

Smart Schools Investment Plan -

SSIP Overview

1. Please enter the name of the person to contact regarding this submission.

Robert Schilling

1a. Please enter their phone number for follow up questions.

516-308-5010

1b. Please enter their e-mail address for follow up contact.

bschilling@msd.k12.ny.us

2. Please indicate below whether this is the first submission, a new submission or an amended submission of a Smart Schools Investment Plan.

First submission

3. All New York State public school districts are required to complete and submit a District Instructional Technology Plan survey to the New York State Education Department in compliance with Section 753 of the Education Law and per Part 100.12 of the Commissioner’s Regulations. Districts that include investments in high-speed broadband or wireless connectivity and/or learning technology equipment or facilities as part of their Smart Schools Investment Plan must have a submitted and approved Instructional Technology Plan survey on file with the New York State Education Department.

By checking this box, you certify that the school district has an approved District Instructional Technology Plan survey on file with the New York State Education Department.

District Educational Technology Plan Submitted to SED and Approved

4. Pursuant to the requirements of the Smart Schools Bond Act, the planning process must include consultation with parents, teachers, students, community members, other stakeholders and any nonpublic schools located in the district.

By checking the boxes below, you are certifying that you have engaged with those required stakeholders. Each box must be checked prior to submitting your Smart Schools Investment Plan.

- Parents
- Teachers
- Students
- Community members

4a. If your district contains non-public schools, have you provided a timely opportunity for consultation with these stakeholders?

- Yes
- No
- N/A

5. Certify that the following required steps have taken place by checking the boxes below: Each box must be checked prior to submitting your Smart Schools Investment Plan.

- The district developed and the school board approved a preliminary Smart Schools Investment Plan.
- The preliminary plan was posted on the district website for at least 30 days. The district included an address to which any written comments on the plan should be sent.
- The school board conducted a hearing that enabled stakeholders to respond to the preliminary plan. This hearing may have occurred as part of a normal Board meeting, but adequate notice of the event must have been provided through local media and the district website for at least two weeks prior to the meeting.
- The district prepared a final plan for school board approval and such plan has been approved by the school board.
- The final proposed plan that has been submitted has been posted on the district’s website.

Smart Schools Investment Plan -

SSIP Overview

- 5a. Please upload the proposed Smart Schools Investment Plan (SSIP) that was posted on the district's website. Note that this should be different than your recently submitted Educational Technology Survey. The Final SSIP, as approved by the School Board, should also be posted on the website and remain there during the course of the projects contained therein.

smartschools application - (1).pdf

6. Please enter an estimate of the total number of students and staff that will benefit from this Smart Schools Investment Plan based on the cumulative projects submitted to date.

7,900

7. An LEA/School District may partner with one or more other LEA/School Districts to form a consortium to pool Smart Schools Bond Act funds for a project that meets all other Smart School Bond Act requirements. Each school district participating in the consortium will need to file an approved Smart Schools Investment Plan for the project and submit a signed Memorandum of Understanding that sets forth the details of the consortium including the roles of each respective district.

The district plans to participate in a consortium to partner with other school district(s) to implement a Smart Schools project.

8. Please enter the name and 6-digit SED Code for each LEA/School District participating in the Consortium.

Partner LEA/District	SED BEDS Code
(No Response)	(No Response)

9. Please upload a signed Memorandum of Understanding with all of the participating Consortium partners.

(No Response)

10. Your district's Smart Schools Bond Act Allocation is:

\$2,650,127

11. Enter the budget sub-allocations by category that you are submitting for approval at this time. If you are not budgeting SSBA funds for a category, please enter 0 (zero.) If the value entered is \$0, you will not be required to complete that survey question.

	Sub-Allocations
School Connectivity	2,085,677
Connectivity Projects for Communities	0
Classroom Technology	0
Pre-Kindergarten Classrooms	0
Replace Transportable Classrooms	0
High-Tech Security Features	0
<b>Totals:</b>	2,085,677.00

Smart Schools Investment Plan -

School Connectivity

1. In order for students and faculty to receive the maximum benefit from the technology made available under the Smart Schools Bond Act, their school buildings must possess sufficient connectivity infrastructure to ensure that devices can be used during the school day. Smart Schools Investment Plans must demonstrate that:
  - sufficient infrastructure that meets the Federal Communications Commission’s 100 Mbps per 1,000 students standard currently exists in the buildings where new devices will be deployed, or
  - is a planned use of a portion of Smart Schools Bond Act funds, or
  - is under development through another funding source.

