MODEL PHOTOGRAPHY BY DON WEIXL

This HO scale diorama is used to tell the story of how things once looked at Okanagan Landing. Here we are looking northeast at the transfer wharf built in 1909 and station complex built in 1910. The Canadian Pacific passenger train from Vernon is ready for its return journey. The passenger train brought approximately 150 tradesman daily from Vernon to Okanagan Landing to work on the *Sicamous* and *Naramata* during 1913 and early 1914. A regular passenger train ran from Okanagan Landing to the CPR mainline in Sicamous. The icehouse located by the wharf was used to fill the ice bunkers of departing empty reefers so that they would be cool for loading at communities along Okanagan Lake. The returning loaded reefers were topped up with ice at the second ice house at the east end of the yard before departing for points along the CPR. The hopper cars spotted along the wharf were used to transport coal to the steamships. The coal was dumped onto the wharf and moved by wheelbarrow up a gangplank onto the ship.

The Canadian Pacific Railway's Okanagan Landing circa 1914

A scale diorama illustrates a community's history/**Hugh Clarke, Ray Hansen** and **Don Weixl**

Building a historical diorama for our local museum was a daunting project, especially when it depicts the railway 100 years ago. Fortunately, however, when a number of members of our model railway club with overlapping skills came together,

VERNON MUSEUM: PHOTO NO. 2999

This 1930's view shows the unique semi-enclosed watertank was raised in 1911 to give better water pressure for fire protection. Immediately to the right of the watertank is the end of the wharf-side icehouse. The new open sided fruit shed is built on a wharf extension to the right of the station. The old passenger shelter has been removed from the left of the station. The sternwheeler in the distance is the *S.S. Sicamous*, identified by being a deck higher than the *S.S. Okanagan*.

the task became a fascinating and achievable project in the eight months at our disposal.

History of Okanagan Landing

Building upon their success in the completion of the Canadian transcontinental railway in 1885, the Canadian Pacific Railway (CPR) continued to build secondary rail lines into commercially viable areas across Canada to exploit local development. Arguably, the most successful of these was the Shuswap & Okanagan Railway, the line from Sicamous to Okanagan Landing, finished in 1892. The area of North Okanagan Lake had been a successful area for raising cattle for 50 years. But, with the arrival of the railway, agriculture and logging were also quickly developed. Apple production became the major fruit crop, grown in orchards along Okanagan Lake. Ever increasing production was transported by a series of sternwheelers and later steam tugs and barges to the transfer wharf at Okanagan Landing and then by railway to centers of population in the Pacific Northwest. This transportation arm of the CPR was called the C.P. Lake and River Service.

When rail reached the Landing in 1892, the CPR lost no time in further development. A rail yard, woodworking shops, shipyard and support services were quickly built. Over the first win-

VERNON MUSEUM: PHOTO NO. 2803

The *S.S. Okanagan* sternwheeler (*above*) is pulled up to the wharf at Okanagan Landing station. The small open sided building is a shelter for passengers waiting for their boat. Note the neat 2″ × 6″ planking of the station platform compared to the rougher 3″ × 10″ planks of the wharf deck. The wharf decking is laid out with a 1″ space between planks to allow water to splash up between them and not lift the planking. This overall view of Okanagan Landing in the 1930's (*below*) shows that most of the buildings in the diorama are still there including the Strand Hotel on the right. The *S.S. Sicamous* along with three barges can be seen tied up on short wharves. The empty skid-way can be seen to the left of the woodworking shop and to the right of the watertank. This is where ships were erected and slid into the lake on completion. This is now a public beach. The main wharf starts just to the left of where the photo ends. The large number of stock cars in the yard indicate a large shipment of cattle from O'Keefe Ranch is imminent.

VERNON MUSEUM: PHOTO NO. 1444

Canadian Pacific Railway's Okanagan Landing circa 1914

The *S.S.* (Steam Ship) *Sicamous,* nicknamed the "White Swan of Okanagan Lake," is under construction in the early spring of 1914 (*above*). The model started with a carved wooden hull covered with a .60″ styrene main deck attached with contact cement. From the main deck on up the construction was made with styrene. The upper deck was left open to show the interior. There is one more deck and the pilothouse to be added. The smokestack shows the maximum height of the vessel (approximately 60 feet from the keel to the top of the pilothouse) The hull is 200′-6″ long and 40′ wide. To the right of the ship is the steel blacksmith shop where on-site exterior and interior fittings were made. The steam tug *Naramata* (*below*), the first steel hulled steam tugboat on Okanagan Lake, was assembled during the 1913-1914 period at the same time the sternwheeler *Sicamous* was being built. It was launched one month before the Sicamous in April 1914 and continued to move rail car barges on Okanagan Lake until being retired in 1967. Like the *Sicamous,* the *Naramata* is preserved at the Marine Museum in Penticton, B.C., on the south end of Okanagan Lake. A model of the Strand Hotel can be seen in the background.

