21st Century Schools – From Good to Great

Derry Township School District
Options Presentation

creating places to *learn*

FANNING▾HOWEY

Improvement Plan

- Three elements
  1. Maintenance
  2. Capital Improvements
  3. 21st Century Learning Environment Improvements

Survey Responses

- 325 online surveys completed
- Community respondents
  - Middle and high schools are in good condition
  - Early Childhood Center & Primary / Intermediate Center furniture is in good condition
  - Parking is adequate, signage direct visitors properly, lighting in parking areas is adequate, and signage directs visitors properly
  - Playfields are in excellent condition
- Faculty/staff/administrator respondents
  - Favors creating an area for multiple learning modalities by enclosing a courtyard and creating an outdoor lab / classroom within existing courtyard
  - Agrees that altering facilities to enhance school facilities and increase educational course offerings
  - Indicates that technology is adequate

Improvement Plan

Maintenance Improvements

- *What* – Those items identified in the 2008 Facility Assessment including small maintenance items as well as basic capital improvements

- *Why* – Keeps the facilities functioning…"Warm, Safe and Dry" needs

- *Educational Benefit* – Maintains the current learning environment

Improvement Plan

Needed Improvements

- *What* – Items identified by the District
- *Why* – Improves the functionality of the buildings and the campus.
- *Educational Benefit* – Marginally improves the learning environment through improved operation.

Improvement Plan

21st Century Improvements

- *What* – Improvements to the facilities necessary to provide multiple learning modalities reflective of how students learn and teachers teach in an environment that supports education.

- *Why* – Research shows that students learn best through varied delivery methods. The buildings should support those methods.

- *Educational Benefit* – Supports evidence based curriculum and instruction the provides students the best opportunity to learn.

Improvement Plan – Maintenance

School	Item	1	2	3	Total
ECC	Site	$600			$600
	Building		$800		$800
	HVAC	$2,250			$2,250
	Plumbing			$1,900	$1,900
ECC Total		$2,850	$800	$1,900	$5,550
ES	Site	$1,700			$1,700
	Building		$89,500		$89,500
	HVAC	$18,000	$202,500	$11,000	$231,500
	Plumbing	$28,300	$2,000	$6,000	$36,300
	Electrical	$4,800		$13,300	$18,100
ES Total		$52,800	$294,000	$30,300	$377,100
MS	Site	$7,100		$3,950	$11,050
	Building	$26,000	$35,000	$2,000	$63,000
	HVAC			$21,500	$21,500
	Plumbing		$200		$200
	Electrical	$2,000	$2,100	$5,000	$9,100
MS Total		$35,100	$37,300	$32,450	$104,850
HS	Site	$1,600	$2,100	$1,775	$5,475
	Building	$37,000	$17,000	$25,000	$79,000
	HVAC	$7,000	$11,000	$11,500	$29,500
	Plumbing	$800	$1,700	$8,600	$11,100
	Electrical	$2,840	$1,030	$7,000	$10,870
HS Total		$49,240	$32,830	$53,875	$135,945
Grand Total		$139,990	$364,930	$118,525	$623,445

Improvement Plan – Capital Improvements

Technology

CCTV

Replace the existing cameras and adding new to provide coverage at all entrance, parking lots and other locations as identified.

Access Control / Intrusion Detection/ Miscellaneous Security

Replace the current swipe card readers and adding readers to locations where teachers and staff enter the buildings. Add combination camera/intercom stations at all main building entrances. Add door contacts and motion detectors at all exterior door locations and other vulnerable openings such as roof hatches.

Technology Cabling (Voice, Data, Wireless Access Points)

Removing all existing cabling and providing a "homerun" cabling system where each individual data/voice cable runs back to a technology closet using Category 5e cable for wired locations and Category 6A cable for the wireless access points.

Network Electronics and Wireless Access Points

Replace all of the technology closet electronic equipment with the exception of the "head end equipment" that has been recently upgraded. Anticipate being able to reuse some or all of it. To support the anticipated future wireless needs add wireless access points in all buildings. Generally average one access point per classroom.

