

Smart Schools Investment Plan - 57030206000

SSIP Overview

Page Last Modified: 10/11/2016

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

Christopher Smith

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

607-776-3301 ext 1650

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

csmith@bathcsd.org

2. Please indicate below whether this is the first submission, a new or supplemental 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 - 57030206000

SSIP Overview

Page Last Modified: 10/11/2016

- 5a. Please upload the proposed Smart Schools Investment Plan (SSIP) that was posted on the district's website, along with any supporting materials. 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.

BCSD Preliminary SSIP 1-21-16--formal website posting for SMART BOND.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.

1,570

- 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:

\$1,826,167

- 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	171,856
Connectivity Projects for Communities	0
Classroom Technology	1,413,425
Pre-Kindergarten Classrooms	0
Replace Transportable Classrooms	0
High-Tech Security Features	30,000
Totals:	1,615,281

Smart Schools Investment Plan - 57030206000

School Connectivity

Page Last Modified: 09/26/2016

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 District currently exceeds the minimum requirement established by the FCC. The District currently has a 1GB connection to the Internet, 10 GB and 1 GB connections to all wiring closets from the MDF, and 350 MB wireless connections to each classroom with redundant/supplemental access points distributed throughout the district.

- 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	1,560	156,000	156	1 GB	1 GB	(No Response)

Smart Schools Investment Plan - 57030206000

School Connectivity

Page Last Modified: 09/26/2016

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

As the District looks to the future, it is clear that the level of saturation and bandwidth demands of end users will require an even more robust, flexible, reliable, and secure wireless infrastructure. The District has plans to address a majority of the projected high-speed broadband and wireless connectivity needs through a network refresh an upcoming capital project in conjunction with E-rate funding. However, it is necessary to immediately address a number of isolated issues that exist in "large group" instructional spaces as well common or public spaces.

The initial design of the District's current wireless network (2011) focused on coverage in classrooms. As the culture of our learning environment evolves we are seeing bandwidth demands increase and usage patterns evolve as well. While primary usage still occurs in the classrooms there has been a significant increase in usage and bandwidth demands in ancillary and large group spaces.

SSBA funds will be used to purchase and install next generation AC access points in areas that are used for or currently hold groups larger than 25 students. This will include instructional areas such as the distance learning room, LGI rooms, conference rooms, gymnasiums, and the auditorium. It will also include common spaces such as foyers and the cafeterias in the middle school and high school. Enhancing coverage in these spaces significantly increases the options and opportunities for both staff and students to gather and work collaboratively in larger groups.

To meet the demands of the evolving needs of our learning environment the District must address critical infrastructure and data center needs.

- The inclusion of the video and other rich multimedia resources over recent years has dramatically increased storage demands on the network. The current storage solutions is nearly 5 years old and near maximum capacity. Maintenance of the current solution requires regularly cleans up and frequent reorganization of data. This ceiling has and is affecting day to day decisions by staff about what resources they create/integrate. The addition of a new SAN solution and fiber channel switches will greatly increase opportunities and as well as improve performance and reliability.
- The APC Symmetra uninterrupted power solution in the MDF was installed during the 2002 building project. Because of its age, support and parts present a significant challenge. The District would like to upgrade this solution to the newest generation of APC technology to protect the equipment in the MDF as well as to monitor environmental conditions and performance.
- The District's current firewall solution is over 5 years old. The lack of throughput and processing power have begun to affect network performance. The district plans to replace the existing firewall with two firewalls set up for redundancy and load balancing. In addition significant improvements in the performance and reliability, the new firewalls will also provide next-gen IPS and advanced malware protection.

4. 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?")

The District is fully committed to the development and support of a 21st Century Learning Environment where the level of access, tools, resources, and activities mirror the real world. Access must be ubiquitous, efficient, reliable, and safe. When end users are provided this level of access opportunities for transformational learning abound and can significantly enhance the learning environment.

