STRENGTHENING NEIGHBORHOODS THROUGH THEIR SCHOOLS

Lessons Learned from DC for Urban School Revitalization Programs
Ann Neeriemer  AIA, LEED AP
Senior Associate
Perkins Eastman DC

Peter James  AIA, LEED AP BD+C
Associate
Perkins Eastman DC
RESILIENCE is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.

Source: 100 Resilient Cities
CHRONIC STRESSES are slow-moving disasters that weaken the fabric of a city:

- Unemployment & poverty
- Deteriorating transportation infrastructure
- Endemic crime & violence
- Hunger & food deserts

Source: 100 Resilient Cities
ACUTE SHOCKS are sudden, unpredictable events that threaten a city:

- Natural disasters
- Terrorist attacks
- Disease outbreaks
- Political/social unrest

Source: 100 Resilient Cities
“Could someone help me with these? I’m late for math class.”

Scott Spencer
THE DC SCHOOLS MODERNIZATION PROGRAM

- Dedicated Funding Source
  - School Modernization Financing Act of 2006

- Shared Oversight
  - Deputy Mayor for Education
  - District of Columbia Public Schools (DCPS)
  - DC Department of General Services (DGS)

- Long-Term Investment
  - $250M/year, $3.2B to date
STABILIZE, MODERNIZE, OPTIMIZE

Roosevelt High School Courtyard

Tubman Elementary School
Perkins Eastman

Watkins Elementary School
Perkins Eastman DC
CITY RESILIENCE FRAMEWORK

- Leadership & Strategy
- Health & Wellbeing
- Infrastructure & Environment
- Economy & Society

Source: 100 Resilient Cities
Leadership & strategy

Fosters long-term & integrated planning
Empowers a broad range of stakeholders
Grows future generations of leaders

Economy & society

Health & wellbeing

Infrastructure & environment
Leadership & strategy

Economy & society
- Fosters economic prosperity
- Promotes equality and social justice
- Builds community

Health & wellbeing

Infrastructure & environment
Leadership & strategy

Economy & society

Health & wellbeing
- Meets basic needs
- Contributes to public health
- Promotes recreation & wellness

Infrastructure & environment
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Improves the natural and manmade environment
Provides emergency services
Promotes environmental stewardship
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PROMOTE EQUITY AND ACCESS TO RESOURCES CITY-WIDE
ENABLE MULTI-AGENCY COOPERATION
INVOLVE THE SCHOOL COMMUNITY IN THE DESIGN PROCESS
CREATE PLACES FOR FITNESS & RECREATION THAT CAN BE USED BY COMMUNITY OUTSIDE SCHOOL HOURS
PARTNER WITH COMMUNITY ORGANIZATIONS TO OFFER NUTRITION AND WELLNESS SERVICES

Joyful Food Market
Run by Martha’s Table

Marie Reed Health Clinic
Quinn Evans Architects

https://s3-media1.fl.yelpcdn.com/bphoto/biYx4CDG7tT8rj3xra92RQ/o.jpg
ENSURE STUDENTS ARE SAFE AT SCHOOL
PRACTICE SUSTAINABLE DESIGN AT ALL SCALES

A ground-source heat pump system (also known as a geothermal system) is like your skin—protects you from sun, wind, rain, and snow. This promotes a healthy environment by allowing natural light and fresh air into the building while keeping warm in the winter and cool in the summer.

Low-voltage, recycled, and regional materials, green housekeeping, and pervasive daylighting and views enhance the quality of the interior environment.

Solar panels, also known as photovoltaics (PV) panels, convert natural energy from the sun into clean, reliable electricity.

Rainwater collection and water-efficient fixtures reduce demand for fresh water and help maintain stormwater runoff.

Reducing our environmental footprint.

