TRANSLINK

Regional Permit Policies and Procedures Manual

For the Transportation of Oversize and Overweight Vehicles and Loads in Metro Vancouver

VERSION 2019-01 | MARCH 9, 2023

PREPARED FOR:

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Regional Permit Policies and Procedures Manual (RP3M) Revision Process		
Purpose of the Manual	The purpose of this Manual is to provide guidance in the permit application, review, and approval process for the operation of oversize-overweight (OS-OW) vehicles on municipal roads in Metro Vancouver.	
Revisions to the Manual	1	**Revision frequency:** Unless circumstances warrant more frequent revisions, revisions to the RP3M will be made annually.
	2	**Submission of revision proposals:** Revision proposals must be submitted in writing to the TransLink Infrastructure Programs (IP) Department, Roads and Goods Movement Initiatives. The written submission must state whether the proposed revision consists of an update, clarification, or deletion of existing policies and procedures, or an addition of new policies and procedures. A clear explanation of why the revision is required must also be provided.
	3	**Revision process:** Proposed revisions received by July 31 will be referred to TransLink's Regional Transportation Advisory Committee (RTAC) by the end of each calendar year for endorsement. Before any proposed revisions are referred to RTAC, they must be reviewed by a Working Group or Subcommittee of RTAC. The Working Group or Subcommittee must determine whether to recommend that RTAC endorse a given proposal, receive a given proposal for information pending further research and analysis, or reject a given proposal. Proposed revisions to the RP3M that RTAC endorses will be incorporated in an updated version of the RP3M. On a best-effort basis, the updated version of the manual will be published by January 31 in each calendar year. Alternatively, RTAC-endorsed revisions will be communicated in a supplement to the RP3M, which will be circulated to the stakeholders listed in #5 by January 31 in each calendar year pending the publication of a revised version of the full manual at a later date. Revisions to Appendix A (Routing) and Appendix B (Municipal Exceptions) that are proposed by a local road authority must be referred to RTAC and/or a Working Group or Subcommittee of RTAC for information and discussion, but do not have to be referred to RTAC for endorsement. For greater clarity and certainty, revisions to OS-OW vehicle routes and municipal exceptions to the regional policy framework are at the discretion of each local road authority and do not require RTAC endorsement to be incorporated in the RP3M.
	4	**Revision tracking:** Revisions to the RP3M will be reflected in a new document version number – 2019-XX, denoting the revision numbered sequentially from the 2019 base document, starting with 2019-00, which is the version number of the RP3M as endorsed by RTAC and referred to local road authorities for implementation on November 21, 2019. A major update of the RP3M may result in a new base document designation [20XX-00].
	5	**Distribution:** The revised RP3M (or a supplement to the manual) will be posted on TransLink's websites. A notification of the revised document will be sent to stakeholders via email with a link to view and download the manual (or the supplement to the manual). Notification will be sent to the following stakeholders: • TransLink IP Department (Director); • Until December 2023, all members of the Commercial Vehicle Working Group (CVWG), and after December 2023, an appropriate RTAC Subcommittee or Working Group for circulation to applicable municipal staff; • Commercial Vehicle Safety and Enforcement (CVSE), including the Commercial Transport Manager, CVSE Victoria and Regional Manager, CVSE South Coast Region (SCR); • Industry groups, including the Manufactured Housing Association of BC (MHABC), BC Structural Movers Association (BCSMA), and BC Trucking Association (BCTA).

RP3M Version History

Version Number	Date	Brief description of revision(s)
2019-00	November 2019	–
2019-01	March 2023	• Revisions to Section 3.1 - Term Permit Conditions for Non-Reducible Loads • Revisions to Section 3.6 - Long Combination Vehicles (LCVs) • Editorial and formatting changes throughout the document to conform with the TransLink *Brand Book*, January 2019. • Updated references to the *BC Commercial Transport Procedures Manual* (CTPM) and CVSE Compliance Circulars, current as of November 1, 2022. • Updated Appendix B, current as of November 1, 2022

Version 2019-01 was endorsed by RTAC on March 9, 2023 for soft launch by Local Road Authorities. Implementation of this manual in whole or in part is at the discretion of individual Local Road Authorities and may vary across Metro Vancouver. Please seek additional guidance from the applicable Local Road Authority.

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GLOSSARY OF TERMS

Articulated Vehicle – Vehicle with a hinge or pivot connection to allow navigation of sharp turns.

BC Commercial Transport Act (CTA) – Enabling legislation for the BC Commercial Transport Regulations (CTR).

BC Commercial Transport Procedures Manual (CTPM) – A provincial publication with policies, procedures, guidelines, and standards applicable to commercial vehicles, including oversize-overweight (OS-OW) vehicles that travel on roads and highways under provincial jurisdiction in BC.

BC Commercial Transport Regulations (CTR) – Regulations pursuant to the CTA which among other things, establish size and weight limits for commercial vehicles (Division 7) and standards for pilot cars and signs (Division 8).

BC Commercial Vehicle Safety and Enforcement (CVSE) – A branch of the Ministry of Transportation and Infrastructure (MoTI) responsible for commercial and private vehicle safety, vehicle inspection, commercial trucking, and permits, including oversize-overweight (OS-OW) vehicle permits.

Bridge Formula – A mathematical equation that is used to calculate the basic overload weight allowed by permit for various axle groups in a combination. Bridge formula limits the weight-to-length ratio between axle groups in order to minimize potential damage to infrastructure.

Engineer Review – Review of a permit application by a professional engineer or engineers, or their designate(s), acting on behalf of the local road authority.

Front Overhang (aka FPU) – The distances measured from the bumper forward to the front of the vehicle and / or load.

Front Projection (aka FPK / FPT) – The distance measured from the kingpin forward to the front of the vehicle or load (semi-trailers) or the distance from the turn centre of the steering axle forward to the front of the vehicle and / or load.

Gross Vehicle Weight (GVW) – Is derived by adding the gross weight of all individual axles of a vehicle, subject to the following rules:

1. cannot exceed legislated axle weight limits;
2. cannot exceed 100 kg/cm of tire width (110 kg/cm for steer axle tires in logging truck combinations);
3. cannot exceed the gross vehicle weight rating (GVWR), gross axle weight rating (GAWR), or the tire load rating set by the manufacturer.

Interaxle Spacing –The longitudinal distance separating 2-axle units as determined from the centres of each of the axles that is the closest to the other axle unit.

Legislated Weight and Dimension Limits – Vehicle weight and dimension limits in municipal bylaws and the BC Commercial Transport Act and Regulations. Vehicles with weights and dimensions within these limits do not require oversize-overweight vehicle permits.

Licensed GVW –The gross vehicle weight for which a commercial vehicle is licensed. The licensed gross vehicle weight of a commercial vehicle or combination of vehicles is as follows (CTA S. 6(10)):

1. for a tow car, grader, loader, shovel, roller, mixer, crane, a tractor other than a truck tractor or other self-propelled construction machinery, the weight of the vehicle fully equipped;
2. for a passenger commercial vehicle, the combined weight of the vehicle and the weight resulting from the multiplication of the number of seats in the vehicle by 80 kg;
3. for an ambulance or hearse, the unladen weight of the vehicle plus 250 kg;
4. for every other commercial vehicle, the unladen weight of the vehicle plus 1/2 of that weight or gross vehicle weight declared by the applicant for the licence, whichever is greater, but not more than the maximum gross vehicle weight permitted under this Act and the regulations under this or any other Act.

Local Road Authorities – Organizations that have jurisdiction to grant OS-OW permits for roadways in Metro Vancouver, excluding the Provincial and or Federal governments. This includes but is not limited to Indigenous communities and municipalities.

Manned Steering Trailer – A free-standing dolly, supporting one end of a long load that rests on a turntable attached to the dolly, equipped with a compartment for a driver as described in (*CTPM Chapter 5, Section 5.3.12.F*). Manned steering trailers may be used to transport loads over 31 m long but are required for transportation of loads over 36 m long.

“Non-reducible Load” for Oversize Permits – Refers to any load or vehicle exceeding applicable size limits that, if separated into smaller loads or vehicles, would:

1. compromise the intended use or destroy the value of the load or vehicle;
2. require more than eight (8) hours to dismantle using appropriate equipment; or
3. require efforts beyond ‘reasonable measures’ to minimize load dimensions, where ‘reasonable’ measures include:
    - the use of lowbed trailers to minimize or eliminate excess height; and
    - orientation of the load in a manner which minimizes or eliminates the extent to which the load is over-dimensional.

A non-reducible, over-dimensional load may consist of multiple objects, provided a second over-dimensional condition is not created (i.e., several objects which are overwidth can be transported on the same vehicle provided an overlength situation is not also created).

"Non-reducible Load" for Overweight Permits – Refers to any load or vehicle exceeding applicable weight limits that, if separated into smaller loads or vehicles, would:

1. compromise the intended use or destroy the value of the load or vehicle;
2. require more than eight (8) hours to dismantle using appropriate equipment;
3. result in the vehicle being greatly underweight if one component were removed, where the load consists of only two large components, and the total weight being permitted does not exceed 3,500 kg.

Up to two unattached additional pieces which belong to a component or machine (e.g., buckets, blades, C-frames, rippers, etc.) may be transported on the same vehicle and the combined load will still be considered non-reducible, provided that: the gross combined weight of the load and vehicle does not exceed the preapproved weight rating (64,000 kg) on any portion of its approved route.

Overall Height (OAH) – Measured from the ground to the top of the vehicle and / or load. If a vehicle is equipped with a tarp system with roll-up tarp backstops consisting of short, non-retractable metal straps which extend upwards to secure the roll-up tarp, the overall height of the vehicle, including the backstops, must not exceed 4.3 m, and the overall height of the load must not exceed 4.15 m (CTR 7.05).

Overall Length (OAL) – Measured from the front of the vehicle and / or load to the end of the vehicle and / or load, excluding the following equipment (CTR 7.08):

1. an air deflector, heater or refrigerator unit attached to the front of the vehicle;
2. the draw bar of a full trailer if the draw bar articulates in the horizontal plane relative to the main load-carrying structural component of the trailer;
3. auxiliary equipment or devices that are not designed or used to carry cargo and do not extend more than 30 cm beyond the front or ten (10) cm beyond the rear of the vehicle, including, but not limited to, air connectors, electrical connectors, hydraulic connectors, rollers, pickup plates, bumpers, ladders, glad hands, load securement devices or dangerous goods placards;
4. a platform mounted on the front upper portion of a trailer to a maximum horizontal length of 1 m, if the platform is used exclusively to assist in the installation or securing or both of load securement devices;
5. the following portions of an aerodynamic device that is not designed or used to carry cargo, is installed at the rear of a truck, trailer or semi-trailer and is capable of being folded to within 30.5 cm of the rear of the vehicle:
    - any portion of the device more than 1.9 m above the ground that does not protrude more than 1.52 m beyond the rear of the vehicle;
    - any portion of the device within 1.9 m of the ground that does not protrude beyond a transverse plane that:
        - starts from the rear bottom edge of the rear impact guard of the vehicle or, if there is no rear impact guard, the lowest point at the rear of the vehicle, and
        - intersects a point that is 1.74 m above the ground and 1.21 m behind the rear of the vehicle.

Overall Width (OAW) – Measured from the widest point on the left side of the vehicle and / or load to the widest point on the right side of the vehicle and / or load, excluding the following equipment (CTR 7.06);

1. mirrors fitted for the purpose of conforming to the requirements of the Motor Vehicle Act Regulations, which do not extend more than 30 cm on each side beyond the total width of vehicle and load;
2. auxiliary equipment or devices that are not designed or used to carry cargo and do not extend more than 10 cm on each side beyond the total width of vehicle and load otherwise permitted by this section, including, but not limited to, anti-splash and spray devices, load securement devices, ladders, glad hands, air connectors, electrical connectors, hydraulic connectors, clearance lamps and dangerous goods placards;
3. 445 mm-wide tires, fitted to the steering axles of a truck or truck tractor manufactured before January 1, 2005, that extend up to a maximum of 10 cm on either side of the vehicle beyond the maximum vehicle width of 2.6 m.

Overload Analysis – The evaluation of bridges and structures for the purpose of issuing overweight vehicle permits consistent with the policies, procedures, and methodology in **Appendix I**.

Oversize (OS) – A vehicle that exceeds one or more legislated dimension limits.

Overweight (OW) – A vehicle that exceeds legislated weight limits, including weight limits on individual axles, axle groups, and the gross vehicle weight (GVW).

Permanently Mounted Equipment (PME) – (CTR 1.01):

1. heavy duty crane mounted on a truck tractor or truck,
2. hydraulic or main-engine winch, power-driven off the engine,
3. chassis-mounted rotating ready-mix concrete drum,
4. dump box with tilt cylinders or a multi-stage tilt cylinder mounted behind the cab,
5. liquid tank if 100% of a liquid tanker straight truck's payload and capacity consists of a liquid load, or
6. liquid tank associated with hydro-vac equipment if it is designed and used to excavate trenches and holes hydraulically and vacuum the loosened material into the liquid tank but does not include conventional vacuum truck equipment.

Pre-Screened Route (PSR) – Refers to routes that have been assessed for use by OS-OW vehicles (inclusive of the load) within defined dimension and / or weight parameters. While certain routes may have been pre-screened as an aid in the permit application process, this does not remove the responsibility and liability from carriers and drivers to verify that a vehicle and / or load can safely travel on a given route. It is ultimately the responsibility of the carrier and driver to ensure the move can be completed safely and without damage to public property. Under no circumstances will Metro Vancouver local road authorities be liable to any person, business, or entity for any direct, indirect, consequential, or other damage based on the routing information provided in this manual. Travel off PSRs is subject to the review and notification requirements indicated in the tables in **Section 3.4** of this Manual. Whenever feasible and practical, travel between a PSR and the origin or destination off the PSR will be accommodated using the most direct route.

Rear Overhang (RPU) – The distance measured from the rear bumper to the end of the vehicle and / or load.

Rear Projection (RPA / RPT) – The distance measured from the turn centre of the trailer or vehicle to the end of the vehicle and / or load (i.e., from the centre of the last axle group of a straight truck or in vehicle combinations, the trailer or semi-trailer).

Remotely Steered Trailer – A steering trailer being remotely steered requires an independent operator who is not in care and control of any other vehicle, including a pilot car that is required by the permit for the load.

Self-Steering Trailer – A trailer, semi-trailer or free-standing dolly that is equipped with axles that can be steered mechanically and / or automatically in proportion to the external articulation between the long load being towed and the chassis of the dolly. Self-steering trailers may be used to transport overlength loads up to 36 m load length. Except as permitted by regulation, these trailers are only to be operated when transporting oversized loads authorized by permit. Semi-trailer axles must be made non-steering when operating within regulation dimensional limits.

Term Permit Network (TPN) – A subset of the Truck Route Network (TRN) where Term Permit Vehicles (TPV) are permitted to travel under the conditions described in **Section 3.1**. As described in **Section 3.1**, there are two tiers of TPN (TPN-1 and TPN-2) and associated TPV. While these routes have undergone a technical review to aid in the development of the TPN, this does not remove the responsibility and liability from carriers and drivers to verify that a vehicle and / or load can safely travel on a given route. It is ultimately the responsibility of the carrier and driver to ensure the move can be completed safely and without damage to public property and that the vehicle abides by the operating conditions outlined in **Section 3.1** at all times. Under no circumstances will Metro Vancouver local road authorities or the South Coast British Columbia Transportation Authority be liable to any person, business, or entity for any direct, indirect, consequential, or other damage based on the routing information provided in this manual. The routing information provided herein only applies when traveling on municipal roads. The carrier and/or driver must contact the Provincial Permit Centre for routing and authorizations, including intersections of provincial and municipal roads that are under provincial jurisdiction.

Term Permit Vehicle (TPV) – A vehicle and /or load that falls within the dimensions outlined in **Section 3.1** or that has a configuration specified in **Appendix G**. TPVs are subdivided into two tiers, each of which has a specified TPN.

T-Form – The conditions of transport imposed for loads and / or vehicles. Conditions can be, but are not limited to, pilot car requirements, light and flag requirements, and operating hours.

Truck Route Network (TRN) – Routes designated for truck travel in municipal bylaws. Unless otherwise noted in a municipal bylaw, designated truck routes must be used by all vehicles and vehicle combinations with a Licensed Gross Vehicle Weight (LGVW) greater than 11,800 kg in Metro Vancouver. Travel on roads that are not part of the TRN is generally only allowed using the most direct route between the TRN and the origin or destination off the TRN to complete a local pick-up or delivery.

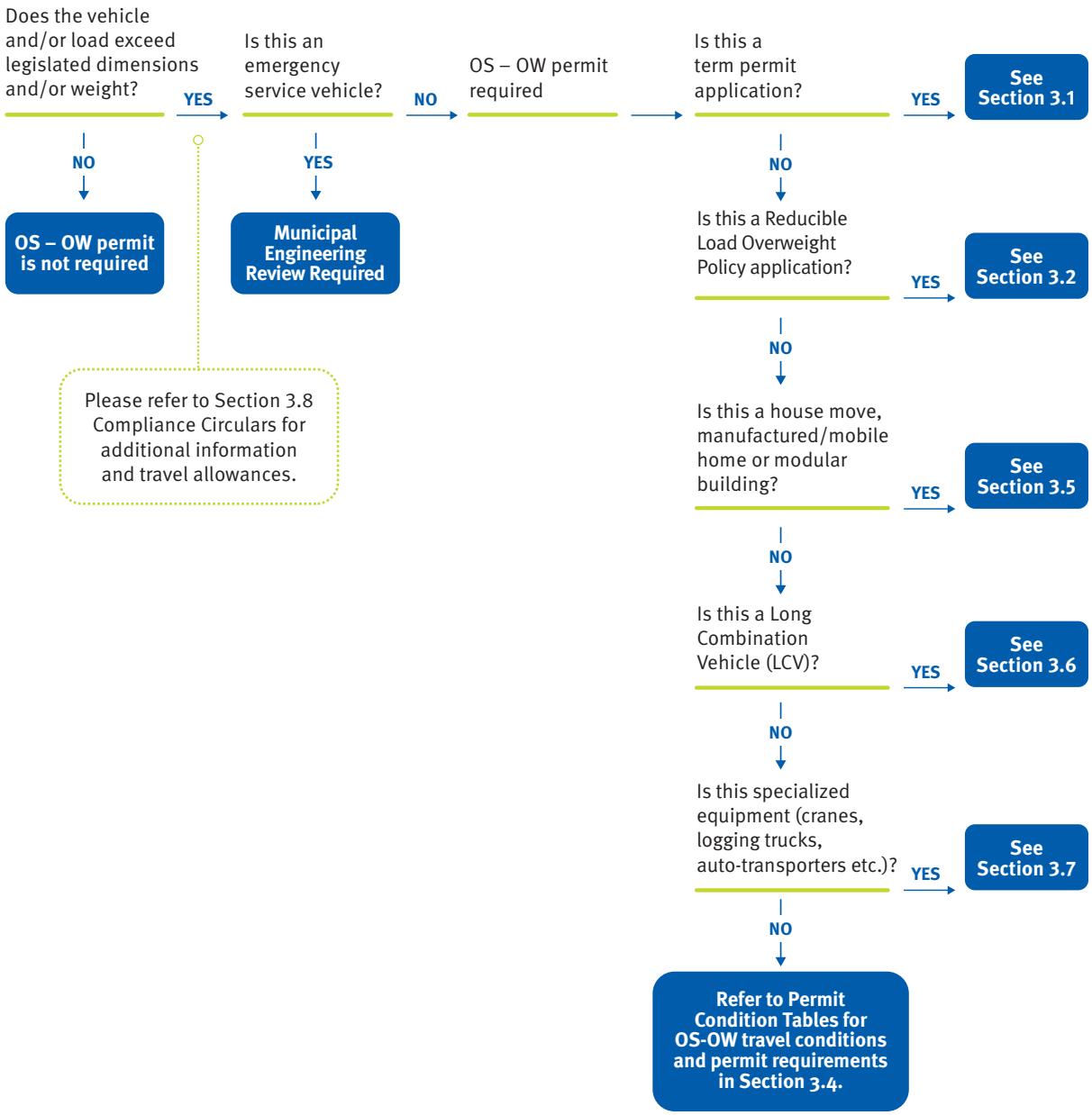
Wheeler – A truck-tractor and semi-trailer combination, or a truck and trailer combination, which includes one or more standard or wide wheeler lines, as defined in *CTPM* Chapter 5, Section 5.3.16.

Wheeler Line – A single-axle line consisting of eight (8) or more tires.

DOES THE FRAMEWORK APPLY?

The requirements and conditions set out in this Manual apply to you if you intend to operate a vehicle (with or without a load) in Metro Vancouver that exceeds legislated weight and dimension limits. Depending on the type of vehicle / load, different sections of this Manual may apply. **Figure 1** provides guidance on which section(s) are applicable for your vehicle / load, and how to determine permit requirements and conditions for travel.

Figure 1: OS-OW Permit Requirement Flowchart



1.

REGIONAL PERMIT POLICIES AND PROCEDURES MANUAL

1.1 CONTEXT

Goods movement is an essential part of life in every urban environment. For some types of goods, it is not possible or practical to dismantle them for transport, leading to loads that exceed legislated (legal) weight and dimension limits. Transporting these oversize (OS) and / or overweight (OW) loads requires permits from local road authorities and / or the Province.

The *Regional Permit Policies and Procedures Manual* (RP3M) provides a framework for permitting the transport of OS-OW vehicles and loads on municipal roads in Metro Vancouver, excluding provincial highways. It harmonizes municipal OS-OW permit requirements across Metro Vancouver and generally aligns with provincial policies. The objective of harmonizing requirements across the region is to improve consistency and predictability in the permitting process and make it easier for carriers to comply with the requirement to obtain municipal permits.

Permit conditions are set according to four (4) primary vehicle and load parameters – the overall width (OAW), overall length (OAL), and overall height (OAH) of the vehicle and load, and the gross vehicle weight (GVW) calculated based on the gross weight on individual axles and axle groups. Conditions are also imposed for front and rear overhangs or projections that exceed legislated limits.

Generally, permit conditions cover routing, travel times, requirements during transport (including pilot cars), and other requirements such as minimum insurance amounts, and are summarized in four (4) Permit Condition Tables in **Section 3.4**. In addition to the requirements in the Permit Condition Tables, certain vehicles and loads are subject to additional requirements or receive certain allowances. This includes loads that qualify for permits under the *Reducible Load Overweight Policy* (**Section 3.2**), *House Moves, Manufactured Homes, Modular Buildings, and Mobile Homes* (**Section 3.5**), *Long Combination Vehicles (LCVs)* (**Section 3.6**), and *Specialized Equipment* (**Section 3.7**).

Term permits allow the transport of OS-OW loads up to specific weights and dimensions and are valid for up to 12 months (see **Section 3.1**). Applications for term permits can be processed relatively quickly. Applications for larger and heavier OS-OW loads may require more extensive review before a permit can be issued, including bridge evaluation for overload permits and review of clearances on proposed routes. Carriers are required to submit applications for municipal OS-OW permits in accordance with the guidelines provided in this manual.

1.2 OVERVIEW OF APPENDICES

The manual includes several appendices, which should be consulted to get a full picture of the permit policies and procedures that apply to the transportation of OS-OW vehicles and/or loads in Metro Vancouver. **Appendix A** consists of maps that provide routing information for OS-OW vehicles.

1. **The Truck Route Network (TRN)** is the road network all heavy commercial vehicles with a licensed gross vehicle weight greater than 11,800 kg are required to use for through-travel.
2. **The Term Permit Networks (TPNs)** are subsets of the Truck Route Network (TRN) where Term Permit Vehicles (TPVs) are permitted to travel under the conditions described in **Section 3.1**.
3. **Pre-Screened Routes (PSRs)** are routes from the BC Commercial Transport Procedures Manual (CTPM) and Project Cargo Corridors, and mostly include provincial highways and some municipal road segments.

Appendix B lists municipal exceptions to the harmonized policies and procedures in this manual.

Appendix C provides a sample application form for municipal OS-OW permits. Application forms should be completed and sent to each local road authority through which the OS-OW vehicle and load will travel.

This manual and the sample permit application form apply ONLY to roads under municipal jurisdiction throughout Metro Vancouver. For travel on provincial highways, carriers must apply for permits from the Ministry of Transportation and Infrastructure (MoTI). Efforts have been made to align municipal requirements with provincial requirements as closely as possible while recognizing that the network of municipal roads is more constrained than the provincial highway network.

Appendix D includes a list of provincial permit condition forms (also referred to as T-Forms) for convenience and ease of reference.

Applicable provincial policies, particularly the Commercial Transport Procedures Manual (*CTPM*), as amended from time to time, are incorporated in this manual and reproduced herein for convenience and ease of reference.

Appendix E summarizes OS-OW vehicle permit fees for individual local road authorities.

Appendix F includes *Compliance Circulars* that provide allowances or exceptions granted by the Province under Section 7.02 (1) of the *BC Commercial Transport Regulations*. Unless otherwise noted, these allowances, as amended from time to time, are incorporated in this manual and appended herein for convenience and ease of reference.

Appendix G illustrates vehicle combinations and dimensions associated with the TPNs.

Appendix H outlines the application requirements to request a term permit for a vehicle not currently addressed by **Section 3.1** or **Appendix G**.

Appendix I provides the BC MoTI policies, procedures and methodology for the evaluation of structures for overweight permits, as well as the Bridge Formula for the evaluation of vehicle configurations.

Permits issued by a local road authority, including permits to travel on TPNs and PSRs, do not remove liability from carriers. Carriers are responsible for ensuring the move can be completed safely and without damage to public property. Under no circumstances will Metro Vancouver local road authorities or TransLink be liable to any person, business, or entity for any direct, indirect, consequential or other damage based on the information provided in this manual.

Local road authorities retain the right to waive, alter or impose additional conditions not listed in this manual on a case-by-case basis. Sections and tables where one or more local road authorities have different conditions are identified by this symbol (i). Please refer to **Appendix B** for more details about municipal exceptions to the policies and procedures in this manual.

2.

APPLYING THE FRAMEWORK

2.1 LEGISLATED WEIGHT & DIMENSIONS LIMITS

An oversize and / or overweight permit is required for vehicles and loads that exceed the weight and dimension limits prescribed in municipal bylaws (i.e., “legislated” or “legal” limits). Municipal bylaws either closely mirror the provincial limits in the *BC Commercial Transport Regulations* (CTR) or adopt them by reference. Commonly used terminology and vehicle types are illustrated in **Figures 2 and 3**. Legislated weight and dimension limits, for which an OS-OW permit is not required, are summarized in **Tables 1 and 2**.

Figure 2: Common Terminology

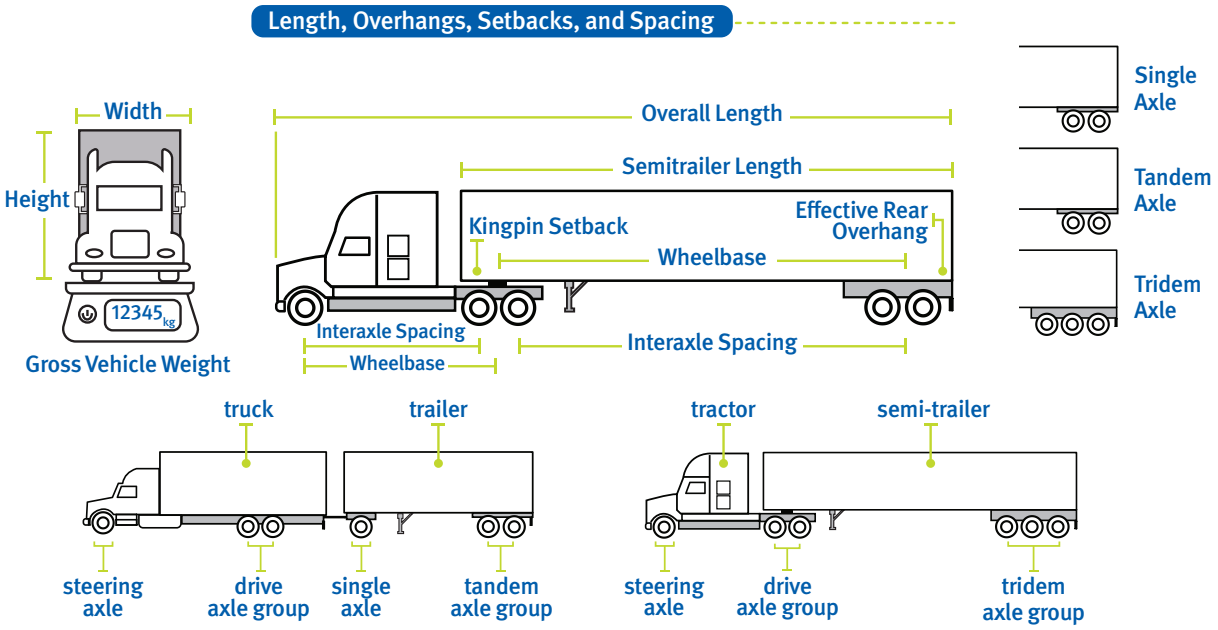
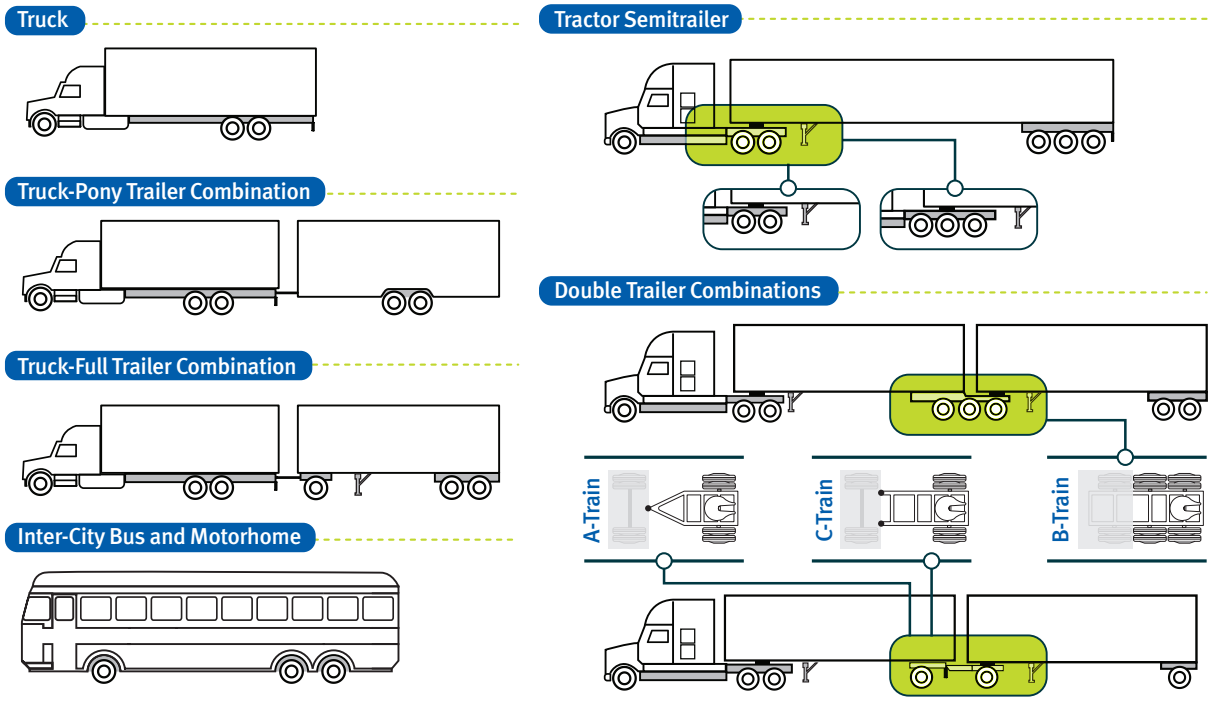


Figure 3: Common Terminology



NOTE: Different axle configurations are possible for each combination, but are not shown

Table 1: Legislated Dimension Limits for Common Vehicle Types (No Permit Required)

Parameter	Legislated Limit (less than or equal to)		
Overall Height (OAH)	**4.15 m** (4.30 m if the vehicle is equipped with a tarp system.)		
Overall Width (OAW)	**2.6 m** (Excludes mirrors and other auxiliary equipment.)		
Overall Length (OAL)	**Single Unit (non-articulated)**	• Truck (up to 5 axles; axle groups cannot exceed 3 axles) • Truck Tractor (up to 5 axles; axle groups cannot exceed 3 axles) • Bus, Motor Home, or Powered Recreation Vehicle (2 axles)	**12.5 m**
		• Bus, Motor Home, or Recreation Vehicle (3 axles)	**14.0 m**
	Vehicle Combinations (articulated)	• Articulated Bus	**20.0 m**
		• Tandem Drive Tractor Semi-Trailer (up to 7 axles) • Tandem Drive Truck and Pony Trailer (up to 8 axles) • Tandem Drive Truck and Full Trailer (up to 9 axles)	**23.0 m**
		• Tridem Drive Tractor Semi-Trailer (up to 8 axles)	**23.5 m**
		• Tridem Drive Truck and Full Trailer (up to 10 axles)	**25.0 m**
		• A and C-Train Trailer (up to 10 axles)	**26.0 m**
		• B-Train Trailer (up to 11 axles)	**27.5 m**
Front Projection	Front projection is measured from the bumper forward to the front of the vehicle and/or load. Vehicles with Permanently Mounted Equipment (PME) are permitted 1.0 m of front projection		
Rear Overhang	Rear overhang is the longitudinal distance from the turn centre of a full trailer, pony trailer, semi-trailer, truck or bus to the rearmost point of the vehicle including the load, where the turn centre is defined as the geometric centre of the axle group on a semi-trailer or pony trailer or the rear axle group on a truck, truck tractor, full trailer or bus. • Truck, bus, full trailer, pony trailer: 4.0 m • Semi-trailer: 35% of the trailer wheelbase, measured from the kingpin to trailer turn centre.		

Notes:

The information in this table is reproduced from the CTR for convenience and ease of reference. Refer to CTR Division 7, including Appendix A to K for all vehicle types and all legislated internal and external vehicle dimension limits (inclusive of the load) below which a permit is not required. This table is not an exhaustive summary of all legislated vehicle dimension limits. It provides a summary of external dimension parameters that, if exceeded, trigger the requirement to obtain a municipal and / or provincial permit. If there are inconsistencies between the information contained in this table and the CTR, the CTR supersedes the information in this table.

Table 2: Legislated Weight Limits for Common Vehicle Types (No Permit Required)

Parameter		Legislated Limit (less than or equal to)	
Gross Vehicle Weight (GVW)	Single Unit (non-articulated)	**Truck** • 2 Axles (single steer; single drive) • 3 Axles (single steer, tandem drive) • 4 Axles (single steer, tridem drive)	 18,200 kg 26,100 kg 33,100 kg
		Bus, Motor Home, or Recreation Vehicle • 2 Axles (single steer, single drive) • 3 Axles (single steer, single drive + tag axle)	 16,350 kg 24,250 kg
	Vehicle Combinations (articulated)	**Tractor Semi-Trailer** • 3 Axles (single steer, single drive, single trailer axle) • 5 Axles (single steer, tandem drive, tandem trailer axle) • 6 Axles (single steer, tandem drive, tridem trailer axle)	 24,200 kg 40,000 kg 47,000 kg
		Truck and Pony Trailer • 5 Axles (single steer, tandem drive, tandem trailer axle) • 6 Axles (single steer, tandem drive, tridem trailer axle) • 7 Axles (single steer, tridem drive, tridem trailer axle)	 43,100 kg 47,100 kg 54,100 kg
		Truck and Full Trailer • 7 Axles (single steer, tandem drive, tandem + tandem trailer axles) • 8 Axles (single steer, tridem drive, tandem + tandem trailer axles	 60,100 kg 63,500 kg
		Trailer Combinations • A-Train (up to 10 axles) • B-Train (up to 11 axles) • C-Train (up to 10 axles)	 53,500 kg 63,500 kg 60,100 kg
Axle or Axle Group Weight	**Steering Axle*** Tandem Drive Tractor or Truck	• Tractor • Tractor with PME • Truck with or without PME	6,000 kg 9,100 kg 9,100 kg
	Steering Axle* Tridem Drive Tractor or Truck	• Tractor or truck • Tractor with PME or a truck *Note: Steering axle weight must always be min 27% of tridem drive axle group weight.*	7,300 kg 9,100 kg
	Other Axles, including drive, trailer, jeep, and booster axles	• Single Axle	9,100 kg
		• Tandem Axle	17,000 kg
		• Tridem Axle	24,000 kg

Notes:

** Applicable only to single steering axles. Refer to the CTR for information applicable to tandem steering axles.*

The information in this table is reproduced from the CTR for convenience and ease of reference. See CTR Division 7, including Appendix A to K for all vehicle types and all legislated weight limits (inclusive of the load) below which a permit is not required. This table is not an exhaustive summary of all legislated weight limits. It provides a summary of gross axle weight and gross vehicle weight limits that, if exceeded, trigger the requirement to obtain a municipal and / or provincial permit. If there are inconsistencies between the information contained in this table and the CTR, the CTR supersedes the information in this table.

Notes (continued):

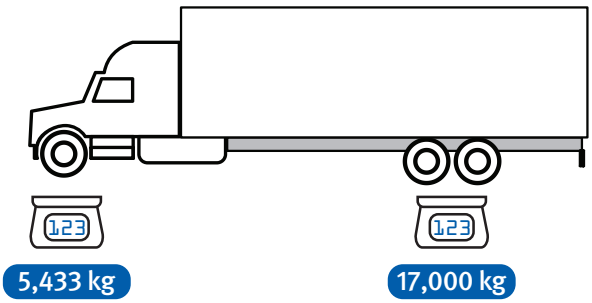
1. *Gross Vehicle Weight (GVW). The weights in the table only apply if the manufacturer's weight ratings (GVWR, GAWR, tire load rating) are sufficiently high and tires are of a sufficient width to satisfy the tire load limit rule (100 kg/cm of tire width). For greater clarity, in order for a vehicle or vehicle combination to qualify for the weights in the table, the manufacturer's weight ratings must be equal to or greater than the weights in the table and the tires must be wide enough to satisfy the tire load limit rule. By way of example, the maximum axle weights and GVW for the hypothetical truck shown in Figure 4 would be 5,443 kg on the steer axle, 17,000 kg on the tandem drive axle, and 22,443 kg GVW, derived as follows:*

   - *The steer axle weight cannot exceed the legislated maximum weight for a single steer axle (9,100 kg), or the weight based on the tire load limit rule (100 kg/cm of tire width), which in this example works out to 5,588 kg (2,794 kg per tire). Each steer tire is rated for 2,800 kg when inflated to 105 pounds per square inch (PSI), meaning that that the steer axle can support up to 5,600 kg based on the tire load rating. The steer axle has a gross axle weight rating (GAWR) of 5,443 kg. Thus, in this example, the GAWR (5,443 kg) is the critical value (lowest value).*
   - *The tandem drive axle weight cannot exceed the legislated weight for a tandem axle (17,000 kg), or the weight based on the tire load limit rule (100 kg/cm of tire width), which works out to 22,353 kg. Each drive tire is rated for 2,650 kg when inflated to 105 PSI, meaning that that for a tandem axle with 8 tires, the maximum weight is 21,200 kg. The gross axle weight rating (GAWR) is 18,144 kg. Thus, in this case, the legislated weight for the tandem drive axle (17,000 kg) is the critical value (lowest value).*
   - *The maximum GVW is the sum of the critical values (5,443 kg + 17,000 kg = 22,443 kg). Note that this is less than the legislated weight limit for a 3-axle truck from the table. If the truck was equipped with wider steering tires, a more robust steering axle with a higher manufacturer's gross axle weight rating, and also had a higher gross vehicle weight rating, it could qualify for the maximum gross axle weight limits and gross vehicle weight limit (i.e., 26,100 kg).*

   Note: This is a stylized example that assumes other vehicle components, such as the chassis and suspension have an adequate weight rating and are not the critical (i.e., limiting) factors in determining the GVWR assigned by the manufacturer.

2. *Notwithstanding the tire load limit rule, 445 mm tires on the steering axle qualify for 9,100 kg (CTR Appendix B, Note 3).*

Figure 4: Truck Example



Tire Size: 11R22.5

Tire width: 11" or 279.4 mm

Steer tire load rating:

2,800 kg (6,173 lb) @ 105 PSI

Drive tire load rating (dual tire assembly):

2,650 kg (5,842 lb) @105 PSI

Gross Axle Weight Rating (GAWR):

Steer axle: 5,443 kg (12,000 lb)

Drive axle: 18,144 kg (40,000 lb)

Gross Vehicle Weight Rating (GVWR)

23,587 kg (52,000 lb)

All values are hypothetical and provided for illustrative purposes only.

2.2 PERMITTABLE WEIGHT AND DIMENSION LIMITS

As a general rule, there are no firm upper weight and dimension limits for OS-OW permits. However, larger and heavier vehicles, vehicle combinations, and loads will result in more complex permit applications, review processes, and more restrictive permit conditions. There are two categories of OS-OW permits made available by local road authorities in Metro Vancouver:

1. **Term permits** – Term permits allow the transport of OS-OW vehicles and / or loads up to specific weights and dimensions and are valid for up to 12 months. (See **Section 3.1** of this manual).
2. **Single Trip Permits (Basic or Complex)** – Single trip permits allow the transport of OS-OW vehicles and / or loads under specific permit conditions based on the weights and dimensions of the vehicle and / or load. Unless otherwise indicated, single trip OS-OW permits are valid up to 24 hours. (See **Section 3.3** and **Section 3.4** of this manual).

Table 3 provides the dimension limits for a spectrum of permit types, ranging from *Term Permits* to *Complex Single Trip Permits*. Term Permits (or Single Trip Permits up to Term Permit limits) and "Basic" Single Trip Permits generally can be reviewed and processed relatively quickly by local road authorities. The review process for permit applications that exceed these limits is more complex, requires more time, and may involve route dimension review and detailed overload analysis conducted by an engineer at the carrier's or move proponent's expense.

Processing permit applications efficiently is critical for carriers to meet delivery schedules and their customers' expectations. For smaller OS-OW loads in particular, carriers will often receive requests to move a load with minimal advance notice, sometimes within a 24-hour window. A common example is construction equipment or materials that need to be on site the next day. If carriers are unable to obtain a permit on short notice, they will not be able to transport the load and meet their customers' expectations. The outcome is an increase in non-compliance with the requirement to obtain appropriate permits.

This manual does not set service standards for turnaround times for local road authorities to issue permits. Service standards for local road authorities vary based on staff resources and workloads. Local road authorities are encouraged to collect data for the OS-OW permits they issue, including turnaround times. Once enough data has been collected, an analysis can be completed to help establish reasonable and manageable turnaround times for permits.