The SSIP proposed projects will ensure that the foundation which supports the transport, storage, and delivery of digital content throughout the district is reliable, efficient, safe and effective. The use of digital tools and resources throughout the district will not be limited by internal design factors.

Rich learning content will be accessible or may be created at any time virtually anywhere in the District.

The implementation of the proposed SSIP projects directly supports District Goal #1 in the Instructional Technology Plan. Students will use technology to enhance their learning, increase their knowledge and understanding across all areas of study, and develop essential technology skills which they will carry with them and build upon throughout their life.

Smart Schools Investment Plan - 57030206000

School Connectivity

Page Last Modified: 09/26/2016

- 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.

The District implemented a 1 to 1 program in grades 3-12 in the 2011-2012 school year. The program was expanded to grades 2-12 in the 2014-2015 school year. There are more than 1300 student notebook computers and 200 staff notebook or tablet computers deployed and moving throughout district on a daily basis. Historical data gathered from the wireless management system has provided a detailed picture of coverage, usage, and reliability. The extrapolation of current growth and usage data has provided a series of short and long term goals relating to the design and development of the District's wireless network.

To address the immediate or short term goals the District will integrate next generation AC access points in large group instructional areas as well as high-use common areas. The District will replace the existing access points in these areas with AC access point. The existing access points will be used to provide supplemental coverage in high-demand areas and also may be used as spares.

- 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. Please indicate on a separate row each project number given to you by the Office of Facilities Planning.**

Project Number
57-03-02-06-7-999-BA1

- 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?

Yes

- 7a. **Districts that choose the Streamlined Review Process will be required to certify that they have reviewed all installations with their licensed architect or engineer of record and provide that person's name and license number. The licensed professional must review the products and proposed method of installation prior to implementation and review the work during and after completion in order to affirm that the work was code-compliant, if requested.**

I certify that I have reviewed all installations with a licensed architect or engineer of record.

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

Name	License Number
Jeff Robbins, Hunt EAS	35151

- 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 - 57030206000

School Connectivity

Page Last Modified: 09/26/2016

	Sub-Allocation
Network/Access Costs	171,856
Outside Plant Costs	(No Response)
School Internal Connections and Components	(No Response)
Professional Services	(No Response)
Testing	(No Response)
Other Upfront Costs	(No Response)
Other Costs	(No Response)
Totals:	171,856

10. Please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category. This is especially important for any expenditures listed under the "Other" category. All expenditures must be eligible for tax-exempt financing to be reimbursed through the SSBA. Sufficient detail must be provided so that we can verify this is the case. If you have any questions, please contact us directly through smartschools@nysed.gov.
NOTE: Wireless Access Points should be included in this category, not under Classroom Educational Technology, except those that will be loaned/purchased for nonpublic schools.
Add rows under each sub-category for additional items, as needed.

Select the allowable expenditure type. Repeat to add another item under each type.	Item to be purchased	Quantity	Cost per Item	Total Cost
Network/Access Costs	AC Access Points	20	1,250	25,000
Network/Access Costs	NAS/SAN Storage Solution	1	61,500	61,500
Network/Access Costs	Data Center UPS Solution	1	30,356	30,356
Network/Access Costs	Fiber Channel Switches	2	12,500	25,000
Network/Access Costs	Firewall w/ intrusion detection (appliance)	1	30,000	30,000

Smart Schools Investment Plan - 57030206000

Community Connectivity (Broadband and Wireless)

1. 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)
Totals:	0

7. Please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category. This is especially important for any expenditures listed under the "Other" category. All expenditures must be capital-bond eligible to be reimbursed through the SSBA. If you have any questions, please contact us directly through smartschools@nysed.gov.
Add rows under each sub-category for additional items, as needed.

Smart Schools Investment Plan - 57030206000

Community Connectivity (Broadband and Wireless)

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 - 57030206000

Classroom Learning Technology

Page Last Modified: 09/26/2016

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 District currently exceeds the minimum requirement established by the FCC. The District currently has a 1GB connection to the Internet, a 10 GB and 1 GB connection from the MDF to all wiring closets, and 350 MB wireless connections to each classroom with redundant/supplemental access points distributed throughout the district.

