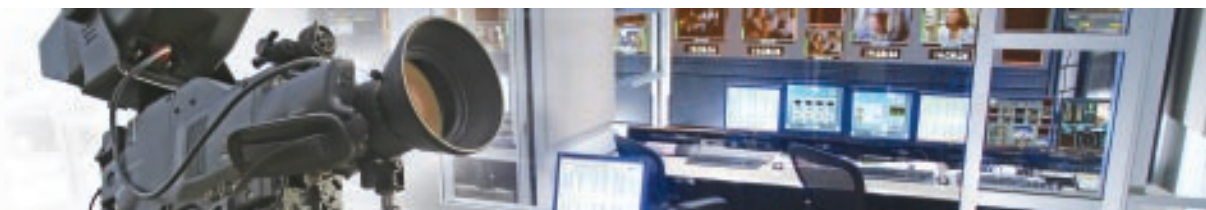




## Lifetime Television

Creating highly technical, cost effective and unique engineering solutions



### Project Business Objective

FEA was commissioned by Lifetime TV to provide design, construction administration and commissioning services for a new on-air broadcast facility in lower Manhattan. FEA's objective was to provide a multifaceted mechanical and electrical system to support highly technical broadcast equipment and non-critical office spaces.

### Project Summary

FEA was presented with the task of providing a fully redundant mechanical and electrical system that could support the technical and non-technical disciplines in the facility, and have an element of scalability that would allow for a normal and emergency operating mode, due to the stringent power limitations enforced by the building owner.

A common building generator was shared by numerous tenants in the building and supplied emergency power during power failures. Due to the smaller size of the building generator and the number of tenants requiring emergency power, all tenants were limited to the amount of emergency power supplied by this generator during power failures. FEA designed a scalable solution able to satisfy both Lifetime TV and the Building Owners normal and emergency power requirements. This system design included multiple mechanical and electrical load shed scenarios automatically initiated by the Building Management System during any power failure. The result of this load shed sequence was a reduction in infrastructure support to the non-critical spaces to allow for continuous fully redundant support for all data center and highly technical broadcast equipment. At the completion of the project FEA developed and tested all aspects of the installed systems, making sure that all normal, emergency and load shed scenarios were functioning as designed. All electrical and mechanical systems had to be specifically designed, coordinated exactly, and tediously tested in order for this system to work properly and meet all the unique requirements of our client. FEA met this challenge and delivered a fully automated, state of the art system.

### Deliverables

- // Standby Generator System
  - 800A expandable to 1200A
- // Power Distribution
  - N+0 to non-critical equipment
  - N+N to critical Computer and Broadcast Equipment
- // UPS Power
  - One (1) 400 kW/500 kVa
  - One (1) 40 kW N+1 expandable to 80 kW
- // Raised floor power distribution
  - 225 A 'plug-in' busway
- // Chiller Plant
  - Two (2) modular chillers providing N+1 redundancy
  - Four (4) roof mounted drycoolers
- // Raised Floor Cooling
  - Four (4) 30-ton glycol cooled CRAC units providing N+1 redundancy
- // Technical and Non-technical cooling
  - Two (2) 45-ton chilled water air handlers providing N+1 redundancy
- // BMS, SCADA, EPO, Fire Alarm, Preaction, CATV, Security