

Market Study for Essex, Maryland Corridor Two

Matt Harrop, Xingchen Liu, Andrea Nichols, Osedeba Okejio, Adan Ramos

Under the supervision of Professor Melina Duggal

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Background and Objectives

According to the Baltimore County Master Plan 2020, the Middle River Redevelopment Area was established just east of Baltimore to assist in creating a long-term plan with the goal of developing “a sustainable community by promoting compact, walkable, mixed-use, transit-oriented development.” Baltimore County asked UMD students to create a market analysis about three specific corridors in this redevelopment area.

In this report we analyze the second corridor, which spans from the intersection of 702 and Eastern Boulevard to the intersection of Martin Boulevard and Eastern Boulevard, by:

- developing a market study to analyze the future potential land uses for corridor two: office, for-sale condominium, for-sale townhouse, apartment, and retail
- understanding the challenges and strengths facing Essex
- understanding the economic and demographic factors affecting the Essex market
- recommending the appropriate land uses, including long-term and short-term opportunities.



source: Google Maps

Essex Sustainable Community Boundary: Corridor Two

Corridor Two (yellow) within Essex Sustainable Community (red) Boundary



source: Google Maps

Corridor Analysis

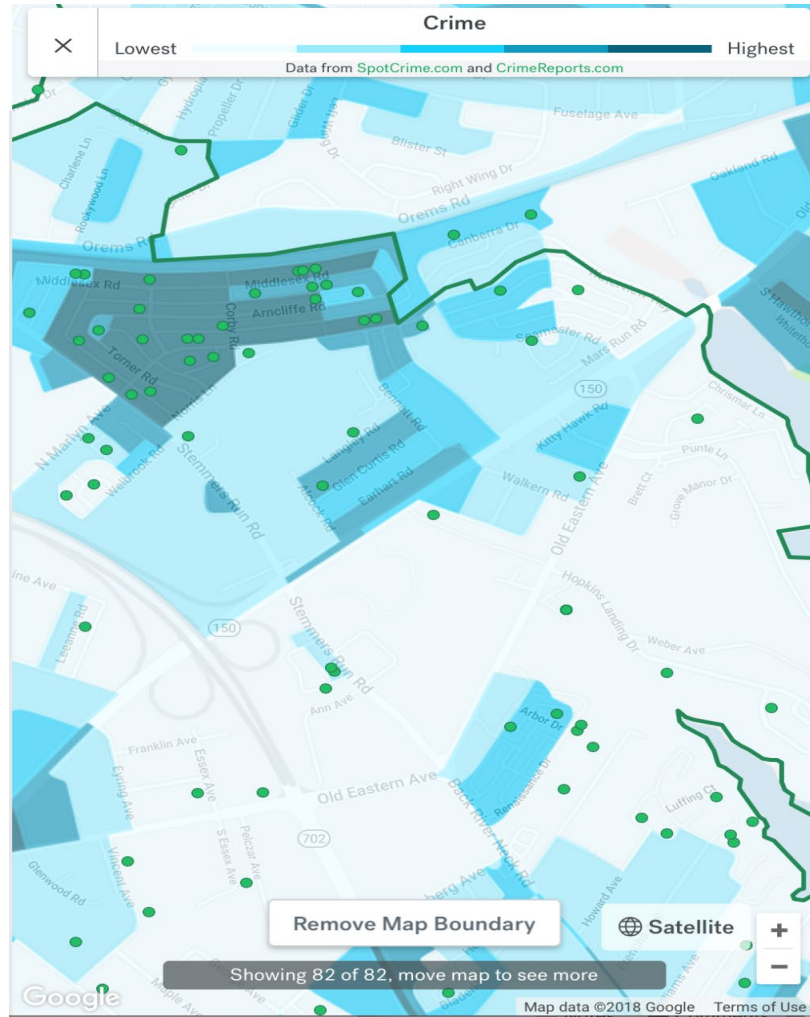


Source: Google Maps

- The corridor is approximately 1.4 miles long bounded by US 702 to the south and Martin Boulevard to the north; a two-minute drive from end to end.
- Commercial retail clusters exist at the southern, middle, and northern ends:
 - Southern end:** Save-A-Lot grocery, Super 8 Motel, Dunkin' Donuts, Al's Seafood
 - Middle:** Weis Markets, Denny's, daily needs retail – banks, hair salon, liquor store
 - Northern end:** Geresbeck's grocery, Family Dollar, fast food options
- Two local crab houses: Al's and Schultz's contribute to authentic Maryland cultural feel.
- Renaissance Park covers a large section of the corridor's southern end, is well-maintained, and provides a large recreation space of which residents are proud.
- The corridor contains two elementary schools, one middle school, and one high school.
- The corridor's northern end terminates just before Martin State Airport, a commercial and local jet center surrounded by a few corporate offices, including Middle River Aircraft Systems, a satellite office of Lockheed Martin Mission Systems Training, and other industrial and warehouse centers.

Corridor Analysis

Crime Rates in the Corridor;
darker blue corresponds with higher crime rate



Corridor Aesthetics: wide, separated boulevard with commercial centers and residential access roads



The main thoroughfare in Corridor Two is Eastern Boulevard, a separated, two-lane (the northernmost section is three-lane) highway with auto-centered development. The corridor has the benefit of continuous sidewalks but the speed limit is 35 miles per hour, and sporadic retail clusters include parking lots fronting the boulevard. Combined, these factors create an environment that make the corridor seem less hospitable to pedestrians than automobiles.

sources: Trulia; Google Maps

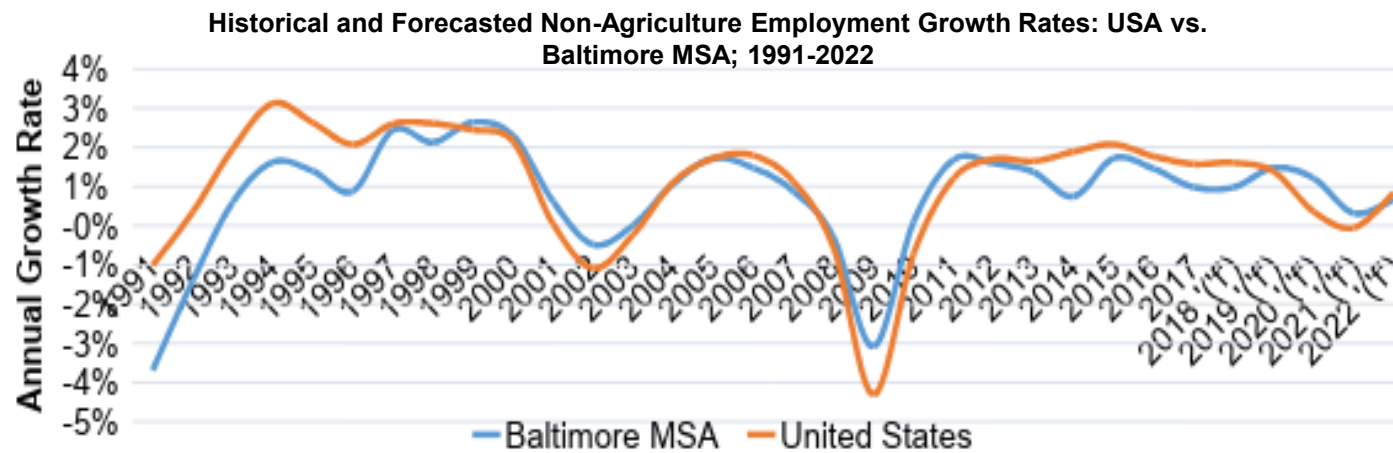


Strengths and Challenges

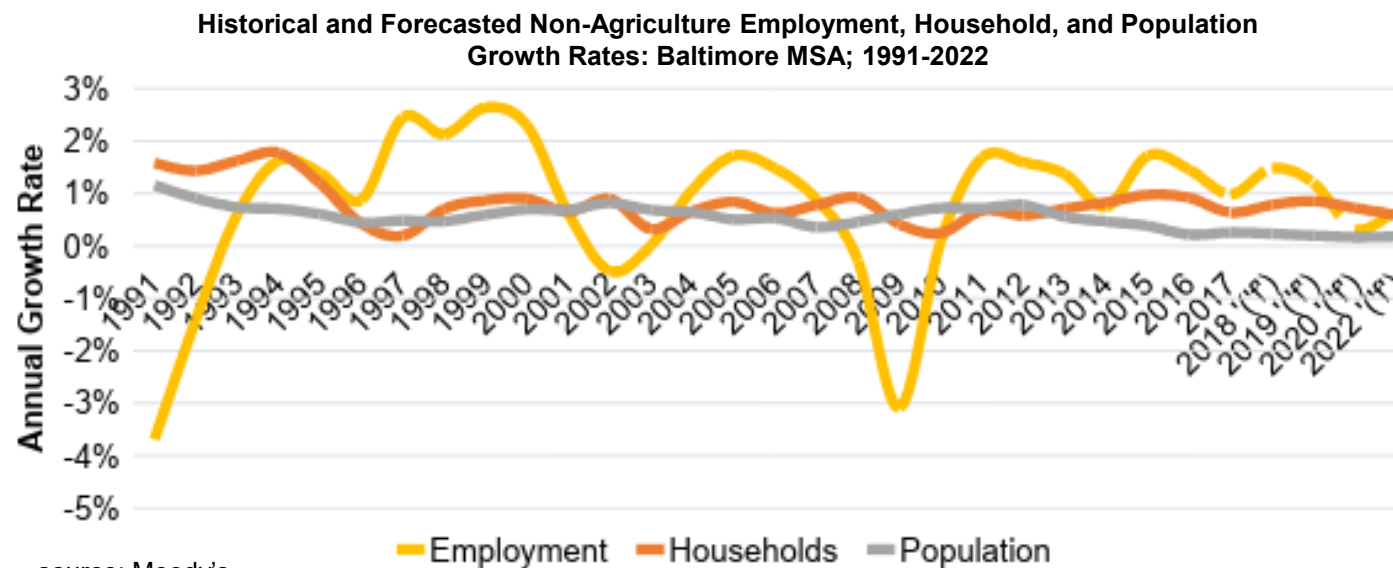
Characteristics	Strengths	Challenges
Access to Jobs	<ul style="list-style-type: none">Easily accessible to many job corridors by car – 20 mins. to downtown, 20 mins. to Towson, 30 mins. to Columbia, 30-45 mins. to Annapolis Junction and other I-95 corporate offices.	<ul style="list-style-type: none">Public transit dependence would make commuting to anywhere but downtown Baltimore more difficult.
Transit Proximity	<ul style="list-style-type: none">Bus routes provide access to downtown job core, and MARC provides access to the Washington Metro Area.Residents and businesses may charter planes from Martin Airport.	<ul style="list-style-type: none">Regional rail access is not central to corridor.
"Path of Growth"	<ul style="list-style-type: none">Well positioned to be cost effective living location that is close to job centers as other nearby areas, like Greenleigh and Tradepoint Atlantic, become more expensive.	<ul style="list-style-type: none">Town is not in the favored corridor to the north of downtown.Much of the growth around Essex, including residential and retail, is happening further north along I-95.
Retail - Services	<ul style="list-style-type: none">There is plenty of daily needs retail, including popular grocery store.Parking is easy and available.	<ul style="list-style-type: none">There is some noticeable vacancy.Retail centers look older and not particularly well maintained.
Retail - Restaurants	<ul style="list-style-type: none">Few local crab shacks, as well as popular restaurant Pizza Johns, provide neighborhood character.	<ul style="list-style-type: none">Limited variety of restaurants, including fast casual and upscale dining.
Walkability	<ul style="list-style-type: none">Well kept, continuous sidewalks exist along most of corridor.Main intersections include crosswalks and medians.	<ul style="list-style-type: none">Walk score is 35, meaning that the area is car dependent.Lack of density and crosswalks existing only at major intersections on Eastern Blvd. limit attractiveness of walking.Speed limit is over 25, which will add to the perception that walking along the road is unsafe for pedestrians.
Open Space/Recreation	<ul style="list-style-type: none">Corridor contains beautiful, well-kept park that inspires community pride.	<ul style="list-style-type: none">Waterfront is not activated to potential.
Visibility	<ul style="list-style-type: none">Visibility for business is good from Eastern Blvd.	<ul style="list-style-type: none">Businesses less visible from 702 and not visible from 695.
Aesthetic Quality of Neighboring Uses	<ul style="list-style-type: none">The corridor, though less pedestrian-focused, looks better maintained than the other corridors.	<ul style="list-style-type: none">Commercial buildings along the corridor look dated.
Perception of Area	<ul style="list-style-type: none">Family homes, schools, and park in corridor give perception of being family-friendly.	<ul style="list-style-type: none">Area is perceived to have high crime rates.
Schools	<ul style="list-style-type: none">Public schools from elementary through high school are located in corridor.	<ul style="list-style-type: none">School ratings are below average for Maryland public schools.
Safety	<ul style="list-style-type: none">Crime seems less concentrated along Corridor 2 than along Corridor 1 according to Trulia.	<ul style="list-style-type: none">Violent and property crime in the area is above the national average according to www.BestPlaces.net.

Economics and Demographics

Overview of the Baltimore MSA



The Baltimore MSA (metropolitan statistical area) weathered the recession better than the US in terms of employment growth. However, since 2012 the Baltimore MSA has lagged behind the US in terms of employment growth at a 1.0% compound annual growth rate (CAGR) in 2017 versus the US 1.6% CAGR.

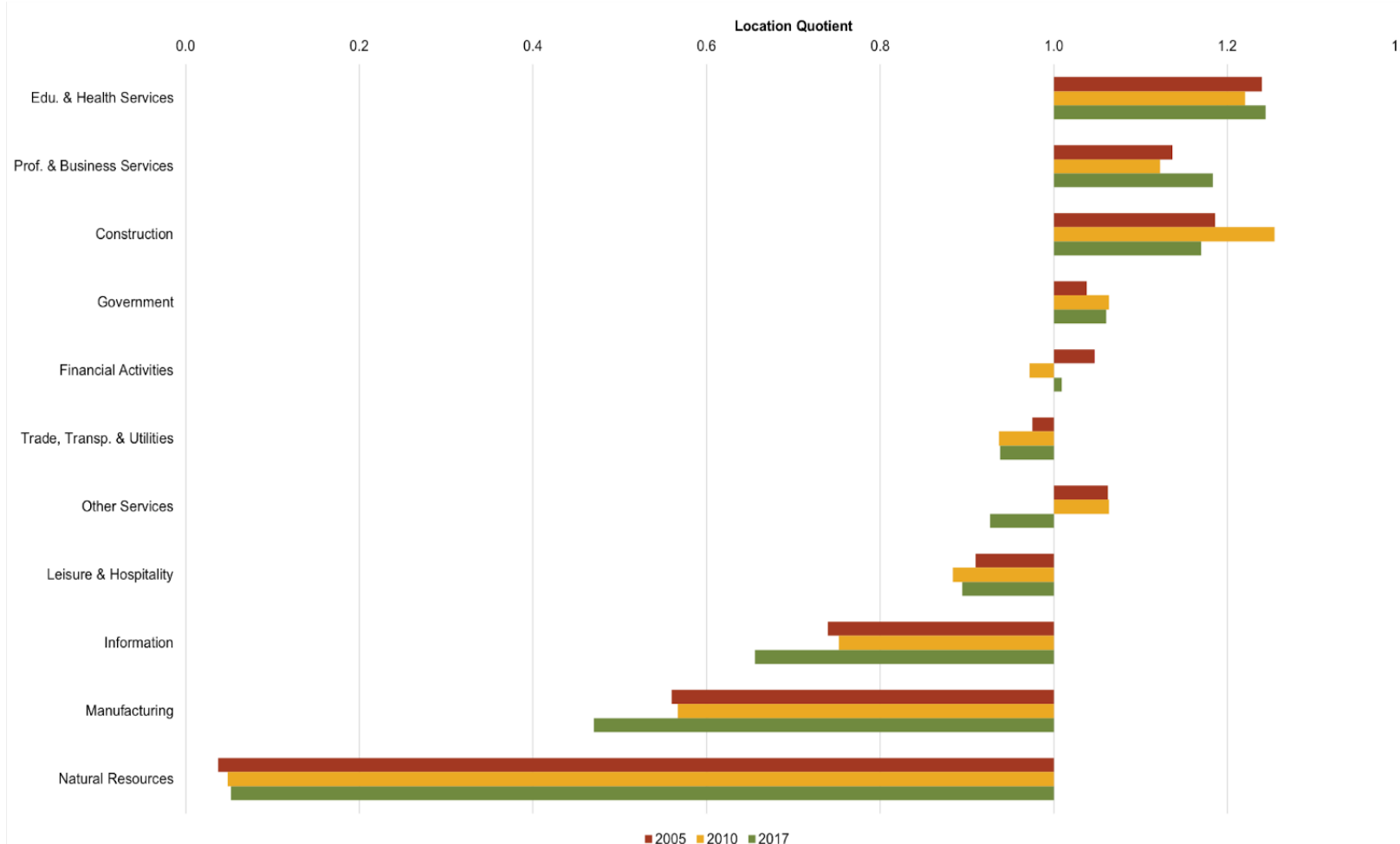


Household growth in the Baltimore MSA has decline from a 1.0% CAGR to a 0.6% CAGR over the period of 2015-2017; and, projected growth is expected to continue to decline according to Moody's

source: Moody's



Employment by Sector: Baltimore MSA vs. National



source: ESRI

The following sectors have a quotient above 1.0 in the Baltimore MSA, which means that the Baltimore MSA has a greater proportion of jobs in these areas compared to the national average: education & health services, professional & business services, construction, government, and financial activities. This is a mix of both higher-paying professional services and finance jobs, as well as lower-paying education and construction jobs.

