

newsletter

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Upper Canada Railway Society



newsletter

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James A. Brown, Editor



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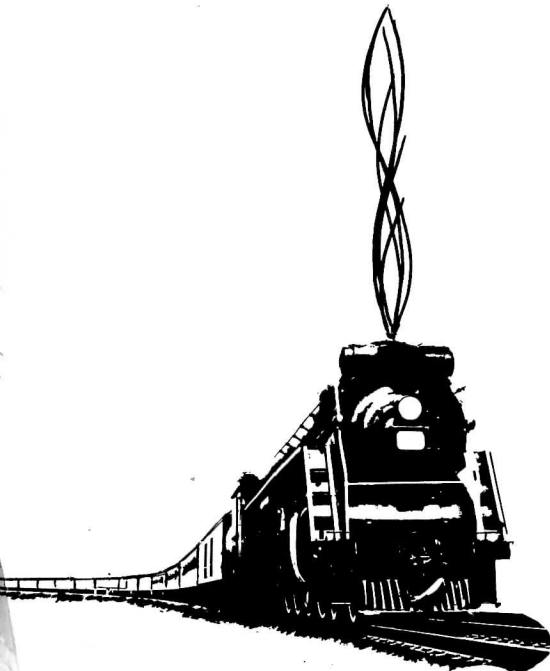
All other Society business, including membership inquiries, should
be addressed to UCRS, Box 122, Terminal A, Toronto, Ontario.

Contributors:

Keith Anderson, Chas. Bowman, John Bromley, Bruce Chapman,
Peter Cox, Bob Gevaert, Tom Henry, Omer Lavallee,
George Roth, Jim Walder, Bill Wilson.

Production: Omer Lavallee.

Distribution: Harold McMann, John Thompson, Ted Wickson.



The Cover

Grooming the Iron Horse. Although attention like this at running shops kept steam locomotives on the go from day to day, occasional heavier work was called for. We take a brief look at the steam-era backshop, beginning on page 34.

-- C.W.R. Bowman

Coming Events



Regular meetings of the Society are held on the third Friday of each month (except July and August) at 589 Mt. Pleasant Road, Toronto, Ontario. 8.00 p.m.

April 5: Outdoor observation session at Burlington Station. Take GO Transit trains from Toronto at 1723 or 1823, return on CN trains at 2214 or 2230.

April 19: Regular meeting, including an illustrated talk by John H. Walker on the subject "Steel Rails to the Junction".

May 10: Last-run all-night streetcar excursion over TTC lines to be dropped with the opening of the B-D Subway extensions on May 11th. Write UCRS Trip Committee for tickets, at \$4 each.

May 17: Regular meeting, with entertainment focussing on the railways of Newfoundland.

RESERVE THE FOLLOWING DATES NOW FOR THIS SUMMER'S STEAM EXCURSIONS -- FULL DETAILS SOON!

June 1: Toronto to Stratford and Palmerston with CN 6218, including a photo stop at Guelph alongside the displayed 6167.

July 6: Toronto to Montreal with 6218, return by diesel.

July 13: Montreal to Toronto with 6218, possibly running via Ottawa.

Aug 3: North Bay to Englehart, featuring Ontario Northland 2-8-0 137; special cars from Toronto to North Bay.

HELP WANTED

The Joint UCRS/OERHA Book Committee needs a coordinator to handle the advertising, distribution and financial aspects of its first publication -- on the Niagara, St. Catharines and Toronto Railway -- due to be released about the end of May. If you would like to help, contact B.E. West, 49 Leaside Drive, Apt 409, St. Catharines, Ontario.

Readers' Exchange

FOR SALE: Large collection of Toronto Transit Commission colour slides. No list, state your wants. For full information write or phone Robert McMann, 80 Banrockburn Ave., Toronto 12, Ont. (416) 783-9232

WANTED: Will buy 35mm colour slides and any size colour negatives of Rutland Rly and NKP diesels and steam. Have various brass models, etc. (HO) for sale; send stamped addressed envelope for details. T. Gascoigne, Box 565, Oshawa, Ont.

WILL BUY OR TRADE photos of CP's 4-6-4-hauled excursion from Montreal to Smiths Falls, Ont., in 1960. Contact Fred W. Burchill, 1911 Victoria Park Ave., Apt 209, Scarborough, Ont. 445-4668

RAILWAY NEWS AND COMMENT

TWO KILLED AS CN FREIGHT TRAINS COLLIDE

A head-on collision between two Canadian National freight trains at Pepperlaw, Ont., 55 miles north of Toronto, resulted in the deaths of two crewmen on March 16th.

The collision occurred when southbound train 310, entering the CTC-equipped siding at Pepperlaw, was struck by northbound train 451 at about six o'clock in the morning, in dense fog. Fuel tanks were wrenched free by the impact and fire ensued, which burned furiously for over an hour. Two crewmen -- the engineer of No. 310 and a brakeman on the northbound train -- died after jumping from their locomotives, when debris landed on them. Several other crew members were seriously injured.

All four locomotives involved suffered extensive damage and repairs, in at least one case, may well prove uneconomical. Engines 3238 and 3212 were handling No. 310, while 3874 and 3869 headed up No. 451. (Unit 3212 was featured in a series of 'fast freight' promotion photographs taken last year at Montreal Yard; the best known of these is probably the large mural at the west end of the concourse in Montreal's Central Station.)

About a dozen cars were derailed, mostly empty steel frame boxcars. Contrary to impressions given by the press, there were no stock or tank cars derailed, although the trains' consists could well have included such equipment.

Wreckers from Toronto Yard and Capreol cleared the line. Although track was relaid through the wreck site by midnight March 16th, the Toronto Auxiliary continued cleanup operations until the morning of March 22nd. While the line was blocked, Bala Sub. trains between Toronto and Washago were rerouted via the Newmarket Subdivision.