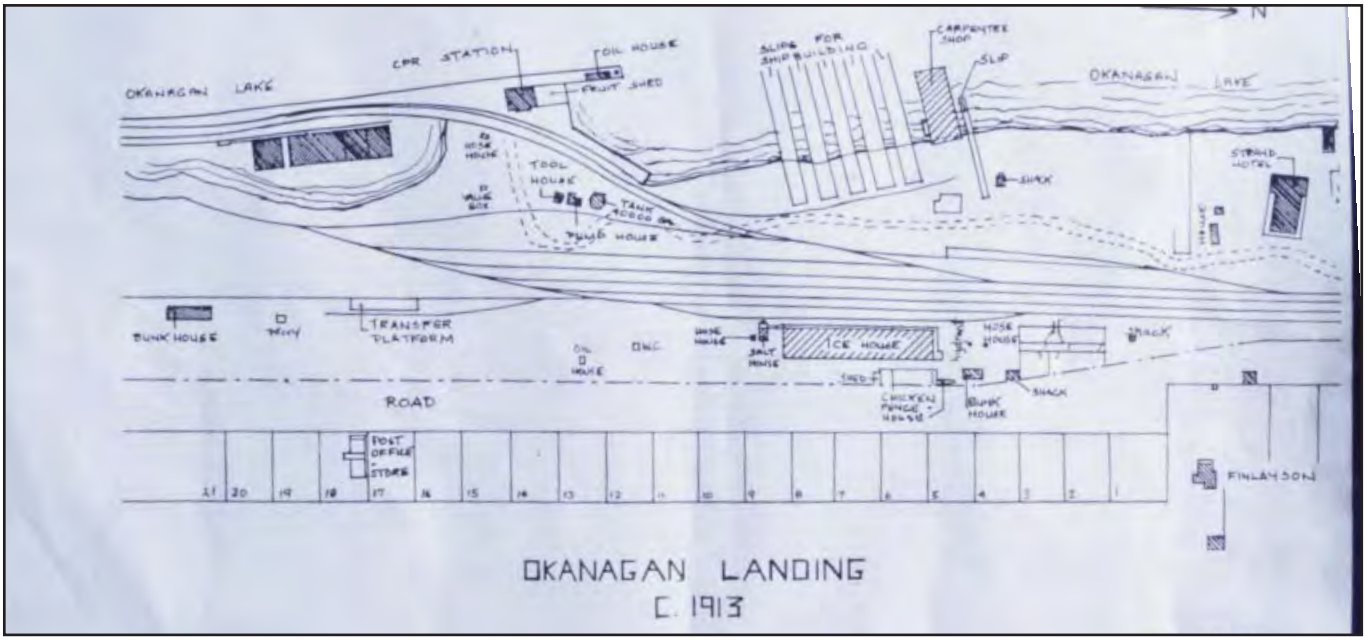
ter, the sternwheeler *Aberdeen* was fabricated and launched in the spring of 1893. She was able to provide reliable alternate daily service to Kelowna, 35 miles away, and Penticton, 70 miles away. Patterned after the proven riverboat design, these flat bottomed craft were able to land on shore nose first to take on freight and passengers. Packing houses and wharves were constructed at central points over the following years.

Following upon this success, in 1904, the much larger and faster sternwheeler *Okanagan* was launched at the landing. At 193 feet long, she was able to ply the 140 mile return trip to Penticton in one day, providing daily service.

By 1908, the *Aberdeen* moved the first railcar transfer barge from Okanagan Landing to Kelowna. This was made possible by the construction of the impressive ¼ mile wharf and barge loading apron. In 1910 the iconic Okanagan Landing Station was completed on the wharf at the approach end.

