Fenton Mill

Appendix

Methodology
Approach

This study examines the revenues to be received by York County generated by Fenton Mill, a mixed-use community proposed to be developed on several parcels in the Lightfoot area of the County, and all costs to the County attributable to that development. The fiscal impact of a hypothetical by-right development was also calculated for comparison purposes.

Only variable revenues and costs are counted in the fiscal impact study. This means that, rather than applying per capita/employee or per household/business total revenue and total County per capita/employee or per household/business expenditures to Fenton Mill, only those incremental revenues and costs that the County will actually receive or incur due to the increase in households and the additional commercial development are counted as having an impact. Fixed costs that do not rise as population or households increase incrementally are not counted as having a cost impact.

Revenues include one-time direct revenues, annual direct revenues from the project and tax revenues generated by households. One-time direct revenues are revenues to the County derived from the construction of Fenton Mill. They include all building permit and associated fees (electrical, mechanical, plumbing, sewer and natural gas), and various development fees. They also include public improvements that will be constructed or paid for by the applicant for the benefit of the County and donations to the County non-cash donations to the County that have public benefit.

Annual direct revenues include: real estate property taxes, personal property taxes, vehicle registration fees, the car rental tax remitted to the County, EMS charges, and user fees (various fees and fines, and the County’s utility consumption tax calculated per household or business), as well as business personal property taxes paid on equipment owned by tenants in the commercial component, and the local option sales tax, meals taxes and business license fees paid by commercial tenants. Additional tax revenues generated by residents at Fenton Mill are estimates of taxes paid by York County businesses due to purchases made by households occupying Fenton Mill.

Costs include operating costs of government per household and business, certain capital costs incurred by general government, operating costs of education, and capital costs incurred by the York County Public Schools. Cost data and assumptions were derived from the York County Fiscal Year 2020 Adopted Annual Budget and the York County Public Schools Fiscal Year 2020 Approved Annual Budget (collectively or individually, “the Budget(s)). The methodology for performing these calculations is explained in the “Cost Calculation” section, below.
Additionally, a separate analysis was performed to include variable costs and revenues incurred and received by the County’s enterprise funds. While enterprise funds are designed to be self-sustaining fiscal entities, net (surplus) revenues received by these funds constitute a “profit” generated by the fund. This profit can be used to reduce customer user charges or to retire debt more quickly, or the surplus revenue may be transferred to the County’s general fund as revenue to that fund. In any case, incremental costs and revenues to the County’s enterprise funds generate a fiscal impact, though not necessarily to the County’s general fund.

While Fenton Mill will be served by Newport News Waterworks, the County had extended water lines to the Lightfoot area. Therefore, the County’s utility enterprise fund will receive both sewer and water connection fees from the developer (counted as a one-time revenue). Sewer service user fees were included as annual direct revenues. Costs and revenues for solid waste management costs were included for the residential component of the proposed development. The commercial component will be served by a private waste hauler. The developer plans to extend sewer lines within the proposed development with an extension to an existing pump station and, therefore, a sewer maintenance cost was assumed to be incurred by the County (see below under “Cost Calculation”).

All impacts are presented in constant 2020 dollars. Inflation is not applied to either revenues or costs throughout the analysis period. The constant dollar approach also means that no assumptions are made about the rate of real estate or personal property assessment increases in the County. No assumptions are made about future increases in business tax revenues based upon price increases. Neither are assumptions made about future increases in the unit costs or revenues of government. The practical implication of this approach is that any systemic future imbalances between rising (or falling) revenues and rising costs will be adjusted through changes in the County’s tax rate, either upward or downward.

The fiscal impact is calculated through the stabilization year (the year in which all costs and revenues have been realized). The stabilization year for the proposed development is expected to be FY 2034 (except for a recurring capital purchase, which occurs in FY 2037). Because revenues and costs are reported in constant dollars, there is no significant change in the projected cash flow after the stabilization year. Because the stabilization year of the alternative by-right development does not occur until FY 2038, the analysis period was extended to the end of a five-year increment, producing a twenty year analysis period was used, extending from FY 2021 to FY 2040.

Real estate taxes from the Site currently received by the County are subtracted from the revenues to be generated by both Fenton Mill and the by-right development. The fiscal impact of both the residential and the commercial components of Fenton Mill were calculated. However, since the commercial component of the proposed development and the by-right development are relatively small (less than 3% of revenues for Fenton Mill and less than 5% of by-right development revenues in the stabilization year), fiscal impact metrics for the residential and commercial components are not disaggregated in the report.
Throughout, revenue and cost data are estimated on a per-household and/or per business basis (per student for education costs). The projected number of households in the County in 2020 (26,255) was estimated by multiplying the number of households reported in the 1-year 2018 U.S. Census Bureau American Community Survey (ACS) by the estimated rate of household increase. The estimated rate of household increase (5.0% over a two year period) was calculated as the percentage household increase from 2016 to 2018 derived from the ACS.

The calculation of per-unit costs for services delivered to both households and businesses (see under “Cost Calculations,” below, for a description of this methodology) entails an estimate of the number of businesses located in the County. The number of business establishments in the County (1,587) was derived from the Virginia Employment Commission’s Quarterly Census of Employment and Wages (2nd quarter 2019). No increase in the number of businesses was projected. The business firm, rather than a per-employee measure, was deemed to be a more appropriate unit to measure the delivery of most County services to the business community.

Parameters and Assumptions

The applicant is proposing the construction of 836 residential units and approximately 40,000 (+/- 5,000) square feet of commercial space, to be constructed in phases. Fenton Mill would be developed on parcels C20d-4780-1137, D19a-1381-3152, D19b-2734-4736, D19b-2545-2534, D20c-1816-0933 and D20c-1880-1425. The residential component will consist of 506 single-family detached units developed on regular and premium lots, 230 townhouse units and 100 age-restricted active adult units in quadruplex and, potentially, patio home options. The developer anticipates that single-family dwellings on regular lots would sell for between $350,000 to $450,000; single-family dwellings on premium lots would sell for between $450,000 and $600,000; townhouses would sell for between $250,000 and $350,000; and active adult units (both options) would sell for between $300,000 and $400,000. Mid-points were used to estimate average sale prices (for the purpose of estimating real estate assessments and household income), resulting in predicted average selling prices of $400,000, $525,000, $300,000 and $350,000 for the single-family regular lot, premium lot, townhouse and active adult products, respectively.

Fenton Mill’s residential component is also planned to contain two clubhouse/swimming pool complexes—one serving the active adult community and the other serving the remaining households in Fenton Mill. The proposed development would also be served by other amenities, such as a multi-use path, playgrounds and parks, various specialized sports facilities (e.g. bocci, pickleball, etc.) and a pedestrian bridge leading to the school site.
The commercial space is expected to be neighborhood oriented and leased to a combination of convenience retail, restaurant and personal service or consumer office tenants. For analysis purposes, a tenant mix composed of 40% neighborhood retail, 30% service and consumer office, and 30% restaurant is assumed. For analysis purposes, a configuration composed of three commercial buildings of 12,000 to 16,000 square feet was assumed. Typical tenants could include, by way of example, a market, drug store, specialty shops, beauty salon, nail salon, tax preparer, insurance agency and family-style or ethnic restaurants.

Assuming a timely rezoning approval, the developer anticipates construction of the proposed development beginning in the Spring of 2021 with initial infrastructure being put in place. For analysis purposes, an infrastructure construction start date of April 2021 was used. A six month period was assumed for sitework and initial infrastructure construction. Construction of the first residential units was assumed to begin in October 2021. While construction is expected to take place in four phases, the phasing schedule has not yet been determined. Therefore, construction was assumed to occur in a continuous fashion. For analysis purposes, development was assumed to begin at the Newman Road entrance to the proposed development, with construction on townhouse, active adult and single-family detached units beginning simultaneously and proceeding in a logical order. Construction of the commercial portion of Fenton Mill is assumed to begin in the fall of 2023 with the first establishments opening in November 2024.

Residential products would be absorbed at various rates according to the developer’s best estimates. It is projected that the single-family detached product would sell at an average rate of about 4 units per month over a period of ten years; townhouses would sell at a rate of about 2 units per month over a period of ten years; and active adult units would sell at a rate of about 2 per month over a four year period. The commercial space would be developed over a period of nine years (construction to lease up) with construction beginning in the third year after residential construction begins. Approximately 5,000 square feet of commercial space is assumed to be leased annually.

A five-month construction period was assumed for each single-family detached unit and a six-month construction period was assumed for each townhouse block or quad/patio building. Townhouses were assumed to be built in blocks of six units. A three-month marketing/closing and move-in period was assumed for the residential product. Thus, the first residential units were assumed to be occupied in July 2022 and the last units were assumed to be occupied at the end of FY 2032. The first commercial tenants were assumed to open within four months of building completion, with building construction taking up to year. The final tenant openings were assumed to occur in July 2031 (FY 2032). Both the residential and commercial components of Fenton Mill are projected to be fully developed by FY 2032 but the alternative by-right development is assumed not to reach full development until FY 2037 (see below). Because certain one-time costs and revenues occur at the beginning of FY 2033 for Fenton Mill, the fiscal impact does not stabilize until FY 2034. For the by-right development, costs and revenues stabilize in FY 2036 but a capital cost (the replacement of a Sheriff patrol vehicle) would occur in FY 2037. Therefore, as noted above, the analysis period was extended to FY 2040.
These parameters are best estimates of the scope of the proposed development made by the applicant at this point in time. The specifics of the proposed development are subject to change based upon final determinations of site constraints and/or market conditions. Descriptions of the proposed development contained herein are not guarantees by the applicant that the proposed development will be constructed exactly as described above. However, the basic elements of the proposed development are those outlined above. Any change in the fiscal impact of the proposed development on the County due to minor changes in the scope of the proposed development are expected to be in the magnitude of projected revenues and costs and are expected to be in practically the same proportion of revenues to costs as estimated in the fiscal impact analysis report.

**By-right Development Assumption**

The Site is currently zoned Residential Rural (RR), with a portion zoned Limited Business (LB). That portion is similar in size to the portion of the Site to be developed commercially under the proposed development and the same parameters and assumptions were applied to the by-right commercial development as were applied to the commercial development within Fenton Mill. However, due to the smaller number of residential units allowed under RR zoning, construction of the commercial component of the by-right development was assumed to be smaller (30,000 square feet) and delayed until the completion of the by-right development. This is consistent with when the Fenton Mill commercial development is assumed to begin relative to the number of residential units completed.

The RR property was assumed to be developed as a clustered single-family detached community. A total of 290 units was assumed based upon an estimate of the carrying capacity of the Site received from the applicant’s civil engineer. Average lot size was assumed to be one-third of an acre. Dwelling units were assumed to be similar to the premium lot units proposed for Fenton Mill, averaging 3,500 square feet in size and selling for an average price of $525,000. Because of the larger lot sizes and the challenging topography of the Site, the developable area and infrastructure needs were assumed to be similar to those of Fenton Mill.

If a rezoning of the Site is not obtained, Fenton Mill Associates would need to extensively revise the plans and engineering for the Site in order to construct a by-right development. Given that there would be no reduction in site development costs compared to the proposed development, development of the Site under its by-right use would be notably less profitable to investors than the proposed development. Thus, additional time would be spent in obtaining financing for the project. Thus, it is reasonable to assume that it could take three additional years for the Site to be developed in its by-right. Absorption was assumed to take place at the same rate as the single-family units proposed for Fenton Mill, extending over a six year period. The commercial development was projected to extend over a seven year period, with the first of three 10,000 square foot commercial buildings constructed in FY 2030 and the last unit occupied in FY 2035. Thus, the initial stabilization year for the by-right development was assumed to be FY 2038, extending the analysis period to FY 2040, as explained above.
Revenue Calculations

Revenues estimated for Fenton Mill fall into three categories: one-time direct revenues, annual direct revenues and additional tax revenues generated by residents of Fenton Mill. The methodology does not use multipliers to calculate revenues that could be generated through the project’s secondary impacts, as such multipliers are considered to be unreliable for small geographic areas. The methodology does not include revenues generated from spending by construction workers as this cannot reliably be said to occur within the County.

One-time Direct Revenues

As noted above, one-time direct revenues are revenues to the County derived from the construction of Fenton Mill. They include all building permit and associated fees (electrical, mechanical and sprinkler system, plumbing, water, sewer and natural gas), various development fees and certificate of occupancy fees. Also, as noted above, the enterprise fund alternative analysis includes sewer and water connection fees.

Building permit fees were calculated using the fee schedule from the County’s website as confirmed by staff. Average square footages for each product type were supplied by the applicant. These are: 2,800 square feet for regular lot single-family dwelling units, 3,500 square feet for premium lot single-family dwelling units, 2,000 square feet for townhouse units, 1,800 square feet for active adult units, 5,000 square feet for the community clubhouse, and 3,000 square feet for the active adult community clubhouse. Commercial building sizes were estimated to be 12,000 square feet (2 buildings) and 16,000 square feet for analysis purposes. The community swimming pool was estimated to cost $500,000 and the active adult swimming pool was estimated to cost $250,000.

For the purpose of calculating plumbing permits, each full bath was assumed to have three fixtures and each half bath was assumed to have two fixtures, with each unit assumed to have a sink, dishwasher, washing machine and water heater. Residential units will all have two and one-half baths. Each clubhouse is assumed to have two restrooms, each with six fixtures and each pool area was assumed to have two dressing/shower rooms each with six fixtures, plus the plumbing for the pool. The clubhouse/pool was assumed to be subject to the commercial fee rate. Each commercial tenant is assumed to have one unisex restroom with three plumbing fixtures. Restaurants are assumed to have two restrooms, each with three plumbing fixtures, plus two sinks and a dishwasher in the kitchen area.

