



City of Richmond
Planning and Development Department

Memorandum

To: David Weber
Director, City Clerk's Office

Date: June 21, 2011

From: Brian J. Jackson, MCIP
Director of Development

File: DP 08-432193

Re: **Application by – Interface Architecture Inc. for Development Permit at
12351 No. 2 Road**

The attached Development Permit was given favourable consideration by the Development Permit Panel at their meetings held on March 2, 2011 and February 16, 2011.

It would now be appropriate to include this item on the agenda of the next Council meeting for their consideration.

Brian J. Jackson, MCIP
Director of Development

SB:blg
Att.



Development Permit Panel

Wednesday, February 16, 2011

Time: 3:30 p.m.
Place: Council Chambers
Richmond City Hall
Present: Joe Erceg, Chair
Robert Gonzalez, General Manager, Engineering and Public Works
Dave Semple, General Manager, Parks and Recreation

The meeting was called to order at 3:30 p.m.

1. Minutes

It was moved and seconded

That the minutes of the meeting of the Development Permit Panel held on Wednesday, January 26, 2011, be adopted.

CARRIED

2. Development Permit 08-432193

(File Ref. No.: DP 08-432193) (REDMS No. 2592297)

APPLICANT: Interface Architecture Inc.

PROPERTY LOCATION: 12351 No 2 Road

INTENT OF PERMIT:

Permit the construction of a 44-unit townhouse development at 12351 No. 2 Road on a site zoned "Town Housing (ZT48) - Trites Area (Steveston) and South McLennan (City Centre)".

Applicant's Comments

John Lo, Interface Architecture Inc., advised that the architect for the proposed 44-unit townhouse development was unable to attend the meeting, but that he would make a brief presentation and then respond to the Panel's queries. Mr. Lo introduced Masa Ito, Landscape Architect for the project, and then made the following remarks:

- the proposed 44-unit townhouse development is at 12351 No. 2 Road, south of Moncton Street, on a site rezoned from "Light Industrial" to "Town Housing";

- the rezoning application was made in 2007, but due to the economic slowdown in 2008, the original design of 39 townhouse units was increased to 44 townhouse units;
- the site's long, rectangular shape presented a challenge; and
- to the west and to the south of the subject site are industrial properties; to the east across No. 2 Road, is farmland in the Agriculture Land Reserve, and to the north is a 54-unit townhouse development;

In response to the Chair's query regarding the whereabouts of the project's architect, Mr. Lo advised that he was out of town.

Mr. Ito made the following comments regarding the landscape and open space design:

- the No. 2 Road frontage is enhanced with landscaped front yards, and a mixture of evergreen and deciduous tree planting;
- on the east perimeter of the subject site Agricultural Land Reserve (ALR) buffer standards were followed in the landscape design elements;
- the interfaces to the industrial properties to the south and west include a pedestrian corridor, with landscape treatments;
- a low picket fence surrounding the play equipment area defines the open streetscape within the subject site, and leads to the common area cited in the centre of the proposed development.
- the common area is where residents can congregate, and includes both a seating area and a children's play area; and
- landscape elements include flowering plants, a colonnade of shade trees, and seasonal flowers.

Panel Discussion

Discussion ensued with regard to the pedestrian corridor, and advice was offered that: (i) it would be lit, but the lighting would not interfere with residents' living quarters; (ii) at present it measures three metres in width, but at a later date it would be increased to six metres; (iii) a chain link fence will run along the south and west sides of the walkway.

With regard to the potential of future development in the area, Mr. Lo advised that the area plan allowed the industrial buildings to be demolished at some later date, and that multi-family residential buildings could take their place.

In response to a query, advice was given regarding the following details of the outdoor amenity space: (i) there were seating areas for use by residents who choose to garden; and (ii) children's play equipment as well as an open, grassy play area is available.

In response to the Chair's query regarding the buffer area between the ALR land and the subject site, Mr. Ito advised that the AAC's request for a hedge to prevent dust had been met in the landscape scheme.

In addition, Mr. Ito stated that: (i) with regard to the No. 2 Road frontage, improvements include a Scarlet Oak tree; (ii) a Cherry tree was a feature of the front yard; and (iii) a Cedar hedge, measuring five feet in height, will also be a feature of the property.

Staff Comments

Wayne Craig, Program Coordinator Development, advised that staff supports: (i) the application; (ii) the ALR buffer scheme, for the six metre front yard setback along the eastern perimeter of the subject site; and (iii) the three metre public walkway along the south, and west edges, of the development site.

Mr. Craig stated that there is coordinated access between the subject site, and the site to the north where there is a 54-unit townhouse development, for emergency vehicles.

In conclusion Mr. Craig remarked that the proposed development includes two convertible units, and that all other units include aging in place features, including handrails, lever handles and blocking in washroom walls for future grab bar installation.

In response to the Chair's query regarding the noise issue, Mr. Craig advised that a professional acoustical engineer had undertaken a study, including noise measurements, to investigate sound issues and had specified design and construction of the proposed dwelling units to meet standards specified by CMHC. He added that to mitigate noise from adjacent industrial properties south facing residential unit bedrooms would be fitted with additional drywall material, and additional glazing, in addition to mechanical ventilation with temperature control devices that would ensure comfortable living, with windows shut during summer months.

The Chair noted that to ensure mitigation of industrial noise potential indoors doors and windows in the proposed townhouse units would need to be closed. He further noted that the City is moving toward a new Noise Regulation Bylaw, one that features decibel frequencies identified as dBA and dBC, and queried if the acoustical work done on the application related to the draft Bylaw.

Mr. Craig advised that the draft Noise Regulation Bylaw had not been applied to the Interface Architecture Inc. application.

The Chair invited the applicant's acoustical engineer, Aaron Peterson of Brown, Strachan Associates to address the Panel.

In response to the Chair's queries Mr. Peterson advised that:

- during the acoustical study of the proposed townhouse units the existing noise bylaw maximum theoretical levels of noise had been applied, assuming multiple noise sources, and this design noise level exceeds the maximum dBA and dBC noise levels permitted in the City's draft Noise Regulation Bylaw;
- the noise level standards adopted for the inside of the proposed townhouse units are lower than the noise levels permitted in the City's draft Noise Regulation Bylaw;

- the acoustic study design noise level of 69 dBA, or roughly 75 dBC, took into account the 65 dBA daytime noise level in the City's existing Noise Regulation Bylaw, as well as the potential for multiple industrial units, and this equation was used as the project's design level, which was higher than those outlined in the City's draft Noise Regulation Bylaw;
- during the acoustic study both "intermediate zone" and "quiet zone" noise levels were applied at the maximum level outlined in the City's Noise Regulation Bylaw; and
- the dBA and dBC noise frequencies and levels outlined in the City's draft Noise Regulation Bylaw depends on zoning, and the project would still meet the draft Noise Regulation noise levels and the interior noise level standards as set out by the Canadian Municipal Housing Corporation.

