

# MEP CASE STUDY

## RETROFIT OF OFFICE BUILDINGS



### CONTACT

#### CLIENT

The client is a lead engineering firm providing mechanical, electrical and plumbing design MEP/T services, and a master consultant for banks and medical centers for their renovation and expansion projects. Having a team of over 200 engineers and design professionals, it is one of the largest MEP, Fire Protection, Life Safety and technology consulting engineering firms in US.

#### PROJECT OVERVIEW

The client won a retrofit contract whereby they had to provide Mechanical and Electrical design and drafting services with architectural backgrounds within a short time. The building consisted of 50 floors, 20 of which had to be remodeled as specified by the new tenant, constrained by the requirement of using the existing mechanical and electrical equipment.

#### CHALLENGE

Retrofit projects demand more client visits to the jobsite. Unfortunately, if the engineers are occupied with frequent site visits, it leaves less time to focus on design and detailing. Because of limited time they decided to outsource the work to i2t2, since i2t2 has done similar projects, and had intimate familiarity with local codes and standards. The specifics of the project were uniquely challenging. All duct works had to be routed through existing beam sleeves, despite a tight space (barely 8") between the bottom of the beam and top of ceiling. All mechanical equipment capacities also had to be predefined, and to be balanced for the total cooling and heating loads. Balancing the CFM, duct size, and multiple equipment, and to run the ducts through the sleeves in order to serve the loads, became major challenge.

#### SOLUTION

i2t2 assigned a dedicated team to work on the project, sending daily updates of the drawings. Alternate day conference calls enabled us to discuss inputs and modifications, and update the client on the progress with the project. Because of the tight management and control, however, we were able to minimize the deviations and turnaround time of the project.

#### RESULTS

The total remodeling of 20 floors of the building was done on time, and with the complete satisfaction of the owners. The total cost saving delivered was 45% more than the estimate, and the client has used i2t2 continually ever since for their retrofit projects.

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