For the purposes of calculating electrical permits, each residential unit was assumed to have a 200 amp single-phase service. Each clubhouse was assumed to have a 400 amp single-phase service and each commercial building was assumed to have a 400 amp 3-phase service. Temporary services were assumed to be required for every three single-family detached units and for each townhouse block or quadruplex (assumed to be equivalent to four patio homes, if developed).
All commercial buildings and each clubhouse were assumed to be sprinklered. The cost of each sprinkler system was estimated to be $1.00 per square foot, based on a recent cost estimate for another development within the region. Each restaurant was assumed to require a kitchen hood sprinkler. For calculation of mechanical permits, each commercial component tenant space was assumed to have an air handling system. Restaurants would need typical restaurant mechanical permits. The entire development will be served by natural gas with one outlet per unit or tenant space. Natural gas mechanical permits were assumed to be required for restaurants.

A water/ sewer permit was assumed to be required for each residential unit and for each commercial building. The sewer and water meter connection fees, which are paid to the County’s sewer utility enterprise fund, were taken from the County Code. It was assumed that each commercial building and clubhouse would be served by a 1” water meter, with the residential units served by 5/8” meters.

Sign permit fees were as stated in the County Code. Six monument signs between 51 and 100 square feet were assumed for the development: one at each entrance of the residential development and one for the commercial component of the proposed development. Each tenant was assumed to have one smaller sign. Based on the applicant’s concept plan, 42 street signs were assumed. The sign permits were assumed to be issued in conjunction with each development phase.

Development fees included all subdivision and site plan fees, site improvement inspection fees; erosion and sediment control fees; and the VSMP fee. It was assumed that these development fees would be paid with the construction of each development phase. Phasing was estimated for analysis purposes only consistent with development groupings dictated by topography and product absorption rates. It is assumed that the applicant will submit all plans in the County’s approved digital format and that plan review fees will, thus, be waived. Fees used were as stated in County’s Code (Sec. 7.1-8) or (for VSMP) in the stormwater section of the Code, unless updated on the County’s website. Development fees were calculated on data pertaining to the proposed development provided by the applicant.

One-time revenues also include public improvements that will be constructed or paid for by the applicant for the benefit of the County and donations to the County non-cash donations to the County that have public benefit. The applicant intends to extend water lines that will benefit existing neighborhoods and future development in the Skimino area. These improvements include boring a water line under I-64 to bring additional water capacity to the area and extending water lines along Wichita Lane and Indiana Lane. Besides the additional capacity to serve new development, this will enhance fire protection to the existing Skimino Hills neighborhood. The cost of this improvement is estimated to be $300,000.
Additionally, the applicant plans to donate a 16.5 acre site for a future elementary school (see below under “Education capital cost”). This site is relatively flat and will be fully served by utilities and infrastructure. The applicant estimates the value of the site at $800,000, which is a reasonable estimate. This site could substitute for the Marquis site on which a new elementary school is planned in the County’s Proposed Capital Improvements Program (CIP), which has been found to be inadequate. Both the water system extension and the school site donation are counted as avoided cost revenues in the fiscal impact analysis. While they are counted as fiscal revenue, they are not counted as revenue to the County’s general fund.

Annual Direct Revenues

Annual direct revenues include: real estate property taxes, personal property taxes, EMS charges, user fees (miscellaneous fees and fines, and the County’s utility consumption tax per household), business personal property taxes levied on equipment owned by tenants in the commercial component, and the local option sales tax, meals taxes and business license fees paid by businesses at Fenton Mill. These taxes are paid directly to the County by households, businesses and the owner of Fenton Mill. They are calculated based upon estimates of the assessed property values, per household personal property taxes adjusted for income status and age of household, estimated business personal property assessments and gross receipts for the commercial component, stated rates and per-household revenues calculated from data in the Budget.

The County’s sewer and water fees were included as revenue to the County’s enterprise fund separately in the fiscal impact analysis. A solid waste fee was calculated for the residential component of Fenton Mill but not for the commercial component, which will be served by a private waste hauler. The senior citizen discount rate was applied to 34.8% of active adult households based upon the percentage of those 55 and over who were 70 and over in the County according to the U.S. Census Bureau. The senior citizen discount rate was also applied to 10.5% of all remaining households (the percentage of the total County population age 70 and over).

Real estate property taxes

York County’s real estate assessment of the residential component of Fenton Mill was estimated using the applicant’s estimated selling price for each product. As noted above, the average selling price for single-family detached product was assumed to be $400,000 per unit and $525,000 for homes on the regular and premium lots, respectively. The average selling price for the townhouse product was assumed to be $300,000 per unit and the average selling price for active adult units was assumed to be $350,000. In order to obtain real estate assessment estimates, these selling prices were adjusted by applying the assessment-to-sale price ratio for York County from the Virginia Department of Taxation’s 2017 Assessment Sales Ratio Study (the latest available). Residential units were adjusted by multiplying the estimated sale price by the assessment-to-sale ratio for suburban single-family units for York County (0.9563).
In order to estimate the assessed value of the commercial component of Fenton Mill, six unanchored strip shopping centers were identified in the County. All but two were located along Route US 17 (George Washington Memorial Highway). Two comparable strip centers were found in the Lightfoot area of the County. The properties used as comparables were: 1215 (Kiln Creek Shopping Center), 4508, 4740, and 6450 George Washington Memorial Highway, and 312 and 410 Lightfoot Road. York Village Shopping Center (7330 George Washington Memorial Highway) was considered but was deemed to be too old and outdated (and consequently under assessed compared to the other identified comparables).

Averaging the six properties produced an estimated assessed improvement value of $79.53 per square foot, with assessments ranging from $61.50 to $127.19 per square foot. The two properties located in Lightfoot were weighed more heavily (three times) to compute this average, since they are newer and closer to the Site. While the configuration of Fenton Mill’s commercial component has not yet been determined, a developer’s estimate of total commercial square footage (40,000 square feet) was used to estimate the improvement assessment of this portion of the proposed development. Thus, the assessed value for the Fenton Mill commercial component was estimate to be $3,181,200. It is acknowledged, however, that the actual commercial square footage constructed may vary up or down by as much as 5,000 square feet, depending on market conditions.

The two clubhouses were assessed at the estimated assessed improvement value of commercial property. The pools were assumed to be assessed at their construction cost. The clubhouses and pools were assumed to be owned by the developer and, thus, taxable until deeded to a homeowner’s association (HOA). This was expected to occur when the relevant phase was 70% completed. The active adult clubhouse/pool is a part of phase 1 and was assumed to be built in the first year of development. It was projected to be deeded to the HOA and become non-taxable in FY 2027. The primary clubhouse/pool was deemed to be associated with phase 2 of the development and to be constructed in FY 2025, becoming taxable in FY 2026. It was projected to be deeded to the HOA in FY 2029, becoming non-taxable. It was assumed that the by-right development would not contain a clubhouse/pool amenity.

To estimate the commercial land assessment for Fenton Mill, a different set of comparables was used. Assessments per acre for the commercial comparables used to estimate improvement assessments varied widely from about $261,400 to $700,000 per acre, with smaller sites generally having larger per acre assessments. Since the commercial parcel at Fenton Mill is expected to be approximately 5 acres and to be owned by a single entity, it was deemed more appropriate to use comparable retail properties of similar size.
Five properties were identified along Route US 17 as mid-size commercial properties (ranging from 4.38 to 9.22 acres. These were 1215, 4318 (Heritage Square), 5214 (Washington Square), 6450 and 8100 (Patriot’s Crossing) George Washington Memorial Highway. Additionally, four mid-size commercial sites were identified in the Lightfoot area that could be used as comparables for the commercial site of the proposed development. These were: 6610W Mooretown Road (a shopping center containing Ross Dress for Less and several other shops), 649/701 E. Rochambeau Drive (Williamsburg Ford), 601 E. Rochambeau Drive (Casey Toyota) and 500 Lightfoot Drive (Williamsburg Antique Mall). While none of these uses mirror the proposed commercial development at Fenton Mill, site sizes ranged from 5.85 to 8.83 acres.

Assessments per acre in the Lightfoot area were less than those along Route US 17. Those along Route US 17 ranged from about $234,650 to $348,450 per acre and those in Lightfoot ranged from $101,300 to $217,950 per acre. Because the uses of properties along Route US 17 were significantly closer to the proposed use in Fenton Mill than those in the Lightfoot area, these comparables were not discarded. However, since the proposed development is in the Lightfoot area and would reflect land values in that area, these comparables were given significantly greater weight (three times those along Route US 17). The resulting weighted average was $197,321 per acre, rounded to $197,300 per acre. Thus, the land assessment for the proposed commercial site at Fenton Mill was estimated to be $986,500.

Land was assumed to be assessed at its current rate until developed and sold (or, for the commercial component, until the first building was completed). Land dedicated in right-of-way was assumed to become non-taxable as infrastructure was put in place. Infrastructure construction was assumed to be phased. Open space associated with each phase was assumed to be deeded to the HOA upon the completion of 70% of each phase. Upon full development, no land would be owned by the developer and all land would be taxed as part of developed property or would be tax-exempt.

At full development, the Fenton Mill residential component was estimated to be assessed for a total of $296,477,000 and the commercial component (land and improvements) was estimated to be assessed for $4,167,700, for a combined assessed value of $300,644,700.

**Personal property (car) taxes and motor vehicle registration fee**

Personal property taxes were calculated per Fenton Mill household and adjusted for differences in automobile expenditures based on income relative to the County’s general population and on age, as well as tenure. The base car tax per vehicle was derived by first calculating the County’s total car tax revenue (PPRTA received from the Commonwealth estimated by the County in the Budget divided by the percentage [54% in 2019, the latest year available on the County’s website] of car tax relief divided by the number of vehicles in the County, obtained from the County’s Commissioner of the Revenue).
The County’s average car tax paid per vehicle ($244.18) was adjusted by multiplying this average by a factor calculated by dividing the expected automobile purchase expenditure associated with each apartment unit type’s household income (based on selling price) by the expected automobile purchase expenditure for the County’s average household income (using ACS 2017 data adjusted for inflation using the 2016 to 2019 Consumer Price Index (CPI) change to inflate to 2020 dollars). Automobile expenditures per household for various income levels and age groups were derived from the most recent (2018) U.S. Bureau of Labor Statistics Consumer Expenditure Survey (CES). The methodology for estimating income levels for Fenton Mill households is provided under “Additional Revenues Derived from Households,” below.

Estimated expenditures by income level were also adjusted for differences in purchase patterns by age for those units that will be age-restricted. Adjustments for age were made by dividing the average vehicle expenditure for households over age 55 by the average vehicle expenditure for all households. This adjusted estimate of car tax per vehicle was then multiplied by the estimated number of vehicles owned by residents of Fenton Mill.

This estimated car tax payment per vehicle for Fenton Mill households was then multiplied by the number of vehicles owned by Fenton Mill households. The average number of vehicles per household for the income level associated with each residential product at the proposed development was first derived from the CES data. This was then adjusted for the difference in vehicle ownership between owner-occupied households in Census tract 510 (the Census tract in which Fenton Mills would be located) and all households in the County.

The number of vehicles per owner occupied household in Census tract 510 (2.24) and the number of vehicles per household for all households in the County (2.18) was derived using ACS data. ACS data was used even though it undercounts the actual number of vehicles owned by households under the assumption that this undercount would apply equally to owner and renter households and, therefore, the relative difference between vehicles per owner-occupied households and all households would not be affected. The expected number of vehicles predicted to be owned by the CES data was then adjusted to take into account the higher number of vehicles per owner-occupied residence in Census tract 510.

Another adjustment to the estimated number of vehicles for each household type was made to take into account the significantly fewer vehicles per household predicted using CES data for the average household income in York County (2.37 vehicles per household) than the number of vehicles per household calculated from data supplied by the Commissioner of the Revenue (2.53 vehicles per household). This adjustment was made by multiplying the calculated number of vehicles per household (derived as described above) by the ratio of the average number of vehicles per household in the County to the number predicted using CES data.
Finally, for each residential product at the proposed development, the estimated number of vehicles per household at the proposed development was multiplied by the estimated personal property tax received per vehicle. This result was multiplied by the number of occupied units for the appropriate residential product.

For the active adult units, the number of vehicles owned by households at Fenton Mill was assumed to be equal to the number of persons per household, adjusted for differences in the number of vehicles per household by income level. CES data by age show that for age groups 65+ and 55-64, the number of vehicles per household is equal to the number of persons per household. The number of persons per household was calculated using data for York County, Census tract 510, from the ACS for Tenure by Household Size by Age of Householder for owner households. Households with two or more persons were assumed to have only two persons. Consequently, the number of households containing two or more persons was multiplied by two to obtain the number of persons in those households.

The number of persons in households was calculated for households with householders 55 years of age and older. This was divided by the number of such households to obtain an estimated household size for Fenton Mill active adult units. This was determined to be 1.67 persons per household. Thus, the number of vehicles per Fenton Mill active adult household was assumed to average 1.67. This was multiplied by the ratio of the number of vehicles per household for households at the average income level for Fenton Mill active adult units to the predicted number of vehicles per household for a household with York County average household income.