Future water facilities will capture and treat 35,000 gallons of stormwater.
CREATE HIGH-PERFORMANCE LEARNING ENVIRONMENTS
CASE STUDIES

ROOSEVELT SENIOR HIGH SCHOOL

DUNBAR SENIOR HIGH SCHOOL
A HISTORIC NEIGHBORHOOD SCHOOL
A WELCOMING ENTRANCE
CONNECTING TO THE COMMUNITY

Community Entry: The new Pavilion addition now provides a gracious entrance for the alternative STAY program and for after-hours community use of the health clinic, gym, and pool.
HEALTH CLINIC & SHARED RECREATION

ROOSEVELT

The team from the MedStar GUH clinic at Roosevelt HSDC provides students free physicals, sick visits and much more at the full service health care facility - in the school building! Meet them at the high school Resource Fair! @DOHDC @MayorBowser

Sean O’Donnell liked
DC Public Schools @dcpublicschools - Feb 27
CREATING A ‘HEART’
CONNECTING TO THE COMMUNITY
THE ‘WATERWORKS’ | TEACHING BUILDING

**FOOD PRODUCTION**

The greenhouse and garden serve the school and community as teaching tools for local, sustainable agriculture.

**DAYLIGHT & VIEWS**

Ample natural light and views to the outdoors improve the quality of the interior environment and enhance learning.

**RECYCLED CONTENT**

Selecting products made with recycled content keeps useful materials out of landfills and preserves natural resources.

**GEOTHERMAL**

A ground-source heat pump system (also known as a geothermal system) under the north athletic fields supports Roosevelt’s commitment to energy efficiency.

**WATERWORKS**

Rainwater harvested from the roof is stored in three cisterns in the Waterworks Courtyard and reused for flushing toilets and urinals.

**ELECTROCHROMIC**

The atrium skylight features electrochromic glass, which automatically adjusts throughout the day based on the amount of sunlight. This keeps the atrium comfortable and saves energy.
RESTORING SCHOOL PRIDE

- Daily attendance has increased
- Student re-enrollment has increased by 10%
- Student safety is reported as having increased by 9%
- Participation in AP courses has increased by 16%
- Successful completion of AP courses has increased by 8%
• Involve the community throughout the design process
• Reinforce the civic identity of the school in the design
• Hire local businesses and artists to work on the project

• Learn the history of the community, the school, and the people (community banners)

• Identify programs & spaces for joint use by the community
  • Public health clinic
  • Partnership with parks & recreation

• Storm water management
• Solar Energy
• Educational signage
CASE STUDY: DUNBAR SENIOR HIGH SCHOOL
ASPIRATIONAL ARCHITECTURE
ARMORY AS "HEART OF THE SCHOOL"
1977 REPLACEMENT BUILDING
EVOLVING URBAN DESIGN APPROACH
A REIMAGINED ARMORY
SETTING HIGH EXPECTATIONS FOR SUCCESS
TELLING THE SUSTAINABILITY STORY
IT TAKES A VILLAGE
MEASURING PROJECT SUCCESS

SENSE OF SAFETY: WELL FOSTERED BY THE SCHOOL

- Hallways, stairs, and elevators: 29% (63%)
  - 34% increase
- Bathroom and lockers: 29% (60%)
  - 31% increase

91 Credits, LEED Platinum
The highest scoring new school in the world
"A masterpiece of a green learning environment...
- USGBC Center for Green Schools

DUNBAR ACHIEVEMENTS

STUDENTS’ SENSE OF COMMUNITY: WELL FOSTERED BY

- Informal: 0% (70%)
  - 70% increase
- Formal: 6% (55%)
  - 49% increase

GRADUATION RATES: 10% increase
ENROLLMENT RATES: 20% increase
TEST SCORES:
- Reading scores: ↑ 24 points
- Math scores: ↑ 7 points
LARGEST GAINS of any city high school
- Reopened O Street to spur local development and improve neighborhood connectivity and safety
- Engaged alumni community in school planning and design, and invited them to milestone events
- Recognized illustrious African-American alumni and created aspirational school environment
- Hired local workers and artists to work on the building
- Worked with multiple agencies to design joint-use library, health clinic, pool & gym
- Solar power purchase agreement
- Stormwater BMP in public space (O Street)
- Raising the bar for DC public buildings—LEED Platinum
NOW IT’S YOUR TURN...
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