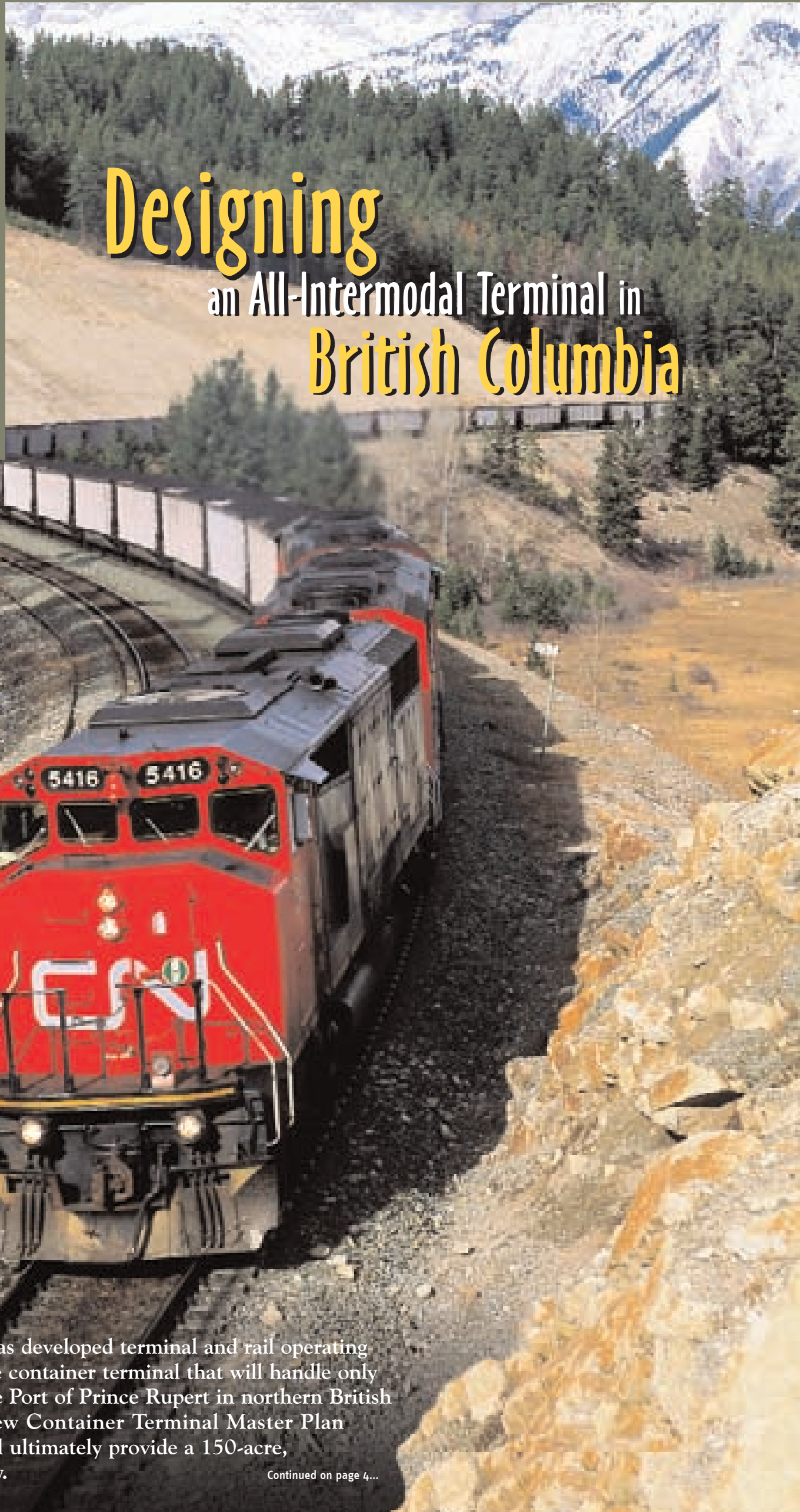




# MOFFATT & NICHOL NEWS

Winter 2005

## Designing an All-Intermodal Terminal in British Columbia



Moffatt & Nichol has developed terminal and rail operating plans for a unique container terminal that will handle only intermodal traffic at the Port of Prince Rupert in northern British Columbia. The Fairview Container Terminal Master Plan developed by M&N will ultimately provide a 150-acre, 1.4-million TEU facility.

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M&N NEWS BRIEFS

# Bob Nichol Honored with Golden Beaver Award

ROBERT D. NICHOL, CHAIRMAN AND PRESIDENT OF MOFFATT & NICHOL, has received the Golden Beaver Award for Engineering at the 50th Annual Beaver Awards Dinner in Los Angeles in January.

Bob Nichol was recognized for his many achievements in his 45-year career, including serving as Program Director for the \$1.9-billion Alameda Corridor project, one of the largest public works projects in US history.

