



# DC Public Education Landscape

June 4, 2019

# EdScape Beta Table of Contents



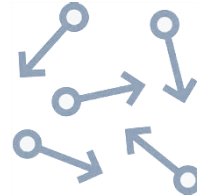
## Chapter 1. Population and Students



## Chapter 2. Public Schools



## Chapter 3. Facilities



## Chapter 4. Enrollment Patterns



## Chapter 5. Neighborhood Factors

## Chapter 5. Neighborhood Factors

How many public school students live in the different types of housing in Washington, DC?

How many public school students may live in the future housing being constructed?

How do adult educational levels differ across the city?

How does car ownership differ across the city?

What are the patterns of violent and property crime in neighborhoods across the city?

Where are early childhood students most ready for school across the city?

## Neighborhood Factors Contents

Residential Housing

Types of Housing

Types of Housing by Ward

Public School Students by Housing Type

Residential Development Pipeline

Educational Attainment for Adults

Vehicle Access

Crime and Safety

Early Development Instrument

Neighborhood Factors - Sources and Methodology

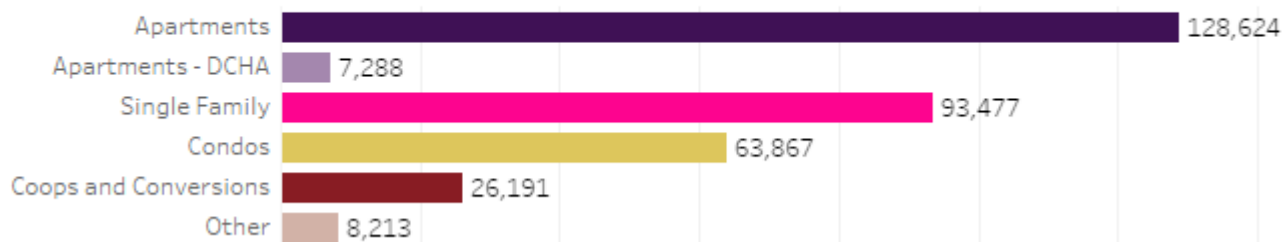
# Chapter 5. Neighborhood Factors

## Types of Housing

Different types of housing (e.g., apartments, single family units, condominiums, and public housing developments) yield different average numbers of public school students who live in them. Understanding the characteristics of the current housing stock and the housing in which public school students live can help when planning for future facility needs. The housing analyses in this chapter build on the administrative data and housing classifications used in D.C. Policy Center’s report, “Taking Stock of the District’s Housing Stock: Capacity, Affordability, and Pressures on Family Housing.”

Citywide, the housing stock in Washington, DC consists of mostly apartment units (approximately 129,000 units) followed by single family homes (almost 93,500) and then condominiums (approximately 63,900). In addition, there are approximately 7,300 units in public housing sites owned and managed by the DC Housing Authority. (See the methodology section for definitions of the different housing types.)

Types of Housing Units - Citywide, 2017



Note: “Apartments - DCHA” represents apartment units in the 56 public housing sites owned and managed by the District of Columbia Housing Authority (DCHA).