Table 3: Dimension Parameters by Permit Type

		Dimension Inclusive of Load		
Parameter	**Vehicle Type**	**Term or Single Trip Permit**	**"Basic" Single Trip Permit**	**"Complex" Single Trip Permit**
Overall Height (OAH)	Single Unit (non-articulated) and Vehicle Combinations (articulated)	≤ 4.30 m	4.30 m to 4.57 m	› 4.57 m
Overall Width (OAW)		≤ 3.20 m	3.20 m to 4.40 m	› 4.40 m
Overall Length (OAL)*	Single Unit (non-articulated)	≤ 16.0 m	≤ 16.0 m	≤ 16.0 m
	Vehicle Combinations (articulated)	≤ 27.5 m	≤ 36.0 m	› 36.0 m
Front Projection	Term Permit or Single Trip Permit: • Up to 1.0 m from the bumper forward to the front of the vehicle and / or load; • Up to 3.0 m from over the kingpin forward to the front of the vehicle and / or load.			
Rear Projection	Measured from the turn centre of a full trailer, pony trailer, semi-trailer, truck or bus to the rearmost point of the vehicle or load, where the turn centre is defined as the geometric centre of the axle group on a semi-trailer or pony trailer or the rear axle group on a truck, truck tractor, full trailer or bus. • Term Permit: 6.5 m; • Single Trip Permit: 7.5 m (hiboy semi-trailer without booster), 8.5 m (expando semi-trailer), 9.5 m (lowbed semi-trailer with booster).			
Notes: ** Length dimension parameters apply to loaded vehicles. Unloaded vehicles and specialized equipment are subject to special conditions.*				

Overweight permits are issued for non-reducible loads (Section 2.3 and Section 3.2) and certain specialized vehicles (Sections 3.5 to 3.7). *CTPM Chapter 6.0, Section 6.3.2* provides the maximum axle and axle group weights permitted for overweight vehicle configurations. If a vehicle and / or load exceeds 63,500 kg on municipal roads or 64,000 kg on provincial highways (unless travelling on approved overweight routes), or axle group weights do not meet bridge formula, detailed bridge engineering assessment may be required. Refer to **Appendix I** for additional information about the policies, procedures, and methodology for bridge overload assessments.

CTPM Quick Reference

The following information has been reproduced from the Provincial Commercial Transport Procedures Manual (CTPM) Chapter 6, Section 6.3.2B as amended from time to time, for convenience and ease of reference. Please consult provincial policy to ensure the most up to date requirements.

Weight Parameters for Permits

Steering Axle	
Tandem Drive/Tridem Drive	9,100 kg – truck tractor or a truck provided the manufacturer's axle weight rating and tire size (100 kg/cm of tire width – See Note 1) is not exceeded – **WEIGHT MUST BE LEGAL WHEN EMPTY**
Other Axles – Semi-Trailers	
Single (other than steering axle and includes jeeps and boosters)	11,000 kg
Spread Axle Tandem (S.7.24 CTAR)	18,200 kg for non-reducible loads and fixed equipment only provided either one of the axles does not exceed 11,000 kg
Tandem*	23,000 kg
Tandem Drive with Single Axle Jeep ✓	28,000 kg – 2.4 m to 3.0 m axle spread
	29,000 kg – over 3.0 m to 3.7 m axle spread
Tridem Drive	28,000 kg – 2.4 m to 2.8 m axle spread
Tridem Jeep	28,000 kg – 2.4 m to 3.1 m axle spread
Tridem Trailer	28,000 kg – 2.4 m to 3.7 m axle spread with tandem or tridem booster
	29,000 kg – 2.4 m to 3.7 m with no booster or single booster
Tridem Booster	28,000 kg – 2.4 m to 3.1 m (only allowed with tridem lowbed)
Other Axles – Pony and Full Trailers	
Tandem	21,000 kg
Tridem	21,000 kg (legal)
Axle Group Combinations	
Bridge formula applies	
Gross Vehicle Weight	
64,000 kg – unless travelling on approved overload routes	

Notes:

** Bridge formula does not apply*

✓ If the axle spacing of the 3 axles, tandem drive and single axle jeep, exceed 3.7 m then the Bridge Formula applies

1. *A maximum of 100 kg/cm of tire width is applicable to all tires on all vehicle configurations, except that 445 tires may be used on an appropriate steering axle to achieve 9,100 kg.*
2. *A maximum of 3,850 kg/super single tire and 3,000 kg/tire for all others is applicable to all tires except the steering axle.*
3. *The drive axle group must have a minimum of 20% of the gross vehicle weight.*
4. *The "bridge formula" is applicable to all axle groups and does not terminate at 800 cm.*
5. *Regardless of the weights outlined above, weight restrictions as specified on the CVSE1011, exceptions listed in approved overload routes, or posted weight restrictions at bridges must not be exceeded.*
6. *Pony and full trailers must be legal dimensions, and no jeeps or boosters are allowed with these trailers*

2.2.1 Bridge Formula and Evaluation of Structures

Bridge formula is a mathematical equation that is used to calculate the basic overload weight allowed by permit for various axle groups in a combination. Bridge formula should guide the vehicle configuration (i.e., configuration of axle spacings and loads) to minimize potential impacts to infrastructure. Exceeding bridge formula is possible but may require detailed evaluation of bridges and structures (such as culverts) conducted by an engineering firm at the carrier's or move proponent's expense.

Bridge Formula: 30 x wheelbase (cm) + 18,000 kg = Maximum weight allowed by permit

Please refer to CTPM Chapter 6, Section 6.3.2.B. (iii) for additional information about the Bridge Formula and how to apply it. Relevant excerpts from this chapter of the CTPM are also provided in **Appendix I** for ease of reference and convenience.

Proponents must be able to satisfy bridge formula to travel on pre-approved routes without requiring additional evaluation of bridges and structures. If a carrier requests an overweight permit for routes that are not pre-approved, an evaluation of bridges and structures may be required. Please refer to **Appendix I** for guidance on the policies, procedures, and methodology for the evaluation of bridges and structures on the route for overweight permits. If detailed analysis of bridges and structures is required, it should typically be conducted by an engineering firm at the carrier's or move proponent's expense.

2.2.2 16 and 24 Wheelers and Platform Trailers

Provincial permit policy respecting the use of wheelers and platform trailers is incorporated in this manual as amended from time to time, except as noted below. Relevant parts of the provincial policies and requirements in *CTPM Chapter 5, Section 5.3.16.1 through Section 5.3.16.3* are reproduced herein for convenience and ease of reference.

Wheelers and platform trailers can exceed the weights outlined in *CTPM Chapter 6, Section 6.3.2* (see CTPM Quick Reference on p. 17), subject to referral of the permit application to an engineer for review, evaluation of bridges and structures, and in some cases additional permit conditions.

Permits for wheelers or platform trailers are subject to the CVSE Extraordinary Load Approval Request (*CVSE 1049*, **Appendix D**) and are equivalent to a "complex single trip permit" application in this manual.

- The Permit Condition Tables in **Section 3.4** apply and supersede provincial policies, requirements, and allowances when travelling on roads under municipal jurisdiction.
- Bridge formula applies when operating wheelers or platform trailers at conventional axle groups weights in *CTPM Chapter 6, Section 6.3.2* (CTPM Quick Reference on p. 15). Exceeding bridge formula is possible but may require detailed evaluation of bridges and structures conducted by an engineering firm at the carrier's or move proponent's expense.
- Applications to use standard or wide wheelers or platform trailers at the maximum axle group weights provided in *CTPM Chapter 5, Section 5.3.13.1 to 5.3.16.3* will require detailed evaluation of bridges and structures conducted by an engineering firm at the carrier's or move proponent's expense.

CTPM Quick Reference

The following has been reproduced from the Provincial Commercial Transport Procedures Manual (CTPM), as amended from time to time, for convenience and ease of reference. Please consult provincial policy to ensure the most up to date requirements.

5.3.16.1 Standard Wheelers

A. Vehicle Criteria

The following criteria apply to Standard Wheelers:

i) Axle Track width minimum 3.0 m and maximum 4.2 m;
ii) Interaxle spacing between wheeler axle groups is minimum 4.2 m;
iii) Maximum Tire Loading Limit: A maximum of 100 kg/cm of tire width applicable to all tires; and
iv) Adjacent axle load-equalization in the longitudinal direction in an axle group must not exceed 1,000 kg.

B. Standard Wheeler Axle Group Weights

The maximum axle group weights for Standard Wheelers on pre-approved 85,000 kg wheeler routes (PAW85K Routes) and on other roads and bridges under the jurisdiction of the Ministry (Other Routes) can be found in Table 1 below. All weights shown are subject to Bridge Formula limits, unless approved through the Extraordinary Load Approval Process.

Table 1: Standard Wheeler Axle Group Weights[1]

Standard 16-Wheeler Axle Groups		Standard 24-Wheeler Axle Groups	
PAW85K Routes	Other Routes	PAW85K Routes	Other Routes
31,000 kg	Subject to special approval, Max. 31,000 kg	40,000 kg	Subject to special approval, Max. 40,000 kg

[1] Some bridges on the pre-approved routes have additional restrictions. See the route information in Section 6.3.3 D.

C. Seasonal Load Restrictions for Standard Wheelers, where approved

Regional authorization is required for wheelers used during seasonal restrictions.

i) Standard 16 Wheeler Axle Groups: 100% equivalent weight for roads with seasonal load restrictions is 28,000 kg. An overweight permit is required above 17,000 kg.
ii) Standard 24 Wheeler Axle Groups: 100% equivalent weight for roads with seasonal load restrictions is 34,000 kg. An overweight permit is required above 24,000 kg.

* * *

5.3.16.2 Wide Wheelers

A. Vehicle Criteria

The following criterion applies to Wide Wheelers:

i) Minimum Clear Gap is 0.3 m;
ii) Minimum 4.2 m axle track width;
iii) Minimum interaxle spacing between wheeler groups is 4.2 m;
iv) Maximum Tire Loading Limit: A maximum of 100 kg/cm of tire width applicable to all tires;
v) Adjacent axle load-equalization in the longitudinal direction in an axle group must not exceed 1,000 kg; and
vi) All axles within the wheeler are to be on a common suspension to equalize weight distribution, i.e., load equalization via maintaining the same air or hydraulic pressure between and among the half tracks and axle groups.

B. Wide Wheeler Axle Group Weights

The maximum axle group weights for Wide Wheelers on roads and bridges under the jurisdiction of and or administered by the Ministry can be found in Table 2 below.

Table 2: Maximum Wide Wheeler Axle Group Weights[2]

Clear Gaps	16-Wheeler Tandem Full Suspension	24-Wheeler Tridem Full Suspension
0.3 m to 0.8 m	33,000 kg	40,000 kg
0.81 m to 1.5 m	35,000 kg	44,000 kg
1.51 m to 1.75 m	40,000 kg	46,000 kg
1.76 m to 2.0 m	41,000 kg	48,000 kg
2.01 m to 2.5 m	43,000 kg	50,000 kg
›2.5 m	47,000 kg	52,000 kg

[2] Permit requests will be evaluated on a case-by-case basis as the axle group weights are subject to change if route(s) contain any bridge/culvert crossings.

C. Seasonal Load Restrictions for Wide Wheelers, where approved

Regional authorization is required for wheeler use during seasonal restrictions. The seasonal load restrictions identified below are applicable to all clear gaps in Table 2.

i) Wide 16 Wheeler axle groups: 100% equivalent weight for roads with seasonal load restrictions is 31,000 kg.
ii) Wide 24 Wheeler axle groups: 100% equivalent weight for roads with seasonal load restrictions is 40,000 kg.

* * *

5.3.16.3 Platform Trailers

A. Vehicle Criteria

i) Only a heavy haul combination meeting the platform trailer definition in Sections 5.3.16 A xiii) and xiv) will be allowed in this section;
ii) Track width: Minimum 2.4 m for Single and 3.0 m for Wide Platform Trailers;
iii) Maximum Tire Loading Limit: A maximum of 100 kg/cm of tire width applicable to all tires;
iv) A minimum of five (5) single axle groups (5 lines) are required in a single axle group platform trailer; and
v) Adjacent axle load equalization for the tandem axle group in the longitudinal
vi) direction must not exceed 1,000 kg.

B. Platform Trailer Weight

In general, Table 3 below shows the maximum platform axle line weights approved by the provincial Geotechnical, Materials and Pavement Engineers as a function of single axle group and tandem axle groups.

Table 3: Maximum Platform Trailer Axle Line Weights[4, 5]

	Single ('2 File') Platform Trailer (8 tires per axle line, min. 3.0 m track width)
Maximum per single axle group (min interaxle spacing 1.5 m	14,000 kg
Maximum per tandem axle group (min interaxle spacing 4.2 m)	28,000 kg
Maximum per tandem axle group (min interaxle spacing 7.0 m)	31,000 kg

[4] *For permit uniformity with neighbouring jurisdictions, a minimum tire width of 235 mm is required.*
[5] *Permit requests will be evaluated on a case-by-case basis as weights provided in Table 3 are subject to change if route(s) contain any bridge/culvert crossings*

C. Seasonal Load Restrictions

Regional authorization is required for wheeler use during seasonal restrictions.

The seasonal load restrictions identified below are applicable:

i) Single ('2 file') platform trailer
   a. Single axle – 100% equivalent weight for roads with seasonal load restrictions is 7,000 kg
   b. Tandem axle – 100% equivalent weight for roads with seasonal load restrictions is 14,000 kg

2.3 REDUCIBLE AND NON–REDUCIBLE LOADS

OS-OW permits are generally not issued for reducible loads. A reducible load can be made smaller or lighter to enable transport within legislated weight and dimension limits. Carriers must affirm that they are transporting a non-reducible load to obtain a permit. However, there are three situations in which reducible loads may be eligible for an OS-OW permit:

1. For overweight permits, if the total additional weight being permitted does not exceed 3,500 kg;
2. For oversize permits, a load may consist of multiple objects, provided a second over-dimensional condition is not created (i.e., several objects which are over-width can be transported on the same vehicle provided an overlength situation is not also created);
3. For reducible loads with weights greater than the legislated limit of 63,500 kg and overall lengths up to 27.5 m under the *Reducible Load Overweight Policy* (**Section 3.2**).

2.4 DETERMINING YOUR TRAVEL CONDITIONS

Travel conditions for transporting OS-OW vehicles and / or loads on Metro Vancouver roads (excluding the provincial network) are detailed in four (4) Permit Condition Tables in **Section 3.4**, that relate to vehicle width, length, height, and weight.

Each table addresses a separate vehicle parameter but shares a common set of travel conditions. The tables function as checklists for travel conditions. To identify the applicable travel conditions:

- Identify which vehicle and / or load parameters exceed legislated limits (if any);
- Consult all tables where the load parameter exceeds legislated limits. If, for example, a load is both overwidth and overlength, **Table 8** (Width) **and Table 9** (Length) need to be consulted;
- Note the applicable conditions from each table. Where conditions differ between tables, the most restrictive condition applies. For example, if a load has a width of 3.4 m (one pilot car required) and a length of 32.0 m (two pilot cars required), the load will require two pilot cars for transport.

For house moves, manufactured homes, modular buildings, and mobile homes, or specialized equipment such as LCVs, Cranes, Pumper Trucks etc., additional and / or different conditions apply. Please refer to **Sections 3.5** through **3.7**.

2.5 PERMIT CONDITION DESCRIPTIONS

Individual local road authorities retain the right to waive, alter or impose additional conditions not listed in this manual on a case-by-case basis. Sections of this manual where one or more local road authorities has different conditions are identified by this symbol (i). Please refer to **Appendix B** for more details about municipal exceptions to the policies and procedures of this manual.

Table 4 provides an overview of potential permit conditions for OS-OW transport included in this framework grouped by the type of condition. **Table 5** provides descriptions of each permit condition that may be applicable for OS-OW loads, including links and references to corresponding provincial documents.

Table 4: Potential OS-OW Vehicle Permit Conditions in Metro Vancouver

Permit Condition Type	Travel Condition / Requirement
Routing	• Adhere to Appropriate Route Network • Proposed Routing Required from Carrier • Engineer Review Required • Route Clearance Review Required • Height Pole Required • Notify / Consult Utilities • Bridge Overload Assessment Required • Transportation Management Plan Required
Travel Time Windows	• Overnight Only Travel • Peak Period Travel Restrictions, typically no travel between 07:00 – 09:00; 15:00 – 18:00
Requirements During Transport	• Flags / Lamps Required • Pilot Cars Required • Traffic Control Required • Signage Required
Additional Requirements	• Minimum insurance amount required • Extraordinary Load Approval (provincial)

Table 5: Permit Condition Descriptions

Condition / Requirement	Description	Further Information
Routing Requirements		
Routing	While it may be necessary for a load to travel outside of the preferred route network to connect to an origin or destination, this condition indicates where loads are preferred to travel for the majority of their trip. The *Permit Condition* Tables indicate where additional routing requirements *may* apply for transport *off* of the preferred route network, depending on the weights and dimensions of the vehicle and / or load. Additional routing requirements may include route surveys, transportation management plans, or engineering review. The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver local road authorities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.	**Appendix A** includes maps defining the preferred route network for vehicles and loads within legislated limits and OS-OW vehicles and loads of various dimension and weight envelopes (as defined in the Permit Condition Tables).
Proposed Routing from Carrier	All single trip permit applications must include proposed routing. This condition requires the carrier to indicate the planned route from origin to destination. While a bill of lading may not be available in all cases (e.g., the vehicle configuration is unladen), when one is available, the origin and destination can be checked against the information on the bill of lading, which should indicate the origin and destination per *Motor Vehicle Act Regulations S.37.39*. The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver local road authorities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.	
Engineer Review	Before a permit is issued, very large or heavy OS-OW vehicles/loads should be referred for review and sign-off by an engineer – or their designate – acting on behalf of the local road authority. This provides additional oversight to address potential infrastructure concerns, giving the local road authority the ability to impose additional permit conditions or waive certain conditions, if deemed appropriate. For very large or complex trips, this engineer or their designate may request additional analysis or review be completed by a third-party engineering firm.	

Condition / Requirement	Description	Further Information
Route Clearance Review	For very large loads, the dimensions along the proposed route or portions of the proposed route may need to be checked against physical clearances and restrictions on the route with assistance from an engineer or field staff.	
Height Pole	For loads over a certain height, a pilot car mounted with a height pole may be used to confirm clearances on the route during either the move itself or as part of a route survey conducted ahead of time during the planning stage for the oversized move. Pilot cars mounted with a height pole that exceeds the legislated height are required to obtain an OS-OW permit for route planning purposes (provincial and local road authority, as applicable). A permit is not required when the height pole equipped pilot car is escorting an OS-OW vehicle and / or load travelling under a valid municipal and / or provincial OS-OW vehicle permit (as applicable).	See Sections 3.2.1 and 4.2.1 of *BC's* *Pilot Car Load Movement Guidelines* for further information on this requirement.
Notify / Consult Utilities	This condition requires the carrier to contact the relevant utility to verify overhead clearances and flag any concerns along the proposed route. Generally, this includes BC Hydro, Coast Mountain Bus Company (Overhead Trolley Lines), Shaw, and Telus. This list is not exhaustive. It is the responsibility of the driver and / or carrier to ensure all relevant utility providers have been contacted.	
Bridge Overload Assessment	This condition is applied in two cases: 1. The vehicle does not meet Bridge Formula. 2. Where a route has not been pre-screened for the proposed vehicle GVW and / or axle group	For more information see Section 2.2.1 and **Appendix I** of this Manual and *CTPM Chapter 6, Section 6.3.2*.
Transportation Management Plan	A Transportation Management Plan (TMP) is used to coordinate moves for loads that are very large or very heavy. If a TMP is noted as a permit requirement for all or a portion of your planned route, please refer to *CTPM Chapter 6, Section 6.4.4* and contact relevant local road authorities for specific requirements.	*CTPM Chapter 6, Section 6.4.4*.
Transport Requirements		
Overnight Only or Peak Period Restrictions	This condition sets limits on the time of day the truck is permitted to travel. Most OS-OW loads are prohibited from travelling during peak periods; some are required to travel at night.	
Weekend and Holiday Restrictions	Generally, weekend and holiday travel restrictions are not imposed by local road authorities. However, the Province and select local road authorities have limitations on weekend and holiday travel.	See **Appendix B** for Municipal Exceptions.

Condition / Requirement	Description	Further Information
Travel Conditions		
Flags / Lamps	Flags / Lamps requirements may include: • Red or orange flags on all four corners of each load/trailer. • Lights on extremities, amber lamps facing forward, red lamps facing the rear for night travel. • One or two amber flashing or rotating beacon(s) mounted on the truck for daylight travel.	CVSE1000 Division 8 – Pilot Cars and Signs.
Pilot Cars	Pilot cars play an important role in making sure that OS-OW vehicles/loads travel Metro Vancouver's roads safely. Pilot cars: • Function to warn other road users of the presence of an oversize vehicle; • Assist in manoeuvring the load through constrained areas; • Keep traffic delays to a minimum; • Ensure all road users are aware of the potential hazard and know what to do if they encounter OS-OW vehicles; • Ensure safe passing of other vehicles.	Unless otherwise noted in the *Permit Condition Tables*, operation of pilot cars must be in accordance with BC's Pilot Car Load Movement Guidelines.
Traffic Control	Where traffic control is needed for the load to proceed safely, it must be performed by a certified traffic control person according to the *Pilot Car Load Movement Guidelines*, or by a Peace Officer.	Traffic control should be conducted in accordance with Section 5 of *Pilot Car Load Movement Guidelines* and Section 5 of BC's *Traffic Management Manual for Work on Roadways – 2015 Interim Edition*.
Signage	Wide load, D sign, or oversize load signs are required front and rear for vehicles / loads with OAW over 3.2 m. Long load, D sign or oversize load signs are required front and rear for vehicles / loads (other than A, B, and C-Trains) over 25 m long.	See CVSE1000 – and CTR Division 8.
Additional Requirements		
Minimum Insurance Required	The carrier is required to carry a minimum of $3M insurance. An additional bond of indemnity may be required for very large or very heavy loads.	
Extraordinary Load Approval (Provincial)	Very large loads that exceed standard provincial OSOW policy limits are subject to additional conditions for travel and a more rigorous application process as outlined in *CTPM Chapter 6, Section 6.4*. Carriers should apply to both the Province and the Local road authority and may be asked to provide proof of application to the Province as part of the municipal application. Agencies may share information provided during the application process if warranted.	*CTPM Chapter 6, Section 6.4*; *CVSE1049*.

Individual local road authorities retain the right to waive, alter or impose additional conditions not listed in this table (e.g. convoying restrictions) on a case-by-case basis. The permit conditions in **Table 5** only represent the Permit Conditions associated with the Permit Condition Tables included in **Table 6** to **Table 11** of this manual.

3.

PERMIT CONDITIONS

3.1 TERM PERMIT CONDITIONS FOR NONREDUCIBLE LOADS

There are two tiers of term permits. **Table 6** details the conditions under which term permits may be issued for loads, vehicles, or combinations of vehicles. **Appendix G** provides dimensions for specific vehicle combinations that exceed the conditions in **Table 6** and are eligible for term permits. Carriers may apply for term permits for other equipment subject to the process described in **Appendix H**. Term permits are generally issued for a 12-month period.

Table 6: Term Permit Weight and Dimensions

Parameter	Dimension Inclusive of Load	
	Tier 1	Tier 2
Vehicle Type*	Single Unit Truck Select truck and single trailer / semi-trailer combinations***	Truck and single trailer / semi-trailer (single articulation point) Vehicle combinations (multiple articulation points)
Overall Length (OAL)*	≤ 16.0 m	≤16.0 m (single unit truck) ≤ 25.0 m (single articulation point) ≤ 27.5 m (multiple articulation points)
Trailer Wheelbase	≤ 12.5 m	
Overall Height (OAH)	≤ 4.3 m	
Overall Width (OAW)	≤3.2 m	
Track Width**	≤ 2.6 m	
Front Projections	• Tractor or truck ≤ 1.0 m (for PME only) • Semi-trailers ≤ 3.0 m measured from over the kingpin forward to the front of the vehicle and / or load.	
Rear Projection	≤ 6.5 m measured from the turn centre to the end of the vehicle and / or load.	
GVW	• ≤ 63,500 kg* **Except as noted below, axle group weights greater than legislated limits are allowed under single trip permit only for all vehicles, vehicle combinations, and loads. Single trip permits issued for axle group weights over legislated limits can be combined with term permits.*	
Term Overweight Permit Eligibility	Overweight axle and axle groups **are** allowed under term permit for the vehicles and vehicle combinations listed below. Bridge formula applies and GVW must be less than or equal to 63,500 kg. If bridge formula is exceeded or GVW is greater than 63,500 kg, a single trip permit is required consistent with the *Permit Condition Tables* in Section 3.1. Eligible vehicles and vehicle combinations are: • Specialized Equipment (e.g. cranes) as outlined in Section 3.7; • Emergency response vehicles, including fire trucks (if not exempt from legislated weights and dimensions limits under municipal bylaw). Vehicles and vehicle combinations that qualify under *Provincial Reducible Load Overweight Policy* (Section 3.2; *CTPM Chapter 6, Section 6.5*). These vehicles cannot exceed legislated axle weight limits, but can exceed GVW 63,500 kg, subject to detailed review and a number of specific requirements.	

Notes:

** Length dimension parameters apply to loaded vehicles. Unloaded vehicles and specialized equipment are subject to special conditions.*
*** Vehicles with multiple articulation points that have trailers and / or boosters with track width up to 3.2 m are also eligible for term permits, provided all other dimensions are within the limits described in this table. Cranes with track width up to 3.2 are also eligible for permits provided all other dimensions meet the specifications in Appendix G.*
**** Select truck and single trailer / semi-trailer vehicle combinations are eligible for Tier 1 Term Permits, despite exceeding the maximum dimensions listed in this table. Appendix G lists eligible vehicles and provides corresponding drawing with specific configurations and dimensions.*

Vehicles operating under the *Reducible Load Overweight Policy (RLOP)* are eligible for term permits, as are LCVs and specialized equipment in **Section 3.7**. Equipment included in **Section 3.7**, **Figure 7** may be eligible for term permits if the equipment is within the limits specified in **Table 6**. Internal dimensions may vary in accordance with provincial requirements, including front and rear projections as described

in **Section 3.7**. Vehicles operating under the RLOP and included in **Section 3.7**, **Figure 6** and **Figure 7** may be subject to different term permit conditions, including specific routes.

Table 7 sets out conditions that apply to all term permits unless otherwise noted. Consulting the Permit Condition Tables in **Section 3.4** is not required for term permits. Refer to **Sections 3.2**, **3.6**, and **3.7** for conditions and requirements specific to vehicles operating under the *RLOP*, LCVs, and specialized equipment; however, where no travel conditions are specified, the conditions in **Table 7** apply.

Table 7: Term Permit Travel Conditions

Permit Condition Type	Travel Condition / Requirement	
	Tier 1	Tier 2
Routing Requirements*	Tier 1 Term Permit Network (TPN-1)	Tier 2 Term Permit Network (TPN-2)
Travel Time Windows	Peak Period Travel Restrictions (no travel between 07:00 – 09:00, 15:00 – 18:00)	
Operating Conditions	Vehicles operating under a term permit may not make special maneuvers. Special maneuvers include: • Encroachment into the opposing lane of traffic (i.e. crossing the centreline) while travelling straight or making a turn. • Crossing over multiple parallel lanes of travel to navigate a turn.** • Reversing during a turning maneuver. The driver and / or carrier is responsible for verifying that no special maneuvers will be required on the proposed route.	
Requirements During Transport	Flags / Lamps required	
Additional Requirements	$3M minimum third-party insurance required	

**The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements and within the operating conditions defined in this table. Under no circumstances will TransLink and Metro Vancouver local road authorities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.*

***Vehicles are permitted to straddle two parallel lanes and / or cross a single parallel lane to make a turn.*

3.2 REDUCIBLE LOAD OVERWEIGHT POLICY

The Reducible Load Overweight Policy (RLOP) allows carriers to apply for permits to transport loads at weights higher than the legislated limit of 63,500 kg and at overall lengths up to 27.5 m. *RLOP* is based on the assumption that carriers already have the option / ability to transport the load at legal weights and dimensions. *CTPM Chapter 6, Section 5* specifies the conditions under which carriers are eligible to enter into agreements with the Province to operate trucks that exceed the weight and / or dimensions identified in the CTR when carrying reducible loads. These conditions are summarized below for ease of reference (refer to *CTPM Chapter 6, Section 5* for the full requirements).

Carriers travelling in Metro Vancouver must first receive provincial approval for an *RLOP* permit prior to submitting an application to municipal authorities. Unlike Long Combination Vehicles (LCVs) (**Section 3.6**), *RLOP* permits are only valid on certain routes pre-screened for use by a specific carrier. Loads must meet the specific configuration requirements set out in the *CTPM*. Municipal staff and Commercial Transport advisors are encouraged to work in close collaboration to review and process these applications.

CTPM Quick Reference

The following has been reproduced from the Provincial CTPM Chapter 6, Section 5, as amended from time to time, for convenience and ease of reference. Please consult provincial policy to ensure the most up to date requirements.

Producers or shippers are eligible to enter into agreements to operate trucks which exceed the weights and/or dimensions identified in the Commercial Transport Regulations (CTR) when carrying reducible loads using vehicle configurations depicted in the Appendices to the CTR, and under the following conditions:

- The commodity must be capable of being hauled using vehicle combinations at legal weights and dimensions as identified in the CTR,
- The haul proponent is responsible for all studies as may be required to confirm:
  - the proposed vehicle configuration complies with recognized vehicle dynamics performance and safety thresholds at the requested weights, and
  - bridge capacities and any upgrades, if necessary to accommodate the haul vehicles at the requested weights,
- The haul proponent will be responsible for paying any costs associated with upgrading infrastructure to accommodate the haul,
- The haul must generate a minimum of 5% reduction in Equivalent Single Axle Loadings (ESAL) when compared with the ESAL count which would be generated by the haul using a comparable Super B-train at legal weights and dimensions, according to the process outlined in section 6.5.1.
- If the haul is approved, the shipper will be required to ensure that any carrier operating pursuant to this agreement will:
  - comply with any pilot car requirements or other travel conditions resulting from the approved dimensions of the configuration and load (see Form CVSE1000),
  - implement a system for monitoring axle and gross vehicle weights, and make the vehicle weight information available to Ministry staff as required to audit compliance,
  - develop, document and demonstrate a driver training and monitoring program which is specific to the haul,
  - install electronic technology, including electronic driver logs, speed monitoring for each driver and vehicle on the haul, and
  - maintain a “Satisfactory” rating under the National Safety Code, and
- If the vehicles operate on highways which have inspection stations which are part of the Weigh2Go network, all vehicles operating pursuant to the agreement must be registered and maintain participation in the Weigh2Go program.

3.3 SINGLE TRIP PERMIT QUICK REFERENCE FOR COMMON VEHICLE DIMENSIONS AND WEIGHTS

DID YOU KNOW?

According to provincial permit data, of the approximately 9,000 single trip OS-OW permits issued annually for travel on Metro Vancouver-area highways:

- 64% are for widths ≤ 3.2 m;
- 86% are for lengths ≤ 27.5 m
- 67% are for heights ≤ 4.3 m; and,
- Over 50% are for GVW ≤ 63,500 kg.

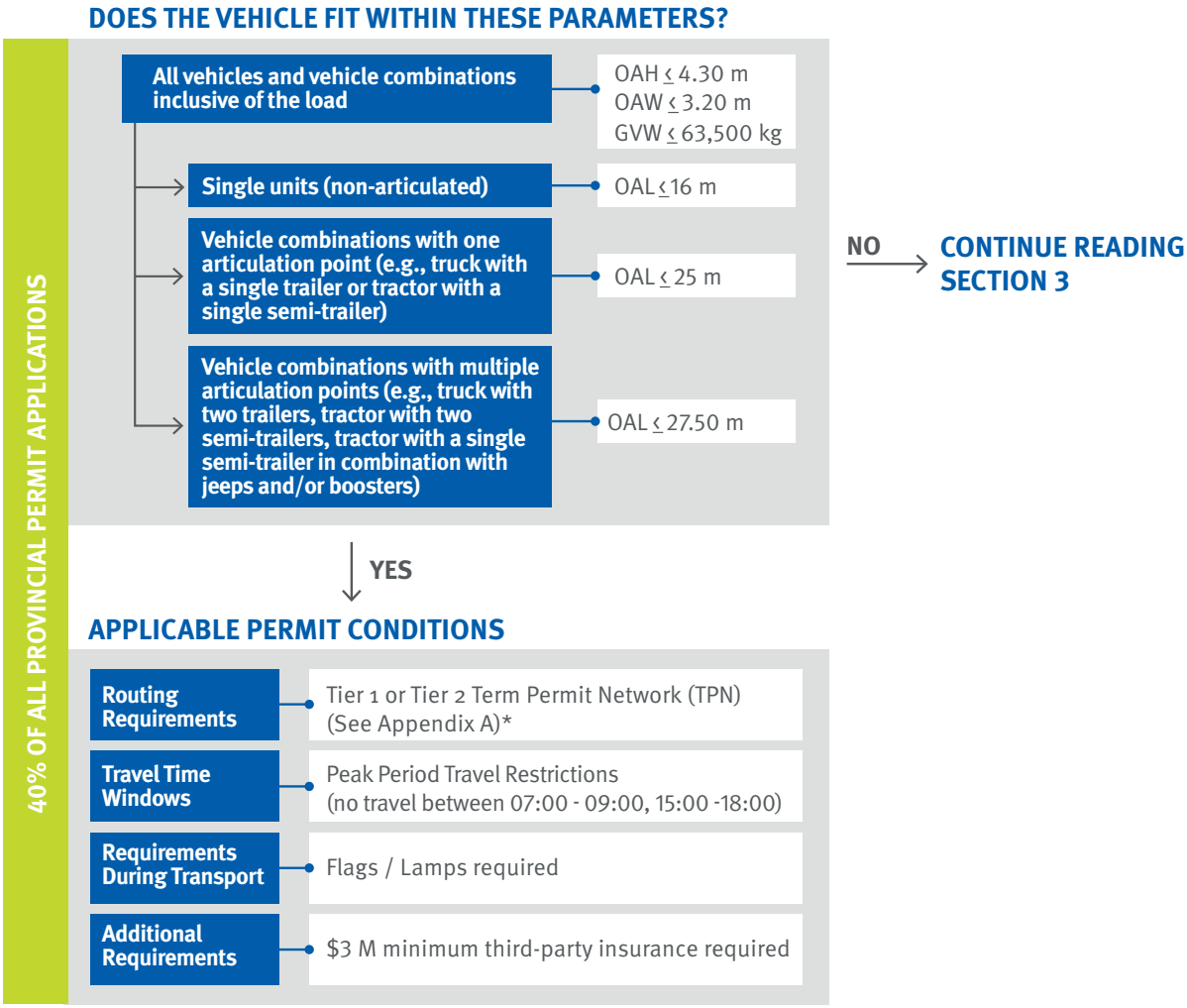
This accounts for approximately 40% of all OS-OW permits!

This manual aims to harmonize and simplify the permitting process for smaller OS-OW vehicles that comprise the majority of OS-OW permits in Metro Vancouver.

Local road authorities reserve the right to amend the permit conditions outlined on the next page on a case-by-case basis at their discretion.

Figure 5 illustrates common vehicle dimensions and weight parameters based on provincial permit data and outlines the permit conditions required for the vehicles / loads that fall within these parameters. Permits for vehicles and loads within these parameters account for approximately 40% of all provincial permit applications.

Figure 5: Permit Conditions for Common Vehicle Weights and Dimensions



** The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver local road authorities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual. Vehicle configurations that are eligible for a Tier 1 Term Permit as outlined in Section 3.1, Table 6 may use the Term Permit Network – Tier 1 under a Single Trip Permit. Other vehicles should use the Term Permit Network – Tier 2.*

3.4 SINGLE TRIP PERMIT CONDITION TABLES

Tables 8 through 11 detail the conditions and requirements for transporting OS-OW loads on municipal roads in Metro Vancouver (excluding provincial highways). Consulting the Permit Condition Tables is required to complete an application for a single trip OS-OW vehicle permit in Metro Vancouver. For guidance on how to apply these tables see **Section 2.4**: Determining Your Travel Conditions.

Unless otherwise indicated, municipal single trip OS-OW permits are valid up to 24 hours.

Table 8: Permit Condition Table for Width

	Routing Requirements								Travel Time Requirements		Transport Requirements				Additional Requirements	
	Preferred Route Network	Proposed Routing from Carrier	Engineer Review	Route Clearance Review	Height Pole	Notify / Consult Utilities	Bridge Overload Assessment	Transportation Management Plan	Overnight only (22:00 – 05:00)	Peak Period Travel Restrictions (No travel 07:00 – 09:00; 15:00 – 18:00)	Flags / Lamps +	Pilot Cars ++	Traffic Control	Signage	Minimum Insurance Amount	Extraordinary Load Approval (provincial)
≤ 2.60 m	TRN, TPN***, PSR	**Legislated Limit | No Permit Required.**														
2.61 – 2.90m	TPN***, PSR									✓	✓				3M	
2.91 – 3.20m	TPN***, PSR									✓	✓	1^			3M	
3.21 – 3.80m	PSR	✓	✓							✓	✓	1	✓	✓	3M	
3.81 – 4.40m	PSR	✓	✓	✓*						✓	✓	2	✓	✓	3M	
4.41 – 5.00m	PSR	✓	✓	✓*				✓	✓		✓	3	✓	✓	3M	✓*
› 5.00m	Case by Case	✓	✓	✓		✓		✓	✓		✓	3	✓	✓	3M**	✓

Notes:

**Except on Pre-Screened Routes (or portions thereof).*
***Additional bond of indemnity may be required.*
****Vehicle configurations that are eligible for a Tier 1 Term Permit as outlined in Section 3.1, Table 6 may use the Term Permit Network – Tier 1 under a Single Trip Permit. Other vehicles should use the Term Permit Network – Tier 2.*
*^ While a pilot car is generally not required below OAW 3.2 m (inclusive of the load), pending a regional study to review how OS-OW vehicles operate in an urban environment with narrow lane widths, some local road authorities may require one pilot car for vehicles / loads with an overall width (OAW) of 2.91 to 3.20 m. Please refer to **Appendix B**.*
+ Flags / Lamps Required for Front Overhang › 1.0 m and Rear Overhang › 1.2 m.
++ 1 Pilot Car Required for Front Projection ›3.0 m and Rear Projection › 6.5 m.

Table 9: Permit Condition Table for Length

	Routing Requirements								Travel Time Requirements		Transport Requirements				Additional Requirements	
	Preferred Route Network	Proposed Routing from Carrier	Engineer Review	Route Clearance Review	Height Pole	Notify / Consult Utilities	Bridge Overload Assessment	Transportation Management Plan	Overnight only (22:00 – 05:00)	Peak Period Travel Restrictions (No travel 07:00 – 09:00; 15:00 – 18:00)	Flags / Lamps +	Pilot Cars ++	Traffic Control	Signage	Minimum Insurance Amount	Extraordinary Load Approval (provincial)
Legal	**TRN, TPN***, PSR**	**Legislated Limit Varies Depending on Vehicle Type – See Table 1, P.10 | No Permit Required.**														
Legal – 27.5m	**TPN*****	✓	✓							✓			✓	✓		
27.6 – 31.0m	**PSR**	✓	✓							✓		1	✓	✓	$3M	
31.1 – 36.0m	**PSR**	✓	✓							✓		2	✓	✓	$3M	
36.1 – 40.0m	**PSR**	✓	✓					✓		✓		2	✓	✓	$3M	✓
› 40m	**Case by Case**	✓	✓	✓				✓	✓			3	✓	✓	$3M**	✓

Notes:

**Except on Pre-Screened Routes (or portions thereof).*
***Additional bond of indemnity may be required.*
****Vehicle configurations that are eligible for a Tier 1 Term Permit as outlined in Section 3.1, Table 6 may use the Term Permit Network – Tier 1 under a Single Trip Permit. Other vehicles should use the Term Permit Network – Tier 2.*
+ Flags / Lamps Required for Front Overhang › 1.0 m and Rear Overhang › 1.2 m.
++ 1 Pilot Car Required for Front Projection ›3.0 m and Rear Projection › 6.5 m.

Loads over 31.0 m require steering trailers.

Consistent with provincial policy (CTPM Chapter 5, Section 5.3.12.F), loads such as bridge beams, structural steel, processed poles, and pilings that are more than 31 m long require steering trailers.

Table 10: Permit Condition Table for Height

	Routing Requirements								Travel Time Requirements		Transport Requirements				Additional Requirements	
	Preferred Route Network	Proposed Routing from Carrier	Engineer Review	Route Clearance Review	Height Pole	Notify / Consult Utilities	Bridge Overload Assessment	Transportation Management Plan	Overnight only (22:00 – 05:00)	Peak Period Travel Restrictions (No travel 07:00 – 09:00; 15:00 – 18:00)	Flags / Lamps +	Pilot Cars ++	Traffic Control	Signage	Minimum Insurance Amount	Extraordinary Load Approval (provincial)
≤ 4.15 m	TRN, TPN***, PSR	Legislated Limit | No Permit Required.														
4.16 – 4.30m	TPN***, PSR														$3M	
4.31 – 4.57m	PSR														$3M	
4.58 – 4.88m	PSR	✓	✓		✓	✓*		✓*		✓		1			$3M	
› 4.88m	Case by Case	✓	✓	✓	✓	✓		✓*		✓		1			$3M**	✓

Notes:

**Except on Pre-Screened Routes (or portions thereof).*
***Additional bond of indemnity may be required.*
****Vehicle configurations that are eligible for a Tier 1 Term Permit as outlined in Section 3.1, Table 6 may use the Term Permit Network – Tier 1 under a Single Trip Permit. Other vehicles should use the Term Permit Network – Tier 2.*
+ Flags / Lamps Required for Front Overhang › 1.0 m and Rear Overhang › 1.2 m.
++ 1 Pilot Car Required for Front Projection ›3.0 m and Rear Projection › 6.5 m.

Table 11: Permit Condition Table for Weight

	Routing Requirements								Travel Time Requirements		Transport Requirements				Additional Requirements	
	Preferred Route Network	Proposed Routing from Carrier	Engineer Review	Route Clearance Review	Height Pole	Notify / Consult Utilities	Bridge Overload Assessment	Transportation Management Plan	Overnight only (22:00 – 05:00)	Peak Period Travel Restrictions (No travel 07:00 – 09:00; 15:00 – 18:00)	Flags / Lamps +	Pilot Cars ++	Traffic Control	Signage	Minimum Insurance Amount	Extraordinary Load Approval (provincial)
≤ 63,500 kg Axle Weight ≤ CTR	TRN, TPN***, PSR	**Legislated Limit | No Permit Required.**														
≤ 63,500 kg Axle Weight › CTR	TPN***, PSR	✓	✓				✓*								$3M	
63,501 – 85,000 kg	PSR85	✓	✓				✓*	✓*							$3M	
85,001 – 125,000 kg	PSR125	✓	✓				✓*	✓*							$3M	
› 125,000 kg	Case by Case	✓	✓				✓	✓		✓					$3M**	
Axle Group Weight ≠ Bridge Formula	Case by Case	✓	✓				✓								$3M**	

Notes:

**Except on Pre-Screened Routes (or portions thereof).*
***Additional bond of indemnity may be required.*
****Vehicle configurations that are eligible for a Tier 1 Term Permit as outlined in Section 3.1, Table 6 may use the Term Permit Network – Tier 1 under a Single Trip Permit. Other vehicles should use the Term Permit Network – Tier 2.*
+ Flags / Lamps Required for Front Overhang › 1.0 m and Rear Overhang › 1.2 m.
++ 1 Pilot Car Required for Front Projection ›3.0 m and Rear Projection › 6.5 m.

