rules	Swimming and wading are allowed in designated areas only. Pets should be on a leash at all times; pick up after your pet. Playgrounds, fields, and courts are off-limits to pets. Dispose of trash in appropriate containers or carry home. Build fires in designated cooking areas only; put out fires thoroughly. Leave restrooms neat and sanitary. Alcoholic beverages are allowed by special permit only. Do not remove or vandalize structures, natural resources, or equipment. Glass containers are not permitted in the park. Solicitations, vending, and sign posting are allowed by special permission only. Do not attach signs to trees or shrubs. Noise levels, including sound equipment, much conform to Ordinance 601.04. The City may eject any person violating any park rule or regulation. The City may confiscate items that violate park rules or regulations.
Lighting Style	Auto-Utilitarian


FREW ST
NORTHUMBERLAND ST
BLVD OF THE ALLIES
I-376
SOCCER FIELDS
FRISBEE GOLF
TENNIS COURTS
SPORTSPLEX
1
2
3
4
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14


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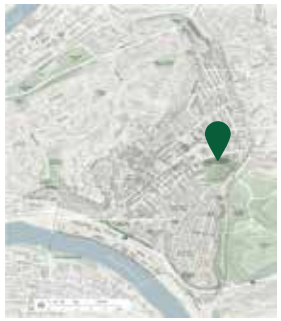
CAMPUS GREEN/PLAZA

CARNEGIE LIBRARY AREA



The network of public green space and plazas surrounding the Carnegie Library and Museum Complex is part of the Schenley Park system that is owned by the City of Pittsburgh and operated by the Pittsburgh Parks Conservancy. This community space surrounds the complex of the City's premier cultural resources (owned by the Carnegie Institute), including the main branch of the Carnegie Library of Pittsburgh, the Carnegie Museums of Art and Natural History, and Carnegie Music Hall. The space is frequently used by museum and library visitors as well as the general public for passive enjoyment of the surrounding architecture, landscaping, and neighboring parks.

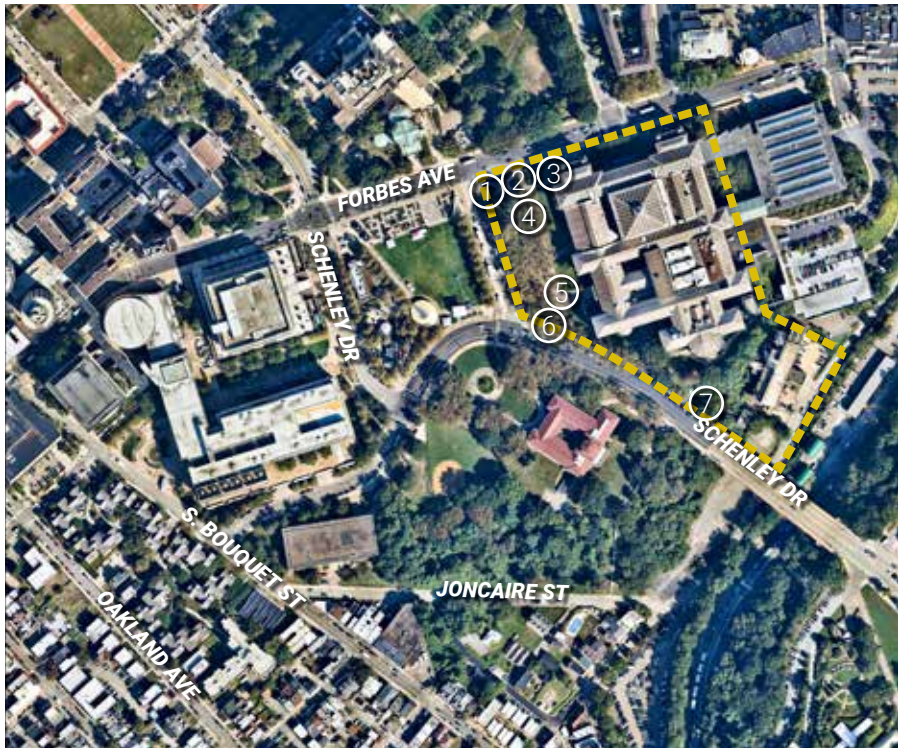
The public space is also located on the same property with the Bellefield Boiler Plant, a historic central steam plant built in 1907 that still provides heat and hot water to the universities and major Oakland buildings. This facility is below grade and is viewable, but not accessible to pedestrians.

The 12-acre public open space is located across Schenley Drive Extension from Schenley Plaza, across Forbes Avenue from University of Pittsburgh's Stephen Foster Memorial building and Cathedral of Learning open space and log cabin replica, and across Schenley Drive from the Mary Schenley Memorial Fountain and Frick Fine Arts Building. The Carnegie Library public open space is primarily for passive use and includes paved pedestrian paths connecting the complex buildings to the adjacent campus and park areas. The space also features benches, bike racks, mature trees, open lawn area, a bike share station, and an open brick paved plaza area. At the time of this writing, the plaza area was cordoned off with temporary construction fencing, indicating improvements are being made.

The primary gateway to the library complex public open space is at the corner of Forbes Avenue and Schenley Drive Extension and features ornamental garden beds on the corner and the statue of "Dippy" the Dinosaur. The main entrances to the Museums of Art and Natural History and Carnegie Music Hall are on the primary Forbes Avenue frontage, with access directly to the sidewalk. The main entrance to Carnegie Library is accessed through the open space plaza and pedestrian network off of Schenley Drive Extension. There is also an entrance to the Lecture Hall in the rear of the complex along Schenley Drive.

Ownership	City of Pittsburgh
Size	543,351 sf
% Green Space	85%
% Hardscape	15%
Activities/ Programming	Active and Passive Uses, Green Areas, Bike Parking, Bike Share Station, Picnic Tables, Lawn, Trees, Public Art, Seating, Picnic Tables, Seasonal Farmer's Market
Posted Hours	No posted hours
Posted Rules	No posted rules
Lighting Style	Auto-Utilitarian

Like the other public spaces within the Schenley Park system, the Carnegie Library and Museum Complex open space has good pedestrian accommodation with signalized crosswalks, wide sidewalks, connected pedestrian paths, bike parking, and a bike share station at the intersection of Schenley Drive and Schenley Drive Extension. On-street parallel parking is provided on both sides of Schenley Drive Extension. On the side of Schenley Drive adjacent to the library complex, on-street parking is diagonal back-out parking instead of parallel parking. Pedestrian amenities that are lacking in this public space include a mid-block crosswalk on Schenley Park Extension



for direct access between Schenley Plaza and the library; sharrows or bicycle lanes on Schenley Park Extension; and pedestrian scale lighting. Light fixtures within the open space area are tall functional streetlights that do not match the traditional human scale lighting in the adjacent public spaces.

COMMUNITY PARK/BASEBALL FIELD

MAZEROSKI FIELD (FORMER FORBES FIELD) OPEN SPACE

Mazeroski Field is a community softball and youth baseball field named for Pittsburgh Pirates star Bill Mazeroski. The field is part of the Schenley Park system that is owned by the City of Pittsburgh and operated by the Pittsburgh Park Conservancy. Mazeroski Field is on what was previously the site of Forbes Field, the third home of the Pittsburgh Pirates, the first home of the Pittsburgh Steelers, and the home for the Negro League Baseball Homestead Grays and NCAA Pitt Panthers. Forbes Field was in operation from 1909 to 1971 and the left outfield wall remains on the site as a sports monument. The original flagpole stands in what was fair territory near the centerfield wall.

Ownership	City of Pittsburgh
Size	25,247 sf
% Green Space	100%
% Hardscape	0%
Activities/ Programming	Ballfield, Soldiers Memorial, Baseball Memorial
Posted Hours	No posted hours
Posted Rules	No posted rules
Lighting Style	Human & Auto Mix

The 0.57 acre Mazeroski youth baseball and softball field is located behind the outfield wall. The field has a fence around it and is accessed through openings in the fence from the sidewalk on Roberto Clemente Drive. The field is also located adjacent to the Mary Schenley Memorial Fountain and Frick Fine Arts Building but is separated from these spaces by fencing. The outfield wall, orientation of the field, and steep slope behind the space means that the recreational area is largely hidden from the view passersby and cut off from surrounding spaces. There is an open courtyard with benches, lighting, small lawn area, mature and new trees, historic flagpole, and the Forbes Field historical marker in front of the outfield wall facing Roberto Clemente Drive. This courtyard is shared with the adjacent University of Pittsburgh Katz Graduate School of Business.

Mazeroski Field and the Forbes Field outfield wall are located on Roberto Clemente Drive, cater-corner from the University of Pittsburgh's Posvar Hall. Roberto Clemente Drive is a two-way street with moderate traffic volumes and on-street parking. There are no bike lanes or sharrows on Roberto Clemente Drive, however, sidewalks are moderately wide and there is a signalized crosswalk at the intersection with Schenley Drive. The park is in the midst of the University of Pittsburgh campus and well connected to campus buildings and surrounding open spaces. There is a small unpaved parking area in front of Mazeroski Field and next to the outfield wall that has a driveway on Roberto Clemente Drive. The parking area is not screened from the street and is not very attractive. The location of the driveway is right before the intersection with Schenley Drive and the start of the Schenley Drive bike lane, an awkward location that could pose some safety hazards for pedestrians and cyclists.


