

**Public Schools:
Reclaiming Innovation
through Adaptive Reuse**

USGBC Government Summit 2011

Modernizing DC Public Schools

Washington DC

DCPS

WHS

Gerard Heiber, LEED AP, President
SIGAL Construction Corporation

SIGAL

Modernizing DC Public Schools

Washington DC

DCPS

WHS

Chris Dunlavey, AIA LEED AP
President of B&D and Co-Principal

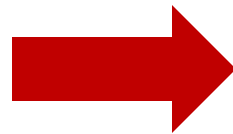
DC Partners for the Revitalization of Education Projects (DCPEP)



DC Public Schools

Pre - School Reform

- Turnover of Superintendents / Director of Facilities
- Lack of dedicated funding source for capital projects
- Historically plagued with mounting deferred maintenance challenges



118 out of 142 schools rated in “poor” condition or worse in 2005

DC Public Schools

School Reform

- Summer 2007 D.C. Mayor Adrian Fenty used authority of the Public Education Reform Act of 2007
- Public Schools (DCPS) shifted away from an autonomous school board to the city government
 - Created Office of the Chancellor & hired Michelle Rhee
 - Created Office of Public Education Facilities Modernization (OPEFM) & hired Allen Lew

Office of Public Education Facilities Modernization

Charged with the modernization of a system comprised of 142 school buildings



OPEFM's Charge

- Assume management of budget exceeding \$2.4 billion funding:
 - Former 13- to 18-year Capital Improvement Program
 - An initial stabilization program to correct major life safety, environmental and security issues
- Immediate assumption of management over capital improvement projects already initiated, exceeding \$650 million in project costs
- Analyze and Refine 2006 Master Facilities Plan and Capital Improvement Plan for Approval by DC Council

History of DC Schools Master Facilities Plan

- 2000 & 2006 Master Facilities Plan
 - Sequential Approach: School by School for 13 – 18 Years
 - Tear Down & Rebuild Focus
 - Swing Off Site
- 2008 & 2010 Master Facilities Plan
 - Phased Approach for ES / MS
 - Adaptive Reuse Focus
 - Swing On Site



OPEFM Today

Unprecedented \$1 billion in new school construction, long-overdue system and safety improvements, playgrounds, athletic fields & other amenities

- Full Modernizations 12 Completed / 6 In Progress
- Phased 1 Modernizations 13 Completed / 6 In Progress



HD Cooke ES - Before



HD Cooke ES - After

Modernizing DC Public Schools

Washington DC

DCPS

WHS

Beth Penfield, LEED AP, Project Manager
Brailsford & Dunlavey



BRAILSFORD & DUNLAVEY

DCPS / OPEFM Guiding Principles

Modernize/Enhance Our Classrooms – Focus attention on areas that most impact the learning environment of our students with a particular emphasis on incorporating researched-based facility elements, such as **enhanced natural lighting, acoustics, air quality, climate control** and technology, that directly impact student achievement and educator effectiveness.



Why Green Schools?

Green School – “a school building or facility that creates a healthy environment that is conducive to learning while saving energy, resources, and money.”

(USGBC 2008)



Why Green Schools?

- According US Census Bureau:

- 56 million students enrolled this Fall
- 7.2 million teachers in 2008
- 98,793 public schools (06-07)
- 28,219 private schools (07-08)

63.2 million
occupants in
127,012 K-12
facilities daily

- According to a 1999 US Dept. of Ed study the average age of US school building was 40-years old and 1-in-4 schools reported at least one part of their facility to be “less than adequate”

LEED® for Schools

Green
Building
Guidelines:

Prerequisites
& Credits

- Sustainable Sites
- Water Efficiency
- Energy & Atmosphere
- Materials & Resources
- Indoor Environmental Quality
- Innovation in Design

LEED® for Schools



- LEED for New Construction PLUS:
 - SS: Environmental Site Assessment, Site Master Plan, Joint Use of Facilities
 - WE: Process Water Use Reduction
 - IEQ: Minimum & Enhanced Acoustical Performance, Low-Emitting Materials: Furniture & Furnishings and Ceiling & Wall Systems, Mold Prevention