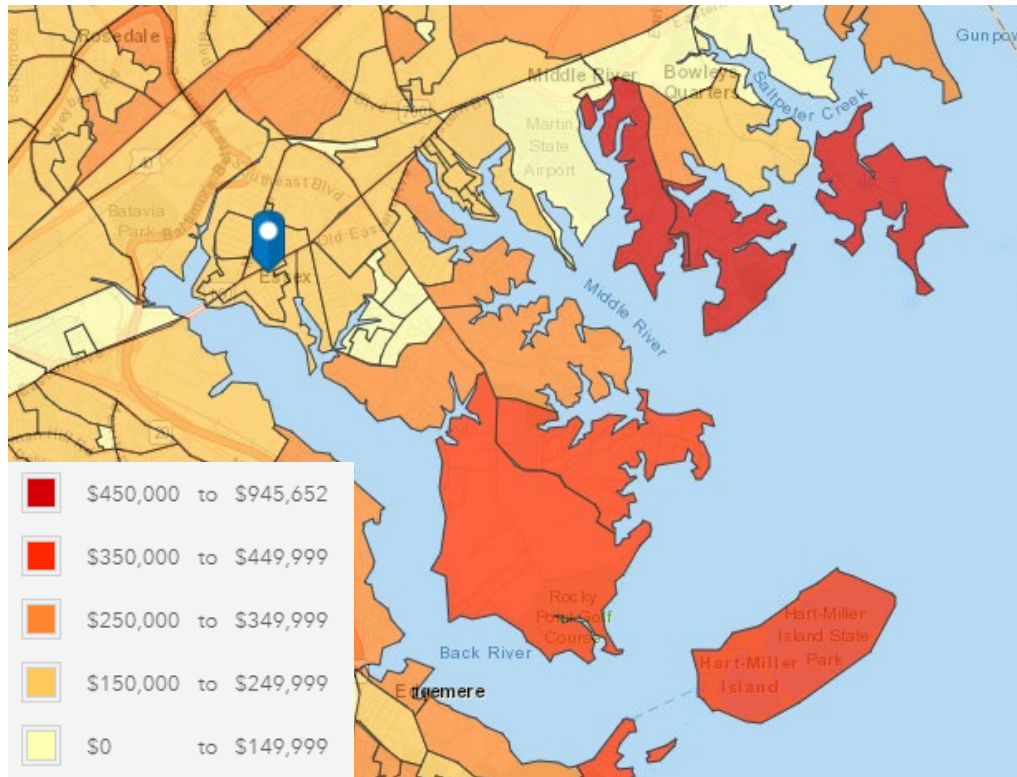
A smaller proportion of workers than the national average are employed in transportation & utilities, leisure & hospitality, information, and natural resources.

	2005	2010	2017
Edu. & Health Services	1.2	1.2	1.2
Prof. & Business Services	1.1	1.1	1.2
Construction	1.2	1.3	1.2
Government	1.0	1.1	1.1
Financial Activities	1.0	1.0	1.0
Trade, Transp. & Utilities	1.0	0.9	0.9
Other Services	1.1	1.1	0.9
Leisure & Hospitality	0.9	0.9	0.9
Information	0.7	0.8	0.7
Manufacturing	0.6	0.6	0.5
Natural Resources	0.0	0.0	0.1

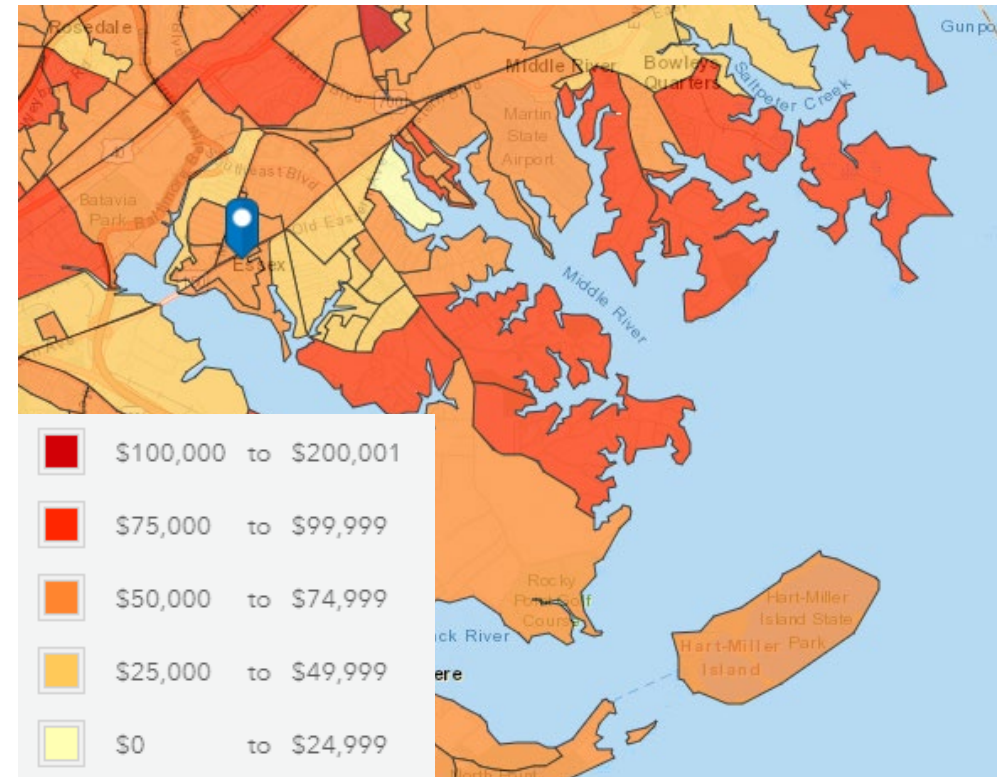
Essex Household Income and Home Value

Median household income in the Essex census designated place (CDP) is \$52,210, with higher incomes concentrated in the southern sections of Essex along the water and the lowest incomes concentrated in the central part of the Essex. Median home values correlate with the income values, as higher value homes are located in the southern portion of Essex while lower value homes are located in the central part. Because home values in Essex are relatively inexpensive, in the \$150,000 to \$250,000 range along the primary Eastern Boulevard corridor, it may be difficult for multifamily rental to compete with for-sale housing.

Median Home Value in Essex CDP; 2018



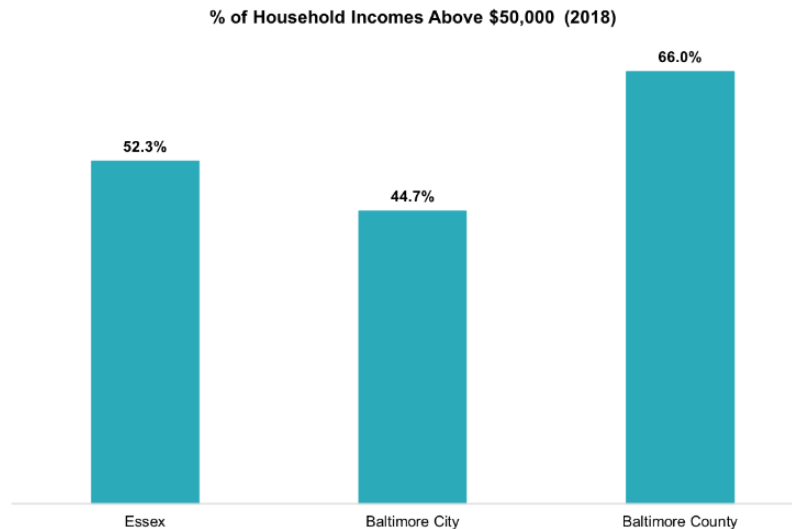
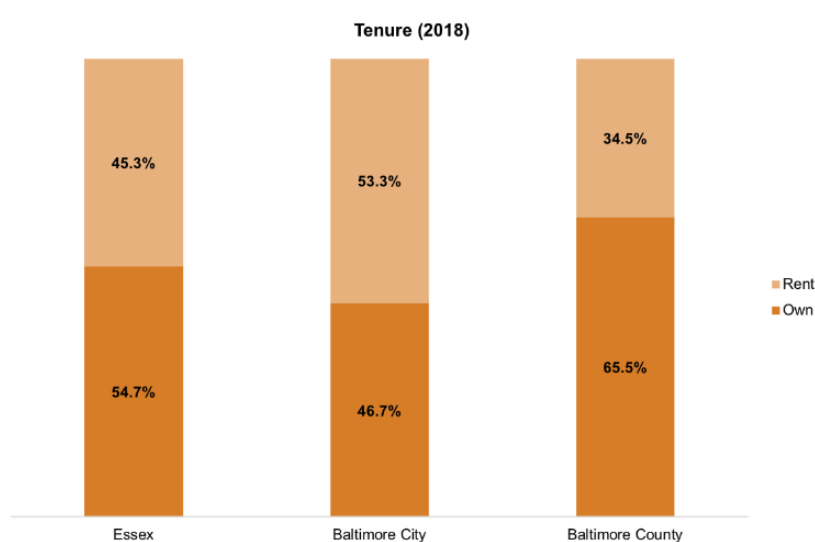
Median Income in Essex CDP; 2018



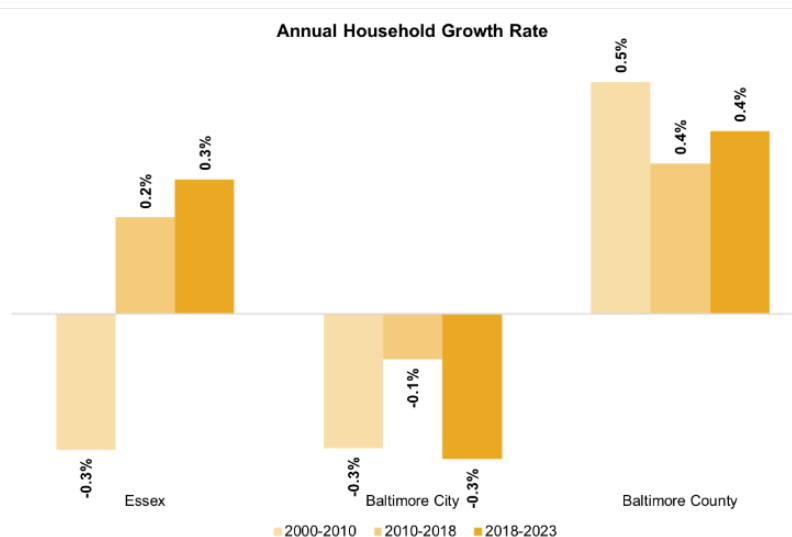
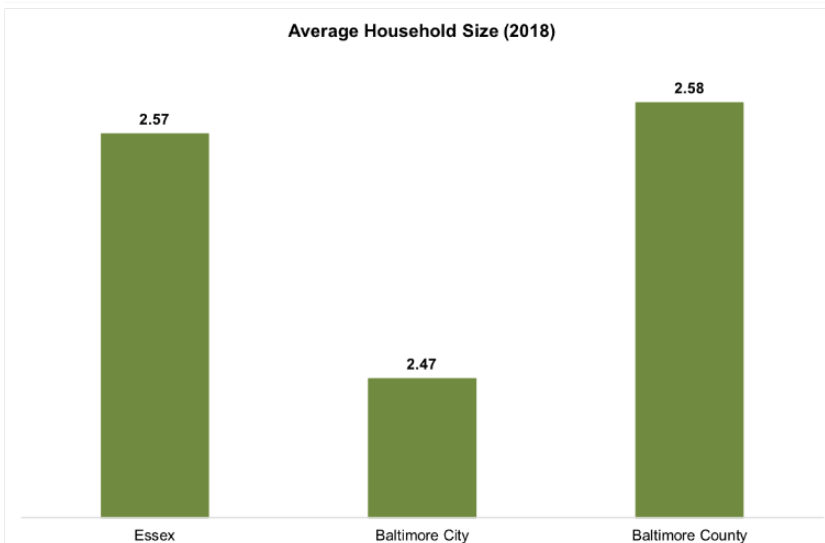
source: ESRI



Comparison of Key Demographic Characteristics



Tenure: In 2018, 54.7% of Essex housing units were owner-occupied, down from 55.5% in 2010. The number of renter-occupied units has increased from 44.5% in 2010 to 45.3% in 2018. Thus, Essex's owner-occupied rate is higher than Baltimore City's rate, 46.7%, and lower than Baltimore County's rate, 65.5%.



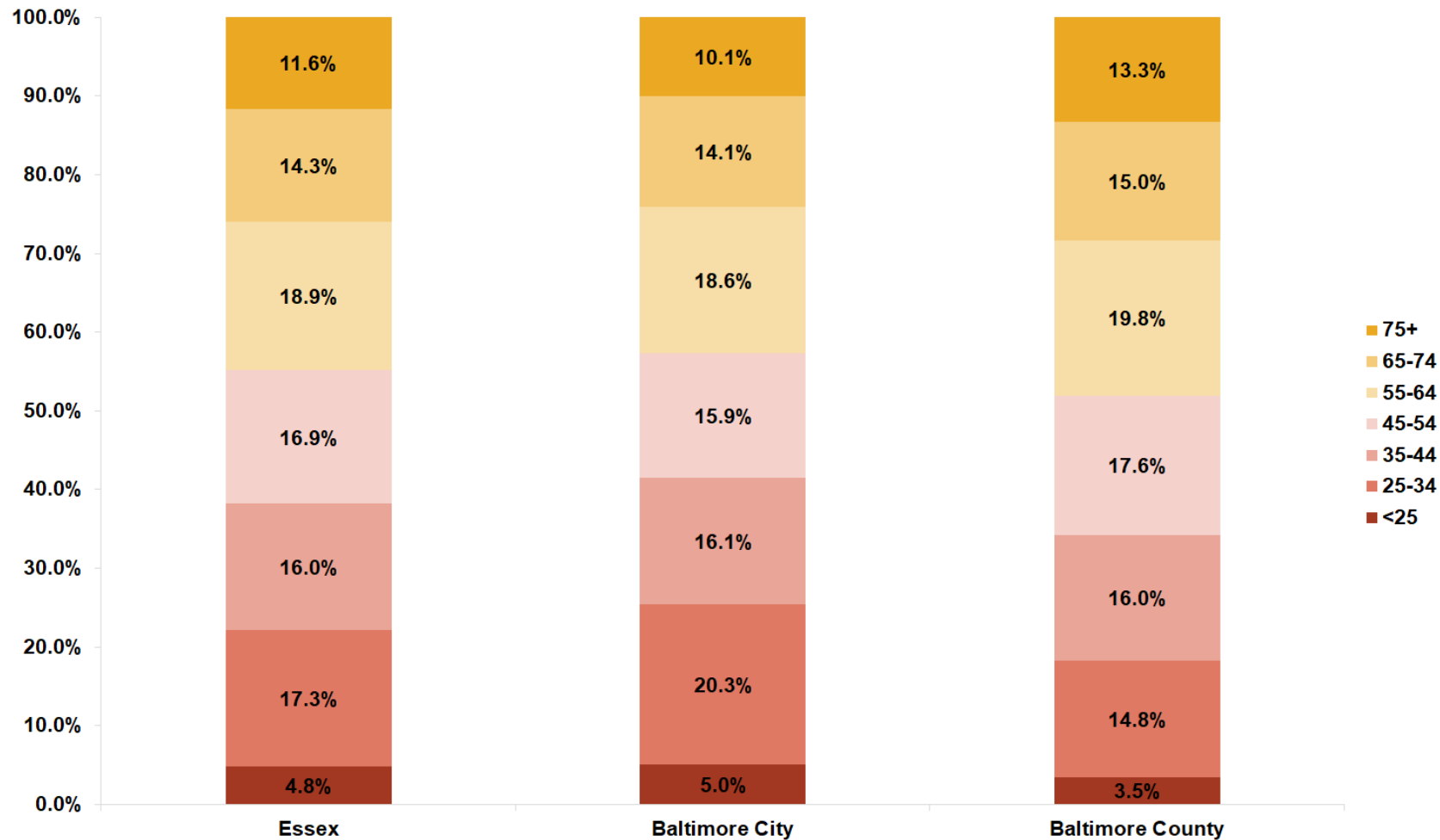
Average Household Size: There is not a significant difference between the household sizes in Essex, Baltimore City, and Baltimore County, which are 2.57, 2.47, and 2.58 respectively.