Telephone

Replacement of the telephone systems in all building except for the Middle School and incorporte 911 calling feature.

Clock Systems

Replacement of all non-correcting and electric clocks with Master Clock and correcting battery clocks throughout the building and corridors.

Improvement Plan – Capital Improvements

Technology

Intercom
Replacement of the Intercom paging system in the High School and the Elementary Building.

Audio/Video Systems
Replacement of all video projectors, interactive white boards etc. The trend is now toward the use of Interactive Video Projectors projected onto a whiteboard. The newer projectors are not only interactive but are 3D capable among other features.

Miscellaneous
Develop a cyber learning lab in the District Office.

Upgrade infrastructure in the Cafeteria at each building to allow USB mobile device charging

System allowing wireless downloading of video from the bus cameras to Transportation server

Board Room remodel

Large stand alone UPS in the MC/ER in the District Office. (included in Network category)

Better sound systems in all large assembly spaces (gyms, auditorium, cafeterias, etc.)

Improvement Plan – Capital Improvements

Safe & Supportive Schools

Safety and Security Improvements (not included in Technology)
Improved campus vehicular/pedestrian plan
EVAC Chairs at multi-level buildings

Food Service

Equipment improvements

Early Childhood Center

Replace the one convection oven and add a second unit possibly with a combination oven
Replace the table-top steamer
New compressors and evaporators for the walk-in refrigerator and freezer

Elementary School

Replace food warmers

Middle School

Replace dishwasher
Replace two (2) older refrigerators
Replace convection oven
Replace air-curtain refrigerators

High School

New double stack combination ovens
Replace dishwasher

Improvement Plan – Capital Improvements

Buildings and Grounds

All Schools/District
Seal inlets to storm drains in the parking lots
Seal parking lot cracks
Concrete leveling
Expansion joints in sidewalks
Tree removal and replacement
Generator for buildings and grounds building *(diesel)*

High School
Re-roofing *(High School)*
Brick expansion joints at the High School (and Middle School) deteriorating
Replace several entrances to the High School *(main, bus and athletic area entrances)*
Install ductless split systems in the electrical rooms
Replace water softener system
More efficient electrical transformers
Upgrade low-voltage lighting system to GE TLC lighting system
Turf field replacement *(10 years old, seams starting to fail)*
Convert 2nd field from natural grass to turf
Weight Room upgrade

Improvement Plan – Capital Improvements

Buildings and Grounds

Elementary School   Leaks around windows

Refurbish cooling tower

Replace pneumatic controls with digital controls

Hot and chilled water pumps need to be replaced

Total Capital Improvements - $12,361,208

Improvement Plan – Needed Improvements
Safety & Security: Transportation Access

TO BE INCLUDED PRIOR TO THE PRESENTATION BASED ON INPUT RECEIVED

Improvement Plan – 21st Century Improvements

Guiding Philosophy

1. *Flexible* environments that allow for day- to-day space modifications.

2. *Effective technology* both in provision and use.

3. *Multiple learning modality areas* to move away from "sage on the stage" to "guide at the side".

Improvement Plan – 21st Century Improvements

Associated Actions

1. *Flexible* environments that allow for day- to-day space modifications.

2. *Effective technology* both in provision and use.

   - Continue to migrate to BYOD and wireless, anywhere access
   - Increase integration of technology into curriculum and delivery of education

Improvement Plan – 21ˢᵗ Century Improvements

Associated Actions

3. *Multiple learning modality areas* to move away from "sage on the stage" to "guide at the side".