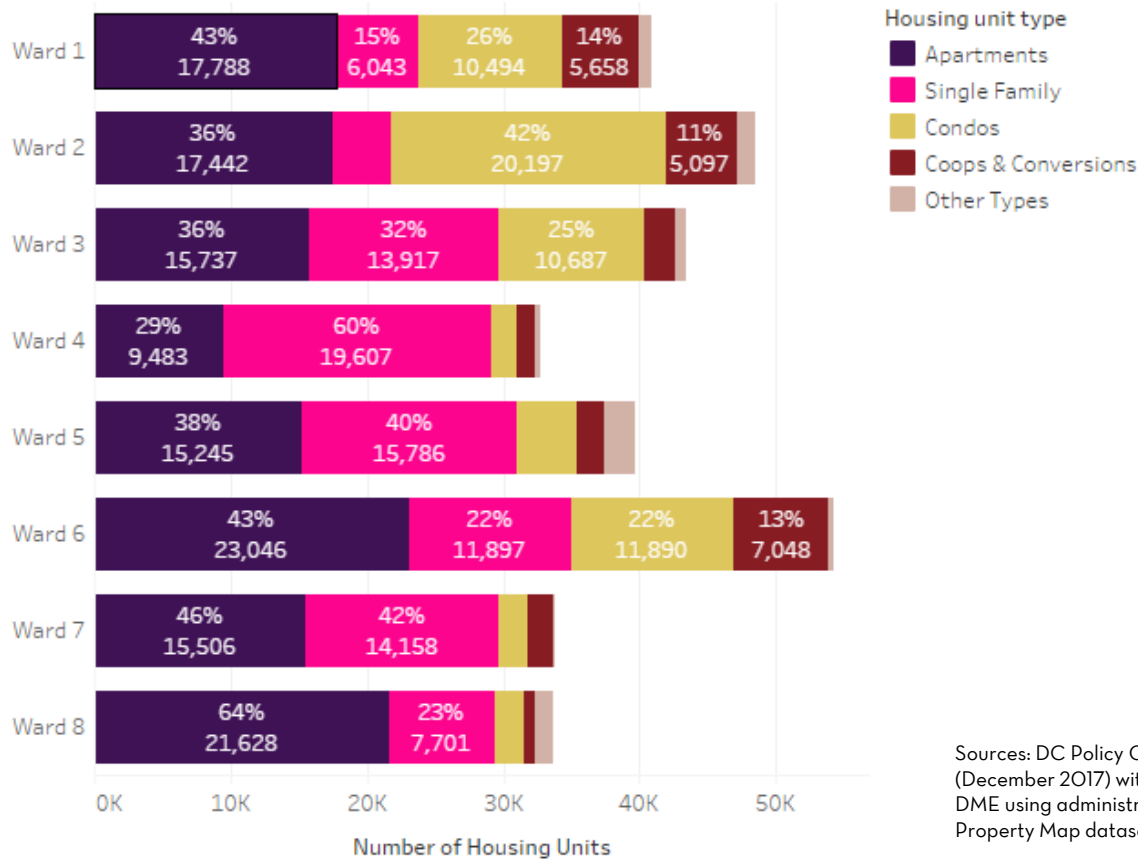
Sources: DC Policy Center housing stock database (December 2017) with additional data and analyses by DME using administrative housing data from DC Vector Property Map datasets

# Chapter 5. Neighborhood Factors

## Types of Housing by Ward

The Washington, DC housing stock varies by ward. Ward 6 has the greatest number of total units of any housing type, followed by Ward 2. Wards 4, 7, and 8 have the fewest total number of housing units. In addition, the type of housing units varies by ward. For instance, Ward 6 has the most apartment units while Ward 8 has the highest proportion of apartments in its housing stock (64% of the total units). Ward 4 has the most single family units and the highest proportion of single family units of any ward (approximately 19,600 units representing 3/5 of all units in the ward).

Types of Housing Units - Ward, 2017



Sources: DC Policy Center housing stock database (December 2017) with additional data and analyses by DME using administrative housing data from DC Vector Property Map datasets

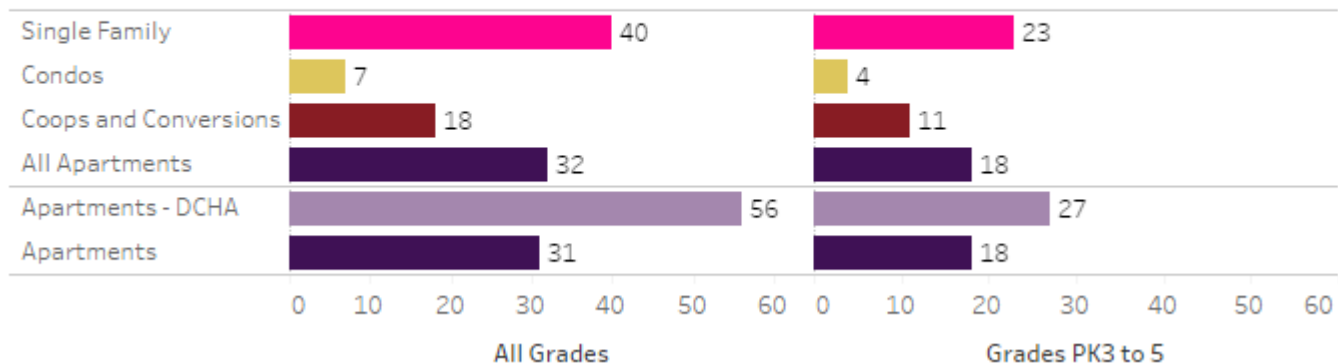
# Chapter 5. Neighborhood Factors

## Public School Students by Housing Type

This section examines how many public school students live in the different types of housing units (i.e., “the student yield”). This information can be used to estimate how many public school students may live in future residential developments. Citywide, 100 units of housing of any type yielded 28 public school students (all grades) in SY2018-19. Single family units yielded the most of any single type (40 students per 100 units), followed by apartments (32 students per 100 units), and condos yielded the least (7 students per 100 units). When apartments are differentiated by those owned and managed by the DC Housing Authority, the rate increases to 56 public school students per 100 DCHA units, the rate increases to 56 public school students per 100 DCHA units.

Whether future housing developments are apartments or condos will have a significant impact on the number of future students who may live there. This is an important consideration for future school facility planning.