By 1911, a 300 ton ice house was constructed on the wharf, the second ice house at the landing. These facilities were used to top up the reefers travelling to the cities. Also, this year the first wooden hulled steam tug, *Castlegar,* and two wooden barges were launched. They were used extensively in moving construction supplies in 1912 to Penticton for the building of the Kettle Valley Railway, both east and west.

In the spring of 1913, construction



The *S.S. Sicamous* was one of three large sternwheelers assembled at the Okanagan Landing shipyard. The sternwheelers all had long shallow hulls which limited their structural strength. They had heavy machinery including the boiler and up to 15 tons of coal located at the front of the ship plus the heavy steam engine and electrical generator located at the rear of the ship. This caused the bow and stern of the ship to droop and could cause the hull to leak. To counter this, steel rods called hog chains connected the bow and stern. They ran up and over the hog posts, seen rising above the upper decks. Turnbuckles were used to adjust the tension to keep everything aligned properly. This system of rods and chains were also used on the barges. The scaffolding surrounding the *Sicamous* was used by the riveters assembling the hull and was later used by the painters. The hull and machinery were fabricated at Port Arthur (now Thunder Bay) Ontario, disassembled and shipped by railcar to Okanagan Landing for re-assembly.

Canadian Pacific Railway's Okanagan Landing circa 1914

The wharf apron needed to be raised and lowered, depending on the lake height. Note the huge counterweights which takes the weight of the apron while the block and tackle adjusts the apron into position (*above*). The Canadian Pacific wood hulled *S.S. Kelowna* tugboat waits for a barge to be loaded with reefer cars on the Okanagan Landing wharf (*below*). Canadian Pacific operated three steam powered tug boats on Okanagan Lake from 1911 to 1972. The tugs usually traveled with two barges tied together at the front with the tug between the two barges at the stern. This arrangement had to be separated each time a barge was placed at a barge slip. Okanagan Lake had several isolated communities with packing houses located on barge slips. Once the barge was carefully spotted at the apron of the landing slip, the empty reefer cars were pulled off of the barges by a steam winch and cable system. The tracks on the slip were built on a grade which allowed the workers to use gravity to roll the loaded reefer car onto the barge. They controlled the speed of the car by using the car's brakes. The balance of the barge was critical during loading so that only one or two cars were loaded on each track at a time. Canadian Pacific barge service lasted until 1972 on Okanagan Lake. The *Sicamous* was the last sternwheeler on Okanagan Lake and was pulled from service in 1936. Note the Ring Billed Gulls leaving their signature on the pilings.

started on the largest and fastest sternwheeler, the *Sicamous*. At 202 feet long and able to make 18 knots (21 m.p.h.), she became the final iteration of the sternwheelers on Okanagan Lake. At the same time, the steam tug, *Naramata*, was started. The simultaneous construction of these vessels required a workforce of about 150 craftsmen. Due to the limited accommodation at the landing, a train made a run from Vernon, five miles to the north, to bring the crews. It returned each evening. This was definitely an example of early rail commuter service. Both of these steel hulled vessels were launched one year later in 1914. This is the time of our diorama, a time which ushered in a busy decade for the C.P. Lake and River Service.

It has been reported that in 1928, 2,107 rail cars of fruit passed through Okanagan Landing! Due to other rail connections to the lake and an increase in road transportation, the *Sicamous* suspended service in 1936, while the barge service continued to 1972.

Diorama

The diorama represents the spring of 1914 at Okanagan Landing. While there are some excellent references available (p.), there continues to be many gaps in historical knowledge. Our ultimate modeling guides are images from the photo bank at our local museum. Even so, we had to be scrupulous in our attempts not to invent history where no recorded history exists.

