

# THEODORE ROOSEVELT SENIOR HIGH SCHOOL

WASHINGTON, DC



# PROJECT SUMMARY

## **Project Name:**

Theodore Roosevelt Senior High School Modernization

## **Client:**

DC Department of General Services

## **Program:**

Roosevelt Senior High School

Curriculum: Comprehensive, International  
Baccalaureate High School

Grades: 9-12

Projected Enrollment: 800

Roosevelt STAY

Curriculum: Alternative Day/Evening High School

Grades: 9-12

Projected Enrollment: 300 approx.

## **Building Size:**

330,000 gsf

## **Dates of Original Construction:**

Main Academic Building, Theater and Gym: 1932

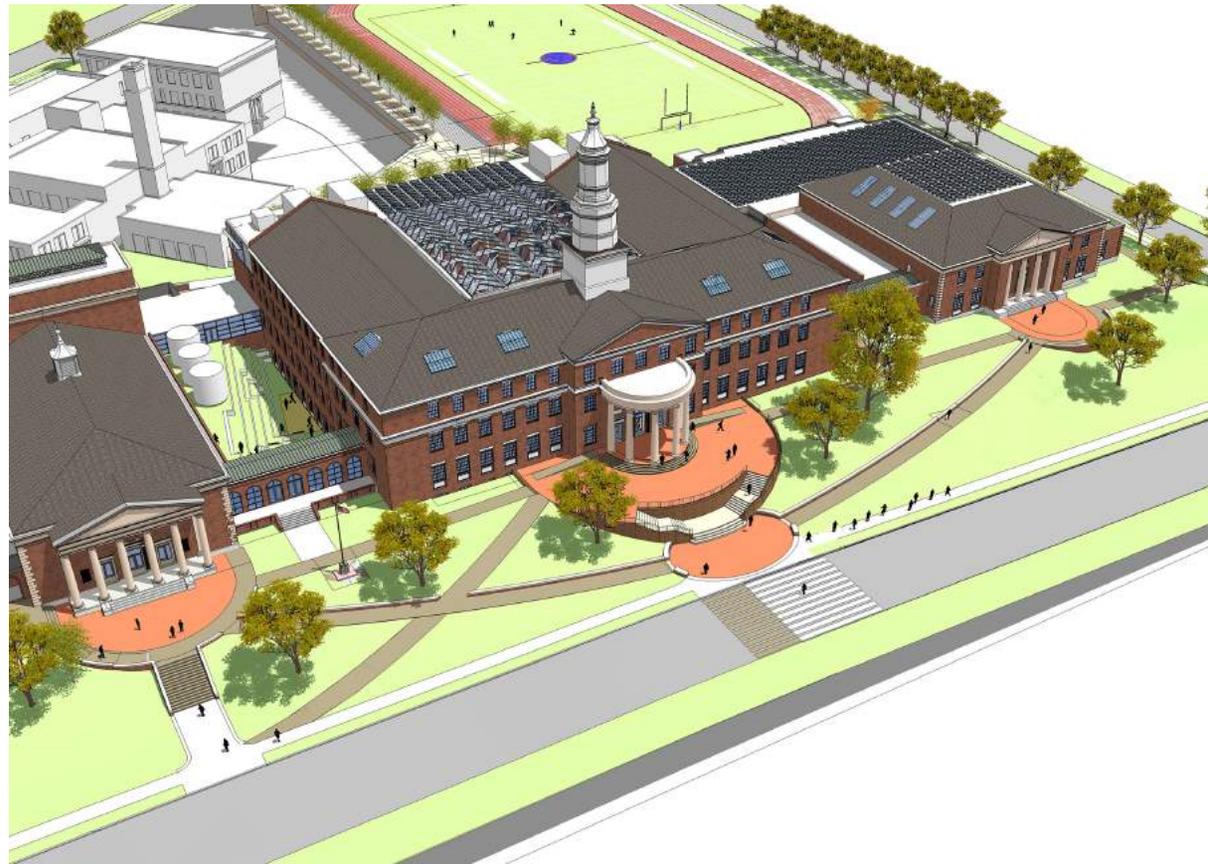
North, 4th Floor and Pool Additions: 1977

