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Turnover for Mainline Freight Rail Transportation Services in Canada

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Introduction

The purpose of this paper is to provide a brief overview of the turnover program for the railway services industry in Canada. The turnover program for mainline freight transportation is managed by the Transportation Division of Statistics Canada and has been in existence since 1921. The structure of this paper follows the Content Development Framework set out by the Voorburg Group on Service Statistics.

1. Definition of the Service

According to the North American Industry Classification (NAICS 2007), this Canadian industry comprises establishments primarily engaged in operating railways for the transport of goods over a mainline rail network. A mainline rail network is a system that usually comprises one or more trunk lines, into which a network of branch lines feed. The branch lines may be part of the mainline establishment or may be separate establishments of short-haul freight railways.

Establishments primarily engaged in the following are excluded from this industry:

- Operating railways for the transport of goods on a rail line that does not comprise a rail network, NAICS 482112 Short-Haul Freight Rail Transportation
- Providing the railway transport of passengers, NAICS 482114 Passenger Rail Transportation
- Operating street railways and urban rapid transit, NAICS 48511 Urban Transit Systems
- Operating tourist and scenic trains, NAICS 48711 Scenic and Sightseeing Transportation, Land
- Operating switching and terminal railways, NAICS 48821 Support Activities for Rail Transportation

Rail companies in Canada are also classified as either Class I, Class II or Class III, based on revenue (see *Appendix, 1) Table 1.1 - Uniform Classification of Accounts (U.C.A.)*).

As for the notable relationship between mainline carriers defined by NAICS 482113 and short-haul carriers defined by NAICS 482111, some clarifications must be mentioned. Short-haul carriers regularly receive contracts to transport goods along smaller regional lines connected to mainline networks serviced by rail carriers in NAICS 482113. This occurs as part of a larger shipment route yet since mainline carriers usually do not provide rail services to smaller markets, sub-contracting these services to smaller regional carriers seems quite appropriate.

2. Unit of Measure

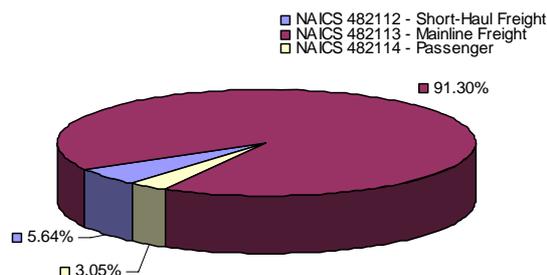
The main unit of measure in the case of rail freight service is *operating revenues*, which is expressed in Canadian dollars (\$ CDN). *Operating revenues* include revenues pertaining to the carriers of freight operations only. These correspond to the total amount billed by the carrier and exclude revenues earned by other carriers in the case of interline shipments.

3. Market Conditions and Constraints

3.1 Size of industry

In Canada, the mainline freight rail transportation industry, NAICS 482113 has 2 main carriers; Canadian National (CN) and Canadian Pacific (CP). In 2006, the revenue share of the rail freight carrier market held by CN was 53.92% and the share held by CP was 40.26%, while all other carriers contributed only 5.82%.

The following chart illustrates the breakdown of the Rail Transportation industry (NAICS 482):



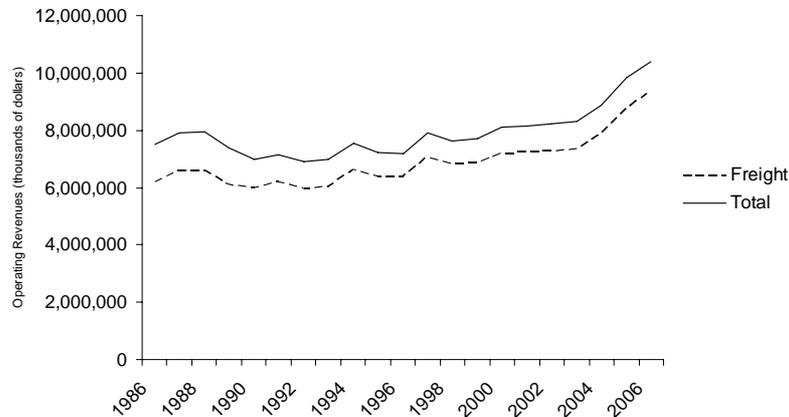
Source: Statistics Canada, *Railway transport survey (annual)*.

