Facilities Condition Assessment Survey

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Facilities Condition Assessment Survey (FCAS)

Agenda
1. FCAS Core Competencies
2. FCAS Service
3. FCAS Process & Tools
4. Capital Planning
5. Customizing to Client Requirements
Sample Organization

Condition Assessment Experience

Data Driven Condition Assessments for over 25 years

- New York City Office of Management & Budget
- New York City School Construction Authority
- New York City Housing Authority
- Port Authority of New York & New Jersey
- Columbia University, New York
NYC Office of Management & Budget

AIMS (Asset Information Management System)

- 2,500+ Assets with Various Building Types
- 6,200 Miles of Roads and Bridges

The client received a sustainable system capable of collecting high-level field data used to create preliminary capital planning budgets for all NYC agencies.

New York City School Construction Authority

Baseline Conditions Assessment Surveys

- 1,500+ Buildings, 123 Million SF
- 8 Month Schedule
- Many NYC Landmarks or Building Designated by SHPO (State Historic Preservation Office)

PB provided the client a database of independently assessed physical needs which was key to NY State approving the largest schools capital budget ($13 billion) in history.
New York City Housing Authority

- 2,432 Buildings with 180,000 Apartments Throughout NYC
- 156 Million SF
- Aggressive Schedule - Less Than 1 Year from Mobilization to the Delivery of a Capital Plan
- Mobilization of a Large Team - 70+ Inspectors

PB provided the client both a prioritized $2 billion, 5 Year Capital Plan to match their budget, and a comprehensive $24 billion, 15 year list of potential Capital Improvement Needs.

Our Services

We're here to help you determine:
- The condition of your facilities
- What is needed to keep them in a state of good repair

We can provide you:
- Engineering Evaluation
- Independent and Unbiased Assessment
- Capital Budget Planning Tool
FCAS Inspection

- Visually assess all building components as defined by a project-specific Physical Breakdown Structure (PBS)
- Identify all deficiencies and determine the Quantity, Action, Purpose and Urgency of the proposed remediation
- Rate the component or system condition from 1 (best) to 5 (worst)
Report Findings to the Client

- Live, sortable, comprehensive database delivered to the client
- Customized aggregation, analysis and presentation of field and costing data
- Analysis of historical data
- System based analysis

PB Team's understanding of the FCAS program serves as the foundation for continued innovation and improvement to meet Capital Planning needs.

FCAS Process & Tools

Robust System Architecture – DATA Consistency is the Key
State of the Art Data Collection Tool

- Electronic sketching capability
- Digitized photos linked to deficiencies
- Automatic reporting system
- Customized building components
- GIS Data Support

Physical Breakdown Structure (PBS)

Five Levels of Inspection Detail
Use of Satellite Images on Tablets

- Asset List Synchronizes with Satellite Image of Each Site
- Satellite Image Used to Locate Site Deficiencies

Scheduling - Whether complex or straightforward, coordination is critical

For the NYC schools it was imperative to schedule inspections that make efficient use of school principals' and custodians' valuable time while also maximizing productivity of the inspection teams.
Training: FCAS consists of a learning center that reinforces the project methods

- All inspectors undergo an extensive classroom and field training program to ensure consistent assessments
- Trainers utilize state of the art multimedia tools to engage the inspectors and clearly communicate content
- Tablets are fully integrated throughout the training process
- Communication skills are emphasized

Facility Management/ User Interview Feedback

FCAS can be a community outreach program

- An accurate assessment depends upon information obtained from facility personnel as well as field observations
- Email notifications, questionnaires, appointment confirmations, and phone calls ensure feedback is received
- The inspection reports can be posted on a website as an accessible information source
- PB has volunteered speakers for School Career Days or impromptu introductions when requested
Inspection

Walkthrough

- The team inspects components throughout the building
- Working as a team ensures extra sets of eyes
- The team enters deficiencies as encountered into the handheld tablets
- Inspectors are trained to engage the custodial or maintenance staff using laymen's terms to identify deficiencies not mentioned during the interview

Multi-Disciplinary Team

- Senior Architect
  * Structure
  * Exterior
  * Accessibility

- Associate Architect
  * Interior
  * Site
  * Athletic Field

- Electrical
  * Communication
  * Lighting/Power
  * Security
  * Fire Alarm
  * Computer Technology

- Mechanical
  * HVAC
  * Plumbing
  * Fire Suppression
  * Vertical Transportation
Discipline Menus Showing Deficiency Details

Architectural

Discipline Menus Showing Deficiency Details

Mechanical
Discipline Menus Showing Deficiency Details

Electrical

Emergency Notification Process
Same day notification of hazardous conditions

FCAS has been a safety notification system with over 2,500 emails and 70 structural reports annually sent to Division of School Facilities and the School Construction Authority.

For example:
- 3 inches of water on the floor of the electrical switchboard room
- Sidewalk tripping hazards
- Deficient fire alarm system
- Missing CO detector
- Loose masonry units
Quality Assurance & Quality Control Plan

Inspectors Receive Handheld Tablets

Conduct Field Inspection

Upload Field Data to Server

Electronically Readable/Editable Data Provided

In-House QA/QC of DATA

Data Approved?

YES

Project Close-out review and Final Approved Data Provided to Data Consultant

NO

Field QA/QC of Data

The Data Consultant Incorporates Data into Database

Costs are applied to Capital Planning System

In-house Report Reviews

After reports are uploaded to the central database, the quality control team follows a structured and comprehensive process to verify the information provided by the inspection teams.

FCAS is a generator and repository of accurate, consistent data for effective capital planning and reporting.
System Based Costing Process

Filter Data to Meet Client's Needs
Sample Building Deficiency Report

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<th>ASH ARCHITECTURAL DETAILS</th>
<th>Condition</th>
<th>Deficiency</th>
<th>Priority</th>
<th>Quantity</th>
<th>Unit</th>
<th>Urgency</th>
<th>Potential Action</th>
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<th>Response Action</th>
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Capital Planning Cycle

- Inspect
- Capital Plan
- Scope
- Design
- Construction
Capital Planning and Budget Prioritization

- Apply system and component priority rankings, while incorporating client's specific prioritization policies within a given budget
- Field - Recorded Parameters
  - Action
  - Purpose of Action
  - Urgency of Action
  - Condition Rating
  - Remaining Useful Life (RUL)
- Apply client's project creation practices
- Budgeting approach for those items that are difficult to visually assess like piping, radiators, ductwork etc., whose replacement is driven by lifecycle criteria
Inspection Data & Capital Planning

**Unit Cost x Quantity** (Deficiency or Replacement) = order of magnitude **Cost** to:

- Remediate Deficiencies or
- Replace systems that have exceeded their useful life

### Total Deficiency & Lifecycle Costs 2008-09 to 2012-13 ($K)

[Chart showing lifecycle costs over years 2008-09 to 2012-13]

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Customizing to Client Requirements

**Meeting Our Clients' Particular Needs:**

- Capital Planning
- Maintenance/Asset Management
- Inventory and Condition of Facilities

**Always with:**

- Independent Engineering Evaluation
- Experienced Team Dedicated to Quality
Customizing to Client Requirements

What Should Your Organization be Looking for?

A firm with:

- Robust IT systems and data management, integrated with architectural and engineering expertise
- A proven record of successfully executing several FCAS projects of different magnitudes in recent years
- The skills to scope, schedule, and budget an FCAS program
- A successful record for coordinating and scheduling field inspections
- A time-tested and proven assessment methodology
- An extensive, fully integrated QA/QC program ensuring data consistency
- Experienced inspectors and managers

Now it's your turn...

QUESTIONS?