

**The Impact of Monitor Way Development on the  
Merrimack Valley School District**

A Report by

Dr. Richard W. England

Professor Emeritus of Economics & Natural Resources

Paul College of Business & Economics

University of New Hampshire

May 16, 2024

Monitor Way is a multi-use, multi-year development project proposed for Penacook, New Hampshire, a village within the City of Concord. The project envisions construction of 946 housing units, some for sale and the remainder for rent. These units would range in size from studio apartments to three-bedroom townhouses, condominiums, and apartments. The rental units would include both market rate and workforce housing options.

In addition to construction of new housing units, Monitor Way would include 110 thousand square feet of retail, commercial and office space in a new village center as well as a 90 thousand square-foot self-storage facility. The development of Monitor Way would occur in several stages over a period from 2026 through 2032.

This new neighborhood in Penacook would conserve in perpetuity half of the woodland presently on the parcel. Two miles of walking trails and bike paths would become available for recreational use. The development would provide public access to the Merrimack River, an amenity not currently available on the property. Monitor Way would create a new high-density neighborhood in the “city of villages” while preserving significant environmental amenities.

This project would provide homes for a wide variety of households ranging from singles to couples to families with children. Some of those children would be of school-age, and most of them would enroll in the Merrimack Valley School District (MVSD). This report analyzes how easily the MVSD could accommodate an estimated 150 new students and what fiscal impact their enrollment might have on the school district.

# How *Not* to Measure the Fiscal Impact of Newly Enrolled Students

When a new subdivision or apartment complex is proposed for a town or city, some residents ask how many school-age students would enter the community and what impacts their enrollment in the local public schools would have on the school budget and property tax rate. These are legitimate questions, but the answers given are often wildly inaccurate and can distort the local planning process.

Consider the following example. Suppose that a housing unit was constructed in Penacook, New Hampshire, in early 2022 and that a couple with one school-age child moved into the unit. During the 2022-23 school year, the Merrimack Valley School District operating budget totaled \$44.57 million and enrollment in the district totaled 2193 students.<sup>1</sup> The *average* cost of educating a child in the MVSD equaled \$20,331 during that school year.

The owner of the new housing unit would need to pay a school tax rate (local and state) on the assessed value of the unit. In 2022-23, the school tax rate in Penacook was \$17.87 per thousand dollars of assessed value. Thus, the annual school tax bill on the Penacook housing unit would depend upon its assessed value:

2022-23 assessed value of housing unit	2022-23 Penacook school tax bill
\$400,000	\$7,148
\$600,000	\$10,722
\$800,000	\$14,296
\$1,000,000	\$17,870

<sup>1</sup> ADM-R from NH Department of Education. Budget from MVSD 2022Annual Report.

From this hypothetical example, it is tempting to conclude that Penacook would suffer a fiscal loss on enrollment of the new student since the revenue from taxing the child's dwelling unit would be less than the average expense of educating existing MVSD students. It appears that the school district would break even on enrolling the new student only if his or her home had an assessed value of \$1.138 million.<sup>2</sup>

It needs to be stressed that this train of logic is faulty for two reasons:

- On the revenue side of the school district budget, local taxation of the student's dwelling unit is not the only source of extra revenue to pay for his or her education. Additional sources of revenue from the federal and state governments need to be considered. Some of those sources expand with the number of students enrolled in the district.
- On the expense side of the school district budget, the relevant number is not the *average* cost of educating existing students but rather the *incremental*, or marginal, cost of schooling the newly enrolled student. It is almost certain that the incremental cost will be less than the average cost. It could even be negligible.

Nearly a quarter of the revenue funding the MVSD budget during the 2023-24 school year comes from New Hampshire adequate education grants, not from local property taxes. Each additional student enrolled in a Merrimack Valley school increases district revenues by several thousand dollars per year:

---

<sup>2</sup> Note that this (faulty) logic can fuel opposition by current residents to construction of affordable housing in their community.

School Year	Base Adequate Education Grant per Student (ADM-R)
2022-23	\$3,787
2023-24	\$4,100
2024-25	\$4,182
Source: NH Department of Education, <i>State Adequate Education Grants</i> .	