- 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	1,560	156,000	156	1GB	1GB	(No Response)

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.

The District implemented a 1 to 1 program in grades 3-12 in the 2011-2012 school year. The program was expanded to grades 2-12 in the 2014-2015 school year. There are more than 1300 student notebook computers and 200 staff notebook or tablet computers deployed and moving throughout district on a daily basis. Historical data gathered from the wireless management system has provided a detailed picture of coverage, usage, and reliability. The extrapolation of current growth and usage data has provided a series of short and long term goals relating to the design and development of the District’s wireless network.

To address the immediate or short term goals the District will integrate next generation AC access points in large group instructional areas as well as high-use common areas. The District will replace 10 of the existing access points in these areas with AC access points. The existing access points will be used to provide supplemental coverage in high-demand areas or as spares.

Smart Schools Investment Plan - 57030206000

Classroom Learning Technology

Page Last Modified: 09/26/2016

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 - 57030206000

Classroom Learning Technology

Page Last Modified: 09/26/2016

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.

In the instructional environment, 100% of the classrooms have either an interactive LCD projector or a LCD project and an interactive whiteboard. A majority of the classroom projectors range in age from 5 to 7 years old. The interactive whiteboards range in age from 5 to 10 years old.

Unfortunately, over the past two years the District has seen a dramatic increase in the failure rates of projector bulbs, projectors, and SmartBoards. None of current devices in the current solutions are under warranty and down time is beginning to have a substantial effect on the instructional environment. To resolve this issue, the District intends to replace all of the interactive display solutions in classrooms and instructional spaces with 4K interactive LED displays. The interactive LED displays will dramatically increase resolution, image quality, reliability, longevity, and significantly reduce maintenance.

All classrooms are also outfitted with a sound solution for presentations. Roughly 85% of the classroom have only computer speakers for multimedia presentations. The remaining 15% utilize portable assisted listening systems. While the assisted listening requirements are currently being met for all students with identified needs, only a small portion of non-identified students benefit by enhanced audio in the classroom. In addition, the assisted listening systems currently being used are 6 to 8 years old and are becoming noticeably less reliable. According to current research - *to understand 100% of speech sounds, children need to hear the teacher's voice spoken 15 decibels louder than the background noise. But in a typical K-12 classroom, the teacher's voice is barely 5 decibels louder than surrounding noise — so only those children closest to the teacher can get the most information with the least amount of effort. Research over the last decade has shown that kids farthest from the teacher can miss up to 40% of what's being said. When it's that hard to keep up, it's no wonder they stop paying attention, cause disruption, and perform more poorly.* To address these issues, the District plans to install assisted listening systems in all classrooms throughout the District.

In the Math Department, we have nearly 100 graphing calculators that are at or nearing the end of their useful life. Many have become unreliable and repair or refurbishing are not an option. Integration into the learning environment has become very difficult due to the fact that most teachers only have a few working devices. To address this issue, the District will order approximately 100 new graphing calculators for the HS and MS math classroom.

Through the Pre-K grant the District was able to integrate Smart Tables in all Pre-K classrooms. The staff and students have found the SMART Tables to be very powerful tools in supporting child development. The learning applications that students can access on the SMART Tables encourages them to work together to solve problems. This collaborative problem solving helps to improve the students' social skills by encouraging them to listen to other students and communicate their ideas effectively. The reading, writing and problem solving activities on the SMART Table also help to develop students' cognitive skills, as well as develop their motor skills. The District will expand the use of SMART Tables to kindergarten, first grade, and all special education classrooms in the primary school.

In the Science Department, much of the current probeware has exceeded its useful life. Many probes are not compatible with the new software or connections. In addition the VEX robots and software being used within our STEM curriculum are no longer supported by the manufacturer. In order for the Science Department to continue to develop and support a high quality STEM curriculum it is necessary to upgrade both probeware and robotics packages.

