SSIP1 Executive Summary

District-Wide Technology Infrastructure Upgrades

April 1, 2020

Presented to North Tonawanda City School District Board of Education

Archi-Technology Technology Consultants LLC

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SSIP1 Executive Summary Overview

Smart Schools Bond Act (SSBA) Overview

North Tonawanda City SD Mission and Goals

NTCSD Smart Schools Investment Plan (SSIP) 1:
Upgrade District-Wide Technology Infrastructure

Previous and Next Steps

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Smart Schools Bond Act (SSBA) Overview

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About the Smart Schools Bond Act of 2014

- The **Smart Schools Bond Act (SSBA)** was passed in the 2014 – 15 Enacted Budget and approved by the voters in a statewide referendum on Nov. 4, 2014.

- The SSBA authorized the issuance of **$2 billion** of bonds to finance improved educational technology and infrastructure.

- The intent of the SSBA is to **improve current learning opportunities for NYS K12 students** as well as future employment potential in the 21st Century job market.

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About the Smart Schools Bond Act of 2014 (cont.)

- The SSBA provides funds for **three specific areas:**
  - Instructional technology including devices
  - Technology infrastructure & connected systems incl. high-tech security features
  - Temporary classroom upgrades to permanent structures
- The SSBA requires that a Review Board review and approve districts' **Smart Schools Investment Plans (SSIPs)** before any funds are made available.
- SSIPs are developed by a **District's SSIP team** based on current conditions and the District's five-year objectives.
- **North Tonawanda City SD** is eligible for **$3,332,873** that can be used for technology and security upgrades via multiple requests.

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North Tonawanda City School District
Mission, Vision, and Goals

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NTCSD Mission and Vision

District Mission

To provide an excellent education to all that encompasses developing confident, creative, competitive and caring students.

District Vision

To develop a nationally recognized school system focused on:

- A collaborative environment that fosters the academic, emotional and social growth of each student through quality and purposeful educational experiences.
- Students becoming independent, productive and globally competitive citizens.
- Instilling the belief that each student is invaluable.

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NTCSD Technology Goals

1. Empower all students to acquire technological knowledge, skills and attitudes that are necessary to succeed in college or in the workplace.

2. Enhance teaching and learning across all grade levels and content areas and support the New York State Learning Standards.

3. Increase productivity and improve communications for the instructional and administrative management of data.

4. Improve access to technological resources in classrooms, libraries, labs, and offices.

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NTCSD Technology Goals (cont.)

5.   Provide extensive staff development in technology to support curricular, instructional, and administrative functions.

6. Provide adequate support for technology users and for timely repair and maintenance of equipment.

7. Promote the use of effective educational software and online resources.

8. Evaluate and report the progress of the technology plan to ensure its successful implementation.

Recommended NTCSD Technology Priorities

Reliable Technology Infrastructure

Project - Upgrade District-Wide Technology Infrastructure (CERs, Fiber Optic Cable & legacy cabling)
Project - Upgrade CERs in Spruce & Drake

Network (Wired & Wireless)

Project - Replace end-of-life Network Switches ('20/'21)
Project - Replace end-of-life Network Switches ('23/'24)

Building Communications Systems

Project - Improve Public Address (PA) systems

Security Systems

Project - Upgrade Security Systems in Meadow & IS
Project - Add Perimeter Door Monitoring
Project - Add coverage to Video Surveillance Systems

Classroom Systems

Project - Annual refresh for classroom printers
Project - Replace end-of-life Smartboards with Flat Panel Displays

Equipment & Devices

Project - Annual refresh for Student Devices & Desktops
Project - Annual refresh for Staff Devices & Desktops

More detailed project information is included in the district's **Comprehensive Technology Plan.**

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Recommended NCSD Technology Priorities (cont.)

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Projects included in SSIP1 shown in reverse type.

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NTCSD Smart Schools Investment Plans

The Smart Schools Investment Plan (SSIP)1 summarized here is currently estimated to cost **$3,332,873,** the district's entire SSBA allocation.

The preliminary Plan addresses district goals by funding the following projects:

- **Reliable Technology Infrastructure:** Upgrade District-Wide Technology Infrastructure (CERs, Fiber Optic Cable & legacy cabling)

- **Building Communications Systems:** Improve Public Address (PA) systems

- **Security Systems:**
  - Upgrade Security Systems in Meadow & Intermediate School
  - Add Perimeter Door Monitoring

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North Tonawanda City SD SSIP
Technology Infrastructure, Building Communications, and Security System Upgrades

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SSIP1: District-Wide Technology **Infrastructure Upgrades**

Current Conditions

The District's current Cable Plant Infrastructure is insufficient to meet current and future needs.

