

***Goethals Bridge
HVAC Rehabilitation and
Installation of Fire Alarm
& Fire Suppression Systems***

***Committee on Construction
June 22, 2010***

Goethals Bridge HVAC Rehabilitation and Installation of Fire Alarm & Fire Suppression Systems Overview

Systems have exceeded useful life

- Heating, Ventilation, and Air Conditioning (HVAC)
- Fire Alarm
- Fire Suppression

No longer code compliant



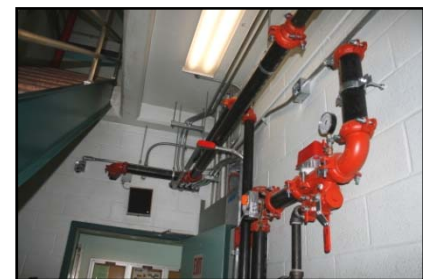
Heating, Ventilation and Air Conditioning



Site Map



Fire Alarm System



Fire Protection System

Goethals Bridge HVAC Rehabilitation and Installation of Fire Alarm & Fire Suppression Systems Contract Background

- Contract award
 - Low bidder - Yonkers Electric Contracting Corporation
 - Award Amount: \$10.8M
 - Award Date: March 2007
- Construction staging plan
 - Building divided in two work areas
- Off-hours work
 - Fireproofing installation, asbestos and lead removal
- No staff relocation during construction

Goethals Bridge HVAC Rehabilitation and Installation of Fire Alarm & Fire Suppression Systems Issues

- Facility staff concerns
 - Workplace environmental concerns during demolition
 - Dust and odor
- Response to concerns
 - Extensive environmental testing - no hazards found
 - Revised construction staging plan
 - Facility staff office trailers
 - 4 month work stoppage
- Other issues
 - Higher than anticipated quantities of asbestos and lead removal
 - Additional cable and conduit interferences
 - Unanticipated roof repairs
- Overall schedule impact
 - Change in substantial completion date from September 2009 to April 2011
 - 19-month delay

***Goethals Bridge HVAC Rehabilitation and
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Cost & Schedule***

Previous Amount	\$17.9 million
Requested Project Authorization	\$28.0 million
Project Completion	2Q-2011

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Lessons Learned

Future projects should incorporate:

- Formal assessment of project risks and associated impacts
- Detailed review of construction impacts on each individual facility function
- Consideration of advantages of staff relocation even at higher up-front cost
- Consideration of limited up-front assessments of field conditions by contractor