Panel Discussion

In response to a query directed at staff regarding how the ALR buffer scheme, for the six metre front yard setback along the eastern perimeter of the subject site, compares with similar sites in the City, where a development is adjacent to ALR land, Mr. Craig advised that this proposed development's treatment is consistent with others in the vicinity.

In response to a query directed at the applicant, Mr. Lo advised that the mechanical ventilation provided in the bedrooms of the proposed townhouses would eliminate the need to open the windows.

Gallery Comments

Steve Pecarsky, Vice President, True World Foods Inc., 12417 No. 2 Road, submitted a drawing (attached to these Minutes as Schedule 1) to illustrate the proximity of the proposed townhouse units to the industrial properties.

Mr. Pecarsky commented that townhouse units that currently occupy addresses along Andrews Road are very close to industrial buildings and that noise travels easily from the industrial buildings into the Andrews Road townhouse units. He commented that the proposed townhouse units should be situated as far from the adjacent industrial buildings as possible, to allow the sound to dissipate as it travelled between industrial and residential buildings.

Mr. Pecarsky stated that with True World Foods equipment shut down, the company had measured a 40-decibel noise level.

The Chair noted that:

- a three metre public walkway along the south and west edges of the development site ensured that the proposed townhouse units would be further from the industrial buildings, than the Andrews Road townhouse units are from the industrial buildings;

Development Permit Panel
Wednesday, February 16, 2011

- measures that go beyond any measures taken in older projects will be applied that attenuate noise, such as improved windows, construction techniques to deaden sound; and
- the City does not want to create a situation of conflict, where this proposed project is concerned, especially in light of the draft Noise Regulation Bylaw.

Mr. Yuzawa, President of True World Foods clarified comments made by Mr. Lo, with regard to envisioned redevelopment of industrial properties fronting onto Trites Road, and stated that he did not foresee any redevelopment in the near future. He stated that his company has invested heavily in equipment, and that he saw True World Foods at its present location, even for the next twenty-five years.

Mr. Yuzawa stated that the City has to consider both business and residential structures when it considers rezoning issues, and that it is everyone's desire to enjoy peace.

The Chair noted that the Panel's mandate extends to consideration of the design and layout of proposed developments, but does not extend to questions of zoning. He recognized that the interface of residential and industrial sites in the neighbourhood where True World Foods conducts its business has had its issues and challenges.

The Chair went on to say that he believes the industrial site at 12417 No. 2 Road will be there for some time, and for the applicant to suggest otherwise was not necessarily the case. For this reason the Panel had to consider the impact of noise transmission.

Correspondence

None.

Panel Discussion

The Chair stated that:

- the applicant, the architect and the acoustic engineer have paid attention to noise issues with regard to the proposed townhouse development on a site that was formerly used for industrial activities, but he noted that the architect was not in attendance at the meeting; and
- there was no written material in the application package from the acoustic engineer, Community Bylaws Department, or Health Department confirming compliance with City's draft Noise Regulation Bylaw, and for this reason he suggested that the Development Permit 08-432193 be deferred.

There was general agreement that deferring Development Permit 08-432193 was an acceptable action.

The Panel also requested information from a mechanical engineer that mechanical ventilation meant that there was no requirement to have the proposed townhouse unit windows open in summer months.

Panel Decision

It was moved and seconded

That Development Permit 08-432193 for 12351 No. 2 Road be:

- (i) deferred to provide an opportunity for staff to submit (a) a written brief to the Development Permit Panel regarding the compliance of the project with the City's new Noise Regulation Bylaw, and (b) a statement from a mechanical engineer ensuring that mechanical ventilation meant no requirement to have the proposed townhouse unit windows open in summer months; and*
- (ii) be an agenda item at the Wednesday, March 2, 2011 meeting of the Development Permit Panel, to take place in the Council Chambers, Richmond City Hall, 6911 No. 3 Road.*

CARRIED

3. Development Variance DV 10-542375

(File Ref. No.: DV 10-542375) (REDMS No. 2974416)

APPLICANT: Provincial Rental Housing Corporation

PROPERTY LOCATION: 8180 Ash Street

INTENT OF PERMIT:

- 1. Vary the minimum lot width from 12 m to 8.3 m for proposed Lot 5; and
- 2. Vary the minimum lot frontage from 6 m to 0.38 m for proposed Lot 4, to 2.7 m for proposed Lot 5 and to 0.60 m for proposed Lot 6 to:
 - a) to permit subdivision of 8180 Ash Street into six (6) lots zoned "Single Detached (RS1/B)" for the purpose of developing affordable single-family dwellings.

Applicant's Comments

Declan Rooney, Engineering Consultant, advised that he was accompanied by Naomi Brunemeyer, Manager, Regional Development, B.C. Housing Management Commission. He noted that he was unable to attend the meeting, but that Andrea Rubee was in attendance to represent the architect.

Mr. Rooney advised that:

- the request for variances is to permit the subdivision of 8180 Ash Street into six lots for six separate single-family dwellings to allow: (i) greater affordability; (ii) reduced land values, and (iii) reduced servicing costs;
- the request to vary the lot frontage is due to the constrained frontage on property on Dayton Court;

Development Permit Panel
Wednesday, March 2, 2011

In response to a queries from the Chair, Mr. Jackson advised that along the public walkway there is: (i) access to the interior courtyard and individual accesses to the walkway-facing units; and (ii) a slight rise and fall that provides visual interest and assists in connecting visually to the interior courtyard.

Correspondence

None.

Gallery Comments

None.

Panel Discussion

There was general agreement that the project was well executed.

Panel Decision

It was moved and seconded

That a Development Permit be issued which would:

1. *Permit the construction of 358 unit apartment complex with an indoor amenity building over one level of parking at 9331, 9351, 9371, 9391 and 9411 Odlin Road on a site zoned "Low Rise Apartment (ZLR24) Alexandra Neighbourhood (West Cambie)"; and*
2. *Vary the provisions of Richmond Zoning Bylaw 8500 to:*
 - a) *increase the maximum lot coverage from 45% to 46.4%; and*
 - b) *reduce the parkade setback off of Odlin Road from 3.8 meters to 3.0 meters.*

CARRIED

4. Development Permit DP 08-432193

(File Ref. No.: DP 08-432193) (REDMS No. 2592297)

APPLICANT: Interface Architecture Inc.

PROPERTY LOCATION: 12351 No 2 Road

INTENT OF PERMIT:

Permit the construction of a 44-unit townhouse development at 12351 No. 2 Road on a site zoned "Town Housing (ZT48) - Trites Area (Steveston) and South McLennan (City Centre)".

Development Permit Panel
Wednesday, March 2, 2011

Panel Discussion

The Chair stated that at the February 16, 2011 meeting of the Development Permit Panel, the Interface Architecture application was considered and discussed. At that meeting the Panel referred the application back to staff and the applicant, and requested that the Panel receive information regarding: (i) the compliance of the project with the City's draft Noise Regulation Bylaw; and (ii) how to ensure thermal comfort throughout the summer months to project's units.