Within the rail industry, freight transportation continuously represents the single largest revenue source. 2007 proved to be no exception to this as the \$9.4 billion in freight revenues, which grew 1.0% over 2006 levels, accounted for 90.0% of the industry's total operating revenues.

Total operating revenues for the Canadian railway industry rose 0.8% to \$10.5 billion in 2007, the 9th consecutive year an increase has occurred. The increase was brought on primarily by a rise in freight revenue, which rose 1.0% to \$9.4 billion. Over the 5 year period from 2003 to 2007, total operating revenues grew from \$8.3 billion to \$10.5 billion. The combined effect of the changes in operating revenues and expenses in 2007 resulted in net operating income decreasing 4.5% over 2006 levels to \$2.5 billion. Net income, after adjusting for taxes and extraordinary items, increased 9.2% to \$2.0 billion. According to the *Rail in Canada 2007* publication, employment in the Canadian rail industry rose to 34,281 employees in 2007, an increase of 0.6% over the previous year.



The following chart shows the operating revenues for both the rail freight and total rail industry from 1986 to 2007:



Source: Statistics Canada, Railway transport survey(annual).

The regulatory environment in this industry is quite favourable towards the development of Canadian rail freight carriers and assists in ensuring a competitive atmosphere. Canadian rail freight carriers operate in Canada and the United States and are subject to economic, environmental, safety, health, labour and security regulations which are set by ruling bodies in each of the respective countries (see *Appendix, 2) Table 2.1 - Regulatory Framework in Canada* for a list of the different regulatory associations and their corresponding areas of legislation).

The transportation sector was deregulated substantially by a series of legislative changes in 1987 and 1996 which removed much of the finer details governing how railway operations should function. Railways no longer needed economic justification for the discontinuation of rail lines and enjoyed the freedom to negotiate prices in alignment with market conditions yet stipulations set out by the Canada Transportation Act (CTA) protect shippers/customers against potential monopolistic price-setting behaviour or excessive surcharges.

Rail carriers in this industry are exposed to the volatility of fuel price fluctuations which can adversely affect the financial performance of any particular carrier by increasing expenses relative to its income. This concern is amplified by the fact that fuel comprises a sizeable portion of operating expenses and therefore any change in the price of fuel is significant. This concern has been addressed with the introduction of new fuel surcharge schedules and fuel hedging techniques. The new fuel surcharge programs are designed to offset the impact of rising fuel prices and to implement cost-recovery from consumers of this industry. Such surcharges are also inclusive of apprehension voiced by their customers in order to ensure competitiveness in their respective markets.

Currency fluctuations are another factor that wield influence on the financial operations of rail carriers and the demand for their services in this industry. Since both CN rail and CP rail operate in both Canada and the U.S., they are invariably affected by currency rate fluctuations due to the fact that a fraction of revenues, expenses and debts are denominated in U.S. dollars. CN, which has a considerable presence in the U.S., sees as much as 55% of its revenue, 60% of

its expenses and 90% of its debt based in U.S. currency thus on average, a one-cent appreciation of the Canadian dollar against the U.S. dollar (i.e. \$0.84 to \$0.85 USD per CDN) over the course of one year adversely affects net income by about \$10 million annually. As for the demand for Canadian exports in relation to currency fluctuations, as the Canadian dollar appreciates against other currencies, it becomes increasingly expensive to purchase Canadian goods/exports and rail carriers suffer due to decreased demand for Canadian goods and ultimately freight transportation.

The industry is also affected by other economic conditions and phenomena (i.e. market conditions and strike actions).

4. Standard Classification Structure and Product Details

4.1 Output

4.1.1 Main Variables

The main variables used to measure the turnover and activities for this service industry are:

- **Operating Revenues**

Operating revenues include revenues pertaining to the rail carriers of freight operations only. These correspond to the total amount charged by the carrier and exclude revenues which were earned by other carriers in the case of intermodal or subcontracts to other companies of other industry groups.