## **LEED Certification:**

Pursuing LEED for Schools 2009 Platinum

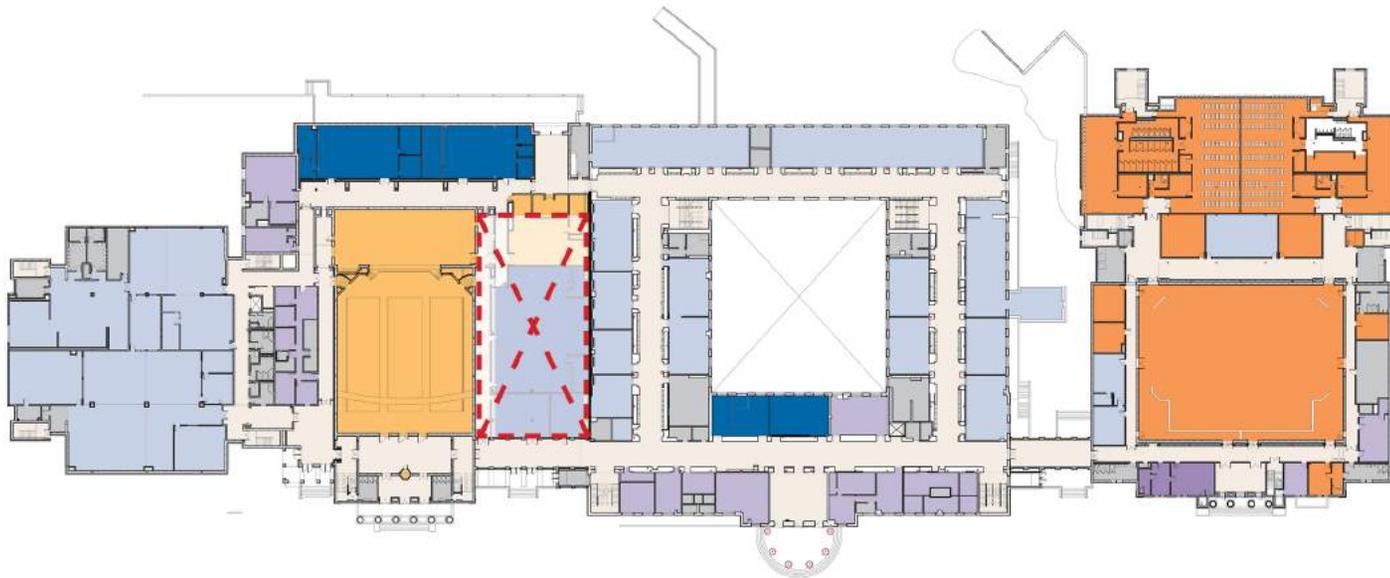
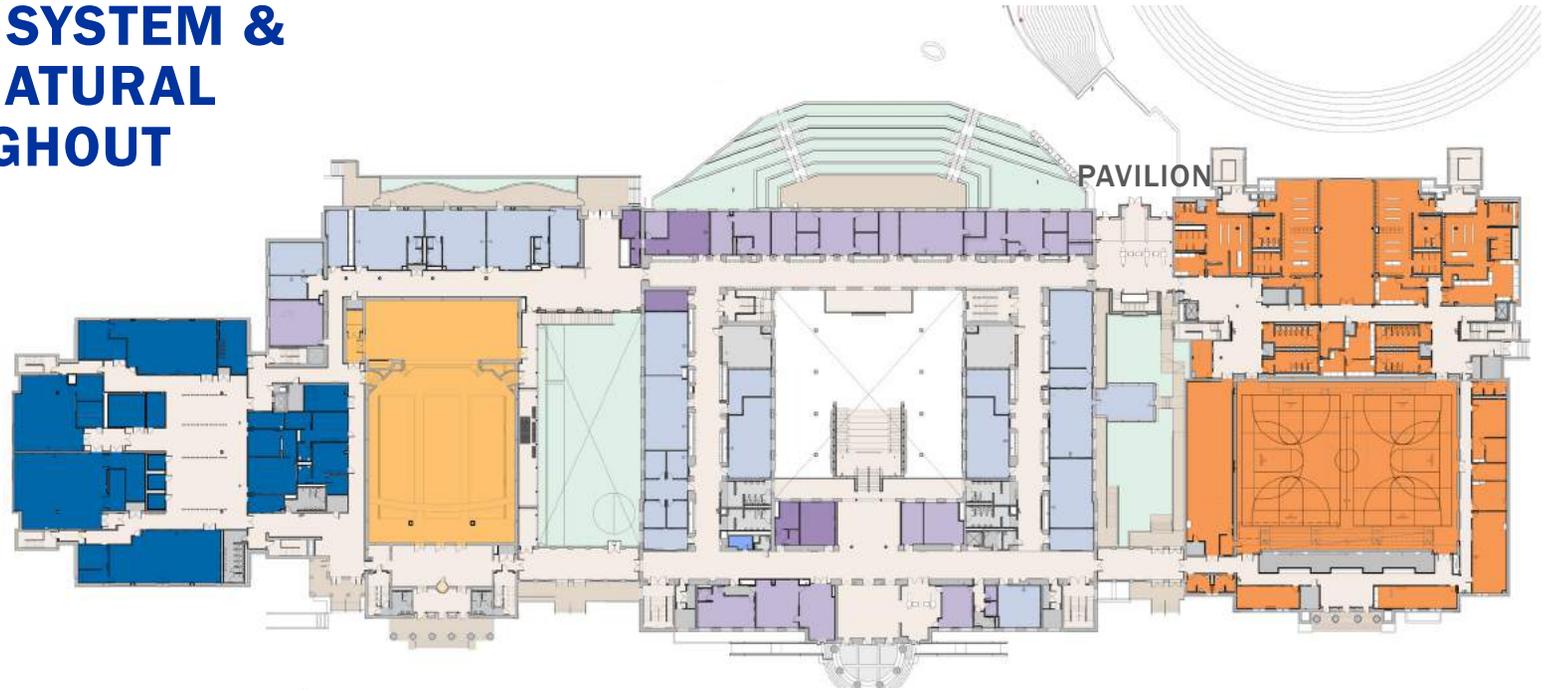
## **Ribbon Cutting:**

August 19, 2016



# COMPLETING THE CIRCULATION SYSTEM & ENHANCING NATURAL LIGHT THROUGHOUT

**1st Floor Plan After** – With the addition of the “Pavilion,” the circulation between each of the four buildings comprising the campus is finally complete, easing access to all of the school’s resources.