Smart Schools Bond Act funds used for technology infrastructure or classroom technology investments must increase the number of school buildings that meet or exceed the minimum speed standard of 100 Mbps per 1,000 students and staff within 12 months. This standard may be met on either a contracted 24/7 firm service or a "burstable" capability. If the standard is met under the burstable criteria, it must be:

1. Specifically codified in a service contract with a provider, and
2. Guaranteed to be available to all students and devices as needed, particularly during periods of high demand, such as computer-based testing (CBT) periods.

Please describe how your district already meets or is planning to meet this standard within 12 months of plan submission.

The two projects noted in this plan provide the necessary infrastructure backbone to support bandwidth of this magnitude. Similarly, the District has recently upgraded other necessary infrastructure components, such as its firewall, core main building switches, server farm, and fail-over capabilities to live back-ups.

The District also plans on increasing our bandwidth from the current 500Mbps to 800Mbps in the 2016-17 school year, which will meet this standard.

- 1a. If a district believes that it will be impossible to meet this standard within 12 months, it may apply for a waiver of this requirement, as described on the Smart Schools website. The waiver must be filed and approved by SED prior to submitting this survey.

By checking this box, you are certifying that the school district has an approved waiver of this requirement on file with the New York State Education Department.

2. Connectivity Speed Calculator (Required)

	Number of Students	Multiply by 100 Kbps	Divide by 1000 to Convert to Required Speed in Mb	Current Speed in Mb	Expected Speed to be Attained Within 12 Months	Expected Date When Required Speed Will be Met
Calculated Speed	7,126	712,600	712.6	500	800	6/15/2016

3. Briefly describe how you intend to use Smart Schools Bond Act funds for high-speed broadband and/or wireless connectivity projects in school buildings.

We plan on using these resources for two initiatives:

1. Replace existing 1Gb network switch infrastructure at the end of its useful life with newer, faster 10Gb Power-Over-Ethernet (POE) model switches. This will be done District-wide, and also include some closet upgrades
2. The existing wireless infrastructure in our elementary buildings provides only “basic” coverage that will not be able to support growing initiatives that make use of mobile technologies. As such, we will build out the wireless infrastructure in each of our elementary buildings to provide for density coverage.

Smart Schools Investment Plan -

School Connectivity

4. Briefly describe the linkage between the district's District Instructional Technology Plan and the proposed projects. (There should be a link between your response to this question and your response to Question 1 in Part E. Curriculum and Instruction "What are the district's plans to use digital connectivity and technology to improve teaching and learning?")

Our District Instructional Technology Plan refers to the regular use by students and staff of cloud-based digital tools, such as Google Apps & our learning management system, Haiku. In this regard, we have invested heavily in our secondary buildings in the value of mobile technologies and their ability to transform teaching and learning. Building out the wireless infrastructure in our elementary buildings and upgrading our switch infrastructure District-wide will establish the network backbone necessary to support these initiatives in all grades K-12, including our special needs population.

5. If the district wishes to have students and staff access the Internet from wireless devices within the school building, or in close proximity to it, it must first ensure that it has a robust Wi-Fi network in place that has sufficient bandwidth to meet user demand.

Please describe how you have quantified this demand and how you plan to meet this demand.

Prior to implementing our 1:1 technology program in grades 7-12 in 2014, we invested heavily in expanding the density of wireless capacity and coverage in our three secondary buildings. This involved installation of a wireless access point in each instructional space, installation of high-availability wireless controllers, installation of a more robust firewall with active fail-over capabilities, replacement of our 1Gb core mdf switches in these buildings with more robust 10gb models, and increasing our bandwidth availability to 500Mbps.