The Chair invited the applicant to address the two issues.

Applicant's Comments

Ken Chow, Architect, Interface Architecture Inc., introduced Aaron Peterson, with the Vancouver acoustical engineering firm of Brown Strachan Associates.

In response to queries Mr. Chow and Mr. Peterson provided the following information:

- the proposed 44 townhouse units at 12351 No. 2 Road meet the design noise criteria for the draft Noise Regulation Bylaw;
- the project's design meets the CMHC interior noise level criteria for both dBA and dBC exterior noise levels, as outlined in the draft Noise Regulation Bylaw;
- of the 44 proposed townhouse units, the 26 units that face the industrial property to the south and west of the subject site include additional noise attenuation features;
- mechanical systems were proposed to provide thermal comfort for residents in 26 of the 44 proposed townhouses; and
- at the request of the Panel, the applicant agreed that all townhouse units (including those that do not face the industrial property to the south) will be fitted with noise attenuation and mechanical systems, including exhaust fans, and ceiling fans, to ensure thermal comfort throughout the year with windows closed; this treatment will extend to the entire unit, not just bedrooms.

Staff Comments

Mr. Jackson noted that the applicant should provide the City with written documentation indicating that thermal comfort features would extend to all living spaces, in each of the 44 proposed townhouse units. He advised that this is to be submitted prior to Development Permit Application 08-432193 going forward to a future Council meeting.

Correspondence

None.

Gallery Comments

None.

**Development Permit Panel
Wednesday, March 2, 2011**

Gallery Comments

None.

Panel Decision

It was moved and seconded

That a Development Permit be issued which would permit the construction of a 44-unit townhouse development at 12351 No. 2 Road on a site zoned "Town Housing (ZT48) - Triles Area (Steveston) and South McLennan (City Centre)".

CARRIED

5. New Business

6. Date Of Next Meeting:

7. Adjournment

It was moved and seconded

That the meeting be adjourned at 4:10 p.m.

CARRIED

Certified a true and correct copy of the Minutes of the meeting of the Development Permit Panel of the Council of the City of Richmond held on Wednesday, March 2, 2011.

Joe Erceg
Chair

Sheila Johnston
Committee Clerk



City of Richmond
Planning and Development Department

**Report to
Development Permit Panel**
To: DPP, MAR. 2, 2011

To: Development Permit Panel
From: Brian J. Jackson, MCIP
Director of Development
Date: February 23, 2011
File: DP 08-432193
Re: Application by Interface Architecture Inc. for a Development Permit at
12351 No. 2 Road

Staff Recommendation

That a Development Permit be issued which would:

1. Permit the construction of a 44-unit townhouse development at 12351 No. 2 Road on a site zoned "Town Housing (ZT48) – Trites Area (Steveston) and South McLennan (City Centre)".

Brian J. Jackson, MCIP
Director of Development

SB:blg
Att.

Staff Report

Origin

Interface Architecture Inc. has applied to the City of Richmond for permission to develop a 44-unit townhouse development at 12351 No. 2 Road on a site zoned "Town Housing (ZT48) - Trites Area (Steveston) and South McLennan (City Centre)". The site was formerly an industrial site.

The site is being rezoned for this project under Bylaw 8449 (RZ 08-414348) from "Light Industrial (IL)" to "Town Housing (ZT48) - Trites Area (Steveston) and South McLennan (City Centre)" (formerly "Comprehensive Development District (CD/126)").

A Servicing Agreement was secured as a requirement of rezoning for the design and construction of: road widening and frontage improvements along No. 2 Road, a 3 m public walkway along the south and west edges of the development site in a public rights-of-passage (PROP) right-of-way (ROW), servicing pipe size upgrades to City requirements if needed, and signalization warrant study for No. 2 Road and Moncton Street. Capacity analyses submitted by the applicant confirmed that servicing pipe size upgrades are not required. The City has received a warrant study. Traffic signalization will occur as part of the Development Cost Charge (DCC) program when signalization is warranted in the future.

The site was formerly used for industrial activities and as a result, required soil remediation. A copy of the Ministry of Environment Certificate of Compliance for the site has been received.

Background

The subject application and associated Staff Report dated December 22, 2010 (**Appendix D**) were considered by the Development Permit Panel on February 16, 2011.

The Panel referred the application back to staff with the following recommendation:

That Development Permit DP 08-432193 for 12351 No. 2 Road be:

- (i) deferred to provide an opportunity for staff to submit (a) a written brief to the Development Permit Panel regarding the compliance of the project with the City's new Noise Regulation Bylaw, and (b) a statement from a mechanical engineer ensuring that mechanical ventilation meant no requirement to have the proposed townhouse unit windows open in summer months; and***
- (ii) be an agenda item at the Wednesday, March 2, 2011 meeting of the Development Permit Panel, to take place in the Council Chambers, Richmond City Hall, 6911 No. 3 Road.***

The purpose of this Report is to outline the measures taken by the applicant to respond to the concerns raised by the Panel.

Staff Comments

The proposed scheme attached to this Report complies with the intent of the applicable sections of the Official Community Plan (OCP) and is in compliance with the “Town Housing (ZT48) - Trites Area (Steveston) and South McLennan (City Centre)” zoning district.

Analysis

Industrial Interface

- As outlined in the Staff Report of December 22, 2010, registration of an Industrial Noise Sensitive Use Restrictive Covenant is a requirement of the Development Permit to ensure residents of the proposed townhouse development would enjoy appropriate indoor sound levels throughout the year, including the warmer summer months.
- The covenant requires compliance with indoor sound level standards determined by Canada Mortgage and Housing Corporation, and the ASHRAE 55-2004 industry standard for thermal comfort.
- The covenant requires that a registered professional confirm compliance of the design and construction of the dwelling units. This will ensure that the engineering design will be incorporated in the construction of the proposed development.
- Specific measures are noted on the Development Permit drawings and Development Applications staff will coordinate with Building Approvals staff to ensure these features are included in the Building Permit drawings and constructed in the development.

Compliance with the City's Noise Regulation Bylaw

- A letter from Brown Strachan Associates, the project acoustic engineer, of February 22, 2011 is attached (**Appendix A**). In the letter, Aaron Peterson confirms that the project design complies with the City's noise regulations as outlined in the Public Health Protection Bylaw No. 6989, and also complies with the new proposed Noise Regulation Bylaw presented to General Purposes Committee on February 7, 2011.
- As briefly referred to in the Staff Report of December 22, 2010, a detailed acoustic report, prepared by Brown Strachan Associates Consulting Engineers in Acoustics, was submitted to the City and has been placed in the Development Permit application file. The report is titled “13251 No. 2 Road – Acoustical Evaluation,” is dated September 14, 2010 and is sealed by Professional Engineer David Brown. The report outlines in detail the approach to provide appropriate indoor sound levels with windows closed by incorporating specified acoustic attenuation construction measures. These measures include: glazing upgrades for bedrooms facing industrial property to south with 6-11-4 thermal glazing (glass-airspace-glass in mm); and drywall upgrades for corner bedrooms facing industrial property to south with two layers of interior drywall on exterior walls (excluding closets). In addition, acoustic attenuation will be provided through thermal glazing, exterior wall assembly, exterior doors & weather-stripping required by the BC Building Code.