## Program Legend

- ACADEMIC
- ADMINISTRATION
- AUDITORIUM
- AUDITORIUM SUPPORT
- Circulation
- FAMILY SUPPORT
- FIELD
- MEDIA CENTER
- MEP
- PATHWAYS
- PERFORMING ARTS
- PHYSICAL EDUCATION
- SPECIAL ED.
- STAY
- SUPPORT
- VISUAL ARTS

**1st Floor Plan Before** – To realize the goal of natural light and views throughout, the team removed the 1970’s windowless infill from the northern courtyard and added skylights and windows to the remaining 1970’s additions.

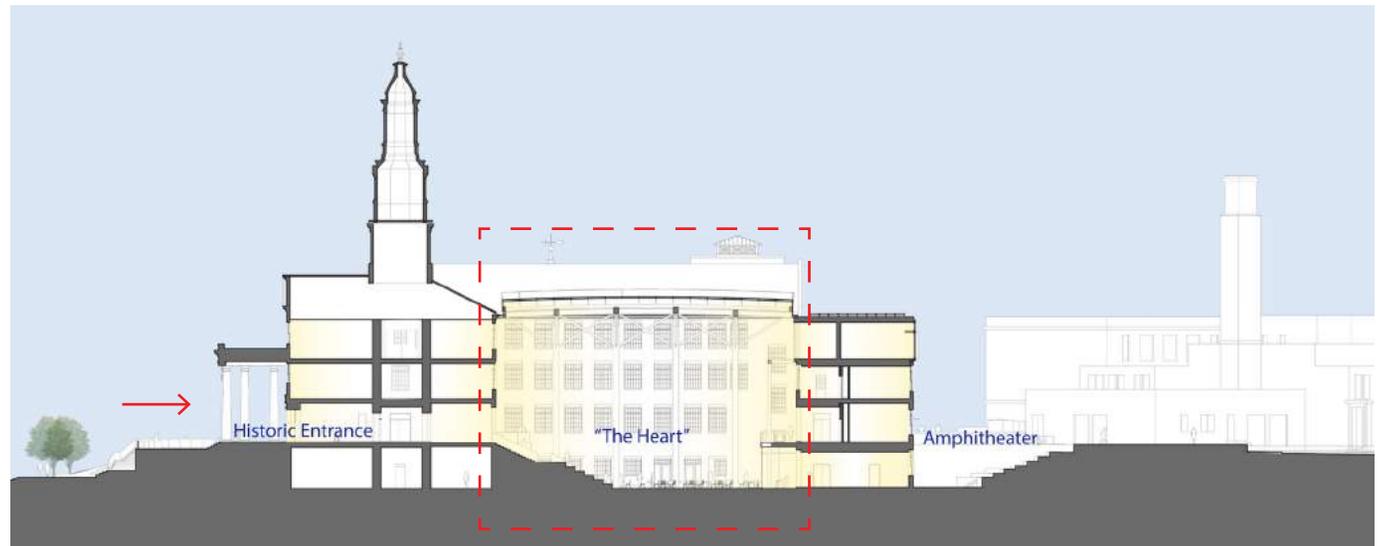
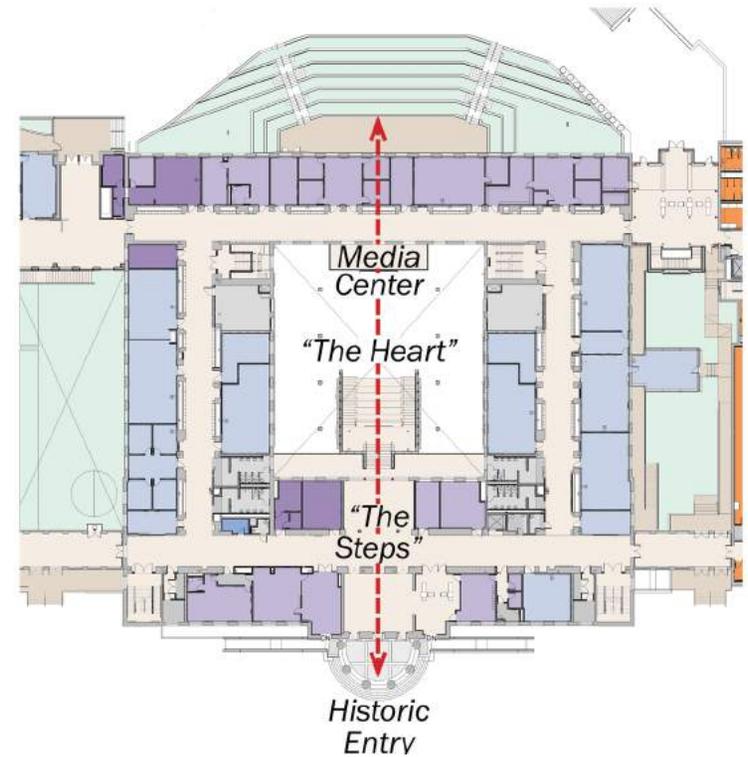
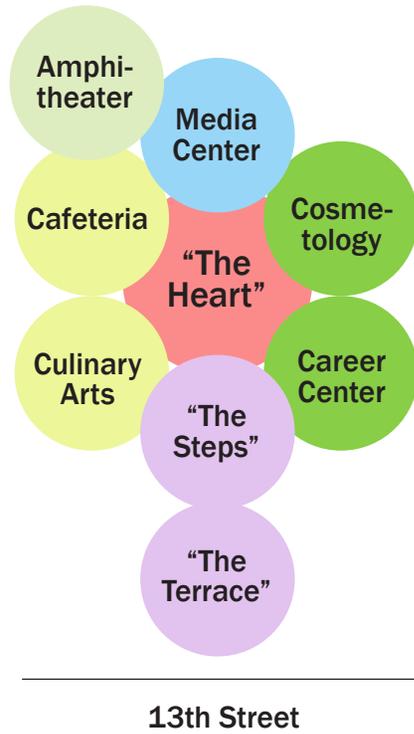