As detailed later in the report, I estimate that roughly 150 additional students would eventually enroll in MVSD because of new housing at Monitor Way. The base adequate education grant will be higher than \$4,182 (the 2024-25 amount) at that time. It is therefore reasonable to expect that MVSD will receive more than \$627,300 annually from the State of New Hampshire to help pay for the schooling of these students.

Although proper accounting for revenue effects is important, proper analysis of cost impacts is even more important if one is trying to predict the budgetary impact of enrolling additional students in a school district. Consider the following simplified 2023-24 budget for the MVSD:

MVSD Operating Budget, 2023-24 (thousands \$)	
Regular education	14,869
Special education	9,398
Student services	6,104
Library and technology services	1,568
Athletic programs	482
Administrative services	2,440
Buildings & grounds	4,204
Transportation services	2,649
Misc.	3,888
Total budget	45,602
Source: MVSD, 2024 Annual Report.	

The first three items result from providing instructional and other services to students and comprise two-thirds of the total operating budget. For all three budget items, the costs reflect primarily salaries and benefits paid to teachers and other service providers. It is certainly plausible that these costs would increase if student enrollment grew and more professional staff needed to be hired. (But as we will see shortly, these increases are only possible and not inevitable.)

The remaining items in the budget are less closely tied to student enrollment. If additional students enroll in a school, the number of librarians and technology specialists does not necessarily increase. If enrollment in the district rises, the size

of the SAU administrative staff and number of school principals does not increase. Even if a greater number of students utilize school facilities, the expense of operating, maintaining, and improving buildings and grounds does not increase with enrollment.<sup>3</sup> Finally, the costs of operating a fleet of buses to transport students is unlikely to rise unless enrollment grows substantially because buses frequently have empty seats and because the existing fleet could make more runs per school day to transport a somewhat larger student body.

In summary, as new students enroll in a school district, total budgetary costs will probably increase but the *additional* costs of serving the new arrivals will be less than the *average* cost of servicing the existing student body. This means that the logic of the hypothetical example on pp. 2-3 is unnecessarily alarmist and that the arrival of families with school-age children does not inevitably increase a town's school tax rate. In fact, under the right conditions, there is no reason at all for an increase in the school tax rate.

## **Projecting the Impact of Monitor Way on MVSD Student Enrollment**

The first step in projecting future student enrollment that would be associated with the Monitor Way project is to look at planned construction of housing units that could accommodate school-age children. I will assume that studio and one-bedroom apartments are suitable for singles and couples without school-age children but not for families with children who might enroll in MVSD. That leaves

---

<sup>3</sup> If existing school buildings are already overcrowded, then the arrival of additional students could lead to expensive construction and bonding expenses. However, if existing facilities are uncrowded and even underutilized, then new construction is unnecessary. More on this point later.

townhouses, condominiums, and apartments with two or three bedrooms as possible residences for students.

According to the TIF bond worksheet provided by the client, here is the mix of two- and three-bedroom units<sup>4</sup> that would be built over a six-year period:

	2026	2027	2028	2029	2030	2031	Total units
TH 2BR	28	28	32			12	100
TH 3BR	20	20	24			10	74
Con 2BR			14	36			50
Con 3BR			6	15			21
VC 2BR			54	44	44		142
MR 2BR			19	39	28		86
WF 2BR					10	26	36
WF 3BR					6	18	24

Predicting how many school-age children would occupy these new housing units in Penacook is far from simple. However, it is important to remember that the United States seems to be undergoing a demographic transition. As Kenneth Johnson, UNH demographer, has noted, a growing percentage of women of prime child-bearing age (20-39 years old) remain childless. Although there were nine percent more women in this age group in 2022 compared to 2006, the portion who had never borne a child rose by 37 percent during that period.<sup>5</sup> This decline in fertility implies fewer children of school age in years to come.

<sup>4</sup> TH = Townhouse, Con = Condominium, VC = Village Center Rental, MR = Market Rental, WF = Workforce.