- **Operating Expenses**

Operating expenses include expenses incurred while providing rail freight carrier operations only. These generally exclude non-operating expenses such as capital loss, interest paid, etc.

- **The Operating Ratio**

The operating ratio is the share of total operating revenues absorbed by total operating expenses (excluding interest charges). It is calculated by dividing operating expenses by operating revenue. A decline in the ratio indicates an improvement in financial performance. A ratio greater than 1.00 represents an operating loss. This variable is not collected directly by survey, it is derived after the fact by STC.

- **Ton-Kilometer Unit**

A unit measure of weight (mass) multiplied by distance from the origin to destination for each shipment. This is the standard output measure of the rail industry.

4.2 Main Classifications

There are two dimensions for classifying and producing estimates of rail transport activity in Canada, namely commodity and industry.

4.2.1 Commodity Classification

In the case of goods that are transported by rail and other modes, commodity data is collected and published using the Standard Classification of Transported Goods (SCTG). The SCTG can be summarized as follows:

The Standard Classification of Transported Goods (SCTG) consists of a blend of transportation characteristics, commodity similarities and industry-of-origin considerations, designed to create statistically significant categories. It is a structured list that is defined at its less detailed levels according to the Harmonized Commodity Description and Coding System (HS), and at more detailed levels, according to patterns of industrial activity. Other factors in the definition of categories were transportation considerations such as volume, revenue, value, origin and destination. (STC internal website)

See Appendix 3) Table 3.1: Standard Classification of Transported Goods (SCTG) for more detail.

4.2.2 Product/Service Classification

The North American Product Classification System (NAPCS) is a classification that organizes goods and services throughout the economy in a systematic fashion. The portion of NAPCS which is presented here represents the products of selected service-producing industries. These classes are considered provisional but are currently being used in the collection of product data in the annual service industry surveys and provide the basis of the commodity dimension of the revised Canadian System of National Accounts (CSNA).

The development of NAPCS has been a joint project of the national statistical agencies of Canada, Mexico and the United States. The purpose of the project has been to develop a unified standard for products which would allow comparisons of data among the three participating countries. It will also facilitate integration of data at Statistics Canada.

It is important to mention at this point that none of the rail surveys (or any transportation surveys for that matter) have incorporated the NAPCS dimension in their collection. These surveys and their users still rely heavily on the existing SCTG and HS (Harmonized System) classifications for reporting, assembling and analyzing transport data. However, with the development of NAPCS nearly complete, a strategy for its implementation in the transportation surveys is being debated. According to the current NAPCS definition, the rail freight services can be broken down into several sub-services as follows (see Table1):



Table 1: NAPCS for Rail Freight Transportation

| 482002 | Rail freight transportation services |
|---------------|---|
| 482002.1 | Transportation of bulk liquids and bulk gases in intermodal tank containers by rail |
| 482002.2 | Transportation of bulk liquids and bulk gases, except in intermodal tank containers, by rail |
| 482002.3 | Transportation of dry bulk, except in intermodal containers, by rail |
| 482002.4 | Transportation of climate-controlled boxed, palletized and other packed goods, except in intermodal containers, by rail |
| 482002.5 | Transportation of boxed, palletized and other packed goods, not climate-controlled, not in intermodal containers, by rail |
| 482002.6 | Transportation of climate-controlled intermodal containers, n.e.c., by rail |
| 482002.7 | Transportation of intermodal containers, not climate-controlled, n.e.c., by rail |
| 482002.8 | Transportation of automobiles and light-duty trucks by rail |
| 482002.9 | Transportation of livestock by rail |
| 482002.1 | Transportation of waste by rail |
| 482002.11 | Transportation of other goods by rail |
| 482002.11.1 | Transportation of truck trailers by rail |
| 482002.11.2 | Transportation of all other goods by rail |

This table highlights the main classifications of rail freight services as classified by NAPCS, for further details regarding their definition, see *Appendix 4), List of North American Product Classification System (NAPCS) For Transportation.*