As if to prove that lightning can strike twice in the same place, the engineer of No. 451 was a survivor of an earlier head-on crash at Pepperlaw, on December 23rd, 1943, when a doubleheaded northbound train met a southbound extra just south of Pepperlaw station. In that affair the engineer, H.A. MacDonald, was firing the southbound train, and in both cases he stayed with his locomotive. (Incidentally, can anyone supply details of the engines involved in the 1943 affair? The leading engines were a 4-6-2 and a 2-8-2, numbers unknown.)



▲ Burned-out unit 3212 lies beside the track as auxiliaries from Capreol (left) and Toronto clear the debris.

-- W.R. Wilson

▼ No. 3238 was the leading unit on southbound train 310, and took the brunt of the impact on its left front corner. That's 3212 in the background.

-- J.A. Brown



THE ALBERTA RESOURCES RAILWAY -- WHY??

There is growing opposition in Alberta to the Alberta Resources Railway, a project designed to exploit the vast timber, coal and pulp resources in the northwest part of the province.

Everything rolled along smoothly until late last year when McIntyre Porcupine Mines Ltd., which is developing a coking coal deposit at the Smoky River -- one of the prime targets of the railway -- had to acknowledge that negotiations with Japanese steel companies to purchase the coal had broken down. This coal, and Japanese interest in it, were primary reasons for construction of the railway, which links Canadian National's main line west of Edmonton with the Northern Alberta Railway near Grande Prairie. The area's other natural resources, chiefly timber and gypsum, and improved access to Alberta's Peace River district, were only incidental in the planning.

Construction of the railway began late in 1965 at an estimated cost of \$40 million, but a bill introduced during the current session of the Legislature acknowledged that it will cost at least \$100 million.

The initiative for the project is reported to have come from CN, who proposed to build the railway with funds advanced by the government. Provided the new line turned out to be a money-maker, CN would be prepared to purchase it later. This agreement has led some critical observers to suggest that the proposed railway is a fine piece of salesmanship. In effect, the government agreed to a deal that committed Albertans to the risk and initial costs, while CN stands to reap the benefits. If the resources railway turns out to be a white elephant -- as it surely looks at the moment -- the people of Alberta will be stuck with it.

There is speculation that CN's ultimate plan is to connect the ARR with the southern terminal of the Great Slave Lake Railway, to increase its share in the handling of Pine Point ore. This cannot be the sole purpose of the scheme, but earnings from traffic out of the Northwest Territories and northern Alberta via the new railway would be far greater than the half share in traffic on the Northern Alberta Railway which CN now realizes. The NAR, jointly owned by CN and Canadian Pacific, now provides the link between the Great Slave Lake Railway and CN and CP lines, at Edmonton.

What confounded government critics even more was the admission of Provincial Treasurer A.O. Aalborg, who is responsible for the resources railway, that the government has only verbal assurance that CN will eventually buy it. He said the understanding is that the province advances money for the construction of the railway, and CN repays these advances out of freight tonnage revenue, with the option to buy the railway outright by repaying all advances with interest.

The Alberta government regards every dollar it is paid on the basis of the tonnage hauled as a dollar toward CN's purchase of the new line. Mr. Aalborg said technically this was not an agreement to purchase the line, but to pay back the advances. The resources railway, he added, will eventually pay for itself. A sales contract for the Smoky River coking coal will be signed, if not this year, then in the not-too-distant future. Peace River farmers will have better access to the west coast, and a pulp mill may even be developed south of Grande Prairie in the early 1970's.

The resources railway was built on the same principles that guided the building of Canada's large nationwide railways: Open up an area and bring economic development to it. "The project in our view is still fully justified. It means the resources in the area will be developed much ahead of when they would normally have been".

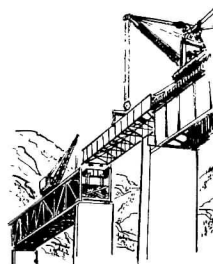
Meanwhile, tracklaying on the Alberta Resources Railway to Grande Prairie is expected to be finished by late October. Final ballasting, surfacing, legal surveys and general clean-up will then be required to complete the line, from Solomon to Grande Prairie.

-- Toronto GLOBE AND MAIL

DRILLING COMPLETED FOR CN'S VANCOUVER TUNNEL PROJECT

A small blast on March 7th, 73 feet below the Masonic Cemetery in Burnaby, B.C., breached the final obstacle to completion of Canadian National's 11,200-foot tunnel which stretches from Lougheed Highway to a point near the Second Narrows bridge. The tunnel will be finished in July.

It is part of a \$32 million development, scheduled for completion in October, which also includes a rail bridge across the Second Narrows, and rail yards at Port Mann and North Vancouver.



NEW STATION FOR CANADIAN PACIFIC IN HULL

The National Capital Commission will build a \$500,000 station for Canadian Pacific at Montcalm Street, Hull, replacing the vacant station off St. Redempteur Street. Construction will begin as soon as possible.

The new station is being built as part of the NCC railway relocation program in the National Capital area. Last year the new Ottawa station off Alta Vista Drive was opened, replacing the venerable Union Station.

The Hull station, a 40 by 50 foot glass-and-concrete structure, will be equipped with a waiting room, general offices and baggage room. The NCC will probably assume responsibility for design of the station grounds and maintenance.

EXPO EXPRESS CARS TO RUN AT MONTREAL FAIR

The fate of Montreal's Expo Express appears to be on the way to resolution. It will be recalled that the automated rapid transit system was among the disposable assets of Expo 67 after the fair terminated last October. In the following months, the city of Montreal proposed a continuing exhibition -- to be known as 'Man and His World' -- and successfully negotiated the transfer of the majority of the structural assets of Expo to the City for this purpose. As far as transit is concerned, this included the three minirail systems and the permanent installations of Expo Express; it excluded the 48 automatically-controlled air conditioned Hawker Siddeley transit cars themselves.

