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Hudson’s Bay Company HVAC Upgrade

PROJECT DETAILS

LOCATION:
ALBERTA

MARKET SECTOR:
RETAIL

DELIVERY METHOD:
BID AND SPEC

The Hudson’s Bay Company downtown Calgary has been a cornerstone to the city’s retail storefronts for more than 100 years. First constructed in 1913, The Bay has undergone several additions and renovations to both increase retail space and improve the existing mechanical and electrical systems throughout the building.

Modern Niagara is part of a six-month, two-phase mechanical upgrade. This includes:

Phase 1: Boiler Upgrade

Installed four new heating boilers in the penthouse, replacing two large steam boilers in the basement.
Installed a new 14” distribution header, pumps, domestic hot water loop, and distribution risers.
Installed 14 new unit heaters throughout the loading dock and basement area to replace the old steam heaters.

Phase 2: Chiller Retrofit

Phase 2 is currently in progress, encompassing the installation of a large air-cooled chiller. We proposed a Victaulic piping system as an alternative to welding pipe as specified. Our solution was safer and more practical for the small mechanical room, as it required smaller crews and greater safety while we completed the work during regular, occupied store hours.

During the chiller retrofit, we discovered that that the penthouse ceiling was inaccessible due to several large overhead exhaust ducts. To address this challenge, we designed and built racks off of the penthouse floor, and installed the headers at floor-level. This not only ensured that the installation will be safer (as it does not rely on an existing aging overhead structure), but it also provides easy access to the control and isolation valves for future building operation and maintenance.

We also reinforced the existing roof with structural steel and installed a new air-cooled chiller on the roof to replace the existing chiller. The new chiller will be connected to the distribution header installed during Phase 1 through a 3-way valve assembly, allowing for a two-pipe heating and cooling system.