Annual Household Growth Rate: Essex's growth rate was 0.3% from 2010-2018, up from -0.3% from 2000-2010. This makes the household growth rate of Essex higher than that of Baltimore City, 0.1%, and lower than the County, 0.4%.

source: ESRI



Comparison of Household Distribution By Age



In Essex, Baltimore City, and the County, 54%, 57.2%, and 39.6% of households are under the age of 45 respectively.

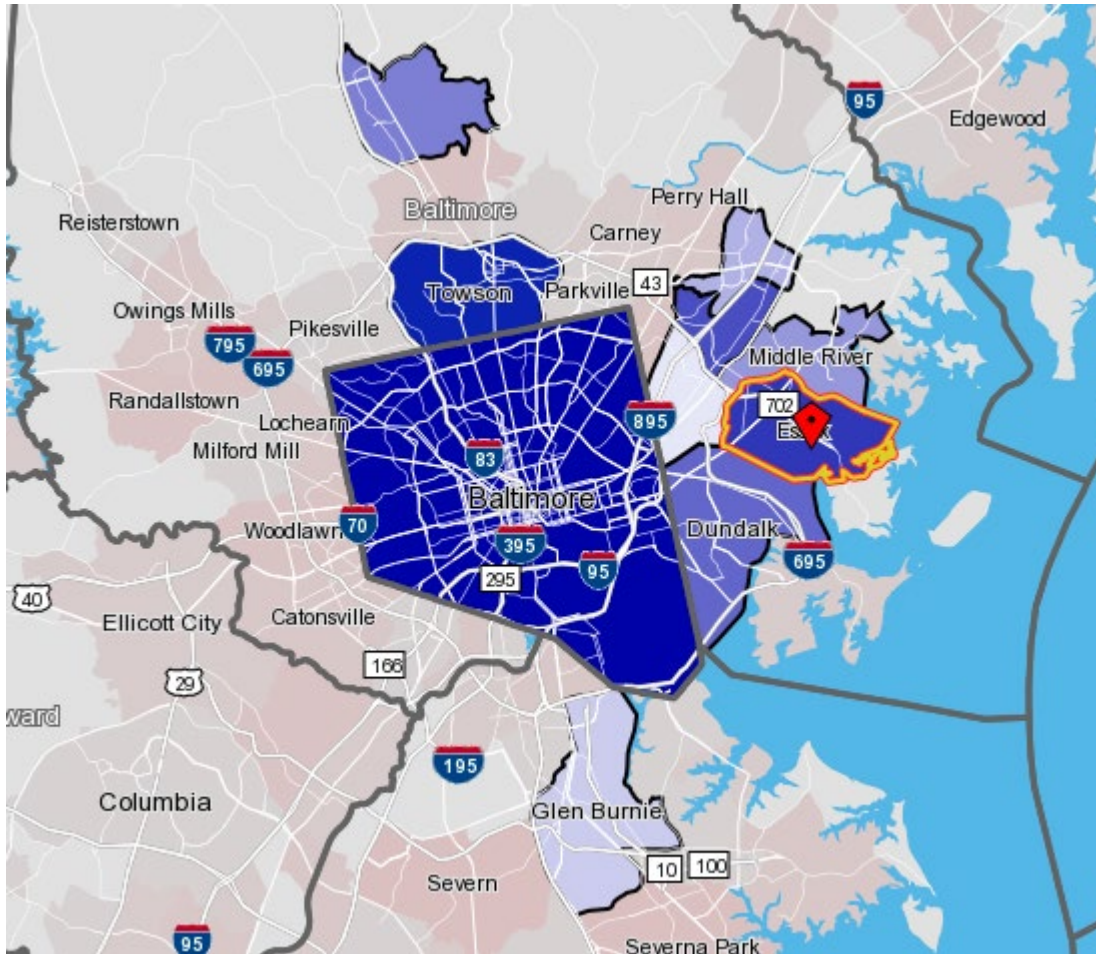
Baltimore County as a whole has fewer households under the age of 25 than Essex or Baltimore City. Essex, at 11.8%, has more elderly households than Baltimore City at 10.1%.

All three regions have varying populations in their prime working years from 35 to 54. Essex has 35.8% of its population aged 35-54, while Baltimore City and the County have 24.5% and 37.4% respectively.

source: ESRI

Essex Commuting Patterns











Where Workers Who Live in Essex CBD are Employed, 2015



source: Census on the Map

Workers who live in Essex are predominately commuting into Baltimore City with approximately 30.3% of Essex residents working in Baltimore. The next highest percentages are 5.4% in Towson and 4.6% in Essex itself. Thus, over 95.0% of Essex residents are leaving Essex to commute to jobs daily.

Jobs Counts by Places (Cities, CDPs, etc.) Where Workers are Employed - Primary Jobs 2015

	Count	Share
<u>All Places (Cities, CDPs, etc.)</u>	17,080	100.0%
 <u>Baltimore city, MD</u>	5,183	30.3%
 <u>Towson CDP, MD</u>	929	5.4%
 <u>Essex CDP, MD</u>	793	4.6%
 <u>Rossville CDP, MD</u>	655	3.8%
 <u>Dundalk CDP, MD</u>	564	3.3%
 <u>Cockeysville CDP, MD</u>	506	3.0%
 <u>Middle River CDP, MD</u>	436	2.6%
 <u>White Marsh CDP, MD</u>	380	2.2%
 <u>Glen Burnie CDP, MD</u>	289	1.7%
 <u>Rosedale CDP, MD</u>	259	1.5%
All Other Locations	7,086	41.5%

Educational Attainment

Figure 1: Essex, MD At least High School Education

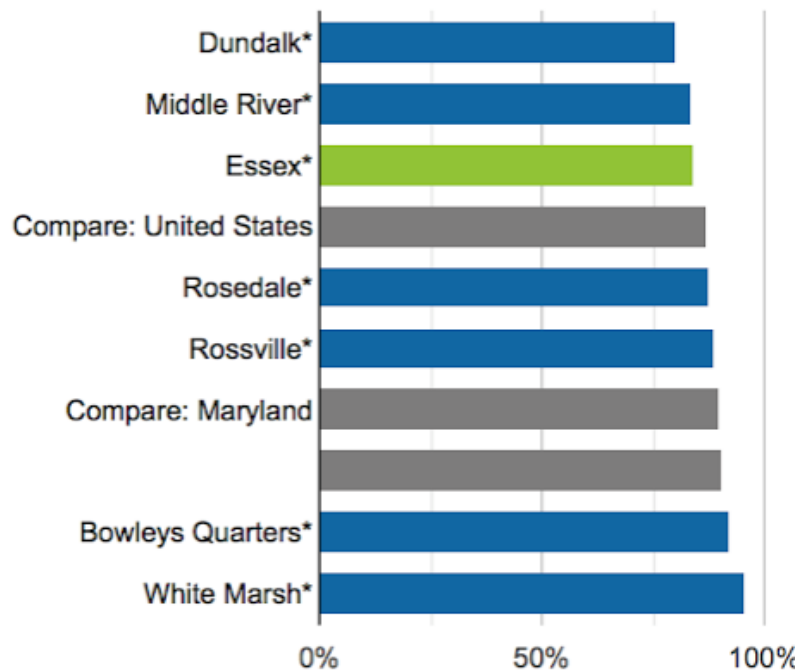
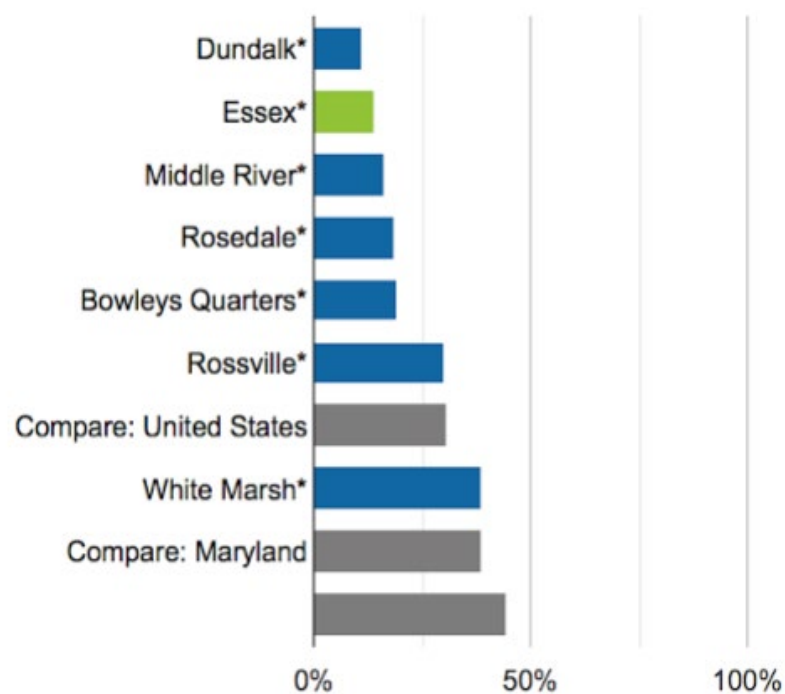


Figure 2: Essex, MD Bachelors Degree or Better Education



According to Towncharts.com, Figures 1 and 2 show educational attainment data using the latest 2017 American Community Survey.

Figure 1 is the number of people aged 25 years or older who have graduated from high school or equivalent credential.

On the other hand, Figure 2 depicts the number of residents in the same age range who attained degrees in higher learning.

Both charts show that there is room for Essex to improve its educational attainment. Most of its students complete high school but few move on to higher education compared to residents in the surrounding areas.

source: Towncharts.com

For-Sale Analysis and Recommendations



Overview of Essex Real Estate Trends

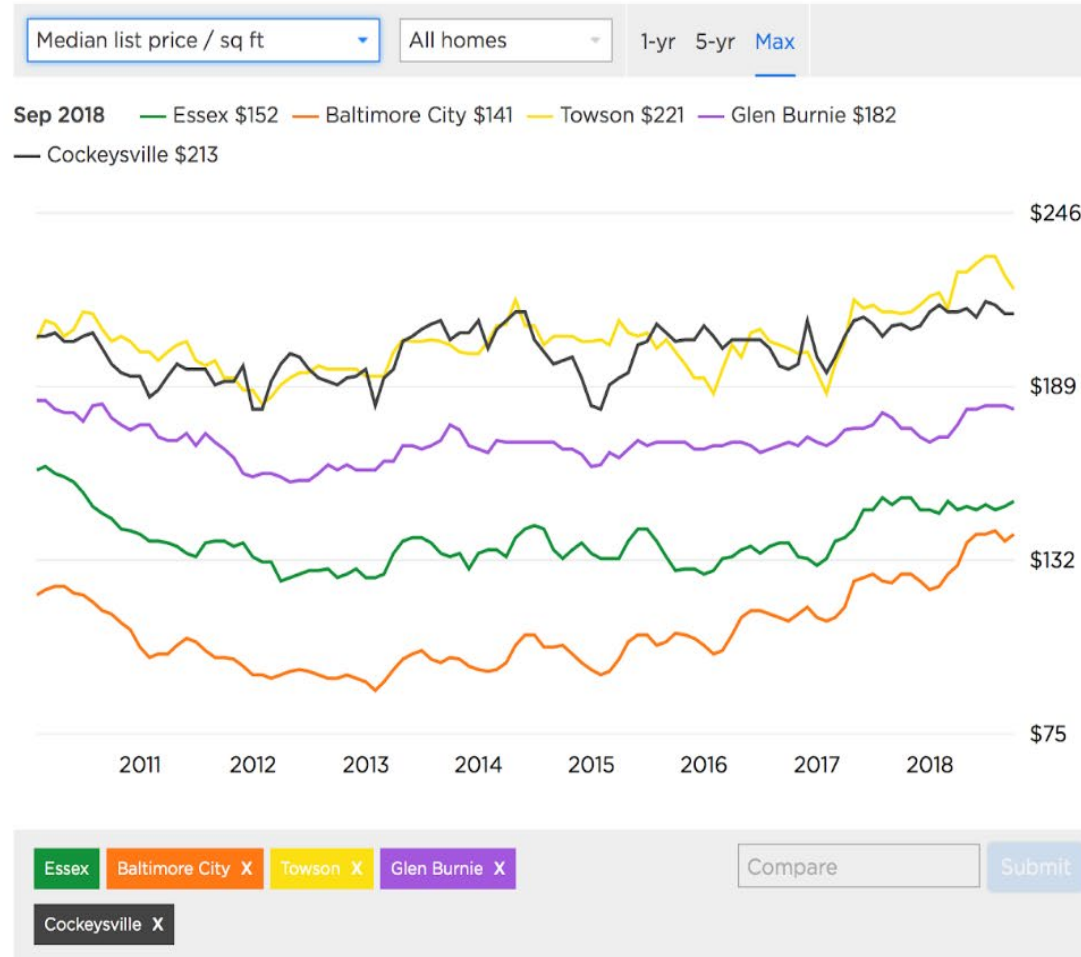
Listings & Sales

Data through Sep 30, 2018

\$152 Median list price / sq ft

No recent data Median sale price / sq ft

21.0% Listings with price cut



The Listings and Sales chart illustrates the active residential for-sale market compared to cities located in its Primary Market Area (PMA), composed of areas that compete for housing demand with Essex. The areas were determined by examining the commuter data for people who live in the city of Essex but commute outside of Essex for work.

Essex housing prices are lower than all of the other competitive areas within the PMA except Baltimore City. The difference in housing prices between Essex and its competitive areas may make it an attractive place for workers to relocate.