The cars were offered for sale by tender, with bids closing in mid-March. Among the transit authorities known to be interested in bidding were those of New York, Toronto and Edmonton. Montreal indicated that it would not bid, due to heavy financial commitments towards other costs of the continuing exhibition, and indicated that the tracks and facilities of Expo Express might be used by employing cars temporarily surplus on the Montreal Metro.

Just before the bid closing in March, however, it was announced that the closing date for tenders had been deferred until September, and that the cars -- which make up eight six-car trains and which are now in storage at CP's Angus Shops in Montreal -- would be available for use for the 1968 season of 'Man and His World'.

A cryptic remark made by the Mayor of Montreal in a radio interview to the effect that, far from being further depreciated, the transit cars may be worth "even more" by September, would seem to indicate that Montreal is prepared to purchase the equipment for use in 1969 and thereafter, should the 1968 season indicate that a continuing 'Man and His World' is financially feasible. Between \$3 and \$4 million is involved.

-- OSAL

The establishment of centralized customer service centres will soon erase such pastoral scenes as this, on CP at Hussar, Alta. The coming of the train is quite an event at Hussar since it occurs but once a week. Here is M713 doing local business on its Thursday-only run from Bassano to Calgary.

-- J.A. Brown



CP APPLIES TO CLOSE 84 PRAIRIE STATIONS

The Canadian Transport Commission will hold hearings on April 22nd and 29th at Regina, Sask., and Medicine Hat, Alta., respectively, on applications by Canadian Pacific to close 84 small station offices. The applications also provide for the removal of caretakers or caretaker-agents from a further 44 stations.

CP plans to establish customer service centres at Regina and Medicine Hat to handle by telephone those customers normally served by local station agents.

The stations involved are listed below:

REGINA AREA:

Agents removed from:

Antler, Sask.	Midale, Sask.
Arcola, Sask.	Milestone, Sask.
Balcarres, Sask.	Neudorf, Sask.
Bromhead, Sask.	Ogema, Sask.
Bulyea, Sask.	Ormiston, Sask.
Carlyle, Sask.	Pangman, Sask.
Creelman, Sask.	Pipestone, Man.
Cupar, Sask.	Qu'Appelle, Sask.
Drake, Sask.	Redvers, Sask.
Earl Grey, Sask.	Reston, Man.
Fillmore, Sask.	Rouleau, Sask.
Gladmar, Sask.	Sintaluta, Sask.
Govan, Sask.	Simpson, Sask.
Grenfell, Sask.	Southey, Sask.
Holdfast, Sask.	Stoughton, Sask.
Imperial, Sask.	Strasbourg, Sask.
Indian Head, Sask.	Torquay, Sask.
Kayville, Sask.	Viceroy, Sask.
Kisbey, Sask.	Wilcox, Sask.
Lemberg, Sask.	Wolseley, Sask.
Liberty, Sask.	Yellow Grass, Sask.
Manor, Sask.	

Caretaker-agents removed from:

Dilke, Sask.	Nokomis, Sask.
Dysart, Sask.	Silton, Sask.
Horizon, Sask.	Sinclair, Man.
Lake Alma, Sask.	Verwood, Sask.
Lipton, Sask.	Wauchope, Sask.
Lockwood, Sask.	

Caretakers removed from:

Abernethy, Sask.	Macoun, Sask.
Crane Valley, Sask.	Markinch, Sask.
Craven, Sask.	McLean, Sask.
Drinkwater, Sask.	Minton, Sask.
Duval, Sask.	Pense, Sask.
Forget, Sask.	Readlyn, Sask.
Francis, Sask.	Sedley, Sask.
Heward, Sask.	Summerberry, Sask.
Lang, Sask.	Tribune, Sask.

MEDICINE HAT AREA:

Agents removed from:

Abbey, Sask.	Lomond, Alta.
Acme, Alta.	Maple Creek, Sask.
Bassano, Alta.	Mendham, Sask.
Beiseker, Alta.	Nacmine, Alta.
Bindloss, Alta.	Patricia, Alta.
Brooks, Alta.	Pennant, Sask.
Burstall, Sask.	Piapot, Sask.
Cabri, Sask.	Prelate, Sask.
Carbon, Alta.	Richmound, Sask.
Duchess, Alta.	Rosemary, Alta.
East Coulee, Alta.	Redcliff, Alta.
Empress, Alta.	Sceptre, Sask.
Fox Valley, Sask.	Standard, Alta.
Gleichen, Alta.	Strathmore, Alta.
Gull Lake, Sask.	Suffield, Alta.
Hazlet, Sask.	Tilley, Alta.
Hilda, Alta.	Tompkins, Sask.
Hussar, Alta.	Vauxhall, Alta.
Lancer, Sask.	Walsh, Alta.
Langdon, Alta.	Wimborne, Alta.
Leader, Sask.	

Caretakers removed from:

Carceland, Alta.	Lemsford, Sask.
Cluny, Alta.	Millicent, Alta.
Golden Prairie, Sask.	Namaka, Alta.
Hatton, Sask.	Schuler, Alta.
Irricana, Alta.	Shackleton, Sask.
Irvine, Alta.	Success, Sask.
Jenner, Alta.	Torrington, Alta.
Buffalo, Alta.	

◀ It's not every day you see a railway station on the move! Here's CN's King station crossing Highway 400 en route to a conservation area for preservation.

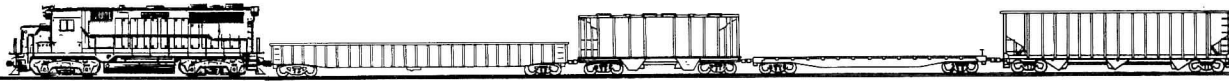


RAPID TRANSIT RECOMMENDED FOR OTTAWA AREA

A recent report of the Ottawa Transportation Commission has recommended a rail rapid transit system to serve the Metropolitan Ottawa area.

The report stresses that public transportation should be one of the first considerations in any area planning when the proposed regional government takes over on January 1st, 1969. Considering proposed developments at Tunney's Pasture and the LeBreton Flats area, each of which will be a working centre of between 16,000 and 18,000 employees, the report says there is a pressing need to plan transportation for them.

