

Facilities Standards & Best Practices

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Our History



Who We Are



Culture



Art



Research



Science

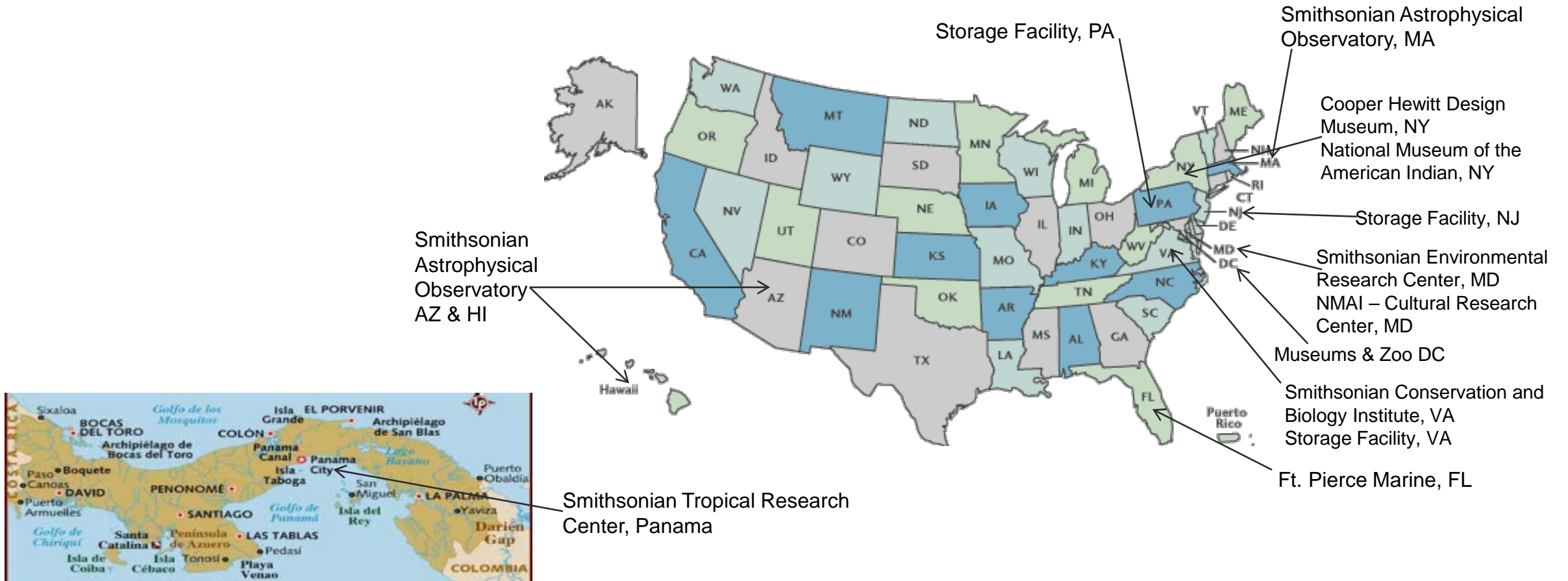


History

By the Numbers

- ▶ 19 museums, 9 research centers and the National Zoological Park
- ▶ 10,895,000 square feet of facilities owned worldwide
- ▶ 2 million square feet of leased space
- ▶ 640 buildings
- ▶ 137 million artifacts, works of art and specimens in the Smithsonian's collections
- ▶ 2,000+ live animals
- ▶ 7.7 million digital records available online through the Collections Search Center
- ▶ 6,000+ Smithsonian employees 1,800+ employees in Facilities
- ▶ \$840M total Smithsonian budget
- ▶ \$202M Facilities Salaries and Expenses & \$144M Capital Budget

