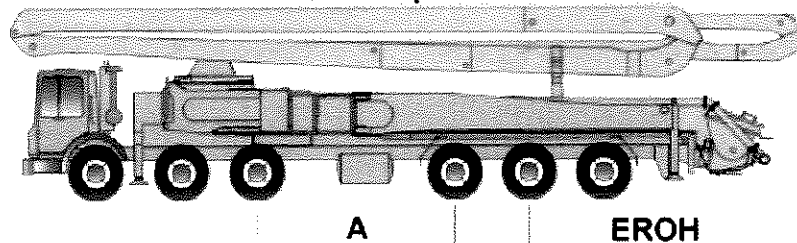


## APPENDIX A

### Tridem Steer – Tridem Drive



#### Tridem Steering axles:

- Must maintain a minimum steering axle group weight of 40% of drive axle weight at all times.
- Must be equally spaced.
- The weight must be equally distributed between axles within 1000kg of an adjacent axle.

#### Tridem drive axles:

- Must be equally spaced.
- The weight must be equally distributed between axles within 1000 kg of an adjacent axle.
- All 3 axles must be on a common suspension and must drive the unit.
- No lift, pusher or tag axles will be allowed.

#### Dimensions:

DIMENSION	LEGAL	DIMENSIONS by Permit
Overall Length	Maximum 14.0 m	Maximum 16.5 m
Overall Width	Maximum 2.6 m	Maximum 2.6 m
Overall Height	Maximum 4.15 m	Maximum 4.15 m
Tridem Steer Axle Spread	N/A	Min 2.4 m/Max 3.1 m
Tridem Drive Axle Spread	Min 2.4 m/Max 3.1 m	Min 2.4 m/Max 3.1 m
Tridem Drive Track Width	N/A	Min 2.5 m/Max 2.6 m
Effective Rear Overhang	Maximum 4.0 m	Maximum 6.0 m
<b>Interaxle Spacing</b>		
Tridem Steer Axle to Tridem Drive Axle	Minimum 6.0 m	Minimum 6.0 m – Note 1

**Weights:**

<b>WEIGHT LIMITS</b>				
<b>Axle</b>	<b>RTAC Route</b>	<b>Class A1 Highway</b>	<b>Class B1 Highway</b>	<b>Maximum Weight by Permit</b>
Tridem Steering Axle (Note 2)	n/a	n/a	n/a	24,000 kg
Tridem Drive Axle (Note 3)	21,000-22,000 kg	21,000 kg	20,000 kg	27,500 kg
<b>Gross Vehicle Weight Limit</b>	N/A	N/A	N/A	51,500kg

Note 1 – Will require single trip bridge approval if axle spacing is less than 6.0 m. If the Interaxle spacing is less than 6.0 m, the combined allowable steering and drive axle weights will be reduced by 500 kg for each 0.1 m or portion thereof up to a minimum spacing of 3.6 m.

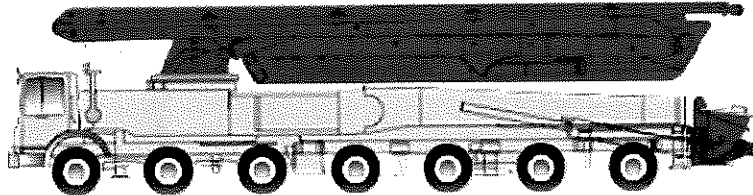
Note 2 - The gross weight on the tridem steering axle shall not exceed the lesser of:  
(a) 9 kg per mm width of the tire (weight multiplied by the width of the tire multiplied by the number of tires);  
(b) 24,000 kg;  
(c) the rated capacity of the tire (weight multiplied by the number of tires); or  
(d) the gross axle weight rating (GAWR) for the axle unit.

Note 3 - The gross weight on the tridem drive axle (12 wheels) shall not exceed the lesser of:  
(a) 9 kg per mm width of tire (weight multiplied by the width of the tire multiplied by the number of tires);  
(b) 27,500 kg;  
(c) the rated capacity of the tire (weight multiplied by the number of tires); or  
(d) the gross axle weight rating (GAWR) for the axle unit.

**Static Rollover Threshold Requirement:**

The static rollover threshold (SRT), minimum 0.4g, must be certified by the manufacturer of the truck or a Professional Engineer and submitted to submitted and reviewed by the Director of Traffic Engineering before approval is considered for these configurations.

## Carrier Style



### General:

1. Single Trip permit only.
2. All configurations must be reviewed by WM&S and City of Winnipeg.
3. The weight on the axles must equalize such that adjacent axles are within 1000 kg.
4. No lift, pusher or tag axles allowed.
5. The wheels at the front and rear of the vehicle shall be designed to steer to avoid scuffing of the tires during turning maneuvers.
6. Tire width shall be a minimum of 445 mm.

### Dimensions:

DIMENSION	LEGAL	DIMENSIONS by Permit
Overall Length	Maximum 14.0 m	Maximum 16.5 m
Overall Width	Maximum 2.6 m	Maximum 2.6 m
Overall Height	Maximum 4.15 m	Maximum 4.15 m
Track Width	N/A	Min 2.5 m/Max 2.6 m
Effective Rear Overhang	Maximum 4.0 m	Maximum 6.0 m
<b>Interaxle Spacing</b>		
Axle to Axle	N/A	Min 1.5 m/ Max 3.0 m

### Weights:

Carrier style concrete pumper trucks equipped with wide based single tires will be allowed varying seasonal axle weights based on the allowable weight per mm width of tire in a haul season and the tire size (minimum tire width of 445 mm). The seasonal axle weights shall not exceed the values calculated using Table 1 and the allowable maximum gross axle weights shown in Table 2 (whichever is the minimum).

Table 1: Maximum Allowable Weights per mm Width of Tires

<b>Route/Highway Spring Weight Restrictions</b>	<b>Spring Season (Spring Road Restrictions Period)</b>	<b>Summer/Fall and Winter Seasons (No Spring Road Restrictions in Effect)</b>
None (Normal)	7.5 kg/mm	7.5 kg/mm
Level 1	6.75 kg/mm	7.5 kg/mm
Level 2	4.875 kg/mm	7.5 kg/mm

Table 2: Maximum Allowable Gross Axle Weights

<b>Spring Road Restrictions</b>	<b>Spring Season (Spring Road Restrictions Period)</b>	<b>Summer/Fall and Winter Seasons (No Spring Road Restrictions in Effect)</b>
None (Normal)	9,100 kg	9,100 kg
Level 1	8,190 kg	9,100 kg
Level 2	5,915 kg	9,100 kg

**Static Rollover Threshold Requirement:**

The static rollover threshold (SRT), minimum 0.4g, must be certified by the manufacturer of the truck or a Professional Engineer and submitted to submitted and reviewed by the Director of Traffic Engineering before approval is considered for these configurations.