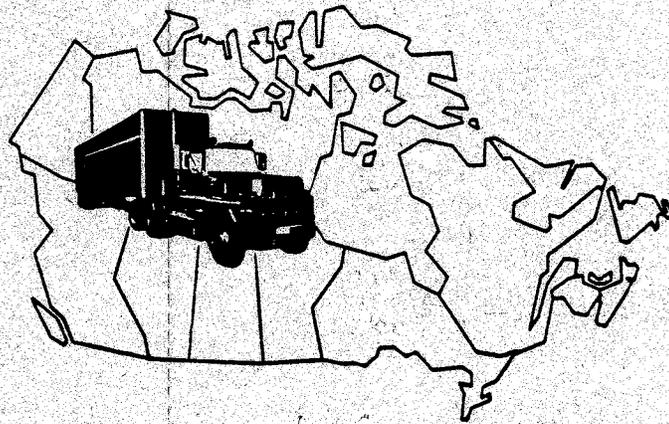


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ECONOMIC ISSUES RELATED TO THE PROPOSED CHANGES IN VEHICLE WEIGHTS AND DIMENSIONS REGULATIONS FOR INTERPROVINCIAL TRUCKING



DECEMBER 1987

IBI
GROUP

ROADS AND TRANSPORTATION ASSOCIATION OF CANADA

ECONOMIC ISSUES RELATED TO THE PROPOSED CHANGES
IN VEHICLE WEIGHTS AND DIMENSIONS REGULATIONS
FOR INTERPROVINCIAL TRUCKING

IBI GROUP
December, 1987



December 30, 1987

Mr. Ralph Campbell, P. Eng.
Research Program Manager
Roads and Transportation Association
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1765 St. Laurent Blvd.
Ottawa, Ontario
K1G 3V4

Dear Mr. Campbell:

ECONOMIC ISSUES RELATED TO THE PROPOSED CHANGES
IN VEHICLE WEIGHTS AND DIMENSIONS REGULATIONS
FOR INTERPROVINCIAL TRUCKING

We submit herewith our report on the above, prepared in response to your invitation of September 25, 1987, our proposal of October 6, and our meeting on October 8 with the RTAC Implementation Planning Subcommittee. This letter constitutes an executive summary of our report. The numbered sections in this letter correspond to those in the body of the report, and the letter cross-references exhibit and page numbers in the report.

1. BACKGROUND

Over the past years, the Roads and Transportation Association of Canada (RTAC) has conducted detailed technical studies of possible changes in truck weight and dimension regulations in order to propose a uniform set of regulations for interprovincial trucking across Canada. The Implementation Planning Subcommittee issued a draft report entitled "Recommended Regulatory Principles for Interprovincial Heavy Vehicles Weights and Dimensions" in June of 1987 which, with some revisions was presented to the provincial and federal transportation ministers at the RTAC/CCMTA meeting in September, 1987. The regulatory proposals are summarized in Exhibit 1.1 of the attached report which compares them (in terms of factors affecting economic productivity) with existing regulations in the provinces and territories. The proposed regulations would allow significant increases in maximum overall combination length (to 25 m or 82 ft.), maximum semi-trailer length (to 16.2 m or 53 ft.) and gross combination weight (e.g. to 62.5 tonnes or 137,500 lbs. for seven and eight axle B-trains). Maximum single axle loads (9.1 tonnes or 20,000 lbs.) would be relatively unchanged from those in most provincial

jurisdictions, but maximum tandem axle loads (17.0 tonnes or 37,400 lbs.) would be less than those now allowed in the Atlantic provinces, Ontario, Quebec and the Yukon, and maximum tridem axle loads (24.0 tonnes or 52,800 lbs.) would also be substantially less than existing provincial limits in the east and central parts of the country.

The Implementation Planning Subcommittee held public hearings on the proposals in five centres across Canada during July and August at which time a variety of concerns were expressed by truckers, the railways and shippers, some of which focused on economic issues. At their meeting in September, the Council of Ministers decided to defer a decision on the recommendations to a subsequent meeting in February, 1988, to permit additional consultations and consideration of the recommendations in light of the concerns expressed.

1.2 IBI Group/ADI Limited Economic Study

As one of the background studies, RTAC commissioned IBI Group and ADI Limited to conduct a study entitled "Economics of Truck Sizes and Weights in Canada" which was submitted in July, 1987. This study provided estimates of increased trucking productivity in relation to possible increases in road and bridge costs; it also included estimates of potential losses in rail traffic and revenues which might result from relaxed interprovincial truck size and weight regulations. By mutual agreement, modal diversion estimates were prepared by CN and CP based on estimated percentage trucking cost reductions provided by IBI Group (see Exhibit 1.3). The economic impact and modal diversion estimates were prepared for each of four regulatory scenarios of which the fourth, Scenario D, was the set of regulations subsequently proposed. For weight-out (high density) commodities the estimated trucking cost reductions for the proposed regulations would be in the range 6-36% (generally in the range 9-14% for most interprovincial movements) and for cube-out (low density) commodities trucking cost reductions would be in the range 9-12%.

The estimated economic impacts of the regulatory proposal (see Exhibit 1.2) were an annual reduction of about \$160 million in trucking costs (1985 dollars) and an annual increase of about \$13 million in road and bridge costs based on existing truck movements. The estimates of gross revenue losses, prepared by the railways, were about \$170-\$219 million annually for CN and \$153-\$190 million annually for CP. CN's estimate, when prorated to the Atlantic provinces, was about \$18-\$22 million per year.

2. TERMS OF REFERENCE

RTAC retained IBI Group in October, 1987 to examine specified economic issues raised in the public consultation hearings and in subsequent submissions and discussions that relate to potential economic impacts on

the railways, Halifax container port operators/carriers, and local industries served by them. It was recognized that this is an overview study in the sense that it was conducted in an effective period of about 10 weeks and with a relatively modest budget, which precluded in-depth analyses or surveys. Because of these limitations it was agreed with the Implementation Planning Subcommittee that the study would focus on intermodal economic impacts and service curtailment issues with particular reference to the Atlantic provinces because of the competitive situation regarding the road, rail and marine modes in that part of the country. A further reason for this emphasis was the more detailed traffic diversion, revenue loss and revenue attrition studies which were carried out by CN during the summer of 1987 for the CN Atlantic Region (only), which suggested that revenue losses to CN would be many times higher than they had originally estimated, with potentially serious implications in terms of rail service abandonment, loss of container services through the Port of Halifax and related impacts on local industries depending on these services; i.e. a "domino effect".

It was further agreed with the Implementation Planning Subcommittee (at the October 8 meeting with IBI Group) that the Terms of Reference of this study would therefore exclude considerations of road infrastructure costs and cost sharing and potential economic impacts on truckers of the proposed new regulations, in order that the time and resources available could be concentrated on the above intermodal service/infrastructure issues and potential industrial impacts in the Atlantic Region. At the same time, more general comments on related economic impacts across Canada, of a similar nature, were also requested, for example potential impacts of the subcommittee's proposed regulations on trans-border trucking and rail traffic.

3. INTERVIEWS, ANALYSES AND COMMENTARY

Economic concerns included in July/August, 1987 briefs to the Implementation Planning Subcommittee are summarized in Exhibit 2.1. In area 5 (Implications for Viability of Rail System) and 6 (Implications for Intermodal Equipment) which are the focus of this study, it can be seen that those expressing such concerns were all located in the Atlantic provinces with the exception that CN raised these issues in its briefs submitted in Regina, Vancouver, Toronto and Montreal as well as in Charlottetown. While not directly in our Terms of Reference, it is worth pointing out that the majority of briefs were submitted by truckers, focusing on their concerns about possible reductions in axle weights and gross vehicle combination (GVC) weights and their desire for grandfathering of existing equipment and tolerances on weight limits. Briefs and subsequent submissions/commentary by shippers, carriers and terminal/port operators in the Atlantic provinces focused on the above issues with an underlying, but strong concern about possible losses in rail, intermodal and marine container services which could reduce transportation service levels and competition and expose industry to higher trucking rates subsequently with negative economic consequences on affected industries, railways and ports in the Atlantic Region.

Our information sources in conducting this study were:

- o the briefs submitted to RTAC;
- o correspondence between CN-Moncton and the Atlantic provinces transportation ministers;
- o a circular issued by the Atlantic Provinces Transportation Commission (APTC) dated October 14, 1987 regarding the regulatory proposals, and discussions with APTC staff;
- o meetings in Toronto and Montreal with CN (the latter including staff from Moncton and Montreal);
- o a meeting with CP staff in Montreal; and
- o telephone interviews with eight major shippers located in the Atlantic provinces, four east coast terminal and port operators/developers, and eight marine shipping lines providing container service through the Port of Halifax and representing over 65% of the estimated 300,000 containers that will move through the Port of Halifax in 1987.

Unfortunately, the available time and resources precluded face to face interviews with shippers and others in the Atlantic provinces, but the telephone interviews, which involved extended and repeat conversations in a number of instances, were generally an effective means of obtaining information and opinions from those contacted.

3.1 Trans-border Traffic

In the initial IBI/ADI study of July, 1987 the potential effect of the regulatory proposals on trans-border rail traffic was addressed with respect to CN. As discussed on pages 3-1 to 3-3 of the following report, CN's estimates prepared during early 1987 indicate a loss to its net contribution of about \$14 million per year. Three of the ten states sharing the land border with Canada - Michigan, North Dakota and Idaho - permit 53 foot (16.2 m) trailers; the other seven do not, which means that most light density rail freight would not be effected by the longer semi-trailers proposed. No border state currently permits the use of two 31.5 ft. (9.6 m) trailers in a double combination, which would be permitted in Canada under the RTAC proposals. For this and related reasons, the impact of these proposals on cube-out rail traffic would be minimal.

All U.S. border states but one (Michigan) have a maximum allowable gross weight on the Interstate System of 80,000 lbs. (36.3 tonnes), considerably less than existing allowable truck weights throughout Canada. Trans-border rail freight exceeding a density of 12.5

lbs. per cu. ft. (200 kg/m³) would therefore not be affected by the proposals except for freight to/from Michigan. Because existing truck weight regulations in Ontario, Quebec and Michigan are generally higher than the proposed new interprovincial regulations, truck and rail traffic between Ontario/Quebec and Michigan would be unaffected by the new regulations except to the extent that they might act as a "conduit" for traffic to/from other provinces; any such traffic impacts would likely be quite small.

In summary it would appear that a relatively modest percentage of existing rail trans-border traffic might be lost to the truck mode as a direct result of the regulatory changes. It can, of course, be argued that this situation would change if more U.S. states were to relax their truck weight/dimension regulations, but future decisions in this regard are speculative at present. The general conclusion regarding minimal impact of the proposed RTAC regulations applies particularly strongly to the Atlantic and Western Provinces because of the distribution of U.S. border states with lower regulatory limits; cube-out traffic to/from the Prairie Provinces and Ontario would be the traffic most likely to be affected.

3.2 Atlantic Region Rail Costs and Service

The more detailed estimates of traffic and revenue losses, carried out by CN Atlantic Region staff during the summer of 1987, suggest that CN would suffer a primary loss of 25% of its gross revenue in the Atlantic provinces owing to the regulatory proposals and an additional secondary loss of 15-25%. The primary loss would result because truck rates reduced by 7-18% would undercut the variable costs of some existing CN movements and would force rate reductions on others if the traffic is to be retained by CN. This is similar to the reasoning applied in the earlier CN estimates (provided to IBI early in 1987) except the estimated losses are substantially higher (a gross revenue reduction of about \$35 million for traffic in the maritime provinces versus the original estimate of \$17.8-\$21.8 million) and their more recent calculations included Newfoundland traffic (an additional reduction in gross revenue of about \$16 million per year), for a total estimated primary loss of about \$50 million per year.

The estimated secondary losses result from CN's conclusion during the summer 1987 analyses that its costs in the Atlantic provinces could not be reduced in proportion to the estimated 25% primary loss of traffic, which would mean that rail variable costs would increase by about 13% and therefore rates would have to be increased by an equal amount in order to keep the railway viable in that region. The secondary losses, as a result of this rate increase, were estimated to be an additional \$46 million in gross revenues, for a total loss of about \$96 million per year relative to the original estimate of \$18-22 million per year. More details on these estimates and the manner in which they were carried out in each of the four Atlantic provinces are presented on pages 3-4 through 3-10 of the report.

Commentary: We are not able to provide an independent set of traffic/revenue loss estimates for CN's Atlantic provinces traffic because of time and budget limitations on this study and the fact that railway cost information is not available to us. In our discussions with producers and manufacturers in the Atlantic region (see pages 3-11 - 3-14) we asked whether there would be significant modal diversion of their traffic to trucks following a rail rate increase of 10-15%. As would be expected, the replies expressed a range of opinions, depending on factors such as product densities, length of haul and service requirements. There is little doubt that a 10-15% increase in rail rates would cause significant traffic shifts to truck but it is by no means certain that rail traffic losses would be as great as those estimated by CN, recognizing that rail has already suffered a substantial traffic diversion to truck and that the traffic it has retained tends to be somewhat more "captive" to rail because of factors such as product density and length of haul. On the other hand, we see the basic logic of CN's estimates of secondary traffic loss impacts and find it quite possible that its gross revenue losses would be greater than those originally estimated for the Atlantic provinces. In summary, we can only say that CN's original estimates (an \$18-22 million reduction in gross revenues) and its new estimates (an estimated reduction of \$96 million in gross revenues) tend to represent the lower and upper limits of the range and there is a substantial degree of uncertainty (reflected by this large range) regarding the actual outcome. CN assumes that the secondary traffic/revenue losses would include 100% of its import/export container traffic through the Port of Halifax. As discussed in the next subsection, we do not agree with this assessment and we feel that most of the container traffic through the port would survive a 13% increase in rail rates between Halifax and Central Canada. Since this would, we understand, be the major contributor to the estimated secondary losses, we feel that CN's gross revenue losses might be closer to the middle or lower end of the above range; that is, possibly \$30-50 million per year. It must be understood, however, that this is a "guesstimate" and that actual experience might fall in the wider range noted above.

3.3 Halifax Container Port Viability

We conducted a transportation cost comparison of container traffic moving between Europe and Toronto via Halifax and via New York and a similar comparison of container traffic from the Pacific to Toronto moving via Halifax and via New York. The results of this analysis (see Exhibit 3.6) suggest that the European traffic via Halifax would have a cost advantage of \$85 - \$507 per container for volumes in the range of 40-1,000 lifts (on and off the vessel at the port in question) at the port, under present conditions. If the Halifax-Toronto rail rates were increased by 13%, we estimate that this cost advantage would be reduced to \$11 - \$433 per container, but Halifax would still be the less expensive route for the wide range of volumes studied (it would be even more attractive at higher volumes). Pacific traffic to/from Toronto was found to be served less expensively through New York for lower volumes (40-100 lifts) but Halifax was estimated to be less expensive at higher volumes (by \$102 per

container for 500 lifts and \$313 per container for 1,000 lifts). If Halifax-Toronto rail rates were increased by 13%, the same overall competitive position would persist, but the Halifax cost advantage would be reduced to \$27 per container for 500 lifts and \$239 per container for 1,000 lifts.

Commentary: It is recognized that there are uncertainties in a comparative cost analysis of the type presented on pages 3-15 through 3-21 and summarized in Exhibit 3.6. We feel, however, that the cost comparison is basically valid and that, while the cost advantage enjoyed by Halifax would be narrowed, the traffic would still continue to move through that port even if CN's rates were to increase by about 13%. This conclusion is strengthened by the interviews with eight major shipping lines whose vessels handle containers through the Port of Halifax (see pages 3-22 through 3-24) most of whom indicated they would likely continue to use Halifax even if such rail rate increases were experienced (although they would strongly object to such increases) for reasons which include not only comparative costs via Halifax and New York but also Halifax's advantages in terms of ease of entering/exiting the port, low levels of port congestion, availability/cost of storage and the reduced need for storage in Halifax, timing of movements and lack of congestion delays, and ease of loading/unloading to/from the land mode. Interviews with Halifax port and terminal operators indicated that they feel their cost advantage relative to New York has been narrowing over the past decade and are concerned that a 13% rail rate increase by CN could have a negative effect on their traffic.

3.4 Intermodal Equipment

In their brief, and in subsequent discussions, CN notes that, of the 2,197 cars which it currently owns or leases capable of carrying trailers or containers, only about 317 would definitely be able to carry 16.2 m (53 ft.) trailers and all of these are over 20 years of age. Most of the remaining cars in the CN intermodal fleet serving Atlantic Canada are at least 13 years of age. CN feels that, of the 2,197 cars, another 873 might be adapted to carry the longer trailers, but it is not clear whether it would be justified economically. CN would be hesitant to change their rolling stock to accommodate 16.2 m trailers because of the large investment involved and their feeling (based on past experience) that an even greater relaxation of maximum semi-trailer length and maximum overall combination length would quite likely be allowed within a few years, thereby negating much of the new investment. We pointed out that new intermodal equipment is coming on the market which is substantially more flexible regarding the length of trailers/containers which can be carried and that a phased purchase of such equipment might allow them to adapt as truckers purchase the longer trailers over the next several years, with improved flexibility to accommodate future regulatory changes which might occur. CN's reply was that the equipment referred to is not suitable for mainline trains and that, in any case, their basic point regarding the size of the investment still applies. Discussions with CN also revealed that the railway owns or leases about 93% of the trailers used on its

Atlantic region intermodal services (this figure is about two-thirds for Canada as a whole) which means that CN directly controls most of the trailers using its service and could opt for continuing use of the same trailer fleet thereby virtually eliminating physical impacts on its intermodal service.