The District maintains a solid technology curriculum including CAD, architecture, and computer graphics. The final products for student projects in the associated classes, in most cases, are a 1D or 2D drawing. The ability to expand these curriculums and courses to include 3D modeling and output has long been a goal of the District. Integration of a 3D printer into the learning environment would have a dramatic impact on the opportunities for staff to integrate more real-world projects and inspire students to re-design or even create new products.

The District frequently uses the cafetorium at VEW Primary School and the Auditorium at Haverling HS for instructional purposes such as guest speakers, performances, large group instruction, professional development, etc. There is not a dedicated display solution in the primary school and the current solution in the HS auditorium is antiquated and poorly designed limiting options for integration. The District plans to integrate a new display and sound solution in the primary school cafetorium and upgrade the solution in the HS auditorium. These new solutions will dramatically increase the usage options will substantially enhance the quality of the digital content presented within these spaces.

A majority of the district services and resources are currently running on an IBM Blade Center that is nearly 6 years old. The factory warranty expired a number of years ago and support of the solution is expensive and upgrade or expansion is not a viable option. The district would like to implement a more viable virtual server solution to support the VMware environment. This re-design will significantly reduce TCO for the solution, dramatically increase performance and reliability, as well as scalability.

Smart Schools Investment Plan - 57030206000

Classroom Learning Technology

Page Last Modified: 09/26/2016

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?")

The upgrade of all classroom display and sound technology will substantially enhance the learning environment by improving both the auditory and visual experience for all learners. The integration of 4K LED displays, document/digital cameras, as well as integrated digital audio solutions throughout the district will open the door to a wide variety of instructional opportunities for all staff and students. Whether it be the ability to integrate high quality – HD or better – digital resources into the learning environment; the ability to automatically record, archive and play back any lesson (both audio and video); the opportunity for video collaboration between classrooms or anywhere in the world; or simply the ability to more clearly hear the teacher or other students clearly at all times – the benefits for all within our learning environment be substantial and dramatic.

The inclusion of SMART Tables in all classrooms grades PK-1 and all special education classrooms in grades K-3 will provide access to a variety of instructional resources and UDL design options. This rich and inviting technology provides access to a variety of learning experiences for students that are captivating and engaging– promoting and supporting the growth of all students regardless of ability – in an inclusive and collaborative environment.

In grades 2-12, all students have access to a personal learning device throughout the day. Students in grades 6-12 are permitted to take the device home, thereby expanding access to learning resources as well as extending the school day. Students with special needs may have access to additional resources – touch display, text to speech software, visual support software, or other support resources based on their individual needs. Combined with enhancements in visual, audio, and storage technologies students should have access to a rapidly growing repository of instructional lessons developed by staff throughout the district. These lessons will provide the opportunity to reinforce, re-teach or supplement current classroom instruction. Additionally, the 1 to 1 environment provides our SWD and ELL students with access to a variety of digital resources such as MySciLearn's Fast Forward and Reading Assistant, Unique Learning System, MobyMax, and BrainPop ESL.

The development of the district's 1 to 1 program has significantly increased access to resources and support for students. In addition to provide access to a wide variety of resources for students with disabilities and ELL, the computers assigned to these student can be customized to meet their individual learning needs and style.

7. **Where appropriate, 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.**

The enhancement District-wide upgrade of visual and audio systems in all instructional spaces will provide numerous opportunities for staff, students, and to not only access beneficial content, but also to create and share content. The District currently uses Rise Vision in conjunction with 20 digital displays throughout the district to share information and celebrate accomplishments. The digital displays being added throughout the district will be integrated with the current solution and increase access to information from all instructional spaces. The District has plans to re-establish the broadcast communications course offerings, as well as to support the evolution of the solution from in inward facing medium to one that provides information to the community as well.

Each classroom or instructional space will have the ability to connect with other sources within or outside the district as well as to originate content to be delivered within or outside the district. The flexibility and power of this solution will provide numerous opportunities to develop and enhance relationships with outside agencies such as, connections with higher education institutions to support the curriculum or professional practice through the use of distance learning connections, virtual field trips, etc.