Greening of the District

- Legislation & Regulatory Action
 - Green Building Act of 2006 → LEED –S Certified
 - Clean & Affordable Energy Act of 2008
 - Greened Construction Code Roll Out
 - Lead Hazard Prevention and Elimination Act of 2008
 - Comprehensive Stormwater Management Enhancement Amendment Act of 2008
 - NEW: Healthy Schools Act 2010



OPEFM & Greening DCPS

Hurdles & Challenges to Greening

- Lack of inclusions for LEED for Schools
- General unfamiliarity with LEED
- Large un-modernized building stock
- Unclear utility tracking



OPEFM Today

- 6 LEED Certified Schools:
 - Gold: HD Cooke, School Without Walls, Savoy, Stoddert
 - Silver: Phelps
 - Certified: Scott Montgomery – KIPP DC Addition
- 8 LEED Certifications In Progress:
 - Eastern, Wheatley, Wilson, Woodson, Janney, Cardozo, Dunbar, Takoma
- If not LEED, still Design & Built with 'green' in mind
 - Legacy OPEFM Projects – Too late in the process
 - Phase 1s - Scope not comprehensive enough for LEED

Modernizing DC Public Schools

Washington DC

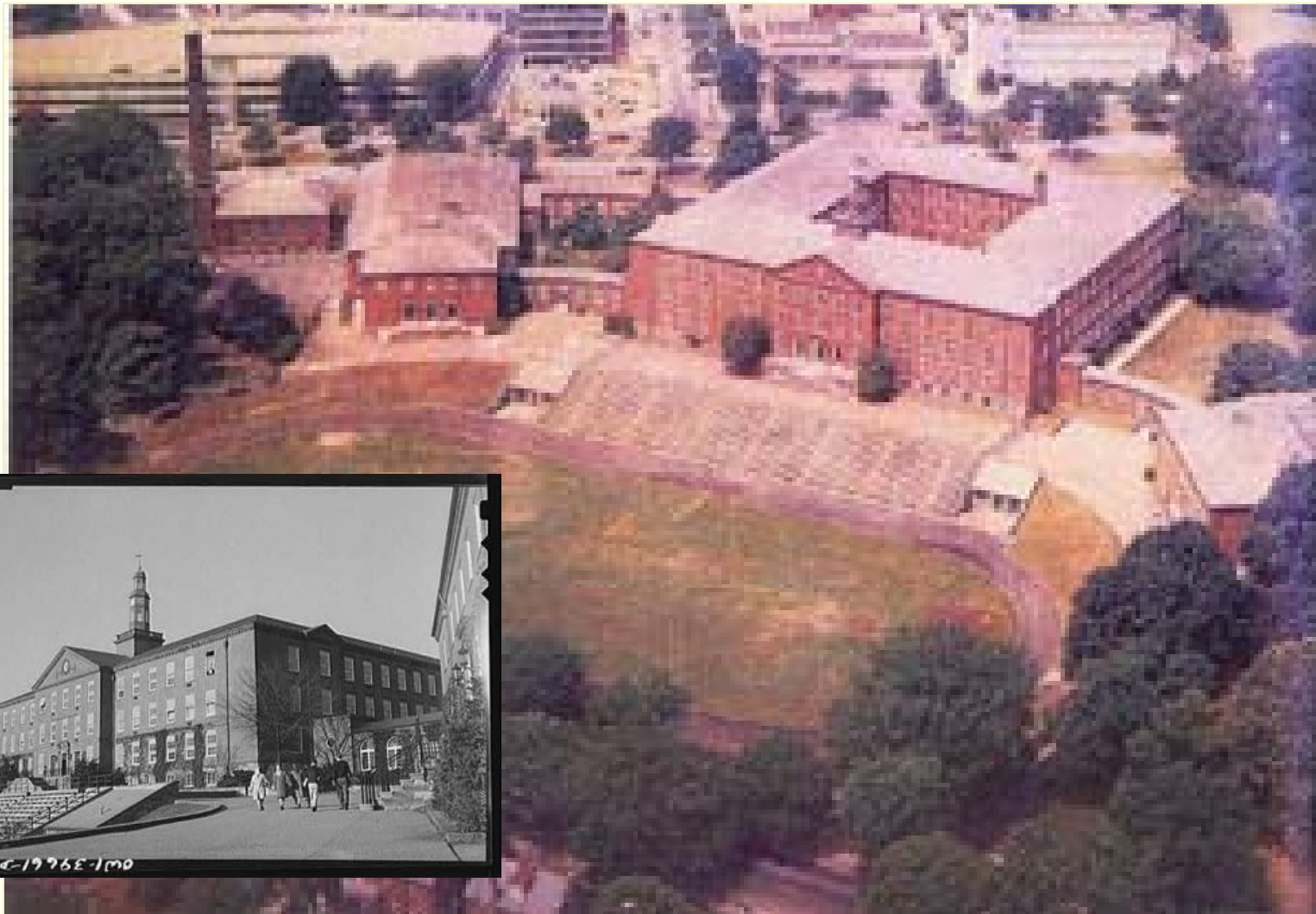
DCPS

WHS

Kerric T. Baird, Senior Vice President
GCS, Inc.

GCS | INC.

To Rebuild or Reuse?