Commentary: We accept that the advent of 53 foot trailers would affect the productivity and capacity of CN's intermodal service in Atlantic Canada and elsewhere. The extent of such an impact is impossible for us to estimate quantitatively, for reasons outlined above in section 3.2. This question is closely related to that of the time required by truckers and railways to adapt to the regulatory change. In our original economic study we suggested that truckers would probably have completed their adaptation to the new regulations in five or six years after the regulations were introduced, and CN's recent work suggests three-five years. The rate of adaptation would, however, depend very much on the actual regulations themselves. As discussed by the Atlantic Provinces Transportation Commission Circular of October, 1987, the proposed reductions in tandem and tridem axle loadings under the new regulations, taken in combination with the problems of operating longer semi-trailers and longer overall combination length doubles on two lane highways in the Atlantic provinces, would strongly affect truckers' acceptance of and adaptation to the new regulations. Particularly if existing equipment were grandfathered (which we assume would be the case) truckers in the Atlantic region might be very slow to respond to the new regulations, such that a relatively small number of longer trailers might be in use after three-five years, and more complete adaptation might take as long as ten-fifteen years. If this were the case, the concerns expressed by CN regarding its intermodal equipment would be somewhat softened, in that there would be a longer period to adapt and the natural attrition of equipment would make this less expensive. This conclusion, plus CN's direct control of 93% of the trailers using the Atlantic region intermodal service, contributes to our comment in section 3.2 above that the lower half of CN's estimates of reductions in gross traffic revenues is probably more applicable than the upper half. Having said this, however, we must state our general agreement with CN that their intermodal service would be affected negatively by the proposed regulations and (for reasons discussed more fully in section 4 below) transportation policies should seek to favour and strengthen intermodal services where possible.

3.5 Commentary on CN Concerns

In summary, therefore, we conclude that, if the proposed interprovincial trucking regulations were put into effect, CN would suffer a loss in its Atlantic region traffic and revenues which would be substantially greater than that estimated by CN about a year ago as input to the IBI/ADI Economic Study and that these might amount to reductions in gross revenue of about \$30-\$50 million per year (but could be lower or higher depending on estimating assumptions and actual experience). This is in the lower half of the rather wide range of losses which are bounded on the lower side by CN's original estimates of reductions in gross revenues (\$18-\$22 million per year for the three Maritime provinces) and their more recent estimates of about \$96 million per year for the four Atlantic provinces.

Our reasons for suggesting a more conservative estimate of these losses relate to our finding that the Halifax container traffic would probably remain viable if the new trucking regulations were put into effect and that, depending on the details of the regulations, truckers' adaptation time would probably be substantially longer than the five-six years which we estimated in our July, 1987 study for RTAC and the three-five years suggested by CN in its briefs to RTAC during the summer of 1987.

We are unable to comment on the extent to which such losses might require CN to curtail service although, based on their more recent analyses (and our interpretation of the results as noted above) a 25% reduction in service would not be unexpected, achieved by a combination of shorter trains and less frequent service. Whether this would lead to substantially greater pressure by CN to abandon rail lines in the Atlantic provinces, beyond the steps that have already been taken in this direction by CN, is impossible for us to say based on the information available to us but, in general, increased pressure would seem likely.

As discussed more fully in section 4 below, we suggest that intermodal services, both trailers on flat car (TOFC or "piggyback") and container on flat car (COFC), are very important throughout Canada but particularly in the Atlantic Provinces owing to the relatively shorter distances and the availability of marine container services in that region. We suggest, therefore, that transportation policies should seek to maintain or strengthen such intermodal services.

3.6 Commentary on CP Concerns

CP Rail is also very concerned that the competitive balance between road and rail would be substantially altered by the proposed regulations and that the impacts on its traffic, revenues and operations would probably be substantial. CP also makes another point which is important from the viewpoint of Canadian transportation policy. They note that the railways in Canada fund the capital and operating costs of their infrastructure while, in their view, truckers do not. They concede that truckers pay fuel taxes which may be somewhat equivalent to their share of highway capital and operating costs (probably not as high in their view) but that the railways also pay fuel taxes which simply go into general government revenues and are not applied to assist the railways in financing their infrastructure. In our meeting with CP in Montreal on December 11 they pointed that this is a dangerous situation, since market forces do not take into account the true costs of highway infrastructure in the private sector. Regulated limitations on the sizes and dimensions of trucks act as a surrogate for such market forces but, if these regulations are relaxed unduly, the true economic balance between road and rail will not be achieved and it is possible that the rail mode could wither and die as a result of this, except possibly for major bulk commodity movements such as are experienced in Western Canada.

Commentary: As a matter of principle, we do not think it is correct that productivity gains which can be achieved by a transportation mode should be limited through regulation solely to protect another mode from competition, unless this competition would be "unfair". We are persuaded, however, that there is considerable truth in CP's argument and therefore that any new trucking regulations proposed should take into account the extent to which they would lead to unreasonable losses and curtailment of the other mode, owing to differences in the level of public funding enjoyed by each for its infrastructure. The implications of this opinion are discussed more fully in section 4 below.

3.7 Commentary on Shipper Concerns

A number of the shippers whom we contacted in Atlantic Canada expressed concern that, if rail rates were to increase significantly and/or rail services were to be substantially reduced, they would be negatively affected by the resulting lack of competition between the road and rail transportation modes. Under such circumstances they fear that, following the initial reduction owing to increased trucking productivity, truck rates would increase more substantially thereafter because of the reduced competition from rail. These concerns related to both rail carload and intermodal services. The shippers were also concerned about higher trucking costs if there were a rollback to the lower tandem and tridem weights (as proposed for interprovincial movements) for trucking within each of the Atlantic provinces and if there were no grandfathering of existing equipment regarding the proposed regulations. (See Appendix A for a detailed statement of these concerns prepared by the Atlantic Provinces Transportation Commission in October, 1987).

Commentary: We agree that a reduction in rail service/competition would be a legitimate concern, but the difficulty (as discussed more fully above) is in estimating the extent to which rail service might be curtailed as a result of the proposed regulations. On balance, as noted above, we feel that CN and CP would suffer substantial traffic and revenue losses (possibly 50% or more higher than those which they estimated as input to the IBI/ADI study earlier in 1987). While we feel that the Halifax container operations would survive these developments, there would likely be a reduction in rail service amounting to possibly 25%, and rail rates might have to be increased by 10-15% for the railways to remain viable in Atlantic Canada. Under such circumstances, we feel that rail services would still continue to be available in the region, both carload and intermodal services, but rail's ability to compete with the truck mode (in terms of both service and price) would be eroded and this might lead to subsequent increases in truck rates which might not otherwise have been experienced. In other words, truck rates might go down in the near term as a result of the new regulations, but they might go up even more in the medium/long term in the Atlantic provinces, because of reduced rail competition. If this scenario is correct, there would be considerable validity in the concerns expressed by Atlantic shippers. However, the continuing presence of intra-modal competition within the trucking mode (expected to be strengthened under the regulatory reform legislation) throws considerable doubt on the validity of the scenario.

4. IBI ASSESSMENT

The Implementation Planning Subcommittee asked us to assess the briefs and concerns of interested parties, carry out appropriate analyses, and give our opinion regarding possible impacts of the proposed interprovincial trucking regulations on the continuing viability of rail and marine container services in Atlantic Canada and related economic impacts on industry. Our assessment is summarized briefly herein and is also presented in chapter 4 of the report.

4.1 Potential Loss of Railway/Container Services

As noted above in sections 3.2 and 3.5, we conclude that the railways would likely suffer greater losses of traffic and revenues than those which they originally estimated as input to the IBI/ADI Economic Impact Report early in 1987 and that, as a consequence, they would probably have to cut service by up to 25% (through a combination of shorter trains and less frequent service) and might have to raise their rates by 10-15% in order to remain viable in the Atlantic region. It was not possible for us to carry out detailed analysis of these effects or their possible impact on rail service attrition since we do not have access to rail operating cost information and, in any case, there was insufficient time and resources available for the extensive analysis which would be required.

We were, however, able to conduct a preliminary analysis of the competitive position of Halifax versus New York as the container port to serve traffic between Central Canada and Europe or Central Canada and the South Pacific. Based on this preliminary analysis, we conclude that there is sufficient margin for Halifax to remain competitive at all volumes higher than 40 container lifts per vessel for European traffic and at volumes greater than about 480 container lifts for Pacific traffic, even if the Halifax-Toronto rail rates were increased by 13% as might result from the primary and secondary traffic losses estimated by CN.

Since CN has not yet completed its more detailed traffic analyses for other parts of Canada, since intermodal economic concerns were not received by RTAC for regions outside of Atlantic Canada (except from CN in a more general way than that expressed for the Atlantic provinces), and because of the limited resources and time available for this study, similar analyses were not carried out for the rest of Canada. We suggest, however, that the types of impacts estimated for the Atlantic region are probably considerably more significant than they would be in any other parts of Canada, because of the relatively shorter distances in that region, the greater availability of the marine mode and, as a result, the greater vulnerability of rail to intermodal competition.

We were able to assess in more detail the likely impact of the proposed interprovincial trucking regulations on trans-border rail traffic, to and from the U.S. Our conclusion is that such impacts would be relatively modest under current conditions because of the lower trucking weight and dimension regulations in most U.S. border states and the lack of evidence that these will be relaxed across the board in the foreseeable future.

4.2 The Road/Rail Balance

Reflecting the discussion in section 3.6 above, we suggest that further consideration of the broad economic and policy issues affecting the overall balance between road and rail services is appropriate in moving to a decision on interprovincial trucking regulations. We believe there is some cogency in the argument put forward by CP that truck size and weight limitations are a surrogate for true market competition between road and rail, which is not experienced in full because of differences in the level of government funding for infrastructure. Finding the most appropriate balance is a challenging task, and the issues addressed in this report are relevant considerations.

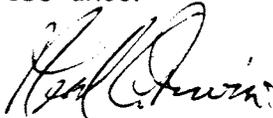
4.3 Other Economic Concerns and Impacts

The main other economic concerns within our Terms of Reference for this study are those expressed by shippers located in Atlantic Canada who fear that, if the new trucking regulations would result in reduced rail service and increased rail rates, the lack of effective ongoing competition might result, in the medium and longer term, in higher truck rates. To a lesser or greater extent, depending on one's assessment of the impacts noted in 4.1 above, we feel there may be some foundation for these concerns although they are softened by the continuing pressure of competition within the trucking mode which is expected to be strengthened under the provisions of regulatory reform. Since, in addition, we conclude that the Halifax container port operations would survive the new regulations, we think it is unlikely that industry would experience substantial losses in income and jobs, at least in the short to medium term. There would likely be some employment losses in the railways' Atlantic regions but we have insufficient information to estimate these.

We have appreciated this opportunity to assist the Implementation Planning Subcommittee in assessing the important economic issues at stake regarding new interprovincial trucking regulations across Canada. We hope that the information and opinions put forward in this report will assist the subcommittee in its deliberations, in the context of economic concerns expressed at the summer 1987 hearings and subsequently.

Yours sincerely

IBI GROUP



Neal A. Irwin
Managing Director



Lee S. Sims
Director

NAI/mc

ECONOMIC ISSUES RELATED TO THE PROPOSED CHANGES
IN VEHICLE WEIGHTS AND DIMENSIONS REGULATIONS
FOR INTERPROVINCIAL TRUCKING

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APPENDIX A: Circular of the Atlantic Provinces Transportation Commission

ECONOMIC ISSUES RELATED TO THE PROPOSED CHANGES
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1 INTRODUCTION

Over the last two years the Roads and Transportation Association of Canada (RTAC) has been involved in an intensive review of truck weight and dimension regulations. A number of studies were commissioned on the impacts of current truck sizes and potential changes in regulations. Many of these studies were technical in nature although IBI Group and ADI Limited were commissioned to conduct a review of the economic impacts of changes in truck weights and dimensions regulations, resulting in a report providing estimates of possible increased trucking productivity and comparing them with possible parallel increases in road and bridge costs. The results of this study were documented in a report entitled "Economics of Truck Sizes and Weights in Canada" dated July, 1987.

1.1 REGULATORY PROPOSALS FOR INTERPROVINCIAL TRUCKING

The Implementation Planning Subcommittee for the Vehicle Weights and Dimensions Study was set up as a subcommittee of the Joint RTAC/CCMTA (Canadian Conference of Motor Transport Administrators) Committee on Heavy Vehicle Weights and Dimensions. The subcommittee was charged with the following responsibilities:

1. To develop a plan that will assist each jurisdiction in implementing vehicle weight, dimension and configuration regulatory principles that will lead to national uniformity.
2. To develop schedules for proposed implementation of the recommendations.
3. To monitor the progress of implementation of the recommendations as they may be agreed to by the Council of Ministers Responsible for Transportation and Highway Safety.

The Implementation Planning Subcommittee issued a draft report entitled "Recommended Regulatory Principles for Interprovincial Heavy Vehicles Weights and Dimensions" in June of 1987, which was finalized in September, 1987.

This report recommended a number of principles for regulating heavy vehicles as well as specific recommended limits. The report states that these regulatory principles and recommended limits have been developed in the context of the following objectives:

1. To encourage the use of the most stable heavy vehicle configurations through the implementation of practical, enforceable weight and dimensions limits.
2. To balance the available capacities of the national highway transportation system by encouraging the use of the most productive vehicle configurations relative to their impact on the infrastructure.
3. To provide the motor transport industry with the ability to serve markets across Canada using safe, productive, nationally acceptable equipment.

The limits proposed for interprovincial trucking are summarized on Exhibit 1.1 and compared with current limits in the provinces and territories. This exhibit is a very simplified version of the current and proposed limits but shows the main features relevant to trucking economics. It can be seen that in some cases the proposals represent increases in current limits for all jurisdictions in Canada and in other cases they represent limits which may involve an increase in some jurisdictions but not in others. The report says that these limits are for interprovincial trucking. It does not suggest what should be done in those provinces where the current limits are beyond those proposed. The report states:

"If implemented, the regulatory agreement would permit vehicles which are in compliance to travel unrestricted across each jurisdiction in Canada on a designated system of highways. The regulatory proposals are not intended to inhibit the ability of individual jurisdictions to meet the needs of the transportation system in their region, and to develop appropriate heavy vehicle weights and dimensions for intraprovincial goods movement."

EXHIBIT 1.1

SUMMARY OF CURRENT KEY TRUCK SIZE AND WEIGHT LIMITS IN CANADA
COMPARED WITH PROPOSED INTERPROVINCIAL REGULATIONS

	NEWFOUNDLAND	NOVA SCOTIA	NEW BRUNSWICK	P.E.I.	QUEBEC	ONTARIO	MANITOBA	SASKATCHEWAN	ALBERTA	B.C.	YUKON	N.W.T.	INTER-PROVINCIAL PROPOSALS
Maximum Overall Combination Length ¹ (m)	21.0	21.0	21.0	21.0	23.0	23.0	23.0	23.0	23.0	23.0	22.5	24.4	25.0
Maximum Semi-Trailer Length (m)	14.65	14.65	14.65	none	15.5	14.65	none	14.6	none	14.65	13.5	none	16.2
Maximum Width (m)	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.05	2.6
Maximum Height (m)	4.15	4.15	4.12	4.5	4.15	4.15	4.15	4.15	4.15	4.15	4.2	4.2	4.15
Maximum Single Axle Load ^{2,3} (tonnes)	9.0	9.0	9.0	9.0	10.0	10.0	9.1	9.1	9.1	9.1	10.0	8.13	9.1
Maximum Tandem Axle Load ³ (tonnes)	18.0	18.0	18.0	18.0	20.0	19.1	16.0	16.0	16.8	17.0	19.1	16.26	17.0
Maximum Tridem Axle Load ³ (tonnes)	27.0	27.0	27.0	27.0	30.0	28.6	16.0	16.0	16.8	17.0	28.6	16.26	24.0
Maximum GCW ³ (tonnes)													
5-axle tractor/semi (3-S2)	39.5	39.5	39.5	39.7	48.5	47.2	37.5	37.5	39.0	39.5	43.2	36.6	46.5
6-axle tractor/semi (3-S3)	48.5	48.5	48.5	48.7	54.5	52.5	37.5	37.5	39.0	39.5	52.7	36.6	46.5
7-axle A-train (3-S2-2)	52.5	50.0	N/A	N/A	57.5	63.3	55.7	53.5	53.5	57.7	N/A	54.0	53.5
7-axle B-train (3-S2-S2)	52.5	50.0	56.5	N/A	57.5	62.8	53.5	53.5	53.5	56.5	63.3	54.0	56.5
8-axle A-train (3-S2-3)	52.5	50.0	N/A	N/A	57.5	63.5	56.5	53.5	53.5	63.5	N/A	54.0	53.5
8-axle B-train (3-S3-S2)	52.5	50.0	N/A	N/A	57.5	63.5	53.5	53.5	53.5	63.5	63.3	54.0	62.5

none - no specific restriction applies

N/A - not allowed except under special permit

- Subject in most provinces to a further restriction on the maximum distance from the king pin to the rear of the combination (often 16.75 m maximum)
- Except on steering axle
- Subject to various regulations governing axle spacing and spreads in each province

SOURCES: - Nix, F.P., A. Clayton and B. Bisson, A Study of Vehicle Weight and Dimension Regulations and Canada's Trucking Industry, Background Paper #1: Analysis of Canada's Vehicle Weight and Dimension Regulations, October 1985.
 - Provincial highway departments
 - Implementation Planning Subcommittee, Recommended Regulatory Principles for Interprovincial Heavy Vehicle Weights and Dimensions, September 1987

Note: In some provinces there are also published tolerances permitted beyond the specified limits.