Our reach is far & wide



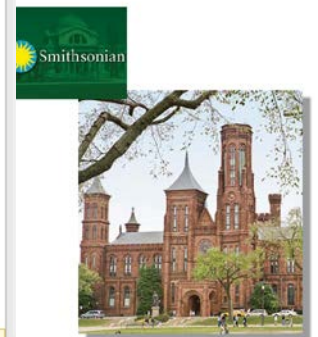
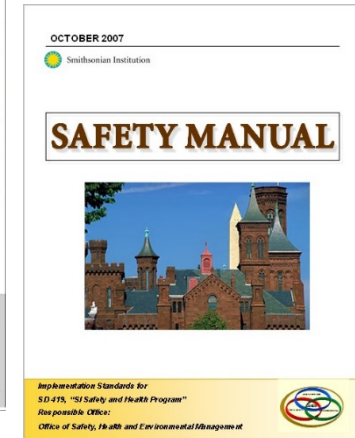
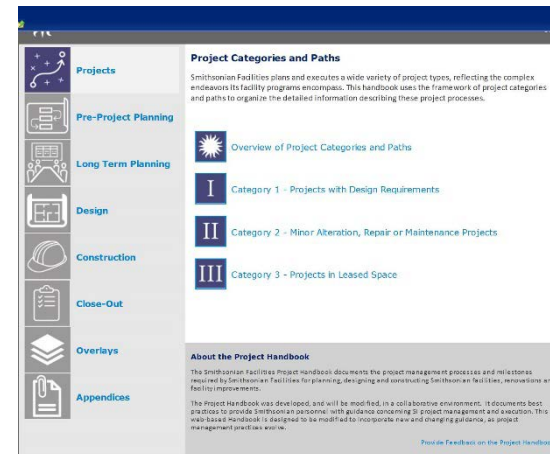
Standards: In an un-standard world

- ▶ Historic facilities
- ▶ Collections space
- ▶ Environmental control requirements
- ▶ Open 24/7, 364 days a year
- ▶ 30 million visits per year



Standards: Where they have worked

- ▶ Building Automation Systems
- ▶ APPA Cleaning Standards
- ▶ International Association of Museum Facility Administrators (IAMFA) Benchmarking
- ▶ Fire Protection Standards
- ▶ Design Standards
- ▶ Security protection Standards
- ▶ Collections standards



OFMR Operations and Maintenance Handbook

September 2012

Standards: Where they are needed

- ▶ Environmental
- ▶ Sustainability
- ▶ Education Space
- ▶ Professional development

Best Practice: Lessons Learned

- ▶ A standardized process to avoid making the same mistake twice!
- ▶ Lessons Learned Committee identifies, collects, analyzes, disseminates, and archives lessons and best practices
 - ▶ Encourages, solicits and guides others to contribute Project lessons learned
 - ▶ Addresses the most pressing lessons learned
 - ▶ Provides recommendations to leadership
 - ▶ Maintains a database for in-house and contractor use (A/E scope includes review)
- ▶ Annual report of lessons learned and corrective actions
- ▶ Bi-Monthly Smithsonian Facilities Newsletter contributions
- ▶ Part of the Facilities BIMWiki Site



Lessons
Learned

Best Practice: Collections Space Standards



Best Practice: Collections Space Standards

Collections Space: 47% of our 2.1Msf of collections space storage is unacceptable*

- ▶ Developed a first ever Collections Space Framework Plan
 - ▶ Existing conditions surveyed and a standardized “living” database created
 - ▶ Established structured rating process for each space (vs subjective/objective)
 - ▶ Prioritized critical needs and created an Implementation Plan (30 year) based on design prototypes
- ▶ Could not have been done without a pan-Institutional team
 - ▶ Fully collaborative; strategically focused; shared spaces
 - ▶ Team has become the major advocate for the program
 - ▶ Plan is used to inform Regents, OMB, Congress of space needs

* By Smithsonian established standards

Best Practice: Contractor Performance Assessment Reporting System

- ▶ The Federal Acquisition Regulations require evaluation of contractors (design, construction, etc)
- ▶ **CPARS** is a web-enabled application that collects and manages a library of contractor evaluations into a standardized “report card”
- ▶ Evaluations by project COTR with input from project team consisting of a rating and narrative on Quality, Schedule, Cost Control, Management, Small Business Utilization (if applicable), Regulatory Compliance
- ▶ These assessments are an SI evaluation factor in all design and construction procurements

NOTE: 1) Same system used by DOD, US Army Corps of Engineers, many others
2) SI also uses the **Client Feedback Tool** at critical milestones in design

Best Practice:

Contractor Performance Assessment Reporting System

CPARS
Evaluation Data Entry

Contract/Schedule Number: N4511214C0023 Order Number:
(Click on a tab below to view/enter the related information; fields identified with * are required)

