



To: Planning Committee
From: Victor Wei, P. Eng.
Director, Transportation
Brian J. Jackson, MCIP
Director of Development


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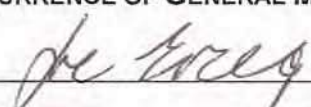
Re: TANDEM VEHICLE PARKING IN MULTI-FAMILY RESIDENTIAL UNITS

Staff Recommendation

1. That staff be directed to consult with stakeholders, including Urban Development Institute, Greater Vancouver Home Builders Association, and other small townhouse builders not part of the UDI and GVHBA, on the following parking-related topics specific to multi-family residential developments:
 - impacts of regulating the extent of tandem parking provided;
 - minimum dimensions of parking stalls; and
 - measures to better define visibility of visitor parking.
2. That staff report back as soon as possible on the results of the consultation and any proposed measures to address identified concerns.


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FOR Brian J. Jackson, MCIP
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FOR ORIGINATING DEPARTMENT USE ONLY			
ROUTED TO:		CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Policy Planning		Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
REVIEWED BY TAG	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	REVIEWED BY CAO YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

Staff Report

Origin

Concerns have recently been identified by City Council and residents regarding the potential for spillover parking into surrounding neighbourhoods arising from tandem parking (as opposed to side by side parking) arrangements in multi-family residential units. At recent Public Hearings, Staff were requested to review the impacts of tandem parking in townhouse developments to the adjacent street system. This report presents the results of staff's analysis of this issue and recommends that further consultation with stakeholders be undertaken.

Analysis

1. Scope of Work

To fully investigate any potential issues arising from tandem parking arrangements in multi-family residential units, staff undertook extensive analysis including:

- Review of City Bylaw Provisions: existing language and current practice/criteria of staff in permitting tandem parking;
- Land Use / Urban Design Implications: potential implications of tandem parking on building form and unit yield;
- Best Practices: of other Greater Vancouver municipalities (e.g., Vancouver, Burnaby, New Westminster, Delta, Surrey, Coquitlam);
- Survey of Residents: of existing townhouse developments with tandem and traditional side-by-side parking to solicit feedback regarding on-site parking adequacy and convenience;
- Observed Impacts on Adjacent Streets: on-street parking site surveys on both arterial and local roads at each of the surveyed sites; and
- Community Bylaws Review: record of three hour parking restriction violations and illegal conversions of tandem garages to habitable area.

2. Current City Bylaw Provisions for Tandem Parking

The provision of tandem parking was first formalized in City's *Zoning & Development Bylaw* on July 21, 2008 and the bylaw last amended on April 19, 2010 as part of the overall bylaw update. Per Section 7.5.6¹ of the bylaw, where residents of a single dwelling unit within a multi-family development in site specific zones (i.e., ZT45, ZT48 to ZT53, ZT55 to ZT65, and ZT67) intend to use two parking spaces, the spaces may be provided in a tandem arrangement with both spaces having standard dimensions (i.e., length of 5.5 m and width of 2.5 m). These site-specific zones are generally located within the City Centre area with the exception of two site specific zones in the Hamilton area and on Francis Road just east of No. 3 Road (i.e., 8080 Francis Road). For other zones, a proposal for tandem parking would require a variance. Generally, staff support the provision of tandem parking in order to reduce

¹ 7.5.6. Where residents of a single dwelling unit:

- a) reside in a building used for:
 - i) housing, apartment;
 - ii) mixed residential/commercial purposes; or
 - iii) housing, town in site specific zones ZT45, ZT48 to ZT53, ZT55 to ZT65, and ZT67; and
- b) intend to use two parking spaces, the spaces may be provided in a tandem arrangement, with one standard parking space located behind the other, and both standard parking spaces may be set perpendicular to the adjacent manoeuvring aisle.

lot coverage in smaller sites and in areas with specific constraints (e.g., where ground floor is non-habitable due to the minimum flood construction level requirement), provided that other conditions noted in Section 7.5.6 of the bylaw are met and registration of a restrictive covenant on title prohibiting the conversion of the spaces into habitable area is included as part of the development process.

Prior to the current City Bylaw provision for tandem parking as described above, tandem parking has been permitted in townhouse developments, although there was no explicit reference for this parking arrangement in previous bylaws.

Staff estimate approximately 20% to 25% of the existing townhouse units city wide have tandem parking spaces. This split between tandem parking and side by side parking arrangements is expected to increase based on a review of the more recent townhouse development applications. Staff anticipate approximately 50% to 65% of the units provided in future townhouse developments could potentially have tandem parking.

3. Urban Design Implications of Tandem Parking on Building Form and Unit Yield

3.1 Building Form

Typically, most townhouses in Richmond can be grouped into the following three categories:

- Three Storey Units with Tandem Parking: have a long and narrow configuration with unit widths ranging from 4.1 m to 5.0 m (narrower units provide two bedrooms and wider units provide three bedrooms on the top floor) and depths ranging from 11 m to 16 m;
- Two Storey Units with Side-by-Side Double Car Garage: main living space is on the ground floor adjacent to the garage and three to four bedrooms are on the upper floor; and
- Three Storey Units with Side-by-Side Double Car Garage: a newer typology where the garage and sometimes a small den are located on the ground floor with the main living space on the second floor and three bedrooms on the third floor. Widths range from 5.6 m to 7.2 m and depths vary from 8 m to 9.75 m.

3.2 Site Grade / Flood Proofing Impact on Massing

Where there is a significant difference between the minimum flood construction level (FCL) and the surrounding natural grade, the minimum required elevation is generally achieved by setting the first habitable floors over a non-habitable ground floor on natural grade that is dedicated to parking use only. Note that this typology is only practical where all units on site are three storeys high with a non-habitable space provided on the ground floor and drive aisles built on natural grade. This three storey townhouse typology is not practical for arterial road redevelopments due to compliance with the:

- minimum flood proofing elevation (FPE), which is typically 0.3 m above the crown of the fronting street; and
- Arterial Road Redevelopment Policy, which requires buildings to step down to two or two and one-half storeys along the rear yard interface with single-family housing, side yards and at the internal drive aisle entrance.

The resulting two or two and one-half storey double car garage units needed to comply with the above requirements typically entails that the site be filled to achieve the minimum FPE and a unit

design that includes some habitable space on the ground floor. The full height and mass of the central portion of the townhouse clusters, including a substantial portion of the garage at grade, is therefore quite evident along the street frontage.

3.3 Urban Design Implications

Relative to tandem units, double garage units dictate wider units, which may give the overall development site a welcome sense of openness at the interior of the site; to a minor degree, this sense of openness is still present in Arterial Road Redevelopment sites that combine the double garage units with tandem parking units. Independent from the height of the tandem or double garage units, the streetscape public realm is not seriously affected by the garage configuration as appropriate pedestrian scale and visual interests along the fronting streets are often reinforced by street facing windows and well-defined individual unit entries. However, the sense of space and character along the internal drive aisles, may be affected by restrictions resulting from garage configuration types since developers may disregard design features that increase the sense of identity, place and unit entrance along the internal drive aisle (such as landscaping breaks, prominent back entry doors or staggered facades) on the double garage units in order to minimize the width of the units. While this could be addressed by a wider unit design, the wider townhouse cluster generally results in a stronger massing of the building. Moreover, this type of wider unit is not well received by developers as it reduces unit yield.

3.4 Unit Yield and Unit Typology Relationship

Density in terms of overall net floor area is not affected by the garage configuration in a three storey unit whether a tandem or double garage typology. However, unit yield is directly affected by the elimination of tandem parking units since wider double garage units make the drive aisle less efficient and therefore yields fewer units on the same length of driveway (see **Attachment 1** for typical townhouse unit width). In essence, approximately 21% to 34% more pavement would be required with double car garages (see **Attachment 2** for detailed results).

Staff also examined the implications on unit yield of typical townhouse developments on arterial roads. Site planning is often organized so that buildings fronting the arterial road are primarily three storeys in height (including the ground floor garage) but step down to a two storey height along the side yards and the driveway entrance. Using this typical typology combination, there would be a five to 12.5 per cent reduction in unit yield (depending on the width of the development site) if tandem units were to be prohibited on arterial road developments (see **Attachment 3** for detailed results and complete calculations).

In general, wider development sites present a higher level of flexibility in site planning. A mix of unit widths and typologies are typically included in a development to maximize the unit yield and respond to the unique site configuration of each development site (see **Attachment 4** for results of a case study conducted in the North McLennan Area). It is noted that the number of two-bedroom townhouses would be minimized if tandem units are not allowed as the double garage units are generally able to adequately accommodate three bedrooms on a single floor.