4.2.3 Industry Classification

According to the current NAICS definition, the rail industry can be broken down into several sub-industries or sub-sectors to the 6-digit level (see Table 2) :

Table 2: NAICS for Rail Freight Transportation

| NAICS | |
|----------------|--|
| Classification | Description |
| 482 | Rail Transportation (subsector) |
| 4821 | Rail Transportation (industry group) |
| 48211 | Rail Transportation (industry) |
| 482112 | Short-Haul Freight Rail Transportation US |
| 482113 | Mainline Freight Rail Transportation CAN |
| 482114 | Passenger Rail Passenger ^{CAN} |

Rail Transportation (NAICS 482)

This subsector comprises establishments primarily engaged in operating railways. Establishments primarily engaged in the operation of long-haul or mainline railways, short-haul railways and passenger railways are included.

Rail Transportation (NAICS 4821)

This industry group comprises establishments primarily engaged in operating railways. Establishments primarily engaged in the operation of long-haul or mainline railways, short-haul railways and passenger railways are included.

Rail Transportation (NAICS 48211)

This industry comprises establishments primarily engaged in operating railways. Establishments primarily engaged in the operation of long-haul or mainline railways, short-haul railways and passenger railways are included.

Exclusions: establishments primarily engaged in:

- operating street railways and urban rapid transit (48511, Urban Transit Systems)
- operating tourist and scenic trains (48711, Scenic and Sightseeing Transportation, Land)
- operating switching and terminal railways (48821, Support Activities for Rail Transportation)

Short-Haul Freight Rail Transportation^{US} (NAICS 482112)

This Canadian industry comprises establishments primarily engaged in operating railways for the transport of goods on a rail line that does not comprise a rail network. A short-haul railway line usually takes goods from one or more points to a point on the larger transportation network, which is usually a mainline railway, but may be a trans-shipment point onto another transportation mode.

Exclusions: Establishments primarily engaged in:

- operating switching and terminal railways (488210, Support Activities for Rail Transportation)

Mainline Freight Rail Transportation^{CAN} (NAICS 482113)

This Canadian industry comprises establishments primarily engaged in operating railways for the transport of goods over a mainline rail network. A mainline rail network is a system that usually comprises one or more trunk lines, into which a network of branch lines feed. The branch lines may be part of the mainline establishment or may be separate establishments of short-haul freight railways.

Passenger Rail Passenger^{CAN} (NAICS 482114)

This Canadian industry comprises establishments primarily engaged in the railway transport of passengers.

Exclusion: Establishments primarily engaged in:

- operating street railways and urban rapid transit (485110, Urban Transit Systems)



- operating same-day return tourist and scenic trains (487110, Scenic and Sightseeing Transportation, Land)

5. Evaluation of Standard Definition and Market Conditions

The Standard Classification of Transported Goods (SCTG) is currently employed as the commodity classification for the rail surveys and it represents a good categorization measure for the types of commodities transported in Canada. It also currently satisfies the basic needs the System of National Accounts but the SNA would prefer more detailed commodity breakdowns. As the Canadian statistical system (i.e. both the System of National Accounts and business survey fields) moves to implement North American Product Classification System, a historical linkage will need to be constructed.

At this point, switching commodity classifications from the current SCTG to the NAPCS is under review. With import/export data remaining on the Harmonized System basis however, changing to NAPCS is less appealing, but nevertheless is still on the table for consideration.

At the 2-digit level, there are 42 commodity categories in the SCTG system. Of these, the top ten commodities account for 57.88% of all tonnage transported by rail.