- The engineered design is based on outdoor design site noise levels of 69 dBA (or 75 dBC), including 68 dBA for possible commercial/industrial (this takes into account current noise levels and allowable noise levels under City's current noise bylaw for potentially multiple industrial units). The engineering design is conservative, based on an outdoor design site noise level (69 dBA) that is higher than the maximum daytime sound level permitted under both the current Public Health Protection Bylaw No. 6989 (65 dBA) and the draft Noise Regulation Bylaw (60 dBA). This means that the townhouse units will be appropriately quiet inside even if the exterior noise level is at the maximum allowable noise level under the existing or proposed noise regulations.
- As noted above, the required restrictive covenant will ensure that this engineering design will be incorporated in the construction of the proposed development.

Resident Comfort During Summer

- A letter from Stantec Consulting Ltd., the project mechanical engineer, of February 22, 2011 is attached (**Appendix B**). In the letter, professional engineer, Phil Rempel, confirms that mechanical ventilation will be included in the design proposal, providing thermal comfort for the residents to meet ASHRAE 55-2004 comfort conditions, so that the proposed townhouse unit windows will not be required to be open in summer months. Mechanical ventilation is specified for bedrooms of suites facing the industrial property to the south in blocks 4 to 9 (inclusive), which equates to 26 of the 44 townhouse units.
- As briefly referred to in the Staff Report of December 22, 2010, a detailed mechanical report prepared by Stantec Consulting Ltd. was submitted to the City and has been placed in the Development Permit application file. The report is titled "12351 No. 2 Road Richmond – Mechanical Ventilation System and ASHRAE 55-204 Compliance Approach," is dated December 17, 2010 and is sealed by professional engineer, N.P. Rempel. The report outlines in detail the approach to provide summer thermal comfort inside the bedrooms with windows closed by creating an outdoor breeze condition. Each bedroom will be provided with a quiet exhaust fan (no more than 1.5 sone & sized for 1 air change/hr), dehumidistat controller and quiet ceiling fan (no more than 0.5 sone & sized for 0.5 m/s).
- As noted above, the required restrictive covenant will ensure that this engineering design will be incorporated in the construction of the proposed development.

Conclusions

The applicant has satisfactorily addressed the Panel's comments regarding acoustic and thermal comfort for residents of the proposed development. All other design considerations were addressed in the Staff Report of December 22, 2010, including conditions of adjacency, site planning and urban design, architectural form and character, tree management, landscape design, sustainability, floodplain management, servicing capacity, and community benefits. The applicant has presented a development that fits into the Trites Sub-Area through a development that incorporates quality design, and extends the pedestrian circulation routes envisioned in the Steveston Area Plan. On this basis, staff recommend support of this Development Permit application.

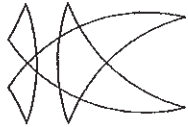


Sara Badyal, M. Arch, MCIP
Planner 2 (Urban Design)

SB:blg

See **Appendix C** for legal and development requirements prior to Development Permit approval.

- Appendix A Brown Strachan Associates letter dated February 22, 2011
- Appendix B Stantec Consulting Ltd. letter dated February 22, 2011
- Appendix C Development Permit Considerations
- Appendix D Staff Report dated December 22, 2010



Brown Strachan Associates
Consulting Engineers in Acoustics

PROJECT: F17.101

February 25, 2011

Interface Architecture Inc.
230 - 11590 Cambie Road
Richmond, BC V6X 3Z5

Attention: Mr. Ken Chow

Dear Mr. Ken Chow:

Re: 12351 No. 2 Road

Further to our acoustical report dated 14 September 2010, we confirm that the specified construction for 12351 No. 2 Road meets the City of Richmond design noise criteria, for both the existing and proposed Noise Bylaw requirements (appended).

The project is designed to meet Richmond's OCP interior sound level criteria (Section 9.3.14.A & B) based on the maximum exterior noise levels permitted under the existing City of Richmond Public Health Protection Bylaw No. 6989 (65/60 dBA, day/night).

For this area, the maximum exterior noise levels permitted under the proposed Noise Regulation Bylaw limit are 60/55 dBA (day/night). The proposed Bylaw also includes a 70/65 dBC exterior limit.

Our recommended design for this project meets Richmond's OCP interior noise level criteria for exterior levels up to 69 dBA and 75 dBC.

Please call if you have any questions.

Yours very truly,

BROWN STRACHAN ASSOCIATES

Aaron Peterson, B.A.Sc., EIT

AP/em/11Feb/Interface1.1et



- (f) the **sound** made by amplified music, whether pre-recorded or live, after 2:00 a.m. and before 8:00 a.m. on any day.

3.1.3 Security and Fire Alarms

3.1.3.1 A person must not cause, permit, or allow, a security or fire alarm:

- (a) to sound continuously or sporadically for a period of more than 2 hours; or
- (b) to continue to sound once the premises or **vehicle** is secure.

3.1.3.2 For the purposes of subsection 3.1.3.1, a person is deemed to have caused the **sound** even if the sounding of the alarm arose from malfunction of the said alarm.

3.1.3.3 In the event of a violation of subsection 3.1.3.1, an **inspector** may stop the alarm from sounding by:

- (a) in the case of a house alarm, entering onto the property, including entering into any buildings on the property, and disabling the alarm by whatever means possible; and,
- (b) in the case of a **vehicle** alarm, by having the alarm disconnected and towing the **vehicle**, at the owner's expense, to a secure storage yard.

3.1.3.4 Neither the **City**, any **City** employee, nor any persons authorized by the **City** to enforce Subdivision Three may be found liable for any action taken in good faith, pursuant to this section.

3.1.4 Separate Violations Under Parts 3.1 and 3.2

3.1.4.1 A person may be found to be in violation of Part 3.1, despite having satisfied the requirements of Part 3.2.

PART 3.2: MEASURABLE NOISE LIMITS

3.2.1 Non-Continuous Sound

3.2.1.1 A person must not make, cause, or permit to be made, a **non-continuous sound** exceeding **sound levels**:

- (a) of 80 dBA or more during the **daytime**, or
- (b) of 75 dBA or more during the **nighttime**,

when received at a point of reception in the **City**.

3.2.2 Continuous Sound

3.2.2.1 A person must not make, cause, or permit to be made, a **continuous sound** exceeding **sound levels**:

EXISTING
Bylaw No. 6989

9.

MAXIMUM VALUES -
USED FOR DESIGN

- (a) of 65 dBA or more during the **daytime**, or
- (b) of 60 dBA or more during the **nighttime**,

when received at a **point of reception** outside a quiet zone.