3.5 Conclusions on Land Use/Urban Design Implications

In summary, the garage arrangement (whether tandem or side-by-side) does not have any significant impact on the overall urban design of the site and massing of typical four unit cluster buildings; however, this impact may be significant with clusters of more than four units. The

combination of unit types in a cluster as well as the configuration of each unit typology (width and depth) is dependent on the overall site configuration, the design of internal circulation, and various city and building code requirements. Developers often could use a different combination of unit typologies to achieve the same density in terms of floor area. However, it is apparent that wider units would make the drive aisle less efficient in terms of unit yield for a given length of driveway. Limiting townhouse typologies to double garage units only would reduce not only the unit yield but also the proportion of two- bedroom vs. three-bedroom units.

One potential land use implication relates to the inherent affordability of lower priced townhouses with tandem parking. If tandem parking was eliminated, the average price for townhouses may rise as a result.

4. Practice in Other Greater Vancouver Municipalities

Staff reviewed the Zoning Bylaws and discussed with staff of several municipalities in the Greater Vancouver area to determine if other jurisdictions permit tandem parking and, if so, under what criteria as well as the dimensions of the parking spaces. This information is summarized in Table 1 below.

Table 1: Tandem Parking Provisions in Other Greater Vancouver Municipalities

Municipality	Tandem Parking Identified in Bylaw	Limit on the Number of Units with Tandem Parking	Minimum Parking Stall Dimensions length (m) x width (m)	Tandem Parking Practice
Richmond	✓		5.5 x 2.5	<ul style="list-style-type: none"> Supported for multiple residential sites where residents of a single dwelling unit would have at least one parking space in non-tandem arrangement Supported for some hotel development where parking is by valet
Vancouver		✓ (50% maximum)	5.5 x 2.5	<ul style="list-style-type: none"> Supported for some multiple residential sites and for hotels where parking is by valet and the jockeying of vehicles would not disrupt garage circulation. Tandem spaces counted as one space for the purposes of meeting minimum requirements of the bylaw.
Burnaby			5.5 x 2.6	<ul style="list-style-type: none"> Would be considered only if for parking above and beyond bylaw requirements so that there are no potential impacts to on-street parking
New Westminster			5.3 x 2.59-2.74	<ul style="list-style-type: none"> Supported for some townhouse developments
Delta	✓		5.5 x 2.75	<ul style="list-style-type: none"> Supported for townhouse, single family, duplex, and strata house dwellings only.
Surrey	✓		6.1 x 2.6 (within garage); 6.0 x 2.6 (one space outside).	<ul style="list-style-type: none"> Supported for ground-oriented multiple unit residential buildings (containing two or more units) and parking facilities.
Coquitlam			5.8 x 2.6-2.9	<ul style="list-style-type: none"> Tandem spaces counted as one space for the purposes of meeting minimum requirements of the bylaw.

With respect to parking space dimensions, the City's current standard width of 2.5 m is the same as that for Vancouver and marginally narrower than those for other suburban municipalities by 0.1 to 0.4 m. Typical vehicle widths range from 1.95 m for a compact car to 2.45 m for a pickup truck (both including side mirrors).

Staff also obtained feedback from staff in other municipalities as to any apparent operational concerns arising from the provision of tandem parking in multi-family residential units, which is summarized in Table 2 below.

Table 2: Operation of Tandem Parking in Other Greater Vancouver Municipalities

Municipality	Comments from Municipal Staff re Operation of Tandem Parking
Burnaby	<ul style="list-style-type: none"> Concerns regarding the jockeying of vehicles may involve backing over City right-of-way and create additional potential conflicts with either pedestrians or other vehicles.
New Westminster	<ul style="list-style-type: none"> Concerns regarding conversion of inner tandem parking stall to liveable space.
Delta	<ul style="list-style-type: none"> No formal monitoring information as to how well tandem parking works but have had comments from some residents that it leads to higher use of on-street parking. Conversion of parking spaces to storage/habitable spaces appears to be independent of whether parking is in a tandem or side-by-side arrangement.
Surrey	<ul style="list-style-type: none"> Mixed responses from developers with respect to providing tandem parking. A large number of developers, especially those with smaller townhouse developments, are not pursuing tandem parking as these units are more difficult to sell, even at a lower price. Staff see tandem parking as a means to make housing more affordable. Responses from adjacent residents have been mixed, depending on the neighbourhood. Key concerns have been the spillover of townhouse parking on to adjacent streets with single-family housing. The spillover parking from townhouses seems to be less of a concern outside the single-family areas. Considering undertaking a pilot study on tandem parking that would focus only on selected neighbourhood(s) with the intent to work with the residents and developers to develop tandem parking policies/regulations that are specific to the neighbourhood in question. The timing for such a study is not yet confirmed.
Coquitlam	<ul style="list-style-type: none"> Considering allowing tandem parking in high density buildings only for two-bedroom plus type units (not one-bedroom units or visitor space locations). Can be difficult to ensure that tandem parking spaces remain as two spaces. Multi-vehicle families may choose to park one vehicle on the street due to the inconvenience of jockeying vehicles and/or conversion of the parking space to storage.

In summary, tandem parking is permitted for multiple unit residential buildings in several other Greater Vancouver municipalities. While some municipal staff have concerns regarding spillover parking impacts on to adjacent streets, no formal monitoring has occurred to substantiate these concerns.

5. Survey of Richmond Residents

In July 2011, staff distributed a survey (see **Attachment 5**) to approximately 1,170 owners and occupants of 35 existing townhouse developments in Richmond with both tandem and conventional side-by-side parking to obtain their feedback regarding on-site vehicle parking adequacy (including visitor parking) and convenience (including parking space dimensions). Of the total 1170 units surveyed, 68.5% had a tandem parking arrangement. A total of 395 surveys were returned for a response rate of 33.8 per cent, which is typical of City transportation-related surveys. Of the 395 respondents, 243 (61.5 per cent) have tandem parking. Key findings are summarized in Table 3 below (see **Attachment 6** for detailed survey comments).

Table 3: Key Findings of Resident Survey

Question & Number of Respondents	All Responses	Those Who Have Tandem Parking	Those Who Have Side by Side Parking
Q1: How many parking spaces does your townhouse unit have? (393 Respondents)	<ul style="list-style-type: none"> 1: 12.4% 2: 81.0% 3: 1.3% Other: 4.8% No response: 0.5% 	<ul style="list-style-type: none"> 1: 15.2% 2: 79.4% 3: 2.1% Other: 3.3% No response: 0% 	<ul style="list-style-type: none"> 1: 3.9% 2: 87.7% 3: 0% Other: 7.6% No response: 0.8%
Q2: How many vehicles do you own in your household? (393 Respondents)	<ul style="list-style-type: none"> 1: 34.9% 2: 58.2% 3: 5.3% Other: 1.0% No response: 0.5% 	<ul style="list-style-type: none"> 1: 37.4% 2: 56.4% 3: 4.1% Other: 1.6% No response: 0.5% 	<ul style="list-style-type: none"> 1: 29.4% 2: 62.5% 3: 8.1% Other: 0% No response: 0%
Q3: Is number of parking spaces adequate for your needs? (386 Respondents)	<ul style="list-style-type: none"> Too few: 30.6% Too many: 0.8% Just right: 66.3% No response: 2.3% 	<ul style="list-style-type: none"> Too few: 34.6%⁽²⁾ Too many: 1.2% Just right: 61.3% No response: 2.9% 	<ul style="list-style-type: none"> Too few: 22.8%⁽³⁾ Too many: 0% Just right: 76.5% No response: 0.7%
Q4: If current number of parking spaces is too few, indicate the number of parking spaces you would like to have. (165 Respondents)	<ul style="list-style-type: none"> 1: 3.1% 2: 16.8% 3: 19.1% Other: 2.3% No response: 58.3% 	<ul style="list-style-type: none"> 1: 1.6% 2: 18.9% 3: 19.8% Other: 3.3% No response: 26.4% 	<ul style="list-style-type: none"> 1: 5.9% 2: 11.8% 3: 19.1% Other: 3.7% No response: 59.6%
Q5: If space sufficient or too much, how is extra parking space used? ⁽¹⁾ (223 Respondents)	<ul style="list-style-type: none"> Storage: 25.3% Visitor Parking: 19.5% Other: 11.6% No response: 43.5% 	<ul style="list-style-type: none"> Storage: 31.5% Visitor Parking: 23.2% Other: 11.9% No response: 33.3% 	<ul style="list-style-type: none"> Storage: 29.8% Visitor Parking: 21.2% Other: 12.5% No response: 36.5%
Q6: Is size of garage/ carport adequate? (390 Respondents)	<ul style="list-style-type: none"> Yes: 54.7% No: 44.1% No response: 1.3% 	<ul style="list-style-type: none"> Yes: 51.0% No: 47.7% No response: 1.3% 	<ul style="list-style-type: none"> Yes: 63.2% No: 36.0% No response: 0.8%
Q7: Indicate parking space arrangement of your garage/carport. (390 Respondents)	<ul style="list-style-type: none"> Tandem: 61.5% Side by side: 34.4% Other: 2.8% No response: 1.3% 	<ul style="list-style-type: none"> Not Applicable 	<ul style="list-style-type: none"> Not Applicable
Q8: If parking spaces are tandem, is this workable? (239 Respondents)	<ul style="list-style-type: none"> Not Applicable 	<ul style="list-style-type: none"> Yes: 39.1% No: 59.3% No response: 1.6% 	<ul style="list-style-type: none"> Not Applicable

(1) Results reflect responses only from respondents who indicated "Too many" or "Just right" for Question 3.