<sup>5</sup> Carsey School of Public Policy, UNH, Research Brief #176.



The decline in fertility and aging of the U.S. population have already had a marked impact on enrollment in New Hampshire’s public schools:

New Hampshire Public School Enrollment (ADM-R)			
School Year	Elementary School	Middle School	High School
2022-23	68,576	30,539	53,375
2011-12	79,542	34,928	62,079
Source: NH Bureau of Educational Statistics			

Other factors that might affect the average number of public-school students living in Monitor Way housing units include parental choices to home school or send their child(ren) to private school, use of second bedrooms as home offices, and reluctance of parents to live above retail and office space.

Taking these factors into account, I will make the following assumptions about the average number of public-school children living in each type of housing unit:

Assumed Average Number of Public-School Students per Housing Unit	
Townhouse 2BR	0.2
Village Center 2 BR	0.1
Workforce 2BR	0.3
Condominium 2 BR	0.2
Market Rental 2 BR	0.2
Townhouse 3 BR	0.5
Condominium 3 BR	0.5
Workforce 3 BR	0.7

Combining the information in the tables on pages 7 and 8, one can project the number of new students enrolling in the MVSD each year from 2026 through 2031. One could expect that roughly 150 students in total would become MVSD pupils during those years.

Projected Number of Students Living in Monitor Way Housing and Entering MVSD	
2026	15.6
2027	15.6
2028	33.4
2029	26.9
2030	17.4
2031	33

Although these numbers are speculative, it is reasonable to expect that completion of the Monitor Way project would result in an increase in the student population of the Merrimack Valley schools. How might the arrival of these new students affect the operations and finances of the school district?

**Projecting the Impact of Increased Enrollment on MVSD Operations and Finances**

As previously noted, New Hampshire has been undergoing a demographic transition for a number of years. Because of a falling birth rate in earlier years, the

number of school-age children has been declining in more recent years. As the following table demonstrates, this has been true for New Hampshire as a whole but also for the City of Concord and the member towns of the Merrimack Valley School District:

Number of Students Living in Town or City and Enrolled in its Public School District (Oct. 1)			
	2009-2010	2023-2024	Pct. Change
Boscawen	525	469	-10.7
Concord	4,761	3,643	-23.5
Loudon	791	611	-22.8
Penacook	785	677	-13.8
Salisbury	230	156	-32.2
Webster	265	199	-24.9
New Hampshire	180,324	144,375	-19.9
Source: NH Bureau of Educational Statistics			

This decline in student enrollment has been felt across the grade levels, from kindergarten through high school:

School District Enrollment by Grade Level (October 1)						
	2011-2012			2023-2024		
	Kindergarten + Elementary	Middle	High	Kindergarten + Elementary	Middle	High
Concord	1,978	1,014	1,785	1,595	774	1,448
MVSD	1,137	617	890	949	479	756

Twelve years ago, the Concord Public Schools had 960 more students than during the current school year. A dozen years ago, the Merrimack Valley School District had 460 more students than today. These numbers are highly significant because they suggest that newly enrolled students from Monitor Way could easily be accommodated in the existing school buildings of the MVSD. If enrollment at the Merrimack Valley High School simply returned to its 2011-2012 level, it could accommodate 134 additional pupils. If enrollment at the district's middle school returned to its 2011-2012 level, it could host 138 additional students. The five elementary schools within the MVSD could seat an additional 188 students if they returned to the combined enrollment level of 2011-2012. The implication is that nearly 500 additional students could be schooled in the seven existing schools operated by the MVSD. There would be no need for expensive construction and bond financing to service those additional students.<sup>6</sup>

---

<sup>6</sup> One caveat is that there appears to have been a modest enrollment decline at Penacook Elementary School during this time period. Assuming that new kindergarten and elementary students from Monitor Way enroll in Penacook and not in other MV elementary schools, Penacook Elementary School could become fully utilized.

