



## SACRÉ-DAVEY EXPERTISE

Ports & Marine

Working with public and private port and terminal owners, Sacré-Davey Engineering covers your projects needs, from feasibility studies to program management and engineering for all phases of port and harbour design. We look at the long term influences: environmental, financial and social - planning for sustainable and commercial vitality. With our 30 year history, Sacré-Davey can provide you with expert solutions:

## **SERVICES**

Ports & Marine

- Container & Cargo Terminals
- Liquid & Dry Bulk Terminals
- Terminal Operations
- Strategic Planning
- Project Management
- Construction Management
- Economic Feasibility
- Environmental Management
- Terminals & Storage Building Design
- Berthing Studies

- Ship & Barge Loader Design & Integration
- Bulk Materials Handling
- Explosion Venting Design
- Dust Collection & Suppression
- Rail, Truck Loading
  & Unloading
- Rail System
- Layout & Design
- Stacking & Reclaim
- Jetty & Infrastructure

- Structural & Seismic Design
- MCC Design
- Shore Power
- Power Studies, Arc Flash & Harmonics
- Drive Upgrades
- Automation
- Energy Efficiency Audits, BC Hydro Powersmart
- Piling Systems
- Bridge, Road & Transportation

Head Office: 315 Mountain Highway V7J 2K7 North Vancouver BC Canada T: 604.986.0663 F: 604.986.0525 W: sacre-davey.com

## **PROJECTS**

Ports & Marine Please let us know if you would like to learn more about Sacré-Davey's project portfolio.

**PROJECT 1:** The Neptune Bulk Terminals facility improvement project was a \$95 million EPC and required the installation of dry bulk ship unloading machinery, network of inbound conveyors, a storage shed, a network of outbound conveyors including a surge bin and a rail car load out system to transport and handle the rocks. Due to environmental concerns, a number of large dust collectors were required to ensure that fugitive dust was captured. As part of the design build EPC team, SDE assisted in this project by taking a conceptual design through to final design and installation. SDEs scope included the detailed design of all structures and select elements of the mechanical system such as the dust collection system.

**PROJECT 2:** Sacré-Davey was contracted to provide detailed engineering, procurement and construction management and commissioning services for a \$36M canola oil transfer and storage system. Previously, SDE prepared an engineer's study and AACE class 2 capital cost estimate for the project. Modification to the railcar unloading and marine loading area was required to accommodate the transfer of the canola oil. The modifications also included changing the existing glycol system to railcar top unloading. Pumps and process piping were optimized in conjunction with a BC Hydro Power Smart study.

**PROJECT 3:** Sacré-Davey provided detailed Engineering design for Condensate tank farm expansion including low and medium voltage MCC switch gear specification, VFD wiring, design of two new E-houses with over 7 MW of connected loads including motors, valves, and electrical loads, and 4 PLC racks including approximately 300 IO points.

- Preliminary feasibility study and AACE Class III Capital Cost Estimate,
- Detailed engineered drawings and work packages including; mechanical, structural, civil, process, electrical, instrumentation & controls,
- Demolition and relocation drawings and work packages,
- Construction schedule,
- Hazard and operability study (HAZOP) report,
- Constructability review and risk assessment,
- Procurement



Quality Management – British Columbia is the first and only Province where the Provincial Engineering Regulatory body has developed a Quality Management System. The Organizational Quality Management System (OQM) was designed by engineers specifically for the engineering profession and provides a significant step towards ISO Certification. While use of OQM was not mandated, Sacré-Davey Engineering was one of the first companies to implement the system and be certified by the EGBC. These same quality standards are applied to every project we undertake, agnostic of location.

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