These calculations can be represented by the formula below and on the following page:

\[
PPT = \sum \frac{PPT}{V_{FM}} \times \frac{V}{HH_{FM}} \times HH_{OFM}
\]

Where, \(PPT\) = Total personal property tax paid by Fenton Mill residents
\(PPT/V_{FM}\) = Personal property tax per vehicle for each unit type at Fenton Mill
\(V/HH_{FM}\) = Vehicles per household for each unit type at Fenton Mill and
\(HH_{OFM}\) = the number of occupied households for each unit type at Fenton Mill

\[
PPT/V_{FM} = PPT/V_Y \times (VPNO_{IFM}/VPNO_{Y})
\]

For active adult: \([x (VPNO_{A55}/VPNO_{US})]\)

Where, \(PPT/V_Y\) = Average personal property tax per vehicle for all York County households
\(VPNO_{IFM}\) = Vehicle purchase net outlay for each Fenton Mill unit type by income level
\(VPNO_{Y}\) = Vehicle purchase net outlay for households at mean income for York County
\(VPNO_{A55}\) = Vehicle purchase net outlay for households age 55 years and older
\(VPNO_{US}\) = Vehicle purchase net outlay for households all ages

A-12
and

\[ V_{HHFM} = V_{HHIFM} \times (V_{HHO510/YACS}) \times (V_{HHY}/V_{HHY}) \]

Where 

- \( V_{HHIFM} = \) Vehicle per household for each Fenton Mill unit type by income level
- \( V_{HHO510} = \) the average number of vehicles per household in Census tract 510 reported by the ACS
- \( V_{HHYACS} = \) the average number of vehicles per household in York County reported by the ACS
- \( V_{HHY} = \) Vehicle per household for households at mean income for York County from CES data and
- \( V_{HHY} = \) Vehicles per household in York County from Commissioner of the Revenue data

For active adult units \( V_{HHFM} = 1.67 \)

Motor vehicle registration fees were applied to the number of vehicles per Fenton Mill household as calculated according to the formula for \( V_{HHFM} \), above.

**Business personal property taxes**

Business personal property taxes would be collected from tenants in the Fenton Mill commercial development. Business personal property assessments at Fenton Mill were estimated using data obtained from the York County Commissioner of the Revenue for comparable commercial developments. The same comparables were used as were used to estimate real estate assessments. Again, an examination of the data for York Village Shopping Center showed it to be a low-end outlier and this property was not included in the comparable set. Also, as with real estate assessments, the stores in the Lightfoot area were not considered to be representative of the neighborhood-oriented uses that would likely occupy the Fenton Mill commercial space.

The average original cost of business property per square foot was calculated to be $26.86, (or $0.27 business property tax revenue per square foot of commercial space). Since this calculation included vacant space which generated no business personal property tax, this metric was applied to the entire commercial area at Fenton Mill (since some commercial vacancy was factored into the calculations). This resulted in an estimated $10,750 in business personal property tax collected annually from Fenton Mill businesses at full development.

**Meals tax**

Revenue from the County’s food and beverage (meals) tax was also estimated using data provided by the Commissioner of the Revenue for the four comparable commercial properties. It was estimated that about 30% of this space, excluding the Food Lion at Patriot’s Square, was occupied by restaurants. This metric was therefore assumed when estimating the tenant mix for the commercial space at Fenton Mill. Meals tax collected per square foot was calculated for the entire commercial area (again excluding the Food Lion), not solely for restaurant space. Thus, the metric would be applied to the entire 40,000 square feet commercial space.
The average meals tax collected from the comparable properties was $2.71 per square foot. After adjusting for the share of space occupied by restaurants, this is equivalent to about $235 per square foot in restaurant sales. Applying these metrics to the commercial space at Fenton Mill, it was estimated that the proposed development would generate $108,275 in meals taxes for the County annually at full development prior to any adjustments described below.

**Business license fee**

Tenants in the Fenton Mill commercial buildings would pay a business license fee to the County. Data from the Commissioner of the Revenue from the comparable properties was used to estimate business license fees generated by the Fenton Mill Establishments. The average business license fee from these comparable properties was $0.71 per square foot. Again, this computation included vacant space and, so, this metric was applied to the entire commercial area, generating an estimated $28,350 annually in business license fee revenue. This was computed to be equivalent to gross receipts of about $155 per square foot prior to any adjustments described below. It was estimated that $23,000 in business license fees would be generated by non-restaurant establishments.

**Local option sales tax**

Data regarding local option sales tax remitted by the Commonwealth to the County was not available from the Commissioner of the Revenue for the comparable properties. Therefore, this metric was estimated using a proportional method. The total business license fee collected from each comparable property was multiplied by the estimated percentage of retail (including restaurant) tenancy in that property. Estimated retail tenancy ranged from 31.25% to 81.25% and averaged about 60% of establishments generating sales tax. Sales tax revenue generated by the comparable properties was estimated to be $1.45 per square foot. Factoring out non-retail space, this is equivalent to gross sales of $265 per square foot for retail and restaurant establishments combined. As with the other metrics, vacant space in the comparable properties contributed to this average and, therefore, the metric was applied to the entire amount of commercial space resulting in an estimated $57,900 in local option sales tax revenue generated by the commercial establishments at Fenton Mill prior to any adjustments described below. It was estimated that $30,900 in sales tax revenue would be generated by non-restaurant establishments.

**Adjustment of business taxes**

Potentially, not all tax revenue generated by Fenton Mill commercial establishments will be new to York County. A regression analysis-based study conducted by the Consultant in Newport News, Virginia showed that market growth was the dominant factor in predicting increases in sales tax revenue for the City and that the addition of retail space had no effect on the growth of sales tax revenue. Given that retail supply does not create its own demand, new commercial establishments must compete with existing commercial establishments for market share, whether of the existing market base or for additional market demand associated with new residential development or reduced residential vacancies.
When a locality is the commercial center for a region, new businesses tend to compete with other businesses in that same locality, resulting in no increase in new business taxes generated from sales. However, when there is substantial retail leakage or when a new business is located near a locality’s border—particularly when there is substantial commercial development in the neighboring locality—much of a new business’ market share is likely to be derived from businesses located outside the locality, resulting in an increase in new business tax revenue.

This is the situation with Fenton Mill and, so, a location analysis was conducted to estimate the extent to which Fenton Mill business sales will be derived at the expense of businesses located outside the County (i.e., located in James City County) versus businesses located in the County. As noted above, commercial establishments occupying Fenton Mill are expected to be a mix of neighborhood serving retail, “family-style” restaurants and consumer services. Therefore, the location analysis focused on identifying similar businesses or businesses that could compete with these establishments existing within the Fenton Mill commercial development market area. This area was defined generally as being within a five to eight minute drive of the proposed development.

A Google Map search revealed the only commercial enterprises located east of I-64 in the Lightfoot area (north of Camp Perry) were a variety of home businesses. These were deemed to be not a competitive factor with respect to future commercial development at Fenton Mill.

There was significant commercial development west of I-64 in the Lightfoot area, both within and outside of York County. Some of these establishments would compete with restaurants located at Fenton Mill, most noticeably Bellisimo Pizza Café, Burger King, Chick Fil-A, The Huntsman’s Grill, IHOP, Pierce’s Pit Bar-B-Que, Sonic, Starbucks, Taco Bell, Tokyo Express and Tropical Smoothie, in addition to the numerous restaurants and fast food establishments in James City County. The degree to which restaurants located at Fenton Mill would compete with existing York County businesses and, therefore, generate no new sales-based business taxes for the County, is equal to the propensity of Fenton Mill households to dine at these establishments. Or, in other words, the degree to which Fenton Mill restaurants can be expected to generate new revenue for the County from sales and meals taxes and the business license fee is the inverse of the degree by which Fenton Mill households will generate new revenue for the County from restaurant spending. This analysis is presented under “Additional Revenue from Households” below.
In terms of other commercial establishments in the area, some are clearly not a competitive factor. No business at Fenton Mill would compete with the new and used car dealerships in Lightfoot and a small hardware store would not open so close to Lowe’s and Home Depot. Similarly, it is very unlikely that a business would open at Fenton Mill offering a selection that could be purchased at Wal-Mart, although some overlap could occur. The target tenant for Fenton Mill does not include shopping goods such as apparel and furnishings, so Ross Dress for Less and Ferguson Bath, Kitchen and Lighting Gallery were excluded from the potential competitive mix. Businesses located in the Williamsburg Antique Mall were deemed to be tourism oriented, rather than neighborhood oriented and were also excluded from the competitive mix, as the Site is too far from Richmond Road to successfully attract tourist spending.

The proposed commercial development at Fenton Mill could potentially compete with other establishments located in the Lightfoot area, however. The potentially competitive set includes the 22 businesses located at Lightfoot Crossing (312 and 410 Lightfoot Road). Along Mooretown Road, Baeplex Martial Arts School, Continuum Movement Center, Moon Sewing Center, Supreme Styles Beauty Supply and Fashion, and potentially Big Lots could be competitors to businesses in Fenton Mill. Thus, a total of 27 businesses located in York County were considered to be potential competitors to businesses located at Fenton Mill.

A Google Map examination of businesses located along Richmond Road in James City County from (but not including) the Premium Outlets to Norge revealed 37 businesses that could be considered potential competitors with businesses located at Fenton Mill. Since the retail/service mix in both York County and James City County was highly varied, distance was deemed to be a secondary factor determining from where businesses located at Fenton Mill would potentially attract customers. The best estimate of consumer spending redirection was deemed to be the simple proportion of York County businesses in the competitive set to all businesses identified in the competitive set. Therefore, it was estimated that 42% of tax revenues based on sales generated by Fenton Mill establishments would be redirected from existing York County businesses and, thus, produce no new revenue for the County. Consequently, the calculated estimates for non-restaurant sales tax and business license fees were reduced by 42%.

A second adjustment was made to account for spending by Fenton Mill households at the commercial establishments located at Fenton Mill. This was necessary in order to avoid double counting the revenues derived from this spending. This was made by estimating the total share of spending that the Fenton Mill commercial development would receive from Fenton Mill households as opposed to other households. In order to do this, neighborhoods within a five to eight minute drive from the Site were considered to be within the Fenton Mill commercial development market area. The propensity for these neighborhoods to shop at Fenton Mill was determined through a locational analysis that considered distance from the Site and proximity to other commercial establishments.
Neighborhoods within the Fenton Mill commercial development market area were identified as those neighborhoods east of I-64 (Skimino, Skimino Creek, Skimino Farms, Oaktree and Barlow Corners); neighborhoods in James City County in lower Stonehouse (west of Newman Road and south of Riverview Road) and Riverview Plantation; residential areas located west of I-64 and east of Waller Mill Reservoir; residential areas along Old Mooretown Road (including the Arbors and the yet to be built Fenton Mill development); the Ewell and Forest Heights neighborhoods in James City County west of Richmond Road and south of Humelsine Parkway; and Liberty Landing and the residential streets off Centerville within a mile west of Richmond Road and north of Humelsine Parkway.

The number of households in each neighborhood was estimated using Google Maps. With respect to non-retail businesses, households in neighborhoods east of I-64, including those at Fenton Mill, were deemed to be captive to the Fenton Mill commercial development (with respect to goods and services offered by those establishments). This does not mean that those households shop nowhere else but that, given a choice between a Fenton Mill establishment and a competing establishment elsewhere, they will always choose the Fenton Mill establishment. Other households were deemed to be subject to intervening commercial areas through which they would need to drive in order to reach Fenton Mill. For most neighborhoods west of I-64, this would be the Lightfoot commercial area in York County. For the Liberty Landing and Centerville Road households, commercial development in Norge would have a pulling effect diverting some retail purchases to that area.

Intervening commercial areas would only have a blocking effect, however, if they offered a similar product or service as businesses in Fenton Mill. If Fenton Mill businesses offered unique products or services, consumers would by-pass the intervening commercial areas to shop at Fenton Mill. Although the degree of unique offerings from Fenton Mill businesses cannot be estimated with any certainty, the more establishments within the competing market area, the more likely it is that there will be duplication of offerings. With this in mind, a simple relative measure was constructed by dividing the expected number of Fenton Mill businesses (8) by the number of comparable businesses located in each of the competing commercial areas (27 for Lightfoot, 37 for Richmond Road/Norge). This “uniqueness factor” estimated the probability of consumers by-passing intervening areas to shop at Fenton Mill.

Applying this formula, it was estimated that approximately 41% of purchases at Fenton Mill businesses would be generated by Fenton Mill households. Consequently, the estimates of business license fee and sales tax revenue from non-retail establishments was reduced by an additional 37% after the reduction is applied to account for retail redirection. (Applying the reduction to the net new revenue rather than to all revenue avoids double counting revenue from sales generated by Fenton Mill households that are redirected from York County businesses.)
With respect to restaurants, a similar approach was used to calculate the percentage of Fenton Mill restaurant sales generated by Fenton Mill households. However, restaurant offerings are considerably more unique than general retail and service offerings (it is assumed that no same-brand restaurants will open at Fenton Mill to compete with others in the market area). Therefore, distance becomes a more important factor in determining where households in the Fenton Mill market area will dine. A distance gradient methodology (described below under “Additional Revenue from Households”) was applied to the neighborhoods identified above to calculate the probability of households dining at Fenton Mill restaurants. This resulted in an estimate that about 63% of sales at Fenton Mill restaurants would be derived from Fenton Mill households. As with non-restaurant revenue, net new revenue derived from Fenton Mill restaurants was correspondingly reduced by this percentage.

It should be noted that both estimates of the adjustment metrics can be viewed as conservative. To the extend that retail spending is redirected from establishments located outside the assumed market area, this is most likely to occur from businesses in James City County, thus reducing the percentage of sales redirected from York County businesses. Also, to the extent that businesses, especially restaurants, located at Fenton Mill attract patrons from outside the assumed market area, the percentage of Fenton Mill sales derived from Fenton Mill households would be reduced.