As previously noted, salaries and benefits paid to teachers and other school staff comprise the lion’s share of the MVSD operating budget. We need to ask, then, what impact the enrollment of students living in Monitor Way housing might have on MVSD staffing and employee compensation. Given the decline in the district’s student enrollment during the past dozen years or so, one might expect a reduction in staffing and payroll expense to have occurred. That is not the case, however, because of two features of public-school administration. One is that tenure provisions of collective bargaining agreements and professional contracts make it difficult for school administrators to reduce staffing even though student enrollment has fallen. A second feature is that year-to-year fluctuations in enrollment are normal, especially in a smaller school district. School administrators are therefore reluctant to lose staff who would be needed if an upturn in enrollment followed a brief downturn.

Because staffing levels in public schools are inflexible, a decline in total student enrollment inevitably results in a lower ratio of students to teachers and other staff. This can be seen in the following table of class size data for two Merrimack Valley schools:

Average Class Size (October 1)				
	Penacook Elementary School			MV Middle School
	Grades 1&2	Grades 3&4	Grade 5	Grades 6-8
2011-2012	21.8	20.5	21.0	23.7
2023-2024	17.0	17.0	16.3	20.0
Source: NH Bureau of Educational Statistics				

This table implies that additional students could be enrolled in the MVSD without hiring additional teachers by simply increasing class sizes sufficiently. This means total instructional costs in the district budget could remain the same even if student enrollment increased.<sup>7</sup> If, however, class sizes did not increase sufficiently to absorb all additional students, then some hiring of teachers would need to take place and their salaries and benefits would impact the district’s budget.

It is important to point out, however, that the *additional* salary and benefit expense that results from hiring a new teacher is less than the *average* salary and benefit cost for the existing teaching staff. At any particular level of college degree, salary levels for teachers typically increase with years of experience (so-called “steps” in the salary schedule). Hence, new hires (who almost certainly have fewer years of experience) will be paid less than the already hired “average teacher” with more years of experience.

Teacher Salaries, 2023-2024 (\$ per year)			
	Average Salary for All Teachers	Minimum Salary for B.A.	Minimum Salary for M.A.
Concord School District	84,916	49,550	57,478
Merrimack Valley School District	60,054	43,200	46,400
Source: NH Bureau of Educational Statistics			

---

<sup>7</sup> Of course, increases in class size to accommodate more students are not automatic. They would have to be the outcome of deliberations and decision-making involving school administrators, the school board, teachers and other professional staff, parents, and voters.

These points can be summarized by considering the following formula:

$$\text{Total instructional cost} = \frac{(\text{average salary \& benefits of instructional staff}) \times (\text{student enrollment})}{(\text{students per instructional staff member})}$$

If student enrollment in a district increases by, let us say, five percent, then total instructional cost will rise by five percent only if average salary and benefits of the instructional staff and the number of students per instructional staff member both remain the same. However, if the number of students per instructional staff member increases and the average salary and benefits paid to instructional staff decreases as student enrollment grows, the fiscal impact of enrolling more students will be greatly reduced and even eliminated.<sup>8</sup>

If, in addition to increasing class sizes slightly, the MVSD hired three additional junior teachers to help instruct 150 additional students, the additional instructional costs per year would be approximately \$200 thousand (\$43,200 of salary + 55% for benefits for each teacher). Because each new student would bring a base adequate education grant greater than \$4,100 per year to the district, MVSD could pay the additional instructional costs and add roughly \$425 thousand of net revenue to its budget.

---

<sup>8</sup> The impact of additional students on instructional costs would be higher if some of those students have special needs. Because it is very difficult to forecast how many children with special needs might enroll, I have not included that fiscal impact in my analysis. It should be noted, however, that the state's Adequate Education Cost program provides a supplementary grant for each pupil with special needs. The base plus supplementary grant in 2023-24 is \$6,200 for each special needs pupil.

## Property Tax Revenue Impacts

Turning next to the property tax revenue impacts of Monitor Way development, the first step is to look at the tax rates applied to the assessed valuations of taxable properties. The following table lists the property tax rates levied on properties in the City of Concord in 2023. Properties outside Penacook pay local school taxes to support the Concord Public Schools. Properties within Penacook pay local school taxes to support the MVSD.<sup>9</sup> All properties inside the City of Concord (including Penacook) pay the same municipal and county tax rates.