3.5 HOUSE MOVES, MANUFACTURED HOMES, MODULAR BUILDINGS, AND MOBILE HOMES

House moves, manufactured homes, modular buildings, and mobile homes are subject to the municipal permit conditions outlined in this section. The Province provides different conditions for house moves, multi-section manufactured homes, and modular buildings that have already been established on a foundation than for new manufactured homes, modular buildings and houseboats.

The *CTPM Chapter 4, Section 4.3* and CVSE1000S includes policies, specifications, and allowances for manufactured homes, modular buildings and other manufactured building units used in resource and other industries, and houseboats. This includes internal dimensions, loading conditions, and other conditions. Provincial policies and allowances noted in this section are adopted by reference from the *CTPM*, as amended from time to time.

House moves, multi-section manufactured homes, and modular buildings that have already been established on a foundation and have been attached on a more permanent basis (i.e., shared walls, flooring, ceiling, etc.), may be moved in accordance with the conditions set out in *T-Form CVSE1052*, which does not apply to brand new manufactured homes and / or modular buildings.

CVSE T-FORM Quick Reference

The following has been reproduced from the Form CVSE1052, as amended from time to time, for convenience and ease of reference. Please consult provincial policy to ensure the most up to date requirements.

Provincial Permit Conditions for the Movement of Structures (CVSE 1052)
For the Movement of Structures over 6m OAW and 4.88, OAH Only

- Steerable moving dollies are required and no major support member of the transportation platform (beams, bolsters, bunks, etc.) shall be of wooden construction.
- Any structure in excess of 4.88 metres (16') in loaded height must use a skid-board system to allow safe passage under utility and low voltage power lines.
- Safety lighting shall include:
  - four flashing amber lights, two at front extremities and two at rear extremities of the structure being moved
  - clear or white lights completely around the structure's perimeter (at least 40 watts per 3 metres of structure)
  - flood lights front and rear
- The mover must possess at least $1,000,000 liability insurance specifying structural moving.
- The applicant must obtain any required building permits from the appropriate municipal or regional authorities prior to the transportation of the house or building.
- Hours of travel for moves up to 110 km total distance: 00:01 to 05:00 Monday to Friday, except 02:00 to 05:00 in the Lower Mainland (west of Hwy 11 at Abbotsford or Mission or south of Squamish). Changes to these hours must be approved by the appropriate district(s) CVSE Manager, or their delegate.

Some local road authorities require municipal building permits and / or demolition permits to be issued and building and / or site inspections to be completed before a transport permit can be issued, including, but not limited to:

- City of Vancouver
- City of Surrey
- Township of Langley
- City of Port Coquitlam
- City of White Rock
- City of Maple Ridge

Please consult municipal building and zoning bylaws and contact the appropriate local road authority for further information about all applicable permit and inspection requirements. Additionally, other stipulations such as the requirement to consult police prior to the move or arrange for a police escort may be required (City of Delta and City of Vancouver). A list of additional municipal requirements is included in **Section 3.5.1**.

A valid **transport permit** issued by the Manufactured Home Registry is required for most moves of manufactured homes, modular buildings, and other manufactured building units. Depending on the type of dwelling, a new manufactured home permit may be required.

Table 12 below provides key vehicle and load parameters for House and Mobile Home moves in the Lower Mainland. Single trip oversize permits may be pre-approved up to the parameters provided in **Table 12**. If these parameters are exceeded, and in some cases prior to, provincial Extraordinary Load Approvals are required.

Table 12: Key Vehicle and Load Parameters for House Moves and Mobile Homes

	House Moves	Manufactured Homes, Modular Buildings, House Boats, Mobile Homes
Overall Width (OAW)	Varies	≤ 6.10 m
Overall Height (OAH)	Varies	≤ 4.88 m
Overall Length (OAL)	Varies	≤ 36.0 m
Gross Vehicle Weight (GVW)	Typically, below 64,000 kg *Overloads on individual axle groups up to 64,000 kg are permitted as per CTPM Chapter 6, Section 6.3.2 and as referenced in Section 2.2 of this manual*	

3.5.1: Summary of Municipal Permit Requirements and / or Allowances

Permit conditions differ from the Permit Condition Tables in **Section 3.4** as follows:

- Other permits (i.e., building permit, demolition permit) may be required in addition to a transport permit (i.e., OS-OW vehicle permit).
- Proposed travel routes must be reviewed by municipal staff;
- Utility review and approval prior to transport, and utility escort during transport may be required;
- Additional insurance and indemnification requirements, including performance bonds may be required;
- Police notification and / or escort may be required;

This list of municipal requirements is not exhaustive and will vary depending on the local road authority of origin or destination. Please contact the appropriate local road authority for further information about all applicable requirements.

3.6 LONG COMBINATION VEHICLES (LCVs)

LCVs can operate on **specifically designated routes only** and are subject to other unique requirements under provincial permit policy per T-Form CVSE1014 and *CTPM Chapter 5, Section 5.3.6.* Provincial permit policy respecting the operation of LCVs in BC is incorporated in this manual as amended from time to time, except as noted in **Section 3.6.2** on the next page, with relevant parts reproduced herein for convenience and ease of reference.

To operate LCVs in BC, a carrier must first provide a letter to the *Provincial Commercial Transport Manager (CT Manager)* in Victoria confirming that they understand the requirements set out in the Provincial *CTPM Chapter 5, Section 5.3.6.*

The letter should address:

- start and end points of their proposed route(s);
- driver training; and
- National Safety Code obligations, including maintaining a satisfactory carrier safety profile, and liability coverage (minimum third-party liability insurance of five (5) million dollars is required to operate LCVs in BC).

Once the Commercial Transport Manager is satisfied, the carrier company is added to an approved list of prequalified carriers that are eligible for provincial permits. Contact the CVSE Commercial Transport Program (Commercial.Transport@gov.bc.ca) for additional information.

Metro Vancouver local road authorities will not accept permit applications or issue permits to operate LCVs on municipal roads until a carrier has been added to the Province's prequalified list.

3.6.1: Key Vehicle and Load Parameters

Key vehicle and load parameters for LCVs are summarized in **Table 13**.

Table 13: Key Vehicle and Load Parameters for LCVs

	Rocky Mountain Double (RMD)			Turnpike Double (TPD)
	A, B, and C Train			A, B, and C Train
Overall Width (OAW)	≤ 2.60 m			≤ 2.60 m
Overall Height (OAH)	≤ 4.15 m			≤ 4.15 m
Overall Length (OAL)	≤ 32.0 m			≤ 41.0 m
Gross Vehicle Weight (GVW)	**A-Train**	**B-Train**	**C-Train**	**A, B, and C Train**
5 Axles	38,000 kg			38,000 kg
6 Axles	49,800 kg	48,600 kg	49,800 kg	49,800 kg
7 Axles	53,500 kg	56,500 kg	54,600 kg	57,700 kg
8 Axles	53,500 kg	63,500 kg	60,500 kg	63,500 kg
Axle group weights	Legislated Limits Steering Axle: 6,000 kg Single Axle: 9,100 kg Tandem Axle: 17,000 kg Tridem Axle: 24,000 kg			

3.6.2: Summary of Municipal Permit Requirements and / or Allowances

The permit policies and requirements in this section supersede provincial policies and requirements on roads under municipal jurisdiction in Metro Vancouver. All other provincial policies respecting the operation of LCVs apply as set out in the *CTPM Chapter 5, Section 5.3.6 and T-Form CVSE1014*.

The conditions from the Permit Condition Tables in **Section 3.4** that would otherwise apply to a vehicle and / or load of the same size and weight are waived, except as noted below.

Travel Times:

- RMDs: No travel during peak periods (07:00 – 9:00; 15:00 – 18:00)
- TPDs: Overnight travel only (22:00 to 05:00)

Existing Routes: Like provincial permits for LCVs, municipal LCV permits are restricted to a specific route. There are 14 routes in the Lower Mainland that are available for municipal LCV permits. These routes are listed below.

1. **Burnaby (7867 Express Street) to BC Interior (via Highway 1)**
   Express Street to Lake City Way, turn left onto Lake City Way, Lake City Way to Lougheed Highway (Highway 7), turn left onto Lougheed Highway, Lougheed Highway to Gaglardi Way, turn right onto Gaglardi Way, Gaglardi Way turns into Caribou Road North, Caribou Road North to Highway 1, turn right onto Highway 1
2. **BC Interior (via Highway 1) to Burnaby (7867 Express Street)**
   Highway 1 to Caribou Road North, exit to the right onto Caribou Road North, Caribou Road North turns into Gaglardi Way, Gaglardi Way to Lougheed Highway (Highway 7), turn left onto Lougheed Highway, Lougheed Highway to Lake City Way, turn right onto Lake City Way, Lake City Way to Express Street, turn right onto Express Street.
3. **Township of Langley (27475 58th Crescent) to BC Interior (via Highway 1)**
   Rocky Mountain Doubles Only. Exit the Trans Canada Highway taking the 264th street exit north. This exit leads directly to the intersection of 56th avenue and 264th Street. Continue eastbound on 56th avenue to 58 Crescent. Turn left on 58 Crescent and proceed directly into the General Motors yard.
4. **Township of Langley (9818-198B Street)**
   Inbound Only From Highway 1 WB exit onto 176th Street, turn left onto 176th Street (Hwy 15), turn left onto Golden Ears Way, turn left onto 192nd Street, continue onto 98A Ave, turn right onto New Telegraph Trailer, turn left onto Telegraph Trail, turn left onto 196A Street, continue onto 98 Ave, continue to 9818-198B Street.
5. **Township of Langley (9818-198B Street)**
   Outbound only From 9818-198B Street, turn left onto 96th Ave, turn right onto 199A Street, continue to 200th Street, turn left onto Hwy 1 (EB) on-ramp.
6. **Aldergrove (3365 264th Street) to BC Interior (via Highway 1)**
   From Highway 1 (WB), take 264th Street exit, turn right onto 264th Street, proceed to 3365 264th Street. Alternatively, from 3365 264th Street, proceed north on 264th Street, turn right onto Highway 1 (EB) on-ramp.

7. **Hwy 17 (South Fraser Perimeter Road)**
   Eastbound: From Tanner Road to Hwy 1 at 176 Street Interchange. Westbound: From Hwy 1 at 176 Street Interchange to 103A Avenue.
8. **Surrey (10155 Grace Road) – Inbound Only**
   From Hwy 17 off-ramp, left turn to Tannery Road, right turn to 120 Street (Scott Road), right turn to 103A Avenue, and left turn to 10155 Grace Road.
9. **Surrey (10155 Grace Road) – Outbound Only**
   From Grace Road, left turn to 103A Avenue, and right turn to Highway 17 on-ramp.
10. **Langley (9818-198B Street) to BC Interior (via Highway 1)**
    From 9818-198B Street, turn left onto 96th Ave, turn right onto 199A Street, continue to 200th Street, turn left onto Hwy 1 (EB) on-ramp.
11. **BC Interior (via Highway 1) to Langley (9818-198BStreet)**
    Highway 1 westbound exit onto 176th Street, turn left onto 176th Street (Hwy 15), turn left onto Golden Ears Way, turn left onto 192nd Street, continue onto 98A Ave, turn right onto New Telegraph Trailer, turn left onto Telegraph Trail, turn left onto 196A Street, continue onto 98 Ave, continue to 9818-198B Street.
12. **Delta (7700 Hopcott Rd)**
    Inbound via Hwy 17 or Hwy 91 Connector, 98th Ave, River Road, Hopcott Rd to site
    Outbound via Hopcott Rd, River Rd, 98th Ave, Hwy 17 or Hwy 91 Connector
13. **Delta (1700 Cliveden Avenue, Annacis Island) – for Rocky Mountain Doubles only**
    Inbound via Hwy 1 WB, 176th St, Hwy 17 (SFPR), Hwy 91 Connector/Nordel Way, Hwy 91 over Alex Fraser Bridge, Annacis Island off-ramp, Cliveden Avenue, Fosters Way to site
    Outbound via Cliveden Avenue, onramp to Hwy 91 over the Alex Fraser Bridge, Hwy 91 Connector/ Nordel Way, Hwy 17 (SFPR) to 176th St on-ramp to Hwy 1 EB
14. **Surrey (11398 Bridgeview Dr) – for Rocky Mountain Doubles only – Travel 19:00-06:00**
    From Highway 17, south on Bridgeview Dr, east on 115 Avenue, south on 131 Street, west on 114 Avenue to 11398 Bridgeview Dr, and the same route in reverse

Addition of New Routes: Consistent with the Permit Condition Tables in **Section 3.4**, applications to add municipal routes other than those that are listed above must be accompanied by detailed route information to be provided by the carrier for engineer review and route dimension review. To facilitate the review process, the carrier must submit turn movement analysis (AUTOTURN or similar) for all major intersections and turns on roads under municipal jurisdiction and / or, at the discretion of the municipal engineer, work with municipal staff to conduct a supervised and recorded trial run on the proposed route to establish that the proposed vehicle combination can negotiate all intersections and turns on the route without unduly impacting public safety, the flow of traffic, and municipal infrastructure.

Existing Route Reviews and Changes: Should circumstances change in a way that increases the potential risk of LCV operation on asset conditions, public safety, and / or travel conditions, a local road authority may modify or remove approved LCV routes or add additional permit conditions on a temporary or permanent basis.

When a carrier makes an application for a term permit or a single trip permit using an existing approved LCV route, the carrier and the road authority will confirm that circumstances, including road geometry, traffic volumes, presence and / or frequency of vulnerable road users, asset condition, and / or frequency of encroachments have not changed in a way that is expected to unduly impact public safety, assets, or travel conditions. If circumstances have changed, the road authority and the carrier will work together to mitigate the concern. If the concern cannot be mitigated, the road authority may request that the carrier complete the review process for adding a new route given the new circumstances.

CVSE and TransLink must be notified of changes to existing routes. Changes to the RP3M, including to the list of existing routes, are made on an annual basis and are subject to review by RTAC. (See the RP3M Revision Process Table on page iii.)

Insurance: Minimum third-party liability insurance of five (5) million dollars is required to operate LCVs on roads under municipal jurisdiction in Metro Vancouver. Valid insurance must be maintained throughout the term of the permit.

Term Permits: Notwithstanding the term permit length limit in **Section 3.1**, LCVs qualify for municipal term or single trip permits valid for travel on the routes listed on the previous page. Applications for LCV permits (single trip or annual term) must be accompanied by proof that the carrier is a current provincial LCV approved carrier.

Pilot Cars: Pilot cars are not required for LCVs on specified routes when travelling in accordance with all conditions set forth in this section.

Waiving of the conditions in the Permit Condition Tables in **Section 3.1** is based on the following considerations:

1. LCV operations are subject to provincial prequalification requirements for carriers, minimum driver training and experience standards, and controlled routing;
2. LCVs generally conform to legislated weights and dimensions limits, the most significant difference being overall length;
3. LCV operations would be compromised and impractical without close alignment between municipal and provincial permit policies and requirements.

CVSE T-FORM Quick Reference

The following has been reproduced from the CVSE T-Form 1014, as amended from time to time, for convenience and ease of reference. Please consult provincial policy to ensure the most up to date requirements.

CVSE 1014 – Provincial LCV Operating Conditions & Routes

1. TRAVEL RESTRICTIONS:

a. **Adverse Weather** – LCV vehicles must not be dispatched when adverse conditions are known to be present on the route. The Permittee is required to make a reasonable effort to determine the driving conditions on the route prior to each trip, including checking www.drivebc.ca or http://weather.gc.ca/canada_e.html for travel advisories and road construction prior to travel. LCV's must not operate during adverse weather, or when driving conditions impede the driver's ability to operate in a safe manner or prevent the driver from driving with reasonable consideration for the safety of persons using the highway. Drivers encountering adverse conditions must stop at the next safe location (or as directed by an authorized MoT employee or a peace officer) and wait for conditions to improve. While proceeding to the next safe location, LCV's may not pass any other vehicle unless that vehicle is travelling at a speed of less than 70 km/h, nor cross oncoming lanes where visibility does not allow it to be done safely. This includes conditions where:
   i) Visibility is obscured to less than 300 m; and/or
   ii) There is snow or ice present on the highway which affects the traction of the LCV.

b. **Headlights** – Must be on at all times when operating the LCV

c. **Speed** – Maximum speed shall be the lesser of 100 km/h or the posted speed limit

d. **eLogs** – Unless otherwise authorized in writing by the MoT, the Permittee must ensure that LCV's are only operated when the elog and onboard recording device are activated and functioning.

e. **LCV Driver's Certificate** – Must be carried by the driver when operating an LCV.

2. CONVOYING AND PASSING:

a. **Convoying** – No convoying with another LCV is allowed within a distance of 1 km. Except in urban areas, drivers must follow other commercial vehicles at a minimum distance of 500 m.

b. **Passing** – Drivers must travel in the rightmost lane at all times, except to pass. Passing is allowed under the following conditions:
   - *Highways with two lanes in one direction:* LCVs may only pass vehicles travelling less than 80km per hour, when on level ground.
   - *Highways with three lanes in one direction:* LCVs may travel in the middle lane to pass slow moving vehicles.
   - *Highways in the Peace River District:* LCVs may pass when it is safe to do so.

c. **Opposing Lanes** – Drivers must avoid crossing opposing lanes of traffic unless absolutely necessary.

3. LOADS AND LOAD SECUREMENT:

a. **A and C-Trains:**
   - Small livestock which includes pigs, sheep, goats, and poultry are allowed to be transported in the lead trailer only.
   - Large livestock including cattle, horses, bison etc. are not allowed in either trailer.
   - No bulk liquids (excluding tote tanks between 500 – 1300 litres).
   - No bulk loads of dangerous goods.

   B-Trains:
   - Small livestock which includes pigs, sheep, goats, and poultry are allowed to be transported in either or both trailers.
   - Large livestock including cattle, horses, bison etc. are not allowed in either trailer.
   - No bulk liquids (excluding tote tanks between 500–1300 litres).
   - No bulk loads of dangerous goods

b. **General Equipment** – No tankers, low beds hauling heavy machinery, or any other unspecified type of vehicles and vehicle combinations.

c. **Stability** – Drivers must load and couple vehicles to ensure the LCV combination, when travelling in a straight line on level, smooth, and paved surfaces, will follow the path of the towing vehicle without shifting, swerving, or swaying more than 10cm side to side from the path of the towing vehicle.

4. ROADS AND REST AREAS:

a. **Limitations – Unless directed by an authorized MoTI employee or a peace officer:**
   i) LCVs may only be operated on the routes described on this form.
   ii) LCVs may only use highway turn-a-rounds or park trailers on the highway under demonstrated emergency situations; and
   iii) Any breakup or makeup of LCVs must be done off public roadways on private property

d. **Peace District** – LCVs operating in the Peace District may use the former Pouce Coupe Inspection Station location as a turnaround (breaking up of the combination may be required).

3.7 SPECIALIZED EQUIPMENT

CTPM Chapter 5 includes policies, specifications, and allowances that provide specific guidance for specialized equipment. This includes internal dimensions, loading conditions, and other conditions. Specific allowances are made for some specialized equipment while others have additional restrictions.

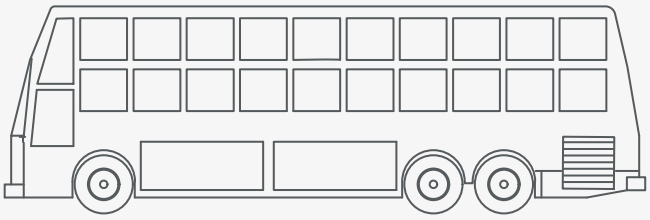
Provincial policies and allowances for specialized equipment noted in this section are adopted by reference from the *CTPM*, as amended from time to time. However, notwithstanding provincial policies and allowances, municipal requirements in **Section 3.1** (Term Permits) and conditions in **Section 3.4** (Permit Condition Tables) apply, as indicated in this section.

The equipment illustrated in **Figure 6** is eligible for municipal term permits – in local road authorities where term permits are available per **Section 3.1** – provided that it is within the maximum dimensions noted and physical route clearances are verified by the carrier.

Figure 6: Specialized Equipment Policies and Allowances

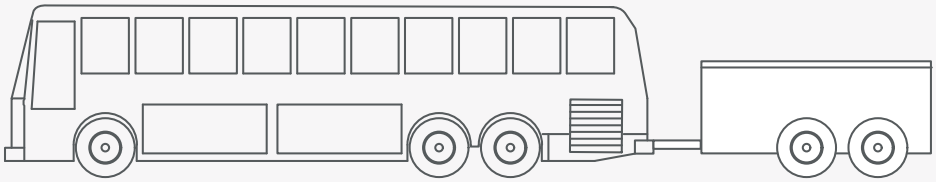
Double Decker Buses: Maximum OAH 4.42 m.

All other size and weight parameters per CTR, Division 7. The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



Intercity Buses with a Pony Trailer: Maximum OAL 20 m and pony trailer weight 4,500 kg.

All other size and weight parameters per CTR, Division 7. The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



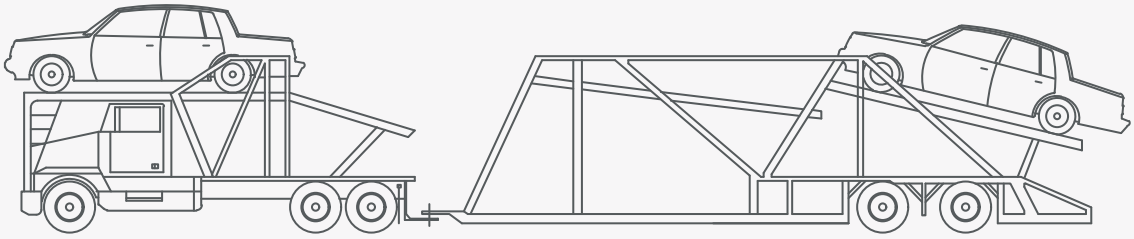
Fire Trucks: Maximum OAW 3.8 m, various OAL limits depending on chassis length and front /rear projections*, and maximum OAH 4.3 m.

All other size and weight parameters per CTR, Division 7. The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.

** Max. 15 m vehicle chassis length*
Max. 6.5 m front projection
Max. 6.5 m rear projection

Auto Transporters: Maximum OAL 25 m (inclusive of 1 m front projection and 1.2 m rear projection, and maximum OAH 4.3 m. All other size and weight parameters per CTR, Division 7.*

The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



**Max OAW 2.6 m per CTR, Division 7*

Trailers and Semi-Trailers (Empty): Maximum OAW 3.2 m, OAL 27.5 m, OAH 4.3 m, and maximum wheelbase 12.5 m.

All other size and weight parameters per CTR, Division 7. The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.

Extended Length B-Trains: Maximum OAL 27.5 m, OAH 4.45 m (Loaded)*, and box length 23 m.

*All other size and weight parameters per BC CTR, Division 7 and CTPM Chapter 4, Section 4.5.4. Must use routes per Form CVSE1012**. The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.*

**Only the trailer's tarp and the load may occupy the space above 4.3 m height and the trailers side wall height must be no more than 4.15 m.*

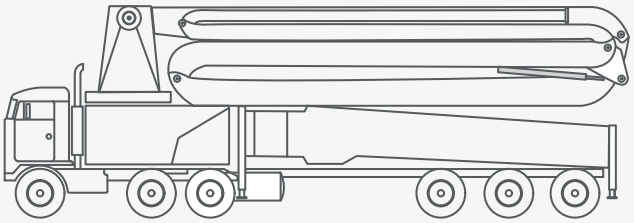
*** Commodity type not specified for municipal permits*

The equipment shown in **Figure 7** is eligible for term permits in cases where the overall dimensions and GVW are within term permit limits per **Section 3.1**. and where other requirements specified in *CTPM Chapter 5, Section 5.3* are met. Vehicles that exceed the term permit limits in **Section 3.1** may be eligible for term permits in some local road authorities. Carriers should consult individual local road authorities for guidance.

Figure 7: Specialized Equipment Policies and Allowances Adopted by Reference

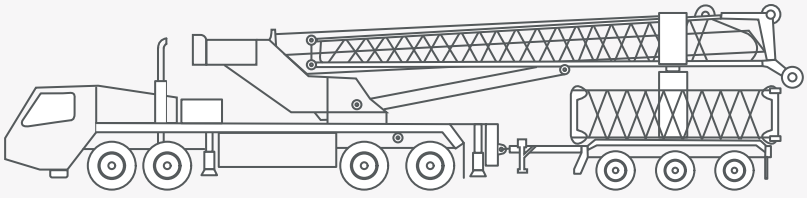
Concrete Pumper Trucks: Refer to CTPM Chapter 5, Section 5.3.2.

The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



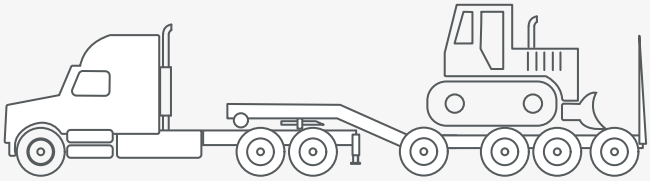
Cranes: Refer to CTPM Chapter 5, Section 5.3.3.

The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



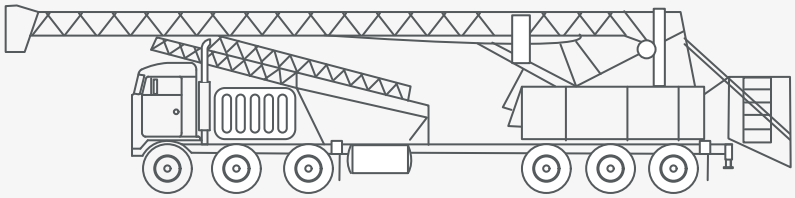
Rubber Tired Loaders: Refer to CTPM Chapter 5, Section 5.3.3.

The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



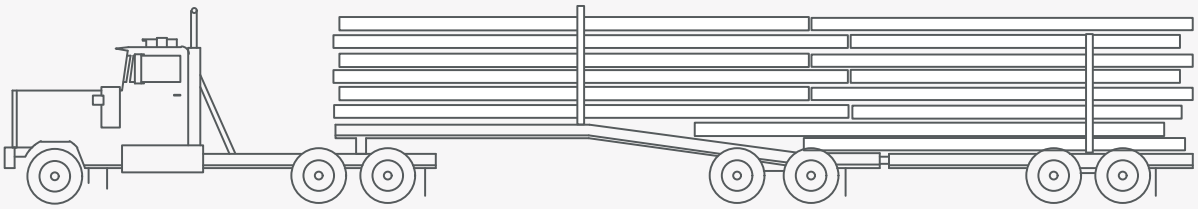
Fixed Equipment: Refer to CTPM Chapter 5, Section 5.3.4.

The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



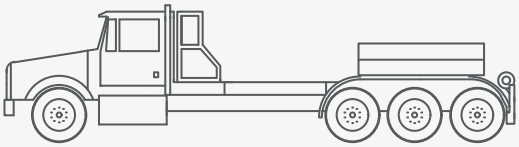
Logging Trucks: Refer to CTPM Chapter 5, Section 5.3.5.

The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



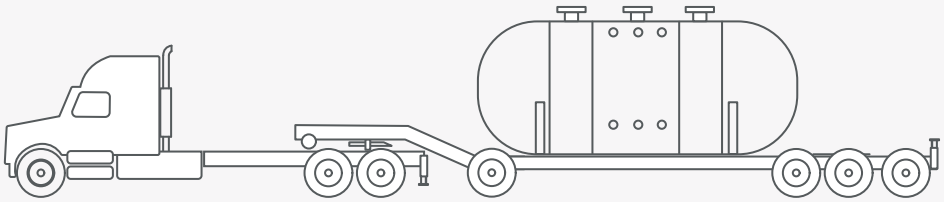
Non-TAC Vehicles: Refer to CTPM Chapter 5, Section 5.3.7.

The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



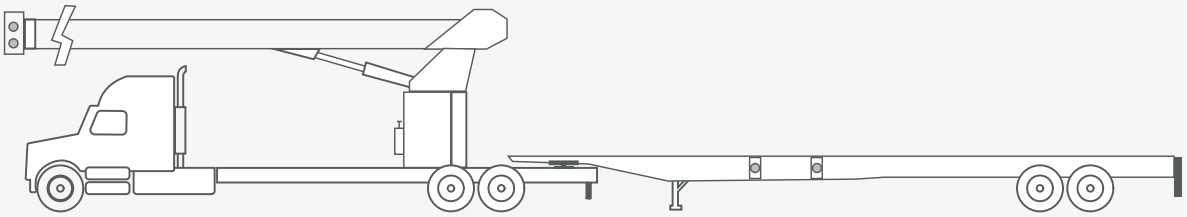
Non-TAC Vehicles: Refer to CTPM Chapter 5, Section 5.3.7.

The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



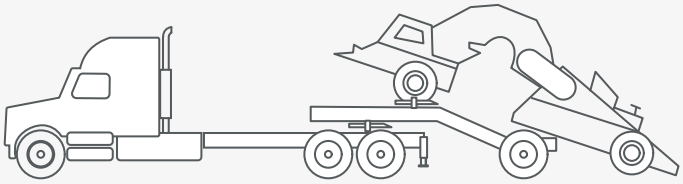
Picker Trucks: Refer to CTPM Chapter 5, Section 5.3.9.

The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



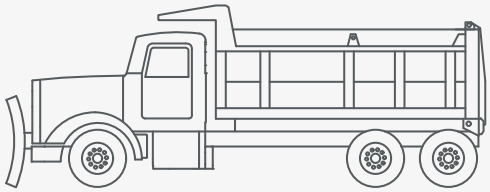
Scrapers: Refer to CTPM Chapter 5, Section 5.3.10.

The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



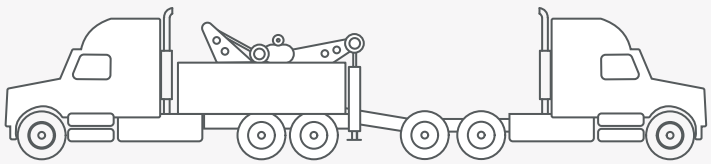
Vehicles equipped with Plow Blades: Refer to CTPM Chapter 5, Section 5.3.13.

The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



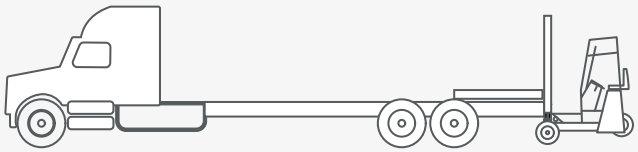
Tow Vehicles: Refer to CTPM Chapter 5, Section 5.3.14.

The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



Trucks and Semi-trailers with Rear-Mounted Forklifts: Refer to CTPM Chapter 5, Section 5.3.15.

The driver and/or carrier is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements. Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.



3.8 CVSE COMPLIANCE CIRCULARS

Compliance Circulars address allowances granted by the Province under the general authorization in *CTR Section 7.02 (1)*, pending updates to the *CTR*. There are over 230 Compliance Circulars, which can be found at the CVSE website (https://cvse.ca/whatsnew.html). **Table 14** identifies seven (7) Compliance Circulars are adopted in this manual by reference, as amended from time to time. They are included in **Appendix F** for convenience and ease of reference.

Table 14: Compliance Circulars Adopted by Reference and Implications for Municipal Policy

Compliance Circular No.	Content	Implications for Municipal Policy

08/09	Permits for Extended Length Super B-Trains Hauling Wood Chips and Mill Processed Wood Residuals.	Qualifies for a municipal term permit per Section 3.7, Figure 6.
		• Authorization to travel under municipal term permit only applies to routes listed on CVSE 1012.
		• Given this is a route specific term permit, consistent with provincial policy:
		  ◦ OAH up to 4.45 m is allowed.
		  ◦ Standard term permit conditions in Section 3.1 of this manual are waived, including the peak travel time restrictions (i.e., travel is permitted 24/7).
		• Refer to the provincial Compliance Circular and CTPM Chapter 4, Section 4.5.4 for additional information, including equipment specifications and requirements.

11/12	Hydro Vac Trucks with Front Mounted House Reels to Operate Under General Authorization.	Qualifies for a municipal term permit. • Consistent with provincial policy, the front projection can exceed the municipal term permit limit of 1.0 m; • All other requirements of the municipal term permit policy in Section 3.1 apply.

Compliance Circular No.	Content	Implications for Municipal Policy
06/17	Deadline for Planned Trailer Axle Weight Reductions Extended to December 31, 2020 for Affected Vehicles.	This is a weight allowance under provincial general authorization pending an update to the BC CTR – no provincial or municipal permit is required.
01/18	Updated Changes Affecting Wide Base Single Tires (WBST).	This is a weight allowance under provincial general authorization pending an update to the BCT CTR – no provincial or municipal permit is required.
05/19	Application Process for Overweight or Oversize Fire Apparatus used for Public Fire Control Operations.	Per Section 3.7, in local road authorities that do not exempt emergency/first responders' vehicles from the requirement to obtain a permit, this Compliance Circular establishes that fire trucks qualify for a municipal term permit subject to the requirements and vehicle specifications in the Compliance Circular and *CTPM Chapter 5, Section 5.3.18*.
06/19	Length allowances are available for automatic tarping ('autotarp') devices that are intended to reduce worker injuries.	This is a length allowance under provincial general authorization – no provincial or municipal permit is required.
03/21	Weight Allowances for Commercial Trucks, Truck Tractors and Buses Powered by Electricity or Hydrogen/ Diesel Bi-Fuel, and Changes to Existing Weight Allowances for Full Size Commercial Vehicles Powered by LNG, CNG or LNG/Diesel	These weight allowances are provided under provincial Letter of Authorization (LOA) that applies on provincial highways. Extending these weight allowances to local roads in Metro Vancouver is under review. Carriers should contact individual local road authorities to determine under what conditions a given local road authority is able to accommodate the weight allowances (e.g., under a term permit).

APPENDIX A

PREFERRED ROUTE NETWORK FOR OS-OW VEHICLES AND LOADS

The routing information contained in this Appendix, including information about pre-screened routes, does not remove the responsibility and liability from carriers and drivers to verify that a vehicle / load can safely travel on a given route. It is ultimately the responsibility of the carrier and driver to ensure the move can be completed safely and without damage to public property. Under no circumstances will TransLink and / or Metro Vancouver local road authorities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.

The routing information provided herein only applies when traveling on municipal roads. The carrier and/or driver must contact the Provincial Permit Centre for routing and authorizations, including intersections of provincial and municipal roads that are under provincial jurisdiction.

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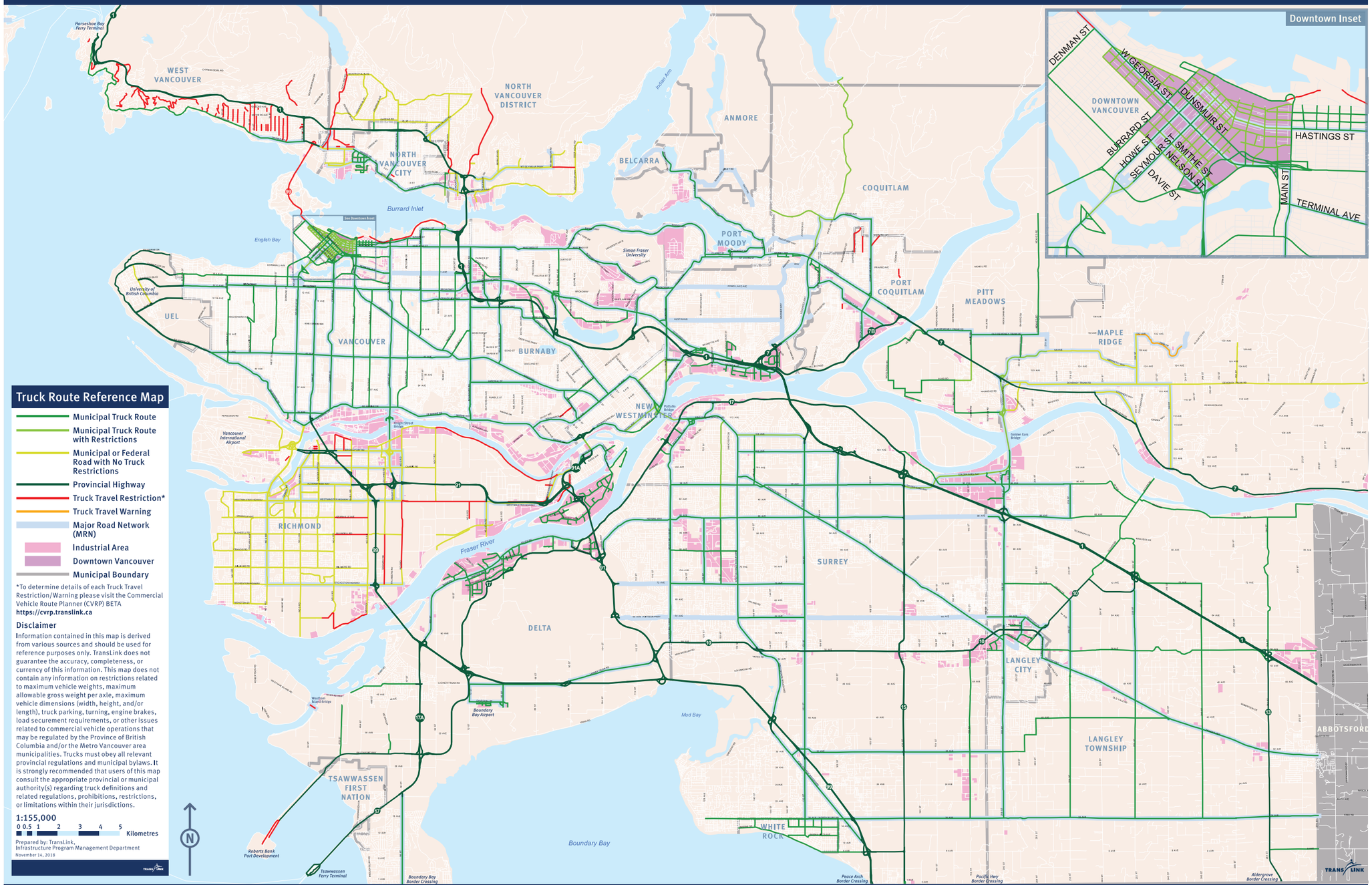
Truck Route Reference Map



Truck Route Reference Map

- Municipal Truck Route
- Municipal Truck Route with Restrictions
- Municipal or Federal Road with No Truck Restrictions
- Provincial Highway
- Truck Travel Restriction*
- Truck Travel Warning
- Major Road Network (MRN)
- Industrial Area
- Downtown Vancouver
- Municipal Boundary

*To determine details of each Truck Travel Restriction/Warning please visit the Commercial Vehicle Route Planner (CVRP) BETA
https://cvrp.translink.ca

Disclaimer

Information contained in this map is derived from various sources and should be used for reference purposes only. TransLink does not guarantee the accuracy, completeness, or currency of this information. This map does not contain any information on restrictions related to maximum vehicle weights, maximum allowable gross weight per axle, maximum vehicle dimensions (width, height, and/or length), truck parking, turning, engine brakes, load securement requirements, or other issues related to commercial vehicle operations that may be regulated by the Province of British Columbia and/or the Metro Vancouver area municipalities. Trucks must obey all relevant provincial regulations and municipal bylaws. It is strongly recommended that users of this map consult the appropriate provincial or municipal authority(s) regarding truck definitions and related regulations, prohibitions, restrictions, or limitations within their jurisdictions.

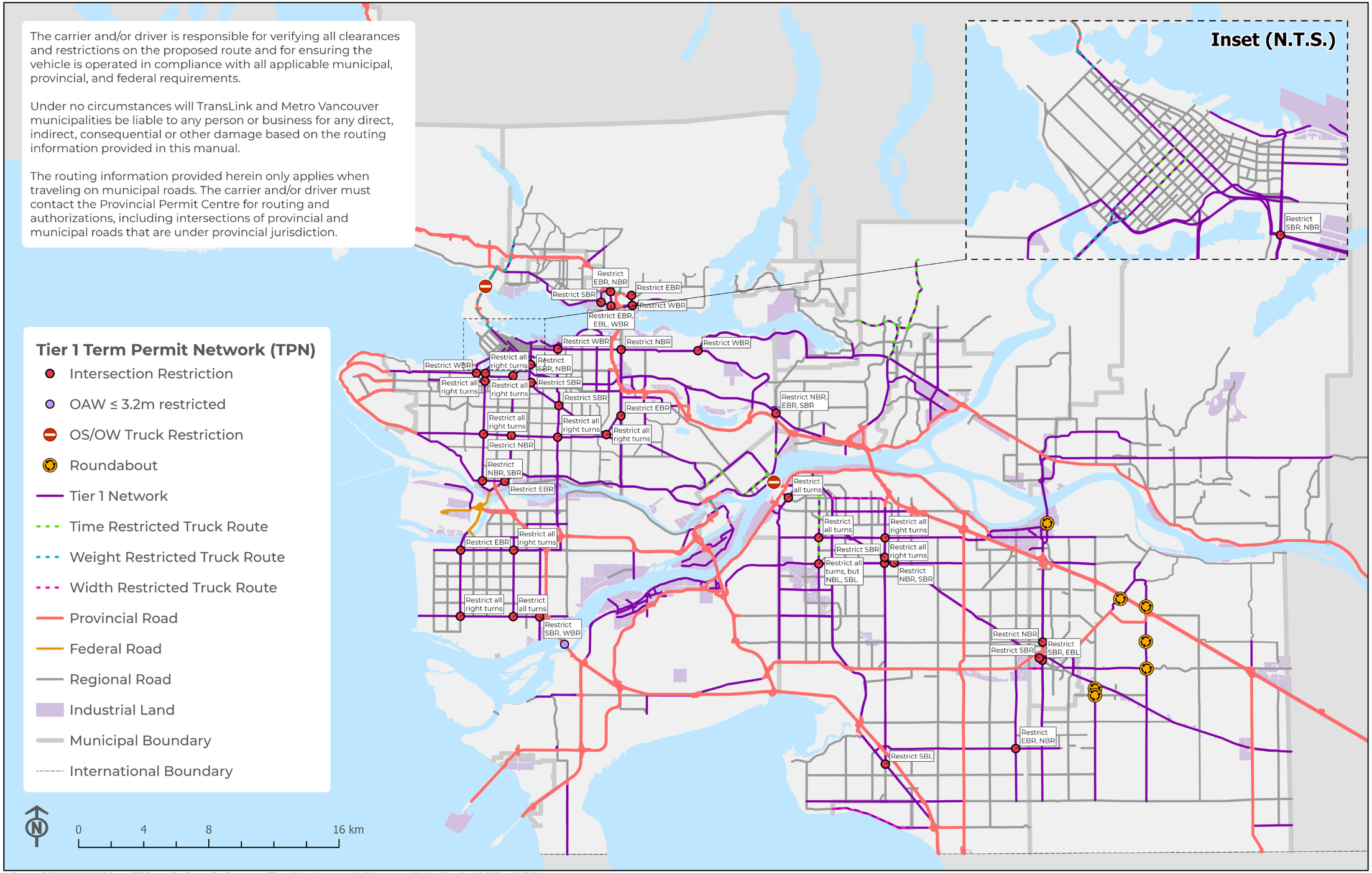
1:155,000
0 0.5 1 2 3 4 5 Kilometres

Prepared by: TransLink,
Infrastructure Program Management Department
November 14, 2018

The carrier and/or driver is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements.

Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.

The routing information provided herein only applies when traveling on municipal roads. The carrier and/or driver must contact the Provincial Permit Centre for routing and authorizations, including intersections of provincial and municipal roads that are under provincial jurisdiction.



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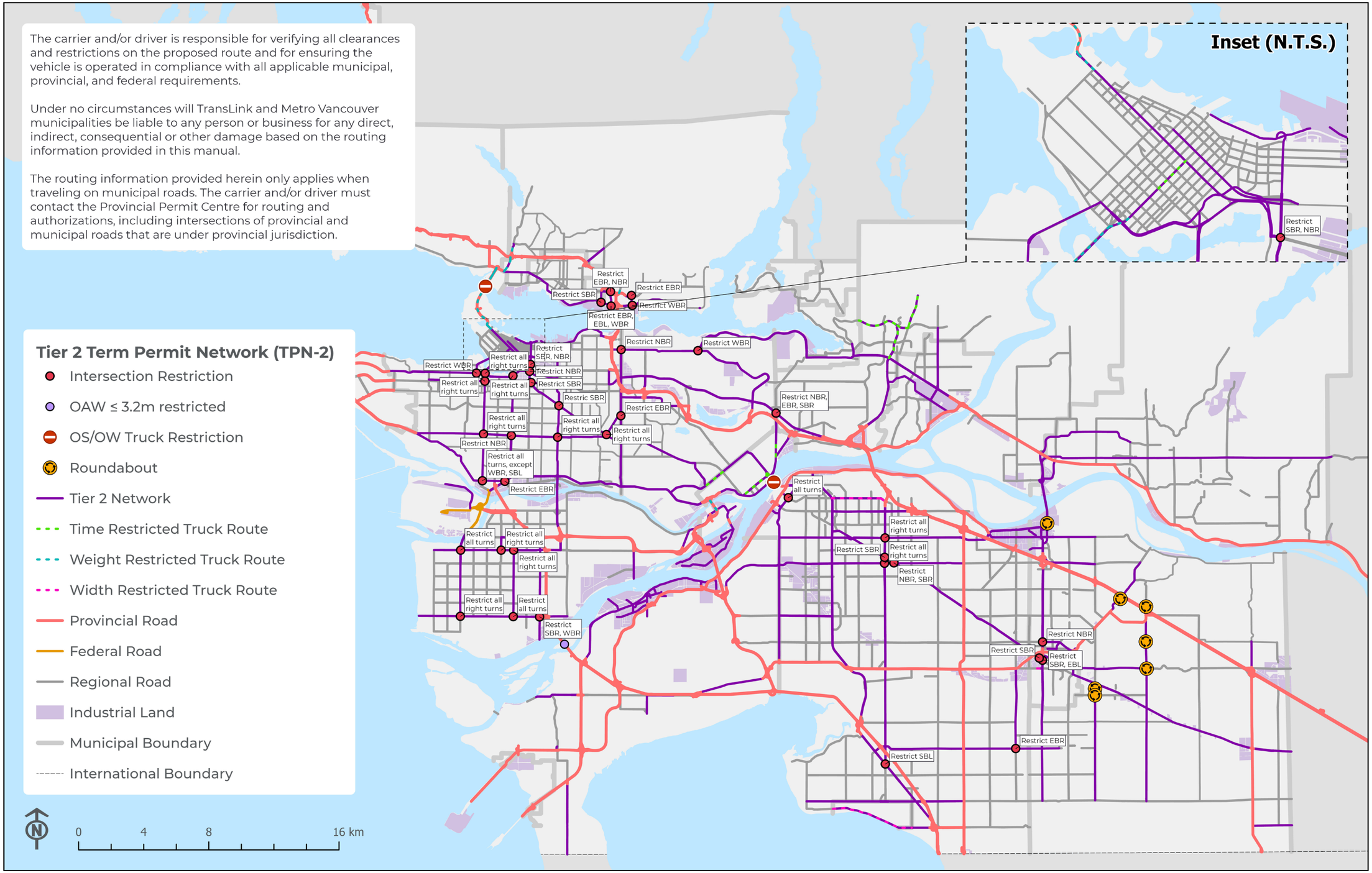
The carrier and/or driver is responsible for verifying all clearances and restrictions on the proposed route and for ensuring the vehicle is operated in compliance with all applicable municipal, provincial, and federal requirements.

Under no circumstances will TransLink and Metro Vancouver municipalities be liable to any person or business for any direct, indirect, consequential or other damage based on the routing information provided in this manual.

The routing information provided herein only applies when traveling on municipal roads. The carrier and/or driver must contact the Provincial Permit Centre for routing and authorizations, including intersections of provincial and municipal roads that are under provincial jurisdiction.



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The following restrictions apply to all vehicles moving on the truck route network. Vehicles and / or loads moving under term and single trip permits are subject to the restrictions below.

Width Restrictions:

STREETNAME	CITY	Restriction
108 Ave	Surrey	Restricted to vehicles less than 3.2 meters in width, inclusive of load.
56th Avenue	Langley City	56 Ave west of 200th Street. Consult municipality for width restrictions.
Gatensbury St	Port Moody	Not suitable for OS-OW travel.
Marine Drive	White Rock	Marine Drive will have width and weight restrictions. The restriction limits will be determined when the City complete its transportation master plan.

Weight Restrictions:

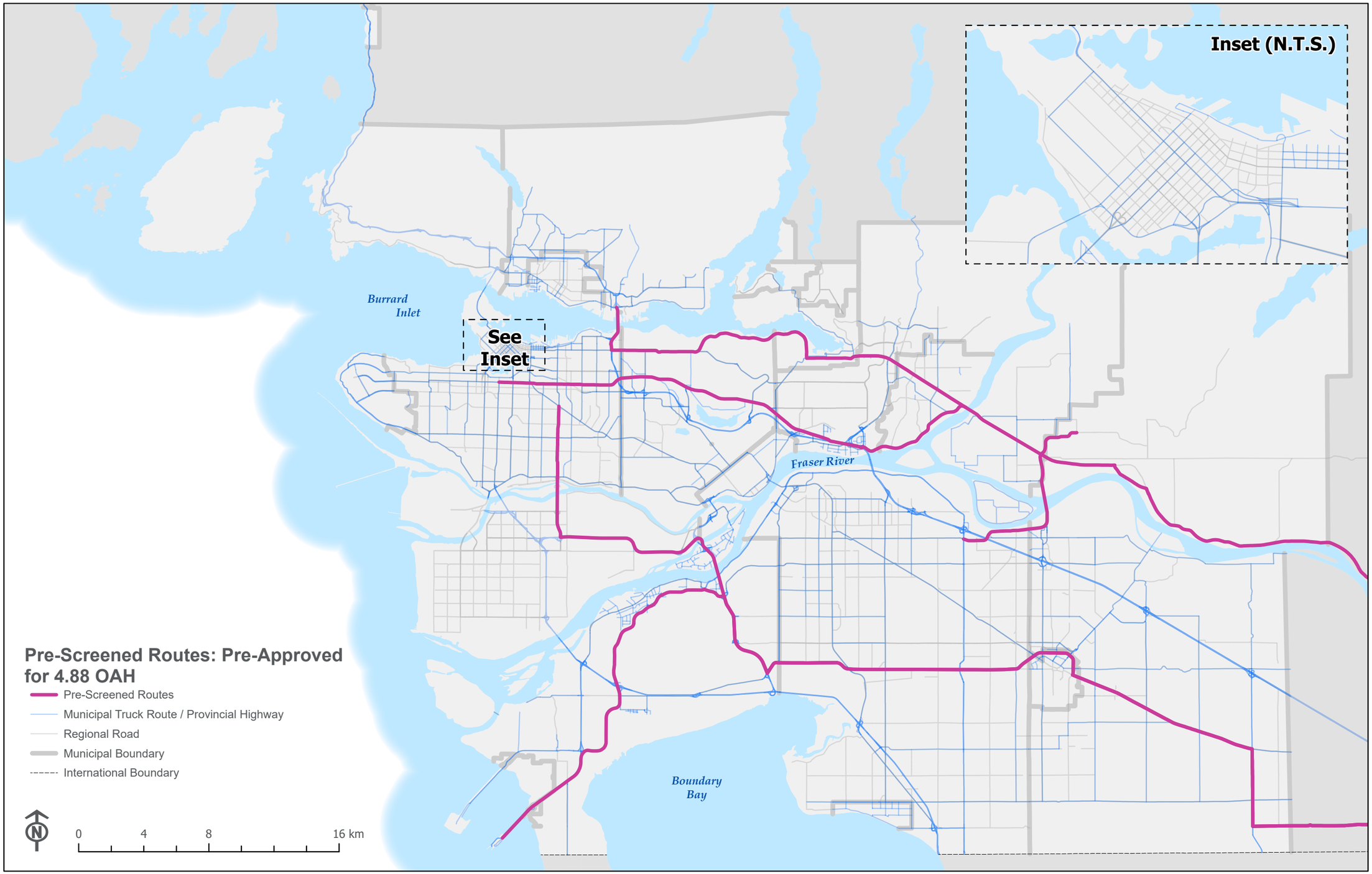
STREETNAME	CITY	Restriction
17th St West	North Vancouver District	No Vehicles with a GVW of 5,000kg or more are allowed to operate or be present on this street.
17th St West	North Vancouver District	No Vehicles with a GVW of 5,000kg or more are allowed to operate or be present on this street.
Capilano Rd	City of North Vancouver	No Vehicles with a GVW of 30,000kg or more are allowed to operate or be present on this street.
Carter Rd.	Bowen Island	No vehicles with a GVW of 5,500 kg or more permitted on the Carter Bridge.
Ford Rd	Pitt Meadows	Limited Use Truck Route (Maximum 26,100 kg) only.
Garden Ave.	North Vancouver District	No Vehicles with a GVW of 5,000kg or more are allowed to operate or be present on this street.
Gatensbury St	Port Moody	Not suitable for OS-OW travel.
Granville St Bridge	Vancouver	Vehicles with a GVW of 27,000 kg or higher are not permitted to drive a vehicle or combination of vehicles over the Granville Street Bridge.
Harris Rd	Pitt Meadows	Limited Use Truck Route (Maximum 26,100 kg) only.
Lillooet Rd	North Vancouver District	No Vehicles with a GVW of 30,000kg or more are allowed to operate or be present on this street.
Lions Gate Bridge	Vancouver	Vehicles with a GVW greater than 13,000 kg are prohibited on the Lions Gate Bridge (includes the Stanley Park Causeway).
Mountain Hwy	North Vancouver District	No Vehicles with a GVW of 10,000kg or more are allowed to operate or be present on this street in the southbound direction.
Mt Seymour Pkwy	North Vancouver District	No Vehicles with a GVW of 10,000kg or more are allowed to operate or be present on this street in the eastbound direction.
W Keith Rd	North Vancouver District	No Vehicles with a GVW of 5,000kg or more are allowed to operate or be present on this street.
Westham Island Bridge	Delta	Maximum Load Limit of 50,000 kg (50 Tonnes) and height limit of 4.38 meters
Queensborough Bridge	New Westminster	Maximum GVW of 63,500 kg; No overload weights on individual axle groups

Height Restrictions:

Available online only.
Truck Route Planner: https://translink.apps.gov.bc.ca/trp/
BC MOTI Height Clearance Tool: https://www.drivebc.ca/cvrp/?c=hct

Time Restrictions:

STREETNAME	CITY	Restriction
132 St	Surrey	Use is restricted to the hours of 7:00am to 6:00pm daily.
Braid St	New Westminster	Limited Truck Route; Only in effect between 7:00am and 9:00pm.
David Ave	Coquitlam	Time Restriction: 6:00am - 10:00pm - Monday to Friday; 8:00am - 5:00pm - Saturday; Truck Travel is not permitted on Sundays and Statutory Holidays.
Downtown Vancouver Truck Routes	Vancouver	Vehicles over 15.25m (50 feet) in length may only travel on a designated truck route in the Downtown area between 7 am and 6 pm. Outside of this time, they may travel anywhere.
E Columbia St	New Westminster	Limited Truck Route; Pattullo Bridge On-Ramp Closed to Traffic between 3pm to 6pm, Monday to Friday.
E Columbia St	New Westminster	Limited Truck Route; Only in effect between 7:00am and 9:00pm.
E Eighth Ave	New Westminster	Limited Truck Route; Only in effect between 7:00am and 9:00pm (excluding the 400 block of East Eighth Avenue).
Esplanade	City of North Vancouver	All trucks with overall width greater than 3.1m restricted to overnight travel (22:00 – 05:00) only.
Forbes Avenue	City of North Vancouver	All trucks with overall width greater than 3.1m restricted to overnight travel (22:00 – 05:00) only.
Marine Drive	City of North Vancouver	All trucks with overall width greater than 3.1m restricted to overnight travel (22:00 – 05:00) only.
Pinetree Way	Coquitlam	Time Restriction: 6:00am - 10:00pm - Monday to Friday; 8:00am - 5:00pm - Saturday; Truck Travel is not permitted on Sundays and Statutory Holidays.
Pipeline Rd	Coquitlam	Time Restriction: 6:00am - 10:00pm - Monday to Friday; 8:00am - 5:00pm - Saturday; Truck Travel is not permitted on Sundays and Statutory Holidays.
Royal Ave	New Westminster	Limited Truck Route; Only in effect between 7:00am and 9:00pm.
Southpoint Dr	Burnaby	May only be driven or operated on between the hours of 7:30am and 9:00pm on any day.
Tenth Ave	New Westminster	Limited Truck Route; Only in effect between 7:00am and 9:00pm (Eastbound Direction Only).



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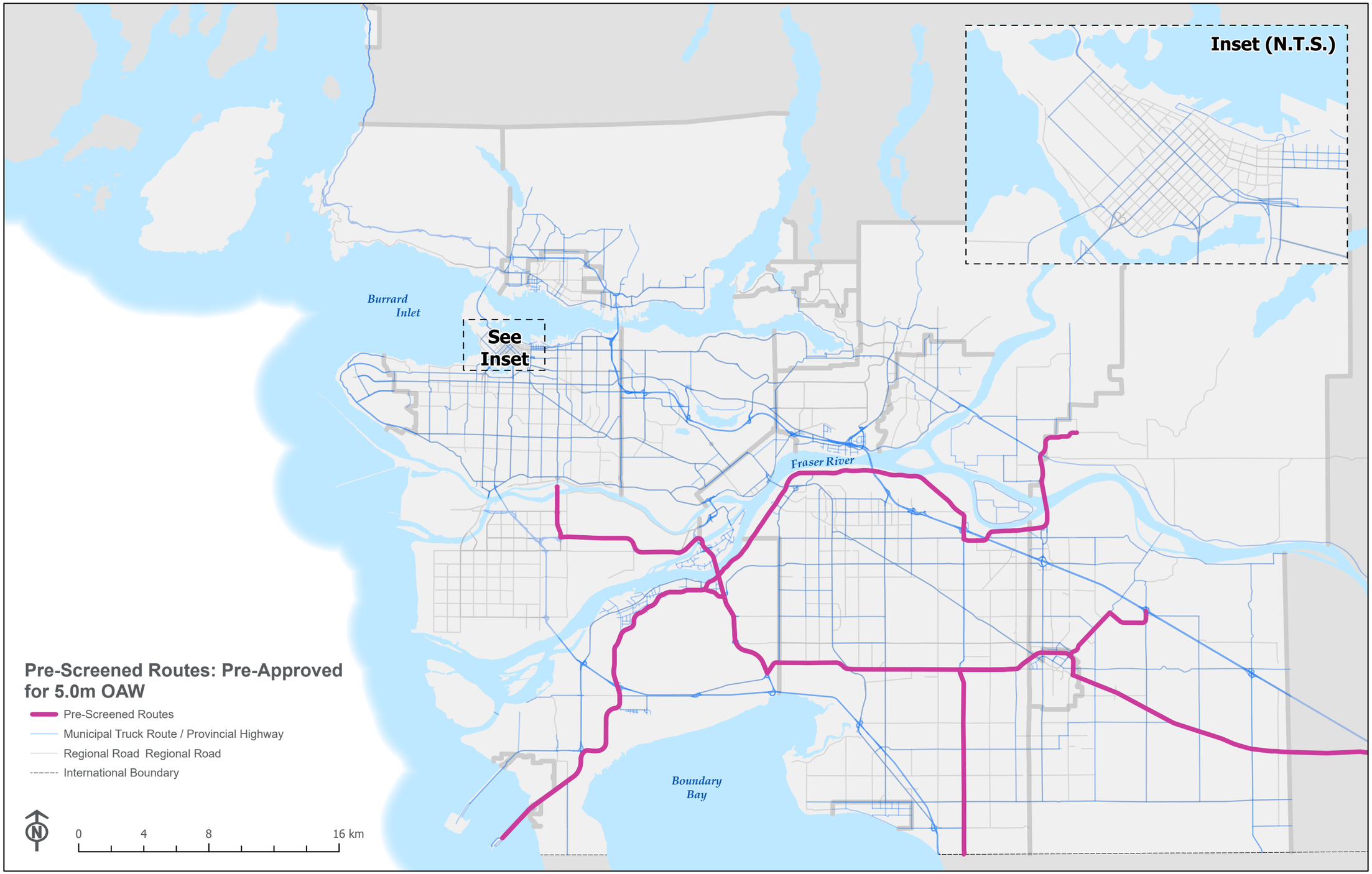

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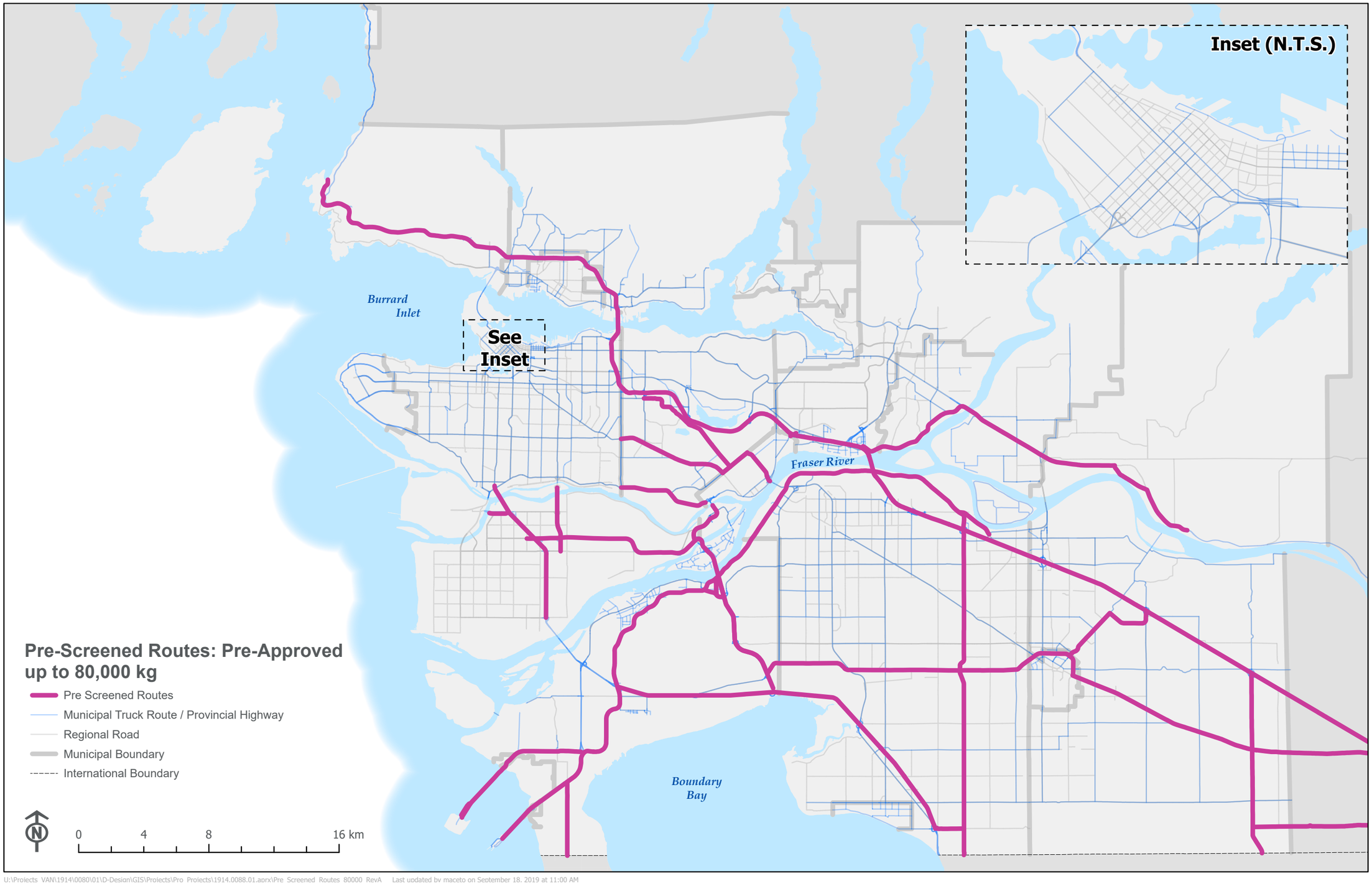

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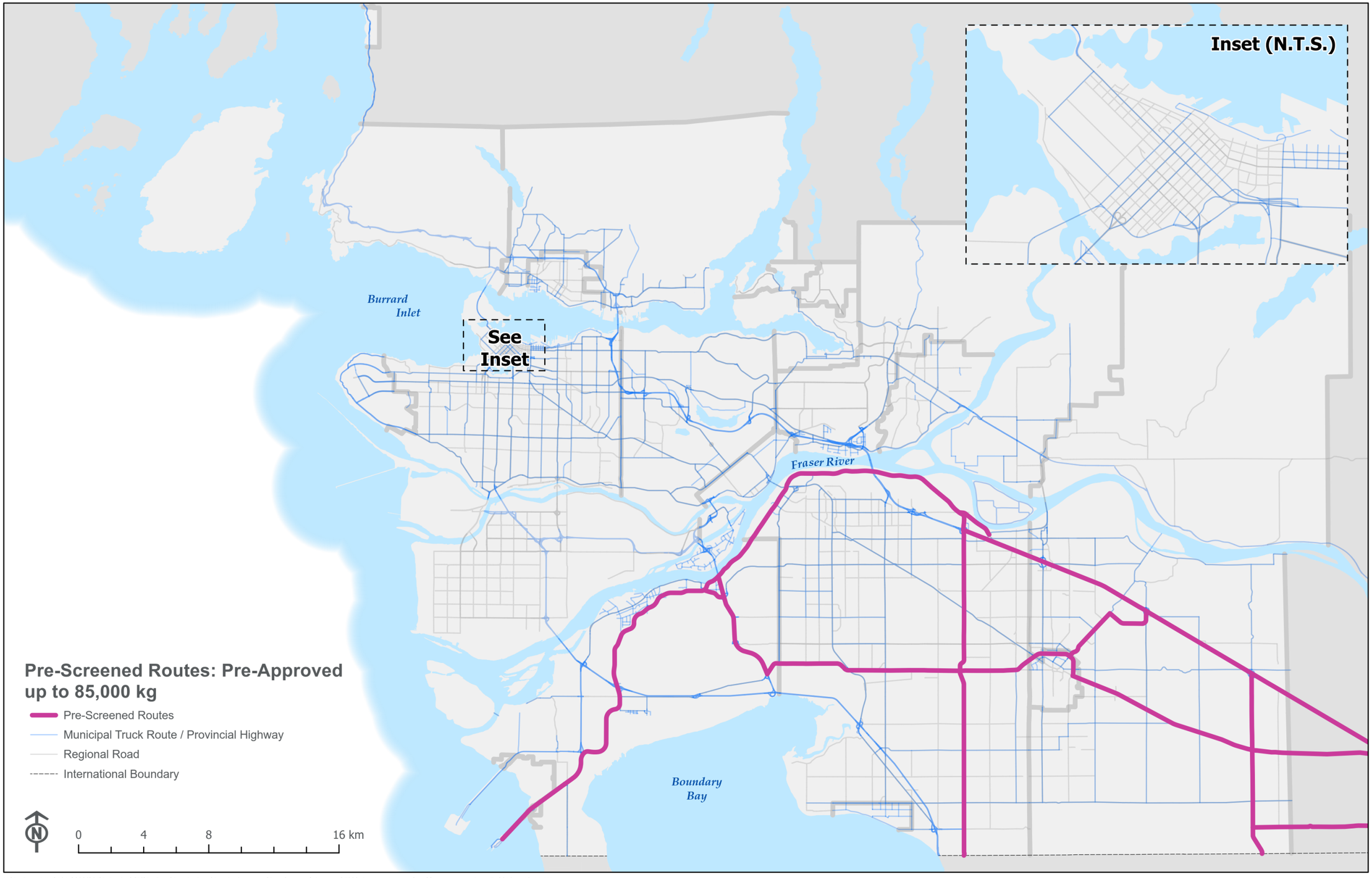

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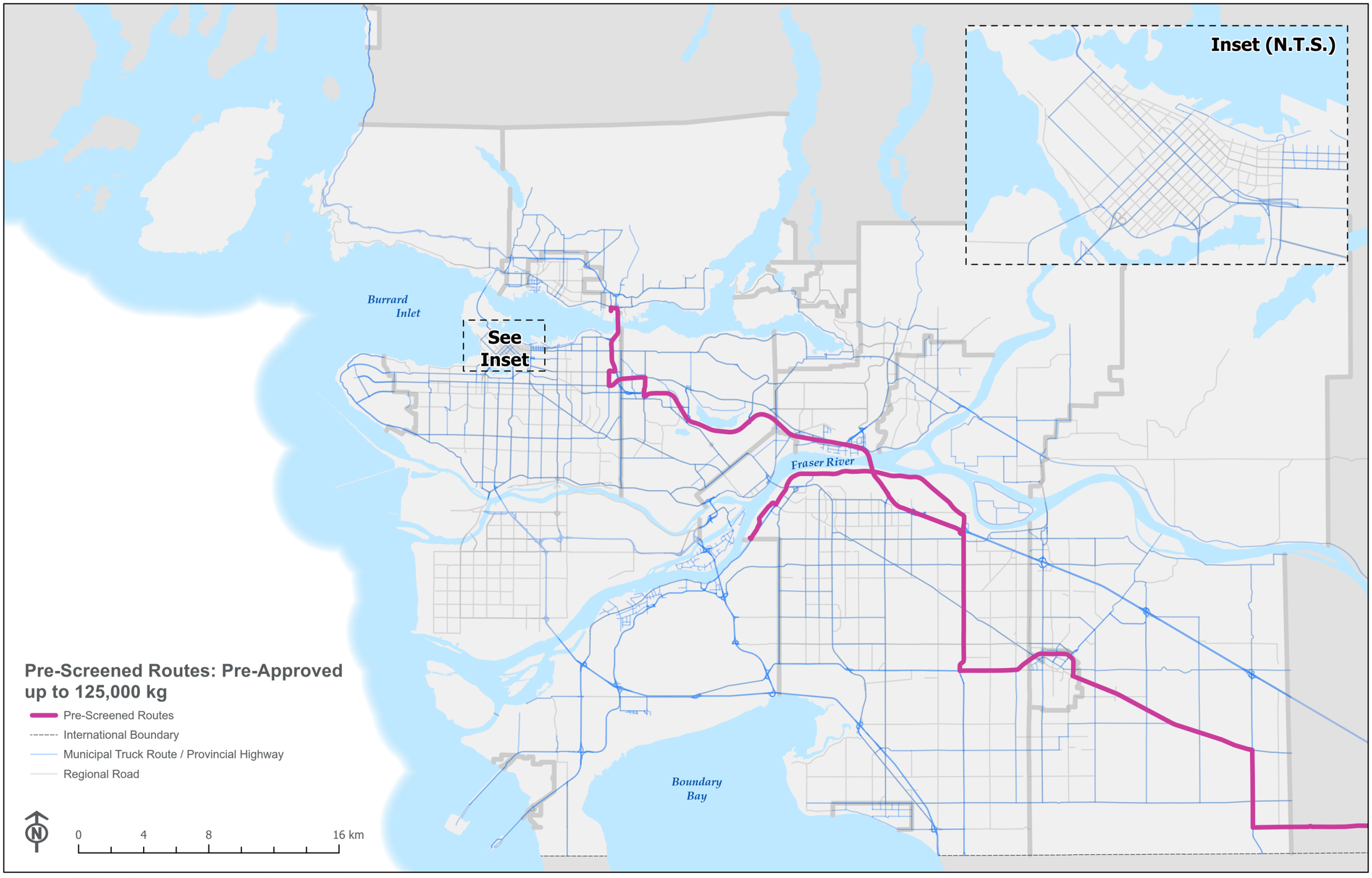

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APPENDIX B

MUNICIPAL EXCEPTIONS TO PERMIT CONDITION TABLES

Please note that term permits are only available in the following local road authorities:*

- City of Burnaby
- City of New Westminster
- City of Richmond
- City of Surrey
- City of Vancouver
- Township of Langley

Other local road authorities do not offer term permits. Single trip permits are required for the movement of all oversize vehicles and / or loads on roadways under the jurisdiction of all other local road authorities.

**Please contact local road authority for details*

VILLAGE OF BELCARRA

Condition	Requirement
Requirement to Obtain Permits	No person shall be permitted to operate a vehicle exceeding a GVW of 30,000 kilograms on any residential street within the municipal boundaries of the Village, without the prior written approval of the Superintendent of Public Works (Traffic and Parking Regulation Bylaw No. 518, 2018).

BOWEN ISLAND MUNICIPALITY

Condition	Requirement
Requirement to Obtain Permits	Bowen Island only requires permits for house moves. All other OSOW vehicles can operate without permit on the condition that: • A vehicle, or the vehicle and load together, which exceeds 3 metres in width shall be preceded and/or followed by a pilot car suitably identified with flags and/or flashing lights, as required by the Commercial Transport Act. • The driver and carrier are responsible for ensuring the vehicle is operated in compliance with all applicable municipal bylaws and provincial and federal regulations, and for verifying all clearances and restrictions on the route.

CITY OF BURNABY

Condition	Requirement
Term Permit Dimensions	‹ 3.0 m overall width (vehicle inclusive of load). ‹ 4.5 m overall height (vehicle inclusive of load). ‹ 22.2 m overall length (vehicle inclusive of load).
Single Trip Permit Conditions	‹ 24.3 m overall length (vehicle inclusive of load).
Minimum Insurance Amount	$5 million

CITY OF DELTA

Condition	Requirement
Travel Time Windows	Afternoon peak hour restrictions are from 14:30 to 18:00 (weekdays) to accommodate school traffic.
House Moves, Manufactured Homes, Modular Buildings, & Mobile Homes	Delta police are to be contacted prior to entering Delta (604-940-5013 – Watch Commander). The structure cannot be used for any purpose on any other site in Delta without approval from Delta.

LANGLEY CITY

Condition	Requirement
Long Combination Vehicles (LCVs)	Travel time exclusion window is 06:00 to 09:00 and 15:00 to 19:00.
Compliance Circular 08/09 Implications for Municipal Policy	Pending review, this particular vehicle combination is not eligible for term permits. Peak travel time restriction may be waived for Extended Length B-Trains under single trip permit.

TOWNSHIP OF LANGLEY

Condition	Requirement
Travel Time Windows	Unless expressly permitted by the conditions of a permit issued by the Engineer, no person shall drive or operate an oversize vehicle or load on a Sunday or Statutory Holiday
House moves, manufactured homes, modular buildings, & mobile homes	Municipal building permits and / or demolition permits and / or site inspections may be required before a transport permit can be issued. Other stipulations may also apply. This list of municipal requirements is not exhaustive. Please contact Township of Langley for further information about all applicable requirements.

CITY OF MAPLE RIDGE

Condition	Requirement
Term Permit Dimensions	‹ 3.0 m overall width (vehicle inclusive of load).
Single Trip Permit Conditions	Single trip permits are issued for a specific date and time range: • At the discretion of the municipal engineer: ◦ the permit validity period can be more than 24 hours; ◦ a permit can be issued to encompass multiple trips for multiple vehicles / loads. The vehicles / loads must fit within the same weight and dimension parameters, have the same trip origin/destination, use the same route, and meet all other conditions specified on the permit. • If possible, drivers / carriers are encouraged to obtain permits several weeks in advance of the proposed move date.
House moves, manufactured homes, modular buildings, & mobile homes	Municipal building permits and / or demolition permits and / or site inspections may be required before a transport permit can be issued. Other stipulations may also apply. This list of municipal requirements is not exhaustive. Please contact City of Maple Ridge for further information about all applicable requirements.

CITY OF NORTH VANCOUVER

Condition	Requirement

Term Permit Travel Conditions	Travel times in the City of North Vancouver are as follows:
	• Monday to Friday: Travel is permitted 09:00 to 20:00, except as noted below:
	  ◦ No travel permitted 15:00 to 18:00;
	  ◦ No travel permitted 20:00 to 09:00 the following day.
	• Saturday: Travel permitted 09:00 to 15:00
	• Sunday and Statutory Holidays: No travel permitted all day
	Maximum overall width (OAW) is 3.0 m (vehicle inclusive of load) for vehicles and / or loads using Marine Drive and Esplanade under a term permit. If the vehicle and / or load exceeds 2.9 m in width (vehicle inclusive of load), 2 pilot cars may be imposed as a condition of travel.

Convoying Restrictions	Convoy restrictions may be imposed on truck routes (Esplanade, Lonsdale, Marine Drive) in the case where pedestrian crossing traffic becomes delayed. Convoying loads will need to demonstrate the ability to pass through green interval traffic signal splits.

DISTRICT OF NORTH VANCOUVER

Condition	Requirement
Term Permit Travel Conditions	Travel is not permitted during the following times: 07:00 to 09:00, 11:00 to 13:00, and 15:30 to 18:30.
Compliance Circular 08/09 Implications for Municipal Policy	Pending review, peak travel time restrictions (as described for Term Permit Travel Conditions above), apply for Extended Length B-Trains.

CITY OF PITT MEADOWS

Condition	Requirement
Minimum Insurance Amount	Minimum $5 million third-party liability insurance is required for all oversize-overweight vehicle permits. Additionally, the City of Pitt Meadows must be named as an insured on the insurance certificate. A bond/security in the amount of $5,000 is also required. The City of Pitt Meadows will review these requirements in the future with a view towards aligning more closely with regional policies.
Submitting Permit Applications	A permit application must be submitted a minimum of 72 hours before the proposed move date.

CITY OF PORT COQUITLAM

Condition	Requirement
Term Permit Validity	Term Permits can be issued for up to four (4) months.
Condition: House moves, manufactured homes, modular buildings, & mobile	Municipal building permits and / or demolition permits and / or site inspections may be required before a transport permit can be issued. Other stipulations may also apply. This list of municipal requirements is not exhaustive. Please contact City of Port Coquitlam for further information about all applicable requirements.

CITY OF RICHMOND

Condition	Requirement
Term Permit Dimensions	‹ 3.0 m overall width (vehicle inclusive of load). ‹ 4.15 m overall height (vehicle inclusive of load). ‹ 23.0 m overall length (vehicle inclusive of load).

CITY OF SURREY

Condition	Requirement
Permit Conditions for Width (Single Trip and Term)	The City of Surrey may, in the future, reduce the term permit eligible overall vehicle width (inclusive of the load) and/or add a pilot car requirement below OAW 3.2 m (inclusive of the load) pending the outcome of a regional study to review how OS-OW vehicles operate in an urban environment with narrow lane widths.
Convoying Restrictions	Convoying restrictions may be imposed as a Permit Condition if the movement of a load is determined to negatively impact the road network. This will be evaluated on a case-by-case basis.
LCVs	Additional time restrictions are in effect for certain locations. Permit holder may be required to add or modify existing signage. In some cases, only Rocky Mountain Doubles may be permitted to travel.
Extended Length B-Train Term Permit Eligibility and Peak Period Travel Restrictions **(RP3M Section 3.7, Figure 6 and CTPM Chapter 4, Section 4.5.4)**	Consistent with the regional policy, this vehicle combination is term permit eligible and exempt from peak period restrictions, noting that the City of Surrey: • waives the peak period restriction only on the routes specified on Form CVSE1012 as of November 2019; • reserves the right to impose peak period restrictions on any additional routes within the City's jurisdiction that are added to Form CVSE1012 in the future; • may retroactively impose peak period restrictions on any routes within the City's jurisdiction that are currently listed on Form CVSE1012 if traffic volumes increase, surrounding land use changes, or safety concerns are identified.
House moves, manufactured homes, modular buildings, & mobile homes	Municipal building permits and / or demolition permits and / or site inspections may be required before a transport permit can be issued. Other stipulations may also apply. This list of municipal requirements is not exhaustive. Please contact City of Surrey for further information about all applicable requirements.

CITY OF VANCOUVER

Condition	Requirement
Travel Time Windows	Peak period travel restrictions are 07:00 to 10:00 and 15:00 to 19:00. Overnight travel time window is 02:00 to 05:00. City of Vancouver is reviewing this policy to align more closely with the regional overnight travel time window in the manual.
Traffic Control	Conditions where the vehicle's travel is not consistent with regulations (e.g., travel in an oncoming traffic lane) or requires specialized traffic control should include Vancouver Police Department (VPD).
Bridge Formula	Bridge Formula does not apply. City of Vancouver is reviewing the application of Bridge Formula to align more closely with the regional policy in the manual.
House moves, manufactured homes, modular buildings, & mobile homes	Municipal building permits and / or demolition permits and / or site inspections may be required before a transport permit can be issued. Other stipulations may also apply, including a police escort. This list of municipal requirements is not exhaustive. Please contact City of Vancouver for further information about all applicable requirements.

DISTRICT OF WEST VANCOUVER

Condition	Requirement
Single Trip Permit Conditions	Municipal single trip OS-OW permits are valid up to three (3) days. • The exemption is valid only while conducting work for the District of West Vancouver, or for specific route (streets) and for a limited period of time. • A copy of the exemption must be kept with the specified vehicle. • Prior to each trip the driver must check vehicle brakes before travelling on a restricted route. • Peak period restriction: ◦ 8:30 to 09:30 and 15:00 to 18:00 Monday to Friday; and ◦ Sunday (all day).
House Moves	Refundable deposit of $5,000.00 is required. • Route needs to be analyzed by our staff (high voltage wire lines, and other geometric conditions – cul-de-dac and narrow streets, curves, fire hydrants etc.). • Pilot vehicle is required ahead of load. • Travel during daylight hours only. • No travel during peak hours 08:00 to 09:00 and 15:00 – 17:00.

CITY OF WHITE ROCK

Condition	Requirement
Term Permit Validity	Term Permits can be issued for up to six (6) months.
House moves, manufactured homes, modular buildings, & mobile homes	Municipal building permits and / or demolition permits and / or site inspections may be required before a transport permit can be issued. Other stipulations may also apply. This list of municipal requirements is not exhaustive. Please contact City of White Rock for further information about all applicable requirements.

UNIVERSITY ENDOWMENT LANDS/UBC AREA

Condition	Requirement
Term Permit Conditions	Please contact UBC directly to confirm routing and other requirements if the use of UBC-area local roads which are not part of the Tier 1 and Tier 2 Term Permit Networks is required. Contact: info.planning@ubc.ca Please provide the following information: 1. Vehicle/load dimensions 2. Date and time of travel 3. Origin and/or destination information 4. Proposed route to the destination from the term permit networks and/or from the origin to the term permit networks. 5. Your contact information, including company name, email, and phone number.

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APPENDIX C

SAMPLE ROADWAY USE PERMIT APPLICATION FORM FOR THE TRANSPORT OF OVERSIZE AND / OR OVERWEIGHT VEHICLES AND /OR LOADS

This appendix provides a sample roadway use permit application form for the transport of OS-OW vehicles and / or loads. The intent of this appendix is to indicate the types of data local road authorities should expect applicants to provide. Actual application forms may differ between local road authorities.

Roadway Use Permit Application Form
Transport of Oversize and / or Overweight Vehicles and / or Loads

1. Applicant Information			
Name of Applicant:			
Address:			
Phone:		Email:	

2. Application Type

Application Type:

☐Term Permit
☐Single Trip Permit
☐Single Trip Permit – Multiple loads with the same dimension and weight parameters

Are you transporting a non-reducible load?
☐Yes ☐No

3. Vehicle Information			
Registered Owner:		Make:	
Year:		Model:	
License Plate:		Colour:	

Vehicle & Load Description:
(e.g. Vehicle: tractor and lowbed semi-trailer, tractor and flat deck semi-trailer, single unit truck, mobile crane etc., Load/ Commodity: CAT 9 bulldozer, structural steel, mobile home or load not applicable, travelling empty etc.)

