Fiscal Analysis of Merion Pike West, Phase 1

Summary

Merion Pike West is a proposed two-phased development in Arlington Mill. In Phase 1, the plan calls for replacing 90 garden-style apartments with a six-story, 400-unit building, which includes 276 units allocated to market rate rentals and 124 units designated for households below the area median income (AMI).[1] Based on an anticipated demolition of existing facililties in 2022 and a completed and occupied building in 2024, we estimate that:

- This development will increase county spending between $32 and $37 million between 2022 and 2031.
- The bulk of the new spending comes from an anticipated increase in net enrollment of just over 100 students.
- Revenues, principally driven by real estate taxes, will increase by about $14.5 million over the same time period.
- The county will need to increase revenues between $17 and $23 million to cover the anticipated budget shortfall through 2031.

Background

Merion Pike West is a proposed development at 843 South Greenbrier Street in the Arlington Mill Civic Association. The development has two phases and covers about 180,000 square feet of land. It encompasses five subsequently listed parcels on Greenbrier Street (street numbers for the buildings are in parentheses): 22014005 (871, 873*, 875*, 877), 22014038 (835, 837, 839*, 841*), 22014039 (861, 863*, 865*), 22014045 (843, 845*, 847, 849), and 22014399 (851, 855*, 859). According to the links above, each of these addresses is home to six garden-style apartment units for the addresses

[1] There is no retail in the Phase 1 development plans submitted in April.

without asterisks and seven garden-style units for addresses with asterisks. The existing apartments are split evenly between one- and two-bedroom units. The site is bounded on the west by South Greenbrier Street and on the south by Columbia Pike. Merion Pike West Phase 1 encompasses all of the parcels except for 22014005; by our count, this includes 90 existing units. The 26 units in the 05 parcel will not be included in Phase 1.[2] According to the plans, approximately 92,000 sq. ft. are currently impervious and about 90,000 sq. ft. are pervious; the new construction will change that allocation to 144,000 sq. ft. and 38,000 sq. ft. respectively. Because a larger share of the land will be covered by the new building, a number of trees will also be removed, a catalog of which is available in the plans themselves and summarized in Table 3 in the Appendix.

We evaluate the fiscal impact of Phase 1. We assume that the 90 units will be demolished in 2022 and that the new facility will be completed and occupied in 2024. Phase 1 includes the construction of 400 new residential units. Of those, 276 units will be market rate apartments, 62 units will be priced for households making 60 percent of the AMI and 62 units will be priced for households making 80 percent of the AMI. The new construction is going to be six stories tall; therefore, we classify the units as elevator units or high-rise units.[3]

New Revenues

Most of the county's revenues from residential properties come from real estate taxes, however, new construction also brings substantial additional revenues. We use a comprehensive model of Arlington to estimate the effects of development on of all the county's revenue streams including Arlington Public School (APS) service charges, meal taxes, sales taxes, personal property taxes, utility taxes, state aid, and more.

We show the results from our simulations in Table 1. In 2022 and 2023, many of the taxes are negative because the existing property has been demolished. Once the new construction is completed in 2024, most of the taxes reach their long-run levels.[4]

[2] Arlington Projects and Planning lists the removal 90 units across 14 buildings in Phase 1, and the site lists the removal of 27 units across four buildings in Phase 2. Using Spokeo.com, we only found 26 units across four buildings in Phase 2. Our count is consistent with the apartments.com listing for Greenbrier Apartments, which lists a total of 106 units in all buildings. The difference between these counts is because of an additional unit at either 875 or 877 S. Greenbrier.
[3] Classifying the development as a mid-rise building leads to slightly lower student counts, which leads to a small reduction in anticipated spending.
[4] Assessments are typically determined in January; however, the fiscal year begins in July. Therefore, a change in assessment can yield an effect on the previous fiscal year revenues. For example, we assume that the assessment on the new building changes in January of 2024, but that means that half of the increase is reflected in the real estate tax paid in FY 2023. This is why the Real estate tax revenues begin increasing a year earlier than the other sources of revenues, which we assume do not begin to increase until the beginning of the fiscal year, which begins in July.