2023 Property Tax Rates					
(\$ per \$1000 of Assessed Valuation)					
	Municipal	County	State Education	Local Education	Total Rate
Concord	9.51	2.17	1.57	13.61	26.86
Penacook	9.51	2.17	1.55	15.92	29.15
Source: NH Department of Revenue Administration					

Because of the phased development planned for Monitor Way, additional housing units would become subject to property taxation over several years. Here is the tentative construction plan for various types of housing units:

---

<sup>9</sup> Property tax rates vary from year to year for several reasons. For example, the property tax rate in Penacook varied between \$27.97 and \$29.93 between 2020 and 2023. I will not attempt to forecast future tax rates in either Penacook or Concord but will use 2023 tax rates to make rough revenue estimates for various years.



Completed Housing Units, by Type							
	2026	2027	2028	2029	2030	2031	2032
Village Center Rentals			125	227	327	327	327
Workforce Rentals					40	151	151
Market Rate Rentals			50	150	223	223	223
Condos			20	71	71	71	71
Townhouses	48	96	152	152	152	152	174
Total Units	48	96	347	600	813	924	946
Source: TIF worksheet provided by client.							

The property tax payments by the owners of these housing units would depend upon the assessed values of the structures and of the land occupied by the units. Lacking information on parcel sizes, I will assume that assessed land values are zero. Hence, my estimates of the assessed values of the housing units will be *substantially lower* than their true values. The following estimates of construction cost provided by the client will be used as proxies for assessed building value of each housing unit:

Estimated Construction Cost per Unit (\$)				
Townhouse	Market Rate Rental	Workforce	Condo	Village Center Rental
310,000	301,000	279,000	390,000	301,000

Assuming that housing units enter the property tax rolls during the year of their planned construction and that no property revaluations occur, we can combine the two previous tables to project the cumulative impact of Monitor Way housing construction on property tax assessments in Penacook:

Property Tax Assessments of Monitor Way Housing (millions \$)							
	2026	2027	2028	2029	2030	2031	2032
Village Center Rentals			37.6	68.3	98.4	98.4	98.4
Workforce Rentals					11.2	42.1	42.1
Market Rate Rentals			15.1	45.2	67.1	67.1	67.1
Condos			7.8	27.7	27.7	27.7	27.7
Townhouses	14.9	29.8	47.1	47.1	47.1	47.1	53.9
All Units	14.9	29.8	107.6	188.3	251.5	282.4	289.2

This projection of property tax assessments on Monitor Way housing is admittedly imprecise, but what it indicates is that additions to the property tax base will be modest in the first two years of the project but rise to several hundred million dollars by the end of this decade.

From a fiscal impact perspective, it is significant that the Monitor Way proposal envisions a mixed-use project with a large retail, commercial, and office component and also a self-storage facility. These two components are important because they would generate property tax revenues for both the City of Concord and the MVSD but would not require educating more students in either the Concord or Merrimack Valley public schools.

The construction of 110 thousand square feet of retail, office, and restaurant space in a new village center would tentatively take place during 2028 and 2029, with 25 percent completion during the earlier year. Construction of a climate-controlled, self-storage facility is planned for 2029. That facility would provide 90 thousand square feet of space. As in the case of assessing housing units for tax purposes, I will assume that

assessed land values for these two components are zero. Therefore, my projections of property tax assessments and revenues are quite conservative.

I will use two methods to estimate the assessed building values of the non-residential component of the village center. One approach is to apply the expected construction cost of \$250 per square foot to the 110 thousand feet of planned construction. That method yields an assessed building value of \$27.5 million. To check this estimate, I have used the 2024 assessment of an actual commercial property near the proposed Monitor Way project. I have chosen to use the Market Basket property on Merchants Way in Concord as a nearby comparable. Its assessed building value per square foot is \$162.55. Applying that amount to 110 thousand square feet in the proposed village center yields a total assessment estimate of \$20.806 million. Because the planned village construction would presumably be of higher quality, this second estimate of assessed building is probably far too low. I will therefore use the first assessment estimate, namely \$27.5 million, to project future property tax revenues.