(2) Of those who said "Too few," 69.0% have the same number or fewer vehicles than parking spaces.

(3) Of those who said "Too few," 67.7% have the same number or fewer vehicles than parking spaces.

From the above, more residents with tandem parking cite having too few parking spaces and a too small garage vis-à-vis those with side by side parking. With respect to the size of the garage, residents most commonly stated that the garage was too narrow, which makes it difficult to enter and exit the vehicle and limits storage space. A majority of residents with tandem parking (59.3 per cent) indicate that the arrangement is not workable for their daily activities with residents most commonly citing the inconvenience of jockeying vehicles. Of these 59 per cent, just over two-thirds (67.4 per cent) own two or more vehicles. Of those with tandem parking who indicated that the arrangement is acceptable (39.1 per cent), over one-half (55.8 per cent) have

two or more vehicles. In addition to the survey results, a local developer commented to staff that:

- residential units with tandem parking are less desirable and thus sell last and for lower cost than units with side by side parking; and
- irrespective of a tandem or side by side parking arrangement, the internal dimensions for parking garages are tight.

Staff also note that a number of residents reported having inadequate visitor parking. For example, of those 63 residents providing comments to Question 3, one-third cited a need for more visitor parking in their complex, particularly if on-street parking is not permitted or is very limited on adjacent streets. The City's current visitor parking requirement for townhouse developments is 0.20 spaces per dwelling unit, which is identical to that in Burnaby, New Westminster, Delta, Surrey, and Coquitlam. Based on site observations by staff, there appears to be developments where the visitor stalls are not easily located from the entrance, scattered randomly rather than consolidated and/or not clearly demarcated, all of which may result in visitors not being aware of the parking. A further possibility is that strata councils may not appropriately manage use of the visitor stalls by residents, irrespective of their location or whether or not the spaces are properly marked.

6. Observed Parking Impacts on Adjacent Streets

In August 2011, staff conducted site visits to 35 existing townhouse developments (of which the resident surveys as noted previously were sent to) with both tandem parking and conventional side by side parking. The purpose of the site visits was to observe on-street parking usage on a typical weekday between 6:00 pm and 8:00 pm on both the adjacent arterial and local roads fronting the site and within a 200 m radius (approximately two- to three-minute walking distance) of each site. The full results are presented in **Attachment 7**.

While a potential impact of multi-family residential developments with high percentages of tandem parking arrangements may spillover parking to adjacent local streets, such a result is not manifested at the locations investigated. On-site observations indicate that the streets surrounding the developments generally have excess on-street parking capacity for both residents of and visitors to these neighbourhoods. Only two locations investigated, i.e., Norton Court in the Hamilton area and Odlin Road in the West Cambie area, exhibited on street parking utilization at capacity. However, it should be noted that there is a very limited supply of parking available on these two streets with just four spaces on Norton Court and three spaces on Odlin Road. Most other streets in the study area experienced parking utilization of less than 50%. Similarly, there appears to be sufficient visitor parking capacity although usage may be higher on weekends.

With respect to the impact of curb extensions on street operations, these features are typically placed at intersections to improve pedestrian safety by shortening crossing distances, increasing the visibility of pedestrians to motorists (and vice-versa) and slowing traffic speeds. As on-street parking is not permitted within six metres of an intersection, the placement of curb extensions at these locations has no impact on the available capacity of on-street parking.

7. Review of Relevant Violations Issued by Community Bylaws

Per Section 12.4(1) of the City's *Traffic Bylaw*, an individual cannot park a vehicle between the hours of 8:00 am and 6:00 pm on any roadway abutting a premises used for residential or commercial purposes for more than three hours unless those premises are the property or residence of the person or his/her employer. Given this provision, staff reviewed the violations of this three hour time limit issued by Community Bylaws over the past six years (2005 to present) on streets with single family residences that are within a 200 m radius of the townhouse developments with both tandem parking and conventional side-by-side parking.

Of the 206 total violations issued citywide (i.e., all streets in the city) over the six-year period, only nine (4.4 per cent) were on streets adjacent to townhouse developments with both tandem parking and conventional side-by-side parking as shown in Table 4 below.

Table 4: Location of Ticket Violations for Residential Parking over 3 Hours

Area	Street	Total # Dev'ts	Total # Units	% with Tandem Parking	# Streets within 200 m	Ticket Location & Number of Occurrences	Date
Blundell	No. 2 Road	2	36	61%	9	Comstock Rd: 3 Laurelwood Ct: 1	Aug 2011 May 2006
Gilmore	Steveston Hwy	1	50	76%	7	Kimberley Dr: 1	Aug 2010
Broadmoor	No. 3 Road	1	16	75%	5	Bates Rd: 1	Aug 2010
North McLennan	Ferndale Rd Birch St	4	146	94%	6	Ferndale Rd: 1 Alberta Rd: 2	Oct 2008 Oct 2007

While these violations may be attributable to the residents of the multi-family development choosing to park one or more of their vehicles on-street rather than on-site, one cannot infer that the actions were undertaken solely by residents with tandem parking who wished to avoid the inconvenience of moving vehicles. Further, it should be noted that further work would be required to determine the nature of the violation (i.e., whether the spillover parking is caused by residents of the multi-family development vs. single-family dwelling units). Equally plausible explanations for possible spillover parking from the multi-family development include residents with more vehicles than parking spaces (whether tandem or side by side), residents using their on-site parking for storage, visitors to the complex, and residents merely preferring the convenience of on-street parking.

As noted in Section 2, units with tandem parking have a restrictive covenant registered on title that prohibits the conversion of the tandem parking spaces into habitable area. Accordingly, staff also reviewed the illegal suite inspections conducted by Community Bylaws (which are initiated on a complaint basis) over the past two years (2010 to present) in multi-family developments. Of the 67 illegal suite inspections conducted to date (40 in 2010 and 27 to date in 2011), a total of three inspections were undertaken in multi-family developments with one inspection referred to Building Approvals to address unauthorized additions while the remaining two inspections found no contravention. Nevertheless, it should be noted that some strata self-manages these issues and not all incidents/contraventions are reported to the City.

8. Summary of Key Findings

Based on staff's investigations, the key findings are:

- allowing tandem parking reduces the lot coverage for smaller sites and increases housing affordability, as units with tandem parking typically sell for lower cost than units with side by side parking;
- limiting townhouse typologies to double garage units only would reduce not only the unit yield but also the unit variety;
- the City's practice in allowing tandem parking in multi-family residential developments is consistent with some Greater Vancouver municipalities that already permit tandem parking and others currently reviewing/studying the merits of tandem parking;
- the City's parking space dimensions are very similar to that of other Greater Vancouver municipalities;
- 59 per cent of surveyed residents with tandem parking find the arrangement inconvenient due to the need to jockey vehicles but only four respondents (1.7 per cent) indicated that they parked their second vehicle on the street as a result;
- 48 per cent of surveyed residents with tandem parking (versus 36 per cent with side by side parking) indicated that the garage was too narrow, which makes it difficult to enter and exit the vehicle and limits storage space;
- on a typical weekday evening, there is generally sufficient on-site visitor parking and on-street parking capacity on the local and arterial streets within a 200 m radius of the surveyed sites that have both tandem and side by side parking;
- visitor parking is not always easily located from the entrance, is scattered randomly rather than consolidated and/or not clearly demarcated; and
- very few violations have been issued for motorists exceeding the three hour parking time limit on streets with single family residences that are adjacent to multi-family complexes that have both tandem and side by side parking.

9. Recommendations

Based on the above findings, staff recommend that the City continue to permit tandem parking in multi-family residential townhouse developments in order to reduce lot coverage, particularly for smaller sites, and maintain unit variety and affordability. However, to address concerns identified by residents, staff recommend that stakeholders (e.g., Urban Development Institute, Greater Vancouver Home Builders Association, and other small townhouse builders not part of the UDI and GVHBA) be consulted immediately on the following parking-related topics specific to multi-family residential developments:

- *Regulation of Tandem Parking*: consider establishing a maximum percentage of tandem parking allowed in a development based on criteria such as development size (e.g., number of units, frontage length) and dimension;
- *Compatibility of Tandem Parking*: consider establishing requirements/guidelines on tandem parking based on its location (e.g., within or outside City Centre), adjacent land uses (e.g., proximity to established single-family housing zones), and street classification (e.g., if development is located on or near a local road or an arterial road with full-time parking restrictions);

- *Parking Space Dimensions*: for tandem parking stalls only, consider increasing the width and/or depth to provide easier access to the vehicle and/or more storage space; and
- *Visitor Parking*: measures to better define how visitor parking is to be provided in terms of location, degree of consolidation, wayfinding, and identification.