Public Student Yield per 100 Units by Housing Type - Citywide, SY18-19



Sources: DC Policy Center housing stock database (December 2017) with additional data and analyses by DME using administrative housing data from Vector Property Map datasets and OSSE Audited Enrollment (SY18-19)

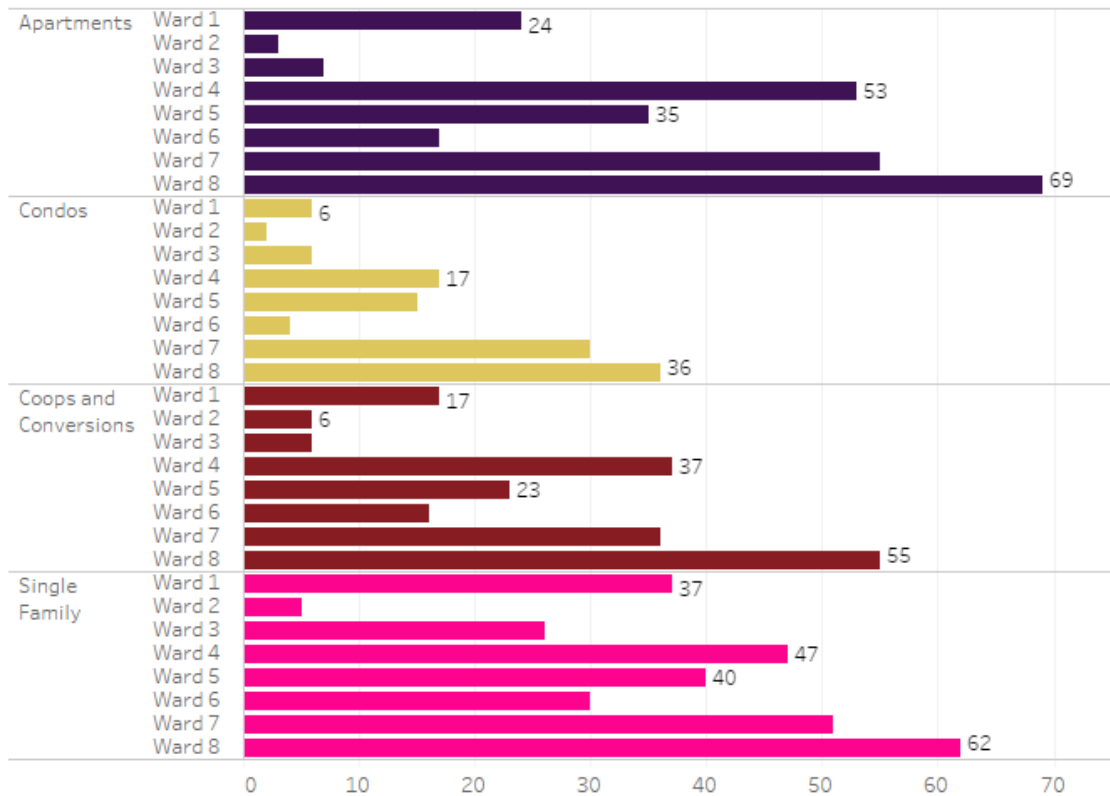


# Chapter 5. Neighborhood Factors

## Residential Development Pipeline by Ward

Looking at the student yield per housing type for each ward, units in Ward 8 had the greatest public student yield irrespective of housing type. This is unsurprising since Ward 8 is home to the greatest number of public school students across all of the wards.

