5163-5187 JOYCE STREET TRANSPORTATION ASSESSMENT AND MANAGEMENT STUDY

Part 2: Transportation Demand Management Plan (DRAFT)

DRAFT

Prepared for: 1128587 BC Ltd.

Our File: 2775.B01

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1.0 INTRODUCTION

WATT Consulting Group (WATT) was retained by 1128587 BC Ltd. to prepare a Transportation Assessment and Management Study for the proposed development at 5163-5187 Joyce Street in Vancouver, BC for the City of Vancouver (application number: PS-2017-00402). The development is planned to consist of multi-family residential strata, library, and retail uses.

The study consists of two reports in accordance with the City of Vancouver's *Transportation Assessment and Management Study Guidelines* and the terms of reference for the scope of work as approved by the City:

1. Part 1: Transportation Impact Study; and
2. Part 2: Transportation Demand Management Plan.

The information presented in this report (Part 2: Transportation Demand Management Plan) is based on the proposed development program and drawings as of July 29, 2020, unless otherwise noted.

1.1 STUDY OBJECTIVES

The objectives of the Transportation Demand Management Plan are to:

1. Calculate the bylaw requirements for the off-street parking supply, including vehicle parking, loading, bicycle, and passenger spaces.
2. Compare the proposed off-street parking supply with the bylaw requirements.
3. Develop a transportation demand management (TDM) plan to reduce the site parking demand and support a reduction in the off-street parking supply.

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1.2 SUBJECT SITE

Location	The proposed development is located on two consolidated parcels at 5163-5187 Joyce Street, situated in the Joyce-Collingwood Station Precinct as part of the Renfrew-Collingwood neighbourhood. The site fronts onto Joyce Street and is bounded by two adjacent properties to the north and south, and a laneway to the west. The surrounding area is a transit hub with a mix of residential and commercial uses, including retail, restaurant, and office.
Use	The proposed development is planned to consist of multi-family residential strata, library, and retail uses. The library use will be an expansion of the existing Collingwood Branch of the Vancouver Public Library, currently located at 2985 Kingsway.
Size	The proposed gross floor area is approximately 23,100 m^2, including 293 residential dwelling units, 1,277 m^2 for the library use, and 578 m^2 (two commercial retail units) for the retail use.
Access	Seven levels of underground parking is provided with vehicular access and loading located off of the laneway that is intersected by Vanness Avenue and Clive Avenue. Pedestrian access is proposed to be off of Joyce Street, and bicycle access off of Joyce Street and the laneway.
Transit Accessibility	The site is located in a Level A transit accessibility area as it is within 400 m walking distance of Joyce–Collingwood Station.

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2.0 PARKING SUPPLY REQUIREMENT

The City of Vancouver's requirements are described in the *Parking Bylaw (No. 6059)*.

2.1 VEHICLE PARKING SPACES

A minimum total of 319 off-street parking spaces are required under the base bylaw requirements, including 255 residential spaces and 64 non-residential spaces (see **Table 1**). The site is eligible for a 10% reduction (non-visitor parking only) as it is within 400 m of a SkyTrain station (Level A Transit Accessibility). This results in an adjusted overall requirement of 289 parking spaces. A total of 228 vehicle parking spaces and two carshare spaces are proposed in the current application, meeting the requirement.

The City's vehicle parking requirement for a library use is based on the floor area dedicated for assembly purposes. As the design of the future Collingwood Branch will not be resolved as part of the current application, the assembly floor area is estimated to be 80% of total gross floor area based on research of comparable library designs.

TABLE 1: OFF-STREET PARKING SPACE MINIMUM REQUIREMENT

Use	Subtype	Quantity	Bylaw Supply Rate	Required Spaces	Bylaw Section
Residential	0-49 m^2	73 units	0.5 spaces / unit	37	4.2.1.13
	>50 m^2	220 units (14,174 m^2 GFA)	0.6 spaces / unit + 1 space / 200 m^2 GFA	203	4.2.1.13
	Visitor	293 units	0.05 spaces / unit	15	4.1.16
Library		1,277 m^2 GFA (1,022 m^2 assembly)	1 space / 18.6 m^2	55	4.2.4.1
Retail		578 m^2 GFA	1 space / 300 m^2 GFA	9	4.2.5.1
Total (Base)				**319**	
Total (with Transit Accessibility Reduction)				**289**	
Total (with Transit Accessibility & TDM Plan Reduction)				**228**	
Proposed				**228**	

2.2 BICYCLE PARKING SPACES

A minimum total of 568 residential Class A bicycle spaces, 4 non-residential Class A bicycle spaces, and 20 Class B bicycle spaces are required under the base bylaw requirements (see **Table 2**). A total of 568 Class A bicycle spaces and 20 Class B bicycle spaces are proposed in the current application, meeting the requirement.

Based on the minimum Class A bicycle parking requirements, the following end-of-trip facilities are required for the non-residential uses: 6 clothing lockers. 6 clothing lockers are proposed in the current application, meeting the requirement.