A rail rapid transit system, with surface feeders, could serve the whole national capital area, but would require coordination of federal, provincial and regional authorities.



WORTH NOTING...

- * Canadian National's King (Ont.) station, closed for several years, was moved recently to the Boyd Conservation Area, near Woodbridge. Reportedly 115 years old, the station may be ultimately displayed at the Black Creek Pioneer Village, northwest of Toronto.
- * Heavy-duty road cranes were brought in to rerail CP road switcher 8161 and four cars after a derailment on the Lake Erie & Northern at Dutton, between Paris and Brantford March 18th. A stone, placed in a switch by vandals, was blamed for the accident.
- * CP is modifying its clocks for 24-hour time, and will likely adopt the system on its eastern lines by October. CP lines east of Fort William remain the last stronghold of a.m.-p.m. time on the major roads. CP's passenger timetables will reportedly appear in Daylight Saving time this summer.
- * To reflect properly the diversified nature of its business -- non-transportation sales account for 60 per cent of revenue -- Montreal Locomotive Works plans to change its name this spring to MLW-Worthington Ltd. MLW acquired Worthington (Canada) Ltd. in 1966.
- * Despite strong representation from communities as far north as Barrie, Ontario Highways Minister George Gomme denied recently that any extensions would be made to GO Transit operations out of Toronto until studies of the existing operation are completed. Fourteen additional cars have been ordered from Hawker Siddeley to provide additional capacity on existing GO trains. They will be delivered this fall.
- * Thinking to the future, Transport Minister Hellyer envisages a continuous urban area between Windsor and Quebec City, with moving sidewalks and trains travelling in vacuum tubes at up to 2,000 m.p.h.
- * Construction on Canada's first solids pipeline, from Calgary to Vancouver, should be under way in about 18 months. The \$60 million dollar line will transport sulphur in a slurry form through 14-inch pipes.
- * Plans for a \$30 million combined highway and rail tunnel beneath the Welland Canal diversion channel at Welland, Ont. were announced recently. The St. Lawrence Seaway Authority will bear full cost of the project which is to provide two highway lanes and railway tracks to be used as a canal-crossing point for all railways.
- * Canadian Pacific reports net income for 1967 of \$34,765,953, or \$2.19 per common share, down substantially from \$48,305,517, or \$3.13 per share in 1966. Excluded from the results are dividends received from Canadian Pacific Investments Ltd., which were passed to CPR common shareholders directly in the form of dividends.
- * The upcoming merger of GN, NP, CB&Q etc. could become reality as early as June 1st, barring further delays by the ICC or the courts. New name of the giant system will be Burlington Northern Inc., replacing the cumbersome Great Northern Pacific & Burlington Lines Inc.
- * Norfolk & Western plans to streamline the track arrangement at the Detroit side of its Windsor-Detroit ferry operation. This plan lends a note of optimism to the future of N&W's Canadian operations.
- * CP will double its RDC service between Sudbury and White River to six days a week starting in April. The ruling was made by the Canadian Transport Commission's railway committee, which said the increased service is required during the summer timetable period.

EQUIPMENT NOTES...

CANADIAN NATIONAL MOTIVE POWER NOTES

* Deliveries:

From Montreal Locomotive Works, 3,000 h.p. Century 630's, class MR-30b;

2018 - Feb 24/68	2021 - Mar 8/68
2019 - Feb 27/68	2022 - Mar 13/68
2020 - Mar 1/68	2023 - Mar 20/68

No locomotives have been received from General Motors Diesel Ltd. since February 10th, as a result of work stoppages in GM's Canadian plants.

* GTW locomotives (4900-series) are no longer operating through to Toronto on GTW-CN Chicago-Toronto trains. Engines are now changed at Port Huron, and CN 4100-series road switchers with steam generator cars handle the Canadian portion of the run. The move is presumably necessitated by power requirements on GTW lines.

* A rockslide south of Boston Bar, B.C. recently precipitated GR-17 4286 into the Fraser River, killing the engineer. It is doubtful if the locomotive will be recovered.

CP PLOW, CABOOSE SOLD TO NEW U.S. LINE

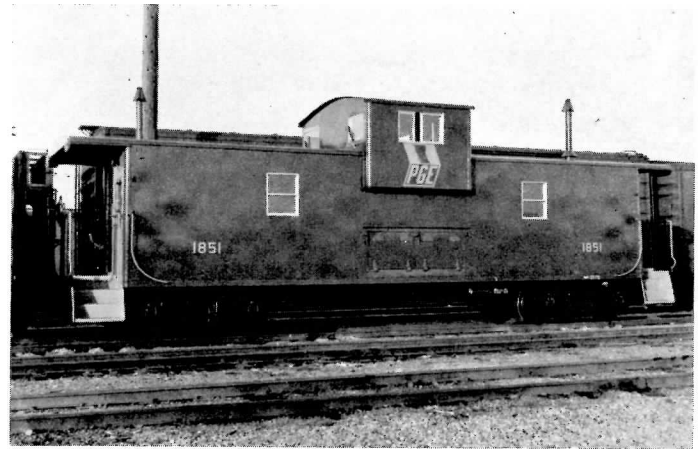
* On January 24th, Canadian Pacific sold snow plow No. 400639 and caboose 435210 to the Ogdensburg & Norwood Railroad, which is an organization that has taken over the former Rutland Railroad line between those two New York State points. The O&N owns one Alco diesel-electric road switcher, and is said to be planning a part-commercial, part-tourist operation.

The two pieces of equipment were sent to Ogdensburg by way of the Prescott-Ogdensburg car ferry operated by Canadian Pacific Car & Passenger Transfer Limited.

BRIEFLY...