FORBES AVE
SCHENLEY DR
SCHENLEY DR
S. BOUQUET ST
OAKLAND AVE
JONCAIRE ST
1
2
3

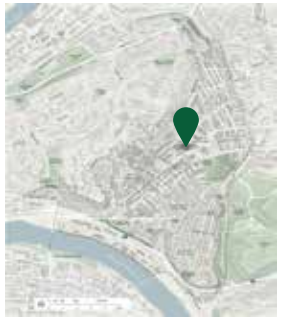

1


2


3

CAMPUS GREEN/PLAZA

SCHENLEY PLAZA

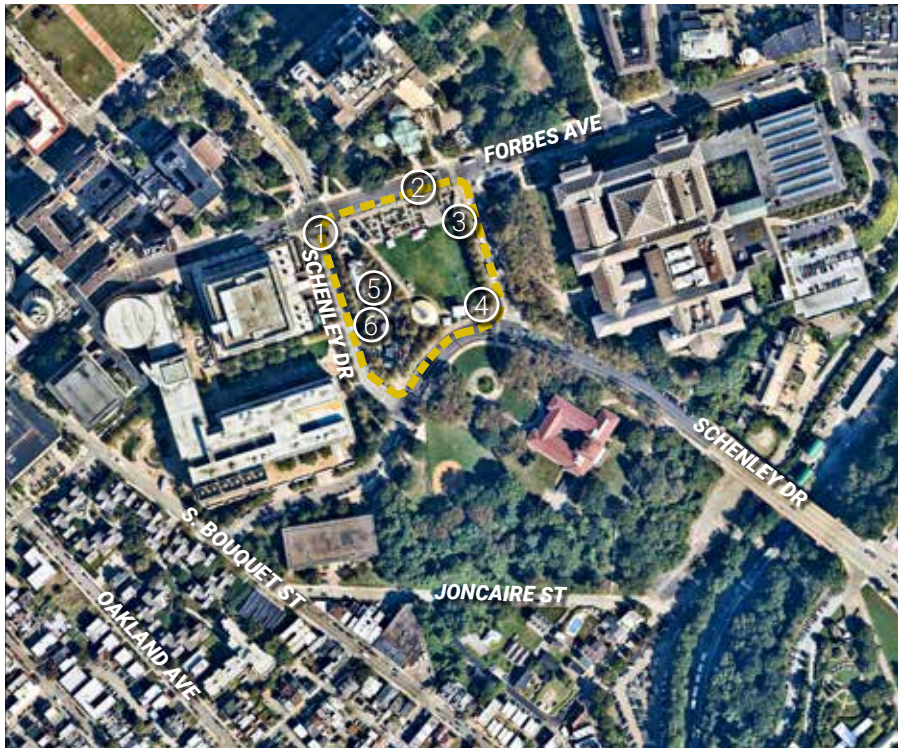


Schenley Plaza is a very active community green space located on the busy Forbes Avenue corridor in the heart of the campuses of the University of Pittsburgh and Carnegie Mellon University. The plaza, owned by the City of Pittsburgh and operated by the Pittsburgh Parks Conservancy, is about 3.6 acres and includes a wide array of active and passive recreation resources plus entertainment, events, dining, and public art amenities. Key features include a one-acre open lawn area; ornamental gardens; the PNC Carousel; the Porch full service restaurant; food kiosks; a tented area, chairs, and café tables; restrooms; traditional pedestrian lighting; security kiosks.

The plaza is bordered by roads on all sides, including Forbes Avenue, Schenley Park Drive, and Schenley Drive Extension. Forbes Avenue is a major multi-modal corridor with high traffic volumes, multiple one-way travel lanes, on-street parking, multiple bus routes, and a dedicated bike lane between the parking and travel lanes. A protected bike lane is located across the street on Forbes Avenue in front of the Stephen Foster Memorial building. Schenley Park Drive runs along the western edge of the plaza then curves to the southern edge. Schenley Park Drive has moderate traffic volumes, two way travel lanes, on-street parking, and a protected bike lane. Schenley Drive Extension is a narrower road with lower traffic volumes, two-way travel lanes, and on-street parking.

Despite fronting on a major transportation corridor like Forbes Avenue and being surrounded by urban roads, pedestrian and bicycle access is very good. There are signalized crosswalks at every intersection and an unsignalized mid-block crosswalk on Schenley Park Drive linking to the Hillman Library pedestrian plaza. Pedestrian activity is high and sidewalks along the plaza are wide and well connected to the plaza's interior pedestrian

Ownership	City of Pittsburgh
Size	159,987 sf
% Green Space	85%
% Hardscape	15%
Activities/ Programming	Active and Passive Uses, Green Areas, Public Art, Lawn, Ornamental Gardens, Outdoor and tented seating, Carousel, Cafe, Programmed family activities, Programmed family entertainment, Free wifi, Restrooms
Posted Hours	6 am to 11 pm
Posted Rules	Enjoy free wireless service; Move the chairs and tables within the Plaza; Use blankets to relax on the lawn, but not plastic material or tarpaulins; Admire the gardens - without entering flower beds, picking flowers or allowing pets to dig in soil; Use one seat on a bench designed for sharing; Walk dogs on a leash on paved areas only, provided you clean up after them; Place trash and recyclables in proper receptacles; Snap souvenir photos of Plaza memories; Request information from Plaza security and other Conservancy staff; Plaza Rules Do Not Allow: Alcohol or drug use; Sports on the lawn; Walking pets on the lawn or through plantscaped areas; Bicycling, skateboarding or skating on any of the pathways; Harming birds, wildlife, park landscape or park property; Amplified music except by permit; Performances except by permit; Commercial activity, advertising or photography except by permit; Obstructing park entrances and walkways; Open fires; Feeding the pigeons; Panhandling; Rummaging in trash receptacles. To report an emergency, call 911
Lighting Style	Human-Aesthetic

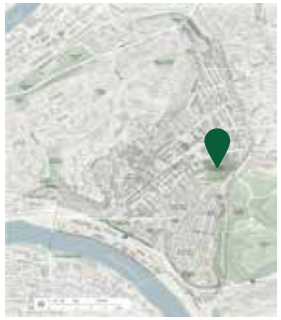


paths. Bicycle racks are provided on the edge of the plaza and a HealthyRide Bike Share station is located at the corner of Forbes Avenue and Schenley Park Drive. Human scale lighting, landscaping, street trees, and streetscape furniture provide pleasant and inviting gateways to the plaza. One exception to the attractive quality of the streetscape on the plaza edge is the presence of utility boxes and a trash storage area on the sidewalk on Schenley Park Drive across from the Pitt School of Education. The trash storage area has a wooden fence that provides some screening, but the utility boxes are not screened with any fencing or landscaping.

Schenley Park Plaza is surrounded by the campuses of the University of Pittsburgh and Carnegie Mellon University, providing a hub of activity for students and university employees. The plaza also provides resources that draw families and other users from throughout the City, including the carousel, restaurants, classes, and events. Schenley Park Plaza is well connected to the surrounding network of campus open spaces, university cultural facilities, and adjacent park spaces such as the Mary Schenley Fountain / Frick Fine Arts Building, Carnegie Library open space, Hillman Library open space, and the former Forbes Field/Mazeroski Field.

CAMPUS GREEN/PLAZA

MARY SCHENLEY FOUNTAIN / FRICK FINE ARTS



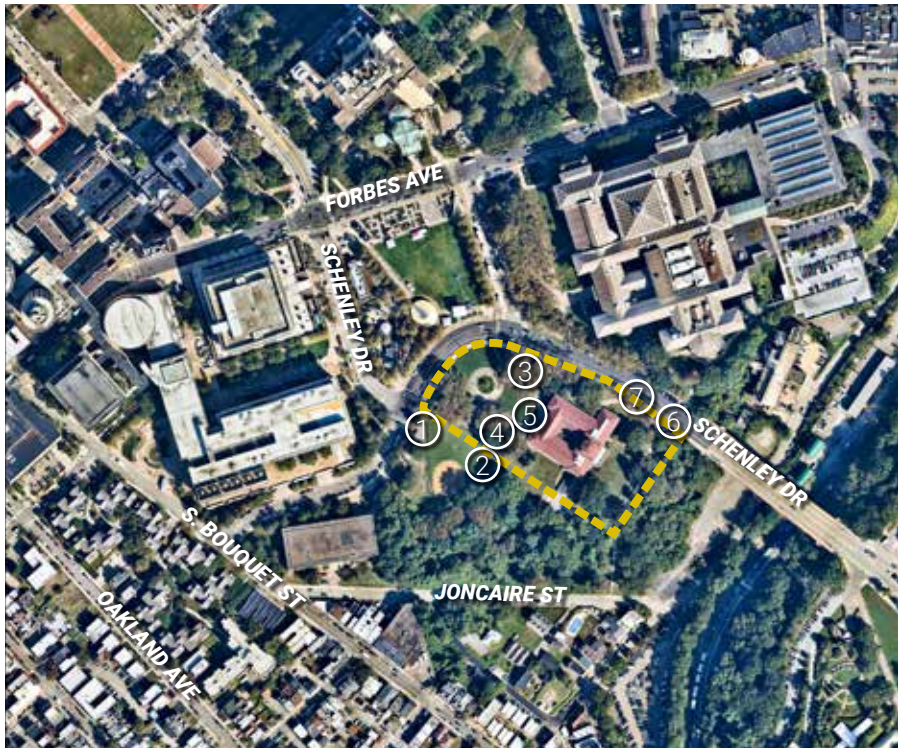
The Mary Schenley Fountain and Frick Fine Arts Building are part of the Schenley Park system that is owned by the City of Pittsburgh and operated by the Pittsburgh Parks Conservancy. According to the Pittsburgh Parks Conservancy website, the fountain is an important city landmark created to honor Mary Schenley's gift of land in 1889 that would become Schenley Park. The Frick Fine Arts Building was constructed in 1965 in the Italian Renaissance style and contains a cloistered garden, public art gallery, recital hall, classrooms, a forty-five foot high octagon capped by a pyramidal roof, and a fine arts library.

These landmarks and surrounding open space are located on 1.2 acres across Schenley Drive from Schenley Plaza and the Carnegie Library and Museum Complex. The community/campus open space is mostly passive with, in addition to the fountain and fine arts building, paved pedestrian paths, open lawn area, benches, bike racks, mature tree canopy, traditional pedestrian scale lighting, historic markers and signage, security kiosks, and public art (Spanish American War Memorial – The Hiker).

Schenley Drive is a moderately busy traffic route with two-way travel lanes and a protected bike lane along the park. On-street parking is located across Schenley Drive adjacent to Schenley Plaza. A HealthyRide bike share station is located across Schenley Drive in front of Carnegie Library. Pedestrian access to the park is good, with wide sidewalks and three signalized crosswalks across Schenley Drive leading to the park space gateways. There is a narrow driveway on Schenley Drive, just before the point where it becomes and overpass, that provides access to a small employee parking and loading area behind the Frick Fine Arts Building. The driveway is narrow enough that it does not disrupt pedestrian access and the parking and loading area is well hidden from the street view.

