COST ALLOCATION AND RATE POOL REVENUE REQUIREMENT

1. INTRODUCTION

The purpose of Exhibit I1 is to describe the process followed by Hydro One to allocate the transmission rates revenue requirement, as described in Exhibit E, Tab 1, Schedule 1, into rate pools.

This Schedule sets the context for cost allocation in this Application and provides Hydro One's transmission rates revenue requirement input that is used to determine the Uniform Transmission Rates ("UTR").

The remaining schedules of Exhibit I1 provide further explanation on:

- the cost allocation methodology to functional categories (refer to Exhibit I1, Tab 1, Schedule 2);
- the aggregation of functional categories into the Network, Line Connection and Transformation Connection rate pools (refer to Exhibit I1, Tab 1, Schedule 3);
- a list of transmission line and station assets by functional category and the allocation factors for dual function lines and generator connections (refer to Exhibit I1, Tab 2, Schedules 1 and 2 and Exhibit I1, Tab 3, Schedules 1 to 3);
- the allocation of depreciation, return on capital, taxes and OM&A costs into the rate pools (refer to Exhibit I1, Tab 4, Schedules 1 to 4); and
- a description of how revenue requirement is allocated to the three rate pools (refer to Exhibit I1, Tab 5, Schedule 1).

2. SUMMARY

In Hydro One's 2017/2018 Transmission Rate Application (EB-2016-0160), the Board approved Hydro One's methodology to allocate the transmission rates revenue requirement into three rate pools: Network, Line Connection and Transformation Connection. The cost allocation methodology proposed in this Application has not changed from what was approved by the Board in the Decision and Rate Order in Proceeding EB-2016-0160.

The derivation of the revenue required to be collected through transmission rates is based on Hydro One's proposed total revenue requirement as shown in Table 2 in Exhibit A, Tab 4, Schedule 1 offset by Other Revenues consisting of: external revenue, wholesale meter service ("WMS") revenue, regulatory assets, export transmission service revenue, and funding for low voltage switchgear ("LVSG") credit. Table 1 demonstrates this derivation of rates revenue requirement for the years 2020 to 2022.

Table 1: Derivation of Rates Revenue Requirement ($ Millions)

	2020	2021	2022
Total Revenue Requirement[1]	**1,673.8**	**1,765.8**	**1,853.8**
Other Revenues:			
External Revenue[2]	(31.4)	(32.7)	(32.2)
WMS Revenue[3]	(0.1)	(0.1)	(0.1)
Regulatory Assets[4]	6.8	6.8	6.8
Export Transmission Service Revenue[5]	(35.9)	(35.9)	(36.3)
Funding for LVSG Credit[6]	14.8	15.6	16.3
Rates Revenue Requirement	**1,628.0**	**1,719.4**	**1,808.4**

[1] Reference: Table 2, Exhibit A-4-1; [2] Reference: Table 2, Exhibit E-2-1; [3] Reference: Table 1, Exhibit I2-3-1;
[4] Reference: Table 1, Exhibit H-1-3; [5] Reference: Table 2, Exhibit I2-4-1; [6] Reference: Table 6, Exhibit I1-1-3.

Hydro One applied the approved methodology to allocate 2020 transmission rates revenue requirement into the proposed rate pools as outlined in Table 2. For the remaining years, 2021 and 2022, the transmission rates revenue requirement has been allocated among the proposed rate pools using the methodology approved by the OEB in its Decision and Order, dated April 25, 2019, for Hydro One's 2019 Transmission Revenue Requirement in Proceeding EB-2018-0130. For further detailed calculations on the 2021 and 2022 rates revenue requirement by rate pool, refer to Exhibit I, Tab 5, Schedule 1.

This summary of rate pool revenue requirement represents Hydro One Transmission's input into the determination of the provincial UTRs. The UTRs are collected by the Independent Electricity System Operator ("IESO") from market participants who are defined transmission customers in Ontario.

Table 2: Summary of Rates Revenue Requirement by Rate Pool ($Millions)

Year	Network	Line Connection	Transformation Connection	Total
2020	977.6	186.3	464.1	1,628.0
2021	1,033.2	196.6	489.6	1,719.4
2022	1,087.2	206.6	514.5	1,808.4

DESCRIPTION OF COST ALLOCATION METHODOLOGY

1. INTRODUCTION

Hydro One Transmission's rate base and rates revenue requirement components are described in Exhibit C, Tab 1, Schedule 1 and Exhibit E, Tab 1, Schedule 1 respectively. This Exhibit describes the methodology used to allocate these costs into functional categories.

The cost allocation methodology described below is the same methodology approved by the Board in the Decision and Rate Order in Hydro One's 2017/2018 Transmission Rate Application (EB-2016-0160).

2. KEY STEPS OF COST ALLOCATION METHODOLOGY

The cost allocation methodology consists of the basic steps identified below:

a) Review Board decisions impacting cost allocation and rate design.
b) Functionalize assets into the transmission functional categories. The term "transmission functional categories" refers to the groupings to which all physical assets and their associated costs are assigned on the basis of the criteria described in Section 3.
c) Apportion Hydro One's transmission rates revenue requirement components to the functional categories on the basis of direct assignment, to the extent possible. Allocate remaining costs, which cannot be directly assigned, among the functional categories using the previously approved methodology as summarized in Section 4.

The cost allocation activities described by the above steps result in the split of the Hydro One transmission rates revenue requirement by functional category, which is a necessary

intermediate step to defining Hydro One's transmission rates revenue requirement by rate pool. Details on the mapping of functional categories to the rate pools are described in Exhibit I1, Tab 1, Schedule 3.

3. FUNCTIONALIZATION OF ASSETS

A key activity in determining the rates revenue requirement for each rate pool is the process of grouping similar physical assets owned by Hydro One into functional categories. The assignment of functional categories is based on the normal system operating condition of assets in-service as of the end of 2017, with due consideration given to the Board Decision in Proceeding EB-2011-0043 regarding the expanded definition of Network assets, the electrical system and customer connectivity, and the load forecast data for the test years.

A simplified diagram of the basic elements of the transmission system, useful in understanding the assignment of assets to functional categories, is provided in Figure 1.

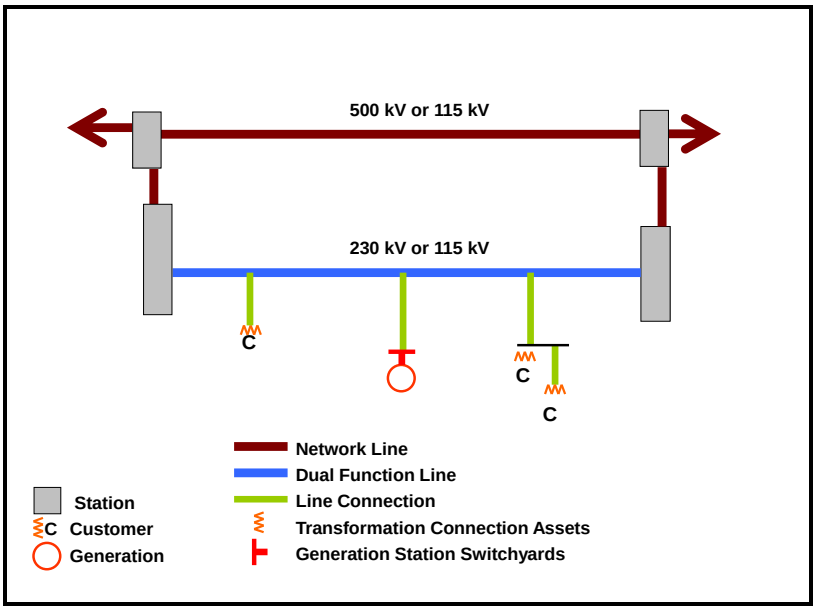


Figure 1: Transmission System Basic Elements

The functional categories to which assets are assigned are Network, Dual Function Line, Line Connection, Transformation Connection, Generation Line and Transformation Connection, Common, and Other. A description of each of these functional categories is provided below.

For the purpose of delineating costs to the rate pools, the asset values for the Dual Function Line, and the Generation Line and Transformation Connection functional categories are further separated as per the methodology described in Section 3.2 and Section 3.5, respectively.

3.1 NETWORK ASSETS

The transmission facilities that are used for the benefit of all customers, or have been approved by the Board as being for the benefit of all customers in the province, are categorized as Network assets.

Network assets are designed to provide reliability of the integrated transmission system and enhance overall electricity market efficiency. These assets are comprised of the integrated transmission facilities operating at 500kV or 230kV that link major sources of generation to major load centres. In the Board's Decision in Proceeding EB-2011-0043, the meaning of a Network asset was expanded to also include certain assets captured under the previous definition of a Line Connection asset, and/or portions thereof, that provide other functions beyond supplying load.[1] Per Section 3.0.14 of the Transmission System Code, subject to the aforementioned criteria:

[1] This revision is only applicable where a line or station commences to be constructed on or after August 26, 2013, or where an existing line or station is expanded or reinforced for the purposes of increasing its capacity and the expansion or reinforcement commences to be constructed on or after August 26, 2013, regardless of when the line or station was originally placed into service.

a) a "network facility" includes any line that forms part of the physical path between:
   i. two network stations; or
   ii. networking stations and the transmission system of a neighbouring Ontario transmitter or a transmission system outside Ontario, such that electricity can be transmitted along the entire path under some operating conditions, which may or may not reflect normal operating conditions; and

b) a "network station" includes any station with one or more of the following:
   i. an element that is greater than 500kV;
   ii. an autotransformer that steps down voltage from a higher transmission level to a lower transmission level;
   iii. a transmission switchyard to which all of the following are connected:
      A. one or more generation facilities with a minimum aggregate installed rated capacity of 250MW;
      B. one or more load facilities with a minimum aggregate load of 150MW; and
      C. a minimum of four transmission circuits.

More specifically, Network assets include:

- All 500kV circuits and 500/230kV autotransformer facilities.
- All capacitor bank facilities located at transformation or switching stations.
- All 230kV circuits that are not tapped to supply load and that are normally operated in parallel with the 500kV circuit(s); such parallel circuits may be circuit(s) that form a group of transmission circuits that together normally operate in parallel with the 500kV circuit(s).
- All 115kV circuits that are not tapped to supply load and that are normally operated in parallel with network circuits noted above.

- The 230/115kV autotransformer facilities normally connecting the 230kV and 115kV circuits noted above and/or a portion of Dual Function Lines described in Section 3.2.
- All 230kV and 345kV "interconnection circuits", which are lines connecting Hydro One's transmission system to the transmission systems owned by other transmitters in Ontario and/or by neighbouring jurisdictions.
- All 230kV circuits that are not tapped to supply load and that are normally operated in such a manner that they connect the "interconnection circuits", directly or through a group of transmission circuits, to any of the 500kV and 230kV network circuits noted above.
- The specific sections of 115kV circuits that interconnect with transmission systems owned by other transmitters in Ontario and/or by the neighbouring jurisdictions, beginning from the junction or station from/at which Hydro One Transmission's customer load is supplied up to the border of the other transmitters system.
- The transformation or switching stations, or portions thereof, including the circuit breakers and associated assets that switch the network circuits and the Dual Function Lines described in Section 3.2.

3.2 DUAL FUNCTION LINE ASSETS

The transmission circuits that provide both Network and Line Connection functions are classified as Dual Function Line ("DFL") assets. More specifically, DFL assets are used for both the common benefit of all customers, and for providing a connection between a network station and load supply point(s) for one or more customers.

The transmission circuits comprising the following types of electrical assets are assigned to the DFL functional category of assets:

- All 230kV and 115kV circuits that are tapped to supply load and that are normally operated in parallel with the 500kV circuit(s); such parallel circuits may be circuit(s) that form a group of transmission circuits that together normally operate in parallel with the 500kV circuit(s).
- All 115kV circuits that are tapped to supply load and that are normally operated in parallel with network circuits or Dual Function Lines noted above.
- All 230kV circuits that are tapped to supply load and that are normally operated in such a manner that they connect the "interconnection circuits", directly or through a group of transmission circuits, to any of the 500kV and 230kV network circuits noted above.
- A "local loop" under the condition that an existing Line Connection has been reconfigured to create a new independent delivery path emanating from one network station and ending uninterrupted at another network station, and where the transfer capacity between these two existing network stations has been increased thereby providing a network benefit.

For cost allocation purposes, the value of each Dual Function Line is split between the Network and Line Connection functions of each asset using the methodology approved by the Board in Proceeding EB-2016-0160. The allocation factors used to split the DFL asset value between these functions are derived using the average forecast monthly coincident peak demand, for the respective test year, of customer load ("DFL Customer Demand") connected to the Dual Function Line and the minimum of the average of summer and winter transmission capacity ("Minimum DFL Capacity") of the Dual Function Line as follows:

Line Connection Portion of DFL:

$$\text{Proportion Allocated to the Line Connection Portion of DFL} = \frac{\text{Average Monthly DFL Customer Demand}}{\text{Minimum DFL Capacity}}$$

Network Portion of DFL:

$$\text{Proportion Allocated to the Network Portion of DFL} = 1 - \text{Proportion Allocated to the Line Connection Portion of DFL}$$

The use of customers' average monthly coincident peak demand as a proxy for the extent to which the minimum of the average DFL capacity is used for Line Connection purposes is considered an appropriate allocator as it reflects the load diversity inherent in the use of a DFL by connected customers.

Exhibit I1, Tab 3, Schedule 1 lists the DFLs and the corresponding proportions of asset value that are allocated to the Network and Line Connection portions of the DFL functional categories.

3.3 LINE CONNECTION ASSETS

The transmission circuits and intermediate stations operating at 230kV or 115kV that are used to provide a connection between a network station and load supply point(s) for one or more customers and/or one or more generating stations are categorized Line Connection assets. Similarly, transmission circuits used to provide a connection between a Dual Function Line and load supply point(s) for one or more customers and/or one or more generating stations are also categorized Line Connection assets.

Line Connection assets do not reinforce the integrated transmission system that is commonly shared by a large portion of the Province, or the entire Province. Specifically, the transmission circuits or stations comprising the following type of electrical assets, excluding any assets referred to in Section 3.1 and 3.2 above, are assigned to Line Connection functional category of assets:

- The 230kV or 115kV transmission circuits that are radial and connect (directly or indirectly via other connection circuits) to one of the network stations or Dual Function Lines defined above.
- The intermediate 230kV or 115kV radial station assets that serve one or more customers.
- A local loop, as described in Section 3.2, if it does not increase the transfer capability along the full length of the transmission interface between two existing network stations.
- Intermediate radial stations, or portions thereof, dropping voltage from 230kV to 115kV are also categorized as a Line Connection asset if they are not already categorized as a Network asset as per the guidelines above. These facilities cannot be classified as Transformation Connection assets, since they do not meet the "drop the voltage from above 50kV to below 50kV" criteria.

The treatment of Line Connection assets that are partially or fully used to connect generating stations to the transmission system is described in Section 3.5.

3.4 TRANSFORMATION CONNECTION ASSETS

Transformer stations owned by Hydro One, or portions thereof, which step down the voltage from above 50kV to below 50kV, are categorized as Transformation Connection assets. Transformation Connection assets also include those that are partially or fully used to connect generating stations to the transmission system, the treatment for these is further described in Section 3.5.

As per the Board's Decision in Proceeding EB-2016-0160, Wholesale Revenue Metering ("WRM") assets that formerly made up the Wholesale Meter functional category are now included in the Transformation Connection functional category.

3.5 GENERATION LINE AND TRANSFORMATION CONNECTION ASSETS

Some of the existing Line Connection assets and Transformation Connection assets, described in Sections 3.3 and 3.4 above, are partially or fully used to connect generating stations to the transmission system.

For a connection facility, including Generation Station switchyards, that is used solely to connect a generating station(s), the asset value can be fully allocated to the appropriate Generation Connection functional category; either Generation Line Connection or Generation Transformation Connection depending on the type of electrical asset.

In cases where a connection facility, including Generation Station switchyards, is used to connect one or more generating station(s) and one or more transmission load customer delivery points, it is appropriate that the portion of connection facility costs associated with generating stations be separately identified. In this manner, some of the costs associated with that facility are allocated to the appropriate Generation Connection functional category, and the remaining costs are allocated to the load customer through either the Line Connection or Transformation Connection functional category. In these cases, the allocation of the asset value is based on the sum of the maximum annual non-coincident peak demand of all delivery points connected to the connection facility and the maximum installed capacity of generation connected to that facility as follows:

Generator Connections Portion:

$$\text{Proportion Allocated to the Generator Connections} = \frac{\text{Generation Capacity}}{\text{Generation Capacity} + \text{Non-Coincident Peak Demand}}$$

Load Customer Connections Portion:

$$\text{Proportion Allocated to the Load Connections} = 1 - \text{Proportion Allocated to the Generator Connections}$$

This use of a delivery point's maximum annual non-coincident peak demand and the maximum generator installed capacity as the basis for allocating the costs of connection assets specifically dedicated for their joint use is considered appropriate since these values represent the maximum extent to which the assets could be used by either party, and it is the methodology approved by the Board in Proceeding EB-2016-0160.

A listing of the transmission lines and stations, which are used for connecting generation stations to the transmission network are provided in Exhibit I1, Tab 3, Schedule 2 and Exhibit I1, Tab 3, Schedule 3, respectively. These Exhibits show the corresponding proportion of those assets that is allocated to the Generator Connection and to the Load Connection functional categories in accordance with the methodology described above.

3.6 COMMON ASSETS

Commonly used facilities that serve the operation of the overall provincial transmission system are categorized as Common assets. Common assets include telecommunication and control equipment, administration buildings and control rooms, minor fixed assets (such as office computers and equipment), and electrical equipment held in reserve.

3.7 OTHER ASSETS

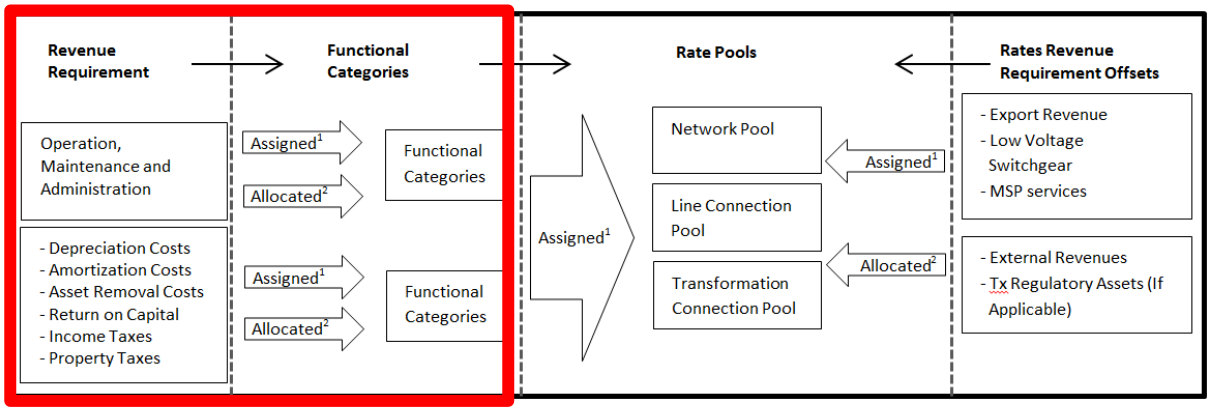
Remaining Hydro One Transmission owned facilities that cannot be assigned to any of the functional categories listed above are categorized as Other assets. These assets include facilities such as disconnect switches in customer-owned stations and transmission facilities that cannot be allocated to one of the other functional categories under normal operating conditions.

A listing of all transmission lines and stations, with their associated functional categories to which they are allocated, is provided in Exhibit I1, Tab 2, Schedule 1 and Exhibit I1, Tab 2, Schedule 2, respectively.

4. ALLOCATION OF REVENUE REQUIREMENT TO FUNCTIONAL CATEGORIES

The first stage in the allocation of revenue requirement to the rate pools entails the apportionment of the revenue requirement components into the functional categories as demonstrated in Figure 2. There are two basic elements of the revenue requirement allocated or assigned to the functional categories:

1. Operations, Maintenance and Administration ("OM&A") costs; and
2. Expenses associated with fixed assets such as: depreciation, asset removal costs, return on capital, income taxes, property taxes and amortization costs.



[1] *The term "Assigned" refers to a value that is designated to a particular Functional Category or Rate Pool (i.e. Export Revenues are directly assigned to the Network Rate Pool).*

[2] *The term "Allocated" indicates that a parameter(s) is used to calculate the proportion of the values that are designated to more than one Functional Category or Rate Pool (i.e. load forecast data is applied to the value of Dual Function Line assets to determine the proportion of its value that is allocated to the Network Functional Category and to the Line Connection Functional Category).*

Figure 2: Schematic Outlining the Allocation of Revenue Requirement to Rate Pools

The following subsections describe how the functionalization of transmission assets, as described in Section 3, is used as a basis to allocate Hydro One's transmission revenue requirement components into functional categories.

4.1 ALLOCATION OF ASSET VALUE

As a starting point, it is necessary to allocate the Gross Book Value ("GBV") of transmission assets to functional categories. Assignment of the physical assets to the functional categories and the subsequent split of the Dual Function Lines and Generation Connection assets, as described above, yields the functionalization of the GBV of transmission assets into the functional categories shown below:

- Network
- Network Portion of Dual Function Line
- Line Connection
- Line Connection Portion of Dual Function Line
- Transformation Connection
- Generator Line Connection
- Generator Transformation Connection (includes Generation Station Switchyards)
- Common
- Other

Once the GBV has been allocated to the functional categories, the Net Book Value ("NBV") of transmission assets is determined by assigning the accumulated depreciation, discussed in Exhibit C, Tab 1, Schedule 1, to the functional categories listed above in proportion to the share of GBV of assets in each functional category by Uniform System of Accounts ("USofA"). A summary of the GBV and NBV of assets by functional category is provided in Exhibit I1, Tab 4, Schedule 1.

The breakdown of the asset values among the functional categories is the basis of, or contributes to, the data required to establish the various factors to appropriately allocate the revenue requirement components among the functional categories on the basis of either GBV, NBV, rate base, or OM&A, as described below.

4.2 ASSIGNMENT OF DEPRECIATION AND AMORTIZATION COSTS, RETURN ON CAPITAL, AND TAXES

The treatment of Depreciation and Amortization Costs, Return on Capital, and Taxes is in accordance with the methodology approved by the Board in Proceeding EB-2016-0160.

The Depreciation costs on transmission fixed assets are allocated to the functional categories in proportion to the average GBV of the functional categories over two years by USofA. The asset removal costs and capitalized depreciation determined per Exhibit F, Tab 6, Schedule 1 are assigned to the functional categories in proportion to the GBV. A summary of the Depreciation costs by functional category is provided in Exhibit I1, Tab 4, Schedule 2.

The Amortization expenses, also determined per Exhibit F, Tab 6, Schedule 1 are assigned to the functional categories in proportion to the NBV.

Return on Capital and Income Taxes are assigned on the basis of the rate base in each functional category. The rate base is determined by adding the Working Capital, which includes Materials and Supply Inventory identified in Exhibit C, Tab 1, Schedule 1, to the NBV of the functional categories. The share of Working Capital added to each functional category is in proportion to the distribution of OM&A. A summary of the Return on Capital and Income Taxes by functional category is provided in Exhibit I1, Tab 4, Schedule 3.

The amount for "Taxes Other Than Income Taxes", which are largely for property taxes as described in Exhibit F, Tab 7, Schedule 4, are assigned to the functional categories in proportion to the NBV.

4.3 ALLOCATION OF OM&A COSTS

The allocation of OM&A costs is in accordance with the methodology approved by the Board in Proceeding EB-2016-0160. The OM&A costs allocated as per the methodology described in this Section are the totals shown in Exhibit E, Tab 1, Schedule 1, less the amount for "Taxes Other Than Income Taxes" described in Exhibit F, Tab 7, Schedule 4.

The allocation of these expenditures for the various OM&A projects and programs, which are described in Exhibit F, to the functional categories, is based on the following approach:

a) Where work is readily identifiable thereby making direct assignment possible, costs are directly assigned to specific functional categories.

b) Where direct assignment is not possible, allocation to the functional categories is based on parameters representative of the relative OM&A expenditure requirements, such as:
    - the kilometers of line in each functional category as a percent of the total number of kilometres installed.
    - the GBV of stations within a particular functional category as a percent of the total GBV of all stations.
    - the length of underground circuit-km in a functional category as a percent of the total length of underground lines within the system.

In order to allocate costs to the functional categories, the OM&A spending associated with the Network and Line Connection portions of Dual Function Lines, as well as the OM&A spending associated with the generator and load portions of Generation Line and Transformation Connection assets must be determined. The methodology to determine these costs is described below.

4.3.1 OM&A Costs for Generation Connections

The OM&A costs associated with Generator Line and Transformation Connections used solely to connect a generating station(s) can be fully assigned to the appropriate Generation Connection functional category; either Generation Line Connection or Generation Transformation Connection depending on the type of electrical asset.

In cases where a connection facility is used to connect one or more generating station(s) and one or more load customers, some of the costs associated with that facility are allocated to the appropriate Generation Connection functional category, and the remaining costs are allocated to load customer under the appropriate Connection functional category. Using the asset value data from Section 4.1 and the OM&A costs determined as per Section 4.3, the following formula is used to estimate the generator's share of OM&A costs for each of the Line and Transformation Connection functional categories:

$$\text{Proportion Allocated to the Generator Line or Transformation Connection} = \text{Total Generation Line or Transformation OM\&A Costs} \times \left[\frac{\text{Generation Line or Transformation Connection NBV}}{\text{Generation Line or Transformation Connection NBV} + \text{Line or Transformation Connection NBV}} \right]$$

Therefore, the formula used for the load customers' share of OM&A costs is:

$$\text{Proportion Allocated to the Load Customer Line or Transformation Connections} = 1 - \text{Proportion Allocated to the Generator Line or Transformation Connection}$$

4.3.2 OM&A Costs for Dual Function Lines

The OM&A costs of each DFL asset are split between the Network portion and Line portion of the DFL functional category. The allocation factors for OM&A costs are derived using the NBV of assets determined as per Section 4.1. The following formulas are used to estimate the portion of OM&A costs to the appropriate DFL functional category.

Network Portion:

$$\text{Proportion Allocated to the Network Portion of Dual Function Lines} = \text{Total OM\&A Costs for DFL} \times \left[\frac{\text{NBV of Network Portion of DFL}}{\text{Sum of Total NBV of DFL}} \right]$$

Line Connection Portion:

$$\text{Proportion Allocated to the Line Connection Portion of Dual Function Lines} = 1 - \text{Proportion Allocated to the Network Portion of Dual Function Lines}$$

4.3.3 Summary of OM&A Costs

Allocation of the OM&A costs described above results in the split of total OM&A costs between the functional categories, a summary of which is provided in Exhibit I1, Tab 4, Schedule 4.

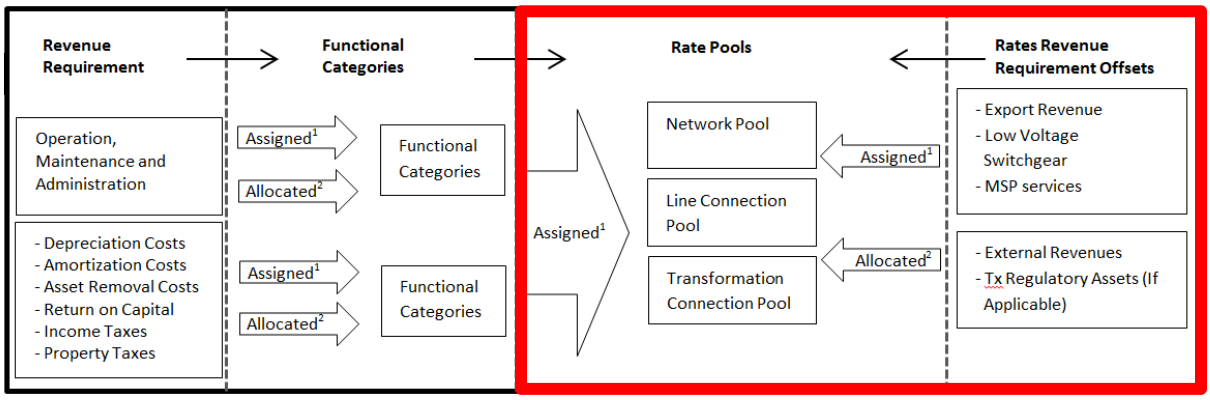
NETWORK, LINE CONNECTION AND TRANSFORMATION CONNECTION RATE POOLS

1. INTRODUCTION

This Exhibit describes the activities to determine the transmission rates revenue requirement for the Network, Line Connection, and Transformation Connection rate pools, and provides a summary of the associated asset value and rates revenue requirement. A detailed account of the transmission rates revenue requirement by rate pool is provided in Exhibit I1, Tab 5, Schedule 1.

2. ALLOCATION OF REVENUE REQUIREMENT TO RATE POOLS

The allocation of the transmission rates revenue requirement to the rate pools is summarized in Figure 1. This process is the same as was presented and approved by the Board in Hydro One's 2017/2018 Transmission Rate Application (EB-2016-0160).



[1] *The term "Assigned" refers to a value that is designated to a particular Functional Category or Rate Pool (i.e. Export Revenues are directly assigned to the Network Rate Pool).*
[2] *The term "Allocated" indicates that a parameter(s) is used to calculate the proportion of the values that are designated to more than one Functional Category or Rate Pool (i.e. load forecast data is applied to the value of Dual Function Line assets to determine the proportion of its value that is allocated to the Network Functional Category and to the Line Connection Functional Category).*

Figure 1: Schematic Outlining the Allocation of Revenue Requirement to Rate Pools

As illustrated in Figure 1, once the allocation of revenue requirement components into the functional categories is completed, as described in Exhibit I1, Tab 1, Schedule 2, then the next steps include:

1. Mapping of allocated transmission costs from the functional categories to the assigned rate pools; and
2. Assignment and allocation of the rates revenue requirement offset components such as: Export Transmission Service ("ETS") revenue, regulatory assets (if applicable), the Low Voltage Switchgear ("LVSG") credit, Wholesale Meter Service ("WMS") revenue and other external revenues into the rate pools.

These two steps are discussed further in Section 2.1 and Section 2.2, respectively.

2.1 MAPPING OF FUNCTIONAL CATEGORY TO RATE POOL

The allocated transmission costs that are derived using the cost allocation methodology described in Exhibit I1, Tab 1, Schedule 2, are aggregated from the functional categories to the three rate pools: Network, Line Connection, and Transformation Connection; as shown in Table 1 and described below.

Table 1: Functional Category to Rate Pool Mapping

Functional Category	Rate Pool
Network	Network
Network Portion of DFL	Network
Line Connection	Line Connection
Line Connection Portion of DFL	Line Connection
Transformation Connection	Transformation Connection
Generation Line Connection	Network
Generation Transformation Connection	Network
Common and Other	Prorate to Network, Line and Transformation

Network, Line Connection, and Transformation Connection Assets

The financial values associated with the Network, Line Connection, and Transformation Connection functional categories are directly assigned to the Network, Line Connection, and Transformation Connection rate pools, respectively. This is also applicable to the portions of Dual Function Line ("DFL") assets that are allocated to the Network and Line Connection functional categories.

Generation Line and Transformation Connection Assets

The financial values associated with the Generator Line and Transformation Connection functional categories are assigned to the Network rate pool, based on the Board Decision under Proceeding RP-1999-0044; which states that generators do not pay transmission service charges with respect to transmission connection facilities used to transfer electricity from the generating station to the network. This approach is considered fair and equitable, since generators connected to the transmission system enhance and contribute to the electricity market for all load customers. This aligns with the cost allocation to the Network rate pool where costs are recovered through Network rates applicable to all load customers (including generators when they are taking load), while the costs for Connection rate pools are recovered only from load customers that utilize those connections.

Common and Other Assets

The financial values associated with the functional categories "Common" and "Other" are allocated to the Network, Line Connection and Transformation Connection rate pools in proportion to the corresponding amounts of financial values that are already assigned to those rate pools by revenue requirement component (i.e., "Common" and "Other" OM&A costs are allocated to the rate pools based on the relative share of OM&A costs already assigned to the rate pools).

2.2 ALLOCATION OF RATES REVENUE REQUIREMENT OFFSETS

Hydro One Transmission's revenue requirement to be recovered through rates includes amounts in addition to the fixed asset depreciation costs, return on capital, income taxes, and OM&A costs, allocated above. These costs are outlined in Table 1 of Exhibit E, Tab 1, Schedule 1 and are generically defined for the purpose of this exhibit as "Rates Revenue Requirement Offsets".

Table 2 below identifies the Rates Revenue Requirement Offset items, the total revenues to be collected, and the allocators used to divide these costs among the three rate pools. Allocation of the items in Table 2 is done on the same basis as under Proceeding EB-2016-0160.

Table 2: Rates Revenue Requirement Offsets ($ Millions)

Items	2020 Rates Revenue Requirement Offsets	Allocator
Regulatory Assets	5.2	Prorated based on the amounts of financial values that are already assigned to those functional categories
Export Transmission Service Revenue Variance	1.6	Direct Assignment to Networks
Export Transmission Service Revenue	(35.9)	Direct Assignment to Networks
External Revenues	(31.4)	Prorated based on the amounts of financial values that are already assigned to those functional categories
Wholesale Meter Service Revenue	(0.1)	Direct Assignment to Transformation Connection
Funding for Low Voltage Switchgear Compensation	14.8	Direct Assignment to Transformation Connection

3. SUMMARY OF ASSET VALUE AND REVENUE REQUIREMENT FOR RATE POOLS

This Section provides the annual mid-year net book value and transmission rates revenue requirement for each of the three rate pools: Network, Line Connection, and Transformation Connection. For 2020, this is derived using the methodology described above in Section 2. For the remaining years, 2021 and 2022, the net book value and the transmission rates revenue requirement have been allocated among the three rate pools using the same percentage split as 2020.

3.1 NETWORK RATE POOL

The mid-year net book value and rates revenue requirement for the Network rate pool are provided in Table 3.

The rates revenue requirement for the Network rate pool includes an offset to account for export transmission service revenue forecast to be collected, as discussed in Exhibit I2, Tab 4, Schedule 1; as well as an offset to account for any export transmission service revenue variance (included in regulatory assets amount), as discussed in Exhibit H, Tab 1, Schedule 1.

Table 3: Network Rate Pool ($ Millions)

Year	Net Book Value	Rates Revenue Requirement
2020	7,727.1	977.6
2021	8,175.7	1,033.2
2022	8,690.5	1,087.2

3.2 LINE CONNECTION RATE POOL

The mid-year net book value and rates revenue requirement for the Line Connection rate pool are provided in Table 4.

Table 4: Line Connection Rate Pool ($ Millions)

Year	Net Book Value	Rates Revenue Requirement
2020	1,428.5	186.3
2021	1,511.4	196.6
2022	1,606.6	206.6

3.3 TRANSFORMATION CONNECTION RATE POOL

The mid-year net book value and rates revenue requirement for the Transformation Connection rate pool are provided in Table 5.

The rates revenue requirement for the Transformation Connection rate pool includes the LVSG credit amount, as outlined in Table 6 below, as well as an offset to account for WMS revenue forecast to be collected in each year, as discussed in Exhibit I2, Tab 3, Schedule 1.

Table 5: Transformation Connection Rate Pool ($ Millions)

Year	Net Book Value	Rates Revenue Requirement
2020	3,182.6	464.1
2021	3,367.4	489.6
2022	3,579.4	514.5

Low Voltage Switchgear Credit

As first approved by the Board in Proceeding EB-2006-0501, the revenue requirement for the Transformation Connection pool also includes an amount that is payable by Hydro One Transmission to Toronto Hydro-Electric System Inc. and Hydro Ottawa Inc. as compensation for LVSG equipment that those utilities own, operate and maintain within certain transformation stations owned by Hydro One. The compensation amount is based on the LVSG as a proportion of the total transformation station costs, including OM&A and capital-related charges, incurred by Hydro One.

The estimated cost of providing low voltage switchgear service, and the methodology used to calculate the annual LVSG compensation payable to each utility, was most recently approved in Proceeding EB-2016-0160. For this application, Hydro One reviewed the costs for several transmission stations that have been recently put in service and found that the average low voltage switchgear service costs continue to comprise approximately 19.0% of Hydro One Transmission's total station costs.

The LVSG compensation is based on the forecast of each eligible utility's total monthly non-coincident peak demand supplied from all Hydro One Transmission transformer stations in which the utilities own the LVSG facilities, multiplied by the LVSG proportion of Hydro One Transmission's Transformation Connection rate.

The annual LVSG compensation amounts proposed are shown in Table 6. These amounts are added to the revenue to be collected by the Transformation Connection service rates.