Outside of Dundalk, Essex contains some of the lowest-priced single-family housing product in the PMA.

source: Zillow



For-Sale Residential Supply of Townhouses

Median Sales Price in 21221

☐ 1 Br ☐ 2 Br ☐ 3 Br ☐ 4 Br ☒ All properties

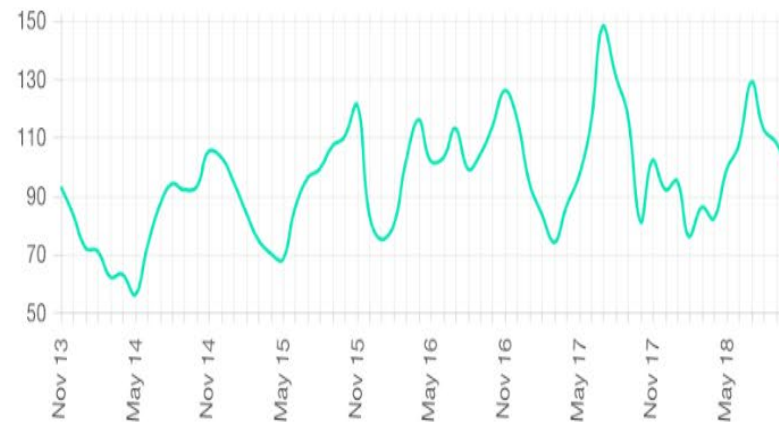
1 yr **5 yr** Max

Median Sales Price



● All properties

Number of Sales



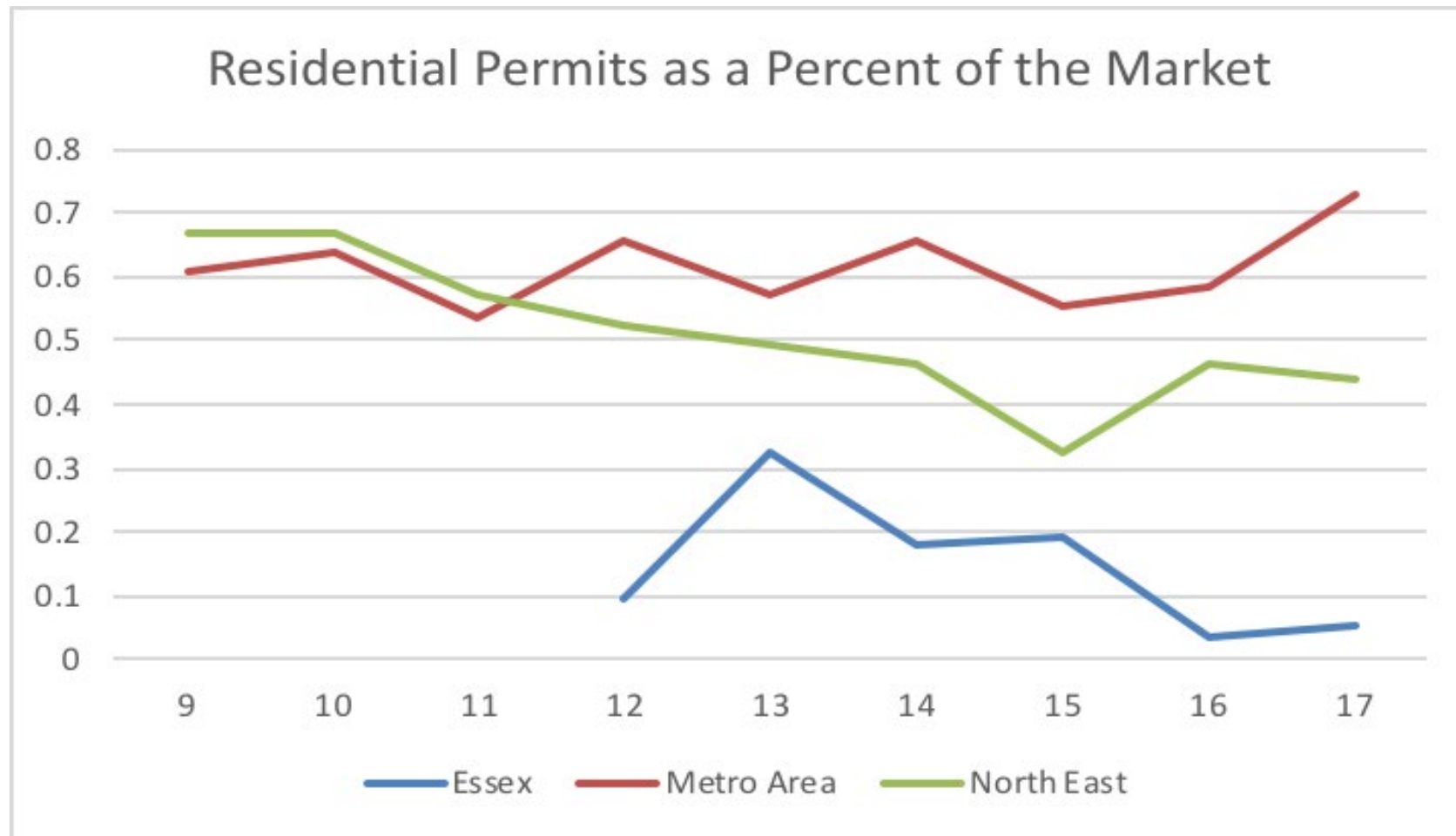
● All properties

Over the past five years, Essex's median sales prices have continued to rise. However, the number of home sales has remained volatile, with slightly more sales in May 2018 than in November 2013. There has been a downward trend in 2018 YTD.

Median home prices for the past year have increased from \$187,250 to \$210,000, while the number of sales in Essex has decreased slightly from 102 to 99. It is unclear whether there exists a negative correlation between the rise in Essex home prices and the decrease in amount of homes sold.

source: Trulia Neighborhoods

For-Sale Residential Supply of Townhouses, cont.



The residential housing permit percentage in Essex, as a percentage of the overall Baltimore Metropolitan Area permits, has decreased over the last five years. There was an uptick from 2016 to 2017, however, this is not consistent with any noticeable trend.

source: MRIS.COM



For-Sale Residential Demand for Essex

ESTIMATED ANNUAL FOR-SALE DEMAND POTENTIAL DEMOGRAPHIC TRENDS AND PROJECTIONS: ESSEX, MD 2018-2035

	Income: Home Price ² :	Below \$25,000	\$25,000 \$50,000	\$50,000 \$75,000	\$75,000 \$100,000	\$100,000 \$150,000	\$150,000 And Above	
		Below \$95,000	\$95,000 \$180,000	\$180,000 \$265,000	\$265,000 \$350,000	\$350,000 \$525,000	\$525,000 And Above	
SOURCES OF DEMAND								TOTAL
New Household Growth, 2018-2035								
Total Annual New Households ¹		1,058	1,058	1,058	1,058	1,058	1,058	1,058
x Distribution of Income ³		15%	20%	19%	14%	18%	15%	100%
= Income Qualified		158	211	202	146	186	155	1,058
x Owner Propensity ³		20%	34%	45%	61%	72%	88%	52%
=New Households Seeking For-Sale Units		32	72	90	89	135	136	554
Existing Owner Household Annual Turnover								
Total Households ³		312,826	312,826	312,826	312,826	312,826	312,826	312,826
x Distribution of Income ³		15%	20%	19%	14%	18%	15%	100.0%
x Owner Propensity ³		43%	53%	60%	72%	80%	91%	66%
Total Owner Households		20,038	32,840	35,963	31,199	44,083	41,799	205,922
x Annual Turnover Rate ³		5%	5%	6%	6%	6%	6%	6%
=Demand From Existing Households in Turnover		1,002	1,642	2,158	1,872	2,645	2,508	11,827
Annual For-Sale Demand By Home Price Range		1,034	1,714	2,248	1,961	2,780	2,644	12,380
Preference for New ⁴		0%	2%	2%	7%	8%	8%	5%
Annual Demand for New		0	34	45	137	222	212	650
Preference for SFD ⁵		0%	5%	20%	35%	55%	75%	52%
Annual Demand for New SFD		0	2	9	48	122	159	340
Preference for Townhome ⁵		0%	15%	40%	60%	43%	23%	38%
Annual Demand for New TH		0	5	18	82	96	49	250
Preference for Condo ⁵		0%	80%	40%	5%	2%	2%	9%
Annual Demand for New Condo		0	27	18	7	4	4	61
Essex Capture of SFD ⁶		0%	20%	10%	8%	8%	2%	5%
Annual Demand for New SFD		0	0	1	4	10	3	18
Essex Capture of Townhome ⁶		0%	20%	20%	10%	5%	2%	7%
Annual Demand for New Townhome		0	1	4	8	5	1	19
Essex Capture of Condo ⁶		0%	10%	5%	5%	0%	0%	7%
Annual Demand for New Condo		0	3	1	0	0	0	4

¹ Based upon Baltimore Metropolitan Council Round 90 projections for Baltimore County annualized between 2020 and 2035.

² Based on bankrate.com mortgage calculator, utilizing a 30 year fixed loan with a 4.5% interest rate.

³ American Community Survey, 2016, 5 year estimates for Baltimore County, Maryland.

⁴ Based on new home sales as a percentage of total home sales in Baltimore County from Redfin for the last three years.

⁵ Based on re-sale home data from Redfin for the last three years.

⁶ Based on Essex capture of Baltimore County sales based upon Redfin data for three years.

At 52%, single-family detached is the residential product type with the most annual demand, with 340 homes projected per year until 2035. Townhomes come in second at 38% with an annual demand of 250 homes, while multifamily for-sale product has the least demand at 9% and an annual demand of 60 homes per year from 2018 to 2035.

The preference for new homes is projected to increase as incomes and housing prices rise. The most significant jump, 2% to 7%, in the percentage of households preferring new homes occurs when buyers make \$75,000 - \$100,000. Demand increases one percentage point and stays steady at 8% as sales prices move from \$265,000 - \$525,000 and incomes move from \$100,000 - \$150,000.

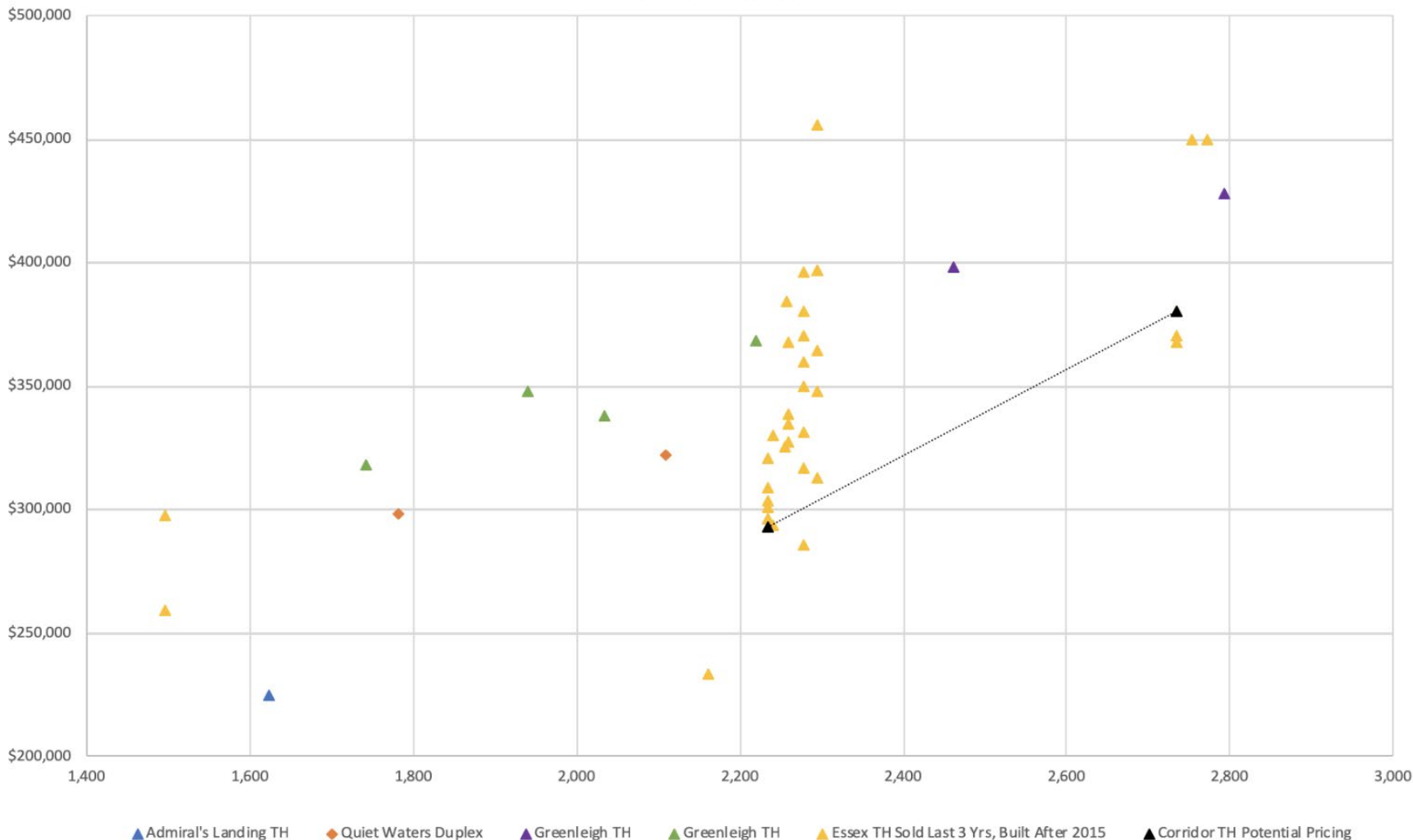
Essex captures an average of 5% of new single-family detached demand, 7% of new townhomes and 7% of new condominiums in the Baltimore metropolitan area. Baltimore city captures 20% of townhomes created each year from 2018 - 2035 in houses priced in the \$95,000 - \$265,000 range.

source: Redfin



For-Sale Townhomes Positioning

Townhome Products



This section of the corridor has townhomes on or near the water, but it is unlikely that new developers will have access to this amenity. Consequently, the positioning analysis excludes product near the water for properties located between the Southeast Freeway and Martin Boulevard sections of the corridor.

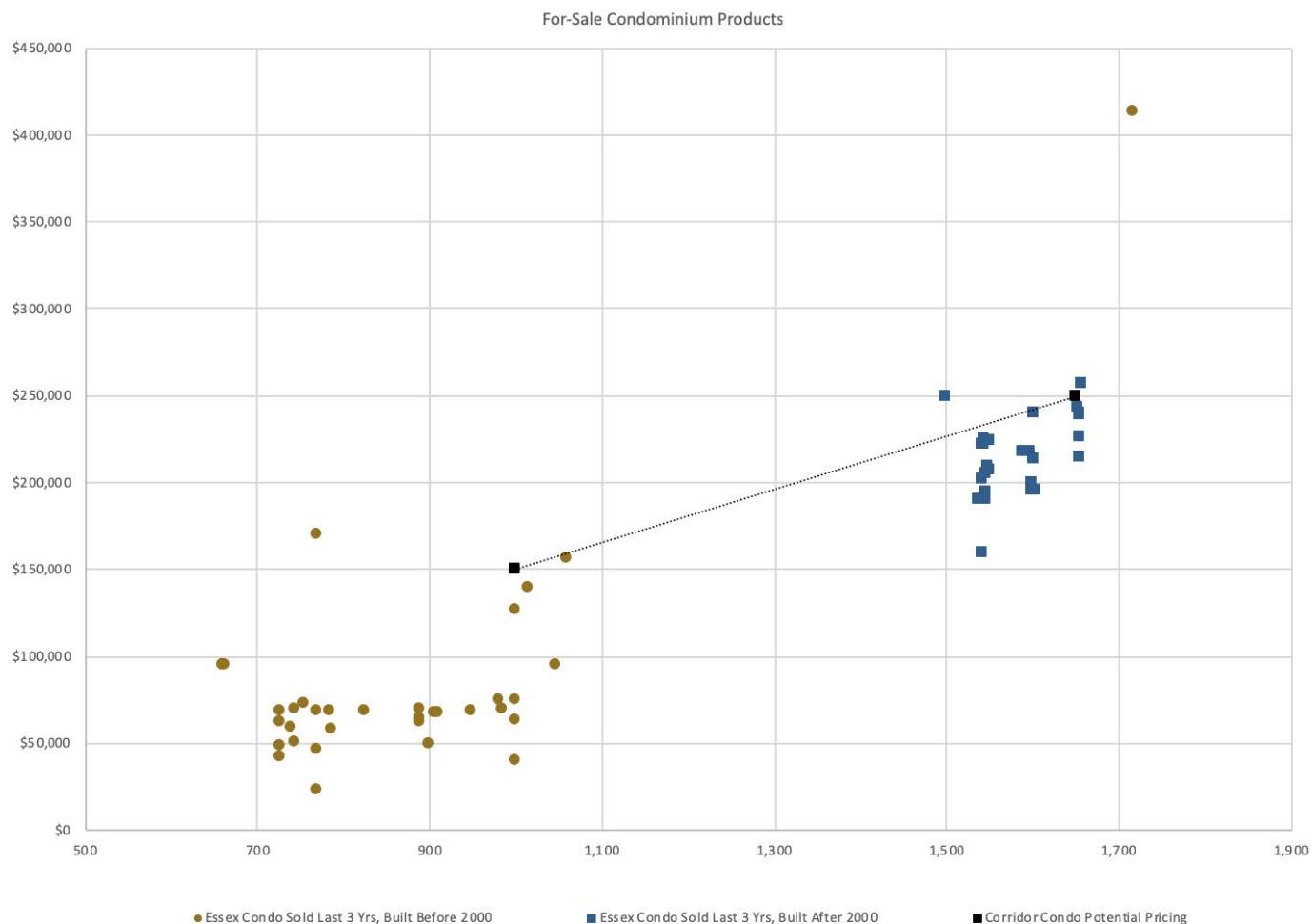
The lowest data points on the townhome product chart are from Renaissance Drive, Baltimore, at \$233,620 for 2,160 square feet and Back River Neck Road, Essex, at \$259,000 for 1,496 square feet. Neither of these data points are in Corridor Two.