Contractor Name/Address **Contract Information** **Misc Information** **Small Business Utilization** **Ratings** **Assessor** **Contractor Rep**


Evaluate the following Areas: ? (please review areas marked by ☑)

Quality ☑ **Schedule** ☑ **Cost Control** **Management** ☑ **Small Business** ☑ **Regulatory** ☑ **Other Areas**

Quality ?
Past Rating: N/A **Rating:** Exceptional
Assessing Official Comments

Contractor has provided exceptional quality in support of VFED. Contract required a system backup and disaster recovery plan that was put to test after a malicious code/virus attack. Contractor was proactive with a successful recovery, implemented an innovative solution to prevent future attacks, and enhanced system security. The contractor also initiated a system analysis identifying a security loophole previously overlooked at the time of database development by the previous incumbent. The contractor was able to recommend a Commercial-Off-The-Shelf (COTS) product to resolve security issues saving custom development time and cost. The contractor staff assisted in conducting analysis of alternatives, market research, and application acquisition package recommendations in finding the COTS bolt-on. Contractor experienced report generation errors resulting in unscheduled down time after a three week period,

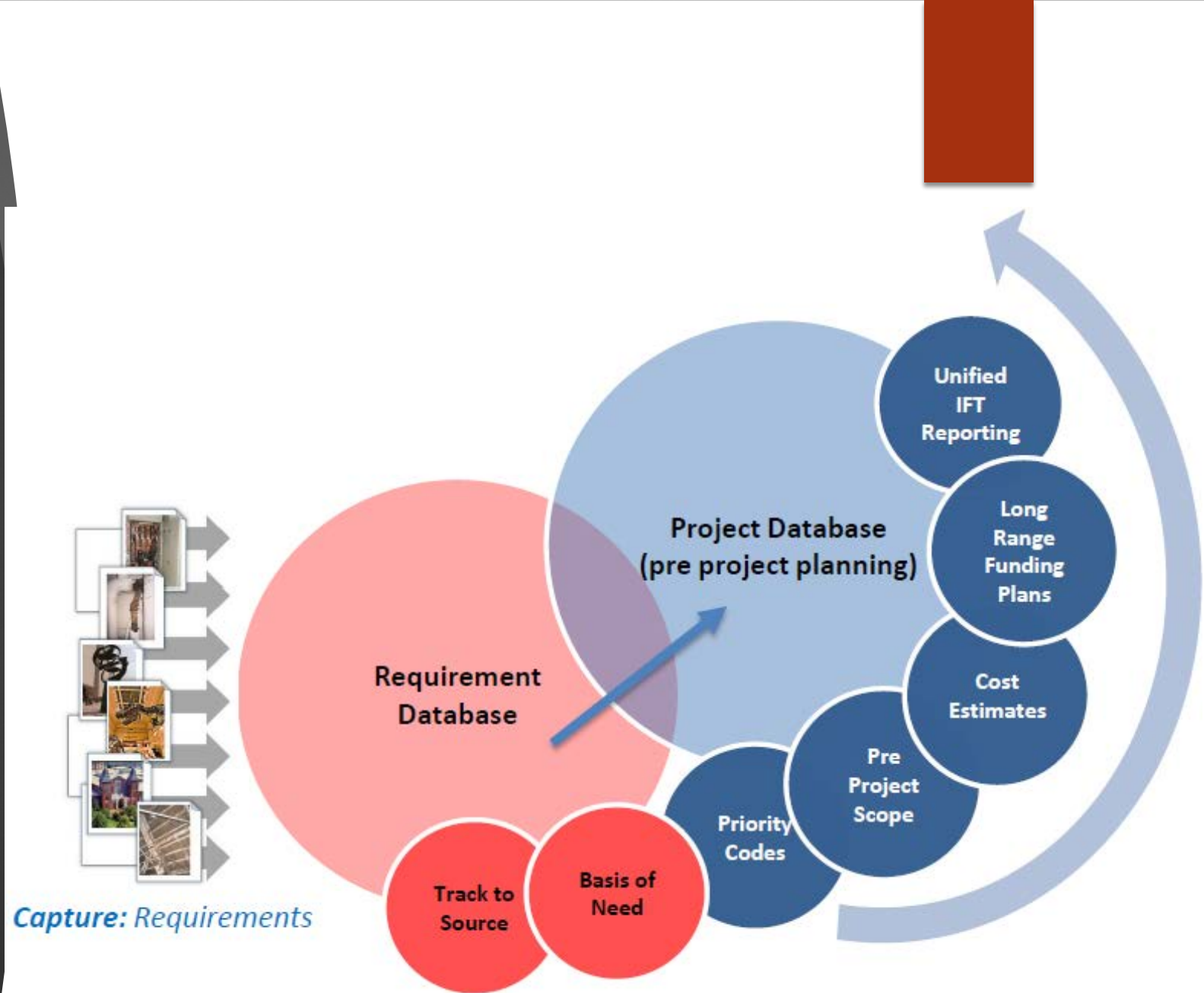
Contractor Representative Comments (24000 character limit)