3.2.2.2 A person must not make, cause or permit to be made a **continuous sound** exceeding **sound levels**:

- (a) of 55 dBA or more during the **daytime**, or
- (b) of 45 dBA or more during the **nighttime**,

when received at a **point of reception** within a quiet zone.

3.2.2.3 For the purposes of subsection 3.2.2.2, a quiet zone includes:

- (a) those parcels of land in which the permitted uses, as specified in the **Zoning Bylaw**, are primarily residential;
- (b) those parcels of land located in:
 - (i) Assembly (ASY);
 - (ii) Health Care (HC); and
 - (iii) Marina (MA1)in the **Zoning Bylaw**;
- (c)
 - (i) the northerly one-half of Minoru Park; and
 - (ii) the School & Institutional Use (SI) in which the Kiwanis Senior Citizens Housing Society at 6251 Minoru Boulevard is located; and
- (d) any area governed by an existing Land Use Contract whose primary land use is:
 - (i) residential; or
 - (ii) such as is permitted in Assembly (ASY), Health Care(HC), or Marina (MA1) in the **Zoning Bylaw**.

3.2.3 Construction Noise

3.2.3.1 A person must not make, cause, or permit to be made, a sound level exceeding 80 dBA, resulting from **construction or construction equipment**:

- (a) during the **daytime** on weekdays and Saturdays; or
- (b) between the hours of 9:00 a.m. and 6:00 p.m. on Sundays and Statutory Holidays, when received at a **point of reception** in the **City**.

Schedule B

Summary of Permitted Sound Levels by Zone

		Sound Receiver Zone					
		Quiet		Intermediate		Activity	
		Day	Night	Day	Night	Day	Night
Sound Source Zone	Quiet	55 dBA, 70 dBC	45 dBA, 65 dBC outside, 55 dBC inside	55 dBA, 70 dBC	50 dBA, 65 dBC	60 dBA	60 dBA
	Inter-mediate	60 dBA, 70 dBC	50 dBA, 65 dBC	60 dBA, 70 dBC	55 dBA, 65 dBC outside, 55 dBC inside	65 dBA	65 dBA
	Activity	60 dBA	55 dBA	65 dBA	60 dBA	70 dBA	70 dBA



9.3.13 SECURITY

- a) Developments shall be designed to make all exterior public or semi-public spaces visible and defensible, so that residents can control their own surroundings;
- b) Fenestration in façades facing the internal roadways and open spaces should be carefully arranged to provide for internal unit privacy, yet convey a perception of "eyes on the street", enhancing safety and security for residents;
- c) Provide photo cell lights for all entries and garage doors to common parking structures and motion-detector lights for all areas hidden from view such as patio doors. Motion detectors should be mounted in a tamper-proof manner or in a vandal resistant location typically more than 3 m (9.8 ft.) above the adjacent floor or grade;
- d) Where structured parking is provided, gate tenant parking apart from that for visitors and consider incorporating gates on visitor parking areas;
- e) Pre-wire buildings for alarm systems and install phone jacks in all bedrooms. Consider incorporating TV monitors with multi-unit or individual unit enter-phones and "panic stations" in all residential units and shared parking areas.

9.3.14 ACOUSTICS

The intent is to minimize the impacts of aircraft noise and traffic noise to residential developments.

- a) Provide acoustic separation between dwelling units, particularly in family-oriented developments. Control sound transmission passively through unit design, e.g. avoid placing bedrooms of one unit adjoining the living room of the neighbouring unit; avoid hard-surfaced floor areas such as kitchens over bedrooms or other quiet rooms.

9.3.14.A Traffic Noise

- a) Traffic noise should be screened from residential units in order to maintain an acceptable ambient sound level of 35 dB for indoor spaces and 55 dB for outdoor private space;
- b) Where private outdoor space is adjacent to arterial roads, buildings should be set back 12m from the arterial, and other noise mitigating measures should be utilized, such as fencing, berming, and landscaping; OR provide special mitigation measures as determined by a registered professional trained in acoustics;

Interpreted to be criteria outlined in 9.3.14.B (appended), equivalent to CMHC design criteria in "Road and Rail Noise: Effects on Housing" (appended).



- c) Traffic noise for residential units facing major streets/arterials can also be mitigated by:
- Careful site layout;
 - Orienting private outdoor spaces away from noisy streets;
 - Orienting the front entry and public part of the dwelling toward the street and locating quiet rooms such as bedrooms away from the street;
 - Recessing balconies and facing them with solid balustrades;
 - Finishing soffits with material which absorbs or baffles sound waves;
 - Providing extra insulation for walls of buildings adjacent to traffic;
 - Triple-glazing windows to reduce noise infiltration;
 - Using enclosed balconies or sunrooms facing the street as a buffer between living areas and the traffic.

Bylaw 7794
2004/11/23

9.3.14.B Aircraft Noise

- a) All Development Permit applications in areas identified in the Aircraft Noise Sensitive Development Map (see Section 5.4 Noise Management) shall require evidence in the form of a report and recommendations prepared by a person trained in acoustics and current techniques of noise measurement, demonstrating that the noise level in those portions of the dwelling units listed below shall not exceed the noise level set out in the corresponding right-hand column. The noise level utilized is an A-weighted 24-hour equivalent (leq) sound level and will be defined simply as noise level in decibels;

Portions of Dwelling Units (Decibels)	Noise Levels
Bedrooms	35
Living, dining, recreation rooms	40
Kitchen, bathrooms, hallways, utility rooms	45

- b) Skylights are discouraged in homes located within the area identified in the Aircraft Noise Sensitive Development Map;
- c) In addition to the above, a trained professional is to assist in the design of the private patios and balconies to minimize the noise levels with recommendations for building material selection and space planning.

9.3.15 UNIVERSALLY ACCESSIBLE HOUSING UNITS

The intent is to ensure that all people, including persons with disabilities, have opportunities and choices for housing in residential developments.

- a) Universally accessible residential designed units are encouraged in all multiple-family residential development.



Stantec

Stantec Consulting Ltd.
500 - 34077 Gladys Avenue
Abbotsford BC V2S 2E8
Tel: (604) 855-7890
Fax: (604) 855-7891

Appendix B

February 22, 2011
File: 112521095

City of Richmond
Planning-Urban Design
6911 No. 3 Road
Richmond BC, V6Y 2C1
FAX: 604-276-4063

Attention: Sara Badyal, M.Arch, IA.AIBC, MCIP

Dear Madam:

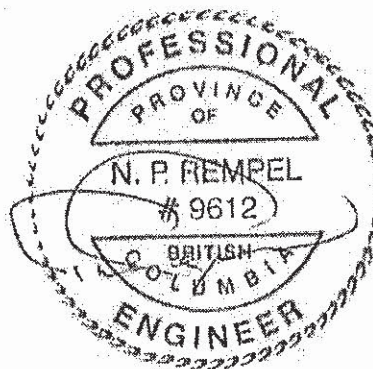
Reference: 12351 No. 2 Road, Richmond – Mechanical Ventilation and ASHRAE 55 Comfort Compliance

As requested, we confirm that the bedrooms of suites facing the industrial property to the south in blocks 4 to 9 (inclusive) will be provided with mechanical ventilation (individual exhaust fans) and the alternate approach to comfort conditions so that the rooms will meet ASHRAE 55-2004 comfort conditions without opening the windows in the summer months. A total of 26 of the 44 townhome units will be included. Please refer to our report of December 17, 2010, "Mechanical Ventilation System and ASHRAE 55-2004 Compliance Approach" for this address for reference to alternate approach methods.