TABLE 2: OFF-STREET BICYCLE SPACE MINIMUM REQUIREMENT

Use	Subtype	Quantity	Bylaw Supply Rate	Required Spaces	Bylaw Section
Class A					
Residential	<65 m^2	169 units	1.5 spaces / unit	254	6.2.1.2
	65-105 m^2	124 units	2.5 spaces / unit	310	6.2.1.2
	>105 m^2	0 units	3 spaces / unit	0	6.2.1.2
Library		1,277 m^2 GFA (1,022 m^2 assembly)	1 space / 500 m^2	2	6.2.3.1
Retail		578 m^2 GFA	1 space / 340 m^2 GFA	2	6.2.5.1
Total				**568**	
Proposed				**568**	
Class B					
Residential		293 units	1 space / 20 units	16	6.2.1.2
Library		1,277 m^2 GFA (1,022 m^2 assembly)	1 space / 1,500 m^2	4	6.2.3.1
Retail		578 m^2 GFA	6 spaces for 1,000 m^2 GFA	0	6.2.5.1
Total				**20**	
Total				**20**	

2.3 LOADING SPACES

A minimum total of 0 Class A loading spaces, 3 Class B spaces, and 0 Class C spaces are required under the base bylaw requirements. A total of 3 Class B loading spaces are proposed in the current application, meeting the requirement.

TABLE 3: OFF-STREET LOADING SPACE MINIMUM REQUIREMENT

Use	Subtype	Quantity	Bylaw Supply Rate	Required Spaces	Bylaw Section
Class A					
Residential		293 units	N/A	N/A	5.2.1
Library		1,277 m^2 GFA	N/A	N/A	5.2.3
Retail		578 m^2 GFA	N/A	N/A	5.2.5
Total				**0**	
Proposed				**0**	
Class B					
Residential		293 units	1 space / 100-299 units	1	5.2.1
Library		1,277 m^2 GFA	1 space / 2,800 m^2 GFA	0	5.2.3
Retail		578 m^2 GFA	1 space / 465 m^2 GFA	1	5.2.5
Total				**2**	
Proposed				**2**	
Class C					
Residential		293 units	N/A	N/A	5.2.1
Library		1,277 m^2 GFA	2 spaces / 5,000 m^2 GFA	0	5.2.3
Retail		578 m^2 GFA	N/A	N/A	5.2.5
Total				**0**	
Proposed				**0**	

2.4 PASSENGER SPACES

A minimum total of 2 Class A passenger spaces are required under the base bylaw requirements (see **Table 4**). 2 additional Class A are proposed as part of the TDM plan (COM-03). A total of 4 Class A passenger loading spaces are proposed in the current application, meeting the requirement.

TABLE 4: OFF-STREET PASSENGER SPACE MINIMUM REQUIREMENT

Use	Subtype	Quantity	Bylaw Supply Rate	Required Spaces	Bylaw Section
Class A					
Residential		293 units	1 space / 50-125 units + 1 space / additional 150 units	2	7.2.1
Library		1,277 m^2 GFA	N/A	N/A	7.2.3
Retail		578 m^2 GFA	1 space / 4000 m^2	0	7.2.5.1
Total				**2**	
Proposed (with COM-03: Additional Passenger Loading Spaces)				**4**	

3.0 TDM REQUIREMENT

This section summarizes the TDM requirements for the proposed application according to the City's *Transportation Demand Management for Developments in Vancouver Administrative Bulletin*. A TDM plan is not required for the site under the City's guidelines as it is located outside the Downtown area and it is not classified as a Large Site (site size of less than 8,000 m^2 and less than 45,000 m^2 of floor area proposed). However, a reduction in the required off-street parking is proposed; for this reason, a TDM plan is required by the City.

Table 5 provides a summary of the proposed uses by TDM categories and the required TDM point requirement. **Table 6** shows the maximum parking reduction permitted when considering transit accessibility and the provision of a TDM plan. Parking reductions are not available for residential visitor parking.

TABLE 5: TDM REQUIREMENT SUMMARY

Land Use	Land Use Quantity	TDM Category	TDM Point Target
Residential	293 dwelling units	Residential – Strata	24
Library	1,277 m^2 GFA	Other (Commercial – Retail/Service)	24
Retail	578 m^2 GFA	Commercial – Retail/Service	14

TABLE 6: PERMITTED PARKING REDUCTION

TDM Category	Transit Reduction	Maximum TDM Reduction	Total Reduction
Residential	10% (Level A)	20%	30%
Library	10% (Level A)	20%	30%
Retail	10% (Level A)	20%	30%

The required TDM worksheets by the City can be found in **Appendix A**, including:

- **Worksheet A:** TDM Requirements Flow Chart;
- **Worksheet B:** TDM Points Requirement;
- **Worksheet C:** Transit Accessibility Parking Reduction; and
- **Worksheet D & E:** TDM Plan Summary (TDM Measures & Parking Provision).

4.0 TDM PLAN

4.1 SUMMARY OF TDM MEASURES

A summary of the proposed TDM plan and point summary is provided in **Table 7**.

TABLE 7: TDM PLAN POINT SUMMARY

TDM Measure	Land Uses and TDM Categories		
	Residential (Residential – Strata)	Library (Other)	Retail (Commercial – Retail/Service)
ACT-02: Improved Access to Class A Bicycle Parking	4	3	3
ACT-05: Bicycle Maintenance Facilities	2	2	2
COM-01: Carshare Spaces	3	6	6
COM-03: Additional Passenger Loading Spaces	4	4	4
SUP-03: Multimodal Wayfinding Signage	2	2	2
OTH-01: Innovative Strategies – Unbundled Parking	8	N/A	N/A
OTH-01: Innovative Strategies – E-scooter Parking	2	2	2
Total Points	25	19	19
TDM Point Target	24	24	14

The application currently has a shortfall of 5 TDM points for the proposed library use; this will be resolved at a later date in a subsequent submission.

