



# Mount Markham Central School

500 Fairground Road  
West Winfield, NY 13491

---

Paul Berry, Ph.D.  
Superintendent

Phone – (315) 822-2824  
Fax – (315) 822-6162

## **Smart Schools Investment Plan**

The SMART SCHOOLS BOND ACT OF 2014 was passed in the 2014-15 Enacted Budget and approved by the voters in a statewide referendum held during the 2014 General Election on Tuesday, November 4, 2014.

The Smart Schools Bond Act authorized the issuance of \$2 billion of general obligation bonds to finance improved educational technology and infrastructure to improve learning and opportunity for students throughout the State. Mount Markham has been allocated \$1,478,088.

The purpose of the Smart Schools Bond Act is to improve learning and opportunity for public and nonpublic school students by funding capital projects to:

1. Install high-speed broadband or wireless internet connectivity for schools and communities;
2. Acquire learning technology equipment or facilities, including but not limited to interactive whiteboards, computer servers, and desktop, laptop, and tablet computers;
3. Construct, enhance, and modernize educational facilities to accommodate prekindergarten programs and to provide instructional space to replace classroom trailers; and/or
4. Install high-tech security features in school buildings and on school campuses, including but not limited to video surveillance, emergency notification systems, and physical access controls.

Our district is required to submit a Smart Schools Improvement Plan to demonstrate how Smart Schools Bond Act funds will be used to provide the educational tools and opportunities students throughout New York State will need to succeed in the 21st century economy.

Our Plan:

- Include linkages between the district's long-term educational planning and technology investments;
- Provide learning opportunities beyond the classroom through the use of technology; and
- Address the educational needs of all students, including students with disabilities, English language learners and those who have not succeeded in traditional classroom settings.

### **District Instructional Technology Plan**

The Mount Markham School District recognizes the increasing potential of today's technology as a powerful learning medium for our students. Technology is already in the hands of our students, and it is imperative that we integrate its use into the curriculum.

To meet the requirements set forth by state and federal agencies, in addition to the instructional technology mission statement, Mount Markham CSD will provide cost-effective technologies that will empower all students to learn and support student academic achievement. This would

include preparing our students to be life-long learners who are responsible citizens prepared to enter the technological society of today, as well as tomorrow.

The implementation of this mission statement is based on the following philosophies and beliefs:

- Empower students and employees by integrating technology into the daily teaching and learning process
- Address the instructional needs of all students through the use of technology and enhance learning
- Use technology to motivate and inspire students to learn
- Prepare students with the skills to master the latest technology
- Through the use of technology, assist with preparing our students to be life-long learners who are responsible citizens prepared to enter the global society.

Goals outlined in the technology plan:

1. Develop a district wide BYOD policy to allow students/staff to use their own devices for educational purposes during the school day.
2. Pilot the placement of wireless/cellular access points on school buses to provide students with filtered access during their bus rides to/from school, field trips and sporting events.
3. Expand guest wireless access at community and sporting events, both inside and outside school buildings.
4. Continue to expand parent/community outreach through the district website, parent portal, district emergency notification system and social media.

Additional goals identified during the Smart School Investment Planning Process:

1. Strengthen network infrastructure through the installation of fiber optic wiring, new switches and servers;
2. Strengthen campus security by adding additional cameras, upgrading doorway access panels, and adding security film to exterior glass;
3. Strengthen opportunities for blended learning and flexible learning by creating a 21<sup>st</sup> century learning center in each school;
4. Strengthen opportunities for college-bound and non-college bound students to participate in study in one or more of the following areas: pre-engineering, agribusiness, machine/tool fabrication.

## Smart Schools Investment Plan

### Overview

During the 2015/16 school year, a diverse group of stakeholders from the Mount Markham community, including parents, teachers, school administrators, support staff, technicians and students have met and reviewed the opportunities presented by the Smart Schools Bond Act.

The group began by examining the vision put forth by the MM Tech Survey completed as part of the Smart School process. In addition, the stakeholders discussed and reviewed professional development needs as well as student outcome data.

This group has helped to develop an investment plan that focuses on school connectivity, community connectivity, classroom technology, and high tech security. The plan, when fully implemented, would impact every on-campus student and member of the faculty and staff.

SSIP Area	Investment Allocation
<b>School Connectivity</b>	\$400,560
<b>Classroom Technology</b>	\$440,000
<b>Community Connectivity</b>	\$150,000
<b>High-Tech Security</b>	\$344,200
<b>Project Design and Contingency</b>	\$140,000
<b>Total Plan Investment</b>	\$1,474,760
<b>Total Smart School Bond Allocation</b>	\$1,478,088

### School Connectivity

Building/Item	Qty	Cost/Item	Total Cost	Phase
<b>District Network</b>				
<b>Fiber Backbone</b> Telecom Rack in ES/MS/HS	3 locations	\$25,000 total	\$25,000	I
<b>Telecom Closets</b> Telecom room in ES/MS/HS	3 locations	\$11,000	\$33,000	I
<b>Network Electronics</b>	District Wide	\$173,000	\$173,000	III
<b>Emergency Power Supply and Grounding</b>	TBD	\$76,860	\$76,860	I
<b>AC System for NOC</b>	1	\$48,000	\$48,000	II
<b>Elementary School</b>				
<b>Wireless Access Points</b>	21	\$700/AP	\$14,700	I
<b>High School</b>				
<b>Wireless Access Points</b>	26	\$700/AP	\$17,500	I

The strength of our plan is only as strong as the network upon which the plan is built. A significant portion of the plan focuses on new network wiring, new wifi access points, switches and servers. While the speed of our network is strong, these upgrades will accommodate more student and teacher devices and allow new devices to work at their intended speed.