Ownership	City of Pittsburgh
Size	52,680 sf
% Green Space	85%
% Hardscape	15%
Activities/ Programming	Active and Passive Uses, Green Areas, Lawn, Public Art, Schenley Memorial Fountain, Ornamental Gardens, Henry Clay Frick Library, Bike Parking
Posted Hours	No posted hours
Posted Rules	No posted rules
Lighting Style	Human & Auto Mix

The Mary Schenley Fountain and Frick Fine Arts Building public space area is well connected to the surrounding campus and public space uses, particularly Schenley Plaza and the Carnegie Library and Museum Complex. Although they are separated by the moderate traffic volumes on Schenley Drive, signalized crosswalks provide safe pedestrian access to the public space.


FORBES AVE
SCHENLEY DR
SCHENLEY DR
S. BOUQUET ST
OAKLAND AVE
JONCAIRE ST
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7

COMMUNITY PARK

DAN MARINO FIELD/FRAZIER PARK

The Dan Marino Field/Frazier Park, owned and operated by the City of Pittsburgh, is an active community park located on four acres of land at the intersections of Frazier Street, Dawson Street, and Parkview Avenue in the southeasternmost section of South Oakland. The Dan Marino Field features a well-maintained softball field for youth and adult leagues with lighting for night games. The field is also used for community events and the South Oakland Be A Good Neighbor Block Party. The Frazier Field House, located in front of the softball field on Frazier Street, includes restrooms and hosts community meetings and youth education programs. The Frazier Playground is located adjacent to the field and features half-court basketball and play equipment and benches that are aging and in fair condition. The Frazier Farms community garden is located adjacent to the field house. The garden is owned and operated by the Oakland Community Development Corporation and provides public gardening and farming opportunities for local South Oakland residents.

Frazier Park and Dan Marino Field is located on the southern edge of the South Oakland neighborhood surrounded by residences. The park is also adjacent to the I-376 highway to the south but is separated by woodlands and steep slopes. The park is easily accessible by pedestrians and bicyclists within the surrounding neighborhood. Bicyclists can also access the park from the low traffic residential streets. There is a HealthyRide bike share station located adjacent to the field house on Frazier Street, but no bike racks are provided in or near the park. There is no transit service directly to the park, the closest bus stop is on Boulevard of the Allies and Dawson Street. Marino Field has no parking lot, all parking is on-street, which can be difficult at times during league games.

Ownership	City of Pittsburgh
Size	181,689 sf
% Green Space	85%
% Hardscape	15%
Activities/ Programming	Active Uses, Green Areas, Baseball Field, Playground, Community Garden
Posted Hours	Activity Hours: M 6-8pm Computer hours; T 4:30-6 pm Youth Open Studio; W 4:30-6 pm Youth Open Studio; Th 5-7 pm Chess club; Sun 5:30-7pm Youth Open Studio; First Tuesday monthly 6-7:30 pm song meeting
Posted Rules	Pet Owners Are Responsible for Cleaning Up After Pets; All dogs must be on a leash
Lighting Style	Auto-Utilitarian

The Open Space PGH Plan recommends a “Redevelop” for Frazier Park. Issues with the park identified in the Plan relate to the dominant use of the park as a fenced off ball field, leaving very little room for a flexible and functional neighborhood park. As such, the Plan recommends redeveloping the park by relocating the ball field (or reduce its formality and footprint), providing better access into the site by eliminating the fencing and providing pedestrian access from Whitney Street.


WHITENEY ST
FRAZIER ST
DAWSON ST
PARKVIEW AVE
BOHEM ST
I-376
SECOND ST
1
2
4
3
5
6


FRAZIER FARMS
1


2


DAN MARINO FIELD
3


PET OWNERS ARE RESPONSIBLE FOR CLEANING UP AFTER PETS
ALL DOGS MUST BE ON A LEASH
4


5


6

NEIGHBORHOOD PARK

BOUNDARY STREET PLAYGROUND

Boundary Street Park is a 19,500 square foot neighborhood park located on Boundary Street and south of Yarrow Way and the Panther Hollow Parking Lot in Central Oakland. The park is owned and operated by the City of Pittsburgh and features a hockey court and a playground with a drinking fountain and bench. At the time of this analysis, there was a portable toilet in front of the playground next to the sidewalk. Several local in-line hockey leagues use the court as well as neighborhood pick-up team.

The park is located in a fairly remote part of Oakland. Boundary Street is a low traffic residential street that forms the eastern edge of the Oakland neighborhood, separated from Schenley Park by steep slopes and the rail line. The street is primarily bordered by preserved steep slope areas that are not developable, but there are a few residences surrounding the park. Boundary Street does have a sidewalk and on-street residential permit parking along the park that extends from Yarrow Way to about 50 feet past the park, where the last residence is located. At this point, Boundary Street becomes an access drive to the Junction Hollow Trail, where cars can park on the street and cyclists can ride to access the trail.

The Open Space PGH Plan recommends a “Relocate, Divest or Naturalize” strategy for Boundary Street Park. Issues with the park identified in the Plan relate to the isolation of the park from the nearby dense Oakland neighborhood and not serving much of the neighborhood. The Plan recommends relocating the park to another site, possibly the Zulema Park, which is more accessible and better suited to serve more of the neighborhood. Activating Zulema Park would require streetscape treatments to reduce the impacts of the surrounding major streets. The Plan also recommends divestment of the park if an alternate owner can be found or, if not, to naturalize the site.

Ownership	Allegheny County, City of Pittsburgh, School District of City of Pittsburgh
Size	19,500 sf
% Green Space	90%
% Hardscape	10%
Activities/ Programming	Active Uses, Green Areas, Trees, Playground, Basketball Court, Funnel Ball, Seating
Posted Hours	No posted hours
Posted Rules	No posted rules
Lighting Style	Street Lights Only

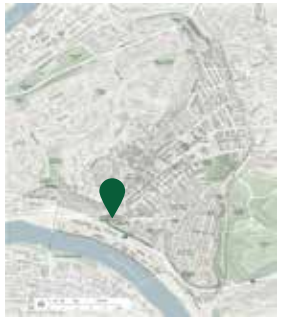

BOUNDARY ST
DAWSON ST
1
2


1


2

BEAUTIFICATION SITE/NEIGHBORHOOD PARK

LAWN & OPHELIA PARK



The neighborhood park located at the intersection of Lawn and Ophelia Streets, owned and operated by the City of Pittsburgh, provides a playground and greenspace for the adjacent Oakcliffe neighborhood in South Oakland. The park is bordered by sidewalks along Lawn and Ophelia Streets, which are in fair to good condition. Pedestrians can easily access the park from the adjacent neighborhoods south of Forbes Avenue. The park is adjacent to a Hwy 885 off ramp and areas to the north cannot safely cross Forbes Avenue to access the park by foot or bike. The park is well maintained and provides playground equipment and seating areas that aging and in fair condition. The park is primarily enjoyed by families in the immediate Oakcliffe neighborhood.

The 2013 Open Space PGH Plan recommendations for Lawn and Ophelia Park are Divest and Naturalize. Divest means to transfer all or part of the property to another City department, sell the property, or transfer ownership to another non-city entity. Naturalize means to revegetate the property with appropriate species (riparian or upland), restore ecosystem or riparian processes, or remove invasive species or non-native vegetation. The City has partnered with the Pittsburgh Water and Sewer Authority (PSWA) with plans to transform the park to a naturalized public space for stormwater management. The plan requires transfer of maintenance to PSWA and ultimate removal of the playground equipment and redesign of the park into a community gathering space with stormwater management features, including rain gardens, vegetated curb bump-outs, and native meadow plantings. The intent of the transformation is to transfer maintenance costs to another agency (PSWA) to allow for investment in the nearby Niagara Park, a more centrally located and accessible park, for active recreation improvements.

Ownership	City of Pittsburgh
Size	13,097 sf
% Green Space	75%
% Hardscape	25%
Activities/ Programming	Passive and Active Uses, Greening, Trees, Lawn Seating, Playground
Posted Hours	Park opens at 6 am; Closes at dusk
Posted Rules	Dogs are not permitted on playground and courts at any time. All violators subject to fine and/or imprisonment.
Lighting Style	Auto-Utilitarian


FORBES AVE
BLVD OF THE ALLIES
OPHELIA ST
LAWN ST
I-376
1
2
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1


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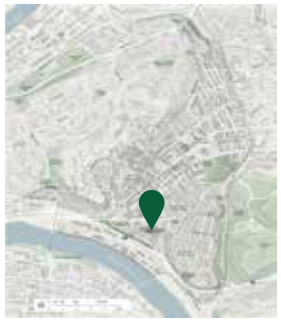
3


PARK OPENS
at 6 AM
CLOSES at
DUSK
DOGS ARE NOT
PERMITTED ON
PLAYGROUND
AND COURTS
ALL VIOLATORS
OR
4


5

NEIGHBORHOOD PARK

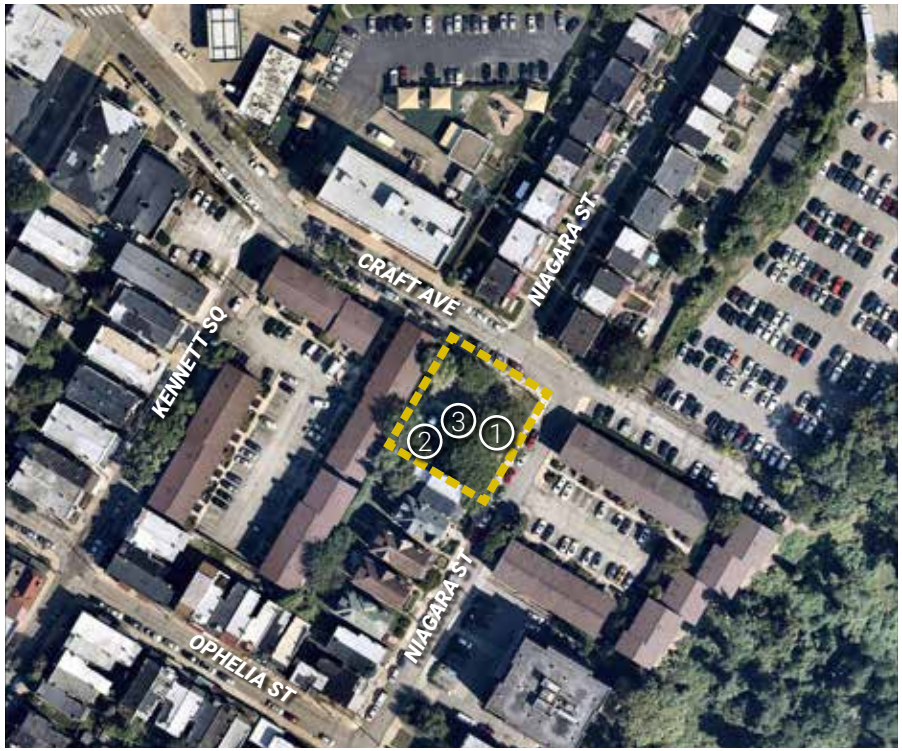
NIAGARA PARK



The Niagara Park is a small neighborhood park at the intersection of Niagara Street and Craft Avenue in South Oakland. The park is surrounded by a mix of moderate and high density residences and some businesses and institutions, including Magee Women's Hospital and the Children's Center of Pittsburgh. The Niagara Park provides active and passive recreation resources for the neighborhood, with playground equipment, seating, and a basketball half court. Once a year, the University of Pittsburgh hosts a series of neighborhood block parties throughout Oakland, including the Oakcliffe block party in Niagara Park. These "Be A Good Neighbor Oakland Block Parties" bring together students, long-term residents, University officials, Pittsburgh Police, elected officials, and community organizations to connect with their community. The park is easily accessible for pedestrians and cyclists, with wide sidewalks along narrow residential streets. Currently there are no bike racks, bike share stations, or bike lanes near the park.