The lowest-cost townhome in Corridor Two and not on the waterfront is on Marina View Court at \$290,900 for 2,035 square feet. On the other hand, the highest-cost townhome in the corridor was sold at \$379,990 for 2,772 square feet. Using these two properties, the new townhome product in the second part of the corridor may be priced around \$325,000 for 2,500 square feet of living space.

source: Redfin



For-Sale Condominium Positioning Chart



Corridor Two has many condominiums built before 2000. Because of their ages and relative prices and sizes, it is difficult to compare them to new, modern condominiums in order to estimate pricing.

According to the demographic data, the average household in Essex is 2.6 people. Developers tend to build condominiums around 900 square feet; so, condominiums may not appeal to Essex's household demographics as much as larger for-sale housing like townhomes.

Moreover, household income in Essex is low and, based on the condominiums studied in the corridor, the highest per square foot sales value was approximately \$241. Such low per square foot pricing may make new condominium development unfeasible.

But, we also can build some condominiums near the water, which can have a higher price.



Comparable Townhouse Communities

Address	Community	No. Units	Unit Type	Unit Size	Base Unit Price	\$/SF	Other
7734 Village Park Drive, Baltimore, MD 21222	Admiral's Landing	108	3B/3.5b	1,623	\$224,900	\$139	Open space, swim pond, lodge
9710 Bird River Road, Middle River, MD 21220	Hawkins Manor	56	3B/2.5b	2,112	\$378,000	\$179	No amenities
6206 Greenleigh Ave., Baltimore, MD 21220	Greenleigh	TBD	3B/2.5b	2,462	\$398,000	\$162	Planned community w/amenities
6306 Greenleigh Ave., Baltimore, MD 21220	Greenleigh	TBD	3B/2.5b	1,741	\$318,000	\$183	Planned community w/amenities
730 Crossroads Circle, Baltimore, MD 21220	Greenleigh at Crossroads	TBD	Sold	3,208	\$549,900	\$171	Planned community w/amenities
Sparrows Point, MD	Shaw's Discovery	N/A	N/A	N/A	\$260,000s	N/A	Gated, water access, trails

Source: New Home Source, Redfin



Comparable Condominium Communities

Number	Address	Year Built	Unit Type	Unit Size	Base Unit Price	\$/SF
1	1901 Kathryns Ct #1901, Baltimore, MD 21221	2008	2B/2b	1,538	\$190,000	\$124
2	574 Hopkins Landing Dr, Essex, MD 21221	2006	2B/2b	1,544	\$222,000	\$144
3	4 Cloverwood Ct #103, Baltimore, MD 21221	2004	3B/1b	889	\$62,500	\$70
4	2634 Linzey Rd Unit 3 2634, Essex MD 21221	2003	3B/2b	1,716	\$414,000	\$241
5	1258 Sugarwood Cir #302, Baltimore MD 21221	1992	3B/1b	1,000	\$75,000	\$173



Case-Study: Vancouver Mixed-Use Project



Baltimore has an up and coming startup scene as reported by Technically Baltimore. A thriving startup scene needs a large population of entrepreneurs, access to investors, a readily available supply of talent, abundant resources that support entrepreneurship, and state and local governments support.

In Essex, there is a large commuter population with transit access, (bus, MARC, AMTRAK, and highway) to investors in New York, Washington DC, Baltimore City and the greater Baltimore County area. The city also has a readily available supply of talent with five well-respected universities located within 10 miles of the city's borders.

Within Essex city itself, students are scoring high in STEM-related classes in math and science and there are a number of resources that support entrepreneurship. There are only a few startup ecosystems in the United States that support social purpose-driven entrepreneurship, but Vancouver, Canada has created a \$500 million per year industry by building a sustainable startup ecosystem in the city.

The second section of the corridor is somewhat developed. The most likely sites where the city may be able to attract developers who will create for-sale housing product are the corridor's two strip malls. Retail developers have long been required to produce more parking lots than needed by customers. The Vancouver project found a way to maximize those underused parking lots that, if emulated by Essex, may benefit the city. The Rise in Vancouver converted an underused parking lot into a mixed-use community that is transit-oriented, sustainable, and promotes the city's startup ecosystem.



For-Sale Townhouse Recommendations

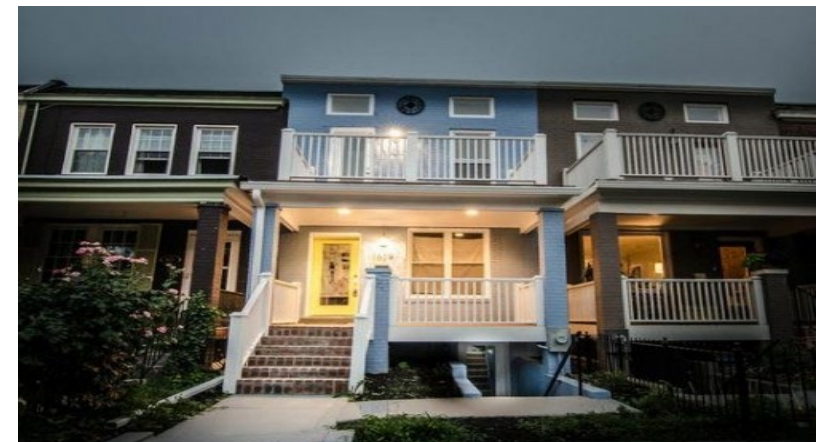
As a community in its redevelopment phase, Essex will likely benefit from a flexible townhouse product that can transform to meet homeowners' changing needs. For this reason, a townhouse product with high-ceiling basements, street access, back-loaded garages, and four to five floors would likely be ideal.

The high-ceiling basement would give owners the option to turn their basements into cottage offices, retail, rental, or an in-law suite. Clients, renters, or in-laws could enter the basement from Eastern Boulevard while the family could enter the property from the street or rear driveway. In the short-term families could use the basement as storage or a playroom, and in the long-term, owners could move in an ailing parent or a renter for additional income.

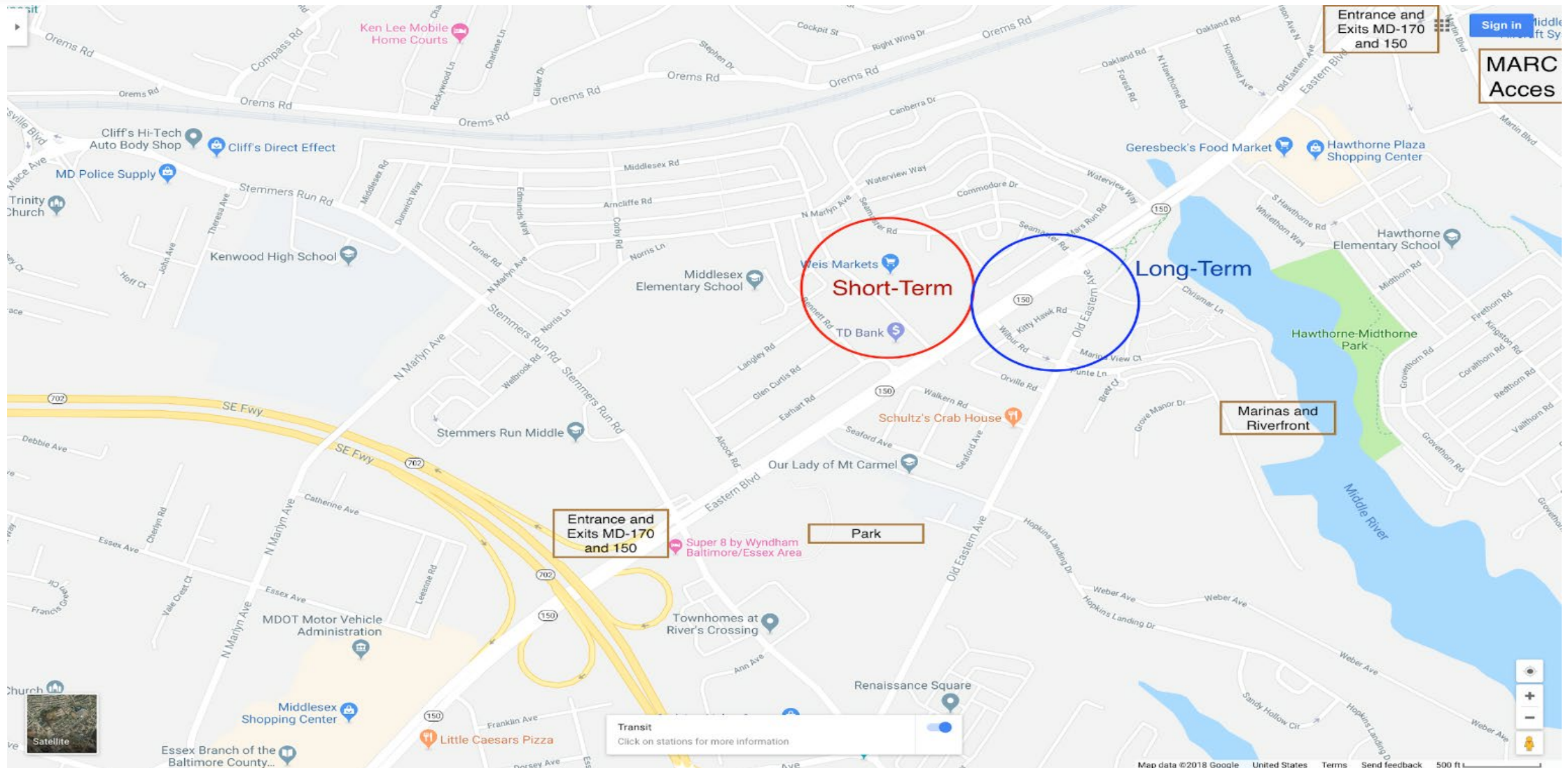
Building townhomes at this size serves two purposes:

- the larger size would likely make them more competitive with other new communities
- as land becomes more limited, the product provides greater density without redeveloping the property.

source: Trulia, Google Images



Areas of Long & Short-Term Opportunities: Townhomes





For-Sale Condominium Recommendation

This section of the Corridor offers reasonable short-term and long-term opportunities to build for-sale condominiums. From the demand data, annual demand for new condos is approximately four units per year to satisfy the small market.

This portion of the boulevard has various modes of transportation like Martin State Airport, MARC regional transit, I-695, and I-95. Also, this area is near Middle River, Upper Back River and the Renaissance Park, which provides a beautiful place to live. Due to the relative size and cost of condominiums, they would likely produce an excellent opportunity for the first-time home buyer.

Many single young potential buyers prefer the lower cost per square foot of condos over townhouses. Demographic data show that most of the labor that worked in Essex did not live in the city, and any new condominium would likely provide these individuals with a housing product that may encourage them to live closer to work.

Challenges for building condominiums are the crime rate, lack of connection, and walkability score. The overall crime rate in Essex is 45% higher than the national average. With a walk score of 35 out of 100, this corridor lacks safe pedestrian access between the retail and the residences. The sidewalks are narrow and offer no pedestrian buffer from the traffic.

The second part of the corridor has limited raw land to develop condominium buildings, which take a lot of space. This part of the corridor is most likely to realize demand from buyers between 25 to 34 years old with incomes of \$25,000 to \$50,000 and families with income between \$50,000 to \$75,000.



For-Sale Condominium Recommendation

There are four likely areas of opportunity to develop for-sale condominiums in this section of the corridor.

Space 1 is roughly 1.5 acres near the Middlesex Elementary School. This proximity would likely make new condo units attractive to faculty and staff who work at the school.

Space 2 is about 2.02 acres. The site is within walking distance of a grocery store, which offers prospective residents convenient access to retail.

Spaces 3 and 4 are near the water and have beautiful water views. They might attract prospective buyers who own a boat or those who prefer aquatic events. This access to natural amenities may give developers the opportunity to realize demand condominiums.

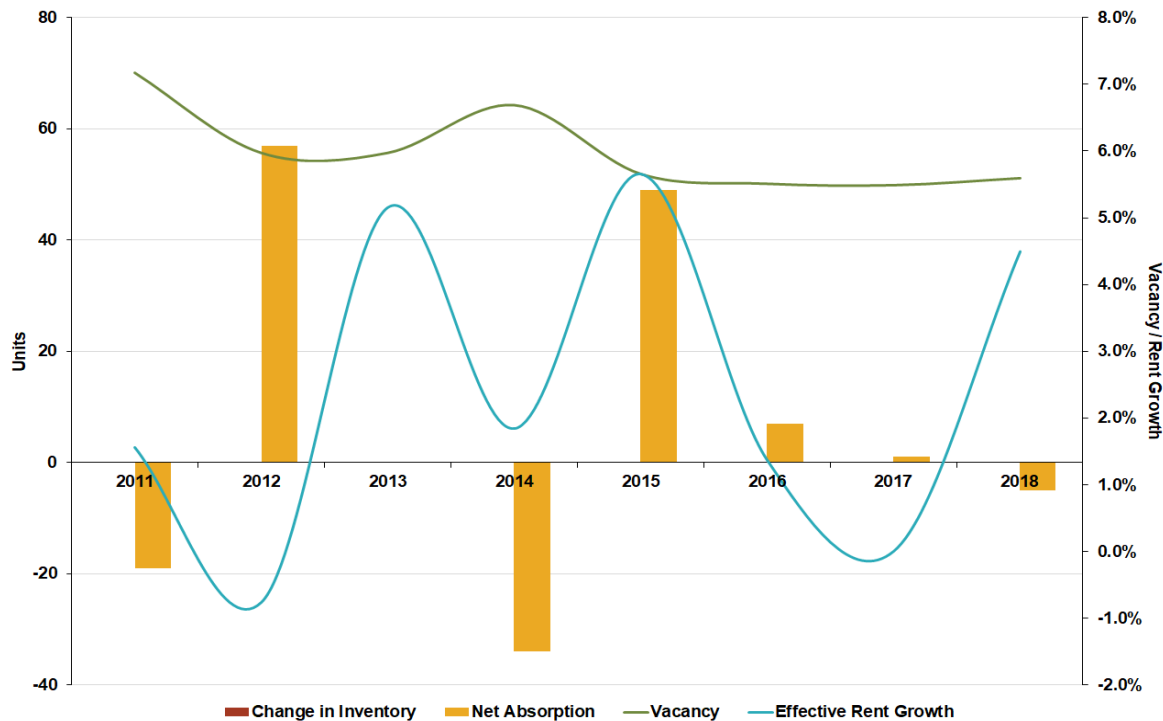


Multifamily Rental Analysis and Recommendations

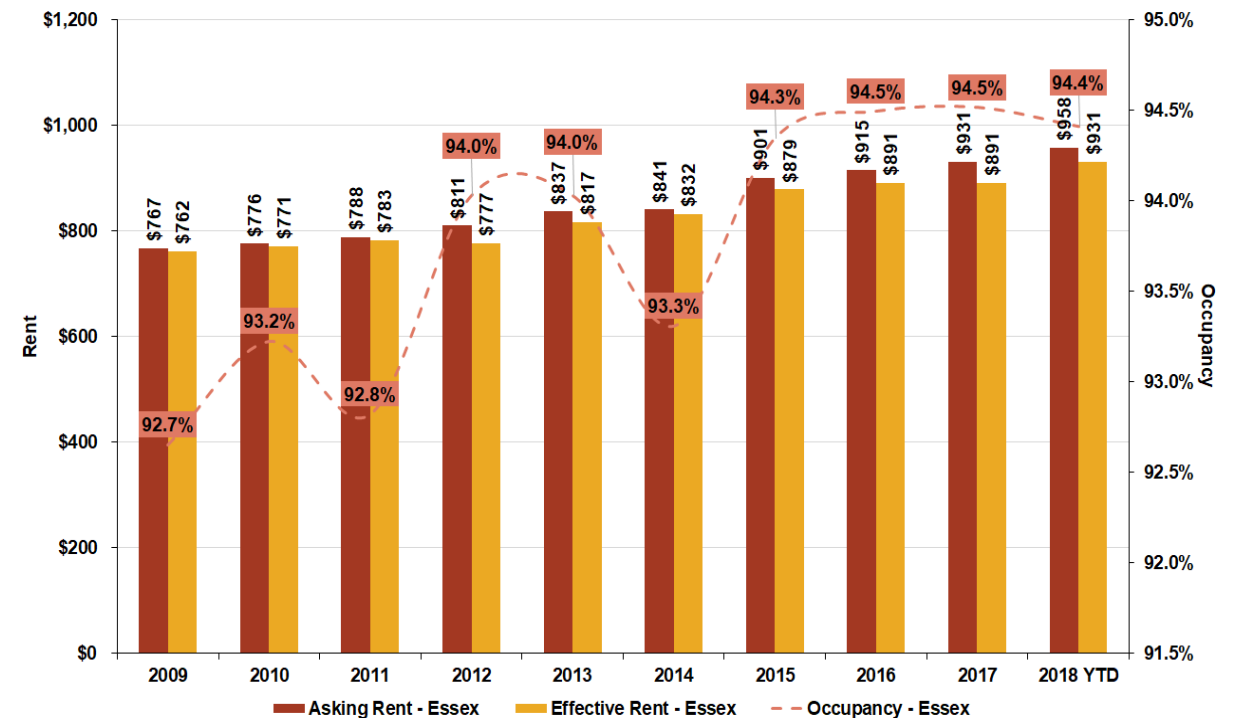
Multifamily Rental Trends

- There has been no new multifamily rental inventory added from 2011 to 2018.
- Absorption of existing apartments has been net negative in 2018 YTD with net positive absorption trending downward from 2015.
- Overall occupancy has improved since 2009 and has remained at stable since 2015.
- Asking rent has grown by a compound annual growth rate of 2.5% over the period 2009 to 2018.