The assessed building value of the planned self-storage facility at Monitor Way can be estimated by looking at an actual nearby facility. Bluebird Storage offers climate-controlled self-storage in Hooksett. Its 2024 building value assessment is \$46.15 per square. Applying that number to 90,000 square feet of storage space at Monitor Way yields an estimated building value assessment of \$4.154 million. This means that non-residential construction at Monitor Way would add nearly \$32 million to the Concord property tax base in 2029 and the following years.

Adding the estimated building assessments of non-residential structures to the table on p. 16 yields the following:

Property Tax Assessment of Monitor Way Buildings (millions \$)							
	2026	2027	2028	2029	2030	2031	2032
Residential	14.9	29.8	107.6	188.3	251.5	282.4	289.2
Non-Residential			6.9	31.7	31.7	31.7	31.7
Total	14.9	29.8	114.5	220.0	283.2	314.1	320.9

This growing contribution to the property tax base would add growing amounts of annual revenue to the budgets of the City of Concord and Merrimack County, to funding of the statewide Adequate Education Grant program, and to the budget of the Merrimack Valley School District. In the first two years of construction, the property tax revenue yield from Monitor Way would be quite modest. However, by 2028, Monitor Way would contribute more than \$1 million to the Concord municipal budget. That contribution would exceed \$2 million in 2029 and \$3 million by 2031. Similarly, the contribution of Monitor Way to the MVSD budget would approach \$2 million in 2028, exceed \$4.5 million in 2030 and exceed \$5 million by 2032.<sup>10</sup>

---

<sup>10</sup> It bears repeating that these revenue estimates are very conservative since assessed land values have been excluded from the analysis. Property tax rates applicable to Penacook in 2023 have been used to estimate annual tax revenues. Those are the latest rates presently posted by NH DRA on its website.

Property Tax Revenues Associated with Monitor Way Development (thousands \$)							
	2026	2027	2028	2029	2030	2031	2032
City of Concord	142	284	1,089	2,092	2,693	2,087	3,052
Merrimack County	32	64	248	477	615	682	696
Statewide Education Tax	23	46	177	341	439	487	497
Merrimack Valley School District	237	474	1,823	3,502	4,509	5,000	5,109

**Key Points of Study**

Some of the main findings of this study are as follows:

- The construction of more than nine hundred housing units would obviously increase the total population and school-age population of Penacook.
- Because of a declining birth rate during recent times and a growing percentage of women who remain childless, the growth in school-age population associated with a 946-unit increase in the housing stock would be less than would have been the case only a few decades ago.
- Although the exact number of school-age children taking up residence at Monitor Way is impossible to predict, it is plausible that 150 newly arrived children would enroll in the Merrimack Valley School District over a period of five or six years.
- The impact of these newly enrolled students on Merrimack Valley School District budget costs would be modest for several reasons. First, the district’s pupil

enrollment is more than four hundred students lower than twelve years ago. The arrival of new students from Monitor Way would not overcrowd the existing buildings, and expensive construction would be unnecessary. Second, average class sizes have fallen in the Merrimack Valley schools during the past twelve years. Additional students from Monitor Way could receive instruction by increasing class sizes a bit and by hiring a few junior instructional staff. A large expansion of the instructional staff would be unnecessary.

- The completion of all proposed residential, retail, office and self-storage buildings at Monitor Way would add more than \$300 million to the property tax base of the City of Concord by 2032. That figure is extremely conservative because it does not account for the increased assessed value of the land on which Monitor Way would be situated. Much of that land is presently enrolled in the state's Current Use Assessment program. Once developed, those acres would no longer qualify for current use assessment and would be assessed at a much higher rate
- Completion of the Monitor Way project would increase the property tax revenues of several public entities. By 2032, the City of Concord could expect to receive a boost to its tax revenue greater than \$3 million annually. By that same year, the Merrimack Valley School District would receive at least \$5 million annually in extra local school tax revenues.