The playground equipment and park amenities in Niagara Park are currently dated and are in fair to poor condition. The 2013 Open Space PGH Plan recommends future City investment in the park. In 2019, the Department of Public Works prepared a concept plan, with input from the community, for renovations to Niagara Park. Proposed improvements include relocation of the half-court basketball court, new safety surface and playground equipment, upgraded perimeter fencing, and new seating options. Implementation of these improvements are planned for the 2020 construction season.

Ownership	City of Pittsburgh
Size	9,561 sf
% Green Space	50%
% Hardscape	50%
Activities/ Programming	Passive and Active Uses, Basketball Half Court, Green Areas, Trees, Lawn, Seating, Playground
Posted Hours	Not posted or illegible
Posted Rules	No throwing trash on the ground; no bicycles in the playground; no rollerblading and skatebording; no throwing sticks and stones; (next several rules are illegible); Children must have supervision
Lighting Style	Street Lights Only


CRAFT AVE
NIAGARA ST.
KENNETT SQ
NIAGARA ST
OPHELIA ST
3
2
1

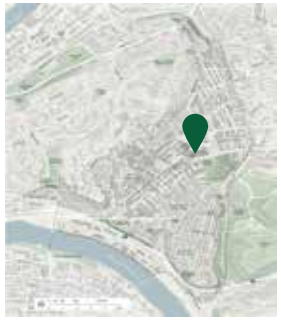

PLAYGROUND RULES
To prevent injury to you and others,
keep this playground in good condition.
Please mind the rules and enjoy yourself.
No-Nos
Throwing trash on the ground.
Bicycles in the playground.
Rollerblading and skateboarding.
pervision.
1


2


3

CAMPUS GREEN/PLAZA

PITT UNION OPEN SPACE



The grounds surrounding the William Pitt Student Union is a highly active campus green space and gathering amenity at the heart of the Pitt campus. The campus green is about two acres of land located directly across Fifth Avenue from the Cathedral of Learning, across Bigelow Boulevard from the Soldiers and Sailors Lawn, and cater-corner to Schenley Plaza across Forbes Avenue. There is also a pedestrian connection linking to the center of Schenley Quadrangle.

The Pitt Union is the epicenter of student activity on campus and the grounds provide a supportive open space environment for student gathering, student events, and student organization activities. The space features open lawn areas, ornamental plantings, mature trees, traditional lighting, table and seating areas, bike racks, pedestrian paths, historic clock, and the iconic Millennium Panther Statue. The Pittsburgh Stop outdoor vendor kiosk sells Pitt sports apparel at the corner of Bigelow Boulevard and Forbes Avenue. The grounds are well connected to surrounding the surrounding campus and business community with crosswalks, wide sidewalks, bike lanes on Bigelow Boulevard and Forbes Avenue, and bus shelter on Bigelow Boulevard. There are vehicular access drives on Forbes Avenue and Fifth Avenue that disrupt the pedestrian flow and feel of the public green space.

At the time of this analysis, Bigelow Boulevard was closed for a major campus infrastructure improvement project. The Bigelow Block Transformation Project was initiated in November of 2019 to align University of Pittsburgh campus infrastructure work with the City of Pittsburgh's Complete Streets plan for Bigelow Boulevard. The reconstruction project, anticipated for completion in August, 2020, entails installing and boring utility lines, relocating and enhancing the mid-block pedestrian crosswalks, upgraded streetscaping and landscaping, traffic calming, and bike connection upgrades. The project also includes upgrades to the Pitt Union grounds, including new landscaping, expanded programmable outdoor space for students, and more seamless and accessible connections with the recently renovated Schenley Quadrangle.

Ownership	University of Pittsburgh
Size	86,281 sf
% Green Space	50%
% Hardscape	50%
Activities/ Programming	Passive Uses, Lawn, Green Areas, Trees, Ornamental Gardens, Seating, Picnic Tables, Kiosk Shopping, Restrooms
Posted Hours	No posted hours
Posted Rules	No posted rules
Lighting Style	Human-Aesthetic


LYTTON AVE
UNIVERSITY PL
THACKERAY AVE
FIFTH AVE
BIGELOW BLVD
FORBES AVE
S. BOUQUET ST
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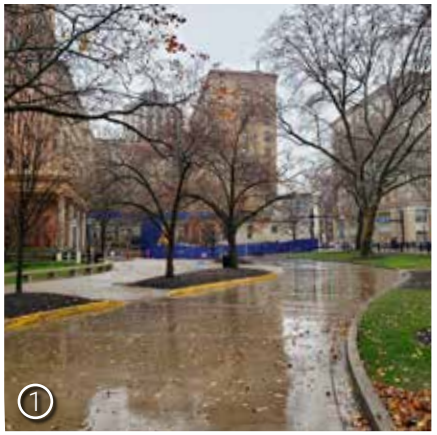
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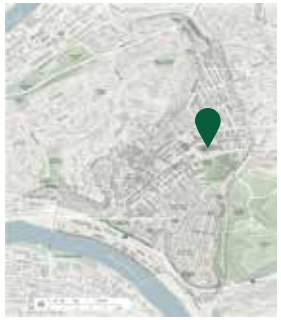
CAMPUS GREEN/PLAZA

CATHEDRAL OF LEARNING GREEN

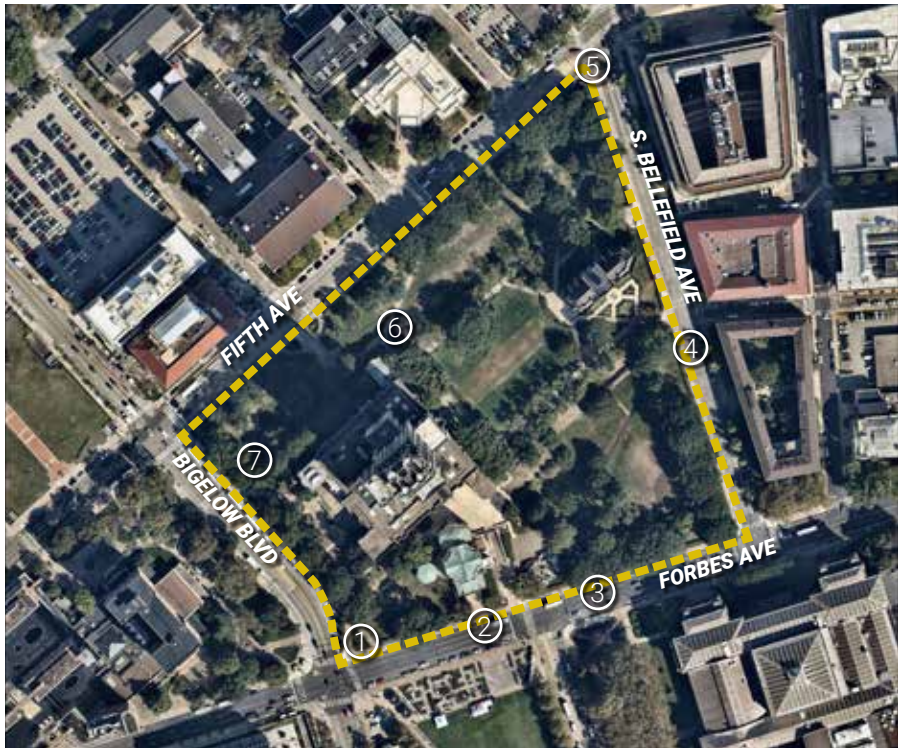


The open space surrounding the Cathedral of Learning tower, owned and operated by the University of Pittsburgh, is a popular public green space and the centerpiece of the Pitt campus. The 42-story Cathedral houses classrooms, academic and administrative offices, libraries, computer labs, a theater, a print shop, and a food court. The campus green space is a popular gathering place for students, employees, and visitors alike, offering seating, paved pedestrian paths, and bike racks amongst landscaped lawn areas, ornamental plantings, mature trees, traditional pedestrian lighting, and architectural landmarks. In addition to the 1920's-era cathedral tower, the grounds include the Stephen Foster Memorial and Charity Randall Theatre, the reconstructed log cabin, and the Heinz Memorial Chapel.

The main entrance to the Cathedral of Learning is on Fifth Avenue. The grounds also border and are accessible from the busy road segments of Forbes Avenue, Bigelow Boulevard, and Bellefield Avenue. Fifth Avenue and Forbes Avenue are the main transportation corridors through the neighborhood and car and bus traffic are heavy. However, sidewalks along all streets are wide and well connected to the interior pedestrian paths. There are signalized crosswalks at all road intersections, providing safe connections to the surrounding academic, cultural, institutional and recreation uses, particularly Schenley Plaza and the Carnegie Museum and Library Complex. There are two additional signalized crosswalks on Fifth Avenue and at Lytton Avenue and Tennyson Avenue, connecting the Cathedral of Learning to Alumni Hall and Langley Library. A bike share station is also located at the corner of Fifth Avenue and Tennyson Avenue.