These adjustments were also made for the by-right development. While the retail redirection metrics are not expected to be different, the percentage of sales generated by the by-right development households would be reduced due to the significantly smaller number of households to be developed. It was calculated that the by-right development would generate about 17% of non-restaurant sales and about 37% of restaurant sales from by-right development households.

**User fees and other miscellaneous revenue**

Certain user fees and charges were based on revenues reported in the *Budget* and calculated per household or per household and business. These included civil fines and fees (including parking fees and portions of the Clerk of Court Excess fee, various court fees and charges and various Sheriff fees and charges), criminal fines and forfeitures (including Commonwealth Attorney charges, DNA/blood test fees, jail admission fees and portions of the Clerk of Court Excess fee, various court fees and charges and various Sheriff fees and charges), concealed weapon fees, dog licenses, EMS charges, library fines and charges, parks and recreation fees, and utility consumption fees.

The local share of the communication sales tax was not included as a variable revenue. This is because the remittance of this tax to the County by the Commonwealth is according to a fixed formula that was calculated based upon York County’s public school population relative to statewide public school enrollment and, therefore, will not change with the addition of new households.
The utility consumption fee, which is remitted to the County by the utilities collecting the fee through customer billing, was adjusted for higher usage by businesses. Typically, the maximum commercial levy is 6.67 times higher than the maximum residential levy and, so, this ratio was used to calculate per household and per business revenues.

An adjustment was made for smaller household sizes at Fenton Mill than the average household size in the County. Householder sizes were smaller at Fenton Mill for both the active adult community, as noted above, and for the non-restricted residential units. ACS 5-year average 2017 data for Census tract 510 showed average household size for owner-occupied dwellings as 2.42 persons per household, as opposed to 2.72 persons per household for all York County dwelling units. It was assumed that Fenton Mill households would be similar to other households in Census tract 510.

This adjustment was made when revenue was deemed to be derived from persons rather than households. Revenue per household (reflecting average County household size) was multiplied by the ratio of Fenton Mill estimated household size to County household size. This was done for all of the revenue sources noted above except dog licenses and utility consumption fees, and (for active adult units) except for senior activity fees and EMS charges, which received special treatment described below.

Additionally, some of the revenue sources noted above collect revenue from both households and businesses while others collect revenue from households only. The methodology for distributing revenues between households and businesses is described under “Cost Calculations,” below. Revenues collected from households only were concealed weapons fees, dog licenses, criminal justice revenues related to persons (Commonwealth Attorney charges, court appointed attorney fees, and jail admission fees), library fines and charges, and parks and recreation fees. Although business owners or employees may hold concealed weapons permits, they were assumed to obtain them in their locality of residence.

For Fenton Mill active adult households, the revenue per household for senior activity fees was adjusted to apply only to persons 55 and older. The County’s population age 55 or older was calculated using 2018 ACS data. The percentage of the County’s population falling into this age group (30.2%) was applied to the number of households in the County, the result being used as the denominator to calculate a preliminary estimate of revenue per senior household.

An adjustment was also made with respect to active adult households for revenue derived from the civil and criminal justice system to take into consideration the significantly lower incidence of participation in the criminal justice system among the older population. As explained below under “Cost Calculation,” the incidence of criminal activity among those 55 and older has been calculated to be only 8.5% compared to the general population. While certain fines and fees apply only to criminal activity, others are derived from a combination of criminal and civil court appearances. The County no longer reports work load data for the courts system. However, such data was previously available and the latest available data was used to calculate the percentage of civil and criminal cases heard by the courts generally. This was calculated to be 64.33% civil cases and 35.67% criminal cases.
Revenues derived solely from criminal activity were reduced by 91.5% per household for Fenton Mill households. Thirty-five and two thirds percent (35.67%) of revenues derived from combined civil and criminal court activity were reduced by 91.5% so that these revenues were reduced to a blended rate of 67.4% of court associated revenue per household attributed to Fenton Mill active adult households.

For Fenton Mill active adult households, revenues from medic transport fees (EMS fees) were adjusted for the higher incidence of EMS use among the elderly population. Data on EMS incidence use by type of development was obtained from the County’s Fire and Rescue department in 2017. County staff were not aware of an update to this data. The data disaggregated EMS usage by age-restricted, age-targeted, assisted living and general market housing. However, this data was derived from apartment communities only. A request was made to the County’s Fire and Rescue Department for any data from single-family homes but no response was provided. It was assumed that age-restricted apartment communities tend to have older occupants than would a single-family/clustered housing community with residents age 55-year and older and, therefore, a higher incidence of EMS use. To account for the presumed lower incidence of EMS usage among Fenton Mill active adult households, EMS incidence was deemed to be more similar to the age-targeted apartment communities for which data was previously provided. Conservatively, the data for age-restricted and age-targeted apartment communities was averaged to estimate the EMS and police call incidence at Fenton Mill.

The incidence for patient transport calls was calculated to be 0.688 per unit, rounded to the nearest third decimal. This compares to an incidence of 0.1 calls per unit for general market housing. Thus, EMS revenue per household was multiplied by the ratio of estimated Fenton Mill household to general market medical transport incidence (6.88) to obtain the estimated EMS revenue per Fenton Mill household. EMS revenue was calculated and is shown separately from other user fees and miscellaneous revenues.

Table A-1, on the following page, details the County’s variable revenues, other than those derived from the direct levy of taxes on the development, revenues applied to the reduction of County costs (see the discussion below under “Cost Calculations”) and revenues derived from spending by Fenton Mill households. It also shows revenues per Fenton Mill business.

*Enterprise fund revenues*

For the enterprise fund impact analysis, bi-monthly sewer fees and monthly solid waste fees that are received by the County as part of enterprise funds were calculated at rates stated on the County’s website. The calculation of fees based on the senior solid waste fee discount is explained above at the beginning of this section.
### Table A-1

**York County Non-Direct Revenues from Households**

<table>
<thead>
<tr>
<th>Item</th>
<th>Revenue</th>
<th>Revenue per General Household</th>
<th>Revenue per Active Adult Household</th>
<th>Revenue per Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clerk of Court Excess Fee</td>
<td>$105,000</td>
<td>$3.36</td>
<td>$1.55</td>
<td>$3.77</td>
</tr>
<tr>
<td>Commonwealth Attorney Charges</td>
<td>$6,000</td>
<td>$0.20</td>
<td>$0.01</td>
<td>$0.00</td>
</tr>
<tr>
<td>Concealed Weapon Fees</td>
<td>$20,000</td>
<td>$0.68</td>
<td>$0.47</td>
<td>$0.00</td>
</tr>
<tr>
<td>Court Fines, Courthouse</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment, Court Security Fees</td>
<td>$330,000</td>
<td>$10.55</td>
<td>$4.88</td>
<td>$11.85</td>
</tr>
<tr>
<td>DNA/Blood Test Fee</td>
<td>$1,000</td>
<td>$0.03</td>
<td>*</td>
<td>$0.00</td>
</tr>
<tr>
<td>Dog License Fees</td>
<td>$20,000</td>
<td>$0.76</td>
<td>$0.76</td>
<td>$0.00</td>
</tr>
<tr>
<td>EMS Fees</td>
<td>$1,400,000</td>
<td>$44.74</td>
<td>$345.95</td>
<td>$50.28</td>
</tr>
<tr>
<td>Jail Admission Fee</td>
<td>$9,000</td>
<td>$0.30</td>
<td>$0.02</td>
<td>$0.00</td>
</tr>
<tr>
<td>Library Fines and Charges</td>
<td>$35,000</td>
<td>$1.19</td>
<td>$0.81</td>
<td>$0.00</td>
</tr>
<tr>
<td>Parking Fines</td>
<td>$4,000</td>
<td>$0.13</td>
<td>$0.09</td>
<td>$0.14</td>
</tr>
<tr>
<td>Parks and Recreation Fees**</td>
<td>$425,000</td>
<td>$14.40</td>
<td>$9.89</td>
<td>$0.00</td>
</tr>
<tr>
<td>Senior Activity Fees</td>
<td>$16,000</td>
<td>$0.00</td>
<td>$2.02</td>
<td>$0.00</td>
</tr>
<tr>
<td>Sheriff Fees and Charges</td>
<td>$168,000</td>
<td>$5.37</td>
<td>$2.48</td>
<td>$6.03</td>
</tr>
<tr>
<td>Utility Consumption Tax</td>
<td>$240,000</td>
<td>$8.62</td>
<td>$8.62</td>
<td>$57.53</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$2,779,000</td>
<td><strong>$90.33</strong></td>
<td><strong>$377.55</strong></td>
<td><strong>$129.60</strong></td>
</tr>
</tbody>
</table>

Rounded to the nearest $50  
*Less than $0.01  
**Does not include Senior Activity Fees

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**Additional Revenues Generated by Households**

Tax revenues generated by households are estimates of taxes paid by York County businesses due to purchases made by Fenton Mill residents. Purchases by Fenton Mill residents are estimated based upon their projected spending patterns. These spending patterns were estimated using CES data. Spending per household was obtained by income level and age of head of household.

Household incomes for Fenton Mills households were estimated based upon the projected sale price of residential units. A housing price-to-income ratio of 4-to-1 was assumed, based on recent conversations with area mortgage brokers. The proposed development’s household incomes were, thus, estimated by dividing average unit sale prices by 4.0. This resulted in an average income estimate of about $92,700. Table A-2 on the following page, shows estimated average household income for each Fenton Mill residential product type.
Spending was estimated for food at home (grocery spending), food away from home, other retail, and personal and other services. Food away from home was used to calculate meals tax revenue. Spending estimates per household were then adjusted to subtract spending that is predicted to occur outside York County so that only taxes associated with household spending that are new to the County are counted in the fiscal impact analysis. Normally, spending retained in a locality by its residents is assumed to be the inverse of retail leakage.

However, due to spending by tourists and the influx of shoppers from James City County and Williamsburg to certain big-box stores located in York County, the standard model for calculating leakage of retail spending does not work for the County. Building material, general merchandise and food and beverage establishments are particularly vulnerable to overestimation of spending in York by County residents. Also, grocery spending, as well, as spending at restaurants, is likely to spill over into neighboring jurisdictions as shoppers seek convenience and variety when making their shopping decisions. This is particularly true of Fenton Mill since the Site is located relatively close to James City County. Therefore, rather than a retail leakage model, a retail shopping gradient model was used to estimate the retention of Fenton Mill residents’ retail spending in York County.

The gradient model, briefly described, plots retail locations and their distances from the subject development. All other things held equal, it is assumed that shoppers are less likely to patronize competing retail outlets the farther the distance from their residence. Distance is measured in driving time and the propensity to shop at a given location is calculated as the reciprocal of the distance in minutes, with 1 minute given a weight of 1, 2 minutes a weight of 0.5, 3 minutes a weight of 0.33 and so on. Only the closest same store location is mapped and stores at which residents are unlikely to shop are either excluded or given a lower weight. Distance weighted scores are disaggregated by locality and summed for the host locality and all other localities. The sum of the host locality score divided by the sum of all distance weighted scores is the best estimate of the percentage of spending retained in the host locality.

Gradient models were developed for grocery spending, food away from home, and shoppers’ goods. Although some residents of the active adult community at Fenton Mill may be somewhat less mobile (willing to travel) than most York County residents, this was not deemed to be a significant factor, particularly since age minimum household age is 55 years old. Therefore, no distinction in maximum distance that Fenton Mill residents can be expected to travel in order to shop or dine was made between active adult and other Fenton Mill households in this analysis.
A driving distance of about ten minutes from the Site was assumed to be viable for grocery shopping. Additionally, Fenton Mill residents were also assumed to shop at the Whole Foods in Newport News and the Costco and Sam’s Club buying clubs there. Seven grocery stores were identified within Fenton Mill shopping area. Only one—Wal-Mart on E. Rochambeau Drive—is located in York County. The other six, are located in James City County. These are: Harris Teeter in Lightfoot; Food Lion at Williamsburg Premium Outlets; Farm Fresh in Norge; and Fresh Market, Publix and Trader Joe’s near New Town. Kroger on Ironbound Road was not included as it was 11 minutes from the Site and similar in enough in market appeal to Harris Teeter and Publix that Fenton Mill residents were assumed to shop at one of those closer stores. Also, the distance gradient scores for Sam’s Club and Costco were averaged, as it was assumed that Fenton Mill households would shop at one or the other of these buying clubs. The distance weighting methodology yielded an estimate of 20.39% of spending on food at home, ABC and tobacco expenditures from Fenton Mill households remaining in the County.

Dining establishments were divided into fast food, family style and QSR/casual dining, and fine dining categories. Fast food establishments were plotted within a 10 minute drive time but only the closest brand franchise was counted. No fast food establishment was more than six minutes away from the Site. For food away from home, QSR/casual dining, buffet and family style restaurant establishments were plotted within a 15 minute drive time, although at more than a 10 minute drive time establishments without a popular or unique appeal were eliminated. Fine dining restaurants were plotted within a 20 minute drive time from the Site. Eight of ten fast food establishments identified were located in York County. However, only 6 of the 38 mid-line restaurants identified were located in York County. No fine dining restaurants within the market area were located in York County.

The three categories of dining establishments were weighted according to frequency of use. It was assumed that 30% of food away from home spending was at fast food restaurants, 50% was at mid-line restaurants, and 20% was at fine dining restaurants. The distance weighting methodology yielded an estimated 33% of food and beverage spending away from home by Fenton Mill households remaining in the County. As noted above under “Adjustment of business taxes,” the degree that Fenton Mill restaurants can be expected to redirect food away from home spending from York County restaurants would be equal to the percentage of Fenton Mill household restaurant spending remaining in the County. In other words, while 33% of Fenton Mill household food away from home spending would generate new tax revenue for the County, 67% of Fenton Mill restaurant sales would generate new revenue for the County.