* Evidence of the recent Penn Central formation has been discovered on PC's Canadian lines. A PRR Century 425 in company with an NYC B-unit visited CP's St. Luc yard the other day, while PC vans are becoming commonplace on the road's Windsor-Niagara Falls line. Ex-NYC 2544, carrying the Penn Central herald, passed through Canfield Junction early in March.

* B.C. Hydro has placed a new steel caboose in service, numbered A-1. Tenders have been called for three more.



-- Keith Anderson



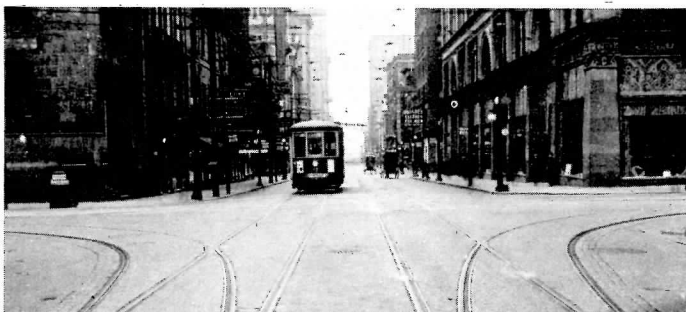
PGE TURNS OUT NEW CABOOSES

* Pacific Great Eastern's Squamish (B.C.) Shops recently outshopped a homemade steel caboose, No. 1851, which is reportedly the prototype for a fleet of five vans. Like CN's new cabooses, No. 1851 has a bay-window cupola, electric lighting (and toilet) and radio racks.



TRACTION TOPICS

Edited by John F. Bromley



Traction Topics takes a rest this month as its editor puts the finishing touches on a new UCRS publication, "TTC '28", which will be released soon. These photos are presented as typical of the fare you will find in this book.



YONGE car 2572 passes the almost-deserted Yonge-Queen intersection on a Sunday morning about 40 years ago. These Witt cars provided almost all YONGE service for over thirty years.

During the extension of the city system to Glen Echo in 1922, the TTC leased several of the ex-Toronto Civic Railways cars to the Toronto & York Radial Railways for use over the new TTC-gauge trackage, as it was extended to replace the T&YR rails between Woodlawn and the City Limit at Glen Echo. In this view, four of these cars -- later the TTC 'H' class -- lay over during midday on Yonge Street at Farnham, October 19th, 1922.



FERROVIA

..... Not an emerging African state,
but a railway display which will be one
of the new features at "Man and His
World" -- Montreal's 1968 exhibition.

FEW WILL DENY that one of the most successful events of 1967, Canada's centennial year, was Expo '67 -- the universal and international exposition held at Montreal, which opened on April 28th and closed on October 29th. More than fifty million visitors passed through its gates, a remarkable number considering that Montreal suffered a transit strike during the closing weeks of the exposition. From the point of view of attendance and of participation by other nations, it was the most successful world exposition held to date. Much of its charm was contributed by its site on two islands in the Saint Lawrence River, to which access was had by two rail transportation systems - Montreal's "Metro" and an intra-mural rapid transit system designed for Expo itself, "Expo Express".

During its all-too-brief six-month run, Expo '67 had so skilfully shown Canada to the world, as well as the world to Canada, that Jean Drapeau, the energetic and enthusiastic Mayor of Montreal resolved that it was imperative that Expo be continued in a modified form on an annual basis. He revealed plans to retain most of the physical assets of Expo for this annual exhibition, and has spent the past winter in negotiating the transfer of land, services and some pavilions to the jurisdiction of the City of Montreal. Most of the structures of the 1967 event will remain; some will be operated again in 1968 by their 1967 national or corporate sponsors. Others, vacated by last year's exhibitors, will be devoted to new exhibits. The whole, to open on Friday, May 17th (also the 326th birthday of Montreal) will run until mid-October. Taking the theme title for Expo '67, the new exhibition will be known as "Terre des Hommes -- Man and His World".

Among the new displays, the City has wisely encouraged participation by hobby groups. As a result, there will be pavilions devoted to such things as plant and bird life, stamp collecting, motor cars, aeronautics and navigation. Of most interest to readers of the "Newsletter" will be an exhibition devoted completely to railways, to be known as "Ferrovia", which will occupy the former pavilion of the State of Maine on LaVoisier Avenue on Ile-Sainte-Helene, close to the Metro station and adjacent to the terminus of two minirails.

"Ferrovia" evolved as the brainchild of a number of rail hobbyists in Montreal who were seeking a suitable outlet for their talents as organizers, administrators, artists, writers, historians, model builders and museologists. They will combine their talents with extensive and wide-ranging personal collections of documents, photographs, artifacts and models owned by individual members of the group, into an exhibition which will amuse and instruct visitors to "Man and His World".