4.2 TDM MEASURES: ACTIVE TRANSPORTATION

4.2.1 ACT-02: IMPROVED ACCESS TO CLASS A BICYCLE PARKING

- **Residential:**
  - Access to the proposed residential Class A bicycle parking will be through a dedicated ramp that is separated from vehicle circulation off of the laneway (Drawing A206). 2 points are awarded for the "Residential – Strata" category.
  - Enhanced wayfinding and interior finishing will be provided for the residential bicycle parking area on Level P1 (see **Figure 2** for precedent imagery). Details will be provided at a later date in a subsequent submission. 2 points are awarded for the "Residential – Strata" category.
- **Library and Retail:** 100% of the proposed non-residential Class A bicycle parking will be located at-grade on Level L1 (Drawing A206). 3 points are awarded for the "Other" and "Commercial – Retail/Service" categories.



Figure 1: Enhanced Bicycle Parking Wayfinding and Finishing Precedent Image

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4.2.2 ACT-05: BICYCLE MAINTENANCE FACILITIES

- **Residential, Library, and Retail:** A shared bicycle maintenance facility is provided for residents, commercial tenants, and the public, located on Level L1 (Drawing A206). 2 points are awarded to all categories. An operational plan describing the amenities, means of providing access, and maintenance will be provided to the City at a later date in a subsequent submission.

4.3 TDM MEASURES: ALTERNATIVE COMMUTE SERVICES

4.3.1 COM-02: CARSHARE VEHICLE AND SPACES

- **Residential, Library, and Retail:** Two carshare spaces are provided on Level L1 (Drawing A206) that will be shared across all the uses. Based on the level of provision:
  - 3 points are awarded to the "Residential – Strata" category; and
  - 6 points are awarded to the "Other" and "Commercial – Retail/Service" categories.

4.3.2 COM-03: ADDITIONAL PASSENGER LOADING SPACES

- **Residential, Library, and Retail:** Two additional Class A passenger loading spaces are provided on Level P2 (Drawing A204). 4 points are awarded to all categories.

4.4 TDM MEASURES: SUPPORT, PROMOTION, AND INFORMATION

4.4.1 SUP-03: MULTIMODAL WAYFINDING SIGNAGE

- **Residential, Library, and Retail:** Multimodal wayfinding signage will be provided in an exterior location on Joyce Street by the proposed library and retail entrances on Level L1. 2 points are awarded to all categories.

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4.5 TDM MEASURES: OTHER

4.5.1 OTH-01: INNOVATIVE STRATEGIES – UNBUNDLED PARKING

- **Residential:** The proposed off-street parking supply for the residential uses will be sold separately ("unbundled") with the purchase of the strata unit. The City of San Francisco's *Transportation Demand Management Technical Justification Report* reported a reduction in VMT ranging from 4.5 to 13% for unbundled parking.[1] Using the low end of the VMT reduction for a conservative assessment, 8 points are awarded to the "Residential – Strata" category based on the City's point assignment method (2 points for every 1% reduction in VMT).

4.5.2 OTH-01: INNOVATIVE STRATEGIES – E-SCOOTER PARKING

- **Residential, Library, and Retail:** A dedicated e-scooter parking rack is provided for residents, commercial tenants, and the public, located on Level L1 (Drawing A206). 2 points are awarded to all categories.

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[1] Victoria Transport Policy Institute. (2018). *Parking Management: Strategies for More Efficient Use of Parking Resources*; Shoup, D. (2005). *The High Cost of Free Parking*, p. 570.

5.0 CONCLUSION

The proposed application at 5163-5187 Joyce Street consists of multi-family residential strata (293 dwelling units), library (1,277 m^2 GFA), and retail (578 m^2 GFA) uses.

The base bylaw off-street parking requirements are as follows:

- **Vehicle Parking:** 319 parking spaces, including 255 residential spaces and 64 non-residential spaces;
- **Bicycle Parking:** 568 residential Class A spaces, 4 non-residential Class A spaces, and 20 Class B spaces;
- **Loading:** 2 Class B loading spaces; and
- **Passenger Loading:** 2 Class A passenger loading spaces.

The proposed TDM plan achieves a parking reduction of 30% based on the provision of the following TDM measures:

- ACT-02: Improved Access to Class A Bicycle Parking;
- ACT-05: Bicycle Maintenance Facilities;
- COM-02: Carshare Vehicles and Spaces;
- COM-03: Additional Passenger Loading Spaces;
- SUP-03: Multimodal Wayfinding Signage;
- OTH-01: Innovative Strategies – Unbundled Parking; and
- OTH-01: Innovative Strategies – E-Scooter Parking.

The adjusted vehicle parking requirement with the provision of the TDM plan is 228 parking spaces. The application currently proposes 228 parking spaces, meeting the TDM-adjusted requirement.

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APPENDIX A

TDM Worksheets

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WORKSHEET A: TDM Requirements Flow Chart

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START
Is the project site a *Large Site* ?
>8000 m^2 in land area, or
>45,000 m^2 of new floor area?

→ Yes → **A TDM Plan is required (30 points)** Refer to Table 1 in Worksheet B

↓ **No**

Is the project located *Downtown* ?