In particular, concern has been raised in the Atlantic Provinces about the possibility of the reduction in semi-trailer payloads due to decreases in allowable gross combination weights and tandem and tridem axle weights.

Other parts of the regulatory proposals that have raised comments, with particular reference to economic impacts, are:

- o permitting semi-trailers up to a maximum length of 16.2 m (53 feet) compared to a usual maximum today of 14.65 m (48 feet);
- o permitting a 20 m (65.6 feet) combined length from the front of the first trailer to the rear of the second trailer for B trains which would permit twin 9.5 m (31 feet) trailers compared to a norm of 8.2 or 8.6 m (27 or 28 feet) today;
- o encouragement of B trains and the discouragement of A trains through greater permitted trailer lengths and gross combination weights for B trains because of their superior stability characteristics. C trains are not to be encouraged "at the present time" but "high priority" should be given to developing converter dollies that would improve the performance of C trains to provide stability characteristics similar to those of B trains;
- o "axle loads and GCW's referred to in the proposal shall be regarded as absolute maximums with no legislated or published tolerances." This too has caused comment in those provinces where tolerances are currently published.

1.2 THE ECONOMIC EVALUATION REPORT

As noted above, IBI Group and ADI Limited were retained by RTAC to produce an evaluation of the potential economic impacts of the proposals. Because the final proposals were not known during the course of that study, four scenarios of economic impacts were analyzed, termed Scenarios A, B, C and D in the report. Scenario D represents the actual recommendations. The expected economic impacts for Scenario D are summarized on Exhibit 1.2. These estimates were based on a number of assumptions:

EXHIBIT 1.2

ESTIMATED ECONOMIC IMPACTS OF PROPOSALS
(millions of 1985 dollars per year)

PROVINCE	TRUCK PRODUCTIVITY IMPROVEMENTS	COSTS	
		INCREMENTAL ROAD SUR- FACING COSTS	INCREMENTAL BRIDGE COSTS
British Columbia	\$ 29.0	\$ 0.1	\$ 7.4
Alberta	26.1-28.3	-0.7	2.1
Saskatchewan	18.7-18.9	-2.2	1.4
Manitoba	8.9-9.1	0.0	2.9
Ontario	65.4	0.0	0.0
Quebec	6.9-7.5	0.0	1.0
New Brunswick	1.5	0.0	0.2
Nova Scotia	2.4	-0.1	0.5
Prince Edward Island	0.1	-0.3	0.1
Newfoundland	1.1	0.5	0.0
NATIONAL TOTAL	160.0-163.3	-2.7	15.6

Source: "Economics of Truck Sizes and Weights in Canada"
by IBI Group and ADI limited for the Roads and
Transportation Association of Canada, July,
1987.

- o truckers would take advantage of the new limits after a suitable adjustment period. The numbers shown are after this adjustment period has taken place;
- o there would be no rollback of limits in provinces where they already exceed the recommended standards;
- o the benefits and costs shown in Exhibit 1.2 assume that there would be no intermodal shifts in traffic.

As can be seen the conclusion of this study was that the truck productivity gains would be much greater than the expected increase in road costs. In fact, some provinces would experience reductions in total annual road costs. These results were based on an analysis of existing movement of commodities by truck.

The study also examined the potential impact of increases in allowable truck sizes on the major Canadian railways, Canadian National (CN) and Canadian Pacific (CP) in terms of possible intermodal traffic shifts. The methodology in performing this analysis was developed in consultation with the railways themselves. Essentially all truck competitive rail traffic was examined by railway staff. IBI Group staff supplied the estimated reductions in over-the-road trucking costs that would result from the implementation of the interprovincial recommendations. The estimated reductions in trucking costs for Scenario D are reproduced as Exhibit 1.3. If trucking costs were reduced as a result of new regulations allowing greater truck productivity and consequently rates were reduced by the same proportions, it was assumed that rail rates would have to be reduced by the same percentages; there would be two possible impacts on the railways:

- o loss of some traffic for those movements for which the rail mode would no longer be economic at the lower rail rates;
- o on the remaining truck commodities traffic there would be a loss of revenue because of the need to decrease rates to meet truck competition.

EXHIBIT 1.3

ESTIMATED PERCENTAGE TRUCKING COST REDUCTIONS: SCENARIO D

(a) WEIGHT-OUT COMMODITIES

ORIGIN/ DESTINATION	NFLD	PEI	NS	NB	QUE	ONT	MAN	SASK	ALTA	BC
NFLD	6									
PEI	9	9								
NS	9	9	9							
NB	9	9	9	6						
QUE	9	9	9	6	6					
ONT	9	9	9	6	10	0				
MAN	20	36	20	8	8	8	8			
SASK	20	36	20	13	13	14	14	14		
ALTA	20	36	20	13	13	14	14	14	14	
B.C.	20	36	20	13	13	14	14	14	14	0

(b) CUBE-OUT COMMODITIES

SCENARIO D

Ont-Ont, Ont-Que, Que-Que		9%
To/From PEI	10%	
All Other O-D Pairs		12%

Source: Exhibit 6.4 from "Economics of Truck Sizes and Weights in Canada" by IBI Group and ADI Limited for the Roads and Transportation Association of Canada, July, 1987.

The results of the analysis are summarized below in millions of 1985 dollars per year:

	<u>LOSS IN GROSS REVENUE</u>	<u>LOSS IN NET CONTRIBUTION</u>
Canadian National	170.1-218.6	80.6-81.4
Canadian Pacific	153.4-190.2	41.2-51.2

The loss in gross revenue is the total amount by which railway revenues are estimated to be reduced because of the loss of traffic and necessary rate reductions on some of the remaining traffic to meet the competition. The loss in net contribution is the net loss after railway variable costs have been reduced because of the reduction in levels of traffic.

1.3 SUBSEQUENT EVENTS

The Implementation Planning Subcommittee subsequently held a number of public hearings on the proposals in five centres across Canada during July and August. Over 70 submissions were received at these hearings, many expressing concern with the recommendations.

At their meeting in September the Council of Ministers decided to defer a decision on the implementation of the recommendations to a subsequent meeting in February, 1988, to permit additional consultations and consideration of the recommendations.

Based on a subsequent decision by the Implementation Planning Subcommittee, (taken at a meeting on October 8, 1987) RTAC commissioned this study to provide an overview of certain economic issues raised.

1.4 OBJECTIVES AND STRUCTURE OF THIS REPORT

The objective of this report is to examine specified issues raised in the public consultation hearings and in subsequent contacts between RTAC and the transportation public that relate to potential economic impacts of implementing the recommendations on the railways, container service operators and carriers and local industries served by them. The issues raised are reviewed in Chapter 2. The results of our interviews and analysis are described in Chapter 3. Chapter 4 presents the assessment and comments of the IBI Group study team.

As noted above this is an overview study in the sense that it was conducted in a period of about ten weeks and with a relatively modest budget, which precluded in-depth analyses or surveys. Because of these limitations it was agreed with the Implementation Planning Subcommittee at the outset that the study would focus on intermodal economic impacts and service curtailment issues (e.g. affecting rail and marine container services and infrastructures) with particular reference to the Atlantic provinces because of the competitive situation regarding the road, rail and marine modes in that part of the country. A further reason for this emphasis was the more detailed traffic diversion, revenue loss and revenue attrition studies by CN for the Atlantic region, performed subsequently to their original work contributing to the IBI/ADI study, which suggested that revenue losses to CN would be many times higher than CN had originally estimated, with potentially serious implications in terms of rail service abandonment, loss of container services through the Port of Halifax and related impacts on local industries depending on these services.

It was further agreed with the Implementation Planning Subcommittee that the terms of reference of this study would therefore exclude considerations of road infrastructure costs and cost sharing and potential economic impacts on truckers of the proposed new regulations, in order that the time and resources available could be concentrated on the above intermodal service/infrastructure issues and potential industrial impacts, across Canada with emphasis in the Atlantic region.

2. ISSUES RAISED

The purpose of this chapter is to describe the relevant economic issues raised during the public consultation process and in subsequent discussions.

2.1 SUBMISSIONS TO THE PUBLIC CONSULTATION HEARINGS

Consultation meetings were held by the Implementation Planning Subcommittee in Regina, Vancouver, Toronto, Montreal and Charlottetown to receive public and industry comment on the recommendations of the subcommittee. Over 70 submissions were received by the subcommittee: 27 from the for-hire trucking industry, 9 from the private motor carrier industry, 12 from the trucking equipment manufacturing industry, 7 from the automobile safety associations, 6 from the rail industry, 6 from shippers and 6 from other associations. Many of these submissions were concerned with the technical details and impacts of the recommendations.

The submissions listed on Exhibit 2.1 dealt with the potential economic impacts of implementation of the recommendations. Exhibit 2.1 also shows the main concerns of the various briefs. The concerns related to the economic impacts of the proposals on the parties can be summarized as follows (not presented in order of importance or priority):

1. Need for grandfathering: A large number of the submissions dealt with the need to provide a suitable adjustment period to utilize existing equipment which conforms with current standards but would not conform with the new standards. In fact, some of the submissions suggested that such equipment, whether already in use or only ordered at the time of implementation of the recommendations, should be usable for the entire life of the equipment.
2. Possible reductions in current VWD: The proposed standards are lower than some of the current regulations in a number of provinces. The report issued by the Implementation Planning Subcommittee does

not make a firm commitment on whether or not those provinces should be asked to reduce the current standards. This caused concern with respect to traffic moving within the Atlantic Provinces, within Ontario and Quebec and between Ontario and Quebec where there was a concern that presently allowed axle loads apparently might be decreased, in other words that there might be a rollback of existing regulations where they are currently above the proposed interprovincial standard. Many of the submissions suggested that limits not be reduced in any location but that the proposals be seen as a minimum standard.

3. Penalties for A and C trains: The proposals suggest that B trains should receive greater permissible weights than A and C trains because of the superior stability characteristics of B trains. Several submissions said that this case had not been proved, particularly with respect to the comparison between B and C trains.
4. Tolerances on weight limits: The current practice in several jurisdictions is to provide a tolerance over the weight limits to take account of difficulties in the measurement and in loading of vehicles. The subcommittee's recommendations state that there should be no "published" tolerances. This caused a considerable amount of comment.
5. Implications for viability of the rail system: CN and other parties in the Atlantic Region were concerned with the potential impact of the implementation of the regulations on truck competition with the rail system and the continued viability of the rail system. It was stated by several submissions that the proposals should not be implemented if it meant that there would be considerable contraction of the rail system and possible discontinuance of marine container services through Halifax.
6. Implications for intermodal equipment: The railways in particular were concerned that changing the standards for road vehicles would cause premature obsolescence for intermodal equipment, particularly railway flatcars used for piggyback services.
7. Need for compatibility with interprovincial and provincial standards: The recommendations are for interprovincial trucking. Several submissions mentioned that there should be compatibility between inter- and intraprovincial standards so that the same equipment can be used for both types of movement. Some carriers mentioned that, if they were to design their

equipment for interprovincial movements and different standards were to prevail for intraprovincial movements, they would be at a competitive disadvantage with locally based firms. It was also stated that municipal standards should be compatible with the proposals as well so that trucks can use municipal roads.

8. Need for compatibility with U.S.: One submission indicated that there was a need to ensure compatibility with U.S. standards so that international trade would be encouraged.

2.2 OTHER CONCERNS

In addition to the formal submissions at the public consultations, there have also been other concerns brought forward by:

- o the railways in their consultation with provincial governments and others;
- o the Atlantic Provinces Transportation Commission in its circular to sponsors and others;
- o provincial departments of transportation.

The concerns of the railways are extensively dealt with in the next chapter of this report. The circular of the Atlantic Provinces Transportation Commission is attached to this report as Appendix A; it is most concerned with the potential reduction in semi-trailer payloads due to reductions in the gross combination weights and for axle weights, particularly for tri-axle assemblies. Specific concerns from provincial departments of transportation have been mostly from the Atlantic Provinces. Concerns have been centred on issues already described, with specific reference to:

- o possible reductions in allowable payloads for semi-trailer combinations;
- o reduction in the viability of the rail network with consequent rail service reductions and line abandonments.

Concerns have been expressed concerning the on-going viability of container movements through the Port of Halifax and the movement of potatoes from Prince Edward Island.

2.3 ISSUES ADDRESSED IN THIS REPORT

Reflecting the focus outlined in Section 1.4 above, this study addresses primarily points 5 and 6 of Section 2.1, including the other concerns noted in Section 2.2 where they relate to the viability of rail, intermodal and marine container services in the Atlantic Provinces and associated economic impacts.

3. INTERVIEWS, ANALYSES AND COMMENTARY

During the course of this engagement, consultant team members met with both CN and CP and interviewed a number of other parties to discuss their concerns and obtain an understanding of the likely impacts of the interprovincial trucking regulation proposals. In this chapter, the results of these discussions and analyses are presented in some detail together with our comments.

3.1 EFFECTS OF RTAC PROPOSALS ON TRANS-BORDER RAIL TRAFFIC

The two major Canadian railways have expressed concerns that considerable proportions of their existing traffic across the Canada-U.S. border could be lost to the truck mode under the recommendations regarding truck weights and dimensions. Although they have not yet carried out detailed analyses of their potential losses of trans-border traffic, the railways have argued that existing and possible future increased truck size and weight limits in U.S. border states will lead to improved truck productivity and reduced truck rates for significant amounts of the trans-border traffic now carried by the railways.

In the initial IBI/ADI study, this subject was addressed with respect to CN. CN had originally made their estimates of losses of traffic including all trans-border traffic on the same basis as domestic movements. The results of this analysis are shown below:

	CN Loss in Gross Revenue (\$million/yr)	CN Loss in Net Contribution (\$million/yr)	CN Loss in Net-Ton-Miles (million/yr)
Including trans-border traffic	195.4-259.2	94.6-95.5	3,757-5,028
Excluding trans-border traffic	<u>170.1-218.6</u>	<u>80.6-81.4</u>	<u>3,258-4,219</u>
Difference	25.3-40.6	14.0-14.1	499-809

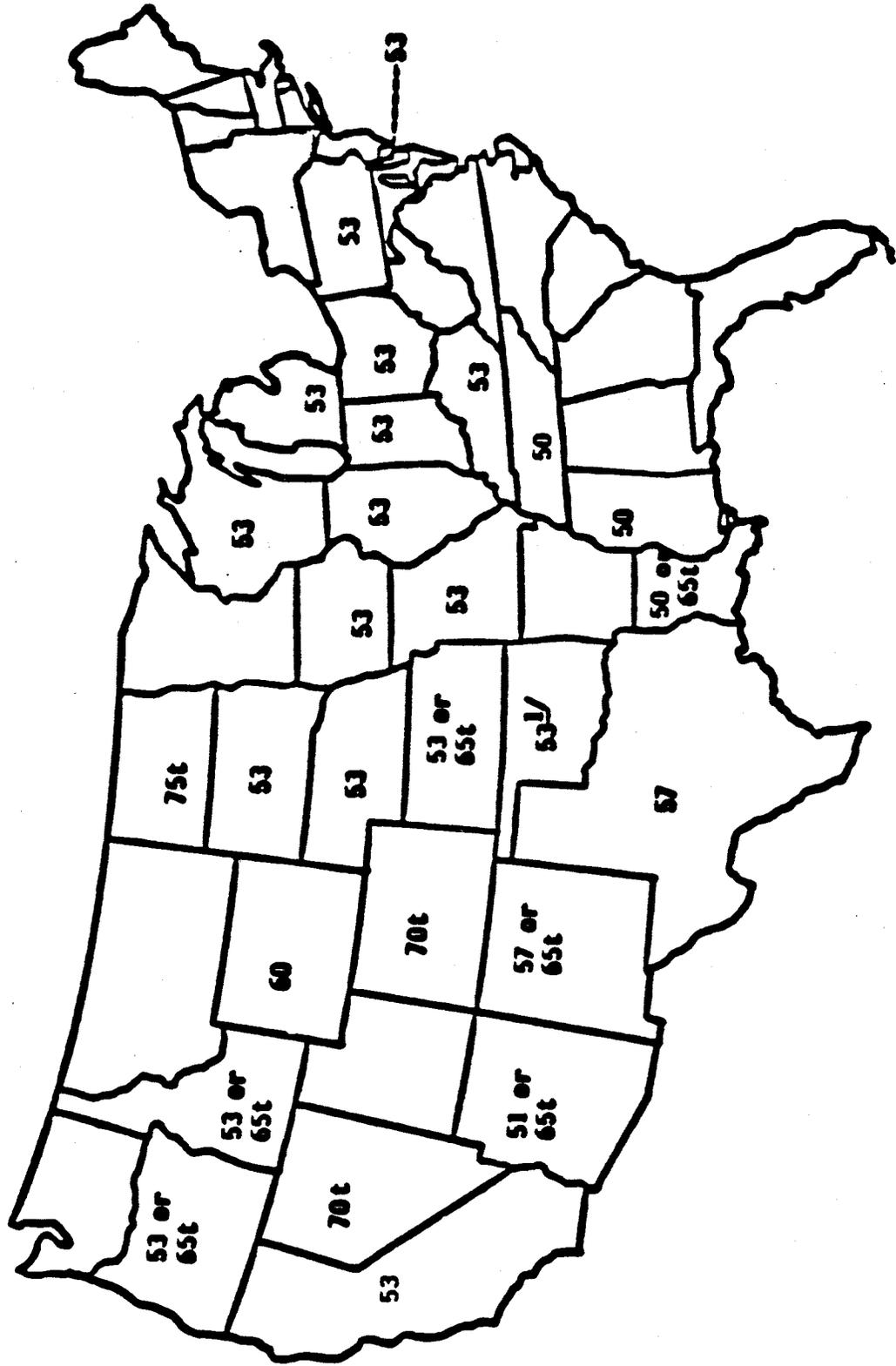
The consultant team decided to exclude the trans-border traffic losses because, in most cases, the U.S. regulations were more restrictive than proposed or existing Canadian regulations. CN, in its brief at the RTAC public consultations, repeated its assertion that trans-border traffic should be included in the analysis of effects.

