

## Smart Schools Investment Plan - GCFirewall2016

## SSIP Overview

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

Rita Melikian

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

5164781060

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

melikianr@gcufsd.net

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.

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- 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.

Technology Task Force report to BOErev.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.

4,300

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:

\$561,721

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	326,005
Connectivity Projects for Communities	0
Classroom Technology	0
Pre-Kindergarten Classrooms	0
Replace Transportable Classrooms	0
High-Tech Security Features	0
<b>Totals:</b>	326,005.00

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School Connectivity

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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.

With a student population of 3800 and an Internet bandwidth of 350 Mbps we are already very close to meeting the Federal Communication Commission (FCC) standard of 100 MBps for every 1000 student. However, based on our Internet use history our goal is to exceed the FCC standards. Therefore, for the 2016-2017 school year our bandwidth will be doubled to 700 Mbps with a goal of reaching one Gig the 2017-2018 school year. Consequently, the ratio for Internet speed for every 1000 student will be 250 Mbps. Our Internet service is provided by Nassau BOCES Bo-Tie and Lightpath.

- 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	3,800	380,000	380	350	700	September, 2016

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**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 intend to use the Smart Schools Bond Act (SSBA) funds to implement three projects with the main goal to increase our Internet bandwidth, insure continuity of service and provide easy management of our data center.

- 1.) The first project is aimed at increasing our Internet throughput to one Gig. The first step to increasing our Internet bandwidth involves the upgrade of other hardware including our Firewall. A firewall is a network security device that monitors incoming and outgoing network traffic and decides whether to allow or block specific traffic based on a defined set of security rules. The ability to increase the Internet throughput first and foremost hinges on the firewall's ability to manage the one Gig internet traffic. Our current firewall is capable of handling a traffic of up to 450 Mbps. The installation of a high-speed broadband not only is a requirement of the SSBA but also is necessitated as a result of the district-wide 1:1 initiative where our students are provided with personal wireless devices, such as iPads and Chromebooks. With the installation of the new firewalls and the increase to a one Gig throughput we will exceed the 100 Mbps per 1000 students. Our Internet speed numbers will be closer to 250 Mbps per student.
- 2.) Additionally, we intend to upgrade our existing uninterrupted power supply (UPS) in our data center and network closets to insure better continuity of service for our users.
- 3.) Update our data center infrastructure by replacing current 20-year old racks with new racks that provide precision cooling, UPSs, power management, monitoring and control technologies, and fire suppression.

**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 SSBA projects are designed to increase Internet bandwidth and insure continuity of service in order to guaranty robust access to online instructional resources for our students and faculty. A high-throughput and high-availability Internet is the cornerstone of our instructional technology plan. Most of our instructional resources are accessed on the Internet and therefore a robust network and Internet infrastructure is essential to our instructional program. Our instructional technology plan aims to provide engaging and individualized learning opportunities for our students in order to enhance student achievement. The upgrades included in our projects will make achieving our goals possible.

**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.**

Our district has completed the installation of an extensive wireless network with wireless access points in each classroom. Following a site survey of all our buildings, it was decided to install Cisco 2600i series that support the 802.11n protocol. We have an access point in every classroom in order to provide the best coverage and performance in each location. Each access point supports a bandwidth of up to 450 mbps for an average of 25-30 users in each classroom. These access points are managed by two Cisco 5508 controllers which provide high availability to our wireless network users. According to our technology plan, every student in grades 4-12 in our school district will have access to a wireless device in the classroom. Currently we support 1200 wireless users and will be adding close to another 800 users at the 2016-2017 school year. We plan on upgrading the access points as the need arises and the technology improves. With our current wireless infrastructure we should be able to meet the growth demands for the next 5-7 years.

**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
28-02-18-03-7-999-BA1

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- 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
Roger P. Smith, A.I.A	165141

- 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.

	Sub-Allocation
Network/Access Costs	294,005
Outside Plant Costs	(No Response)
School Internal Connections and Components	(No Response)
Professional Services	32,000
Testing	(No Response)
Other Upfront Costs	(No Response)
Other Costs	(No Response)
<b>Totals:</b>	326,005.00

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

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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	Palo Alto Firewalls Palo Alto Networks PA-3060	3	28,080	84,240
Professional Services	Installation for Palo Alto Firewalls	1	7,800	7,800
Connections/Components	Emerson Uninterrupted Power Supply (UPS) -Model GXT4-6000RT208, 6000 VA/4800 Watts Capacity, Nominal 208/120 or 240/120 VAC input and output and all related components	4	9,138	36,552
Connections/Components	Emerson Model GXT4-3000RT120, 3000 VA/2700 Watts Capacity, 120VAC input and output and related componenets	7	3,006	21,042
Connections/Components	Model GXT4-1500RT120, 1500 VA/1350 Watts Capacity, 120VAC input and output and other related components	28	1,239	34,680
Professional Services	Start Up and Installation services	1	23,529	23,529
Connections/Components	Smartrow Data Center Infrastructure cabinetes	1	117,491	117,491