Public Student Yield per 100 Units by Housing Type - Ward, SY18-19



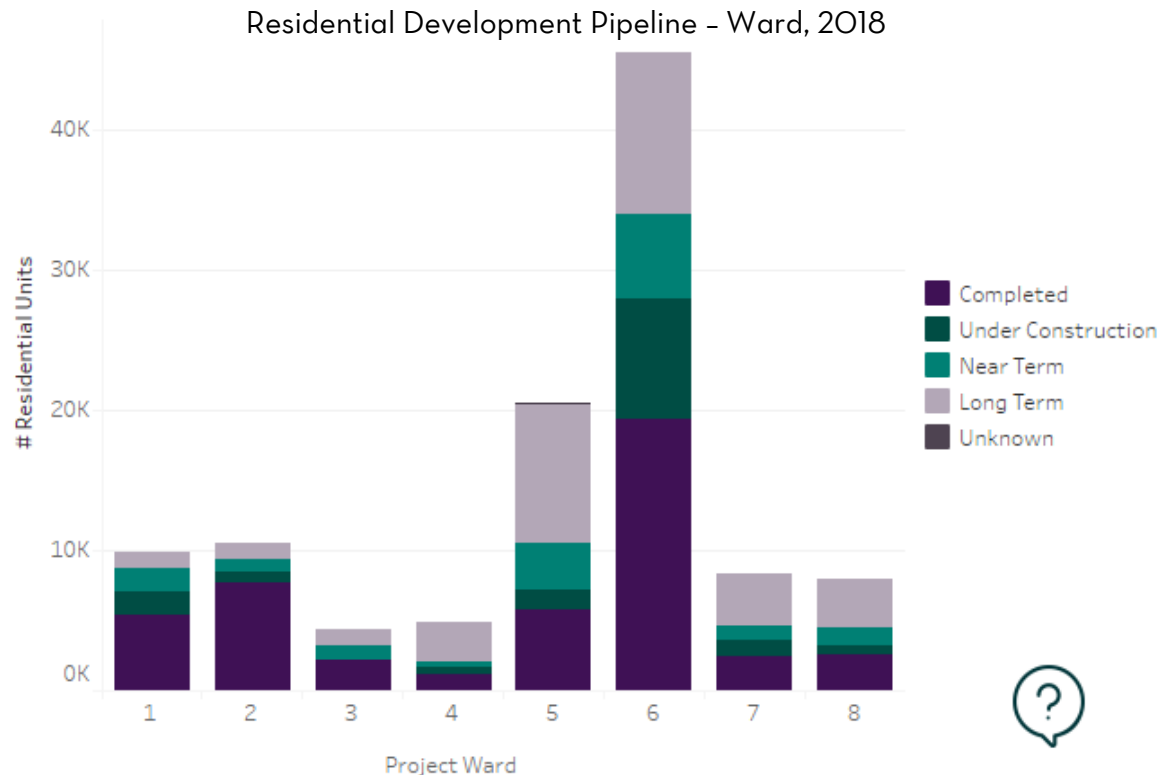
Sources: DC Policy Center housing stock database (December 2017) with additional data and analyses by DME using administrative housing data from Vector Property Map datasets and OSSE Audited Enrollment (SY18-19)



## Chapter 5. Neighborhood Factors

### Residential Development Pipeline Projects

Residential housing development has been robust in Washington, DC over the last decade. Ward 6 has experienced the most with nearly 20,000 completed residential units, 8,600 units currently under construction now, and another 6,000 planned in the near term. In addition, there are over 11,000 units that could be potentially developed in the long-term (anywhere from 2 to 15 years). It is uncertain when these long-term projects will actually be built nor exactly what housing type (i.e., apartment versus condo) since the developer may revise based on the economy and the market.



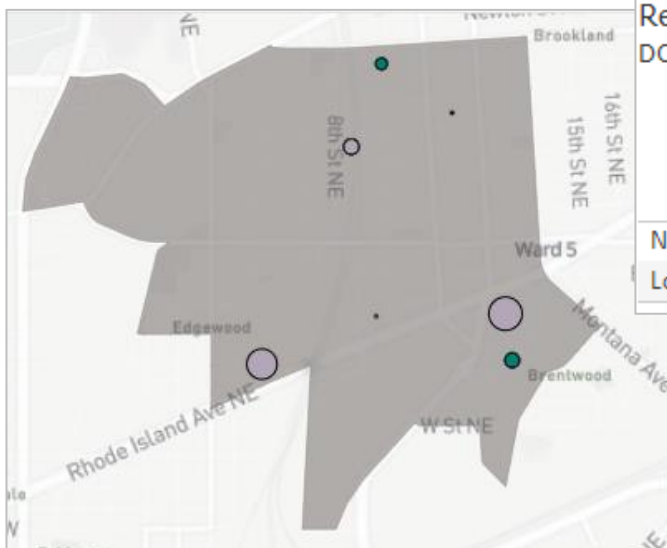
Sources: Washington DC Economic Partnership (November 2018), DC Office of Planning, DMPED Project Pipeline Database, DC Vector Property Map Database



# Chapter 5. Neighborhood Factors

## Estimated Student Yield from Residential Development Pipeline

Based on the future residential development information and historic public school student yields described earlier, the number of potential public school students who may live in these potential new developments can be estimated. For illustrative purposes, below is the estimated number of expected new residential housing units in 2-3 years (near term) and 5-15 years (long term) in the Noyes elementary school boundary, and the estimated number of public school students that may live in them. In the near term, this area is expecting 544 residential units potentially resulting in 197 public school students living there. In the long term, this is increased to an additional 3,581 potential residential units and 1,196 potential public school students. Note that these are estimates based on historic enrollment patterns and students in the new units may not represent students new to the public school system nor the boundary.