Shopping goods locations were plotted over a radius that included the farthest retail node or mall with a unique store likely to be patronized by Fenton Mill residents, but not greater than 30 minutes drive time from the Site. Five retail centers were identified as destinations for shopping goods purchases—Lightfoot (Wal-Mart, Ross Dress for Less, and Lowe’s/Home Depot), Williamsburg Premium Outlets, the Marquis Center (Kohl’s, Best Buy, Target, Dick’s Sporting Goods), the New Town area (Barnes & Noble, Bed Bath Beyond, Office Depot and Petco/Petsmart), and the Patrick Henry retail area (Dillard’s, J.C. Penney, Macy’s, and Costco/Sam’s Club).

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Lightfoot and the Marquis Center are located in York County. Lightfoot is the closest retail center to Fenton Mill. Each location was weighted by the number of unique anchor tenants located there, with Low’s/Home Depot, Petco/PetSmart and Costco/Sam’s Club each counted as one anchor and the Premium Outlets given a weight of 2. Various methods were used to weight the distance gradient and these results were averaged. This distance gradient model calculated that 47.92% of shopper’s goods purchases by Fenton Mill residents would take place in York County. This is a conservative estimate, as it does not include online shopping by Fenton Mill residents, for which all of the local sales tax collected would be remitted to York County.

It was estimated that 45% of all non-food retail spending would be for shopping goods, with the remaining 55% spent on convenience goods. Spending on convenience goods was assumed to follow closely the consumer spending patterns for grocery shopping, as stores selling convenience goods tend to cluster around grocery anchors or be located in strip commercial shopping areas near grocery-anchored shopping centers (this pattern was also assumed to be true for personal and other services). Therefore, the propensity to shop for shopping goods in York County was applied to 45% of all non-food retail spending and the propensity to shop for grocery items in York County was applied to 55% of all non-food retail spending. This resulted in 32.78% of spending on other retail by Fenton Mill households occurring in York County.

No movie theaters are located in York County and no admissions tax is levied by the County.

Cost Calculations

Costs were calculated for variable operating costs of government per household, general government capital costs, education operating costs per student, and education capital costs. Cost data and assumptions were derived from the Budgets.

Per household and per business variable costs were calculated for various budget line items. Costs were calculated separately for age-restricted and other households. State revenues supporting various budget line items were deducted to leave only the County’s operating cost. Certain government functions, such as social services, that would not serve Fenton Mill population were not included in the calculations of cost per household.
Water lines are maintained by Newport News Waterworks and the County will incur no water line maintenance costs. Sewer lines will be extended within the Site (33,100 linear feet) and also from the Site to a nearby pump station (9,700 linear feet). While little maintenance is expected to be needed on the new sewer lines, sewer maintenance costs were conservatively deemed to occur after the sewer system is fully accepted by the County, which is expected to occur upon completion of each phase of the residential construction, with the line connecting to the pump station accepted after the initial infrastructure is put in place. Phasing was estimated based upon the developer’s concept plan and natural groupings determined by the Site’s topography. Fenton Mill will be served by on Site stormwater infrastructure in accordance with current regulations. Therefore, variable costs associated with stormwater maintenance were not included as costs to the County attributable to Fenton Mill.

Chief executive and legislative functions, as well as certain special purpose functions, which would be performed regardless of population size, were not included in the calculations. With regard to administrative support services, only that percentage proportional to the variable cost share of all costs was included in the calculations.

When calculating the variable cost of public services, some public services are consumed by households only and some public services are consumed by households and businesses (i.e., recreational services would be assigned completely to households, since businesses do not directly consume these services). For those public services that serve businesses and households, the costs generated by businesses and the costs generated by households must be distinguished.

Per household and per business variable operating costs were determined in the following manner. Business establishments and households were considered to be equal from the standpoint of generating public service costs, when both households and business establishments consumed those services.

A percentage of each service shared by households and businesses was allocated to households or businesses according to the formula on the below.

\[
\begin{align*}
% \text{ allocated to households} &= \frac{\# \text{ households}}{\# \text{ households} + \# \text{ businesses}} \\
% \text{ allocated to business} &= \frac{\# \text{ businesses}}{\# \text{ households} + \# \text{ businesses}}
\end{align*}
\]

Per household costs were then determined according to the following formula:

\[
\text{Expenditure per household} = \frac{\text{Expenditure}}{\# \text{ of households}} \times \frac{\% \text{ allocated to households}}{\# \text{ of households}}
\]

Per business costs were determined according to the following formula:

\[
\text{Expenditure per business} = \frac{\text{Expenditure}}{\# \text{ of businesses}} \times \frac{\% \text{ allocated to business}}{\# \text{ of businesses}}
\]
Governmental functions with variable costs that serve both households and businesses were:

- civil justice (Clerk of Circuit Court, General District Court and Sheriff), since civil suits are engaged in by businesses as well as persons
- Commissioner of the Revenue and Treasurer (both businesses and households are taxed)
- E-911 Operations, and the Emergency Services component of Fire & Rescue (response events occur at businesses and households)
- Fiscal Accounting, Human Resources and Purchasing (which support all County governmental functions) and
- Sheriff protective services.

Government functions for which Fenton Mill population would generate no significant demands but would otherwise generate variable costs were then excluded. These included those function shown below:

- Children and Family Services Fund
- Community Services Special Programs
- Health Services
- Housing Rental Assistance
- Housing Rehabilitation
- Social Services and
- Water and Sewer Extension (to be provided by the developer)

Additionally, the cost of functions associated with children, such as juvenile corrections and youth recreation and, of course, education, were not attributed to the active adult Fenton Mill residential units.

Government functions that would be performed regardless of population size were excluded. These functions are listed below and on the following page:

- the chief executive and legislative functions of the County
- Budget and Accounting and Financial Services
- Capital Outlay
- Central Insurance
- Colonial Behavioral Health Contribution
- Colonial Group Home Commission
- Community Development Authority Fund
- Community Services Administration
- Computer Support
- County Attorney
- County Capital Fund

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Various adjustments were made to expenditure line items to arrive at the County’s variable cost of providing public services. First, fixed costs were removed from budget line items. This included costs for senior and middle management personnel (essentially department heads and assistant department heads), as well as some specialized positions filled by only one employee. Employee positions and salaries were identified using the County’s October 1, 2019 Pay and Classification Schedule. Salaries were assumed to be the midpoint (average) between the entry level and maximum pay for the relevant position. While it is recognized that individual salaries are likely to be either above or below the midpoint, it was assumed that these differences would average out to or close to the midpoint over the total number of positions identified as “excluded positions.” Fringe benefits for excluded positions were estimated to be 30% of salaries.

Certain other expenses which had been detailed line items in past County budgets were estimated using current budget categories. “Other expenses” was assumed to contain such variable costs as printing and postage and was counted fully as a variable cost, as was the “materials and supplies” category. “Contractual services” and “capital outlay” were assumed to contain fixed cost expenses in most instances. The “internal services” category within departmental budgets was not counted as these charges were calculated separately (see below).
Certain assumptions and adjustments were made for various departments. For the General Registrar, the Registrar’s salary was assumed to be 50% higher than that of the Chief Assistant Registrar. In the Sheriff’s Office, seven Sheriff’s Deputies were assumed to be needed to provide courtroom security (based on data from the Virginia Compensation Board) and were considered excluded positions. For Animal Control, Fire and Rescue, and Sheriff Law Enforcement one-third of internal services charges were assumed to be for vehicle maintenance that us above the normal variable cost of vehicle maintenance reflected in the Vehicle Maintenance line item and were counted as a variable cost (more discussion of Fire and Rescue variable costs is provided below). For Parks and Recreation, 50% of variable costs were assigned to park and facility maintenance, which must be performed regardless of variations in use and, thus, were excluded as a fixed cost.

Fire protection, as opposed to EMS services, was deemed to be largely a fixed cost, except for the cost of materials and supplies, and transportation. This is because the personnel cost of fire response is a function of latent demand. Firefighters must be available 24/7 to respond to relatively infrequent calls for fire suppression regardless of the number of fires. While fire stations are limited in the number of building units that can be served, this limitation is largely a function of response time rather than the number of units within a geographic area (within certain density limits). It is presumed that Fire Station #5, which will serve Fenton Mill, has enough latent demand capacity that no new firefighting equipment or crews will be needed in order to serve Fenton Mill.

Conservatively, 50% of variable personnel costs, after deducting the salaries and fringe benefits of battalion chiefs was assumed to apply to EMS functions, which were considered to be more variable than the fire response function with respect to latent demand. Although an argument could be made that all Fire and Rescue personnel costs can be attributed to latent demand and, therefore, fixed, EMS costs were deemed to be variable. Material costs, other charges and one-third of internal services costs were then added to personnel costs to obtain an estimate for Fire and Rescue variable costs applicable to businesses and general market households.

The calculation of EMS associated costs for Fenton Mill’s active adult households requires special attention, however. Data supplied by the County Planning staff that quantifies the incidence of Fire and EMS incidents and patient transportation incidents for multi-family units in the County shows an increased incidence of both EMS and fire response calls for age-restricted and age-targeted properties compared to general market properties. While it may be true that, due to staffing for latent demand, personnel costs at the fire station serving the proposed development would not rise, the costs that could be attributed to serving the increased incidence of EMS and fire response calls was calculated and counted as a variable cost. This should be considered to be a conservative approach to variable cost estimation.
Data from the County’s *Classification and Pay Schedule* was used to estimate the average firefighter salary plus benefits cost ($73,083). A standard four persons per fire response crew was assumed and a two-person medical transport crew was assumed. It was assumed that the increased incidence of fire response calls was due, for the most part, to minor fires, false alarms or other minor incidences rather than to an increase in major blazes. Therefore, each fire response call was estimated to last for three hours. It was assumed that the average EMS or patient refused call consumed two hours and the average patient transport call consumed four hours.

As noted above under “User fees and other miscellaneous revenues,” data on incidence for age-targeted and age-restricted properties were averaged in order to estimate the incidence of EMS and fire response calls from Fenton Mill households. The per unit incidence for fire response, EMS/patient refusal calls and patient transport calls was calculated for Fenton Mill residents. These metrics were 1.448 fire responses per Fenton Mill household, 0.10712 EMS/patient refusals per Fenton Mill household and 0.688 patient transports per Fenton Mill household annually.

These metrics were then multiplied by the expected total number of personnel hours assigned to each event type in order to obtain the number of EMS personnel hours per Fenton Mill household. This number was then divided by the total number of annual crew hours (assuming a 55 hour work week and two weeks of vacation) and multiplied by the average firefighter salary and benefit cost to obtain the gross variable EMS cost per Fenton Mill household.

These calculations are shown in the formula below:

\[
FR_{FM} = [(FI \times CS \times HR) + (RI \times CS \times HR) + (PTI \times CS \times HR)] \times FSB/AH
\]

Where \(FR_{FM}\) = Variable Fire and Rescue personnel cost per Fenton Mill household

- \(FI\) = fire response Fenton Mill incidence
- \(RI\) = patient refusal Fenton Mill incidence
- \(PTI\) = patient transport Fenton Mill incidence
- \(CS\) = crew size
- \(HR\) = Number of hours per type of incidence
- \(FSB\) = Average firefighter salary plus benefits and
- \(AH\) = Annual firefighter hours worked

Fire and EMS material costs, other charges and vehicle maintenance (one-third of internal services) were then adjusted to account for the higher incidence of Fire and EMS calls per Fenton Mill household versus the Countywide average for all fire and rescue variable costs. These were adjusted by multiplying these costs by the ratio of all EMS and fire response incidents per Fenton Mill household to general market household. This ratio was 5.4756.
For E-911 variable costs, Fenton Mill’s estimated incidence of EMS and law enforcement related calls was used to adjust E-911 variable costs per household. The estimated incidence of all E-911 calls from Fenton Mill households (from data previously provided by County staff and used to estimate Fire and Rescue incidences) was divided by the incidence of E-911 calls per general market households and this ratio (1.3268) was applied to EMS variable costs per household.

For the Electoral Board, the household size adjustment for smaller households at Fenton Mill was calculated based upon the ratio of the Fenton Mill average adult household size to the average adult household size for all York County households. Separate calculations were made for active adult and all other households. All Fenton Mill active adult residents were assumed to be potential voters. For the remaining households, the average number of adults (i.e., potential voters) was assumed to equal the average number of adults per household in Census tract 510. This was computed to be 1.65 adults per household.

It was assumed that for all households with more than two persons in the County, except single parent households, had two potential voters. The number of single-parent households was estimated from 2010 Census data (the latest available) by calculating single parent households as a percentage of all households with two or more persons. These were then assumed to represent households with only one potential voter. The calculated adult household size (1.74 persons per household) was then used as the denominator, rather than average household size, to adjust the variable General Registrar cost per household for Fenton Mill residents discussed above.

With respect to the Domestic Violence Program, the denominator was ratio of the percentage of Fenton Mill households with two adults present and the percentage of all York County households with two adults present. Using ACS data, this was determined to be 0.9026 for the active adult households and 0.8761 for the remaining households so that the variable Domestic Violence Program cost per household was multiplied by 90.26% and 87.61%, respectively, to obtain the estimated cost for Fenton Mill households.

