

FIRST UNITED METHODIST

Westborough, MA



PROJECT DATA

PROJECT TYPE:
New Construction

OWNER:
First United Methodist Church

ARCHITECT:
Maple Hill Architects

PROJECT BUDGET:
\$2,400,000

CONSTRUCTION COMPLETED:
2021



PROJECT DETAILS

This project involved a new 3-story, 3,100 square foot addition that included an elevator, lobby, kitchen, and nursery room. Norian/Siani Engineering provided MEP&FP engineering services. HVAC design featured an Energy Recovery Ventilator (ERV) for ventilation air and local exhaust, ducted dehumidifiers for occupied areas of the existing basement, and new Air Source Heat Pump systems to serve the addition and replace electric heating in select areas of the existing building.

The addition triggered the installation of sprinkler throughout the existing building and addition. Consequently, a new building fire alarm system had to be specified. Our electrical scope also included power for the new elevator and new efficient lighting and controls.

UNITED HOUSE OF PRAYER

Roxbury, MA

NSE
Norian/Siani Engineering



PROJECT DATA

PROJECT TYPE:

Renovation

OWNER:

Pentecostal Church

CONSTRUCTION COMPLETED:

2001

PROJECT DETAILS

This Pentecostal church headquartered in Washington D.C. purchased a historic pair of structures in Roxbury. Formerly the largest Jewish temple in New England and its accompanying school building, this pair of 1920's structures are thoroughly renovated to provide facilities for an active and growing religious community. The school building is brick, four stories, over 30,000 square feet and provides housing with 13 apartments, a daycare and a vocational/computer educational training center. The limestone and granite, neoclassical church building includes a single very large worship space on the main floor and a second large chapel on the ground level. Also on the ground floor are the social hall and a large commercial kitchen. The additional floors include offices and an audiovisual center. N/S Engineering has provided design engineering for HVAC, plumbing, electrical, and fire safety systems. Special systems include diesel powered fire pump, facility wide emergency power, potable water booster pumps, special sumps and site drainage for a tricky site and a single central plant providing chilled and hot water to discrete air handling units. A direct digital control system keeps the systems operational and conserves energy. Apartments are heated and cooled separately, and utilities are also metered separately. The kitchen is operated as a separate enterprise and has its utilities metered separately. This project was a very complex one with a great deal of attention paid to detail and the specific requirements of the client. N/S Engineering worked with Architects in Los Angeles and Boston, administrators in Washington D.C and North Carolina plus the local site personnel and contractors.

WAYLAND TRINITARIAN

Wayland, MA

NSE
Norian/Siani Engineering



PROJECT DATA

PROJECT TYPE:
Addition and Renovation

OWNER:
Wayland Trinitarian Church

ARCHITECT:
Maple Hill Architects

PROJECT BUDGET:
\$7,200,000

CONSTRUCTION COMPLETED:
2009

PROJECT DETAILS

Norian/Siani Engineering provided the HVAC and plumbing design and construction administration services for this addition project which also included the renovation of an older existing sanctuary. The facility is large including a chapel, classrooms, meeting rooms, offices, and more. The project was designed to meet standards equivalent to a LEED Silver, NC 2.2 rating. Norian/Siani Engineering designed a high efficiency boiler plant with condensing mode boilers, and variable frequency drive pumps.. The building's HVAC and plumbing systems include a direct digital control system, variable speed fans, air-to-air heat exchangers, demand limiting ventilation control, night time ventilation cooling, very high efficiency cooling systems, and many more features. A custom utility rebate provides more than the standard prescriptive rebates since the project includes a more advanced "integrated system" design approach.

WEST CONCORD UNION CHURCH

Concord, MA



PROJECT DATA

PROJECT TYPE:
HVAC Upgrade

OWNER:
West Concord Union Church

PROJECT BUDGET:
\$1,300,000

CONSTRUCTION COMPLETED:
2023

PROJECT DETAILS

This project involves the full renovation of the church's heating system. The existing system consisted of a 50+year old steam heating system for the church spaces and Air Source Heat Pump systems serving a series of offices and classrooms on the second floor. The new heating and cooling system includes three Variable Refrigerant Volume Air Source Heat Pumps serving all areas of the building. A variety of fan coil units were selected as determined by the individual needs of the areas served. Additionally, the sanctuary features a refrigerant to water heat exchanger allowing for a forced hot water hydronic system to provide heat via fin tube radiators within the existing radiator enclosures.