## THE NEW ATRIUM | The “heart” of the school

Situated at the crossroads of the campus, the Heart of the School will become the literal and social center of the school community. The acoustical baffles celebrate all of the nationalities represented in the RSHS community.

# “THE HEART” OF THE SCHOOL

In reorganizing the school, an atrium was created in the former little used central courtyard. With a new monumental stair, this move allowed the organization of the community oriented program elements around this “heart” along an axis beginning at the historic front door and ending in the new amphitheater.



# ATRIUM BEFORE & AFTER

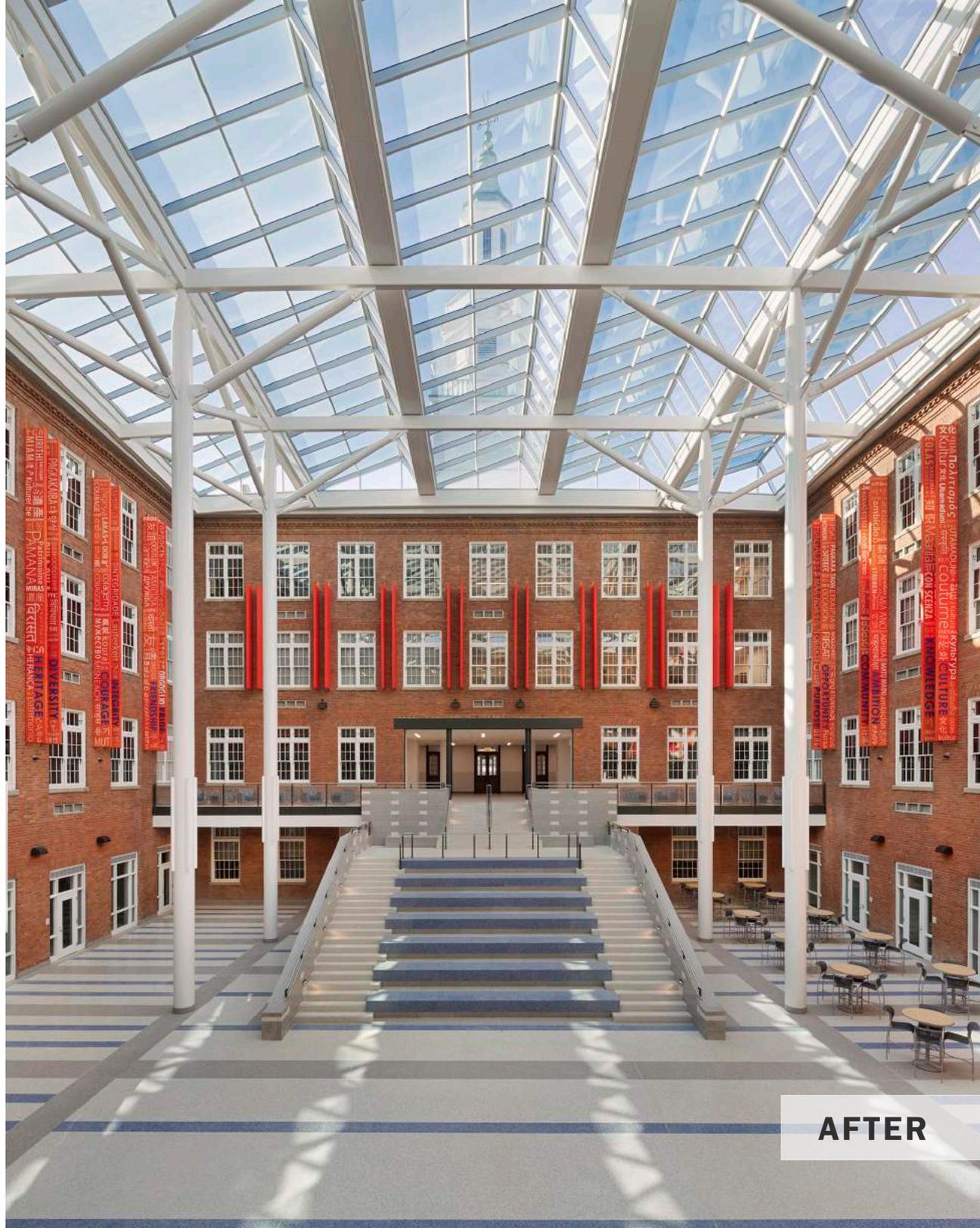
**BEFORE**



The courtyard before modernization was largely unused.