Completions, Absorption, Vacancy, and Rent Growth - Essex; 2011-2018



Asking Rent, Effective Rent, and Occupancy - Essex; 2009-2018



Multifamily Rental Supply



Eight comparable rental properties were chosen in the market area from Central Baltimore to the far northeast with Essex in the center. Per square foot rents range from \$1.36 to \$3.62. New high rise apartments in central Baltimore are asking high \$3.00 rents. However, these projects weren't included because they are of a standard of construction and luxury inappropriate for Essex, which is still in an unproven area for luxury rentals.

The Berkleigh in the Greenleigh planned community was built in 2018 and is in lease-up. It is less than five miles from Corridor Two and is achieving \$1.69 per square foot rents. This property can be considered the most analogous to a new property that would be built in Essex, with similar proximity to downtown and I-95. The Berkleigh is currently leasing at a rate of approximately 18 units per month. This would equate to approximately a 16-17 month lease-up period should the trend continue.

MAP KEY	COMMUNITY NAME	YEAR BUILT	MARKET RATE UNITS	OCC. RATE	AVERAGE SIZE (SF)	AVERAGE ASKING RENT	AVERAGE ASKING \$/SF
1	The Berkleigh	2018	317	17%	1,223	\$2,062	\$1.69
2	Essex Park	1974	228	92%	730	\$994	\$1.36
3	Essex Village and Marilyn Gardens	1946	354	100%	420	\$725	\$1.73
4	Enclave At Box Hill II	2018	137	66%	1,035	\$1,673	\$1.62
5	Enclave At Box Hill I	2015	157	81%	1,224	\$1,770	\$1.45
6	Highland Haus	2017	70	100%	736	\$1,640	\$2.23
7	Remington Row	2016	108	100%	795	\$1,570	\$1.98
8	Icon Residences at the Rotunda	2016	222	100%	780	\$2,820	\$3.62

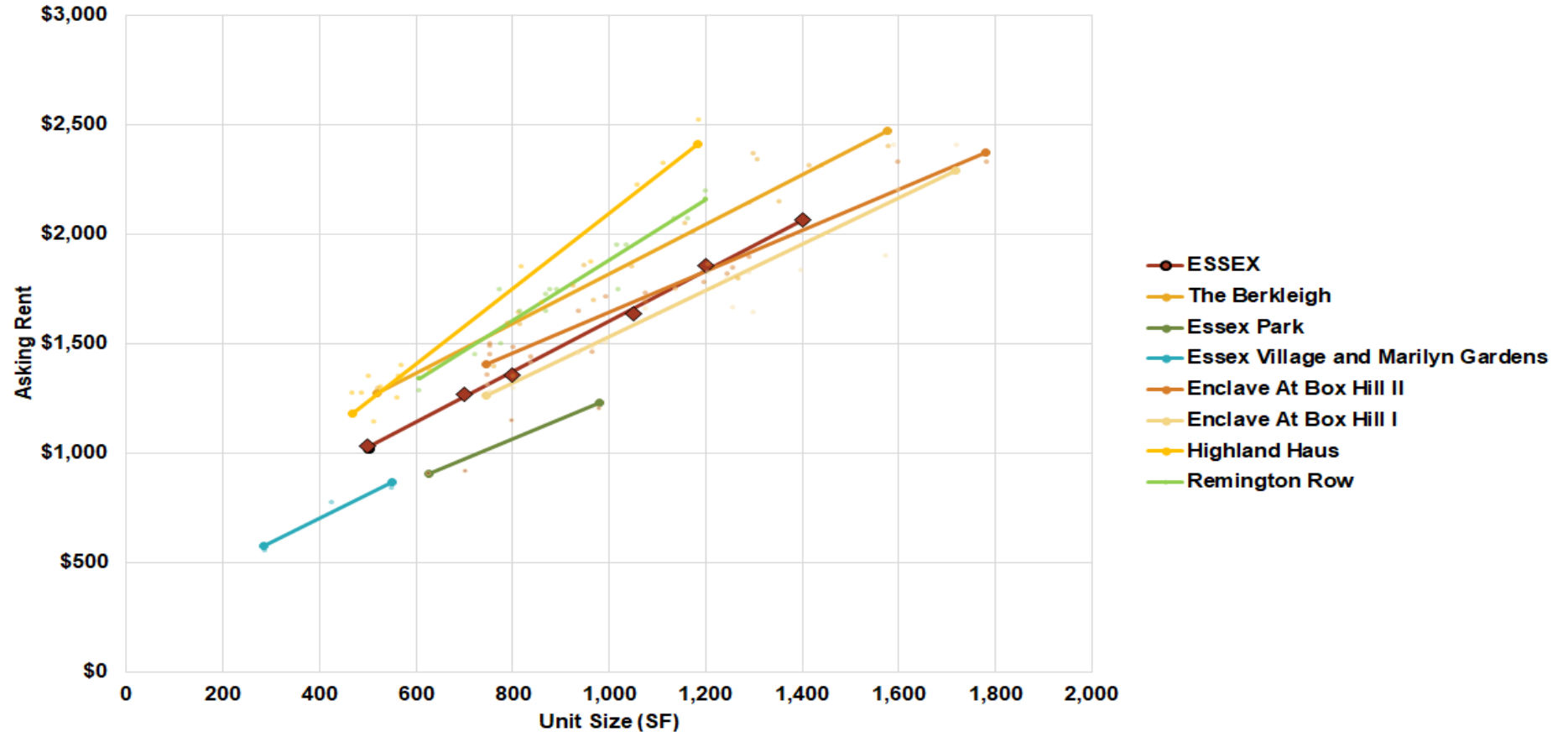


Multifamily Rental Price-to-Size Comparison

Recommended pricing for a new multifamily building in Corridor Two is approximately \$1.65 per square foot. This would price the building above current Essex multifamily properties but below newer properties in Greenleigh and in Baltimore proper.

Greenleigh has a more developed corporate mixed-use presence, as well as access to better schools and less perceived crime.

Newer buildings in Baltimore proper offer modern amenities, as well as access to downtown jobs, restaurants, retail, and nightlife.





Multifamily Rental Demand

Rental Demand for New Apartments: Baltimore County and Essex Capture

	Income:	Below \$25,000	\$25,000 \$50,000	\$50,000 \$75,000	\$75,000 \$100,000	\$100,000 \$150,000	\$150,000 And above	
	% Spent on Rent ³ :	50%	38%	27%	22%	16%		
	Rent ² :	Below \$1,000	\$1,000 \$1,600	\$1,600 \$1,700	\$1,700 \$1,800	\$1,800 \$2,000	\$2,000 and above	
SOURCES OF DEMAND								TOTAL
New Household Growth, 2018-2035								
Total Annual New Households ¹		1,058	1,058	1,058	1,058	1,058	1,058	1,058
x Distribution of Income ³		15%	20%	19%	14%	18%	15%	100%
= Income Qualified		158	211	202	146	186	155	1,058
x Renter Propensity ³		80%	66%	55%	39%	28%	12%	48%
=New Households Seeking Rental Units		127	139	111	57	51	19	504
Existing Renter Household Annual Turnover								
Total Households		312,826	312,826	312,826	312,826	312,826	312,826	312,826
x Distribution of Income ³		15%	20%	19%	14%	18%	15%	100.0%
x Renter Propensity ³		57%	47%	40%	28%	20%	9%	34%
Total Renter Households		26,833	29,525	23,638	12,026	10,888	3,994	106,904
x Annual Turnover Rate ³		18%	25%	28%	28%	28%	18%	24%
=Demand From Existing Households in Turnc		4,830	7,381	6,619	3,367	3,049	719	25,965
Annual Rental Demand By Rent Range		4,956	7,520	6,730	3,424	3,100	738	26,469
Preference for New ⁴		0.5%	0.5%	3.0%	3.0%	3.5%	3.0%	1.9%
Annual Rental Demand for New Apartment		25	38	202	103	108	22	498
Preference for Essex Low ⁵		1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%
Annual Rental Demand in Essex		0	1	3	2	2	0	8
Preference for Essex High ⁵		5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%
Annual Rental Demand in Essex		1	2	12	6	6	1	29

¹ Based upon Baltimore Metropolitan Council Round 90 projections for Baltimore County annualized between 2020 and 2035.

² Based on rents as a percent of household income demonstrated in market assuming that renters spend 15% to 50% of household income on rent, the higher the income the lower the percentage spent on rent annually.

³ American Community Survey, 2016, 5 year estimates for Baltimore County, Maryland.

⁴ Based on new apartment absorption in Baltimore County compared to total units and starting rents of new apartment buildings.

⁵ Low based on the communities' number of new units compared to the county. High based upon current percentage of units in community compared to county.

Essex could capture between 2-6% of Baltimore County demand for new apartments. The low projection of eight units annually was determined using Essex's current proportion of new multifamily product in the county, while the high projection of 29 units was determined using Essex's current proportion of all multifamily product in the county.

Given the annual demand range, a near-term, larger-scale multifamily project would not be feasible. Using the high end of the annual demand range, a larger-scale project becomes feasible after five years at 145 units. Ten years of demand aggregation at the high end of the range leads to the possibility of a 290-unit property.

Essex's capture of the Baltimore County demand for multifamily units will continue to be influenced by the evolution of Essex itself and the community's ability to develop a greater sense of place

Multifamily Rental Opportunity Summary

- Aesthetically and pragmatically, Corridor Two is an environment well-suited for multifamily development in Essex for a number of reasons including continuous sidewalks, protected boulevard medians, proximity to groceries, and proximity to schools.
- Some limiting factors that may initially make multifamily development more challenging include the perception of high crime, below average school scores, and unrenovated retail centers, contributing to an undeveloped sense of place.
- Demand for multifamily housing in Essex does not support near-term development of a larger-scale project.
- There is an opportunity for development of a larger-scale multifamily project in the long-term.
- Mitigating the limiting factors may increase the potential for moving the timeline for a multifamily project forward, as demand may increase once limiting factors are improved.



Proposed Essex Unit Mix and Pricing

UNIT TYPE	UNITS	MIX	AVG. UNIT SIZE (SF)	AVG. RENT	AVG. \$/SF
Studio	20	8.0%	500	\$1,030	\$2.06
1BR	84	33.7%	700	\$1,265	\$1.81
1BR+	20	7.8%	800	\$1,355	\$1.69
2BR	100	40.2%	1,050	\$1,635	\$1.56
2BR+	11	4.3%	1,200	\$1,855	\$1.55
3BR	15	6.0%	1,400	\$2,065	\$1.48
TOTAL/AVG.	250	100.0%	896	\$1,475	\$1.65

Multifamily Rental Potential Development Locations



A potential primary site (yellow) for development would include land near the already existing retail center that includes a grocery store and other daily needs retail. This location would be walkable to retail and schools.

A potential secondary development site (red) would include land along Old Eastern Avenue. A development in this area would be farther from retail, however it would be closer to the community park and less impacted by traffic pollution on Eastern Boulevard.

source: Google Maps

Retail Analysis and Recommendations

By the end of this year, there will be only 31,450 square feet of new retail product delivered to the Baltimore County East submarket.

Current product data points to the dated quality of the product in the area.

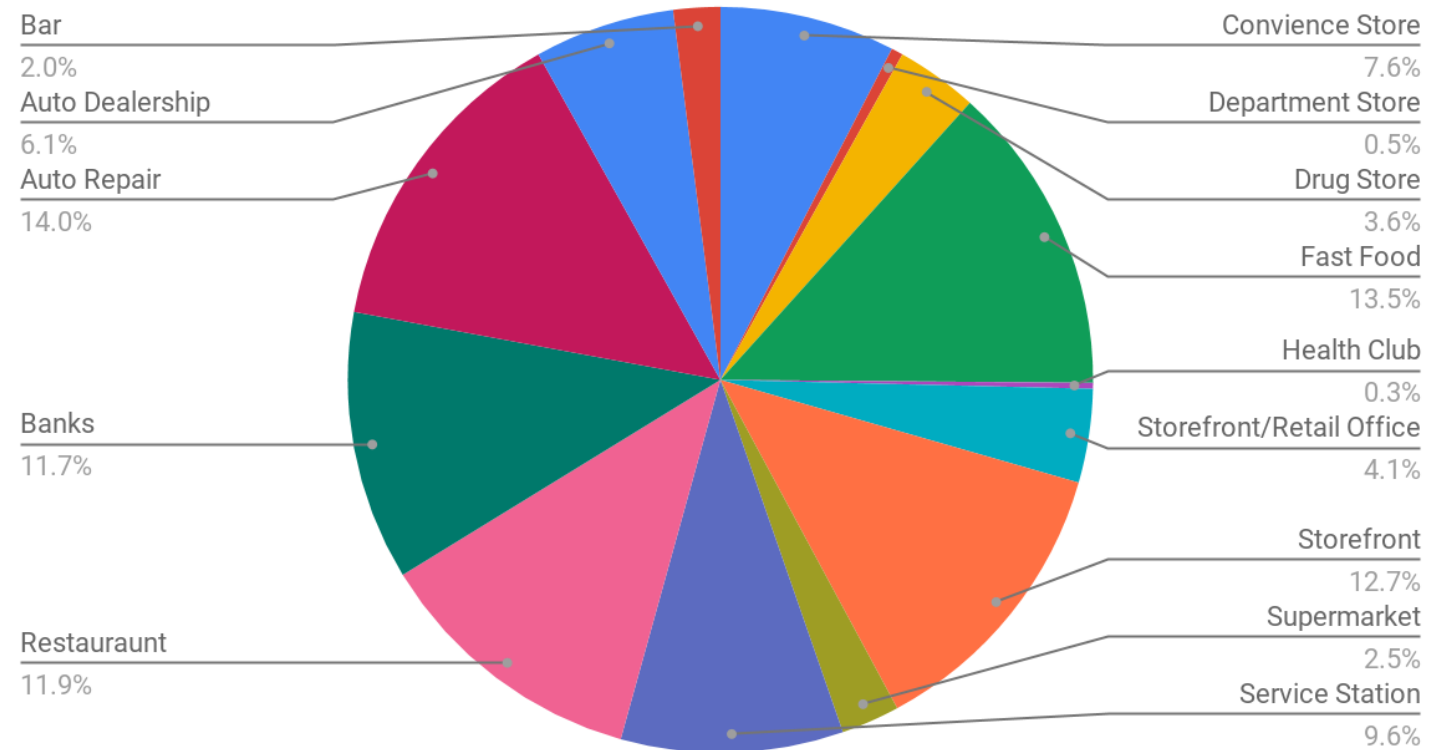
Properties built between:

1998-2018: 26
 1978-1998: 242
 1958-1978: 269
 1938-1958: 256

Proposed Rentable Building Area of retail for 2019 is, so far 300,005 square feet