	Noyes				
	# Rental units	# Condo units	# Single Family un..	# Unknown..	# Resident ial Units
Near Term	413	0	131	0	544
Long Term	1,329	114	0	2,138	3,581

Potential public school students estimated using the methodology described in the Sources section:  
**Near Term: 197 public school students**  
**Long Term: 1,196 public school students**

Notes: The interactive dashboard allows the user to choose different neighborhoods to see the estimated number of public school students that may live in other near-term and long-term residential housing development projects.

“Unknown type” is used because the developer has not yet indicated if the units will be rental, condo, single family, etc.

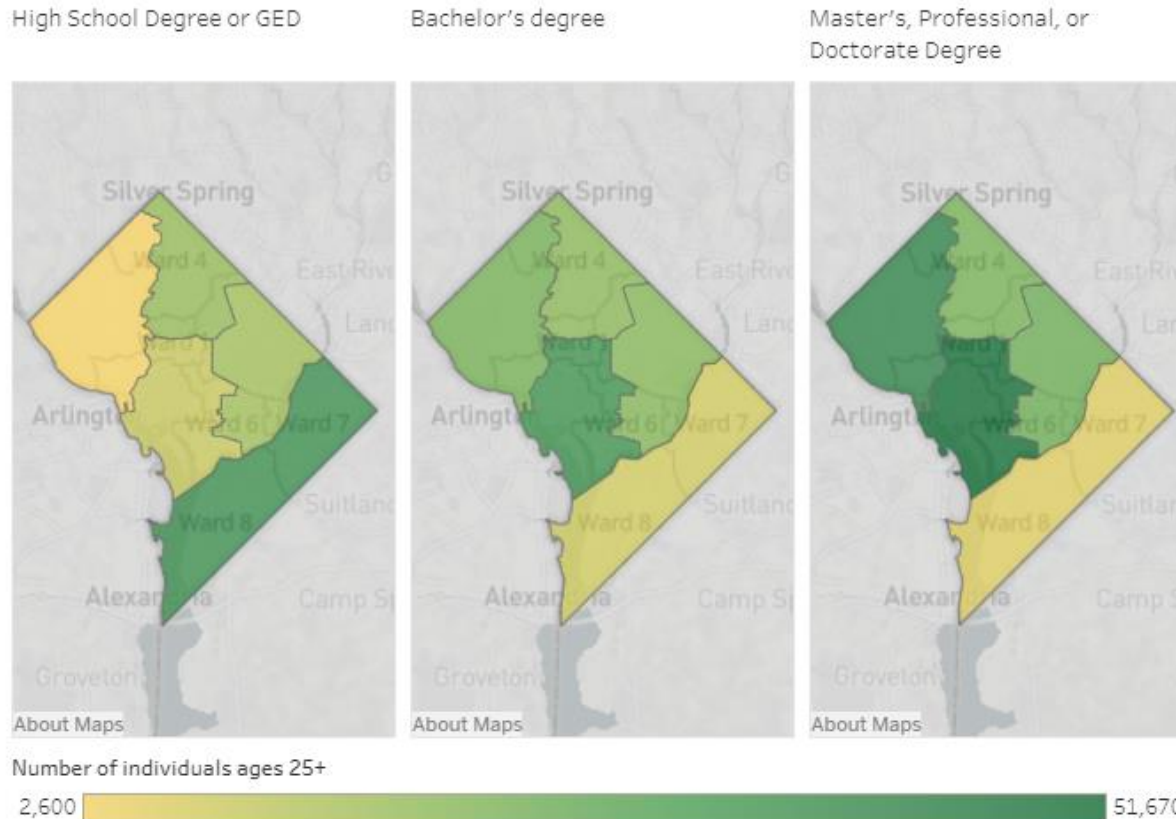
Sources: Washington DC Economic Partnership, DC Office of Planning, DMPED Project Pipeline Database, DC Vector Property Map Database

# Chapter 5. Neighborhood Factors

## Educational Attainment for Adults

The American Community Survey estimates adults' highest level of schooling by five geographies called Public Use Microdata Areas (PUMAs) (similar to but not the same as wards). More adults living in PUMA “east” (or in Wards 7 and 8) had a high school diploma or GED equivalent as their highest educational level compared to other parts of the city (estimated between 2012 and 2016). More adults living in PUMA “central” and PUMA “west” have bachelor’s degrees or higher (master’s, doctorate, or professional) compared to other parts of the city.