Ownership	University of Pittsburgh
Size	479,865 sf
% Green Space	80%
% Hardscape	20%
Activities/ Programming	Passive Uses, Chapel, Memorial, Walkways, Historic Log Cabin, Green Areas, Public Art, Lawn, Ornamental Gardens
Posted Hours	No posted hours
Posted Rules	No posted rules
Lighting Style	Human-Aesthetic

The University of Pittsburgh is working with the City of Pittsburgh to enhance and improve the safety of the Fifth Avenue and Bellefield crosswalk area. The sidewalk at Fifth and Bellefield is being extended into the closest lane and all the way around the corner, allowing pedestrians to have a shorter walk across Fifth Avenue.


5
S. BELLEFIELD AVE
FIFTH AVE
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BIGELOW BLVD
FORBES AVE
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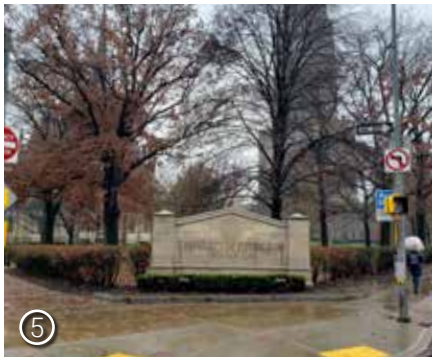
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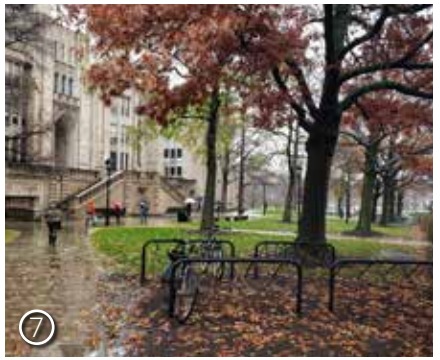
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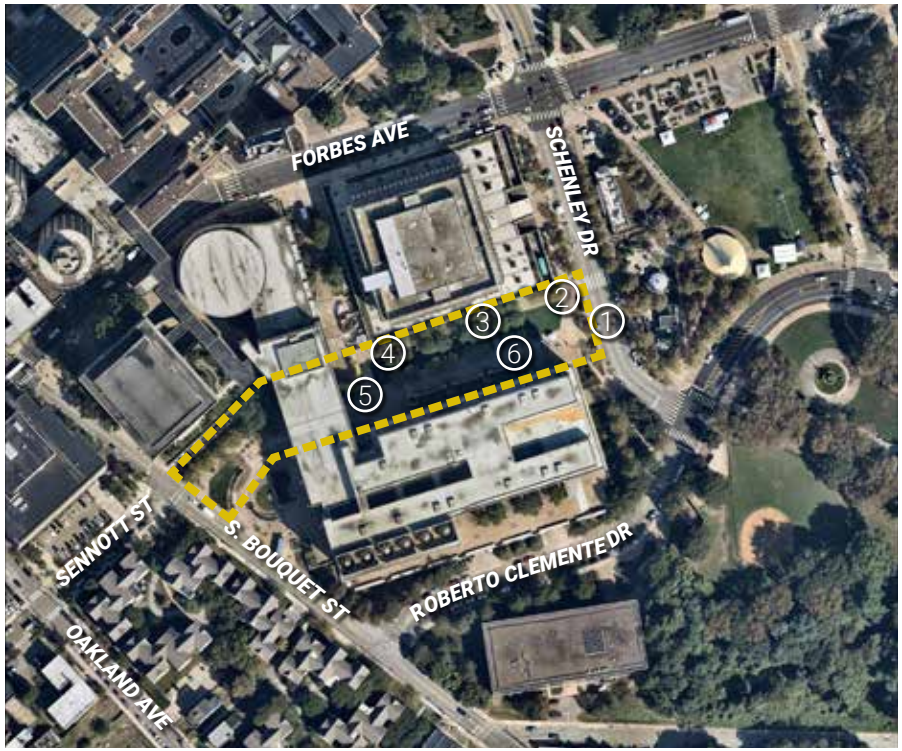
CAMPUS GREEN/PLAZA

HILLMAN LIBRARY OPEN SPACE

The campus open space between Hillman Library and Posvar Hall in the heart of the University of Pittsburgh campus provides a visually engaging pathway for the University community. The linear space provides passive enjoyment with plenty of seating and tables among green spaces, ornamental plantings, trees, traditional style lighting, and public art for students, employees, and the public. Artist Tony Smith's "Light Up", one of the most recognizable pieces of public art on campus, anchors the center of the space.

The space is designed for passive use, primarily for students meeting up or taking a lunch break between classes and study sessions. It's also a semi-active use, providing an engaging pathway across campus with delineated paths for walkers and cyclists and plenty of bike racks. The open space provides direct bicycle and pedestrian access from Schenley Plaza across the Schenley Drive crosswalk, under Posvar Hall to the greenspace and amphitheater on Bouquet Street, and between Hillman Library and Lawrence Hall to Forbes Avenue.

Ownership	University of Pittsburgh
Size	64,800 sf
% Green Space	40%
% Hardscape	60%
Activities/ Programming	Passive Uses, Public Art, Seating, Picnic Table, Green Areas
Posted Hours	No posted hours
Posted Rules	No skateboarding
Lighting Style	Human-Aesthetic


FORBES AVE
SCHENLEY DR
SENNOTT ST
S. BOUQUET ST
ROBERTO CLEMENTE DR
OAKLAND AVE
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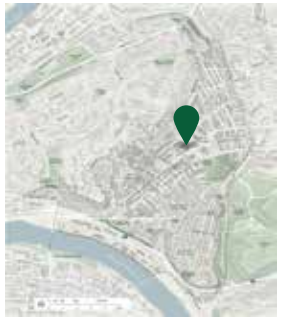
CAMPUS GREEN/PLAZA

SOLDIERS & SAILORS LAWN



The vast lawn area in front of the Soldiers and Sailors Memorial Hall and Museum provides over four acres of public open space in the center of the University of Pittsburgh campus and the Oakland Civic Center. The museum was commissioned in 1905 to honor United States uniformed military personnel how served in war and peace. Allegheny County owns the Soldiers and Sailors property, but the museum and grounds are operated and maintained by the Soldiers and Sailors Memorial Hall and Museum Trust, Inc., a 501(c)(3) nonprofit corporation.

The Soldiers and Sailors Lawn includes a wide and prominent brick inlayed multi-level pedestrian path leading from Fifth Avenue to a large front patio and up the stairs to Memorial Hall. There are also paved paths leading from the sidewalks on Bigelow Boulevard and University Place. The main entrance on Fifth Avenue features a gateway flagpole flanked by memorial cannons on the lawn area and decorative historic lighting. The lawn area features manicured greens, ornamental trees and plantings, and some memorial markers. Seating and user amenities are not provided on the lawn area, which is primarily used for visual aesthetics and memorial reverence. Benches are provided on the sidewalk on Fifth Avenue in front of the lawn. User facilities for seating, informational signage, and memorabilia visitation are concentrated on the patio. The patio is also available for private party rental.

A notable feature of the Soldiers and Sailors green space is the presence of a public parking garage beneath the lawn, owned and operated by the University of Pittsburgh. The garage provides public parking for the museum as well as nearby destinations. There is also a surface parking lot located behind the lawn and patio on University Place used for handicap access and loading. Both vehicular and pedestrian access to the parking garage is available on Bigelow Boulevard and University Place.

Ownership	Allegheny County
Size	181,014 sf
% Green Space	90%
% Hardscape	10%
Activities/ Programming	Passive Uses, Greening, Trees, Lawn, Seating, Public Art and Memorials, Programmed Memorial Events
Posted Hours	No posted hours
Posted Rules	No Skateboarding, Rollerblading, Bicycling
Lighting Style	Human-Aesthetic

Pedestrian access to the Soldiers and Sailors Lawn is excellent. Wide sidewalks and signalized crosswalks at intersections provide safe accommodation. Bike lanes are provided on Bigelow Boulevard but not on Fifth Avenue or University Place. There is a HealthyRide bike share station located across Bigelow Boulevard and directly behind the museum on O'Hara Street. The presence of the parking garage driveways on Bigelow Boulevard and University Place and the surface lot on University Place present some disruption to the pedestrian circulation around the facility.

The Soldiers and Sailors Memorial Hall and Museum has proposed concept plans for major improvements to the lawn area to create a more user friendly and environmentally sustainable garden and park area for showcasing its memorials and prized artifacts. The proposed improvements include a new name, Remembrance Park, a new handicap accessible oval walk, outdoor amphitheater, new statues and monuments honoring veterans, outdoor classrooms, accessible entry ramps, new seating areas, new native perennial plantings, boxwood gardens, and new LED lighting.