Well over one year into the initiative, we currently have deployed 2,250 Chromebooks in a 1:1 model in our secondary buildings. At any given point in an instructional day, we are averaging approximately 1,000 simultaneous Chromebook users and 290Mbps of bandwidth usage District-wide. Users are reporting excellent network responsiveness with in our secondary buildings where we have high-density wireless coverage. Average DNS resolution times on our Chromebooks of 30.67 milliseconds and HTTP response times of 37.67 milliseconds support these reports. Expansion of the 1:1 model to three additional secondary grade levels in September, 2016 is anticipated to increase our bandwidth requirements by 60%. While this still falls within our existing bandwidth availability, the District plans on budgeting for an increase to the '100Mbps per 1,000 students' standard in 2016-17 school year.

The two projects noted in our plan are designed to round out the wireless density in our elementary buildings at the same level as our secondary buildings, as well as establish a more robust intermediary switch infrastructure district-wide to guard against bottlenecks & provide a firm foundation for future growth with mobile technologies.

6. As indicated on Page 5 of the guidance, the Office of Facilities Planning will have to conduct a preliminary review of all capital projects, including connectivity projects.

Project Number
28-05-23-03-7-999-007

7. Certain high-tech security and connectivity infrastructure projects may be eligible for an expedited review process as determined by the Office of Facilities Planning.

Was your project deemed eligible for streamlined review?

No

8. Include the name and license number of the architect or engineer of record.

Name	License Number
Joseph L. Mile	28771

9. If you are submitting an allocation for School Connectivity complete this table. Note that the calculated Total at the bottom of the table must equal the Total allocation for this category that you entered in the SSIP Overview overall budget.

Smart Schools Investment Plan -

School Connectivity

	Sub-Allocation
Network/Access Costs	0
Outside Plant Costs	0
School Internal Connections and Components	1,514,840
Professional Services	509,637
Testing	0
Other Upfront Costs	61,200
Other Costs	0
<b>Totals:</b>	<b>2,085,677.00</b>

10. To the extent possible, please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category.

Select the allowable expenditure type. Repeat to add another item under each type.	Item to be purchased	Quantity	Cost per Item	Total Cost
Connections/Components	10GB switches	136	7,233	983,688
Connections/Components	10GE network modules	136	1,411	191,896
Connections/Components	uninterruptible power supplies 3000VA	40	2,153	86,120
Connections/Components	uninterruptible power supplies 5000VA	10	5,711	57,110
Connections/Components	wall mount rack enclosures	2	415	830
Connections/Components	wireless access points	232	698	161,936
Connections/Components	wireless controllers	2	16,630	33,260
Professional Services	switch configuration/installation	1	198,886	198,886
Professional Services	WAP cabling/installation	1	99,825	99,825
Professional Services	WAP configuration	1	103,126	103,126
Professional Services	Architectural Services	1	107,800	107,800
Other Upfront Costs	Assorted cables/mounts/supplies	1	61,200	61,200

**Smart Schools Investment Plan -**

Community Connectivity (Broadband and Wireless)

1. Briefly describe how you intend to use Smart Schools Bond Act funds for high-speed broadband and/or wireless connectivity projects in the community.

(No Response)

2. Please describe how the proposed project(s) will promote student achievement and increase student and/or staff access to the Internet in a manner that enhances student learning and/or instruction outside of the school day and/or school building.

(No Response)

3. Community connectivity projects must comply with all the necessary local building codes and regulations (building and related permits are not required prior to plan submission).

I certify that we will comply with all the necessary local building codes and regulations.

4. Please describe the physical location of the proposed investment.

(No Response)

5. Please provide the initial list of partners participating in the Community Connectivity Broadband Project, along with their Federal Tax Identification (Employer Identification) number.

Project Partners	Federal ID #
(No Response)	(No Response)

6. If you are submitting an allocation for Community Connectivity, complete this table.

Note that the calculated Total at the bottom of the table must equal the Total allocation for this category that you entered in the SSIP Overview overall budget.