Table 3 lists the top ten commodities by tonnage from all origins in Canada in 2006 and the percentage of total tonnage of all rail commodities:

Table 3: Top 10 Commodities Moved By Rail

| SCTG Code | Commodity | 2006 | Percent of Total Tonnage |
|-----------|---------------------------------------|---------------|--------------------------|
| | | <i>tonnes</i> | <i>percent (%)</i> |
| 15 | Coal | 31,971,009 | 11.30 |
| 42 | Mixed loads or unidentified freight | 25,422,961 | 8.99 |
| 02 | Wheat | 21,774,627 | 7.70 |
| 14 | Iron ores and concentrates | 20,476,705 | 7.24 |
| 26 | Lumber | 14,850,395 | 5.25 |
| 22 | Potash | 13,593,163 | 4.81 |
| 20 | Other basic chemicals | 10,719,670 | 3.79 |
| 27 | Wood pulp | 9,351,638 | 3.31 |
| 13 | Sulphur | 7,849,352 | 2.78 |
| 26 | Other wood products (plywood, veneer) | 7,670,458 | 2.71 |
| | Total of the top ten commodities | 163,679,978 | 57.88 |
| | Other commodities | 119,124,849 | 42.12 |
| | Total tonnage of all rail commodities | 282,804,827 | 100.00 |

Source: Statistics Canada. *Rail in Canada 2007*

6. National Accounts Concepts and Measurement Issues

Industry statistics in the SNA production accounts are defined and compiled using establishment-level data. For the rail freight transportation industry, the main activity of these establishment is

rail freight transportation over a mainline. The entire rail industry output is covered by the RTS, RCODS and MRC (see section 7) where there are only two mainline rail freight carriers in Canada, both with operating revenues exceeding \$250 million annually. In order to conform to the concept of operating revenues, all subsidies are excluded. Operating revenues and expenses are obtained from the Railway Transport Survey (RTS).

Some of the expenditures on rail transportation are direct purchases by consumers, but most of rail transportation is purchased indirectly when consumers buy goods and pay for the cost of transporting the goods from the producer to the purchaser. This cost of transportation is included in the purchasers' price of products, together with the cost of storage, mark ups by wholesalers and retailers, and commodity taxes. In the input–output tables these additional costs which are incurred by purchasers over and above the producers' price are called margins.

From an industry based point of view, the rail freight transportation industry is treated as a margin industry from the perspective of the System of National Accounts. Total operating revenues for this industry are distributed across all commodities based on results obtained from the three surveys mentioned above (i.e. RTS, RCODS, MRC). In this sense, the transportation charges for a good form part of the eventual purchaser price concept - prior to other types of margins (i.e. wholesale, retail, etc.).

The deflator for rail transport is a unit value index calculated from revenue and tonne-kilometre data for interprovincial movement of 69 commodity groups. In addition, north and south Canada–United States freight movement is factored into the index. Freight subsidy payments on western grain are deducted from revenue in the calculations. The *Dispute Resolutions Branch* of the Canadian Transportation Agency provides the information and calculations.

Rail categories use volume indicators of the output of the total industry at constant prices. Constant price revenue from freight transportation is calculated using base year revenues of one ton of freight through a distance of one kilometre, by commodity.

7. Turnover/Output Data Methods

Statistics on the rail industry include the freight loaded by railways in Canada by commodity, freight origin and destination and the financial and operational statistics of railways that operate within Canada. Railway statistics are collected in accordance with the provisions of the Carrier Information Regulations under Section 50 of the *Canada Transportation Act* and Chapter S-19 of the *Statistics Act*. Responding to these surveys is mandatory. Data are collected for all units of the target population, therefore no sampling is done.

These surveys are:

- *The Monthly Railway Carloadings (MRC) Survey*
- *The Rail Commodity Origin/Destination Survey (RCODS)*
- *Railway Transport Survey (RTS)*

The Monthly Railway Carloadings Survey provides data from approximately 40 carriers operating in Canada. Information is collected on: the number of cars loaded, tonnage of revenue freight

loaded (including intermodal), commodity groupings and region (east or west). The rail carriers report each month on their total intermodal and non-intermodal traffic.¹ For non-intermodal traffic, the carriers report the number of cars and tonnes by commodity of revenue-generating freight that they have loaded in Canada. For intermodal freight, the carriers report the number of units and tonnes for containers-on-flat-cars (C.O.F.C.) and trailers-on-flat-cars (T.O.F.C.), with no commodity detail. The carriers also report the total tonnage of revenue freight received from United States connections.