Stripped of ornament in the 1970s, the cupola was restored and is celebrated by being visible through the atrium's 10,000 sf electro-chromic glass ceiling.



**AFTER**

# UNCOVERING THE PAST

Two historic frescos were discovered beneath decades of paint. After restoration, the frescos are featured at the top of the grand stair.

## BEFORE



## AFTER

# WATERWORKS

## BEFORE & AFTER

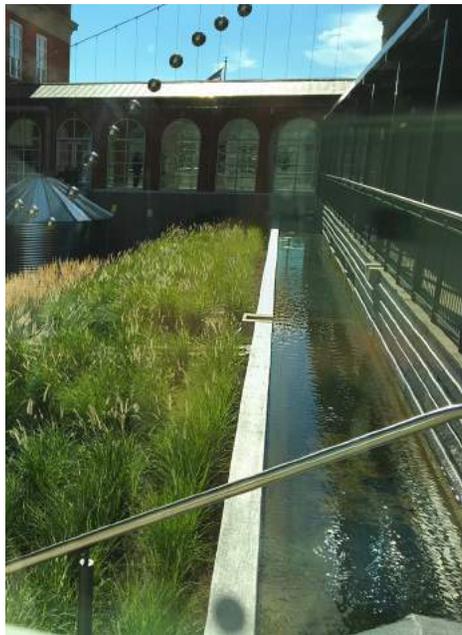
**BEFORE**



The northern courtyard was infilled in the 1970s. Windows were blocked and natural light cut off from surrounding program spaces.



With the infill demolished, the restored courtyard celebrates rainwater and the hydrologic cycle. Water from the roof cascades down the new terraces – accented by public art – to be captured into one above-ground cistern and two beneath the landscaped terraces.



**AFTER**

# CAFETERIA

BEFORE & AFTER

**BEFORE**



Before the modernization, the dark and uninviting cafeteria was in the bottom of the infilled north courtyard.



After, the dining has been moved back into the 1930s academic wing with views and access into the reopened north courtyard.



**AFTER**

# SUSTAINABILITY FEATURES

Plaques describing the sustainable features of this LEED Platinum (pending), high performance learning environment are placed around the school to help students, teachers, and the community understand its many “green” features.

There are a total of 20 different sustainable features illustrated throughout the site.



## WATERWORKS

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

With two 15,000-gallon cisterns buried below the landscaped terraces and one 25,000-gallon cistern above ground, the school can collect up to 55,000 gallons of rainwater for reuse.

By diverting rainwater from running off the site, the Roosevelt campus will reduce its impact on the Anacostia River watershed.



## ELECTROCHROMIC

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

Electrochromic glazing on the south-facing sections provides daylight and views while blocking solar heat gain and glare. This “smart” skylight helps reduce the need for air conditioning in the warmer months.



## FOOD PRODUCTION

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

Growing food locally puts us in touch with the seasons, yields fresh and tasty fruits and vegetables, and reduces pollution from long-distance shipping and refrigeration.



## DAYLIGHT & VIEWS

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

Natural light is provided to over 90% of classrooms and offices at Roosevelt. Daylighting and views to the outside have been correlated with improved student performance, while glare and direct sunlight can be negative factors. To allow ample daylight yet prevent excessive brightness and glare, the building uses high-performance glazing, and interior roller shades.



## RECYCLED CONTENT

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

Twenty percent of the building materials at Roosevelt, including windows, doors, ceramic tile, and acoustic ceiling panels, are made with recycled content.



## GEO THERMAL

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

The geothermal system, made up of more than 200 wells that measure 500 feet deep, takes advantage of the earth’s constant year-round temperature to help heat and cool the building. This system reduces the building’s demand for energy from fossil fuels.

# AMPHITHEATER BEFORE & AFTER

**BEFORE**



Students used to enter the east side of the building and, despite the fact that it faced the stadium, the east side was definitely the “back” of the campus and not an appropriate replacement for the historic front door.



Featuring bio-retention gardens, the new amphitheater creates a new outdoor gathering place on the east side, allows natural light and views into and from the new media center, and graciously ends the axis beginning in the historic front door on the other side of campus.



**AFTER**

# COMMUNITY ENTRY

## BEFORE & AFTER

**BEFORE**



The south courtyard was previously neglected and hard to secure.



After, the new Pavilion addition enclosed the courtyard and now provides a gracious entrance for the alternative STAY program and for after-hours community use of the health clinic, gym, and pool.