Sincerely,

STANTEC CONSULTING LTD.

Phil Rempel, P.Eng
Principal
Tel: (604) 855-7890
Fax: (604) 855-7891



cc. Original- Westmark Development Group, #203-2631 Viking Way, Richmond, attn: Al Schmidt

Development Permit Considerations

12351 No. 2 Road ("the lands")

Prior to forwarding this application to Council for approval, the developer is required to complete the following:

- 2) Registration of an Industrial Noise Sensitive Use Restrictive Covenant on Title to ensure mitigation of industrial noise potential is incorporated into dwelling unit design and construction to achieve the following:

- a) indoor sound level criteria (with doors and windows closed):

Portion of Dwelling Unit	Maximum Noise Levels (decibels)
Bedrooms	35 dB
Living, dining, and recreation rooms	40 dB
Kitchen, bath, hallways, and utility rooms	45 dB

- b) indoor thermal comfort standard (with doors and windows closed throughout all seasons):
ASHRAE 55-2004 "Thermal Environmental Conditions for Human Occupancy"

- 3) Receipt of a Letter-of-Credit for landscaping in the amount of \$225,062.

Prior to future Building Permit* issuance, the developer is required to complete the following:

- Incorporation of accessibility measures in Building Permit drawings for two (2) convertible units in conformance with the Development Permit Plans.
- Incorporation of accessibility measures for aging in place in Building Permit drawings for all units in conformance with the Development Permit Plans.
- Submission of acoustic report, mechanical engineering report, and incorporation of identified noise attenuation construction measures to mitigate industrial noise potential from the neighbouring industrial sites.
- Submission of a construction traffic and parking management plan* to the satisfaction of the City's Transportation Division (<http://www.richmond.ca/services/ttp/special.htm>).
- The applicant is required to obtain a Building Permit* for any construction hoarding associated with the proposed development. If construction hoarding is required to temporarily occupy a street, or any part thereof, or occupy the air space above a street or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit.

Note:

- * This requires a separate application.
- Where the Director of Development deems appropriate, the preceding agreements are to be drawn not only as personal covenants of the property owner but also as covenants pursuant to Section 219 of the Land Title Act.
- All agreements to be registered in the Land Title Office shall have priority over all such liens, charges and encumbrances as is considered advisable by the Director of Development. All agreements to be registered in the Land Title Office shall, unless the Director of Development determines otherwise, be fully registered in the Land Title Office prior to enactment of the appropriate bylaw.
- The preceding agreements shall provide security to the City including indemnities, warranties, equitable/rent charges, letters of credit and withholding permits, as deemed necessary or advisable by the Director of Development. All agreements shall be in a form and content satisfactory to the Director of Development.

[Signed copy in file]

Signed

Date



City of Richmond
Planning and Development Department

Appendix D

Report to Development Permit Panel

To: Development Permit Panel
From: Brian J. Jackson, MCIP
Director of Development
Date: December 22, 2010
File: DP 08-432193
Re: Application by Interface Architecture Inc. for a Development Permit at
12351 No 2 Road

Staff Recommendation

That a Development Permit be issued which would:

1. Permit the construction of a 44-unit townhouse development at 12351 No. 2 Road on a site zoned "Town Housing (ZT48) - Trites Area (Steveston) and South McLennan (City Centre)".

Brian J. Jackson, MCIP
Director of Development

SB:blg
Att.

Staff Report

Origin

Interface Architecture Inc. has applied to the City of Richmond for permission to develop a 44-unit townhouse development at 12351 No. 2 Road on a site zoned "Town Housing (ZT48) - Trites Area (Steveston) and South McLennan (City Centre)". The site was formerly an industrial site.

The site is being rezoned for this project under Bylaw 8449 (RZ 08-414348) from "Light Industrial (IL)" to "Town Housing (ZT48) - Trites Area (Steveston) and South McLennan (City Centre)" (formerly "Comprehensive Development District (CD/126)").

A Servicing Agreement was secured as a requirement of rezoning for the design and construction of: road widening and frontage improvements along No. 2 Road, signalization warrant study for No. 2 Road and Moncton Street, which may lead to intersection improvements or contribution for future works, a 3 m public walkway along the south and west edges of the development site in a public rights-of-passage (PROP) right-of-way (ROW), and servicing pipe size upgrades to City requirements if needed.

The site was formerly used for industrial activities and as a result, required soil remediation. A copy of the Ministry of Environment Certificate of Compliance for the site has been received.

Development Information

Please refer to the attached Development Application Data Sheet (**Attachment 1**) for a comparison of the proposed development data with the relevant bylaw requirements.

Background

The site is located in the Trites Sub-Area (Steveston Area), which is in transition from industrial to residential (with discrete single-family, two-storey and three-storey townhouse areas). The Trites Sub-Area Land Use Map permits three-level townhouses on the subject site. The site is also subject to a 2.9 m GSC flood construction level. Development surrounding the site is as follows:

- To the north, is a 54-unit three-storey townhouse development at 12311 No. 2 Road (RZ 04-271083 & DP 05-290213), zoned "Town Housing (ZT48) - Trites Area (Steveston) and South McLennan (City Centre)";
- To the east, across No. 2 Road is farmland in the Agricultural Land Reserve (ALR), zoned "Agricultural District (AG1)";
- To the west, are two (2) industrial properties fronting onto Trites Road, zoned "Light Industrial (IL)". These properties are envisioned to be redeveloped through single-family subdivision in the future;
- To the south, is an active strata-titled industrial property at 12491 No. 2 Road, zoned "Light Industrial (IL)". This property is designated as interim industrial use and envisioned to become multi-family in the future; and

Rezoning and Public Hearing Results

During the rezoning process, staff identified the following design issues to be resolved at the Development Permit stage (design response included in '***bold italics***'):

- Architectural form and character – ***Improved through enhanced detailing, articulation and unit layout;***
- Review of units providing opportunities for conversion to accommodate a resident in a wheelchair and/or aging in place – ***Two (2) convertible units provided***

The Public Hearing for the rezoning of this site was held on January 19, 2009. At the Public Hearing, the following input was received (design response included in '***bold italics***'):

- An e-mail of support was received from a neighbouring resident; and
- Concern was expressed by a neighbour that the driveway shared by 12251 and 12311 No. 2 Road was proposed to be shared with the subject development, including truck traffic and safety concerns. ***[The design includes a driveway to No. 2 Road. Cross-access has been secured over 12251, 12311 and 12351 No. 2 Road for emergency vehicles only. Bollards will be installed at the emergency vehicle cross-access to restrict resident traffic from crossing over onto the neighbouring property].***

Staff Comments

The proposed scheme attached to this report has satisfactorily addressed the significant urban design issues and other staff comments identified as part of the review of the subject Development Permit application. In addition, it complies with the intent of the applicable sections of the Official Community Plan (OCP) and is in compliance with the Town Housing (ZT48) - Trites Area (Steveston) and South McLennan (City Centre).