Size

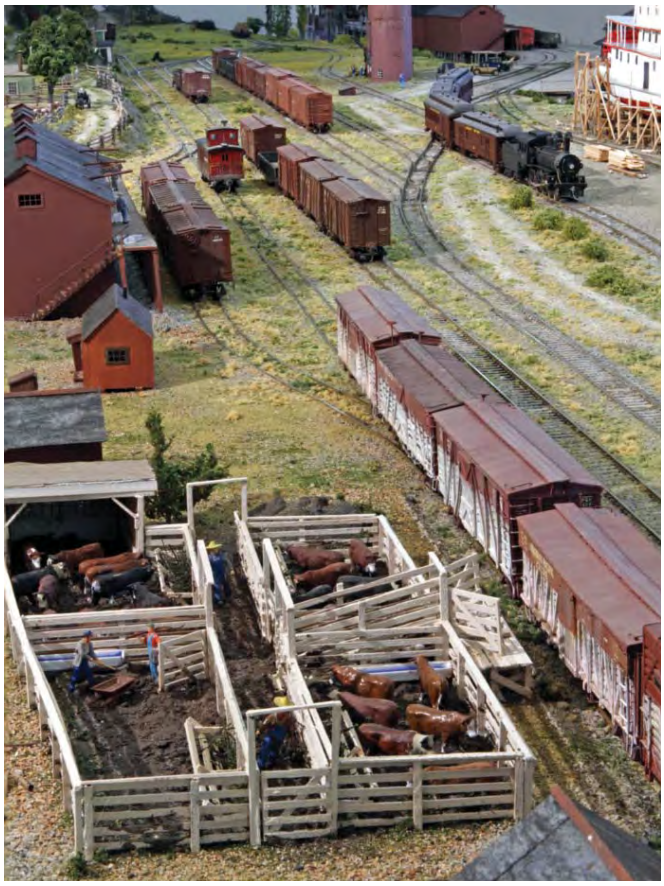
The CPR rail head and transfer barge wharf diorama is housed in the living room of the station master's family quarters upstairs in the preserved Okanagan Landing Station. For this public display, we had room to build a 4′-6″ × 22′ island with a walk around footprint. This allowed us to work from both sides of the table and to include a condensed, but significant portion, of the original rail yard. The table height of 42″, while being too tall for 6 year olds and too low for 60 year olds, is a necessary compromise.

Water

Our first building challenge was the realization that 30% of the model would be comprised of lake surface. After experimentation, we found that the best water surface for a project of this size was multi coats of gloss polyurethane over primed donnacona painted dark blue-green. This technique captures the look of lake expanse nicely and is easy to clean and to recoat.

Land forms and scenery

Landforms were built up from contoured foam insulation board. This was sealed with acrylic paint, sifted sand and dirt. Extensive use of static grass was used to simulate the lush bunch grass of the North Okanagan Valley. Where the CPR had laid track disturb



Stock pens (*above*) were used to load cattle being sent to slaughter from the nearby O'Keefe Ranch. The stock cars are all scratch-built replicas of early 1900 CP all wood stock cars. Code 83 track was used for a more realistic appearance. During this period creosoted ties were not used. The track's ties were painted different tones of gray to simulate weathered wood. The rail sides were painted Rail Brown. An effort was made to only have the tops of the rails shiny on the entire diorama. Ballast was made with fine sand. Ballast, and in some places weeds, cover the ties and track as was the case on the prototype. The Strand and later the Tourist Hotel was built in 1904. The model of the Strand (*top right*) was built without plans. Instead a selection of good historic photos were used to estimate the size and number of doors and windows. Once suitable commercial door and window castings were purchased, they were laid on sheet styrene in a pattern duplicating what was seen in the photos. The walls were then sketched onto the styrene, cut out and assembled using styrene cement. Wood strips were contact cemented to the styrene walls to give the building strength. The many roof sections were made from Strathmore board shingled with Campbell paper shingle material and supported with wood strips. Horse drawn carriages and wagons outnumbered automobiles and trucks in the 1913-1914 time period. This team track (*above right*) was used for l.c.l. (less than car load) cargo, which was transferred from boxcars to team wagons or from team wagon to boxcar. The rail fence along the 1913 road was made off-site in a jig in three span sections using round toothpicks. The sections were pressed into the foam base one section apart. The gap was filled with 3 more toothpicks to form a continuous fence. The fence was stained with a wash made from lacquer thinned Floquil Grimy Black paint.

The actual transfer wharf was ¼ mile long. It needed to be compressed to fit into the available diorama space (*right*). The modeled transfer wharf measures over eight feet long, which scales out to about half of the actual length of the prototype. Construction started by drilling ⅛″ holes eight per section 15 scale feet apart, which is the same as trestle bents. The pilings are ⅛″ dowels cut and pressed into place using a jig that pushed them down to the same height. Then a ⅛″ square cross timber was placed over the pilings. This step used over 300 pilings. Next the longitudinal timbers were placed over the cross timbers on each edge and one under each rail of the track. Square ⅛″ ties were added next. Only every third tie was actually full length, with the other ties just being end stubs to save material. The ties are covered by scale 3″ × 10″ planking. Like the prototype, the planking by the station is smoother than the planking found on other parts of the wharf. The scale lumber was all cut on a full size table saw using a fine blade and clear white pine lumber.