→ **No** → **No TDM Plan is required** Refer to Table 4 in Worksheet B ✓

↓ Yes

Is the project within the *West End and Robson North Permit Area?*

→ Yes →
Does the project propose:
>500 m2 of new non-residential floor area; and/or
>2,300 m2 of non-residential change of use; and/or
>11 dwelling units of social housing?

→ No → **No TDM Plan is required** Refer to Table 3 in Worksheet B

→ Yes → **A TDM Plan is required (24 points)** Refer to Table 3 in Worksheet B

→ No →
Does the project propose:
>500 m2 of new non-residential floor area; and/or
>2,300 m2 of non-residential change of use; and/or
>11 dwelling units?

→ No → **No TDM Plan is required**

→ Yes → **A TDM Plan is required (24 points)** Refer to Table 2 in Worksheet B

WORKSHEET B: TDM Points Requirement

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Table 4 - TDM Plan Point Targets to Achieve Parking Reductions

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Development		Required Points
Residential		
Residential - Social (Maximum 40% reduction)	☐	Up to 12 points.
Residential - Strata (Maximum 20% reduction)	☐	For less than 12 dwelling units, up to 12 points.
	☐	For 12 to 24 dwelling units, up to one (1) point per dwelling unit.
	☐	For 25 to 220 dwelling units, up to 24 points.
	✓	**For 221 dwelling units or more, up to 24 points**
Residential - Rental (Maximum 40% reduction)	☐	For less than 12 dwelling units, up to 12 points.
	☐	For 12 to 24 dwelling units, up to one (1) point per dwelling unit.
	☐	For 25 to 220 dwelling units, up to 24 points.
	☐	For 221 dwelling units or more, up to 24 points.
Commercial		
Commercial - Office (Maximum 20% reduction)	☐	For less than 500 m^2 up to 12 points.
	☐	For 500 to 1,000 m^2 up to 0.024 points per m^2.
	☐	For 1,001 to 2,300 m^2 up to 24 points.
	☐	For 2,301 m^2 or more, up to 24 points.
Commercial - Retail/Service (Maximum 20% reduction)	☐	For less than 500 m^2 up to 12 points.
	✓	**For 500 to 1,000 m^2 up to 0.024 points per m^2.**
	☐	For 1,001 to 2,300 m^2 up to 24 points.
	☐	For 2,301 m^2 or more, up to 24 points.
Other		
All other land uses (Maximum 20% reduction)	✓	**Up to 24 points, to be determined on a case-by-case basis by the Director of Planning in consultation with the General Manager of Engineering Services.**
Change of Use		
Change of use, all land uses (Maximum 20% reduction)	☐	For less than 2,300 m^2 up to 12 points
	☐	For 2,300 m^2 or more, up to 24 points, to be determined on a case-by-case basis by the Director of Planning in consultation with the General Manager of Engineering Services

WORKSHEET C: Transit Accessibility Parking Reductions

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Accessibility Level	Criteria
✓ **Level A**	Within: • **100 m walking distance of any one (1) existing FTN route, including B-Line stops only, or** • 200 m walking distance of any intersection of two (2) existing FTN routes, including B-Line stops only, or • **400 m walking distance of a SkyTrain station.**
☐ **Level B**	Within: • 101 m to 200 m walking distance of any one (1) existing FTN route, including B-Line stops only, or • 201 m to 400 m walking distance of any intersection of two (2) existing FTN routes, including B-Line stops only, or • 401 m to 800 m walking distance of a SkyTrain station
☐ **Level C**	Within: • 200 m walking distance of any one (1) existing FTN route, including B-Line stops only, or • 400 m walking distance of any intersection of two (2) existing FTN routes, including B-Line stops only, or • 800 m walking distance of a SkyTrain station.

WORKSHEET D: TDM Plan Summary – TDM Measusures

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TDM Measure	(Maximum Points) Points Achieved					
	Residential			Office	Retail/ Service	Other
	Strata	Rental	Social			
Financial Incentives						
FIN-01: Car Share Membership						
☐ Provide a two-way car share membership to remain associated with each unit, for a minimum of 20 years.	(2)					
☐ 2 points for two-way car share memberships to residents at least semi-annually for at least 20 years. 2 points for including $200 annual driving credits per dwelling unit		(4)	(4)			
FIN-02: Public Transit Passes						
☐ Offer monthly subsidies toward TransLink Compass Cards (stored value or monthly pass) to residents for a minimum of 10 years equivalent to: • $100 for Residential – Rental land uses, and/or • $50 for Non-Residential land uses. May receive partial points for reduced contributions.		(16)	(16)	(16)	(16)	
Active Transportation						
ACT-01: Additional Class A Bicycle Parking						
☐ Up to 40% above minimum requirements. May receive points for fewer additional spaces.	(8)	(8)	(8)	(8)	(3)	
ACT-02: Improved Access to Class A Bicycle Parking						
☐ • 2 points, bicycle access ramp fully separated from the vehicle parking ramp. • 2 points, minimum 40% Class A parking at-grade, or 4 points, 100% of Class A parking at-grade, or 4 points, for providing 60% fully-automated bicycle parking with no user fees. • Up to 2 points, for providing excellent design of lighting, finishes, grades, convenience, etc.	(8) 4	(8)	(8)	(8)	(3) 3	3
ACT-03: Enhanced Class B Bicycle Parking						
☐ Provide enhanced visitor Class B bicycle parking, consisting of well-lit, secure, indoor facilities, excellent design of lighting, finishes, grades, convenience etc.	(2)	(2)	(2)	(2)	(2)	
ACT-04: Secure Public Bicycle Parking						
☐ Provide secure bicycle parking spaces available to the public, available to users not associated with the building. This may require a membership.				(2)	(2)	
ACT-05: Bicycle Maintenance Facilities						
☐ Provide bicycle maintenance facilities and workspace.	(2) 2	(2)	(2)	(2)	(2) 2	2
ACT-06: Improved End of Trip Amenities						
☐ • 2 points, for providing improved facilities • Up to 4 points, for providing additional end-of-trip facilities up to 50% above the minimum requirements.				(6)	(2)	