Table 6*:* LVSG Credit

Year	LVSG Component of Transformation Connection Rate ($/kW/Month)	Average Monthly NCP Demand for Toronto Hydro and Hydro Ottawa (MW)	Total Credit ($ Millions)
2020	0.44	33,780.70	14.8
2021	0.47	33,409.25	15.6
2022	0.49	33,092.83	16.3

LIST OF TRANSMISSION LINES BY FUNCTIONAL CATEGORY

N= Network *LC= Line Connection* *DFL=Dual Function Line*

Operation Designation	Section	From	To	Functional Category
15M1	10	Rabbit Lake SS	Kenora MTS JCT	LC
15M1	13	Kenora MTS JCT	Kenora MTS JCT	LC
15M1	14	Kenora MTS JCT	Kenora MTS	LC
15M1	15	Kenora MTS JCT	Kenora MTS	LC
15M1	16	Kenora MTS JCT	Kenora MTS	LC
29M1	1	Ignace JCT	Ignace DS JCT	LC
29M1	2	Ignace DS JCT	Camp Lake JCT	LC
29M1	3	Camp Lake JCT	Valora JCT	LC
29M1	4	Valora JCT	Mattabi JCT	LC
29M1	7	Valora JCT	Valora DS	LC
29M1	8	Camp Lake JCT	Agimak DS JCT	LC
29M1	12	Agimak DS JCT	Agimak DS	LC
29M1	13	Agimak DS JCT	Agimak DS	LC
3024F2	1	Tisdale JCT	Pamour JCT	OTHER
56M1	1	Nipigon JCT	Red Rock JCT	LC
56M1	2	Red Rock JCT	Red Rock DS	LC
56M1	3	Red Rock JCT	56M1 T#256 JCT	OTHER
57M1	1	Reserve JCT	Nipigon JCT	LC
57M1	2	Nipigon JCT	Nipigon DS	LC
61M18	1	Seaforth 61M18 JCT	Constance DS	LC
61M18	2	Constance DS	Goderich TS	LC
61M18	3	Seaforth TS	Seaforth 61M18 JCT	LC
61M18	4	Seaforth 61M18 JCT	Seaforth LSO JCT	OTHER
61M18	5	Constance DS	Constance DS	LC
79M1	1	Gamble H9A JCT	Rockland JCT	LC
79M1	2	Rockland JCT	Rockland East DS JCT	LC
79M1	3	Rockland East DS JCT	Clarence DS	LC
79M1	4	Clarence DS	Wendover JCT	LC
79M1	5	Wendover JCT	Cassburn JCT	LC
79M1	6	Cassburn JCT	Hawkesbury MTS #1	LC
79M1	10	Rockland JCT	Rockland DS	LC
79M1	11	Wendover JCT	Wendover DS	LC
79M1	13	Rockland East DS JCT	Rockland East DS JCT	LC
79M1	14	Rockland East DS JCT	Rockland East DS	LC
79M1	15	Rockland East DS JCT	Rockland East DS	LC
79M1	16	Clarence DS	Clarence DS	LC
A1B	1	Aguasabon SS	AV Terrace Bay JCT	DFL
A1B	2	AV Terrace Bay JCT	Terrace Bay SS	DFL

Operation Designation	Section	From	To	Functional Category
A1B	3	AV Terrace Bay JCT	AV Terrace Bay CTS	LC
A1T	4	Toronto Pwr T#56 JCT	Niagara A1T T#49 JCT	OTHER
A1T	5	Montrose JCT	Toronto Pwr T#56 JCT	OTHER
A1T	6	Michigan JCT	Montrose JCT	OTHER
A1T	7	Michigan JCT	Crowland STR 46 JCT	OTHER
A1T	11	Toronto Pwr T#56 JCT	Niagara A1T T#49 JCT	OTHER
A1T	12	Allanbrg A1T T#1 JCT	Michigan JCT	OTHER
A1T	13	Michigan JCT	Crowland JCT	OTHER
A1T	15	Crowland STR 46 JCT	ASW Steel JCT	OTHER
A1T	16	Crowland STR 46 JCT	Crowland JCT	OTHER
A1T	17	Crowland JCT	Crowland JCT	OTHER
A2	1	Hawthorne TS	Blackburn JCT	LC
A2	2	Blackburn JCT	Cyrville Rd JCT	LC
A2	3	Cyrville JCT	Bilberry Creek JCT	LC
A2	4	Bilberry Creek JCT	Bilberry Creek TS	LC
A2	5	Cyrville JCT	Nationl Research JCT	LC
A2	6	Nationl Research JCT	NRC TS	LC
A2	7	Nationl Research JCT	Nationl Research JCT	OTHER
A2	8	Cyrville Rd JCT	Cyrville JCT	LC
A2	9	Cyrville Rd JCT	Cyrville MTS	LC
A21L	1	Mackenzie TS	Lakehead TS	N
A22L	1	Mackenzie TS	Lakehead TS	N
A23P	1	Algoma TS	Mississagi TS	N
A24P	1	Algoma TS	Mississagi TS	N
A36N	1	Allanburg TS	Kalar JCT	LC
A36N	3	Kalar JCT	Murray TS	LC
A36N	4	Kalar JCT	Kalar MTS	LC
A37N	1	Allanburg TS	Kalar JCT	LC
A37N	3	Kalar JCT	Murray TS	LC
A37N	4	Kalar JCT	Kalar MTS	LC
A3M	1	Mackenzie TS	Moose Lake TS	N
A3RM	1	Billings JCT	Merivale MTS	DFL
A3RM	2	Ellwood JCT	Billings JCT	DFL
A3RM	4	Ellwood JCT	Riverdale JCT	LC
A3RM	6	Riverdale JCT	Riverdale TS	LC
A3RM	7	Riverdale TS	Slater TS	LC
A3RM	10	Hawthorne TS	Ellwood JCT	DFL
A3RM	14	Billings JCT	Billings JCT	OTHER
A3RM	15	Billings JCT	Billings JCT	OTHER
A3RM	16	Merivale MTS	Merivale TS	DFL
A41T	1	Hawthorne TS	IPB Masson JCT	N
A42T	1	Hawthorne TS	IPB Masson JCT	N

Operation Designation	Section	From	To	Functional Category
A4H	2	Ansonville TS	Fournier JCT	DFL
A4H	3	Fournier JCT	Fournier JCT	LC
A4H	4	Hunta SS	LSR MSO JCT	LC
A4H	5	Fournier JCT	Hunta SS	DFL
A4H	6	Fournier JCT	Power JCT	LC
A4H	7	Power JCT	Cochrane West JCT	LC
A4H	8	Cochrane West JCT	Cochrane MTS	LC
A4H	10	Cochrane West JCT	Cochrane West DS	LC
A4K	1	Hawthorne TS	Blackburn JCT	LC
A4K	2	Blackburn JCT	Cyrville Rd JCT	LC
A4K	3	Cyrville JCT	Moulton JCT	LC
A4K	4	Overbrook TS	King Edward TS	LC
A4K	9	Moulton JCT	Overbrook TS	LC
A4K	10	Moulton JCT	Moulton MTS	LC
A4K	11	Cyrville Rd JCT	Cyrville JCT	LC
A4K	12	Cyrville Rd JCT	Cyrville MTS	LC
A4L	1	Alexander SS	A.P. Nipigon JCT	LC
A4L	2	Beardmore JCT	Namewaminikan JCT	LC
A4L	4	Roxmark JCT	Longlac TS	LC
A4L	5	Roxmark JCT	Roxmark Mine CTS	OTHER
A4L	6	Jellicoe DS #3 JCT	Roxmark JCT	LC
A4L	7	Beardmore JCT	Beardmore DS #2	LC
A4L	10	A.P. Nipigon JCT	Beardmore JCT	LC
A4L	11	A.P. Nipigon JCT	A.P. Nipigon CGS	LC
A4L	12	Jellicoe DS #3 JCT	Jellicoe DS #3	LC
A4L	13	Namewaminikan JCT	Jellicoe DS #3 JCT	LC
A4L	14	Namewaminikan JCT	Namewaminikan CGS	LC
A4M	1	Mackenzie TS	Moose Lake TS	OTHER
A565L	1	Ashfield SS	Longwood TS	N
A592K	1	Ashfield SS	K2 Wind 500 CGS	N
A5A	1	Alexander SS	Minnova JCT	DFL
A5A	2	Minnova JCT	Schreiber JCT	DFL
A5A	3	Schreiber JCT	Aguasabon SS	DFL
A5A	4	Schreiber JCT	Schreiber Winnipg DS	LC
A5A	6	Minnova JCT	Minnova JCT	LC
A5H	1	Fournier JCT	Hunta SS	DFL
A5H	2	A.P. Tunis JCT	Fournier JCT	DFL
A5H	3	Iroquois Fls DS JCT	Iroq Falls 115 JCT	DFL
A5H	4	Ansonville TS	Iroquois Fls DS JCT	DFL
A5H	10	Iroq Falls 115 JCT	A.P. Tunis JCT	DFL
A5H	15	Fournier JCT	Fournier JCT	LC
A5H	17	Iroquois Fls DS JCT	Iroquois Falls DS	LC

Operation Designation	Section	From	To	Functional Category
A5H	18	A.P. Tunis JCT	A.P. Tunis JCT	LC
A5RK	1	Hawthorne TS	Blackburn JCT	LC
A5RK	2	Blackburn JCT	Russell TS	LC
A5RK	3	Russell TS	Riverdale JCT	LC
A5RK	4	Riverdale JCT	Riverdale TS	LC
A5RK	5	Riverdale TS	Slater TS	LC
A5RK	6	Riverdale JCT	A5RK STR O7 JCT	LC
A5RK	7	Overbrook TS	King Edward TS	LC
A5RK	8	A5RK STR O7 JCT	Overbrook TS	LC
A6C	1	Allanburg TS	Allanburg TS	LC
A6C	2	Hurricane JCT	Michigan JCT	LC
A6C	3	Hurricane JCT	BF Goodrich JCT	OTHER
A6C	4	Allanburg TS	Allanburg TS	LC
A6C	6	BF Goodrich JCT	Cytec Welland CTS	OTHER
A6C	7	BF Goodrich JCT	Oxy Vinyls CTS	OTHER
A6C	8	Michigan JCT	Crowland TS	LC
A6C	9	Allanburg TS	Hurricane JCT	LC
A6P	1	Alexander SS	Reserve JCT	DFL
A6P	2	Reserve JCT	Port Arthur TS #1	DFL
A6P	3	Reserve JCT	Reserve JCT	LC
A6R	1	Hawthorne TS	Blackburn JCT	LC
A6R	2	Blackburn JCT	Russell TS	LC
A6R	3	Russell TS	Riverdale JCT	LC
A6R	4	Riverdale JCT	OHSC JCT	LC
A6R	5	OHSC JCT	Riverdale TS	LC
A6R	6	OHSC JCT	OHSC JCT	LC
A7C	1	Allanburg TS	Allanburg TS	LC
A7C	2	Hurricane JCT	Michigan JCT	LC
A7C	3	Hurricane JCT	BF Goodrich JCT	LC
A7C	4	Allanburg TS	Allanburg TS	LC
A7C	6	BF Goodrich JCT	Cytec Welland CTS	LC
A7C	7	BF Goodrich JCT	Oxy Vinyls CTS	LC
A7C	8	Michigan JCT	Crowland TS	LC
A7C	9	Allanburg TS	Hurricane JCT	LC
A7L	1	Alexander SS	Reserve JCT	N
A7L	2	Reserve JCT	Lakehead TS	N
A8G	1	A8G STR2 JCT	Rosedene JCT	OTHER
A8G	2	Rosedene JCT	Railway JCT	OTHER
A8G	3	Railway JCT	A8G T#43 JCT	OTHER
A8G	4	Beach JCT	Gage TS	OTHER
A8G	5	Railway JCT	Glanford JCT	OTHER
A8K	1	Ansonville TS	A8K-19EO JCT	N

Operation Designation	Section	From	To	Functional Category
A8K	2	A8K-19EO JCT	Monteith SS JCT	N
A8K	3	Monteith SS JCT	Monteith SS	OTHER
A8K	4	Monteith SS JCT	A8K-47EO JCT	N
A8K	5	A8K-47EO JCT	Kirkland Lake TS	N
A8L	1	Alexander SS	Lakehead TS	N
A8M	1	Billings JCT	Merivale TS	DFL
A8M	2	Hawthorne TS	Billings JCT	DFL
A8M	9	Billings JCT	Billings JCT	LC
A8M	10	Billings JCT	Billings JCT	LC
A8M	11	Billings JCT	Uplands JCT	LC
A8M	12	Uplands JCT	Uplands MTS #2	LC
A9K	1	Ansonville TS	Monteith DS JCT	DFL
A9K	2	Monteith DS JCT	Ramore TS	DFL
A9K	3	Ramore TS	Kirkland Lake TS	DFL
A9K	4	Monteith DS JCT	Monteith DS	LC
B1	1	Beach Road JCT	Beach TS	LC
B10	1	Burlington TS	Gage JCT	LC
B10	2	Gage JCT	Gage TS	LC
B10	3	Gage JCT	Birmingham TS	OTHER
B11	1	Burlington TS	Gage JCT	LC
B11	2	Gage JCT	Gage TS	LC
B11	3	Gage JCT	Birmingham TS	OTHER
B12	1	Burlington TS	Dundas #2 JCT	DFL
B12	2	Dundas #2 JCT	Horning Mountain JCT	DFL
B12	3	Horning Mountain JCT	Alford JCT	DFL
B12	4	Alford JCT	Powerline JCT	DFL
B12	5	Alford JCT	Mohawk Str 31 EP JCT	OTHER
B12	6	Horning Mountain JCT	Newton TS	LC
B12	7	Dundas #2 JCT	Dundas TS #2	LC
B12	8	Powerline JCT	Brant TS	DFL
B12	9	Powerline JCT	Powerline MTS	LC
B13	1	Burlington TS	Dundas #2 JCT	DFL
B13	2	Dundas #2 JCT	Horning Mountain JCT	DFL
B13	3	Horning Mountain JCT	Alford JCT	DFL
B13	4	Alford JCT	Powerline JCT	DFL
B13	6	Horning Mountain JCT	Newton TS	LC
B13	7	Dundas #2 JCT	Dundas TS #2	LC
B13	8	Powerline JCT	Brant TS	DFL
B13	9	Powerline JCT	Powerline MTS	LC
B15C	1	Cooksville TS	Lorne Park TS	LC
B15C	2	Lorne Park TS	Ford JCT	LC
B15C	3	Ford JCT	Oakville TS #2	LC

Operation Designation	Section	From	To	Functional Category
B15C	4	Ford JCT	Ford Oakville CTS	LC
B16C	1	Cooksville TS	Lorne Park TS	LC
B16C	2	Lorne Park TS	Ford JCT	LC
B16C	3	Ford JCT	Oakville TS #2	LC
B16C	4	Ford JCT	Ford Oakville CTS	LC
B16C	5	Cooksville TS	Cooksville TS	LC
B18H	1	Burlington TS	Beach Road JCT	DFL
B18H	2	Beach Road JCT	Beach TS	DFL
B18H	3	Beach Road JCT	Lake TS	LC
B1S	1	Barrett Chute SS	Ardoch JCT	DFL
B1S	2	Ardoch JCT	Northbrook JCT	DFL
B1S	3	Northbrook DS	Lodgeroom DS	DFL
B1S	4	Lodgeroom DS	Sidney TS	DFL
B1S	5	Ardoch JCT	Ardoch DS	LC
B1S	6	Northbrook JCT	Northbrook DS	DFL
B1S	7	Ardoch JCT	Ardoch JCT	DFL
B1S	8	Ardoch JCT	Ardoch DS	OTHER
B20H	1	Burlington TS	Beach Road JCT	DFL
B20H	2	Beach Road JCT	Beach TS	DFL
B20H	3	Beach Road JCT	Lake TS	LC
B20P	1	Bruce A TS	Bruce HW Plant D JCT	LC
B20P	2	Bruce HW Plant D JCT	Douglas Point TS	LC
B20P	4	Bruce HW Plant D JCT	Bruce HW Plant D TS	OTHER
B20P	8	Bruce A TS	Bruce HW Plant B TS	LC
B22D	1	Bruce A TS	Majestic JCT	DFL
B22D	2	Wingham JCT	Seaforth TS	DFL
B22D	3	Seaforth TS	Festival MTS #1 JCT	DFL
B22D	4	Stratford JCT	Detweiler TS	DFL
B22D	5	Stratford JCT	Stratford TS	LC
B22D	6	Wingham JCT	Wingham TS	LC
B22D	7	Majestic JCT	Armow JCT	DFL
B22D	8	Majestic JCT	Majestic CTS	LC
B22D	9	Festival MTS #1 JCT	Stratford JCT	DFL
B22D	10	Festival MTS #1 JCT	Festival MTS #1	LC
B22D	11	Armow JCT	Wingham JCT	DFL
B22D	12	Armow JCT	Armow CSS	LC
B23C	1	Belleville TS	Pancake JCT	DFL
B23C	2	Pancake JCT	Wilson JCT	DFL
B23C	3	Wilson JCT	Whitby JCT	DFL
B23C	4	Wilson JCT	Wilson TS	LC
B23C	5	Whitby JCT	B23C H26C Tie JCT	DFL
B23C	6	Whitby JCT	Whitby TS	LC

Operation Designation	Section	From	To	Functional Category
B23C	7	B23C H26C Tie JCT	Cherrywood TS	DFL
B23C	8	B23C H26C Tie JCT	B23C H26C Tie JCT	OTHER
B23D	1	Bruce A TS	Majestic JCT	DFL
B23D	2	Wingham JCT	Seaforth TS	DFL
B23D	3	Seaforth TS	Zurich JCT	DFL
B23D	4	Stratford JCT	Detweiler TS	DFL
B23D	5	Stratford JCT	Stratford TS	LC
B23D	6	Wingham JCT	Wingham TS	LC
B23D	7	Majestic JCT	Wingham JCT	DFL
B23D	8	Majestic JCT	Majestic CTS	LC
B23D	9	Festival MTS #1 JCT	Stratford JCT	DFL
B23D	10	Festival MTS #1 JCT	Festival MTS #1	LC
B23D	11	Zurich JCT	Festival MTS #1 JCT	DFL
B23D	12	Zurich JCT	Zurich CSS	LC
B24P	1	Bruce A TS	Bruce HW Plant D JCT	LC
B24P	2	Bruce HW Plant D JCT	Douglas Point TS	LC
B24P	4	Bruce HW Plant D JCT	Bruce HW D EP JCT	OTHER
B24P	8	Bruce A TS	Bruce HW Plant B TS	LC
B27S	1	Bruce A TS	Owen Sound JCT	DFL
B27S	2	Owen Sound JCT	Owen Sound TS	LC
B27S	3	Owen Sound JCT	Owen Sound TS	DFL
B28S	1	Bruce A TS	Owen Sound TS	LC
B3	1	Burlington TS	Dundas JCT	LC
B3	2	Dundas JCT	McMaster JCT	LC
B3	3	McMaster JCT	Horning Mountain JCT	LC
B3	4	Horning Mountain JCT	Glanford JCT	LC
B3	5	Glanford JCT	Mohawk TS	LC
B3	6	McMaster JCT	McMaster CTS	LC
B3	7	Horning Mountain JCT	Newton TS	LC
B3	8	Dundas JCT	Dundas TS	LC
B31L	2	IPB Baudet JCT	B5D-B31L SS JCT	N
B31L	3	B5D-B31L SS JCT	Raisin River JCT	N
B31L	4	Raisin River JCT	St.Lawrence TS	N
B31L	5	B5D-B31L SS JCT	B5D-B31L SS JCT	N
B31L	6	St.Lawrence TS	St.Lawrence TS	N
B31L	7	St.Lawrence TS	St.Lawrence TS	N
B3E	1	Blind River TS	Elliot Lake JCT	LC
B3E	2	Elliot Lake JCT	Elliot Lake TS	LC
B3N	2	Mid R. JCT Bunce Crk	Sun Oil Co JCT	N
B3N	3	Sun Oil Co JCT	Vidal JCT	N
B3N	4	Vidal JCT	Sarnia Scott JCT	N
B3N	5	Sarnia Scott JCT	Sarnia Scott TS	N

Operation Designation	Section	From	To	Functional Category
B4	1	Burlington TS	Dundas JCT	LC
B4	2	Dundas JCT	McMaster JCT	LC
B4	3	McMaster JCT	Horning Mountain JCT	LC
B4	4	Horning Mountain JCT	Glanford JCT	LC
B4	5	Glanford JCT	Mohawk TS	LC
B4	6	McMaster JCT	McMaster CTS	LC
B4	7	Horning Mountain JCT	Newton TS	LC
B4	8	Dundas JCT	Dundas TS	LC
B40C	1	Burlington TS	Cumberland TS	LC
B41C	1	Burlington TS	Cumberland TS	LC
B4B	1	Blind River TS	Algoma TS	LC
B4E	1	Blind River TS	Elliot Lake TS	LC
B4V	1	Bruce A TS	Underwood JCT	DFL
B4V	2	Hanover TS	Southgate JCT	DFL
B4V	3	Amaranth JCT	Orangeville TS	DFL
B4V	4	Amaranth JCT	Amaranth CTS	LC
B4V	5	Underwood JCT	Hanover TS	DFL
B4V	6	Underwood JCT	Underwood CGS	LC
B4V	7	GV3 WF JCT	Amaranth JCT	DFL
B4V	8	GV3 WF JCT	GV3 WF CGS	LC
B4V	9	Southgate JCT	GV3 WF JCT	DFL
B4V	10	Southgate JCT	Southgate CGS	LC
B501M	1	Bruce B SS	Willow Creek JCT	N
B501M	2	Willow Creek JCT	Milton SS	N
B502M	1	Bruce A TS	Willow Creek JCT	N
B502M	2	Willow Creek JCT	Milton SS	N
B540C	1	Bowmanville SS	Cherrywood TS	N
B541C	1	Bowmanville SS	Cherrywood TS	N
B542C	1	Bowmanville SS	Cherrywood TS	N
B543TC	1	Bowmanville SS	Clarington JCT	N
B543TC	2	Clarington JCT	Cherrywood TS	N
B543TC	3	Clarington JCT	Clarington TS	N
B560V	1	Bruce A TS	Willow Creek JCT	N
B560V	2	Milton SS	Milton SS	N
B560V	3	Willow Creek JCT	Milton SS	N
B560V	4	Milton SS	Claireville TS	N
B561M	1	Bruce B SS	Bruce JCT	N
B561M	2	Bruce JCT	Willow Creek JCT	N
B561M	3	Willow Creek JCT	Milton SS	N
B561M	4	Bruce JCT	Bruce JCT	N
B562E	1	Bruce A TS	Willow Creek JCT	N
B562E	2	Willow Creek JCT	Evergreen SS	N

Operation Designation	Section	From	To	Functional Category
B563A	1	Bruce B SS	Bruce JCT	N
B563A	2	Bruce JCT	Willow Creek JCT	N
B563A	3	Willow Creek JCT	Ashfield SS	N
B563A	4	Bruce JCT	Bruce JCT	N
B569B	1	Bruce A TS	Bruce JCT	N
B569B	2	Bruce JCT	Bruce B SS	N
B569B	3	Bruce JCT	Bruce JCT	N
B5C	1	Burlington TS	Harper's JCT	DFL
B5C	2	Harper's JCT	Puslinch JCT	DFL
B5C	3	Puslinch JCT	Arlen MTS JCT	DFL
B5C	4	Arlen MTS JCT	Hanlon JCT	DFL
B5C	5	Hanlon JCT	Cedar TS	DFL
B5C	6	Harper's JCT	Westover JCT	LC
B5C	7	Westover JCT	Westover A JCT	LC
B5C	8	Westover A JCT	Enbrg Westover S CTS	LC
B5C	9	Westover A JCT	Enbrg Westover N CTS	LC
B5C	10	Puslinch JCT	Puslinch DS	LC
B5C	11	Arlen MTS JCT	Arlen MTS	LC
B5C	12	Hanlon JCT	Hanlon TS	LC
B5D	2	IPB Baudet JCT	B5D-B31L SS JCT	OTHER
B5D	3	B5D-B31L SS JCT	St.Isidore TS	N
B5D	4	B5D-B31L SS JCT	B5D-B31L SS JCT	N
B5D	5	St.Isidore TS	Longueuil JCT	LC
B5D	6	Longueuil JCT	Longueuil TS	LC
B5D	7	Longueuil JCT	Ivaco CTS	OTHER
B5G	6	ASEA Brown Bovri JCT	ASEA Brown Bovri CTS	OTHER
B5QK	1	Barrett Chute SS	Sharbot JCT	DFL
B5QK	2	Sharbot JCT	Hinchinbrooke DS	DFL
B5QK	3	Hinchinbrooke DS	Harrowsmith JCT	DFL
B5QK	4	Harrowsmith JCT	Railton JCT	DFL
B5QK	5	Railton JCT	Frontenac TS	LC
B5QK	6	Railton JCT	Cataraqui TS	DFL
B5QK	7	Harrowsmith JCT	Harrowsmith DS	LC
B5QK	8	Sharbot JCT	Sharbot DS	LC
B5V	1	Bruce A TS	Underwood JCT	DFL
B5V	2	Hanover TS	Amaranth JCT	DFL
B5V	3	Underwood JCT	Hanover TS	DFL
B5V	4	Underwood JCT	Underwood CGS	LC
B5V	5	Amaranth JCT	Orangeville TS	DFL
B5V	6	Amaranth JCT	Amaranth CTS	LC
B6C	1	Burlington TS	Harper's JCT	DFL
B6C	2	Harper's JCT	Puslinch JCT	DFL

Operation Designation	Section	From	To	Functional Category
B6C	3	Puslinch JCT	Arlen MTS JCT	DFL
B6C	4	Arlen MTS JCT	Hanlon JCT	DFL
B6C	5	Hanlon JCT	Cedar TS	DFL
B6C	6	Puslinch JCT	Puslinch DS	LC
B6C	7	Arlen MTS JCT	Arlen MTS	LC
B6C	8	Hanlon JCT	Hanlon TS	LC
B6G	6	ASEA Brown Bovri JCT	ASEA Brown Bovri CTS	OTHER
B6M	1	Birch TS	Murillo JCT	DFL
B6M	2	Stanley JCT	Shabaqua JCT	DFL
B6M	3	Shabaqua JCT	Shebandowan JCT	DFL
B6M	4	Shebandowan JCT	Kashabowie JCT	DFL
B6M	5	Kashabowie JCT	Sapawe JCT	DFL
B6M	6	Caland Ore JCT	Moose Lake TS	DFL
B6M	7	Shabaqua JCT	Shabaqua DS	LC
B6M	12	Murillo JCT	Stanley JCT	DFL
B6M	15	Sapawe JCT	Caland Ore JCT	DFL
B6M	16	Sapawe JCT	Sapawe DS	LC
B6M	17	Murillo JCT	Murillo DS	LC
B7	1	Burlington TS	Palermo JCT	LC
B7	2	Palermo JCT	Bronte TS	LC
B8	1	Burlington TS	Palermo JCT	LC
B8	2	Palermo JCT	Bronte TS	LC
B88H	1	Brown Hill TS	York EnergyCentr JCT	DFL
B88H	2	York EnergyCentr JCT	Holland Marsh JCT	DFL
B88H	3	Holland Marsh JCT	Holland TS	DFL
B88H	4	Holland TS	Armitage TS	DFL
B88H	5	York EnergyCentr JCT	York EnergyCentr CGS	LC
B89H	1	Brown Hill TS	York EnergyCentr JCT	DFL
B89H	2	York EnergyCentr JCT	Holland Marsh JCT	DFL
B89H	3	Holland Marsh JCT	Holland TS	DFL
B89H	4	Holland TS	Armitage TS	DFL
B89H	5	York EnergyCentr JCT	York EnergyCentr CGS	LC
B8W	1	Brant TS	Brant JCT	DFL
B8W	2	Brant TS	Brant JCT	DFL
B8W	3	Brant JCT	Toyota Woodstock JCT	DFL
B8W	6	Toyota Woodstock JCT	Commerce Way JCT	DFL
B8W	7	Toyota Woodstock JCT	Toyota Woodstock TS	LC
B8W	8	Commerce Way JCT	Commerce Way TS	DFL
B8W	9	Commerce Way JCT	Commerce Way TS	DFL
BP76	1	Beck #2 TS	Mid R. JCT Niagara	N
BSC105	1	Beck #1 SS	Parks TS	OTHER
BSC105	2	Parks TS	Mid R. JCT Niagara	OTHER

Operation Designation	Section	From	To	Functional Category
C10A	1	Cherrywood TS	Duffin JCT	LC
C10A	2	Duffin JCT	Agincourt JCT	LC
C10A	3	Agincourt JCT	Agincourt TS	LC
C10A	5	Agincourt JCT	Cavanagh MTS	LC
C10A	6	Agincourt JCT	Leaside JCT	OTHER
C11R	1	Cherrywood TS	Leaside JCT	OTHER
C12	1	Caledonia TS	Hartford JCT	LC
C12	3	Hartford JCT	Vanessa JCT	LC
C12	4	Vanessa JCT	Bloomsburg JCT	LC
C12	5	Bloomsburg JCT	Norfolk TS	LC
C12	6	Bloomsburg JCT	Bloomsburg DS	LC
C14L	1	Cherrywood TS	Scarboro JCT	DFL
C14L	2	Scarboro JCT	Bermondsey TS	DFL
C14L	3	Bermondsey TS	Leaside TS	DFL
C14L	4	Scarboro JCT	Scarboro TS	LC
C14L	5	Scarboro JCT	Warden TS	LC
C14L	6	Scarboro JCT	Scarboro JCT	LC
C14L	7	Leaside Str 4-5 JCT	Leaside Idle JCT	OTHER
C15L	1	Cherrywood TS	Sheppard TS	DFL
C15L	2	Sheppard TS	Scarboro JCT	DFL
C15L	3	Scarboro JCT	Leaside TS	DFL
C15L	4	Scarboro JCT	Scarboro TS	LC
C16L	1	Cherrywood TS	Sheppard TS	DFL
C16L	2	Sheppard TS	Leaside TS	DFL
C17L	1	Cherrywood TS	Scarboro JCT	DFL
C17L	2	Bermondsey TS	Leaside TS	DFL
C17L	3	Scarboro JCT	Bermondsey TS	DFL
C17L	4	Scarboro JCT	Warden TS	LC
C18R	1	Cherrywood TS	Fairchild TS	DFL
C18R	3	Fairchild TS	Bathurst JCT	DFL
C18R	4	Bathurst JCT	Richview TS	DFL
C18R	8	Bathurst JCT	Bathurst TS	LC
C1A	1	Cameron Falls GS	Alexander SS	LC
C1A	2	Alexander SS	Alexander GS	LC
C1A	3	Alexander SS	Alexander SS	LC
C1P	1	Crowland TS	Tunnel JCT	OTHER
C1P	2	Tunnel JCT	Vale Inco JCT	OTHER
C1P	3	Vale Inco JCT	Port Colborne TS	OTHER
C20R	1	Cherrywood TS	Agincourt JCT	DFL
C20R	2	Fairchild TS	Bathurst JCT	DFL
C20R	3	Bathurst JCT	Finch JCT	DFL
C20R	4	Finch JCT	Richview TS	DFL

Operation Designation	Section	From	To	Functional Category
C20R	6	Finch JCT	Finch TS	LC
C20R	7	Leslie JCT	Fairchild TS	DFL
C20R	10	Agincourt JCT	Leslie JCT	DFL
C20R	11	Agincourt JCT	Cavanagh MTS	LC
C21J	1	Chatham SS	Leamington JCT	DFL
C21J	2	Sandwich JCT	Malden JCT	DFL
C21J	3	Malden JCT	Keith TS	DFL
C21J	4	Malden JCT	Malden TS	LC
C21J	5	Leamington JCT	Sandwich JCT	DFL
C21J	6	Leamington JCT	Leamington TS	LC
C22J	1	Chatham SS	Leamington JCT	DFL
C22J	2	Sandwich JCT	Malden JCT	DFL
C22J	3	Malden JCT	Keith TS	DFL
C22J	4	Malden JCT	Malden TS	LC
C22J	5	Leamington JCT	Sandwich JCT	DFL
C22J	6	Leamington JCT	Leamington TS	LC
C23Z	1	Chatham SS	Dillon RWEC CGS JCT	DFL
C23Z	2	Sandwich JCT	Lauzon TS	DFL
C23Z	3	KEPA Wind Farm JCT	Comber WF JCT	DFL
C23Z	4	KEPA Wind Farm JCT	Port Alma WF CSS	OTHER
C23Z	5	Dillon RWEC CGS JCT	KEPA Wind Farm JCT	DFL
C23Z	6	Dillon RWEC CGS JCT	Dillon RWEC CGS	LC
C23Z	7	Comber WF JCT	Comber WF CTS	LC
C23Z	8	Comber WF JCT	Belle River JCT #2	DFL
C23Z	9	Belle River JCT #2	Sandwich JCT	DFL
C23Z	10	Belle River JCT #2	Belle River CSS	LC
C24Z	1	Chatham SS	KEPA Wind Farm JCT	DFL
C24Z	2	Sandwich JCT	Lauzon TS	DFL
C24Z	3	KEPA Wind Farm JCT	Comber WF JCT	DFL
C24Z	4	KEPA Wind Farm JCT	Port Alma WF CSS	LC
C24Z	5	Comber WF JCT	Sandwich JCT	DFL
C24Z	6	Comber WF JCT	Comber WF CTS	LC
C25H	1	Chats Falls SS	Havelock TS	N
C27P	1	Bannockburn JCT	Dobbin TS	DFL
C27P	2	Galetta JCT	Bannockburn JCT	DFL
C27P	3	Chats Falls SS	Galetta JCT	DFL
C27P	5	Galetta JCT	Arnprior GS	LC
C2A	1	Cameron Falls GS	Alexander SS	LC
C2A	2	Alexander SS	Alexander GS	LC
C2A	3	Alexander SS	Alexander SS	LC
C2L	1	C2L C3L STR 85 JCT	Ellesmere TS	OTHER
C2L	2	Ellesmere TS	C2L C3L STR 34 JCT	OTHER

Operation Designation	Section	From	To	Functional Category
C2L	5	Cherrywood TS	Ellesmere JCT	DFL
C2L	6	Ellesmere JCT	Scarboro JCT	DFL
C2L	7	Scarboro JCT	Leaside TS	DFL
C2L	8	Scarboro JCT	Scarboro TS	LC
C2L	9	Ellesmere JCT	Ellesmere TS	LC
C2P	1	Crowland TS	Tunnel JCT	LC
C2P	2	Tunnel JCT	JBL JCT	LC
C2P	3	Vale Inco JCT	Port Colborne TS	LC
C2P	4	Tunnel JCT	Panabrasives CTS	LC
C2P	5	Vale Inco JCT	ValeCanLtd-PrtClbrne	LC
C2P	6	JBL JCT	Vale Inco JCT	LC
C2P	7	JBL JCT	JBL CSS	LC
C31	1	Chatham SS	C31 SKWP CMS JCT	LC
C35P	1	Cherrywood TS	Markham #2 JCT	DFL
C35P	2	Markham #2 JCT	Markham #3 JCT	DFL
C35P	3	Markham #3 JCT	Parkway TS	DFL
C35P	4	Markham #2 JCT	Markham #2 PH JCT	LC
C35P	5	Markham #2 PH JCT	Markham MTS #2	LC
C35P	6	Markham #3 JCT	Markham #3 PH JCT	LC
C35P	7	Markham #3 PH JCT	Markham MTS #3	LC
C36P	1	Cherrywood TS	Markham #2 JCT	DFL
C36P	2	Markham #2 JCT	Markham #3 JCT	DFL
C36P	3	Markham #3 JCT	Parkway TS	DFL
C36P	4	Markham #2 JCT	Markham #2 PH JCT	LC
C36P	5	Markham #2 PH JCT	Markham MTS #2	LC
C36P	6	Markham #3 JCT	Markham #3 PH JCT	LC
C36P	7	Markham #3 PH JCT	Markham MTS #3	LC
C3A	1	Cameron Falls GS	Alexander SS	LC
C3A	2	Alexander SS	Alexander GS	LC
C3A	3	Alexander SS	Alexander SS	LC
C3L	1	C2L C3L STR 85 JCT	Ellesmere TS	OTHER
C3L	2	Ellesmere TS	C2L C3L STR 34 JCT	OTHER
C3L	4	Leaside Str 4-5 JCT	Leaside TS	DFL
C3L	5	Cherrywood TS	Ellesmere JCT	DFL
C3L	6	Ellesmere JCT	Scarboro JCT	DFL
C3L	7	Scarboro JCT	Leaside Str 4-5 JCT	DFL
C3L	8	Scarboro JCT	Scarboro TS	LC
C3L	9	Ellesmere JCT	Ellesmere TS	LC
C3L	10	Leaside Str 4-5 JCT	Leaside TS	DFL
C3S	1	Chats Falls SS	South March TS	N
C3S	3	South March TS	Kanata MTS #1	LC
C4R	1	Cherrywood TS	Malvern TS	DFL

Operation Designation	Section	From	To	Functional Category
C4R	2	Malvern TS	Agincourt JCT	DFL
C4R	3	Agincourt JCT	Leslie TS	DFL
C4R	4	Finch JCT	Richview TS	DFL
C4R	5	Agincourt JCT	Agincourt TS	LC
C4R	6	Finch JCT	Finch TS	LC
C4R	9	Leslie TS	Finch JCT	DFL
C550VP	15	Parkway JCT	Parkway TS	N
C550VP	18	Cherrywood TS	Parkway JCT	N
C550VP	19	Parkway JCT	Claireville TS	N
C551V	21	Cherrywood TS	Claireville TS	N
C552V	1	Cherrywood TS	Claireville TS	N
C553VP	1	Cherrywood TS	Parkway JCT	N
C553VP	2	Parkway JCT	Claireville TS	N
C553VP	3	Parkway JCT	Parkway TS	N
C5E	1	Cecil TS	Terauley TS	LC
C5E	2	Terauley TS	Manhole A OPF	LC
C5E	3	Manhole A OPF	Esplanade TS	LC
C5R	1	Cherrywood TS	Malvern TS	DFL
C5R	2	Malvern TS	Agincourt JCT	DFL
C5R	3	Agincourt JCT	Leslie TS	DFL
C5R	4	Leslie TS	Richview TS	DFL
C5R	6	Leslie TS	Leslie TS	LC
C7BM	1	Arnprior JCT	Barrett Chute SS	DFL
C7BM	2	Fitzroy JCT	Arnprior JCT	DFL
C7BM	3	Chats Falls SS	Fitzroy JCT	OTHER
C7BM	4	Fitzroy JCT	Bellman JCT	DFL
C7BM	6	NQL1 B JCT	Merivale TS	DFL
C7BM	7	NQL1 B JCT	Centre Point JCT	LC
C7BM	8	Woodroffe TS	Lincoln Heights TS	LC
C7BM	9	NQL1 B JCT	Manordale JCT	LC
C7BM	10	Arnprior JCT	Arnprior TS	LC
C7BM	11	Centre Point JCT	Woodroffe TS	LC
C7BM	14	Manordale JCT	Manordale JCT	LC
C7BM	19	Centre Point JCT	Centre Point MTS	LC
C7BM	20	Centre Point MTS	Centre Point MTS	LC
C7BM	21	Centre Point MTS	Centre Point MTS	LC
C7BM	24	Manordale JCT	Manordale MTS	LC
C7BM	25	Manordale JCT	Manordale MTS	LC
C7BM	26	Bellman JCT	NQL1 B JCT	DFL
C7E	1	Cecil TS	Terauley TS	LC
C7E	2	Terauley TS	Manhole A OPF	LC
C7E	3	Manhole A OPF	Esplanade TS	LC

Operation Designation	Section	From	To	Functional Category
C9	1	Caledonia TS	Caledonia Q35M JCT	LC
C9	2	Caledonia Q35M JCT	Hartford JCT	LC
C9	3	Hartford JCT	Vanessa JCT	LC
C9	4	Caledonia Q35M JCT	Caledonia Q35M JCT	OTHER
C9	5	Vanessa JCT	Bloomsburg JCT	LC
C9	6	Bloomsburg JCT	Norfolk TS	LC
C9	7	Bloomsburg JCT	Bloomsburg DS	LC
D10H	1	Detweiler TS	Leong JCT	LC
D10H	2	Leong JCT	Waterloo JCT	LC
D10H	3	Waterloo JCT	Wallenstein JCT	LC
D10H	4	Wallenstein JCT	Palmerston TS	OTHER
D10H	5	Palmerston TS	Hanover TS	LC
D10H	6	Waterloo JCT	Rush MTS	LC
D10H	7	Wallenstein JCT	Elmira TS	LC
D10S	1	DeCew Falls SS	Hooper's JCT	LC
D10S	2	Hooper's JCT	Vansickle TS	LC
D10S	3	Vansickle TS	Louth JCT	LC
D10S	4	Louth JCT	Glendale TS	LC
D10S	6	Louth JCT	Carlton TS	LC
D11K	1	Detweiler TS	Kitchener #1&4 JCT	LC
D11K	2	Kitchener #1&4 JCT	Kitchener MTS#1	LC
D11K	3	Kitchener #1&4 JCT	Kitchener MTS#4	LC
D12K	1	Detweiler TS	Kitchener #1&4 JCT	LC
D12K	2	Kitchener #1&4 JCT	Kitchener MTS#1	LC
D12K	3	Kitchener #1&4 JCT	Kitchener MTS#4	LC
D1A	1	Holland Road JCT	Allanburg TS	LC
D1A	2	Fibre JCT	Holland Road JCT	LC
D1A	3	Gibson JCT	Fibre JCT	LC
D1A	4	St.Johns Valley JCT	Gibson JCT	LC
D1A	5	Hooper's JCT	St.Johns Valley JCT	LC
D1A	6	DeCew Falls SS	Hooper's JCT	LC
D1A	7	Holland Road JCT	ResFP Thorold CTS	LC
D1A	8	Fibre JCT	D1A STR 4A JCT	OTHER
D1A	9	Gibson JCT	Thorold TS	LC
D1M	1	Des Joachims TS	Minden TS	N
D1W	1	Detweiler JCT	Wolverton JCT	LC
D1W	2	Wolverton JCT	D1W STR 82 JCT	OTHER
D1W	3	Wolverton JCT	Wolverton DS	LC
D23G	2	Pinard TS	Pinard D23G JCT	LC
D26A	1	Dryden TS	Dinorwic JCT	N
D2H	1	Pinard TS	Pinard JCT #2	LC
D2H	2	Pinard JCT #2	Hwy 634 JCT	LC

Operation Designation	Section	From	To	Functional Category
D2H	3	Pinard JCT #2	Hwy 634 JCT	LC
D2H	4	Hwy 634 JCT	Island Falls JCT	LC
D2H	5	Hwy 634 JCT	Island Falls JCT	LC
D2H	6	Island Falls JCT	Greenwater Pr Pk JCT	LC
D2H	7	Island Falls JCT	Greenwater Pr Pk JCT	LC
D2H	8	Greenwater Pr Pk JCT	Calder JCT	LC
D2H	9	Greenwater Pr Pk JCT	Calder JCT	LC
D2H	10	Hunta JCT	Hunta SS	LC
D2H	11	Hunta JCT	Hunta JCT	LC
D2H	12	Hwy 634 JCT	Hwy 634 JCT	LC
D2H	13	Island Falls JCT	Island Falls JCT	LC
D2H	14	Greenwater Pr Pk JCT	Greenwater Pr Pk JCT	LC
D2H	15	Pinard JCT #2	Pinard JCT #2	LC
D2H	18	Calder JCT	Calder JCT	LC
D2H	19	Calder JCT	Hunta JCT	LC
D2H	20	Calder JCT	Hunta JCT	LC
D2H	21	Calder JCT	Calder CSS	LC
D2L	1	Dymond TS	New Liskeard JCT	DFL
D2L	2	Upper Notch JCT	Cassels 2 JCT	DFL
D2L	3	Upper Notch JCT	Cassels 2 JCT	DFL
D2L	4	Cassels 2 JCT	Herridge Lake JCT	DFL
D2L	5	Cassels 2 JCT	Herridge Lake JCT	DFL
D2L	6	Herridge Lake JCT	Marten River JCT	DFL
D2L	7	Herridge Lake JCT	Marten River JCT	DFL
D2L	8	Marten River JCT	D2L STR 409 JCT	DFL
D2L	9	Marten River JCT	D2L STR 409 JCT	DFL
D2L	10	Cassels JCT	Temagami DS	LC
D2L	13	Cassels 2 JCT	Cassels JCT	DFL
D2L	14	Cassels JCT	Cassels 2 JCT	DFL
D2L	15	Herridge Lake JCT	Herridge Lake DS	DFL
D2L	16	Herridge Lake DS	Herridge Lake JCT	DFL
D2L	17	D2L STR 409 JCT	Crystal Falls SS	DFL
D2L	18	New Liskeard JCT	Upper Notch JCT	DFL
D2L	19	New Liskeard JCT	New Liskeard JCT #2	LC
D2M	1	Des Joachims TS	Otter Creek JCT	DFL
D2M	2	Otter Creek JCT	Minden TS	DFL
D2M	3	Otter Creek JCT	Wallace JCT	LC
D2M	4	Otter Creek JCT	Otter Creek JCT	LC
D2M	5	Wallace JCT	Wallace TS	LC
D2M	6	Wallace JCT	Wallace TS	LC
D3A	1	Fibre JCT	Allanburg TS	LC
D3A	2	St.Johns Valley JCT	Gibson JCT	LC

Operation Designation	Section	From	To	Functional Category
D3A	3	Hooper's JCT	St.Johns Valley JCT	LC
D3A	4	DeCew Falls SS	Hooper's JCT	LC
D3A	5	Gibson JCT	Thorold TS	LC
D3A	6	Allanburg TS	Michigan JCT	LC
D3A	7	Michigan JCT	ASW Steel JCT	LC
D3A	8	Gibson JCT	Fibre JCT	LC
D3A	9	Fibre JCT	Fibre JCT	OTHER
D3A	10	ASW Steel JCT	ASW Steel CTS	LC
D3A	11	ASW Steel JCT	ASW Steel CTS	LC
D3H	1	Pinard TS	Pinard JCT #2	LC
D3H	2	Pinard JCT #2	Hwy 634 JCT	LC
D3H	3	Pinard JCT #2	Hwy 634 JCT	LC
D3H	4	Hwy 634 JCT	Island Falls JCT	LC
D3H	5	Hwy 634 JCT	Island Falls JCT	LC
D3H	6	Island Falls JCT	Greenwater Pr Pk JCT	LC
D3H	7	Island Falls JCT	Greenwater Pr Pk JCT	LC
D3H	8	Greenwater Pr Pk JCT	Calder JCT	LC
D3H	9	Greenwater Pr Pk JCT	Calder JCT	LC
D3H	10	Hunta JCT	Hunta SS	LC
D3H	11	Hunta JCT	Hunta JCT	LC
D3H	12	Hwy 634 JCT	Hwy 634 JCT	LC
D3H	13	Island Falls JCT	Island Falls JCT	LC
D3H	14	Greenwater Pr Pk JCT	Greenwater Pr Pk JCT	LC
D3H	15	Pinard JCT #2	Pinard JCT #2	LC
D3H	16	Calder JCT	Hunta JCT	LC
D3H	17	Calder JCT	Hunta JCT	LC
D3H	18	Calder JCT	Calder JCT	LC
D3K	1	Dymond TS	Nine Mile JCT	DFL
D3K	2	Nine Mile JCT	Dane JCT	DFL
D3K	3	Dane JCT	Gull Lake South JCT	DFL
D3K	4	Dane JCT	Notre Developmnt CTS	OTHER
D3K	5	Gull Lake South JCT	Kirkland Lake TS	DFL
D3M	1	Des Joachims TS	Minden TS	N
D4	1	Pinard TS	Pinard JCT #2	LC
D4	2	Pinard JCT #2	Abitibi Canyon GS	LC
D4	3	Pinard JCT #2	Abitibi Canyon GS	LC
D4M	1	Des Joachims TS	Otter Creek JCT	N
D4M	2	Otter Creek JCT	Minden TS	N
D4W	1	Detweiler TS	Kitchener #9 JCT	DFL
D4W	2	Kitchener #9 JCT	Buchanan TS	DFL
D4W	3	Kitchener #9 JCT	Kitchener MTS#9	LC
D4Z	1	Dymond TS	Nine Mile JCT	N