   - Media centers converted to student learning commons
   - Cafeterias become more multi-use through the provision of alternative seating and technology
   - Project based learning areas in each school
   - Learn labs in each school
   - Distance learning areas

Improvement Plan – 21st Century Improvements

Early Childhood and Kindergarten

Convert classrooms to Integrated Learning Centers

- Option 1
  - Create Discovery and Exploration zones in each center
  - Enhanced flexibility is delivered through mobile learning stations and technology tools.
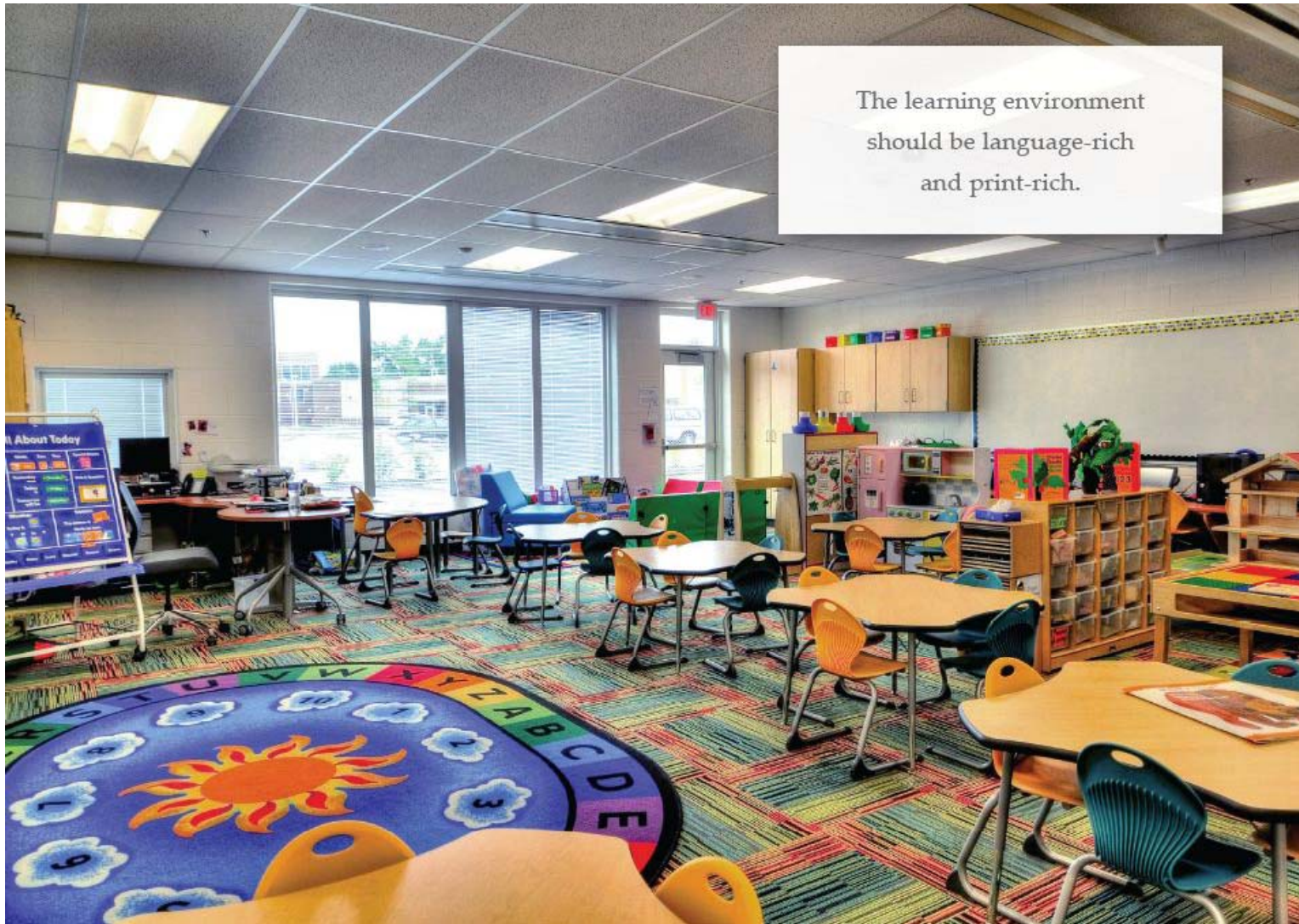
- Option 2
  - Operable walls between classrooms allow the space to adapt to individualized instruction.