The total quantity of freight carried in Canada is the sum of the non-intermodal and intermodal freight loaded and the traffic received from U.S. connections. Additional information provided includes the number of units and tonnes of C.O.F.C. and T.O.F.C received from U.S. connections and the total tonnes of cargo that the carriers received from other Canadian connections. This freight that is exchanged among Canadian based carriers is counted only once in the total quantity of freight moved as it is counted only when loaded. For intermodal freight, twenty-foot equivalent units (TEUs) are derived from the dimensions of the freight-laden containers. Empty containers are not included in these statistics.

The data are collected via questionnaires and electronic reports that are filed with Statistics Canada eight working days after the reference month. These questionnaires are captured and edited and the data are then aggregated to produce tables for all of Canada and the Eastern and Western divisions of Canada.² Tables show the data for the reference month and the year-to-date. These year-to-date figures include revisions of data from previous months.

The Rail Commodity Origin and Destination Survey collects commodity origin and destination statistics that are provided to Transport Canada (TC) and represent an annual census of waybill records from the two major railways - the Canadian National and Canadian Pacific. Freight interlined with Class II (short haul) carriers is included while interline duplication between CN and CP is removed. Each record represents a freight movement and shows origin, destination, commodity code, tonnage and other related information. However, the data on revenues are not transmitted to Statistics Canada by Transport Canada. The information collected on this survey include: tonnage, origin, destination and commodity.

The annual *Railway Transport Survey* collects financial and operating statistics using a mail census of common carrier railways operating in Canada. Companies falling under federal jurisdiction report data on schedules or forms, specified by Transport Canada directly to Transport Canada. Other railway carriers report directly to Statistics Canada on the same schedules or forms. Individual reports undergo comprehensive review upon receipt and are edited for consistency and reliability. Information is collected on: railway financial, operating and traffic, equipment and fuel, and employment.

¹ Intermodal traffic is freight carried in containers or truck trailers that are loaded onto flat cars while non-intermodal traffic is freight carried in bulk or loaded in box cars.

² The Eastern and Western Divisions, for statistical purposes, are separated by an imaginary line running from Thunder Bay to Armstrong, Ontario. Freight loaded at Thunder Bay is included in the Western Division while loadings at Armstrong are reported in the Eastern Division.

The data are used by Statistics Canada as input to the System of National Accounts, by Transport Canada and other federal and provincial departments, by transportation companies, consulting firms, universities and foreign governments. The information is used for the analysis of transportation activity, for marketing and economic studies, as well as industry performance measures

8. Evaluation of Comparability of Turnover/Output Data with Price Indices

Under the Service Producer Price Index (SPPI) program currently underway at Statistics Canada, a price index for rail freight transport is being developed. The current index methodology relies on using the entire population (i.e. CN and CP: the exclusive rail freight carriers at NAICS 482113) to formulate the SPPI for rail freight services. As a result, the samples for both turnover and SPPI are identical. Furthermore, the activity data collected from the turnover surveys (operating revenues, tonnage, type of commodity transported and corridors) is being used to refine the sampling and price selection methodology for the SPPI. As a result, the turnover/output data and the SPPI series will be directly comparable.

9. Summary

The role of rail freight transportation in Canada is integral to economic growth and prosperity. The industry has witnessed a major resurgence in recent years as a key player in the transport of freight over long distances. Such a resurgence is largely due to increased global demand for commodities as well as major rail initiatives which have been realized and continue to develop. Once the rail freight SPPI is fully developed and tested, a comprehensive and robust program measuring the key aspects of industry activity will be achieved.

In the area of prices, the design and development of a SPPI for rail freight transportation is currently in progress. The design as well as its maintenance relies heavily on the turnover surveys as a source for both the enterprises and commodities they transport.

Appendix:

1) Table 1.1 - Uniform Classification of Accounts (U.C.A.)

Uniform Classification of Accounts and Related Railway Records as prescribed by the National Transportation of Canada (now called the Canadian Transportation Agency), for use by all railways under federal jurisdiction. These accounts are also used for railway carriers whose data are collected under the authority of the Statistics Act.