This reduction was also applied to the Juvenile and Domestic Court variable costs. Additionally, using data from the latest Budget containing such data, domestic cases were calculated to comprise only 21.13% of that court’s case load. Consequently, for Fenton Mill active adult households, the variable cost per Fenton Mill household was reduced further by applying that percentage, since no juvenile cases would be heard. For the remainder of Fenton Mill households, the two-adult ratio was applied only to that portion of costs attributed to domestic cases.
For Fenton Mill active adult households, the variable costs of certain court and criminal justice functions were adjusted to take into account the rarity with which Fenton Mill active adult residents could be expected to be “on the wrong side of the law” with respect to these functions. It was assumed that Fenton Mill active adult target population will not be involved in the criminal justice system (as criminals) to any great extent. The variable cost of activities associated with preventing, apprehending, prosecuting or punishing criminal activity was reduced by 91.5% for Fenton Mill active adult households. This was based on data from the *Blackwell Encyclopedia of Sociology*.

The data stated that 80% of all crimes are committed by persons under age 40 and less than 1% of all crimes are committed by persons over 65, with victimization rates following similar (though not precisely the same) trends. Since the population at Fenton Mill active adult units will be over 55, the percentage of this population associated with criminal activity would be closer to 1%. Taking a straight-line projection approach, the incidence of involvement with criminal activity would increase by 0.75% for each year under 65 years of age.

Thus, taking the conservative approach of taking the highest predicted incidence of criminal activity involvement, the age group at Fenton Mill would be involved in crimes handled by the York County criminal justice system only 8.5% of the time compared to the general population. Thus, variable revenues and costs associated with crime were reduced by 91.5% (i.e., multiplied by 8.5%) for this population.

Variable costs for public safety, judicial and corrections were accordingly adjusted. Where a function includes both civil and criminal components, these were distinguished and the criminal activity reduction was applied to those costs associated with criminal activity. As noted above, data from a previous *Budget* was used to identify civil and criminal cases and actions in the County’s court system. For the Clerk of Court, 63.82% of its workload was identified as civil actions and this percentage was applied variable costs per household in order to retain those Clerk of Court variable costs associated with civil actions, while 91.5% of the remaining cost (associated with criminal actions) was deducted.

The same formula was applied to variable General District Court costs, with 83.23% of that that court’s cases being civil cases. The criminal incidence adjustment was applied to Circuit Court variable costs as this court handles primarily criminal cases. The treatment of Juvenile and Domestic Court variable costs is discussed above. Commonwealth Attorney variable costs were reduced by 91.5% since this office handles criminal cases. While costs for Juvenile Corrections were excluded, the County’s payment for adult corrections (the Regional Jail) was included but subject to the 91.5% criminal incidence reduction.
The Sheriff’s department activities were divided into three components—law enforcement, investigation and civil operations/court security. With respect to law enforcement, it was assumed, based upon court case data from the prior Budget, that 25% of the Sheriff law enforcement workload was traffic violation related. Of the remaining workload, it was assumed, lacking any data on the matter, that half of law enforcement activity involved patrol and active engagement with criminal activity and the other half involved police call responses. Data on call incidence supplied by the County and used to estimate fire and EMS incidence shows that residents in age-restricted units are only 34.72% as likely to make calls to Sheriff law enforcement. Thus, reduction factors of 91.5% and 65.28% were applied to the patrol and police call response functions of Sheriff law enforcement, with no reduction except for the adjustment for smaller household size, applied to variable costs associated with the traffic violation function.

Investigation was assumed to be entirely devoted to handling criminal cases and, therefore, the 91.5% criminal incidence reduction was applied to calculate variable costs per Fenton Mill household. As stated above, the personnel costs for seven Sheriff’s deputies were subtracted from the civil operations/court security component and no further adjustment was made to disaggregate court security expenses. The criminal incidence adjustment was not applied to this function.

Since Fenton Mill non-age-restricted households are assumed to reflect County-wide criminal incidence, no adjustments to criminal justice associated costs were made to the remaining Fenton Mill households.

Certain administrative support functions, shown in the Budget as an internal cost line item but also in the Internal Service Funds budget, are substantially fixed costs (since they must be provided) but have a variable cost component (since they serve County functions that incur variable costs from household growth). This variable cost component for County functions serving households was calculated to be 30.86% of the costs for these support functions, with this percentage applied to the internal services functions’ variable costs only. The variable cost percentage was calculated dividing variable cost personnel costs for those functions serving households only by all personnel costs in the County General Fund budget. This variable cost component for County functions serving businesses was calculated to be 26.59%, calculated by using variable costs for only those functions serving both households and businesses. These administrative support functions are: Central Purchasing, Fiscal Accounting, Health Insurance, Human Resources, Radio Maintenance, Vehicle Maintenance and Workers Compensation.

Next, revenues from the Commonwealth and certain other sources were deducted to leave only the County’s locally funded operating costs. This procedure was applied to the functions listed on the following page.
• Clerk of Circuit Court
• Commissioner of the Revenue
• Commonwealth Attorney
• Domestic Violence Program
• E-911
• Library
• Sheriff
• Treasurer and
• Victim Witness Program.

Revenues deducted from these functions included grants and Poquoson and Williamsburg contributions to E-911, and Williamsburg public safety contributions. It should be noted that the Budget identifies other revenues supplementing local costs that were deemed to be variable revenues (revenues that would change with increases or decreases in households and businesses). These variable revenues were not deducted from costs but were, instead, treated as revenues (see above under “User fees and other miscellaneous revenues”).

When revenues were deducted from costs, the reduction in cost was distributed among fixed and variable costs. Only that portion of revenues defraying costs assigned to variable costs was actually deducted from costs. The formula for distributing revenues and calculating costs is displayed below:

\[ NVC = VC - (R \times (VC/TC)) \]

Where:
- \( NVC \) = Net Variable Costs (variable costs after revenue is deducted)
- \( VC \) = Variable Costs (prior to revenue deduction)
- \( R \) = Revenue
- \( TC \) = Total Cost (variable and fixed costs)

Finally, adjustments were made to reflect lower demand for certain services based on smaller household sizes at Fenton Mill. This was done by multiplying the County’s variable cost per household by the ratio of the average household size for Fenton Mill households to the average household size for all households in York County. This calculation was performed separately for Fenton Mill active adult households and all other households. Calculations for average household size at Fenton Mill have been described above.

Line items whose per household costs were adjusted for lower demand due to smaller household sizes are listed below:

• Adult criminal justice functions
• Emergency Communications/E-911
• Fire & Rescue EMS
• Library
• Parks & Recreation

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Table A-3 on the following pages details the County’s variable cost expenditures per household. The variable cost for certain functions was calculated based on units of measure other than households or businesses. These were the cost of real estate assessments, sewer line maintenance and solid waste management. Variable costs associated with the County’s Real Estate Assessor were calculated on a per-parcel basis as $21.08 per assessed parcel. For the commercial property, each building was counted as equivalent to a residential parcel.

Billing for sewer charges was assumed to be handled by either the Hampton Roads Sanitation District or Newport News Waterworks with no identifiable cost incurred by the County. The cost of sewer line maintenance was calculated per linear foot of existing sewer line. The cost of solid waste management was calculated per customer. Table 4, on page 36, shows the calculated variable cost and the cost per service unit for each function. Metrics for these service units were obtained from County staff.

General government capital costs. The County is expected to incur no new capital infrastructure costs as a result of the proposed development. The developer will construct all infrastructure necessary to serve Fenton Mill, including roads, water lines, sewer lines and stormwater infrastructure. Fire and Rescue services are presumed adequate to serve Fenton Mill, with no new vehicles or equipment needed to be purchased. The County would incur capital costs due to providing additional Sheriff currently patrols to serve the Site. Currently, there is on Sheriff patrol deputy for every 469 households in the County. With the addition of 853 new households, it is assumed that the County would add two Sheriff’s patrols to serve Fenton Mill. The operating costs associated with these additional patrols are accounted for in the variable operating cost analysis (see above).

To add the new patrols, the County would purchase two patrol vehicles and incur a one-time officer equipment and training cost. Based upon data supplied by the County’s Sheriff in 2014, updated for inflation, the cost in 2020 of hiring a new patrol officer was estimated to be $110,000. Based upon more recent data from another Virginia locality, the cost of a patrol vehicle was estimated to be $40,000. Vehicles were assumed to be replaced very five years. A new officer was assumed to be hired after 400 housing units were occupied and in the final year of Fenton Mill residential development. Since a by-right development would produce almost 62% of a warrant for an additional patrol officer, a new officer with the attendant capital expense was assumed to be hired when the by-right development was built out.

Education costs were estimated separately from other public service costs of local government. Education costs were calculated on a per pupil basis. The York County Public School population for the 2019-20 school year (12,978 full time students) was obtained from Virginia Department of Education (VDOE) Fall Membership website. Cost data and assumptions for school operating costs were derived from the school Budget.
<table>
<thead>
<tr>
<th>Item</th>
<th>Variable Cost Expenditure</th>
<th>Expenditure per Fenton Mill General Household</th>
<th>Expenditure per Fenton Mill Active Adult Household</th>
<th>Expenditure per Fenton Mill Business</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Corrections</td>
<td>$2,456,175</td>
<td>$83.23</td>
<td>$4.87</td>
<td>$0.00</td>
<td>Adjusted for household size; AA Adjusted for criminal incidence</td>
</tr>
<tr>
<td>Animal Control</td>
<td>$361,125</td>
<td>$13.75</td>
<td>$13.75</td>
<td>$0.00</td>
<td></td>
</tr>
<tr>
<td>Central Purchasing</td>
<td>$311,600</td>
<td>$3.45</td>
<td>$3.45</td>
<td>$2.98</td>
<td>30.86%/26.59% variable cost</td>
</tr>
<tr>
<td>Circuit Court</td>
<td>$33,575</td>
<td>$1.07</td>
<td>$0.06</td>
<td>$1.21</td>
<td></td>
</tr>
<tr>
<td>Clerk of Circuit Court</td>
<td>$522,850</td>
<td>$16.71</td>
<td>$7.70</td>
<td>$18.78</td>
<td>Excludes costs paid by Commonwealth; adjusted for civil cases and criminal incidence</td>
</tr>
<tr>
<td>Commissioner of the Revenue</td>
<td>$804,550</td>
<td>$28.90</td>
<td>$28.90</td>
<td>$28.90</td>
<td>Excludes costs paid by Commonwealth; adjusted for household size.</td>
</tr>
<tr>
<td>Commonwealth Attorney</td>
<td>$611,675</td>
<td>$19.55</td>
<td>$1.14</td>
<td>$21.97</td>
<td>AA adjusted for civil cases and criminal incidence</td>
</tr>
<tr>
<td>Domestic Violence Program</td>
<td>$24,475</td>
<td>$0.82</td>
<td>$0.84</td>
<td>$0.00</td>
<td>Adjusted for % of 2-person households</td>
</tr>
<tr>
<td>Emergency Communications/911</td>
<td>$1,807,050</td>
<td>$57.74</td>
<td>$86.16</td>
<td>$64.90</td>
<td>Excludes intergovernmental revenue. AA adjusted for increased incidence</td>
</tr>
<tr>
<td>Fire and Rescue</td>
<td>$5,756,125</td>
<td>$183.94</td>
<td>$676.34</td>
<td>$206.74</td>
<td>30.86%/26.59% variable cost</td>
</tr>
<tr>
<td>Fiscal Accounting</td>
<td>$472,925</td>
<td>$5.24</td>
<td>$5.24</td>
<td>$4.52</td>
<td>No personnel costs; adjusted for household size, civil cases and criminal incidence</td>
</tr>
<tr>
<td>General District Court</td>
<td>$9,625</td>
<td>$0.31</td>
<td>$0.18</td>
<td>$0.35</td>
<td>Excludes costs paid by Commonwealth; adjusted for number of adults in household</td>
</tr>
<tr>
<td>General Registrar</td>
<td>$127,875</td>
<td>$4.62</td>
<td>$4.67</td>
<td>$0.00</td>
<td></td>
</tr>
<tr>
<td>Health Insurance</td>
<td>$12,167,700</td>
<td>$134.86</td>
<td>$134.86</td>
<td>$116.20</td>
<td>30.86%/26.59% variable cost</td>
</tr>
<tr>
<td>Human Resources</td>
<td>$593,325</td>
<td>$6.58</td>
<td>$6.58</td>
<td>$5.67</td>
<td>30.86%/26.59% variable cost</td>
</tr>
<tr>
<td>Juvenile &amp; Domestic Relations Court</td>
<td>$15,300</td>
<td>$0.50</td>
<td>$0.10</td>
<td>$0.00</td>
<td>No personnel costs. Adjusted for 2-person HH size. AA Domestic cases only.</td>
</tr>
<tr>
<td>Juvenile Corrections</td>
<td>$357,350</td>
<td>$12.11</td>
<td>$0.00</td>
<td>$0.00</td>
<td>Adjusted for household size</td>
</tr>
<tr>
<td>Library</td>
<td>$2,063,925</td>
<td>$69.94</td>
<td>$45.44</td>
<td>$0.00</td>
<td>Adjusted for household size.</td>
</tr>
<tr>
<td>Magistrate</td>
<td>$775</td>
<td>$0.03</td>
<td>*</td>
<td>$0.03</td>
<td>AA Adjusted for criminal incidence</td>
</tr>
<tr>
<td>Parks &amp; Recreation Operations</td>
<td>$772,850</td>
<td>$26.19</td>
<td>$18.05</td>
<td>$0.00</td>
<td>Excludes administration; 50% reduction for parks; adjusted for household size</td>
</tr>
<tr>
<td>Radio Maintenance</td>
<td>$1,274,100</td>
<td>$14.12</td>
<td>$14.12</td>
<td>$12.17</td>
<td>30.86%/26.59% variable cost</td>
</tr>
<tr>
<td>Sheriff: Civil Operations, Investigations, Law Enforcement</td>
<td>$6,125,325</td>
<td>$202.49</td>
<td>$68.36</td>
<td>$220.00</td>
<td>Excludes costs paid by Commonwealth; adjusted for household size; AA adjusted for criminal incidence, % of civil cases</td>
</tr>
</tbody>
</table>

