

Fleet Maintenance Facility

Victoria, BC, Canada

BACKGROUND

Established as a military installation by the Royal Navy in 1855, and serving the Royal Canadian Navy since 1910, Canadian Forces Esquimalt located in Victoria, British Columbia is the second largest military base in Canada and home to Canada's Pacific Coast Maritime Forces.

The Fleet Maintenance Facility (FMF) Cape Breton provides maintenance support for ships and ship-related equipment to the Maritime Forces Pacific.

THE CHALLENGE

The facilities at CFB Esquimalt's Dockyard contained more than 60 buildings rendered antiquated by modern industrial workplace standards. A modernization program was proposed: The Fleet Maintenance Facility (FMF) Cape Breton Shop Consolidation Project would consolidate Cape Burton's new workspace and create approximately 28,000 m² (300,000 ft²) of new operational space. The upgrades would also streamline the industrial process, transforming it into a truly modern space. The upgraded facility would be the second largest enclosed building on the North American West Coast, second to the Boeing Aircraft Facility in Washington, USA. The concrete structure was designed to withstand earthquakes and tsunamis.

The slabs in the new maintenance buildings would be exposed to seawater, heavy traffic from loading and offloading of heavy naval vessel components for repair, and would also be subjected to materials handling, manufacturing, welding, fabrication and assembly. Therefore, the new, innovative concrete design would require slabs built with durable concrete that was both abrasion and erosion resistant.

PERFORMANCE

Stantec recommended Hard-Cem for Phase IV of the FMF Project. Hard-Cem offers full-depth concrete hardening to protect concrete from long-term abrasion and erosion, and can be used with air-entrained concrete. Hard-Cem's chemically neutral nature means that it can also be used with any concrete mix design. Moreover, Hard-Cem's integral quality allows it to be used in vertical, horizontal, inclined, interior and exterior applications.

With the success of Phase IV, Stantec again specified Hard-Cem for Phase V of the base modernization program. A proven technology, Hard-Cem is repeatedly specified by engineers for its performance in demanding applications.

OWNER:

Department of National Defence

ENGINEER:

Stantec

DISTRIBUTOR:

Brock White Canada

CONTRACTOR:

Stuart Olson Constructors Inc.

Total Area:

Hard-Cem[®] treated concrete included in the 28,000 m² (300,000 ft² of new space)



Aerial views of the Fleet Maintenance Facility (FMF) in Victoria, BC