	Sub-Allocation
Network/Access Costs	(No Response)
Outside Plant Costs	(No Response)
Tower Costs	(No Response)
Customer Premises Equipment	(No Response)
Professional Services	(No Response)
Testing	(No Response)
Other Upfront Costs	(No Response)
Other Costs	(No Response)
<b>Totals:</b>	

7. To the extent possible, please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category.

Select the allowable expenditure type. Repeat to add another item under each type.	Item to be purchased	Quantity	Cost per Item	Total Cost
(No Response)	(No Response)	(No Response)	(No Response)	(No Response)

Smart Schools Investment Plan -

Classroom Learning Technology

1. In order for students and faculty to receive the maximum benefit from the technology made available under the Smart Schools Bond Act, their school buildings must possess sufficient connectivity infrastructure to ensure that devices can be used during the school day. Smart Schools Investment Plans must demonstrate that sufficient infrastructure that meets the Federal Communications Commission’s 100 Mbps per 1,000 students standard currently exists in the buildings where new devices will be deployed, or is a planned use of a portion of Smart Schools Bond Act funds, or is under development through another funding source.

Smart Schools Bond Act funds used for technology infrastructure or classroom technology investments must increase the number of school buildings that meet or exceed the minimum speed standard of 100 Mbps per 1,000 students and staff within 12 months. This standard may be met on either a contracted 24/7 firm service or a "burstable" capability. If the standard is met under the burstable criteria, it must be:

1. Specifically codified in a service contract with a provider, and
2. Guaranteed to be available to all students and devices as needed, particularly during periods of high demand, such as computer-based testing (CBT) periods.

Please describe how your district already meets or is planning to meet this standard within 12 months of plan submission.

(No Response)

1a. If a district believes that it will be impossible to meet this standard within 12 months, it may apply for a waiver of this requirement, as described on the Smart Schools website. The waiver must be filed and approved by SED prior to submitting this survey.

By checking this box, you are certifying that the school district has an approved waiver of this requirement on file with the New York State Education Department.

2. Connectivity Speed Calculator (Required)

	Number of Students	Multiply by 100 Kbps	Divide by 1000 to Convert to Required Speed in Mb	Current Speed in Mb	Expected Speed to be Attained Within 12 Months	Expected Date When Required Speed Will be Met
Calculated Speed	(No Response)	(No Response)	(No Response)	(No Response)	(No Response)	(No Response)
<b>Totals:</b>						

3. If the district wishes to have students and staff access the Internet from wireless devices within the school building, or in close proximity to it, it must first ensure that it has a robust Wi-Fi network in place that has sufficient bandwidth to meet user demand.

Please describe how you have quantified this demand and how you plan to meet this demand.

(No Response)

4. All New York State public school districts are required to complete and submit an Instructional Technology Plan survey to the New York State Education Department in compliance with Section 753 of the Education Law and per Part 100.12 of the Commissioner’s Regulations.

Districts that include educational technology purchases as part of their Smart Schools Investment Plan must have a submitted and approved Instructional Technology Plan survey on file with the New York State Education Department.

By checking this box, you are certifying that the school district has an approved Instructional Technology Plan survey on file with the New York State Education Department.

Smart Schools Investment Plan -

Classroom Learning Technology

5. Describe the devices you intend to purchase and their compatibility with existing or planned platforms or systems. Specifically address the adequacy of each facility's electrical, HVAC and other infrastructure necessary to install and support the operation of the planned technology.

(No Response)

6. Describe how the proposed technology purchases will:
- > enhance differentiated instruction;
  - > expand student learning inside and outside the classroom;
  - > benefit students with disabilities and English language learners; and
  - > contribute to the reduction of other learning gaps that have been identified within the district.

The expectation is that districts will place a priority on addressing the needs of students who struggle to succeed in a rigorous curriculum. Responses in this section should specifically address this concern and align with the district's Instructional Technology Plan (in particular Question 2 of E. Curriculum and Instruction: "Does the district's instructional technology plan address the needs of students with disabilities to ensure equitable access to instruction, materials and assessments?" and Question 3 of the same section: "Does the district's instructional technology plan address the provision of assistive technology specifically for students with disabilities to ensure access to and participation in the general curriculum?")

(No Response)

7. Where appropriate, briefly describe how the proposed technology purchases will enhance ongoing communication with parents and other stakeholders and help the district facilitate technology-based regional partnerships, including distance learning and other efforts.