To evaluate the railways' concerns, we have examined the existing truck size and weight limits in the U.S. states in relation to the Canadian size and weight limits being proposed by the Subcommittee. A maximum semi-trailer length of 53 feet (16.2 metres) in a tractor/semi combination is currently permitted on Interstate and designated National Network Federal Aid highways in a broad belt of states ranging south and west of the Great Lakes as shown on Exhibit 3.1. Three of the ten states sharing the land border with Canada - Michigan, North Dakota and Idaho - permit the 53 foot trailers; the other seven do not. Thus, light density rail freight which could enter or leave the U.S. by truck through these three states and move entirely through other states permitting 53 foot trailers would face increased competition from the truck mode under the interprovincial regulatory proposals which would permit the use of 53 foot trailers in tractor/semi-trailer combinations throughout Canada. However, traffic currently crossing the border at many major crossing points such as Fort Erie/Buffalo (New York state), Fort Frances/International Falls (Minnesota), and Lake Champlain (New York/Vermont) would not be affected by the provision for 53 foot trailers in the interprovincial proposals.

With respect to trailer length, it should also be noted that no border state currently permits the use of two 31 foot (9.5 metre) trailers in a double combination, which would be permitted in Canada under the interprovincial proposals. The normal maximum in the U.S. border states is two 28.5 foot double trailers. Therefore, the longest double combinations allowed under the proposals could not be operated in the U.S. under current regulations. Since the estimated percentage trucking cost reductions for cube-out commodities calculated by IBI Group and presented to the railways during preparation of the economics study were based on

EXHIBIT 3.1

**STATES WITH MAXIMUM SEMI-TRAILER LENGTHS
GREATER THAN 48 FEET AS OF NOVEMBER 1987**



t = total overall (tractor and semi-trailer) length

1/ 53' max. semi-trailer length on 2 lane highways. No max. length on 4 lane highways.

Source: Association of American Railways

freight moving in doubles, the actual percentage trucking cost reductions that would be available to trans-border truckers would be somewhat less than the 9-12% percent estimated for cube-out commodities for Scenario D (corresponding to the final interprovincial regulatory recommendations) in the economics study.

For heavy trans-border rail freight that normally weights out in truck trailers, the regulatory proposals would not result in any traffic transfer to the truck mode since the maximum allowable gross weight on the Interstate System in all states but one is 80,000 lbs (36.3 tonnes), considerably lower than existing allowable truck weights throughout Canada. The sole exception to this is the State of Michigan, which allows up to 149,000 lbs (67.5 tonnes) maximum gross vehicle weight. Thus, for weight-out commodities, only the rail traffic to and from Michigan would be vulnerable to increased truck rate competition arising specifically from the interprovincial proposals. The balancing freight density for a 53 foot (16.2 metre) trailer and a maximum allowable combination weight of 80,000 lbs (36.3 tonnes) is about 200 kilograms/metre³ (12.5 lbs per ft.³). Trans-border rail freight exceeding this density would not be affected by the proposals except for freight to/from Michigan. Because existing truck weight regulations in Ontario, Quebec and Michigan are generally higher than the proposed new interprovincial regulations, truck and rail traffic between Ontario/Quebec and Michigan would be unaffected by the new regulations except to the extent that they might act as a "conduit" for traffic to/from other provinces; any such traffic impacts would likely be quite small.

Commentary

The above discussion indicates that implementation of the proposed changes in vehicle weights and dimensions in Canada would not likely have a major impact on trucks carrying transborder flows of goods as in most cases the regulations in the U.S. states would be more restrictive than the corresponding Canadian regulations. For high density

commodities moving from Ontario to the U.S., there would not be an impact unless the implementation of the RTAC proposals were to result in a reduction in Ontario limits, which is not likely according to staff of the Ontario Ministry of Transportation. The one exception to this is that 53 foot trailers would now be permitted to move between Ontario and Michigan and this would be advantageous for low density commodities for this particular movement.

In summary, although details of existing origins and destinations of the railways' trans-border traffic are not known by the consultant team, it would appear from the above that a relatively modest percentage of this traffic would be lost to the truck mode as a direct result of the proposed regulatory changes. It should be noted that the railways anticipate significant further increases in allowable truck lengths and weights in the U.S. Such increases, if large enough, could increase the proportion of the traffic in question that would be subject to competition from more efficient trucking. However, it can be argued that the effects of such future decisions by U.S. authorities are speculative at present and should not be considered directly attributable to the interprovincial trucking regulation proposals under consideration here.

3.2 ATLANTIC REGION RAIL COST INCREASES

As noted earlier in Sections 1.2 and 1.4, CN and CP prepared estimates of traffic and revenue losses which might result from various truck regulatory scenarios, as input to the IBI/ADI economic impact study for RTAC, during the spring of 1987. Since then CN staff in Moncton have prepared more in-depth analyses of the impact on their traffic in Atlantic Canada and they have also introduced other issues that were not analyzed earlier such as impact on employment, levels of competition and viability of the ports of Saint John and Halifax. These potential impacts were seen by CN to be most acute in the Atlantic Region where 40% of their business is truck-competitive intermodal traffic and another 30% is truck-competitive rail carload traffic. Thus, up to 70% of their Atlantic based

traffic could be threatened by reductions in the truck rates. Currently, CN annually moves approximately 16 million tons of freight in the Atlantic Provinces, most of which is natural resource products. CN asserts that margins on Atlantic Region traffic are quite small and therefore they would not be able to compete in many instances with reduced rates offered by the trucking industry. CN's brief states that this loss of traffic from the system would begin a spiral of decreasing traffic and increasing unit rail costs resulting in increasing rates for remaining rail customers. The final result would be the abandonment of rail lines in order to eliminate costly infrastructure.

3.2.1 The CN Analysis

CN has analyzed up to 70% of their Atlantic Region traffic on a customer by customer basis in each Maritime province in the detailed analysis. This analysis assumed an 8-9% increase in truck productivity (based on their analysis of potential productivity improvements) and therefore a similar decrease in freight rates for over-the-road traffic. They then reviewed all of their major customers in the Atlantic Region and assessed them with respect to two types of traffic loss:

- o Primary Losses - these would be direct losses of traffic and revenues where CN can no longer compete with the lower freight rates that would be offered by the trucking companies;
- o Secondary Losses - these are remaining traffic and revenues that might be lost due to the estimated 13% increase in rail costs ultimately reflected in rates which would occur as a result of the primary loss of traffic and revenues to the trucking industry.

There are three main differences between this new work and the earlier work done for the IBI/ADI study:

- o the primary losses were estimated by the CN commercial managers on a customer by customer basis taking into account the anticipated impact of increased truck

competition rather than by comparing the recorded revenues and simulated costs in the CN computer system as was done earlier;

- o secondary losses were not estimated in the earlier work as it was assumed that the variable costs of moving traffic were linear with the volume moved (a basic assumption of the CN cost model). Under this assumption a decrease in traffic would result in a proportionate decrease in variable costs and the variable costs of the remaining traffic would stay constant. The new analysis did not make this assumption but rather assumed that variable costs per unit of traffic could increase with declining traffic volumes;
- o the earlier analysis was based on CTC approved costs which are based on historic or book value costs. The more recent analysis is based on replacement value costs, which are substantially higher than historic costs.

The following table shows the comparison between the original estimates of losses in the Atlantic provinces and the updated estimate:

	<u>Reduction in Gross Revenue (\$million)</u>
Previous Estimate	
- total Canada	\$170.1-218.6
- allocated to Maritime Provinces	17.8-21.8
Recent Estimate - Primary Losses	
- Maritime Provinces customers	\$70.1
- Newfoundland traffic	31.6

It should be noted that the revenue losses estimated in the more recent analysis include traffic originating and terminating in the Atlantic Region. If this analysis were repeated on a region by region across Canada, the resulting estimates of losses in traffic and revenue could not be simply summed as inter-regional traffic would be counted twice, in the originating region and in the termination region. Therefore

in making the comparison the more recent results should be reduced by a factor of up to 50% to account for this potential double counting. If a factor of 50% is applied, the above estimate of the primary reduction in gross revenues on CN's Atlantic region traffic would be one half of \$101.7 million or about \$51 million.

During the recent Atlantic Region analysis, customers were analyzed by CN commodity teams in the region who are knowledgeable regarding rail customers and rates; these teams then reviewed each customer on an individual basis assessing the current costs of rail and other modes, their revenue/cost ratios and the nature of the competition, being truck or water. The prevailing CN attitude was that much of the shorter haul traffic to the Maritimes and Central Canada would almost certainly be lost to the trucking industry. However, for the longer hauls where rail is more cost-effective than trucks, they could expect to keep most of their current traffic and revenues.

Primary losses were estimated to be 25% of CN's current revenues in the Atlantic Region due to their not being able to compete with the truck rates. However, CN staff now reason that even if they lost this 25% of revenue they would still have to run approximately the same number of trains on many of these routes in order to serve remaining traffic because of the relatively light density of traffic. The analysis examined which costs would remain if approximately the same levels of service were offered with a 25% loss of traffic. The costs that would remain fixed include:

- o switching operations (which represent 33% of the total costs);
- o crew wages;
- o capital costs of locomotives;
- o depreciation;
- o fuel (some reduction would occur but very minimal);

- o any other costs which vary by train-miles since the same service miles would have to be run.

For carload traffic these remaining costs represent 59% of the long term variable costs of operating the train. For intermodal traffic, the remaining fixed costs represent 52% of the costs as fixed costs are lower since there is less switching and local handling for intermodal traffic generally moving from yard to yard than for conventional carload traffic moving from originating to terminating private sidings. Therefore, it was assumed that if there is a 25% decrease in revenues and 52% of the costs for moving the lost traffic are still incurred, the remaining traffic must have their rates increased by 13% ($25\% \times 52\%$). Therefore, in estimating the secondary losses it was assumed that rail variable costs would increase by 13%. In order to retain a viable cost-revenue balance following the primary traffic loss, additional traffic would therefore be lost, which would result in the secondary revenue losses. Secondary losses were estimated at a further \$92 million in gross revenues or approximately another 23% of total revenues for traffic originating or destined to the Atlantic provinces. Factoring this by 50% to correct for double counting would give an estimated secondary loss of about \$46 million and a total (primary plus secondary) reduction in CN's gross revenues of about \$96 million as its Atlantic Region traffic.

Some of the details of the analysis are described below together with our comments on likely losses of traffic.

Newfoundland

The analysis of the Newfoundland traffic was not done on a customer by customer basis. Rail traffic to Newfoundland goes by container through Port Aux Basques and then by rail, with most of the traffic destined to St. John's and the Avalon Peninsula. CN has proposed the complete abandonment of the Newfoundland railway operation and to move

all of the goods either by truck from Port Aux Basques or directly by ship into St. John's harbour. With respect to the trucking regulation proposals, CN feels that any increase in the cost of moving the goods across Newfoundland would worsen an already non-cost-effective situation and would create a downward spiral of increasing unit costs and abandonment.

Discussions with authorities in the Port of Halifax indicate that there is already a weekly container service into St. John's harbour from Halifax, carrying approximately 400 containers per week. This service competes directly with CN's container service which uses the rail/ferry/rail mode from origin to destination.

The study team's opinion is that it is not entirely reasonable to attribute the possible loss of Newfoundland rail traffic to implementation of the proposed changes in vehicle weights and dimensions. Railway services in Newfoundland already incur a very considerable deficit and the federal government has discussed a proposal with the Newfoundland Government to close the rail lines. While improved economics of trucking on the mainland and within Newfoundland will not help the economic situation of railway services in Newfoundland, it is difficult to concur with the assumption made by CN Moncton staff that it would cause a loss of approximately 93% of the current rail traffic when it is already in a large deficit position.

Nova Scotia

CN prepared a detailed analysis of approximately 25 customers whose goods they move in Nova Scotia. Since many shippers in the Atlantic provinces can also take advantage of the marine mode, their analysis included traffic lost to both the truck and marine modes. It was assumed that they would not lose their two largest customers who are shippers; however, much of the remaining traffic including most goods moving within the Maritimes or to/from Central Canada was assumed to be lost to truck,

while traffic on longer distance routes would be retained. Traffic lost would include local rail movements of materials to and from the two largest customers.

CN estimated that they would lose, as part of their primary losses, almost 33% of their \$87 million revenues from Nova Scotia carload traffic. A further 11% would be secondary losses due to increases in railway rates. This includes an assumed 30% loss of all the customers not analyzed on a customer by customer basis which represents about 26% of their Nova Scotia annual tonnage moved.

CN assumed that they would lose no automotive traffic either as primary or secondary losses.

Although we could not examine the economics of specific movements, the CN approach in making these estimates appears to be a reasonable one. We did note, however, that in most cases where there was a question of judgement, the more negative assumption was usually taken by the CN staff, leading to estimates of greater rather than lesser losses in traffic and revenues.

New Brunswick

In New Brunswick it was assumed that CN would lose 24% of revenues due to reduced trucking rates with no losses due to increased rail costs. It was assumed that the lost traffic would include:

- o paper to Central Canada;
- o 25% of petroleum products which are short distance movements;
- o loss of a major potash customer;
- o other traffic which represents 25% of revenues.

The other traffic was assumed to be lost at a rate of 30%. It was also assumed that CN New Brunswick services would lose approximately 30% of their intermodal traffic, mostly on traffic that was cube related. New Brunswick intermodal traffic is approximately 600,000 tons annually. These losses mainly represent local traffic and movements into Central Canada. It was felt that most of the domestic intermodal traffic which is light mixed consumer goods except for peat moss would end up on 53 foot trailers.

As for the Nova Scotia analyses, the study team's opinion was that the approach was a reasonable one but CN's judgement calls were generally at the negative end of the spectrum.

Prince Edward Island

In Prince Edward Island, 95% of the products carried by CN are potatoes. Potato shippers move approximately half of their potatoes by truck and the other half by intermodal, with approximately 1% of movements from the island by direct rail shipment. CN felt that they would not lose any of their traffic from P.E.I. at the time the more detailed analysis was prepared (during the late spring and summer of 1987); however, at the meeting in Montreal with IBI staff in November 1987 CN indicated their opinion that there is a potential for the restrictions on larger trucks on the ferries to be lifted and this would allow more truck movements of potatoes directly from the Island. No estimate was provided by CN of the possible impact of this.

The main problem for CN in Prince Edward Island is the competition already provided by truckers competing with rail intermodal services, which would be increased if the proposed regulations are introduced. The rail lines on the Island already suffer large losses and studies of abandonment have been done. The proposed interprovincial trucking regulations would contribute to greater competition from trucks but it would not be reasonable, in our view, to attribute major losses to the proposed regulations, in light of the existing problems.

3.2.2 Discussions With Maritime Shippers

Discussions were held with some of the producers and manufacturers in the Atlantic Region to determine their attitude and possible response to decreases in trucking costs and potential increases in rail rates in the Region. Companies contacted included:

- o Scotia Investments - this is a group of companies which move linerboard, food products, molded pulp products, foam plastic products and frozen fish;
- o Eatons - currently moves store products (general freight) into the Maritime provinces by intermodal piggyback having consolidated the product into trailers in Montreal;
- o National Sea Products - this company moves fresh and frozen products to all major Canadian cities, the United States and around the world. They currently use intermodal only for movements past Winnipeg but they have been known to move some goods past Winnipeg by truck;
- o Volvo - all of their finished product (cars) is currently moved by rail except for local distribution which is by truck. Parts coming in from Canada and the U.S. currently are brought into the factory by truck;
- o Canadian Tire - currently moves a large number of containers per year into Central Canada from both West and Eastern Canada. These are partly moved by their own trucks and partly moved by piggyback in containers. Canadian Tire ships a wide variety of general products;
- o Michelin - this company is one of the larger shippers of goods in the Atlantic provinces. Ocean containers arriving at the Port of Halifax are shipped to the plant by truck. Finished products moved by both truck and rail (piggyback) to all points across North America.
- o Sysco Steel - this company moves mainly 78 and 39 foot rail out of the plant by special equipment. Some of their 39 foot rail can be moved by truck. Materials used in the manufacturing process are currently moved in by truck and rail with the greater proportion coming in by rail;

- o Cape Breton Development Corporation - this company moves over half a million tons of coal and other goods by CN. They also have their own railway for moving products to the customer.