A vehicle line drawing must be included as an attachment to this Roadway Use Permit Application Form.
Vehicle line drawing included: ☐Yes☐ No

Vehicle Dimensions:

Overall Width (OAW)	
Overall Height (OAH)	
Overall Length (OAL)	

3. Vehicle Information (continued)

Gross Vehicle Weight (GVW), Axle Weight and Spacings:

Axle Configuration:_____

Gross Vehicle Weight (GVW): _____kg

	Axle 1	Axle 2	Axle 3	Axle 4	Axle 5	Axle 6	Axle 7	Axle 8	Axle 9	Axle 10	Axle 11	Axle 12	Axle 13
Axle group													
Axle weight (kg)													
Axle spacing (m)													
Number of tires													
Tire width (mm)													

S1	Steering Axle 1	D1	Drive Axle 1	J1	Jeep Axle 1	T1	Trailer Axle 1	B1	Booster Axle 1
S2	Steering Axle 2	D2	Drive Axle 2	J2	Jeep Axle 2	T2	Trailer Axle 2	B2	Booster Axle 2
		D3	Drive Axle 3	J3	Jeep Axle 3	T3	Trailer Axle 3	B3	Booster Axle 3

Example:

Vehicle Description: 13-Axle Lowbed

Axle Configuration: Single Steer + Tridem Drive + Tridem Jeep + Tridem Semi-Trailer + Tridem Booster

Gross Vehicle Weight: 115,700 kg

	Axle 1	Axle 2	Axle 3	Axle 4	Axle 5	Axle 6	Axle 7	Axle 8	Axle 9	Axle 10	Axle 11	Axle 12	Axle 13
Axle group	S1	D1	D2	D3	J1	J2	J3	T1	T2	T3	B1	B2	B3
Axle weight (kg)	7,700	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000
Axle spacing (m)	5.28	1.37	1.37	4.27	1.52	1.52	9.75	1.52	1.52	4.27	1.52	1.52	
Number of tires	2	4	4	4	4	4	4	4	4	4	4	4	4
Tire width (mm)	385	285	285	285	285	285	285	285	285	285	285	285	285

4. Insurance

Proof of Insurance Enclosed with Application:

☐ Yes ☐ No

Note: Applicants for oversize / overweight permits must submit evidence of vehicle liability insurance, minimum $3,000,000.00

5. Trip Details

Estimated Hours of travel:		Date of Travel:	
Time of travel:		Provincial Permit No.:	
Origin Address:		Destination Address:	

Indicate all routes you wish to use:

Road	Municipal / Provincial	Truck Route
		☐Yes☐ No
		☐Yes☐ No
		☐Yes☐ No
		☐Yes☐ No
		☐Yes☐ No

A route map must be included as an attachment to this Roadway Use Permit Application Form.
Route map attached: ☐Yes☐ No

6. Applicable Municipalities

Please check all municipalities in which you will travel (municipal roads only):

☐Anmore
☐Belcarra
☐Bowen Island
☐Burnaby
☐City of Langley
☐City of North Vancouver
☐Coquitlam
☐Delta
☐District of North Vancouver
☐District of West Vancouver
☐Lions Bay
☐Maple Ridge
☐New Westminster
☐Pitt Meadows
☐Port Coquitlam
☐Port Moody
☐Richmond
☐Surrey
☐Township of Langley
☐Vancouver
☐White Rock
☐Tsawwassen First Nation

7. Travel Conditions and Permit Requirements

Indicate all travel conditions and permit requirements that apply, based on RP3M tables:

☐Route Survey	☐Bridge Overload Assessment	☐Notify / Contact Utilities	☐Traffic Management Plan
☐Third Party Engineer Review	☐Municipal Review	☐Overnight travel Only	☐Peak Period Restriction
☐Weekend / Holiday Restriction	☐Extraordinary Load Approval	☐Flags / Lamps Required	☐ Traffic Control
☐Convoying Restrictions	☐Signage	☐Other (please specify):	
☐Pilot Car(s) (please specify):			

Note: All signs, flags, lights and pilot cars to conform to Division 8 of the Provincial Transport Act and Regulations

8. Applicant Signature

Applicant Signature _____ Print Name _____ Date _____

APPENDIX D

PROVINCIAL T-FORMS

The following has been reproduced from the CVSE as amended from time to time, for convenience and ease of reference. Please consult provincial policy to ensure the most up to date requirements. More information available at: http://www.th.gov.bc.ca/cvse/whatsnew.html.

Commercial Transport	CVSE1000	**General Permit Conditions to 4.4 m OAW (October 2017) (Guide to Using the CVSE1000)** • **Category A: Term & Single Trip Permits to 3.2 m Wide*** • **Category B: Term & Single Trip Permits to 3.8 m Wide*** • **Category C: Single Trip Permits to 4.4 m Wide*** ***See form for height and length limits**
Permit Conditions by Size	CVSE1000L	Supplement for Logs
Permit Conditions by Size	CVSE1000S	Supplement for Structures
Permit Conditions by Size	CVSE1001	Routes Pre-Approved for 5.0 m OAW (October 2017)
Permit Conditions by Size	CVSE1002	Conditions up to 6.0 m OAW in the Peace Region (October 2017)
Permit Conditions by Size	CVSE1003	Conditions for Structures up to 6.0 m OAW in the Peace Region (October 2017)
Other Permit Attachment Forms	CVSE1010	East-West Overheight Corridors in the Lower Mainland
Other Permit Attachment Forms	CVSE1011	Highways with Restrictive Load Limits
Other Permit Attachment Forms	CVSE1012	Routes for Wood Chip & Residual
Other Permit Attachment Forms	CVSE1013	Restricted Routes for Wide Bunks Hauling Beetle Killed Wood (October 2017)
Other Permit Attachment Forms	CVSE1014	LCV Operating Conditions & Routes (October 2017)
Miscellaneous CVSE Operational Forms	CVSE1020	NRCVP Exemption for Repairs
Miscellaneous CVSE Operational Forms	CVSE1021	Rig Move Worksheet
Miscellaneous CVSE Operational Forms	CVSE1022	Oversize Overweight Authorization (for Indian War Canoes, Parade Floats, etc)
Miscellaneous CVSE Operational Forms	CVSE1040	Firetruck Application for Municipalities

Extraordinary Load Forms	CVSE1049	Extraordinary Load Approval Request
Extraordinary Load Forms	CVSE1052	District Authorizations & Notifications for Very Large Loads (October 2017) List of Contacts for Use with Form CVSE1052 (January 4, 2019) Information for Authorities Signing the CVSE1052
Extraordinary Load Forms	CVSE1053	Agreement to Comply with Bridge Crossing Conditions
Commercial Transport	CVSE1054	Addendum to CVSE 1050 to Add Bridge Crossing Supervision Requirements
Miscellaneous CVSE Operational Forms	CVSE1060	Weight Check
Miscellaneous CVSE Operational Forms	CVSE1061	Certificate of Weight of Motor Vehicle
Other Permit Attachment Forms	CVSE1070	NEW MV4000 - Permit Scope and Limitations

APPENDIX E

METRO VANCOUVER MUNICIPAL OS-OW PERMIT FEES (2019/2020)

This appendix summarizes 2019 permit fees (2020 where information was available) for Metro Vancouver local road authorities. Permit Fee information was not available for the following local governments and First Nations:

- Village of Anmore
- City of Delta
- Electoral Area A
- Village of Lions Bay
- District of North Vancouver
- City of Port Moody
- Tsawwassen First Nation
- District of West Vancouver

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Local road authority	Source	Oversize Permit Fee		Overweight Permit Fee	
		Oversize Term Permit Fee	Oversize Single Trip Permit Fee	Overweight Term Permit Fee	Overweight Single Trip Permit Fee
Province of British Columbia		$30 If OS and OW, the fee is the OW single trip fee plus $15	$15	For each term permit not exceeding one month: $100*	According to the table: $0.95 - $21.40 (depending on weight) per 10 km of operation or fraction thereof (min $25)
Village of Belcarra	Traffic and Parking Regulation Bylaw No. 518, 2018	–	–	–	–
Bowen Island Municipality	Application for Permit to Operate a Restricted Route Vehicle(s) Within a Municipal Right-of-Way and/or Property	Application Fee: $25 Permit Fee: $100 / axle			
City of Burnaby	City of Burnaby Website	$215	$31.75	–	–
City of Coquitlam	Bylaw No. 4896, 2018 Schedule 'A'	Application Fee: $50			
City of Langley	Highway Use Permit Oversize/ Overweight Vehicle	Application Fee: $100 + GST			
Township of Langley	Highway and Traffic Bylaw 2010 No. 4758 Schedule 'B'	Application Fee: $25 Permit Fee: $25		Application Fee: $25 Permit Fee: ≤ 2,000 kg - $75 2,001 – 5,001 kg - $150 5,000 – 10,000 kg - $325 10,000 – 15,000 kg - $575 › 15,000 kg - $1,000	
City of Maple Ridge	Highway and Traffic Bylaw No. 6704-2009	–	$25	–	$100
City of New Westminster	City of New Westminster Website	$200	$50	$200	$50
City of North Vancouver		$80 + GST ($4.00)			
City of Pitt Meadows	Highway and Traffic Bylaw No. 2260	Application Fee: $100			
City of Port Coquitlam	Fees and Charges Bylaw No. 3892	$50			
City of Richmond	Oversize/Overweight Single Trip Permit Application	$100	$25	$100	$25
City of Surrey	Highway, Traffic, and Parking Regulation - Bylaw No. 13007 Schedule B	$330	$70	$330	$70
City of Vancouver	City of Vancouver Website	$321.57	$33.71	$321.57	$33.71
City of White Rock	Street and Traffic Bylaw, 1999, No. 1529	$100 to authorize › 1 trip $50 to authorize a Highway Use Permit	$10 to authorize › 1 trip $50 to authorize a Highway Use Permit	$10 to authorize › 1 trip $50 to authorize a Highway Use Permit	$100 to authorize › 1 trip $50 to authorize a Highway Use Permit

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APPENDIX F

COMPLIANCE CIRCULARS

The following Compliance Circulars address allowances granted by the Province under the general authorization in Section 7.02 (1) of the Commercial Transport Regulations (CTR), pending updates to the CTR.

BRITISH COLUMBIA
The Best Place on Earth

COMPLIANCE CIRCULAR

NO. 08/09

October 30, 2009

SUBJECT: NEW PERMITS FOR EXTENDED LENGTH SUPER B-TRAINS HAULING WOOD CHIPS AND MILL PROCESSED WOOD RESIDUALS (Correction: Box Length Limit is 23 m not 25 m)

Managers, Victoria	Carrier Safety Inspectors	Driver Services Centres
Motor Vehicle Inspectors	Government Agents	MOT (Director, Chair
Passenger Transportation Board	Appointed Agents	Transportation Policy)
Deputy Director, CVSE	Trucking Industry	Supt of Motor Vehicles
Regional CVSE Managers	Law Enforcement Agencies	
Managers, Licensing	Commercial Transport Insp.	
ADM (Compliance and Consumer Services)	(Inspection Stations)	
	Passenger Transportation Branch	

PURPOSE OF CIRCULAR

This new permit will allow wood chips haulers to use Extended Length Super B-trains with an overall length up to a maximum 27.5 m, a maximum overall box length up to 23 m, and a maximum overall height up to 4.45 m to haul low bulk density wood chips and mill processed wood residuals such as saw dusts and hog fuels. The added volume will compensate for hauling any wood chips and mill processed wood residuals which are extremely dry and light (such as beetle-killed wood chips), and help achieve full legal axle weights.

This initiative will increase trucking productivity and reduce greenhouse gas emissions, when compared with hauling the same amount of wood chips using the existing Super B-train configurations.

From a vehicle dynamic and safety perspective, the new configuration exhibits acceptable vehicle dynamic performance and complies with established commercial vehicle performance thresholds. Because the Extended Length Super B-trains require more room to turn compared with normal Super B-Trains, permits will be restricted to Ministry approved routes only.

BACKGROUND

The pulp and paper industry and independent wood chips haulers have approached the Commercial Vehicle Safety and Enforcement Branch (CVSE) to solve their trucking productivity problem. In many instances, the maximum allowable axle weights for their Super B-Trains were not realized when hauling dry and low bulk density wood chips, especially when hauling beetle-killed wood chips.

CVSE has explored many options and decided that the safest and most practical approach would be to lengthen the allowable box length of the trailers, and increase the allowable height of the trailers in the Super B-Trains. The added volume, approximately +15% over the existing B-Train

combinations, would allow the new Extended Length Super B-Trains to reach the full legal axle weight targets.

Operators of the “Extended Length Super B-Trains” are required to obtain the necessary Over-Dimension Permit before they can operate the lengthened combination on approved routes.

Note: Only tandem or tridem drive Super B-Trains are eligible for this permit. This means the first trailer in a B-Train must be equipped with a tridem axle group, and the second fifthwheel must be placed within the suspension spread of the tridem axle group of the first trailer.

Further dimensional restrictions of the permits, which differ from the existing regulations on legal B-Trains as shown in Appendix G of the Commercial Transport Regulations, are:

- The allowable overall length is increased from a maximum of 25 m to 27.5 m;
- The allowable box length is increased from a maximum of 20 m to 23 m; and
- The maximum overall height is increased from 4.3 m to 4.45 m, provided that only the trailer’s tarp and wood chips may occupy the space over 4.3 m and the actual trailer sidewall height must be no more than 4.15 m.

Under the current section 7.05 (2) of the Commercial Transport Regulations, tarp roll stops are allowed to be positioned up to a height of 4.3 m, and the sidewall of the trailer cannot exceed 4.15 m. The additional space allowances prescribed in this permit - from 4.3 m to 4.45 m - was intended for the added volume of wood chips and the tarp itself. No physical hardware, other than just wood chips and tarp, should occupy this space.

Also note that the vehicle height clearance for any on-road structure is always the driver’s responsibility. Please obey all posted signs, especially those respecting height restrictions.

T-30 Form - Approved Routes

A new T-Form (**T-30**) has been created to outline all the approved routes for the Extended Length Super B-Trains and can be located on our website at:

http://www.th.gov.bc.ca/cvse/ctm/Forms/forms.htm

To obtain a Letter of Authorization please contact Jackie Hucal at (250) 953-4061, or jackie.hucal@gov.bc.ca. After receiving the Letter of Authorization, an Over-dimension Permit can be purchased from the Provincial Permit Centre at 1-800-559-9688.

Greg Gilks, P. Eng.,
Director, Commercial Vehicle Safety and Enforcement Branch
Ministry of Transportation and Infrastructure

Ministry of Transportation and Infrastructure

COMPLIANCE CIRCULAR

NO. 11/12

September 11, 2012

SUBJECT: Hydro Vac Trucks with Front Mounted Hose Reels to Operate Under General Authorization

Managers, Victoria	Passenger Transportation Board	Commercial Transport Insp.
Regional CVSE Managers	Passenger Transportation Branch	(Inspection Stations)
Area Vehicle Inspectors	Carrier Safety Inspectors	ICBC
Deputy Director, CVSE	Government Agents	Trucking Industry
ADM, Highways Department	Law Enforcement Agencies	

PURPOSE OF CIRCULAR

To advise that letters of authorization and permit fees are no longer required to operate the front mounted hose reels.

BACKGROUND

Front-mounted hose reels are not specifically addressed in the Commercial Transport Regulations. They are not included in the definition of "permanently mounted equipment", and are not entitled to the allowance for additional weight for PME. Other provisions for front projection for devices that do not carry cargo[1] are insufficient for the dimensions of many front-mounted hose reels in their unaltered, factory-released state.

AUTHORIZATION

To maintain pace with vehicle technologies and equipment additions that may not have been considered when legislation was enacted or revised, by general authority[2], these vehicles may operate without permits at legal weights with a front projection of up to 1 meter from the front bumper.

The driver's clear sightlines to the highway must not be unduly obstructed by the hose reel, and the design and attachment of the hose reel must conform to the original manufacturer's specifications, and not negatively impact road safety.

[1] *Commercial Transport Regulations*, section 7.08(2)(c)
[2] *Commercial Transport Regulations*, section 7.02(1)

To operate without permit under this general authorization, the overall length of the truck with hose reel must not exceed 13.5 m.

For additional information, please contact Jeff Monty, Manager, Commercial Transport, CVSE, telephone: (250) 953-4017 or email: Jeff.Monty@gov.bc.ca.

Brian Murray
Director, Commercial Vehicle Safety and Enforcement Branch
Ministry of Transportation & Infrastructure

Ministry of Transportation and Infrastructure

COMPLIANCE CIRCULAR
Amended December 10, 2018

NO. 06-17

November 17, 2017

SUBJECT: Deadline for Planned Trailer Axle Weight Reductions Extended to December 31, 2020 for Affected Vehicles

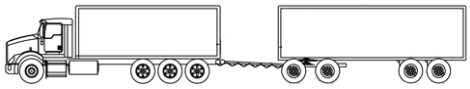
Managers, Victoria	Passenger Transportation Board	Commercial Transport Insp.
Regional CVSE Managers	Trucking Industry	(Inspection Stations)
Area Vehicle Inspectors	Carrier Safety Inspectors	ICBC
Deputy Director, CVSE	Government Agents	
ADM, Highways Department	Law Enforcement Agencies	

PURPOSE OF CIRCULAR

To notify owners and operators of the following truck configurations that the scheduled trailer weight reductions as detailed below will be postponed until **December 31, 2020**.

1. **Quad-Axle Full Trailers (Appendix F)**

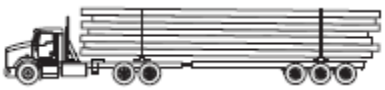
The proposed decrease in the maximum allowable weight for a quad-axle full trailer from 34,000 kg to 31,000 kg has been cancelled, per Director's Decision Feb 2014.



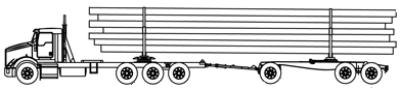
2. **Tridem Pole Trailers (Appendix H), Quad- and Tri-Axle Pole Trailers (Appendix I), and Tridem Hayrack Semi-Trailers in Logging Applications (Appendices D and G)**

The scheduled decreases in the maximum allowable weights for these vehicles will be postponed until December 31, 2020 or until a more permanent decision may be taken, whichever occurs sooner.

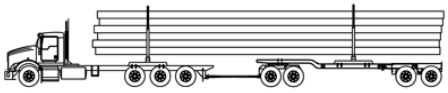
Tridem pole trailer



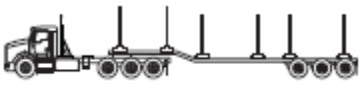
Tri-axle pole trailer

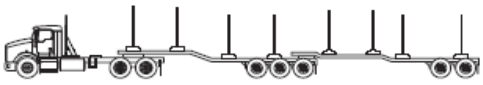


Quad-axle pole trailer



Tridem hayrack semi-trailer in logging applications





With the current allowances, maximum weights on these trailers are as follows; please note that other applicable limits and provisions, such as manufacturers' ratings, tire loading, and the additional weights from section 7.26 CTR, still apply:

- Tridem pole trailer 25,000 kg
- Tri-axle pole trailer 26,100 kg
- Quad-axle pole trailer 34,000 kg including allowances from section 7.26 CTR
- Tridem hayrack semi-trailer 25,000 kg

BACKGROUND

Commercial Vehicle Safety and Enforcement is extending the date for the weight changes described above until **December 31, 2020** pending the completion of further research.

No commercial transport permit is required for operators of vehicle combinations including one of the above trailer types to operate at the unreduced maximum trailer weight.

This allowance is authorized pursuant to the general authority granted to the Director of Commercial Vehicle Safety under Section 7.02 (1) of the Commercial Transport Regulations.

Steve Haywood
Director, Commercial Vehicle Safety and Enforcement Branch
Ministry of Transportation and Infrastructure

BRITISH COLUMBIA | Ministry of Transportation and Infrastructure

COMPLIANCE CIRCULAR
Amended February 6, 2019

NO. 01-18

June 14, 2018

SUBJECT: Updated Changes Affecting Wide Base Single Tires (WBST)

Managers, Victoria	Passenger Transportation Board	Commercial Transport Insp.
Regional CVSE Managers	Trucking Industry	(Inspection Stations)
Area Vehicle Inspectors	Carrier Safety Inspectors	ICBC
Deputy Director, CVSE	Government Agents	
ADM, Highways Department	Law Enforcement Agencies	

PURPOSE OF CIRCULAR

British Columbia is further amending its policies regarding the use of Wide Base Single Tires (WBST). Effective immediately to harmonize with other provinces, BC will allow increased weight allowances for Wide Base Single Tires that are **445 mm** or wider to receive full weight parity with dual tires, subject to:

1. Operation as described for 'super single tires' in section 7.25 of the CTR (below, with weights amended to reflect the new allowance).

   Super single tires

   7.25 A person must not, without a permit, use super single tires, unless
   (a) the super single tires
   (i) are used on a single, tandem or tridem axle group,
   (ii) do not support, except on the steering axle, more than [4,450 kg] each, and
   (iii) are on the last axle group, if the super single tires are used on a vehicle combination with a tandem or tridem axle group, and
   (b) subject to section 7.07 (1) (c), the axles on which the super single tires are installed
   (i) have a minimum axle track width of 2.5 m,
   (ii) do not have dual wheels or single tires installed on them, and
   (iii) do not support more than [8,900 kg] each.

2. A maximum of **100 kg/cm tire width** is applicable to all tires.

BACKGROUND

TRAN has allowed WBST, 445 mm or wider, as a replacement for dual tire configurations on commercial trucks (see Figure 1) since 2008, at a reduced legal axle weight allowance of 7,700 kg, compared to conventional dual tire legal axle weights of 9,100 kg for single axles.

Figure 1: Tire comparison (a) NGWBST and (b) Dual Tire Assembly

In June of 2018, BC increased the weight allowance for wide based single tires 455 mm or wider to full parity with dual tires. This latest amendment increases the weight allowance for wide based single tires 445 mm or wider to full parity. New maximum weights for wide based single tires in BC are:

Maximum Tire Loading	100 kg/cm		
Maximum Axle Loading	**Dual Tires**	**445 mm WBST**	**455 mm WBST**
Single Axle	9,100 kg	8,900 kg	9,100 kg
Tandem Axle (1.0 – 1.85 m)	17,000 kg	17,000 kg	17,000 kg
Tridem Axle (2.4 – 3.7 m)	24,000 kg	24,000 kg	24,000 kg

BC is making this change to further harmonization efforts across Canada. Improved fuel savings for commercial trucks with WBST relate directly to greenhouse gas reductions.

SUMMARY:

The increase in weight allowance assists the trucking industry in meeting their greenhouse gas requirements, by reducing the number of trips. Increased fuel economy for WBST also contributes to reductions in greenhouse gas emissions by 3.2%.

The Ministry will allow the new weights by general authority delegated to the Director CVSE in Section 7.02(1) of the Commercial Transport Regulations, pending the next update to the regulations, which will incorporate the increased weights. No permits are required.

For additional information or questions please contact Commercial.Transport@gov.bc.ca.

Cole Delisle
A/Director, Commercial Vehicle Safety and Enforcement Branch
Ministry of Transportation and Infrastructure

Ministry of Transportation and Infrastructure

COMPLIANCE CIRCULAR

NO. 05/19

October 16th , 2019

SUBJECT: Application Process for Overweight or Oversize Fire Apparatus Used for Public Fire Control Operations

Regional CVSE Managers	Law Enforcement Agencies	BC MoT Bridge Branch
Commercial Transport Insp. (Inspection Stations)	BC Fire Departments	BC Municipalities

PURPOSE OF CIRCULAR

To notify municipalities, cities, towns, regional districts, firetruck manufacturers and other interested parties of updates to BC's firetruck permit policies and processes. This Circular replaces Circular 05/09.

Depending on the size and weight of a firetruck, there are different 'levels' of authorization for its operation by a municipality or other public authority:

1. **Legal vehicles:** A firetruck that fits within the truck allowances set out in Division 7 of the Commercial Transport Regulations does not need a permit to operate on provincial highways.

2. **Policy-compliant firetrucks:** A new permit policy for firetrucks can be found in **Section 5.3.18**, Chapter 5 of the Commercial Transport Procedures Manual. The policy is attached to this Circular as **Appendix A**. If the firetruck fits within the dimensions and weights shown in the policy, no additional approvals are needed: the registered owner of the firetruck can contact the Provincial Permit Centre at 1-800-559-9688 for permits. No fees are charged for permits issued to municipalities. For parties that are not public authorities, Section 5.3.18 shows the maximum weights and dimensions allowed for firetrucks.

3. **Custom permits for oversize/overweight municipal firetrucks:** Municipalities should use Form **CVSE1040** to request approval for firetruck weights and dimensions that exceed the policy described in #2, above. The new application form is attached to this Circular as **Appendix B**. It is important to note that permits resulting from these applications may limit, prohibit, or provide directions respecting the use of provincial roadway routes by a person or authority operating or in charge of the fire apparatus. The likelihood of having such conditions on the permit increases the more the vehicle being applied for exceeds the dimension and weight allowances described in #2, above. Holders of these permits are advised to consult CVSE prior to adding new equipment to the fire apparatus covered under the custom permit, in case adjustments to the permit will be required. If the vehicle no longer meets the specifications described in the custom permit, the permit is void.

CUSTOM PERMIT RENEWALS AND AUTHORIZATIONS FOR DELIVERY

This section will address:

- Renewal of the custom approvals described in #3, above; and
- Requirements for carriers and manufacturers to use when requesting a Letter of Authorization for delivery of one of the firetrucks described in #3, above, to a municipality or other authority responsible for public fire control operations.

Custom Firetruck Permit Renewal Requests:

It is recommended that renewal requests are submitted a minimum of 90 days prior to the current permit's expiry. The municipality or other authority responsible for public fire control must submit a new weigh scale certificate/slip from a certified weigh scale, showing the fully loaded operational axle weights, to Commercial.Transport@gov.bc.ca for review. Any discrepancy from the weights in the previous LOA may result in the need for new structural analysis along the proposed route(s), which may delay the renewal process.

Letter of Authorization (LOA) Requests for Delivery Purposes:

A primary or secondary vehicle manufacturer, or a carrier, may apply for an LOA to be able to obtain single trip overweight permits to deliver an overweight fire apparatus to a municipality or other authority responsible for public fire control operations, provided the application for permit from that municipality or authority has already been approved. Delivery routes should be limited to shortest possible route from borders, manufacturer and dealer locations.

These requests are to be submitted to Commercial.Transport@gov.bc.ca and shall include:

- Detailed vehicle information, as described in Form **CVSE1040**,
- Detailed routing information
- A copy of the custom permit issued to the municipality or other public authority responsible for public fire operations, or a letter or email from that municipality or other authority demonstrating an understanding of the need to apply for a permit.

BACKGROUND

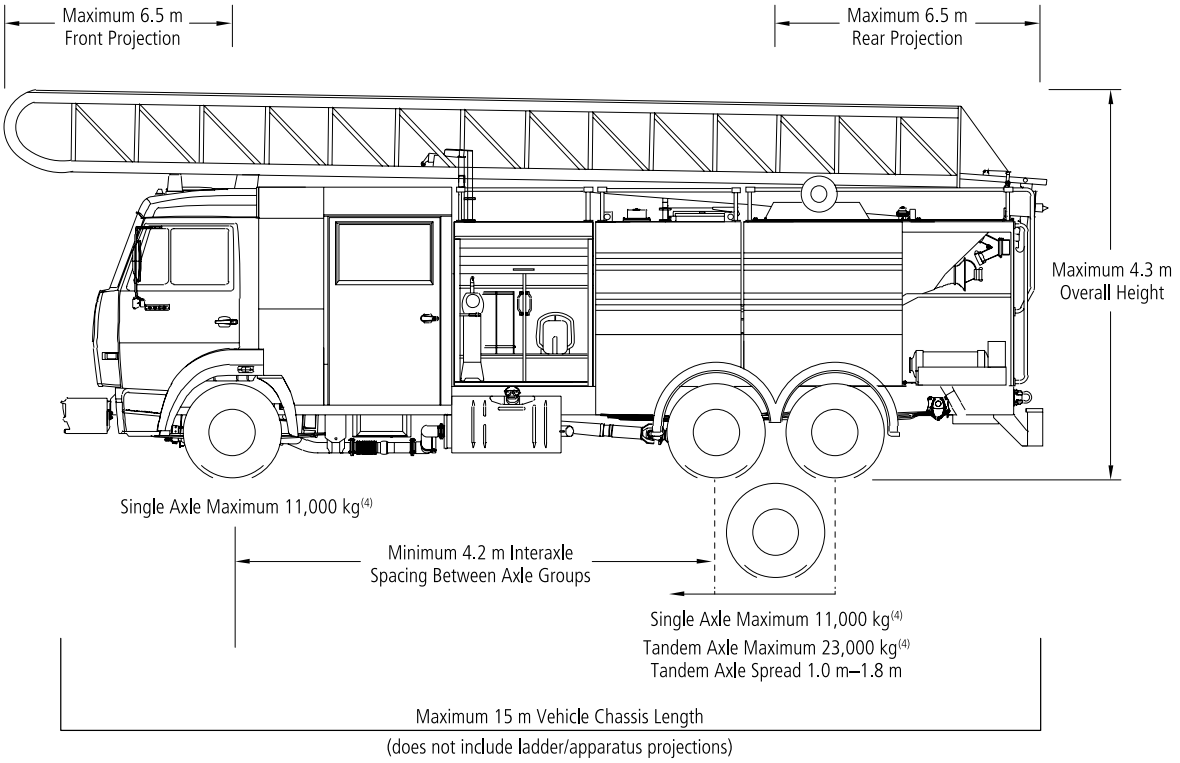
Fire apparatus, particularly new firetrucks used as aerial bucket or ladder trucks, regularly exceed provincial permit policy axle weights when fully outfitted for fire operations. Overweight vehicle(s) have a direct impact on MOTI's ability to provide a safe roadway network. Therefore, to meet MOTI's obligations while providing fire protection to the public, a permit with conditions will be issued to fire apparatus that exceed legal and policy axle weights.

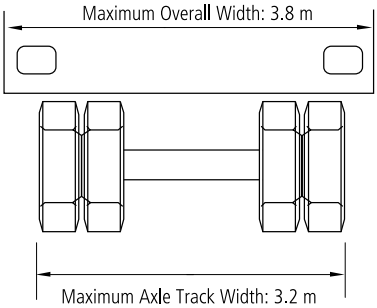
Yours truly,

Nam Nguyen
Sr. Vehicle Engineer, Commercial Transport
Ministry of Transportation and Infrastructure

Attachment: **Appendix A** – New Permit Policy for Firetrucks, from Section 5.3.18, Chapter 5, Commercial Transport Procedures Manual
Appendix B – Link to Form **CVSE1040**

5.3.18.A Municipal Fire Trucks





NOTES:
1. Bridge Formula applies to all axles, Maximum Permitted Weight = axle spacing (in cm) x 30 + 18,000 kg.
2. Legal Single axle weight maximum without permit is 9,100kg. Legal Tandem axle group maximum weight without a permit is 17,000 kg.
3. All weights subject to original equipment manufacturer gross vehicle weight, axle and tire rating.
4. Maximum 110 kg/cm tire width loading:

Single Tire		Dual Tire	
Tire Width (mm)	**Max. Axle Load**	**Tire Width (mm)**	**Max. Axle Load**
385	8,470 kg	235	10,340 kg
425	9,350 kg	245	10,780 kg

Non-Compliant Fire Trucks

For municipal fire trucks that do not comply with the dimensions and weights as outlined in this section, please refer to Compliance Circular No. 05/19

www.cvse.ca/CTPM/Com_Circulars/2009/090615_comp_crcular_05-19.pdf

These special permits are issued out of the Commercial Transport Office in Victoria and are ONLY available for B.C. municipal fire trucks.

BRITISH COLUMBIA | Ministry of Transportation and Infrastructure

Commercial Vehicle Safety and Enforcement

FIRETRUCK APPLICATION FOR MUNICIPALITIES

This application form is to be used by municipalities, cities, towns and regional districts only, for firetrucks that exceed the weights and/or dimensions set out in Section 5.3.18, Chapter 5, Commercial Transport Procedures Manual.

Firetrucks operated by other parties must not exceed the dimensions and weights set out in Section 5.3.18. Carriers seeking to deliver firetrucks to municipalities must apply for a special permit, using this form. See **Circular 05-19** for more information.

An approval resulting from this application will be valid on provincial infrastructure only.

Applicant Name and Contact Information (Municipality or other Public Authority)

Name of Municipality: _____

Contact Person: _____

Phone: _____ **Email:** _____

Address that the firetruck will operate from:

_____

Area of operation: *Please attach location and "radial" route information for the primary response area, including diagrams/maps showing the provincial roadways and maximum distances.*

If the vehicle is intended to be used in a mutual response area, please include that information in a separate attachment, including diagrams/maps.

Vehicle Description

Year: _____ **Make:** _____

Model: _____ **VIN:** _____

Total number of axles on the vehicle: _____

Vehicle Weight Information, in kg:

Gross Vehicle Weight Rating (GVWR)
The original equipment manufacturer's maximum weight rating for the entire vehicle: _____

Gross Axle Weight Rating (GAWR) – Steer Axle
The original equipment manufacturer's rating for maximum weight on the steer axle (Axle 1): _____

Gross Axle Weight Rating (GAWR) - Rear Axle Group
The original equipment manufacturer's rating for maximum weight on the rear axle(s) (Axle 2 or 2+3): _____

Weigh scale slip: *Please attach a weigh scale certificate/slip from a certified weigh scale or manufacturer's certified weight estimates showing fully loaded operational axle weights.*

FIRETRUCK APPLICATION FOR MUNICIPALITIES

Tire Information:

Number of tires on the steer axle (Axle 1): _____

Size of tires on the steer axle (Axle 1): _____

Tire load rating for front tires, in kg:
The original equipment manufacturer's rating for maximum weight on each front tire _____

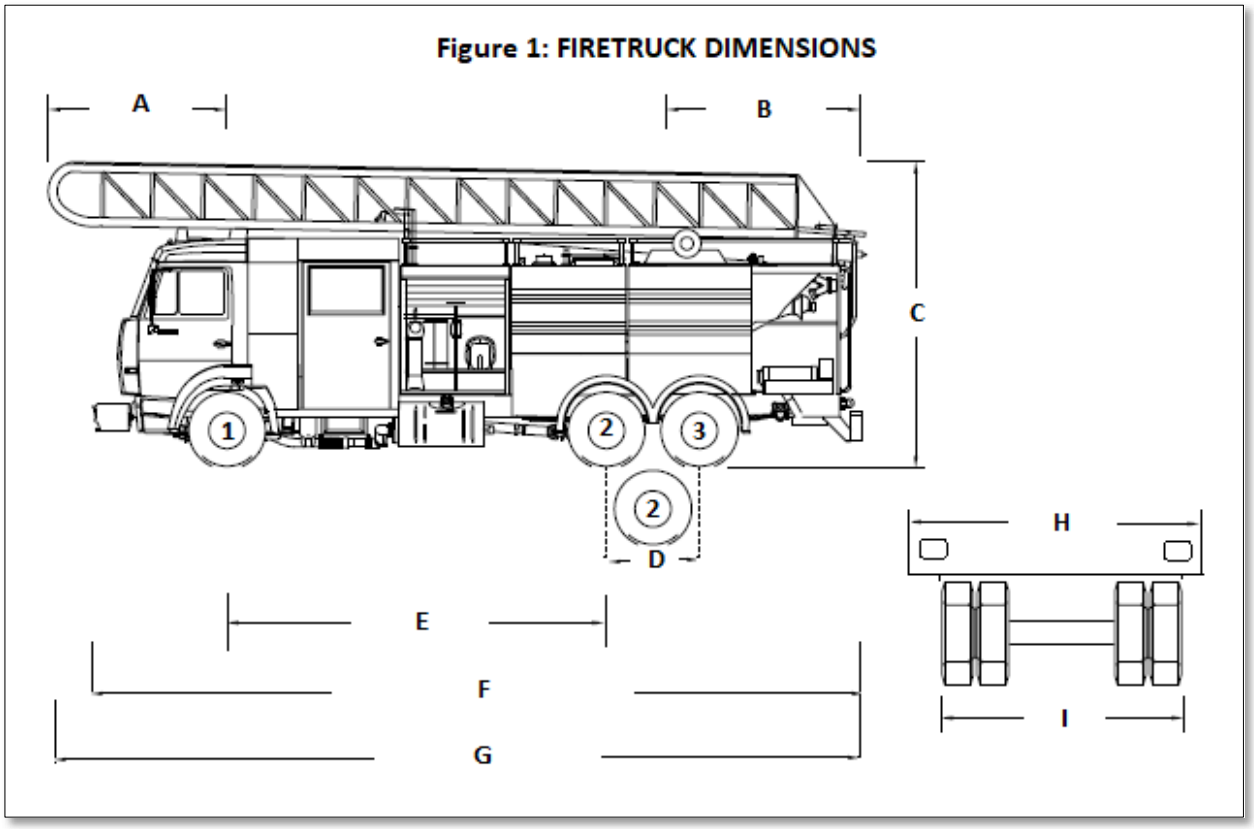
Number of tires on the rear axle group (Axle 2 or 2+3): _____

Size of tires on the rear axle group (Axle 2 or 2+3): _____

Tire load rating for the rear axle group, in kg:
The original equipment manufacturer's rating for maximum weight on each rear tire _____

Vehicle Dimensions, in metric:

Figure 1: FIRETRUCK DIMENSIONS



A: Front projection, measured from the centre of the steer axle _____

B: Rear projection, measured from the centre of the rear axle or axle group _____

C: Overall height, measured from the pavement to the highest point of the vehicle in travel mode _____

D: Axle spread on the rear axles, if applicable, measured from the centre of Axle 2 to the centre of Axle 3 _____

E: Interaxle spacing, measured from the centre of Axle 1 (the steer axle) to the centre of Axle 2 _____

F: Length of the vehicle, measured without overhead apparatus _____

G: Overall length of the vehicle including overhead apparatus _____

H: Overall width of the vehicle, measured from widest point to widest point, excluding mirrors _____

I: Axle track width, measured from the outside face of the outside tire on one side to the outside face of the outside tire on the opposite side of the vehicle, at any point above the lowest point of the rim _____

Timelines and processes:

Information provided on this application form will allow MOTI Bridge and Vehicle Engineers to carry out analysis on the provincially owned structures and road geometry that exist along the proposed route(s). Applicants should seek separate authorization for travel on roads that are not under provincial jurisdiction (i.e. from the municipalities in which they will need to operate). After provincial analysis is complete, MOTI will provide a permit for operation on provincial highways, which will be valid for a three-year period.

It is important to note that the permit may limit, prohibit, or provide directions respecting the use of provincial roadway routes by a person or authority operating or in charge of the fire apparatus. The likelihood of having such conditions on the permit increases the more the vehicle being applied for exceeds the dimension and weight allowances set out in Section 5.3.18, Chapter 5, of the Commercial Transport Procedures Manual.

If you have questions about how to complete this application package, please contact Commercial.Transport@gov.bc.ca, (250) 953-4017.

It is recommended these requests be submitted well in advance of the delivery of the fire apparatus if possible, to prevent any delays in obtaining authorization to utilize the new equipment on provincial roadways. Complete application packages should be submitted to Commercial.Transport@gov.bc.ca

_____ _____

Authorized Signature for the Applicant **Date (mm/dd/yyyy)**

Mandatory Attachments to Include:

1. Primary Response Area Information, including diagrams/maps
2. Mutual Response Area Information, if applicable, including diagrams/maps
3. Weigh Scale Slip - *certificate/slip from a certified weigh scale or manufacturer's certified weight estimates showing fully loaded operational axle weights*

BRITISH COLUMBIA | Ministry of Transportation and Infrastructure

COMPLIANCE CIRCULAR

NO. 01/17

January 10, 2017

SUBJECT: Changes Affecting Long Wheelbase Truck Tractors

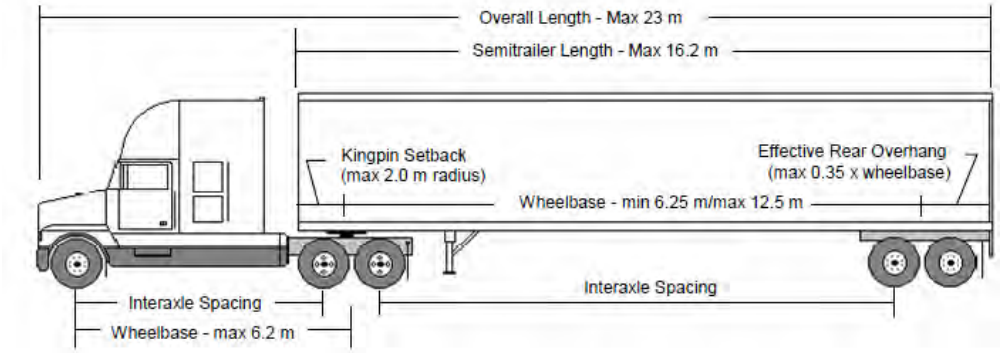
Managers, Victoria	Passenger Transportation Board	Commercial Transport Insp.
Regional CVSE Managers	Trucking Industry	(Inspection Stations)
Area Vehicle Inspectors	Carrier Safety Inspectors	ICBC
Deputy Director, CVSE	Government Agents	
ADM, Highways Department	Law Enforcement Agencies	

PURPOSE OF CIRCULAR

To announce that British Columbia is amending its policies regarding the use of long wheelbase truck tractors with a tandem drive axle group. Effective immediately, by general authority of section 7.02(1) of the Commercial Transport Regulations (CTR), BC will allow the use of long wheelbase, tandem drive truck tractors in combination with one or two semi-trailers, as follows:

1. Provision to Allow Longer Wheelbase Truck Tractors in Combination with a Single Semi-trailer

Appendix B of the CTR provides a maximum wheelbase of 6.2 m for tandem drive truck tractors. Appendix D of the CTR provides a maximum semi-trailer wheelbase of 12.5 m.



The new authorization grants that the truck tractor wheelbase can be increased up to 7.2 m in a tandem drive truck tractor-semi-trailer configuration, provided the wheelbase of the semi-trailer is reduced in accordance with the following table:

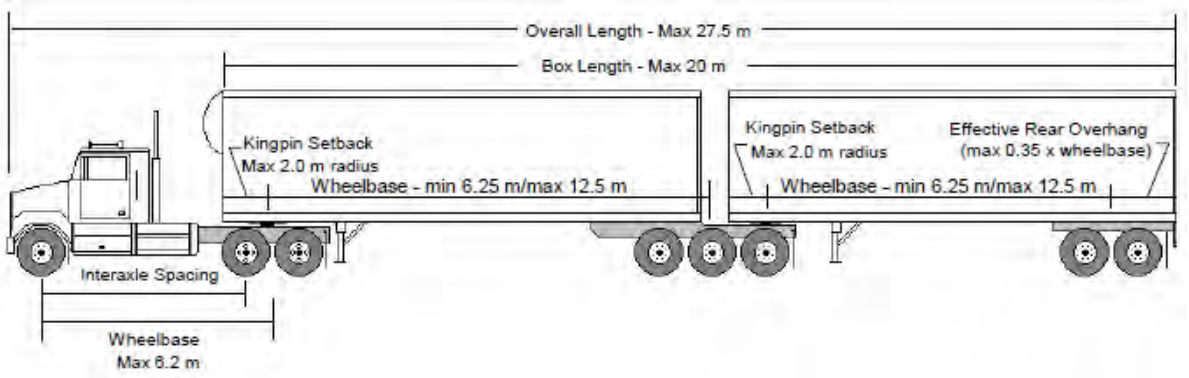
Maximum Semi-trailer Wheelbase for Truck Tractor Wheelbase > 6.2 m

Truck Tractor Wheelbase	Maximum Semi-trailer Wheelbase
6.2 m or less	≤ 12.50 m

> 6.2 m to 6.3 m	≤ 12.47 m
> 6.3 m to 6.4 m	≤ 12.40 m
> 6.4 m to 6.5 m	≤ 12.33 m
> 6.5 m to 6.6 m	≤ 12.27 m
> 6.6 m to 6.7 m	≤ 12.20 m
> 6.7 m to 6.8 m	≤ 12.13 m
> 6.8 m to 6.9 m	≤ 12.07 m
> 6.9 m to 7.0 m	≤ 12.00 m
> 7.0 m to 7.1 m	≤ 11.93 m
> 7.1 m to 7.2 m	≤ 11.87 m

As there are some small discrepancies between the old and new tables of single semi-trailer wheelbases in combination with long wheelbase truck tractors, the current allowances will continue to be honoured under permits for a period of 90 days, ending April 10, 2017. The 'old' table may be found in section 5.3.7.A, Chapter 5, of the Commercial Transport Procedures Manual.