Table A-3
York County Non-School Expenditures per Household and Business Fiscal Year 2020 Adopted Annual Budget
York County Non-School Expenditures per Household and Business Fiscal Year 2020 Adopted Annual Budget (Cont.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Variable Cost Expenditure</th>
<th>Expenditure per Fenton Mill General Household</th>
<th>Expenditure per Fenton Mill Active Adult Household</th>
<th>Expenditure per Fenton Mill Business</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasurer</td>
<td>$ 626,925</td>
<td>$ 22.52</td>
<td>$ 22.52</td>
<td>$ 22.52</td>
<td>Excludes costs paid by Commonwealth</td>
</tr>
<tr>
<td>Vehicle Maintenance</td>
<td>$ 2,794,200</td>
<td>$ 30.97</td>
<td>$ 30.97</td>
<td>$ 26.68</td>
<td>30.86%/26.59% variable cost</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Excludes costs paid by state grant. Adjusted for household size, criminal incidence</td>
</tr>
<tr>
<td>Victim-Witness Program</td>
<td>$ 118,650</td>
<td>$ 4.02</td>
<td>$ 0.24</td>
<td>$ 0.00</td>
<td>30.86%/26.59% variable cost</td>
</tr>
<tr>
<td>Workers Compensation</td>
<td>$ 176,800</td>
<td>$ 1.96</td>
<td>$ 1.96</td>
<td>$ 1.69</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$40,386,850</td>
<td>$945.62</td>
<td>$1,176.50</td>
<td>$755.31</td>
<td></td>
</tr>
</tbody>
</table>

AA = Active adult households
Rounded to the nearest $25
* Less than $0.01

Table A-4
York County Non-School Expenditures per Service Unit Other Than Household Fiscal Year 2020 Adopted Annual Budget

<table>
<thead>
<tr>
<th>Item</th>
<th>Variable Cost Expenditure</th>
<th>Expenditure per Service Unit</th>
<th>Service Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Estate Assessment</td>
<td>$ 558,800</td>
<td>$ 21.08</td>
<td>Parcel</td>
</tr>
<tr>
<td>Sewer Line Maintenance</td>
<td>$3,338,175</td>
<td>$ 2.24</td>
<td>Linear foot</td>
</tr>
<tr>
<td>Solid Waste Management</td>
<td>$5,431,300</td>
<td>$309.62</td>
<td>Customer</td>
</tr>
</tbody>
</table>

Costs for functions that must be provided and are not affected by relatively small changes in student population were excluded from the calculation of variable costs. These included the administrative functions and functions staffed with only a single position, whether systemwide or at individual schools. However, student service functions for which staff resources were distributed systemwide or over a number of schools (such as social work services) were included as variable cost components, since fluctuations in student population would affect staffing levels. However, this does not include administrative and other functions that would not increase with student population.

Those functions excluded from the variable cost calculations are listed below and on the following page:

- Alternative Education
- Capital projects
- Communication services
- Contingency
- Curriculum Development
- Executive administration (including School board)

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- Grounds services
- Interscholastic sports [VHSL/Interscholastic activities (athletics)]
- Operations management; maintenance
- Principals
- Technology administration, operations & maintenance, grants
- Technology support
- Transportation management
- Vehicle services
- Warehouse

Additionally, adult education was excluded from the variable cost calculation because, based on income level, it would be highly unlikely that residents of the Fenton Mill would be pursuing their GED. Pre-school costs were also excluded since eligibility for pre-school enrollment is income-tested and Fenton Mill residents would not qualify for this program.

Other functions were entirely self-funded by program income or state and/or federal grants. The costs of these programs were excluded from the calculation of per-student costs. These programs were:

- DODSA grants
- Food services
- Title I
- Title IIA
- Title IIIA
- Title IVA
- Title VIB
- Miscellaneous Programs

There were also certain functions for which staffing met the fixed cost criteria but which contained some variable cost component, such as special materials. Those functions falling into this category are listed below:

- Elementary school guidance
- Elementary and middle school art, music and PE
- Health services, except occupational and physical therapists
- High school consumer science, marketing, NJROTC and TV communications
- Media services
- School of the Arts, elementary and middle school grades

Certain fixed costs were then deducted from the budgeted amounts of those remaining functions that were deemed to create variable costs.
Typical line item fixed costs included:

- Administrative and supervisory personnel
- Capital outlays
- Contractual services, except for Governor’s School
- Dues and subscriptions
- Furniture and equipment (except replacement)
- Leases and rentals
- Purchased services (except in Special Education and to New Horizons)
- Software and
- VRS debt retirement

Certain assumptions were made with regard to the distribution of staff across fixed cost and variable cost activities for operations and maintenance (building services) and pupil transportation (vehicle maintenance services). For building services it was assumed that 25% of janitorial work could be related to demand placed by a school’s student population. All other work would need to be performed regardless of fluctuations in a school’s population. Therefore, 25% of janitorial service personnel salaries and fringes and of janitorial materials and supplies were counted as variable costs. Water and sewer charges were assumed to be variable based on student demand but 25% of this cost was assumed to be for cleaning that would occur regardless of student population.

Transportation vehicle maintenance has an eight-person staff. It was estimated that, for a minimum size bus fleet, two mechanics would be required. Therefore two-eighths (one quarter) of the personnel cost for this function was deemed a fixed cost.

Certain functions, though administrative, support both fixed and variable cost activities, with the cost of providing these functions being sensitive to increases in variable costs. These support functions include: fiscal services and human resources. As with other functions, typical fixed costs were deducted from the function’s total cost to leave only variable costs. These variable costs were then distributed between the fixed cost and the variable cost functions they support. In order to calculate this distribution, the total amount of variable costs in the Proposed Annual Budget (excluding these support functions) was divided into the total budget. The variable cost for each support function was multiplied by the resulting percentage (66.19%) of variable costs within the budget.

Health and dental insurance costs are accounted for in a separate fund are distributed to functional costs in the general operating fund through budget transfers. Approximately 14.33% of the Health and Dental Insurance Fund is funded through employee contributions, which represents a source of non-County revenue. Consequently, the value of employee contributions was deducted from health insurance fringe benefit costs for variable cost positions in the Budget.

Next, categorical revenues received from state, federal and other sources were deducted from functional line item variable costs. When the functional line item contained both fixed and variable costs, a portion of categorical revenue proportional to the percentage of fixed costs was deducted from these categorical revenues.
The general formula for computing this deduction is shown below:

\[ CR_{\text{var}} = CR \times \frac{VC}{TC} \]

Where \( CR_{\text{var}} = \) Variable categorical revenues  
\( CR = \) Total categorical revenues  
\( VC = \) Variable costs and  
\( TC = \) Total costs

Functional line item costs from which categorical revenues were subtracted and those categorical revenues are shown in Table A-5 below. Categorical revenue shown in Table A-5 is from the Commonwealth, unless otherwise indicated. Federal categorical revenues completely fund programs that are separate cost centers in the Annual Budget except for NJROTC.

<table>
<thead>
<tr>
<th>Function</th>
<th>Categorical Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>All instructional programs</td>
<td>K-3 initiative; VRS retirement, social security and group life contributions</td>
</tr>
<tr>
<td>Special education</td>
<td>Special education SOQ; special education support</td>
</tr>
<tr>
<td>Gifted and talented</td>
<td>Gifted education - SOQ</td>
</tr>
<tr>
<td>Homebound</td>
<td>Homebound contribution</td>
</tr>
<tr>
<td>Limited English Proficiency</td>
<td>LEP contribution</td>
</tr>
<tr>
<td>NJROTC</td>
<td>Federal NJROTC grant</td>
</tr>
<tr>
<td>Reading</td>
<td>Early reading intervention</td>
</tr>
<tr>
<td>Summer school</td>
<td>Remedial summer school contribution; Summer school tuition (local program income)</td>
</tr>
<tr>
<td>Technology instruction</td>
<td>Technology initiative</td>
</tr>
<tr>
<td>Textbooks</td>
<td>Textbook funding</td>
</tr>
<tr>
<td>Virtual High School</td>
<td>Virtual high school tuition (local program income)</td>
</tr>
<tr>
<td>Vocational education</td>
<td>Voc-Ed SOQ; Voc-Ed contribution</td>
</tr>
</tbody>
</table>

Source: York County School Division Fiscal Year 2020 Approved Annual Budget

The Commonwealth contribution to VRS retirement, social security and group life contributions from the Commonwealth was proportionally distributed as categorical revenue among teachers in variable cost positions and teachers in fixed cost positions.

After deducting categorical revenue, these variable costs were then distributed among local funding and other funding sources. In order to calculate this percentage, non-categorical funding from all sources was summed.
Funding sources were:

- Commonwealth
  - Basic Aid
  - Local sales tax remittance
  - At risk program funding
  - Compensation supplement
  - Comprehensive services contribution
  - Foster home children funding
  - National board certification
  - Project graduation funding
  - Remedial programs funding
  - SOL Algebra contribution and
  - Supplementary lottery
- Federal government
  - Impact aid
- Local/program income
  - County appropriation
  - Day school tuition
  - Pupil fees
  - Revenue stabilization fund and
  - Miscellaneous school system revenue.

All program income was assumed to be available for operating budget expenses.

Certain revenues were excluded from the calculation of the County’s share of education expenses. These include revenues that are earmarked for functions that are not relevant to the student population generated by Fenton Mill and other functional categories that were excluded from the fiscal impact analysis, including program revenue that fully funds various cost centers. Excluded revenues include those shown below:

- Commonwealth
  - Pre-school initiative
  - Miscellaneous grants
- Federal government
  - DODEA grants
  - Medicaid reimbursement
  - Miscellaneous grants
  - Titles 1A, IIA, IIIA and IVA and
  - Title VIB special education funding

The Food Service Fund was also excluded from the calculations, since this is completely self-funded. The Health and Dental Expenditures Fund was excluded (except for employee contribution revenue) to avoid double counting. The Capital Projects Fund was also excluded since it supports fixed costs.
The local share of variable costs was calculated by dividing local source revenue by total revenue, excluding categorical and excluded revenues. Local source revenue was composed of County operating fund appropriations. Total revenue included local source, local program income, Commonwealth non-categorical revenue and federal non-categorical revenue. Categorical revenue was excluded from the calculation because this was subtracted when calculating variable costs.

Table A-6 below shows the data for these calculations as well as total amounts of categorical revenues provided by state, federal and program income.

<table>
<thead>
<tr>
<th>Source of Funding</th>
<th>Non-categorical Funding</th>
<th>Total Categorical/Excluded Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>York County</td>
<td>$ 54,802,450</td>
<td></td>
</tr>
<tr>
<td>Commonwealth of Virginia</td>
<td>$ 58,228,325</td>
<td>$ 15,349,400</td>
</tr>
<tr>
<td>Federal government</td>
<td>$ 9,157,400</td>
<td>$ 5,179,550</td>
</tr>
<tr>
<td>Program income, other local</td>
<td>$ 721,200</td>
<td>$ 2,306,250</td>
</tr>
<tr>
<td>Total</td>
<td>$122,909,375</td>
<td>$22,835,200</td>
</tr>
</tbody>
</table>

Percent York County Funding 44.59%

Rounded to the nearest $25

Source The York County School Division Fiscal Year 2020 Approved Annual Budget

This calculated local share of variable costs, after subtracting that portion of categorical revenue assigned to variable costs, was then divided by the number of students within the school system to yield the variable cost to the County per each additional student.