Smart Schools Investment Plan - 57030206000

Classroom Learning Technology

Page Last Modified: 09/26/2016

- 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."

The District is fully committed to providing on-going professional development for staff. As a part of the District's professional development plan a wide range of professional development opportunities exist for teachers, teaching assistants, and administrators. The current professional development catalog for staff includes nearly 50 offerings to choose from – inside the district, outside the district, and online. Please click here district catalog to view the Winter 2015-2016 PD offerings.

The offerings include a wide variety of technology-based resources such as SMART notebook, LCD BrightLink projectors, Microsoft products, Google Classroom, NetSupport School, Blogging, Glogging, Class Dojo, ClassLink LaunchPad, IXL Math, Reading A-Z, Flipped Classroom, Developing a Digital Classroom, SMART Table, etc.

The District also has a full-time K-12 Educational Technology Specialist who works with teachers throughout the District to support the use and integration of technology. In addition, each building has a Building Technology Mentor which provides peer to peer support, training, and integration planning and support. The District strongly believes that both the instructional leadership staff and the technical support staff need higher-level professional development in order to continue in their roles.

- 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.

- 9a. Please enter the name of the SUNY or CUNY Institution that you contacted.

SUNY Geneseo

- 9b. Enter the primary Institution phone number.

585-245-5000

- 9c. Enter the name of the contact person with whom you consulted and/or will be collaborating with on innovative uses of technology and best practices.

Dr. Anjoo Sikka

- 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

Smart Schools Investment Plan - 57030206000

Classroom Learning Technology

Page Last Modified: 09/26/2016

- 10a. Describe your plan to loan purchased hardware to nonpublic schools within your district. The plan should use your district’s nonpublic per-student loan amount calculated below, within the framework of the guidance. Please enter the date by which nonpublic schools must request classroom technology items. Also, specify in your response the devices that the nonpublic schools have requested, as well as in the in the Budget and the Expenditure Table at the end of the page.

The Bath Central School District has contacted Victory Baptist Academy and offered the \$250 per student allocation (16 students =\$4000) to purchase additional technology as part of the Smart Schools Act. Victory Baptist Academy representative (Wendy Ferguson) has declined this funding and a signed letter is on file in the District indicating their desire to not participate in this funding opportunity.

- 10b. A final Smart Schools Investment Plan cannot be approved until school authorities have adopted regulations specifying the date by which requests from nonpublic schools for the purchase and loan of Smart Schools Bond Act classroom technology must be received by the district.

By checking this box, you certify that you have such a plan and associated regulations in place that have been made public.

11. Nonpublic Classroom Technology Loan Calculator

The Smart Schools Bond Act provides that any Classroom Learning Technology purchases made using Smart 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.

	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.

Smart Schools Investment Plan - 57030206000

Classroom Learning Technology

Page Last Modified: 09/26/2016

	Sub-Allocation
Interactive Whiteboards	1,105,200
Computer Servers	60,000
Desktop Computers	(No Response)
Laptop Computers	(No Response)
Tablet Computers	(No Response)
Other Costs	248,225
Totals:	1,413,425

15. **Please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category. This is especially important for any expenditures listed under the "Other" category. All expenditures must be capital-bond eligible to be reimbursed through the SSBA. If you have any questions, please contact us directly through smartschools@nysed.gov.**
- Please specify in the "Item to be Purchased" field which specific expenditures and items are planned to meet the district's nonpublic loan requirement, if applicable.**
- NOTE: Wireless Access Points that will be loaned/purchased for nonpublic schools should ONLY be included in this category, not under School Connectivity, where public school districts would list them.**
- Add rows under each sub-category for additional items, as needed.**