Advisory Design Panel Comments

The Advisory Design Panel was supportive of the proposed development conditional to the applicant taking their comments into consideration. An annotated copy of the relevant excerpt from the Advisory Design Panel Minutes from December 17, 2008 is attached for reference (**Attachment 2**). The design response from the applicant has been included immediately following the specific Design Panel comments and is identified in '***bold italics***'.

Agricultural Advisory Committee Comments

Without a quorum, members of the Agricultural Advisory Committee reviewed the Agricultural Land Reserve (ALR) buffer scheme for the 6 m front yard setback along No. 2 Road, on February 17, 2009. Those members present confirmed that the proposed buffer met appropriate OCP guidelines based on the staff review of the buffer. The project was circulated to all Committee members by e-mail and no concerns or objections were expressed, nor did members feel that a formal (quorum) review of the proposal by the AAC was necessary.

Analysis

Conditions of Adjacency

- The proposed development includes an appropriate interface to No. 2 Road, enhanced and animated with pedestrian-oriented front entries and landscaped front yards with a mix of evergreen and deciduous tree planting.
- The neighbouring town house development to the north has a side yard along the shared property line. The proposed development presents an appropriate response to this interface with a mix of private yard space, passive side yard setback, and drive aisles. Screening is provided with 1.8 m height privacy wood fencing.
- The development presents an appropriate interface to the Agricultural Land Reserve located directly to the east, across No. 2 Road. This adjacency is addressed with the 6 m front yard setback along No. 2 Road planted as a landscape buffer, including a mix of trees, shrubs, and continuous evergreen hedging. A restrictive covenant to protect the landscape buffer was a requirement of the rezoning. As noted above, members of the Agricultural Advisory Committee reviewed the design and found it acceptable for the intended purpose.
- The development presents appropriate temporary interfaces to the industrial developments to the south and west through generous setbacks of 6.2 m and more along the south edge, and 8.2 m and more along the west edge. These generous setback areas include a 3 m wide pedestrian corridor right-of-way, landscaped yard space, outdoor amenity space and drive aisle area. A restrictive covenant to protect the landscape treatment and advise residents of the potential impacts of adjacent industrial activities was a requirement of the rezoning.
- Registration of an Industrial Noise Sensitive Use Restrictive Covenant is a requirement of the Development Permit to ensure appropriate indoor sound level is provided in the town houses. The covenant requires that a professional engineer confirm the design and construction of the dwelling units meets appropriate specified standards.

Urban Design and Site Planning

- The proposed development achieves a scale, design, circulation, public pedestrian path, and internal road layout that addresses and improves the pattern and circulation network of the neighbourhood.
- A 3 m wide right-of-way is provided along the south and west edges of the site (with corner cut) to accommodate a pedestrian corridor connecting No. 2 Road with Moncton Street through the existing development to the north. Townhouse unit pedestrian entries with gated yards present a frontage character along the pedestrian corridors for design and CPTED purposes. The development site is providing half the width of the pedestrian corridor network, which will be widened to a minimum of 6 m through future development to the south and west. Registration of a right-of-way and construction of a 1.5 m paved path through a Servicing Agreement were secured through the rezoning.
- The centrally located outdoor amenity space provides a sense of openness, and a variety of experience along both the internal streetscape and the proposed east-west public pedestrian corridor. The outdoor amenity space includes children's play equipment and opportunities to plant larger growing tree species.
- The townhouse expression along the streetscape defines the edge of the public road and provides interest to the public realm. The proposed pedestrian-oriented town house massing expression has predominantly three-storey building height and a mix of building orientation to provide site planning interest on the deep and relatively narrow single lot development. For the same reason, the internal street curves from the centre of the site to the south edge.

This also provides a variety of experiences along the south and west public path. The long public pedestrian corridor is given a sense of openness at its midpoint from No. 2 Road by pulling the developments outdoor amenity space and internal drive aisle to this edge.

- The proposed site layout includes 44 townhouses in nine (9) separate three-storey buildings. The two (2) end unit townhouses flanking the entry along No. 2 Road have pedestrian-oriented front entries and landscaped front yards facing the streetscape.
- Townhouse unit entries and vehicle garage entries are located on opposite ends of 32 of the 44 town houses, reinforcing the pedestrian orientation of the proposed development.
- Vehicular access is from No. 2 Road. A secondary emergency vehicle access was secured through the rezoning of the subject and neighbouring developments to the north. Emergency vehicle cross-access is provided to and from the neighbouring townhouse developments to the north through a drive aisle connection. Bollards located at the connecting point ensure against daily use of this link.
- Transportation infrastructure improvements were secured through the rezoning and provided through a required Servicing Agreement for works including:
 - No. 2 Road frontage improvements: Works include, but are not limited to, road widening, curb and gutter, new 1.5 m concrete sidewalk at the property line, creation of minimum 1.6 m wide grass boulevard with street trees (7 cm cal. Scarlet Oak), street lighting, and pre-ducting for hydro/telephone.
 - Public Path: Construct a new 1.5 m concrete walkway (in new 3 m PROP ROW) at the property line edge, sloping toward the project, with 1.5 m edge planted with grass and low slow growing hedging as shown in landscape plan. The path way is to be built by the developer and hard surface maintained in the future by the City.
 - Traffic signal warrant analysis: Which may lead to intersection improvements or contribution for future works.
- Off-street parking for residents and visitors complies with the Zoning Bylaw requirements, including accessible parking. Visitor parking is located throughout the site. Off-street parking is accessed from the internal drive aisles.
- A covered enclosure is provided for garbage and recycling collection adjacent to visitor parking and near the central outdoor amenity area.
- Mailboxes are provided in a kiosk structure at the entry to the outdoor play area.

Architectural Form and Character

- The three-level townhouse building massing is consistent with the Official Community Plan's Trites Sub-Area Land Use Map (Steveston Area Plan) and is an appropriate continuation of townhouse development along No. 2 Road. The simple building massing is articulated with: porches, projecting bays, roof dormer elements with gable treatment, and a mix of building materials.
- The 44 town houses are provided in nine (9) three-storey buildings ranging in size from four (4) to six (6) unit clusters.
- The two (2) end unit town houses along the No. 2 Road streetscape feature frontage character with pedestrian-oriented entries with open porches.
- The proposed building materials are generally consistent with the Official Community Plan (OCP) guidelines, including: Vinyl horizontal siding, Hardie Plank fibre cement horizontal siding, Hardie Shingle fibre cement wall shingles, board and batten with Hardie Panel fibre cement board, painted wood trim, and asphalt shingles.
- The colour palette includes a range of taupe siding, brown shingles, highlighted with white trim elements and muted brown blue and green entry doors for accent colour.