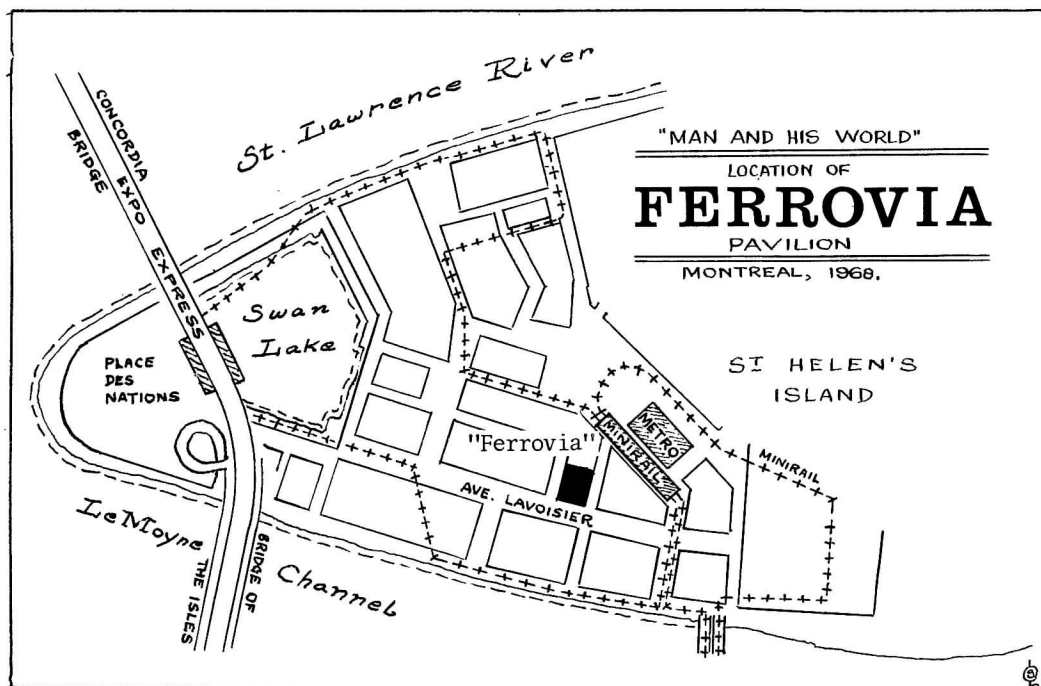
The initial approach, made on January 18th, 1968 to Mayor Drapeau, met with an immediate and enthusiastic reception. The sponsors emphasized that time would not permit as large and comprehensive a display for 1968 as might seem desirable, but the initial proposal provided for continuation of "Ferrovia" as a permanent feature, should the 1968 exhibition, (which is really a "guinea pig") prove successful. All other things being equal, it is the intention to enlarge the display in future years, as well as change it from year to year.

Initially, the sponsors were asked to make a proposal with respect to the former pavilion of Vermont, which afforded a floor space of approximately two thousand square feet. This was felt to be the maximum area which could be handled in the limited time available. The Mayor and his consultants were impressed by the type of display proposed and the quality of the components. There was, however, some concern over the fact that the Vermont pavilion, striking and attractive architecturally, was constructed of wood only and did not possess such attributes as central heating. Moreover, they felt that any expenditure of time and materials should contemplate future expansion in succeeding years. The outcome was that the sponsors were asked to restate their display in terms of the pavilion of the State of Maine, a fireproof, heated and air-conditioned building in neo-Colonial style, possessing about three times the floor area of Vermont.

The City indicated that it would assist actively in basic construction of display facilities, leaving the sponsors of "Ferrovia" to concentrate on the displays themselves. It was also agreed to accept a less-concentrated display for 1968 in view of the time element, and mutual agreement was secured to proceed on this basis. While some of the exhibits are still in the conceptual stage, we will attempt to give a broad outline of what the visitor to "Ferrovia" might expect to see.

Throughout the pavilion, identifying captions will be colour-coded corresponding to the two official languages. Uniform type faces will be used on all signs and captions.

The displays will be grouped around a central pool with flowing water, in which are situated three islands. On the islands will be large-scale artifacts. The exhibit as a whole will draw on two- and three-dimensional aids to depict selected aspects of how mankind has been, and is being served by the science of railways.



One area will be devoted to miniature railways, both scale models and coarse-scale toys. It will feature a large, completely-landscaped and operating "tin-plate" O gauge system built in and featuring equipment of the Twenties and Thirties. Adjacent displays planned include one in which the evolution of the commercial model train will be depicted with actual specimens, grouped according to gauge and period, ranging from cast iron pull-toys of the 1880s, to models currently available in HO and N gauges.

There will be a series of panels depicting the evolution of railways in Canada, from the era of the "Dorchester" to that of the unit train, and the period of expansion in the North. Another exhibit will show the evolution of speed on railways, from the early British railways of 150 years ago down to the Tokaido Line and the TurboTrain.

Yet others will depict selected subjects: one in contemplation would trace the background of the transport of road vehicles by rail, a concept usually accepted as modern, but really traceable back to the 1840s when French railways transported highway coaches by rail. The motor "buff" will see a number of splendid scale model automobiles in this exhibit.

One of the dominant art features will be a large, eighteen-foot-long stylized map of Canada and its railways, which will locate and portray, by photographs keyed to the mural, the principal architectural and engineering features of Canadian railways.

In one corner, it is planned to install a rear-projection screen upon which slide programmes on rail topics will be projected. Initially, one 80-slide programme is being planned, but others will be added as time and resources permit. This is an area capable of diversification and expansion in the future.

It is also planned to feature a display of small prototype artifacts such as locomotive number and builder's plates. It is proposed to use aluminum duplicates in the display, rather than original plates, both for reasons of weight as well as security. We would be interested in hearing from Society members who might have unusual items in this area which they would be

willing to lend to us to have duplicated, and credit would be given for those displayed. Those interested might send a note to the writer at P.O.Box 772, Montreal 3, Canada.

Meanwhile, a cordial invitation is extended to the members of the Society to visit "Ferrovia" during the summer of 1968. The pavilion will normally be staffed by paid help relieving the sponsors from full-time attendance, but it is likely that one or more of the principals will be on hand at the more popular times.

-- Omer Lavallee.

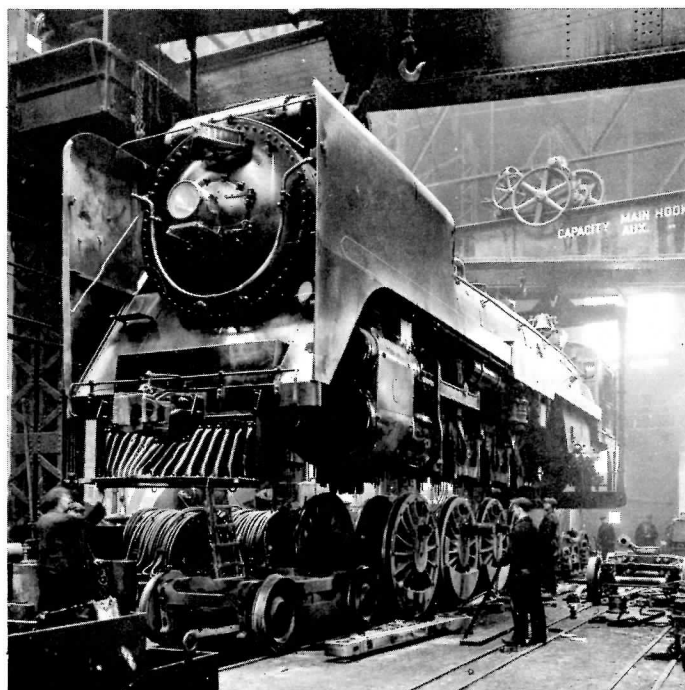
Home for Ferrovia at the 'Man and His World' site will be Expo's State of Maine pavilion, constructed in Colonial style at a cost of \$180,000.