The above findings and recommendations of staff were presented to the Richmond Parking Advisory Committee which expressed support for the next steps to be taken. The intent of the proposed further consultation with the development industry is to verify the perceived concerns and develop mutually acceptable policies and measures. If approved, staff would report back as soon as possible on the results of the consultations and any identified measures. It should be noted that grandfathering of the requirements on existing applications would be considered particularly on any new restriction on the amount of tandem parking that would result in a lower unit yield.

Financial Impact

None at this time.

Conclusion

In response to perceived concerns identified by residents regarding the potential for spillover parking into surrounding neighbourhoods arising from tandem parking (as opposed to side by side parking) arrangements in multi-family residential units, staff undertook a comprehensive analysis of the issue. The cumulative results of a resident survey, on-site staff observations and a review of relevant bylaw violations do not reveal that spillover parking is a notable concern at the 35 sites investigated in Richmond.

The resident survey did reveal that of those residents with tandem parking, 59 per cent find the arrangement inconvenient due to the need to jockey vehicles but only four respondents (1.7 per cent) indicated that they parked their second vehicle on the street as a result and 48 per cent indicated that the garage was too narrow. A number of residents also cited a shortage of visitor parking; on-site staff observations of visitor parking revealed that it is not always easily located from the entrance, is scattered randomly rather than consolidated and/or not clearly demarcated.

Based on the collective findings, staff suggest that further consultation with stakeholders be undertaken on the following parking-related topics specific to multi-family residential developments:


- impacts of regulating the extent of tandem parking provided based on criteria such as development size and dimensions;
- compatibility of tandem parking based on its location, adjacent land uses, and street classifications;
- minimum dimensions of parking stalls; and
- measures to better define visibility of visitor parking in terms of location, degree of consolidation, wayfinding, and identification.

Such consultation with the building industry will ensure that in considering any changes to regulating tandem parking, a balance between affordability and livability is achieved. Staff

would report back as soon as possible (e.g., four to six months) on the results of the consultation and any proposed measures to address identified concerns.



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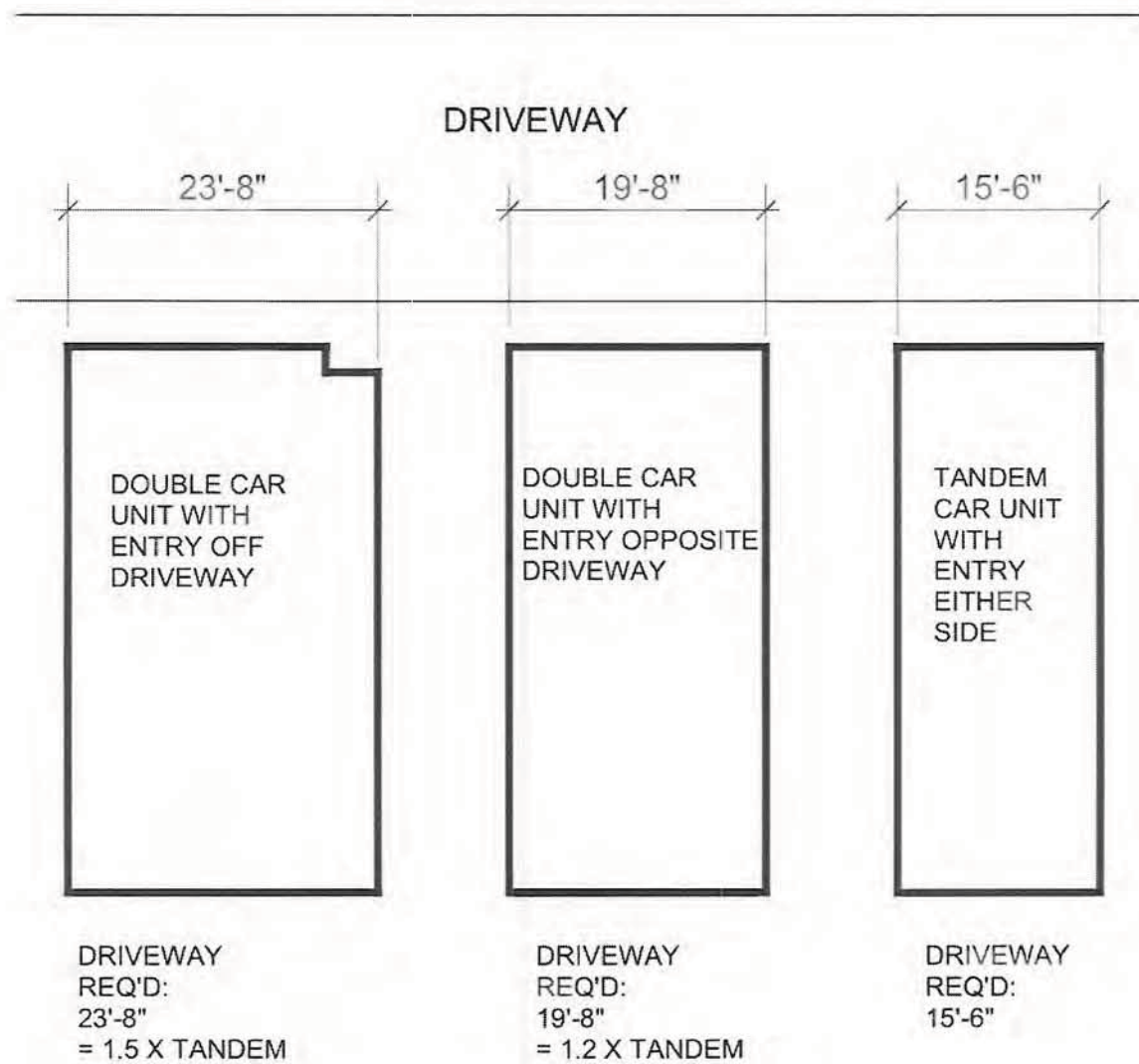
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Typical Widths of Townhouse Typologies



Pavement Required per Townhouse Typology

Item	Townhouse Typology		
	Tandem	Double Car with Building Entry Opposite Side of Driveway	Double Car with Building Entry Same Side of Driveway
Unit Width	4.7 m	6.0 m	7.2 m
Driveway Paving Area Required per Unit (based on 6.7 m driveway width)	31.7 m ²	40.1 m ²	48.3 m ²
Efficiency Compared to Tandem Units	-	21% more pavement per unit required	34% more pavement per unit required

Implications on Unit Yield: Arterial Road Developments

Townhouse Unit Yield per Typology and Width of Development Site

Townhouse Typology	Lot Width					
	40 m (minimum at local arterial)	50 m (minimum at major arterial)	60 m	80 m	100 m	120 m
Mix of Double Garage and Tandem Units (6 unit cluster along arterial road and duplex interface with single-family housing)	10	12	16	21	27	33
Double Garage Units Only	9	11	14	20	25	30
Reduction in Unit Yield (# Units)	1	1	2	1	2	3
Reduction in Unit Yield (%)	10.0%	8.3%	12.5%	5.0%	7.4%	9.1%

Option 1: Maximum Tandem Units

Townhouse Typology	Lot Width					
	40 m (minimum at local arterial)	50 m (minimum at major arterial)	60 m	80 m	100 m	120 m
Front Row:						
<i>Driveway Entry Location</i>	Side	side	side	centre	centre	centre
<i># of two storey end units (18.5 ft typical)</i>	2	2	2	4	4	4
<i># of tandem units (15 ft. typical)</i>	4	5	8	9	13	17
Subtotal	6	7	10	13	17	21
Rear Row:						
<i>Amenity Space Location</i>	Side	side	side	centre	centre	centre
<i># of duplex units</i>	4	5	6	8	10	12
Total # of units	10	12	16	21	27	33

Option 2: Double Garage Unit only

Townhouse Typology	Lot Width					
	40 m (minimum at local arterial)	50 m (minimum at major arterial)	60 m	80 m	100 m	120 m
Front Row:						
<i>Driveway Entry Location</i>	Side	side	side	centre	centre	centre
<i># of 2 storey end units (18.5 ft typical)</i>	2	2	2	4	4	4
<i># of double garage units (18.5 ft typical)</i>	3	4	6	8	11	14
Subtotal	5	6	8	12	15	18
Rear Row:						
<i>Amenity Space Location</i>	Side	side	side	centre	centre	centre
<i># of duplex units</i>	4	5	6	8	10	12
Total # of units	9	11	14	20	25	30