2. Provision to Allow Longer Wheelbase Truck Tractors in Combination with Two Semi-trailers (B-Trains)



Appendix B of the CTR provides a maximum wheelbase of 6.2 m for tandem drive truck tractors. Appendix G of the CTR provides a maximum wheelbase of 12.5 m for each semi-trailer.

The new authorization grants that the wheelbase on a tandem drive truck tractor can be up to 6.8 m in a B-Train configuration, provided the sum of the wheelbases of the semi-trailers is reduced in accordance with the following table:

Maximum Sum of Semi-trailer Wheelbases for Truck Tractor Wheelbase > 6.2 m

Truck Tractor Wheelbase	Maximum Sum of Semi-trailer Wheelbases
> 6.2 m to 6.3 m	≤ 16.53 m
> 6.3 m to 6.4 m	≤ 16.44 m
> 6.4 m to 6.5 m	≤ 16.36 m
> 6.5 m to 6.6 m	≤ 16.27 m
> 6.6 m to 6.7 m	≤ 16.19 m
> 6.7 m to 6.8 m	≤ 16.10 m

Permits are not required for use of these new provisions. Previous prohibitions on the use of oversize/overweight permits for loads carried by long wheelbase truck tractor combinations are also cancelled, effective immediately.

Amendments to section 5.3.7.A of the Commercial Transport Procedures Manual will follow in due course.

BACKGROUND

These changes align with amendments to the Memorandum of Understanding Respecting a Federal-Provincial-Territorial Agreement on Vehicle Weights and Dimensions, which were proposed to the Task Force on Vehicle Weights and Dimensions Policy by the trucking industry. The changes are intended to provide additional space to accommodate emissions control equipment, improve driver comfort and allow larger sleeper berths.

On September 28, 2016, the Council of Ministers agreed to amend the MOU, to adopt the above two provisions.

The dimension limits which apply to truck tractors and semi-trailers in the MOU were developed in consideration of vehicle turning performance and to ensure that vehicles can safely negotiate turns within space available at intersections. For this reason the MOU has specified a limit on tandem drive truck tractor wheelbase of 6.2 m since 1988.

From a technical perspective, it is possible to respect the turning performance criteria cited above if an increase in truck tractor wheelbase is accompanied by a reduction in the wheelbase(s) of the trailer(s) being towed to compensate. For this reason, the Task Force was satisfied that the trucking industry's request to use longer wheelbase truck tractors can be safely accommodated if the conditions described in #1 and #2 above are respected.

Questions about the new provisions may be directed to Jan Lansing, Manager Commercial Transport: jan.lansing@gov.bc.ca.

Steve Haywood
Director, Commercial Vehicle Safety and Enforcement Branch
Ministry of Transportation and Infrastructure

Ministry of Transportation and Infrastructure

COMPLIANCE CIRCULAR

NO. 06-19

October 29, 2019

SUBJECT: Length Allowances for Autotarp Systems

Managers, Victoria	Passenger Transportation Board	Commercial Transport Insp.
Regional CVSE Managers	Trucking Industry	(Inspection Stations)
Area Vehicle Inspectors	Carrier Safety Inspectors	ICBC
Deputy Director, CVSE	Government Agents	
ADM, Highways Department	Law Enforcement Agencies	

PURPOSE OF CIRCULAR

In response to concerns presented to the Ministry about worker safety, BC will allow length exceptions as described in this Circular for the use of 'autotarp' systems. Operation using the new allowances will be assessed after a period of one year, and a determination will be made at that time about whether to continue the allowances into the future.

For the purposes of this Circular, an automatic tarping (autotarp) system:

- can be operated remotely from ground level; and
- may extend no more than **30.5 cm** to the front or rear of any one vehicle, and
- must be attached at the very top of the vehicle in such a way that no part of the autotarp system descends to a point less than 1.9 m above the ground; and
- must not be designed or used to carry cargo other than a tarp.

Exceptions to the Commercial Transport Regulations (CTR) that will be allowed are:

1. Section 7.08(2) of the Commercial Transport Regulations (CTR) lists devices that may be attached to a vehicle without being included in measurement of the vehicle's (or vehicle combination's) overall length. In addition to the devices currently listed, effective immediately, we will allow an autotarp system installed at the rear of a truck, trailer or semi-trailer. Allowances in 7.08(2)(c) for 30 cm beyond the front or 10 cm beyond the rear of a vehicle for other auxiliary equipment or devices not designed or used to carry cargo may still be used, in combination with the new autotarp allowance, provided the maximum of 30.5 cm extension from the vehicle is not exceeded.
2. Appendix B of the CTR sets out weight and dimensional allowances for trucks and truck tractors. An autotarp system may be excluded from the measurement of the maximum 4.0 m effective rear overhang.

3. Appendix D of the CTR sets out weight and dimensional allowances for truck tractor and semi-trailer combinations. An autotarp system mounted either to the front or the rear of the box on a semi-trailer may be excluded from the measurement of the maximum 16.2 m semi-trailer length, and from the measurement of the maximum effective rear overhang of 35% of semi-trailer wheelbase.
4. Appendix G of the CTR sets out weight and dimensional allowances for A-, B- and C-Trains. An autotarp system mounted either to the front of the box on the front trailer and/or to the rear of the box on the rear trailer may be excluded from the measurement of the maximum 20.0 m box length (a maximum combined allowance of 61 cm) , and from the measurement of the maximum effective rear overhang of 35% of semi-trailer wheelbase.

Exceptions to current permit policy allowances that will be allowed are:

1. Section 4.5.4, Chapter 4 of the Commercial Transport Procedures Manual provides permit allowances for the transport of wood chips, mill processed wood residuals and pulp bales in walled B-Train configurations on routes listed on Form CVSE1012. An autotarp system mounted either to the front of the box on the front trailer and/or to the rear of the box on the rear trailer may be excluded from the measurement of the maximum 23.0 m box length (a maximum combined allowance of 61 cm).

BACKGROUND

Concerned representatives of BC industry approached the Ministry to make us aware of significant issues with worker safety related to manually tarping loads of loose materials.

It appears that autotarp systems that fit within current regulation dimensions are not suitable for all uses, and the Ministry has agreed to provide these limited allowances to assist with improvements to worker safety.

No exceptions to regulation or policy other than those described in this Circular are intended or implied.

Because the equipment will be allowed only at the very top of the vehicles where its potential to interact with other road users is very limited, we do not expect to see detrimental impacts to other road users. However, the on-road safety performance of vehicles operating with these allowances will be assessed after a period of one year, and a determination will be made at that time as to whether to continue the allowances into the future.

Until the allowances are either cancelled or adopted by regulation, the Ministry will allow the increased dimensions by general authority delegated to the Director CVSE in Section 7.02(1) of the Commercial Transport Regulations. No permits are required.

For additional information or questions please contact Commercial.Transport@gov.bc.ca.

Cole Delisle
A/Director, Commercial Vehicle Safety and Enforcement Branch
Ministry of Transportation and Infrastructure

BRITISH COLUMBIA | Ministry of Transportation and Infrastructure

COMPLIANCE CIRCULAR

NO. 03-21

May 14, 2021

SUBJECT: New Weight Allowances for Commercial Trucks, Truck Tractors and Buses Powered by Electricity or Hydrogen/Diesel Bi-Fuel, and Changes to Existing Weight Allowances for Full Size Commercial Vehicles Powered by LNG, CNG or LNG/Diesel

Managers, Victoria	Passenger Transportation Board	Commercial Transport Insp.
Regional CVSE Managers	Trucking Industry	(Inspection Stations)
Area Vehicle Inspectors	Carrier Safety Inspectors	ICBC
Deputy Director, CVSE	Government Agents	
ADM, Highways Department	Law Enforcement Agencies	

PURPOSE OF CIRCULAR

To advise industry, staff and the general public about new weight allowances for commercial trucks, truck tractors and buses, as shown in Appendices B and C of the Commercial Transport Regulations, that are electrically powered or use a hydrogen/diesel bi-fuel. These allowances will be available by Letter of Authorization (LOA) effective immediately.

This Circular also serves to advise industry, staff and the general public that effective August 14, 2021, an LOA will also be required for carriers utilizing weight allowances previously granted under Circular 02-14 and Circular 01-16 for trucks, truck tractors, and buses fueled by liquified natural gas (LNG), LNG/diesel bi-fuel or compressed natural gas (CNG).

Implementation

The weight allowances shown in the table below are only permitted on the steering axle and drive axle group. The overall Gross Vehicle Weight (GVW) for the vehicle or combination is also increased accordingly, except that the increase may not be used to exceed the GVW shown in the table below:

Alternative Fuel Type	Axle Weight Increase	Maximum GVW	LOA Required By
Electric	1,500 kg	65,000 kg	Immediately
Hydrogen/Diesel Bi-Fuel	1,000 kg	64,500 kg	Immediately
LNG	1,500 kg	65,000 kg	August 14, 2021
LNG/Diesel Bi-Fuel	1,000 kg	64.500 kg	August 14, 2021
CNG	1,500 kg	65,000 kg	August 14, 2021

The increase may not be used to exceed 64,000 kg at the specific locations indicated as having no alternative power weight allowance" on Form CVSE1011.

Qualifying vehicles must not exceed the original equipment manufacturers (OEM's) stated maximum Gross Axle Weight Rating, Gross Vehicle Weight Rating, or 100 kg/cm of tire width.

With the exception of the steering axle weight, seasonal load restrictions continue to apply. The maximum allowable GVW must be reduced accordingly.

Vehicles must be equipped with a fuel type decal that, if it is not already regulated/required, must be a minimum of 5 cm in height and visible as close as possible to the fuel source of the vehicle.

In order to accurately track uptake of the allowances, CVSE will be requiring carriers to obtain a Letter of Authorization to utilize the additional axle weight. Permits will not be required. To apply for this letter, please send the following information to Commercial.Transport@gov.bc.ca:

- Company or individual name
- Contact email
- Contact phone number
- Contact address
- Vehicle Information:
    - Power source (electric, LNG, CNG, LNG/diesel or hydrogen/diesel)
    - Year
    - Make
    - Model
    - VIN
    - Registration Number

Please contact Commercial.Transport@gov.bc.ca prior to applying for a letter if your fleet size is greater than 6.

BACKGROUND

These alternative fuels are clean and environmentally friendly fuels that produce fewer emissions than diesel fuel for heavy duty trucks, truck tractors and buses. To encourage broader use of these new fuel types, the Ministry of Transportation and Infrastructure is providing additional axle weight allowances to help offset the added weight of the equipment installed on these trucks, truck tractors or buses.

This allowance is authorized by the Director of Commercial Vehicle Safety and Enforcement under Section 7.02(1) of the Commercial Transport Regulations.

For additional information or to apply for an LOA, please call 250-953-4017 or email Commercial.Transport@gov.bc.ca.

Samantha Eburne
Director, Commercial Vehicle Safety and Enforcement Branch
Ministry of Transportation and Infrastructure

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APPENDIX G

TERM PERMIT VEHICLES

Vehicles with the specific configurations and dimensions identified in this Appendix are eligible for Term Permits, despite exceeding the maximum dimensions listed in **Section 3.1**, **Table 6**. Vehicles are listed below and corresponding drawings with applicable internal dimensions are provided under "Vehicle Information."

Eligible for Tier 1 Term Permit

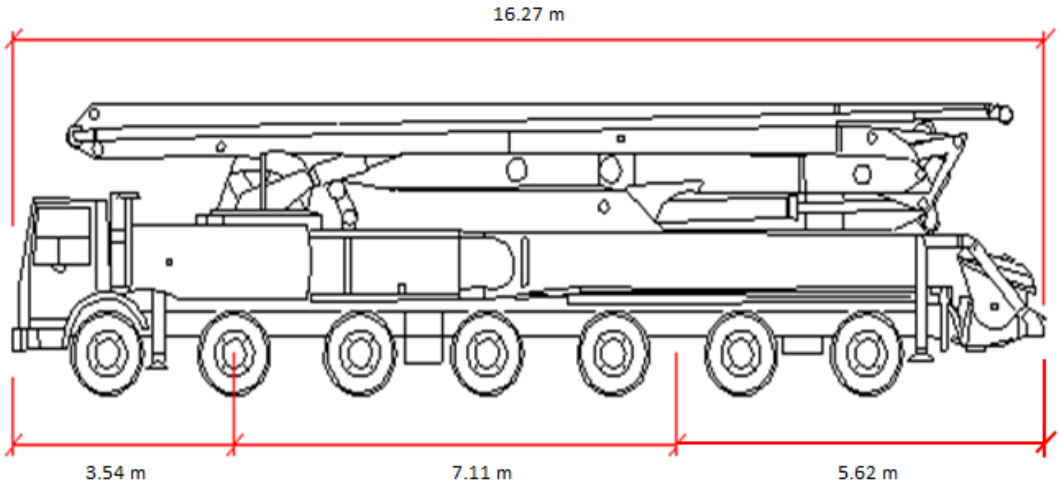
1. Concrete Pumper Truck
2. 4-Axle Crane with Boom Dolly
3. 3-Axle All Terrain Crane with Boom Dolly
4. 4-Axle All Terrain Crane with Boom Dolly
5. 5-Axle All Terrain Crane with Boom Dolly
6. Standard Tractor Semi-Trailer with an Oversize Load
7. 7-Axle Concrete Pumper
8. 7-Axle All-Terrain Crane with Boom Forward

Eligible for Tier 2 Term Permit

No specific vehicle configurations that exceed the maximum dimensions listed in **Section 3.1**, **Table 6** are currently eligible for Tier 2 Term Permits.

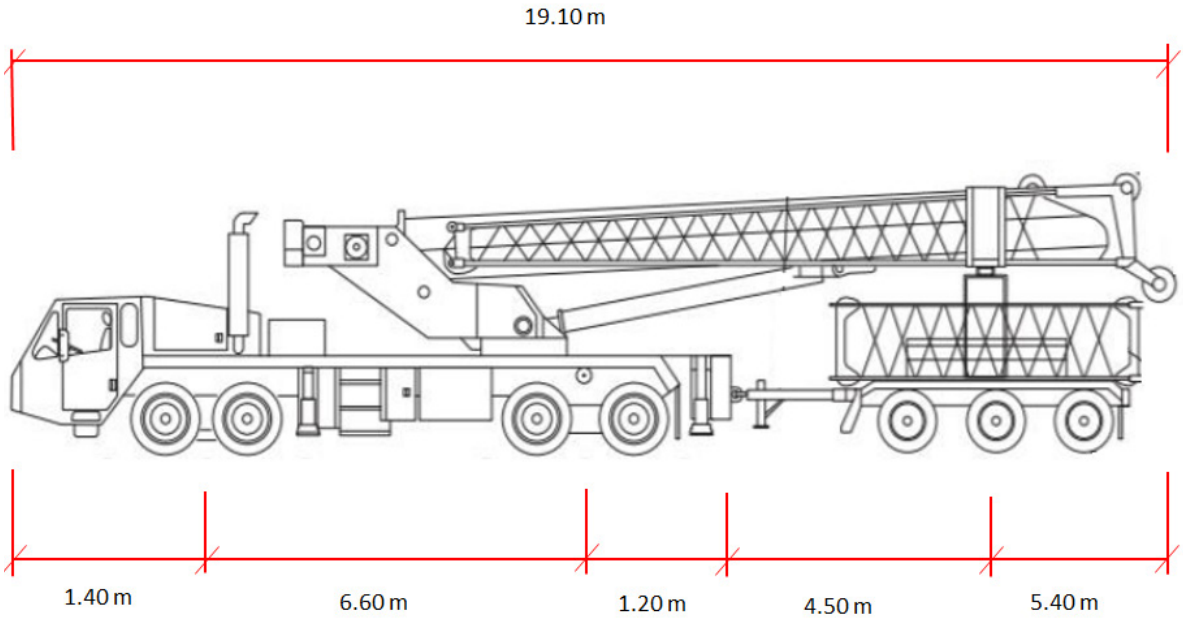
Vehicle Information

1. Concrete Pumper Truck



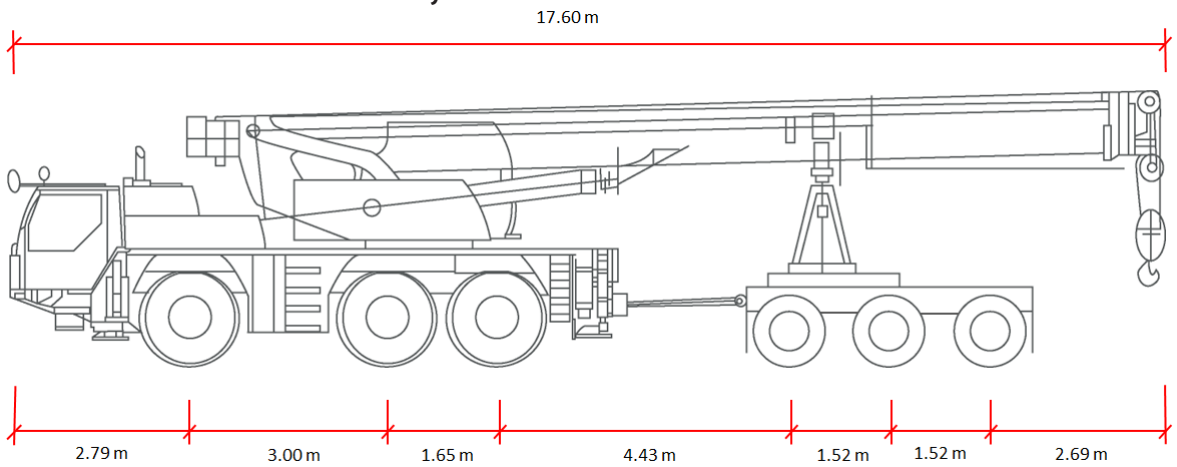
This concrete pumper truck has seven axles with interaxle spacing of 2.03 m and an overall length of 16.27 m. The front three axles are steerable, and the vehicle has no articulation points. Its turn movement impact area is consistent with that expected of a Tier 1 Term Permit Vehicle despite exceeding the Overall Length (OAL) limit in **Section 3.1**, **Table 6.**

2. 4-Axle Crane with Boom Dolly:



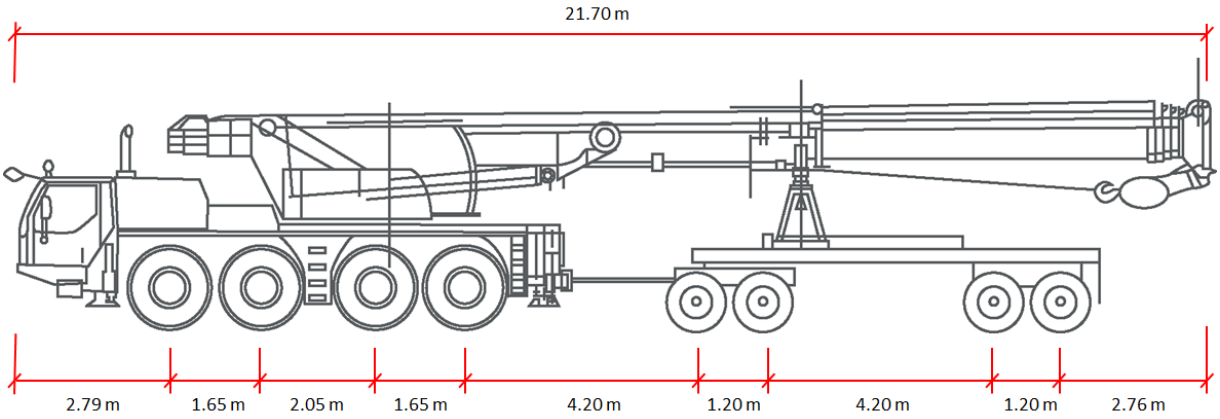
This mobile crane with a boom dolly has an overall length of 19.1 m and a wheelbase of 6.60 m. It has a front projection of 1.40 m. It has a tandem axle spread of 1.22 m and the dolly has a tridem axle with a spread of 2.4 m. The front two axles are steerable. Its turn movement impact area is consistent with that expected of a Tier 1 Term Permit Vehicle despite being articulated and exceeding the Overall Length (OAL) limit in **Section 3.1**, **Table 6**.

3. 3-Axle All-Terrain with Boom Dolly



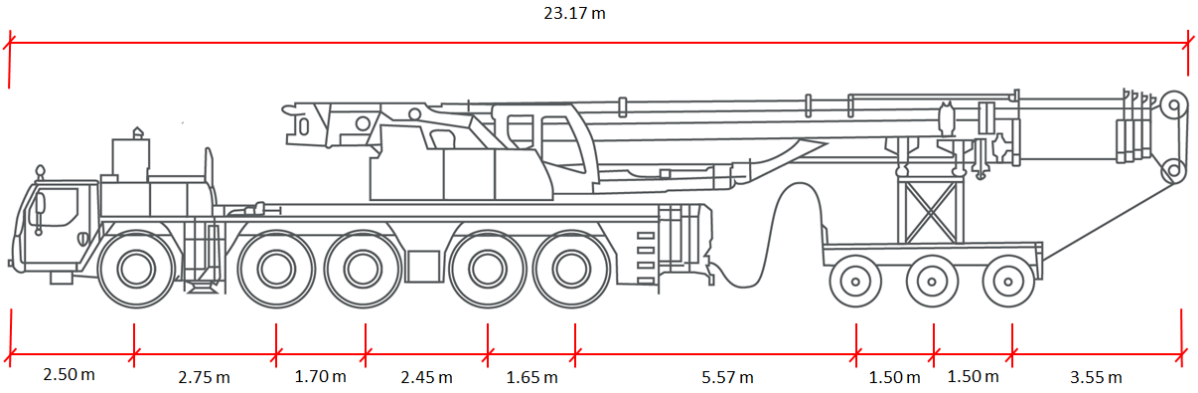
This mobile crane with a boom dolly has an overall length of 17.60 m and a wheelbase of 3.8 m. It has a single steerable front axle and a tandem rear axle with interaxle spacing of 1.65 m. The dolly has a tridem axle spread of 3.05 m. The front axle is steerable, and the vehicle has one articulation point. Its turn movement impact area is consistent with that expected of a Tier 1 Term Permit Vehicle despite being articulated and exceeding the Overall Length (OAL) limit in **Section 3.1**, **Table 6**.

4. 4-Axle All-Terrain with Boom Dolly



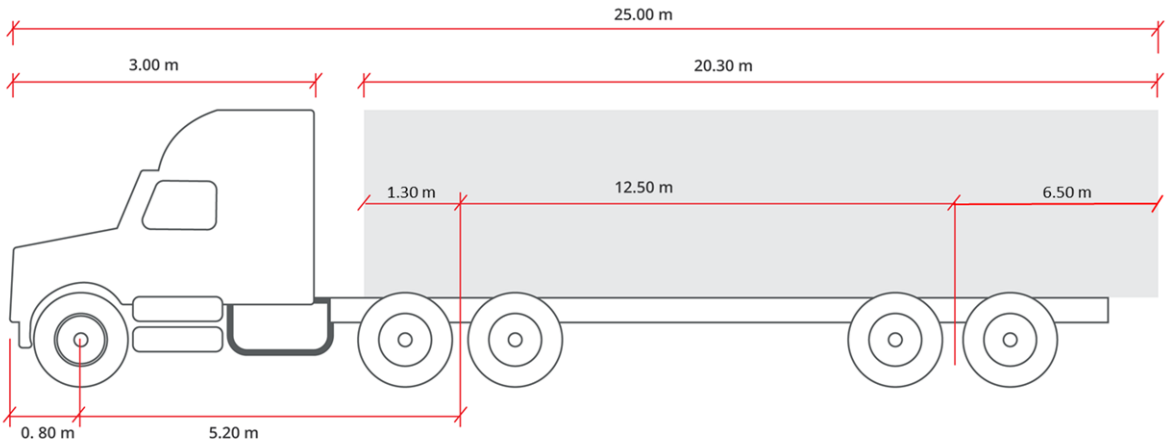
This crane with a boom dolly has an overall length of 21.70 m and a wheelbase of 3.70 m. It has two tandem axle groups with an axle spread of 1.65 m and an interaxle spacing of 2.05 m measured between axle 2 and 3. The boom dolly has two tandem axle groups with an axle spread of 1.2 m and an interaxle spacing of 4.2 m measured between axles 6 and 7. The front four axles are steerable, and the vehicle has one articulation point. Its turn movement impact area is consistent with that expected of a Tier 1 Term Permit Vehicle despite having articulation points and exceeding the Overall Length (OAL) limit in **Section 3.1**, **Table 6**.

5. 5-Axle All-Terrain with Boom Dolly



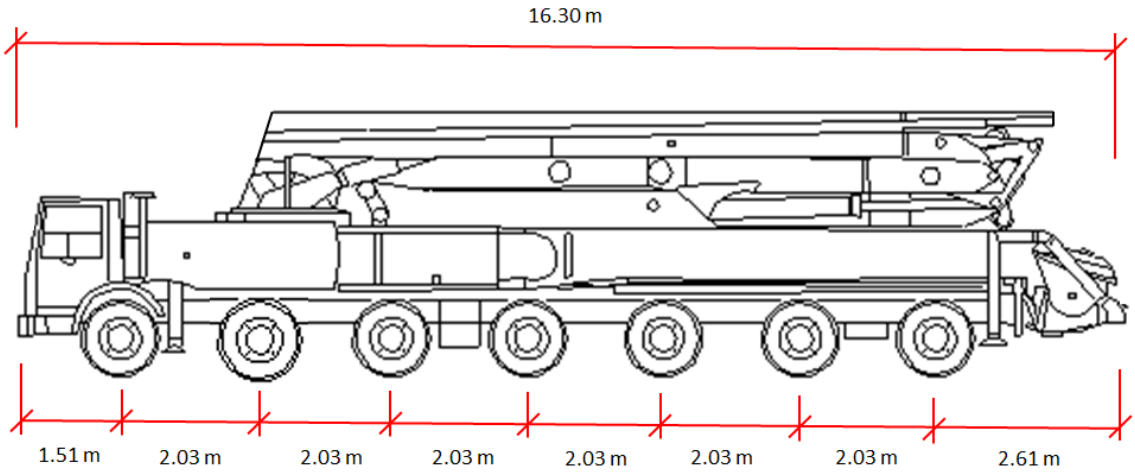
This crane with a boom dolly has an overall length of 23.17 m. It has a single steerable front axle and two tandem axle groups. It has interaxle spacing of 2.75 m between axles 1 and 2. The axle spread between axles 2 and 3 is 1.7 m. The interaxle spacing between axles 3 and 4 is 2.45 m. The axle spread between axles 4 and 5 is 1.65 m. The boom dolly has three axles with an interaxle spacing of 1.5 m. The front axle and two tandem axle groups are steerable and the vehicle has one articulation point. Its turn movement impact area is consistent with that expected of a Tier 1 Term Permit Vehicle despite being articulated and exceeding the Overall Length (OAL) limit in **Section 3.1**, **Table 6**.

6. Standard Tractor Semi-Trailer with an Oversize Load



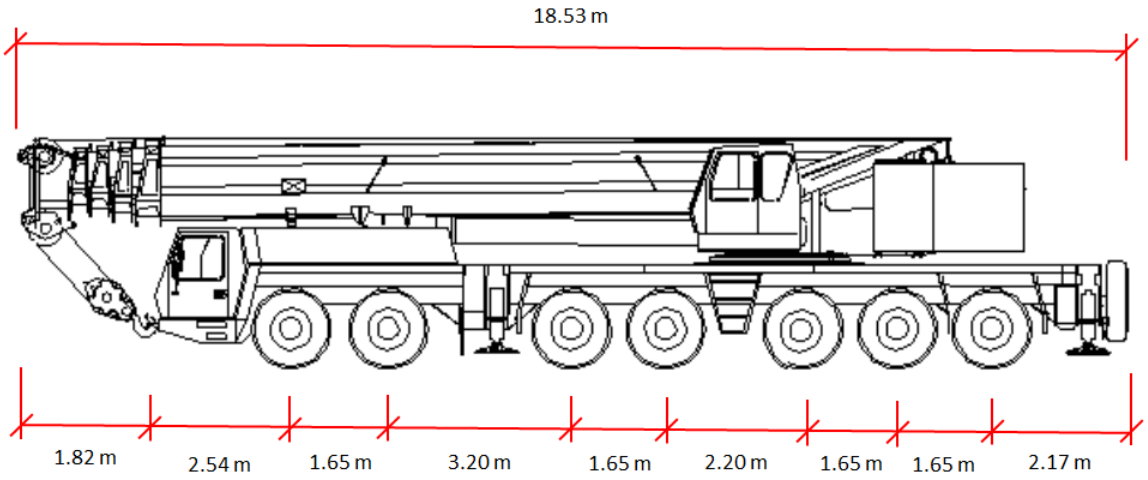
This represents a legal tractor semi-trailer combination per Appendix D of the *Commercial Transport Regulations* carrying an oversize load with the maximum rear overhang of 6.5 m and maximum load width of 3.2 m per Chapter 6.3.1.B of the *Commercial Transport Procedures Manual*. The wheelbase is 12.5 m, which is the maximum legal trailer wheelbase. The rear axle spread is 1.27. Only the front axle is steerable, and it has a single articulation point. Its turn movement impact area is consistent with that expected of a Tier 1 Term Permit Vehicle despite having an articulation point and exceeding the Overall Length (OAL) limit in **Section 3.1**, **Table 6**.

7. 7-Axle Concrete Pumper



This concrete pumper truck has seven axles with interaxle spacing of 2.03 m and an overall length of 16.30 m. The front 3 and rear 2 axles are steerable, and the vehicle has no articulation points. Its turn movement impact area is consistent with that expected of a Tier 1 Term Permit Vehicle despite exceeding the Overall Length (OAL) limit in **Section 3.1, Table 6**.

8. 7-Axle All-Terrain Crane with Boom Forward



This crane with boom forward truck has seven axles with an axle spread of 1.65 m and overall length of 18.53 m. The front three and rear three axles are steerable, and the vehicle has no articulation points. It has an interaxle spacing of 3.20 m between axle 2 and 3, while having an interaxle spacing of 2.20 m between axle 4 and 5. Its turn movement impact area is consistent with that expected of a Tier 1 Term Permit Vehicle despite exceeding the Overall Length (OAL) limit and front projection limit in **Section 3.1, Table 6**.

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APPENDIX H

TERM PERMIT VEHICLE ADDITION PROCESS

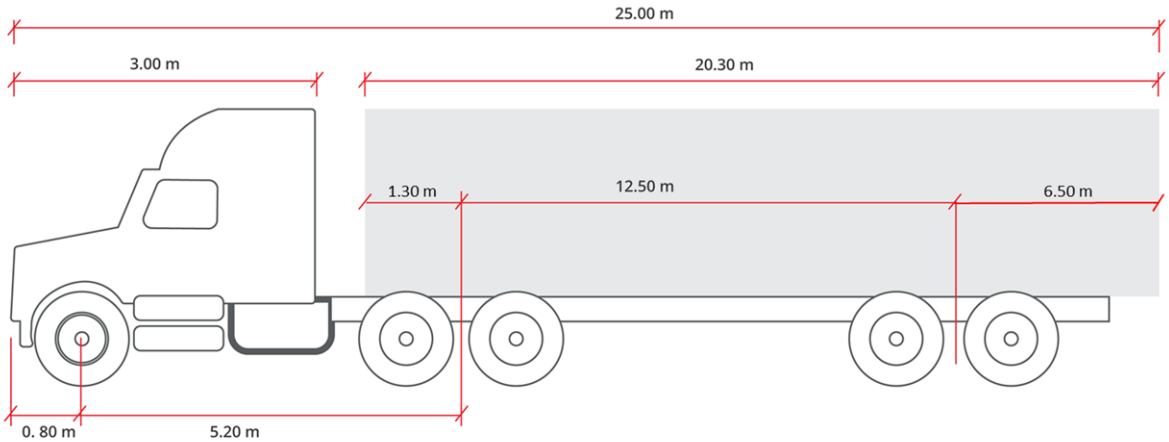
A load, vehicle, and / or combination of vehicles that exceeds the limits in **Section 3.1**, **Table 6** may be eligible for Term Permits if the turn movement impact area of the configuration is less than the operating envelope of the control vehicle used to develop the applicable Term Permit Network (TPN).

Carriers may submit documentation for their vehicle configuration along with swept path analysis to local road authorities for review. This analysis must be prepared and sealed by a Professional Engineer.

Control Vehicles

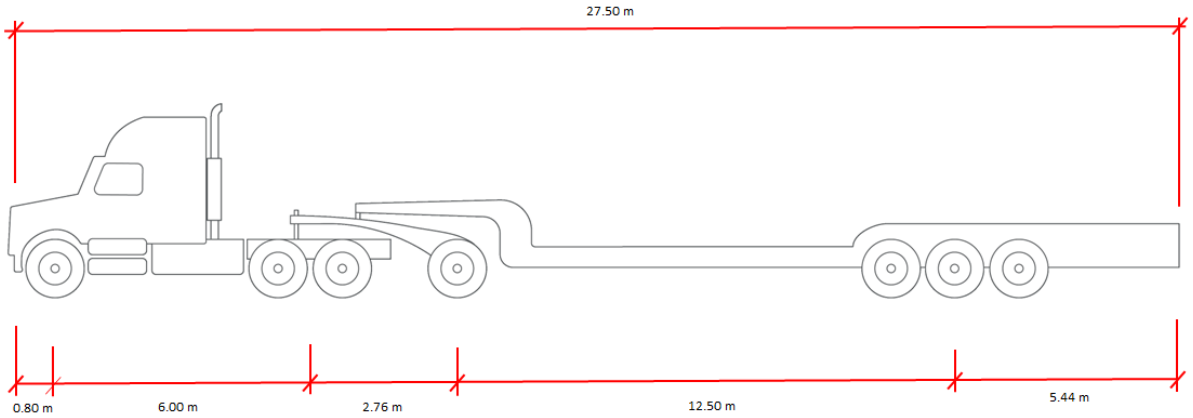
Swept path analyses for the control vehicles below were used to confirm the Tier 1 and Tier 2 TPNs. Only loads, vehicles, or combinations of vehicles with smaller turn movement impact areas than the control vehicles are eligible to use the TPNs with a valid term permit. The dimensions of the control vehicles are provided below.

Tier 1 Term Permit Network Control Vehicle



This control vehicle represents a legal tractor semi-trailer combination per Appendix D of the *Commercial Transport Regulations* carrying an oversize load with the maximum rear overhang of 6.5 m and maximum load width of 3.2 m per Chapter 6.3.1.B of the *Commercial Transport Procedures Manual*. The wheelbase is 12.5 m, which is the maximum legal trailer wheelbase. The rear axle spread is 1.27 m per Appendix A of the *Commercial Transport Regulations*. Only the front axle is steerable, and the vehicle combination has one articulation point.

Tier 2 Term Permit Network Control Vehicle



This control vehicle represents a legal tandem drive tractor per Appendix D of the *Commercial Transport Regulations* with a steerable front axle towing a steerable jeep and a tridem low bed trailer with a track width of 3.2 m and a wheelbase of 12.50 m. The drive axle spread is 1.52 m per Appendix A of the *Commercial Transport Regulations*, and the tridem axle spread is 3.04 m.[1] The axle group spacing between the drive axle group and the jeep axle is 2.76 m. The overall length of 27.5 m is the maximum for term permits for vehicles with multiple articulation points.

Operating Envelope Maximums

Table 1 summarizes the maximum width of the operating envelope for different movement types. Maximum widths for each movement are summarized for each tier. The swept path of the vehicle being considered for Term Permit eligibility may not exceed the maximum width for any movement in the desired tier. Each movement is illustrated in a corresponding figure, as noted in the table below.

Table 1: Maximum Width of Operating Envelope by Movement and Tier

Maximum Width of Operating Envelope by Movement and Tier				
	Illustration	Radius	Tier 1	Tier 2
Right U-Turn	Figure 1	15 m	9.46 m	9.87 m
Right 90˚ Turn	Figure 2	20 m	6.95 m	7.16 m
Through Travel Curve	Figure 3	100 m	4.15 m	4.00 m
Left 90˚ Turn	Figure 4	20 m	6.99 m	7.19 m
Left U-Turn	Figure 5	15 m	9.45 m	9.86 m

1 *Project Cargo Corridors - Province of British Columbia (gov.bc.ca). Online: https://www2.gov.bc.ca/gov/content/transportation/vehicle-safety-enforcement/services/permitting/project-cargo-corridors*

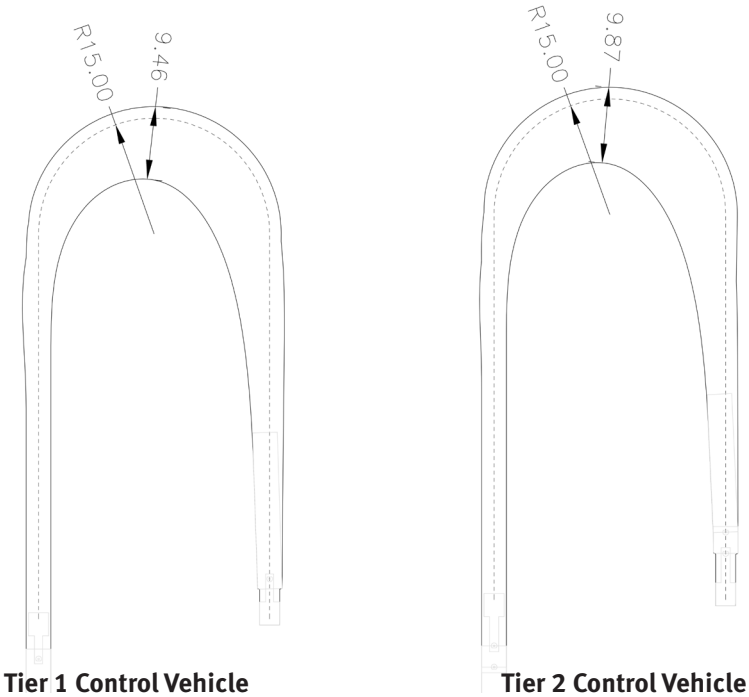


Figure 1: Right U-Turn along 15 m Radius

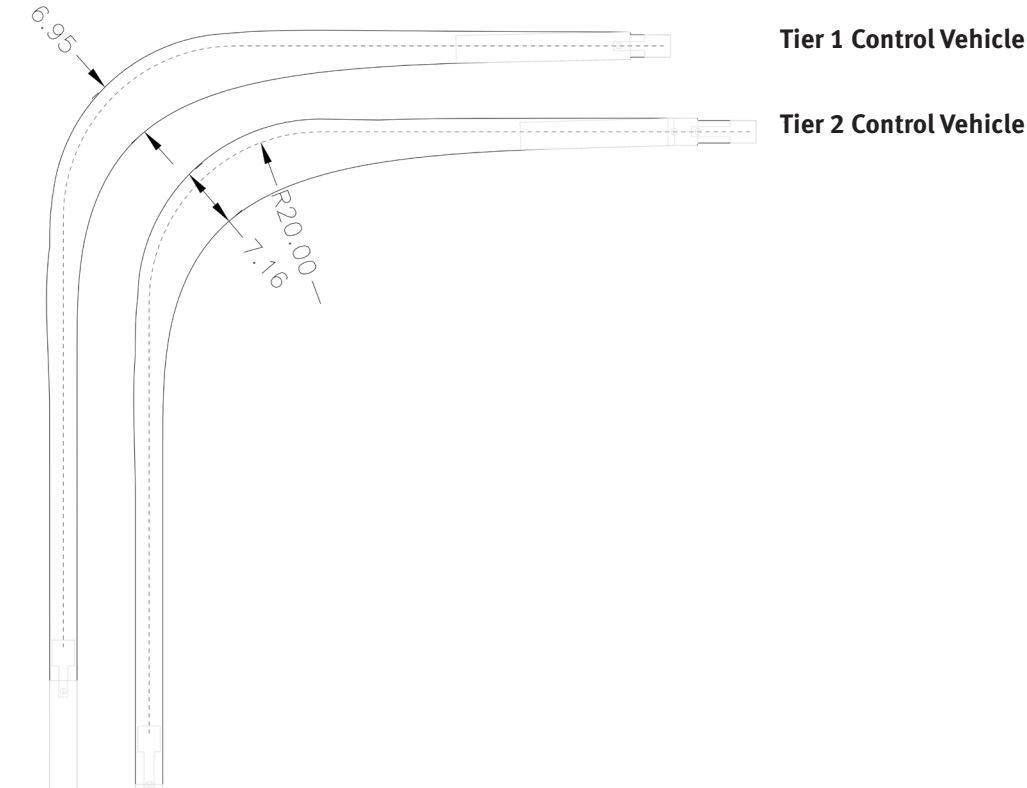


Figure 2: Right Turn along 20 m Radius

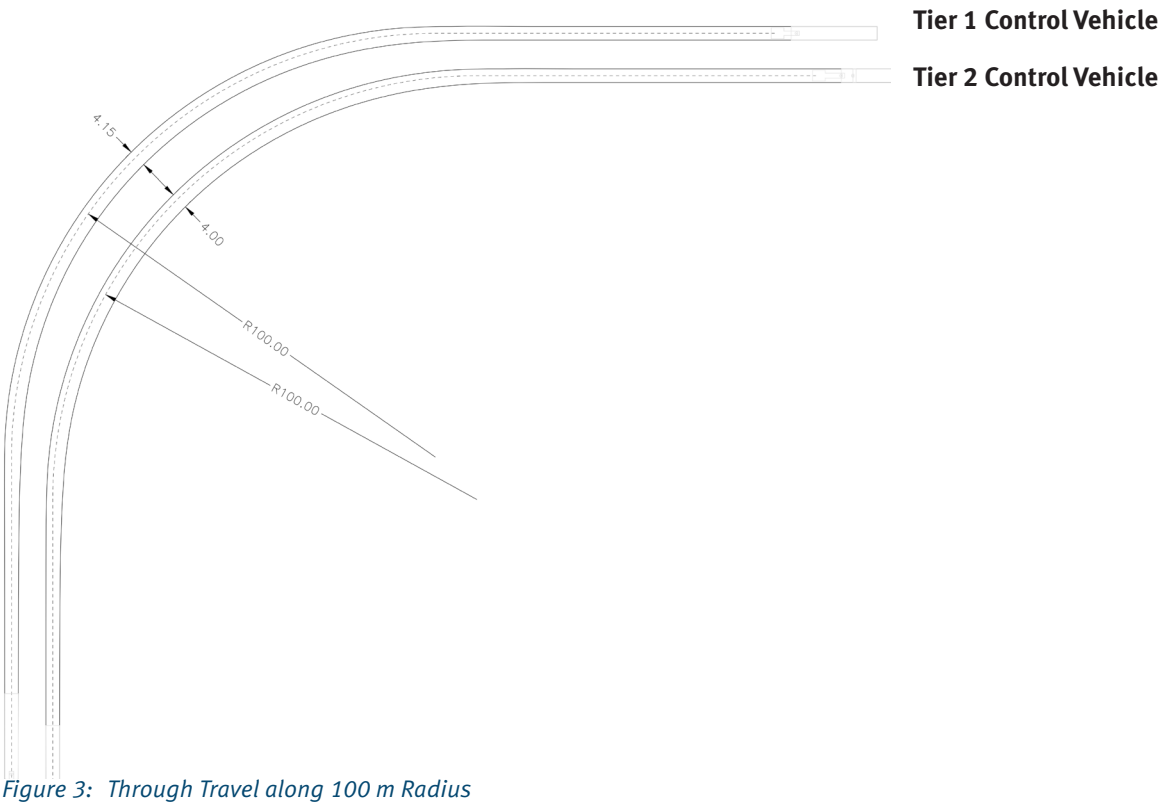


Figure 3: Through Travel along 100 m Radius

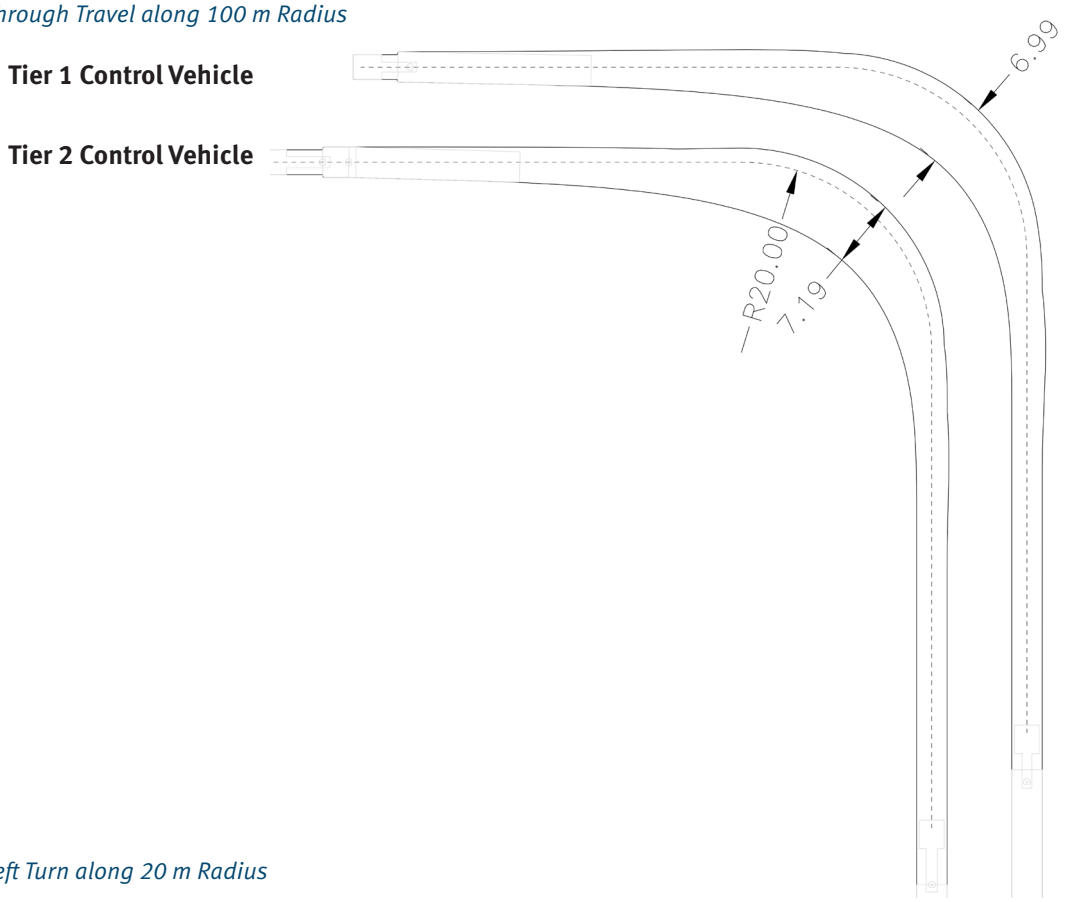
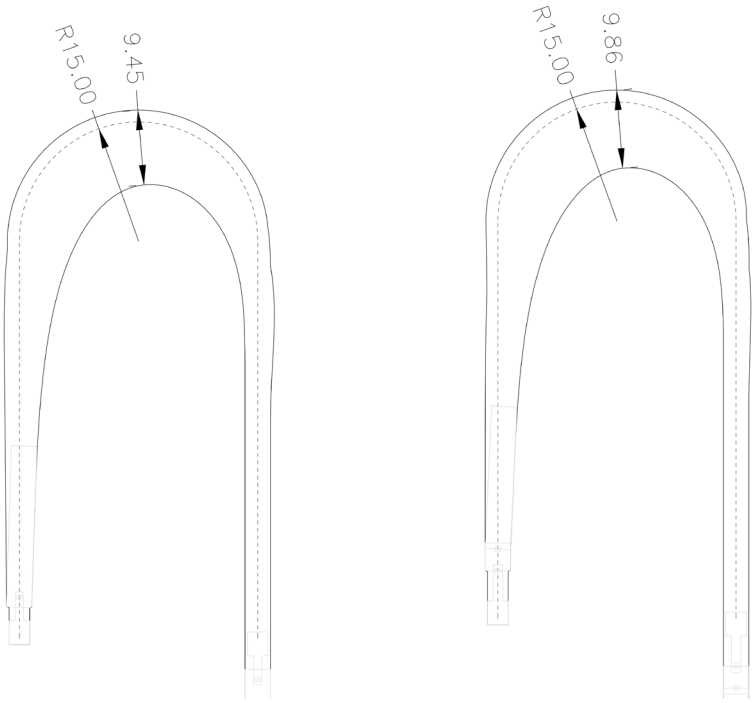


Figure 4: Left Turn along 20 m Radius



Tier 1 Control Vehicle **Tier 2 Control Vehicle**

Figure 5: Through Travel along 100 m Radius

Alternative Process

If the vehicle in question does not satisfy the conditions of this appendix because of a technical constraint resulting from the software or a specific element of the vehicle design, but the applicant has compelling evidence that the specific configuration has an operating envelope that is less than the control vehicles, the carrier may make a case for inclusion. Additional engineering analysis may be submitted for review by municipal engineers or their delegates.