Canadian Pacific Railway's Okanagan Landing circa 1914

Hugh Clarke and Eldie Jamieson discuss putting the finishing touches on the display before it is opened to the public. The base of the diorama is made of 1″ foam board covered with fine natural sand glued in place with diluted white glue. Noch and Heiki static grasses were applied followed by ground foam weeds where the natural grass was disturbed. Trees were made from a selection of natural armatures and leaves added using spray glue. The diorama measures 22′ long × 4′-6 ″ wide and is located in the upstairs station master's living room of the original Okanagan Landing Station. In the 1980's the station was moved approximately 100 meters from it's original location on the wharf to it's present location adjacent to the Okanagan Landing Community Hall in Paddlewheel Park. The station has been refurbished and is now a satellite museum of the Vernon and District Museum.

ing the natural vegetation, the resulting nuisance weeds and coarse brush was duplicated with various ground foam applications. There were few natural conifers at this location. The few deciduous trees, mostly cottonwoods and scrub willow found at the shoreline, were made from Scenic Express and other suitable armatures fixed with Selkirk Leaf Material and others with check perforation paper leaves from Sublime Design.

Trackplan

The design of the Okanagan Landing rail yard was adapted from a track plan for 1912 available from the museum. This design, while likely somewhat incorrect for 1914, captures the spirit of the yard and closely depicts the design around the almost finished steam tug, *Naramata,* and sternwheeler, *Sicamous*.

Transfer wharf

A major focus, along with the boats, is the presentation of the huge transfer wharf. The prototype was approximately a quarter of a mile long. Its base was secured by well over 300 wood pilings driven into the clay lake bottom. It supported two tracks and, on occasion in the autumn, was able to support whole cuts of fruit reefers. A large 300 ton ice house and the station complex were supported at the shore end. At its lake end was a short adjustable apron which was raised or lowered to coincide with the rail barges during variations in lake height. Our model of the wharf is composed of 290 dowels drilled into the table. The wharf surface was then built up out of scale timbers which were capped with prototypical board-by-board 4″ × 10″ planking. It appears that the surface planks around the station were planed, while those on the wharf were rough cut. We have duplicated this look with careful wood surface preparations.

Model detail

One of our members is an accomplished styrene scratchbuilder. He was able to build the major structures at home prior to the diorama preparation. The structures include the sternwheeler *Sicamous*; steam tug *Naramata*; hotel; wood shop; two icehouses; water tank; and pump house. His extensive work enabled the diorama to be built within the six month time frame. Another factor was that available detail such as rail cars, locomotives, figures, carriages and vehicles had to be reworked to date 1914 or before. Horses and lake gulls were exempt from this edict.

The North Okanagan Model Railroad members who were involved with the Okanagan Landing diorama project were (L-R) Eldie Jamieson, Ray Hansen, Rick Marsh, Hugh Clarke, George Copley and Don Weixl.

Lighting and scene mapping

A halogen light strip directly above the table is the major light source for the diorama. In addition, we have installed independently controlled accent LED lighting in the glass supports. These lights will greatly reduce heat generation. The various vignettes and mini scenes are mapped for visitors by a system of captioned pushbuttons controlling individual 5mm LED. The clear dome of the LED's on the diorama are nearly invisible when off, but clearly identify each important area when on.

Glass cover

In order to protect the modeled areas, the perimeter of the diorama is guarded by plate glass on rollers which allow access for maintenance. Dust, ever our enemy, is reduced by a cover over the top made of window insulation vinyl.

Final thoughts

This project has been an instructive and enjoyable modeling challenge for all involved. The modest costs incurred for the diorama construction have been graciously born by the Okanagan Landing Community Association. As an administrative necessity, the diorama has been "sold" to the Vernon Regional Museum by the North Okanagan Model Railway Association (NOMRA) for $1.00. The builders have accepted the responsibility for future maintenance should it be necessary.

We would like to acknowledge Vernon Museum and Archives Curator, Ron Candy, and his assistant, Barbara Bell, for their help in this project. To order historical prints, please contact Vernon Museum and Archives, 3009 32 Avenue, Vernon, B.C., Canada V1T 2L8 or Ron Candy, rcandy@vernonmuseum.ca (www.vernonmuseum.ca).