O'HARA ST
BIGELOW BLVD
UNIVERSITY PL
FIFTH AVE
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SOLDIERS & SAILORS
MEMORIAL HALL & MUSEUM
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NO
SKATEBOARDING
ROLLER BLADING
BICYCLING
6


7

PARK

DESOTO ST. GREEN SPACE

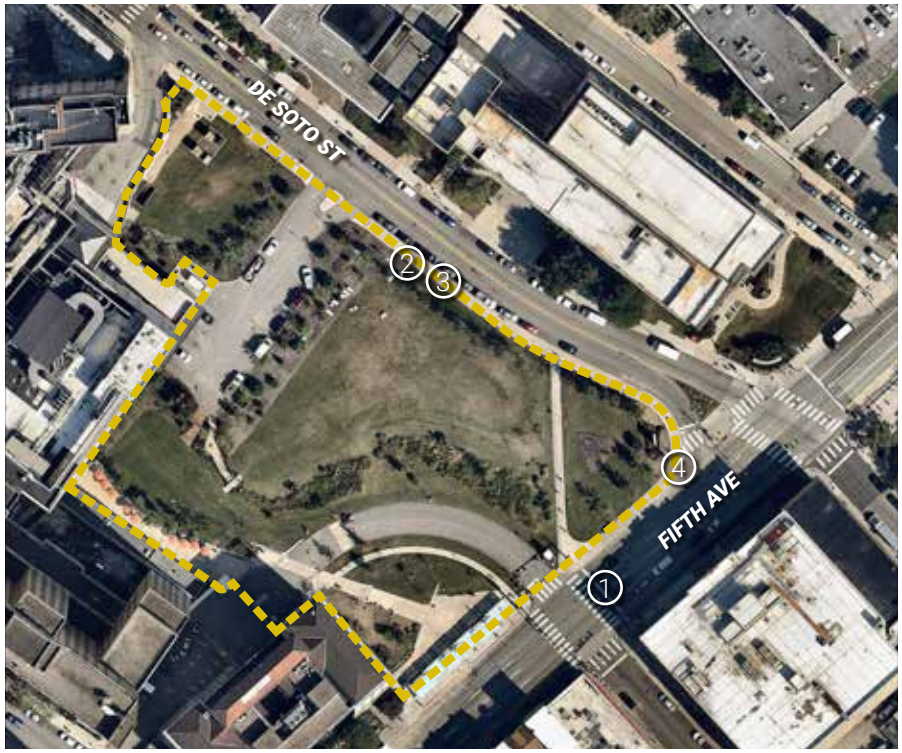
This 2.6-acre urban park serves as the front lawn and gateway to the University of Pittsburgh Medical Center (UPMC) Presbyterian main campus. The DeSoto Street green space is located at the intersection of Fifth Avenue and DeSoto Street and on either side of the Atwood Street access drive that leads to the medical center complex. The green space was once the site of the Children's Hospital of Pittsburgh, which was demolished in 2010. The vacated green space was recently improved with new landscaping and tree plantings, pedestrian scale light posts, and new gateway signage. There is no seating within the greenspace. Seating is limited to the new bus station at Fifth Avenue and Atwood Street.

Ownership	Children's Hospital of Pittsburgh
Size	115,656 sf
% Green Space	95%
% Hardscape	5%
Activities/ Programming	Passive Uses, Greening, Trees, Lawn, Ornamental Garden, Green GSI Features
Posted Hours	No posted hours
Posted Rules	No posted rules
Lighting Style	Human-Aesthetic

The Atwood Bus Station is a major infrastructure investment project by the Pittsburgh Port Authority that was recently opened at Fifth Avenue across from Atwood Street and adjacent to the Atwood Street access drive to the hospital complex. The Atwood bus stop is one of the most heavily used in Pittsburgh. The new station replaced the previous basic bus shelter with a modern structure with glass windscreens to give some protection from the elements, benches, bicycle racks, maps, lighting and a screen showing arrival times of incoming buses.

With the new bus station and central healthcare facilities, pedestrian activity around the green space is very high. Pedestrian access to the DeSoto Street Green Space is very good, there are wide sidewalks along DeSoto Street and Fifth Avenue with signalized crosswalks at the intersections. The sidewalk along the Atwood Street access drive is only on one side, adjacent to the bus station. A sidewalk added to the other side of the drive would improve pedestrian safety. Driveways to hospital parking lots and garages on DeSoto Street create some disruptions in the pedestrian continuity along the park and several large utility boxes located close to the sidewalks should be screened with landscaping or decorative fencing.

The DeSoto Street green space does not provide amenities for seating or passive use. At this time, the primary use of the space appears to be for visual aesthetics and stormwater management. The Institutional Master Plan for UPMC Oakland indicates that the existing remaining hospital building on the site will be expanded on the green space with new medical facilities and parking, although a significant amount of green space will be retained. This expansion plan was recommended in 2014 with a ten year timeframe. Improvements to the green space could include more pedestrian and user amenities with the expansion plan for this very active pedestrian traffic area.


DE SOTO ST
FIFTH AVE
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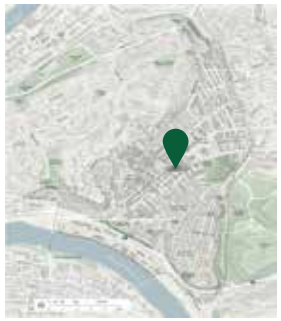
PARK

FORBES DIGITAL PLAZA



Forbes Digital Plaza is a 3,600 square foot urban park located at the busy intersection of Forbes Avenue and S. Bouquet Street. The plaza is owned by the University of Pittsburgh and operated by the Oakland Business Improvement District. The outdoor digital art gallery provides an innovative approach to public space place-making and community branding by showcasing local, national, and international artists, musicians and performers, as well as community information. The plaza's location in the heart of Oakland's urban core provides an open space respite for the shoppers, diners, and workers in the surrounding business and academic community.

In addition to two large digital screens displaying art and information, the plaza provides seating, greenspace, ornamental landscaping, street trees, and decorative traditional lighting for passive enjoyment. Users can take a break between classes, on their way to work, or shopping to check their phones and enjoy a cup of coffee. Pedestrian access to the plaza is excellent, with wide sidewalks, curb bump-outs, and signalized crosswalks and on the adjacent urban streets. There is a HealthyRide bike share station one block away on Fifth Avenue and a one or two bike racks on the sidewalk adjacent to the plaza. A few more bike racks near the plaza would be an improvement. Another area requiring visual improvement is the dumpster area behind the adjacent retail building on Bouquet Street, which should be screened or otherwise relocated.

Ownership	University of Pittsburgh
Size	160,344 sf
% Green Space	60%
% Hardscape	40%
Activities/ Programming	Passive and Active Uses, Green Area, Trees, Ornamental Garden, Seating, Programmed Digital Art Exhibits
Posted Hours	M-Th: 9:00 am - 8:00 pm; F&S: 9:00 am - 10:00 pm; Sun: 10:00 am - 4:00 pm
Posted Rules	No posted rules
Lighting Style	Human-Utilitarian


FIFTH AVE
S. BOUQUET ST
OAKLAND AVE
FORBES AVE
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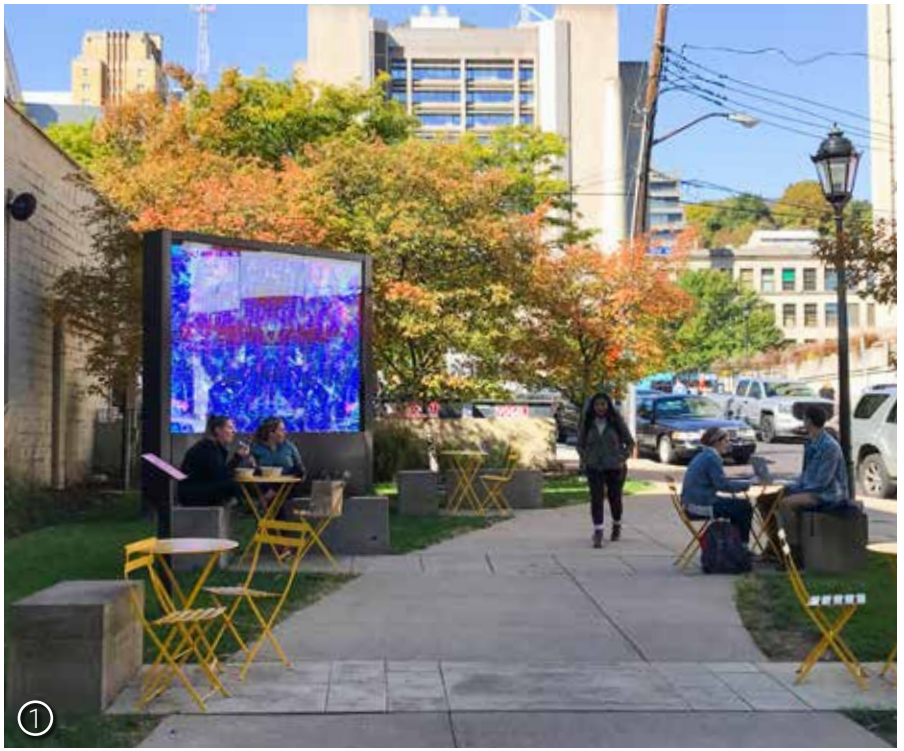
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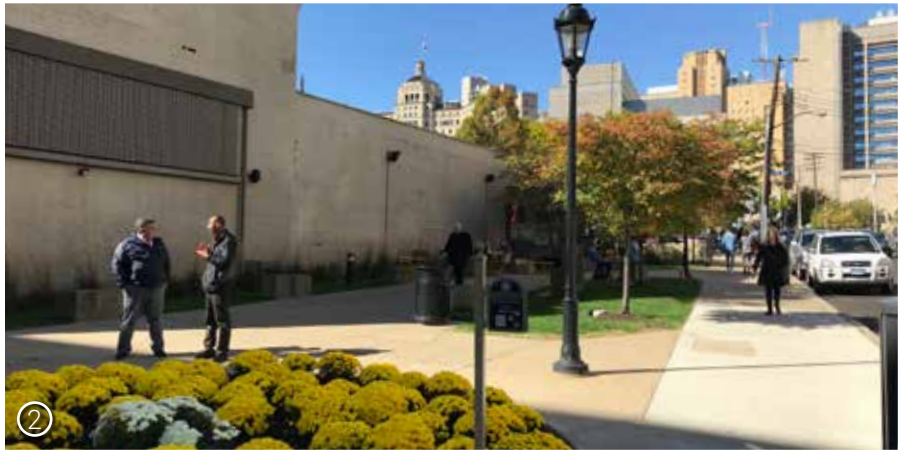

2


3


FDP
FORBES
DIGITAL PLAZA
www.forbesplaza.org
4

BEAUTIFICATION SITE/PARK

ZULEMA PARK

Zulema Park, owned and operated by the City of Pittsburgh, is a triangular shaped green space formed by the intersection of Boulevard of the Allies and Zulema Street, cater-corner from the Bates Street Park and a green triangle at Zulema and Coltart Streets. The park is about 32,000 square feet and features an open lawn area, mature trees, and paved pedestrian paths. There is no seating or other pedestrian amenities in the park. Its primary use is open space preservation and visual aesthetics, providing a green respite and buffer between the surrounding residential neighborhood and the heavily-trafficked Boulevard of the Allies commercial corridor. There is no seating or other amenities in the park, but the green area is flat and well-manicured and the trees are well-spaced, allowing for passive lawn sitting and shade.

Pedestrian access to Zulema Park is fair to poor. Although there are sidewalks along and within the space, there are no crosswalks provided to safely access the park across Boulevard of the Allies or Zulema Street. The closest crosswalks are at the Bates and Zulema intersection and the Bates and Boulevard of the Allies intersections. There are no bike racks or bike lanes along the park, but there is a bike share station across Zulema Street at the triangular green space between Zulema Street and Coltart Avenue.