These discussions with local shippers resulted in a variety of responses to the question of whether a 10-15% increase in the rail rates would cause them to alter their current shipping patterns. Depending on the nature of the product shipped, about half of the shippers felt that this rate increase would cause them to review their current shipping patterns while the remainder felt that it would require a very large rate increase for them to begin shipping their products by truck. There was a concern that if rail rates increased to the point where rail lines were abandoned, there would be reduced competition for the movement of goods in the area which would drive up the truck rates and not allow producers to move their products outside of the area competitively. Rail is usually the mode used for the longer distance and heavier products. However, some manufacturers are moving products long distances (past Central Canada) by truck. This can be an effective mode for some shippers if they move large volumes of goods which allows them to negotiate lower rates, if they can not consolidate their product into large shipments, if there are sufficient backhauls for trucks available, or for timing or service level reasons.

Commentary

Most of the concerns of the shippers contacted were related to the possibility of rail rate increases that might occur as a result of increased truck competition. These shippers were conscious, however, of the potential for cost reductions on truck movements. The shippers with the greatest concerns were those representing industries who feel they are more of a captive market for the rail mode due to the nature of their product. The shippers interviewed did not indicate an awareness of the role of likely increases in intermodal competition within the trucking mode (as a result of Canadian regulatory reform legislation) in helping to limit longer term truck rate increases which might otherwise result from reduced rail competition.

Prince Edward Island Potatoes

Discussions with representatives from the PEI Potato Marketing Board and shippers/growers of potatoes in Prince Edward Island indicate that they have some very significant concerns with regard to the changes in weights and dimensions of trucks moving in the Atlantic region. Approximately 50% of the potatoes are moved from the Island via CN intermodal and the remaining by trucking companies. Under the proposed regulation, there is a fear that if there is a rollback in the current standards tri-axle trailers would eventually be eliminated from the truck fleet in the Atlantic Provinces. Currently a large proportion of intermodal potato movements are on tri-axle semi-trailers. At certain times of the year it is difficult to get trucks of any sort and therefore the elimination of the tri-axle fleet might reduce the availability of trucks for moving products out of Prince Edward Island. This assumes that there would be no grandfathering of the existing trailers.

An analysis by one of the trucking companies showed that a reduction in the payload size associated with a rollback in standards would increase traffic costs by as much as 20%. This assumes that the rate charged to the customer would remain the same but the load carried per truckload would be reduced. For example the rate charged for a five-axle semi tractor trailer refrigerated load with a payload of 45,000 pounds operating between Prince Edward Island and Toronto is \$1,035. Under the new recommendations, without grandfathering, the allowable payload would be reduced to 37,285 pounds which would cause the cost to the buyer per hundredweight carried to increase from \$2.30 to \$2.78.

There are currently approximately 10,000 van-loads of potatoes moved from PEI each year into Ontario/Quebec. Approximately 50% of these are moved by intermodal and the remainder by direct truck. CN's concerns regarding the impacts of longer trailers on the productivity of their intermodal equipment are discussed below in Section 3.4. As noted earlier in Section 3.2.1 we concur with CN's summer 1987 estimates that the proposed

regulations would have little or no impact on their PEI potato traffic. This is because, as noted in Section 3.4, CN owns or leases 93% of the trailers used on its Atlantic region intermodal service and therefore controls all but a small percentage of the trailers involved. It also seems unlikely that CN would face significant increases in trucking productivity for this traffic over the next 5-10 years. Assuming that existing trucking equipment is grandfathered under the proposed regulations, truckers competing with the intermodal services would not experience the 20% cost increase noted in the proceeding paragraph as long as they can keep operating existing equipment. This suggests that truckers would delay purchasing new equipment to move potatoes under the proposed regulations, and would use existing equipment as long as possible.

Commentary

In general the concerns of the Maritime shippers were of two types:

- o improvements in truck productivity would decrease the competitiveness of the railways and in the longer term would lead to rail service reductions, line abandonments and/or rate increases;
- o any rollback in the current truck axle weight limits in the Atlantic and central provinces would decrease the productivity of trucks.

These two fears are of course contradictory, since one impact would tend to offset the other. Much of the uncertainty would be removed if a definitive position on the potential for rollbacks of the current standards and for grandfathering of existing equipment were taken by the Atlantic Provinces.

With respect to the problems associated with changing equipment on railway intermodal services, an important point was noted above; namely

that the vast majority of piggyback services (93%) provided in the Atlantic region by CN is now operated with railway owned or leased trailers. With suitable grandfathering of any trucks or trailers that might be in the fleet, there would be no compulsion for the railways to change this equipment although of course they would be contending with greater truck productivity as trucking companies adapt to the new regulations. The truckers' rate of adaptation would, however, likely be quite slow as long as grandfathered equipment could still be operated.

3.2.3 Summary

In general the shippers surveyed would react to a possible 10-15% increase in rail rates by first looking at the new relationship between truck and rail rates and possibly switching some of their movements to truck if the equipment were available. This is more important to shippers whose commodities cube-out rather than weight-out. These shippers could also take advantage of the 53 foot trailers in the proposed inter-provincial standards. There are other factors affecting the decisions of shippers regarding whether to move goods by truck or rail other than just cost. These other factors include level of service, availability of equipment, efficiency and cost of loading and unloading the product and timing.

3.3 HALIFAX CONTAINER PORT

One of the major concerns stated by CN is that, if their costs increase and therefore rates on container traffic from the Atlantic Region must increase, this will seriously affect the viability of the Halifax container port which depends heavily on the railway services. CN estimated that there would be no primary loss of import/export traffic through the Port of Halifax as a result of a 7-9% decrease in trucking rates. However they felt that they would suffer a secondary loss of 100% of their container import/export traffic because of the resulting 13% increase in rail costs (and rates).

3.3.1 Traffic Trends and Patterns

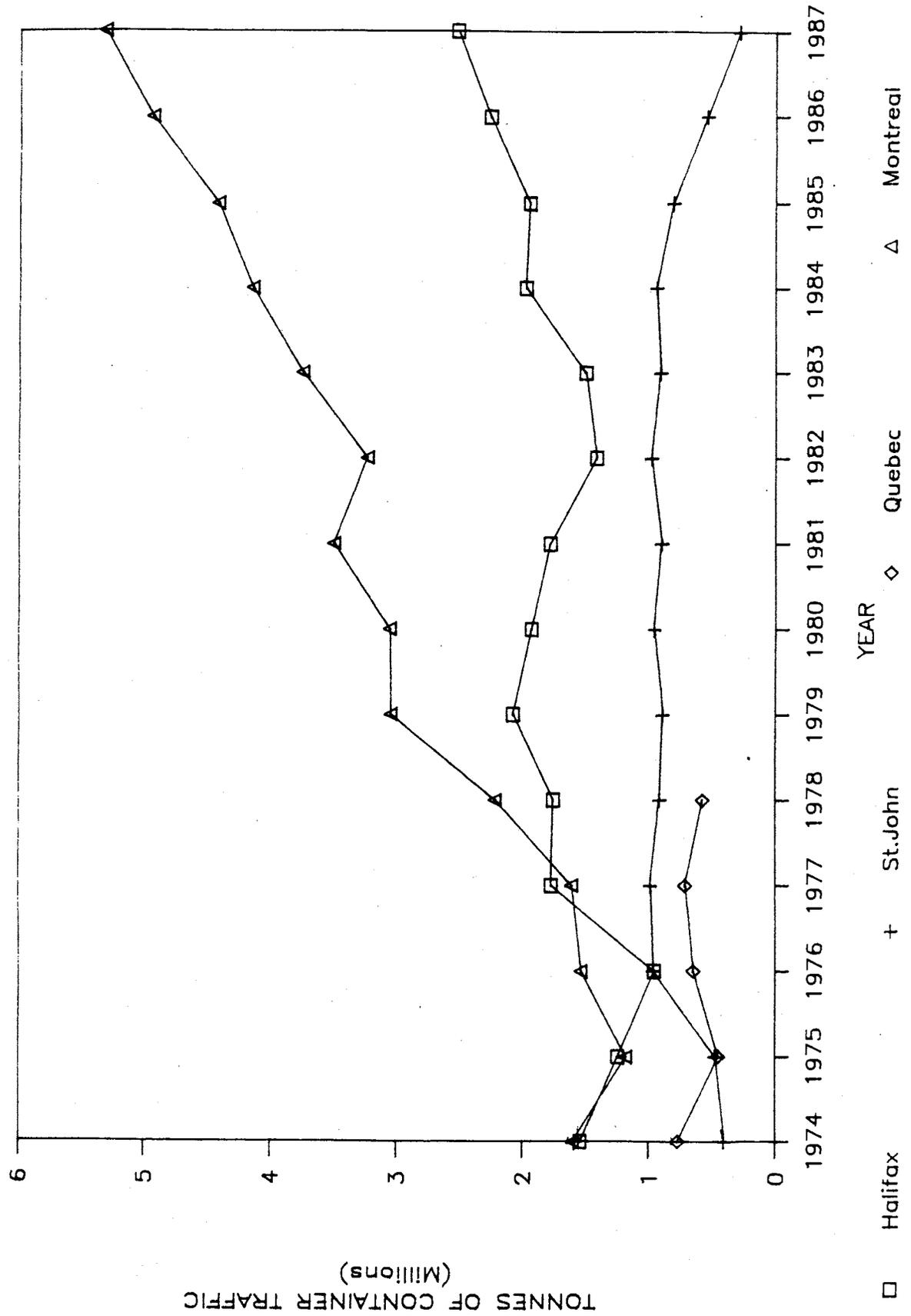
To provide an understanding of the level of container traffic moving through the Port of Halifax, since 1974 as compared to other Canadian eastern ports, a graph was prepared by IBI staff (Exhibit 3.2) of container traffic at Eastern Canadian ports based on information supplied by the Halifax Port Corporation. The exhibit shows that the Port of Quebec and the Port of Saint John handle insignificant amounts of container traffic and container traffic moves mainly through the Port of Montreal and the Port of Halifax. Traffic through the Port of Halifax has increased by almost 25% in the last three years, and traffic through the Port of Montreal has increased by almost 20% in the same time period. Discussions with the Halifax port operators revealed that, given the current situation, they expect container movements to increase by another 10% next year. Approximately 85% of the traffic moves out of the Port of Halifax by rail and, of this, 60-70% moves inland, mainly to Ontario and Quebec.

The Port of Halifax is known to shippers as an excellent, ice free harbour which is only 53 nautical miles off the great circle route between New York and Europe. Ships coming into the port can usually be unloaded and out of their berth in less than eight hours. Most of the container vessels calling at Halifax drop containers destined for Canadian destinations on a longer route, usually linking Europe and the U.S. East Coast. Only a portion of the ship's load is dropped off or picked up in Halifax. There are, however, a number of shipping lines from Australia and the Far East whose vessels continue from U.S. east coast ports into the Port of Halifax and then return south and back through the Panama Canal. These shipping companies find the round trip to Halifax to be more cost effective than dropping their Canadian-bound containers in U.S. ports despite the three extra days' steaming required.

This pattern of loading and unloading containers at Halifax on a long, multi-call route is different from the pattern of service to

EXHIBIT 3.2

CONTAINER TRAFFIC AT EASTERN CANADIAN PORTS



Montreal where most vessels unload all of their cargo in the Port of Montreal. A number of shipping lines stated that they prefer using the Port of Halifax to the Port of Montreal because they can stop at a Canadian port but not lose excessive time on a weekly or bi-weekly shipping run which serves U.S. and overseas ports. Therefore, shipments through Halifax tend to be to or from overseas ports for which it is not economic to collect full ship loads for Canada. The trend towards larger container vessels in the liner trades would tend to reinforce this particular advantage of Halifax.

3.3.2 Halifax Versus New York Container Cost Analysis

A transportation cost comparison was prepared between moving goods through the Port of Halifax and the Port of New York from European and Pacific origin/destinations to Toronto. The rate comparison is between the total terminal, land and diversion costs of moving goods through the Port of Halifax and the incremental cost of moving Canadian-bound cargo through the Port of New York to Toronto. New York was chosen as it is the largest adjacent container port on the U.S. East Coast and because overland mileages to Toronto are very similar from several East Coast ports including Boston, New York, Philadelphia and Baltimore.

The analysis was prepared using both the current 1987 cost structure and also with an increase in rail rates of 13%. For containers moved by ship into the Port of Halifax the land mode assumed is rail to Toronto. For the Port of New York, containers are assumed to be moved to Toronto by truck because currently there are no rail container or piggyback services offered between New York (or other U.S. ports) and Canada. For simplicity it is assumed that there is no empty container movement, and that an equal number of loaded containers are loaded and unloaded from the vessel. Terminal charges and estimates were gathered from representatives from the Port of Halifax/Dartmouth Port Development Corporation, Ports Canada and the Port of Halifax. The gross registered

tonnage of the container ship is assumed to be 50,000 tons with a volume of 120,000 cubic metres. It is assumed that 40 foot containers represent 55% of the containers lifted, with the remainder being 20 foot containers. Approximately 88% of the 20 foot containers are assumed to be carrying higher density commodities. This normally occurs because limitations on container loads mean that 40 foot containers cannot carry twice the load of a 20 foot container.

The incremental cost to shippers of moving Canadian-bound goods through the Port of New York are shown on Exhibit 3.3 for 40, 300, 500 and 1,000 lifts (on and off). Charges assessed at the Port of New York are only those charges that are assessed on a per container or per weight cargo basis. This assumes that all other costs are already being covered by other shipments on the vessel and none of these costs are being allocated to the movements to Canadian centres. This slightly underestimates the costs shown for goods moving through the Port of New York. Added to this are the truck rates moving from New York to Toronto. Therefore, costs assessed for the Port of New York are as follows (assume exchange rate of \$1.35 Canadian to U.S. \$):

- o Stevedore rates - these are estimated to be \$125 U.S. (\$168 Canadian) per extra container loaded;
- o Tonnage Assessment - these are assumed to be \$4.00 (\$5.40 Canadian) per ton of cargo (greater of assessed or measurement tons). The measurement tonnage is assumed to be 28 measured tons for 40 foot containers and 20 measurement tons for 20 foot containers according to a Port of New York representative. Container cargo moving through the Port of New York destined for Canada enjoys a 30% reduction on this charge compared to U. S. bound cargo;
- o Container Royalty - this is assumed to be \$3 U.S. (\$4.05 Canadian) per weight ton of cargo;
- o Truck Rates - these are assumed to be \$945 per 40 foot container and per heavy 20 foot containers and \$472 per light 20 foot container assuming an equal load and unload of loaded containers (88% of 20 foot containers are assumed to be heavy).

EXHIBIT 3.3

1987 INCREMENTAL TERMINAL AND TRUCK COSTS FOR CONTAINER TRAFFIC NEW YORK TO TORONTO

TOTAL CONTAINER LIFTS *	40		300		500		1000	
GROSS REG'D TONS	50,000		50,000		50,000		50,000	
CONTAINER CARGO:	Number	Weight	Number	Weight	Number	Weight	Number	Weight
- 20's	18	216	135	1,620	225	2,700	450	5,400
- 40's	22	396	165	2,970	275	4,950	550	9,900
- Total	40	612	300	4,590	500	7,650	1,000	15,300
VOLUME OF SHIP (metres ³) (length*width*breadth)	120,000		120,000		120,000		120,000	
STEVEDORE COSTS (\$168/container)	6,750		50,625		84,375		168,750	
TONNAGE ASSESSMENT (\$5.40/assessed ton)	5,270		39,528		65,880		131,760	
CONTAINER ROYALTY (\$4.05/weight ton cargo)	2,479		18,590		30,983		61,965	
TOTAL TERMINAL COSTS	14,499		108,743		181,238		362,475	
- Total Costs	362		362		362		362	
- per container								
TRUCK RATES	36,778		275,837		459,729		919,458	
TOTAL COST	51,277		384,580		640,967		1,281,933	
TOTAL COST PER CONTAINER	1,282		1,282		1,282		1,282	

* Lifts refer to on and off container movements for the vessel in question at the port.

The results of the analysis of incremental costs of moving Canadian-bound goods through the Port of New York (Exhibit 3.3) shows that the estimated total cost, including land transportation, is \$1,282 per container. The terminal costs alone are estimated to be \$362 per container with the land transportation costs representing 72% of the total incremental per container cost.