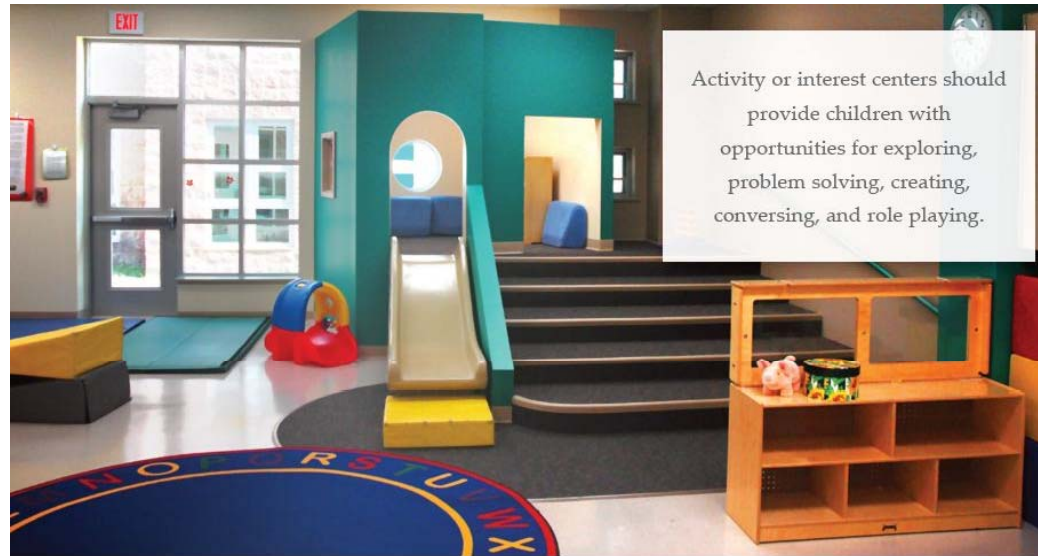 *The result is a truly adaptable and holistic approach to early childhood instruction.*

Improvement Plan – 21ˢᵗ Century Improvements

The learning environment should be language-rich and print-rich.

Improvement Plan – 21st Century Improvements

Activity or interest centers should provide children with opportunities for exploring, problem solving, creating, conversing, and role playing.

Improvement Plan – 21st Century Improvements

Primary and Intermediate Center

More common areas and teaming opportunities

Outdoor learning area

- Option 1
  - Enclose a courtyard to create an area for large group instruction and project based learning.

- Option 2
  - Addition for large group instruction and project based learning

- Option 3
  - Further develop a courtyard as an outdoor learning area

- Option 4
  - Use "all 4 corners" of classrooms for different learning modalities

- Option 5
  - Operable walls between selected classrooms allow the space to adapt to individualized instruction

Improvement Plan – 21st Century Improvements

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Improvement Plan – 21st Century Improvements

Middle School

Project based learning area

Learn labs for each grade level

Distance learning area

- Option 1
    - Enclose the amphitheater courtyard to create additional areas for large group instruction, and project based learning as well as year-round use.

- Option 2
    - Addition for large group instruction and project based learning

- Option 3
    - Further develop a courtyard as an outdoor learning area

- Option 4
    - Use "all 4 corners" of classrooms for different learning modalities

- Option 5
    - Operable walls between selected classrooms allow the space to adapt to individualized instruction

Improvement Plan – 21st Century Improvements

High School

Transition media center to learning commons; Life-skills/on-line learning spaces; More science lab spaces

- Option 1
  - Combine two existing lab spaces into one lab with two adjacent lecture/learn labs spaces.
- Option 2
  - Construct an addition for additional science lab spaces
- Option 3
  - Convert existing computer labs to learn labs
- Option 4
  - Convert media center to a learning commons
- Option 5
  - Operable walls between selected classrooms allow the space to adapt to individualized instruction
- Option 6
  - Addition for art and physical education expansion

STEM Lab