(No Response)

8. Describe the district's plan to provide professional development to ensure that administrators, teachers and staff can employ the technology purchased to enhance instruction successfully.

Note: This response should be aligned and expanded upon in accordance with your district's response to Question 1 of F. Professional Development of your Instructional Technology Plan: "Please provide a summary of professional development offered to teachers and staff, for the time period covered by this plan, to support technology to enhance teaching and learning. Please include topics, audience and method of delivery within your summary."

(No Response)

9. Districts must contact the SUNY/CUNY teacher preparation program that supplies the largest number of the district's new teachers to request advice on innovative uses and best practices at the intersection of pedagogy and educational technology.

By checking this box, you certify that you have contacted the SUNY/CUNY teacher preparation program that supplies the largest number of your new teachers to request advice on these issues.

10. A district whose Smart Schools Investment Plan proposes the purchase of technology devices and other hardware must account for nonpublic schools in the district.

Are there nonpublic schools within your school district?

- Yes  
 No

11. Nonpublic Classroom Technology Loan Calculator  
 The Smart Schools Bond Act provides that any Classroom Learning Technology purchases made using Smart



Smart Schools Investment Plan -

Classroom Learning Technology

Schools funds shall be lent, upon request, to nonpublic schools in the district. However, no school district shall be required to loan technology in amounts greater than the total obtained and spent on technology pursuant to the Smart Schools Bond Act and the value of such loan may not exceed the total of \$250 multiplied by the nonpublic school enrollment in the base year at the time of enactment.

See:

[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).

	1. Classroom Technology Sub-allocation	2. Public Enrollment (2014-15)	3. Nonpublic Enrollment (2014-15)	4. Sum of Public and Nonpublic Enrollment	5. Total Per Pupil Sub-allocation	6. Total Nonpublic Loan Amount
Calculated Nonpublic Loan Amount	(No Response)	(No Response)	(No Response)	(No Response)	(No Response)	(No Response)

12. To ensure the sustainability of technology purchases made with Smart Schools funds, districts must demonstrate a long-term plan to maintain and replace technology purchases supported by Smart Schools Bond Act funds. This sustainability plan shall demonstrate a district's capacity to support recurring costs of use that are ineligible for Smart Schools Bond Act funding such as device maintenance, technical support, Internet and wireless fees, maintenance of hotspots, staff professional development, building maintenance and the replacement of incidental items. Further, such a sustainability plan shall include a long-term plan for the replacement of purchased devices and equipment at the end of their useful life with other funding sources.

By checking this box, you certify that the district has a sustainability plan as described above.

13. Districts must ensure that devices purchased with Smart Schools Bond funds will be distributed, prepared for use, maintained and supported appropriately. Districts must maintain detailed device inventories in accordance with generally accepted accounting principles.

By checking this box, you certify that the district has a distribution and inventory management plan and system in place.

14. If you are submitting an allocation for Classroom Learning Technology complete this table. Note that the calculated Total at the bottom of the table must equal the Total allocation for this category that you entered in the SSIP Overview overall budget.

	Sub-Allocation
Interactive Whiteboards	(No Response)
Computer Servers	(No Response)
Desktop Computers	(No Response)
Laptop Computers	(No Response)
Tablet Computers	(No Response)
Other Costs	(No Response)
<b>Totals:</b>	

15. To the extent possible, please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category.

Select the allowable expenditure type. Repeat to add another item under each type.	Item to be purchased	Quantity	Cost per Item	Total Cost
(No Response)	(No Response)	(No Response)	(No Response)	(No Response)

Smart Schools Investment Plan -

Pre-Kindergarten Classrooms

1. Provide information regarding how and where the district is currently serving pre-kindergarten students and justify the need for additional space with enrollment projections over 3 years.

(No Response)

2. Describe the district’s plan to construct, enhance or modernize education facilities to accommodate pre-kindergarten programs. Such plans must include:

- Specific descriptions of what the district intends to do to each space;
- An affirmation that pre-kindergarten classrooms will contain a minimum of 900 square feet per classroom;
- The number of classrooms involved;
- The approximate construction costs per classroom; and
- Confirmation that the space is district-owned or has a long-term lease that exceeds the probable useful life of the improvements.