The Open Space PGH recommends possibly activating Zulema as a neighborhood park by relocating the playground and hockey court from the Boundary Street Park to this location and improving the streetscape to minimize impacts from surrounding major streets. The Oakland 2025 envisioned major transformation of the space by reconfiguring the right-of-way with medians and roundabouts, adding grade separation, and expanding the park to the western edge of Bates Street. The plan then envisioned redevelopment of surrounding parcels to higher-density mixed-use housing.

Ownership	City of Pittsburgh
Size	31,679 sf
% Green Space	95%
% Hardscape	5%
Activities/ Programming	Passive Uses, Green Areas, Trees, Lawn
Posted Hours	No posted hours
Posted Rules	No posted rules
Lighting Style	Street Lights Only


COLTART AVE
ZULEMA ST
BATES ST
BLVD OF THE ALLIES
1
2
3


1


2


3

BEAUTIFICATION SPACE/PARK

OAKLAND SQUARE

Oakland Square is a half acre neighborhood park surrounded by the historic homes on Oakland Square, a one-way residential loop road. The green space is primarily passive and includes open lawn area, mature trees, ornamental plantings, and a paved pedestrian path connecting across the park. One posted sign specifically prohibits dogs from entering the park. Once a year, the University of Pittsburgh hosts a series of neighborhood block parties throughout Oakland, including the Oakland Square block party in the Oakland Square green space. These "Be A Good Neighbor Oakland Block Parties" bring together students, long-term residents, University officials, Pittsburgh Police, elected officials, and community organizations to connect with their community.

Oakland Square is bordered by Dawson Street at the western end, a small two-way residential street. Parkview Avenue, a small two-way residential street that intersects with the Oakland Square loop road, is connected across the park by a paved pedestrian path. On-street residential permit parking is provided along Oakland Square and adjacent streets. There are no sidewalks bordering the park side of the street, but sidewalks are provided along the side of the street adjacent to the residences and traffic volumes immediately surrounding the square are low.

There are three large utility poles with wires strewn across the length of the park that inhibit tree canopy growth. The small concrete curb edge is broken in some places. At the eastern end of the square, there is a larger apron of brick paving along the edge in fair condition. The eastern edge of Oakland Square is at the edge of the topographic line and provides spectacular views overlooking Schenley Park, including the Boundary Street Bridge and Panther Hollow Lake.

Ownership	City of Pittsburgh
Size	24,796 sf (0.56 acre)
% Green Space	99%
% Hardscape	1%
Activities/ Programming	Passive Uses, Green Areas, Trees, Lawn, Ornamental Gardens
Posted Hours	No posted hours
Posted Rules	No posted rules
Lighting Style	Auto-Utilitarian


OAKLAND AVE
ATWOOD ST
OAKLAND SQ
DAWSON ST
SEMPLE ST
1
2
3
4
5
6
7


1


2


3


4


5


6


7

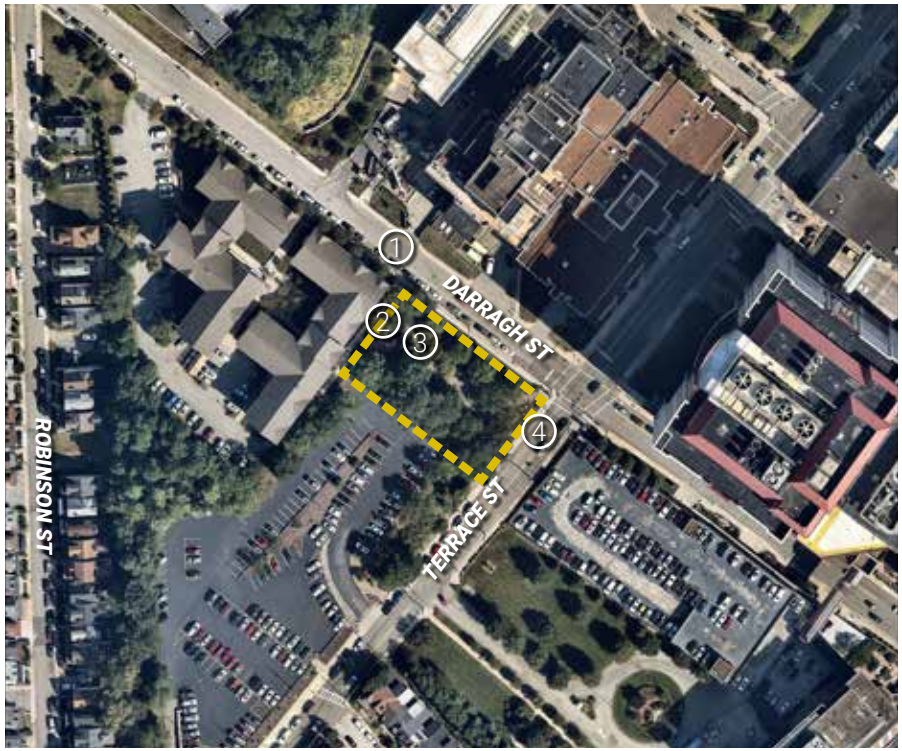
PARK

DARRAGH STREET PARK

Surrounded by the bustling University of Pittsburgh Terrace Street health care campus, Darragh Street Park is well situated to draw fair-weather lunch crowds of health care workers and patients. Fitted with tiered picnic areas, including tables, benches, aesthetic lighting, and grills, the park also provides space for more recreational diners.

The steep, albeit beautifully landscaped slopes and staircases throughout the park present a significant challenge to accessibility. There are no ramps leading up from the sidewalk, and the only possible point of entry for a wheelchair user would be from the adjacent private parking lot. The staircases and picnic areas are planted with ornamental flowers and trees. In fact, Darragh Street Park won the Pennsylvania Horticultural Society Community Greening Award in 2012. The elevation and plantings create a somewhat quiet and peaceful urban oasis for outdoor sitting. This separation, however, reduces the sense that "eyes on the street" are providing an extra measure of security. This is mitigated by the presence of multiple emergency call boxes.

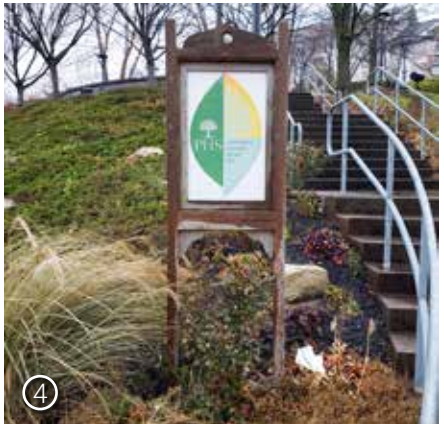
Ownership	University of Pittsburgh
Size	15,927 sf
% Green Space	65%
% Hardscape	35%
Activities/ Programming	Passive and Active Uses, Green Areas, Trees, Lawn, Seating, Picnic Tables
Posted Hours	No posted hours
Posted Rules	No posted rules
Lighting Style	Human-Aesthetic


1
2
3
4
DARRAGH ST
TERRACE ST
ROBINSON ST


1

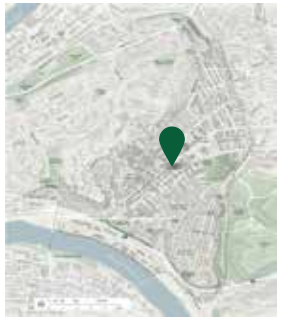

2


3


4

CAMPUS GREEN/PARK

FIFTH AVENUE GREEN SPACE



The urban park located at the busy intersections of Fifth Avenue, Oakland Avenue, and S. Bouquet Street provides about 13,000 square feet of open green space in the heart of Oakland's business, healthcare and academic community. The park, owned and maintained by the University of Pittsburgh, includes open lawn area, traditional lighting, benches, and several bike racks. There is a HealthyRide bike share station directly in front of the park on Fifth Avenue.

The space is adjacent to a surface parking lot on Fifth Avenue, separate by some plantings, but not fully screened from view. The park has some amenities for passive enjoyment, including benches, which are located on the edge of the plaza along the street edge, providing temporary comfort while waiting for buses. Bike racks placed in the middle of the plaza give the feeling that the plaza is intended more for passing visual aesthetics than prolonged passive use.

It is closely located to the more programmed and usable Forbes Digital Plaza; the two open spaces are separated by a surface parking lot. If the parking could be removed and the spaces joined together, it could funciton as a better park and link between Fifth Avenue and Forbes Avenue.

The plaza is easily accessed by pedestrians along Fifth Avenue via wide sidewalks and signalized intersections. Similar large corner green spaces buffering large academic and healthcare buildings can be found across Fifth Avenue.

Ownership	University of Pittsburgh
Size	12,930 sf
% Green Space	95%
% Hardscape	5%
Activities/ Programming	Passive Uses, Greening, Trees, Lawn, Seating, Bike Share Station, Bike Parking, Walkways
Posted Hours	No posted hours
Posted Rules	No posted rules
Lighting Style	Human-Aesthetic


DESOTO ST
FIFTH AVE
OAKLAND AVE
BOUQUET ST
FORBES AVE
1
2
3

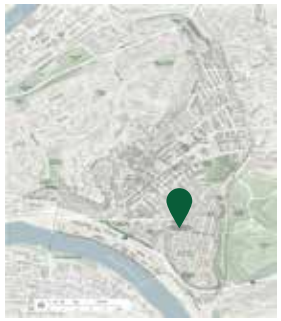

1


2


3

BEAUTIFICATION SITE/PARK

BATES STREET PARK



Bates Street Park is a 12,000 square foot urban park located at the intersections of Bates Street, Boulevard of the Allies, and Juliet Street. It is across Boulevard of the Allies from Zulema Park.

The park is heavily wooded with mature trees and steep slopes. Its primary function is for visual aesthetics and open space preservation, as the topography and dense vegetation prevent the use of the park for active or passive recreation. The front corner of the park along the Juliet Street edges is relatively open, and a diagonal sidewalk provides pedestrian access across the park between Bates Street and the residences along Juliet Street. Surrounding land uses include a mix of residences and small businesses and an electrical substation across Bates Street.

