



NORTH READING PUBLIC SCHOOLS CAPITAL IMPROVEMENTS PLAN



5 YEAR REQUEST SUMMARY

CATEGORY	FY'21 REQUEST	FY'22 REQUEST	FY'23 REQUEST	FY'23 REQUEST	FY'24 REQUEST	TOTAL
VEHICLES	55,000	55,000	45,000	45,000	65,000	265,000
TECHNOLOGY	45,000	60,000	45,000	60,000	45,000	255,000
FACILITIES	235,000	605,000	830,000	465,000	340,000	2,475,000
TOTAL	335,000	720,000	920,000	570,000	450,000	2,995,000

5 YEAR APPROVAL HISTORY

CATEGORY	FY'16 APPROVED	FY'17 APPROVED	FY'18 APPROVED	FY'19 APPROVED	FY'20 APPROVED	TOTAL
VEHICLES	35,000	45,000	0	35,000	45,000	160,000
TECHNOLOGY	60,000	60,000	167,357	105,000	60,000	452,357
FACILITIES	50,000	50,000	25,000	40,000	30,000	195,000
TOTAL	145,000	155,000	192,357	180,000	135,000	807,357

VEHICLES REQUESTS

Notes	SPECIAL EDUCATION	YEAR IN SERVICE	USEFUL LIFE (YRS)	MILEAGE AS OF AUG. 2019	CONDITION	PURCHASE PRICE	FY'21 REQUEST	FY'22 REQUEST	FY'23 REQUEST	FY'24 REQUEST	FY'25 REQUEST	TOTAL
1	Ford Transit 350	2015	12	57,835	Excellent	39,993						
	Ford E-250 (Wheelchair Van)	2016	12	36,507	Excellent	39,521						
	Ford E-250	2019	12	0	NEW	40,576						
	Ford E-250 (Spare Van)	2011	12	100,420	Good	26,514			45,000			45,000
	SUBTOTAL- SPECIAL EDUCATION						0	0	45,000	0	0	45,000
	ATHLETICS	YEAR IN SERVICE	USEFUL LIFE (YRS)	MILEAGE AS OF AUG. 2019	CONDITION	PURCHASE PRICE	FY'21 REQUEST	FY'22 REQUEST	FY'23 REQUEST	FY'24 REQUEST	FY'25 REQUEST	TOTAL
2	Multi-Function Activity Vehicle	2019	12	4,417	Excellent	\$53,526						0
	Multi-Function Activity Vehicle (#2)	NEW			Request			55,000				55,000
	SUBTOTAL- ATHLETICS						0	55,000	0	0	0	55,000
	FOOD SERVICES	YEAR IN SERVICE	USEFUL LIFE (YRS)	MILEAGE AS OF AUG. 2019	CONDITION	PURCHASE PRICE	FY'21 REQUEST	FY'22 REQUEST	FY'23 REQUEST	FY'24 REQUEST	FY'25 REQUEST	TOTAL
3	Ford Transit Connect	2019	15	0	New	\$20,694						0
	SUBTOTAL- FOOD SERVICES						0	0	0	0	0	0
	BUILDINGS & GROUNDS	YEAR IN SERVICE	USEFUL LIFE (YRS)	MILEAGE AS OF AUG. 2019	CONDITION	PURCHASE PRICE	FY'21 REQUEST	FY'22 REQUEST	FY'23 REQUEST	FY'24 REQUEST	FY'25 REQUEST	TOTAL
4	Trailer	1985	25+	N/A	Fair	\$0						
	Kubota Tractor/Loader	2002	20+	1,584 Hours	Good	\$34,700				45,000		45,000
	Trailer Leaf Vacuum	1998	25	N/A	Poor	\$4,500						
	Ford F-450 (Utility Rack Truck)	2014	10	61,322	Good	\$58,088					65,000	65,000
	F-150 Pick-Up (Transferred to Town)	2014	10	N/A	Transferred	\$24,095						
	Flatbed Trailer	2008	25	N/A	Good	\$7,000						
	Ford F-350	2009	10	50,989	Good	\$35,162	55,000					55,000
	SUBTOTAL- B & G						55,000	0	0	45,000	65,000	165,000
TOTAL VEHICLES							55,000	55,000	45,000	45,000	65,000	265,000