According to the *Uniform Classification of Accounts*, railway carriers can be categorized as shown in the table below:

| Railway Carrier Class | Description |
|--------------------------------------|--|
| Class I | A railway company that realized gross revenues of at least \$250 million for the provision of Canadian rail services in each of the two calendar years before the year in which information is provided pursuant to the <i>Carriers Information Regulations</i> . |
| Class II | A railway company that realized gross revenues of less than \$250 million for the provision of Canadian rail services in each of the two calendar years before the year in which information is provided pursuant to the <i>Carriers Information Regulations</i> . |
| Class III | A railway company, other than a class I rail carrier or a class II rail carrier, which is engaged in the operation of bridges, tunnels and stations. |



2) Table 2.1: Regulatory Framework in Canada

| Regulatory Association | Country of Jurisdiction | Matter of Regulation |
|--|--------------------------------|--------------------------------------|
| Canadian Transportation Agency (CTA) | Canada | Economic (Canada Transportation Act) |
| Competition Bureau | Canada | Rail Merger Transactions |
| Transport Canada | Canada | Safety (Railway Safety Act) |
| Canada Border Services Agency (CBSA) | Canada | Security/Safety |
| U.S. Department of Transportation | United States | Economic/Safety |
| Surface Transportation Board (STB) | United States | Economic |
| Federal Railroad Administration (FRA) | United States | Safety |
| Pipeline and Hazardous Materials Security Administration (PHMSA) | United States | Safety |
| Transportation Security Administration of the Dept. of Homeland Security | United States | Security |
| U.S. Customs and Border Protection (CBP) | United States | Security/Safety |



3) Table 3.1: Standard Classification of Transported Goods (SCTG)

| SCTG Code | Commodity Group |
|-----------|---|
| 01 | Live animals and live fish |
| 02 | Cereal grains |
| 03 | Agricultural products except live animals, cereal grains, and forage products |
| 04 | Animal feed and feed ingredients, cereal straw, and eggs and other products of animal origin n.e.c. |
| 05 | Meat, fish, seafood, and preparations |
| 06 | Milled grain products and preparations, and bakery products |
| 07 | Prepared foodstuffs n.e.c. and fats and oils |
| 08 | Alcoholic beverages |
| 09 | Tobacco products |
| 10 | Monumental or building stone |
| 11 | Natural sands |
| 12 | Gravel and crushed stone |
| 13 | Non-metallic minerals n.e.c. |
| 14 | Metallic ores |
| 15 | Coal |
| 16 | Crude petroleum |
| 17 | Gasoline and aviation turbine fuel |
| 18 | Fuel oils |
| 19 | Products of petroleum refining n.e.c. and coal products |
| 20 | Basic chemicals |
| 21 | Pharmaceutical products |
| 22 | Fertilizers and fertilizer materials |
| 23 | Chemical products and preparations n.e.c. |
| 24 | Plastics and rubber |
| 25 | Logs and other wood in the rough |
| 26 | Wood products |
| 27 | Pulp, newsprint, paper, and paperboard |
| 28 | Paper or paperboard articles |
| 29 | Printed products |
| 30 | Textiles, leather, and articles |
| 31 | Non-metallic mineral products |
| 32 | Base metal in primary or semi-finished forms and in finished basic shapes |
| 33 | Articles of base metal |
| 34 | Machinery |
| 35 | Electronic and other electrical equipment and components, and office equipment |
| 36 | Vehicles |
| 37 | Transportation equipment n.e.c. |
| 38 | Precision instruments and apparatus |
| 39 | Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs |
| 40 | Miscellaneous manufactured products |
| 41 | Waste and scrap |
| 42 | Miscellaneous transported products |

*n.e.c. is used in the title of residual categories that contain products, some of which are identified elsewhere in SCTG. Categories ending with *n.e.c.* appear only at the 2-digit level.