"It's an honor to be recognized by peers and colleagues in our profession," he said. "While this award was bestowed on me, I share this award and the achievement it recognizes with all the staff of the Moffatt & Nichol family who have made this a great firm for the past 60 years."

The Beavers is an organization formed, organized and managed by construction companies and individuals who are or have engaged in heavy engineering construction. The awards dinner recognizes individuals with a Golden Beaver Award for the achievements and contributions to the heavy



Ron Fedrick, President of the Beavers presented the award to Bob Nichol

construction industry in the categories of Management, Supervision, Engineering and Service & Supply. The black-tie event is attended by over 2,100 members and guests.

The purpose of the Beavers is to promote goodwill, friendliness and consideration within the heavy construction industry; to give recognition to those men and women who have demonstrated particular skill, responsibility and integrity; and to encourage and support entry of promising young individuals into heavy engineering construction. ■



Ron Heffron, P.E.



Tom Chase

## M&N Adds Strategic Leadership & Environmental Management to Staff

MOFFATT & NICHOL IS PLEASED TO ANNOUNCE that two long-time engineering professionals, Ron Heffron, P.E. and Tom Chase, have joined the firm, bringing significant strategic management, technical and environmental leadership experience.

Heffron, who joins the firm as Vice President, is a civil and structural engineer with 23 years experience in the project management, inspection, design and rehabilitation of marine facilities worldwide. His experience includes the design and rehabilitation of US Navy waterfront facilities, container terminals, liquid bulk terminals, dry bulk terminals, and recreational/urban waterfront facilities.

Currently Heffron serves as chairman of the ASCE National Ports & Harbors Committee. He also serves as the US delegate to PIANC WG 42, focusing on Life Cycle Management of Port Facilities.

Heffron will work in M&N's corporate office in Long Beach. His primary responsibility will be to help the firm grow in strategic areas through leadership and technical excellence.

Chase, an ocean engineer with 20 years experience in the port industry, joins M&N as Director of Environmental Services. Chase has worked on national and international policy matters for the past 14 years for the American Association of Port

Authorities in Washington DC. While serving as AAPA Director of Environmental Affairs, he launched the industry's Quality Partnership Initiative with the US Army Corps of Engineers and its Port Environmental Management System (EMS) Assistance Program with the US Environmental Protection Agency.

Chase's primary responsibility will be to manage M&N's emerging environmental practice which has been growing in the areas of air, water and sediment quality in recent years. He will identify, link and grow the firm's environmental capabilities for existing and new clients. Chase will continue to apply his expertise in Federal policy to assist clients in working with a variety of government agencies. ■

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THE GEORGIA PORTS AUTHORITY (GPA) has engaged Moffatt & Nichol to provide professional services to support the port authority's capital and maintenance projects.

The four-year contract with an option to extend for an additional four years takes advantage of the full-service, multi-disciplined capabilities that M&N can provide with in-house staff, including terminal planning, port economics and finance, program and project management, specialized engineering analyses, permitting support, engineering design and preparation of construction documents, and construction support services.

The GPA has terminals in Savannah, Brunswick, Bainbridge and Columbus. The work related to this contract supports the GPA staff, and may involve both planning and engineering support for capital and maintenance projects at all terminals, according to Jonathan Thomas, M&N's project manager in the firm's Savannah office.

M&N has provided a variety of services to the GPA over the past several years and is pleased to be given the opportunity to provide consulting services to one of the fastest growing port authorities in the United States. In this role, M&N serves as an extension of the GPA staff. ■



## Coastal Engineers Share Beach Expertise with Weather Channel Meteorologists

Russ Boudreau, a Moffatt & Nichol coastal engineer in Long Beach, and other regional directors of the American Shore & Beach Preservation Association, recently met with severe weather specialists at The Weather Channel in Atlanta to provide the meteorologists with a better understanding of how the nation's shorelines respond to major storms.

The past year has been an eventful one for beaches around the US. The 2004 hurricane season caused impacts felt across the east and gulf coasts, and the west coast recently felt the assault of severe storms. Reporting of the impacts of recent hurricanes in the southeast raised the concern of several ASBPA board members that the public was not getting an accurate picture of how these severe storms impact beaches.

The key message presented by the coastal engineers was that nourished beaches perform better during severe storm events due to the presence of a wide beach that serves as a storm buffer, or "shock absorber," and provides a reservoir of sand for offshore bar formation. The observed loss of dry beach during storm events does not indicate that this valuable beach sand is "washing away," but rather a shifting of sand offshore to fill the offshore sand bar. The dry portion of the beach typically recovers within months after the storm.

ASBPA President Harry Simmons led off the meeting by providing an overview of ASBPA and the organization's mission of science and education. M&N's Boudreau, a West Coast ASBPA board member - along with Anthony Pratt, Delaware Department of Natural Resources and Northeast

board member; Thomas Campbell, Coastal Planning & Engineering and Southeast board member; and Scott Douglass, University of South Alabama and Gulf Coast board member - made technical presentations by US region. The ASBPA's high-tech graphic presentation played very effectively in the TWC's state-of-the-art media center.