Operation Designation	Section	From	To	Functional Category
D4Z	2	Nine Mile JCT	IPB Casey JCT	N
D501P	3	Pinard TS	Porcupine TS	N
D5A	1	St.Isidore TS	Cumberland JCT	N
D5A	2	Orleans JCT #2	Hawthorne TS	DFL
D5A	3	St.Isidore TS	Longueuil JCT	LC
D5A	4	Longueuil JCT	Ivaco CTS	LC
D5A	5	Longueuil JCT	Longueuil TS	LC
D5A	6	Cumberland JCT	IPB Masson JCT	N
D5A	7	Orleans JCT #2	Orleans TS	LC
D5A	10	Cumberland JCT	Orleans JCT #2	DFL
D5D	1	Dryden TS	Dryden JCT B	LC
D5D	2	Dryden JCT B	Domtar Dryden CTS	LC
D5D	3	Dryden JCT B	Dryden JCT B	OTHER
D5H	1	Des Joachims TS	Otto Holden TS	N
D5W	1	Detweiler TS	Kitchener #9 JCT	DFL
D5W	2	Kitchener #9 JCT	Buchanan TS	DFL
D5W	3	Kitchener #9 JCT	Kitchener MTS#9	LC
D6	1	Des Joachims TS	Des Joachims JCT	LC
D6	2	Des Joachims JCT	Tee Lake JCT	LC
D6	3	Tee Lake JCT	Deep River DS	LC
D6	4	Deep River DS	Chalk River CTS	LC
D6	5	Des Joachims JCT	Des Joachims DS	LC
D6	6	Tee Lake JCT	NPD #2 STR10 JCT	OTHER
D6	7	Chalk River CTS	19D684-1 JCT	LC
D6	8	Petawawa JCT	Forest Lea JCT	LC
D6	9	Forest Lea JCT	Pembroke TS	OTHER
D6	10	Forest Lea JCT	Forest Lea DS	LC
D6	11	Petawawa JCT	Craig JCT	LC
D6	12	Craig JCT	Petawawa DS	LC
D6	13	Craig JCT	Craig DS	LC
D6	14	19D684-1 JCT	Petawawa JCT	LC
D6T	1	Pinard TS	Pinard JCT #2	LC
D6T	2	Pinard JCT #2	Abitibi Canyn JCT #2	LC
D6T	3	Pinard JCT #2	Abitibi Canyn JCT #2	LC
D6T	4	Abitibi Canyn JCT #2	P Sutherland Sr JCT	LC
D6T	5	Otter Rapids SS	Otter Rapids SS	LC
D6T	6	Otter Rapids SS	Otter Rapids SS	OTHER
D6T	7	Otter Rapids SS	Otter Rapids GS	OTHER
D6T	8	P Sutherland Sr JCT	Otter Rapids SS	LC
D6T	9	P Sutherland Sr JCT	P Sutherland Sr SYD	LC
D6V	1	Detweiler TS	Waterloo North 3 JCT	DFL
D6V	2	Scheifele JCT	Guelph North JCT	DFL

Operation Designation	Section	From	To	Functional Category
D6V	3	Fergus JCT	Orangeville TS	DFL
D6V	4	Fergus JCT	Fergus TS	LC
D6V	5	Guelph North JCT	Fergus JCT	DFL
D6V	6	Guelph North JCT	Campbell TS	DFL
D6V	7	Waterloo North 3 JCT	Scheifele JCT	DFL
D6V	8	Waterloo North 3 JCT	Waterloo North MTS 3	LC
D6V	9	Scheifele JCT	Scheifele MTS	LC
D6V	10	Campbell TS	Speed River JCT	DFL
D6V	11	Speed River JCT	Cedar TS	DFL
D6Y	1	Duplex TS	Glengrove TS	LC
D7F	1	Detweiler TS	Detweiler JCT	DFL
D7F	2	Detweiler JCT	Kitchener #6 JCT	DFL
D7F	3	Kitchener #6 JCT	Siebert JCT	DFL
D7F	4	Siebert JCT	D7F_D9F T#162 PH JCT	DFL
D7F	5	Kitchener MTS#7	Freeport SS	DFL
D7F	6	Siebert JCT	Kitchener #2&3 JCT	LC
D7F	7	Kitchener #2&3 JCT	Kitchener MTS#3	LC
D7F	9	Kitchener MTS#7	Kitchener MTS#7	LC
D7F	10	D7F_D9F T#162 PH JCT	D7F_D9F T#157 PH JCT	DFL
D7F	11	D7F_D9F T#157 PH JCT	Kitchener MTS#7	DFL
D7V	1	Detweiler TS	Waterloo North 3 JCT	DFL
D7V	2	Scheifele JCT	Guelph North JCT	DFL
D7V	3	Fergus JCT	Orangeville TS	DFL
D7V	4	Fergus JCT	Fergus TS	LC
D7V	5	Guelph North JCT	Fergus JCT	DFL
D7V	6	Guelph North JCT	Campbell TS	DFL
D7V	7	Waterloo North 3 JCT	Scheifele JCT	DFL
D7V	8	Waterloo North 3 JCT	Waterloo North MTS 3	LC
D7V	9	Scheifele JCT	Scheifele MTS	LC
D7V	10	Campbell TS	Speed River JCT	N
D7V	11	Speed River JCT	Cedar TS	N
D8S	1	Detweiler TS	Leong JCT	LC
D8S	2	Leong JCT	St.Marys TS	LC
D8S	3	Leong JCT	Rush MTS	LC
D9F	1	Detweiler TS	Detweiler JCT	DFL
D9F	2	Detweiler JCT	Kitchener #6 JCT	DFL
D9F	3	Kitchener #6 JCT	Siebert JCT	DFL
D9F	4	Siebert JCT	D7F_D9F T#162 PH JCT	DFL
D9F	5	Kitchener MTS#7	Freeport SS	DFL
D9F	6	Siebert JCT	Kitchener #2&3 JCT	LC
D9F	7	Kitchener #2&3 JCT	Kitchener MTS#3	LC
D9F	9	Kitchener MTS#7	Kitchener MTS#7	LC

Operation Designation	Section	From	To	Functional Category
D9F	10	D7F_D9F T#162 PH JCT	D7F_D9F T#157 PH JCT	DFL
D9F	11	D7F_D9F T#157 PH JCT	Kitchener MTS#7	DFL
D9HS	1	DeCew Falls SS	Hooper's JCT	LC
D9HS	2	Hooper's JCT	Vansickle TS	LC
D9HS	3	Vansickle TS	Louth JCT	LC
D9HS	7	Louth JCT	Carlton TS	LC
D9HS	8	Beach Road JCT	Beach TS	LC
D9HS	9	Louth JCT	Glendale TS	LC
E1C	1	Ear Falls TS	Selco JCT	DFL
E1C	2	Selco JCT	Slate Falls JCT	DFL
E1C	3	Etruscan JCT	Pickle Lake SS	DFL
E1C	5	Etruscan JCT	Etruscan Entrprs CTS	OTHER
E1C	8	Golden Patricia JCT	Etruscan JCT	DFL
E1C	11	Slate Falls JCT	Golden Patricia JCT	DFL
E1C	12	Slate Falls JCT	Slate Falls DS	LC
E1C	13	Placer JCT	Crow River DS	LC
E1C	14	Placer JCT	Placer JCT	LC
E1C	15	Placer JCT	Crow River DS	LC
E1C	16	Placer JCT	Musselwhite CSS	LC
E1C	17	Golden Patricia JCT	Golden Patricia JCT	LC
E1W	1	Essa TS	Minesing JCT	OTHER
E20S	1	Essa TS	Stayner TS	N
E21S	1	Essa TS	Stayner TS	N
E26	1	Essa TS	Waubaushene JCT	LC
E26	2	Waubaushene JCT	Parry Sound JCT	LC
E26	3	Parry Sound JCT	Parry Sound TS	LC
E26	4	Waubaushene JCT	Waubaushene TS	LC
E27	1	Essa TS	Waubaushene JCT	LC
E27	2	Waubaushene JCT	Parry Sound JCT	LC
E27	3	Parry Sound JCT	Parry Sound TS	LC
E27	4	Waubaushene JCT	Waubaushene TS	LC
E2Q	1	Elliot Lake TS	Quirke Lake JCT	OTHER
E2Q	2	Quirke Lake JCT	Denison Mines CTS	OTHER
E2R	1	Ear Falls TS	Pakwash JCT	LC
E2R	2	Pakwash JCT	Balmer JCT	LC
E2R	4	Balmer JCT	Red Lake TS	LC
E34M	1	Merivale TS	Terry Fox JCT	DFL
E34M	2	Terry Fox JCT	Terry Fox JCT	DFL
E34M	3	Terry Fox JCT	Didsbury Road JCT	DFL
E34M	4	Didsbury Road JCT	Almonte TS	DFL
E34M	5	Almonte TS	Almonte TS	LC
E34M	6	Almonte TS	Almonte TS	DFL

Operation Designation	Section	From	To	Functional Category
E34M	7	Terry Fox JCT	Terry Fox MTS	LC
E34M	8	Terry Fox JCT	Terry Fox MTS	LC
E3B	1	Essa TS	Barrie TS	LC
E4B	1	Essa TS	Barrie TS	LC
E4D	1	Ear Falls TS	Scout Lake JCT	DFL
E4D	2	Scout Lake JCT	Dryden TS	DFL
E4D	3	Scout Lake JCT	Perrault Falls DS	LC
E510V	1	Essa TS	Claireville TS	N
E511V	1	Essa TS	Claireville TS	N
E564L	1	Evergreen SS	Longwood TS	N
E578P	1	Evergreen SS	Parkhill CTS	N
E6L	1	Seaforth TS	Egmondville CSS	LC
E8F	1	Essex TS	Chrysler WAP MTS	LC
E8F	2	Chrysler WAP MTS	G.M.Windsor MTS	LC
E8F	3	G.M.Windsor MTS	Ford Annex MTS	LC
E8F	4	Ford Annex MTS	Ford Windsor MTS	LC
E8F	5	Ford Windsor MTS	East Windsor CGS	LC
E8V	1	Essa TS	Alliston JCT	DFL
E8V	2	Alliston JCT	Everett JCT	DFL
E8V	3	Alliston JCT	Alliston TS	LC
E8V	4	Alliston JCT	Alliston TS	LC
E8V	6	Alliston JCT	Alliston JCT	DFL
E8V	7	Everett JCT	Orangeville TS	DFL
E8V	8	Everett JCT	Everett TS	LC
E9F	1	Essex TS	Chrysler WAP MTS	LC
E9F	2	Chrysler WAP MTS	G.M.Windsor MTS	LC
E9F	3	G.M.Windsor MTS	Ford Annex MTS	LC
E9F	4	Ford Annex MTS	Ford Windsor MTS	LC
E9F	5	Ford Windsor MTS	East Windsor CGS	LC
E9V	1	Essa TS	Alliston JCT	DFL
E9V	2	Alliston JCT	Everett JCT	DFL
E9V	3	Alliston JCT	Alliston TS	LC
E9V	4	Alliston JCT	Alliston TS	OTHER
E9V	6	Alliston JCT	Alliston JCT	DFL
E9V	7	Everett JCT	Orangeville TS	DFL
E9V	8	Everett JCT	Everett TS	LC
F10MV	1	Merivale TS	City View JCT	LC
F10MV	2	City View JCT	Val Tetreau JCT	LC
F10MV	4	City View JCT	Woodroffe TS	LC
F10MV	5	Woodroffe TS	Lincoln Heights TS	LC
F10MV	6	Val Tetreau JCT	Hinchey TS	LC
F11C	1	Freeport SS	Speedsville JCT	DFL

Operation Designation	Section	From	To	Functional Category
F11C	2	Speedsville JCT	Preston TS	OTHER
F11C	3	Speedsville JCT	Speed River JCT	DFL
F11C	4	Speed River JCT	Cedar TS	DFL
F11C	5	Freeport SS	Kitchener Graber JCT	LC
F11C	6	Kitchener Graber JCT	Kitchener MTS#5	LC
F11C	7	Freeport SS	Freeport SS	DFL
F12C	1	Freeport SS	Speedsville JCT	DFL
F12C	2	Speedsville JCT	Preston TS	DFL
F12C	3	Speedsville JCT	Speed River JCT	DFL
F12C	4	Speed River JCT	Cedar TS	DFL
F12C	5	Freeport SS	Kitchener Graber JCT	LC
F12C	6	Kitchener Graber JCT	Kitchener MTS#5	LC
F12C	7	Freeport SS	Freeport SS	DFL
F1B	1	Fort Frances TS	Fort Frances JCT	LC
F1B	2	Burleigh JCT	Burleigh DS	LC
F1B	3	Fort Frances TS	Fort Frances MTS	LC
F1B	4	Fort Frances JCT	Burleigh JCT	LC
F1B	5	Burleigh JCT	Hwy #11 JCT	OTHER
F1E	1	Kapuskasing TS	AP Calstock CSS JCT	LC
F1E	2	Nagagami CSS JCT	Hearst TS	LC
F1E	3	Kapuskasing TS	Spruce Falls TS	N
F1E	4	AP Calstock CSS JCT	A.P. Calstock CSS	LC
F1E	5	AP Calstock CSS JCT	Nagagami CSS JCT	LC
F1E	6	Nagagami CSS JCT	Nagagami CSS	LC
F25A	1	Fort Frances TS	Mackenzie TS	N
F2B	1	Fort Frances TS	H2O Pwr FtFrnces CTS	LC
F3M	1	Fort Frances TS	H2O Pwr FtFrnces CTS	N
F3M	2	H2O Pwr FtFrnces CTS	Int'l Bdy Minn JCT	N
FA16G3K	1	Matachewan JCT	Indian Chute JCT	OTHER
FS23M1	1	Elliot Lake TS	Quirke Lake JCT	OTHER
FS9M6	1	Martindale TS	Dominion Drive DS	OTHER
H	1	Summerhaven SS	Summerhaven CSS	LC
H BUS	1	Rabbit Lake SS	Kenora DS	LC
H10EJ	1	Hearn SS	Don Fleet JCT	LC
H10EJ	2	Don Fleet JCT	Esplanade TS	LC
H10EJ	3	Esplanade TS	John TS	OTHER
H10EJ	4	Hearn SS	Hearn SS	LC
H11L	1	Hearn SS	Waverly OPF	LC
H11L	2	Main TS	Lumsden JCT	LC
H11L	3	Lumsden JCT	Todmorden JCT	LC
H11L	4	Todmorden JCT	Leaside TS	LC
H11L	7	Waverly OPF	Brookside OPF	LC

Operation Designation	Section	From	To	Functional Category
H11L	8	Brookside OPF	Main TS	LC
H12P	1	Hearn SS	Portlands Energy JCT	LC
H12P	3	Hearn SS	Hearn SS	LC
H13P	1	Hearn SS	Portlands Energy JCT	LC
H13P	3	Hearn SS	Hearn SS	LC
H14P	1	Hearn SS	Portlands Energy JCT	LC
H14P	3	Hearn SS	Hearn SS	LC
H1L	1	Hearn SS	Basin TS	LC
H1L	2	Basin TS	Mill Street JCT	LC
H1L	3	Mill Street JCT	Gerrard TS	LC
H1L	4	Gerrard TS	Bloor Street JCT	LC
H1L	5	Bloor Street JCT	Leaside TS	LC
H1L	6	Basin TS	Basin TS	LC
H1L	7	Gerrard TS	Carlaw TS	LC
H2	1	Wiltshire TS	Wiltshire TS	DFL
H22D	1	Harmon GS	Harmon JCT	LC
H22D	2	Harmon JCT	Smoky Falls JCT	LC
H22D	3	Little Long JCT	Pinard TS	LC
H22D	4	Little Long JCT	Little Long 2 JCT	LC
H22D	5	Harmon JCT	Kipling JCT	LC
H22D	6	Smoky Falls JCT	Little Long JCT	LC
H22D	7	Kipling JCT	Kipling GS	LC
H22D	9	Smoky Falls JCT	Smoky Falls 2 JCT	LC
H23B	1	Hinchinbrooke SS	Pancake JCT	N
H23B	2	Pancake JCT	Belleville TS	N
H23S	1	Otto Holden TS	Widdifield SS	N
H23S	2	Widdifield SS	Pedley JCT	DFL
H23S	3	Pedley JCT	Martindale TS	DFL
H23S	4	Pedley JCT	Crystal Falls TS	LC
H24C	1	Havelock TS	Marine JCT	DFL
H24C	2	Marine JCT	Oshawa Area JCT	DFL
H24C	4	Oshawa Area JCT	Columbus JCT	DFL
H24C	5	Columbus JCT	Whitby JCT	DFL
H24C	6	Columbus JCT	Lasco JCT	LC
H24C	7	Lasco JCT	Thornton JCT	LC
H24C	8	Thornton JCT	Thornton TS	LC
H24C	9	Thornton JCT	Oshawa G.M. JCT	LC
H24C	10	Lasco JCT	Atlantic Packgng JCT	LC
H24C	11	Marine JCT	Otonabee TS	LC
H24C	12	Atlantic Packgng JCT	Gerdau A. Whitby CTS	LC
H24C	13	Atlantic Packgng JCT	Atlantic Packgng CTS	LC
H24C	14	Oshawa G.M. JCT	Oshawa G.M. TS	LC

Operation Designation	Section	From	To	Functional Category
H24C	15	Oshawa G.M. JCT	G.M.Oshawa JCT	OTHER
H24C	17	Whitby JCT	Cherrywood TS	DFL
H24C	18	Whitby JCT	Whitby TS	LC
H24S	1	Otto Holden TS	Widdifield SS	N
H24S	2	Widdifield SS	A.P. North Bay JCT	DFL
H24S	3	Grant JCT	Martindale TS	DFL
H24S	4	Widdifield SS	Trout Lake TS	LC
H24S	5	Grant JCT	Crystal Falls TS	LC
H24S	6	A.P. North Bay JCT	Grant JCT	DFL
H24S	7	A.P. North Bay JCT	A.P. North Bay JCT	LC
H26C	1	Havelock TS	Marine JCT	DFL
H26C	2	Marine JCT	Oshawa Area JCT	DFL
H26C	4	Oshawa Area JCT	Columbus JCT	DFL
H26C	5	Columbus JCT	Whitby JCT	DFL
H26C	6	Columbus JCT	Lasco JCT	LC
H26C	7	Lasco JCT	Thornton JCT	LC
H26C	8	Thornton JCT	Thornton TS	LC
H26C	9	Thornton JCT	Oshawa G.M. JCT	LC
H26C	10	Lasco JCT	Atlantic Packgng JCT	LC
H26C	12	Atlantic Packgng JCT	Whitby CGS JCT	LC
H26C	13	Atlantic Packgng JCT	Atlantic Packgng CTS	LC
H26C	14	Oshawa G.M. JCT	Oshawa G.M. TS	LC
H26C	15	Oshawa G.M. JCT	G.M.Oshawa JCT	OTHER
H26C	18	Whitby CGS JCT	Gerdau A. Whitby CTS	LC
H26C	19	Whitby CGS JCT	Whitby CGS	LC
H26C	20	B23C H26C Tie JCT	Cherrywood TS	DFL
H26C	22	Whitby JCT	B23C H26C Tie JCT	DFL
H26C	23	Whitby JCT	Whitby TS	LC
H27H	1	Hinchinbrooke SS	Bannockburn JCT	N
H27H	2	Bannockburn JCT	Havelock TS	N
H29	1	Hurontario SS	Pleasant TS	LC
H2JK	1	Hearn SS	Basin TS	LC
H2JK	2	Basin TS	Don Fleet JCT	LC
H2JK	3	Basin TS	Don Fleet JCT	LC
H2JK	4	Don Fleet JCT	Esplanade TS	LC
H2JK	5	Esplanade TS	John TS	OTHER
H2JK	6	John TS	Strachan TS	LC
H2JK	8	Riverside JCT	Manby TS	LC
H2JK	10	Strachan TS	Riverside JCT	LC
H2JK	11	Hearn SS	Basin TS	OTHER
H2JK	12	John TS	John TS	LC
H2JK	16	Hearn SS	Hearn SS	LC

Operation Designation	Section	From	To	Functional Category
H2JK	17	Strachan TS	Strachan TS	LC
H2JK	18	Strachan TS	Strachan TS	LC
H2N	3	Calstock DS JCT	Calstock DS	LC
H30	1	Hurontario SS	Pleasant TS	LC
H35D	1	Beach TS	Dof.Bay Front CTS	LC
H36D	1	Beach TS	Dof.Bay Front CTS	LC
H3L	1	Hearn SS	Basin TS	LC
H3L	2	Basin TS	Mill Street JCT	LC
H3L	3	Mill Street JCT	Gerrard TS	LC
H3L	5	Gerrard TS	Bloor Street JCT	LC
H3L	6	Bloor Street JCT	Leaside TS	LC
H3L	7	Basin TS	Basin TS	LC
H3L	8	Gerrard TS	Carlaw TS	LC
H3L	9	Gerrard TS	Bloor Street JCT	LC
H4Z	1	Otto Holden TS	IPB La Cave JCT	N
H5K	1	Beach TS	Kenilworth TS	LC
H6K	1	Beach TS	Kenilworth TS	LC
H6LC	1	Hearn SS	Don Fleet JCT	LC
H6LC	2	Gerrard JCT	Bloor Street JCT	LC
H6LC	3	Bloor Street JCT	Leaside TS	LC
H6LC	4	Gerrard JCT	Cecil TS	LC
H6LC	5	Don Fleet JCT	Gerrard JCT	LC
H6T	1	Hunta SS	Tisdale JCT	DFL
H6T	2	Tisdale JCT	Laforest Road JCT	DFL
H6T	3	Laforest Road JCT	Timmins TS	DFL
H6T	4	Laforest Road JCT	Laforest Road DS	LC
H7L	1	Hearn SS	Waverly OPF	LC
H7L	2	Main TS	Lumsden JCT	LC
H7L	3	Lumsden JCT	Todmorden JCT	LC
H7L	4	Todmorden JCT	Leaside TS	LC
H7L	7	Waverly OPF	Brookside OPF	LC
H7L	8	Brookside OPF	Main TS	LC
H7T	1	Hunta SS	Warkus JCT	DFL
H7T	2	Warkus JCT	Timmins TS	DFL
H7T	3	Warkus JCT	Kidd Minesite CTS	LC
H82V	1	Holland TS	Holland JCT	DFL
H82V	2	Holland JCT	Vaughan #4 JCT	DFL
H82V	3	Vaughan #4 JCT	Woodbridge JCT	DFL
H82V	4	Woodbridge JCT	Claireville TS	DFL
H82V	5	Vaughan #4 JCT	Vaughan MTS #4	LC
H83V	1	Holland TS	Holland JCT	DFL
H83V	2	Holland JCT	Vaughan #4 JCT	DFL

Operation Designation	Section	From	To	Functional Category
H83V	3	Vaughan #4 JCT	Woodbridge JCT	DFL
H83V	4	Woodbridge JCT	Claireville TS	DFL
H83V	5	Vaughan #4 JCT	Vaughan MTS #4	LC
H8LC	1	Hearn SS	Don Fleet JCT	LC
H8LC	2	Gerrard JCT	Bloor Street JCT	LC
H8LC	3	Bloor Street JCT	Leaside TS	LC
H8LC	4	Gerrard JCT	Cecil TS	LC
H8LC	5	Don Fleet JCT	Gerrard JCT	LC
H9A	1	Hawthorne TS	Orleans JCT #2	LC
H9A	2	Borromee JCT	Wilhaven JCT	LC
H9A	3	Cumberland JCT	Gamble H9A JCT	LC
H9A	5	Borromee JCT	Navan DS	LC
H9A	7	Wilhaven JCT	Cumberland JCT	LC
H9A	10	Orleans JCT	Bilberry Creek JCT	LC
H9A	11	Cumberland DS JCT	Orleans JCT	LC
H9A	12	Gamble H9A JCT	Cumberland DS JCT	LC
H9A	13	Gamble H9A JCT	IPB Masson JCT	N
H9A	15	Bilberry Creek JCT	Bilberry Creek TS	LC
H9A	16	Cumberland DS JCT	Cumberland DS	LC
H9A	17	Cumberland DS JCT	Cumberland DS	LC
H9A	19	Wilhaven JCT	Wilhaven DS	LC
H9A	20	Cumberland DS JCT	Cumberland DS JCT	LC
H9A	21	Bilberry Creek JCT	Bilberry Creek JCT	OTHER
H9A	22	Cumberland DS JCT	Cumberland DS JCT	LC
H9A	23	Cumberland DS JCT	Cumberland DS	OTHER
H9A	24	Gamble H9A JCT	Gamble H9A JCT	LC
H9A	25	Orleans JCT #2	Borromee JCT	LC
H9A	26	Orleans JCT #2	Orleans TS	LC
H9EJ	1	Hearn SS	Don Fleet JCT	LC
H9EJ	2	Don Fleet JCT	Esplanade TS	LC
H9EJ	3	Esplanade TS	John TS	OTHER
H9EJ	4	Hearn SS	Hearn SS	LC
H9K	1	Hunta H9K JCT	Smooth Rock Fals JCT	DFL
H9K	2	Hunta H9K JCT	H9K STR 127A JCT	DFL
H9K	3	H9K STR 127A JCT	Smooth Rk Fls JCT #2	DFL
H9K	4	Smooth Rk Fls JCT #2	Fauquier JCT	DFL
H9K	5	Fauquier JCT	Carmichael Falls JCT	DFL
H9K	6	Carmichael Falls JCT	Spruce Falls JCT	DFL
H9K	7	Spruce Falls JCT	Kapuskasing TS	DFL
H9K	10	Fauquier JCT	Fauquier DS	LC
H9K	11	Carmichael Falls JCT	Carmichael Falls JCT	LC
H9K	14	Hunta SS	Hunta H9K JCT	DFL

Operation Designation	Section	From	To	Functional Category
H9K	15	Smooth Rock Fals JCT	H9K STR 127A JCT	DFL
H9K	16	Smooth Rock Fals JCT	Smooth Rock Falls DS	LC
H9K	18	Kapuskasing TS	Tembec Kapuskas CTS	OTHER
H9W	1	Beach TS	West Lincoln JCT	LC
H9W	2	West Lincoln JCT	West Lincoln CSS	LC
HIGHFAL2	1	Anjigami CTS	Anjigami JCT	N
HIGHFAL2	3	Anjigami JCT	Wawa TS	LC
HL3	1	Beach TS	Birmingham TS	LC
HL3	2	Birmingham TS	Specialty Bar JCT	LC
HL3	3	Specialty Bar JCT	Stirton TS	LC
HL3	4	Stirton TS	Elgin TS	OTHER
HL3	5	Elgin TS	Newton TS	LC
HL3	6	Specialty Bar JCT	Specialty Bar CTS	LC
HL4	1	Beach TS	Birmingham TS	LC
HL4	2	Birmingham TS	Specialty Bar JCT	LC
HL4	3	Specialty Bar JCT	Stirton TS	LC
HL4	4	Stirton TS	Elgin TS	OTHER
HL4	5	Elgin TS	Newton TS	LC
HL4	6	Specialty Bar JCT	Specialty Bar CTS	LC
HLNGWTH1	1	Anjigami CTS	Anjigami JCT #2	N
HLNGWTH1	3	Anjigami JCT #2	Wawa TS	LC
IDLE12	1	Beach Road JCT	Beach TS	OTHER
IDLE13	1	Beach Road JCT	Beach TS	OTHER
IDLE14	1	Beach TS	Beach STR 44 JCT	OTHER
IDLE15	1	Allanburg West JCT	Rosedene JCT	OTHER
IDLE18	1	IDLE18 STR2 J	IDLE18 STR14 J	OTHER
IDLE19	1	Atikokan TGS	Marmion Lake JCT	OTHER
IDLE20	1	Buchanan TS	Buchanan JCT	OTHER
IDLE22	1	Des Joachims TS	Colony Lane JCT	OTHER
IDLE23	1	Nia Park EP J	Mid R. JCT Niagara	OTHER
IDLE24	1	Leong JCT	Nafziger Road JCT	OTHER
IDLE25	1	Major Ln Str 16 JCT	MacPherson Road JCT	OTHER
IDLE25	2	Major Ln Str 16 JCT	MacPherson Road JCT	OTHER
IDLE26	1	Buchanan JCT	Buchanan East JCT	OTHER
IDLE27	1	Centre JCT	Station Street JCT	OTHER
IDLE28	1	Kent TS	Kent JCT	OTHER
IDLE28	2	Kent JCT	T9K T#207 JCT	OTHER
IDLE29	1	Holland Marsh JCT	Holland JCT	OTHER
IDLE30	1	Holland Marsh JCT	Holland JCT	OTHER
IDLE8	1	Claireville TS	Claireville JCT	OTHER
IDLE9	1	Claireville TS	Claireville JCT	OTHER
J1B	1	Keith TS	Brighton Intface JCT	LC

Operation Designation	Section	From	To	Functional Category
J20B	1	Keith TS	Brighton Intface JCT	LC
J2N	1	Keith TS	W.Windsor Power JCT	LC
J3E	1	Keith TS	Crawford JCT	DFL
J3E	2	Crawford JCT	Essex TS	DFL
J3E	3	Crawford JCT	Crawford TS	LC
J4E	1	Keith TS	Crawford JCT	DFL
J4E	2	Crawford JCT	Essex TS	DFL
J4E	3	Crawford JCT	Crawford TS	LC
J5D	1	Keith TS	Mid R. JCT Waterman	N
K1	1	Kirkland Lake TS	Gull Lake North JCT	OTHER
K10SB	1	Richview JCT	Manby TS	OTHER
K10SB	2	Scarboro Idle JCT	Leaside Idle JCT	OTHER
K11W	1	Manby TS	Runnymede TS	DFL
K11W	2	Toronto Runnymede TS	Toronto Wiltshire TS	DFL
K12	1	Karn TS	Woodstock TS	DFL
K12	2	Woodstock TS	Commerce Way TS	DFL
K12W	1	Manby TS	Runnymede TS	DFL
K12W	2	Toronto Runnymede TS	Toronto Wiltshire TS	DFL
K13J	1	Manby TS	Riverside JCT	LC
K13J	3	Strachan TS	John TS	LC
K13J	4	Riverside JCT	Strachan TS	LC
K13J	5	Strachan TS	Strachan TS	LC
K14J	1	Manby TS	Riverside JCT	LC
K14J	3	Strachan TS	John TS	LC
K14J	4	Riverside JCT	Strachan TS	LC
K14J	5	Strachan TS	Strachan TS	LC
K1G	1	Kenilworth TS	Gage TS	OTHER
K1W	1	Manby TS	St.Clair Avenue JCT	DFL
K1W	2	St. Clair Avenue JCT	Toronto Wiltshire TS	DFL
K1W	4	St.Clair Avenue JCT	Fairbank TS	LC
K2	1	Kirkland Lake TS	Gull Lake North JCT	LC
K2	2	Gull Lake North JCT	Gull Lake South JCT	LC
K2	6	Gull Lake South JCT	Holloway Holt JCT	LC
K21C	1	Manby TS	Manby TS	LC
K21C	2	Manby TS	Applewood JCT	LC
K21C	3	Manby TS	Applewood JCT	LC
K21C	4	Applewood JCT	Applewood JCT	LC
K21C	5	Applewood JCT	Cooksville TS	LC
K21C	6	Cooksville TS	Cooksville TS	LC
K21W	1	Kenora TS	IPB Manitoba 230 JCT	N
K22W	1	Kenora TS	IPB Manitoba 230 JCT	N
K23C	1	Manby TS	Applewood JCT	LC

Operation Designation	Section	From	To	Functional Category
K23C	2	Applewood JCT	Cooksville TS	LC
K23C	3	Applewood JCT	Applewood JCT	OTHER
K23D	1	Kenora TS	TCPL Vermill Bay JCT	DFL
K23D	2	TCPL Vermill Bay JCT	Dryden TS	DFL
K23D	3	TCPL Vermill Bay JCT	TCPL Vermill Bay CTS	LC
K24F	1	Kenora TS	Rainy River Gold JCT	DFL
K24F	2	Rainy River Gold JCT	Fort Frances TS	DFL
K24F	3	Rainy River Gold JCT	Rainy River Gold CSS	LC
K25BUS	1	Sandusk SS	Sandusk CGS	LC
K2G	1	Kenilworth TS	Gage TS	OTHER
K2M	1	Rabbit Lake SS	Norman JCT	LC
K2Z	1	Kent TS	Kent JCT	OTHER
K2Z	2	Kent JCT	Tilbury JCT	OTHER
K2Z	3	Tilbury JCT	Woodslee JCT	LC
K2Z	4	Woodslee JCT	Lauzon JCT	LC
K2Z	5	Tilbury JCT	Tilbury West JCT	LC
K2Z	6	Woodslee JCT	Gosfield CGS JCT	LC
K2Z	7	Tilbury JCT	Belle River JCT	OTHER
K2Z	8	Tilbury West JCT	Tilbury West JCT	LC
K2Z	9	Tilbury West JCT	Tilbury West JCT	OTHER
K2Z	10	Tilbury West JCT	Tilbury West DS	LC
K2Z	11	Tilbury West JCT	Tilbury TS	LC
K2Z	12	Lauzon JCT	Lauzon TS	LC
K2Z	13	Rourke Line JCT	Belle River JCT	OTHER
K2Z	14	Lauzon JCT	Rourke Line JCT	LC
K2Z	15	Rourke Line JCT	Belle River TS	LC
K2Z	16	Gosfield CGS JCT	Kingsville TS	LC
K2Z	17	Gosfield CGS JCT	Gosfield Wind CGS	LC
K3	1	Kapuskasing TS	Kapuskasing R Jct	OTHER
K38S	1	Kapuskasing TS	Spruce Falls JCT	DFL
K38S	2	Spruce Falls JCT	O'brien JCT	DFL
K38S	3	Spruce Falls JCT	A.P. Kapuskasing JCT	LC
K38S	5	O'brien JCT	Spruce Falls TS	DFL
K38S	6	O'brien JCT	Tembec Kapuskas CTS	LC
K3D	1	Rabbit Lake SS	K3D-10 SW JCT	DFL
K3D	2	K3D-10 SW JCT	Vermilion Bay JCT	DFL
K3D	3	Vermilion Bay JCT	Eton JCT	DFL
K3D	4	Vermilion Bay JCT	Vermilion Bay DS	LC
K3D	5	Dryden TS	Sam Lake DS	LC
K3D	6	Eton JCT	Dryden TS	DFL
K3D	7	Eton JCT	Eton DS	LC
K3W	1	Manby TS	St.Clair Avenue JCT	DFL

Operation Designation	Section	From	To	Functional Category
K3W	2	St. Clair Avenue JCT	Toronto Wiltshire TS	DFL
K3W	4	St.Clair Avenue JCT	Fairbank TS	LC
K4	1	Kirkland Lake TS	Macassa Mill JCT	LC
K4	3	Macassa #3 JCT	93K4-89 JCT	LC
K4	4	Matachewan JCT	Extender Min. JCT	OTHER
K4	5	Extender Min. JCT	Elk Lake JCT	OTHER
K4	7	Macassa #3 JCT	Macassa #3 JCT	LC
K4	8	Matachewan JCT	Young-Davidson CTS	LC
K4	9	93K4-89 JCT	Matachewan JCT	LC
K4	10	Macassa Mill JCT	Macassa #3 JCT	LC
K4	11	Macassa Mill JCT	Macassa Mill JCT	LC
K40M	1	Sandusk SS	Sandusk JCT	DFL
K40M	2	Sandusk JCT	Caledonia JCT	DFL
K40M	3	Caledonia JCT	Middleport TS	DFL
K40M	4	Caledonia JCT	Caledonia TS	LC
K4W	1	Rabbit Lake SS	Minaki JCT	LC
K4W	2	Minaki JCT	Whitedog Falls SS	LC
K4W	3	Minaki JCT	Minaki DS	LC
K4W	4	Minaki JCT	Minaki DS	LC
K5W	1	Rabbit Lake SS	Minaki JCT	LC
K5W	3	Minaki JCT	Whitedog Falls SS	LC
K6F	1	Rabbit Lake SS	Margach JCT	DFL
K6F	2	Margach JCT	Sioux Narrows JCT	DFL
K6F	3	K6F-10 SW JCT	Nestor Falls JCT	DFL
K6F	4	Nestor Falls JCT	Ainsworth JCT	DFL
K6F	5	Sioux Narrows JCT	Sioux Narrows DS	LC
K6F	6	Nestor Falls JCT	Nestor Falls DS	LC
K6F	7	Sioux Narrows JCT	K6F-10 SW JCT	DFL
K6F	8	Ainsworth JCT	Fort Frances JCT	DFL
K6F	10	Margach JCT	Margach DS	LC
K6F	11	Margach JCT	Margach DS	OTHER
K6F	12	Ainsworth JCT	Barwick JCT	LC
K6F	13	Fort Frances JCT	Fort Frances TS	DFL
K6F	14	Fort Frances JCT	Fort Frances JCT	OTHER
K6F	15	Barwick JCT	Ainsworth Str #4 JCT	LC
K6F	16	Barwick JCT	Barwick TS	LC
K6F	17	Barwick JCT	Barwick TS	LC
K6J	1	Manby TS	Riverside JCT	LC
K6J	3	Strachan TS	John TS	LC
K6J	6	Riverside JCT	Strachan TS	LC
K6J	7	Strachan TS	Strachan TS	LC
K6J	8	Strachan TS	Strachan TS	LC

Operation Designation	Section	From	To	Functional Category
K6Z	1	Kent TS	Tilbury JCT	OTHER
K6Z	3	Belle River JCT	Rourke Line JCT	LC
K6Z	4	Kingsville TS	Pte-Aux-RochesWF JCT	LC
K6Z	5	Lauzon JCT	Lauzon TS	LC
K6Z	6	Rourke Line JCT	Lauzon JCT	LC
K6Z	7	Rourke Line JCT	Belle River TS	LC
K6Z	11	Pte-Aux-RochesWF JCT	Belle River JCT	LC
K6Z	12	Pte-Aux-RochesWF JCT	Pte-Aux-RochesWF CGS	LC
K7	1	Karn TS	Woodstock TS	DFL
K7	2	Woodstock TS	Commerce Way TS	DFL
K7B	7	Vansco JCT	Manby TS	OTHER
K7K	1	Kenora TS	Kenora TS	DFL
K7K	2	Kenora TS	Rabbit Lake SS	DFL
K7K	3	Kenora TS	Weyerhaeuser Ken CTS	LC
K8B	7	Vansco JCT	Manby TS	OTHER
K9S	1	Richview JCT	Manby TS	OTHER
K9S	2	Scarboro Idle JCT	Leaside Idle JCT	OTHER
L12C	1	Leaside TS	Balfour JCT	LC
L12C	2	Balfour JCT	Charles TS	LC
L12C	3	Charles TS	Cecil TS	LC
L13W	1	Leaside TS	Balfour JCT	DFL
L13W	2	Balfour JCT	Bridgman JCT	DFL
L13W	3	Bridgman JCT	Dufferin JCT	DFL
L13W	4	Dufferin JCT	Wiltshire TS	DFL
L13W	5	Dufferin JCT	Dufferin TS	LC
L13W	7	Bridgman JCT	Bridgman TS	OTHER
L13W	8	Dufferin JCT	Dufferin JCT	LC
L14W	1	Leaside TS	Bayview JCT	DFL
L14W	2	Bayview JCT	Birch JCT	DFL
L14W	3	Birch JCT	Bridgman JCT	DFL
L14W	4	Bridgman JCT	Wiltshire TS	DFL
L14W	5	Bridgman JCT	Bridgman TS	LC
L15	1	Leaside TS	Bayview JCT	LC
L15	2	Bayview JCT	Balfour JCT	LC
L15	3	Balfour JCT	Bridgman JCT	LC
L15	4	Bridgman JCT	Bridgman TS	LC
L16D	1	Leaside TS	Duplex TS	LC
L18W	1	Leaside TS	Leaside TS	DFL
L18W	2	Leaside TS	Bayview JCT	DFL
L18W	3	Bayview JCT	Birch JCT	DFL
L18W	4	Birch JCT	Bridgman JCT	DFL
L18W	5	Bridgman JCT	Bartlett JCT	DFL

