

# ARCHBISHOP RIORDAN HIGH SCHOOL

SAN FRANCISCO, CA, USA

EDUCATION

## OLD SCHOOL RENO

*Archbishop Riordan High School (ARHS) is an Archdiocesan, all-boys Catholic high school run by members of the Society of Mary in San Francisco, California. The school opened in September 1949 and currently serves approximately 700 students.*

## PROJECT DETAILS

The ARHS retrofit provided a solution for a failed radiant floor heating and pneumatic control system. The retrofit consisted of 100 hardwired points and 34 space wireless temperature sensors. Two AHUs supply conditioned air to the school's gym while the auditorium is serviced by a separate AHU. MACH-Zone™ controllers are used to control all AHUs. MACH2™ controllers are employed to monitor most temperature sensors via wireless bridges and control hot water valves, pumps, and boilers for the radiant heating system. MS/TP is employed to communicate with all of Reliable Controls® products. The retrofit system also controls four 1.8 mbtu boilers and 16 hot water pumps. For Internet access, RC-WebView™ 2.0 is used for offsite access, and the MACH-ProCom™ is used to generate emails.

With the roof and floors made of concrete, no attic space, no soffits between floors, lathe and plaster walls, and copper pneumatic control tubing set in poured concrete (and secured inside the walls for good measure), the cost of surface-mounting space sensors and running conduit for control wiring was too expensive and unsightly. To meet this challenge, 34 wireless temperature sensors were installed along with nine wireless repeaters and two BACnet® bridges to bring space temperatures back to the system via an MS/TP bus.

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### PROJECT TYPE:

**Retrofit**

### INSTALLATION TYPE:

**Boiler, HVAC**

### TOTAL AREA:

**8,454 m<sup>2</sup> (91,000 ft<sup>2</sup>)**

### EQUIPMENT INSTALLED:

**1 MACH-ProCom™  
3 MACH-Zone™  
4 MACH2™**

### NETWORK:

**EIA-485, LAN, Wireless**

### INTEGRATION:

**BACnet®**

### TOTAL SYSTEM POINTS:

**134 points**

### RELIABLE CONTROLS® DEALER:

**Comfort Dynamics**

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