Recommended District-Wide Improvements

- Construct standards-compliant Technology Rooms (CERs)
- Install Communications Pathways
- Install new fiber-optic backbone cabling
- Replace legacy horizontal cabling with Cat 6/6A
- Install racks, cabinets and cable management

SSIP1: Building **Communication Systems** Upgrade

Current Conditions

The district-wide Public Address (PA) system in all buildings is nearing end-of-life. PA systems are an important component of Security Systems.

Recommended District-Wide Improvements

- Upgrade all existing building PA systems with an IP-connected solution that integrates with the district's Security systems.

SSIP1: District-wide **Security System** Upgrades

Current Conditions

The district's Security system does not currently monitor the status of perimeter doors. This is an important component of a district-wide Security System.

Additionally, the Security systems in Meadow Complex and the Intermediate School are nearing end-of-life and need to be replaced.

Recommended District-Wide Improvements

- Extend district-wide Security System to monitor all perimeter doors.
- Upgrade Security Systems in Meadow Complex and Intermediate School.

SSIP1: Infrastructure, Communications & Security System Upgrades

SSIP1 Total Funding

Categories	Sub-Allocation $ Amount
School Connectivity (details on next pages) *Includes* **Technology Infrastructure** *upgrades*	**$1,860,962**
High-Tech Security (details on next pages) *Includes* **PA, Perimeter Door Monitoring** & **Access Control** *systems upgrades*	**$1,471,911**
Total Estimated Cost	**$3,332,873**

SSIP1 Summary of Sub Allocations

Items	Total Cost
School Internal Connections and Components	$1,472,270
Electronic Security Systems	$1,080,994
Entry Control System	$110,000
Professional Services	$669,609
Total Estimated Cost	**$3,332,873**

SSIP1 Internal Connections and Components

Items	Qty	Avg. Cost per Item	Total Cost
Technology Room Improvements (AMEP, Grounding/Bonding & Fittings)	(21) CERs	$27.5K/CER	**$577,500**
Communications Pathway Upgrades (Sleeves and J-hooks)	6 locations	avg. $14.5K/each	**$89,200**
Fiber Optic Backbone Cabling Upgrades (50 micron backbone fiber between CERs)	5 locations	avg. $15.3K/each	**$76,500**
CER Fittings Upgrades (Racks, Cable Management)	6 locations	avg. $20.1K/each	**$120,750**
UTP Cabling Upgrades (Upgrade existing CAT 5/5e cabling to CAT6; also Jacks, Modules, Patch Cables as needed)	12 locations	avg. $50.6K/each	**$608,320**
Total Internal Connections and Components Costs			**$1,472,270**

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SSIP1 High-Tech Security

Items	Qty	Cost per Item	Total Cost
Public Address (PA) System district-wide upgrade	1	$1,021,594	**$1,021,594**
Perimeter Door Monitoring district-wide upgrade	6	$9,900	**$59,400**
Access Control System Upgrades (Intermediate and Meadow Complex MS & HS)	3	$36,667	**$110,000**
Total High Tech Security Costs			**$1,190,994**

SSIP1 Professional Services

Items	Qty	Cost per Item	Total Cost
Incidentals (20 – 25% of each item) *Design Fee, Construction Management, Design Contingency*	1	$669,609	**$669,609**
Total Professional Services Costs			**$669,609**

Next Steps

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SSIP1 Next Steps

Date	Milestone
April 1	SSIP1 Executive Summary - **Preliminary** Approval By Board
April 2	SSIP1 Executive Summary posted to district website for 30-day review and comment period
April 8	SSIP1 Facebook Live Presentation
_____	SSIP1 Executive Summary - **Final** Approval By Board TBD
_____	SSIP1 Submission to SSBA website TBD

Available Resources

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Available Resources

NTCSD Resources
- District Strategic Plan
- District Technology Plan
- District Comprehensive Technology Plan

NYS Resources
- Smart Schools Bond Act of 2014 Statute
- Smart Schools Bond Act FAQs
- Smart Schools Bond Act (SSBA) Guidance
- NYS State Education Dept. (SED) SSBA website

Questions and Discussion