Operation Designation	Section	From	To	Functional Category
L18W	6	Bartlett JCT	Wiltshire TS	DFL
L18W	7	Bridgman JCT	Bridgman TS	LC
L18W	8	Bartlett JCT	Bartlett JCT	LC
L18W	9	Bartlett JCT	Dufferin TS	LC
L1MB	4	St.Lawrence TS	Lunenburg JCT	LC
L1MB	5	Lunenburg JCT	Morrisburg JCT	LC
L1MB	6	Morrisburg JCT	Casco JCT	LC
L1MB	7	Cardinal JCT	Brockville Chem. JCT	LC
L1MB	8	Brockville Chem. JCT	Brockville TS	OTHER
L1MB	9	Morrisburg JCT	Morrisburg TS	LC
L1MB	10	Cardinal JCT	Enbridge PL Card CTS	LC
L1MB	11	Brockville Chem. JCT	Dyno Nobel CTS	LC
L1MB	13	Casco JCT	Cardinal JCT	LC
L1MB	15	Casco JCT	Cardinal Power CSS	LC
L1S	1	Crystal Falls SS	Verner JCT	DFL
L1S	2	Verner JCT	Warren DS	DFL
L1S	3	Warren DS	Coniston TS	DFL
L1S	4	Coniston TS	Sudbury JCT	DFL
L1S	5	Sudbury JCT	Martindale TS	DFL
L1S	6	Sudbury JCT	Milman Foundry JCT	LC
L1S	7	Verner JCT	Verner POLE 45 JCT	LC
L1S	8	Verner POLE 45 JCT	Verner DS	OTHER
L1S	9	Verner POLE 45 JCT	Verner DS	LC
L1S	10	Warren DS	Warren DS	LC
L1S	11	Milman Foundry JCT	Milman Foundry CTS	LC
L1S	12	Milman Foundry JCT	Milman Foundry CTS	LC
L20D	1	Little Long JCT	Smoky Falls JCT	LC
L20D	3	Little Long JCT	Pinard TS	DFL
L20D	4	Little Long SS	Little Long JCT	DFL
L20D	5	Smoky Falls JCT	Harmon JCT	LC
L20D	6	Harmon JCT	Kipling JCT	LC
L20D	7	Kipling JCT	Kipling 2 GS	LC
L20D	8	Harmon JCT	Harmon 2 GS	LC
L20D	10	Smoky Falls JCT	Smoky Falls 2 JCT	LC
L20H	1	St.Lawrence TS	Easton JCT	DFL
L20H	2	Easton JCT	Crosby JCT	DFL
L20H	3	Easton JCT	Brockville TS	LC
L20H	4	Crosby JCT	Hinchinbrooke SS	DFL
L20H	7	Crosby JCT	Crosby TS	LC
L20H	9	Crosby JCT	Crosby TS	LC
L21H	1	St.Lawrence TS	Easton Yule JCT	DFL
L21H	2	Easton Yule JCT	Crosby JCT	DFL

Operation Designation	Section	From	To	Functional Category
L21H	3	Easton Yule JCT	Smiths Falls TS	LC
L21H	4	Crosby JCT	Hinchinbrooke SS	DFL
L21H	7	Crosby JCT	Crosby TS	LC
L21H	9	Crosby JCT	Crosby TS	OTHER
L21K	1	Lakeview SS	Haig JCT	OTHER
L21K	2	Haig JCT	Applewood JCT	OTHER
L21K	3	Haig JCT	Applewood JCT	OTHER
L21S	1	Little Long SS	Knob JCT	N
L21S	6	A.P. Kapuskasing JCT	Kapuskasing TS	N
L21S	7	Knob JCT	A.P. Kapuskasing JCT	N
L22H	1	St.Lawrence TS	Raisin River JCT	DFL
L22H	2	Raisin River JCT	Easton Yule JCT	DFL
L22H	3	Easton Yule JCT	Easton JCT	DFL
L22H	4	Easton JCT	Hinchinbrooke SS	DFL
L22H	5	Easton JCT	Brockville TS	LC
L22H	6	Easton Yule JCT	Smiths Falls TS	LC
L22K	1	Lakeview SS	Haig JCT	OTHER
L22K	2	Haig JCT	Applewood JCT	OTHER
L22K	3	Haig JCT	Applewood JCT	OTHER
L23CK	1	Lakeview SS	Haig JCT	OTHER
L23CK	2	Haig JCT	Applewood JCT	OTHER
L23CK	3	Haig JCT	Applewood JCT	OTHER
L23N	1	Lambton TS #2	Talford JCT	DFL
L23N	2	Talford JCT	Sarnia Scott TS	DFL
L23N	6	Talford JCT	Dupont JCT	LC
L23N	12	Dupont JCT	Shell Sarnia CTS	LC
L23N	13	Dupont JCT	Nova St Clair R CTS	LC
L24A	1	Raisin River JCT	Hawthorne TS	N
L24A	2	St.Lawrence TS	Raisin River JCT	N
L24CR	1	Lakeview SS	Haig JCT	OTHER
L24CR	2	Haig JCT	Applewood JCT	OTHER
L24CR	3	Haig JCT	Applewood JCT	OTHER
L24L	1	Lambton TS #2	Longwood TS	DFL
L24L	2	Longwood TS	Longwood TS	DFL
L24L	3	Longwood TS	Longwood TS	LC
L25V	1	Lambton TS #2	Nova Moore JCT	DFL
L25V	2	Nova Moore JCT	Nova SS	DFL
L25V	4	Nova Moore JCT	Nova Moore CTS	LC
L26L	1	Lambton TS #2	Longwood TS	DFL
L26L	2	Longwood TS	Longwood TS	DFL
L26L	3	Longwood TS	Longwood TS	LC
L27V	1	Lambton TS #2	Nova Moore JCT	DFL

Operation Designation	Section	From	To	Functional Category
L27V	2	Nova Moore JCT	Nova SS	DFL
L27V	4	Nova Moore JCT	Nova Moore CTS	LC
L27V	5	Nova SS	Nova Corunna CTS	LC
L27V	6	Nova SS	Nova SS	DFL
L28C	1	Lambton TS #2	GSPC JCT	DFL
L28C	2	Lynwood JCT	Chatham SS	DFL
L28C	3	Lynwood JCT	Kent TS	LC
L28C	4	GSPC JCT	Lynwood JCT	DFL
L29C	1	Lambton TS #2	East Lk StClair JCT	DFL
L29C	2	Lynwood JCT	Chatham SS	DFL
L29C	3	Lynwood JCT	Kent TS	LC
L29C	4	East Lk StClair JCT	North Kent 1 JCT	DFL
L29C	5	East Lk StClair JCT	East Lk StClair CGS	LC
L29C	6	North Kent 1 JCT	Lynwood JCT	DFL
L29C	7	North Kent 1 JCT	North Kent 1 CGS	LC
L2M	1	Limebank JCT	Limebank JCT	LC
L2M	2	Chesterville N. JCT	Marionville JCT	OTHER
L2M	3	Newington JCT	Chesterville S. JCT	LC
L2M	4	St.Lawrence TS	Lunenburg JCT	LC
L2M	5	Lunenburg JCT	Morrisburg JCT	LC
L2M	6	Lunenburg JCT	Newington JCT	LC
L2M	7	Osgoode JCT	Limebank JCT	LC
L2M	8	Morrisburg JCT	Casco JCT	LC
L2M	9	Morrisburg JCT	Morrisburg TS	LC
L2M	10	Brockville Chem. JCT	Dyno Nobel CTS	LC
L2M	11	Brockville Chem. JCT	Brockville TS	OTHER
L2M	12	Casco JCT	Brockville Chem. JCT	LC
L2M	13	Casco JCT	Cardinal Power CSS	LC
L2M	14	Marionville JCT	Osgoode JCT	LC
L2M	15	Osgoode JCT	Russell DS	OTHER
L2M	16	Marionville JCT	Marionville DS	LC
L2M	17	Newington JCT	Newington DS	LC
L2M	19	Chesterville S. JCT	Chesterville TS	LC
L2M	20	Chesterville N. JCT	Chesterville TS	OTHER
L2M	21	Chesterville S. JCT	Chesterville N. JCT	OTHER
L2M	22	Limebank JCT	Limebank JCT	LC
L2M	23	Limebank JCT	Limebank MTS	LC
L2M	24	Limebank JCT	Limebank MTS	LC
L2M	25	Limebank JCT	Merivale TS	LC
L2M	26	Limebank JCT	Limebank MTS	LC
L2Y	1	Leaside TS	Glengrove TS	LC
L33P	1	St.Lawrence TS	Massena JCT	N

Operation Designation	Section	From	To	Functional Category
L34P	1	St.Lawrence TS	Massena JCT	N
L37G	1	Lambton TS #2	Greenfld Intface JCT	N
L38G	1	Lambton TS #2	Greenfld Intface JCT	N
L3P	1	Lakehead TS	Port Arthur TS #1	N
L4C	1	Leaside TS	Charles TS	LC
L4D	1	Lambton TS #2	Mid R JCT St Cl L4D	N
L4P	1	Lakehead TS	Port Arthur TS #1	N
L4R	1	L4R STR 30 JCT	L4R STR 17 JCT	OTHER
L4S	1	Leaside TS	L4S L5S STR 9 JCT	OTHER
L4S	2	Bermondsey JCT	Scarboro TS	OTHER
L51D	1	Lambton TS #2	Mid R JCT St Cl L51D	N
L51D	3	Lambton TS #2	Lambton TS #2	N
L51D	4	Lambton TS #2	Lambton TS #2	N
L5C	4	St.Lawrence TS	L5C MSO JCT	OTHER
L5D	1	Leaside TS	Duplex TS	LC
L5H	1	Otto Holden TS	North Bay TS	DFL
L5H	2	North Bay TS	Commanda JCT	DFL
L5H	3	Commanda JCT	Crystal Falls SS	DFL
L5H	4	Commanda JCT	Commanda JCT	OTHER
L5H	6	Commanda JCT	Commanda JCT	OTHER
L5S	1	Leaside TS	L4S L5S STR 9 JCT	OTHER
L5S	2	Bermondsey JCT	Scarboro TS	OTHER
L7S	2	Kirkton JCT	Devizes JCT	LC
L7S	3	Seaforth L7S JCT	Goshen JCT	LC
L7S	4	Devizes JCT	Portland JCT	LC
L7S	5	Portland JCT	St.Marys TS	LC
L7S	6	Portland JCT	St.Marys Cement CTS	LC
L7S	7	Devizes JCT	Enbrg Bryanston CTS	LC
L7S	8	Kirkton JCT	Biddulph JCT	LC
L7S	9	Biddulph JCT	Grand Bend East JCT	LC
L7S	10	Grand Bend East JCT	Lake Huron WTP CTS	LC
L7S	11	Biddulph JCT	Centralia TS	LC
L7S	12	Centralia TS	McGillivray R&BP CTS	LC
L7S	13	Seaforth TS	Seaforth L7S JCT	LC
L7S	14	Seaforth L7S JCT	Seaforth LSO JCT	OTHER
L7S	15	Grand Bend East JCT	Grand Bend East DS	LC
L7S	16	Goshen JCT	Kirkton JCT	LC
L7S	17	Goshen JCT	Goshen CSS	LC
L9C	1	Leaside TS	Balfour JCT	LC
L9C	2	Balfour JCT	Charles TS	LC
L9C	3	Charles TS	Cecil TS	LC
M11S	1	G.M.St Cath CTS	McKinnon's JCT	OTHER

Operation Designation	Section	From	To	Functional Category
M1R	1	Merivale TS	South Gloucester JCT	LC
M1R	2	South Gloucester JCT	Greely JCT	LC
M1R	3	Greely JCT	Russell DS	LC
M1R	4	Greely JCT	Greely DS	LC
M1R	5	South Gloucester JCT	South Gloucester DS	LC
M1R	6	South Gloucester DS	South Gloucester DS	LC
M1R	7	South Gloucester DS	South Gloucester DS	OTHER
M1R	8	Russell DS	Russell DS	LC
M1R	9	Russell DS	Russell DS	LC
M1R	10	Russell DS	Russell DS	OTHER
M1S	1	Moose Lake TS	Valerie Falls JCT	LC
M1S	2	Mill Creek JCT	H2O Pwr SturgFls CGS	LC
M1S	4	Mill Creek JCT	H2O Pwr Calm Lk CGS	LC
M1S	6	Valerie Falls JCT	Mill Creek JCT	LC
M1T	1	Monteith SS	Echo B. Aquarius JCT	OTHER
M1T	2	Gold Centre JCT	Timmins TS	OTHER
M20D	1	Middleport TS	Carluke JCT	DFL
M20D	2	Carluke JCT	Trinity JCT	DFL
M20D	3	Trinity JCT	Galt South JCT	DFL
M20D	5	Galt JCT	Kitchener #8 JCT	DFL
M20D	6	Galt JCT	Preston JCT	DFL
M20D	7	Detweiler JCT	Detweiler TS	DFL
M20D	8	Detweiler JCT	Kitchener MTS#6	LC
M20D	9	Preston JCT	Cambridge #1 JCT	DFL
M20D	10	Cambridge #1 JCT	Preston TS	DFL
M20D	11	Cambridge #1 JCT	EnergyInc(Cam) MTS#1	LC
M20D	12	Kitchener #8 JCT	Detweiler JCT	DFL
M20D	13	Kitchener #8 JCT	Kitchener MTS#8	LC
M20D	15	Preston JCT	Galt TS	LC
M20D	16	Preston TS	Preston TS	OTHER
M20D	17	Galt South JCT	Galt JCT	DFL
M21D	1	Middleport TS	Carluke JCT	DFL
M21D	2	Carluke JCT	Trinity JCT	DFL
M21D	3	Trinity JCT	Galt JCT	DFL
M21D	5	Galt JCT	Galt North JCT	DFL
M21D	6	Galt JCT	Ameristeel Cambr JCT	DFL
M21D	7	Ameristeel Cambr JCT	Preston JCT	DFL
M21D	8	Ameristeel Cambr JCT	Ameristeel Cambr CTS	LC
M21D	9	Detweiler JCT	Detweiler TS	DFL
M21D	10	Detweiler JCT	Kitchener MTS#6	LC
M21D	11	Preston JCT	Cambridge #1 JCT	DFL
M21D	12	Cambridge #1 JCT	Preston TS	DFL

Operation Designation	Section	From	To	Functional Category
M21D	13	Cambridge #1 JCT	EnergyInc(Cam) MTS#1	LC
M21D	14	Kitchener #8 JCT	Detweiler JCT	DFL
M21D	15	Kitchener #8 JCT	Kitchener MTS#8	LC
M21D	16	Preston TS	Preston TS	OTHER
M21D	18	Preston JCT	Galt TS	LC
M21D	19	Galt North JCT	Kitchener #8 JCT	DFL
M23L	1	Marathon TS	Greenwich WF CGS JCT	DFL
M23L	2	Greenwich WF CGS JCT	Lakehead TS	DFL
M23L	4	Greenwich WF CGS JCT	Greenwich LakeWF CSS	LC
M24L	1	Marathon TS	Greenwich WF CGS JCT	DFL
M24L	2	Greenwich WF CGS JCT	Lakehead TS	DFL
M24L	4	Greenwich WF CGS JCT	Greenwich LakeWF CSS	LC
M27B	1	Middleport TS	Carluke JCT	DFL
M27B	2	Carluke JCT	Southcote JCT	DFL
M27B	3	Southcote JCT	Horning JCT	DFL
M27B	4	Horning JCT	Burlington TS	DFL
M27B	5	Horning JCT	Horning TS	LC
M28B	1	Middleport TS	Carluke JCT	DFL
M28B	2	Carluke JCT	Southcote JCT	DFL
M28B	3	Southcote JCT	Horning JCT	DFL
M28B	4	Horning JCT	Burlington TS	DFL
M28B	5	Horning JCT	Horning TS	LC
M2D	1	Ignace JCT	Dryden TS	DFL
M2D	2	Moose Lake TS	Ignace JCT	DFL
M2D	4	Dryden TS	Dryden TS	DFL
M2D	5	Dryden TS	Dryden JCT B	OTHER
M2W	1	Marathon TS	Pic JCT	LC
M2W	2	Pic JCT	Manitouwadge JCT	LC
M2W	4	Manitouwadge JCT	Willroy JCT	LC
M2W	6	Manitouwadge JCT	Manitouwadge JCT B	LC
M2W	7	Willroy JCT	Willroy Mines Ltd	OTHER
M2W	8	Marathon TS	Black River JCT	LC
M2W	9	Williams Mine JCT	Hemlo Mine JCT	LC
M2W	10	Hemlo Mine JCT	Animki JCT	LC
M2W	15	Marathon TS	Pic DS	LC
M2W	16	Black River JCT	Umbata Falls JCT	LC
M2W	22	Manitouwadge JCT B	Manitouwadge DS #1	LC
M2W	25	Umbata Falls JCT	Williams Mine JCT	LC
M2W	26	Manitouwadge JCT B	Manitouwadge TS	LC
M2W	27	Animki JCT	White River DS	LC
M30A	1	Merivale TS	Albion JCT	DFL
M30A	2	Albion JCT	Ellwood MTS JCT	DFL

Operation Designation	Section	From	To	Functional Category
M30A	3	Albion JCT	Albion TS	LC
M30A	5	Ellwood MTS JCT	Ellwood MTS	LC
M30A	6	Ellwood MTS JCT	Hawthorne TS	DFL
M31	1	Espanola TS	Espanola A JCT	LC
M31	2	Eddy Tap A JCT	Domtar Espanola CGS	LC
M31	3	Espanola A JCT	Eddy Tap A JCT	LC
M31	4	S2B-M31 JCT	Espanola A JCT	OTHER
M31A	1	Merivale TS	Albion JCT	DFL
M31A	2	Albion JCT	Ellwood MTS JCT	DFL
M31A	3	Albion JCT	Albion TS	LC
M31A	5	Ellwood MTS JCT	Ellwood MTS	LC
M31A	6	Ellwood MTS JCT	Hawthorne TS	DFL
M31W	1	Middleport TS	Carluke JCT	DFL
M31W	2	Carluke JCT	Salford JCT	DFL
M31W	3	Salford JCT	Buchanan TS	DFL
M31W	4	Salford JCT	Ingersoll JCT	DFL
M31W	5	Ingersoll JCT	Ingersoll TS	LC
M31W	6	Ingersoll JCT	Karn TS	DFL
M32S	1	Merivale TS	Nepean TS	DFL
M32S	2	Nepean TS	South March TS	DFL
M32S	3	South March TS	Kanata MTS #1	LC
M32W	1	Middleport TS	Carluke JCT	DFL
M32W	2	Carluke JCT	Newport JCT	DFL
M32W	3	Newport JCT	Salford JCT	DFL
M32W	4	Salford JCT	Buchanan TS	DFL
M32W	5	Newport JCT	Brantford TS	LC
M32W	6	Salford JCT	Ingersoll JCT	DFL
M32W	7	Ingersoll JCT	Ingersoll TS	LC
M32W	8	Ingersoll JCT	Karn TS	DFL
M33W	1	Middleport TS	Carluke JCT	DFL
M33W	2	Carluke JCT	Newport JCT	DFL
M33W	3	Newport JCT	Salford JCT	DFL
M33W	4	Salford JCT	Buchanan TS	DFL
M33W	5	Newport JCT	Brantford TS	LC
M34H	1	Middleport TS	Carluke JCT	N
M34H	2	Carluke JCT	Southcote JCT	N
M34H	3	Southcote JCT	Neale JCT	N
M34H	4	Neale JCT	Hannon JCT	N
M34H	5	Hannon JCT	Beach TS	N
M3E	1	Manitou Falls GS	Ear Falls TS	LC
M4G	1	Merivale TS	Nepean Epworth JCT	LC
M4G	2	Nepean Epworth JCT	Ottawa JCT	LC

Operation Designation	Section	From	To	Functional Category
M4G	3	Carling TS	Lisgar TS	LC
M4G	4	Lisgar TS	Slater TS	LC
M4G	5	Ottawa JCT	Carling TS	LC
M4G	6	Nepean Epworth JCT	Nepean Epworth MTS	LC
M570V	1	Milton SS	Claireville TS	N
M571V	1	Milton SS	Claireville TS	N
M572T	1	Milton SS	Trafalgar TS	N
M573T	1	Milton SS	Trafalgar TS	N
M585M	1	Middleport TS	Milton SS	N
M5G	1	Merivale TS	Nepean Epworth JCT	LC
M5G	2	Nepean Epworth JCT	Ottawa JCT	LC
M5G	3	Carling TS	Lisgar TS	LC
M5G	4	Ottawa JCT	Carling TS	LC
M5G	5	Nepean Epworth JCT	Nepean Epworth MTS	LC
M6E	1	Minden TS	Cooper's Falls JCT	DFL
M6E	2	Cooper's Falls JCT	Orillia TS	DFL
M6E	3	Orillia TS	Midhurst TS	DFL
M6E	4	Cooper's Falls JCT	Bracebridge JCT	LC
M6E	5	Midhurst TS	Essa TS	DFL
M6E	6	Bracebridge JCT	Muskoka TS	LC
M6E	7	Bracebridge JCT	Bracebridge TS	LC
M7E	1	Minden TS	Cooper's Falls JCT	DFL
M7E	2	Cooper's Falls JCT	Orillia TS	DFL
M7E	3	Orillia TS	Midhurst TS	DFL
M7E	4	Cooper's Falls JCT	Bracebridge JCT	LC
M7E	5	Midhurst TS	Essa TS	DFL
M7E	6	Bracebridge JCT	Muskoka TS	LC
M80B	1	Minden TS	Beaverton JCT	DFL
M80B	2	Beaverton JCT	Beaver JCT	DFL
M80B	3	Beaver JCT	Brown Hill TS	DFL
M80B	5	Beaverton JCT	Lindsay TS	LC
M80B	6	Beaver JCT	Beaverton TS	LC
M81B	1	Minden TS	Beaverton JCT	DFL
M81B	2	Beaverton JCT	Beaver JCT	DFL
M81B	3	Beaver JCT	Brown Hill TS	DFL
M81B	5	Beaverton JCT	Lindsay TS	LC
M81B	6	Beaver JCT	Beaverton TS	LC
M9K	1	Moosonee DS	Moosonee JCT	LC
M9K	2	Moosonee JCT	Moosonee JCT	LC
M9K	3	Moosonee JCT	Moosonee SS	LC
M9K	4	Moosonee JCT	Moosonee DS	LC
M9K	5	Moosonee JCT	Moosonee DS	LC

Operation Designation	Section	From	To	Functional Category
N1S	1	Sarnia Scott TS	Vidal JCT	LC
N1S	3	Vidal JCT	Suncor CTS	LC
N20K	1	Nanticoke TS	Imp Oil Nanticok JCT	DFL
N20K	2	Imp Oil Nanticok JCT	Sandusk JCT	DFL
N20K	3	Sandusk JCT	Sandusk SS	DFL
N20K	4	Imp Oil Nanticok JCT	Imp Oil Nanticok JCT	LC
N21J	1	Nanticoke TS	Stelco JCT	LC
N21J	2	Stelco JCT	Jarvis TS	LC
N21J	3	Stelco JCT	Nanticoke Creek JCT	LC
N21W	1	Sarnia Scott TS	Lucasville JCT	DFL
N21W	2	Lucasville JCT	Bostwick Road JCT	DFL
N21W	3	Bostwick Road JCT	Buchanan TS	DFL
N21W	4	Lucasville JCT	Plank Road JCT	LC
N21W	5	Bostwick Road JCT	Wonderland TS	LC
N21W	6	Plank Road JCT	Confederation Rd JCT	LC
N21W	7	Confederation Rd JCT	Modeland TS	LC
N22J	1	Nanticoke TS	Stelco JCT	LC
N22J	2	Stelco JCT	Jarvis TS	LC
N22J	3	Stelco JCT	Nanticoke Creek JCT	LC
N22W	1	Sarnia Scott TS	Lucasville JCT	DFL
N22W	2	Lucasville JCT	Bostwick Road JCT	DFL
N22W	3	Bostwick Road JCT	Buchanan TS	DFL
N22W	4	Lucasville JCT	Plank Road JCT	LC
N22W	5	Bostwick Road JCT	Wonderland TS	LC
N22W	6	Plank Road JCT	Confederation Rd JCT	LC
N22W	7	Confederation Rd JCT	Modeland TS	LC
N37S	1	Nanticoke TS	Summerhaven SS	N
N4S	1	Sarnia Scott TS	Vidal JCT	LC
N4S	3	Vidal JCT	Suncor CTS	LC
N580M	1	Nanticoke TS	Middleport TS	N
N581M	1	Nanticoke TS	Middleport TS	N
N582L	1	Nanticoke TS	Longwood TS	N
N5K	1	Wallaceburg TS	Kent TS	OTHER
N5K	2	Kimball JCT	Wallaceburg TS	LC
N5K	3	Sarnia Scott TS	Kimball JCT	LC
N5M	1	Nanticoke TS	Grand JCT	DFL
N5M	2	Caledonia JCT	Middleport TS	DFL
N5M	3	Caledonia JCT	Caledonia TS	LC
N5M	4	Grand JCT	Caledonia JCT	DFL
N5M	5	Grand JCT	Grand CSS	LC
N6C	1	Sarnia Scott TS	St.Andrews TS	LC
N6M	1	Nanticoke TS	Caledonia JCT	DFL

Operation Designation	Section	From	To	Functional Category
N6M	2	Caledonia JCT	Middleport TS	DFL
N6M	3	Caledonia JCT	Caledonia TS	LC
N6S	1	Sarnia Scott TS	Sarnia Scott JCT	LC
N6S	2	Sarnia Scott JCT	Vidal JCT	OTHER
N6S	3	Sarnia Scott JCT	Arlanxeo Can Inc JCT	LC
N6S	4	Arlanxeo Can Inc JCT	TransAlta Energy JCT	LC
N6S	5	Arlanxeo Can Inc JCT	Arlanxeo Can Inc CTS	LC
N6S	7	TransAlta Energy JCT	Imperial Oil CTS	LC
N6S	9	TransAlta Energy JCT	TransAlta Energy JCT	LC
N7C	1	Sarnia Scott TS	St.Andrews TS	LC
N7S	1	Sarnia Scott TS	Sarnia Scott JCT	LC
N7S	2	Sarnia Scott JCT	Arlanxeo Can Inc JCT	LC
N7S	3	Arlanxeo Can Inc JCT	TransAlta Energy JCT	LC
N7S	4	TransAlta Energy JCT	Imperial Oil CTS	LC
N7S	5	Arlanxeo Can Inc JCT	Arlanxeo Can Inc CTS	LC
N7S	7	TransAlta Energy JCT	TransAlta Energy JCT	LC
N93A	1	Atikokan TGS	Marmion Lake JCT	LC
N93A	2	Marmion Lake JCT	Mackenzie TS	LC
NA12M6	1	Buttonville TS	Gormley JCT	OTHER
NA41M31	1	Armitage TS	Old Armitage JCT	OTHER
NA41M31	2	Old Armitage JCT	Gormley JCT	OTHER
NA41M42	1	Holland Marsh JCT	West Gwillimbry JCT	OTHER
NA54M14	1	O1S STR 141 JCT	O1S STR 131A JCT	OTHER
NA54M14	2	O1S STR 128 JCT	O1S STR 119 JCT	OTHER
NA64M28	1	Alford JCT	Mohawk Str 31 EP JCT	OTHER
NA70M2	1	Clarke L7S-70M2 JCT	Prospect L7S-70M2JCT	OTHER
NAF5M16	1	MacPherson Road JCT	Kent TS	OTHER
NAF5M16	2	MacPherson Road JCT	Kent TS	OTHER
NAL23M5	1	Crosby S1K JCT	Newboro DS	OTHER
NAL23M6	1	Crosby S1K JCT	Elgin JCT	OTHER
NAL82M28	1	Smiths Falls TS	Jasper DS	OTHER
NAR43M21	1	Warden TS	Lumsden JCT	OTHER
NAR43M21	2	Lumsden JCT	Todmorden JCT	OTHER
NAR43M31	1	Warden TS	Lumsden JCT	OTHER
NAR43M32	1	Warden TS	Lumsden JCT	OTHER
NF3M11	1	Toronto Power TS	Drummond Road JCT	OTHER
O1S	2	O1S STR 119 JCT	O1S STR 110 JCT	OTHER
P13T	1	Porcupine TS	Timmins TS	N
P15C	1	Dobbin TS	Cherrywood TS	N
P15T	1	Porcupine TS	Timmins TS	N
P1P	1	Port Arthur TS #1	Port Arthur JCT	OTHER
P1T	1	Port Arthur TS #1	TBPI Thunder Bay JCT	OTHER

Operation Designation	Section	From	To	Functional Category
P1T	2	TBPI Thunder Bay JCT	TBPI Thunder Bay CTS	OTHER
P1T	3	TBPI Thunder Bay JCT	TBPI Thunder Bay JCT	OTHER
P1T	4	TBPI Thunder Bay JCT	TBPI Thunder Bay CTS	OTHER
P21G	1	Mississagi TS	P21G POLE 6 JCT	N
P21R	1	Parkway TS	Markham #1 JCT	DFL
P21R	2	Markham #1 JCT	IBM Markham JCT	DFL
P21R	3	IBM Markham JCT	Leaside JCT	DFL
P21R	4	Leaside JCT	Leslie East JCT	DFL
P21R	5	Leslie East JCT	Leslie West JCT	DFL
P21R	6	Leslie West JCT	Finch JCT	DFL
P21R	7	Finch JCT	Richview TS	DFL
P21R	8	Markham #1 JCT	Markham MTS #1	LC
P21R	9	IBM Markham JCT	IBM Markham CTS	LC
P21R	10	Leslie East JCT	Leslie TS	LC
P21R	11	Leslie West JCT	Leslie TS	LC
P21R	12	Finch JCT	Finch TS	LC
P22R	1	Parkway TS	Markham #1 JCT	DFL
P22R	2	Markham #1 JCT	IBM Markham JCT	DFL
P22R	3	IBM Markham JCT	Leaside JCT	DFL
P22R	4	Leaside JCT	Bathurst JCT	DFL
P22R	5	Bathurst JCT	Finch JCT	DFL
P22R	6	Finch JCT	Richview TS	DFL
P22R	7	Markham #1 JCT	Markham MTS #1	LC
P22R	8	Bathurst JCT	Bathurst TS	LC
P22R	9	Finch JCT	Finch TS	LC
P22R	10	IBM Markham JCT	IBM Markham CTS	LC
P25W	1	Mississagi TS	Aubrey Falls JCT	DFL
P25W	2	Aubrey Falls JCT	Wawa TS	DFL
P25W	3	Aubrey Falls JCT	Aubrey Falls CGS	LC
P26W	1	Mississagi TS	Aubrey Falls JCT	DFL
P26W	2	Aubrey Falls JCT	Wawa TS	DFL
P26W	3	Aubrey Falls JCT	Aubrey Falls CGS	LC
P27C	1	Pickering B SS	Cherrywood TS	LC
P2O	1	P2O STR 100 JCT	P2O STR 24A JCT	OTHER
P30C	1	Pickering B SS	Cherrywood TS	LC
P31C	1	Pickering B SS	Cherrywood TS	LC
P32C	1	Pickering B SS	Cherrywood TS	LC
P33C	2	IPB Ottawa River JCT	Chats Falls SS	N
P3B	1	Port Arthur TS #1	Birch TS	N
P3S	1	Dobbin TS	Dale JCT	DFL
P3S	3	Dale JCT	Sidney TS	DFL
P3S	6	Dale JCT	Port Hope TS	LC

Operation Designation	Section	From	To	Functional Category
P45	1	Parkway TS	Markham #4 JCT	LC
P45	2	Markham #4 JCT	Buttonville TS	LC
P45	3	Markham #4 JCT	Markham MTS #4	LC
P46	1	Parkway TS	Markham #4 JCT	LC
P46	2	Markham #4 JCT	Buttonville TS	LC
P46	3	Markham #4 JCT	Markham MTS #4	LC
P4S	1	Dobbin TS	Dobbin DS	DFL
P4S	2	Dale JCT	Vernonville JCT	DFL
P4S	3	Vernonville JCT	Hilton JCT	DFL
P4S	4	Hilton JCT	Sidney TS	DFL
P4S	5	Dale JCT	Port Hope TS	LC
P4S	6	Vernonville JCT	TCPL Cobourg CTS	LC
P4S	7	Hilton JCT	Enbridge PL Hilt CTS	LC
P4S	9	Dobbin DS	Dale JCT	DFL
P4S	10	Dobbin DS	Dobbin DS	LC
P502X	1	Porcupine TS	Hanmer TS	N
P5M	1	Port Arthur TS #1	Conmee JCT	LC
P5M	4	P5M STR 603 JCT	P5M STR 608 JCT	OTHER
P5M	6	P5M STR 621 JCT	P5M STR 626 JCT	OTHER
P6C	1	Pickering A SS	Cherrywood TS	LC
P7B	1	Port Arthur TS #1	P7B STR 320 JCT	N
P7B	2	P7B STR 320 JCT	Birch TS	N
P7C	1	Pickering A SS	Cherrywood TS	LC
P7G	1	Porcupine TS	Dome Site JCT	LC
P7G	2	Dome Site JCT	Gold Centre JCT	LC
P7G	3	Ecstall JCT	Kidd Contractor CTS	OTHER
P7G	4	Ecstall JCT	Kidd Creek Mine JCT	OTHER
P7G	5	Kidd Creek Mine JCT	Kidd Zinc Refin CTS	OTHER
P7G	6	Kidd Creek Mine JCT	Kidd Metsite CTS	OTHER
P7G	8	Hoyle JCT	Hoyle Pond Site JCT	LC
P7G	9	Hoyle JCT	Hoyle DS	LC
P7G	10	Pamour JCT	Hoyle JCT	LC
P7G	11	Pamour JCT	Royal Oak CTS	OTHER
P7G	12	Hoyle Pond Site JCT	Ecstall JCT	OTHER
P7G	14	Gold Centre JCT	Bell Creek JCT	LC
P7G	15	Gold Centre JCT	Echo B. Aquarius JCT	OTHER
P7G	17	Bell Creek JCT	Pamour JCT	LC
P7G	18	Bell Creek JCT	Bell Creek CTS	LC
P8C	1	Pickering A SS	Cherrywood TS	LC
P91G	1	Porcupine TS	Erg Resources JCT	DFL
P91G	2	Erg Resources JCT	Hoyle JCT	DFL
P91G	3	Erg Resources JCT	Erg Resources CTS	OTHER

Operation Designation	Section	From	To	Functional Category
P91G	4	Hoyle JCT	Kidd Metsite CTS	LC
P91G	5	Hoyle JCT	Ansonville JCT	DFL
P91G	6	Ansonville JCT	Ansonville TS	DFL
P9C	1	Pickering A SS	Cherrywood TS	LC
PA27	1	Beck #2 TS	Mid R. JCT Niagara	N
PA301	1	Beck #2 TS	Beck #2 TS	N
PA301	2	Beck #2 TS	Mid R JCT Niagra 345	N
PA302	1	Beck #2 TS	Beck #2 TS	N
PA302	2	Beck #2 TS	Mid R JCT Niagra 345	N
PS4	1	Lambton TS #2	Lambton TS #2	OTHER
PS51	1	Lambton TS #2	Lambton TS #2	OTHER
Q10M	3	McKinnon's JCT	G.M.St Cath CTS	OTHER
Q10P	1	Abit Cons NAN91 JCT	Abit Cons NAN91 JCT	LC
Q10P	2	Abit Cons NAN91 JCT	Abit Cons NAN91 JCT	OTHER
Q10P	3	Abit Cons NAN91 JCT	Q10P STR 9 JCT	LC
Q11S	1	Beck #1 SS	Warner Road JCT	LC
Q11S	2	Warner Road JCT	NOTL York MTS #1 JCT	LC
Q11S	3	McKinnon's JCT	Glendale JCT	LC
Q11S	4	Glendale JCT	Glendale TS	LC
Q11S	5	Warner Road JCT	N.O.T.L. MTS #2	LC
Q11S	6	Glendale JCT	Bunting TS	LC
Q11S	7	Warner Road JCT	Warner Road JCT	OTHER
Q11S	8	NOTL York MTS #1 JCT	McKinnon's JCT	LC
Q12S	1	Beck #1 SS	Warner Road JCT	LC
Q12S	2	Glendale JCT	Glendale TS	LC
Q12S	3	Glendale JCT	Bunting TS	LC
Q12S	4	NOTL York MTS #1 JCT	Glendale JCT	LC
Q12S	5	NOTL York MTS #1 JCT	N.O.T.L. York MTS #1	LC
Q12S	6	Warner Road JCT	NOTL York MTS #1 JCT	LC
Q12S	7	NOTL York MTS #1 JCT	NOTL York MTS #1 JCT	OTHER
Q1N	1	Beck #1 SS	Dresser JCT	OTHER
Q21P	1	Beck #2 TS	Beck Pump Storage GS	LC
Q22P	1	Beck #2 TS	Beck Pump Storage GS	LC
Q23BM	1	Beck #2 TS	Niagara West JCT	DFL
Q23BM	3	Hannon JCT	Neale JCT	DFL
Q23BM	4	Neale JCT	Southcote JCT	DFL
Q23BM	5	Southcote JCT	Mount Hope JCT	DFL
Q23BM	6	Mount Hope JCT	Carluke JCT	DFL
Q23BM	7	Carluke JCT	Middleport TS	DFL
Q23BM	8	Neale JCT	Burlington TS	DFL
Q23BM	9	Burlington TS	Burlington TS	DFL
Q23BM	10	Burlington TS	Burlington TS	LC

Operation Designation	Section	From	To	Functional Category
Q23BM	11	Niagara West JCT	Hannon JCT	DFL
Q23BM	12	Niagara West JCT	Niagara West MTS	LC
Q24HM	1	Beck #2 TS	Hannon JCT	DFL
Q24HM	3	Hannon JCT	Nebo JCT	DFL
Q24HM	4	Neale JCT	Southcote JCT	DFL
Q24HM	5	Southcote JCT	Trinity JCT	DFL
Q24HM	6	Trinity JCT	Carluke JCT	DFL
Q24HM	7	Carluke JCT	Middleport TS	DFL
Q24HM	8	Hannon JCT	Beach TS	DFL
Q24HM	9	Nebo JCT	Neale JCT	DFL
Q24HM	10	Beach TS	Dof.Kenilworth CTS	LC
Q24HM	11	Nebo JCT	Nebo TS	LC
Q25BM	1	Beck #2 TS	Niagara West JCT	DFL
Q25BM	3	Hannon JCT	Neale JCT	DFL
Q25BM	4	Neale JCT	Southcote JCT	DFL
Q25BM	5	Southcote JCT	Mount Hope JCT	DFL
Q25BM	6	Mount Hope JCT	Carluke JCT	DFL
Q25BM	7	Carluke JCT	Middleport TS	DFL
Q25BM	8	Neale JCT	Burlington TS	DFL
Q25BM	9	Burlington TS	Burlington TS	DFL
Q25BM	10	Burlington TS	Burlington TS	LC
Q25BM	11	Niagara West JCT	Hannon JCT	DFL
Q25BM	12	Niagara West JCT	Niagara West MTS	LC
Q26M	1	Beck #2 TS	Abit Cons NAN91 JCT	LC
Q26M	2	Abit Cons NAN91 JCT	Crossline JCT	LC
Q26M	3	Crossline JCT	Allanburg TS	LC
Q26M	4	Allanburg West JCT	Middleport TS	OTHER
Q26M	5	Abit Cons NAN91 JCT	Abit Cons NAN91 JCT	OTHER
Q26M	6	Crossline JCT	Allanburg West JCT	OTHER
Q28A	1	Beck #2 TS	Abit Cons NAN91 JCT	LC
Q28A	2	Abit Cons NAN91 JCT	Allanburg TS	LC
Q28A	3	Abit Cons NAN91 JCT	Abit Cons NAN91 JCT	LC
Q29HM	1	Beck #2 TS	Hannon JCT	DFL
Q29HM	3	Hannon JCT	Nebo JCT	DFL
Q29HM	4	Neale JCT	Southcote JCT	DFL
Q29HM	5	Southcote JCT	Carluke JCT	DFL
Q29HM	6	Carluke JCT	Middleport TS	DFL
Q29HM	7	Hannon JCT	Beach TS	DFL
Q29HM	8	Nebo JCT	Neale JCT	DFL
Q29HM	9	Beach TS	Dof.Kenilworth CTS	LC
Q29HM	10	Nebo JCT	Nebo TS	LC
Q2A	1	Beck #1 Q2AH JCT	Crossline JCT	OTHER

Operation Designation	Section	From	To	Functional Category
Q2AH	1	Beck #1 Q2AH JCT	Holland Road JCT	LC
Q2AH	2	Holland Road JCT	Allanburg TS	LC
Q2AH	3	Holland Road JCT	St.Johns Valley JCT	LC
Q2AH	4	St.Johns Valley JCT	Pelham JCT	LC
Q2AH	5	St.Anns JCT	Dunnville TS	LC
Q2AH	8	Pelham JCT	Rosedene JCT	LC
Q2AH	9	Rosedene JCT	St.Anns JCT	LC
Q2AH	11	St.Anns JCT	Caistor JCT	OTHER
Q2AH	12	Caistor JCT	IPPL Smithville CTS	OTHER
Q2AH	13	Caistor JCT	Railway JCT	OTHER
Q2AH	14	Railway JCT	Glanford JCT	OTHER
Q2AH	15	St.Johns Valley JCT	Louth JCT	LC
Q2AH	16	Louth JCT	Cherry JCT	LC
Q2AH	17	Cherry JCT	Beamsville TS	LC
Q2AH	18	Beamsville TS	Winona JCT	OTHER
Q2AH	19	Saltfleet JCT	Beach TS	LC
Q2AH	20	Cherry JCT	Vineland DS	LC
Q2AH	21	St.Anns JCT	St.Anns JCT	LC
Q2AH	22	Winona JCT	Saltfleet JCT	LC
Q2AH	23	Winona JCT	Winona TS	LC
Q2AH	24	Winona JCT	Winona TS	LC
Q2AH	25	Beck #1 SS	Beck #1 Q2AH JCT	OTHER
Q2AH	26	Beck #1 SS	Beck #1 Q2AH JCT	LC
Q2AH	27	St.Anns JCT	St.Anns JCT	OTHER
Q30M	1	Beck #2 TS	Allanburg Q30M JCT	DFL
Q30M	3	Allanburg Q30M JCT	Mount Hope JCT	DFL
Q30M	4	Mount Hope JCT	Carluke JCT	DFL
Q30M	5	Carluke JCT	Middleport TS	DFL
Q30M	6	Allanburg Q30M JCT	Allanburg TS	LC
Q35M	1	Beck #2 TS	Abit Cons NAN91 JCT	LC
Q35M	2	Abit Cons NAN91 JCT	Crossline JCT	LC
Q35M	3	Crossline JCT	Allanburg TS	LC
Q35M	4	Allanburg West JCT	St.Anns JCT	OTHER
Q35M	5	St.Anns JCT	Caledonia Q35M JCT	OTHER
Q35M	6	Caledonia Q35M JCT	Middleport TS	OTHER
Q35M	7	Crossline JCT	Allanburg West JCT	OTHER
Q35M	8	St.Anns JCT	St.Anns JCT	OTHER
Q35M	9	Caledonia Q35M JCT	Caledonia Q35M JCT	OTHER
Q3K	1	Cataraqui TS	Westbrook JCT	LC
Q3K	2	Westbrook JCT	Frontenac TS	LC
Q3M6	1	Frontenac TS	Novelis CTS	LC
Q3N	1	Beck #1 SS	Portal JCT	LC