Highest Educational Attainment, 2012-2016



Source: American Community Survey, 5 Year Estimates (2012-2016), Table B15002

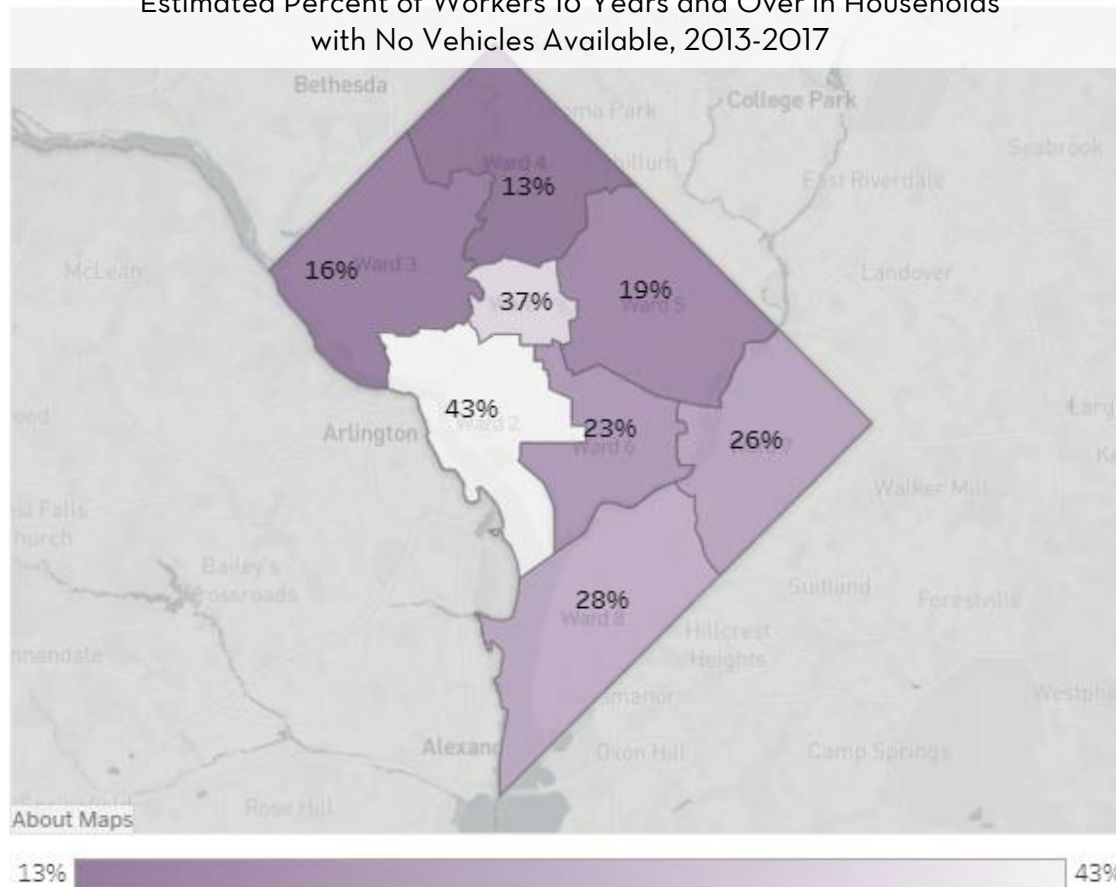
EdScape Beta

# Chapter 5. Neighborhood Factors

## Vehicle Access

The following map shows the areas of the city where workers 16 years and older in households do not have access to a vehicle. Wards 1 and 2 - the densest parts of the city with the greatest access to public transportation - have the least vehicle access at 37% and 43%, respectively.

Estimated Percent of Workers 16 Years and Over in Households with No Vehicles Available, 2013-2017