WORKSHEET D: TDM Plan Summary – TDM Measusures

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TDM Measure	(Maximum Points) Points Achieved					
	Residential			Office	Retail/ Service	Other
	Strata	Rental	Social			
Active Transportation, continued						
ACT-07: Public Bicycle Share Space						
☐ Where the City requires space and SRW for on-site Public Bicycle Share (PBS) station. Up to eight (8) points shall be available to projects meeting the PBS size and siting requirements as determined by the City.	(8)	(8)	(8)	(8)	(8)	
ACT-08: Shared Cycling Fleet						
☐ Provide fleet of bicycles for residents, employees, and/or guests to use (private bicycle share) for 20 years to encourage all types of cycling. • One (1) cycle for each 10 dwelling units for Residential – Rental land uses • One (1) cycle for each 3,000 m2 gross floor area for Commercial – Office and Commercial Retail land At minimum, six (6) cycles shall be provided. Development projects may receive points commensurate with the fleet size provided.		(8)	(8)	(8)	(2)	
ACT-09: Walking Improvements						
☐ • Up to 4 points for a secured public pedestrian connection through a site. • Up to 6 points for pedestrian connections linking building entrances with the surrounding pedestrian network, transit stops, and key destinations, other than connections along the site frontage.	(6)	(6)	(6)	(6)	(6)	
Alternative Commute Services						
COM-01: Carshare Spaces						
☐ Provide dedicated publicly available parking spaces for car share vehicles (one-way or two-way), up to the following ratios: • Residential - Strata: 1 car share parking space for every 20 Dwelling Units; • Residential - Rental: 1 car share parking space for every 10 Dwelling Units; • Commercial - Office: 1 car share parking space for each 2,300 m 2 of gross floor area; • Commercial - Retail: 1 car share parking space for each 930 m 2 of gross floor area. Projects may receive partial points for fewer spaces.	(8)	(16)	(16)	(8)	(8)	
COM-02: Carshare Vehicles and Spaces						
☐ The property owner shall provide publicly accessible two-way car share vehicle(s) and space(s) on-site for at least 3 years, up to the following ratios: • Residential - Strata: 1 car share vehicle and space for every 50 Dwelling Units; • Residential - Rental: 1 car share vehicle and space for every 25 Dwelling Units; • Commercial - Office: 1 car share vehicle and space for each 4,600 m 2 of gross floor area; • Commercial - Retail: 1 car share vehicle and space for each 4,600 m 2 of gross floor area. Projects may receive partial points for fewer vehicles.	(8) 3	(16)	(16)	(8)	(3) 6	6

WORKSHEET D: TDM Plan Summary – TDM Measusures

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TDM Measure	(Maximum Points) Points Achieved					
	Residential			Office	Retail/ Service	Other
	Strata	Rental	Social			
Alternative Commute Services, continued						
COM-03: Additional Passenger Loading Spaces						
☐ Provide additional short-term pick-up/drop-off passenger spaces. • 2 points, for providing one (1) Class A passenger space, or • 4 points, for providing two (2) Class A passenger spaces, and/or • 4 points, for providing one (1) Class B passenger space.	(8) 4	(8)	(8)	(8)	(8) 4	4
COM-04: Shuttle Bus Service						
☐ Provide free local shuttle bus services to between the development site and regional transit hubs, commercial centres, and residential areas for customers, employees, and visitors for 20 years. Up to 14 points, for depending on level of service frequency.				(14)	(14)	
COM-05: Vanpool/Carpool Service						
☐ For development projects with at least 25 employees, the property owner shall implement an employer or building manager-sponsored Vanpool or Carpool service for 20 years. Preferential parking spaces for carpool/vanpool vehicles should also be provided to accommodate 5% of employees carpooling.				(4)	(2)	
Support, Promotion, and Information						
SUP-01: Transportation Marketing Services						
☐ The property owner shall provide individualized, tailored marketing and communication campaigns, including incentives to encourage the use of sustainable transportation modes.		(2)	(2)	(2)	(2)	
SUP-02: Real-Time Information						
☐ Provide real-time sustainable transportation information for 20 years on displays in prominent locations on the project site.		(2)	(2)	(2)	(2)	
SUP-03: Multimodal Wayfinding Signage						
☐ Provide directional signage to major destinations and public amenities.	(2) 2	(2)	(2)	(2)	(2) 2	2
Parking Management						
PKG-01: Parking Pricing						
☐ Implement paid parking for all users, including employees, customers, visitors. A parking rate or pass beyond one day is not to be provided. Only applicable to sites outside the Downtown.				(4)	(4)	