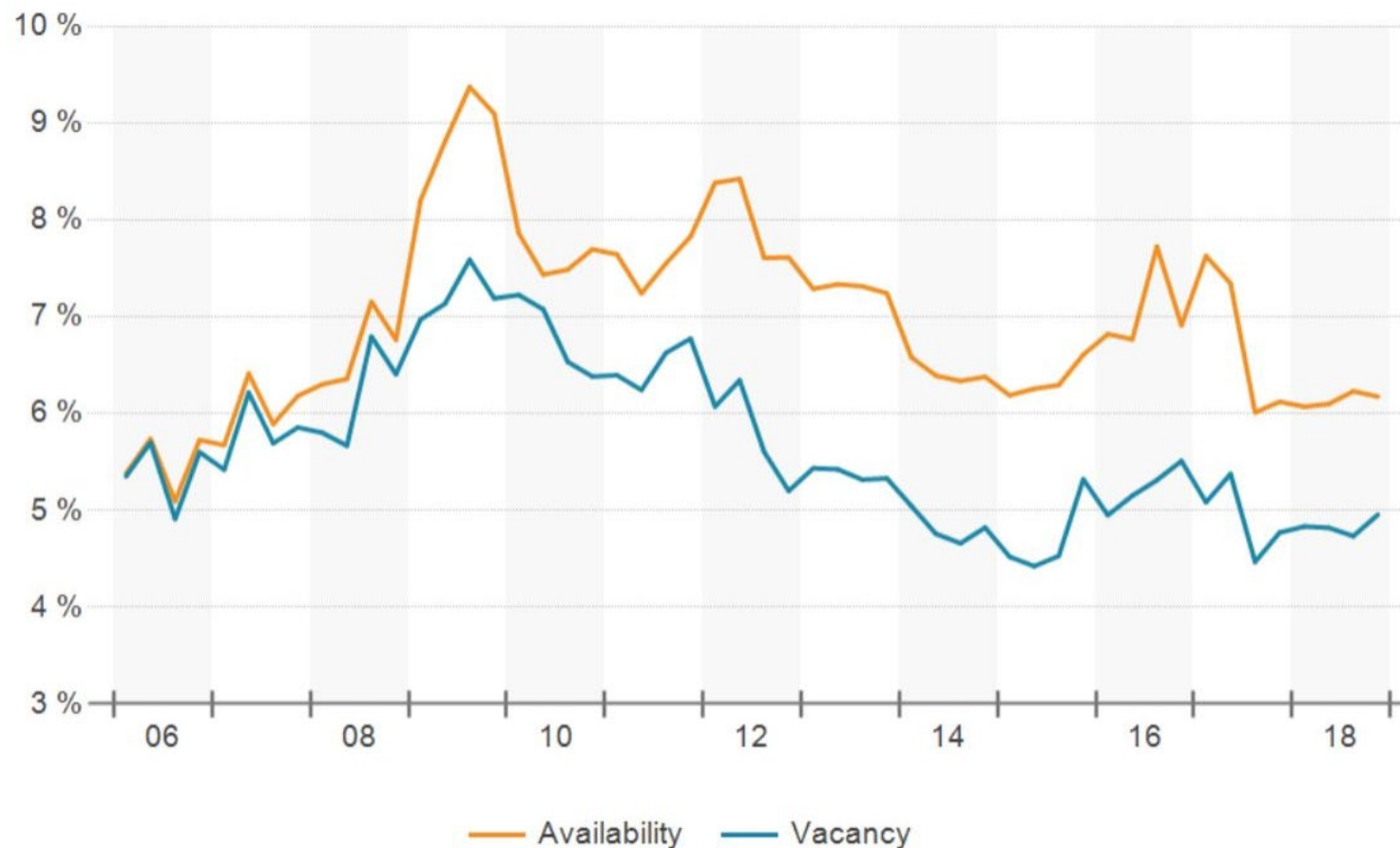
source: CoStar, retrieved 11/17/2018

Retail By Secondary Type: Built Between 1960 - 2018



Retail in Baltimore County East Submarket

Availability and Vacancy Rates by Year

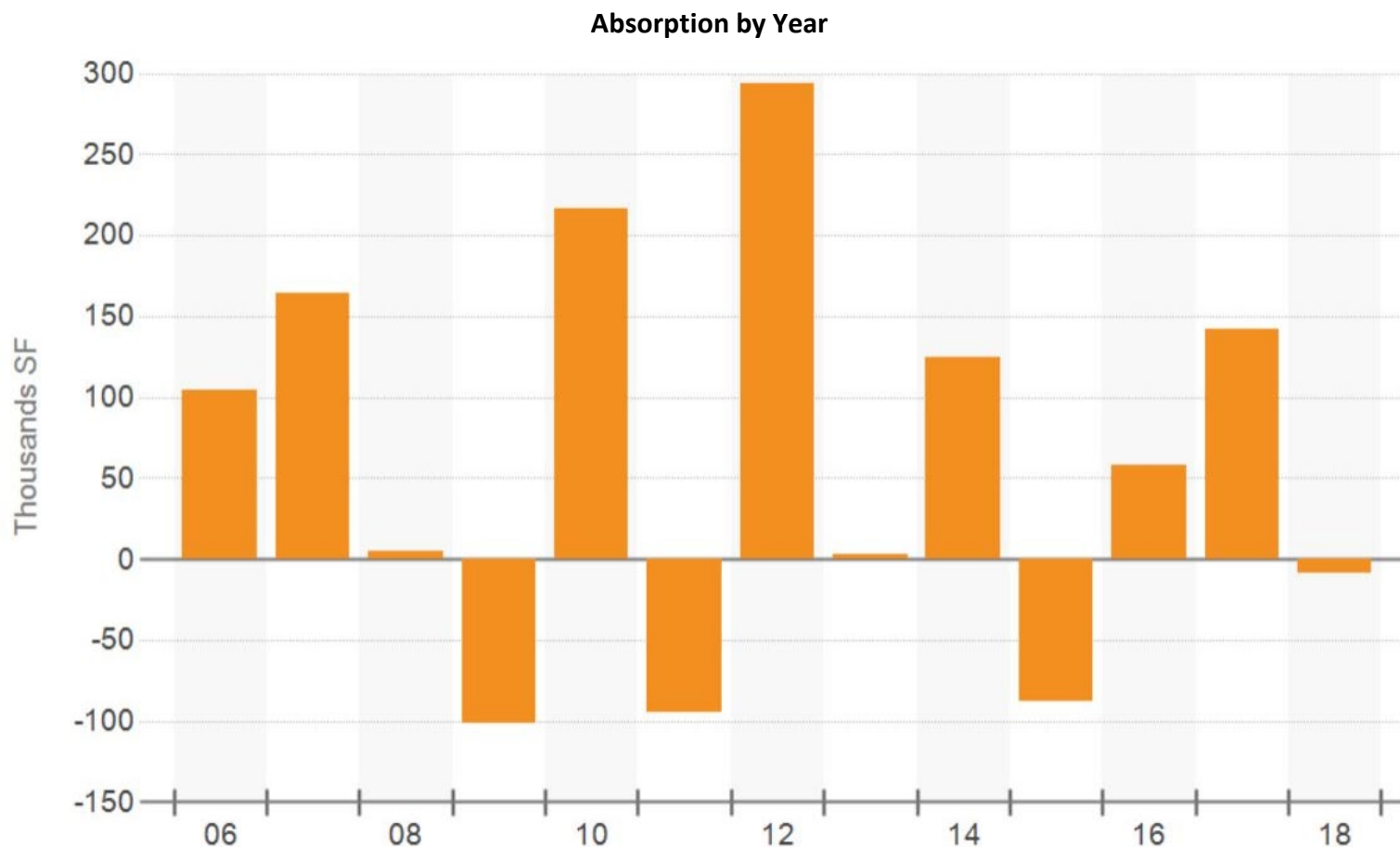


The availability rate and vacancy rate of retail product in the Baltimore County East submarket demonstrates the high vacancy rates following the economic recession in 2008 , as well as a spike of vacancy in 2017.

The current vacancy rate of retail product in the Baltimore County East submarket sits at about 5%.

source: CoStar, retrieved 11/17/2018

Retail in Baltimore County East Submarket

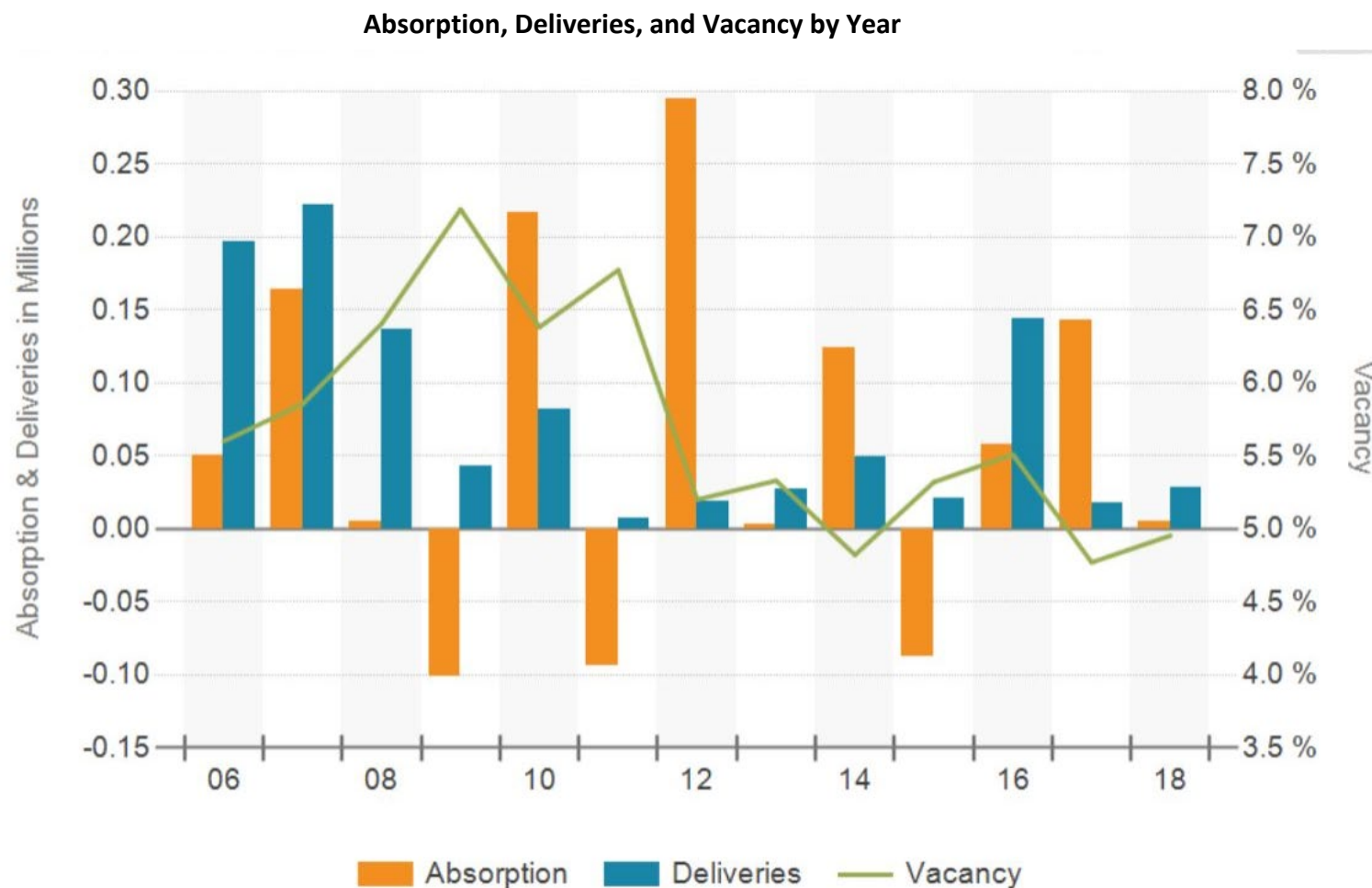


The market was able to absorb almost 150,000 square feet of new retail square footage in 2017, however, retail became over supplied in 2018 it generated an excess of about 10,000 square feet of new retail product that could not be absorbed.

Historically, 2012 saw the largest production of new retail product since 2006. In 2012 the Baltimore County East submarket saw an absorption of about 300,000 square feet of new retail product into the market.

source: CoStar, retrieved 11/17/2018

Retail in Baltimore County East Submarket



Comparing absorption and deliveries (in millions of square feet) and vacancy rates between 2006 and 2018 help to get an understanding of the retail market in the Baltimore County East Submarket.

There was around 0.14 million square feet of new retail product delivered in 2016 that was matched by absorption in 2017, yet very little new deliveries in 2017 or 2018.

Historically, 2012 saw a huge spike in absorption and the end of a large drop in the vacancy rate. This is the first period of time with relative stabilization of the market since the 2008 economic recession. Older product that became vacant after the recession finally got rented.

source: CoStar, retrieved 11/17/2018



Market Analysis: Retail Demand

Households in Essex ¹	15,796	60
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Industry Summary	Expenditure per Household ²	Estimate of Current Total Expenditures in Essex	Sales/SF Threshold ³	Total Retail Supply in Essex Currently ⁴	Annual Future Demand From New Households	National Store Chains Sales/SF Threshold ⁵	Future Annual Supportable Square Feet ⁵	Future 10 Year Demand Potential
Women's Apparel	\$580	\$9,161,680			\$34,993	\$369	95	949
Men's Apparel	\$308	\$4,865,168			\$18,583	\$369	50	504
Girl's Apparel	\$116	\$1,832,336			\$6,999	\$301	23	232
Boy's Apparel	\$79	\$1,247,884			\$4,766	\$301	16	158
Infant Apparel	\$70	\$1,105,720			\$4,223	\$301	14	140
Footwear	\$312	\$4,928,352			\$18,824	\$357	53	528
Entertainment	\$287	\$4,533,452			\$17,316	\$107	162	1,615
Audio & Visual Equipment/Service	\$971	\$15,337,916			\$58,584	\$450	130	1,302
Reading Materials	\$72	\$1,137,312			\$4,344	\$251	17	173
Pets, Toys, Hobbies	\$577	\$9,114,292			\$34,812	\$238	147	1,465
Personal Items	\$1,871	\$29,554,316			\$112,884	\$482	234	2,344
Food at Home	\$3,569	\$56,375,924			\$215,330	\$501	430	4,296
Food Away From Home	\$2,450	\$38,700,200			\$147,817	\$551	268	2,684
Alcoholic Beverages	\$379	\$5,986,684			\$22,866	\$551	42	415
Household Equipment & Furnishings	\$1,319	\$20,834,924			\$79,580	\$337	236	2,364
Automotive Repair & Maintenance	\$697	\$11,009,812			\$42,052	\$257	164	1,635
Total	\$13,657	\$215,725,972	\$165	1,310,752	\$823,972	\$396	2,081	20,805

New retail demand in Essex is based on new household growth and spending projections on an annual basis, over the next 10 years.

Based on this information, Essex is projected to be able to support approximately 20,000 square feet of new retail space every ten years, or 2,000 square feet of new retail per year.

Corridor 2 is likely to see a very limited amount of new retail.

¹ From Esri. Estimates for Essex, Maryland. Future annual growth based upon Esri 2018-2023 estimate (50/year) and Essex household demands (49 to 70/year).