Wilson HS Campus Modernization

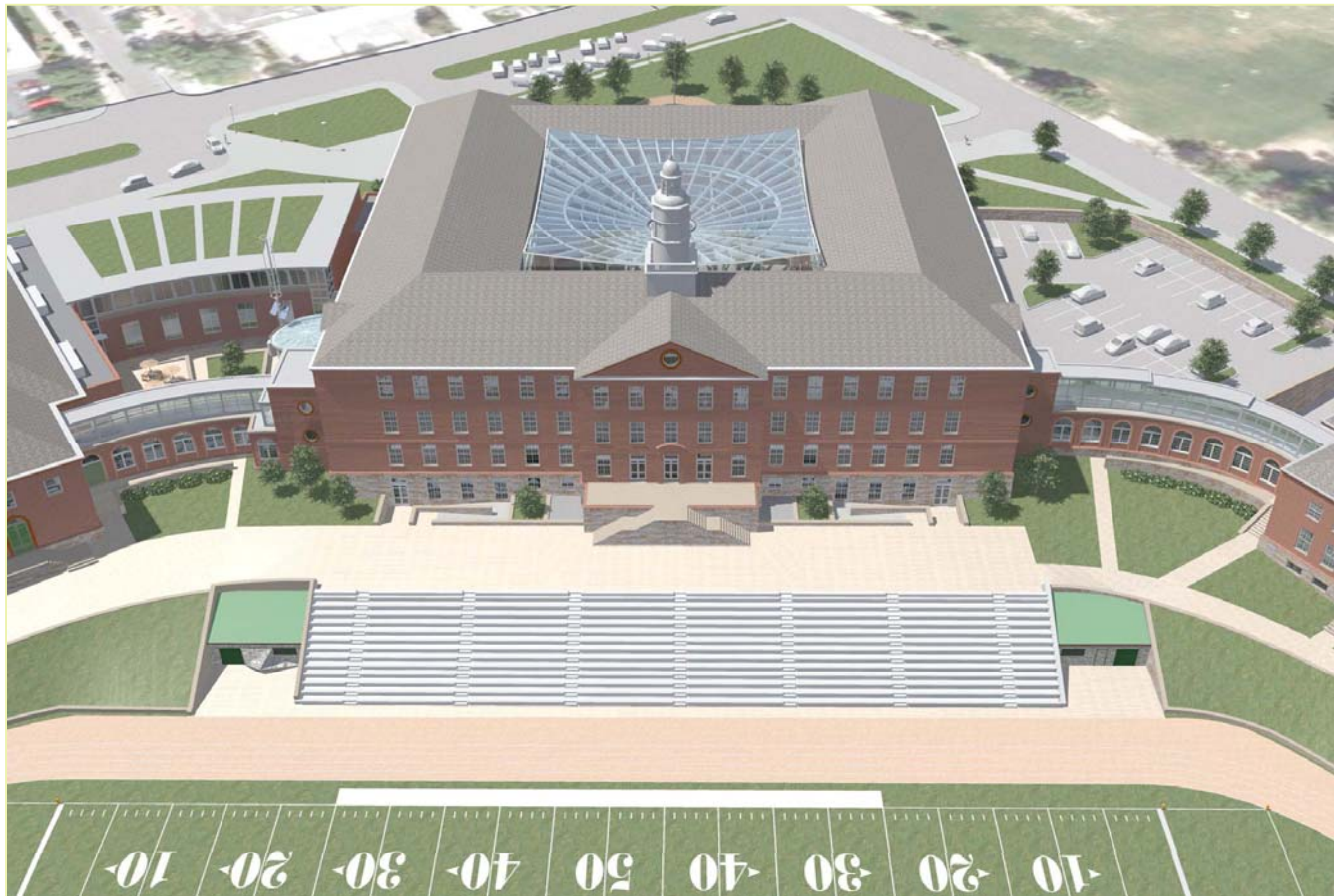
LEED Principles Applied

- Reuse of Materials
- Reuse of Walls, Floors, Roofs
- PV Panels
- Greenroof
- Cistern / Rainwater Harvesting
- Lighting Control
- Acoustics
- Thermal Comfort
- Windows
- Daylight Views

Wilson HS Campus Modernization



Wilson HS Campus Modernization



Wilson HS Campus Modernization



Wilson HS Campus Modernization



Wilson HS Campus Modernization



Wilson HS Campus Modernization



Wilson HS Campus Modernization