VEHICLES REQUESTS

Notes:

1	<p><u>Special Education</u></p> <p>The district currently utilizes three special education vans daily to transport students between in town special education programs. The district replaced the 2007 special education van in the summer of 2019, the oldest van in the fleet. This purchase allowed the 2011 van to become the spare van. This van is also used to transport athletic teams and activities when appropriate, which has helped reduce athletic transportation costs. With the replacement of the 2007 van in the summer of 2019 the district is in a very good position with all the vans in its current fleet in very good condition. The district does not anticipate the need to replace a vehicle in this department again until FY'23 at the earliest and will continue to access the conditions of the vehicles each year.</p>
2	<p><u>Athletics & Extra-Curricular Activities</u></p> <p>The district currently contracts with an outside vendor to meet its athletic and extra-curricular activity transportation needs. The contractual rates have steadily increased and the program is currently spending \$75,000 on an annual basis. The District received a Multi-Function vehicle in December of 2018, and was able to immediately put this vehicle to use, which led to significant savings the second half of the 2018-19 school year. The district was able to transfer about 25 runs from a contracted bus to this vehicle thus saving about \$300 per run or approximately \$7,500 the second half of the year. Research indicates that having access to this vehicle for a full school-year will only increase the district ability to reduce its transportation costs, increasing that savings to \$12,000 to \$15,000 annually. The district is interested in expanding its fleet for this type of vehicle in FY'22 to allow for the optimum level of savings is able to be realized.</p>
3	<p><u>Food Services</u></p> <p>The district replaced the 2005 food service van in the summer of 2019, with funds available in the food service revolving account. The food services department uses this van to satellite food between the high school and the elementary schools that don't have a full size kitchen. This van is a smaller van and more suited for its use by this department and will serve the food service program well for fifteen plus years.</p>
4	<p><u>Building & Grounds</u></p> <p>The next vehicle in line for replacement is the 2009 F-350, and is used by the Building and Grounds Department. This is a high usage vehicle, which is used for the upkeep and maintenance of all school campuses and grounds year round including snow plowing and sanding in the winter months. The district is looking to replace this vehicle next year in FY'21 when it will be over twelve years old. The new truck would include all necessary attachments including a plow and sander. The 2002 Kubota Tractor is next in line for replacement. This is a high use vehicle used for a variety of purposes including transporting loam, clay, and mulch as well as fertilizing, and snow removal. The Parks and Recreation Department also uses this vehicle. All Buildings and Grounds vehicles and equipment remain in good condition and are maintained by the DPW on a regular basis.</p>

TECHNOLOGY REQUESTS

Notes	INSTRUCTIONAL TECHNOLOGY	SCHOOL / DEPT	FY'21 REQUEST	FY'22 REQUEST	FY'23 REQUEST	FY'24 REQUEST	FY'25 REQUEST	TOTAL
1	Computer/Device Replacements	District wide		60,000		60,000		120,000
2	Technology Instructional Equipment	Elementary	45,000		45,000		45,000	135,000
	TOTAL-INSTRUCT'L TECHNOLOGY		45,000	60,000	45,000	60,000	45,000	255,000
	TOTAL TECHNOLOGY		45,000	60,000	45,000	60,000	45,000	315,000

Notes:

1	<p>The district has supported the use of digital tools to enhance personalized instruction and meet student 21st century needs. The presence of digital devices to support teaching and learning has greatly enhanced student learning and supported educators by enhancing their ability to support all student needs with rich digital content and resources. There is a need to continue to support personalized instructional practices for students and teachers and to strategically update and replace student and staff devices to support instruction. The district embraces the value these devices provide to support digital assessment for state standardized testing and provide students with a rich, connected and relevant 21st century education. The focus areas of device replacement include: Computer Devices to support personalized digital instructional for all students and strategic device replacement for aging existing classroom and staff devices. The District has received state grant funding in both FY 19 and FY 20, these funds were used to accelerate the 1:1 Device Initiative in grades 7 through grade 12. The 2019-20 school year will represent the first full school year where students in grade 7 through 12 are operating in a 1:1 environment (3 years ahead of schedule). Going forward the district will have a need to use large capital funding to replace aging professional staff (laptops) devices as well as student devices i.e. personalized Chromebooks, classroom Chromebook and iPad carts.</p>
2	<p>There is a need to replace many of the current classroom interactive and projection setups within the elementary classrooms across all 3 elementary schools. There is a need to begin to fully replace many of the setups in these classrooms (desktops, SMARTboards, projectors) with up to date technology which enhances the interactive experience for students and educators. The district will begin to identify both short term and long term solutions to support tools to enhance instruction with digital projection and interactive tools. This process will include: 1. Identify pilot classrooms to introduce interactive technology which supports enhanced digital learning experiences in a cost effective way. 2. Continue to identify which classrooms require immediate replacement and solutions to classroom instructional devices and projection replacement. The request in FY' 21 is for another allotment of \$45,000 previously received in FY'19 to continue this work to replace aging classroom instructional equipment. The financial need is much greater than the \$45,000 but the district plans to implement this over a five year period using multiple funding sources over time(operating funds, large capital funds and, when available, grant funding).</p>

TECHNOLOGY REQUESTS

CAPITAL REQUESTS HISTORY

INSTRUCTIONAL TECHNOLOGY	SCHOOL / DEPT	FY'16 APPROVED	FY'17 APPROVED	FY'18 APPROVED	FY'19 APPROVED	FY'20 APPROVED	TOTAL
Computer Replacement / Devices	All Schools	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$300,000
Technology Instructional Equipment	Elementary				\$45,000		\$45,000
WIFI Infrastructure Upgrade	Elementary			\$107,357			\$107,357
TOTAL INSTRUCTIONAL TECHNOLOGY		\$60,000	\$60,000	\$167,357	\$105,000	\$60,000	\$452,357
TOTAL TECHNOLOGY		\$60,000	\$60,000	\$167,357	\$105,000	\$60,000	\$452,357

FACILITY REQUESTS

Notes	FACILITIES	SCHOOL / DEPT	DESCRIPTION	FY'21 REQUEST	FY'22 REQUEST	FY'23 REQUEST	FY'24 REQUEST	FY'25 REQUEST	TOTAL
1	Boilers	Hood	Replacement of Hood School boilers to High Efficiency Condensing Boilers installed in 1999.		545,000				545,000
2	HVAC Rooftop Units	Batchelder	Replacement of Batchelder School Roof Top units installed in 2006.			80,000		80,000	160,000
3	Modular Demolition/Removal	Hood	Removal of 4 modular classroom units due to their age and condition and restoring the area to its original condition.		60,000				60,000
4	Modular Removal & Replacement	Little	Removal and replacement of modular classroom unit due to its age and condition.				405,000		405,000
5	*School Security Upgrades	District	Upgrades to exterior cameras / new alarm panels / interior door locks / security screens						0
6	Little School Paving Project	Little	Paving of identified sections of the Little School parking lot. This project would both expand and repair sections of the existing parking lot.	100,000					100,000
7	*Energy Efficiency Measures (LED Lighting/Solar Projects)	District	Energy efficiency measures including LED lighting upgrades and the potential for projects involving solar energy are available and have the potential to significantly reduce energy consumption thus leading to operational savings.						0