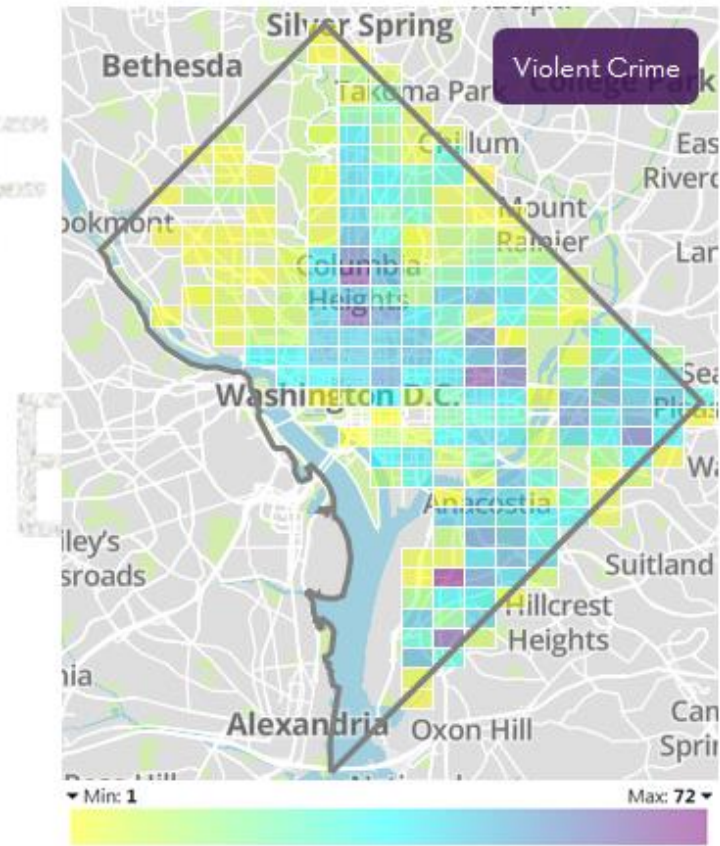
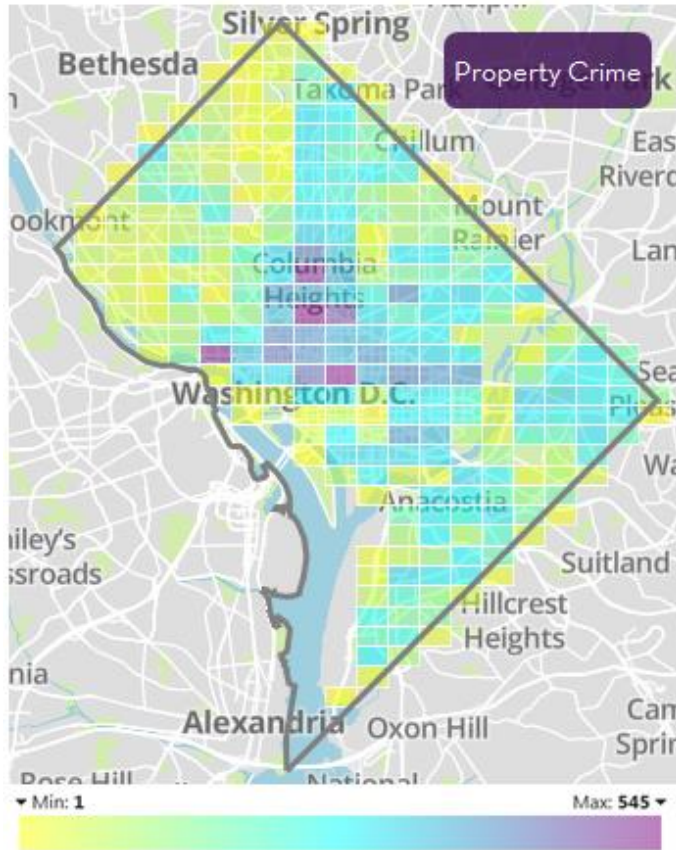


Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates; S0801 - Community Characteristics by Sex

# Chapter 5. Neighborhood Factors

## Crime and Safety

The Metropolitan Police Department provides DC "Crime Cards" that allow users to view the number of property and violent crimes committed across the city. The greatest concentrations of property crime occurred in the central part of the city, and the greatest concentrations of violent crime incidents occurred in the central and eastern parts of the city.