Smart Schools Investment Plan - 57030206000

Classroom Learning Technology

Page Last Modified: 09/26/2016

Select the allowable expenditure type. Repeat to add another item under each type.	Item to be Purchased	Quantity	Cost per Item	Total Cost
Interactive Whiteboards	Interactive 4K LED Display	154	6,787	1,045,200
Computer Servers	Servers	6	10,000	60,000
Interactive Whiteboards	SMART Tables	12	5,000	60,000
Other Costs	FF Projection Screen	1	1,000	1,000
Other Costs	Auditorium Projector	2	5,000	10,000
Other Costs	Sound System	1	2,000	2,000
Other Costs	VEX Robotics Pkg.	2	5,000	10,000
Other Costs	NAO Robotics Pkg	1	10,000	10,000
Other Costs	Commercial 3D Printer	1	5,000	5,000
Other Costs	Ti Calculators	125	120	15,000
Other Costs	Classroom Assisted Listening System	154	1,139	175,525
Other Costs	High speed digital cameras	1	2,000	2,000
Other Costs	Pasco Universal Interfaces	6	500	3,000
Other Costs	Xplorer GLX Datalogger	10	390	3,900
Other Costs	Xplorer GLX Charging St.	1	500	500
Other Costs	3-Axis Accelerometer/Altimeter	3	89	267
Other Costs	Biology Standard Sensor Bundle	4	1,289	5,156
Other Costs	Ext. Bundle for Physiology	3	759	2,277
Other Costs	Chemistry Sensor Bundle	4	650	2,600

Smart Schools Investment Plan - 57030206000

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.

Please indicate on a separate row each project number given to you 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)
Totals:	0

6. Please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category. This is especially important for any expenditures listed under the "Other" category. All expenditures must be capital-bond eligible to be reimbursed through the SSBA. If you have any questions, please contact us directly through smartschools@nysed.gov. Add rows under each sub-category for additional items, as needed.

Smart Schools Investment Plan - 57030206000

Pre-Kindergarten Classrooms

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 - 57030206000

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.

Please indicate on a separate row each project number given to you 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)
Totals:	0

5. Please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category. This is especially important for any expenditures listed under the "Other" category. All expenditures must be capital-bond eligible to be reimbursed through the SSBA. If you have any questions, please contact us directly through smartschools@nysed.gov.

Add rows under each sub-category for additional items, as needed.

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 - 57030206000

High-Tech Security Features

Page Last Modified: 08/29/2016

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.

The District has a network of approximately 180 security cameras and six NVR server/ recorders. There are roughly 20 cameras currently connected to the CCTV system that are 7-8 years old 1.0 megapixel cameras. Those cameras are nearing the end of their useful life. Replacing the older 1.0 megapixel cameras with new 5+ megapixel cameras will dramatically improve the quality of images and significantly improve reliability.

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.

Please indicate on a separate row each project number given to you by the Office of Facilities Planning.

Project Number
57-03-02-06-7-999-BA1

3. Was your project deemed eligible for streamlined Review?

- Yes
 No

- 3a. Districts with streamlined projects must certify that they have reviewed all installations with their licensed architect or engineer of record, and provide that person's name and license number. The licensed professional must review the products and proposed method of installation prior to implementation and review the work during and after completion in order to affirm that the work was code-compliant, if requested.

By checking this box, you certify that the district has reviewed all installations with a licensed architect or engineer of record.

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

Name	License Number
Jeff Robbins, Hunt EAS	35151

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	30,000
Entry Control System	(No Response)
Approved Door Hardening Project	(No Response)
Other Costs	(No Response)
Totals:	30,000

Smart Schools Investment Plan - 57030206000

High-Tech Security Features

Page Last Modified: 08/29/2016

6. **Please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category. This is especially important for any expenditures listed under the "Other" category. All expenditures must be capital-bond eligible to be reimbursed through the SSBA. If you have any questions, please contact us directly through smartschools@nysed.gov. Add rows under each sub-category for additional items, as needed.**

Select the allowable expenditure type. Repeat to add another item under each type.	Item to be purchased	Quantity	Cost per Item	Total Cost
Electronic Security System	12.0 Megapixel CCTV cameras	20	1,500	30,000

Smart Schools Investment Plan - 57030206000

Report