The costs at the Port of Halifax are assumed to include:

- o Berthage charges - these are assessed by the Port of Halifax Corporation and are \$3.62 per gross registered ton for the first 12 hour period. All vessels are assumed to be out of the port in under 12 hours;
- o Harbour dues - these dues are assessed by the Port Corporation and are charged each time the vessel enters the port and therefore are assessed only once on the vessel for each trip. Harbour dues in 1987 are 4.21 cents per gross registered ton;
- o Wharfage - these are charged by the Halifax Port Corporation against the ship cargoes. For containers there is a charge of approximately \$2.53 per metric tonne. This charge is for goods that are moved over the pier. For this analysis it is assumed that a 20 foot container holds cargo of approximately 12 tonnes and a 40 foot container contains cargo of approximately 18 tonnes;
- o Pilotage - this is charged per pilotage unit which is calculated as the extreme length x the depth x the breadth of the ship (volume) divided by 283.17. This represents a pilotage unit. Charges for one-way pilotage are a basic \$107.32 plus \$55 for the pilot boat plus \$1.32 per pilotage unit. This charge is then doubled in order to account for the ship movement in and out of the port. All container ships are assumed to need pilotage;
- o Maritime Employment Labour assessment - this covers pension and welfare benefits for longshoremen and is assumed in 1987 to be \$1.60 per metric weight tonne;
- o Stevedoring costs - these are a negotiated charge and cover expenses such as labour, equipment and rent. These are assumed to be \$120 per container for this analysis;

- o Line costs - these are assumed to be \$800 per vessel for tying the vessel up to the post;
- o Tugage - it is assumed that a container ship will require two tugs to pull it in and one tug to take it out of port. The costs for this are based on the gross tonnage of the vessel. These charges are assumed to be \$1,030 for the first tug and \$770 for each additional tug for the one-way trip.

Not included in these charges are inland terminal charges which are assessed against the goods whether they move by rail or truck. The rail charges are assessed based on the quoted 18,000 container/year volume rate and are for the loaded movement only. Rail charges westbound loaded between Halifax and Toronto are \$387 per 20 foot container and \$747 per 40 foot container. The final cost assessed on the Halifax movement are diversion costs for the ship to move into the Port of Halifax. It is assumed that vessel charter costs are approximately \$50,000 U.S. (\$67,500 Cdn.) per day. The ship is assumed to travel at 18 knots and the diversion to Halifax for ships going from New York on to Europe is 53 nautical miles and for ships returning back south through the Panama Canal is 1,200 nautical miles.

The results of the detailed analysis for the Port of Halifax are shown on Exhibits 3.4 and 3.5 for 40, 300, 500 and 1,000 container lifts (on and off movements combined) at the Port of Halifax. Two different overseas origins/destinations are assumed:

- o ships diverted to the Port of Halifax but continuing on to or from New York on a route from or to Europe and therefore having only a 53 nautical miles diversion (Exhibit 3.4);
- o ship arriving from New York, continuing to Halifax and then returning south, going through the Panama Canal with a 1,200 nautical miles diversion to Halifax (Exhibit 3.5).

Per container costs when the ship diverts only 53 nautical miles between Europe and New York range between \$1,197 and \$774 depending on the number of containers lifted. Rail costs represent between 49% and 75% of

EXHIBIT 3.4

1987 TERMINAL AND RAIL COSTS FOR CONTAINER TRAFFIC HALIFAX TO TORONTO
DIVERSION THROUGH HALIFAX BETWEEN NEW YORK AND EUROPE

TOTAL CONTAINER LIFTS	40	300	500	1000
GROSS REG'D TONS	50,000	50,000	50,000	50,000
CONTAINER CARGO:	Number Weight	Number Weight	Number Weight	Number Weight
- 20's	18 216	135 1,620	225 2,700	450 5,400
- 40's	22 396	165 2,970	275 4,950	550 9,900
- Total	40 612	300 4,590	500 7,650	1,000 15,300
VOLUME OF SHIP (metres ³) (length*width*breadth)	120,000	120,000	120,000	120,000
BERTHAGE CHARGE (3.62c/gross reg. ton)	1,810	1,810	1,810	1,810
HARBOUR DUES (4.21c/gross reg. ton)	2,105	2,105	2,105	2,105
WHARFAGE \$2.531/ton of cargo	1,549	11,617	19,362	38,724
PILOTAGE (\$187.32 + \$55.20 \$1.32/pilotage unit)*2 (minimum \$282.05)	1,603	1,603	1,603	1,603
MARITIME EMPLOYMENT ASS. \$1.60/metric weight ton	979	7,344	12,240	24,480
STEVEDORE COSTS \$120/container (est.)	4,800	36,000	60,000	120,000
LINE COSTS \$800/vessel	800	800	800	800
TUGGAGE (2 in, 1 out) 1st tug \$1,030 add tug \$770	2,830	2,830	2,830	2,830
TERMINAL COSTS				
-TOTAL	16,477	64,110	100,751	192,353
-PER CONTAINER	412	214	202	192
DIVERSION 53 knots diversion 18 knots/hour at \$50,000US/day	8,438	8,438	8,438	8,438
RAIL COSTS	22,946	172,095	286,825	573,650
TOTAL COSTS	47,860	244,642	396,013	774,440
TOTAL COST/CONTAINER	1,197	815	792	774

EXHIBIT 3.5

1987 TERMINAL AND RAIL COSTS FOR CONTAINER TRAFFIC HALIFAX TO TORONTO
DIVERSION THROUGH HALIFAX BETWEEN NEW YORK AND NEW YORK/PANAMA CANAL

TOTAL CONTAINER LIFTS	40	300	500	1000
GROSS REG'D TONS	50,000	50,000	50,000	50,000
CONTAINER CARGO:	Number Weight	Number Weight	Number Weight	Number Weight
- 20's	18 216	135 1,620	225 2,700	450 5,400
- 40's	22 396	165 2,970	275 4,950	550 9,900
- Total	40 612	300 4,590	500 7,650	1,000 15,300
VOLUME OF SHIP (metres ³) (length*width*breadth)	120,000	120,000	120,000	120,000
HALIFAX PORT	TO TORONTO	TO TORONTO	TO TORONTO	TO TORONTO
BERTHAGE CHARGE (\$3.62c/gross reg. ton)	1,810	1,810	1,810	1,810
HARBOUR DUES (\$4.21c/gross reg. ton)	2,105	2,105	2,105	2,105
WHARFAGE \$2.531/ton of cargo	1,549	11,617	19,362	38,724
PILOTAGE (\$187.32 + \$55.20 \$1.32/pilotage unit)*2 (minimum \$282.05)	1,603	1,603	1,603	1,603
MARITIME EMPLOYMENT ASS. \$1.60/metric weight ton	979	7,344	12,240	24,480
STEVEDORE COSTS \$120/container (est.)	4,800	36,000	60,000	120,000
LINE COSTS \$800/vessel	800	800	800	800
TUGGAGE (2 in, 1 out) 1st tug \$1,030 add tug \$770	2,830	2,830	2,830	2,830
TERMINAL COSTS				
-TOTAL	16,477	64,110	100,751	192,353
-PER CONTAINER	412	214	202	192
DIVERSION 1200 knots diversion 18 knots/hour at \$50,000US/day	202,500	202,500	202,500	202,500
RAIL COSTS	22,946	172,095	286,825	573,650
TOTAL COSTS	241,923	438,705	590,076	968,503
TOTAL COST PER CONTAINER	6,048	1,462	1,180	969

the total cost. For containers lifted from ships that divert 1,200 nautical miles to stop in Halifax the per container costs range between \$6,048 and \$969 depending on the number of containers lifted with rail costs representing 9% to 59% of the costs.

A summary of the results is shown in Exhibit 3.6 comparing the two ports for the two different diversions and current and increased rail rates. At the current cost structure, the Port of Halifax has a cost advantage over the Port of New York, regardless of the number of containers lifted, for ships travelling between Europe and the American east coast that divert to Halifax. The advantage ranges between \$83 and \$505 per container depending on the number of lifts.

For ships arriving from the Pacific that divert 1,000 nautical miles to drop containers in Halifax, lifts of over 400 containers (on and off combined) are required to make it a worthwhile diversion.

Exhibit 3.6 also shows the impact of a 13% increase in rail rates between Halifax and Toronto on the ability of the Port of Halifax to compete with the Port of New York for container traffic. For containers diverted through Halifax on ships moving between Europe and the American east coast, the Port of Halifax still retains a cost advantage of \$11 per container even for only 40 lifts. This cost advantage increases to \$433 per container for 1,000 lifts.

For diversions to Halifax for ships moving up the east coast then returning through the Panama Canal, the breakpoint between Halifax and New York increases slightly in terms of the number of lifts required to make the Port of Halifax more cost-effective when rail rates are assumed to increase by 13%. The breakpoint where the two ports become comparable in price is approximately 470 lifts compared to a breakeven point of 400 lifts under the current rate structure.

EXHIBIT 3.6

SUMMARY OF COMPARISON OF PORT OF HALIFAX AND PORT OF NEW YORK
TRANSPORTATION RATES PER CONTAINER WITH AND WITHOUT 13% RAIL RATE INCREASE

	40 LIFTS	300 LIFTS	500 LIFTS	1000 LIFTS	
PORT OF NEW YORK OVERLAND TO TORONTO BY TRUCK - 1987					
TERMINAL	362	362	362	362	
TRUCK	919	919	919	919	
TOTAL	1,282	1,282	1,282	1,282	
PORT OF HALIFAX - OVERLAND BY RAIL - 1987					
TERMINAL	412	214	202	192	
DIVERSION	211	28	17	8	
RAIL	574	574	574	574	
TOTAL	1,197	815	792	774	
DIVERSION EUROPE TO NEW YORK	COST ADVANTAGE VIA HALIFAX	85	466	490	507
PORT OF HALIFAX - OVERLAND BY RAIL - 13% INCREASE IN RAIL RATES					
TERMINAL	412	214	202	192	
DIVERSION	211	28	17	8	
RAIL	648	648	648	648	
TOTAL	1,271	890	867	849	
DIVERSION EUROPE TO NEW YORK	COST ADVANTAGE VIA HALIFAX	11	392	415	433
PORT OF HALIFAX - OVERLAND BY RAIL - 1987					
TERMINAL	412	214	202	192	
DIVERSION	5,063	675	405	203	
RAIL	574	574	574	574	
TOTAL	6,048	1,462	1,180	969	
DIVERSION NEW YORK TO NEW YORK/PANAMA CANAL	COST ADVANTAGE VIA HALIFAX	-4,766*	-180*	102	313
PORT OF HALIFAX - OVERLAND BY RAIL - 13% INCREASE IN RAIL RATES					
TERMINAL	412	214	202	192	
DIVERSION	5,063	675	405	203	
RAIL	648	648	648	648	
TOTAL	6,123	1,537	1,255	1,043	
DIVERSION NEW YORK TO NEW YORK/PANAMA CANAL	COST ADVANTAGE VIA HALIFAX	-4,841*	-255*	27	239

* Negative numbers signify cases in which the movement via Halifax is more expensive than the movement via New York.

However, cost is not the only factor considered by a shipper when deciding on where to load/unload containers. Other important factors are:

- o ease of entering/exiting the port and port congestion;
- o need for and availability/cost of storage;
- o timing of movements;
- o ease of loading/unloading to/from land mode (truck/rail).

There are other advantages to the Port of Halifax over the Port of New York other than just price. As noted by the shipping lines these include a fast turnaround time, ease of moving the goods onto the railways as compared to the trucks which would be required at the Port of New York and also lack of congestion in Halifax while congestion does occur in the Port of New York.

This analysis indicates that Halifax currently does enjoy some price advantage over the Port of New York. This margin is fairly significant for container movements between Europe and Toronto (\$85-\$507 per container) but is smaller for container movements between Australia and Toronto and only occurs for lifts of more than about 400 containers. Therefore, an increase in the rail rates between Halifax and Toronto would mean that the container traffic through Halifax would lose some of its price advantage over traffic moving through the Port of New York. The comparison presented in Exhibit 3.5 indicates that the price advantage of the Halifax route would be maintained if CN's rail rate between Halifax and Toronto were raised by 13% for small ship diversions and would alter the breakeven point number of lifts for long diversions.

3.3.3 Attitudes of Marine Carriers

We also held discussions with carriers who move containers through the Port of Halifax. The following shipping lines were surveyed:

- o Atlantic Container Line (ACL) - this is the largest carrier of containers into the Port of Halifax. They move goods from European ports into the east coast of Canada and the United States;
- o Hapag-Lloyd - this is another large mover of containers through the Port of Halifax. Their goods are moved from Europe and Latin America to both the east and west coasts of North America. Approximately one-quarter of their goods go to Canadian ports with the rest to the United States;
- o Orient Overseas Containers Ltd. (OOCL) - this service operates from the Far East into both the east and west coasts of North America;
- o Pacific American Container Express (PACE/ACT) - this company ships mainly meat and other food products from Australia and New Zealand to the east coast of North America;
- o Zim - this is an Israeli line which moves products from the Mediterranean, Jamaica and Far East to the east coast;
- o Columbus Lines - this is a German line that moves products from Australia and New Zealand to the east and west coasts of North America. Their main products are heavy density items such as meat and other food products;
- o Polish Ocean Lines - this carrier moves products from the European continent to the east coast of Canada;
- o K-Line - this is a Japanese carrier which moves product mainly from Japan to the east and west coasts of North America. Their main products are foodstuffs, textiles and electronics.

These eight lines represent over 65% of the estimated 300,000 containers that will move through the Port of Halifax in 1987. They were asked to comment on the impact of a 10-15% increase in rail rates on their use of the Port of Halifax. The prevailing attitude was that a 10-15% increase in the rail rates would not be accepted by the shipping lines without strong protests. However, many of the marine carriers felt that the Port of Halifax has many advantages that allow them to move their

product through Halifax more effectively than through the Port of New York at the current time. Carriers that have the flexibility of moving through other ports in North America, such as western seaboard ports, would reevaluate their shipping patterns if such a rail increase were put into effect on goods moved out of the Port of Halifax. For those who are flexible, they could move through the Port of Seattle or into California where good rates into Central Canada and the Western U.S. are available due to double stacking of containers.

However, the logistics of putting 200 to 300 trucks through the Port of New York in order to pick up containers is considered by the carriers to be almost infeasible, while the existing movement through the Port of Halifax onto the railway is quite efficient and effective. Therefore, when large numbers of TEU's are being moved, using the Port of New York and then shipping by truck into Canada is considered infeasible. Also affecting the feasibility of moving goods by truck from New York to Toronto is the availability of enough trucks to carry the volume of containers that would have to be moved.

Another factor which allows Halifax to be preferred over say the Port of Montreal is the very small (53 nautical miles) diversion that it represents for ships moving from New York to Europe and therefore the Canadian port fits easily into shipping schedules and does not create significant additional steaming time. Halifax enjoys a substantial advantage over Montreal in this regard and a less significant advantage over Saint John. In a service where goods movement is concerned with not only the rate for moving the product but also the transit times, carriers will consider the fact that there are one and one-half container trains per day leaving the Port of Halifax which allows excellent turnaround for their container-carried goods.

The shipping lines did, however state that for 40 foot container movements, the cost difference of moving through the Port of New York versus the Port of Halifax is quite small and that small changes in the

rail rates or changes to the inland movement of containers in the United States could significantly affect whether or not they move through the Port of Halifax.

Another difficulty with moving goods by truck out of the Port of New York is the 80,000 lb. restriction of trucks on major American roads and the road traffic congestion and port handling delays which can affect service reliability and costs. For heavier products such as Australia/New Zealand meats the highway loading limit means that they could not get the most effective use out of the truck movement.

One shipper felt that if the rail rates did increase it could make it very difficult to call in Canada and the alternative would be not to carry any Canadian cargo at all. At this time it is currently cheaper for them to call in the Port of Halifax but since their cargo to the port is so small that it would not affect their overall economic situation if they did not move Canadian cargo at all.

However, for the larger carriers, the Port of Halifax provides a very cost-effective and efficient port for moving containers and a 10-15% increase in rail rates while it would be strongly protested by the shipping lines, would probably not be significant enough to cause them to entirely cease moving their product through the Canadian port.

3.3.4 Attitudes of Port and Terminal Operators

Discussions were also held with terminal operators at the Port of Halifax, representatives from the Halifax Dartmouth Port Development Commission, and Ports Canada to discover their attitudes towards increases in rail rates on the viability on the Port of Halifax. The terminal operators expressed concern that, if rail rates were to increase, container movements would disappear from the Port of Halifax and possibly go through the Port of Montreal or U.S. Eastern Seaboard Ports. The terminal operators work closely with the shipping lines and the railways

to try to ensure that the port maintains a competitive position as compared to other ports. The terminal rates as a result have gone down over the last five years in order to remain efficient and competitive. This port operator mentioned that 85% of the goods moving out of the port go by rail and the remaining 15% which do not are destined for the Atlantic Provinces.

Discussions with representatives from the Halifax Dartmouth Port Development Commission showed that they would also be very concerned with an increase in rail rates and felt this would cause a serious problem for the port and that it would be possible that the shipping lines would need to absorb the increases in shipping costs to retain their customers. However they felt it was highly unlikely that the shippers could reduce their other costs in order to compensate for the increase in rail rates.

Representatives from the Port of Halifax Marketing Department said that five or ten years ago any cost analysis between Canadian and the U.S. ports came out in favour of the Canadian ports. However, they are concerned that the monetary advantages of Halifax container movements relative to movements through New York or Montreal are becoming smaller since the rail rates plus terminal costs via Halifax are becoming more comparable to those via Montreal and New York.