Operation Designation	Section	From	To	Functional Category
Q3N	2	Portal JCT	Dresser JCT	LC
Q3N	3	Dresser JCT	Niagara JCT	LC
Q3N	4	Niagara JCT	Murray TS	LC
Q3N	5	Portal JCT	Stanley TS	LC
Q3N	6	Dresser JCT	Trei-bacher JCT	OTHER
Q3NC	1	Canal JCT	Portal JCT	OTHER
Q4B	1	Thunder Bay SS	Abitibi JCT	OTHER
Q4B	2	Abitibi JCT	James Street JCT	OTHER
Q4B	3	James Street JCT	St.Paul JCT	LC
Q4B	4	St.Paul JCT	Walsh Street JCT	LC
Q4B	5	Walsh Street JCT	Birch TS	LC
Q4B	6	James Street JCT	ResFP Thundr Bay CTS	LC
Q4B	7	St.Paul JCT	ResFP Kraft CTS	OTHER
Q4B	8	Walsh Street JCT	Fort William TS	LC
Q4C	2	IPB Ottawa River JCT	Chats Falls SS	N
Q4N	1	Beck #1 SS	Portal JCT	LC
Q4N	2	Portal JCT	Stanley TS	LC
Q4N	3	Portal JCT	Dresser JCT	LC
Q4N	4	Dresser JCT	Niagara JCT	LC
Q4N	6	Dresser JCT	Trei-bacher JCT	OTHER
Q4N	8	Niagara JCT	Murray TS	LC
Q5B	1	Thunder Bay SS	Abitibi JCT	LC
Q5B	2	Abitibi JCT	James Street JCT	LC
Q5B	3	James Street JCT	St.Paul JCT	LC
Q5B	4	St.Paul JCT	Walsh Street JCT	LC
Q5B	5	Walsh Street JCT	Birch TS	LC
Q5B	6	Abitibi JCT	Erco JCT	OTHER
Q5B	7	Erco JCT	Q5B STR A6 JCT	OTHER
Q5B	8	James Street JCT	ResFP Thundr Bay CTS	OTHER
Q5B	9	St.Paul JCT	ResFP Kraft CTS	LC
Q5B	10	Walsh Street JCT	Fort William TS	LC
Q5G	1	Beck #1 SS	Holland Road JCT	OTHER
Q5G	2	Holland Road JCT	Beamsville TS	OTHER
Q5G	3	Beamsville TS	West Lincoln JCT	OTHER
Q5G	4	Beach JCT	Gage TS	OTHER
Q6A	1	Beck #1 SS	Crossline JCT	OTHER
Q6N	1	Selby JCT	Napanee TS	OTHER
Q6S	1	Cataraqui TS	Westbrook JCT	DFL
Q6S	2	Westbrook JCT	Odessa JCT	DFL
Q6S	3	Odessa JCT	Selby JCT	DFL
Q6S	4	Selby JCT	Milltown JCT	DFL
Q6S	5	Milltown JCT	Sidney TS	DFL

Operation Designation	Section	From	To	Functional Category
Q6S	6	Odessa JCT	Invista JCT	LC
Q6S	7	Invista JCT	Q6S STR M60 JCT	OTHER
Q6S	9	Milltown JCT	TCPL Belleville CTS	LC
Q8B	1	Thunder Bay SS	Birch TS	LC
Q9B	1	Thunder Bay SS	Birch TS	LC
R13K	1	Richview TS	Manby TS	DFL
R13K	2	Manby TS	Manby TS	DFL
R13K	3	Manby TS	Vansco JCT	LC
R13K	4	Vansco JCT	Horner TS	LC
R14T	1	Richview TS	Tomken JCT	DFL
R14T	2	Tomken JCT	Erindale JCT	DFL
R14T	3	Erindale JCT	Trafalgar TS	DFL
R14T	5	Erindale JCT	Erindale TS	LC
R14T	6	Tomken JCT	Tomken TS	LC
R15K	1	Richview TS	Manby TS	LC
R17T	1	Richview TS	Tomken JCT	DFL
R17T	2	Tomken JCT	Erindale JCT	DFL
R17T	3	Erindale JCT	Trafalgar TS	DFL
R17T	5	Erindale JCT	Erindale TS	LC
R17T	6	Tomken JCT	Tomken TS	LC
R19TH	1	Richview TS	Tomken JCT	DFL
R19TH	2	Tomken JCT	Hanlan JCT	DFL
R19TH	3	Hanlan JCT	Erindale JCT	DFL
R19TH	4	Erindale JCT	Churchill MeadowsJCT	DFL
R19TH	5	Hanlan JCT	Hurontario SS	DFL
R19TH	6	Erindale JCT	Erindale TS	LC
R19TH	7	Tomken JCT	Tomken TS	LC
R19TH	8	Hurontario SS	Hurontario SS	DFL
R19TH	9	Hurontario SS	Jim Yarrow MTS	LC
R19TH	10	Churchill MeadowsJCT	Trafalgar TS	DFL
R19TH	11	Churchill MeadowsJCT	Churchill Meadows TS	LC
R1K	1	Richview TS	Manby TS	N
R1LB	1	Pine Portage SS	Lakehead TS	N
R1LB	2	Lakehead TS	Birch TS	N
R1LB	3	Lakehead TS	Lakehead TS	N
R21D	1	Otter Rapids SS	Pinard JCT	LC
R21D	2	Pinard JCT	Pinard TS	LC
R21D	3	Pinard JCT	Abitibi Canyon GS	LC
R21D	4	Otter Rapids GS	Otter Rapids SS	LC
R21TH	1	Richview TS	Tomken JCT	DFL
R21TH	2	Tomken JCT	Hanlan JCT	DFL
R21TH	3	Hanlan JCT	Erindale JCT	DFL

Operation Designation	Section	From	To	Functional Category
R21TH	4	Erindale JCT	Churchill MeadowsJCT	DFL
R21TH	5	Hanlan JCT	Hurontario SS	DFL
R21TH	6	Erindale JCT	Erindale TS	LC
R21TH	7	Tomken JCT	Tomken TS	LC
R21TH	8	Hurontario SS	Hurontario SS	DFL
R21TH	9	Hurontario SS	Jim Yarrow MTS	LC
R21TH	10	Churchill MeadowsJCT	Trafalgar TS	DFL
R21TH	11	Churchill MeadowsJCT	Churchill Meadows TS	LC
R24C	1	Richview TS	Applewood JCT	LC
R24C	2	Applewood JCT	Cooksville TS	LC
R2K	1	Richview TS	Manby TS	LC
R2K	2	Manby TS	Vansco JCT	LC
R2K	3	Vansco JCT	Horner TS	LC
R2K	4	Manby TS	Manby TS	LC
R2LB	1	Pine Portage SS	Lakehead TS	N
R2LB	2	Lakehead TS	Birch TS	N
R2LB	3	Lakehead TS	Lakehead TS	N
R9A	1	Pine Portage SS	Alexander SS	DFL
R9A	2	Alexander SS	Alexander GS	LC
R9A	3	Alexander SS	Alexander SS	DFL
S1C	1	Conmee JCT	Lac Des Iles JCT	LC
S1C	2	Lac Des Iles JCT	Silver Falls GS	LC
S1C	6	Lac Des Iles JCT	Lac Des Iles Min CSS	LC
S1H	1	Owen Sound TS	Hanover TS	N
S1K	4	Battersea DS	Frontenac TS	LC
S1R	1	S1R STR 1A JCT	S1R STR 24 JCT	OTHER
S21N	1	Martindale TS	Vale Frd Stbe #2 JCT	LC
S21N	2	Vale Frd Stbe #2 JCT	Vale Copper #4 CTS	LC
S21N	3	Vale Frd Stbe #2 JCT	Vale Frd Stbe #2 CTS	OTHER
S22A	1	Martindale TS	Clarabelle JCT	DFL
S22A	2	Clarabelle JCT	Algoma TS	DFL
S22A	3	Clarabelle JCT	Clarabelle TS	LC
S24V	1	Orangeville TS	Shannon CSS	LC
S25L	2	Saunders JCT	St.Lawrence TS	LC
S26L	2	Saunders JCT	St.Lawrence TS	LC
S2B	1	Martindale TS	Copper Cliff JCT	LC
S2B	2	Copper Cliff JCT	Creighton JCT	LC
S2B	3	Creighton JCT	Vermillion JCT	LC
S2B	4	Vermillion JCT	Ethel Lake JCT	LC
S2B	5	Ethel Lake JCT	Turbine JCT	LC
S2B	7	Turbine JCT	Eacom Nairn Ctr JCT	LC
S2B	8	Eacom Nairn Ctr JCT	Espanola JCT	LC

Operation Designation	Section	From	To	Functional Category
S2B	9	Espanola JCT	Eddy Tap JCT	LC
S2B	10	Espanola A JCT	Espanola TS	OTHER
S2B	11	Espanola TS	S2B-M31 JCT	LC
S2B	12	Baldwin JCT	Massey JCT	LC
S2B	13	Massey JCT	Cameron Falls JCT	LC
S2B	14	Cutler JCT	Serpent River JCT	LC
S2B	15	Vermillion JCT	Lockerby Mine CTS	LC
S2B	16	Ethel Lake JCT	Whitefish DS	LC
S2B	19	Espanola A JCT	McLeans Mtn JCT	LC
S2B	20	Massey JCT	Massey DS	LC
S2B	23	Eacom Nairn Ctr JCT	Eacom Nairn Ctr CTS	LC
S2B	24	Spanish JCT	Cutler JCT	LC
S2B	25	Serpent River JCT	Carmeuse Lime JCT	LC
S2B	27	Carmeuse Lime JCT	Blind River TS JCT	LC
S2B	30	Cameron Falls JCT	Spanish JCT	LC
S2B	32	Espanola JCT	Baldwin JCT	OTHER
S2B	33	Blind River TS JCT	Algoma TS	LC
S2B	34	Blind River TS JCT	Blind River TS	OTHER
S2B	35	Eddy Tap JCT	Espanola A JCT	LC
S2B	37	Eddy Tap JCT	Eddy Tap A JCT	OTHER
S2B	38	Creighton JCT	Nickel Basin JCT	OTHER
S2B	39	Spanish JCT	Spanish DS	LC
S2B	40	McLeans Mtn JCT	Manitoulin TS	LC
S2B	41	McLeans Mtn JCT	McLeans Mtn CSS	LC
S2B	42	S2B-M31 JCT	Baldwin JCT	LC
S2E	1	Essa JCT	Essa TS	OTHER
S2N	1	Strathroy TS	Sydenham JCT	LC
S2N	2	Sydenham JCT	Adelaide JCT	LC
S2N	3	Adelaide JCT	Kerwood JCT	OTHER
S2N	4	Kerwood JCT	Ennisbrook JCT	LC
S2N	5	Ennisbrook JCT	Wanstead JCT	LC
S2N	6	Wanstead JCT	Sarnia Scott TS	LC
S2N	7	Adelaide JCT	Landon JCT	LC
S2N	8	Kerwood JCT	Sun Cdn Pipeline CTS	LC
S2N	9	Ennisbrook JCT	Forest Jura DS	LC
S2N	10	Wanstead JCT	Wanstead TS	LC
S2N	11	Wanstead TS	Wanstead JCT	LC
S2N	12	Wanstead TS	Wanstead JCT	LC
S2N	13	Landon JCT	Enbrg Keyser CTS	LC
S2N	14	Landon JCT	Landon CGS	LC
S2S	1	Owen Sound TS	Meaford TS	DFL
S2S	2	Meaford TS	Stayner TS	DFL

Operation Designation	Section	From	To	Functional Category
S30L	2	Saunders JCT	St.Lawrence TS	LC
S32L	2	Saunders JCT	St.Lawrence TS	LC
S39M	1	Summerhaven SS	Caledonia JCT	DFL
S39M	2	Caledonia JCT	Middleport TS	DFL
S39M	3	Caledonia JCT	Caledonia TS	LC
S3S	2	Kapuskasing R Jct	Tembec Kapuskas CTS	OTHER
S3S	4	S3S_S4S STR 8 JCT	Kapuskasing R Jct	OTHER
S47C	1	Spence SS	Erieau WF JCT	DFL
S47C	2	Erieau WF JCT	Chatham SS	DFL
S47C	3	Erieau WF JCT	Erieau WF CGS	LC
S4S	1	S3S_S4S STR 8 JCT	Kapuskasing R Jct	OTHER
S4S	2	Kapuskasing R Jct	Tembec Kapuskas CTS	OTHER
S5M	1	Martindale TS	Donaldson Cres JCT	LC
S5M	2	McCrea JCT	Onaping JCT	LC
S5M	3	Onaping JCT	Onaping Area M&M CTS	LC
S5M	4	McCrea JCT	Thayer Lindsley CTS	OTHER
S5M	5	Onaping JCT	Nickel Basin JCT	LC
S5M	6	Nickel Basin JCT	Larchwood TS	LC
S5M	7	Donaldson Cres JCT	McCrea JCT	LC
S6F	1	Martindale TS	Falconbridge JCT	LC
S6F	2	Falconbridge JCT	Falconbridge 61 JCT	LC
S6N	1	Selby JCT	Napanee TS	OTHER
S7M	1	South March SS	Marchwood JCT	DFL
S7M	2	Marchwood JCT	Bridlewood JCT	DFL
S7M	3	Bridlewood JCT	X523A STR 654 JCT	DFL
S7M	4	X523A STR 654 JCT	S7M STR 673N JCT	DFL
S7M	5	S7M STR 673N JCT	Merivale TS	DFL
S7M	7	Bridlewood JCT	Bridlewood MTS	LC
S7M	8	S7M STR 673N JCT	S7M STR R14-R15 JCT	LC
S7M	9	S7M STR R14-R15 JCT	Fallowfield JCT	LC
S7M	10	Fallowfield JCT	Manotick JCT	LC
S7M	11	Manotick JCT	Richmond MTS	LC
S7M	12	Manotick JCT	Manotick STR A40 JCT	LC
S7M	13	Manotick STR A40 JCT	Manotick DS	LC
S7M	14	Manotick STR A40 JCT	Manotick DS	LC
S7M	15	Fallowfield JCT	Fallowfield MTS	LC
S7M	16	S7M STR R14-R15 JCT	Manordale JCT	OTHER
S7M	17	X523A STR 654 JCT	Didsbury Road JCT	OTHER
S7M	18	Marchwood JCT	Marchwood MTS	LC
S7S	2	Dominion Drive DS	Gervais JCT	OTHER
SK1	1	Rabbit Lake SS	Keewatin JCT	LC
SK1	2	Forgie JCT	IPB Manitoba 115 JCT	N

Operation Designation	Section	From	To	Functional Category
SK1	4	Forgie JCT	Clearwater Bay DS	LC
SK1	5	Keewatin JCT	Forgie JCT	LC
SK1	6	Keewatin JCT	Keewatin DS	LC
T11T	1	St.Thomas TS	Lyons JCT	OTHER
T11T	2	Lyons JCT	Cranberry JCT	OTHER
T11T	7	Lyons JCT	Lyons JCT	OTHER
T1B	1	Rayner CGS	Wharncliffe JCT	LC
T1B	2	Sowerby JCT	Red Rock CGS JCT	LC
T1B	3	Red Rock CGS	Red Rock CGS JCT	LC
T1B	4	Cobden JCT	Striker DS	LC
T1B	5	Striker DS	Algoma TS	LC
T1B	6	Sowerby JCT	Sowerby DS	LC
T1B	7	Cobden JCT	North Shore DS	LC
T1B	8	Wharncliffe JCT	Sowerby JCT	LC
T1B	9	Wharncliffe JCT	Wharncliffe DS	LC
T1B	10	Red Rock CGS JCT	Cobden JCT	LC
T1B	11	Red Rock CGS JCT	Red Rock CGS	LC
T1M	1	Terrace Bay SS	Angler Switch JCT	DFL
T1M	2	Angler Switch JCT	Pic JCT	DFL
T1M	3	Pic JCT	Marathon TS	DFL
T1M	4	Pic JCT	Marathon DS JCT	LC
T1M	5	Marathon DS JCT	Marathon DS	LC
T22C	1	Chats Falls SS	Marine JCT	DFL
T22C	2	Marine JCT	Clarington TS	DFL
T22C	3	Marine JCT	Otonabee TS	LC
T27P	1	Wells CGS	Mississagi TS	LC
T28C	1	Clarington TS	Duffin JCT	N
T28C	2	Duffin JCT	Cherrywood TS	N
T28P	1	Wells CGS	Mississagi TS	LC
T29C	1	Clarington TS	Wilson JCT	DFL
T29C	2	Wilson JCT	Whitby JCT	DFL
T29C	3	Whitby JCT	Cherrywood TS	DFL
T29C	4	Wilson JCT	Wilson TS	LC
T29C	5	Whitby JCT	Whitby TS	LC
T2N	2	Toronto Power TS	Drummond Road JCT	OTHER
T2R	1	Timmins TS	Wawaitin JCT	OTHER
T2R	2	Wawaitin JCT	Shiningtree JCT	OTHER
T2R	3	Shiningtree JCT	Blezard Valley JCT	OTHER
T2R	4	Shiningtree JCT	Blezard Valley JCT	OTHER
T2R	5	Blezard Valley JCT	Copper Cliff JCT	OTHER
T2R	6	Blezard Valley JCT	Copper Cliff JCT	OTHER
T2R	10	Blezard Valley JCT	Falconbridge T2R CTS	OTHER

Operation Designation	Section	From	To	Functional Category
T2R	11	Wawaitin JCT	Wawaitin GS	OTHER
T33E	1	Almonte TS	Almonte TS	LC
T33E	2	Almonte TS	Clarington TS	DFL
T33E	3	Almonte TS	Almonte TS	DFL
T36B	1	Trafalgar TS	Lantz JCT	DFL
T36B	2	Palermo TxB JCT	Burlington TS	DFL
T36B	3	Palermo TxB JCT	Palermo TS	LC
T36B	4	Lantz JCT	Glenorchy JCT	DFL
T36B	5	Lantz JCT	Trafalgar TS	OTHER
T36B	6	Glenorchy JCT	Palermo TxB JCT	DFL
T36B	7	Glenorchy JCT	Glenorchy MTS #1	LC
T37B	1	Trafalgar TS	Lantz JCT	DFL
T37B	2	Palermo TxB JCT	Burlington TS	DFL
T37B	3	Palermo TxB JCT	Palermo TS	LC
T37B	4	Lantz JCT	Glenorchy JCT	DFL
T37B	5	Lantz JCT	Trafalgar TS	N
T37B	6	Glenorchy JCT	Palermo TxB JCT	DFL
T37B	7	Glenorchy JCT	Glenorchy MTS #1	LC
T38B	1	Trafalgar TS	Lantz JCT	DFL
T38B	2	Lantz JCT	Tremaine JCT	DFL
T38B	3	Lantz JCT	Trafalgar DESN JCT	LC
T38B	4	Hornby JCT	TCE Halton Hills JCT	LC
T38B	5	Hornby JCT	Meadowvale TS	LC
T38B	6	Trafalgar DESN JCT	Hornby JCT	LC
T38B	7	Trafalgar DESN JCT	Trafalgar TS	LC
T38B	8	TCE Halton Hills JCT	Halton TS	LC
T38B	9	TCE Halton Hills JCT	TCE Halton Hills JCT	LC
T38B	12	Tremaine JCT	Burlington TS	DFL
T38B	13	Tremaine JCT	Tremaine TS	LC
T39B	1	Trafalgar TS	Lantz JCT	DFL
T39B	2	Lantz JCT	Tremaine JCT	DFL
T39B	3	Lantz JCT	Trafalgar DESN JCT	LC
T39B	4	Hornby JCT	TCE Halton Hills JCT	LC
T39B	5	Hornby JCT	Meadowvale TS	LC
T39B	6	Trafalgar DESN JCT	Hornby JCT	LC
T39B	7	Trafalgar DESN JCT	Trafalgar TS	LC
T39B	8	TCE Halton Hills JCT	Halton TS	LC
T39B	9	TCE Halton Hills JCT	TCE Halton Hills JCT	LC
T39B	12	Tremaine JCT	Burlington TS	DFL
T39B	13	Tremaine JCT	Tremaine TS	LC
T61S	1	Timmins JCT	Shiningtree DS	LC
T61S	2	Timmins JCT	Ogden JCT	LC

Operation Designation	Section	From	To	Functional Category
T61S	3	Ogden JCT	Timmins WestMine JCT	LC
T61S	4	Ogden JCT	Kam Kotia DS	OTHER
T61S	5	Timmins TS	Timmins JCT	LC
T61S	6	Timmins WestMine JCT	Weston Lake DS	LC
T61S	7	Timmins WestMine JCT	Timmins WestMine CTS	LC
T7M	1	Otter Rapids SS	Onakawana JCT	LC
T7M	2	Onakawana JCT	Renison JCT	LC
T7M	3	Renison JCT	Moosonee SS	LC
T7M	4	Onakawana JCT	Onakawana CTS	LC
T7M	5	Renison JCT	Renison CTS	LC
T8M	1	Otter Rapids SS	Moosonee SS	LC
T9K	3	T9K T#80 JCT	T9K T#207 JCT	OTHER
UB3B	1	H2O Pwr FtFrnces CTS	Int'l Bdy Minn JCT	OTHER
V12M	1	Merivale TS	Val Tetreau JCT	LC
V12M	3	Val Tetreau JCT	Hinchey TS	LC
V41H	1	Claireville TS	Claireville TS	DFL
V41H	2	Claireville TS	Sithe Goreway JCT	DFL
V41H	3	Sithe Goreway JCT	Bramalea TS	DFL
V41H	4	Bramalea TS	Cardiff JCT	DFL
V41H	5	Cardiff JCT	Hurontario SS	DFL
V41H	6	Sithe Goreway JCT	Sithe Goreway JCT	LC
V41H	8	Cardiff JCT	Cardiff TS	LC
V41N	1	Nova SS	St.Clair E.C. JCT	DFL
V41N	2	Nova SS	Nova Corunna CTS	LC
V41N	3	St.Clair E.C. JCT	Sarnia Scott TS	DFL
V41N	4	St.Clair E.C. JCT	St.Clair E.C. CGS	LC
V41N	5	Nova SS	Nova SS	DFL
V42H	1	Claireville TS	Claireville TS	DFL
V42H	2	Claireville TS	Claireville TS	DFL
V42H	3	Claireville TS	Sithe Goreway JCT	DFL
V42H	4	Sithe Goreway JCT	Bramalea TS	DFL
V42H	5	Bramalea TS	Cardiff JCT	DFL
V42H	6	Cardiff JCT	Hurontario SS	DFL
V42H	7	Sithe Goreway JCT	Sithe Goreway JCT	LC
V42H	9	Cardiff JCT	Cardiff TS	LC
V42H	10	Claireville TS	Goreway JCT	LC
V42H	11	Goreway JCT	Goreway PH JCT	LC
V42H	12	Goreway PH JCT	Goreway TS	LC
V43	1	Claireville TS	Claireville TS	LC
V43	2	Claireville TS	Goreway JCT	LC
V43	3	Goreway JCT	Goreway PH JCT	LC
V43	4	Goreway PH JCT	Goreway TS	LC

Operation Designation	Section	From	To	Functional Category
V43	5	Claireville TS	Woodbridge JCT	LC
V43	6	Woodbridge JCT	Vaughan #3 JCT	LC
V43	7	Vaughan #3 JCT	Kleinburg TS	LC
V43	8	Woodbridge JCT	Woodbridge TS	LC
V43	9	Vaughan #3 JCT	Vaughan MTS #3	LC
V43N	1	Nova SS	Talford JCT	DFL
V43N	2	Talford JCT	St.Clair E.C. JCT	DFL
V43N	3	Talford JCT	Dupont JCT	LC
V43N	4	Dupont JCT	Shell Sarnia CTS	LC
V43N	5	Dupont JCT	Nova St Clair R CTS	LC
V43N	6	St.Clair E.C. JCT	Sarnia Scott TS	DFL
V43N	7	St.Clair E.C. JCT	St.Clair E.C. CGS	LC
V44	1	Claireville TS	Woodbridge JCT	LC
V44	2	Woodbridge JCT	Vaughan #3 JCT	LC
V44	3	Vaughan #3 JCT	Kleinburg TS	LC
V44	4	Woodbridge JCT	Woodbridge TS	LC
V44	5	Vaughan #3 JCT	Vaughan MTS #3	LC
V586M	1	Claireville TS	Milton SS	N
V586M	2	Milton SS	Middleport TS	N
V586M	3	Milton SS	Milton SS	N
V71P	1	Claireville TS	Toronto Star JCT	DFL
V71P	2	Toronto Star JCT	Vaughan #1 JCT	DFL
V71P	3	Vaughan #1 JCT	Richmond Hill JCT	DFL
V71P	4	Richmond Hill JCT	Richmond Hill #2 JCT	DFL
V71P	5	Richmond Hill #2 JCT	Parkway TS	DFL
V71P	6	Toronto Star JCT	Toronto Star JCT	LC
V71P	7	Toronto Star JCT	Vaughan MTS #2	LC
V71P	8	Vaughan #1 JCT	Vaughan #1 PH JCT	LC
V71P	9	Vaughan #1 PH JCT	Vaughan MTS #1	LC
V71P	10	Richmond Hill JCT	Richmond Hill MTS #1	LC
V71P	11	Richmond Hill #2 JCT	Richmond Hill MTS #2	LC
V72R	3	Richview TS	Richview TS	LC
V72R	4	Claireville TS	Richview TS	DFL
V72R	5	Richview TS	Richview TS	DFL
V73R	4	Claireville TS	Richview TS	N
V74R	1	Claireville TS	Westmore JCT	DFL
V74R	2	Westmore JCT	Richview TS	DFL
V74R	3	Westmore JCT	Rexdale TS	LC
V74R	8	Richview TS	Richview TS	DFL
V74R	9	Richview TS	Richview TS	LC
V74R	12	Westmore JCT	Westmore JCT	LC
V75P	2	Claireville TS	Toronto Star JCT	DFL

Operation Designation	Section	From	To	Functional Category
V75P	3	Toronto Star JCT	Vaughan #1 JCT	DFL
V75P	4	Vaughan #1 JCT	Richmond Hill JCT	DFL
V75P	5	Richmond Hill JCT	Richmond Hill #2 JCT	DFL
V75P	6	Richmond Hill #2 JCT	Parkway TS	DFL
V75P	7	Toronto Star JCT	Toronto Star JCT	LC
V75P	8	Toronto Star JCT	Vaughan MTS #2	LC
V75P	9	Vaughan #1 JCT	Vaughan #1 PH JCT	LC
V75P	10	Vaughan #1 PH JCT	Vaughan MTS #1	LC
V75P	11	Richmond Hill JCT	Richmond Hill MTS #1	LC
V75P	12	Richmond Hill #2 JCT	Richmond Hill MTS #2	LC
V76R	1	Claireville TS	Westmore JCT	DFL
V76R	4	Westmore JCT	Richview TS	DFL
V76R	5	Westmore JCT	Rexdale TS	LC
V76R	9	Westmore JCT	Westmore JCT	LC
V77R	1	Claireville TS	Richview TS	N
V79R	1	Claireville TS	Richview TS	N
W12	1	Buchanan TS	Ingersoll TS	LC
W2	1	Whitedog Falls GS	Whitedog Falls SS	LC
W21M	1	Wawa TS	Marathon TS	N
W22M	1	Wawa TS	Marathon TS	N
W23K	1	Wawa TS	MacKay JCT	N
W2C	1	Wawa TS	Chapleau JCT	LC
W2C	3	Chapleau JCT	Chapleau DS	LC
W2C	4	Chapleau JCT	Chapleau DS	LC
W2C	5	Chapleau JCT	Chapleau MTS	LC
W2S	1	Buchanan TS	Sydenham JCT	LC
W2S	2	Sydenham JCT	Strathroy TS	LC
W36	1	Buchanan TS	Oxford Street JCT	LC
W36	2	Oxford Street JCT	Clarke TS	LC
W36	3	Oxford Street JCT	Talbot TS	LC
W37	1	Buchanan TS	Dundas Street JCT	LC
W37	2	Dundas Street JCT	Clarke TS	LC
W37	3	Dundas Street JCT	Talbot TS	LC
W3B	1	Barrett Chute JCT	Barrett Chute SS	DFL
W3B	2	Stewartville TS	Barryvale Rd JCT	DFL
W3B	3	Barrett Chute JCT	Mountain Chute DS	LC
W3B	4	Barryvale Rd JCT	Barrett Chute JCT	DFL
W3C	1	Whitedog Falls SS	Caribou Falls GS	LC
W3T	1	Buchanan TS	Kettle Creek JCT	OTHER
W3T	2	Kettle Creek JCT	St.Thomas TS	OTHER
W3T	3	Kettle Creek JCT	W3_4T STR B JCT	OTHER
W42L	1	Buchanan TS	Buchanan TS	DFL

Operation Designation	Section	From	To	Functional Category
W42L	2	Buchanan TS	Longwood TS	DFL
W42L	3	Buchanan TS	Buchanan TS	LC
W43L	1	Buchanan TS	Buchanan TS	DFL
W43L	2	Buchanan TS	Longwood TS	DFL
W43L	3	Buchanan TS	Buchanan TS	LC
W44LC	1	Buchanan TS	Cowal JCT	DFL
W44LC	2	Cowal JCT	Duart JCT	DFL
W44LC	3	Cowal JCT	Longwood TS	DFL
W44LC	4	Buchanan TS	Edgeware TS	LC
W44LC	5	Buchanan TS	Buchanan TS	DFL
W44LC	6	Duart JCT	Chatham SS	DFL
W44LC	7	Duart JCT	Duart TS	LC
W45LS	1	Buchanan TS	Cowal JCT	DFL
W45LS	2	Cowal JCT	Duart JCT	DFL
W45LS	3	Cowal JCT	Longwood TS	DFL
W45LS	5	Buchanan TS	Buchanan TS	DFL
W45LS	6	Duart JCT	Spence SS	DFL
W45LS	7	Duart JCT	Duart TS	LC
W4T	1	Buchanan TS	Kettle Creek JCT	OTHER
W4T	2	Kettle Creek JCT	St.Thomas TS	OTHER
W4T	3	Kettle Creek JCT	W3_4T STR B JCT	OTHER
W5N	1	Buchanan TS	Nelson TS	LC
W6CS	1	Stewartville TS	Arnprior JCT	DFL
W6CS	2	Arnprior JCT	Mississippi JCT	DFL
W6CS	3	Mississippi JCT	Chats Falls SS	OTHER
W6CS	4	Mississippi JCT	Marchwood JCT	DFL
W6CS	5	Arnprior JCT	Arnprior TS	LC
W6CS	6	Marchwood JCT	Marchwood JCT	DFL
W6CS	7	Marchwood JCT	Marchwood JCT	OTHER
W6CS	8	Marchwood JCT	South March SS	DFL
W6CS	9	Marchwood JCT	Marchwood MTS	LC
W6NL	1	Buchanan TS	Buchanan JCT	LC
W6NL	2	Buchanan JCT	Highbury TS	LC
W6NL	3	Buchanan JCT	Nelson TS	LC
W7	1	Buchanan TS	Ingersoll TS	LC
W71D	1	Widdifield SS	Lower Notch JCT	DFL
W71D	2	Lower Notch JCT	Dymond TS	DFL
W71D	3	Widdifield SS	Trout Lake TS	LC
W71D	4	Lower Notch JCT	Lower Notch GS	LC
W71D	5	Lower Notch JCT	Lower Notch GS	LC
W8T	1	Buchanan TS	W8T STR A1 JCT	LC
W8T	4	Edgeware JCT	Lyons JCT	LC

Operation Designation	Section	From	To	Functional Category
W8T	5	Lyons JCT	Cranberry JCT	LC
W8T	9	W8T STR A1 JCT	Edgeware JCT	LC
W8T	10	Lyons JCT	Lyons JCT	LC
W9L	1	Buchanan TS	Highbury TS	LC
WT1A	1	Lyons JCT	Silvercreek JCT	LC
WT1A	2	Silvercreek JCT	Aylmer TS	LC
WT1A	3	Silvercreek JCT	Silvercreek CGS	LC
WT1T	1	Cranberry JCT	ESWF JCT	LC
WT1T	2	Tillsonburg JCT	Tillsonburg TS	LC
WT1T	3	Tillsonburg JCT	Tillsonburg TS	LC
WT1T	4	ESWF JCT	Tillsonburg JCT	LC
WT1T	5	ESWF JCT	ESWF CSS	LC
WW1C	1	Ingersoll TS	Lafarge Woodstk. CTS	LC
X1H	1	Lennox TS	Lafarge JCT	DFL
X1H	2	Lafarge JCT	NPIF Kingston JCT	DFL
X1H	3	Cataraqui TS	Hinchinbrooke SS	N
X1H	4	Lafarge JCT	Lafarge Bath CTS	LC
X1H	6	NPIF Kingston JCT	Cataraqui TS	DFL
X1H	8	NPIF Kingston JCT	NPIF Kingston JCT	LC
X1P	1	Massanoga JCT	Dobbin TS	LC
X1P	2	Mountain Chute JCT	Massanoga JCT	LC
X1P	3	Chenaux TS	Mountain Chute JCT	LC
X1P	4	Mountain Chute JCT	Mountain Chute GS	LC
X1P	5	Massanoga JCT	Mazinaw DS	LC
X21	1	Lennox TS	Gretna JCT	LC
X21	2	Gretna JCT	Napanee TS	LC
X21	3	Gretna JCT	Long Reach East JCT	LC
X21	4	Long Reach East JCT	Long Reach West JCT	LC
X21	5	Long Reach West JCT	Picton TS	LC
X22	1	Lennox TS	Gretna JCT	LC
X22	2	Gretna JCT	Napanee TS	LC
X22	3	Gretna JCT	Long Reach East JCT	LC
X22	4	Long Reach East JCT	Long Reach West JCT	LC
X22	5	Long Reach West JCT	Picton TS	LC
X23N	1	Hanmer TS	Vale Frd Stbe #2 JCT	LC
X23N	2	Vale Frd Stbe #2 JCT	Clarabelle JCT	LC
X23N	3	Clarabelle JCT	Vale Copper #4 CTS	LC
X23N	4	Vale Frd Stbe #2 JCT	Vale Frd Stbe #2 CTS	LC
X23N	5	Clarabelle JCT	Clarabelle TS	LC
X25S	1	Hanmer TS	Hanmer Parllel B JCT	N
X25S	2	Hanmer Parllel B JCT	Martindl Parll B JCT	N
X25S	3	Hanmer Parllel B JCT	Martindl Parll B JCT	N

Operation Designation	Section	From	To	Functional Category
X25S	4	Martindl Parll B JCT	Martindale TS	N
X26S	1	Hanmer TS	Hanmer Parllel A JCT	N
X26S	2	Hanmer Parllel A JCT	Martindl Parll A JCT	N
X26S	3	Hanmer Parllel A JCT	Martindl Parll A JCT	N
X26S	4	Martindl Parll A JCT	Martindale TS	N
X27A	1	Hanmer TS	Algoma TS	N
X2H	1	Lennox TS	Lafarge JCT	DFL
X2H	2	Lafarge JCT	NPIF Kingston JCT	DFL
X2H	3	Westbrook JCT	Cataraqui TS	DFL
X2H	4	Cataraqui TS	Hinchinbrooke SS	DFL
X2H	5	Lafarge JCT	Lafarge Bath CTS	OTHER
X2H	6	Westbrook JCT	Gardiner STR 44 JCT	LC
X2H	7	NPIF Kingston JCT	Westbrook JCT	DFL
X2H	9	NPIF Kingston JCT	NPIF Kingston JCT	LC
X2H	10	Gardiner STR 44 JCT	Gardiner TS	LC
X2H	11	Gardiner STR 44 JCT	Gardiner TS	LC
X2Y	1	Chenaux TS	Chenaux JCT	LC
X2Y	2	Chenaux JCT	IPB Bryson JCT	N
X2Y	4	Chenaux JCT	Magellan Arospce JCT	LC
X2Y	5	Magellan Arospce JCT	Haley JCT	LC
X2Y	6	Haley JCT	Cobden TS	LC
X2Y	8	Cobden TS	Pembroke TS	LC
X2Y	9	Magellan Arospce JCT	Magellan Arospce CTS	LC
X2Y	10	Cobden TS	Cobden TS	LC
X3H	1	Lennox TS	Kingston Solar JCT	DFL
X3H	2	Cataraqui TS	Hinchinbrooke SS	N
X3H	3	Kingston Solar JCT	Cataraqui TS	DFL
X3H	4	Kingston Solar JCT	Kingston Solar CGS	LC
X4H	1	Lennox TS	Westbrook JCT	DFL
X4H	2	Westbrook JCT	Cataraqui TS	DFL
X4H	3	Cataraqui TS	Hinchinbrooke SS	DFL
X4H	4	Westbrook JCT	Gardiner STR 44 JCT	LC
X4H	5	Gardiner STR 44 JCT	Gardiner TS	LC
X4H	6	Gardiner STR 44 JCT	Gardiner TS	LC
X503E	1	Hanmer TS	Nobel SS	N
X503E	2	Nobel SS	Essa TS	N
X504E	1	Hanmer TS	Nobel SS	N
X504E	2	Nobel SS	Essa TS	N
X520B	1	Lennox TS	Bowmanville SS	N
X521B	1	Lennox TS	Bowmanville SS	N
X522A	1	Lennox TS	Hawthorne TS	N
X523A	1	Lennox TS	Hawthorne TS	N

Operation Designation	Section	From	To	Functional Category
X526B	1	Lennox TS	Bowmanville SS	N
X527B	1	Lennox TS	Bowmanville SS	N
X534N	1	Lennox TS	Napanee CSS	N
X538N	1	Lennox TS	Napanee CSS	N
X6	1	Chenaux TS	Cobden X6 JCT	LC
X6	2	Cobden X6 JCT	Cobden TS	LC
X6	3	Cobden X6 JCT	Pembroke TS	LC
X6	4	Pembroke TS	Pembroke TS	LC
X74P	1	Hanmer TS	Mississagi TS	N
Z1E	1	Lauzon TS	Windsor Airport JCT	DFL
Z1E	2	Jefferson JCT	Walker JCT	DFL
Z1E	3	Walker JCT	Windsor Transalt JCT	DFL
Z1E	4	Jefferson JCT	Ford Essex JCT	LC
Z1E	5	Walker JCT	Walker TS #1	LC
Z1E	6	Windsor Transalt JCT	Essex TS	DFL
Z1E	7	Windsor Transalt JCT	Windsor Transalt CGS	LC
Z1E	10	Windsor Airport JCT	Jefferson JCT	DFL
Z1E	11	Windsor Airport JCT	Windsor Airport CGS	LC
Z1E	12	Jefferson JCT	Jefferson JCT	LC
Z7E	1	Lauzon TS	Jefferson JCT	DFL
Z7E	2	Jefferson JCT	Walker JCT	DFL
Z7E	5	Walker JCT	Essex TS	DFL
Z7E	7	Jefferson JCT	Ford Essex JCT	LC
Z7E	8	Walker JCT	Walker TS #1	LC
Z7E	10	Jefferson JCT	Jefferson JCT	LC

LIST OF TRANSMISSION STATIONS BY FUNCTIONAL CATEGORY

N = Network *TC = Transformation Connection* *LC = Line Connection*

GC = Generation Line/Transformation Connection

Station Number	Station Name	Functional Category
1001	Agincourt TS	TC
1002	Applewood JCT	LC
1003	Armitage TS	TC
1004	Balfour JCT	LC
1005	Bartlett JCT	LC
1007	Bayview JCT	LC
1008	Beaverton TS	TC
1010	Bloor Street JCT	LC
1012	Goreway TS	TC
1013	Bramalea TS	TC
1014	Bronte TS	TC
1015	Brown Hill TS	N,TC
1018	Buttonville TS	TC
1019	Cherrywood TS	N,TC
1021	Claireville JCT	LC
1022	Claireville TS	N
1024	Tremaine TS	TC
1026	Cooksville TS	TC
1028	Dobbin TS	N,TC
1034	Dufferin JCT	LC
1035	Erindale TS	TC
1038	Gerrard JCT	LC
1044	Kleinburg TS	TC
1049	Lorne Park TS	TC
1050	Lumsden JCT	LC
1051	Manby TS	N,LC,TC
1056	Oakville TS #2	TC
1057	Thornton TS	TC
1058	Wilson TS	TC
1059	Otonabee TS	TC
1062	Palermo TS	TC
1064	Pickering A SS	GC
1065	Pleasant TS	TC
1066	Port Hope TS	TC
1070	Rexdale TS	TC
1071	Westmore JCT	LC