FACILITY REQUESTS

8	Hood Roof Restoration Project	Hood	The Hood School roof was installed in 1999 and its approaching the end of its useful life of 20 years. The roof is a good candidate for a roof restoration project to extend the life for an additional 20 years.			750,000			750,000
9	Asbestos Mitigation	Little	Continuation of Asbestos Mitigation to remove asbestos floor tiles.				60,000	60,000	120,000
10	HVAC Upgrades	Little	The HVAC system at the Little School is over 25 years old; upgrades and rebalancing of identified areas are needed.	65,000					65,000
11	Energy Management System Upgrades	Hood \ Little	Upgrades to energy management system in both schools to allow for remote controls of heating and improve energy conservation efforts.					150,000	150,000
12	Softball Field Upgrades	MS \ HS	Upgrades to the Middle School/High School Softball complex including a new Scoreboard and dugout enclosures.	35,000					35,000
13	Handicapped Accessible Lift	Hood	The Hood School lift has reached the end of its useful life and is in need of replacement.	35,000					35,000
14	WWTP Membranes & Turbines	MS \ HS	The Wastewater Treatment Facility's membranes and turbines have a 5 to 7 year lifespan and need to be on a replacement cycle. There are a lot of additional parts and technology features that will be reaching the end of their useful life in the coming years.					50,000	50,000
TOTAL- FACILITIES				235,000	605,000	830,000	465,000	340,000	2,475,000

*The request includes an alternative funding source, as funds are not being requested through the Town's Capital planning process.

FACILITY REQUESTS

Notes:

1	The two Hood School boilers were installed in 1999, and are presently 20 years old. This request includes replacing both boilers with high efficiency condensing boilers and redesigning the boiler room similar to the project at the Little Elementary School in 2012. The Little School boilers were installed in FY' 12 and have led to approximately \$10,000 to \$15,000 of savings annually. This request is called for in FY'22 when the boilers would be 23 years old and beyond their expected useful life of 20 years to provide efficient and effective heating. The project would be eligible for the Massachusetts School Building Authorities (MSBA) accelerate repair grant program. In addition, the project could also result in a rebate from RMLD of up to \$30,000 for supplying high efficiency equipment. The boilers would be connected to the school's energy management system with Automated Logic for enhanced controls of the heating system.
2	The two rooftop HVAC units at the Batchelder School were installed with the building project in 2006. They have a life expectancy of 15 years and should be considered for replacement between FY'23 and FY'25, after 15 years of operation. The request includes replacing one unit spread out over a three year period beginning in FY'23. The quote from the recommended manufacturer Daikin, (the HS/MS supplier) is \$70,000 with a recommendation to include an additional amount between 10-15% for engineering, contingency, and public bidding. The District feels these units have provided consistent and superior service and are in fair condition but should be considered for replacement during this time period due to their age.
3	The four Hood Elementary School modular classroom units were installed in 2003 and are showing signs of age and deterioration. The expected useful life of these units is 12 to 15 years. The units have been well maintained but are reaching the end of their useful life. The time has come to consider removing the modular units and taking these classrooms offline. The work would include demolition and removal of existing 70'x70' foot modular classrooms, including removal of concrete and backfill to carry the existing slope grade. The proposal also includes loaming and hydroseeding the site once modulars are removed. Once taken offline the plan would be to return the site to its original condition. The District would need to take ownership again of the three classrooms currently being leased in the existing school by SEEM Collaborative to ensure enough classroom space exists once the modulars are offline. The District is currently receiving \$18,000 in rental income through the SEEM Collaborative agreement.
4	The Little School expanded modular classroom floor was installed in 2003 and is showing signs of deterioration as it reaches the end of its useful life. The expected useful life of these units is 15 years. The unit has been well maintained but will need to be replaced in the near future. The classrooms house the schools early childhood program and will be needed into the future. The work includes the full cost of demolition and removal of the old unit and the cost of a new unit including installation and utility connections. The cost includes an approximate estimate from Triumph Modular Company, this project is being proposed for FY'24.