**AFTER**

# GYMNASIUM

## BEFORE & AFTER

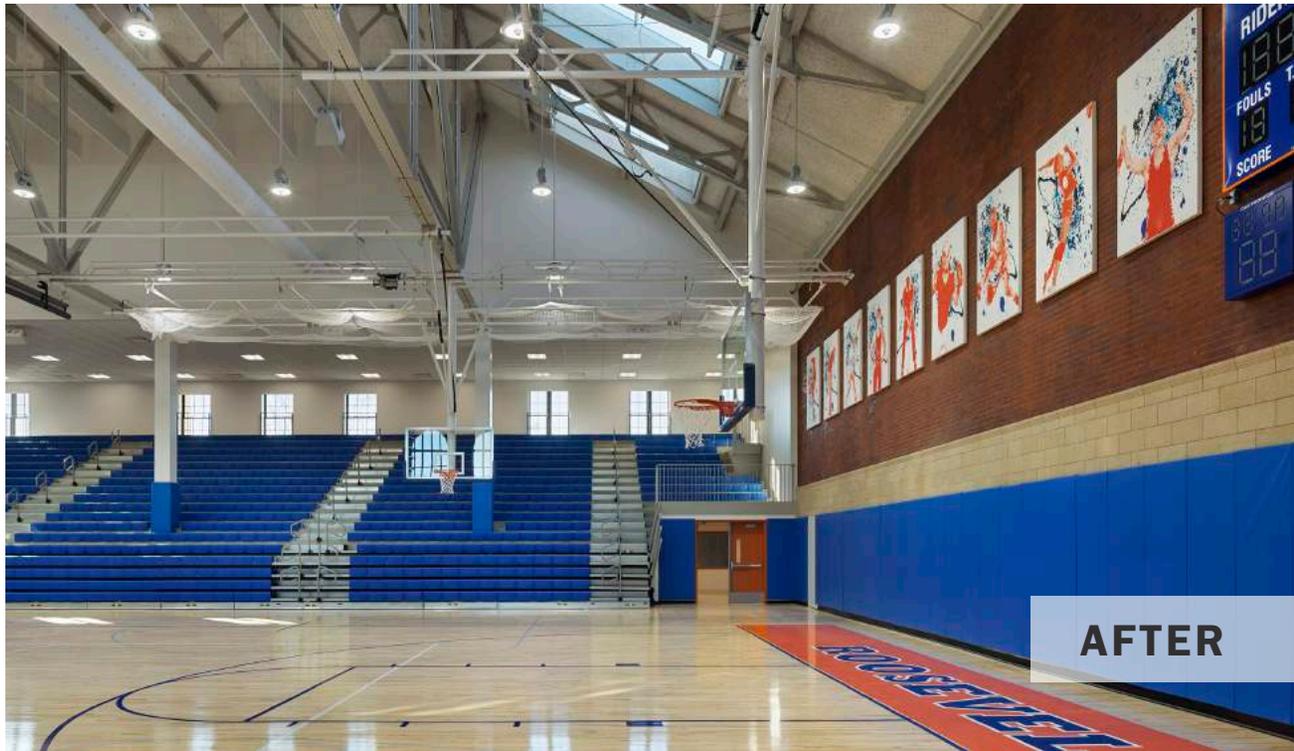
**BEFORE**



Like the theater, the gym had great DNA and natural light but could not seat the entire school for major events.



By removing the floor above the entrance and a large blank brick wall, a new 1,000 seat bleacher could be installed. New artwork on the acoustical panels celebrates sport.



**AFTER**

# AUDITORIUM BEFORE & AFTER

**BEFORE**



The theater had great DNA before the modernization.



Water damage and quirky acoustics marred its use, however. After the modernization, the acoustics have been refined and the notable architectural features have been restored to their former glory including historic lighting housing new LED fixtures.