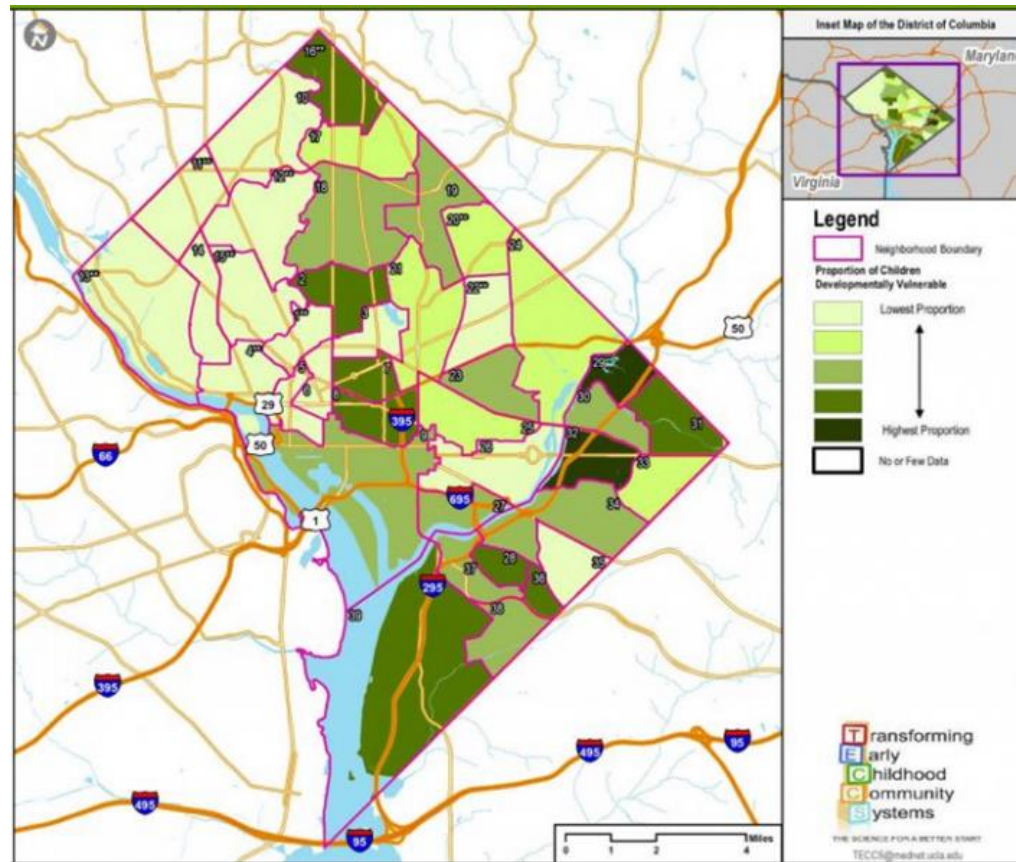


Source: Metropolitan Police Department Crime Map

# Chapter 5. Neighborhood Factors

## Early Development Instrument (EDI)

The Early Development Instrument (EDI) provides a community-level measure reflecting a snapshot of children's health, development, and school readiness. It can be used to assess how a community can better support young learners as well as how to address the needs of incoming students. The map below shows areas of the city with higher and lower vulnerabilities in the domains measured.



### About the EDI

The EDI is an internationally validated tool that provides information about school readiness for the District's 4-year-olds in all eight wards. This information was collected from 116 schools and 340+ classrooms during SY16-17 and will be administered again in February-March 2019.

For more information, visit [OSSE's website](#).

Source: Division of Early Learning, OSSE



# Chapter 5. Neighborhood Factors

## Sources and Methodology

### Sources and Methodology

Student-level enrollment and home addresses: SY2013-14 through SY2018-19 OSSE Audited Enrollment. Student level data was geocoded by the Office of the Chief Technology Officer with all District-appropriate neighborhood geographies appended to each student. Home addresses reflect students' residences provided at the time of registration. Registration can occur between the spring prior to the start of the school year up until the enrollment audit, approximately October 5th of the current school year. Student yield calculations exclude non geocoded students.

The following audited enrollment business rules were applied to the audited enrollment file for SY17-18 and SY18-19:

The universe of DCPS students includes audited UPSFF residents + Non-resident tuition paying + Residency unverified.

The universe of public charter students includes audited UPSFF residents.

Property information: "Apartments - DCHA" represents apartment units in the 56 public housing sites owned and managed by the District of Columbia Housing Authority (DCHA). These were identified geographically and not from the tax rolls nor DCHA administrative records. Because they tend to have substantially higher numbers of students enrolled in public schools, these properties are disaggregated from all apartments in several charts in this chapter.

Residential pipeline information: DC Real Property database and DC Policy Center public data, DMPED Real Estate Project Pipeline Database (PPD), Washington DC Economic Partnership (WDCEP)



# Chapter 5. Neighborhood Factors

## Sources and Methodology

### Sources and Methodology, continued

Calculating student yield in future residential properties: for the Noyes ES boundary example, we applied the Ward 5 student yields per property type to the number of units in the residential pipeline for the boundary. For units of unknown type, we used the proportion of “known” unit types.

#### *Calculations to estimate Noyes ES potential new students*

- Student Yield per 100 Units - Ward 5
  - Apartments - 35 students
  - Condos - 15 students
  - Single Family - 40 students
- Near term (2020-2021):
  - 413 rental units/100 =  $4.13 * 35 = 145$
  - 131 single family units/100 =  $1.31 * 40 = 52$
- Long term (2025-2031):
  - 1,329 rental units/100 =  $13.29 * 35 = 465$
  - 114 condo units/100 =  $1.14 * 15 = 17$
  - 2,138 unknown units
    - 92% rental: 1,967 rental/100 =  $19.67 * 35 = 688$
    - 8% condo: 171 condo/100 =  $1.71 * 15 = 26$



# Chapter 5. Neighborhood Factors

## Sources and Methodology

### Sources and Methodology, continued

Educational Attainment: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, Table B15002

Workers 16+ in Households without a Vehicle: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates; Table S0801

Property and Violent Crimes: DC Crime Cards, the Metropolitan Police Department

Early Development Instrument (EDI): The EDI is an internationally validated tool that provides information about school readiness for the District's 4-year-olds in all eight wards. This information was collected from 116 schools and 340+ classrooms during SY2016-17 and will be administered again in February-March 2019. For more information, see OSSE's website.