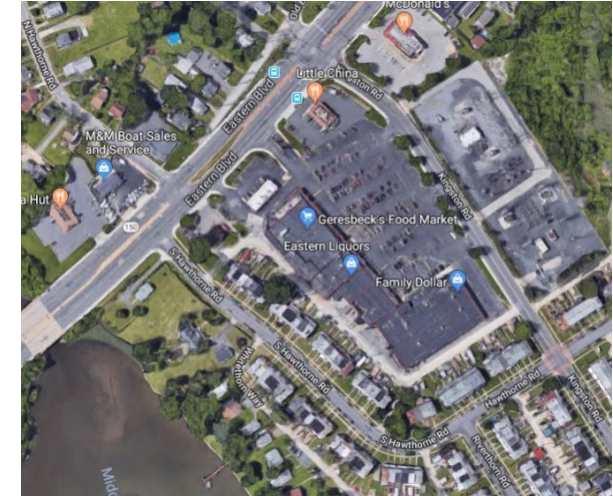
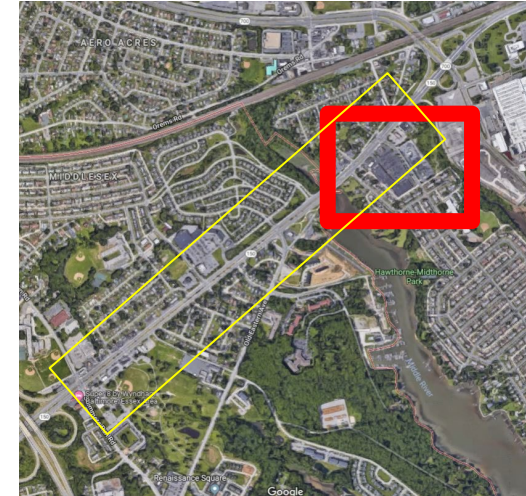
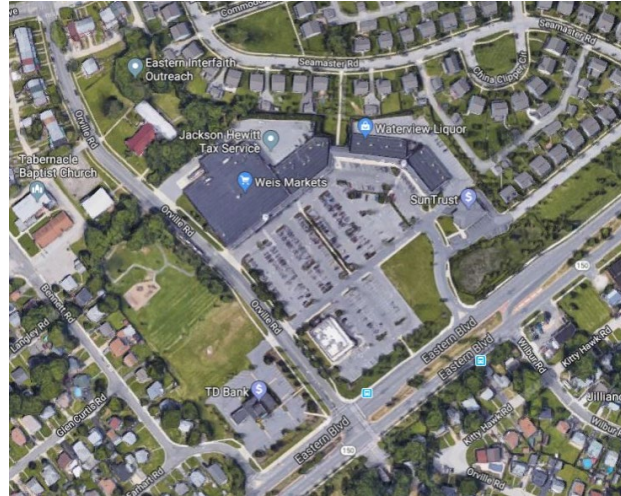
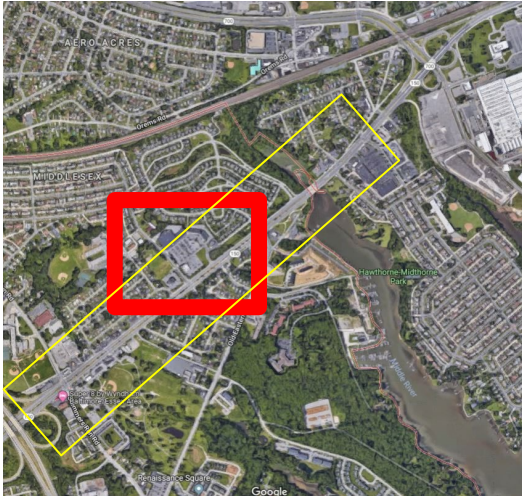
² Annual per household spending by category within a three mile radius from 1415 Eastern Boulevard.

³ Based upon current square feet in Essex from CoStar divided by total retail expenditures.

⁴ CoStar.

⁵ Based on the average reported expenditures by square foot, by store type, as reported [emarketer.com](https://www.emarketer.com).

Existing Shopping Center Data (Neighborhood Centers)



Waterview Shopping Center

- 117-165 Orville Rd
- Total SF: 67,815, SF Vacant: 11, 982 SF
- Year Built: 2004
- Anchor tenant: Weis Markets
- CoStar est. Rent : \$16 - \$19 / SF
- 2017 Value Estimate: \$11,983,300

Hawthorne Shopping Plaza

- 2105-2109 Eastern Blvd
- Total SF: 59,147 SF Vacant: 1,600 SF
- Year Built: 1960
- Anchor tenant: Geresbeck's
- Rent for vacant space :\$16.50/SF Triple Net
- 2017 Value Estimate: \$3,814,100

source: CoStar, retrieved 11/17/2018



Retail Recommendations

Strengths	Opportunities	Key Considerations
<ul style="list-style-type: none">-Essex corridor section two has a number of strengths which may have led to the current oversupply of retail in the area.-Essex corridor two presents an opportunity for retail with great visibility related to location, and high traffic counts.	<ul style="list-style-type: none">- Essex Corridor Two provides a number of smaller short term opportunities for improvement, as opposed to larger development opportunities. These short term opportunities for improvement include street beautification and remediation.- Opportunities in the long term could include a consolidation of such retail. The retail that exists currently may perform better if consolidated in location.	<ul style="list-style-type: none">-Baltimore county as a whole is over supplied with retail, as well as the corridor.-There are two competing neighborhood centers in this section of the corridor that maintain the most traction.-Route 150, also known as Eastern Boulevard in Essex, see approximately 28,931 cars in annual daily traffic according to the MDOT 2017 traffic volume maps.

Beautifying the area's streetscape could make the retail more attractive and profitable.

The land value is low, related largely to regional economic factors, but if the retail corridor was treated as a pedestrian-friendly experience it could draw more people. There is plenty of retail in the corridor already, so more retail space is not suggested. However, renovating existing retail may be central to developing a modern, healthy retail environment.

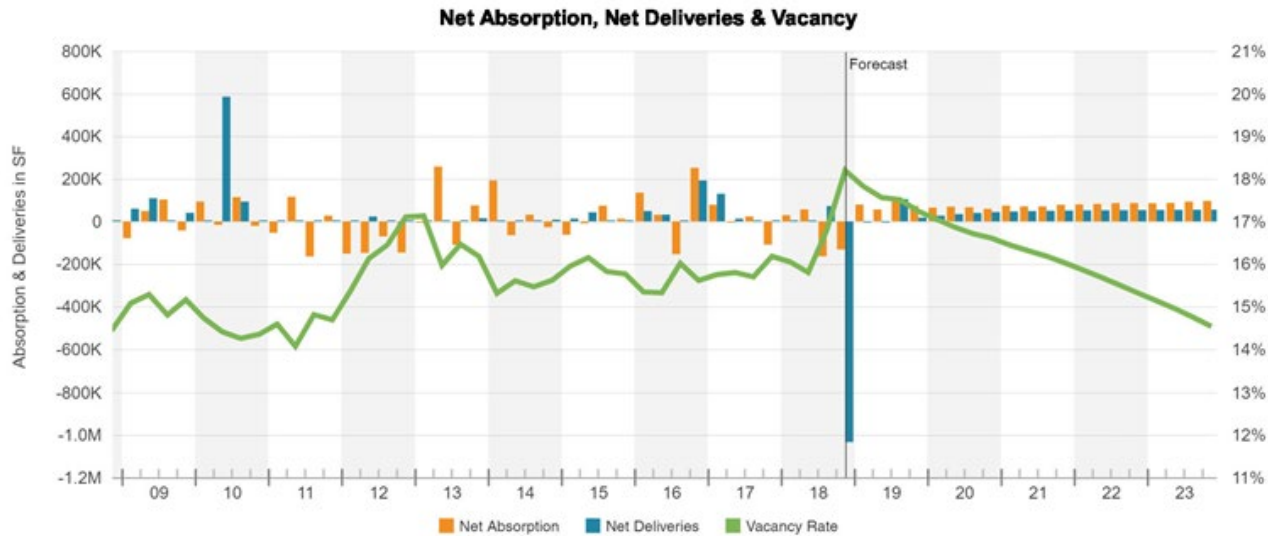
The area's existing retail is predominately auto-related, so encouraging more retail diversity may be beneficial to the overall retail context in Essex.

Under-performing retail spaces could be repurposed for creative uses, including galleries and breweries to make use of vacant space. Additionally, under-performing isolated retailers may be relocated to the more widely-used retail centers to enhance the performance of already popular centers.

More consolidated retail around neighborhood centers may promote greater future development.

Office Analysis and Recommendations

Office in Baltimore County Trends

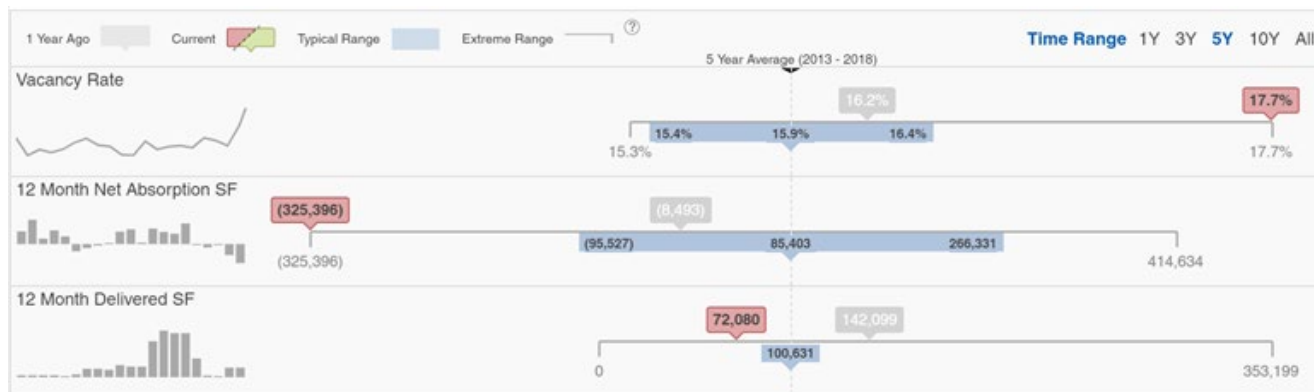


Office uses in Baltimore County have a higher vacancy rate compared to the last five years. The current 17.7% vacancy is a 1.8% increase to the five-year average.

Net absorption in 2018 was -325,296 square feet, contributing to the increase in vacancy. The five-year average of net absorption is also negative at 8,493 square feet.

72,000 square feet of office space was delivered last year, nearly 30,000 square feet below the five-year average. The short term outlook for office uses in Baltimore County is not strong.

It is anticipated that the vacancy rate will sharply decrease in the next five years as absorption begins to surpass deliveries in the county.



source: CoStar

Office in Essex, MD, Trends



source: CoStar

Essex office inventory at 340,000 square feet, accounts for 1.3% of the Baltimore County inventory.

Absorption has been negative for the past two years and in eight out of the past ten years.

There have been no significant deliveries in the past ten years.

In the next five years it is expected that vacancy will decrease as a result of increased absorption per year, and no deliveries.

The forecast for deliveries remains near zero in the next five years.



Office Demand

Essex, MD

	2017
Essex Inventory SF	340,063
Essex Vacancy SF	25,450
Essex Occupied SF	314,613

	2015
Baltimore County Office Emp.	180,557
SF/ Office Emp.	135
Baltimore County Occupied SF	24,336,210

Capture Rate	
Essex % of County Inventory	1.29%
Account for recent Negative Absorption + no Construction since 1997	50.00%
Capture Rate	0.65%

Method 1	2019-2020	2020-2025	2025-2030	2030-2035	2019-2035
Baltimore County SF Demand	662,119	2,024,006	1,473,542	1,248,420	5,408,087
Essex % of County Inventory	0.65%	0.65%	0.65%	0.65%	0.65%
Essex SF Demand	4,280	13,083	9,525	8,070	34,957

The Baltimore County square foot demand between 2019 and 2035 is projected to be approximately 5.4 million square feet.

An optimistic capture rate of this future demand is based on the proportion of Essex inventory to Baltimore County inventory. If Essex currently has 1.29% of the Baltimore County inventory it could capture 1.29% of future demand (75,000 square feet).

As a result of the recent negative absorption and lack of construction since 1997, the capture rate should be a fraction of the inventory proportion outlined above.

By 2035 Essex could support up to 35,000 square feet of additional office uses, with an approximate 0.65% capture of Baltimore County demand.

The 25,000 square feet of existing vacant office space could significantly limit the opportunity for the construction of new office space.

source: CoStar



Office Analysis

Strengths	Opportunities	Key Considerations
<ul style="list-style-type: none">- Transit: bus line through corridor- Competition: no class A office competition- Access: Well connected to major highways + Baltimore City	<ul style="list-style-type: none">- Population: growing family population could result in demand for service office spaces such as doctors, insurance agencies, accountants- Consolidation: grouping retail and office to increase traffic- Healthcare: Concentration of healthcare demand could justify small multi-story office building- Parking: opportunity for new construction on or adjacent to excess existing parking.	<ul style="list-style-type: none">- Anchor: Major institution or public amenity is needed to justify major office growth- Vacancy: 20,000 Sf of existing vacant office space can absorb a large percentage of demand of next 15 to 20 years.- Parcel size: Combining parcels is likely necessary for office development- Jobs: In competition with Baltimore city

Office Recommendations and Potential Locations

Minimal new office addition.

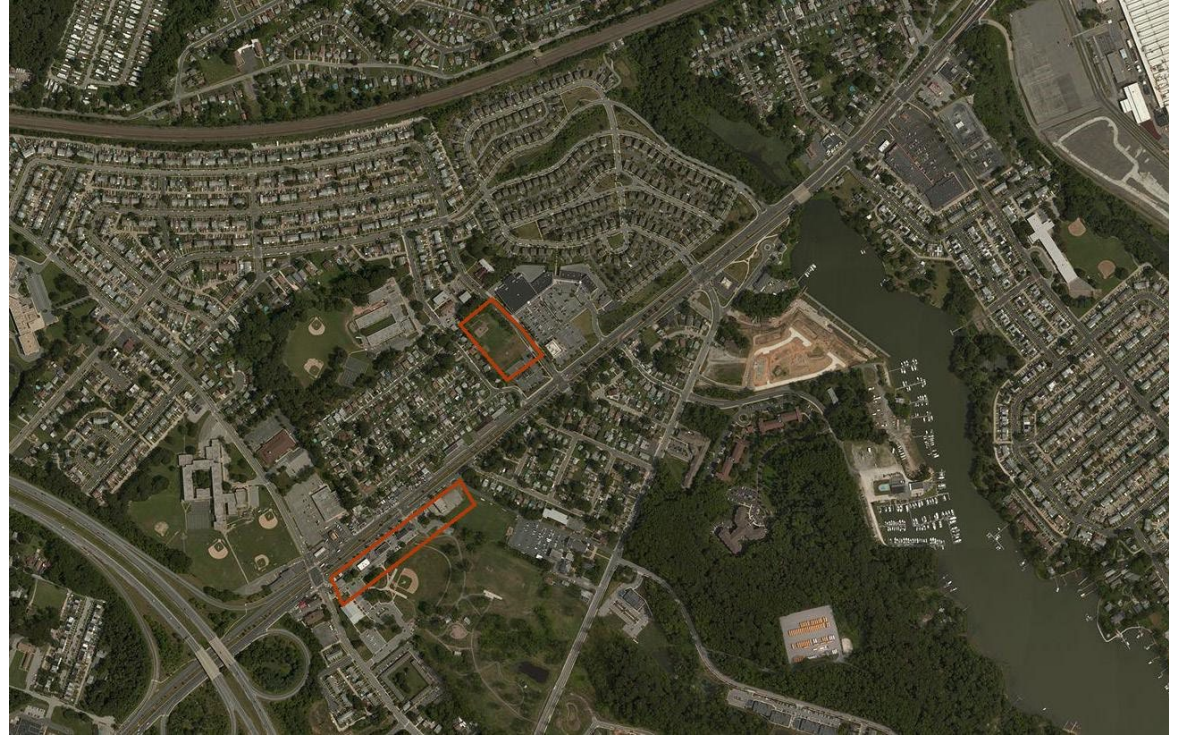
No class A addition as a result of proximity to Baltimore City.

Could have demand for up to 35,000 square feet of **family service office space** over the next 15 years.

Locate interventions **near existing excess parking or amenities** (school, park, shopping center).

Location near major highways not as critical for locally-based office space (doctors, insurance, tax).

Consider **healthcare office space**.



Recommendations Summary and Critical Success Factors



Recommendations Overview by Building Type

Land Use	Short-Term	Long-Term	Key Considerations	Demand Potential to 2035	Key Tenant/Buyer
For-Sale Townhomes	Strong	Strong	Public perception of Essex	Total 342 Units	Income: \$75,000 - \$100,000
For-Sale Condos	Moderate	Moderate	Build some condos near water; convert some old apartments into condominiums	Total 72 Units	Income: \$25,000 - \$50,000 and \$50,000 - \$75,000
Apartments	Weak	Moderate	Mitigate challenges; improve sense of place	Low: Total 128 Units High: Total 464 Units	Income: \$50,000 - \$75,000
Retail	Weak	Strong	Rehab existing neighborhood centers	Total 35,369 sf	Auto Repair Retail
Office	Weak	Weak	Need anchor institution	Total 35,000 sf	Service Office (healthcare, insurance)

Potential Locations



Critical Success Factors: Street Design



Key Street Design Improvements

1. Parklets are mini-parks on the sidewalk that add to the street's aesthetic. They are ideal for neighborhood main streets with active storefronts and heavy foot traffic.
2. According to the National Association of City Transportation Officials (NACTO), bike boxes help cyclists make left or right turns by placing them in front of traffic at a red light.
3. NACTO also states that loading zones help reduce obstructions of the bike lane and make deliveries easier for businesses. Loading zones can be striped and signed, or managed for off-peak deliveries.

source: NACTO.org

Critical Success Factors

