



Osmose points out that the inspection of a steel thru truss is not accurate unless you actually physically climb over the upper chords and underneath the bottom chords. Corrosion, missing rivets and crack identification are key priorities during the steel inspection.

“I needed a ‘one stop shop’ that could provide the resources required to inspect 50-foot tall timber piling along with all the details involved with the steel bridges,” reports Payne. “To get off on the right foot with the communities and to reassure the shippers, I narrowed my choice down to Osmose. The combination of inspection, engineering and repair capabilities simplified the entire process. The digital reporting framework allows me to share the final reports by bridge or for the entire line with all concerned parties. With a list of priorities by bridge we had a clear path to follow.”

With the reports in hand, Payne was relieved that only a few “warts” were found and those could be easily remedied.

“Obviously, our biggest concern was the big bridges over the Snohomish River,” he said. “Our long-term plans have commuters, tourists and bikers departing from the north end of that bridge. We have to be positive that our physical plant is ready when we are.”

Waiting on a federal loan

At the onset, this railroad applied for a federal loan based on the goals of the railroad to support the communities going forward.

“The i’s have been dotted and the t’s are crossed. We are now awaiting events in a waiting game to see what direction we can take,” said Payne. “With multiple

interest groups vested in the success of the GNP, the goal is simple: expand and grow freight traffic. As funding permits, the GNP and King County may help to facilitate possible bicycle trails and the transport of bikes that dovetails with commuters’ philosophy for this region. Long term, the GNP plans to look South.

“The increasing congestion of the highways is only going to help us,” he noted. “If we can get help crossing Interstate 405 and permission to continue to Redmond, the GNP and the neighbors bordering our line will all benefit,” he said. “I know where we are going. I just have to give lessons in patience along the way.” □

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What do
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■ Twin Cities transit

■ Pre-purchase bridge inspection



Pre-sale bridge INSPECTION

The owner of a shortline start-up can often vividly remember the myriad of details that impact operations in the first couple of months of operation. Tom Payne, chairman and chief operating officer of the GNP Railway, is no different.

“We got all dressed up for the party, but we didn’t know when it would start,” explained Payne.

The Port of Seattle was the actual purchaser of this line from the BNSF and, as with any large transaction, details made the purchase and subsequent award of operations to Payne’s company complicated. On December 19, 2009, the GNP Railway Inc. entered into business.

Payne was no stranger to difficulty.

“I started working in the Cominco mines in the Northwest Territories near Yellowknife,” he said. “One of my first jobs, besides cleaning boilers, was to hang in a safety harness and be lowered down into the inky darkness of the mine shaft to inspect and lubricate the rails guiding the mine cage that moved the miners from daylight to the bottom of the mine. It was messy work, but the lives of the miners

Shortline start-ups have their share of problems. A solid inspection, especially of bridges, can keep the problems to a minimum.

depended on those guides for the cage, so I knew what I was asked to do was very important.”

His formal education includes the Babson Institute of Business Administration in Massachusetts with continuing studies at the University of Alberta and the University of Calgary.

In 1973, he earned a brakeman’s job at CP Rail. Advancement through the ranks got him to the front of the train as engineer. From the front of the cab, Payne witnessed firsthand the shrinking of the rail industry in the 1980s as Class 1s shed unprofitable lines.

“I understood where management was coming from, but I had a feeling that I could do better,” said Payne. “Starting with a second house mortgage, he launched his company, Central Western Railway, which started purchasing underperforming branch lines from CN and CPR.

Over the next 10 years, Payne built up the grain-hauling business by literally and personally going door-to-door to farmers, small towns and elevator companies and slowly amassed a 3,200-mile rail network renamed RailLink.

Payne now had the third largest railroad by miles in Canada. He took the company public and, in 1999, it was purchased by RailAmerica.

This purchase left Payne with some spare change in his holding company. His achievements were also recognized when he was inducted into the Canadian Railway Hall of Fame in 2002. But what to do now?

The GNP Railway bridge that crosses the Snohomish River includes large timber approaches into a thru truss and then a deck plate girder followed by more large timber approaches set up in an S curve.

Pre-sale bridge INSPECTION



Osmose obtained detailed information on the piling, caps and stringers using the company’s proven methods of hammer sounding, boring and quantifying the results by measuring shell and void in the timber members.

“It all started innocently enough with a phone call from my steam locomotive fireman who lives out in the Northwest,” said Payne. This fireman works occasionally with him on Payne’s steam locomotive on, ex-Reading 2100, a T-1 4-8-4.

He became intrigued with the idea of a new shortline in the Pacific Northwest.

“It screamed of potential to me and with a little work I could see increased freight business with an eye towards passenger service in the form of commuters and tourists,” Payne said. “Let’s face it, the highways feeding that little software company down the road (Microsoft) are clogged and, in time, this could be a viable way for them to get to work.”

Bridge, track inspection priorities

To satisfy the owner (Port of Seattle) and alleviate concerns from the communities that the GNP passes through, one of the first orders of business was to conduct a detailed inspection from Woodinville to Snohomish, Wash. Ties, rail, roadbed crossings and signals were inspected.

“By far the most difficult item on the railroad to inspect was the bridges,” reports Payne.

This line is unique as it ends in Snohomish over the unpredictable Snohomish River. The bridge that crosses the river is comprised of large (tall) timber approaches into a thru truss and then a deck-plate girder followed by more large

timber approaches set up in an S curve. Add in all the other bridges and the GNP had a commitment to the community to document the structural integrity of these structures.

“It was a challenge to quickly organize a team of inspectors to address GNP’s time constraints, but we had a couple of things working in our favor,” explained Mike Tweet, vice president of engineering for Osmose. “First off, our timber-treating crew was finishing a contract on the West Coast and, with their experienced set of timber climbers, we knew that we could complete the 50-foot approaches to Bridge 38 in far less time than a traditional two- or three-member inspection team could. It was clear we needed to get detailed information on the piling, caps and stringers using our proven methods of hammer sounding, boring and quantifying the results by measuring shell and void in the timber members. We bolstered this crew with additional engineers to help with the acquisition of field data for entry into our data base.

“The climbing did not stop with the timber crew, either,” Tweet noted. “The inspection of a steel thru truss is not accurate unless you actually physically climb over the upper chords and underneath the bottom chords. Corrosion, missing rivets and crack identification are key priorities during the steel inspection. It gets even tougher when you factor in the weather (windy and rainy) and the difficulty of climbing up to places that most people would not even think of going.

“We practice strict fall protection, literally at every step, to maximize our safety and to collect the data for analysis,” said Scott Tatzel, Osmose lead engineer for the steel inspection.

From start to finish, the inspection was completed within the aggressive time constraints requested by the railroad. This inspection involved concrete, steel and timber structures with varying heights and access issues. The final report was assembled along with an engineering review quickly thereafter.