Table 1: Revenues from New Development (Thousands USD)

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2022-2031
Real Estate	(170)	404	992	1,016	1,040	1,064	1,087	1,109	1,131	1,154	8,828
Personal Property	(49)	(50)	174	176	179	181	184	186	188	191	1,360
APS	(66)	(67)	142	145	149	152	156	160	163	167	1,102
Meal, sales, etc.	(128)	(130)	410	416	421	428	434	440	448	453	3,190
Total	(413)	157	1,718	1,753	1,789	1,825	1,861	1,895	1,930	1,965	14,480

Overall, we expect revenue from 2022 through 2031 to increase by about $14.5 million dollars.

The largest component of revenue comes from real estate taxes. Although revenue drops in 2022 from the demolition of the existing units, starting in 2024, real estate tax revenue increases by about $1 million per year over the anticipated revenue from the 90 garden-style apartments. Through 2031, we expect revenues to increase by a little under $9 million at the current tax rate.

Both an increase in the size of the development plus an increase in the per-unit assessment of the building drive the increase in real estate tax revenues. The existing properties on the four parcels assessed for a little under $200,000 per unit in 2020. Based on recently-constructed properties in Arlington Mill and its neighboring civic associations, we estimate that the new market rate properties will assess for a little above $300,000 per unit and that the new units reserved for below-AMI households assess for about $225,000 per unit.[5] [6]

Personal property taxes are assessed against personal vehicles. The developer is slated to add 300 additional parking spaces to the property. These new parking spaces generate personal property tax revenues from the vehicles garaged on the site at a rate of a little below $600 per new space, which works out to $174,000 in 2024.

Additionally, APS receives additional revenue from the unanticipated increase in enrollments. This revenue comes from fees for services such as lunch and extended day program tuition as well as additional revenues from the federal and Virginia governments.

There are a wide variety of other taxes and revenues that the county collects from residents. Taxes and revenues such as meal taxes, sales taxes, and the myriad of other county taxes and fees make up the last major segment of revenue. We expect these sources of revenue to raise a little more than $400,000 per year starting in 2024.

[5] We have updated our approach to estimate assessment values on apartments. New apartment complexes are almost universally assessed on a per-unit basis similarly to the most expensive "comps", and new construction is typically among the most expensive for new apartments. For a new construction, we catalog all market rate apartments of all types built within the last eight years in the civic association and its neighboring associations. We take the midpoint between the average and the maximum of those apartments, which are usually fairly close. Affordable units are assessed at 75 percent the value of market rate units.

[6] The Food Star development—RPCs 23034017, 23034018, and 23034019—in Barcroft to the east that was begun in 2017 assesses for about $308,000 per residential unit.

New Spending

New residents and new students increase the demands on the county's public services and APS resources. Using estimates of the new residents and students, we use our model to estimate the effects on county and school spending. Table 2 shows the estimated changes in spending from 2022 through 2031.

Table 2: Spending from New Development (Thousands USD)

Fiscal Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2022-2031
APS Operating	(840)	(858)	2,467	2,540	2,613	2,685	2,756	2,824	2,893	2,963	20,043
School Construction	(261)	(262)	738	744	751	757	761	765	768	771	5,532
County Operating	(448)	(458)	1,467	1,501	1,535	1,570	1,606	1,642	1,680	1,718	11,813
Total	(1,549)	(1,578)	4,672	4,785	4,899	5,012	5,123	5,231	5,341	5,452	37,388

This development is expected to increase county and school spending by as much as $37 million from 2022-2031. The huge majority of this new spending comes from educating slightly more than 100 net new APS K-12 enrollments.[7] We find that high-rise market rate apartments in this area of the county generate a significant number of new students, while committed affordable units generate nearly double the number of K-12 students per unit.[8] Although our methodology differs somewhat from APS' approach to estimating new students, our estimates are broadly in line with or slightly lower than average 2017 and 2019 student generation factors from Abingdon, Barcroft, and Carlin Springs areas.

New students may require new school facilities; if this is the case, the average cost per seat for new school construction is calculated over a 20-year period (a decline in student enrollment leads to a negative value) and listed under School Construction on Table 2.