WORKSHEET D: TDM Plan Summary – TDM Measusures

Revision 6: Issued for Rezoning (2020-07-29)

Prepared by: WATT Consulting Group

TDM Measure	(Maximum Points) Points Achieved					
	Residential			Office	Retail/ Service	Other
	Strata	Rental	Social			
Parking Management, continued						
PKG-02: Parking Supply						
☐ Provide no more than the minimum vehicle parking provisions for all land uses on site. Outside Downtown, this measure is only applicable to large developments.	(2)	(2)	(2)	(2)	(2)	
Other						
OTH-01: Innovative Strategies						
☐ Other innovative developer-proposed strategies, with acceptable rationale and implementation plan.	(16) 10	(16)	(16)	(16)	(16) 2	2
LINE 1: **TOTAL POINTS ACHIEVED**	25	N/A	N/A	N/A	19	19
LINE 2: **POINT TARGET (Refer to Worksheet B)**	24	N/A	N/A	N/A	14	24
For developments seeking parking reductions:						
LINE 3: **Parking Reduction for Transit Accessibility (Refer to Worksheet C)**	10%	N/A	N/A	N/A	10%	10%
LINE 4: **Maximum Parking Reduction with Achieving TDM Plan Point Targets**	20%	N/A	N/A	N/A	20%	20%
LINE 5: **Available Parking Reduction with Points Achieved** = (LINE 1 / LINE 2) × LINE 4	21%	N/A	N/A	N/A	27%	16%
LINE 6: **Total Allowable Parking Reduction (Transit Plus TDM)** = LINE 3 + LINE 5	31%	N/A	N/A	N/A	37%	26%
LINE 7: **Total Allowable Parking Reduction (Transit Plus TDM) Max** (IF LINE 6 > LINE 7)	30%	N/A	N/A	N/A	30%	30%

WORKSHEET E: TDM Plan Summary - Parking Provision

Revision 6: Issued for Rezoning (2020-07-29)

Check here if a TDM Plan is not required for the development: ✓

Prepared by: WATT Consulting Group

Transit Accessibility Level (if applicable): **Level A**

Parking Bylaw Reference	Land Use	Land Use Subtype	Land Use Quantity	Parking Class	Required Spaces	Reduction % Claimed	Adj. Required Spaces	Proposed Spaces
Vehicle Parking								
4.2.1.13	Residential Strata	<2 BR	73 units	N/A	37	30%	25.9	26
		≥2 BR	220 units	N/A	203	30%	142.1	142
4.1.16	Residential Visitor	N/A	293 units	N/A	15	0%	15	15
4.2.4.1	Library	N/A	1,022 m2 GFA	N/A	55	30%	39	39
4.2.5.1	Commercial	N/A	578 m2 GFA	N/A	9	30%	6	6
Sub-total, Residential					**255**		**183**	**183**
Sub-total, Non-residential					**64**		**45**	**45**
Total					**319**		**228**	**228**
Loading								
5.2.1	Residential	N/A		Class A	0	0%	0	0
			293 units	Class B	1	0%	1	1
				Class C	0	0%	0	0
5.2.3	Library	N/A		Class A	0	0%	0	0
			1,277 m2 GFA	Class B	0	0%	0	0
			1,277 m2 GFA	Class C	0	0%	0	0
5.2.5	Commercial	N/A		Class A	0	0%	0	0
			578 m2 GFA	Class B	2	0%	2	2
			578 m2 GFA	Class C	0	0%	0	0
Sub-total				**Class A**	**0**		**0**	**0**
Sub-total				**Class B**	**3**		**3**	**3**
Sub-total				**Class C**	**0**		**0**	**0**
Total					**3**		**3**	**3**

WORKSHEET E: TDM Plan Summary - Parking Provision

Revision 6: Issued for Rezoning (2020-07-29)

Check here if a TDM Plan is not required for the development: ✓

Prepared by: WATT Consulting Group

Transit Accessibility Level (if applicable): **Level A**

Parking Bylaw Reference	Land Use	Land Use Subtype	Land Use Quantity	Parking Class	Required Spaces	Reduction % Claimed	Adj. Required Spaces	Proposed Spaces
Bicycle Parking								
6.2.1.2	Residential Strata	<65 m^2	169 units	Class A	254	0%	254	254
		65-105 m^2	124 units	Class A	310	0%	310	310
		>105 m^2	units	Class A	0	0%	0	0
		N/A	293 units	Class B	16	0%	16	16
6.2.3.1	Library	N/A	1,022 m2 GFA	Class A	2	0%	2	2
			1,022 m2 GFA	Class B	4	0%	4	4
6.2.5.1	Commercial	N/A	578 m2 GFA	Class A	2	0%	2	2
			578 m2 GFA	Class B	0	0%	0	0
Sub-total				**Class A**	**568**		**568**	**568**
Sub-total				**Class B**	**20**		**20**	**20**
Total					**588**		**588**	**588**
Passenger Loading								
7.2.1	Residential	N/A	293 units	Class A	2	-100%	4	4
7.2.3	Library	N/A	1,277 m2 GFA	Class A	0	0%	0	0
7.2.5.1	Commercial	N/A	578 m2 GFA	Class A	0	0%	0	0
Sub-total				**Class A**	**2**	**(with COM-03)**	**4**	**4**
Sub-total				**Class B**	**0**		**0**	**0**
Sub-total				**Class C**	**0**		**0**	**0**
Total					**2**		**4**	**4**

APPENDIX B

E-Scooter Parking Specifications

DRAFT

E-SCOOTER RACK





Scooter Parking Made Easy

Declutter sidewalks and create orderly parking for electric scooters. The E-Scooter Rack accommodates numerous scooter models, with its unique tapered openings (four per rack). The rubber coated top plate also protects scooters and provides extra grip for parking stability.