"TWC staff were very responsive to the message," Boudreau said. "The meteorologists and coastal engineers agreed that ASBPA can assist in the future, acting as TWC's 'go-to-guys' for coastal issues as they arise, with dozens of specialists near the action throughout the US. Combining ASBPA's beach knowledge with their weather expertise will provide TWC's 9 million viewers with an even better broadcast." ■



PHOTOS: Post Hurricane Isabel Dune Restoration, City of Norfolk, Virginia

## M&N's John Headland Initiates, Leads Post-Tsunami Assessment Team to Sri Lanka

The COPRI Board, with encouragement from ASCE management, determined it should commission a group of technical experts to participate in post-tsunami assessment trips to examine the damage in several countries. Unlike its partners in this effort - the Technical Council on Lifeline and Earthquake Engineering (TCLEE) which commonly assesses post-earthquake damage - COPRI members have not, until now, participated in such projects.

As a member of the COPRI board, Headland initiated the formation of teams who would visit Thailand, India and Sri Lanka. The teams' mission was to learn what it could from the devastating effects of the tsunami to provide information to engineers, scientists and planners who

must make informed decisions about the means for minimizing future damage and loss of life. The assessments focused on the coastal areas and port facilities that were inundated by the water.

The areas affected by the tsunami is far too vast for a single team to visit. Accordingly, COPRI decided to send two members to each of three countries, following the lead of the TCLEE groups. Although the teams wanted to visit Indonesia where so many perished, the trip was not possible due to the numerous constraints that have been reported in the news.

**"Our limited work is not a substitute for the work of local experts in each country who will plan and execute reconstruction, develop corrective actions, and consider planning and zoning issues," Headland said. "Still, we must learn what we can for the benefit of the tsunami-prone areas in the US and around the world."**

Headland's full reports can be found online at [www.asce.org](http://www.asce.org). In addition, ASCE has established a tsunami relief fund with the Red Cross. ■



Team members John Headland and Peter Yin visit an area where a tsunami wave destroyed a passenger train, killing more than 1,500 people

In late January, the American Society of Civil Engineers (ASCE) sent three teams to the tsunami disaster zone in Southeast Asia to conduct damage assessments. John Headland, Moffatt & Nichol Senior Vice President who manages the Northeast Region in the US, led one of the three teams to Sri Lanka under the auspices of ASCE's Coasts, Ocean, Port and River Institute (COPRI).

# ...Designing an All-Intermodal Terminal in British Columbia continued from page 1



PHOTO CREDIT: Prince Rupert Port Authority

Planned Container Terminal

The Fairview Container Terminal will be a major container gateway on the West Coast of North America, according to Harold Westerman, P.Eng., project manager and head of M&N's office in Vancouver, BC. The firm has been retained by CN Rail and Maher Terminals, who are key stakeholders in the two-phased development. The existing Fairview Terminal is being converted from its current use as a bulk, break-bulk and general cargo facility to the intermodal-only container terminal by the end of 2006.

The new Fairview Container Terminal will offer the most direct service for intermodal trade between Asia and central North America and is expected to become a major hub for mid-west North American trade, according to the Prince Rupert Port Authority. The container terminal will provide welcome relief and new capacity to Canadian and US importers and exporters, as well as the most direct routing for their goods.

The design of the new terminal is being planned to allow for the rapid turnaround of 12,000 TEU "New Panamax" container vessels, according to Westerman. Using computer simulation models developed by M&N, the firm has prepared plans for the terminal as well as for the upgrade of rail infrastructure in the Prince Rupert region to accommodate 12,000-foot long intermodal trains. Based on independent ship and rail schedule data, the simulation models determined requirements for container storage capacity plus necessary footage for working, storage and arrival/departure tracks. In addition, the models show on a weekly basis in four-hour increments peak container and railcar inventories and corresponding equipment needs to handle peak and off-peak periods.

The first phase of the project, to commence construction in 2005, will include removal of transit sheds and bulk-loading facilities, upgrades to the existing terminal's substructure, pavements and electrical services, relocation and expansion of rail tracks and the installation of three super-post-panamax container cranes on an upgraded and widened berth structure. Off-terminal plans call for a 15,000-foot arrival track adjacent to the container terminal with train departures staged at nearby Ridley Island by reconfiguring existing rail yards that serve nearby coal and grain export terminals.

The Phase 2 portion of the terminal includes 100 acres of land reclamation, an additional 1,300-foot berth, expanded container and intermodal yards, with eight 5,000-foot long working tracks.

In addition to its planning services, M&N is also providing the terminal operator, Maher Terminals, with detailed engineering reviews of the planned infrastructure along with detailed terminal layouts. ■

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