There are no seating or bicycle facilities, although there is a bus shelter on the corner of Boulevard of the Allies and Juliet Street with a bench. Users of the park are generally passing through or waiting for the bus. The park also includes a gateway sign at the corner of Boulevard of the Allies and Bates Street welcoming visitors to South Oakland. Boulevard of the Allies and Bates Street are two of the highest-traffic roads in Oakland, but Juliet Street is a quieter residential street. There are relatively wide sidewalks on Boulevard of the Allies and Juliet Street, but no sidewalks along the park on Bates Street.

There are sidewalks across Bates Street from the park and a signalized crosswalk at the intersection with Boulevard of the Allies. A signalized crosswalk is also provided across Boulevard of the Allies. Juliet Street has an unsignalized crosswalk. Walkability and pedestrian access to the park is fair, there are sidewalks and crosswalks, but traffic is heavy, the crosswalks are faded, and sidewalks condition is poor in some places. There are no bicycle facilities in or near Bates Street Park.

Ownership	City of Pittsburgh
Size	12,120 sf
% Green Space	90%
% Hardscape	10%
Activities/ Programming	Passive Uses, Green Areas, Trees, Lawn
Posted Hours	No posted hours
Posted Rules	No posted rules
Lighting Style	Street Lights Only

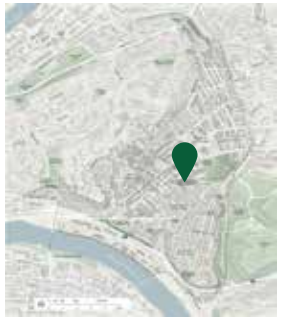

1
BLVD OF THE ALLIES
BATES ST
JULIET ST
2
THORA WAY


1


2

COMMUNITY GARDEN

OAKLAND AVENUE FARM



The Oakland Avenue Farm is an 11,000 square foot community garden on Oakland Avenue near Sennott Street across from the Bouquet Gardens student apartments. The farm is owned by the University of Pittsburgh and run by the Plant to Plate student organization at Pitt, who refer to the garden as "an oasis in the middle of the city." Plant to Plate uses a raised bed system (soil toxicity was an issue) to plant vegetables, greens, herbs, fruits and flowers. The food grown in the garden is donated to the Oakland Community Food Pantry, a food bank located on Lawn Street. Plant to Plate harvests every Wednesday evening and delivers donated produce to the food bank as part of its weekly meetings. The garden is used year round, even in winter, when hardy plants such as kale can be harvested.

The garden consists of several vacant parcels in the middle of a residential block previously occupied by houses in the midst of the University of Pittsburgh Campus. On street permit parking is available on both sides of the street. Pedestrian access is excellent, with relatively wide sidewalks in good condition. The nearest bus stop is at Fifth Avenue and Oakland Avenue, about two blocks away. There are no bike racks on the block and the nearest bike share station is at Bouquet and Sennott Street.

The Farm is a temporary use, as the Pitt IMP sets out of a vision for long-term (10 year) redevelopment of additional student housing as part of the Bouquet Gardens Redevelopment and Oakland Avenue Redevelopment. As redevelopment moves forward, it may be possible to relocate the garden uses to another site, including rooftop or other space.

Ownership	University of Pittsburgh
Size	10,905 sf
% Green Space	100%
% Hardscape	0%
Activities/ Programming	Private Garden
Posted Hours	Work Shifts: Sundays 5-6 pm
Posted Rules	No posted rules
Lighting Style	Auto-Utilitarian

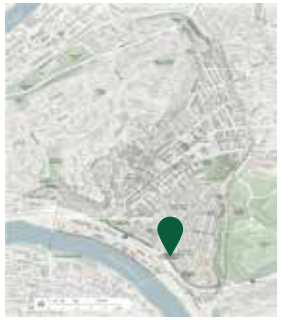

BATES ST
OAKLAND AVE
ATWOOD ST
1
2


1


2

INFORMAL SHRINE

SHRINE OF THE BLESSED MOTHER

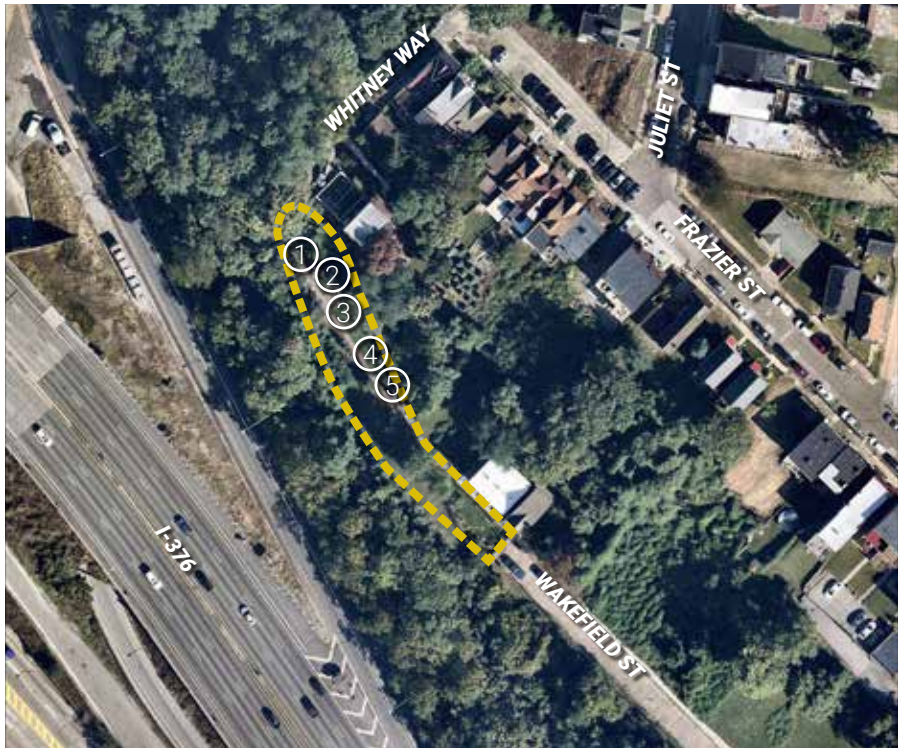


This very distinctive, out-of-the-way Catholic religious shrine is found via a short trail past the dead end on the very quiet Wakefield Street in South Oakland. As a result, the spot is a remote destination, lacking any significant neighboring amenities to draw any visitors who are not directly searching for the shrine. A sign at the corner of Wakefield and Ward Streets reassures pilgrims that they are going the right way. The foot path to reach the shrine hugs a neighboring house, giving the first-time visitor the sense that they are trespassing on private property, however the foot path and land are owned by the City of Pittsburgh.

The roughly 0.5 acre shrine, built by and maintained by devoted volunteers, overlooks Penn Lincoln Parkway and is nicknamed “Our Lady of the Parkway.” Its amenities include a brick walkway, ornamental trees, an information board and other key signage, devotional iconography, human scale lighting, seating, and kneelers (for prayer). In addition to the Parkway, the site overlooks Second Avenue, the Technology Center, and the Monongahela River.

Preservation Pittsburgh and OPDC have worked to nominate the Shrine of the Blessed Mother as a historic landmark.

Ownership	St. Jochim Church
Size	1,872 sf
% Green Space	90%
% Hardscape	10%
Activities/ Programming	Active and Passive Uses, Religious Shrine, Green Areas, Trees, Seating, Occasional Programmed Religious Services
Posted Hours	No posted hours
Posted Rules	No posted rules
Lighting Style	Human-Utilitarian


WHITNEY WAY
JULIET ST
FRAZIER ST
WAKEFIELD ST
I-376
1
2
3
4
5


1


2

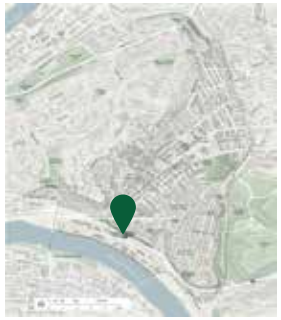

3


4


5

TRAIL/GREENWAY

RIVERFRONT TRAIL SYSTEM



The Riverfront Trail system that extends through South Oakland along the Monangahela Riverfront includes connected segments of the Three Rivers Heritage Trail, Eliza Furnace Trail, Great Allegheny Passage, and the Hazelwood Trail. These trails are multi-use separated paved paths that connect to Pittsburgh's wider regional trail system and Three Rivers Heritage Park, a 15-mile, 880-acre riverfront park system in downtown Pittsburgh. Near Oakland, the trails themselves are distant and disconnected from the riverfront by other land uses and transportation infrastructure.

The Three Rivers Heritage Trail on the north side of the Monangahela River starts in Hazelwood, runs through South Oakland along Second Avenue, extends to Point State Park, then up the Allegheny River to the Strip District. The Three Rivers Trail in Oakland also connects to the south side of the river and the Great Allegheny Passage (GAP) via the Hot Metal Bridge trail, a former rail bridge. The GAP is an iconic rail-trail that runs 150 miles from Cumberland, Maryland to Pittsburgh. The riverfront trail also connects south of Second Avenue to the Hazelwood Trail, a 1.9 mile trail segment along the rail line and closer to the river's edge.

The trail system can be accessed by bus and by car, although there are no clearly defined trailhead parking areas in Oakland. Pedestrian access to the Riverfront Trail system from the rest of Oakland is challenging because of the barrier of the I-376 Highway. The only direct street and sidewalk connection is via Bates Street, which has fair to poor pedestrian conditions. Pedestrian and bike connections to the Junction Hollow Trail and Schenley Park are possible through a winding network of streets and sidewalks and bike lanes in various conditions that ultimately lead to Boundary Street. There are planned connections from Uptown and West Oakland underneath the Birmingham Bridge which would connect to the GAP and Three Rivers Heritage. Further descriptions of future connections are detailed in the Bike(+) Plan.

Ownership	City of Pittsburgh
Size	147,834 sf
% Green Space	40%
% Hardscape	60%
Activities/ Programming	Passive and Active Uses, Green Areas, Trees, Lawn, Ornamental Plantings, Running and Bike Trail, Access to Regional Trail Network
Posted Hours	No posted hours
Posted Rules	No posted rules
Lighting Style	Street Lights Only


FIFTH AVE
FORBES AVE
BLVD OF THE ALLIES
I-376
SECOND AVE
1
2
3
4
5


1


2


3


4


5