FACILITY REQUESTS

5	<p>*Funds were needed to upgrade safety and security measures at all five schools including (interior classroom door locks, exterior door alarms, roll down doors to isolate areas of the middle/high school during off hours, additional controlled access at the second door of the gym entrance at the middle/high school, additional alarm panel at the gym entrance at the middle/high, additional security cameras at the elementary schools as needed, enhanced technology based alert system, and other security enhancements as recommended. There is no funding attached to this request because the District received \$175,000 through the state budget in fiscal year 2019 as a result of lobbying efforts from State Representative Brad Jones, and with these funds the District has made these safety and security upgrades and repairs during the 2018-19 school year.</p>
6	<p>Paving of identified sections of the Little School parking lot is needed. This project would both expand and repair sections of the existing parking lot. The old playground was removed in the summer of 2016, and gravel was placed in this area as a temporary solution. This area could be paved which would expand the parking lot and a dozen parking spaces at the school. There are also other sections of the parking lot that are showing signs of deterioration and are in need of repair. The plan would be to work cooperatively with the DPW and the Town's contractor to identify the needed areas and achieve economies of scale. The \$100,000 request would include paving the main parking lot, old playground area, and front bus loop.</p>
7	<p>*The District is currently researching projects that will enhance energy efficiency measures across the District that involve LED Lighting upgrades and the potential for solar energy projects. The District has proposed LED Lighting upgrades and Solar energy projects in the past that would either 1. require a significant upfront investment by the Town or 2. require burrowing thus impacting the debt schedule and burrowing capacity and thus reducing funds available for urgent large capital projects; these projects have not previously been viewed as a priority by the CIPC and have not been funded. The School Department is currently researching such projects and their potential payback that would include alternative payment methods for such projects. The District anticipates having results and analysis of potential projects and their funding options by January 1st and will be able to present more detailed information at that time.</p>
8	<p>The Hood Elementary School Roof was installed in 1999 and is approaching the end of its useful life of twenty (20) years, the current roof is a welded seam Sarnafil roofing system. The District contracted with Tremco, Inc. to perform an infra-red moisture scan in the summer of 2018, which showed very little moisture penetration, approximately 1% of the 55,000 sq. ft. roof area. Tremco Inc. concluded that the roof is in good condition and is a solid candidate for a roof restoration project, which would extend the life expectancy for an additional 20 years. The estimated cost is between \$10 and \$13 per sq. ft. which would have an estimated total cost of \$750,000. The project would include a 20 year warranty if done by Tremco per their specification. The project could also be a candidate for MSBA's accelerated repair program similar to that of the Little School Roof project. If the MSBA program is pursued the scope and cost of this project would most likely change. Based on the assessment the District will need to expend \$3,000 to \$5,000 annually for regular preventative roof maintenance. This project is being proposed for funding consideration in FY'23.</p>
9	<p>The district received \$50,000 to begin asbestos abatement work at the Hood and Little Schools in the summer of 2013. The Hood School kitchen and storage room and the Little School nurse's office and ceiling in the storage room and B-wing boys' lavatory were addressed. Additional abatement work from the original \$50,000 request continued in the summer of 2015. This additional \$120,000 request which includes, \$60,000 in FY'20 and the remaining \$60,000 in FY'23 would remove all remaining asbestos floor tile from the Little Elementary School. The proposal involves 12,000 square feet of floor tile to be removed. Contractors use an estimated pricing that ranges from \$5.50 to \$7.50 per square foot based on the complexities and current market conditions at the time of bid. The only other school with remaining asbestos is the Hood Elementary School and the plan would be to address this in the future; there is no immediate abatement need at this time.</p>