Wilson HS Campus Modernization



Wilson HS Campus Modernization



Wilson HS Campus Modernization



Wilson HS Campus Modernization



Wilson HS Campus Modernization



Wilson HS Campus Modernization



Wilson HS Campus Modernization



Wilson HS Campus Modernization

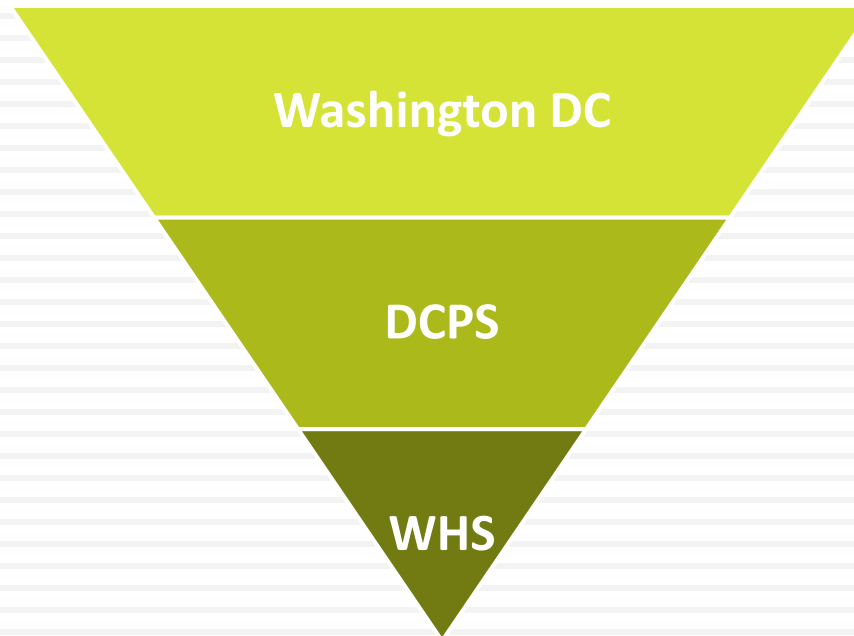
Other Principles

- Alternative Transportation
 - Public Transportation
 - Bike Storage
 - Low-Emitting & Fuel Efficient Vehicles
- Joint Use of Facilities
- School as a Teaching Tool