(No Response)

3. Smart Schools Bond Act funds may only be used for capital construction costs. Describe the type and amount of additional funds that will be required to support ineligible ongoing costs (e.g. instruction, supplies) associated with any additional pre-kindergarten classrooms that the district plans to add.

(No Response)

4. All plans and specifications for the erection, repair, enlargement or remodeling of school buildings in any public school district in the State must be reviewed and approved by the Commissioner. Districts that plan capital projects using their Smart Schools Bond Act funds will undergo a Preliminary Review Process by the Office of Facilities Planning.

Project Number
(No Response)

5. If you have made an allocation for Pre-Kindergarten Classrooms, complete this table. Note that the calculated Total at the bottom of the table must equal the Total allocation for this category that you entered in the SSIP Overview overall budget.

	Sub-Allocation
Construct Pre-K Classrooms	(No Response)
Enhance/Modernize Educational Facilities	(No Response)
Other Costs	(No Response)
<b>Totals:</b>	

6. To the extent possible, please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category.

Select the allowable expenditure type. Repeat to add another item under each type.	Item to be purchased	Quantity	Cost per Item	Total Cost
(No Response)	(No Response)	(No Response)	(No Response)	(No Response)

Smart Schools Investment Plan -

Replace Transportable Classrooms

1. Describe the district’s plan to construct, enhance or modernize education facilities to provide high-quality instructional space by replacing transportable classrooms.

(No Response)

2. All plans and specifications for the erection, repair, enlargement or remodeling of school buildings in any public school district in the State must be reviewed and approved by the Commissioner. Districts that plan capital projects using their Smart Schools Bond Act funds will undergo a Preliminary Review Process by the Office of Facilities Planning.

Project Number
(No Response)

3. For large projects that seek to blend Smart Schools Bond Act dollars with other funds, please note that Smart Schools Bond Act funds can be allocated on a pro rata basis depending on the number of new classrooms built that directly replace transportable classroom units.

If a district seeks to blend Smart Schools Bond Act dollars with other funds describe below what other funds are being used and what portion of the money will be Smart Schools Bond Act funds.

(No Response)

4. If you have made an allocation for Replace Transportable Classrooms, complete this table. Note that the calculated Total at the bottom of the table must equal the Total allocation for this category that you entered in the SSIP Overview overall budget.

	Sub-Allocation
Construct New Instructional Space	(No Response)
Enhance/Modernize Existing Instructional Space	(No Response)
Other Costs	(No Response)
<b>Totals:</b>	

5. To the extent possible, please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category.

Select the allowable expenditure type. Repeat to add another item under each type.	Item to be purchased	Quantity	Cost per Item	Total Cost
(No Response)	(No Response)	(No Response)	(No Response)	(No Response)

Smart Schools Investment Plan -

High-Tech Security Features

1. Describe how you intend to use Smart Schools Bond Act funds to install high-tech security features in school buildings and on school campuses.

(No Response)

2. All plans and specifications for the erection, repair, enlargement or remodeling of school buildings in any public school district in the State must be reviewed and approved by the Commissioner. Districts that plan capital projects using their Smart Schools Bond Act funds will undergo a Preliminary Review Process by the Office of Facilities Planning.

Project Number
(No Response)

3. Was your project deemed eligible for streamlined Review?

Yes  
 No

4. Include the name and license number of the architect or engineer of record.

Name	License Number
(No Response)	(No Response)

5. If you have made an allocation for High-Tech Security Features, complete this table. Note that the calculated Total at the bottom of the table must equal the Total allocation for this category that you entered in the SSIP Overview overall budget.

	Sub-Allocation
Capital-Intensive Security Project (Standard Review)	(No Response)
Electronic Security System	(No Response)
Entry Control System	(No Response)
Approved Door Hardening Project	(No Response)
Other Costs	(No Response)
<b>Totals:</b>	

6. To the extent possible, please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category.

Select the allowable expenditure type. Repeat to add another item under each type.	Item to be purchased	Quantity	Cost per Item	Total Cost
(No Response)	(No Response)	(No Response)	(No Response)	(No Response)