



Facilities Condition Assessment System

New York, NY

Client

New York City Housing Authority

Lead Engineering Firm

Parsons Brinckerhoff

Problem

The New York City Housing Authority (NYCHA) is responsible for over 2500 buildings, including public housing and associated city-owned commercial units. The goal of the project is to establish and maintain a comprehensive Needs Assessment Database of building conditions that adversely affect the intended utilization of the NYCHA facilities portfolio. NYCHA needed to inspect every unit for structural, mechanical, electrical, plumbing, and architectural condition within a year's time, and to generate reports that would calculate needed repairs and associated costs. In addition, they wanted to evaluate their assets for environmental efficiency. NYCHA needed a system that could provide efficient, reliable mobile data collection and robust reporting, so that they could complete their inspections on an accelerated schedule, repeat inspections in subsequent years with a great deal of accuracy, and generate comprehensive reports.

Scope

Warshaw Group provided Mobile Validity® data collection software on Motion Tablet PC devices that allow inspectors to collect inspection data in the field at all the NYCHA housing sites located throughout New York City. The software incorporates reference information and built-in logic to guide inspectors in their data collection, and algorithms to calculate such data as remaining useful life of housing components. Warshaw Group also provided a device provisioning application to manage the upload and download of data between the server and the more than 45 field devices, and a quality assurance application to verify the accuracy of the data being collected. A sophisticated reporting engine was developed using Warshaw Group's Mobile Validity Report Server software for the many reports needed by NYCHA on the condition of their assets, and included a Unit Costing System and a Deficiency Costing and Prioritization System for capital plan generation.

The scope of the work included:

- Consulting on project scope, questionnaire content, and logistics
- System design and development
- Configuration of Mobile Validity Questionnaire Developer
- Configuration of Mobile Validity Results Manager, for quality assurance and provisioning tools

- Configuration of Mobile Validity Reports Server, Unit Costing System, and Deficiency Costing and Prioritization System.
- Inspector and quality assurance training
- Technical training and support

Solution/Benefits

The Facility Condition Assessment System allows NYCHA to include a condition-based rating system assigning a numerical value from 1-5 for each building and component, existing deficiencies, recommended maintenance requirements, system repairs and long-term capital planning needs for a five-, ten- and fifteen-year capital improvement plan for approximately 2,500 buildings belonging to NYCHA. The system allows NYCHA to obtain a detailed visual condition survey and an engineering assessment of the facilities' condition, evaluation of the remaining useful life of components, development of repair/replacement recommendations, determination of cost estimates, and assessment of infrastructure issues related to each facility.

With the Facilities Condition Assessment System field data collection solution, NYCHA is able to collect a large amount of data with a great deal of accuracy and efficiency in a way that is repeatable, and to generate comprehensive reports for their capital improvement plan.