Wilson HS Campus Modernization



Modernizing DC Public Schools



Anthony DeGuzman, Dir. of Operational Reforms
Department Transformation Management
District of Columbia Public Schools (DCPS)



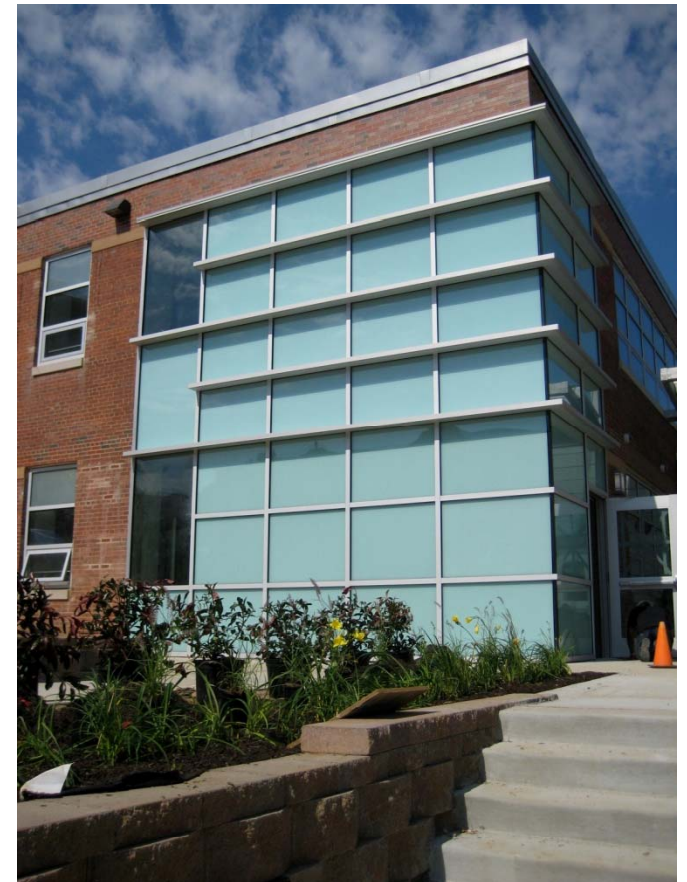
DISTRICT OF COLUMBIA
PUBLIC SCHOOLS

Teaching in a Green School

What does it mean to **teach** in a green DC Public School?

What does it mean to **operate** in a green DC Public School?

What does it mean to **maintain** a green DC Public School?



Teaching in a Green School

School as a Teaching Tool

- Integrating building features into curriculum
 - Not as easy as you'd think.....
 - LEED Credit: Min. 10 Hours / FTE Student
 - Ex: Stoddert ES, Green Education Foundation, & USGBC Center for Green Schools
- High School ACE Mentorship Program
 - Ex: Phelps ACE HS
- Respecting the Past & Historic Buildings

Phelps – School as a Teaching Tool



Sousa – Reinvigorate Historic Space



HD Cooke – Reinvigorate Historic Space





Operating in a Green School

School as a Teaching Tool

- Jump Starting a Recycling Program
 - Not as easy as you'd think....
 - Getting end users on board
 - Equipment Decisions
 - Contracts
- Reactions to New Environments
 - Lighting / Windows
 - Climates

H.D. Cooke – Daylighting



Phelps - Daylighting



School Without Walls



OPEFM: Phase 1 Modernizations

BEFORE



Tubman– Pre Modernization

OPEFM: Phase 1 Modernizations

AFTER



Tubman PreK– Post Modernization

Maintaining a Green School

School as a Teaching Tool

- 'New' Materials vs. 'Old' Custodial Culture
 - No VCT to Wax!!
 - Waterless Urinals??
 - Green Housekeeping Plan
- 'New' Systems vs. 'Old' Engineering Culture
 - Automated vs. Manual
 - Service & Maintenance Agreements

QUESTIONS?

A+