THE STEAM-ERA BACKSHOP

A railway backshop is a remarkable place. Within a few weeks it can take a work-weary locomotive, dismember it completely, rebuild or overhaul its major innards, give it a new coat of paint and turn it out again -- virtually a new machine, ready for thousands of miles of reliable service. Most rail amateurs realize this function exists; yet how many comprehend the intricacy of the overhaul procedure?

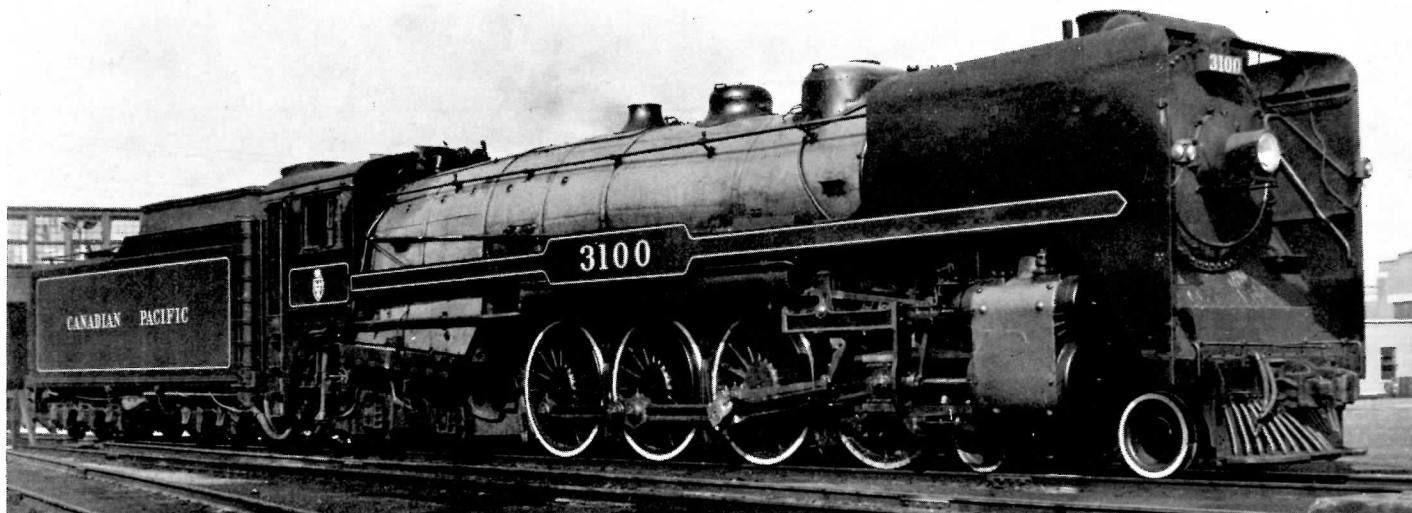
Electrical systems play an important role in modern-day backshops, both in the locomotives themselves and in the equipment used to repair them. In this respect, much of the technology of today's shops remains hidden



to the casual observer.

The steam locomotive, however, held no such secrets. Its workings were there for all to see -- robust, and yet precise enough to want tolerances of a sixty-fourth of an inch in the setting of a valve. The general repair of a steam locomotive was an awesome experience for the layman, in both its extent and complexity.

In April 1937, Canadian Pacific performed a routine general repair on its K-1-a class 4-8-4, No. 3100. The following account of the procedure is abstracted from the Company's Staff Bulletin for June of that year.



▲ 3100 at Toronto; August 8th, 1952.

-- J. Walder

Locomotive 3100, which hauls from 14 to 18 cars on the fast run between Montreal and Toronto every night, was sent to Angus Shops in mid-April for customary general repairs after a splendid record of 125,665 miles since last year, during which time it never missed a trip or had an engine failure.

This fine K-1-a class locomotive, one of two built in Angus Shops in August 1928, handled the heavy train 340 miles each night without giving the Company the slightest trouble. Including its perfect record of 125,665 miles, 3100 has piled up a total of 793,395 miles since its construction.

The repair job, which is done every 125,000 miles in this type of engine, was very thorough. Stretching over a period of almost five weeks and occupying the attentions of several different departments, the locomotive was taken almost completely apart. The various pieces of equipment were sent to the proper departments for thorough testing and repairs. Then, everything in perfect condition again, the engine was reassembled piece by piece until it stood as new-looking, as clean, as mechanically perfect as the day it was built.

The usual complete repair job includes the services of the sandhouse, machine shops, erecting shop, tank shop, boiler shop, jacket shop, carpenter and tender shop, steamfitters shop, paint shop, brass shop, spring and brake shop, blacksmith shops and iron foundries.

When an engine arrives at Angus for repairs, the first operation is to place it at the coaling pit. All coal is removed from the tender, ashes dumped, brick arch removed and water drained off. From here, the engine is removed to the sand blast, where wheels and running gear are sandblasted; if the cab, tender or other parts are pitted, they are sandblasted as well. After this treatment, a priming coat of black paint is applied and the engine is ready to enter the shop.