**AFTER**

# MUSIC ROOMS

## BEFORE & AFTER

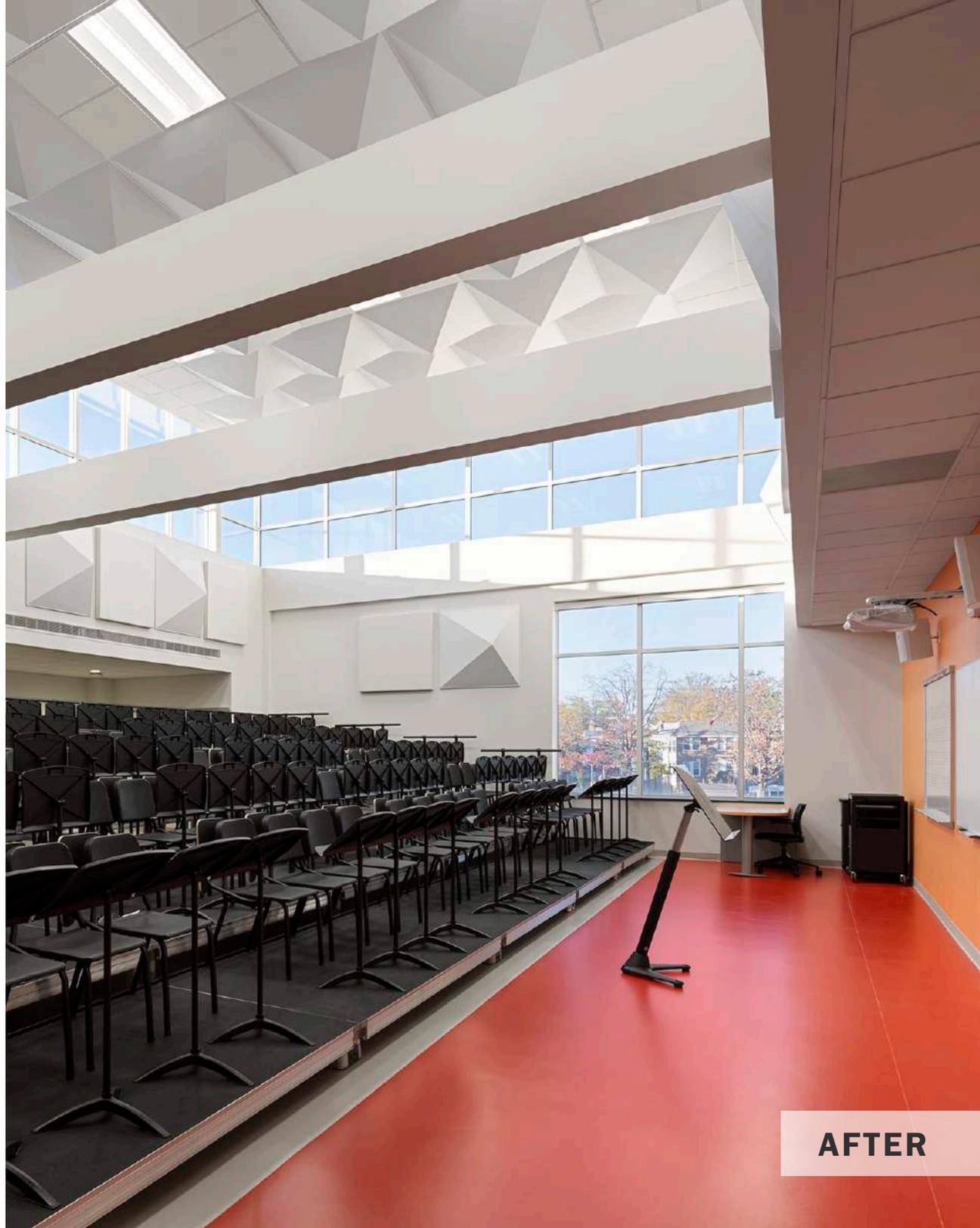
**BEFORE**



Before the modernization, the northernmost 1970s addition was windowless, dark, and hard to navigate.



By simplifying the plan, adding large windows, and raising the roof for new skylights and clerestories, this wing was transformed into a daylight-filled home for the Visual and Performing Arts.