The general formula for calculating York County’s variable student cost is shown below.

\[
SVC_{YC} = \sum\left(\left[TC_n - FC_n - (CR_n x (TC_n - FC_n)/TC_n)\right] \times (YC_n/TC_n)\right)/S
\]

Where, \(SVC_{YC}\) = York County Variable Cost per Student

\(TC_n\) = Total Cost of cost center line item

\(FC_n\) = Fixed Cost of cost center line item

\(CR_n\) = Categorical Revenue funding cost center line item

\(YC_n\) = York County Non-categorical Revenue funding

\(TC_n\) = Total Non-categorical Revenue funding and

\(S\) = Number of students enrolled

Per-student variable operating costs to York County are detailed in Table A-7 on the following page.
<table>
<thead>
<tr>
<th>Item</th>
<th>Budgeted Variable Costs</th>
<th>Categorical Revenue attributed to Variable Costs</th>
<th>Variable Costs (less Categorical Revenue)</th>
<th>Variable Cost Per Student</th>
<th>County Cost per Student (44.59%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Classroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruction</td>
<td>$53,499,350</td>
<td>$4,756,975</td>
<td>$48,742,375</td>
<td>$3,755.77</td>
<td>$1,674.61</td>
</tr>
<tr>
<td>Building Services</td>
<td>$1,213,625</td>
<td>0</td>
<td>$1,213,625</td>
<td>$93.51</td>
<td>$41.70</td>
</tr>
<tr>
<td>Career-Technical</td>
<td>$2,242,900</td>
<td>$396,450</td>
<td>$1,846,450</td>
<td>$142.28</td>
<td>$63.44</td>
</tr>
<tr>
<td>Encore (Middle School)</td>
<td>$2,260,675</td>
<td>$224,425</td>
<td>$2,036,250</td>
<td>$156.90</td>
<td>$69.96</td>
</tr>
<tr>
<td>Fiscal Services (66.19%)</td>
<td>$622,150</td>
<td>0</td>
<td>$622,150</td>
<td>$48.71</td>
<td>$21.72</td>
</tr>
<tr>
<td>Gifted</td>
<td>$447,550</td>
<td>$401,100</td>
<td>$46,450</td>
<td>$3.58</td>
<td>$1.60</td>
</tr>
<tr>
<td>Guidance</td>
<td>$3,485,525</td>
<td>$303,100</td>
<td>$3,182,425</td>
<td>$245.22</td>
<td>$109.34</td>
</tr>
<tr>
<td>Governor’s School (H.S. contractual services)</td>
<td>$425,825</td>
<td>0</td>
<td>$425,825</td>
<td>$32.81</td>
<td>$14.63</td>
</tr>
<tr>
<td>Health Services</td>
<td>$667,575</td>
<td>0</td>
<td>$667,575</td>
<td>$52.98</td>
<td>$23.62</td>
</tr>
<tr>
<td>Homebound</td>
<td>$76,725</td>
<td>$28,150</td>
<td>$48,575</td>
<td>$3.74</td>
<td>$1.67</td>
</tr>
<tr>
<td>H.S. Art, Drama, Music</td>
<td>$1,669,300</td>
<td>$168,975</td>
<td>$1,500,325</td>
<td>$115.61</td>
<td>$51.55</td>
</tr>
<tr>
<td>Elem/M.S. Art, Music, PE; H.S. Consumer Sci, Marketing, NJROTC, TV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>$66,650</td>
<td>$125</td>
<td>$66,525</td>
<td>$5.13</td>
<td>$2.29</td>
</tr>
<tr>
<td>Human Resources (66.19%)</td>
<td>$446,700</td>
<td>$425,825</td>
<td>$446,700</td>
<td>$34.42</td>
<td>$15.35</td>
</tr>
<tr>
<td>Limited English Proficiency</td>
<td>$986,625</td>
<td>$390,600</td>
<td>$596,025</td>
<td>$45.93</td>
<td>$20.48</td>
</tr>
<tr>
<td>Media Services</td>
<td>$298,425</td>
<td>0</td>
<td>$298,425</td>
<td>$23.00</td>
<td>$10.25</td>
</tr>
<tr>
<td>Psychological Services</td>
<td>$806,950</td>
<td>0</td>
<td>$806,950</td>
<td>$62.18</td>
<td>$27.72</td>
</tr>
<tr>
<td>Reading</td>
<td>$1,818,775</td>
<td>$249,625</td>
<td>$1,569,150</td>
<td>$120.91</td>
<td>$53.91</td>
</tr>
<tr>
<td>School of the Arts</td>
<td>$486,300</td>
<td>$44,150</td>
<td>$442,150</td>
<td>$34.07</td>
<td>$15.19</td>
</tr>
<tr>
<td>Social Work Services</td>
<td>$216,675</td>
<td>0</td>
<td>$216,675</td>
<td>$16.70</td>
<td>$7.44</td>
</tr>
<tr>
<td>Special Education</td>
<td>$13,772,675</td>
<td>$5,768,325</td>
<td>$8,004,350</td>
<td>$616.76</td>
<td>$275.00</td>
</tr>
<tr>
<td>Speech Services</td>
<td>$942,050</td>
<td>0</td>
<td>$942,050</td>
<td>$72.59</td>
<td>$32.37</td>
</tr>
<tr>
<td>Summer School</td>
<td>$198,075</td>
<td>$185,000</td>
<td>$13,075</td>
<td>$1.01</td>
<td>$0.45</td>
</tr>
<tr>
<td>Technology Instruction</td>
<td>$2,454,275</td>
<td>$681,950</td>
<td>$1,772,325</td>
<td>$136.56</td>
<td>$60.89</td>
</tr>
<tr>
<td>Textbooks</td>
<td>$727,625</td>
<td>$807,750</td>
<td>$(80,050)</td>
<td>$(6.17)</td>
<td>$(2.75)</td>
</tr>
<tr>
<td>Vehicle Maintenance</td>
<td>$869,600</td>
<td>0</td>
<td>$869,600</td>
<td>$67.01</td>
<td>$29.88</td>
</tr>
<tr>
<td>Vehicle Operation</td>
<td>$5,785,700</td>
<td>0</td>
<td>$5,785,700</td>
<td>$445.81</td>
<td>$198.78</td>
</tr>
<tr>
<td>Virtual High School</td>
<td>$394,825</td>
<td>$18,500</td>
<td>$376,325</td>
<td>$29.00</td>
<td>$12.93</td>
</tr>
<tr>
<td>Workers’ Compensation (66.19%)</td>
<td>$224,850</td>
<td>0</td>
<td>$224,850</td>
<td>$17.32</td>
<td>$7.72</td>
</tr>
<tr>
<td>York River Academy</td>
<td>$545,275</td>
<td>$52,525</td>
<td>$492,750</td>
<td>$37.97</td>
<td>$16.93</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$97,458,475</strong></td>
<td><strong>$14,477,775</strong></td>
<td><strong>$82,980,700</strong></td>
<td><strong>$6,411.28</strong></td>
<td><strong>$2,858.64</strong></td>
</tr>
<tr>
<td><strong>All Costs</strong></td>
<td><strong>$145,744,575</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rounded to the nearest $25

Source: The York County School Division Proposed Annual Budget for Fiscal Year 2015.
*Includes excluded costs; excludes food service and capital projects funds
Table A-7 shows that, although gross spending per student, including all funds, is calculated at $11,230, variable costs funded by the County account for only $2,858.64 of this per-pupil cost.

Education annual expenditures were assigned to the Fenton Mill Development by estimating the number of students to be generated by the project and multiplying this by the per-student cost of education. The student generation metric assumed by the County for single-family units is 0.54 students per unit for the single-family units and 0.37 students per unit for the townhouse units. Active adult units would generate no students attending the York County public schools.

Based on the County’s student generation rates, it is anticipated that the development of Fenton Mill would add 358 students to the York County school system by SY 2032-2033. Based on the current system-wide distribution of students, it is projected that 161 students would be added to Waller Mill Elementary School, 84 students would be added to Queens Lake Middle School and 113 students would be added to Bruton High School.

*Education capital costs* were determined through an analysis of the actual fiscal impact of the proposed development. Actual fiscal impact related to education capital costs is determined by the extent to which a locality can reasonably be expected to incur a budgetary expenditure due to the addition of students generated by the proposed development. Here, students to be generated by development under construction plus approved or proposed development may be considered when calculating remaining facility capacity. This includes a by-right development of the Site, which would generate 157 students attending the York County public schools, 70 of whom would attend Waller Mill Elementary School.

Also, capacity additions that are planned for the future, as well as other potential remedies to address the inadequacy of public facilities, are considered in the calculations. Furthermore, future student generation at schools other than the school to which students from the proposed development are zoned may be considered if this can reasonably be expected to affect remaining facility capacity at the school to which students from the proposed development are zoned through changes in school zoning boundaries.

Data on such future “pipeline developments” was obtained from the County via its *Residential Development Tracking Report* as of January 1, 2020. This report includes developments under construction, those in the review and approval process, and those in the planning stage. All developments zoned for Waller Mill or Magruder Elementary School were included in the foregoing analysis.
Applying the County’s student generation ratios and the proportion of elementary school enrollment resulted in a prediction of 215 additional students attending Waller Mill Elementary School from pipeline developments. Counting only pipeline development, Waller Mill Elementary School would exceed its instructional capacity by 95 students. This does not include the 70 students that would be generated with a by-right development of the Site. Including those students, Waller Mill Elementary School would exceed its instructional capacity by 165 students—33% above its instructional capacity and enough to trigger the need for another elementary school serving the Lightfoot area. Because there would be a need for a new elementary school in the Lightfoot area whether or not Fenton Mill is developed, it cannot be said that the development of Fenton Mill would cause the County to build a new elementary school and, therefore, no capital fiscal impact was attributed to Fenton Mill.

We may also consider that the County is already planning to construct a new elementary school to serve both the Bruton and York districts (area of the County north of the Yorktown Naval Weapons Station, which includes Lightfoot). The County’s school system has included the construction of a new elementary school in its CIP for FY 2020-2025. This school would serve the proposed development either directly or indirectly by relieving facility overcapacity at Waller Mill Elementary School. Construction of the new school is proposed for FYs 2023 and 2024 and, thus, falls within the development timeframe for Fenton Mill.

Although the new elementary school is currently programmed for a site on the Marquis development property, the County believes that site to be inadequate, the site being too small and topographically challenged. Nevertheless, the inclusion of the new school in the CIP indicates the County’s recognition that a new elementary school is needed to serve this area independently of whether Fenton Mill is developed. Indeed, the applicant is proposing the donation of a new elementary school site. The school site that the applicant would offer is 16.5 acres on flat ground and will be fully served with utilities.

According to the County’s capacity data and the VDOE Fall Membership data, Magruder Elementary School is already exceeding its instructional capacity by 56 students. Data from the County’s Residential Development Tracking Report indicate that at least 98 students would be added due to pipeline development (this assumes a reduced number of apartment units at the Marquis development site). Combining a projected facility deficit of 154 students at Magruder Elementary School with a projected facility deficit of 94 students at Waller Mill Elementary School (not including students that would be added by a by-right development of the Site), justifies the need for a new elementary school to be constructed in the northern part of the County regardless of whether Fenton Mill is developed or not. These calculations also show that the proposed 500 student elementary school would be sufficient to relieve current overcapacity at Magruder Elementary School, absorb students to be generated from pipeline development in the area, and absorb students to be generated by Fenton Mill, while leaving a remaining capacity of 90 students at the new elementary school.
A similar analysis was conducted for Queens Lake Middle School. Pipeline development is projected to add 164 students to Queens Lake Middle School. Current remaining capacity at this school is 163 students. Thus, the development of Fenton Mill would ostensibly result in Queens Lake Middle School exceeding its capacity by 85 students after students from pipeline development are added. However, development of the Site under its current zoning would also cause Queens Lake Middle School to exceed its instructional capacity (by 37 students). Furthermore, the CIP includes plans to expand Queens Lake Middle School by adding eight new classrooms in FYs 2022 and 2023. At a maximum class size of 30, this would add capacity to absorb 240 new students—easily accommodating students to be generated by Fenton Mill. Again, it cannot be said that Fenton Mill will cause the County to expend capital funds to mitigate middle school overcapacity caused by the proposed development since the County is planning a capital expenditure whether or not Fenton Mill is approved for rezoning. Bruton High remains well within capacity after pipeline developments and the proposed development are added.

Tables A-8A and A-8B below summarize this discussion. They show the instructional capacity, current enrollment, projected enrollment from pipeline development, projected enrollment with the development of Fenton Mill and remaining capacity at each school after both pipeline development and development on the Site. Table A-8A assumes development of Fenton Mill and Table A-8B assumes construction of an alternative by-right development.

<table>
<thead>
<tr>
<th>Table A-8A</th>
<th>School Capacity, Enrollment and Remaining Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fenton Mill</td>
</tr>
<tr>
<td></td>
<td>Current Enrollment</td>
</tr>
<tr>
<td></td>
<td>Capacity</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Waller Mill Elementary School</td>
<td>495</td>
</tr>
<tr>
<td>Queens Lake Middle School</td>
<td>681</td>
</tr>
<tr>
<td>Bruton High School</td>
<td>1,039</td>
</tr>
<tr>
<td>Magruder Elementary School</td>
<td>585</td>
</tr>
<tr>
<td>New Elementary School</td>
<td>500</td>
</tr>
</tbody>
</table>
Another education capital cost that Fenton Mill will occasion related to the need to transport students generated by the proposed development. A national standard of 1.56 school buses required for every 100 pupils was used to determine that the number of elementary school students generated by the Fenton Mill Development would fill the standard bus capacity of 64 students. However, according to the York County Public Schools, approximately 11% of elementary school students must ride a special needs school bus. This would reduce the number of students generated by Fenton Mill riding a standard school bus to 143 students. It can also be expected that Fenton Mill would generate 18 special needs students.

Two school buses would be required to transport students from Fenton Mill to Waller Mill Elementary School. This would transport 128 Fenton Mill elementary school students with the remaining 15 assumed to be accommodated by existing bus routes in the Lightfoot area or routes added to accommodate pipeline development. Buses are assumed to be purchased when student generation would fill 40% of bus capacity.

It is assumed that the existing special needs school bus fleet is running at capacity. Special needs school buses purchased by the Yorktown Public School System have rated capacities of 21 and 45 students. However, pipeline development is projected to generate 24 special needs students, triggering the purchase of a larger, 45-student capacity special needs school bus. Adding the expected 18 special needs students from Fenton Mill would fill this bus to 93% of its capacity. Nevertheless, since Fenton Mill students would consume capacity on a bus already needing to be purchased by the County, regardless of whether Fenton Mill is approved for development, no capital fiscal impact is assumed for the purchase of a special needs bus to accommodate Fenton Mill students.

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Assuming new school buses are purchased when ridership from Fenton Mill is projected to reach 40% of bus capacity, new school buses would be purchased in FYs 2024 and FY 2029. Based upon data recently supplied by another Hampton Roads locality, the cost of a school bus was estimated at about $126,800 in SY 2020-21. Using the CPI for the most recent one-year period (2018-2019) to deflate this estimate to 2020 dollars, the FY 2020 constant dollar cost of this purchase was estimated to be $123,950, rounding to the nearest $25.