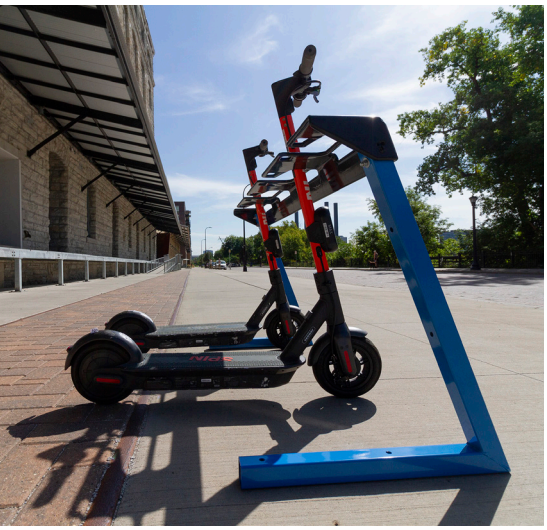
Patent pending.

DERO
A PLAYCORE Company

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E-SCOOTER RACK

- Accommodates numerous electric scooter models
- Unique tapered openings in top plate securely hold e-scooters
- Black rubber coated top plate protects scooters and provides extra hold grip
- Use freestanding or anchored to the ground
- Numerous locking points
- Durable hot-dip galvanized coating on uprights
- Minimal assembly and ships flat
- Custom logo branding is available upon request
- Not suitable for bike parking







FINISH OPTIONS FOR UPRIGHTS

Galvanized



Powder Coat over Galvanized

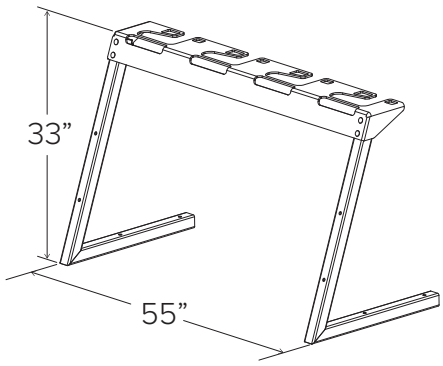
White	Black	Light Gray RAL 7042	Deep Red RAL 3003	Yellow RAL 1023
CNH Bright Yellow	Orange RAL 2004	Blue RAL 5005	Sky Blue RAL 5015	Hunter Green RAL 6005
Light Green RAL 6018	Green RAL 6016	Sepia Brown RAL 8014	Bronze	Silver 9007
Dark Purple	Flat Black	Wine Red RAL 3005	Beige RAL 1001	Iron Gray 7011

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E-SCOOTER RACK
Submittal Sheet



CAPACITY 4 Scooters

MATERIALS Frame tube: 2” 11g square tube
Top plate: 1/4” plate with black rubber coating

FINISHES

☐ **Galvanized**
An after fabrication hot dipped galvanized finish is our standard option.

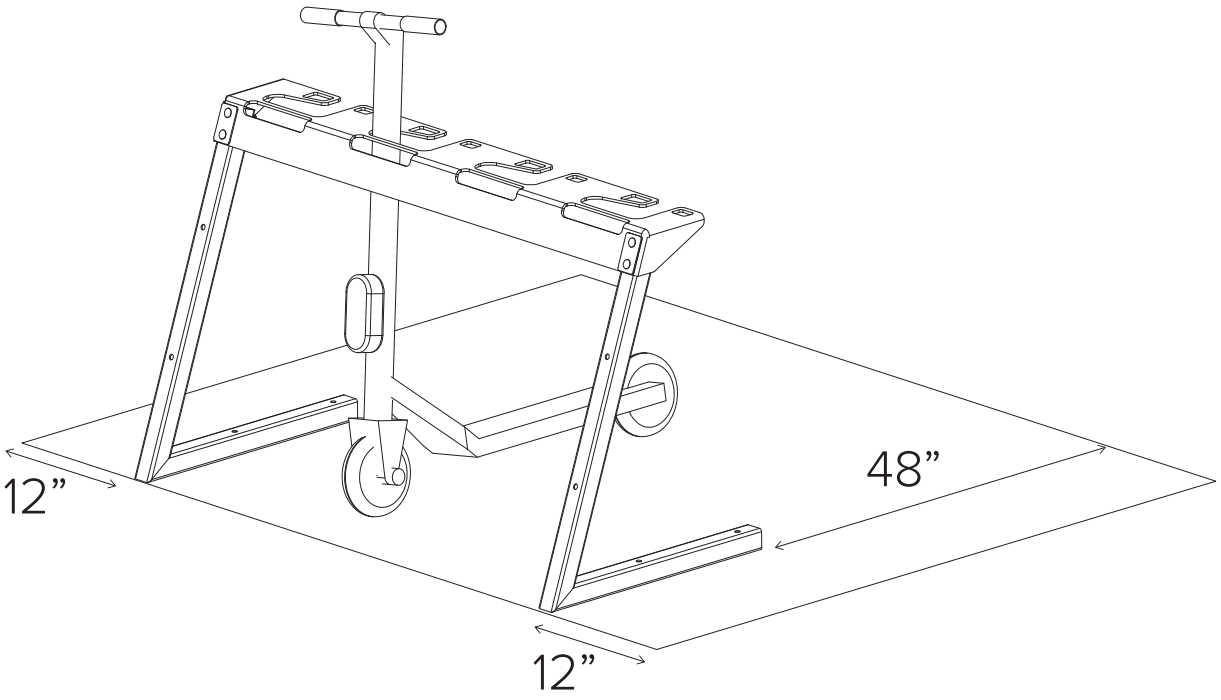
☐ **Powder Coat over Galvanized**
Our powder coat finish assures a high level of adhesion and durability by following these steps:
1. Galvanized
2. Sandblast
3. Epoxy primer electrostatically applied
4. Final thick TGIC polyester powder coat