Once the engine is placed in the shop, the tender is uncoupled and taken away to the tender shop. Then work begins in earnest, with preparations to lift the engine off its wheels. All guard stay bolts and stays are stripped; all brake rigging, main and side rods, headlamp, number lamp and other electrical fittings are removed; the smoke box front comes off; the automatic firedoor and dome casings are removed. While this work is being completed by the erecting shop gang, the jacket shop removes the jacket from the firebox to prepare for the test on the boiler. The tank shop removes the netting and plates from the front end, the carpenter and tender shop removes lagging and the steamfitters strip the pipes ready for test.

The engine is then lifted by two cranes working in tandem. The wheels and trucks are dropped and the engine is carried up the shop to a pit where it stays for the completion of the repairs.

On the second day in the shop, the engine is given a water test to show up any defect in the boiler or cylinders, after which the motion, valves, guide bars and crossheads, and bell stand are removed. Steam pipes are taken out only if found to be leaking on test. The air compressor and water pump are removed. The general stripping of machinery is now completed by the erecting shop. The tank shop removes the ashpan. The jacket shop completes the removal of remaining boiler jacket and steam pipe casings. The carpenter and tender shop finishes removing the lagging and the steamfitters start stripping the superheater pipes.

On the third day, the erecting shop takes out the feed-water heater and proceeds to wash out and test the tube bundle. All repairs required are then started.

If the superheater header is found leaking, the header, dry pipe and standpipe are removed for repairs. Mountings are all stripped down and sent to the brass shop for overhaul.

The boiler shop starts cutting the tube beads in the firebox. The steamfitters finish stripping the superheater tubes and remove them to the rack where they are all tested and repairs are made to the various supports and shields.

On the fourth day, the boiler shop finishes cutting the tubes in the front end and removes them to the tank shop. Here the tubes are placed in a machine which knocks the scale off and also straightens them, after which the length required is obtained and new ends to suit are welded on and tested. Boiler work is now started.

The tender is brought into the tender shop and the stoker engine and trough are removed and sent to the spring and brake shop for reconditioning. The tank is then tested and repairs started. When tank repairs are completed, the painters start finishing up the painting and varnishing on the tender.

All material removed from the locomotive is sent to the machine shop as it is available, so that no delay takes place. The machine shop examines and tests the various parts, stripping the axle boxes off the axles and renewing crown brasses, etc. The crossheads are stripped down and new parts such as shoes, bolts and wrist pins are applied. The motion and valves are all examined and tested minutely for flaws. All main and side rods are similarly inspected and new brasses are applied.

The mechanical stoker engine is repaired; its screws are welded up and turned on the lathe to bring them back to standard. The engine truck and cradle truck are both stripped down and the springs sent to the blacksmith shop for repairs. The wheels are examined, axle journals ground and tires turned. The driving boxes are repaired.

As the various parts are completed they are sent back to the erecting shop and the work of reassembling the locomotive begins.

The boiler work is completed and tested. The engine is carried down the shop and wheeled and trucked. Crossheads, guide bars, motion and valves are applied, superheater tubes are put back and tested, netting and plates are applied, the smokebox front replaced and all plate-work completed. The grates and archbrick are applied, the tender is coupled up and the engine finished up for trial.

Painting the various parts of the locomotive is undertaken at various stages. The tender and cab, which have a very fine varnish surface, are only completed when all work has been finished on them. The frame, wheels, etc., and front end are painted when convenient. Finally only a touch-up remains to complete the locomotive for service, looking and performing like new, and capable of another 125,000 miles of efficient service.

➡ A new coat of paint was probably the most visible evidence that an engine had received backshop attention. Here, Canadian National painters do the job on a Western Lines 2-8-2, at Stratford Shop

-- J.A. Brown



CLASSIFICATION OF LOCOMOTIVE REPAIRS *

Class	Work done	Item of work distinguishing the class of repair from the next lower class
1	New boiler or new back end; Flues, new or renewed; Tires, turned or new; General repairs to machinery and tender.	New boiler
2	New firebox, or one or more shell courses or roof sheet; Flues, new or renewed; Tires, turned or new; General repairs to machinery and tender.	New crown sheet
3	Flues all renewed (superheater flues may be excepted); Necessary repairs to firebox and boiler including front or back tube sheet or side sheets; Tires, turned or new; General repairs to machinery and tender.	General repairs to boiler and machinery
4	Flues, part or all renewed; Light repairs to boiler or firebox; Tires, turned or new; Necessary repairs to machinery and tender.	Flues renewed, all or part
5	Tires, turned or new; Necessary repairs to boiler, machinery and tender, including one or more pairs of driving wheel bearings refitted.	Tires turned or renewed
6	Necessary repairs to boiler, machinery and tender, including one or more pairs of driving wheel bearings refitted.	Wheels taken out

EXPLANATIONS:

"General repairs to machinery and tender", Classes 1, 2 and 3, will include driving wheels removed, tires turned or changed, journals turned if necessary, driving boxes, rods and bearings refitted, and all ordinary repairs to machinery and tender necessary for a full term of service.

Explanation of lettered suffixes to repair class number:

- Suffix 'A' indicates Superheater applied.
- " 'B' indicates Cylinders applied.
- " 'C' indicates Frame applied.
- " 'D' indicates New boiler applied.
- " 'E' indicates Stoker applied.
- " 'F' indicates Outside valve gear applied.
- " 'H' indicates Feedwater heater applied.
- " 'J' indicates Exhaust steam injector applied.
- " 'T' indicates New tender tank applied.
- " 'W' indicates heavy wreck repairs.
- " 'X' indicates New tube sheets or 1/2 or 3/4 side sheets applied.
- " 'Y' indicates Booster applied.

* From Canadian National Railways Mechanical Department Maintenance Regulation No. 63, June 1944.

Over twenty locomotives lined CP's Angus Shops erecting hall in 1948, when this view was taken. In this photo, the three locomotives nearest to the camera are, from left, 2395, 2507 and 2391.

Unlike CP, Canadian National shops lined the engines up at right angles to the long axis of the building, and lifted them with a single crane.

-- Canadian Pacific