Adding Vehicles to Future Versions of the RP3M

Specific vehicle configurations that are accepted for a term permit by an individual local road authority may be submitted to TransLink for inclusion in future versions of the RP3M.

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APPENDIX I

BC MOTI POLICIES, PROCEDURES AND METHODOLOGY FOR EVALUATION OF STRUCTURES FOR EXTRAORDINARY OVERWEIGHT PERMITS

Ministry of Transportation and Infrastructure

BC MOTI Policies, Procedures and Methodology for

Evaluation of Structures for Extraordinary Overweight Permits

Background and Definitions

Extraordinary Overweight: any overweight vehicle that cannot be pre-approved for weight based on current policies

Overload: any vehicle exceeding legal gross vehicle weights or legal axle weights that requires a permit

Structure: any structure supporting vehicles with a span > 3 m

Screening Evaluation (SE) refers to a simplified and rapid method of doing a 2D model key load effects comparison evaluation where the overload vehicle load effects (Demand) are compared to reference vehicles load effects (Capacity), of which the latter are considered to represent the safe capacity of the structure.

Standard SE refers to the method where the effects of vehicle track width, transverse wheel layouts and lateral distribution to structural components are NOT considered - which means they are assumed to be the same for both the demand and capacity vehicles and therefore cancel each other out in the Demand/Capacity (D/C) ratios.

Enhanced SE refers to the method where differences resulting from track widths, transverse wheel layouts and lateral distribution are also included in the D/C ratios. This is typically done only on a case by case basis when the Standard SE is failing and when these benefits can be calculated by simplified methods (e.g. for 2 girder bridges or through-truss bridges, or also for very wide vehicle track widths like dual lane trailers where the distribution benefits are substantial).

Detailed Evaluation: a structure live load evaluation undertaken in accordance with Section 14 of CSA S6, or the equivalent sections of older codes, where Live Load Capacity Factors (LLCFs) are calculated for all critical components and locations.

Reference Capacity Vehicles: The structure design vehicle if known, the legal vehicle(s) if the bridge is not load restricted (or load posted), an evaluation vehicle x LLCFs (if the structure has been "detail evaluated" in accordance with the bridge code), or a previous known overload permit vehicle that has crossed the structure without resulting in known damage. Overload vehicle LLCFs from a report paid for by a hauler for a specific overload study are not used or made public as they are considered proprietary to the hauler.

Robust Substructures: mass concrete abutments or piers, wall piers or similar with no cantilever beam or corbel supporting live load; columns in pier bents with 3 or more columns, pier beams supporting live load (not directly over columns), with span/depth ratios ≤ 2; stocky columns ($KL/r \leq 20$)

Screening Evaluation Methodology and Procedures

- 2D single spine models of all bridges are developed and maintained which accurately represent span lengths (as defined by CSA S6), span articulations, restraints and hinges, and span variable "EI" (if not statically determinate for longitudinal effects distribution) – basically all conditions that will significantly affect the longitudinal distribution of live load effects.
- the model must capture all main spans and floor systems such as stringers and floor-beams and truss hangers, and main support reactions, however duplicate similar spans and symmetry should be taken advantage of to reduce the number of load effects evaluated and tracked
- a min. of 2 spans are modeled for simple span floor system stringers (or decks) and a min. of 4 spans are modelled for continuous span stringers and decks
- span lengths should be modeled to an accuracy of 0.5%
- an Excel spreadsheet (Structure Model Record Sheet) is prepared that includes a brief description of the superstructure and substructure types, photos, dwg section clips of key reference details, schematic of the model, one column for each key load effect being tracked and compared, the reference vehicle load effects, LLCFs if applicable, live load factor adjustments if applicable to adjust reference vehicles to the baseline of "PS" Single Trip permits.
- the reference vehicles should be run on the model and the key load effects permanently recorded and checked
- the Model Record Sheet and the corresponding analysis model should be independently checked, and both signed off by a P.Eng. as well as any future significant modifications to them
- Abutments in compression under live load are typically considered very robust and low risk and are not evaluated, however abutment reactions with live load uplift should be evaluated
- Key load effects to be tracked and D/C ratios calculated typically are at locations of maximum moment and shear in each span, reactions at piers, shear at in span hinges, pins or dapped (or half) joints, however engineering judgment must be used as on certain bridges other locations may be critical. For floor systems max. shear and moment in the stringer (or deck) spans and the reaction on the floor-beam (and hanger if applicable).
- Decks that span transversely between longitudinal girders as one-way slabs are not required to be evaluated, however if they span longitudinally between floor-beams they should be evaluated in a similar manner as floor stringers
- For concrete components not designed or evaluated for shear based on Modified Compression Field Theory or Strut and Tie methods, the design or evaluation vehicle shear load effects are not used as reference capacities as they are likely unconservative, rather the 63.5T legal or 63.5T permit vehicles must be used (provided the bridges are not load posted or restricted for less than legal loading)
- Robust substructures are assigned an 83.5T Standard PS Permit Vehicle LLCF of 1.5 without any evaluation
- LLCFs used in screening evaluation on the capacity side are based on the MOTI standard 83.5T PS Permit Vehicle taken from bridge load rating reports if completed for a bridge (see attached 85T Load Rating Terms of Reference for the procedures).
- D/C ratios may be adjusted by live load factors to account for the different live load factors of the overload permit vehicles from Section 14 vs. the reference capacity vehicles provided the

latter is clear as to what live load factors were used. NT live load factors should be assumed for non-permit legal traffic.

- When comparing single trip overloads to the legal reference vehicle and the structure is in good condition and not load posted, a max. 5% exceedance tolerance or benefit is acceptable, and a max. 2% exceedance tolerance is acceptable for term permit overloads.
- DLA (dynamic load allowance) benefits of the overload travelling at reduced speeds as per Section 14 of CSA S6 may be applied to the D/C ratios, however the amount of DLA 'embedded' in the reference capacity vehicles must be verified. If the reference vehicle DLA cannot be verified based on clear records (such as reference to a code or from an evaluation report) then a maximum benefit of 6% is allowed for the overload crossing at a speed of ≤ 10 kph. If speed reduction benefits are required to pass an overload, then max. speeds of 25 and 10 kph are considered.
- Example calculations: for a DLA of 0.25, the 10 kph benefit is (1.25)/(1+0.3x0.25)-1 = 16%, or for a DLA of 0.3, 19%
- If design or evaluation vehicle lane loads are used as the reference capacity vehicles (beneficial only for long spans) then the reduced DLA for the lane loads based on the applicable era code must be used, and further the crossing condition of "no other vehicles in the same lane" must be assigned to the overload to avoid cancelling the benefit of the UDL portion of the reference lane load. Note for older codes like S6-88 the DLA was different for the UDL and truck portion of the lane load.
- For permits that will not have bridge crossing conditions and the vehicle could likely to be crossing in a traffic jam scenario representing the lane load condition, 100% of the truck load combined with the code UDL starting 3 m before and after the overload vehicle (but not overlapping it) is used.
- For structures at least 2 lanes wide, the benefit of travelling down the centerline of the bridge or straddling 2 lanes and with no other vehicles on the bridge at the same time shall be 10% for all components and load effects. The one exception is for moment in main girders of multi-girder (≥ 4 girders) or slab superstructures where the benefit shall be 30%, which is taken from a paper by Bakht/Jaeger "A Rational Procedure for Overweight Permits" - Transportation Research Record 950).
- Term permits cannot have bridge crossing conditions or crossing restrictions and the permit vehicles are assumed to travel mixed with normal traffic which is the CL1-625 design vehicle (see attached Terms of Reference for Divisible Load permits).
- If a PC permit (Controlled Permit) is required to get a pass on any bridges, then the overload vehicle weights and axle dimensions must be independently verified before the permit is issued and the bridge crossings must be supervised by an independent BC licensed engineer. Independent verification of the weights and dimensions must be done either by official government weigh scale operators or by a BC licensed engineer and verification documents provided. See attached Weighing and Supervision Requirements for more details.
- If the screening evaluation methodology is exhausted without achieving a pass then the overload permit request is denied, and the applicant has the options of reducing weights, changing their vehicle configuration, changing their route, or hiring a consultant to undertake detailed evaluations of the failing bridges (see attached Single Trip Permit Detailed Evaluation

Terms of Reference). If the detailed evaluation is successful, then the permit is issued based on the bridge crossing requirements of the accepted detailed evaluation reports.

- The structural engineering approval portion of the permit is delivered as a sealed secure pdf file and contains the vehicle configuration and details, the approved route as clear step by step directions in order of the direction of travel, and the list of bridges that have crossing conditions/restrictions and the km station (to the nearest 0.1 km) from a clear upstream reference point, typically a junction.
- The most common bridge crossing conditions/restrictions used are: travel down the centerline of the bridge, straddle 2 lanes in the direction of travel, no other vehicles on the bridge at the same time as the overload, no other vehicles in the direction of travel at the same time as the overload, at a speed less than 10 km/h
- Reduced speed restrictions are always the last restrictions to be considered as the rate of compliance is lower as observed by MOTI, further most heavy overloads require multiple pilot cars, travel during off-peak traffic times, and many are over-width, so straddling 2 lanes and no other vehicles on the bridge has less impact on the hauler and compliance is greater
- Structural Culverts with a cover of > 1 m are screen evaluated based on a vertical stress comparison approach at the obvert elevation (rather than beam model load effects), with the stress based on wheel and axle loads and Boussinesq theory stress distribution. Culverts are only evaluated for vehicles with axle weights exceeding overload permit policy limits as defined by the MOTI CTPM, (typically single axle: 11,000 kg, tandem axle group: 24,000 kg, tridem axle group: 29,000 kg), and these vehicles are most typically municipal fire trucks. The overload is compared to the PS permit tandem and tridem group and if necessary the era design vehicle axles shown below, however no live load factor adjustments are used for this stress comparison method.

Time Period	Culvert Design Live Loading	Heaviest Axle
1950 - 1962	HS20	32 kip / 142.3 kN
1962 - 1978	HS25	40 kip / 177.9 kN
1978 - 1988	MS250	200 kN
1988 - 2000	CS-600	180 kN
2000 - 2007	CS-600	180 kN
2007 - 2017	BCL-625	175 kN

Reference Capacity Vehicles

TRTR3 8 Axle Legal B-Train - Normal Traffic (Pre-approved for all bridges open to full legal loading)

Axle No.	1	2	3	4	5	6	7	8	GVW
Description	Steer	Tandem Drive		Tridem Trailer			Tandem Trailer		kg
Weight of axle (kg)	5,500	17,000		24,000			17,000		63,500
Mass (kg)	5,500	8,500	8,500	8,000	8,000	8,000	8,500	8,500	63,500
Force (kN)	53.94	83.360	83.360	78.456	78.456	78.456	83.360	83.360	63,500
Axle spacing (m)		4.00	1.20	5.50	1.20	1.20	5.50	1.40	
No. of Tires	2	8		12			8		

63.5T 7 Axle Permit Vehicle - PS Traffic (Pre-approved for all bridges open to full legal loading)

Axle No.	1	2	3	4	5	6	7	GVW
Description	Steer	Tridem Drive			Tridem Jeep			kg
Weight of axle (kg)	5,500	29,000			29,000			63,500
Mass (kg)	5,500	9,667	9,667	9,667	9,667	9,667	9,667	63,500
Force (kN)	53.939	94.801	94.801	94.801	94.801	94.801	94.801	63,500
Axle spacing (m)		4.40	1.40	2.25	7.3-18	1.50	1.50	
No. of Tires	2	12			12			

80T 9 Axle Permit Vehicle - PS Traffic (Pre-approved for all 80T Route bridges (if not load restricted))

Axle No.	1	2	3	4	5	6	7	8	9	GVW
Description	Steer	Tandem Drive		Tandem Jeep		Tandem Trailer		Tandem Booster		kg
Weight of axle (kg)	5,000	18,750		18,750		18,750		18,750		80,000
Mass (kg)	5,000	9,375	9,375	9,375	9,375	9,375	9,375	9,375	9,375	80,000
Force (kN)	49.04	91.94	91.94	91.94	91.94	91.94	91.94	91.94	91.94	80,000
Axle spacing (m)		4.4	1.37	3.76	1.37	9.00	1.37	3.76	1.37	
No. of Tires	2	8		8		8		8		

83.5T 9 Axle Permit Vehicle - PS Traffic (Pre-approved for all 85T Route and BCL-625 bridges (if not load restricted))

Axle No.	1	2	3	4	5	6	7	8	9	GVW
Description	Steer	Tandem Drive		Tandem Jeep		Tridem Trailer			Booster	kg
Weight of axle (kg)	5,500	20,000		20,000		29,000			9,000	83,500
Mass (kg)	5,500	10,000	10,000	10,000	10,000	9,667	9,667	9,667	9,000	83,500
Force (kN)	53.939	98.070	98.070	98.070	98.070	94.801	94.801	94.801	88.263	83,500
Axle spacing (m)		4.4	1.37	4.60	1.37	7-18	1.50	1.50	3.70	
No. of Tires	2	8		8		12			4	

Ministry of Transportation and Infrastructure

TERMS OF REFERENCE
LOAD CAPACITY EVALUATION OF BRIDGES FOR 85 TONNE CLASS PERMIT LOADS

1.0 Background and Scope of Work

The Ministry has an ongoing program to evaluate the load capacity of bridges on specific routes throughout the Province in order to enable routine issuance of permits for 85 tonne GVW permit loads. Consultants are advised that the Ministry has modified its methodology from using the most cost effective method and minimizing the amount of work to get a positive but reliable answer, to using sophisticated analysis methods to obtain the best possible answer to aid in later evaluation of the structure for higher loadings. The Consultant shall use sophisticated methods, as defined by CSA S6 Clause 14.11.3 in the undertaking of this assignment.

Strengthening designs are not part of this assignment. For structures that are confirmed as under capacity, rehabilitation design and work will be procured under separate contracts by Ministry Region or District personnel.

The Ministry regularly evaluates bridges for passage of loads greater than 85 tonne GVW with special crossing restrictions such as travelling down the bridge centerline and with no other vehicles on the structure. Therefore load cases are included which facilitates these ongoing evaluations.

The Ministry also considers the capacity of bridges on some routes to carry 6 axle mobile cranes. Evaluation of the bridges for this load case may also be required.

The scope of work for this assignment involves the load rating of the specified elements identified in **Table 2**, which shall be based on the available drawings for the structures and inspection reports supplied by the Ministry.

2.0 Evaluation Criteria

2.1 Evaluate structures in accordance with CHBDC CAN/CSA S6-14 (including all current revisions), Section 14 using Ultimate Limit States methods unless noted otherwise. Live loading reductions shall be applied in accordance with Tables 14.3 and 14.4.

2.2 Incorporate the relevant provisions of the MoT Supplement to the CHBDC S6 (Volume 1 of the Bridge Standards and Procedures Manual dated October 2016).

http://www2.gov.bc.ca/gov/content/transportation/transportation-infrastructure/engineering-standards-guidelines/structural/standards-procedures/volume-1

2.3 The Inspection Category shall be INSP2.

2.4 For the mobile crane load case, the following live load factors provided in **Table 1** shall be used instead of those given in Clause 14.13.3.

Table 1 – Live Load Factors for Mobile Cranes

Analysis Type	Span Type	Beta Factor						
		2.50	**2.75**	**3.00**	**3.25**	**3.50**	**3.75**	**4.00**
Static	Short	1.15	1.19	1.23	1.27	1.32	1.36	1.41
	Other	1.10	1.10	1.15	1.19	1.24	1.28	1.33
Sophisticated	Short	1.17	1.22	1.27	1.32	1.37	1.42	1.48
	Other	1.10	1.11	1.16	1.21	1.26	1.31	1.36
Simplified	Short	1.19	1.25	1.31	1.37	1.43	1.50	1.57
	Other	1.10	1.11	1.17	1.22	1.27	1.33	1.39

2.5 Rating of concrete decks, superstructure bracing elements (except for curved in plan bridges), bearings, vertical substructure elements not susceptible to buckling, and foundations are generally not required (unless noted otherwise in Table 2). Single and two column pier bents shall be evaluated.

2.6 Fatigue analysis is not required.

2.7 System Behaviour Category S1 shall be used for the girders in 3 girder simple span bridges.

2.8 If available, shop drawings will be provided for bridge girders, which typically represent the as-built condition. In the event of a discrepancy with the design drawings the shop drawings generally shall govern. The Consultant shall notify the Ministry if any significant difference (e.g. # of strands, concrete strength, plate sizes, number of bolts, etc.) is encountered.

2.9 For concrete girders, shear and moment capacity calculations shall be undertaken in accordance with the Ministry's Supplement to S6, Section 14.14.1.6.1. Note the iteration procedure required for shear resistance calculations. Concrete girders shall be evaluated for shear at dv from the support, at changes in stirrup spacing and at prestressing hold-down points typically.

2.10 When interaction of forces may govern a member capacity, the LLCF shall be calculated by iteration (or comparable method) that results in the applicable interaction equation being equal to 1.0, or the data point falling on the factored resistance interaction curve. Some examples of this are Section 10.9.4.1 (axial compression and bending in a steel column), Section 10.10.5.2c (combined shear and moment in steel girders with slender webs that rely on tension field action) and reinforced concrete columns. The LLCF shall be inserted into the interaction equation by replacing for example Mf by (MfD+LLCFxMfL). The interaction curve for reinforced concrete columns should be developed using factored material strengths and it shall also include the resistance adjustment factor U of S6 14.14.2.

2.11 For the purposes on Section 14.12.5, structures shall not be considered as “important”.

2.12 The evaluation of arch bridge curved compression members shall be in accordance with the most current version of the AASHTO LRFD Bridge Design Specifications following

the first order analysis moment magnification methodology, or an alternative methodology may be proposed to the Ministry for approval prior to proceeding.

2.13 For continuous modular truss panel bridges such as Acrow, Bailey, Mabey etc. the negative moment resistance at piers, if based on the supplier's information for simple spans or based on the full panel section properties, shall be reduced by a factor of 0.75 to account for shear interaction at the panel pin connections.

2.14 For Acrow panels in good condition and not considering fatigue, the ULS Mr = 0.95 x Fy x S and the ULS Vr = 1.6 x Shear Capacity Values (based on allowable stress), based on values from the Acrow manual. Similarly for Bailey panels; ULS Mr = 0.90 x Fy x S and ULS Vr = 0.90 x "Failing Load" (based on testing), based on values from the "The Bailey and Uniflote Handbook".

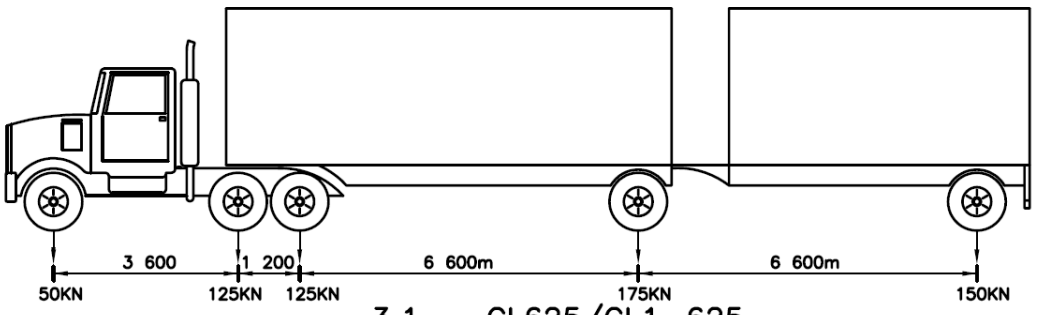
2.15 Companion vehicles are the Normal Traffic loading in the other lanes at the same time as a permit vehicle for the multi lane loading cases. If companion vehicle force effects are significant for a particular force effect and component, then they may be considered as Category A force effects in the LLCF equation (i.e. subtracted from the numerator). The exception is if they are of the opposite sign to the overload vehicle force effects (i.e. causing force reversal) in which case they shall be neglected.

3.0 Dead Load

Unless otherwise indicated in the Terms of Reference, assume that all structures with concrete decks have been designed for an additional 50 mm of concrete overlay and that the overlay has been or will be installed in the future. The dead load category shall be D2.

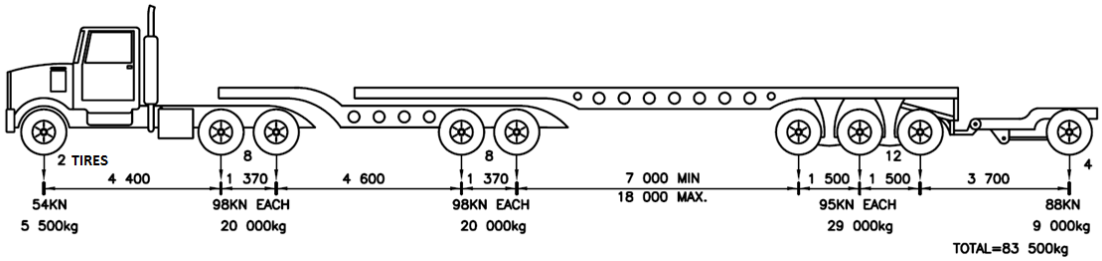
4.0 Live Load

4.1 All structures shall be evaluated for the following live load vehicles unless noted otherwise:

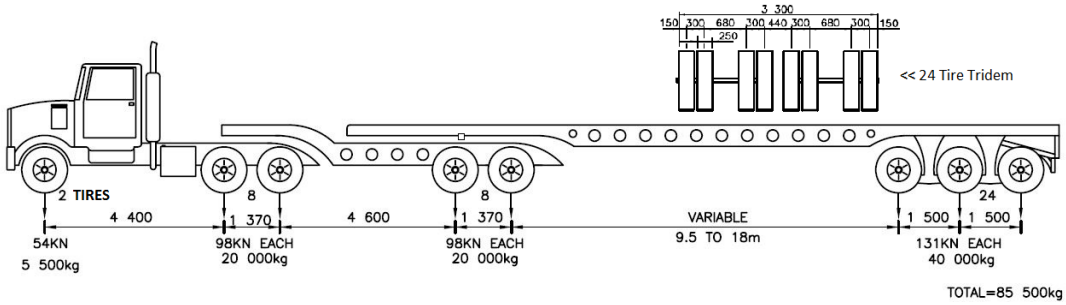


3.1 – CL625/CL1–625

i. CL1-625 Truck or Lane Load, Normal Traffic, Evaluation Level 1



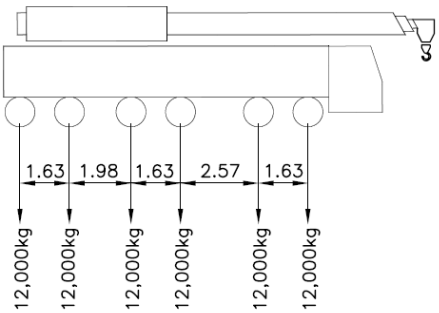
ii. 83.5t 9 Axle PS Permit Vehicle, Truck or Lane Load



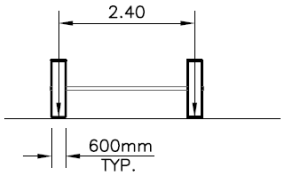
iii. 85.5t 8 Axle PS Permit Vehicle, Truck or Lane Load (Wheeler axle version)

Each of the above vehicles shall be assumed to have a track width of 1.8 m c/c of the wheel lines except for the wheeler axles as shown. Lateral placement of the Permit Vehicles within the Section 14 evaluation lanes shall be in accordance with S6 3.8.4.1 (0.6 m from center of outer wheel (dual tires) to the edge of lane - therefore wheeler tridem will control the lateral position for the 85.5T vehicle).

iv. 6 Axle Mobile Crane PA Permit Vehicle, Truck or Lane Load



Crane–6ax



Transverse Dimension
Between ℄'s of Wheels
(Typical All Cranes) = 2.4m

4.2 Multiple lane loading shall be in accordance with S6 Section 14.9.4. Loading in "other lanes" than the single permit vehicle shall be CL1-625 (reference S6 Section 14.9.4.3). The number and widths of the evaluation lanes shall be the number of current operating lanes as given in **Table 2** with the widths as defined in S6 Section 14.9.4.1. All load combinations shall include the factors in accordance with S6 Tables 14.3 and 14.4 as applicable.

4.3 The following live load cases shall be considered to produce the governing load effects on the elements being evaluated:

i. CL1-625 Normal Traffic (Truck or Lane Load) in all combinations of evaluation lanes (except this load case is not required for bridges designed to BCL-625)
ii. Permit vehicles (Truck or Lane Load) in any single evaluation lane with normal traffic (CL1-625) (Truck or Lane Load) in the other lanes, with all lane combinations considered
iii. For the PS permit vehicles, additional load cases shall be analyzed with the permit vehicles (**Truck Load only**) positioned for various lane configurations as follows, with a lateral tolerance of ±600 mm:
    - 1 or 2 lane bridges - straddle the bridge centerline with no other traffic on the bridge
    - 3 lane bridges - straddle two lanes with no other traffic in those lanes with potential CL1-625 traffic (Truck or Lane Load) in the 3rd lane
    - 4 Lane bridges / 2 lanes in each direction - straddle two lanes of one direction with no other traffic in those lanes, with potential CL1-625 (Truck or Lane Load) in the opposing direction lanes.

4.4 If applicable, for evaluation of single and two column pier bents, braking load and wind load shall be considered in combination with vehicle loads to determine moment and shear forces that may interact with axial forces.

5.0 Bridges and Bridge Components to be Evaluated

Specified bridges and bridge components for evaluation are noted in **Table 2**.

Table 2 – Specific Bridges and Components

Structure No.	Structure Name	Superstructure and Substructure Components to be Evaluated	Hwy Class	Number of Operating Lanes

6.0 Report Format

Provide 1 electronic copy each of the draft report and sealed final report for each bridge, in pdf format. One hard copy of the final report shall also be provided upon request. The report layout and **minimum** content shall be as follows unless approved otherwise by the Ministry. A separate report shall be prepared for each bridge.

6.1 Introduction

- Brief project background and description,
- Reference to Terms of Reference (to be attached as an Appendix).

6.2 Bridge Description

- Reference to General Arrangement Drawing (include drawing in this section or in Appendix),
- Description/discussion of significant features of the structure affecting the load capacity evaluation,
- Description of modifications or rehabilitation of the structure over time which may be significant relative to the load capacity evaluation.

6.3 Analysis

- Evaluation Criteria,
  - Design Codes and code modifications
  - Live Loading including Lane Loading (Hwy Class)
  - Inspection information or assumptions
- Analysis Assumptions and Methodologies,
  - Material properties
  - Dead loads
- Discussion of structural models and issues.

6.4 Results

- General discussion of results,
- Summary table of the lowest LLCF per load case and related member and force effect.
- Evaluation results for each rated member in a standardized tabulation containing at least the following information (**see attached sample table**):
  - Member identification (Element)
  - Failure mode, (shear, bending etc.)
  - Critical section, location for where capacity is being checked (reference to diagram for complicated geometry structures, as required)
  - Reason for selection of specific location for checking
  - Target Reliability Index: System (S) and Element (E) Behavior categories, Inspection Level (typically INSP2)
  - Beta Factor type(s), Beta values shall not be modified for important structures as per Clause 14.12.5;
  - Dead load, dead load category, dead load factor, factored dead load;
  - Live load, live load factor, dynamic load allowance, factored live load;
  - Member resistance and U factor;
  - LLCF; indicate whether vehicle or vehicle/uniformly distributed load combination governs, and;
  - identification of evaluator and checker for each load case, plus hand written signatures.

6.5 Calculations Brief

The Ministry may request a copy of the detailed calculations for review. The Consultant shall record calculations in an organized and complete format and retain them on file for this purpose.

7.0 Ministry Information

The following information will be provided:

Digital pdf copies of all drawings noted on the drawing list for each structure.

Annual inspection reports and inspection pictures from BMIS. If available, two routine inspection reports along with one detailed inspection report will be provided.

The Consultant shall review the inspection reports and advise if any condition issues are noted which could impact the capacities of the elements being evaluated.

Ministry Contact

8.0 Schedule

Submit draft evaluation report(s)	Not later than xxxxxx
Submit final evaluation report(s)	Not later than xxxxxx

Provide the Ministry with a schedule which indicates the proposed delivery dates for the draft and final evaluation reports for each structure within the general guidelines noted above.

Sample Evaluation Table

Bridge Name and Number

Element	Failure Mode (Units)	Critical Section	Target Reliability Index				Dead Loads (per element)							Live Load (per element)					Resistance		
							Unfactored Loads			Load Factors											
			Sys. Behav.	Elem. Behav.	Insp. Level[1]	Beta	D1	D2	D3	α_{D1}	α_{D2}	α_{D3}	Fact'd Load	Load Case[2]	Unfact. Load	DLA	Load Factor	Fact'd Load	Fact'd Resist.	Adjust. Factor U	LLCF
20m span Prestress I Girder	Shear (kN)	Change of Stirrups @5.2 m	S2	E2	INSP2	3.25								CL-625 NT							
														83.5T PS							
														85.5T PS							
														83.5T PS*							
														85.5T PS*							
														Crane PA							
20m span Prestress I girder	Positive Moment (kNm)	@ 0.5L	S2	E3	INSP2	3.00								CL1-625 NT							
														83.5T PS							
														85.5T PS							
														83.5T PS*							
														85.5T PS*							
														Crane PA							

Notes:

Hwy Class

Inspection Category (if not shown in table)

* Truck Load only, straddling 2 Lanes (example for 2 lane bridge)

DLA = 0 indicates Lane Loading Governs

	Name	Signature
Evaluator		
Checker		

1. Not necessary if INSP category is the same for all
2. Report all load cases together by element

Ministry of Transportation and Infrastructure

TERMS OF REFERENCE
DETAILED LOAD CAPACITY EVALUATION OF BRIDGES FOR DIVISIBLE LOAD OVERWEIGHT VEHICLES

1.0 Background and Scope of Work

A Proponent has approached the BC Ministry of Transportation and Infrastructure (**MOTI**) with a request to allow a vehicle with a gross vehicle weight (GVW) that exceeds legal limits to travel on a specific corridor under a special permit. The Ministry requires the Proponent to evaluate the bridge structure(s) on the route to determine whether the proposed vehicle can safely cross them without crossing restrictions or disruption of existing traffic. The Proponent shall retain and pay for the services of a qualified BC licensed Bridge Engineering Consultant to undertake the work. The Consultant shall have experience in undertaking detailed bridge overload evaluations in accordance with the Ministry's requirements. The Consultant shall carry Professional Liability and General Liability Insurance in the amounts of $1M and $2M respectively and shall provide such evidence to the Ministry upon request.

The objective is to evaluate each structure using the most cost effect method taking advantage of simplified analysis methods and symmetry wherever possible. i.e. minimize work to get a positive but reliable answer, rather than expending a lot of effort to maximize the known capacity of the structure. Should the initial evaluations using simplified methods result in unfavorable results (LLCF's less than 1.0), then sophisticated or refined analysis methods shall be undertaken.

If required, strengthening designs for structures that are confirmed as under capacity are not part of this scope but rather will be addressed by a separate project phase and Terms of Reference provided by the Ministry.

The scope of work for this assignment involves the load rating of specified elements for each of the structures identified in **Table 1** for the proposed overload configuration occupying one lane and CL1-625 loading in other lanes, based on the drawings for the structure and inspection reports supplied by the Ministry.

If requested, the Consultant shall attend a start-up meeting with the Ministry to review the order structures should be evaluated (structures with a lower likelihood of having sufficient capacity should be checked first), structural elements that need evaluation, evaluation methodology, report format and schedule.

2.0 Design Criteria

2.1 Evaluate structures in accordance with CHBDC CAN/CSA S6-14, Section 14 using Ultimate Limit States methods unless noted otherwise.

2.2 Incorporate the relevant provisions of the **MOTI** Supplement to the CHBDC S6 (Volume 1 of the Bridge Standards and Procedures Manual dated October 2016).
http://www2.gov.bc.ca/gov/content/transportation/transportation-infrastructure/engineering-standards-guidelines/structural/standards-procedures

2.3 The Inspection Category shall be INSP2. This applies even if the Terms of Reference require detailed inspection of the structure by the Consultant.

2.4 Rating of concrete decks, girder bracing elements (except for curved in plan bridges), bearings, vertical substructure elements NOT susceptible to buckling, and foundations are generally not required (unless noted otherwise in **Table 1**). Single and two column pier bents shall be evaluated.

2.5 Fatigue analysis is not required.

2.6 System Behaviour Category S1 shall be used for 3 girder simple span bridges.

2.7 When interaction of forces may govern a member capacity, the LLCF shall be calculated by iteration (or comparable method) that results in the applicable interaction equation being equal to 1.0, or the data point falling on the resistance interaction curve. Some examples of this are Section 10.9.4.1 (axial compression and bending in a steel column), Section 10.10.5.2c (combined shear and moment in steel girders with slender webs that rely on tension field action) and reinforced concrete columns. The LLCF shall be inserted into the interaction equation by replacing for example Mf by (MfD+LLCFxMfL). The interaction curve for reinforced concrete columns should be developed using factored material strengths and it shall also include the resistance adjustment factor U of S6 14.14.2.

2.8 The live load factors to be used shall be as follows:

a) For CL1-625 loading – Normal Traffic
b) For the divisible overload vehicle – Normal Traffic Alternative Loading, unless the industry proponent implements a monitoring program for actual truck weights, satisfactory to the Ministry, that confirms the statistical variation in actual truck weight is within the variation permitted by the CSA S6-14 for Permit Single (PS). Agreement with the Ministry on a satisfactory monitoring program would have to be in place before PS load factors can be used for the divisible overload vehicle.

2.9 Shop Drawings

If available, shop drawings will be provided for bridge girders, which typically represent the as-built condition. In the event of a discrepancy with the design drawings the shop drawings generally shall govern. The Consultant shall notify the Ministry if any significant difference (e.g. # of strands, concrete strength, plate sizes, number of bolts, etc.) is encountered.

2.10 Concrete Girders

For concrete girders, shear and moment capacity calculations shall be undertaken in accordance with the Ministry's Supplement to S6, Section 14.14.1.6.1. Note the iteration procedure required for shear resistance calculations. Concrete girders shall be evaluated for shear at dv from the support, at changes in stirrup spacing and at prestressing hold-down points typically.

2.11 Dapped Structures

The Consultant shall thoroughly review the as-built dapped concrete connection details for any concrete structures that have dapped girder ends and complete rigorous analysis and evaluation of each detail as it relates to current code provisions for concrete shear. Depending upon the results of this analysis and the resulting LLCF for shear, detailed inspection may be warranted. Ministry approval will be required prior to proceeding with any on-site inspection and will only be considered after submission of the draft evaluation report and subsequent review and discussion with the Ministry.

The Consultant shall include within the evaluation report, additional information as necessary to summarize the analysis methodology, results and conclusions.

2.12 Arch Bridges

The evaluation of arch bridge curved compression members shall be calculated in accordance with the most current version of the AASHTO LRFD Bridge Design Specifications following the first order analysis moment magnification methodology, or an alternative methodology may be proposed to the Ministry for approval prior to proceeding.

2.13 Modular Steel Truss Panel Bridges

For continuous modular truss panel bridges such as Acrow, Bailey, Mabey etc. the negative moment resistance at piers, if based on the supplier's information for simple spans or based on the full panel section properties, shall be reduced by a factor of 0.75 to account for shear interaction at the panel pin connections.

2.14 Companion Vehicle(s) Force Effects

Companion vehicles are the normal traffic loading in other lanes than the overload vehicle for multi lane load cases. If they are significant for a particular load effect and component, then they may be considered as category A force effects in the LLCF equation (subtracted from the numerator). The exception is if they are of the opposite sign as the overload vehicle force effects (i.e. causing force reversal) in which case they shall be neglected.

3.0 Dead Load

Unless otherwise indicated for specific bridges in the Terms of Reference, assume that all structures have been designed for an additional 50 mm of concrete overlay and that the overlay has been or will be installed in the future. The dead load class for concrete overlays shall be D2.

4.0 Live Load and Live Load Cases

All structures shall be evaluated for the following live load cases:

The live load model of the Proponents approved overload vehicle in one lane and Evaluation Level 1, CL1–625 in other lanes as required to cause the largest load effect. Both truck and lane loading shall be considered for both the overload and CL1-625 loading. Multiple lane loading shall be in accordance with S6 14.9.4.3 and Table 14.4 The number of evaluation (design) lanes used for the analysis shall be the number of

current operating lanes as given in **Table 1** and the widths shall be as defined in S6 14.9.4.1.

If applicable, for evaluation of single and two column pier bents, braking load and wind load shall be considered in combination with vehicle loads to determine moment and shear forces that may interact with axial forces and resulting in the governing LLCF's.