3.4 INTERMODAL EQUIPMENT

CN currently owns or leases 2,197 cars designed to carry trailers. As shown in Exhibit 3.7, these trailers are split up by type as follows:

- o single hitch cars - 912 cars with length over the end sills of between 52'6" and 54'4". These currently carry one 48 foot or one 45 foot trailer. Only 317 of these cars are physically able to carry 53 foot trailers;
- o double hitch cars - 452 double hitch cars with links over the sills ranging from 61'4" to 89 foot. These cars currently carry two 28 foot or one 45 foot tractor

EXHIBIT 3.7

CANADIAN NATIONAL TOFC CARS

	<u>Length Over End Sills</u>	<u>Age</u>	<u>No.</u>	<u>Design Payload</u>	<u>Physical Capability 53' Trailer</u>
<u>Single Hitch Cars</u>	52'6"	35	25	1-48'	No
	61'4"	21	268	1-48'	Yes
	47'2"	27	350	1-45'	No
	50'0"	5	200	1-48'	No
	53'6"	25	20	1 48'	No
	54'4"	22	49	1-48'	Yes
<u>Double Hitch Cars</u>	61'4"	21	90	2-28'	(a)
	63'0"	17	140	2-28'	(a)
	63'0"	13	79	2-28'	(a)
	89'0"	13	143	1-45'+ 1-40'	No (b)
<u>Triple Hitch Cars</u>	89'0"	12	60	3-28'	No (b)
	89'+52'6"(d)	15/35	100	3-45'	(c)
	89'+52'6"(d)	11/35	263	3-45'	(c)
<u>5 - Pack</u>	3x52'6"+2x61'3"(e)	2	410	5-48'	No

2197

- Notes:
- (a) Would need substantial modification to accomodate 53' trailer. May not be economically justifiable.
 - (b) Physically capable of handling only one 53' trailer, which would not be economic.
 - (c) Might be modified to handle 2-53' plus 1-31', but may not be economically justifiable.
 - (d) Each unit consists of a pair of permanently coupled cars.
 - (e) Middle sections are 52'6" long and end sections are 61'3", but platforms can only accomodate 48' trailers

Source: CN

plus a 40 foot container. Only the 89 foot cars would be capable of handling 53 foot trailers. However they could carry only one trailer which would not be economical. The remainder would need substantial modifications which railway staff feel may not be economically justifiable;

- o triple hitch cars - 423 triple hitch 89 foot cars or a combination of 89 foot and 52.6' cars permanently coupled. These arrangements carry three 28 foot or three 45 foot trailers depending on the length. These might be modified to handle two 53 footers plus a 131 footer but this may not be economically justifiable in the opinion of CN staff;
- o five-pack - 410 platforms combined in fixed units containing three 52'6" platforms and two 61'3" platforms. Currently these platforms hold five 48 foot trailers. The trailers are carried in wells on each of the platforms. The intermediate platforms could not accommodate 53 foot trailers because of insufficient length. CN staff do not feel that the end platforms could be modified to accommodate 53 foot trailers. At the present time the end trailers have to face outwards with the hitch mounted on the raised portion of the car over the rear truck. They cannot move this hitch outwards because of space limitations. Turning the trailers around would not help much because the cars' air brake reservoirs are on the end portion of the platform.

Of the approximately 317 cars that would definitely be able to carry 53 foot trailers all are over 20 years of age. Most of the remaining cars in the CN fleet are at least 13 years of age. CN feels that, of the 2,197, cars another 873 might be adapted but it is not clear whether it would be justified economically.

CN staff said that they would be hesitant to acquire new cars or to modify existing rolling stock to accommodate 53 foot trailers because in the past they have had experiences where allowable trailer lengths have changed within a short time of being legislated into place. For example when regulations allowing 45 foot trailers came out they were told that this was the maximum length and therefore arranged their cars in order to handle these 45 foot trailers. Within three years 48 foot trailers were

allowed and once again they had to modify their cars and thus developed five packs in order to accommodate five 48 foot trailers. In order to reconstruct the five-packs to carry 53 foot trailers, vehicles would have to have an extra section inserted and be spliced together. It may be more economical to purchase new cars to handle the 53 foot trailers.

Nationwide CN owns two-thirds of the trailers moving on CN trains. In the Maritimes alone CN ownership of trailers increases to 93%. Therefore changes to trailer lengths due to the proposed trucking regulations could potentially affect a very small percentage of their current piggyback traffic in the Maritimes and only one-third of their piggyback traffic nationwide in terms of changes in the dimensions of shippers' or other carriers' trailers.

CN regards the economic life of a rail car to be 30 to 35 years. It is difficult to determine the number of rail cars that would be phased out regardless of the introduction of 53 foot trailers. CN feels that it is too simplistic an analysis to say that many of their cars would be phased out in the near future regardless of the changes in the weights and dimensions of trucks.

CP expressed very similar concerns with respect to the stability of trailer and container sizes. Currently the major piece of intermodal equipment within the CP fleet is the 89 foot flatcar. This is used for the CP domestic container movements. The 44 foot domestic container suffers some disadvantages compared with 48 foot van trailers available from truckers and these would become less competitive if the truckers were to be able to supply 53 foot vans. Because of uncertainty with respect to trends in trailer (and container) sizes, CP has not made any major investments in new intermodal equipment.

In the United States some new equipment is being constructed by the railways to accommodate 53 foot trailers although 53 foot trailers represent only a very small proportion (1-2%) of the American fleet because

of differences between standards in the various states. The use of skeleton cars with flexible bodies to accommodate trailers of various weights would require further research and design as well as changes in CTC standards and AAR (American Association of Railways) interchange rules.

3.5 COMMENTARY ON CN CONCERNS

Both the earlier and the more recent analysis showed that there would be considerable shifts from rail to road under scenarios of relaxed vehicle weight and dimension regulation. The extent of these intermodal shifts depends on the actual changes in the regulations made. For example, in the Maritime provinces at this time we have two groups of persons with concerns about the economic aspects of the interprovincial trucking proposals:

- o the railways who say that it will remove much of their business by making the trucks more competitive;
- o the truckers who are worried about potential rollbacks in regulations and claim that any reduction in axle weights and gross combination weights will take away their business and put it on to rail.

We have discussed the CN estimates and their methodology. Overall the methodology is a reasonable way to proceed. Our impression is, however, that the new estimates have been based on analyses which assume the worst case for the railways in places where there is genuine doubt. We might therefore regard the new estimates as being a high estimate and the old estimates (also made by CN) as representing a low estimate.

One of the assertions made by CN is that major regulatory relaxations for trucks would hasten the process of branch line abandonment in the Atlantic provinces and elsewhere. This must be of real concern to shippers who wish to have a choice of modes wherever possible and to

agencies responsible for roads such as provincial departments of transportation. Associating the process of branch line rationalization with a particular change in the regulatory environment is, however, difficult. Most of the lines under question have already been proposed for discontinuance as they are in a deficit position today. Increased competition from trucks may increase the levels of deficit but it cannot necessarily be said that they caused a particular abandonment.

In proposing abandonments, CN often uses the argument that improved intermodal services will provide effective services for existing rail customers. They would have the choice of shipping directly by truck or by TOFC/COFC via the nearest railhead. The implications of changes in weights and dimensions regulations on intermodal rail equipment therefore could be significant to the extent that carriers and shippers using piggyback services offer longer trailers for the railway haul. As shown, most of the existing rail equipment would not be suitable for new trailers of maximum dimensions. What the railways are asking for is some stability in standards so that investment decisions can be made on a knowledgeable basis. The railways assert that if 53 foot trailers are permitted today, there is no assurance that 60 foot trailers might not be permitted within a few years, again making new equipment obsolescent. Given past history, we agree that the possibility remains open although, for reasons stated in Section 3.4 and elsewhere in this chapter, we feel that CN's estimates of loss in its intermodal (and other) traffic in the Atlantic region are at the upper end of the possible range.

3.6 CP RAIL CONCERNS

The study team also interacted with members of CP rail staff during the course of this study. While not getting into the same level of detail with CP Rail as with CN, CP staff did express concern with the proposed changes in regulations.

While CP does not, in theory, object to improvements in productivity in other modes, with respect to road-rail competition in Canada there is a specific problem. Their argument is as follows:

- o in Canada, both truckers and railways pay fuel taxes;
- o the truckers are provided with their roadways by public agencies while the railways must pay the entire cost of the rail line. In effect, because both pay fuel taxes, the truckers are provided their roadway free;
- o because of this unequal subsidy, there is an incentive to use trucks in cases where, if all costs were taken into consideration, rail would be the more economic mode;
- o reducing the constraints on truck productivity imposed by the current vehicle weights and dimensions limit will aggravate this problem.

Essentially what CP is saying that, if there were no indirect subsidy to trucks, they could not legitimately argue against improvements which would improve the productivity of the road mode but that, with this subsidy, relaxations in vehicle weights and dimensions will exacerbate the problems of misallocation of resources. They point out that these proposed changes are also occurring at the same time that the railways are under pressure for other reasons including the introduction of Bill C-18 which will reduce revenues and net contributions. A number of decisions are being made today which, unconsciously, will have a major impact on the shape of the railway network in this country. In the areas where there are not large movements of bulk materials, the current process is driving the railways to cut back networks as much as possible to reduce fixed costs. At the same time, new regulations are making the abandonment of railway lines more difficult. The cumulative effect will be to make the railways less and less profitable and less capable of making new investments to maintain the plant and to provide new, competitive services.

During the original IBI/ADI study, the estimated impacts on CP gross revenues of changes in interprovincial vehicle weights and dimensions was between \$153 and \$190 million. During the public consultation phase CP Rail produced an updated estimate of loss of revenues associated with consequent volume loss and rate reductions of \$250 million. When questioned as to the difference in these two estimates, CP Rail stated that it came from the more detailed, more refined analysis.

CP Rail are also very concerned about the impact on their intermodal services:

- o increased truck competition will make them harder to market;
- o frequent changes in vehicle dimensions make investment decisions very hard to make.

Our comments on these concerns are similar to those noted earlier regarding similar points raised by CN.

The broader arguments offered by CP appear to the study team to be generally worthy of consideration by the subcommittee and the Council of Ministers as they work towards achieving a uniform set of interprovincial trucking regulations.

4. IBI ASSESSMENT

The review of the issues and the discussions with the various parties reported in the last two chapters have prompted the study team to form a number of opinions. In this chapter these opinions are provided.

4.1 LOSS OF RAILWAY AND MARINE CONTAINER SERVICES

As described in Chapter 3, the railway companies are under a great deal of pressure. Reducing traffic volumes will increase this economic pressure and, in some cases, will entice traffic from the railways and may cause abandonment of lines and services. Among the areas of specific concern are:

- o branch lines in the Maritime provinces;
- o all railway lines in Newfoundland;
- o the Halifax container operation.

As described earlier in this document, many branch lines in the Maritimes and the entire railway operation in Newfoundland have already been proposed for rationalization. The implementation of the proposed interprovincial trucking recommendations probably will not have a material effect on the outcome of the rail rationalization and only a marginal effect on the speed of implementation of these closures. As also reported in Chapter 3, we do not believe that the Halifax container operation is in serious jeopardy as a result of the implementation of the RTAC proposals.

4.2 THE ROAD-RAIL BALANCE IN CANADA

We believe that there is a more widespread implication with respect to the overall balance of road and rail services in Canada. There

is a basic case that the railways have made several times that the road and rail modes are treated unequally with implicit subsidies being provided for the road mode. They state that this may lead to a misallocation of resources, with shippers choosing the truck mode when they might use rail if the "true" costs were assigned and reflected in rates. Current vehicle and weight regulations have acted as a constraint to modal shifts. CP's concern that relaxation of the vehicle weights and dimensions regulations will exacerbate this situation should, in our view, be considered in reaching decisions on interprovincial trucking regulations.

The railways also point out that a number of different decisions are being made, including not only the vehicle weights and dimensions decisions but other decisions with respect to economic regulation of railways, which will tend to have a considerable impact on the railways. The railways state that these decisions are being made incrementally, without sufficient analysis of the overall impact on the future of transportation services in Canada. We feel that these concerns are valid but wonder whether these larger concerns have to be completely resolved before implementation of the proposals for the common standard for interprovincial truck traffic. The interprovincial trucking regulations have been justified on their own merit and normally would be independent of the resolution of modal subsidy issues. The connection here is that the railways assert that the current weights and dimensions regulations act as a constraint to limit the damage of current inequities. The subcommittee and the Council of Ministers will have to decide on the extent to which such broader questions should be considered in moving towards the justifiable objective of uniform interprovincial truck weight and dimension regulations.

With respect to the actual magnitude of potential modal shifts that might result from the vehicle weight and dimension changes proposed, we would like to point out that two estimates have been made by each of the major railways, an initial estimate that was offered as part of the

input to the original study of the economic impacts of changes in truck regulation and a second estimate after the truck regulation proposals were made public. It is difficult to determine which of these two sets of estimates is most reasonable. It is probably sufficient to say that the truth probably lies between the two.

With respect to the specific issue brought up by CN of the potential impact on trans-border traffic to and from the United States, we believe that the analysis described in Chapter 3 shows that changes to traffic to and from the U.S. depends mostly on U.S. regulations. The extent to which these are impacted by changes in the Canadian regulations proposed by the subcommittee will be relatively minimal except for traffic to and from the State of Michigan. Because the Ontario regulations on axle weights are already higher than the proposed interprovincial standards, the main impact will be from the larger semi-trailers that would be permitted under the proposed regulations. These would only be permitted to travel to those states that now permit 53 foot trailers.

We have concentrated most of our efforts on potential economic impacts in the Atlantic provinces as the expressed concerns were greatest there. A consistent comment from shippers in the area was that they wish to keep the option of rail service open and that they were afraid that the interprovincial trucking proposals would drive the railways out of business in their region. Our findings do not support the conclusion, but there remains a significant range of uncertainty in the losses of railway traffic, revenues and services which might result. While we did not devote as much attention to other parts of Canada, the situation may be similar in those areas where there are not large volumes of bulk materials to pay the basic costs of railway operation; any such impacts are likely to be more strongly felt in the Atlantic region than in other parts of Canada, however, for reasons which were pointed out earlier.

A problem area associated with changing the vehicle weights and dimensions is the premature obsolescence that this could cause for railway

intermodal equipment. In recent years there has been a considerable amount of uncertainty about the future of vehicle dimensions and this uncertainty has delayed planning and investment in intermodal equipment by the railways. Given the opportunities available to the Canadian transportation system through the use of effective intermodal services, this is an important problem area. Any resolution of VWD regulations which can stabilize and make investment in this area less risky would be welcomed by all parties. The fact that the majority of trailers and all of the domestic containers now moving on railway intermodal services are owned or leased by the railways makes this argument somewhat less pressing. The railways could continue to use their rail cars to carry their own equipment. They would of course face increasing competition from truckers using more productive equipment under the new interprovincial regulations although such competition might be quite slow to appear as noted earlier. The extent and timing of such competition depends on a number of factors, as discussed in earlier sections, some of which (e.g. grandfathering; rollback of intraprovincial limits) remain unclear regarding the proposed interprovincial trucking regulations.

Our conclusion is that the effects of the interprovincial truck regulation proposals on the railways could be significant but that railcar, intermodal and marine container services would probably continue to be available in the Maritime provinces with some rail rate increases. Normally, the productivity of one mode should not be restricted to safeguard another mode but, in this case, the railways have put forward arguments that cannot be entirely discounted which state that there is unequal treatment of the modes regarding public financing of infrastructure and that changes in the regulatory climate will have an unfortunate impact. The subcommittee and the Council of Ministers will have to decide whether these potential economic effects of the proposed changes in interprovincial trucking regulations should be more broadly and extensively considered while making a decision regarding the proposals or their possible modification.

4.3 OTHER ECONOMIC CONCERNS

The review of other concerns and issues with respect to the economic impacts of the RTAC proposals indicate that these are essentially of two types:

- o the need to grandfather existing equipment so that their economic value can be realized;
- o the potential danger of a rollback in regulations in provinces where these are now higher than the proposed interprovincial regulations. This is of particular concern in the Maritime provinces for tractor/semi-trailer combinations with tri-axle assemblies.

It appears to us that these issues should be addressed in the overall proposals for regulatory change. If there are to be no rollbacks and a satisfactory grandfathering procedure for existing equipment is established, then most of the economic concerns raised by truckers and their customers with respect to the proposals would likely be relieved. The major area of concern that would then remain would be the potential impact on rail traffic, revenues and productivity and the potential secondary impacts of reductions in the extent and competitiveness of rail services. As noted earlier, based on the information and resources available in preparing the report we conclude that these impacts would be significant in the Atlantic region but not as extensive as estimated by CN and that rail services would continue to be available in the region. We recognize that the subcommittee will be considering these and other issues and we believe that a clarified, comprehensive proposal for new regulations, including proposals regarding grandfathering and intraprovincial treatment of affected standards, would contribute to improved understanding by the various parties involved in, and affected by, the process.

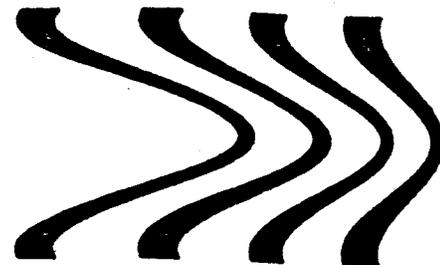
4.4 CONCLUDING REMARKS

We believe that achieving greater uniformity in interprovincial truck regulations would be an important improvement in the productivity of

Canadian goods transportation. We hope that the information and commentary provided in this report will assist the Implementation Planning Subcommittee in developing its final recommendations regarding proposals to achieve this objective cost-effectively, taking into account the economic and other comments received during the 1987 hearings and subsequently.