**AFTER**

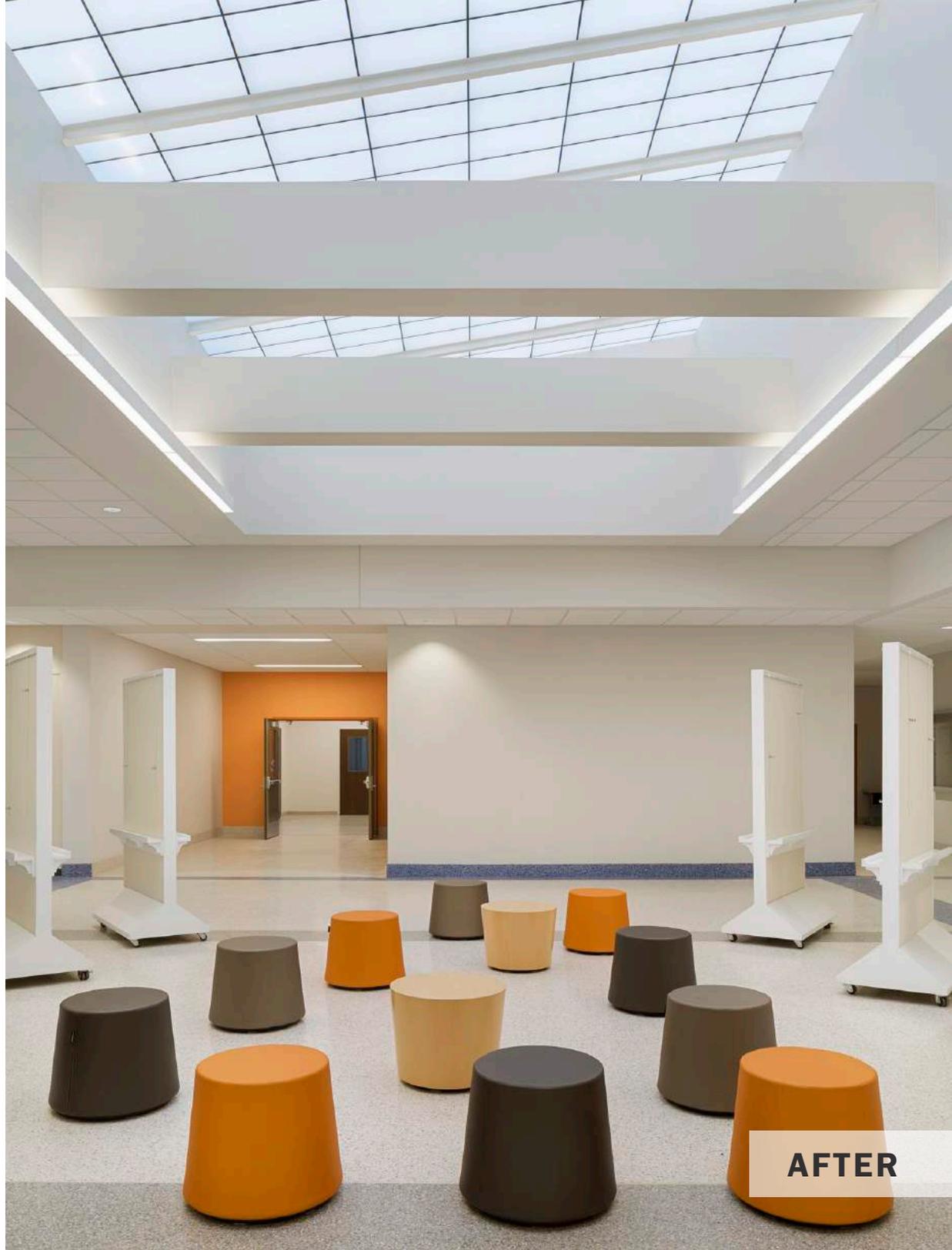
# GALLERY SPACE

BEFORE & AFTER

BEFORE



The dark core (smaller photos) of the northern 1970s addition was opened up with skylights as a new daylight-filled Arts Gallery.



AFTER

# CLASSROOMS

BEFORE & AFTER

BEFORE



One of the great attributes of the 1930s building is its generous windows. The original austral action windows were restored in the atrium.



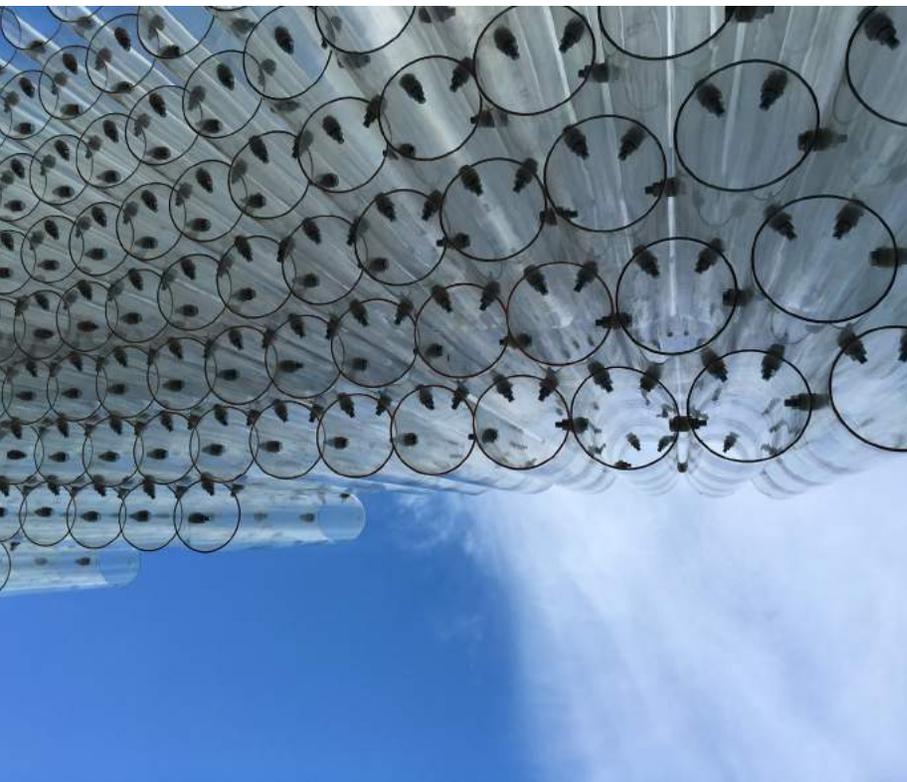
In addition to the natural light, new instructional spaces feature enhanced acoustics, new LED lighting, technology, furniture and in many spaces, new hard wood floors.



AFTER

# SERVING ALL STUDENTS

As Roosevelt serves a large number of children with Autism, a suite of classrooms, OT/PT, and sensory rooms were designed. Located directly outside of these classrooms is a terrace designed as a breakout space, featuring a garden and a sculpture made up of bundled tubes. The contrasting textures of planters and 3D artwork provides sensory and tactile opportunities for the students. The smooth bundled tubes also filter light, offering shade above benches. In addition to these features, motion activated fans will soon be installed for cooling and sensory stimulation.



# RESTORING PRIDE

Gathered to once again arrive through the historic front door – reopened after 25 years – the mayor, the school, the alumni and the community celebrated by cutting the ribbon on the renewed Roosevelt Senior High School.



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