Best Practice: Facility Investment and Cost Engineering

- ▶ A structured process that places greater emphasis on Pre-Project Planning
- ▶ Creates budget, scope, schedule earlier in the project cycle
- ▶ A Facilities Requirements Database (**FReD**) that tracks project information, costs, and metrics
- ▶ Includes prioritization of projects, Five Year Plan budgeting, metrics, and reports
- ▶ Sources include Facilities Condition Assessments, safety inspections, capital planning, exhibits, security, master planning

Facility Investment and Cost Engineering





Standards
+ Best Practices
Excellence

National Museum of African American History and Culture



Aerial Photo from Washington Monument



Large Collections placed in Culture Gallery – now protected in place

SI South Mall Campus Master Plan



National Air and Space Museum

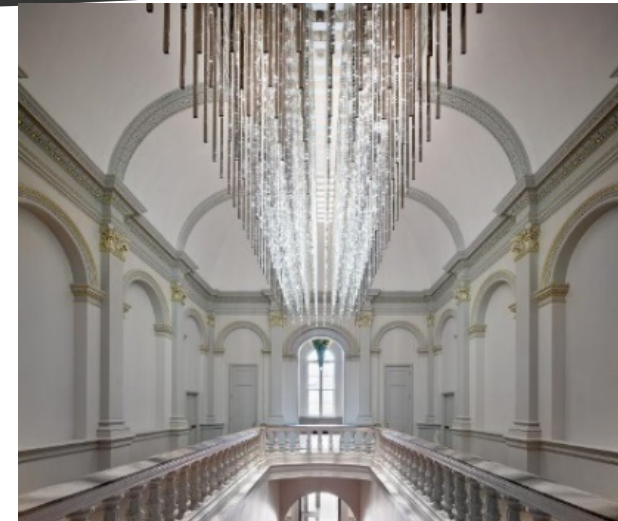
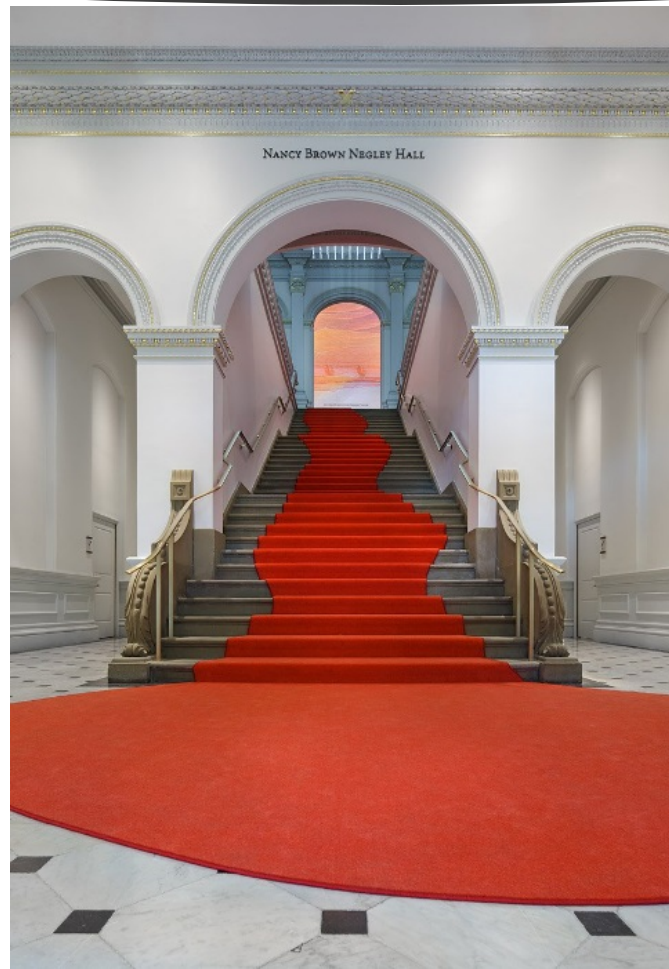
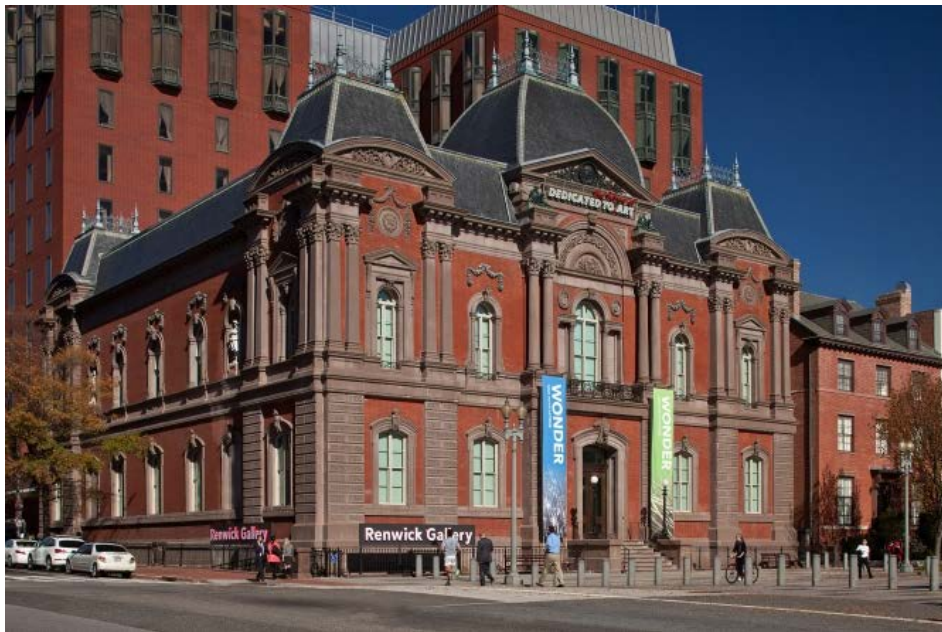


Exterior Cavity Wall Assembly



Stone Cupping

Renwick Gallery of Art



Consolidate Administrative Headquarters

Background

The Smithsonian Institution currently occupies a significant amount of administrative office space dispersed in several buildings located in Washington, DC and Northern Virginia. The current aggregate occupancy cost for these leased spaces exceeds \$26 million and is projected to grow to more than \$35 million by 2021. For the past several years, the Smithsonian has systematically aligned the lease termination dates have been systematically aligned to facilitate the Institution's ability to pursue an effective consolidation strategy.

OPTION	Benefits	Issues
Lease	<ul style="list-style-type: none">• Provides approximately 10 percent annual lease cost savings for first ten years	<ul style="list-style-type: none">• Tenant improvement allowance• Availability/timing of move in
Lease/option to purchase	<ul style="list-style-type: none">• Provides an ability to purchase at a later date within specified time period	<ul style="list-style-type: none">• Same as above
Initial purchase with with lease /purchase option on additional space	<ul style="list-style-type: none">• Least costly alternative over ten year timeframe• Provides tenant improvement allowance• Captures immediate real estate tax savings	<ul style="list-style-type: none">• Requires OMB and Congressional support to enable appropriation supporting leases for a purchased facility

Arts and Industries Building Interim Public Use



October 19, 2015: Installation of Dr. David Skorton as 13th Secretary of the Smithsonian Institution

Arts & Industries Building



Smithsonian Arts & Industries • Washington, DC | March 2011 - August 2014

EarthCam