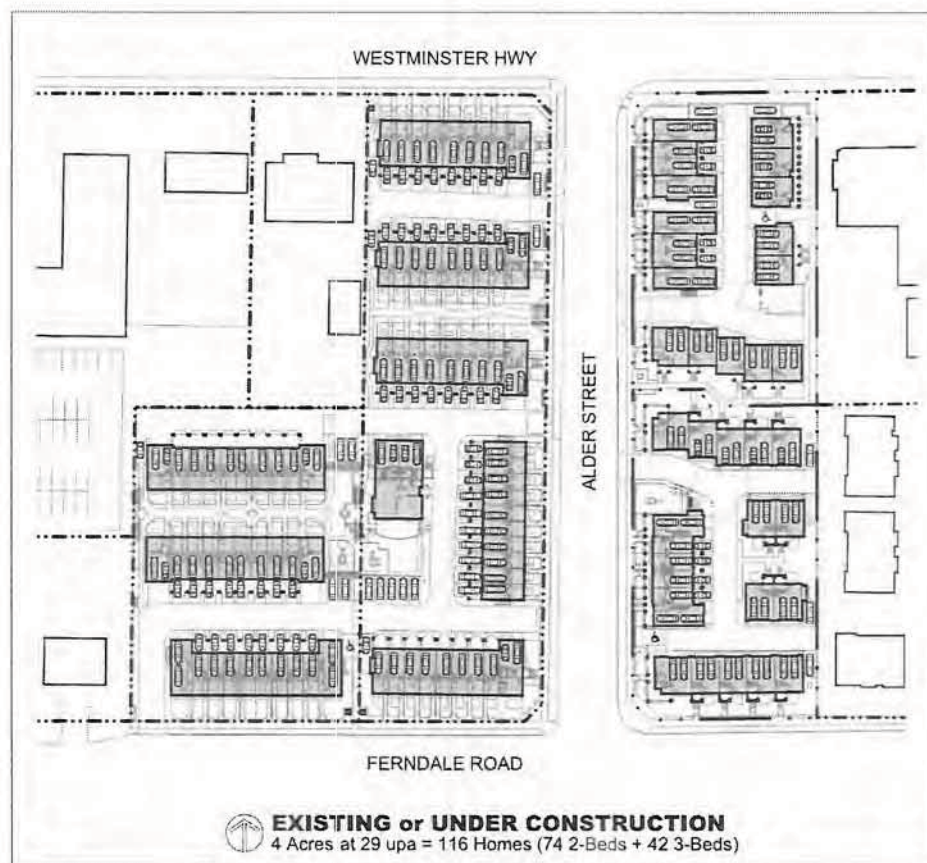
Note: Based on a site with a lot depth of minimum 40 m.

Implications on Unit Yield: Existing & Hypothetical Examples

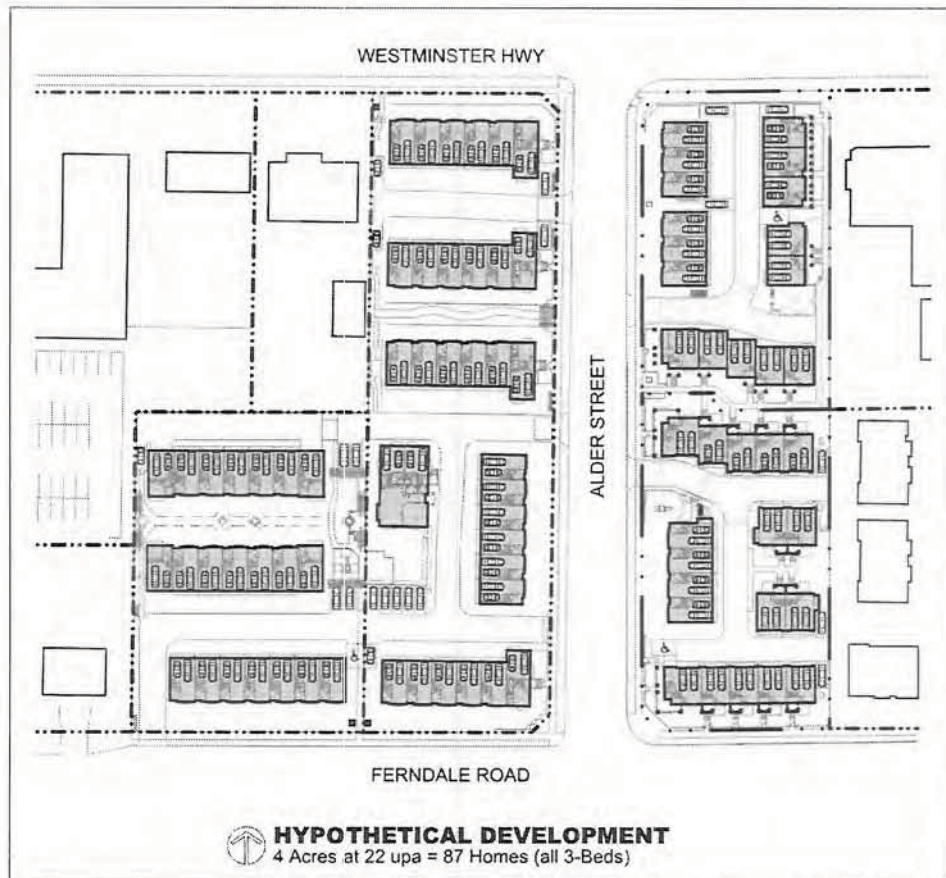
Hypothetical Examples:

Per a study of a mix of a total of 82 tandem and 34 double garage three storey units that have been proposed in a series of high density townhouse developments in the North McLennan Area (see below), if the townhouse typologies are limited to double garage units only and the internal circulation design remains the same, the unit yield would be reduced by 29 units or 25 per cent (i.e., 82 tandem units are replaced by 53 double garage units).

Although this study for a specific site does not account for all design parameters that might also affect unit yield (e.g., property shape, frontage lengths, the number of road crossings, etc), it does suggest a relatively large impact to unit yield in high density townhouse areas if the typology is limited to double garage units only. The study also suggests that with this typology restriction, the size of townhouses would be larger and the variety of unit design will be reduced. In particular, the number of two bedroom townhouses would be minimized if tandem units are not allowed as the double garage units can adequately accommodate three bedrooms on a single floor.



Implications on Unit Yield: Existing & Hypothetical Examples



TOWNHOUSE PARKING SURVEY

Name: _____

(Please print)

Address: _____

Question 1: How many parking spaces does your townhouse unit have?	Answer: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> Other _____
Question 2: How many vehicles do you own in your household?	Answer: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> Other _____
Question 3: Please indicate if the number of parking spaces you currently have are adequate for your family's needs:	Answer: <input type="checkbox"/> Too few <input type="checkbox"/> Too many <input type="checkbox"/> Just the right number of spaces Comments: _____ _____
Question 4: If you feel your current number of parking spaces is too few, please indicate the number of parking spaces you would like to have.	Answer: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> Other _____ Comments: _____ _____
Question 5: If you feel the number of parking spaces provided for your townhouse unit is sufficient or too many, please indicate how you utilize the extra space.	Answer: <input type="checkbox"/> Storage <input type="checkbox"/> Visitor parking <input type="checkbox"/> Other (please specify) _____ Comments: _____ _____
Question 6: Do you find the size of your parking garage/carport adequate?	Answer: <input type="checkbox"/> Yes <input type="checkbox"/> No Comments: _____ _____
Question 7: Please indicate the parking space arrangement of your garage/carport?	Answer: <input type="checkbox"/> Tandem – end to end <input type="checkbox"/> Side by Side <input type="checkbox"/> Other (please specify) _____
Question 8: If the parking spaces are tandem, do you find this way of parking workable for your daily activities?	Answer: <input type="checkbox"/> Yes <input type="checkbox"/> No Comments: _____ _____

Signature: _____ Date: _____

Please enclose the completed survey form in the postage paid, addressed envelope provided and return to the City by: **Friday, July 29, 2011**. Thank you for your participation in this survey. Should you have any questions, please contact Fred Lin, A/M Planner, 251 Transportation Planning at 604-247-4627.