5.0 Bridges and Bridge Components to Be Evaluated

Specified bridges and bridge components for evaluation are noted in Table 1.

Table 1 – Specific Bridges and Components

Structure No.	Structure Name	Superstructure and Substructure Components to be Evaluated	Hwy Class	Number of Operating Lanes

6.0 Report Format

Provide 1 electronic copy each of the draft report and sealed final report for each bridge, in pdf format. One hard copy of the final report shall also be provided upon request. The report layout and minimum content shall be as follows unless approved otherwise by the Ministry. A separate report shall be prepared for each bridge.

6.1 Executive Summary

- Simple Project Description
- Scope Description
- Lowest LLCF and related load case

6.2 Table of Contents

6.3 Introduction

- Brief project description
- Scope including major parts of structure to be evaluated, inclusion of inspection (or not) etc.
- Reference to load cases
- Reference to Terms of Reference (to be appended)

6.4 Bridge Description

- Reference to General Arrangement Drawing included in this section or in appendix

- Span arrangement and articulation
- Span materials, strengths and grades
- Description / discussion of significant features of the structure affecting the load capacity evaluation
- Description of modifications and rehabilitation of the structure over time which are significant relative to the load capacity evaluation.

6.5 Analysis

- Evaluation Criteria
  - Design codes and code modifications
  - Live Loading including Lane Loading (Hwy Class)
  - Inspection information or assumptions

- Analysis Assumptions
  - Material properties
  - Dead loads
- Discussion of structural models and issues
- Resistance calculation methods
- Discussion of which components and sections were chosen for analysis and why others were not. In cases where the superstructure is fairly complex a simple sketch or diagram shall be included showing the locations of the critical sections chosen for analysis.

6.6 Results

- General discussion of results
- Summary table of lowest LLCF per load case and related member and force effect. Discussion of what additional analysis refinements or other steps could be taken to improve results should this be desired. This is particularly important when LLCF's are less than 1.0.

- Evaluation results for each rated member in a standardized tabulation containing at least the following information:

  - Member identification, clearly defined location for which capacity is being checked references in diagram for complicated geometry structures)
  - Mode type, e.g. shear, bending etc., reason for selection of specific location for checking
  - System (S) and Element (E) Behaviour categories, Inspection Level (INSP2)
  - Beta Factor type(s), Beta values shall not be modified for important structures as referenced in S6-14 Clause 14.12.5
  - Dead load, dead load category, dead load factor, factored dead load
  - Lateral Distribution Analysis Type and Span Type (Short, Other)
  - Live load, live load factor, dynamic load allowance, factored live load
  - Member resistance and U factor
  - LLCF
  - Indicate whether vehicle or vehicle/uniformly distributed load combination governs, and
  - Identification of evaluator and checker for each load case, plus hand written signatures for each table.

6.7 Calculations Brief

The Ministry may require copies of detailed calculations for review. The Consultant is to record calculations in an organized and complete format and retain them on file for this purpose.

6.8 Disclaimers

The Ministry shall be entitled to use and rely on the information contained in the report for the purpose of completing load evaluations and ratings for bridges in relation to permit issuance and any such disclaimer attached to the report must allow for same.

For the Confidentiality, Copyright and Disclaimers, the following clauses shall be included in the report:

This report is for the sole use and reliance of the Ministry of Transportation and Infrastructure ("**MOTI**"), ***Name of Applicant*** and ***Name of Consultant***. This report contains proprietary and confidential information that shall not be reproduced in any manner or disclosed to or discussed with any other parties without the express written permission of ***Name of Consultant***. Information in this report is to be considered the intellectual property of ***Name of Consultant***, in accordance with Canadian copyright law.

This report was prepared by ***Name of Consultant*** for the account of ***Name of Applicant*** for the purpose, in whole or in part, of completing a load evaluation and rating for ***Name of Bridge No. XXXXX***. The material in it reflects ***Name of Consultant's*** best judgment, in light of the information available to it at the time of preparation. No other parties except ***Name of Applicant*** and the **MOTI** can use or rely on this report and the information and data therein. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. ***Name of Consultant*** accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

7.0 Inspection (If Required)

7.1 Bridge Inspection Accreditation

The Ministry requires that the bridge inspector(s) proposed for this assignment have credentials which meet or exceed one of the following criteria:

- BCIT Bridge Inspection Diploma with 5 years bridge inspection experience
- FHWA Bridge Inspection Certificate with 5 years bridge inspection experience
- Registered Professional Engineer with APEGBC with 2 years bridge inspection experience

7.2 Bridge Access

All access to Ministry structures shall be coordinated with the Area Bridge Manager and the Regional Bridge Engineer. The Consultant shall arrange their own access. Below are companies which may be able to provide bridge inspection snooper truck services.

Company	Contact	Contact Number
Copcan Ltd.	Brian Gregson	250 754-7260 250 755-6523 (Cell)
H.M.C Ltd.	Mark Warren	250 442-2025 Ext 105 250 442-4406 (Cell)

The Consultant shall arrange for traffic control as required. The current lane closure restrictions are referenced in the Ministry's Maintenance contract at: http://www2.gov.bc.ca/gov/content/transportation/transportation-infrastructure/contracting-to-transportation/highway-bridge-maintenance/highway-maintenance/agreement/local-area-specifications-las

7.3 Detailed Inspection

Review drawings and previous inspection reports for each bridge and prepare an inspection plan for review by the Ministry prior to accessing the site. Modify the inspection plan as required, to incorporate review comments from the Ministry. The Consultant is to provide recommendations regarding any NDT or specialized testing that is considered necessary.

The dapped connection components of the bridge shall be inspected from a position which allows the inspector to physically touch each component. Condition ratings are to be in accordance with the Ministry's Bridge Inspection Manual and the rating guide for that specific element. Any defects found shall be recorded in the Inspection Report with reference to member type and number, location of defect and size of defect, along with any specialized test procedures.

Detailed inspection reports shall be provided separately for each structure. In addition to the detailed inspection data, the reports shall contain a summary of the inspection data in Ministry BMIS format. The Ministry will provide forms in electronic format.

7.4 Recommendations

The Consultant shall provide recommendations regarding any rehabilitation work required to allow unrestricted use of the overload vehicle, coincident with other traffic.

8.0 Ministry Information

The following information will be provided to the successful Consultant:

8.1 Digital pdf copies of all drawings noted on the drawing list for each structure.

8.2 Annual inspection reports and inspection pictures from BMIS. If available, two routine inspection reports along with one detailed inspection report will be provided.

The Consultant shall review the inspection reports and advise if any condition issues are noted which could impact the capacities of the elements being evaluated.

8.3 Ministry Contact

9.0 Schedule

Draft and final reports shall be submitted to the Ministry for each bridge as they are completed rather than the reports for all bridges submitted at one time.

VEHICLE WEIGHING AND BRIDGE CROSSING SUPERVISION REQUIREMENTS

1) Supervisor Requirements

The vehicle weighing, axle spacing measurements and the bridge crossings must be supervised by a B.C. registered Professional Engineer or a qualified technical person working under their direct supervision. Both must be hired by the carrier and must be acceptable to the Ministry. The supervisors must not be direct employees of the carrier or its related companies. The carrier shall submit to motengov@gov.bc.ca, extraordloads.dc@gov.bc.ca, mark.frew@gov.bc.ca and jacob.pietrzyk@gov.bc.ca the resumes of their proposed supervisors. The resumes must indicate that the supervisors have appropriately related highway bridge experience and the resumes must be accepted by the Ministry prior to them undertaking any work.

2) Vehicle Weighing and Axle Spacing Verification Requirements

The carrier shall provide acceptable evidence to MOTI that the axle group weights for each overload vehicle do not exceed the approved weights and the axle spacings conform to the approved spacings. Vehicles which include a platform trailer are exempt from axle spacings verification. Push-trucks are exempt from both weighing and axle spacings verification provided that the axle weights do not exceed the corresponding pull-truck values and the axle spacings are not less than the corresponding pull-truck values.

The carrier has the following **two** options:

Option A): Provide to: dawcreek@gov.bc.ca & extraordloads.dc@gov.bc.ca a vehicle weigh slip AND axle spacings report from a BC (AB or USA where applicable) government scale or:

Option B): The weighing and measuring of the overload vehicle is supervised by an engineer hired by the carrier.

The engineer's responsibilities shall include:

- Ensuring each and all actual axle weights don't exceed the approved weights indicated below and all axle spacings conform to the approved spacings indicated below.
- Prior to weighing they shall review the scale calibration documents (once) to ensure the scales or load cells are calibrated properly within the last 12 months (government owned vehicle weigh scales are exempt).
- If load cells are used to weigh the commodity or the loaded vehicle, it is the responsibility of the engineer (or the technical person under their direction) to physically witness the weighing, the placing of the commodity on the trailer, to confirm the distribution of weight to the axles, and to confirm that the lateral centre of gravity of the commodity coincides with the centre of gravity of the trailer.
- If a SELF-WEIGH vehicle scale is used it is the responsibility of the engineer to witness the weighing and the axle spacing measuring. If a non-government owned scale is used the scale calibration documents shall be reviewed. Where available, technology such as

video calling may be used to allow the engineer to remotely witness the vehicle weighing and axle spacing measurements and clear sample video and photographic evidence must be included with the engineer's report. This option to remotely witness is only applicable for permanent drive over type vehicle weigh scales.

- Confirming in a letter report submitted to motengov@gov.bc.ca, extraordloads.dc@gov.bc.ca, mark.frew@gov.bc.ca and jacob.pietrzyk@gov.bc.ca that the proposed axle weights are a true representation of the actual axle weights. They shall also confirm the axle spacings conform to the approved spacings and where applicable that the centre of gravity of the commodity coincides with the centre of gravity of the trailer. In short, they shall take full responsibility for the vehicle configuration proposed by the carrier for this move. As applicable, scales and load cells calibration documents, and axle weight and spacing measurement results shall be included in the report.

3) Bridge Crossing Supervision Requirements

The following **X** bridge(s) require supervision:

- **Bridge Name, No. XXXX (Highway XXX)**
- **Bridge Name, No. XXXX (Highway XXX)**

The engineer's responsibilities for supervising the bridge crossing shall include:

- Identifying the bridge on the route before the overload vehicle crosses
- Ensuring the overload vehicle follows the bridge crossing restrictions specified herein
- Noting any obvious visual evidence of distress in any bridge component(s) caused by the overload vehicle and supplying MOTI with a copy of the field notes along with any photos taken before, during or after the overload vehicle crosses the bridge
- The engineer shall have the authority to stop the move if restrictions are not being observed or if there is some obvious distress in the bridge prior to or after the overload vehicle crosses

The Professional Engineer shall submit the letter report(s) covering the above points to motengov@gov.bc.ca, extraordloads.dc@gov.bc.ca, mark.frew@gov.bc.ca and jacob.pietrzyk@gov.bc.ca within 2 business days of the overload vehicle crossing the last bridge requiring supervision on the route.

Prior to a permit being issued the Permit Centre must receive:

- **Acceptance by MOTI Bridge Engineering of the proposed overload vehicle weighing supervision engineer (if applicable), the bridge crossing supervision engineer, and respective technical persons (as applicable)**
- **Either A) a weigh slip AND axle spacings report from a BC (AB or USA where applicable) government scale**
  OR
  B) Acceptance by MOTI Bridge Engineering of the report addressing the weighing and axle spacing measurements of the overload vehicle, supervised by an engineer

All emails submitted shall include the OL number in the subject line.

Ministry of Transportation and Infrastructure

CONSULTANT'S TERMS OF REFERENCE
Single Trip Overload - Detailed Bridge Evaluation

1.0 Administration

At project conception, the Consultant shall provide to the Ministry of Transportation and Infrastructure (Ministry):

- A list of engineering personnel to be used on the project with a list of their project function and relevant experience,
- A description and discussion of the methodology to be used,
- A list of information requested from the Ministry,
- Evidence of Professional Liability (Errors and Omissions) Insurance for a minimum of $1,000,000 and General Liability Insurance for a minimum of $2,000,000,
- All documents submitted to the Ministry shall become the property of the Province and as such will be subject to the provisions of the Freedom of Information and Protection of Privacy Act,
- The Ministry Representative is Mr. Mark Frew, P.Eng, (236-468-1991, mark.frew@gov.bc.ca), and an alternate Ministry Representative is Mr. Jacob Pietrzyk, P.Eng., (250-565-6068, jacob.pietrzyk@gov.bc.ca).

2.0 Background

The Ministry requires a single trip overload detailed bridge evaluation to be undertaken on behalf of an Applicant for a single overload trip on a specific route, to assist the Applicant in attaining an overload permit. The list of bridges (provided separately) shall be evaluated by a qualified Consultant whom shall be retained by and paid for by the Applicant.

3.0 Bridge Inspection

It is not necessary for the Consultant to inspect the bridges unless it becomes necessary to achieve a Live Load Capacity Factor (LLCF) > 1.0. If inspection is necessary, it is the Consultant's responsibility to inspect the structures to a degree necessary to ascertain changes from the drawings, and deterioration which impacts structural capacity, etc. The Ministry will provide available inspection data for reference purposes.

4.0 Evaluation Criteria

Structures shall be evaluated in accordance with Canadian Highway Bridge Design Code (CHBDC) CSA S6–14 and supplements, Section 14 using Ultimate Limit States methods unless noted otherwise below. The evaluation shall incorporate the relevant provisions of the Ministry's Bridge Standards and Procedures Manual, which is available at the following web site:
http://www2.gov.bc.ca/gov/content/transportation/transportation-infrastructure/engineering-standards-guidelines/structural/standards-procedures/volume-1

- With respect to Section 14.9.4.1 of CHBDC, the traffic lanes shall be as actually delineated in the field.
- Unless indicated otherwise by the Ministry, the Inspection Category of Section 14.12.4 shall be INSP2. The most recent inspection reports from the Bridge Information Management System for the list of bridges will be provided by the Ministry.

- For the purposes on Section 14.12.5, structures shall not be considered as “important”.
- Concrete decks do not require evaluation unless the deck spans longitudinally, or the wheel loads of the load rating vehicle, except for the steering axle, exceed 2,900 kg (but not to exceed 100 kg/cm of tire width per the Commercial Transport Regulations).
- Evaluation of superstructure bracing elements (except for curved in plan bridges), bearings, vertical substructure elements not susceptible to buckling, deep horizontal substructure elements (excluding cantilever portions of pier caps), mass concrete abutments and piers, and foundations are generally not required, however the Consultant shall make their own determinations on a site by site basis based on engineering judgment.
- For concrete girders, shear and moment capacity calculations shall be undertaken in accordance with the Ministry's Supplement to S6, Section 14.14.1.6.1. Note the iteration procedure required for shear resistance calculations. Concrete girders shall be evaluated for shear at dv from the support, at changes in stirrup spacing and at prestressing hold-down points typically.
- Slip resistance of steel girder bolted connections shall be evaluated at service loads if this is judged to be critical, as splice plate slippage must be prevented.
- Steel girder bolted field splices, if located at high force locations, may be checked at ULS by assuming the capacity of the connection is at least equal to 75% of the capacity of the girder on the weaker side of the splice.
- System Behaviour Category S1 shall be used for 3 girder simple span bridges.
- Fatigue analysis is not required.
- When interaction of forces may govern a member capacity, the LLCF shall be calculated by iteration (or comparable method) that results in the applicable interaction equation being equal to 1.0. Some examples of this are Section 10.9.4.1 (axial compression and bending in a steel column), Section 10.10.5.2c (combined shear and moment in steel girders with slender webs that rely on tension field action) and reinforced concrete columns. The LLCF shall be inserted into the interaction equation by replacing for example Mf by (Mf_D+LLCFxMf_L). The interaction curve for reinforced concrete columns should be developed using factored material strengths and it shall also include the resistance adjustment factor U of S6 14.14.2.
- The evaluation of arch bridge curved compression members shall be in accordance with the most current version of the AASHTO LRFD Bridge Design Specifications following the first order analysis moment magnification methodology, or an alternative methodology may be proposed to the Ministry for approval prior to proceeding.
- Shop drawings will normally be provided for the prestressed concrete and steel girders. Shop drawings typically represent the as-built condition and in the event of a discrepancy with the design drawings, the former generally shall govern. The Consultant shall notify the Ministry Representative if any significant differences (e.g. strand pattern, material strengths, plate sizes, etc) are encountered.
- For continuous modular truss panel bridges such as Acrow, Bailey, Mabey etc. the negative moment resistance at piers, if based on the supplier’s information for simple spans or the full panel section properties, shall be reduced by a factor of 0.75 to account for shear interaction at the panel pin connections.
- To potentially limit the scope of detailed evaluation work, the Consultant may contact the Ministry Representative for a list of load effects by bridge that passed the Ministry’s screening evaluation with a D/C (demand to capacity) ratio of ≤ 0.95 and the associated bridge crossing restrictions. It may take from 1 to 3 business days to receive this information. At the sole option of the Consultant, the bridge components represented by these load effects may not require detailed evaluation unless the Applicant desires to improve on the associated bridge crossing restrictions. If the Consultant elects not to

evaluate the affected components then the Ministry will take responsibility for them, along with the other complete bridges that passed the initial screening evaluation.

- For substructure elements an enhanced live load comparison evaluation method may be tried before a detailed evaluation, which considers lateral distribution, track width and crossing restriction benefits of the overload vehicle(s) as compared to the MOTI "capacity vehicles". The Consultant may request from MOTI the capacity vehicles for the bridge (such as the pre-approved 85T permit vehicles) and the applicable multi-vehicle presence, live load and DLA factors as applicable. The LLCF reported should be the Capacity to Demand ratio based on factored and adjusted live loads.

5.0 Dead Load

Unless a re-surfacing report is available from the Ministry, the Consultant shall assume that all concrete deck structures have been designed for an additional 50 mm of concrete overlay and that the overlay has been installed.

6.0 Live Load

The overload configurations used in the load rating shall be based on a conservative estimate of the payload weight, so that re-evaluation of bridges is not necessary if there is a small change in the manufactured weight. The vehicle configuration should be identical to the one that the MOTI screening evaluation and denial letter was based on, or it could be a bit more conservative with axle weights. If the Applicant has changed the vehicle then the current screening evaluation is invalid and a new overload application to the Extraordinary Loads department will need to be done before undertaking any detailed evaluation.

The overload vehicle shall be assumed to cross each bridge under the following conditions:

Bridge with one or two lanes:

- Travel down the centerline of the bridge roadway (lateral tolerance of 600 mm),
- Crossing speed less than 10 km/h (25 km/h if possible), and
- No other vehicles on the bridge (if bridge is longer than 200 m, no other vehicle within 200 m).

Bridges with more than two lanes, or bridges with more than two lanes and where the two directions of traffic are separated by a raised median or a median barrier, shall be evaluated for the following conditions:

- Straddle two lanes of traffic,
- Crossing speed less than 10 km/h (25 km/h if possible),
- No other vehicles on the bridge travelling in the same direction as the overload (if bridge is longer than 200 m and no other vehicle within 200 m), and
- Closing down traffic in the lanes on the opposite side of a median barrier (or in the opposing direction of travel if there is no median structure) increases the complexity of traffic control considerably and will only be considered in exceptional circumstances.

If a PC Permit classification is required, then additional requirements such as weighing of the overload vehicle and engineer supervision of the bridge crossings will be required.

7.0 Live Load Factors

- Permit – Single Trip (PS) traffic load factors shall be applied to the load effects from the overload vehicles.
- Normal Traffic load factors shall be applied to the load effects caused by non-permit traffic (CL1-625 Evaluation Level 1) that is allowed to use the bridge simultaneously with the overload vehicle, and reduction factors of S6 14.9.4.3 shall be applied.
- Permit – Controlled (PC) load factors shall be used only if the load rating using PS load factors yields LLCF's that are less than 1.0.

8.0 Optional Pre-Work Consultation with Ministry

Prior to proceeding with detailed evaluations, the Consultant is encouraged to provide the Ministry (in writing) with a summary of the components of each bridge and the load effects for each of those members that they plan to evaluate. The System and Element Behavior that they plan to use in the evaluation of each load effect shall be included in the summary, as well as justification as to why any members are not being evaluated. This will generally reduce re-work effort and time between the draft(s) and final report.

9.0 Report Format

A separate report shall be prepared for each bridge evaluated and if multiple vehicle configurations are considered they can be addressed in the single report. Draft reports in PDF format shall be submitted to the Ministry for review. Final reports, that address review comments, shall be sealed and submitted to the Ministry as follows:

- One digital copy in PDF format.
- One Cerlox bound paper copy IF requested by the Ministry

Reports shall incorporate the following information as a minimum:

- A cover page including name of the Applicant, Consultant and a photo of the bridge (if available),
- A brief introduction section,
- A general description of the bridge and history of modifications and rehabilitations if known,
- A brief description of the condition of the bridge,
- A description of the components of the bridge that have been evaluated, and a discussion and justification as to why any components of the bridge and effects do not require evaluation (including those that passed the Ministry's screening evaluation),
- A brief description of the live load path from the deck down to the foundations,
- A description of the evaluation methodology including analysis methods, and methods and assumptions used to distribute dead load and live load to the components being evaluated,
- Any Code variances employed,
- Material properties, assumptions and methods used for resistance calculations,
- A Results section which has the LLCF summary tables embedded in this section (rather than in an appendix – an exception will be allowed if the tables are too numerous and in this case they should be in the first appendix following the report),
- Recommended vehicle crossing restrictions and a clear conclusion statement that the bridge has sufficient structural capacity to support the overload with the recommended restrictions,

- Include a cross section sketch of the transverse location of the vehicle on the bridge IF a unique location is specified beyond which simple words can clearly describe (this sketch may be included in the permit for clarity),
- Disclaimer wording as per below,
- Appended overload configuration drawing(s) of the overload vehicles evaluated, showing axle spacings, axle weights and wheel and tire layout on every axle,
- Appended General Arrangement drawing of the bridge,
- Appended inspection reports (and inventory report) if provided by the Ministry, and
- Appended Ministry Terms of Reference.

Evaluation results for each rated member in a table containing at least the following information all shown together on the same table:

- The table of Live load Capacity Factors shall have no shading (with the exception of heading rows),
- member identification, clearly defined location for which capacity is being checked, mode type, e.g. shear, bending etc., reason for selection of the location for checking (if not obvious),
- Permit Classification (PS or PC), System (S) and Element (E) Behavior categories, Inspection Level (INSP2),
- Target Reliability Index (β),
- dead load categories (D1, D2, D3), dead load factors (αD), total factored dead load (separate dead load category values need not be shown if they are factored inside a model and difficult to split apart)
- live load (L), live load factor (αL), dynamic load allowance (DLA), live load distribution factor (DF), live load lateral distribution category (per § 14.11), span type (short or other per § 14.13.3), factored live load for each lane of traffic, listed separately,
- member resistance (R) and Resistance Adjustment Factor (U),
- Live Load Capacity Factor (LLCF),
- Indicate whether vehicle (Truck Load) or vehicle/uniformly distributed load combination (Lane Load) governs, and
- Identification of evaluator and checker for each load case including signatures.

The Ministry may require copies of detailed calculations for review. The Consultant shall record calculations in an organized and complete format for this purpose.

The Ministry shall be entitled to use and rely on the information contained in the report for the purpose of completing load evaluations and ratings for bridges in relation to permit issuance and any such disclaimer attached to the report must allow for same.

For the Confidentiality, Copyright and Disclaimers, the following clauses shall be included in the report:

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This report was prepared by ***Name of Consultant*** for the account of ***Name of Applicant*** for the purpose, in whole or in part, of completing load evaluation and rating for ***Name of Bridge No.***

XXXXX. The material in it reflects ***Name of Consultant's*** best judgment, in light of the information available to it at the time of preparation. No other parties except ***Name of Applicant*** and the MOTI can use or rely on this report and the information and data therein. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. ***Name of Consultant*** accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

10.0 Information Provided by the Ministry

The Ministry will provide the following information:

- Lists of available drawings, plus digital versions of drawings scanned from microfilm,
- Bridge deck resurfacing reports if available, and
- The two most recent Bridge Inspection Reports if available.

The Ministry contact for the above information is Mr. Dale Wood (dale.wood@gov.bc.ca).

11.0 Bridge Drawings and Information Not Available

If the Ministry does not have sufficient drawings and/or other information for a particular bridge to complete the evaluation, then the Consultant shall make a site visit to that bridge to make field measurements of member sizes and if necessary perform sampling and material testing to determine material properties.

6.3.2 Weight

6.3.2.A. Legal Weights

The following chart outlines the legal weights allowed for axles and axle groups. Regardless of the weights listed below, a vehicle may not exceed the axle weight rating as specified by the manufacturer, or the tire size as specified in the CTAR on any axle or axle group.

If legal dimensions are exceeded, then an overweight permit is required. If a vehicle and/or load is also oversize, an oversize/overweight permit is required. For more information on permits and fees, please refer to Chapter 3 of this Manual. Please refer to the subsequent sections in this Chapter for more information on overweight calculation and approved routes.

Steering Axle	
Tandem Drive	6,000 kg – truck tractor 9,100 kg – truck tractor with PME or a truck
Tridem Drive	7,300 kg – truck tractor or truck* 9,100 kg – truck tractor or truck with PME*
Other Axles	
Single (other than steering axle and includes jeeps and boosters)	9,100 kg ✓
Tandem	17,000 kg
Tandem Drive with Single Axle Jeep	24,000 kg or the weight allowed under 7.17(2) CTAR—whichever is greater
Tridem	24,000 kg
Axle Group Combinations	
Refer to 7.17(2) of the CTAR Refer to the Heavy Haul Quick Reference Chart on page 12	
Notes: * Minimum of 27% of tridem drive axle group when loaded ✓ Legal allowable is to be determined by S.7.17 (2) CTAR for all jeeps and boosters in a combination 1. A maximum of 100 kg/cm of tire width is applicable to tires on all vehicle configurations. 2. A maximum of 3,850 kg/super single tire and 3,000 kg/tire for all others is applicable to all tires except the steering axle.	

Table 6.3.2.A. Weight: Legal Weights

6.3.2.B. Overload Weights

i) Issuance

a) Overweight permits are issued for non reducible loads (as defined in section 6.1), fixed equipment vehicles (as described in section 5.3.4), and may be issued for the specialized bulk haul loads that are approved through the 'Reducible Load Overweight Policy', as set out in section 6.5.

b) Operators of vehicles with non reducible loads unevenly distributed on axles creating the requirement for an overload permit shall be issued permits provided the axle unit is not overloaded by more than 10% of the legal allowable weight (e.g., 1,700 kg overload would be permitted on a tandem

axle with a 17,000 kg legal allowable weight). If an axle unit is overloaded by more than 10 percent, loads must be redistributed on the axles to achieve legal axle weights, when this can be accomplished safely and without undue economic hardship to the carrier.

ii) Heavy Haul Restrictions

a) When pony trailers and full trailers are used with trucks to haul non-reducible loads, the maximum weight allowed by permit is 21,000 kg for tandem axles. Tridem axles are restricted to legal weights of 21,000 kg (Appendix E CTAR). No jeeps or boosters are allowed with these trailers.

b) Maximum allowable weight on a full trailer is 34,000 kg; otherwise S.7.17(2) CTAR applies for non-TAC full trailers. No jeeps or boosters are allowed with these trailers.

c) As a general rule the axle track width of the trailer must be a minimum of 50% of the width of the load.

iii) Bridge Formula

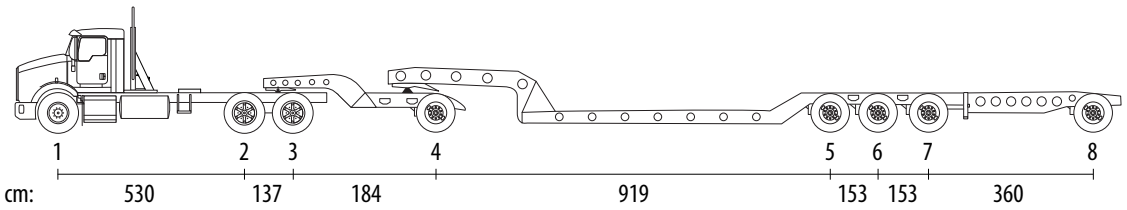
Bridge formula is a mathematical equation that is used to calculate the maximum allowable weight allowed by permit for various axle groups in a combination.

Bridge Formula: 30 x wheelbase (cm) + 18,000 kg = Maximum weight allowed by permit

For the purposes of calculating bridge formula, wheelbase means the distance between the centers of the first axle and last axle of any group of axles of a vehicle or combination of vehicles.

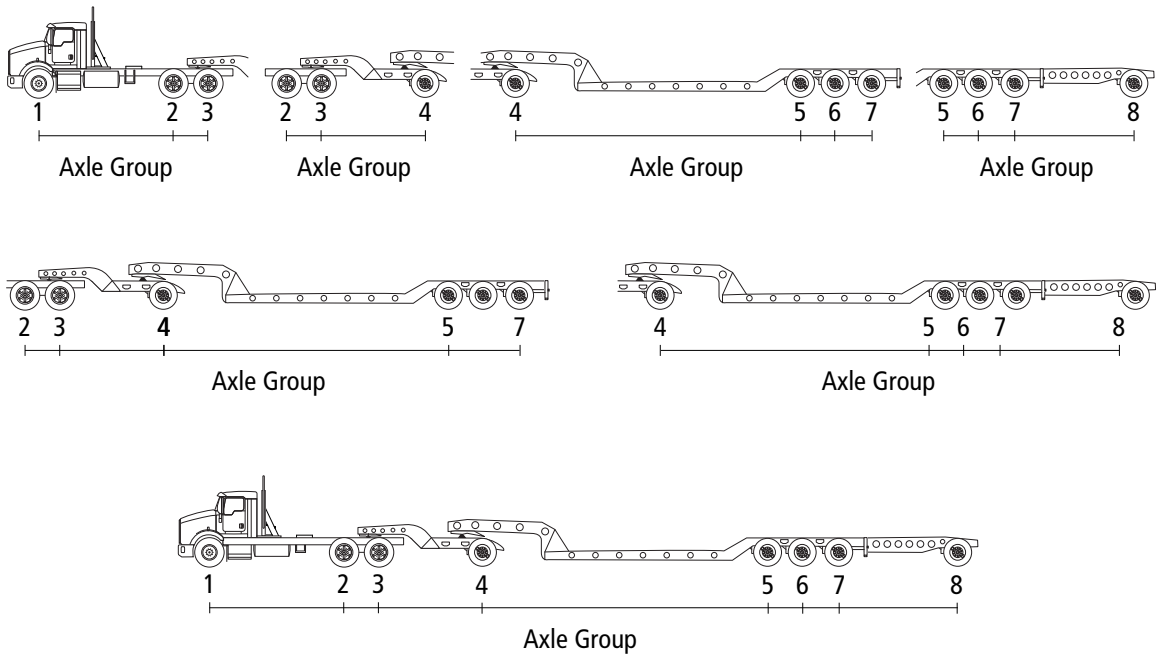
HOW TO CALCULATE BRIDGE FORMULA:

- Determine the wheelbase for each axle group and axle group combinations for the vehicle or combination of vehicles.
- For the purpose of Bridge Formula, **Wheelbase** means the distance between the center of the first axle and last axle of any group of axles.



- The configuration above consists of 8 axles, each axle is numbered 1-8. There are also a number of **axle groups** in this configuration.

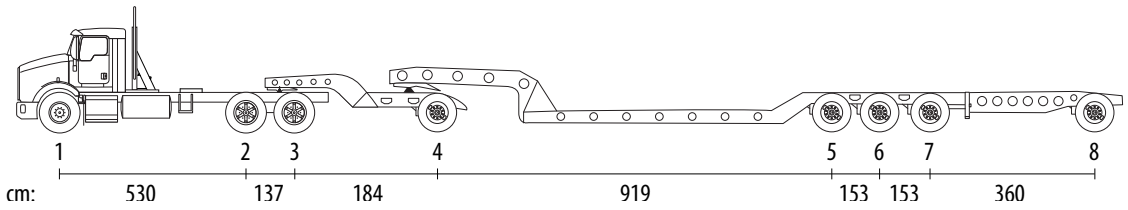
The following are considered **Axle Group Combinations:**



- Once the wheelbase for each axle group has been determined, you can now apply these measurements to the Bridge Formula equation.

DIAGRAM 1

8 Axles



Wheelbase from axle 1 to axle 8 = 2,436 cm

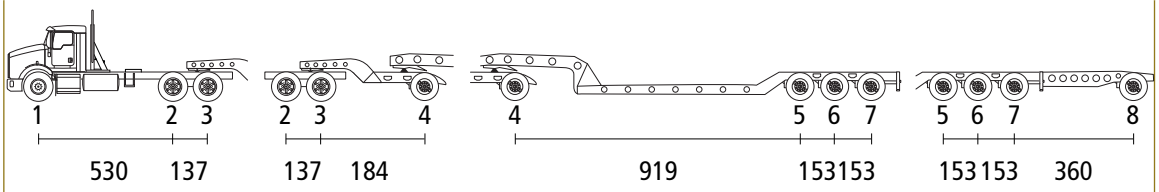
Bridge Formula: 30 x 2,436 (cm) + 18,000 = 91,080 kg

The maximum allowable weight for this configuration based on Bridge Formula cannot exceed 91,080 kg (*APPROVED ROUTE ONLY)

DIAGRAM 2

NOTE: THE FOLLOWING DIAGRAM SHOWS THE MOST COMMON BRIDGE FORMULA CALCULATIONS FOR THIS CONFIGURATION BUT IT IS NOT A COMPLETE REPRESENTATION OF ALL AXLE GROUP POSSIBILITIES

8 Axles, divided into separate AXLE GROUPS (each axle group must not exceed Bridge Formula)



Axles 1, 2, and 3:	30 x 667 (cm) + 18,000 = 38,010 kg (*according to Bridge Formula, the maximum allowable weight for this group is 38,010 kg. However, if this was the actual weight for this group of axles, it would be exceeding the maximum allowable AXLE weights. Therefore, this group would only be allowed a maximum of 32,100 kg)
Axles 2, 3, and 4:	30 x 321 (cm) + 18,000 = 27,630 kg (*axle spacing does not exceed 3.7 m, therefore, this axle group would be allowed 29,000 kg)
Axle 4, 5, 6, and 7:	30 x 1225 (cm) + 18,000 = 54,750 kg (*according to Bridge Formula the maximum allowable weight for this group is 54,750 kg. However, if this was the actual weight for this group of axles, it would be exceeding the maximum allowable AXLE weights. Therefore, this group would only be allowed a maximum of 40,000 kg)
Axle 5, 6, 7, and 8:	30 x 666 (cm) + 18,000 = 37,980 kg (*according to maximum allowable AXLE weights this group would be allowed 40,000 kg. However, Bridge Formula only allows 37,980 kg)

For vehicles and loads exceeding Bridge Formula, please refer to 6-4 Extraordinary Loads for more information.

iv) Permittable Overload Weights

The following chart outlines the maximum permittable weights for heavy haul configurations. In addition to this chart, heavy haul configurations must be compliant with the Heavy Haul Quick Reference Chart which is provided immediately following this chart. If a vehicle and/or load do not comply with weights listed below or in the Heavy Haul Quick Reference Chart, except if utilizing wheeler groups in the Peace River Area only, please refer to 6-4 Extraordinary Loads.

Steering Axle	
Tandem Drive/Tridem Drive	9,100 kg – truck tractor or a truck provided the manufacturer's axle weight rating and tire size (100 kg/cm of tire width – See Note 1) is not exceeded – **WEIGHT MUST BE LEGAL WHEN EMPTY**
Other Axles – Semi-Trailers	
Single (other than steering axle and includes jeeps and boosters)	11,000 kg
Spread Axle Tandem (S.7.24 CTAR)	18,200 kg for non-reducible loads and fixed equipment only provided either one of the axles does not exceed 11,000 kg
Tandem*	23,000 kg
Tandem Drive with Single Axle Jeep ✓	28,000 kg – 2.4 m to 3.0 m axle spread
	29,000 kg – over 3.0 m to 3.7 m axle spread
Tridem Drive	28,000 kg – 2.4 m to 2.8 m axle spread
Tridem Jeep	28,000 kg – 2.4 m to 3.1 m axle spread
Tridem Trailer	28,000 kg – 2.4 m to 3.7 m axle spread with tandem or tridem booster
	29,000 kg – 2.4 m to 3.7 m with no booster or single booster
Tridem Booster	28,000 kg – 2.4 m to 3.1 m (only allowed with tridem lowbed)
Other Axles – Pony and Full Trailers	
Tandem	21,000 kg
Tridem	21,000 kg (legal)
Axle Group Combinations	
Bridge formula applies	
Gross Vehicle Weight	
64,000 kg – unless travelling on approved overload routes	

Notes:

* Bridge formula does not apply

✓ If the axle spacing of the 3 axles, tandem drive and single axle jeep, exceed 3.7 m then the Bridge Formula applies

1. A maximum of 100 kg/cm of tire width is applicable to all tires on all vehicle configurations, except that 445 tires may be used on an appropriate steering axle to achieve 9,100 kg.
2. A maximum of 3,850 kg/super single tire and 3,000 kg/tire for all others is applicable to all tires except the steering axle.
3. The drive axle group must have a minimum of 20% of the gross vehicle weight.
4. The "bridge formula" is applicable to all axle groups and does not terminate at 800 cm.
5. Regardless of the weights outlined above, weight restrictions as specified on the CVSE1011, exceptions listed in approved overload routes, or posted weight restrictions at bridges must not be exceeded.
6. Pony and full trailers must be legal dimensions, and no jeeps or boosters are allowed with these trailers.

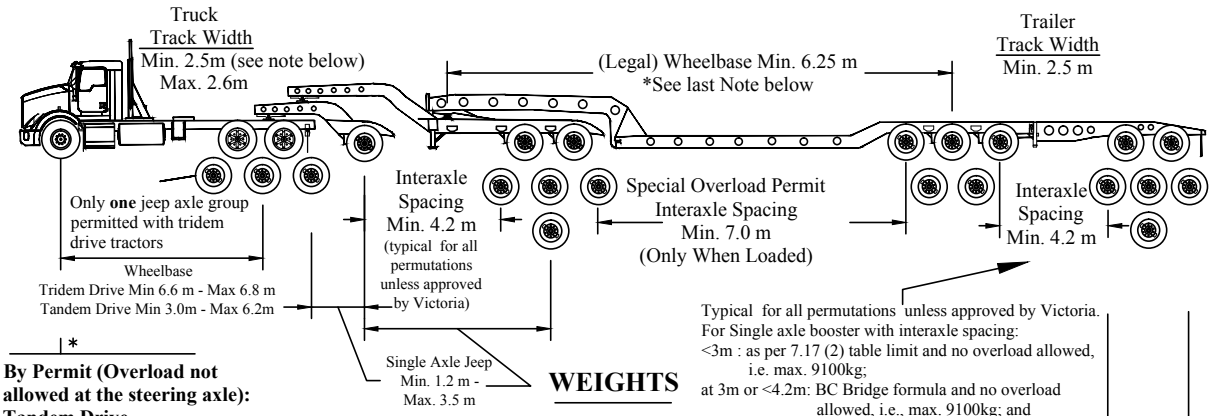
Table 6.3.2.B.iv) Weight: Permittable Overload Weights

Heavy Haul Quick Reference Chart

Diagram of Tandem/Tridem Drive Axle Truck-Tractors – Heavy Haul Configurations

Permit Conditions (Overload)

TRUCK TRACTOR WITH JEEP AND HEAVY HAUL LOWBED SEMI-TRAILER WITH BOOSTER



*

By Permit (Overload not allowed at the steering axle):
Tandem Drive
Max 9 100kg

Tridem Drive**
Max. 9 100 kg
Min. 27% of Tridem Drive Axle Group Weight.

By Permit (Overload):
Tandem Drive:
Max 23 000 kg
Tridem Drive:
Max. 28 000 kg

By Permit (Overload):
Single axle (Jeep)
Max. 11 000 kg
Tandem axle (Jeep)***
Max. 23 000 kg
Tridem axle (Jeep)***
Max. 28 000 kg

Tandem Drive Axle Group Must Be Greater Than 20% of GCVW or 23 000 kg, whichever is less;

Tridem Drive Axle Group Must Be Greater Than 20% of GCVW or 28 000 kg, whichever is less; and

For combinations with having a GCVW in excess of 115 000kg, the use of a tridem drive truck tractor is highly recommended for routes with steep grades and/or in slippery road surface conditions

If Drive axle group and Jeep axle group have an equal number of axles, the two axle groups must be load equalized to within 1 000 kg.

By Permit (Overload):
Tandem axle (Lowbed)
Max. 23 000 kg
Tridem axle (Lowbed)
Max. 28 000 kg with Tandem axle booster or Tridem axle booster.
Max. 29 000 kg with or without Single axle booster

By Permit (Overload):
Single axle (Booster)
Max. 11 000 kg
Tandem axle (Booster)
Max. 23 000 kg
Tridem axle (Booster)
Max. 28 000 kg
Tridem Booster only allowed with Tridem Lowbed.

*** Tandem drive axle weight must be maximized first, before adding weight to Tandem or Tridem Jeep

Typical Maximum Gross Combination Vehicle Weight (GCVW)

(Based on typical axle spacing, and taking bridge formula into account)
116 300 kg without PME 118 100 kg with PME

* Single steering axle weight is exempted from seasonal axle weight restrictions.
** Minimum steering axle weight is not applicable when a tridem tractor is towing an unladen lowbed and booster.

Table A: Interaxle Spacing (Min. Distances)
Applicable when loaded within Legal weight.

	Single	Tandem	Tridem
Single	3 m	3 m	3 m
Tandem	3 m	5 m	5.5 m
Tridem	3 m	5.5 m	6 m

Table B: Axle Spread

Single	Up to Max. 1.0 m
Tandem	Min. 1.0 m - Max. 1.85 m
Tridem Jeep and Tridem Booster:	Min. 2.4 m - Max. 3.1 m
Tridem Lowbed:	Min. 2.4 m -Max. 3.7 m
Tridem: Drive	Min. 2.4 m - Max. 2.8 m

Notes:
- For all tridem drive configurations and all configurations after Dec 31, 2004 maximum of 100 kg/cm of tire width applies to all tires, and a maximum of 3000 kg/tire is applicable to all axles except steering axle.
- All weights shown are subject to bridge formula limit, whichever is less, unless by special request and approved by Victoria.
- For Heavy Haul applications only, automated steering dolly or manned dolly allowed to replace axle group in the tridem lowbed and/or lowbed–booster.
- Configuration permutations, by removing jeep or boosters, are allowed.
- Tridem drive tractors manufactured before July 1, 2012 are permitted a minimum track width of 2.4m
- Semi–Trailer lowbed wheelbase up to a maximum 15.25 meters and lowbed overall length up to a maxumum 18.3 meters will be permitted empty or loaded (see Commercial Transport Procedures Manual, Section 6.3.1B for Peace River exemptions). To accommodate overlength loads, lowbed Semi–Trailers may be expanded up to a distance of 18.3 meters from the kingpin to the last axle of the semitrailer