Station Number	Station Name	Functional Category
1073	Richview TS	N,TC
1074	Scarboro TS	TC
1075	Ellesmere TS	TC
1076	Riverside JCT	LC
1077	Birch JCT	LC
1082	Todmorden JCT	LC
1083	Tomken TS	TC
1084	Basin TS	TC
1086	Bathurst TS	TC
1087	Bermondsey TS	TC
1088	Bridgman TS	TC
1089	Carlaw TS	TC
1090	Cecil TS	LC,TC
1091	Charles TS	TC
1094	Dufferin TS	TC
1095	Duplex TS	TC
1096	Esplanade TS	TC
1097	Fairbank TS	TC
1098	Fairchild TS	TC
1099	Finch TS	TC
1100	Gerrard TS	TC
1101	Glengrove TS	TC
1102	Horner TS	TC
1103	John TS	LC,TC
1104	Leaside TS	N,TC
1105	Leslie TS	TC
1106	Main TS	TC
1107	Malvern TS	TC
1109	Runnymede TS	TC
1110	Sheppard TS	TC
1112	Strachan TS	TC
1113	Terauley TS	TC
1114	Warden TS	TC
1116	Wiltshire TS	N,TC
1118	Trafalgar TS	N,TC
1119	Vansco JCT	LC
1124	Woodbridge TS	TC
1135	Lindsay TS	TC
1139	Markham #2 PH JCT	LC
1154	Milton SS	N
1157	Pickering B SS	GC
1169	Whitby TS	TC

Station Number	Station Name	Functional Category
1173	Bowmanville SS	N
1174	Markham #3 PH JCT	LC
1184	Halton TS	TC
1186	Meadowvale TS	TC
1193	Toronto Star JCT	LC
1217	Hearn SS	LC
1262	Vaughan #1 PH JCT	LC
1265	Goreway PH JCT	LC
1275	Bridgman JCT	LC
1276	Clarington TS	N
1277	Cardiff TS	TC
1278	Parkway TS	N
1283	Waverly OPF	LC
1284	Brookside OPF	LC
1287	Oshawa G.M. TS	TC
1302	Holland TS	TC
1310	Hurontario SS	N
1317	Churchill Meadows TS	TC
2001	Almonte TS	TC
2003	Barrett Chute SS	N
2005	Arnprior TS	TC
2009	Belleville TS	N,TC
2010	Bilberry Creek TS	TC
2011	Billings JCT	LC
2016	Brockville TS	TC
2020	Cataraqui TS	N
2024	Chats Falls SS	N,GC
2027	Chesterville TS	TC
2030	Chenaux TS	LC
2031	Cobden TS	TC
2035	Cyrville JCT	LC
2048	Frontenac TS	LC,TC
2057	Havelock TS	N,TC
2061	Hinchinbrooke SS	N
2065	Gardiner TS	TC
2068	Longueuil TS	TC
2071	Manotick JCT	LC
2074	Merivale TS	N
2079	Morrisburg TS	TC
2083	Napanee TS	TC
2091	Odessa JCT	N,LC
2094	Carling TS	TC

Station Number	Station Name	Functional Category
2095	NRC TS	TC
2096	Albion TS	TC
2097	Hawthorne TS	N,TC
2098	Hinchey TS	TC
2099	King Edward TS	TC
2100	Lincoln Heights TS	TC
2101	Lisgar TS	TC
2103	Overbrook TS	TC
2104	Riverdale TS	TC
2105	Russell TS	TC
2106	Slater TS	TC
2107	Woodroffe TS	TC
2109	Pembroke TS	TC
2113	Picton TS	TC
2127	Smiths Falls TS	TC
2129	South March TS	N,TC
2130	St.Isidore TS	N,TC
2131	St.Lawrence TS	N,LC,TC
2136	Val Tetreau JCT	LC
2137	Wallace TS	TC
2141	Sidney TS	N,TC
2143	Lennox TS	N
2145	Orleans TS	TC
2170	Nepean TS	TC
2176	Bellman JCT	N,LC
2179	Massanoga JCT	LC
2194	B5D-B31L SS JCT	N
2197	Crosby TS	TC
2237	Des Joachims TS	N,LC
2238	Stewartville TS	N,TC
2255	Long Reach West JCT	LC
2256	Long Reach East JCT	LC
2290	Magellan Arospce JCT	LC
2329	19D684-1 JCT	LC
2330	Didsbury Road JCT	N,LC
2332	South March SS	N
2337	Northbrook JCT	LC
3001	Alliston TS	TC
3003	Barrie TS	TC
3004	Midhurst TS	TC
3006	Bruce B SS	N
3007	Bruce A TS	N

Station Number	Station Name	Functional Category
3008	Bruce HW Plant B TS	TC
3014	Cooper's Falls JCT	N,LC
3017	Essa TS	N
3018	Hanover TS	N,TC
3019	Meaford TS	TC
3021	Minden TS	N,TC
3022	Muskoka TS	TC
3023	Orangeville TS	N,TC
3024	Orillia TS	TC
3025	Owen Sound TS	N,TC
3026	Ashfield SS	N
3028	Parry Sound TS	TC
3029	Stayner TS	N,TC
3032	Waubaushene TS	TC
3034	Wingham TS	TC
3035	Bruce JCT	N
3052	Douglas Point TS	TC
3054	Nobel SS	N
3065	Bracebridge TS	TC
3079	Everett TS	TC
4003	Allanburg TS	LC,TC
4007	Beamsville TS	TC
4010	Brant TS	N,TC
4011	Brantford TS	TC
4013	Burlington TS	N,TC
4014	Cumberland TS	TC
4017	Caledonia TS	LC,TC
4021	Crowland TS	TC
4028	Detweiler TS	N,LC
4030	Dundas TS	TC
4031	Dunnville TS	TC
4032	Elmira TS	TC
4033	Fergus TS	TC
4035	Freeport SS	N
4037	Galt TS	TC
4038	Gibson JCT	LC
4040	Nebo TS	TC
4043	Guelph North JCT	N,LC
4044	Campbell TS	TC
4045	Cedar TS	N,TC
4046	Hanlon TS	TC
4049	Beach TS	N,LC,TC

Station Number	Station Name	Functional Category
4050	Birmingham TS	TC
4051	Elgin TS	TC
4052	Gage TS	TC
4053	Horning TS	TC
4054	Kenilworth TS	TC
4055	Lake TS	TC
4056	Mohawk TS	TC
4057	Newton TS	TC
4058	Stirton TS	TC
4070	Jarvis TS	TC
4072	Louth JCT	LC
4074	Nanticoke TS	N
4081	Newport JCT	N,LC
4082	Murray TS	TC
4084	Stanley TS	TC
4085	Norfolk TS	TC
4088	Port Colborne TS	TC
4091	Preston TS	N,TC
4097	Beck #2 TS	N
4101	Bunting TS	TC
4102	Carlton TS	TC
4103	Glendale TS	LC,TC
4104	Vansickle TS	TC
4108	Thorold TS	TC
4110	Vanessa JCT	LC
4123	Summerhaven SS	N
4130	Middleport TS	N
4134	Sandusk SS	N
4165	Edgeware JCT	LC
4177	Palmerston TS	TC
4181	D7F_D9F T#157 PH JCT	LC
4182	D7F_D9F T#162 PH JCT	LC
4195	Hartford JCT	LC
4213	DeCew Falls SS	LC
4214	Beck #1 SS	LC
4230	Puslinch JCT	LC
4237	Imp Oil Nanticok JCT	LC
4256	Winona TS	TC
4257	Dundas TS #2	TC
4258	Winona JCT	LC
4289	Beach JCT	LC
5005	Algoma TS	N,LC

Station Number	Station Name	Functional Category
5011	Blind River TS	LC
5014	Cassels JCT	N,LC
5025	Creighton JCT	LC
5031	Dymond TS	N,TC
5035	Elliot Lake TS	TC
5037	Espanola TS	TC
5050	Hearst TS	TC
5052	Hunta SS	N
5056	Kapuskasing TS	N,TC
5059	Larchwood TS	TC
5063	Manitoulin TS	TC
5065	Martindale TS	N,TC
5071	Mississagi TS	N
5076	North Bay TS	TC
5079	Otter Rapids SS	LC
5087	Ramore TS	TC
5096	Clarabelle TS	TC
5103	Timmins TS	N,LC,TC
5105	Trout Lake TS	TC
5111	Warkus JCT	N,LC
5113	Wawa TS	N
5120	Widdifield SS	N
5121	Crystal Falls TS	TC
5127	Hanmer TS	N
5148	Kirkland Lake TS	N,TC
5158	Porcupine TS	N
5162	Pinard TS	N
5171	Spruce Falls TS	N
5227	Ansonville TS	N
5242	Coniston TS	TC
5243	Little Long SS	N
5244	Lower Notch JCT	GC
5245	Otto Holden TS	N,TC
5306	Moosonee SS	LC
5407	Crystal Falls SS	N
6013	Conmee JCT	LC
6016	Dryden TS	N,TC
6020	Fort Frances TS	N
6022	Fort William TS	TC
6033	Kenora TS	N
6035	Lakehead TS	N
6036	Longlac TS	TC

Station Number	Station Name	Functional Category
6037	Mackenzie TS	N
6042	Manitouwadge TS	TC
6045	Marathon TS	N
6050	Moose Lake TS	N,TC
6062	Port Arthur TS #1	N,LC,TC
6064	Birch TS	N,TC
6065	Rabbit Lake SS	N
6066	Red Lake TS	TC
6084	Terrace Bay SS	N
6095	Alexander SS	N
6098	Whitedog Falls SS	LC
6099	Barwick TS	TC
6110	Kashabowie JCT	N,LC
6112	Marmion Lake JCT	LC
6152	Minnova JCT	LC
6174	Thunder Bay SS	GC
6191	Aguasabon SS	N
6192	Ear Falls TS	N,TC
6193	Pine Portage SS	N
6199	Ainsworth JCT	N,LC
6202	Murillo JCT	N,LC
6226	Angler Switch JCT	LC
6231	K3D-10 SW JCT	N,LC
6232	K6F-10 SW JCT	N,LC
7003	Aylmer TS	TC
7007	Buchanan TS	N,LC,TC
7009	Centralia TS	TC
7011	Chatham SS	N
7013	Cranberry JCT	LC
7017	Dundas Street JCT	LC
7019	Essex TS	N,TC
7022	Goderich TS	TC
7025	Ingersoll TS	TC
7030	Duart TS	TC
7031	Kent TS	TC
7035	Kingsville TS	TC
7036	Kirkton JCT	LC
7038	Lambton TS	TC
7039	Lambton TS #2	N
7040	Clarke TS	TC
7041	Highbury TS	TC
7042	Nelson TS	TC

Station Number	Station Name	Functional Category
7045	Talbot TS	TC
7047	Wonderland TS	TC
7048	Lucasville JCT	N,LC
7054	Oxford Street JCT	LC
7056	Nova SS	N
7060	Modeland TS	TC
7062	St.Andrews TS	TC
7064	Sarnia Scott TS	N,LC
7065	Seaforth TS	LC,TC
7068	St.Marys TS	TC
7070	St.Thomas TS	TC
7071	Edgeware TS	TC
7073	Stratford TS	TC
7077	Strathroy TS	TC
7083	Tilbury TS	TC
7084	Tillsonburg TS	TC
7085	Tilbury JCT	LC
7087	Wallaceburg TS	TC
7088	Wanstead TS	TC
7092	Crawford TS	TC
7093	Lauzon TS	N,TC
7095	Malden TS	TC
7096	Walker TS #1	TC
7098	Woodstock TS	TC
7106	Evergreen SS	N
7120	Longwood TS	N,TC
7136	Cowal JCT	N,LC
7144	Leamington TS	TC
7169	Keith TS	N,TC
7176	Plank Road JCT	LC
7177	Confederation Rd JCT	LC
7199	W8T STR A1 JCT	LC
7214	Belle River TS	TC
7222	Commerce Way TS	TC
7227	Toyota Woodstock TS	TC
7238	Karn TS	N
7242	Spence SS	N

ALLOCATION FACTORS FOR DUAL FUNCTION LINES

Operation Designation	% Network	% Connection
A1B	83%	17%
A3RM	71%	29%
A4H	82%	18%
A5A	97%	3%
A5H	96%	4%
A6P	99%	1%
A8M	93%	7%
A9K	85%	15%
B12	27%	73%
B13	27%	73%
B18H	95%	5%
B1S	86%	14%
B20H	95%	5%
B22D	85%	15%
B23C	61%	39%
B23D	85%	15%
B27S	92%	8%
B4V	100%	0%
B5C	74%	26%
B5QK	58%	42%
B5V	100%	0%
B6C	76%	24%
B6M	92%	8%
B88H	88%	12%
B89H	88%	12%
B8W	91%	9%
C14L	86%	14%
C15L	87%	13%
C16L	100%	0%
C17L	92%	8%
C18R	71%	29%
C20R	69%	31%
C21J	91%	9%
C22J	91%	9%
C23Z	100%	0%
C24Z	100%	0%
C27P	100%	0%
C2L	62%	38%
C35P	86%	14%

Operation Designation	% Network	% Connection
C36P	88%	12%
C3L	62%	38%
C4R	72%	28%
C5R	74%	26%
C7BM	60%	40%
D2L	94%	6%
D2M	91%	9%
D3K	100%	0%
D4W	98%	2%
D5A	91%	9%
D5W	98%	2%
D6V	57%	43%
D7F	78%	22%
D7V	78%	22%
D9F	78%	22%
E1C	98%	2%
E34M	72%	28%
E4D	100%	0%
E8V	77%	23%
E9V	87%	13%
F11C	85%	15%
F12C	85%	15%
H2	100%	0%
H23S	100%	0%
H24C	41%	59%
H24S	100%	0%
H26C	48%	52%
H6T	99%	1%
H7T	81%	19%
H82V	95%	5%
H83V	95%	5%
H9K	95%	5%
J3E	91%	9%
J4E	89%	11%
K11W	100%	0%
K12	100%	0%
K12W	100%	0%
K1W	92%	8%
K23D	100%	0%
K24F	99%	1%
K38S	77%	23%
K3D	98%	2%

Operation Designation	% Network	% Connection
K3W	92%	8%
K40M	98%	2%
K6F	79%	21%
K7	100%	0%
K7K	95%	5%
L13W	95%	5%
L14W	96%	4%
L18W	93%	7%
L1S	95%	5%
L20D	100%	0%
L20H	88%	12%
L21H	90%	10%
L22H	85%	15%
L23N	97%	3%
L24L	96%	4%
L25V	98%	2%
L26L	96%	4%
L27V	97%	3%
L28C	92%	8%
L29C	93%	7%
L5H	84%	16%
M20D	72%	28%
M21D	71%	29%
M23L	100%	0%
M24L	100%	0%
M27B	96%	4%
M28B	96%	4%
M2D	100%	0%
M30A	94%	6%
M31A	94%	6%
M31W	91%	9%
M32S	86%	14%
M32W	83%	17%
M33W	94%	6%
M6E	27%	73%
M7E	33%	67%
M80B	82%	18%
M81B	82%	18%
N20K	94%	6%
N21W	86%	14%
N22W	86%	14%
N5M	97%	3%

Operation Designation	% Network	% Connection
N6M	98%	2%
P21R	45%	55%
P22R	70%	30%
P25W	100%	0%
P26W	100%	0%
P3S	72%	28%
P4S	54%	46%
P91G	98%	2%
Q23BM	86%	14%
Q24HM	89%	11%
Q25BM	87%	13%
Q29HM	89%	11%
Q30M	92%	8%
Q6S	99%	1%
R13K	97%	3%
R14T	75%	25%
R17T	75%	25%
R19TH	45%	55%
R21TH	60%	40%
R9A	100%	0%
S22A	94%	6%
S2S	88%	12%
S39M	98%	2%
S47C	100%	0%
S7M	61%	39%
T1M	100%	0%
T22C	85%	15%
T29C	74%	26%
T33E	95%	5%
T36B	92%	8%
T37B	92%	8%
T38B	69%	31%
T39B	69%	31%
V41H	47%	53%
V41N	99%	1%
V42H	38%	62%
V43N	97%	3%
V71P	50%	50%
V72R	83%	17%
V74R	76%	24%
V75P	50%	50%
V76R	93%	7%

Operation Designation	% Network	% Connection
W3B	100%	0%
W42L	92%	8%
W43L	92%	8%
W44LC	85%	15%
W45LS	99%	1%
W6CS	81%	19%
W71D	100%	0%
X1H	98%	2%
X2H	88%	12%
X3H	100%	0%
X4H	91%	9%
Z1E	62%	38%
Z7E	62%	38%

ALLOCATION FACTORS FOR GENERATOR LINE CONNECTIONS

Operation Designation	Section	From	To	% Generator	% Load
61M18	1	Seaforth 61M18 JCT	Constance DS	42%	58%
61M18	2	Constance DS	Goderich TS	51%	49%
61M18	3	Seaforth TS	Seaforth 61M18 JCT	42%	58%
A36N	1	Allanburg TS	Kalar JCT	38%	62%
A36N	3	Kalar JCT	Murray TS	38%	62%
A37N	1	Allanburg TS	Kalar JCT	38%	62%
A37N	3	Kalar JCT	Murray TS	38%	62%
A3RM	4	Ellwood JCT	Riverdale JCT	15%	85%
A3RM	6	Riverdale JCT	Riverdale TS	15%	85%
A4H	3	Fournier JCT	Fournier JCT	72%	28%
A4H	4	Hunta SS	LSR MSO JCT	100%	0%
A4H	6	Fournier JCT	Power JCT	72%	28%
A4K	1	Hawthorne TS	Blackburn JCT	15%	85%
A4K	2	Blackburn JCT	Cyrville Rd JCT	15%	85%
A4K	3	Cyrville JCT	Moulton JCT	15%	85%
A4K	9	Moulton JCT	Overbrook TS	15%	85%
A4K	11	Cyrville Rd JCT	Cyrville JCT	15%	85%
A4L	1	Alexander SS	A.P. Nipigon JCT	75%	25%
A4L	11	A.P. Nipigon JCT	A.P. Nipigon CGS	100%	0%
A5H	18	A.P. Tunis JCT	A.P. Tunis JCT	100%	0%
A5RK	1	Hawthorne TS	Blackburn JCT	15%	85%
A5RK	2	Blackburn JCT	Russell TS	15%	85%
A5RK	3	Russell TS	Riverdale JCT	15%	85%
A5RK	4	Riverdale JCT	Riverdale TS	15%	85%
A5RK	6	Riverdale JCT	A5RK STR O7 JCT	15%	85%
A5RK	8	A5RK STR O7 JCT	Overbrook TS	15%	85%
A6R	1	Hawthorne TS	Blackburn JCT	15%	85%
A6R	2	Blackburn JCT	Russell TS	15%	85%
A6R	3	Russell TS	Riverdale JCT	15%	85%
A6R	4	Riverdale JCT	OHSC JCT	15%	85%
A6R	5	OHSC JCT	Riverdale TS	15%	85%
A6R	6	OHSC JCT	OHSC JCT	100%	0%
B20P	8	Bruce A TS	Bruce HW Plant B TS	100%	0%
B22D	8	Majestic JCT	Majestic CTS	100%	0%
B22D	12	Armow JCT	Armow CSS	100%	0%
B23D	8	Majestic JCT	Majestic CTS	100%	0%
B23D	12	Zurich JCT	Zurich CSS	100%	0%

Operation Designation	Section	From	To	% Generator	% Load
B24P	8	Bruce A TS	Bruce HW Plant B TS	100%	0%
B4V	4	Amaranth JCT	Amaranth CTS	100%	0%
B4V	6	Underwood JCT	Underwood CGS	100%	0%
B4V	10	Southgate JCT	Southgate CGS	100%	0%
B5V	4	Underwood JCT	Underwood CGS	100%	0%
B5V	6	Amaranth JCT	Amaranth CTS	100%	0%
B88H	5	York EnergyCentr JCT	York EnergyCentr CGS	100%	0%
B89H	5	York EnergyCentr JCT	York EnergyCentr CGS	100%	0%
C1A	1	Cameron Falls GS	Alexander SS	100%	0%
C1A	2	Alexander SS	Alexander GS	100%	0%
C1A	3	Alexander SS	Alexander SS	100%	0%
C23Z	6	Dillon RWEC CGS JCT	Dillon RWEC CGS	100%	0%
C23Z	7	Comber WF JCT	Comber WF CTS	100%	0%
C24Z	6	Comber WF JCT	Comber WF CTS	100%	0%
C27P	5	Galetta JCT	Arnprior GS	100%	0%
C2A	1	Cameron Falls GS	Alexander SS	100%	0%
C2A	2	Alexander SS	Alexander GS	100%	0%
C2A	3	Alexander SS	Alexander SS	100%	0%
C31	1	Chatham SS	C31 SKWP CMS JCT	100%	0%
C3A	1	Cameron Falls GS	Alexander SS	100%	0%
C3A	2	Alexander SS	Alexander GS	100%	0%
C3A	3	Alexander SS	Alexander SS	100%	0%
C5E	1	Cecil TS	Terauley TS	32%	68%
C5E	2	Terauley TS	Manhole A OPF	32%	68%
C5E	3	Manhole A OPF	Esplanade TS	32%	68%
C7E	1	Cecil TS	Terauley TS	32%	68%
C7E	2	Terauley TS	Manhole A OPF	32%	68%
C7E	3	Manhole A OPF	Esplanade TS	32%	68%
D10S	1	DeCew Falls SS	Hooper's JCT	38%	62%
D10S	2	Hooper's JCT	Vansickle TS	38%	62%
D10S	3	Vansickle TS	Louth JCT	38%	62%
D10S	4	Louth JCT	Glendale TS	38%	62%
D1A	1	Holland Road JCT	Allanburg TS	38%	62%
D1A	2	Fibre JCT	Holland Road JCT	38%	62%
D1A	3	Gibson JCT	Fibre JCT	38%	62%
D1A	4	St.Johns Valley JCT	Gibson JCT	38%	62%
D1A	5	Hooper's JCT	St.Johns Valley JCT	38%	62%
D1A	6	DeCew Falls SS	Hooper's JCT	38%	62%
D2H	1	Pinard TS	Pinard JCT #2	96%	4%
D2H	2	Pinard JCT #2	Hwy 634 JCT	96%	4%
D2H	3	Pinard JCT #2	Hwy 634 JCT	96%	4%
D2H	4	Hwy 634 JCT	Island Falls JCT	96%	4%

Operation Designation	Section	From	To	% Generator	% Load
D2H	5	Hwy 634 JCT	Island Falls JCT	96%	4%
D2H	6	Island Falls JCT	Greenwater Pr Pk JCT	96%	4%
D2H	7	Island Falls JCT	Greenwater Pr Pk JCT	96%	4%
D2H	8	Greenwater Pr Pk JCT	Calder JCT	96%	4%
D2H	9	Greenwater Pr Pk JCT	Calder JCT	96%	4%
D2H	10	Hunta JCT	Hunta SS	96%	4%
D2H	11	Hunta JCT	Hunta JCT	96%	4%
D2H	12	Hwy 634 JCT	Hwy 634 JCT	96%	4%
D2H	13	Island Falls JCT	Island Falls JCT	96%	4%
D2H	14	Greenwater Pr Pk JCT	Greenwater Pr Pk JCT	96%	4%
D2H	15	Pinard JCT #2	Pinard JCT #2	96%	4%
D2H	18	Calder JCT	Calder JCT	96%	4%
D2H	19	Calder JCT	Hunta JCT	96%	4%
D2H	20	Calder JCT	Hunta JCT	96%	4%
D2H	21	Calder JCT	Calder CSS	100%	0%
D2L	19	New Liskeard JCT	New Liskeard JCT #2	100%	0%
D3A	1	Fibre JCT	Allanburg TS	38%	62%
D3A	2	St.Johns Valley JCT	Gibson JCT	38%	62%
D3A	3	Hooper's JCT	St.Johns Valley JCT	38%	62%
D3A	4	DeCew Falls SS	Hooper's JCT	38%	62%
D3A	8	Gibson JCT	Fibre JCT	38%	62%
D3H	1	Pinard TS	Pinard JCT #2	96%	4%
D3H	2	Pinard JCT #2	Hwy 634 JCT	96%	4%
D3H	3	Pinard JCT #2	Hwy 634 JCT	96%	4%
D3H	4	Hwy 634 JCT	Island Falls JCT	96%	4%
D3H	5	Hwy 634 JCT	Island Falls JCT	96%	4%
D3H	6	Island Falls JCT	Greenwater Pr Pk JCT	96%	4%
D3H	7	Island Falls JCT	Greenwater Pr Pk JCT	96%	4%
D3H	8	Greenwater Pr Pk JCT	Calder JCT	96%	4%
D3H	9	Greenwater Pr Pk JCT	Calder JCT	96%	4%
D3H	10	Hunta JCT	Hunta SS	96%	4%
D3H	11	Hunta JCT	Hunta JCT	96%	4%
D3H	12	Hwy 634 JCT	Hwy 634 JCT	96%	4%
D3H	13	Island Falls JCT	Island Falls JCT	96%	4%
D3H	14	Greenwater Pr Pk JCT	Greenwater Pr Pk JCT	96%	4%
D3H	15	Pinard JCT #2	Pinard JCT #2	96%	4%
D3H	16	Calder JCT	Hunta JCT	96%	4%
D3H	17	Calder JCT	Hunta JCT	96%	4%
D3H	18	Calder JCT	Calder JCT	96%	4%
D4	1	Pinard TS	Pinard JCT #2	100%	0%
D4	2	Pinard JCT #2	Abitibi Canyon GS	100%	0%
D4	3	Pinard JCT #2	Abitibi Canyon GS	100%	0%

Operation Designation	Section	From	To	% Generator	% Load
D6T	1	Pinard TS	Pinard JCT #2	69%	31%
D6T	2	Pinard JCT #2	Abitibi Canyn JCT #2	69%	31%
D6T	3	Pinard JCT #2	Abitibi Canyn JCT #2	69%	31%
D6T	4	Abitibi Canyn JCT #2	P Sutherland Sr JCT	69%	31%
D6T	9	P Sutherland Sr JCT	P Sutherland Sr SYD	100%	0%
D9HS	1	DeCew Falls SS	Hooper's JCT	38%	62%
D9HS	2	Hooper's JCT	Vansickle TS	38%	62%
D9HS	3	Vansickle TS	Louth JCT	38%	62%
D9HS	9	Louth JCT	Glendale TS	38%	62%
E6L	1	Seaforth TS	Egmondville CSS	100%	0%
E8F	1	Essex TS	Chrysler WAP MTS	59%	41%
E8F	2	Chrysler WAP MTS	G.M.Windsor MTS	73%	27%
E8F	3	G.M.Windsor MTS	Ford Annex MTS	82%	18%
E8F	4	Ford Annex MTS	Ford Windsor MTS	87%	13%
E8F	5	Ford Windsor MTS	East Windsor CGS	100%	0%
E9F	1	Essex TS	Chrysler WAP MTS	59%	41%
E9F	2	Chrysler WAP MTS	G.M.Windsor MTS	73%	27%
E9F	3	G.M.Windsor MTS	Ford Annex MTS	82%	18%
E9F	4	Ford Annex MTS	Ford Windsor MTS	87%	13%
E9F	5	Ford Windsor MTS	East Windsor CGS	100%	0%
F1E	1	Kapuskasing TS	AP Calstock CSS JCT	63%	37%
F1E	4	AP Calstock CSS JCT	A.P. Calstock CSS	100%	0%
F1E	5	AP Calstock CSS JCT	Nagagami CSS JCT	44%	56%
F1E	6	Nagagami CSS JCT	Nagagami CSS	80%	20%
H	1	Summerhaven SS	Summerhaven CSS	100%	0%
H10EJ	1	Hearn SS	Don Fleet JCT	32%	68%
H10EJ	2	Don Fleet JCT	Esplanade TS	32%	68%
H10EJ	4	Hearn SS	Hearn SS	32%	68%
H11L	1	Hearn SS	Waverly OPF	32%	68%
H11L	2	Main TS	Lumsden JCT	32%	68%
H11L	3	Lumsden JCT	Todmorden JCT	32%	68%
H11L	4	Todmorden JCT	Leaside TS	32%	68%
H11L	7	Waverly OPF	Brookside OPF	32%	68%
H11L	8	Brookside OPF	Main TS	32%	68%
H12P	1	Hearn SS	Portlands Energy JCT	100%	0%
H12P	3	Hearn SS	Hearn SS	100%	0%
H13P	1	Hearn SS	Portlands Energy JCT	100%	0%
H13P	3	Hearn SS	Hearn SS	100%	0%
H14P	1	Hearn SS	Portlands Energy JCT	100%	0%
H14P	3	Hearn SS	Hearn SS	100%	0%
H1L	1	Hearn SS	Basin TS	32%	68%
H1L	2	Basin TS	Mill Street JCT	32%	68%

Operation Designation	Section	From	To	% Generator	% Load
H1L	3	Mill Street JCT	Gerrard TS	32%	68%
H1L	4	Gerrard TS	Bloor Street JCT	32%	68%
H1L	5	Bloor Street JCT	Leaside TS	32%	68%
H22D	1	Harmon GS	Harmon JCT	100%	0%
H22D	2	Harmon JCT	Smoky Falls JCT	100%	0%
H22D	3	Little Long JCT	Pinard TS	100%	0%
H22D	4	Little Long JCT	Little Long 2 JCT	100%	0%
H22D	5	Harmon JCT	Kipling JCT	100%	0%
H22D	6	Smoky Falls JCT	Little Long JCT	100%	0%
H22D	7	Kipling JCT	Kipling GS	100%	0%
H22D	9	Smoky Falls JCT	Smoky Falls 2 JCT	100%	0%
H24S	7	A.P. North Bay JCT	A.P. North Bay JCT	100%	0%
H26C	6	Columbus JCT	Lasco JCT	17%	83%
H26C	10	Lasco JCT	Atlantic Packgng JCT	34%	66%
H26C	12	Atlantic Packgng JCT	Whitby CGS JCT	39%	61%
H26C	19	Whitby CGS JCT	Whitby CGS	100%	0%
H3L	1	Hearn SS	Basin TS	32%	68%
H3L	2	Basin TS	Mill Street JCT	32%	68%
H3L	3	Mill Street JCT	Gerrard TS	32%	68%
H3L	5	Gerrard TS	Bloor Street JCT	32%	68%
H3L	6	Bloor Street JCT	Leaside TS	32%	68%
H3L	9	Gerrard TS	Bloor Street JCT	32%	68%
H6LC	1	Hearn SS	Don Fleet JCT	32%	68%
H6LC	2	Gerrard JCT	Bloor Street JCT	32%	68%
H6LC	3	Bloor Street JCT	Leaside TS	32%	68%
H6LC	4	Gerrard JCT	Cecil TS	32%	68%
H6LC	5	Don Fleet JCT	Gerrard JCT	32%	68%
H7L	1	Hearn SS	Waverly OPF	32%	68%
H7L	2	Main TS	Lumsden JCT	32%	68%
H7L	3	Lumsden JCT	Todmorden JCT	32%	68%
H7L	4	Todmorden JCT	Leaside TS	32%	68%
H7L	7	Waverly OPF	Brookside OPF	32%	68%
H7L	8	Brookside OPF	Main TS	32%	68%
H8LC	1	Hearn SS	Don Fleet JCT	32%	68%
H8LC	2	Gerrard JCT	Bloor Street JCT	32%	68%
H8LC	3	Bloor Street JCT	Leaside TS	32%	68%
H8LC	4	Gerrard JCT	Cecil TS	32%	68%
H8LC	5	Don Fleet JCT	Gerrard JCT	32%	68%
H9EJ	1	Hearn SS	Don Fleet JCT	32%	68%
H9EJ	2	Don Fleet JCT	Esplanade TS	32%	68%
H9EJ	4	Hearn SS	Hearn SS	32%	68%
H9K	11	Carmichael Falls JCT	Carmichael Falls JCT	100%	0%

Operation Designation	Section	From	To	% Generator	% Load
H9W	1	Beach TS	West Lincoln JCT	100%	0%
H9W	2	West Lincoln JCT	West Lincoln CSS	100%	0%
J1B	1	Keith TS	Brighton Intface JCT	100%	0%
J20B	1	Keith TS	Brighton Intface JCT	100%	0%
J2N	1	Keith TS	W.Windsor Power JCT	100%	0%
K2	1	Kirkland Lake TS	Gull Lake North JCT	89%	11%
K2	2	Gull Lake North JCT	Gull Lake South JCT	89%	11%
K25BUS	1	Sandusk SS	Sandusk CGS	100%	0%
K2M	1	Rabbit Lake SS	Norman JCT	100%	0%
K2Z	4	Woodslee JCT	Lauzon JCT	25%	75%
K2Z	6	Woodslee JCT	Gosfield CGS JCT	30%	70%
K2Z	12	Lauzon JCT	Lauzon TS	21%	79%
K2Z	17	Gosfield CGS JCT	Gosfield Wind CGS	100%	0%
K38S	3	Spruce Falls JCT	A.P. Kapuskasing JCT	100%	0%
K4W	1	Rabbit Lake SS	Minaki JCT	96%	4%
K4W	2	Minaki JCT	Whitedog Falls SS	96%	4%
K5W	1	Rabbit Lake SS	Minaki JCT	96%	4%
K5W	3	Minaki JCT	Whitedog Falls SS	96%	4%
K6Z	3	Belle River JCT	Rourke Line JCT	29%	71%
K6Z	5	Lauzon JCT	Lauzon TS	23%	77%
K6Z	6	Rourke Line JCT	Lauzon JCT	23%	77%
K6Z	11	Pte-Aux-RochesWF JCT	Belle River JCT	29%	71%
K6Z	12	Pte-Aux-RochesWF JCT	Pte-Aux-RochesWF CGS	100%	0%
L12C	1	Leaside TS	Balfour JCT	32%	68%
L12C	2	Balfour JCT	Charles TS	32%	68%
L12C	3	Charles TS	Cecil TS	32%	68%
L1MB	4	St.Lawrence TS	Lunenburg JCT	57%	43%
L1MB	5	Lunenburg JCT	Morrisburg JCT	57%	43%
L1MB	6	Morrisburg JCT	Casco JCT	57%	43%
L1MB	15	Casco JCT	Cardinal Power CSS	57%	43%
L20D	1	Little Long JCT	Smoky Falls JCT	100%	0%
L20D	5	Smoky Falls JCT	Harmon JCT	100%	0%
L20D	6	Harmon JCT	Kipling JCT	100%	0%
L20D	7	Kipling JCT	Kipling 2 GS	100%	0%
L20D	8	Harmon JCT	Harmon 2 GS	100%	0%
L20D	10	Smoky Falls JCT	Smoky Falls 2 JCT	100%	0%
L29C	5	East Lk StClair JCT	East Lk StClair CGS	100%	0%
L2M	4	St.Lawrence TS	Lunenburg JCT	57%	43%
L2M	5	Lunenburg JCT	Morrisburg JCT	57%	43%
L2M	8	Morrisburg JCT	Casco JCT	57%	43%
L2M	13	Casco JCT	Cardinal Power CSS	57%	43%
L7S	3	Seaforth L7S JCT	Goshen JCT	51%	49%

Operation Designation	Section	From	To	% Generator	% Load
L7S	13	Seaforth TS	Seaforth L7S JCT	51%	49%
L7S	17	Goshen JCT	Goshen CSS	100%	0%
L9C	1	Leaside TS	Balfour JCT	32%	68%
L9C	2	Balfour JCT	Charles TS	32%	68%
L9C	3	Charles TS	Cecil TS	32%	68%
M1S	1	Moose Lake TS	Valerie Falls JCT	89%	11%
M1S	2	Mill Creek JCT	H2O Pwr SturgFls CGS	83%	17%
M1S	4	Mill Creek JCT	H2O Pwr Calm Lk CGS	100%	0%
M1S	6	Valerie Falls JCT	Mill Creek JCT	89%	11%
M23L	4	Greenwich WF CGS JCT	Greenwich LakeWF CSS	100%	0%
M24L	4	Greenwich WF CGS JCT	Greenwich LakeWF CSS	100%	0%
M2W	1	Marathon TS	Pic JCT	31%	69%
M2W	2	Pic JCT	Manitouwadge JCT	31%	69%
M2W	6	Manitouwadge JCT	Manitouwadge JCT B	33%	67%
M2W	8	Marathon TS	Black River JCT	41%	59%
M2W	16	Black River JCT	Umbata Falls JCT	41%	59%
M2W	26	Manitouwadge JCT B	Manitouwadge TS	36%	64%
M3E	1	Manitou Falls GS	Ear Falls TS	100%	0%
N5M	5	Grand JCT	Grand CSS	100%	0%
N6S	1	Sarnia Scott TS	Sarnia Scott JCT	40%	60%
N6S	3	Sarnia Scott JCT	Arlanxeo Can Inc JCT	40%	60%
N6S	4	Arlanxeo Can Inc JCT	TransAlta Energy JCT	40%	60%
N6S	9	TransAlta Energy JCT	TransAlta Energy JCT	40%	60%
N7S	1	Sarnia Scott TS	Sarnia Scott JCT	40%	60%
N7S	2	Sarnia Scott JCT	Arlanxeo Can Inc JCT	40%	60%
N7S	3	Arlanxeo Can Inc JCT	TransAlta Energy JCT	40%	60%
N7S	7	TransAlta Energy JCT	TransAlta Energy JCT	40%	60%
N93A	1	Atikokan TGS	Marmion Lake JCT	100%	0%
N93A	2	Marmion Lake JCT	Mackenzie TS	100%	0%
P25W	3	Aubrey Falls JCT	Aubrey Falls CGS	100%	0%
P26W	3	Aubrey Falls JCT	Aubrey Falls CGS	100%	0%
P27C	1	Pickering B SS	Cherrywood TS	100%	0%
P30C	1	Pickering B SS	Cherrywood TS	100%	0%
P31C	1	Pickering B SS	Cherrywood TS	100%	0%
P32C	1	Pickering B SS	Cherrywood TS	100%	0%
P5M	1	Port Arthur TS #1	Conmee JCT	54%	46%
P6C	1	Pickering A SS	Cherrywood TS	100%	0%
P7C	1	Pickering A SS	Cherrywood TS	100%	0%
P8C	1	Pickering A SS	Cherrywood TS	100%	0%
P9C	1	Pickering A SS	Cherrywood TS	100%	0%
Q10P	1	Abit Cons NAN91 JCT	Abit Cons NAN91 JCT	99%	1%
Q10P	3	Abit Cons NAN91 JCT	Q10P STR 9 JCT	99%	1%

Operation Designation	Section	From	To	% Generator	% Load
Q11S	1	Beck #1 SS	Warner Road JCT	38%	62%
Q11S	2	Warner Road JCT	NOTL York MTS #1 JCT	38%	62%
Q11S	3	McKinnon's JCT	Glendale JCT	38%	62%
Q11S	4	Glendale JCT	Glendale TS	38%	62%
Q11S	8	NOTL York MTS #1 JCT	McKinnon's JCT	38%	62%
Q12S	1	Beck #1 SS	Warner Road JCT	38%	62%
Q12S	2	Glendale JCT	Glendale TS	38%	62%
Q12S	4	NOTL York MTS #1 JCT	Glendale JCT	38%	62%
Q12S	6	Warner Road JCT	NOTL York MTS #1 JCT	38%	62%
Q21P	1	Beck #2 TS	Beck Pump Storage GS	100%	0%
Q22P	1	Beck #2 TS	Beck Pump Storage GS	100%	0%
Q26M	1	Beck #2 TS	Abit Cons NAN91 JCT	38%	62%
Q26M	2	Abit Cons NAN91 JCT	Crossline JCT	38%	62%
Q26M	3	Crossline JCT	Allanburg TS	38%	62%
Q28A	1	Beck #2 TS	Abit Cons NAN91 JCT	38%	62%
Q28A	2	Abit Cons NAN91 JCT	Allanburg TS	38%	62%
Q28A	3	Abit Cons NAN91 JCT	Abit Cons NAN91 JCT	99%	1%
Q2AH	1	Beck #1 Q2AH JCT	Holland Road JCT	38%	62%
Q2AH	2	Holland Road JCT	Allanburg TS	38%	62%
Q2AH	26	Beck #1 SS	Beck #1 Q2AH JCT	38%	62%
Q30M	6	Allanburg Q30M JCT	Allanburg TS	38%	62%
Q35M	1	Beck #2 TS	Abit Cons NAN91 JCT	38%	62%
Q35M	2	Abit Cons NAN91 JCT	Crossline JCT	38%	62%
Q35M	3	Crossline JCT	Allanburg TS	38%	62%
Q3N	1	Beck #1 SS	Portal JCT	38%	62%
Q3N	2	Portal JCT	Dresser JCT	38%	62%
Q3N	3	Dresser JCT	Niagara JCT	38%	62%
Q3N	4	Niagara JCT	Murray TS	38%	62%
Q4N	1	Beck #1 SS	Portal JCT	38%	62%
Q4N	3	Portal JCT	Dresser JCT	38%	62%
Q4N	4	Dresser JCT	Niagara JCT	38%	62%
Q4N	8	Niagara JCT	Murray TS	38%	62%
Q5B	1	Thunder Bay SS	Abitibi JCT	70%	30%
Q5B	2	Abitibi JCT	James Street JCT	70%	30%
Q5B	3	James Street JCT	St.Paul JCT	70%	30%
Q5B	4	St.Paul JCT	Walsh Street JCT	70%	30%
Q5B	5	Walsh Street JCT	Birch TS	70%	30%
Q6S	6	Odessa JCT	Invista JCT	100%	0%
Q8B	1	Thunder Bay SS	Birch TS	70%	30%
Q9B	1	Thunder Bay SS	Birch TS	100%	0%
R21D	1	Otter Rapids SS	Pinard JCT	100%	0%
R21D	2	Pinard JCT	Pinard TS	100%	0%