MOUNT OPTIONS **Surface**
Rack may be left freestanding , or each frame tube accepts (2) 3/8” anchors.

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E-SCOOTER RACK

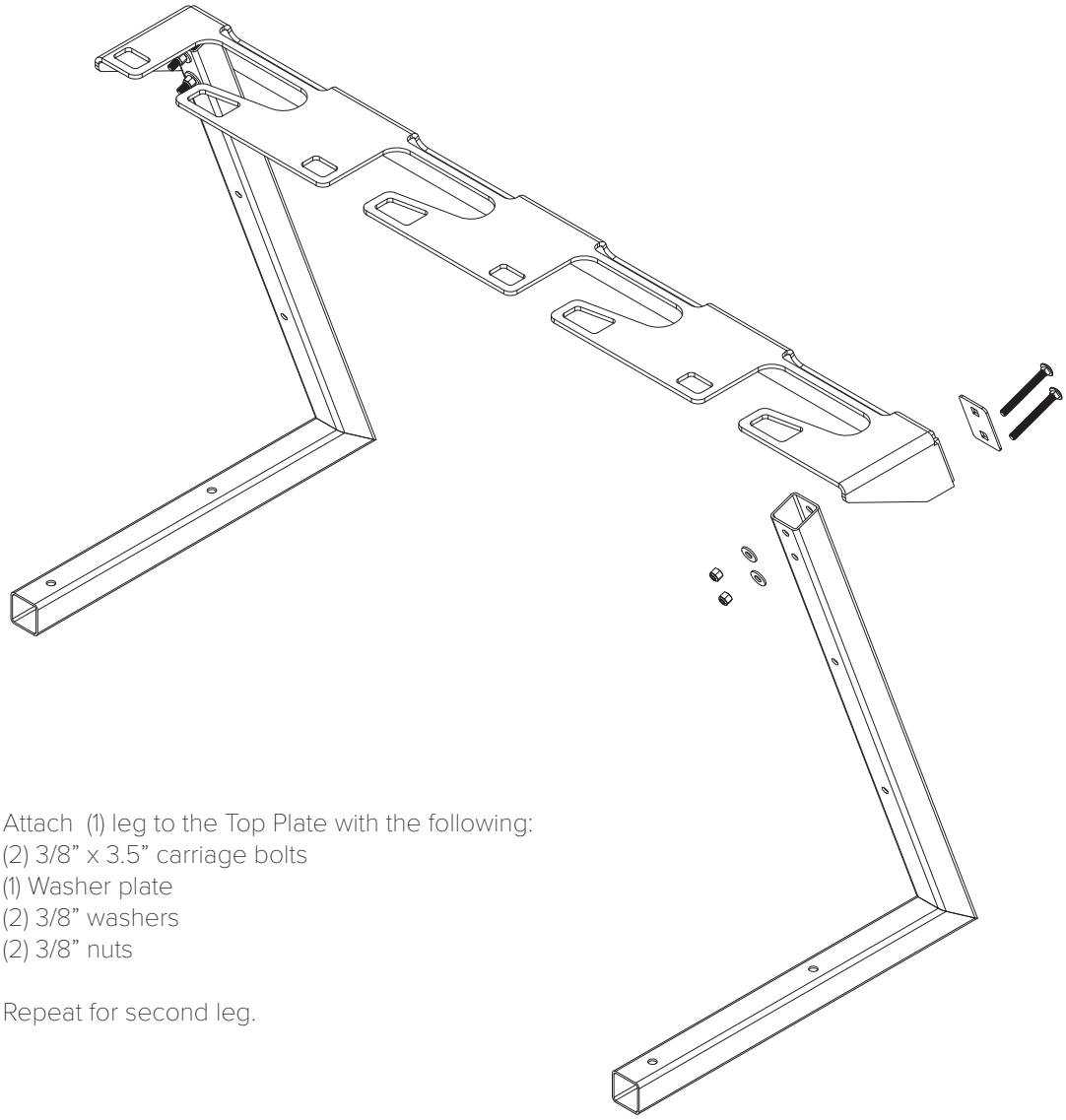
Setbacks



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E-SCOOTER RACK

Assembly Instructions



Attach (1) leg to the Top Plate with the following:
(2) 3/8” x 3.5” carriage bolts
(1) Washer plate
(2) 3/8” washers
(2) 3/8” nuts

Repeat for second leg.

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