County operating spending is listed in the third line of Table 2. This line includes all categories of human services, environmental services, public safety, courts, additional debt service, and anything else that's included in the general fund operating budget that will serve the new residents who move into this building. We break down these expenditures into greater detail in Table 4, included in the Appendix.

Although our estimate of the operating budget includes additional anticipated debt service—higher county income allows the county to borrow more money—they do not explicitly include new capital spending on facilities, equipment, and long-term investments in county infrastructure. Our estimate

[7] In this particular planning unit, 35072, there are an unexpectedly large number of students. The Fall 2020 Elementary School Boundary Process Phase 2 data, which is currently preliminary, estimates about 83 elementary students are enrolled from this planning unit. Our model underpredicts the number of students likely displaced by construction. For the same reason, however, the model likely unpredicts the number of new student enrollments. Therefore, there is a lot uncertainty in both directions on the net change in student enrollments.

[8] We have updated our estimates of student generation factors from those published in our earlier analysis. APS has released preliminary student elementary student enrollment statistics as part of the Fall 2020 Elementary School Boundary Process Phase 2, which we have incorporated in our estimates.

probably shortchanges the anticipated cost to upgrade roads, parks, libraries, and other public facilities that are budgeted through the biennial Capital Improvement Plan.

Overall, we anticipate between $32 and $37 million in additional expenditures required from 2022 through 2031 on account of this development. The bulk of these expenses come from net increases in student enrollment.

Conclusion

Overall, we anticipate that the Merion Pike West Phase I development will bring a significant number of students to APS, which results in a large increase in school spending. Including all sources of revenues and spending, we anticipate a total shortfall between 2022 and 2031 of between $17 and $23 million, depending on whether school construction costs are included.

Notes and Acknowledgments

Written by Jon Huntley, PhD. Contributions by Kody Carmody. All errors are the author's own.
Corresponding author's e-mail: jon.huntley@gmail.com. Last updated, August 2020.
For additional tools, data, and analysis, please visit our site at https://www.arlington-analytics.com/

About the Author

Jon Huntley, founder of Arlington-Analytics.com, has a BS in mathematics and economics from Duke University and a PhD in economics from Northwestern University. He has worked most recently at the Congressional Budget Office and is currently a Senior Economist at The Wharton School of the University of Pennsylvania.

Data Appendix

Table 3: Planned Tree Removal and Replacement

Type	Number	Size Range (in)	Replacements
White mulberry	7	4-28	5
Ornamental cherry	17	3-24	20
Eastern redcedar	2	6-16	2
Northern red oak	11	3-36	22
Black cherry	6	4-14	6
Black locust	15	4-28	17
Red maple	16	5-30	31
Northern catalpa	1	6	1
Elm	2	10-20	1
Sweetgum	2	20-25	5
Saucer magnolia	1	16	2
Northern white cedar	1	3	1
Callery pear	1	4	1
White oak	3	4-38	6

Source: April 17, 2020 second preliminary submission drawings.

Table 4: Change in Operating Spending by Category (thousands USD)

Year	Admin, DES, Development, and Non-Departmental	Human Services	Public Safety and Courts	Regional and WMATA Contributions	Debt Service	Libraries and Parks	APS Operating	APS Debt Service	Total Spending
2022	(100)	(95)	(129)	(44)	(40)	(39)	(840)	(261)	(1,549)
2023	(102)	(97)	(132)	(45)	(41)	(40)	(858)	(262)	(1,578)
2024	334	305	416	158	131	124	2,467	738	4,672
2025	342	312	427	160	134	127	2,540	744	4,785
2026	350	318	437	163	137	130	2,613	751	4,899
2027	359	325	448	166	140	132	2,685	757	5,012
2028	367	332	460	169	143	135	2,756	761	5,123
2029	376	339	471	172	146	138	2,824	765	5,231
2030	386	346	483	175	149	141	2,893	768	5,341
2031	395	353	495	179	153	144	2,963	771	5,452
Total	2,707	2,435	3,376	1,254	1,050	992	20,043	5,532	37,389