Townhouse Parking Survey – Additional Comments

Q3: Please indicate if the number of parking spaces you currently have are adequate for your family's needs. (63 of the 386 respondents who answered the question provided the comments below)

- 3 parking spaces is better
- Not enough storage in home
- No guest parking.
- Need temp parking for guests.
- More visitor parking.
- Especially when we have visitors or guests, esp. when we have parties.
- Especially when we have parties/special occasions.
- Nobody like to visit this complex, sale of property is difficult, parking issues all the time.
- We would be OK but there is no street parking at all. I have a ticket already.
- Once we get a second car, will be difficult when we have visitors.
- There are only 11 visitor spots for a 54 unit townhome complex and no street parking. It's difficult for residents to live harmoniously.
- We wanted more parking space for storage use.
- We'd like an extra space for guests or camper.
- Visitor rules so strict. No nearby street parking for my visitors.
- Can't have more than 2 vehicles.
- Parking is tight for 2 large vehicles.
- Need more visitor parking.
- But wouldn't mind having extra parking.
- Inside only, very inconvenient - can't park outside - terrible!
- The garage is too small for the vehicles.
- It is a tandem garage so we park 1 car on the street for easier access.
- No driveway so guests need to find parking elsewhere when guest parking is full.
- Garage too narrow to park vehicles.
- When friends/family come over, there's not enough parking lot.
- But when friends come over, not enough visitor parking for them. My neighbour has 2 cars themselves, but they have only 1 parking space, they always took the visitor parking all day long.
- Need 1 or 2 more.
- We have a tandem garage. In reality only one car can park in the garage at a time. 2 cars don't fit comfortably.
- Son is getting a car and will require a parking space.
- An extra would be good for visitors. Not enough visitor parking - 35 units with only 5 visitor parking.
- We use 1 parking space for storage.
- Mine is the front & rear parking style. It is not that convenient for us. My husband has to park on the street sometimes.
- The tandem parking space is not convenient to park 2 cars.
- Could use one more.
- Not nearly enough visitor parking when friends come over.
- Double car garage supposedly, but it can only fit one car or two small cars and no storage space if that's the case.
- Not enough space in garage to move once cars are parked.
- Not enough visitor parking.
- There are 2 handicapped parking out of the 6 parking.
- Need extra space for future car for member of family or visitor.
- My daughter comes to visit me 3-4 times per week.
- Planning to get third car.
- Garage is used as a storage area presently.
- I found that some people converted their garages to living space leading to illegal parking in fire lane.
- It's tandem. Only one can be used as parking.
- If our sons come home for short stays, we would need two or three spaces.
- Currently we are a single vehicle family but when the kids are older and have their own vehicles, we won't have enough.
- Everyone parks on the street because their so-called townhouse doesn't have enough parking.
- Spot #2 blocks access to Spot #1. Need to shuffle vehicles. Third vehicle on the way.
- I am a single person but I can see how this would be a challenge for a family.
- Visitor parking not sufficient.
- No spare use as storage.
- A bit more spare from the street would be better because sometimes we will have some friends and families to visit.
- No room for guest parking
- Now is garage 1 car plus driveway, front-back arrangement.
- Tandem design is inefficient - constantly jockeying cars.
- Some units have too many cars and are using too much street parking.
- No guest park.
- We also have visitor parking available in our complex.
- Not enough parking.
- Need garage space for some storage too so one car is on the street. Only 4 spots on street for 3 townhouse complexes.

Townhouse Parking Survey – Additional Comments

- We need more visitor parking as some residents park overnight at the visitor parking spot.
- However, we need more visitor parking.
- Street parking causes inner roads to be extremely narrow and unsafe (e.g., Ash, Keefer, Heather).

Q4: If you feel your current number of parking spaces is too few, please indicate the number of parking spaces you would like to have. (54 of the 165 respondents who answered the question provided the comments below)

- Not enough visitor parking spaces.
- That's fine for us.
- No guest parking.
- We wish to have more visitor parking.
- We wish to have more visitor parking in our area in general.
- More parking for visitors or parking in the road should be allowed.
- There should be one outside the home.
- 1 available not in the garage.
- The third space - by utilizing visitor parking.
- A street parking space would be favourable and highly appreciated rather than a very wide bicycle lane in front of our complex.
- 3 or more parking would be ideal.
- More visitor's parking will be great.
- Again, outside parking needed or proper utilizing of visitor parking.
- But not tandem.
- Additional space for guests.
- In Hennessy Gardens there are 92 units in total, at least 75 customers parking lot.
- When friends/family sleep over, they would have spaces to park their cars.
- It would be great if we can have 2 visitor parking spots.
- More visitor parking required – only 8 spots for 37 units.
- I want more storage space.
- Not enough visitor parking.
- Needs to be larger though - far too small. We have had several scrapes of vehicles.
- 2 parking spaces is enough if we have storage room.
- But not tandem.
- Just about right, right now.
- Enough.
- Garage & outside our garage.
- I would like more visitor parking for the whole complex.
- Side by side will be better.
- It will be more convenient if the parking space can park 2 cars side by side.
- I have noticed that several of my neighbours have built an extra room in the garage and then park their vehicles in visitor parking. A problem!
- We need one more vehicle and parking space.
- Designated disabled parking space preferred but often used by other neighbours who are not disabled.
- Not enough visitor parking spaces.
- Only 5 visitor parking is not enough.
- It is much convenient to have road side parking along No. 2 Road.
- For future car for member of family or visitor.
- Extra visitor parking would be great.
- Only one inside parking is not sufficient.
- Just the right number of spaces.
- For the visitor parking, especially relatives.
- We don't need a car-size space - just a bit of space sideways for easier/safer drive-thru when driving in/out of garage.
- Wish more space for storage.
- Side by side.
- Shouldn't a three bedroom unit have three spaces?
- Prefer double side by side.
- Just perfect for our household. We find that most people make another room from their tandem garage and park one car out on the road.
- I see the # of cars parked in my street, indicates other houses need to park outside.
- 2 or 3 are fine.
- 3 or more.
- 2 side by side.
- OK for now.
- Tandem design is good enough for one car.
- Not enough for guest.

Q5: If you feel the number of parking spaces provided for your townhouse unit is sufficient or too many, please indicate how you utilize the extra space. (62 of the 223 respondents who answered the question provided the comments below)

- Visitor parking not enough use.
- Not enough parking.
- Residents park on the visitor parking spot.
- Guest parking.
- Working area.
- No extra space.

Townhouse Parking Survey – Additional Comments

- Not enough visitor parking.
- Very minimal visitor parking for a Richmond suburb.
- Out of 36 units, we only have 6 visitors parking - too few!
- Too few! Out of 36 units, we only have 6 visitors parking. Too few.
- Prices at the complex will be higher and easy to sell. Parking in this complex sucks.
- Sufficient - 2 spaces, 2 cars.
- Need more visitor parking.
- Need more parking spaces. We only have 4 parking, my family out of town need to park on the street if they stay for more than a week.
- Too few visitor parking.
- Just barely enough but design is for 2 cars, so no complaint.
- Not sufficient. We hardly have spaces to store our bicycles and other car-related things.
- Not enough.
- Parking space
- 2 is sufficient.
- A few could be rented to those with oversize vehicles.
- Just fit
- No extra space.
- Use both spots. Would love more visitor parking.
- We need more recreational facilities.
- Or den.
- Second one-half of tandem garage.
- On road
- Just enough for 2 cars.
- To make more visitor's parking space by sacrificing the garden area.
- Just enough to fit 2 small cars in it. Family's SUV can't even fit in there.
- Just enough.
- Enough for 2 cars but not enough for visitor parking.
- Barely adequate - we have created higher storage shelves, etc.
- The space is for 2 spots however the size of the spots is extremely small and not long enough for a big truck.
- Visitor parking too restrictive - not enough
- An extra could serve as visitor parking.
- It is sufficient, no extra space.
- There are insufficient visitor parking spaces in our complex, usually taken by other residents - not visitors.
- We use the sides for storage.
- Not enough visitor parking for the complex.
- Just right.
- Too many handicap parking, we need more visitors instead.
- For member of family living in household.
- Not enough visitor parking. There are 26 units & only 3 visitor & 2 handicap parking. Way too few because you cannot park on No. 2 Rd. Use some of the flower bed for extra parking.
- My parking is not sufficient - we used them as bicycle parking because we lost our bikes, they were stolen many times already, we kept our snowboard, etc.
- The complex has 4 visitors parking spaces, which is sufficient for a 10 unit complex.
- I don't feel it's enough.
- Barely sufficient.
- More visitor parking
- If possible, more visitor parking for the complex (now there are 4 visitor parking for 16 units).
- Need to provide many parking spaces for visitors.
- Third vehicle.
- Home office. I barely fit my stuff.
- Recreation area.
- There are way too many cars parked on the side streets making it very inconvenient to get out of the neighbourhood & causes many problems (e.g., vision blocked) making it dangerous.
- Other=street parking. Right now the street parking is Mon-Fri 7-6 disable. It would be great if it can be changed to 8-5 disable.
- We only have 2 visitor parking, which is not enough.
- Play room.
- Not spacious.
- Make into extra room.
- Not enough space for parking and storage.

Q6: Do you find the size of your parking garage/carport adequate? (112 of the 390 respondents who answered the question provided the comments below)

- It's too narrow, if can make wider that be fine (increase 2 feet).
- Too small.
- Very tight. Hard to open doors without hitting walls.
- Two cars in tandem garage. Have to move the cars around quite often. We leave at different times and come in at different times.
- Too small.
- Too small.
- Too tiny, when car's in the garage, hardly space to walk on the side.