Operation Designation	Section	From	To	% Generator	% Load
R21D	3	Pinard JCT	Abitibi Canyon GS	100%	0%
R21D	4	Otter Rapids GS	Otter Rapids SS	100%	0%
R9A	2	Alexander SS	Alexander GS	100%	0%
S1C	1	Conmee JCT	Lac Des Iles JCT	54%	46%
S1C	2	Lac Des Iles JCT	Silver Falls GS	100%	0%
S24V	1	Orangeville TS	Shannon CSS	100%	0%
S25L	2	Saunders JCT	St.Lawrence TS	100%	0%
S26L	2	Saunders JCT	St.Lawrence TS	100%	0%
S2B	1	Martindale TS	Copper Cliff JCT	60%	40%
S2B	2	Copper Cliff JCT	Creighton JCT	60%	40%
S2B	3	Creighton JCT	Vermillion JCT	60%	40%
S2B	4	Vermillion JCT	Ethel Lake JCT	60%	40%
S2B	5	Ethel Lake JCT	Turbine JCT	63%	37%
S2B	7	Turbine JCT	Eacom Nairn Ctr JCT	63%	37%
S2B	8	Eacom Nairn Ctr JCT	Espanola JCT	66%	34%
S2B	9	Espanola JCT	Eddy Tap JCT	66%	34%
S2B	14	Cutler JCT	Serpent River JCT	8%	92%
S2B	19	Espanola A JCT	McLeans Mtn JCT	66%	34%
S2B	24	Spanish JCT	Cutler JCT	8%	92%
S2B	25	Serpent River JCT	Carmeuse Lime JCT	13%	87%
S2B	27	Carmeuse Lime JCT	Blind River TS JCT	12%	88%
S2B	30	Cameron Falls JCT	Spanish JCT	8%	92%
S2B	33	Blind River TS JCT	Algoma TS	12%	88%
S2B	35	Eddy Tap JCT	Espanola A JCT	66%	34%
S2B	41	McLeans Mtn JCT	McLeans Mtn CSS	100%	0%
S2N	1	Strathroy TS	Sydenham JCT	92%	8%
S2N	2	Sydenham JCT	Adelaide JCT	92%	8%
S2N	7	Adelaide JCT	Landon JCT	92%	8%
S2N	14	Landon JCT	Landon CGS	100%	0%
S30L	2	Saunders JCT	St.Lawrence TS	100%	0%
S32L	2	Saunders JCT	St.Lawrence TS	100%	0%
S47C	3	Erieau WF JCT	Erieau WF CGS	100%	0%
T1B	1	Rayner CGS	Wharncliffe JCT	100%	0%
T1B	2	Sowerby JCT	Red Rock CGS JCT	87%	13%
T1B	3	Red Rock CGS	Red Rock CGS JCT	87%	13%
T1B	4	Cobden JCT	Striker DS	79%	21%
T1B	5	Striker DS	Algoma TS	70%	30%
T1B	8	Wharncliffe JCT	Sowerby JCT	91%	9%
T1B	10	Red Rock CGS JCT	Cobden JCT	87%	13%
T1B	11	Red Rock CGS JCT	Red Rock CGS	87%	13%
T27P	1	Wells CGS	Mississagi TS	100%	0%
V43N	7	St.Clair E.C. JCT	St.Clair E.C. CGS	100%	0%

Operation Designation	Section	From	To	% Generator	% Load
W2	1	Whitedog Falls GS	Whitedog Falls SS	97%	3%
W2S	1	Buchanan TS	Sydenham JCT	31%	69%
W2S	2	Sydenham JCT	Strathroy TS	31%	69%
W3C	1	Whitedog Falls SS	Caribou Falls GS	100%	0%
W71D	4	Lower Notch JCT	Lower Notch GS	100%	0%
W71D	5	Lower Notch JCT	Lower Notch GS	100%	0%
W8T	1	Buchanan TS	W8T STR A1 JCT	49%	51%
W8T	4	Edgeware JCT	Lyons JCT	49%	51%
W8T	5	Lyons JCT	Cranberry JCT	55%	45%
W8T	9	W8T STR A1 JCT	Edgeware JCT	49%	51%
W8T	10	Lyons JCT	Lyons JCT	31%	69%
WT1A	1	Lyons JCT	Silvercreek JCT	31%	69%
WT1A	3	Silvercreek JCT	Silvercreek CGS	100%	0%
WT1T	1	Cranberry JCT	ESWF JCT	55%	45%
WT1T	5	ESWF JCT	ESWF CSS	100%	0%
X1H	8	NPIF Kingston JCT	NPIF Kingston JCT	100%	0%
X1P	1	Massanoga JCT	Dobbin TS	65%	35%
X1P	2	Mountain Chute JCT	Massanoga JCT	66%	34%
X1P	3	Chenaux TS	Mountain Chute JCT	63%	37%
X1P	4	Mountain Chute JCT	Mountain Chute GS	100%	0%
X2H	9	NPIF Kingston JCT	NPIF Kingston JCT	100%	0%
X3H	4	Kingston Solar JCT	Kingston Solar CGS	100%	0%
X4H	4	Westbrook JCT	Gardiner STR 44 JCT	58%	42%
X4H	6	Gardiner STR 44 JCT	Gardiner TS	58%	42%
Z1E	7	Windsor Transalt JCT	Windsor Transalt CGS	100%	0%
Z1E	11	Windsor Airport JCT	Windsor Airport CGS	100%	0%

ALLOCATION FACTORS FOR GENERATOR STATION CONNECTIONS

N= Network LC= Line Connection TC=Transformation Connection

Asset Number	Station Name	Functional Category	% Generator	% Load
549	Algoma TS	LC	33%	67%
5354	Allanburg TS	LC	38%	62%
1013	Balfour JCT	LC	32%	68%
1021	Billings JCT	LC	14%	86%
1023	Bloor Street JCT	LC	32%	68%
915	Brookside OPF	LC	32%	68%
8211	Bruce HW Plant B TS	TC	100%	0%
7566	Chenaux TS	LC	63%	37%
1220	Conmee JCT	LC	54%	46%
1043	Cranberry JCT	LC	55%	45%
1044	Creighton JCT	LC	60%	40%
1046	Cyrville JCT	LC	13%	87%
3879	DeCew Falls SS	LC	38%	62%
252	E.V. Buchanan TS	LC	14%	86%
232	Ear Falls TS	TC	74%	26%
1060	Edgeware JCT	LC	49%	51%
1079	Gerrard JCT	LC	32%	68%
1080	Gibson JCT	LC	38%	62%
2047	Goderich TS	TC	51%	49%
251	Hamilton Beach TS	LC	32%	68%
1114	Louth JCT	LC	38%	62%
1117	Lumsden JCT	LC	32%	68%
6689	Manitouwadge TS	TC	36%	64%
3828	Marmion Lake JCT	LC	100%	0%
1125	Massanoga JCT	LC	65%	35%
7665	Otter Rapids SS	LC	93%	7%
6952	R.L. Hearn SS	LC	32%	68%
196	Seaforth TS	LC	29%	71%
2942	Sir Adam Beck #1 SS	LC	38%	62%
3450	St. Catharines Glendale TS	LC	38%	62%
218	St. Lawrence TS	LC	57%	43%
1173	Todmorden JCT	LC	32%	68%
1107	Toronto Cecil TS	LC	32%	68%
1184	W8T STR A1 JCT	LC	49%	51%
896	Waverly OPF	LC	32%	68%
4	Whitedog Falls SS	LC	96%	4%

ASSET VALUE BY FUNCTIONAL CATEGORY

(Mid-Year Average)

Functional Category	2020 Gross Book Value ($ Millions)	2020 Net Book Value ($ Millions)
Network	8,383.3	5,563.7
Line Connection	1,618.2	1,092.9
Transformation Connection	4,376.0	2,862.8
Network - Dual Function Line	1,584.6	1,068.3
Line Connection - Dual Function Line	285.0	192.0
Generation Line Connection	393.5	262.1
Generation Transformation Connection	87.9	56.6
Common	2,520.6	1,076.4
Other Assets	240.1	163.2
TOTAL	**19,489.3**	**12,338.1**

DEPRECIATION BY FUNCTIONAL CATEGORY

(Includes Depreciation of Fixed Assets, Capitalized Depreciation and Asset Removal Costs)

Functional Category	2020 Depreciation ($ Millions)
Network	172.8
Line Connection	30.2
Transformation Connection	100.1
Network - Dual Function Line	25.6
Line Connection - Dual Function Line	4.6
Generation Line Connection	7.6
Generation Transformation Connection	2.0
Common	114.6
Other Assets	4.4
TOTAL	**461.8**

RETURN ON CAPITAL AND INCOME TAXES BY FUNCTIONAL CATEGORY

Functional Category	2020 Return on Capital and Income Taxes ($ Millions)
Network	370.9
Line Connection	72.9
Transformation Connection	190.9
Network - Dual Function Line	71.2
Line Connection - Dual Function Line	12.8
Generation Line Connection	17.5
Generation Transformation Connection	3.8
Common	72.6
Other Assets	10.9
TOTAL	**823.4**

OM&A COSTS BY FUNCTIONAL CATEGORY

(Excludes Property Tax and Rights)

Functional Category	2020 OM&A ($ Millions)
Network	85.5
Line Connection	19.4
Transformation Connection	51.1
Network - Dual Function Line	15.6
Line Connection - Dual Function Line	2.5
Generation Line Connection	2.4
Generation Transformation Connection	1.8
Common	122.4
Other Assets	7.0
TOTAL	**307.7**

DETAILED REVENUE REQUIREMENT BY RATE POOL

Table 1: 2020 Detailed Revenue Requirement by Rate Pool

	Rate Pool Revenue Requirement ($ Millions)			
	Network	**Line Connection**	**Transformation Connection**	**Total**
OM&A	181.7	37.8	88.2	307.7
Taxes other than Income Taxes	42.7	7.9	17.6	68.1
Depreciation of Fixed Assets	254.5	42.1	124.3	421.0
Capitalized Depreciation	(8.3)	(1.5)	(3.5)	(13.3)
Asset Removal Costs	33.8	6.2	14.2	54.1
Other Amortization	8.0	1.5	3.3	12.8
Return on Debt	207.0	38.3	85.3	330.6
Return on Equity	278.3	51.5	114.7	444.5
Income Taxes	30.3	5.6	12.5	48.3
Total Revenue Requirement	**1,028.0**	**189.3**	**456.5**	**1,673.8**
External Revenues	(19.3)	(3.5)	(8.6)	(31.4)
WMS Revenue	0.0	0.0	(0.1)	(0.1)
Regulatory Assets	3.2	0.6	1.4	5.2
Export Revenue Variance	1.6	0.0	0.0	1.6
Export Revenue	(35.9)	0.0	0.0	(35.9)
LVSG Credit	0.0	0.0	14.8	14.8
Total Rates Revenue Requirement	**977.6**	**186.3**	**464.1**	**1,628.0**

The detailed revenue requirement by rate pool for the years 2021 and 2022 are provided below in Table 3 and Table 4, respectively. The 2021 and 2022 rates revenue requirement has been allocated among the proposed rate pools using the methodology approved by the OEB in its Decision and Order, dated April 25, 2019, for Hydro One's 2019 Transmission Revenue Requirement in Proceeding EB-2018-0130. The methodology uses the proposed 2020 total revenue requirement as shown in Table 1 to determine the percentage split by rate pool as presented in Table 2.

Table 2: Percentage Split of Total Revenue Requirement by Transmission Rate Pool

	Network	Line Connection	Transformation Connection	Total
2020 Proposed Total Revenue Requirement	1,028.0	189.3	456.5	1,673.8
Percentage Split by Rate Pool	61%	11%	27%	100%

This percentage allocation is used to allocate the 2021 and 2022 total revenue requirement among the three transmission rate pools The rates revenue requirement offsets are then applied to the total revenue requirement to derive the total rates revenue requirement. The External Revenues and Regulatory Assets Balance are allocated based on the total revenue requirement spilt by rate pools; whereas Export Revenues are 100% allocated to the Network rate pool and WMS and LVSG revenues are 100% allocated to the Transformation Connection rate pool.

Table 3: 2021 Detailed Revenue Requirement by Rate Pool

	Rate Pool Revenue Requirement ($ Millions)			
	Network	**Line Connection**	**Transformation Connection**	**Total**
Percentage Split by Rate Pool	*61%*	*11%*	*27%*	*100%*
Total Revenue Requirement	**1,084.4**	**199.7**	**481.6**	**1,765.8**
External Revenue	(20.1)	(3.7)	(8.9)	(32.7)
WMS Revenue	0.0	0.0	(0.1)	(0.1)
Export Revenue	(35.9)	0.0	0.0	(35.9)
Regulatory Assets	3.2	0.6	1.4	5.2
Export Revenue Variance	1.6	0.0	0.0	1.6
LVSG Credit	0.0	0.0	15.6	15.6
Total Rates Revenue Requirement	**1,033.2**	**196.6**	**489.6**	**1,719.4**

Table 4: 2022 Detailed Revenue Requirement by Rate Pool

	Rate Pool Revenue Requirement ($ Millions)			
	Network	**Line Connection**	**Transformation Connection**	**Total**
Percentage Split by Rate Pool	*61%*	*11%*	*27%*	*100%*
Total Revenue Requirement	**1,138.5**	**209.7**	**505.6**	**1,853.8**
External Revenue	(19.8)	(3.6)	(8.8)	(32.2)
WMS Revenue	0.0	0.0	(0.1)	(0.1)
Export Revenue	(36.3)	0.0	0.0	(36.3)
Regulatory Assets	3.2	0.6	1.4	5.2
Export Revenue Variance	1.6	0.0	0.0	1.6
LVSG Credit	0.0	0.0	16.3	16.3
Total Rates Revenue Requirement	**1,087.2**	**206.6**	**514.5**	**1,808.4**

OVERVIEW OF UNIFORM TRANSMISSION RATES

Transmission rates in Ontario have been established on a uniform basis for all transmitters in Ontario since April 30, 2002 as per the Board's Decision in Proceeding RP-2001-0034/RP-2001-0035/RP-2001-0036/RP-1999-0044. The current Ontario Uniform Transmission Rates ("UTR") Schedules, which were effective on January 1, 2019 as part of the Board's Decision and Interim Rate Order under Proceeding EB-2018-0130, with approved 2019 UTR Order under Proceeding EB-2018-0326, issued December 20, 2018, are filed as Exhibit I2, Tab 6, Schedule 1, Attachment 1.

Since rates are established on a uniform basis, Hydro One's requested transmission rates revenue requirement for the 2020 to 2022 test years contributes to the total revenue requirement to be collected from the provincial UTRs. The revenue requirement for all the other transmitters in the province approved to participate in the UTRs must be added to that of Hydro One Transmission in order to determine the total transmission revenue requirement for the province for the test years.[1]

The total revenue requirement from all transmitters must be allocated to the Network, Line Connection and Transformation Connection rate pools in order to establish uniform rates by pool. The revenue requirement allocated to each rate pool for the other transmitters is currently based on the proportions established by Hydro One Transmission's Cost Allocation process, except for B2M Limited Partnership whose costs are 100% allocated to the Network rate pool given that all of its assets are used to provide Network services. Once the revenue requirement by rate pool has been

[1] The other four transmitters currently included in the UTRs are Hydro One Networks Sault Ste. Marie (formerly Great Lakes Power Transmission Inc.), Canadian Niagara Power Inc., Five Nations Energy Inc., and B2M Limited Partnership.

established, rates are determined by applying the provincial charge determinants for each pool to the total revenue for each pool. The provincial charge determinants are the sum of all charge determinants, by rate pool, approved by the Board for each of the transmitters participating in the UTR.

Table 1 below provides the forecast UTRs for the period 2020 to 2022. The forecast UTRs are calculated using the revenue requirement and charge determinant values proposed for Hydro One Transmission in this application; while maintaining these values as approved by the Board in the 2019 UTR Order (under Proceeding EB-2018-0326) for other transmitters. The proposed rate schedule for the 2020 UTRs is provided at Exhibit I2, Tab 6, Schedule 2.

Table 1: Forecast of Uniform Transmission Rates

Year	Network ($/kW)	Line Connection ($/kW)	Transformation Connection ($/kW)
2020	4.35	0.83	2.44
2021	4.61	0.88	2.59
2022	4.88	0.93	2.74

CHARGE DETERMINANTS

1. INTRODUCTION

This Exhibit provides the derivation of Hydro One Transmission's charge determinants for the approved rate pools, which when combined with the charge determinants of the other transmitters for the Network, Line Connection and Transformation Connection rate pools, can be used by the Board to determine Uniform Transmission Rates ("UTRs"). The charge determinants for the 2020 to 2022 test years are based on forecast demand by customer delivery point, as described in Exhibit E, Tab 3, Schedule 1, and are subject to the Terms and Conditions defined in the proposed Transmission Rate Schedule provided in Exhibit I2, Tab 6, Schedule 2, Attachment 1.

2. SUMMARY OF CHARGE DETERMINANTS

The rate pool charge determinants for Hydro One Transmission are summarized in Table 1 for the 2020 to 2022 test years. All charge determinants have been calculated per the methodology approved in the Board's Decision in Proceeding EB-2016-0160/EB-2017-0280/EB-2017-0359.

Table 1: Summary of Rate Pool Charge Determinants (MW)

Charge Determinant	Network	Line Connection	Transformation Connection
2020	235,253	228,853	195,027
2021	233,632	227,294	193,699
2022	231,866	225,594	192,250

3. NETWORK CHARGE DETERMINANT AND PAYMENT OBLIGATIONS

In its Decision on Hydro One's 2017/2018 Transmission Revenue Requirement (EB-2016-0160), the Board directed Hydro One to provide a report, in its next Transmission rates application, that addresses how the Network Service Charge ("NSC") determinant might be modified to respond to concerns raised by Canadian Manufacturers and Exporters. This report is provided in Attachment 1 to this Exhibit. As per the recommendation in this report, Hydro One is not proposing any change to the NSC determinant in this application.

The proposed NSC determinant is the higher of: (a) customer coincident peak demand (MW) in the hour of the month when the total hourly demand of all Provincial Transmission Service ("PTS") customers is highest for the month; and (b) 85% of the customer peak demand in any hour during the peak period 7 AM to 7 PM (local time) on weekdays, excluding the holidays as defined by Independent Electricity System Operator ("IESO"), as detailed in the proposed Ontario Transmission Rate Schedules provided in Exhibit I2, Tab 6, Schedule 2, Attachment 1.

The NSC determinant provides time-of-use signals that encourage customers to shift their demand from coinciding with the time of the total system's monthly peak. Customers with a monthly peak demand that occurs away from the time of the total system's monthly peak will potentially benefit from a reduced Network charge. No transmission Network charges apply to customers that avoid consuming between 7 AM to 7 PM on IESO business days[1], which is the defined transmission system on-peak period.

[1] Unless the monthly system peak demand occurs outside of the 7 AM to 7 PM period, in which case the customer's Network charge determinant will be their coincident peak demand.

All customers that are connected to Hydro One's transmission system incur Network service charges on a per transmission delivery point basis. The 2020 to 2022 hourly load forecast data for each customer's transmission delivery points, adjusted for losses as appropriate, are used to calculate the total charge determinants that attract Network service charges as shown in Table 1.

4. CONNECTION CHARGE DETERMINANT AND PAYMENT OBLIGATIONS

Hydro One is proposing to update the definition of billing demand for the Line and Transformation Connection services to reflect the changes in the embedded generation market over the years, such as inclusion of energy storage facilities.

The "Embedded Generation" section in the proposed 2020 Ontario Uniform Transmission Rate Schedules (Exhibit I2, Tab 6, Schedule 2, Attachment 1) has also been updated to align with the changes in billing demand for the Line and Transformation Connection services as described in Sections 4.1 and 4.2 below.

4.1 LINE CONNECTION

The Line Connection service charge determinant is the transmission delivery point's non-coincident monthly peak demand, as detailed in the proposed Ontario Uniform Transmission Rate Schedules provided in Exhibit I2, Tab 6, Schedule 2, Attachment 1.

All customers that utilize Line Connection assets owned by Hydro One Transmission incur Line Connection service charges on a per transmission delivery point basis. The customer demand supplied from a transmission delivery point will not incur Line Connection service charges if a customer fully owns all Line Connection assets that

connect the transmission delivery point to a network station. Similarly, customers will not incur Line Connection service charges for demand at a transmission delivery point located at a network station.

The billing demand for the Line Connection service charge is the loss-adjusted demand supplied to the delivery point from the transmission system. Furthermore, the demand that is supplied by a generator unit or energy storage facility, through a transmission delivery point that attracts Line Connection service charges, is added to the billing demand if the required government approvals for the generator unit or energy storage facility is obtained after October 30, 1998 and if the generator unit nameplate rating is 2MW or more for renewable generation and 1MW or higher for non-renewable generation or if the individual inverter unit capacity is 1MW or higher for energy storage or solar generators. These charges also apply to the incremental capacity amount associated with any refurbishments or expansions to a generator or generation facility approved after October 30, 1998, for which the incremental generator nameplate capacity is 2MW or more for renewable generation and 1MW or higher for non-renewable generation of the approved refurbishment or if the individual inverter unit capacity is 1MW or higher for expansion of energy storage facilities or solar generators.

The 2020 to 2022 hourly load forecast data for each transmission delivery point, adjusted for losses as appropriate, is used to calculate the total charge determinants that attract Line Connection service charges as shown in Table 1.

4.2 TRANSFORMATION CONNECTION

The Transformation Connection service charge determinant is the customer's non-coincident monthly peak demand, as detailed in the proposed Ontario Uniform Transmission Rate Schedules provided in Exhibit I2, Tab 6, Schedule 2, Attachment 1.

All customers that utilize Transformation Connection assets owned by the Hydro One Transmission incur charges on a transmission delivery point basis. Customer demand supplied from a transmission delivery point will not incur Transformation Connection service charges if a customer fully owns all Transformation Connection assets associated with that transmission delivery point.

The billing demand for the Transformation Connection service charge is the loss-adjusted demand supplied to the delivery point from the transmission system. Furthermore, the demand that is supplied by a generator unit or energy storage facility, through a transmission delivery point that attracts Transformation Connection service charges, is added to the billing demand if the required government approvals for the generator unit or energy storage facility is obtained after October 30, 1998 and if the generator unit rating is 2MW or more for renewable generation and 1MW or higher for non-renewable generation or if the individual inverter unit capacity is 1MW or higher for energy storage or solar generators. These charges also apply to the incremental capacity amount associated with any refurbishments or expansions to a generator or generation facility approved after October 30, 1998, for which the incremental generator nameplate capacity is 2MW or more for renewable generation and 1MW or higher for non-renewable generation of the approved refurbishment or if the individual inverter unit capacity is 1MW or higher for energy storage or solar generators.

The 2020 to 2022 hourly load forecast data for each transmission delivery point, adjusted for losses as appropriate, is used to calculate the total charge determinants that attract Transformation Connection service charges as shown in Table 1.

NETWORK SERVICE CHARGE DETERMINANT STUDY

1. INTRODUCTION

In its October 11, 2017 Decision in Proceeding EB-2016-0160, the Board directed Hydro One to provide a report in its next Transmission rates application that addressed Canadian Manufacturers and Exporters' ("CME") concern about the Network Service Charge ("NSC") that applies to manufacturing or industrial customers who shift their operations to outside of the 7 AM to 7 PM timeframe when the system peak occurs after 7 PM. In response to the Board's Decision, this Exhibit examines the issue of modifying the existing NSC determinant to address CME's concern.

2. BACKGROUND ON NETWORK SERVICE CHARGE

Under the current Board approved Ontario Uniform Transmission Rate ("UTR") Schedules, the NSC determinant is calculated as the higher of:

a) Customer coincident peak demand in the hour of the month when the total hourly demand of all Provincial Transmission Service ("PTS") customers is highest for the month; and
b) 85% of the customer peak demand in any hour during the peak period 7 AM to 7 PM (local time) on weekdays, excluding the holidays as defined by the Independent Electricity System Operator ("IESO").

The current NSC determinant was established under Proceeding RP-1999-0044 and has been used since 2002. Consistent with Sections 3.4.21 to 3.4.30 of the Board's Decision with Reasons in that proceeding, the two criteria used to define the NSC determinant reflects the fact that economic efficiency dictates that transmission customers should be

incented to avoid the transmission system peak. The criteria also recognize that, to ensure fairness in recovering the transmission costs between customers who are able to withhold demand in the "peak period" and others who do not have such opportunity, customers should also be required to pay for transmission services based on their non-coincident peak demand during the "peak period", which was defined as occurring between 7 AM to 7 PM.

In its submission in Proceeding EB-2016-0160, CME raised a concern that when the monthly system peak falls outside of the 7 AM to 7 PM period, manufacturers who take steps to ensure that their manufacturing processes occur outside of the peak hours are nevertheless billed a higher network charge because of their demand coincident with the monthly system peak. CME submitted that such an outcome unfairly penalizes Ontario manufacturers who have taken steps to ensure that their processes are always scheduled outside the "peak period".

3. ASSESSMENT OF THE ISSUE

Hydro One examined the historical data from 2012 to 2017 to determine how often and when the combined highest peak of all PTS customers occurred outside the 7 AM to 7 PM "peak period".

The number of times over the last six years that the highest monthly combined peak of all PTS customers fell outside the 7 AM to 7 PM period and the corresponding month and time at which it occurred are presented in Table 1 below.

Table 1: System Peaks outside the 7AM to 7PM period for Years 2012 to 2017

Year	Number of Occurrences (Annually)	Month and Hour (local time)
2012	4	February, hour 20 March, hour 20 April, hour 20 October, hour 20
2013	3	March, hour 20 April, hour 20 October, hour 20
2014	4	February, hour 20 March, hour 20 April, hour 20 October, hour 20
2015	4	February, hour 20 March, hour 20 April, hour 20 October, hour 20
2016	2	April, hour 20 October, hour 20
2017	3	March, hour 20 April, hour 20 October, hour 20

Table 1 shows that the monthly transmission peak occurred within the defined "peak period" for 72% of the months in the last six years. When the transmission peak fell outside the 7 AM to 7 PM period, it always took place in the hour immediately following the "peak period". More importantly, as discussed in the Section below, the occurrence of the transmission peak outside the 7 AM to 7 PM period only materially impacted two industrial customers between 2012 and 2015, and these customers were not impacted in 2016 and 2017, suggesting that they may have modified their behaviour to avoid this situation in recent years.

4. ALTERNATIVE TO THE EXISTING NSC DETERMINANT

Hydro One has evaluated an alternative to the currently approved NSC determinant that would address the concerns raised by CME while making minimal changes to the current definition. The alternative Hydro One has evaluated is to add the 7 AM to 7 PM requirement to the first condition of the current NSC determinant, resulting in the NSC determinant being defined as the higher of:

a) Customer coincident peak demand in the hour of the month when the total hourly demand of all PTS customers is highest within the peak period of 7 AM to 7 PM (local time) on weekdays, excluding the holidays as defined by the IESO; and
b) 85% of the customer peak demand in any hour during the peak period 7 AM to 7 PM (local time) on weekdays, excluding the holidays as defined by the IESO.

The remainder of this Section analyzes the impact of this alternative NSC determinant on transmission load customers' monthly network charges. Generator customers have been excluded from this analysis since generators' peak demands are typically small and they only draw electricity from the grid when they are not generating electricity.

4.1 SOURCE DATA

To determine how the alternative NSC determinant would have impacted the network charge for each of the transmission delivery point in the last six years, the following data set was used:

- Actual hourly demand data[1] for each of the transmission delivery points connected to Hydro One's transmission system, from January 1st, 2012 to December 31st, 2017;

[1] Source of data: Monthly Transmitter Transmission Tariff Final Data File, from the IESO

- Actual hourly Ontario demand data[2] from January 1st, 2012 to December 31st, 2017; and
- Monthly IESO Transmission Settlement Statements[2] from January 2012 to December 2017, which provides date and time when the total demand for all PTS customers is the highest for a month.

4.2 METHODOLOGY

The following methodology was used to assess the impacts of the alternative NSC determinant on customers' bills:

- Months where the combined highest peak of all PTS customers fell outside the 7 AM to 7 PM period were identified using the information from monthly IESO Transmission Settlement Statements for the period of 2012 to 2017.
- Actual hourly Ontario demand data was used to identify the new system peak time that falls within 7 AM to 7 PM period on a weekday[3].
- Actual hourly delivery point demand data was used to update the coincident peak demand (MW) for each Hydro One Transmission customer delivery point.
- For each month between 2012 and 2017, the Network UTR in effect at the time was applied to calculate network charges for each delivery point under two scenarios:
    - Using Network peak as per existing NSC determinant, and
    - Using Network peak as per alternative NSC determinant as noted above.
- Difference in the total annual network charges under the two scenarios was used to assess the impacts of alternative NSC determinant. Any difference greater than or equal to 5% is considered material.

[2] Source of data: IESO Power Data Directory (*http://www.ieso.ca/en/power-data/data-directory*)
[3] Hourly Ontario system peak data was used as a close proxy to the combined demand of all PTS customers in the Province; since Hydro One Transmission does not have access to demand data for PTS customers of other transmitters.

4.3 RESULTS AND IMPACTS ON NETWORK CHARGES

A total of 509 transmission load customer delivery points, with demand data from January 2012 to December 2017, were analyzed. Table 2 summarizes how these transmission load customers' network charges are impacted by applying the alternative NSC determinant.

Table 2: Impact of Alternative NSC Determinant on Network Charges on All Hydro One Transmission Load Customers' Delivery Points

Year	Better Off			No Impact	Worse Off			Grand Total
	Immaterial (<5%)	Material (>=5%)	Total		Immaterial (<5%)	Material (>=5%)	Total	
2012	375	2	377	36	96	0	96	509
2013	353	1	354	30	125	0	125	509
2014	372	2	374	29	106	0	106	509
2015	344	1	345	42	122	0	122	509
2016	320	1	321	76	112	0	112	509
2017	338	0	338	60	111	0	111	509

The results show that from 2012 to 2016, only four delivery points are materially impacted by the use of the alternative NSC determinant. For these four delivery points, there are seven occasions where the alternative NSC determinant materially reduces the monthly network charge that the customer delivery point would be charged. In 2017, no customer delivery point is materially impacted as a result of using the alternative NSC.

As shown in Table 2, over two-thirds of customer delivery points are marginally better off with the alternative NSC determinant. However, since the rate design process is revenue-neutral, the savings for these delivery points are offset by higher charges for the other one-third of customer delivery points.

4.3.1 Impact on Industrial Customers

Out of the 509 transmission load customer delivery points, 79 belong to industrial[4] customers. Table 3 summarizes how industrial customers' network charges are impacted by applying the alternative NSC determinant.

Table 3: Impact of Alternative NSC Determinant on Network Charges on Industrial Customers' Delivery Points

Year	Better Off			No Impact	Worse Off			Grand Total
	Immaterial (<5%)	Material (>=5%)	Total		Immaterial (<5%)	Material (>=5%)	Total	
2012	38	2	40	14	25	0	25	79
2013	39	1	40	11	28	0	28	79
2014	39	1	40	10	29	0	29	79
2015	39	1	40	16	23	0	23	79
2016	44	0	44	23	12	0	12	79
2017	39	0	39	18	22	0	22	79

From 2012 to 2015, only two industrial customer delivery points are materially impacted by the alternative NSC determinant. One customer delivery point has savings on their annual network charges ranging from 20% to 28% in 2012, 2014 and 2015 while the other delivery point has savings of 6% and 8% in 2012 and 2013, respectively. No delivery points experience material impacts to their annual network charges in 2016 and 2017.

For most industrial customer delivery points (77 out of 79), the alternative NSC determinant has either a zero or immaterial impact on their annual network charge.

[4] The term "Industrial" refers to all non-LDC and non-generation customer delivery points (mostly manufacturing and mining customers).

4.3.2 Impact on Local Distribution Companies

Out of the 509 transmission load customer delivery points, 430 belong to Local Distribution Companies ("LDCs")[5]. Table 4 summarizes how LDCs' network charges are impacted by applying the alternative NSC determinant.

Table 4: Impact of Alternative NSC Determination Network Charges on Local Distribution Companies' Delivery Points

Year	Better Off			No Impact	Worse Off			Grand Total
	Immaterial (<5%)	Material (>=5%)	Total		Immaterial (<5%)	Material (>=5%)	Total	
2012	337	0	337	22	71	0	71	430
2013	314	0	314	19	97	0	97	430
2014	333	1	334	19	77	0	77	430
2015	305	0	305	26	99	0	99	430
2016	276	1	277	53	100	0	100	430
2017	299	0	299	42	89	0	89	430

From 2012 to 2017, only two LDC customer delivery points are materially impacted by the alternative NSC determinant. One delivery point has annual network charge savings of 6% in 2014 and the other delivery point has savings of 7% in 2016. On an annual basis, no LDC customer delivery points are materially impacted in 2012, 2013, 2015 and 2017. For most LDC customer delivery points (428 out of 430), the alternative NSC determinant has either zero or an immaterial impact on the annual network charge.

For an LDC, the transmission network charge is a pass-through that is fully recovered from its distribution customers through Retail Transmission Service Rates ("RTSR"). The impact of the alternative NSC determinant on a distribution customer would be negligible as the RTSR network charge typically represents less than 7% of their total

[5] Many LDCs have multiple transmission delivery points. Currently there are about 40 LDCs that are connected to the Hydro One transmission system.

bill. As such, it is anticipated that this alternative NSC determinant would pose no material bill impact on LDCs' distribution customers.

4.4 OTHER CONSIDERATIONS IN ASSESSING THE EXISTING NSC DETERMINANT

In its reply argument in Proceeding EB-2016-0160, CME also suggested two additional considerations:

- Whether the NCS determinant for manufacturing and industrial customers should be strictly based on customer's non-coincident peak demand.
- Whether there should be a separate NSC determinant applicable only to manufacturing and industrial customers.

With respect to the first additional consideration, Hydro One notes that restricting the criteria for coincident peak to the 7 AM to 7 PM period addresses the concern raised by CME regarding the increased Network charges that could apply to customers who shift their consumption away from the "peak period". As such, the alternative NSC determinant that has been evaluated fully addresses the concern raised while avoiding the need to make the NSC determinant strictly based on customer's non-coincident peak demand, which would represent a more significant departure from the principles adopted by the Board in establishing the current NSC determinant.

With respect to the second additional consideration, as discussed in Section 4.3, the alternative NSC determinant evaluated does not materially impact the vast majority of transmission customers. The alternative considered addresses the concern raised without needing to adopt a separate NSC determinant that would apply only to manufacturing and industrial customers. Creating a separate tariff structure for only a small segment of

transmission customers would also pose additional implementation issues and would raise concerns with the fair and equitable treatment of all transmission customers.

The IESO operates and settles the Ontario electricity wholesale market, including the settlement of transmission charges. Changing the NSC determinant will require changes in the IESO settlement system, which will drive implementation costs, process changes and the need for communication of the changes with all transmission customers and transmitters. Preliminary discussions with the IESO indicate that a change to the NSC determinant will impact a number of IESO settlement processes and tools; as well as a number of other process and tools outside of the settlement system that make use of the Network system peak data. Implementing these changes would require both time and resources to execute.

5. RECOMMENDATIONS

Hydro One recommends that the current NSC determinant definition be maintained.

Rate design is a zero-sum exercise, and so to the extent that a very limited number of customers will see a material reduction to their annual Network service charges, all other transmission customers will have to subsidize those savings.

Modifying the NSC determinant calculation to limit consideration of the customer's coincident peak demand only between 7 AM to 7 PM could be seen as providing an unfair benefit to those customers who are able to withhold demand in the on-peak period.

There is a benefit to the transmission system, and Ontario electricity consumers, when customers avoid the system peak regardless of when it occurs. Therefore, an incentive to avoid the system peak should exist at all times, even when shifting electricity usage patterns are driving the peak to occasionally occur outside the 7 AM to 7 PM period.

The results of the analysis show that changing the NSC determinant to address the concerns raised by CME would result in material savings for only two industrial and two LDC delivery points. The two industrial customers appear to have modified their behaviour in 2016 and 2017 such that going forward they are not likely to be negatively impacted when the system peak falls outside the 7 AM to 7 PM on-peak period. LDCs have very limited ability to control the timing of peak demand within their distribution system and do not actively avoid system peaks in order to reduce their transmission charges. Moreover, as discussed in Section 4.3.2, since RTSR network charge only represents less than 7% of a distribution customers' bill, the impact of the alternative NSC determinant on LDCs' distribution customers is expected to be negligible.

FEES FOR WHOLESALE METER SERVICE

1. INTRODUCTION

This Exhibit summarizes Hydro One's proposal for the derivation of the proposed Wholesale Meter Service ("WMS") fee that will recover the revenue requirement associated with Meter Service Provider ("MSP") services to wholesale revenue metering ("WRM") assets.

2. COSTS ASSOCIATED WITH WHOLESALE REVENUE METERING ASSETS

The WRM installations are comprised of such assets as: recorders, physical meters and related instrument transformers, wiring, and panels that require ongoing operations and maintenance expenses, including costs associated with activities to comply with the Market Rules administered by the Independent Electricity System Operator ("IESO"), and asset related charges such as depreciation and a share of the other revenue requirement costs (e.g., return on capital, taxes, etc.).

For every metering installation with respect to which a Metered Market Participant ("MMP") arranges to exit the transitional arrangement, Hydro One Transmission shall cease to be responsible for these direct or indirect costs that are required to maintain, repair, or replace any equipment necessary for wholesale revenue metering or any other purpose related to the metering installation.

Since market opening in 2002, MMPs have been making arrangements to exit the transitional arrangement upon seal expiry of their WRM installations, as per the Market Rules, reducing Hydro One Transmission's ownership of WRMs.

Although the number of WRM installations and the associated direct and indirect costs has significantly reduced, there is still a cost associated with the remaining small number of WRM assets. The costs for the wholesale revenue meter function are required to be collected from the meter service customers that are served by these WRM installations.

3. RECOVERY OF COSTS ASSOCIATED WITH WHOLESALE REVENUE METERING ASSETS

In Proceeding EB-2016-0160 Hydro One received approval to simplify and streamline the cost allocation process by capturing the WRM asset costs in the Transformation Connection functional category, for subsequent mapping to the Transformation Connection rate pool, as described in Exhibit I1, Tab 1, Schedule 2 and Exhibit I1, Tab 1, Schedule 3 respectively.

As a result of expanding the Transformation Connection functional category to now include the small number of remaining WRM assets, a separate Wholesale Meter functional category no longer exists. The associated costs are bundled with the assets in the Transformation Connection functional category, and subsequently recovered through the Transformation Connection service rate.

In order to ensure the costs attributable to WRMs continue to be recovered from the MMPs who are served by these WRM installations, Hydro One Transmission is proposing to continue with the annual fee approach approved in Proceeding EB-2016-0160. Hydro One Transmission will apply the approved annual fee of $7,900 per meter point for MSP services provided to MMPs that remain under the transitional arrangement.

The amount collected from the proposed WMS fee will be directly assigned to the Transformation Connection rate pool to offset the wholesale meter costs that are now included as part of that rate pool.

The WMS fee is in addition to the existing Exit Meter fee, and will not be applied to MMPs that exit the transitional arrangement in accordance with Hydro One Transmission's wholesale meter exit policy.

It is proposed that the Exit Fee for meter installations, which is based on the average Net Book Value of stranded wholesale revenue metering assets, remain at $5,200 per meter point as most recently approved by the Board in Proceeding EB-2016-0160.

4. FORECAST WMS REVENUE

Table 1 below provides data for 2020 to 2022 on the forecast number of meter points and the revenue to be recovered through the proposed WMS fee.

Table 1: Forecast WMS Revenue

Year	Forecast Number of Meter Points (Mid-Year)	WMS Fee ($/year)	Forecast Revenue Collected for MSP Service ($/year)
2020	12	$7,900	$94,800
2021	8	$7,900	$63,200
2022	8	$7,900	$63,200

Hydro One proposes that the current fee schedule for the WMS and Exit Fee, as documented in Exhibit I2, Tab 7, Schedule 1, Attachment 1 remain in effect until the remaining MMPs exit the transitional arrangement. The WMS fee is administered by Hydro One Transmission.

RATES FOR EXPORT TRANSMISSION SERVICE

1. INTRODUCTION

The Independent Electricity System Operator ("IESO") collects Export Transmission Service ("ETS") revenues and remits them on a monthly basis to Hydro One, whose transmission system is used to facilitate export transactions at the point of interconnection with the neighbouring markets.

2. EXPORT TRANSMISSION SERVICE TARIFF DESIGN

Since the initial setting of the ETS rate, there have been many competing views advanced by stakeholders with respect to the basis of the tariff design and appropriateness of the charge level. As a result, over the years, the ETS rate has been determined through a combination of stakeholder agreements and Board interim Decisions, informed by Board-directed studies performed by both the IESO, and most recently, by Hydro One Transmission.

As a part of Hydro One's 2015/2016 Transmission Rate Application (EB-2014-0140), Hydro One Transmission engaged Elenchus Research Associates ("Elenchus") to perform a cost allocation study of network assets utilized by export transmission customers to determine the ETS rate based on cost causality principles. The Elenchus study was stakeholdered with interested parties and a final report was included in Exhibit H1, Tab 5, Schedule 1, Attachment 1 of that application.

The criteria for Elenchus' recommended methodology to allocate costs are defined below:

- Utilize the prior year actual hourly data for domestic and export customers;

- Utilize the 12 Coincident Peak[1] ("CP") as the allocator in apportioning assets between domestic and export customers in order to develop composite allocators to allocate shared expenses;
- Allocate only dedicated assets used to serve export customers and related expenses to the export customer class. No asset related costs associated with shared assets should be allocated to export customers;
- Allocate OM&A expenses related to the use of shared assets to export customers using composite assets as allocator;
- Exclude external revenues from the allocation to the export customer class; and
- Calculate the ETS rate based on Hydro One Transmission's proposed Network revenue requirement, adjusted to include other transmitters' approved revenue requirement reflected in the Uniform Transmission Rates ("UTRs").

The cost allocation study completed by Elenchus recommended an ETS rate of $1.70/MWh for 2015 and 2016 as being reflective of the cost of providing export service.