APPENDIX A

CIRCULAR OF THE ATLANTIC PROVINCES TRANSPORTATION COMMISSION



CIRCULAR NO. 87-4

October 14, 1987

File 217-I

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**Recommended Regulatory Principles For
Interprovincial Heavy Vehicle Weights and Dimensions**

The federal and provincial governments, in conjunction with the trucking industry, recently funded a \$2.8 million research program on vehicle weights and dimensions and the impact of various vehicle configurations on pavements and bridges. The study was carried out by the Roads and Transportation Association of Canada (RTAC) and the Canadian Council of Motor Transport Administrators (CCMTA).

The final report of the Implementation Planning Subcommittee for this study was submitted to the federal and provincial ministers responsible for transportation at a meeting in September, 1987. The ministers will meet again in February, 1988, to finalize the implementation of the recommendations in the report.

The issue of changes to vehicle size and weight regulations is of major importance to shippers in the Atlantic Provinces. This Commission, by means of this circular, is attempting to inform shippers, in some detail, of the content and effect of the proposed regulations. So that shippers may assess the impact on their transportation requirements, some of the more significant recommendations are summarized below, with APTC comments in script.

The recommendations of the final report dealt with four (4) vehicle configurations:

- 1) Tractor Semi-trailers - 5 axle and 6 axle
- 2) A-Train Double Configurations
- 3) B-Train Double Configurations
- 4) C-Train Double Configurations

Recommendations pertaining to tractor semi-trailer configurations include:

. . . /2

- (a) Trailer lengths of up to 16.2 m (53' 2") be permitted.
Present regulations permit trailer lengths up to 14.65 m (48').
- (b) Tandem axle spreads be limited to minimum 1.2 m (3' 11") and maximum 1.8 m (5' 11").
No change from present.
- (c) Tri-axle spreads be limited to a minimum 2.4 m (7' 10") and maximum 3.7 m (12' 2").
Present regulations permit tri-axle spreads of 4.8 m (16').
- (d) Belly axles and lift axles will not be permitted. Each semi-trailer will be permitted to have only one axle group consisting of either a single axle, a tandem axle group or a tridem axle group that will achieve equalized load sharing between axles in the group.
Present regulations permit the use of belly axles. Lift axles are also permitted and extensively utilized on truck fleets in the Atlantic Provinces.
- (e) The effective rear overhang on semi-trailers be limited to 35% of the wheelbase.
Using the definition of wheelbase contained in the report and the above formula results in the following maximum permitted rear overhang for:
45 foot trailer - 3.0 m (10')
48 foot trailer - 3.3 m (11')
53 foot trailer - 3.6 m (12')
Rear overhang is not controlled in present regulations.
- (f) Wider track axles with a nominal width across the tires of 2.6 m (102") are recommended for use on trailers and semi-trailers and are encouraged for use on tractors.
Present axle track widths are normally 2.4 m (96").
- (g) The following maximum weight limits have been recommended for tractor semi-trailer configurations: (See Appendix A)

	<u>Recommended</u>	<u>Present</u>
Steering Axle	5,500 kg (12,125 lbs.)	Dependent on tire and axle specifications
Single Axle	9,100 kg (20,061 lbs.)	9,000 kg (19,841 lbs.)
Tandem Drive Axle	17,000 kg (37,478 lbs.)	17,000 kg (37,478 lbs.)
Tandem Trailer Axle	17,000 kg (37,478 lbs.)	18,000 kg (39,683 lbs.)
Tridem Axle:		
2.4 m - less than 3.0 m	21,000 kg (46,296 lbs.)	20,500 kg (45,194 lbs.)
3.0 m - less than 3.6 m	23,000 kg (50,705 lbs.)	22,500 kg (49,603 lbs.)
3.6 m to 3.7 m	24,000 kg (52,910 lbs.)	27,000 kg (59,524 lbs.)
Gross Combination Weight:		
5-axle combination	39,500 kg (87,081 lbs.)	39,500 kg (87,081 lbs.)
6-axle combination	46,500 kg (102,513 lbs.)	49,500 kg (109,127 lbs.)

- (h) No tolerance will be permitted for the recommended axle loads nor the gross combination weights.
Present regulations permit tolerance of 450 kg (992 lbs.) or 500 kg (1,102 lbs.) per axle. In New Brunswick the maximum tolerance of a tri-axle is limited to 1,500 kg (3,307 lbs.).
- (i) Maximum overall length of tractor semi-trailer combination is limited to 25 m (82').
Present maximum length is limited to 20 m (65' 6") or 21 m (69') depending on the province.

Recommendations affecting the use of A, B and C Train Configurations are summarized as follows:

- (a) Overall maximum combination length permitted will be 25 m (82').
Present maximum length permitted is 20 m (65' 6") or 21 m (69') depending on the province.
- (b) Gross combination weights recommended for double configurations are:

	<u>Recommended</u>	<u>Present</u>
A-Train	53,500 kg (117,945 lbs.)	By permit only.
B-Train	62,500 kg (137,787 lbs.)	56,500 kg* (124,560 lbs.)
C-Train	53,500 kg (117,945 lbs.)	By permit only.

* In New Brunswick only, less in other provinces.

- (c) A-Train and C-Train Configurations are not encouraged for use at this time. C-Train may be encouraged in future if a more acceptable dolly design is developed.

There were a number of other recommendations contained in the report dealing with such things as braking, dynamic stability, inter-vehicle distances and a number of other related specifications. However, the above summary contains the items which are felt to have the greatest impact on shippers. Copies of the report may be obtained from RTAC at 1765 St. Laurent Boulevard, Ottawa, ON, K1G 3V4, Phone (613) 521-4052, or your provincial Department of Transportation.

These recommendations, if implemented would have significant impact on the transport industry and shippers in the Atlantic Provinces. The 5-axle and 6-axle tractor semi-trailer is the predominant configuration in use in this region at this time. The recommended maximum weight limits for these configurations would reduce payload capacity by approximately 1,000 kg (2,200 lbs.) on a 5-axle vehicle and by approximately 3,000 kg (6,600 lbs.) on a 6-axle vehicle. In addition the recommendation for no allowable tolerance would have the effect of further reducing payloads by 1,500 kg (3,300 lbs.) to 2,500 kg (5,500 lbs.) depending upon the province and the configuration as shown below:

	<u>Recommended</u>	<u>Present</u>
<u>Tractor Semi-Trailer:</u>		
<u>5-axle</u>		
Registered gross weight	39,500 kg (87,080 lbs.)	40,500 kg (89,285 lbs.)
Tare weight	15,500 kg (34,170 lbs.)	15,500 kg (34,170 lbs.)
Payload	24,000 kg (52,910 lbs.)	25,000 kg (55,115 lbs.)
Tolerance	-	2,500 kg (5,510 lbs.)
Net Payload	24,000 kg (52,910 lbs.)	27,500 kg (60,626 lbs.)
<u>6-axle</u>		
Registered gross weight	46,500 kg (102,513 lbs.)	49,500 kg (109,127 lbs.)
Tare weight	16,500 kg (36,375 lbs.)	16,500 kg (36,375 lbs.)
Payload	30,000 kg (66,138 lbs.)	33,000 kg (72,750 lbs.)
Tolerance	-	1,500 kg* (3,307 lbs.)
Net Payload	30,000 kg (66,138 lbs.)	34,500 kg (76,058 lbs.)

* Maximum allowable tolerance for a tri-axle tractor semi-trailer in New Brunswick. Other provinces allow full axle tolerances on tri-axle units.

These examples illustrate a reduction in payload of approximately 13% for both 5-axle and 6-axle vehicles. Actual payload reduction could be higher or lower depending upon a number of factors specific to the individual vehicle, such as, the registered weight, the tare weight, steering axle specifications and variations in existing provincial regulations.

This reduction in payload could result in increased costs to shippers currently utilizing the maximum weight capacity of the vehicles. However, in situations where shippers are not presently utilizing the maximum weight capacity of the vehicle, and where the new regulations will not result in any reduction in payload weight, no increase in shippers' costs should occur.

The reduction in axle spread for the tri-axle group on the 6-axle tractor semi-trailer holds the potential for a further reduction in payload. This is due to the inability to concentrate enough of the load over the reduced allowable axle spread, to take advantage of the maximum permissible weight limit. The provision for rear overhang in the recommendations may alleviate this situation somewhat.

The Atlantic Provinces Trucking Association, representing a number of trucking companies serving the Atlantic Provinces, does not support the recommendations which would result in reduced payload capacity for tractor semi-trailer units. They have also expressed opposition to the recommended elimination of lift and belly axles and the removal of tolerances.

The recommendations contain several items which would result in significant benefits to those shippers which are in a position to take advantage of them. The recommendations to allow increased trailer length of 16.2 m (53') will greatly assist those shippers of light and bulky goods. Any product which fills the cube of the trailer before reaching the maximum allowable weight will

benefit by an increase of approximately 10% in the cubic capacity of such trailers. The use of trailer train combinations could increase this benefit even further.

Similarly those firms located along designated highways, which have commodities that can benefit from the much higher allowable weights attributable to the trailer train combinations, will gain significant advantage from the proposed regulations. Proposed maximum weight limits for B-train combinations will result in increases of approximately 6,000 kg (13,228 lbs.) for an 8-axle unit in New Brunswick and up to 12,500 kg (27,557 lbs.) in other provinces. This could represent increases in payload of 16% to 25% depending upon the tare weight of the individual combination and the province.

The Canadian railways have expressed the opinion that these regulations, if implemented, would seriously hinder their ability to compete with the trucking industry, particularly in the Atlantic Provinces, and impact negatively on the railways' ability to serve shippers. The railways predict a loss of traffic to the trucking industry if the proposed regulations are implemented. This loss of traffic would reduce revenue to the point where, to remain viable, the railways would be forced to increase rates on remaining traffic, thus increasing costs for shippers and also increasing the vulnerability of the remaining traffic to further competition from the trucking industry.

The APTC recognizes that some railway traffic may be in jeopardy to increased competition should these recommendations be implemented. This would be particularly true of light density commodities which could be accommodated in the new 16.2 m (53') trailers. The proposed longer trailers and the trailer train units can not be handled efficiently by railway intermodal (piggyback) service on existing rail flat cars. The railways have already made major investments in current equipment and would face significant costs in obtaining new equipment for their intermodal fleet, i.e., the requirement to obtain railway rolling stock as well as the highway trailers.

The Implementation Planning Subcommittee of the Joint RTAC/CCMTA Committee on Heavy Vehicle Weights and Dimensions held public hearings on these recommendations during the summer of 1987. The Atlantic Provinces Transportation Commission presented a brief at those hearings expressing several concerns with the proposed regulatory principals. These concerns were: (a) that there may not be uniformity of regulation of vehicle size and weight across Canada in terms of both content of the regulations and the implementation date; (b) that the potential loss of payload for 5-axle and 6-axle tractor semi-trailers would result in increased costs for shippers in Atlantic Canada; (c) the removal of tolerance would further reduce payloads; and, (d) the impact that new regulations would have on existing equipment.

The APTC submission also stated that this Commission does not feel that trailer train combinations are a viable alternative to existing equipment in this region at this time. It is felt that the two lane highway system in this region is not conducive to the operation of these units. Operational

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difficulties are foreseen in regard to the location of a number of shippers and also the type of commodities shipped and the ability and desire of customers to receive larger shipments.

While we understand that some provision for permitting the continued use of existing equipment is being considered, the report contained no such recommendation. The APTC feels that some type of "grandfather" clause would be essential in any new regulations, in order to enable carriers to obtain the full economic use of existing equipment.

The APTC recommended to the committee that no new regulations be implemented which would reduce tractor semi-trailer payloads, thus increasing costs for shippers, nor render present equipment obsolete until acceptable alternatives are available in the Atlantic Region.

At their meeting in September, 1987, the provincial Ministers of Transportation confirmed their support for the objectives and principal of uniform regulations covering weights and dimensions of commercial vehicles operating between provinces on a designated highway system across Canada. The paramount importance of inter-provincial truck safety was also reaffirmed by the ministers.

The ministers are now seeking further consultation to ensure that there is clear understanding of the safety and economic benefits of improved uniform weights and dimensions.

As stated earlier, the issue of changes to vehicle size and weight regulations is of major importance to shippers in the Atlantic Provinces. Any concerns you have should be expressed to your provincial Minister of Transportation, before the ministers give further consideration to this issue at their meeting in February, 1988. A list of the current Ministers of Transportation for the Atlantic Provinces is attached.

To ensure that the APTC is fully aware of shippers' concerns respecting the proposed regulations, please send a copy of any communication you may send to your minister to the APTC at P. O. Box 577, Moncton, NB, E1C 8L9, FAX (506) 857-2835. If you require further information or clarification on this important subject or assistance in preparing your comments to the minister, please contact this office.

Yours very truly,



Craig P. Dickson
General Manager

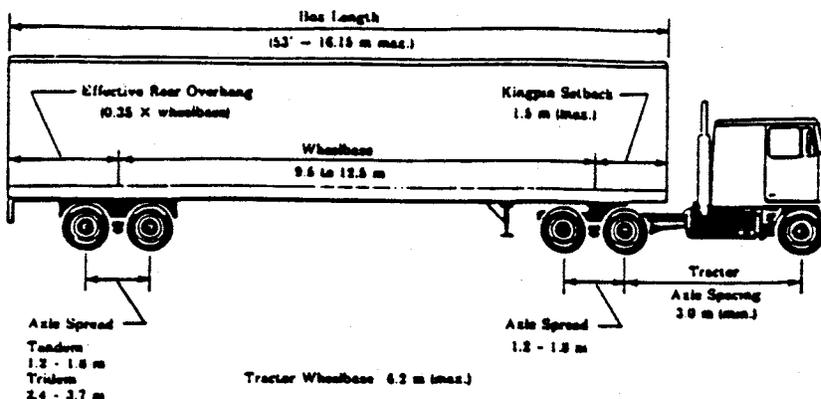
PAV/smw

Attachments

PROPOSED WEIGHT AND DIMENSION LIMITS

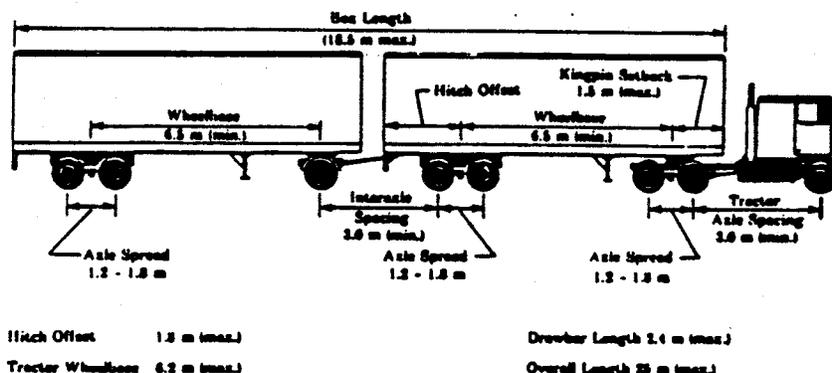
Tractor Semi-trailer:

Max GCW (5 axles) = 39,500 kg
 Max GCW (6 axles) = 46,500 kg



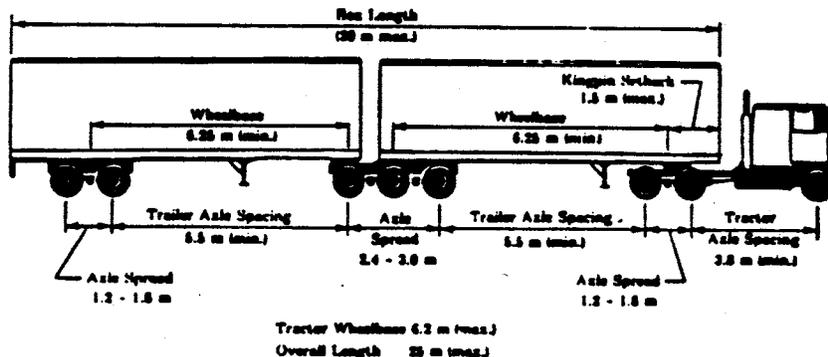
A and C- Train Doubles:

Max GCW = 53,500 kg
 (2nd trailer limited to 16,000 kg)



B Train Doubles:

Max GCW = 62,500 kg



Proposed Axle Load Limits:

Steering Axle = 5,500 kg
 Single Axle = 9,100 kg
 Tandem (1.2 m to 1.8 m) = 17,000 kg

Tridem Spread
 2.4 - less than 3.0 = 21,000 kg
 3.0 - less than 3.6 = 23,000 kg
 3.6 m - 3.8 m = 24,000 kg

MINISTERS RESPONSIBLE FOR TRANSPORTATION

Minister of Transportation
Province of New Brunswick
P. O. Box 6000
Fredericton, NB
E3B 5H1

Honourable Ronald Dawe
Minister of Transportation
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Atlantic Place
Water Street
St. John's, NF
A1C 5T7

Honourable Guy LeBlanc
Minister of Transportation
Province of Nova Scotia
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Honourable Robert Morrissey
Minister of Transportation
& Public Works
Province of Prince Edward Island
P. O. Box 2000
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C1A 7N8