Townhouse Parking Survey – Additional Comments

- Most SUVs and older collector cars are longer and wider.
- One side is too short to fit many vehicles, and it is barely wide enough for two vehicles.
- Too narrow garage.
- It's a tandem garage, which is not very convenient - space for storage is very limited and garage is too narrow.
- It is a little bit too small. Opening/closing the door will always hit the wall.
- My 1/2 ton pickup truck barely fits in. Very tight with a small car in tandem.
- The width size is quite narrow, the length is quite short. Having a van, you cannot close and open the storage trunk if the garage door is closed, and no space to walk around your van.
- Too tight and narrow.
- Too narrow / need more space for storage.
- Size too compact, could be bigger and possibly include a driveway.
- It's a tight space for 2 vehicles.
- Only suitable for mid size vehicles. A large van like a Montana could not be parked in the garage.
- Need more storage space & room between vehicles.
- Bigger vehicle will be tight.
- Too short.
- Size is not big enough for just 1 multi-purpose vehicle & 1 small car.
- Just barely enough. It would be better if there is a bit more space for storage purpose.
- Crammed.
- Too small.
- Too small – tandem garage is not ideal.
- The front to back parking in garage for 2 vehicles is inconvenient as we need to shuffle vehicles often.
- The garage is bit too narrow.
- Definitely not! Terrible set up.
- Not too spacious.
- Although the carport is designed for two cars, it's too small.
- Family van or SUV cannot fit in the garage due to the width.
- Too narrow for car parking.
- Too crowded, there's almost no space for us to walk between two cars.
- Too small compared to the garage of a house.
- Carport is too small, can't even park a car.
- Cannot park two full size cars
- Garage is barely wide enough for 2 vehicles - parking is very tight. One of us has to back in.
- It's too tight for side by side parking
- We only have 1 car, if we add 1 more, size is not enough because we don't have storage.
- Could be wider
- Narrow side to side
- Only good for small cars - very narrow. Tandem garage does not have enough side space for adequate storage or larger vehicle.
- Wider the better.
- We are fortunate to have a wide, end-unit, which is extremely important to us.
- If one car is OK, but two car side by side is narrow.
- It should be bigger.
- Entrance should be wider for the garage
- A little bigger would be much better.
- Too small
- I have to be very careful park in and out of the garage.
- Prefer larger garage for better clearance for ease of parking and more storage space.
- Too narrow.
- The design for 2 cars to park one after another in the narrow long parking space is not convenient.
- Too small for van.
- It is inconvenient if I have 2 cars parked in the garage and I am the first in & first out. Then have to move cars. Also, too tight for a big truck. Overall, do not like tandem parking.
- Entrance & space more wider will be easier for parking.
- A little too narrow - difficult to enter and exit.
- Just fits - could be a bit longer.
- Adequate for only one car + storage. Sometimes we have company car and cannot fit. Have to park on road. Probably should not be classified as two car garage or city should set standard adequate size for 2-car garage. Size currently differs from detached home units.
- A bit larger is better especially for bigger cars.
- It is very tight, you have to be a very good driver to park in the tight space.
- Not deep enough and not wide enough to park 2 cars.
- Not enough visitor parking.
- Too small.
- Could use an extra foot in width and an extra foot in length.
- Garage size is too small, not enough space for storage.
- The size of my parking spaces just fit in.
- Bit too narrow. Two cars barely fit.
- It's tandem and inconvenient - not enough space to move around - wrong design.
- A bigger space (sideways) would be better to keep things tidier.
- This is too small
- A little small.
- Too small.

Townhouse Parking Survey – Additional Comments

- The garage is too narrow. Hard to get on/off the vehicle inside.
- My parking garage is tandem for 2 parking but it is difficult to park 2 cars together.
- Too small, few storage space when parking two vehicles.
- Too narrow.
- Far too narrow.
- A bit narrow on the right side, can't even open the door of passenger side half-way.
- We have single car garage; we'd prefer side by side - but difficult to find
- Too small.
- A bigger garage will be helpful.
- Too narrow; supports for patio/balcony decrease manoeuvring ability.
- My parking garage size is too small for my family.
- Too small. It is fine for a small car but not good for the bigger car like a van.
- Too narrow.
- Quite narrow entrance – have hit the wall twice.
- The garage is quite narrow, thus making walking space limited once the cars are in. Our cars are both small cars.
- Too narrow, can't exit from passenger side door.
- No, a bit small.
- You kidding? It's Richmond! You barely able to open door after you parked.
- Too small - small vehicle only - no storage space.
- I think they make you think there is space for 2 cars -- that's not the case.
- A bit too small.
- Too small.
- For a two car garage, it is big. More space for storage would be nice.
- But not at the entrance, it's too small.
- Too narrow, you need professional skills to park your car.
- The size of the parking garage is too small.
- The width of garage need increase.
- Not enough room for storage.
- Garage fits vehicle adequately but leaves little room for storage.
- Too narrow of the door.
- Not enough room for storage.
- Too narrow.
- Entrance gate a little narrow.
- Not enough space.
- A little too small/tight.
- Needs to be a bit bigger.
- If it were a little wider or longer, we would have storage room and an easier time getting in and out of car seats in the backseats of our cars.

Q8: If the parking spaces are tandem, do you find this way of parking workable for your daily activities? (107 of the 239 respondents who answered the question provided the comments below)

- Not convenient for the family members daily activities
- Side by side parking was necessary for us when we looked for a home. We leave/come home at different times so to organize the person leaving first in the morning would be a total headache! We each need our own cars as we commute with items for work, so it's not possible just to take the car that's in front in the morning.
- 2 ft longer and 2 ft wider, that be fine.
- We work around it. Side by side would be more convenient.
- Most days.
- Somewhat.
- I am always shuffling vehicles.
- Not really. Too small & too few.
- Very frustrating having to move vehicles several times daily.
- Very frustrating and inconvenient.
- A lot of trouble to move around the cars.
- It's workable but not ideal.
- Yes, workable but a pain when one person only knows automatic and other person is sick.
- Better than nothing (no choice).
- I use the front for my vehicle and the back for storage. When moving things in & out, I have to move my car elsewhere, which is very inconvenient.
- One person has to move the car around for another person to drive out. Not very convenient.
- A bit not convenient (prefer side by side) but most small townhouses have such inconvenience.
- Can become a headache sometimes as we have different schedules.
- Absolutely not. It's a hassle moving cars every time.
- Bad idea.
- If we have 2 parking, we would prefer side by side.
- Again, definitely not.
- Tandem is an inefficient and inconvenient way of parking.
- The tandem parking space is inconvenient. This is why the other car has been parked on the street.
- Have to arrange which vehicle parks first or late.

Townhouse Parking Survey – Additional Comments

- If my car is not close to the exit, every time I move out I have to drive the other car out first.
- It is very inconvenient. We have to switch sometimes.
- We constantly have to move cars or exchange cars to be able to drive the "inner" car in the garage.
- Hassle to have to change cars, depending on which car leaves for work earlier.
- It's not convenient. If I want to use another car at back, I need to drive the front car first.
- Very time-consuming to switch the car every night.
- One car is OK, 2 cars will be a problem.
- Most people with tandem garages park only one vehicle in the garage, they all park their second vehicle on the road/street. Others consistently park in visitor spots or in fire lanes.
- We have to juggle cars but are fine with that configuration.
- Always have to re-park the cars to accommodate whoever has to leave the house first.
- For now.
- I only have 1 car.
- Difficult to park and plan which car in first & out. Not user-friendly.
- Tandem garages make no sense. In our situation we use the garage as storage because like I said above it's almost impossible to park 2 cars front to back.
- Rather inconvenient for 2 cars.
- Too narrow.
- It is not convenient.
- Inconvenient if we have 2 cars to park in the garage, so we turned half of it into an extra room instead.
- It won't be workable if my family have two cars
- Side by side is better.
- Side by side would be better.
- Too inconvenient.
- When my husband works long day, it is OK. Otherwise, I have to plan who parks first and out first.
- Not ideal but workable. More of an irritation.
- Yes, but inconvenient when cars have to be moved.
- We need to move the car frequently, it's not convenient. It's better to have side-by-side, but yes it's more expensive.
- I prefer side by side parking.
- But not as convenient as side by side parking. We sometimes have to make necessary changes.
- Works because there is only one vehicle that is parked.
- Inconvenience. I will not buy a home with tandem parking.
- It can sometimes be inconvenient - we have to back out & switch cars.
- Very inconvenient.
- It is a hassle to have another person back up the car before the car in front can get out.
- But prefer side by side garage.
- It is OK for 1 car only.
- Tandem parking does provide challenges as constant requirement to change parking spots.
- Very inconvenient.
- Every time my wife and I need to arrange parking sequence to meet both of our schedules.
- Garage is small.
- You can park only one.
- See answers to Q6 & Q4.
- Move car to allow the other to come out & add fumes inside the structure.
- I don't want to drive the other vehicle & when I'm home, I need to drive in early but leave for work early too.
- Occasionally we have 2 cars parked. We have to move cars in/out to let the other car out.
- Only one is used for parking. The other one has to park on the street. In this case, one parking space is enough instead of making the other one as storage.
- I prefer to have side by side parking, then I don't have to move my car if I have one more car at home.
- Always need to move away the car behind it if we want to use the car at front. Or else we have to park one car on the street all the time.
- Not so convenient if we have 2 cars.
- Side by side spaces are more convenient but we have to accept what our budget could afford us when we decided to buy our residential unit.
- But we prefer non-tandem.
- I need to switch my cars from the front to the back position for my son or daughter.
- We manage but require moving cars; prefer double side by side
- Prefer side by side
- Too inconvenient
- Inconvenient when I need to go out.
- Actually it is inconvenient to a point that moving cars in & out has become such work/thing that we feel we don't want to do but have to do daily. We didn't expect this when we purchased it.
- Inconvenient to move the cars in and out all the time. Not enough space to get on and off both sides of car.
- Side by side is better - more convenient.
- Too much trouble having to move cars around all the time.