Most of the infrastructure work will be completed in phases I and II of the plan. We hope to complete the network upgrade by the fall of 2017. Upgrades in the network will allow more students, including students with special needs, ELL students, as well as at risk students and non-traditional learners (adult education programs), to use devices intended to engage in standards based learning, support teacher use of differentiated instruction, and support Response to Intervention (RTI) and Academic Intervention Service (AIS) responses. Network upgrades will also facilitate differentiated instruction as additional resources will be introduced into the classroom via the internet or instructional devices that seek to address gaps between students learning levels.

### Classroom Technology

Building/Item	Qty	Cost/Item	Total Cost	Phase
<b>District Devices</b>				
<b>Teacher Devices</b>	TBD	\$50,000-\$75,000	\$50,000-\$75,000	II-V
<b>Student Devices</b>	TBD	\$200,000-\$350,000	\$150,000-\$250,000	II-V

Devices are simply tools that allow the user to have a platform to use application programs or access the internet. We recognize that highly trained educators are needed to guide the learning process through the selection of applications and websites that will increase student achievement.

Teacher and student devices will allow learning to occur well beyond the classroom. Blended learning opportunities where students are able to extend and deepen their understanding of standards based learning content can flourish with the right tools.

Student devices could include a Chromebook, iPad, or personal computers used to engage, extend and deepen learning. Other devices to facilitate the delivery of engaging instruction include projectors, whiteboards, calculators, document cameras and equipment to support new course offerings being considered in one or more of the following areas: pre-engineering, agribusiness, machine fabrication.

Teacher and student devices, applications and instructional technology will be centerpieces of learning centers for each building. Starting as single classrooms, these learning centers are incubators for creativity and learning. The learning center would be used by teachers, students and the community to enrich learning, to offer professional development, to engage parents and other non-traditional learners. Learning centers would contain flexible seating, spaces for collaboration and visualization.

Most teacher and student devices will be purchased as part of phases III, IV and V (Summer 2017-June, 2020). The district will engage stakeholders in an examination of programs that will best fit the needs of our students and these programs will guide the selection of devices and equipment.

**Community Connectivity**

Building/Item	Qty	Cost/Item	Total Cost	Phase
<b>District Devices</b>				
LTE Bus Routers, Installation	TBD	\$35,000-\$45,000	\$35,000-\$45,000	IV-V

Our plan has included much discussion about the opportunities to reinvigorate adult education opportunities in the district. Learning centers equipped for distance learning and flexible instruction will offer community members a unique opportunity to engage in learning about limitless topics.

Our district spans four rural counties of Central New York. The idea of placing wifi routers on some of our school buses has been a vision of our technology department and staff so that students might take the opportunity to extend their learning time. Many of our students spend up to two hours each day riding our school buses.

These opportunities are made possible by the Smart School funding and will be targeted for phases four and five of our plan (2018-2020)

**High Tech Security**

Building/Item	Qty	Cost/Item	Total Cost	Phase
<b>Elementary School</b>				
Security Cameras (1) Exterior 8 MP Camera (1) Exterior 30 MP Camera	2	8 MP: \$3,000/ea 30 MP: \$13,000/ea	\$16,000	I
Access Control System	1	\$50,000	\$50,000	I
<b>High School</b>				
Security Cameras	Interior: 28 Exterior: 11	3 MP: \$2,000/ea 8 MP: \$3,000/ea 30 MP: \$14,000/ea	≈\$150,000	III
Network Video Recorder	1	\$20,000	\$20,000	I
Access Control System	1	\$50,000	\$50,000	I

<b>Bus Garage</b>				
<b>Security Cameras</b>	Interior: 3 Exterior: 7	3 MP: \$2,000/ea 8 MP: \$3,000/ea	\$23,200	III
<b>Network Video Recorder</b>	1	\$20,000	\$20,000	III
<b>Cabling, Testing, Terminations</b>	2,500 ft	\$3/ft	\$7,500	III
<b>Network Switches</b>	1	\$5,000	\$5,000	III
<b>Access Control System</b>	1	\$15,000	\$15,000	III

The safety of our students, faculty and staff is paramount. A key opportunity exists with Smart Schools funding to strengthen our campus security through the installation of digital camera monitoring systems, and upgraded access control systems. These additions and upgrades will supplement work on interior core locks that collectively will make our campus safer.

### **Project Design and Contingency**

We have been advised to set aside 10% of the Smart Schools funding to cover architect planning, environmental impact survey, and project contingencies.

### **Additional Information**

#### **Plan Contacts:**

**John Henry Lane** [jlane@mmcsd.org](mailto:jlane@mmcsd.org) 315-822-2824

**Paul Berry** [pberry@mmcsd.org](mailto:pberry@mmcsd.org) 315-822-2824

New York State Education Department: Smart Schools Bond Act Implementation Guidance  
[http://www.p12.nysed.gov/mgtserv/smart\\_schools/docs/Smart\\_Schools\\_Bond\\_Act\\_Guidance\\_04.27.15\\_Final.pdf](http://www.p12.nysed.gov/mgtserv/smart_schools/docs/Smart_Schools_Bond_Act_Guidance_04.27.15_Final.pdf)

MMCSD Resource Page: Contains all files/documents shared during SSBA planning process  
<http://www.mmcsd.org/domain/260>

#### **Videos Shared**

Project Lead the Way Overview: <https://www.youtube.com/watch?v=al65aeTBKNE>

Flexible Learning Spaces: <https://www.youtube.com/watch?v=4cscJcRKYxA>

Flexible Learning Environments: [https://www.youtube.com/watch?v=O\\_x4OLsfReQ](https://www.youtube.com/watch?v=O_x4OLsfReQ)