4) List of North American Product Classification System (NAPCS) For Transportation

Transportation of bulk liquids and bulk gases in intermodal tank containers by rail (482002.1)

Transportation of bulk liquids or gases in intermodal tank containers by rail. Containers are for road, rail and marine intermodal use. Includes transportation of bulk liquids and gases that must be temperature-controlled or pressurized. Includes transportation of bulk liquid and gas commodities such as crude petroleum oil, petroleum products, liquid and gaseous chemicals, milk and water.

Transportation of bulk liquids and bulk gases, except in intermodal tank containers, by rail (482002.2)

Transportation of bulk liquids or gases by rail, except in intermodal tank containers for road, rail and marine intermodal use. Includes transportation of bulk liquids and gases that must be temperature-controlled or pressurized. Includes transportation of bulk liquid and gas commodities such as crude petroleum oil, petroleum products, and liquid and gaseous chemicals.

Transportation of dry bulk, except in intermodal containers, by rail (482002.3)

Transportation of dry bulk by rail, except in intermodal tank containers for road, rail and marine intermodal use. Includes transportation of bulk commodities such as coal, mine ores, grain, sand, gravel, cement, dry chemicals, dry plastics, fertilizer products, wood chips, flour and sugar.

Transportation of climate-controlled boxed, palletized and other packed goods, except in intermodal containers, by rail (482002.4)

Transportation by rail of goods that must be kept within given ranges of temperature and/or humidity, packed in boxes, crates, sacks, drums, or on hangers, hooks or pallets, except in intermodal containers.

Transportation of boxed, palletized and other packed goods, not climate-controlled, not in intermodal containers, by rail (482002.5)

Transportation by rail of goods not requiring climate control, packed in boxes, crates, sacks, drums, or on hangers, hooks or pallets, and not in intermodal containers. Includes transporting small packages, documents and letters destined for different addressees en masse for a portion of their journey.

Transportation of climate-controlled intermodal containers, n.e.c., by rail (482002.6)

Transportation by rail of intermodal containers for road, rail and marine intermodal use that maintain a given range of temperature or humidity.

Transportation of intermodal containers, not climate-controlled, n.e.c., by rail (482002.7)

Transportation by rail of intermodal containers for road, rail and marine intermodal use that do not provide climate control.

Transportation of automobiles and light-duty trucks by rail (482002.8)

Transportation of automobiles and light-duty trucks by rail. Includes transportation in specialized intermodal containers.

Transportation of livestock by rail (482002.9)

Transportation by rail of farm animals, including cattle, horses, swine and poultry. Includes transportation in specialized intermodal containers.

Transportation of waste by rail (482002.10)

Transportation of waste by rail. Includes transportation of solid and liquid waste. Includes transportation of residential and non-residential waste. Includes transportation of hazardous and non-hazardous waste. Includes transportation in specialized intermodal containers.

Transportation of other goods by rail (482002.11)

Transportation by rail of goods except bulk liquids and gases; dry bulk; boxed, palletized and other packed goods; intermodal containers; automobiles and light-duty trucks; livestock and waste. Includes transportation of goods that are not packed, such as logs, pulp, lumber, structural steel, pipe, and glass; large items such as construction machinery and equipment and industrial machinery and equipment; and loose goods that are contained only by the vehicle in which they are carried, such as fresh produce travelling short distances, and scrap, but not dry bulk or waste. Includes transportation of truck trailers.

Transportation of truck trailers by rail (482002.11.1)

Transportation of truck trailers by rail, known as "trailers on flat cars" or T.O.F.C.

Transportation of all other goods by rail (482002.11.2)

Transportation by rail of goods except bulk liquids and gases; dry bulk; boxed, palletized and other packed goods; intermodal containers; automobiles and light-duty trucks; livestock; waste; and truck trailers. Includes transportation of goods that are not packed, such as logs, pulp, lumber, structural steel, pipe, and glass; large items such as construction machinery and equipment and industrial machinery and equipment; and loose goods that are contained only by the vehicle in

which they are carried, such as fresh produce travelling short distances, and scrap, but not dry bulk or waste.

**n.e.c.* is used in the title of residual categories that contain products, some of which are identified elsewhere in SCTG. Categories ending with *n.e.c.* appear only at the 2-digit level.