FACILITY REQUESTS

10	HVAC upgrades are needed and highly recommended at the Little Elementary School in the c-wing. The request involves two projects that were recommended by BLW Engineers who performed an assessment on the system in 2018. The recommended solutions would eliminate the cold air syndrome that currently exists in the c-wing of the school. The projects involves replacing the unit ventilator low limit discharge parts, which have an estimated cost of \$45,000.00 and secondly, rebalancing the c-wing unit ventilators, which has an estimated cost of \$20,000.00.
11	The current Hood system was manufactured by Honeywell and was installed in 1999, it is an old modem based system and needs to be replaced. The operating system that controls the classroom unit vent heaters has been lost. The current request is to install an energy management system throughout the Hood and Little Schools which would build on the existing energy management controls at our other schools. The Hood and Little School has an energy management system in the boiler room only. The new High School and Middle School will be on an automated system when the project is completed. If completed the district would maximize their ability to save energy and regulate occupancy schedules throughout each school. It is anticipated the district would save up to \$15,000 annually at each School, which computes to a payback period of less than ten years if completed. This project would bring both the Hood and Little Schools to the same level as the Batchelder School and new HS/MS allowing for increased ability to control energy use and reduce cost. This project is being proposed for funding consideration for FY'25.
12	Compliance upgrades to the softball field complex at North Reading Middle/High School are needed to fully complete the project and bring the field's amenities to an appropriate level consistent with other athletic complexes available to students athletes. These upgrades would include the supply and installation of rooftop dugouts enclosures, the supply and installation of an electronic scoreboard and a PA sound system for the field. These upgrades are needed to adequately equip the Softball Field with the appropriate amenities of other athletic facilities in the District, and to complete the project. The school construction project did not include installation of a scoreboard and dugout enclosures. The District has worked to identify funds and work with their support organizations to fundraise for these needed upgrades. The monies raised to date have been spent on the sod and irrigation project as well as improving the batting cage facility. Currently, there are no funds available for the dugout and scoreboard projects at this facility. The District has funded the installation of an electrical source to accommodate an electronic scoreboard.
13	The Hood Elementary School Handicapped Accessible lift was installed in 1995, and is in need of replacement as it has reached the end of its useful life. Having a reliable lift is required to meet ADA regulations. The current lift has needed several costly repairs totalling approximately \$6,000 these past two fiscal years to pass state inspection and keep the lift functioning and in working order. It has become costly to make such repairs due to the age and the availability of parts and equipment on such an old device. This device is a priority for replacement in FY'21.
14	The District with the opening of the Middle School/High School in 2013 begin the operation of a Wasterwater Treatment Plant. This plant is a bioprocess membrane plant and is highly technical and complicated operation. The plant has three membranes and two air scour blowers which have reached the end of their useful life and are in need of replacement. The anticipated life expectancy for this equipment is seven to ten years. The 2020-2021 school year would represent year 8 for the membranes which have had a hard life due to several factors and the operating conditions of the plant. The membranes died in the summer of 2019 requiring immediate replacement by the School Department. The District anticipates additional costs in the area of upkeep and replacement of parts, to that end we are seeking a large capital request within our five year plan to secure funding to make such upgrades again in FY'25.

FACILITY REQUESTS

CAPITAL REQUESTS HISTORY

FACILITIES	SCHOOL / DEPT	DESCRIPTION	PRIOR FY'16	FY'16 APPROVED	FY'17 APPROVED	FY'18 APPROVED	FY'19 APPROVED	FY'20 APPROVED	TOTAL
Window Retrofit	High School	Retrofitted classroom windows. Present windows were bolted shut because the double hung sashes lack springs and are jammed closed.	7,500						7,500
Air Condition NOC and labs	High School	Provided air conditioning to network operations center and library classrooms.	15,000						15,000
Building Security	All Schools	Improved perimeter lighting and installed audible door alarms.	41,500						41,500
Chair Lift	Middle	Installed a chair lift to provide handicapped access to 2nd floor.	31,338						31,338
Roof Repair	High / Middle	Repaired bubbled sections of High and Middle School roof.	150,000						150,000
Boiler	Little	We were down to one boiler, with no backup.	250,000						250,000
Retaining Wall	Little	Repaired retaining wall adjacent to Little School softball fields.	100,000						100,000
Asbestos Mitigation	Hood/Little	Removed asbestos tiles that are wearing away.	50,000						50,000
Repaving Parking Lot	Hood	The school parking lot and playground area needs to be repaved. The hot top is beginning to erode causing a safety issue.		50,000	50,000				100,000
Peabody Street Entranceway Repair	Batchelder	The front stairwell on the Peabody Street side is deteriorating and needs to be repaired.				25,000			25,000
Gymnasium Floor Replacement	Little	The Little School Gym floor is reaching the end of its useful life and is in need of replacement.					40,000		40,000
Hood Fire System Panel	Hood	A replacement of the Hood School Fire System panel was needed due to the age and condition of the equipment.						30,000	30,000
TOTAL- FACILITIES			645,338	50,000	50,000	25,000	40,000	30,000	840,338