Townhouse Parking Survey – Additional Comments

- It will be better if the arrangement is side by side.
- Too much vehicle shuffling, key sharing, etc.
- Move both cars in and out often to get the right car, as I usually leave home for work early. The house design with a side by side garage will provide more space in the house.
- It would be very hard plus where do you keep the other stuff?
- Have to move the car daily at night
- Tandem is impractical. It is very troublesome to move the first vehicle out each time.
- Too narrow.
- However, I prefer side by side parking.
- But I prefer side by side parking.
- Makes it inconvenient to get out.
- We need to move our cars around too much.
- Tandem is completely impractical, cannot guarantee rear car leaves first and returns last.
- While a pain at times, it is manageable.
- Our garage are side by side.
- Not very good. I prefer the side by side, more convenient.
- Not convenient.
- No
- It would be more difficult if we had 2 cars.
- Very inconvenient to move one car to get the one out.
- We leave and return at different times so constantly have to juggle cars.
- Have to frequently re-arrange cars.
- We purposely did not buy a unit with a tandem garage.

Other Comments (9 of the 395 respondents provided the comments below)

- Give Westminster Hwy parking access.
- The problem in our area isn't with the individual parking within our unit, but with the lack of visitor parking. Our complex has 37 units and only 9 visitor parking stalls. You can appreciate that these can fill up very fast. I can't figure out as to why there can't be parking along Westminster Hwy between McLean and Gilley. This would solve our problem as well as the other 2 townhouse complexes in our area. Thanks.
- Need more visitor parking! Either in complex or on the street.
- There is very limited visitor's parking - only 7 spaces for 50 units.
- In the next survey, it would be great to have questions regarding the number of visitor's spaces, where they are located, and how they are utilized. Thank you!
- My townhouse had 2 tandem parking spaces originally but I have enclosed the first space to use an extra room. This suits my current needs.
- At present there are at least 6 cars that belong to Orchard Lane owners parking every day and overnight on the 6000-block of Comstock Road and Udy Road. This is unacceptable. City of Richmond must stop any further development or subdivisions on No. 2 Road.
- I think the way the new townhouses are built is setting up for street clogging. It's not true you can fit two cars in these townhouses.
- Richmond is building too many townhouse complexes - increasing traffic and parking issues.

On-Site Observations: On-Street and Visitor Parking Use

Area	Address	# Units	% Tandem Parking	Adjacent St. within 200 m	# On Street Parking Spaces	% On-Street Parking Use	# Visitor Spaces	% Visitor Parking Use
Hamilton	22380 Sharpe Ave	35	0.0%	Sharpe Ave	49	65.3%	7	14.3%
	22386 Sharpe Ave	17	52.9%				3	33.3%
	22711 Norton Court	33	100.0%	Norton Court	4	100.0%	7	14.3%
	22728 Norton Court	9	55.6%				3	0.0%
	22788 Norton Court	24	83.3%				3	0.0%
	22788 Westminster Hwy	54	72.2%				11	9.1%
	Area Subtotal: Average Use						68.0%	
West Cambie	9800 Odlin Road	92	54.3%	Odlin Road	3	100.0%	18	50.0%
				Tomicki Ave	55	9.1%		
				No. 4 Road	150	6.0%		
	Area Subtotal: Average Use						8.2%	50.0%
Thompson	6111 No. 1 Road	34	88.4%	No. 1 Road	58	5.2%	5	60.0%
	6179 No. 1 Road	35					5	20.0%
	6331 No. 1 Road	33	81.8%	No. 1 Road	58	6.1%	6	33.3%
	6511 No. 1 Road	12	0.0%				3	66.7%
	Area Subtotal: Average Use						5.7%	
Blundell	7231 No. 2 Road	26	53.8%	Comstock Rd	22	9.1%	4	25.0%
				Udy Road	16	6.3%		
				Langton Rd	70	28.6%		
				Linscott Rd	9	22.2%		
				Laurelwood Crt	17	35.3%		
	8171 No. 2 Road	10	80.0%	Cantley Road	61	3.3%	4	50.0%
				Cantley Pl	14	7.1%		
				Chemainus Dr	26	23.1%		
				Clearwater Dr	14	7.1%		
	Area Subtotal: Average Use						16.5%	
Gilmore	7171 Steveston Hwy	50	76.0%	Gilbert Rd	58	0.0%	18	16.7%
				Kimberley Dr	32	3.1%		
				Monashee Dr	12	16.7%		
				Buttermere Dr	11	9.1%		
				Bamberton Dr	41	12.2%		
				Waterton Dr	9	33.3%		
				Manning Crt	14	14.3%		
	Area Subtotal: Average Use						7.9%	
Broadmoor	9600 No. 3 Road	16	75.0%	Saunders Rd	28	7.1%	4	0.0%
				Mowbray Rd	21	4.8%		
				Pigott Rd	64	0.0%		
				Bates Rd	70	10.0%		
				Greenlees Rd	6	16.7%		
Area Subtotal: Average Use						5.8%		0.0%
Steveston	12251 No. 2 Road	50	55.6%	No. 2 Road	27	48.1%	1	0.0%
	12311 No. 2 Road	54	77.8%	No. 2 Road	27	48.1%	11	63.6%
	Area Subtotal: Average Use						48.1%	
McLennan North	9400 Ferndale Road	8	87.5%				10	30.0%
				Ferndale Rd	74	56.8%		
	9551 Ferndale Road	58	86.2%	Ferndale Rd	69	53.6%	9	33.3%
	9751 Ferndale Road	21	100.0%	Ferndale Rd	69	53.6%	4	0%
	6188 Birch Street	59	50.8%	Birch Street	18	33.3%	9	66.7%
Area Subtotal: Average Use						53.0%		27.9%

On-Site Observations: On-Street and Visitor Parking Use

Area	Address	# Units	% Tandem Parking	Adjacent St. within 200 m	# On Street Parking Spaces	% On-Street Parking Use	# Visitor Spaces	% Visitor Parking Use
McLennan South (north of General Currie Road)	9451 Granville Ave	30	96.7%	Granville Ave	34	29.4%	5	20.0%
	9791 Granville Ave.	7	57.1	Granville Ave	17	0.0%	2	100%
				No. 4 Road	40	0.0%		
				Turnill St	70	58.6%		
	7393 Turnill Street	45	75.6%	Turnill St.	70	58.6%	4	50%
	9333 Sills Ave	59	57.6%	Sills Ave	62	69.4%	11	18.2%
				Heather St	45	20.0%		
				No. 4 Road	20	0.0%		
	7331 No. 4 Road	22	18.2%	No.4 Road	20	0.0%	6	33.3
Area Subtotal: Average Use						26.0%		32.1%
McLennan South (south of General Currie Road)	9308 Keefer Street	31	87.1%	Keefer Ave	42	57.1%	7	28.6%
				Ash St	40	27.5%		
	9688 Keefer Street	32	56.3%	Keefer Ave	28	46.4%	7	28.6%
				Turnill St	75	45.3%		
				Heather St	97	35.1%		
	7533 Turnill Street	15	91.7%	Turnill St.	75	45.3%	9	66.7%
	7533 Heather Street	45	91.7%	Heather St.	97	35.1%		
	9051 Blundell Road	12	66.7%	Turnill St	75	45.3%	5	60.0%
	7840 Garden City Road	10	60.0%	Garden City Road	25	28.0%	5	60.0%
				Blundell Road	26	3.8%		
	7820 Ash Street	5	40.0%	Ash St	40	27.5%	None Identified	n/a
Area Subtotal: Average Use						37.0%		52.6%