For the purpose of reaching a settlement, all parties agreed to an ETS rate change from the $2.00/MWh, currently in effect at the time, to $1.85/MWh. This rate was approved by the Board in its EB-2014-0140 Decision as the effective rate for 2015 and 2016, and subsequently maintained as the effective rate for 2017 and 2018 in its EB-2016-0160 Decision.

In this application, Hydro One updated the 2015 Elenchus cost allocation model utilizing the latest available information. This included updates to: the fixed assets dedicated to interconnections, the 2018 system peak and export load data used to determine the 12 CP allocator, and the forecast for 2020 ETS exports (MWh). Based on the updated cost

[1] Domestic and Export Demand at Ontario system peak.

allocation model data and Hydro One's proposed 2020 revenue requirement, the 2020 ETS rate calculated using the Elenchus study methodology has been determined to be $1.25/MWh. The decrease in the calculated ETS rate as compared to the 2015 study primarily reflects a decrease in Hydro One's OM&A costs relative to what was proposed at the time the 2015 study was completed, and an increase in forecast exports (MWh) from what was assumed in the 2015 study. The following Table 1 demonstrates these key differences in the parameters utilized in 2015 Elenchus cost allocation study and the updated cost allocation study in this application.

Table 1: ETS Rates Derived Using Elenchus Cost Allocation Study

Year	Total Hydro One Revenue Requirement allocated to Export	ETS Exports (MWh)	ETS Rate ($/MWh)
2015	27.2 million	16,700,000	1.70
2020	22.1 million	18,800,000	1.25

While the updated cost allocation study resulted in a calculated ETS rate of $1.25/MWh, the current ETS rate of $1.85/MWh represents a negotiated rate that was established as part of the Settlement Agreement in Proceeding EB-2014-0410. In addition, a decrease in the ETS rate will negatively impact the transmission rates that Ontario customers pay and could be perceived as benefiting customers in neighbouring jurisdictions at the expense of Ontario consumers. As such, Hydro One proposes to continue using the current ETS rate of $1.85/MWh to establish the ETS revenue used to offset the transmission revenue requirement as discussed in Section 3.

3. EXPORT TRANSMISSION SERVICE REVENUE

Hydro One's ETS revenue, used for establishing the rates revenue requirement proposed in this Application, is calculated using the currently approved tariff of $1.85/MWh and

the three year historical rolling average volume of electricity exported from, or wheeled-through, Ontario over its transmission system. Table 2 provides the forecast of ETS revenue for the period 2020 to 2022.

Table 2: ETS Revenue Forecast ($ Millions)

Year	ETS Revenue
2020	35.9
2021	35.9
2022	36.3

The ETS revenue will continue to be disbursed as a decrease to the revenue requirement for the Network rate pool, as per the cost allocation process approved by the Board.

Hydro One proposes to revise its rates revenue requirement to reflect the Board's Decision and Order with respect to the ETS tariff as part of the Draft Rate Order to be submitted in finalizing the 2020 Uniform Transmission Rates.

BILL IMPACTS

The impact of transmission rates on a customer's total bill varies between transmission-connected and distribution-connected customers. For the purpose of determining the impact of proposed changes to transmission rates on an average customer's bill the same approach used in the EB-2016-0160 transmission rate application has been adopted.

Table 1 below shows the estimated average transmission cost as a percentage of the total bill for a transmission and a distribution-connected customer.

Table 1: Estimated Transmission Cost as a Percentage of Total Electricity Market Costs

Cost Component	**¢/kWh**	**Source**
Commodity	11.55	IESO Monthly Market Report December 2017
Wholesale Market Service Charges	0.43	IESO Monthly Market Report December 2017
Wholesale Transmission Charges	1.01	IESO Monthly Market Report December 2017
Debt Retirement Charge	0.70	IESO Monthly Market Report December 2017
Distribution Service Charges	2.61	2017 Yearbook of Electricity Distributors
Total Cost	**16.30**	

Transmission as Percentage of Total Cost for Dx-connected customers	**6.2%**
Transmission as Percentage of Total Cost for Tx-connected customers	**7.4%**

The figures from Table 1 have been applied to the proposed increase in transmission revenue requirement in 2020 to 2022 to establish average bill impacts as shown in Table 2.

Table 2: Average Bill Impacts on Transmission and Distribution-connected Customers

	2019*	2020	2021	2022
Rates Revenue Requirement ($ millions)	**$1,552.3**	**$1,628.0**	**$1,719.4**	**$1,808.4**
% Increase in Rates Revenue Requirement over prior year		4.9%	5.6%	5.2%
% Impact of load forecast change		3.8%	0.6%	0.7%
Net Impact on Average Transmission Rates		**8.7%**	**6.2%**	**5.9%**
Transmission as a % of Tx - connected customer's Total Bill		*7.4%*	*7.4%*	*7.4%*
Estimated Average Bill Impact		**0.6%**	**0.5%**	**0.4%**
Transmission as a % of Dx - connected customer's Total Bill		*6.2%*	*6.2%*	*6.2%*
Estimated Average Bill Impact		**0.5%**	**0.4%**	**0.4%**

** 2019 rates revenue requirement as per Table 2 in the OEB's Decision and Order for Hydro One's 2019 Transmission Revenue Requirement application (EB-2018-0130), issued on April 25, 2019.*

The total bill impact for a typical Hydro One medium density residential (R1) customer consuming 400 kWh, 750 kWh and 1,800 kWh monthly is determined based on the forecast increase in the customer's Retail Transmission Service Rates ("RTSR") as detailed below in Table 3.

Table 3: Typical Medium Density (R1) Residential Customer Bill Impacts

	Typical R1 Residential Customer		
	400 kWh	**750 kWh**	**1,800 kWh**
Total Bill as of May 1, 2018[1]	$83.40	$121.75	$236.81
RTSR included in 2017 R1 Customer's Bill *(based on 2016 UTR)*	$4.78	$8.96	$21.50
Estimated 2019 Monthly RTSR[2]	$5.10	$9.56	$22.95
2019 increase in Monthly Bill	**$0.13**	**$0.24**	**$0.58**
2019 increase as a % of total bill	*0.2%*	*0.2%*	*0.2%*
Estimated 2020 Monthly RTSR[3]	$5.52	$10.35	$24.83
2020 increase in Monthly Bill	**$0.42**	**$0.79**	**$1.89**
2020 increase as a % of total bill	*0.5%*	*0.6%*	*0.8%*
Estimated 2021 Monthly RTSR[3]	$5.84	$10.96	$26.29
2021 increase in Monthly Bill	**$0.32**	**$0.61**	**$1.46**
2021 increase as a % of total bill	*0.4%*	*0.5%*	*0.6%*

	Typical R1 Residential Customer		
	400 kWh	**750 kWh**	**1,800 kWh**
Estimated 2022 Monthly RTSR[3]	$6.17	$11.56	$27.76
2022 increase in Monthly Bill	**$0.32**	**$0.61**	**$1.46**
2022 increase as a % of total bill	*0.4%*	*0.5%*	*0.6%*

[1] Total bill including HST, based on time-of-use commodity pricing effective May 1, 2018 and 2017 distribution rates approved per Distribution Rate Order EB-2016-0081 (includes impacts of all components of the Fair Hydro Plan).
[2] 2019 Monthly RTSR is an estimated value that incorporates the impacts of changes in UTR in 2017 and 2018 and Hydro One's 2019 rates revenue requirement as shown in Table 2.
[3] The impact on RTSR is assumed to be the net impact on average Transmission rates, as per Table 2, adjusted for Hydro One's revenue disbursement allocator per 2019 Interim UTR Order (EB-2018-0326).

The total bill impact for a typical Hydro One General Service Energy less than 50 kW ("GSe < 50 kW") customer consuming 1,000 kWh, 2,000 kWh and 15,000 kWh monthly is determined based on the forecast increase in the customer's RTSR as detailed below in Table 4.

Table 4: Typical General Service Energy less than 50 kW (GSe < 50 kW) Customer Bill Impacts

	GSe Customer Monthly Bill		
	1,000 kWh	**2,000 kWh**	**15,000 kWh**
Total Bill as of May 1, 2018[1]	$198.93	$367.73	$2,562.20
RTSR included in 2017 GSe Customer's Bill *(based on 2016 UTR)*	$10.63	$21.26	$159.47
Estimated 2019 Monthly RTSR[2]	$11.35	$22.69	$170.21
2019 increase in Monthly Bill	**$0.29**	**$0.58**	**$4.33**
2019 increase as a % of total bill	*0.1%*	*0.2%*	*0.2%*
Estimated 2020 Monthly RTSR[3]	$12.28	$24.56	$184.20
2020 increase in Monthly Bill	**$0.93**	**$1.86**	**$13.99**
2020 increase as a % of total bill	*0.5%*	*0.5%*	*0.5%*
Estimated 2021 Monthly RTSR[3]	$13.00	$26.00	$195.04
2021 increase in Monthly Bill	**$0.72**	**$1.44**	**$10.84**
2021 increase as a % of total bill	*0.4%*	*0.4%*	*0.4%*
Estimated 2022 Monthly RTSR[3]	$13.73	$27.45	$205.88
2022 increase in Monthly Bill	**$0.72**	**$1.45**	**$10.85**
2022 increase as a % of total bill	*0.4%*	*0.4%*	*0.4%*

[1] Total bill including HST, based on time-of-use commodity pricing effective May 1, 2018 and 2017 distribution rates approved per Distribution Rate Order EB-2016-0081 (includes impacts of all components of the Fair Hydro Plan).
[2] 2019 Monthly RTSR is an estimated value that incorporates the impacts of changes in UTR in 2017 and 2018 and Hydro One's 2019 rates revenue requirement as shown in Table 2.
[3] The impact on RTSR is assumed to be the net impact on average Transmission rates, as per Table 2, adjusted for Hydro One's revenue disbursement allocator per 2019 Interim UTR Order (EB-2018-0326).

CURRENT ONTARIO TRANSMISSION RATE SCHEDULES

The current Uniform Transmission Rate ("UTR") Schedules were approved as part of the 2019 Decision and Interim Rate Order dated December 20, 2018 under EB-2018-0326. This approved rate schedule, and the revenue requirement and charge determinants for all transmitters used to establish the current UTRs and revenue disbursement allocators are included in the following attachments.

Attachment 1: 2019 Ontario Uniform Transmission Rate Schedules
Attachment 2: 2019 Uniform Transmission Rates and Revenue Disbursement Allocators

Filed: 2019-03-21
EB-2019-0082
Exhibit I2-6-1
Attachment 1
Page 1 of 6

2019 ONTARIO UNIFORM TRANSMISSION

RATE SCHEDULES

EB-2018-0326

The rate schedule contained herein are interim and shall be effective and implemented as of January 1, 2019

Issued: December 20, 2018
Ontario Energy Board

TERMS AND CONDITIONS

(A) APPLICABILITY The rate schedules contained herein pertain to the transmission service applicable to: •The provision of Provincial Transmission Service (PTS) to the Transmission Customers who are defined as the entities that withdraw electricity directly from the transmission system in the province of Ontario. •The provision of Export Transmission Service (ETS) to electricity market participants that export electricity to points outside Ontario utilizing the transmission system in the province of Ontario. The Rate Schedule ETS applies to the wholesale market participants who utilize the Export Service in accordance with the Market Rules of the Ontario Electricity Market, referred to hereafter as Market Rules. These rate schedules do not apply to the distribution services provided by any distributors in Ontario, nor to the purchase of energy, hourly uplift, ancillary services or any other charges that may be applicable in electricity markets administered by the Independent Electricity System Operator (IESO) of Ontario.

(B) TRANSMISSION SYSTEM CODE The transmission service provided under these rate schedules is in accordance with the Transmission System Code (Code) issued by the Ontario Energy Board (OEB). The Code sets out the requirements, standards, terms and conditions of the transmitter's obligation to offer to connect to, and maintain the operation of, the transmission system. The Code also sets out the requirements, standards, terms and conditions under which a Transmission Customer may connect to, and remain connected to, the transmission system. The Code stipulates that a transmitter shall connect new customers, and continue to offer transmission services to existing customers, subject to a Connection Agreement between the customer and a transmitter.

(C) TRANSMISSION DELIVERY POINT The Transmission Delivery Point is defined as the transformation station, owned by a transmission company or by the Transmission Customer, which steps down the voltage from above 50 kV to below 50 kV and which connects the customer to the transmission system. The demand registered by two or more meters at any one delivery point shall be aggregated for the purpose of assessing transmission charges at that delivery point if the corresponding distribution feeders from that delivery point, or the plants taking power from that delivery point, are owned by the same entity within the meaning of Ontario's *Business Corporations Act*. The billing demand supplied from the transmission system shall be adjusted for losses, as appropriate, to the Transmission Point of Settlement, which shall be the high voltage side of the transformer that steps down the voltage from above 50 kV to below 50 kV.

(D) TRANSMISSION SERVICE POOLS The transmission facilities owned by the licenced transmission companies are categorized into three functional pools. The transmission lines that are used for the common benefit of all customers are categorized as Network Lines and the corresponding terminating facilities are Network Stations. These facilities make up the Network Pool. The transformation station facilities that step down the voltage from above 50 kV to below 50 kV are categorized as the Transformation Connection Pool. Other electrical facilities (i.e. that are neither Network nor Transformation) are categorized as the Line Connection Pool. All PTS customers incur charges based on the Network Service Rate (PTS-N) of Rate Schedule PTS. The PTS customers that utilize transformation connection assets owned by a licenced transmission company also incur charges based on the Transformation Connection Service Rate (PTS-T). The customer demand supplied from a transmission delivery point will not incur transformation connection service charges if a customer fully owns all transformation connection assets associated with that transmission delivery point. The PTS customers utilize lines owned by a licenced transmission company to connect to Network Station(s) also incur charges based on the Line Connection Service Rate (PTS- L). The customer demand supplied from a transmission delivery point will not incur line connection service charges if a customer fully owns all line connection assets connecting that delivery point to a Network Station. Similarly, the customer demand will not incur line connection service charges for demand at a transmission delivery point located at a Network Station.

(E) MARKET RULES The IESO will provide transmission service utilizing the facilities owned by the licenced transmission companies in Ontario in accordance with the Market Rules. The Market Rules and appropriate Market Manuals define the procedures and processes under which the transmission service is provided in real or operating time (on an hourly basis) as well as service billing and settlement processes for transmission service charges based on rate schedules contained herein.

(F) METERING REQUIREMENTS In accordance with Market Rules and the Transmission System Code, the transmission service charges payable by Transmission Customers shall be collected by the IESO. The IESO will utilize Registered Wholesale Meters and a Metering Registry in order to calculate the monthly transmission service charges payable by the Transmission Customers. Every Transmission Customer shall ensure that each metering installation in respect of which the customer has an obligation to pay transmission service charges arising from the Rate Schedule PTS shall satisfy the Wholesale Metering requirements and associated obligations specified in Chapter 6 of the Market Rules, including the appendices therein, whether or not the subject meter installation is required for settlement purposes in the IESO-administered energy market. A meter installation required for the settlement of charges in the IESO-administered that energy market may be used for the settlement of transmission service charges. The Transmission Customer shall provide to the IESO data required to maintain the information for the Registered Wholesale Meters and the Metering Registry pertaining to the metering installations with respect to which the Transmission Customers have an obligation to pay transmission charges in accordance with Rate Schedule PTS. The Metering Registry for metering installations required for the calculation of transmission charges shall be maintained in accordance with Chapter 6 of the Market Rules. The Transmission Customers, or Transmission Customer Agents if designated by the Transmission Customers, associated with each Transmission Delivery Point will be identified as Metered Market Participants within the IESO's Metering Registry. The metering data recorded in the Metering Registry shall be used as the basis for the calculation of transmission charges on the settlement statement for the Transmission Customers identified as the Metered Market Participants for each Transmission Delivery Point. The Metering Registry for metering installations required for calculation of transmission charges shall also indicate whether or not the demand associated with specific Transmission Delivery Point(s) to which a Transmission Customer is connected attracts Line and/or Transformation Connection Service Charges. This information shall be consistent with the Connection Agreement between the Transmission Customer and the licenced Transmission Company that connects the customer to the IESO-Controlled Grid.

(**G) EMBEDDED GENERATION** The Transmission Customers shall ensure conformance of Registered Wholesale Meters in accordance with Chapter 6 of Market Rules, including Metering Registry obligations, with respect to metering installations for embedded generation that is located behind the metering installation that measures the net demand taken from the transmission system if (a) the required approvals for such generation are obtained after October 30, 1998; and (b) the generator unit rating is 2 MW or higher for renewable generation and 1 MW or higher for non- renewable generation; and (c) the Transmission Delivery Point through which the generator is connected to the transmission system attracts Line or Transformation Connection Service charges. These terms and conditions also apply to the incremental capacity associated with any refurbishments approved after October 30, 1998, to a generator unit that was connected through an eligible Transmission Delivery Point on or prior to October 30, 1998 and the approved incremental capacity is 2 MW or higher for renewable generation and 1 MW or higher for non-renewable generation. The term renewable generation refers to a facility that generates electricity from the following sources: wind, solar, Biomass, Bio-oil, Bio-gas, landfill gas, or water. Accordingly, the distributors that are Transmission Customers shall ensure that connection agreements between them and the generators, load customers, and embedded distributors connected to their distribution system have provisions requiring the Transmission Customer to satisfy the requirements for Registered Wholesale Meters and Metering Registry for such embedded generation even if the subject embedded generator(s) do not participate in the IESO-administered energy markets.

(H) EMBEDDED CONNECTION POINT In accordance with Chapter 6 of the Market Rules, the IESO may permit a Metered Market Participant, as defined in the Market Rules, to register a metering installation that is located at the embedded connection point for the purpose of recording transactions in the IESO-administered markets. (The Market Rules define an embedded connection point as a point of connection between load or generation facility and distribution system). In special situations, a metering installation at the embedded connection point that is used to settle energy market charges may also be used to settle transmission service charges, if there is no metering installation at the point of connection of a

distribution feeder to the Transmission Delivery Point. In above situations: •The Transmission Customer may utilize the metering installation at the embedded connection point, including all embedded generation and load connected to that point, to satisfy the requirements described in Section (F) above provided that the same metering installation is also used to satisfy the requirement for energy transactions in the IESO- administered market. •The Transmission Customer shall provide the Metering Registry information for the metering installation at the embedded connection point, including all embedded generation and load connected to that point, in accordance with the requirements described in Section (F) above so that the IESO can calculate the monthly transmission service charges payable by the Transmission Customer.

RATE SCHEDULE: (PTS) PROVINCIAL TRANSMISSION RATES

APPLICABILITY:

The Provincial Transmission Service (PTS) is applicable to all Transmission Customers in Ontario who own facilities that are directly connected to the transmission system in Ontario and that withdraw electricity from this system.

	Monthly Rate ($ per kW)
Network Service Rate (PTS-N):	**3.71**
$ Per kW of Network Billing Demand [1,2]	
Line Connection Service Rate (PTS-L):	**0.94**
$ Per kW of Line Connection Billing Demand [1,3]	
Transformation Connection Service Rate (PTS-T):	**2.25**
$ Per kW of Transformation Connection Billing Demand [1,3,4]	

The rates quoted above shall be subject to adjustments with the approval of the Ontario Energy Board.

Notes:

1 The demand (MW) for the purpose of this rate schedule is measured as the energy consumed during the clock hour, on a "Per Transmission Delivery Point" basis. The billing demand supplied from the transmission system shall be adjusted for losses, as appropriate, to the Transmission Point of Settlement, which shall be the high voltage side of the transformer that steps down the voltage from above 50 kV to below 50 kV at the Transmission Delivery Point.

2. The Network Service Billing Demand is defined as the higher of (a) customer coincident peak demand (MW) in the hour of the month when the total hourly demand of all PTS customers is highest for the month, and (b) 85 % of the customer peak demand in any hour during the peak period 7 AM to 7 PM (local time) on weekdays, excluding the holidays as defined by IESO. The peak period hours will be between 0700 hours to 1900 hours Eastern Standard Time during winter (i.e. during standard time) and 0600 hours to 1800 hours Eastern Standard Time during summer (i.e. during daylight savings time), in conformance with the meter time standard used by the IMO settlement systems.

3. The Billing Demand for Line and Transformation Connection Services is defined as the Non-Coincident Peak demand (MW) in any hour of the month. The customer demand in any hour is the sum of (a) the loss-adjusted demand supplied from the transmission system plus (b) the demand that is supplied by an embedded generator unit for which the required government approvals are obtained after October 30, 1998 and which have installed capacity of 2MW or more for renewable generation and 1 MW or higher for non-renewable generation, on the demand supplied by the incremental capacity associated with a refurbishment approved after October 30, 1998, to a generator unit that existed on or prior to October 30, 1998. The term renewable generation refers to a facility that generates electricity from the following sources: wind, solar, Biomass, Bio-oil, Bio-gas, landfill gas, or water. The demand supplied by embedded generation will not be adjusted for losses.

4. The Transformation Connection rate includes recovery for OEB approved Low Voltage Switchgear compensation for Toronto Hydro Electric System Limited and Hydro Ottawa Limited.

TERMS AND CONDITIONS OF SERVICE:

The attached Terms and Conditions pertaining to the Transmission Rate Schedules, the relevant provisions of the Transmission System Code, in particular the Connection Agreement as per Appendix 1 of the Transmission System Code, and the Market Rules for the Ontario Electricity Market shall apply, as contemplated therein, to services provided under this Rate Schedule.

RATE SCHEDULE: (ETS) EXPORT TRANSMISSION SERVICE

APPLICABILITY:

The Export Transmission Service is applicable for the use of the transmission system in Ontario to deliver electrical energy to locations external to the Province of Ontario, irrespective of whether this energy is supplied from generating sources within or outside Ontario.

	Hourly Rate
Export Transmission Service Rate (ETS):	$1.85 / MWh

The ETS rate shall be applied to the export transactions in the Interchange Schedule Data as per the Market Rules for Ontario's Electricity Market. The ETS rate shall be subject to adjustments with the approval of the Ontario Energy Board.

TERMS AND CONDITIONS OF SERVICE:

The attached Terms and Conditions pertaining to the Transmission Rate Schedules, the relevant provisions of the Transmission System Code and the Market Rules for the Ontario Electricity Market shall apply, as contemplated therein, to service provided under this Rate Schedule.

2019 Interim Uniform Transmission Rates and Revenue Disbursement Allocators

(for Period January 1, 2019 to December 31, 2019)

Transmitter	Revenue Requirement ($)			
	Network	Line Connection	Transformation Connection	Total
FNEI	$4,523,701	$1,142,191	$2,322,200	$7,988,092
CNPI	$2,631,736	$664,488	$1,350,977	$4,647,201
H1N SSM	$22,526,571	$5,687,744	$11,563,805	$39,778,120
H1N	$861,509,753	$217,522,988	$442,248,014	$1,521,280,755
B2MLP	$32,789,151	$0	$0	$32,789,151
All Transmitters	$923,980,911	$225,017,411	$457,484,996	$1,606,483,319

Transmitter	Total Annual Charge Determinants (MW)**			
	Network	Line Connection	Transformation Connection	
FNEI	230.410	248.860	73.040	
CNPI	522.894	549.258	549.258	
HIN SSM	3,498.236	2,734.624	635.252	
H1N	244,924.157	236,948.242	202,510.123	
B2MLP	0.000	0.000	0.000	
All Transmitters	249,175.697	240,480.984	203,767.673	

Transmitter	Uniform Rates and Revenue Allocators			
	Network	Line Connection	Transformation Connection	
Uniform Transmission Rates ($/kW-Month)	**3.71**	**0.94**	**2.25**	
FNEI Allocation Factor	**0.00490**	**0.00508**	**0.00508**	
CNPI Allocation Factor	**0.00285**	**0.00295**	**0.00295**	
GLPT Allocation Factor	**0.02438**	**0.02528**	**0.02528**	
H1N Allocation Factor	**0.93238**	**0.96669**	**0.96669**	
B2MLP Allocation Factor	**0.03549**	**0.00000**	**0.00000**	
Total of Allocation Factors	1.00000	1.00000	1.00000	

** The sum of 12 monthly charge determinants for the year.

Note 1: FNEI Rates Revenue Requirement and Charge Determinants per Board Decision and Order on EB-2016-0231 dated January 18, 2018.
Note 2: CNPI Rates Revenue Requirement and Charge Determinants per OEB Decision EB-2015-0354 dated January 14, 2016.
Note 3: H1N SSM 2019 Rates Revenue Requirement and Charge Determinants per OEB Decision EB-2018-0218, issued December 6, 2018.

Note 4: H1N Rates Revenue Requirement per OEB Decision EB-2018-0130 dated December 20, 2018.

Note 5: H1N Charge Determinants per OEB Decision EB-2018-0130 dated December 20, 2018.

Note 6: B2M LP 2018 Revenue Requirement per OEB Decision and Order EB-2018-0320 dated December 20, 2018.

Note 7: Calculated data in shaded cells.

PROPOSED ONTARIO TRANSMISSION RATE SCHEDULES

The proposed Uniform Transmission Rate ("UTR") Schedule and the revenue requirement and charge determinants for all transmitters used to establish the proposed UTRs and revenue disbursement allocators are included in the following attachments.

Attachment 1: Proposed 2020 Ontario Uniform Transmission Rate Schedules

Attachment 2: Proposed 2020 Uniform Transmission Rates and Revenue Disbursement Allocators

2020 ONTARIO UNIFORM TRANSMISSION RATE SCHEDULES

EB-2019-xxxx

The rate schedules contained herein shall be effective January 1, 2020

Issued: Month, Year
Ontario Energy Board

TERMS AND CONDITIONS

(A) APPLICABILITY The rate schedules contained herein pertain to the transmission service applicable to: •The provision of Provincial Transmission Service (PTS) to the Transmission Customers who are defined as the entities that withdraw electricity directly from the transmission system in the province of Ontario. •The provision of Export Transmission Service (ETS) to electricity market participants that export electricity to points outside Ontario utilizing the transmission system in the province of Ontario. The Rate Schedule ETS applies to the wholesale market participants who utilize the Export Service in accordance with the Market Rules of the Ontario Electricity Market, referred to hereafter as Market Rules. These rate schedules do not apply to the distribution services provided by any distributors in Ontario, nor to the purchase of energy, hourly uplift, ancillary services or any other charges that may be applicable in electricity markets administered by the Independent Electricity System Operator (IESO) of Ontario.

(B) TRANSMISSION SYSTEM CODE The transmission service provided under these rate schedules is in accordance with the Transmission System Code (Code) issued by the Ontario Energy Board (OEB). The Code sets out the requirements, standards, terms and conditions of the transmitter's obligation to offer to connect to, and maintain the operation of, the transmission system. The Code also sets out the requirements, standards, terms and conditions under which a Transmission Customer may connect to, and remain connected to, the transmission system. The Code stipulates that a transmitter shall connect new customers, and continue to offer transmission services to existing customers, subject to a Connection Agreement between the customer and a transmitter.

(C) TRANSMISSION DELIVERY POINT The Transmission Delivery Point is defined as the transformation station, owned by a transmission company or by the Transmission Customer, which steps down the voltage from above 50 kV to below 50 kV and which connects the customer to the transmission system. The demand registered by two or more meters at any one delivery point shall be aggregated for the purpose of assessing transmission charges at that delivery point if the corresponding distribution feeders from that delivery point, or the plants taking power from that delivery point, are owned by the same entity within the meaning of Ontario's *Business Corporations Act*. The billing demand supplied from the transmission system shall be adjusted for losses, as appropriate, to the Transmission Point of Settlement, which shall be the high voltage side of the transformer that steps down the voltage from above 50 kV to below 50 kV.

(D) TRANSMISSION SERVICE POOLS The transmission facilities owned by the licenced transmission companies are categorized into three functional pools. The transmission lines that are used for the common benefit of all customers are categorized as Network Lines and the corresponding terminating facilities are Network Stations. These facilities make up the Network Pool. The transformation station facilities that step down the voltage from above 50 kV to below 50 kV are categorized as the Transformation Connection Pool. Other electrical facilities (i.e. that are neither Network nor Transformation) are categorized as the Line Connection Pool. All PTS customers incur charges based on the Network Service Rate (PTS-N) of Rate Schedule PTS. The PTS customers that utilize transformation connection assets owned by a licenced transmission company also incur charges based on the Transformation Connection Service Rate (PTS-T). The customer demand supplied from a transmission delivery point will not incur transformation connection service charges if a customer fully owns all transformation connection assets associated with that transmission delivery point. The PTS customers utilize lines owned by a licenced transmission company to connect to Network Station(s) also incur charges based on the Line Connection Service Rate (PTS- L). The customer demand supplied from a transmission delivery point will not incur line connection service charges if a customer fully owns all line connection assets connecting that delivery point to a Network Station. Similarly, the customer demand will not incur line connection service charges for demand at a transmission delivery point located at a Network Station.

(E) MARKET RULES The IESO will provide transmission service utilizing the facilities owned by the licenced transmission companies in Ontario in accordance with the Market Rules. The Market Rules and appropriate Market Manuals define the procedures and processes under which the transmission service is provided in real or operating time (on an hourly basis) as well as service billing and settlement processes for transmission service charges based on rate schedules contained herein.

(F) METERING REQUIREMENTS In accordance with Market Rules and the Transmission System Code, the transmission service charges payable by Transmission Customers shall be collected by the IESO. The IESO will utilize Registered Wholesale Meters and a Metering Registry in order to calculate the monthly transmission service charges payable by the Transmission Customers. Every Transmission Customer shall ensure that each metering installation in respect of which the customer has an obligation to pay transmission service charges arising from the Rate Schedule PTS shall satisfy the Wholesale Metering requirements and associated obligations specified in Chapter 6 of the Market Rules, including the appendices therein, whether or not the subject meter installation is required for settlement purposes in the IESO-administered energy market. A meter installation required for the settlement of charges in the IESO-administered that energy market may be used for the settlement of transmission service charges. The Transmission Customer shall provide to the IESO data required to maintain the information for the Registered Wholesale Meters and the Metering Registry pertaining to the metering installations with respect to which the Transmission Customers have an obligation to pay transmission charges in accordance with Rate Schedule PTS. The Metering Registry for metering installations required for the calculation of transmission charges shall be maintained in accordance with Chapter 6 of the Market Rules. The Transmission Customers, or Transmission Customer Agents if designated by the Transmission Customers, associated with each Transmission Delivery Point will be identified as Metered Market Participants within the IESO's Metering Registry. The metering data recorded in the Metering Registry shall be used as the basis for the calculation of transmission charges on the settlement statement for the Transmission Customers identified as the Metered Market Participants for each Transmission Delivery Point. The Metering Registry for metering installations required for calculation of transmission charges shall also indicate whether or not the demand associated with specific Transmission Delivery Point(s) to which a Transmission Customer is connected attracts Line and/or Transformation Connection Service Charges. This information shall be consistent with the Connection Agreement between the Transmission Customer and the licenced Transmission Company that connects the customer to the IESO-Controlled Grid.

(G) EMBEDDED GENERATION The Transmission Customers shall ensure conformance of Registered Wholesale Meters in accordance with Chapter 6 of Market Rules, including Metering Registry obligations, with respect to metering installations for embedded generation that is located behind the metering installation that measures the net demand taken from the transmission system if (a) the required approvals for such ~~generation~~ generator unit or energy storage facility are obtained after October 30, 1998; and (b) the generator unit nameplate rating is 2 MW or higher for renewable generation and 1 MW or higher for non- renewable generation or if the individual inverter unit capacity is 1 MW or higher for energy storage or solar generators; and (c) the Transmission Delivery Point through which the generator or energy storage facility is connected to the transmission system attracts Line or Transformation Connection Service charges. These terms and conditions also apply to the incremental capacity associated with any refurbishments or expansions approved after October 30, 1998, to a generator or generation facility ~~unit~~ that was connected through an eligible Transmission Delivery Point on or prior to October 30, 1998 and the approved incremental generator nameplate capacity is 2 MW or higher for renewable generation and 1 MW or higher for non-renewable generation or if the individual inverter unit capacity is 1 MW or higher for expansion of energy storage facilities or solar generators. The term renewable generation refers to a facility that generates electricity from the following sources: wind, solar, Biomass, Bio-oil, Bio-gas, landfill gas, or water. Accordingly, the distributors that are Transmission Customers shall ensure that connection agreements between them and the generators, load customers, and embedded distributors connected to their distribution system have provisions requiring the Transmission Customer to satisfy the requirements for Registered Wholesale Meters and Metering Registry for such embedded generation even if the subject embedded generator(s) do not participate in the IESO-administered energy markets.

(H) EMBEDDED CONNECTION POINT In accordance with Chapter 6 of the Market Rules, the IESO may permit a Metered Market Participant, as defined in the Market Rules, to register a metering installation that is located at the embedded connection point for the purpose of recording transactions in the IESO-administered markets. (The Market Rules define an embedded connection

point as a point of connection between load or generation facility and distribution system). In special situations, a metering installation at the embedded connection point that is used to settle energy market charges may also be used to settle transmission service charges, if there is no metering installation at the point of connection of a distribution feeder to the Transmission Delivery Point. In above situations: •The Transmission Customer may utilize the metering installation at the embedded connection point, including all embedded generation and load connected to that point, to satisfy the requirements described in Section (F) above provided that the same metering installation is also used to satisfy the requirement for energy transactions in the IESO- administered market. •The Transmission Customer shall provide the Metering Registry information for the metering installation at the embedded connection point, including all embedded generation and load connected to that point, in accordance with the requirements described in Section (F) above so that the IESO can calculate the monthly transmission service charges payable by the Transmission Customer.

RATE SCHEDULE: (PTS) PROVINCIAL TRANSMISSION RATES

APPLICABILITY:

The Provincial Transmission Service (PTS) is applicable to all Transmission Customers in Ontario who own facilities that are directly connected to the transmission system in Ontario and that withdraw electricity from this system.

	Monthly Rate ($ per kW)
Network Service Rate (PTS-N):	**4.35**
$ Per kW of Network Billing Demand [1,2]	
Line Connection Service Rate (PTS-L):	**0.83**
$ Per kW of Line Connection Billing Demand [1,3]	
Transformation Connection Service Rate (PTS-T):	**2.44**
$ Per kW of Transformation Connection Billing Demand [1,3,4]	

The rates quoted above shall be subject to adjustments with the approval of the Ontario Energy Board.

Notes:

1 The demand (MW) for the purpose of this rate schedule is measured as the energy consumed during the clock hour, on a "Per Transmission Delivery Point" basis. The billing demand supplied from the transmission system shall be adjusted for losses, as appropriate, to the Transmission Point of Settlement, which shall be the high voltage side of the transformer that steps down the voltage from above 50 kV to below 50 kV at the Transmission Delivery Point.

2. The Network Service Billing Demand is defined as the higher of (a) customer coincident peak demand (MW) in the hour of the month when the total hourly demand of all PTS customers is highest for the month, and (b) 85 % of the customer peak demand in any hour during the peak period 7 AM to 7 PM (local time) on weekdays, excluding the holidays as defined by IESO. The peak period hours will be between 0700 hours to 1900 hours Eastern Standard Time during winter (i.e. during standard time) and 0600 hours to 1800 hours Eastern Standard Time during summer (i.e. during daylight savings time), in conformance with the meter time standard used by the IMO settlement systems.

3. The Billing Demand for Line and Transformation Connection Services is defined as the Non-Coincident Peak demand (MW) in any hour of the month. The customer demand in any hour is the sum of (a) the loss-adjusted demand supplied from the transmission system plus (b) the demand that is supplied by an embedded generator unit or energy storage facility for which the required government approvals are obtained after October 30, 1998 and which have installed nameplate capacity of 2MW or more for renewable generation and 1 MW or higher for non-renewable generation or if the individual inverter unit capacity is 1 MW or higher for energy storage or solar generators, ~~on~~ or the demand supplied by the incremental capacity associated with a refurbishment or expansion approved after October 30, 1998, to a generator ~~unit~~ or generation facility that existed on or prior to October 30, 1998. The term renewable generation refers to a facility that generates electricity from the following sources: wind, solar, Biomass, Bio-oil, Bio-gas, landfill gas, or water. The demand supplied by embedded generation will not be adjusted for losses.

4. The Transformation Connection rate includes recovery for OEB approved Low Voltage Switchgear compensation for Toronto Hydro Electric System Limited and Hydro Ottawa Limited.

TERMS AND CONDITIONS OF SERVICE:

The attached Terms and Conditions pertaining to the Transmission Rate Schedules, the relevant provisions of the Transmission System Code, in particular the Connection Agreement as per Appendix 1 of the Transmission System Code, and the Market Rules for the Ontario Electricity Market shall apply, as contemplated therein, to services provided under this Rate Schedule.

RATE SCHEDULE: (ETS) EXPORT TRANSMISSION SERVICE

APPLICABILITY:

The Export Transmission Service is applicable for the use of the transmission system in Ontario to deliver electrical energy to locations external to the Province of Ontario, irrespective of whether this energy is supplied from generating sources within or outside Ontario.

	Hourly Rate
Export Transmission Service Rate (ETS):	$1.85 / MWh

The ETS rate shall be applied to the export transactions in the Interchange Schedule Data as per the Market Rules for Ontario's Electricity Market. The ETS rate shall be subject to adjustments with the approval of the Ontario Energy Board.

TERMS AND CONDITIONS OF SERVICE:

The attached Terms and Conditions pertaining to the Transmission Rate Schedules, the relevant provisions of the Transmission System Code and the Market Rules for the Ontario Electricity Market shall apply, as contemplated therein, to service provided under this Rate Schedule.

2020 Draft Uniform Transmission Rates and Revenue Disbursement Allocators

(Effective for period January 1, 2020 to December 31, 2020)

Transmitter	Revenue Requirement ($)			
	Network	Line Connection	Transformation Connection	Total
FNEI	$4,796,696	$914,312	$2,277,083	$7,988,092
CNPI	$2,790,555	$531,916	$1,324,730	$4,647,201
H1NSSM	$23,886,000	$4,552,980	$11,339,140	$39,778,120
H1N	$977,600,904	$186,343,369	$464,085,802	$1,628,030,076
B2MLP	$32,789,151	$0	$0	$32,789,151
All Transmitters	$1,041,863,307	$192,342,577	$479,026,755	$1,713,232,640

Transmitter	Total Annual Charge Determinants (MW)*			
	Network	Line Connection	Transformation Connection	
FNEI	230.410	248.860	73.040	
CNPI	522.894	549.258	549.258	
H1NSSM	3,498.236	2,734.624	635.252	
H1N	235,252.608	228,852.936	195,027.487	
B2MLP	0.000	0.000	0.000	
All Transmitters	239,504.148	232,385.678	196,285.037	

Transmitter	Uniform Rates and Revenue Allocators			
	Network	Line Connection	Transformation Connection	
Uniform Transmission Rates ($/kW-Month)	**4.35**	**0.83**	**2.44**	
FNEI Allocation Factor	**0.00460**	**0.00475**	**0.00475**	
CNPI Allocation Factor	**0.00268**	**0.00277**	**0.00277**	
H1NSSM Allocation Factor	**0.02293**	**0.02367**	**0.02367**	
H1N Allocation Factor	**0.93832**	**0.96881**	**0.96881**	
B2MLP Allocation Factor	**0.03147**	**0.00000**	**0.00000**	
Total of Allocation Factors	1.00000	1.00000	1.00000	

* The sum of 12 monthly charge determinants for the year

Note 1: FNEI Rates Revenue Requirement and Charge Determinants per Board Decision and Order on EB-2016-0231 dated January 18, 2018.
Note 2: CNPI Rates Revenue Requirement and Charge Determinants per OEB Decision EB-2014-0204 dated June 25, 2015 with approved 2016 order under EB-2015-0354, issued January 14, 2016 and confirmed on November 9, 2017 (EB-2016-0160).
Note 3: H1N SSM 2019 Rates Revenue Requirement and Charge Determinants per OEB Decision EB-2018-0218, issued December 6, 2018.
Note 4: H1N Rates Revenue Requirement per Exhibit I1, Tab 1, Schedule 3.
Note 5: H1N Charge Determinants per Exhibit I2, Tab 2, Schedule 1.
Note 6: B2M LP 2018 Revenue Requirement per OEB Decision and Order EB-2018-0320 dated December 20, 2018.
Note 7: Calculated data in shaded cells.

CURRENT WHOLESALE METER SERVICE AND EXIT FEE SCHEDULE

The current Wholesale Meter Service and Exit Fee Schedule was approved under Decision on EB-2016-0160 dated September 28, 2017 with approved 2018 Rate Order under EB-2017-0359 dated February 1, 2018. This approved schedule is included in the following attachment.

Attachment 1: Wholesale Meter Service and Exit Fee Schedule

Schedule C

Hydro One Networks Inc.

Transmission

EB-2016-0160

Decision

2018 Wholesale Meter Service and Exit Fee Schedule

[December 4, 2017 Hydro One DRO Exhibit 5.0]

December 20, 2017

HYDRO ONE NETWORKS INC.
WHOLESALE METER SERVICE
AND EXIT FEE SCHEDULE

HYDRO ONE NETWORKS - WHOLESALE METER SERVICE

APPLICABILITY:

This fee schedule is applicable to the *metered market participants*[*] that are transmission customers of Hydro One Networks ("Networks") and to *metered market participants* that are customers of a Local Distribution Company ("LDC") that is connected to the transmission system owned by Networks.

* The terms and acronyms that are italicized in this schedule have the meanings ascribed thereto in Chapter 11 of the Market Rules for the Ontario Electricity Market.

a) Fee for Wholesale Meter Service

The *metered market participant* in respect of a *load facility* (including customers of an LDC) shall be required to pay an annual fee of $7,900 for each *meter point* that is under the transitional arrangement for a *metering installation* in accordance with Section 3.2 of Chapter 6 of the Market Rules for the Ontario Electricity Market.

This Wholesale Meter Service annual fee shall remain in place until all the remaining meter points exit the transitional arrangement.

b) Fee for Exit from Transitional Arrangement

The *metered market participant* in respect of a *load facility* (including customers of an LDC) or a *generation facility* may exit from the transitional arrangement for a *metering installation* upon payment of a one-time exit fee of $ 5,200 per *meter point*.