- The impact of blank garage doors has been mitigated with a mix of door types, panel pattern and transom windows, pedestrian entries, and small planting areas. Natural light is provided into each of the garages through transom windows in the garage door.
- Two (2) convertible units are provided, designed with conversion for universal accessibility in mind. Conversion would require installation of a vertical lift to provide access to each level of the three-storey units. The floor framing allows for easy removal of the floor area for the potential shaft opening. A slab depression is provided for a pit. This unit also includes a layout for a kitchen and both bathrooms that is appropriate for wheelchair manoeuvring.
- All units include aging in place features, such as handrails, lever handles, and blocking in washroom walls for future grab bar installation.

Tree Management

- As noted in the rezoning staff report, there were no existing trees on the property on this formerly industrial site.
- The landscape design includes the planting of 98 new trees throughout the site, including a mix of deciduous and Evergreen species.

Landscape Design and Open Space Design

- On-site outdoor amenity space is provided in a central location, contributing to the internal streetscape and providing a sense of openness for the adjacent new public path. The generous 340 m² amenity area exceeds the OCP requirements for size, location, visual surveillance and access.
- Children's play equipment is provided in a fenced portion of the outdoor amenity area. The play equipment includes a variety of activities in a climbing structure.
- The generous open area also provides the opportunity to plant two (2) larger growing Tulip trees.
- The landscape plan includes communal, and semi-private landscaped spaces. In addition to the new trees noted above, the landscape design includes a variety of shrubs, perennial, ground cover, grasses and lawn planting.
- Fencing will include open rail wood fencing surrounding the play equipment area, along the public path, and surrounding individual yards. Gates will be provided to the play area, individual yards, and a communal entry gate from the public path. 1.8 m height wood privacy fencing will be provided along the interior north property line.
- Paving treatment includes a variety of materials to: mark the internal drive aisle entry, identify the area where the drive aisle changes alignment, enhance the general area of the outdoor amenity space, improve the internal streetscape, increase site permeability, and differentiate between pedestrian and vehicle areas. Materials include asphalt, concrete, exposed aggregate concrete, and permeable pavers.

Sustainability

The project will incorporate the following sustainable measures:

- Brownfield compact intensified residential land redevelopment
- Proximity to public transportation (along Moncton Street and No. 2 Road)
- Bicycle storage in each townhouse unit, to encourage cycling
- Enhanced pedestrian realm, including new public path, to encourage walking
- Enhanced on-site permeability (40%) in the form of soft landscaping and permeable pavers
- Energy efficient low E glazing to improve envelope performance by reducing solar heat gain

- Energy efficient appliances
- Insulated hot water tanks and piping, to reduce heat loss and energy consumption
- Water efficient fixtures

Industrial Interface

- As discussed above, the subject site is adjacent to active industrial properties to the west and south that are envisioned to be redeveloped with residential uses in the future. Although the interface is seen as temporary, it is important to address the adjacency for the comfort of the future residents.
- As noted above, a restrictive covenant was secured through the rezoning to advise future residents of the potential impacts of adjacent industrial activities to the west and south and to prevent the removal of the landscape treatments along the west and south edges of the site.
- As noted above, registration of an Industrial Noise Sensitive Use Restrictive Covenant is a requirement of the Development Permit to ensure the following appropriate indoor sound levels determined by CMHC and industry standard thermal comfort levels are provided in the townhouse units. The covenant requires that a registered professional confirm compliance of the project design and construction of the dwelling units.
 - a) indoor sound level criteria (with doors and windows closed):

Portion of Dwelling Unit	Maximum Noise Levels (decibels)
Bedrooms	35 dB
Living, dining, and recreation rooms	40 dB
Kitchen, bath, hallways, and utility rooms	45 dB

- b) indoor thermal comfort standard (with doors and windows closed throughout all seasons):
ASHRAE 55-2004 "Thermal Environmental Conditions for Human Occupancy"

- Acoustic and mechanical ventilation reports, prepared by professional engineers, were submitted for the subject development. The reports identified the need for special noise insulating construction measures in bedrooms adjacent to the south and west property lines to provide acoustic and thermal comfort for residents. Accordingly, all of these bedrooms will feature upgraded windows, quiet ceiling fan, quiet exhaust fan, and dehumidistat controller. In addition, corner bedrooms will also feature upgraded exterior walls.
- The required Industrial Noise Sensitive Use Restrictive Covenant for the subject development proposal is an improvement over some older covenants. The proposed covenant will include specifications for acceptable indoor noise levels, thermal comfort in the summer months, and the requirement to have construction measures designed and reviewed by registered professionals. The acceptable indoor noise levels are set for the different areas of the residential units, with bedrooms as the quietest rooms. Thermal comfort is needed for the summer months when residents would open their windows and lose the benefit of noise insulating construction measures.

Floodplain Management

- The proposal complies with Flood Plain Designation and Protection Bylaw No. 8204. The Bylaw requires minimum flood construction level of 2.9 m (geodetic).
- Registration of a flood indemnity covenant was secured through the rezoning.

Servicing Capacity

As noted in the rezoning staff report, the applicant has submitted an engineering capacity analysis for the sanitary sewer capacity and no upgrades have been identified.

Community Benefits

As outlined in the rezoning staff report, the proposal includes the following community benefits which were secured through the rezoning:

- Registration of a public pedestrian corridor 3 m wide right-of-way along the south and west property line, which includes a 1.5 m wide paved path. The pedestrian corridor is to be built by the developer through a Servicing Agreement, and hard surfaces maintained in the future by the City.
- The provision of \$0.60 per buildable ft² (e.g., \$36,053) to the City's Public Art fund.
- The provision of \$2.00 per buildable ft² (e.g., \$120,176) towards the City's Affordable Housing Strategy.
- The provision of \$74,000 in-lieu of on-site indoor amenity space for the 44-unit townhouse development as per the Official Community Plan (OCP) and Council policy.

Conclusions

The applicant has satisfactorily addressed staff and the Advisory Design Panel's comments regarding conditions of adjacency, site planning and urban design, architectural form and character, and landscape design during the Development Permit review process. The proposal for multi-family townhouse development, frontage improvements, and the continuation of the Trites Sub-Area public path system support the vision for this area. Staff recommends support of this Development Permit application.



Sara Badyal, MCIP
Planner 1
(604-276-4282)

SB:blg

See **Attachment 3** for legal and development requirements prior to Development Permit approval.

- Attachment 1: Development application data sheet
- Attachment 2: Advisory Design Panel annotated minutes excerpt
- Attachment 3: Development Permit considerations



City of Richmond

6911 No. 3 Road
Richmond, BC V6Y 2C1
www.richmond.ca
604-276-4000

Development Application Data Sheet Development Applications Division

DP 08-432193

Attachment 1

Address: 12351 No 2 Road

Applicant: Interface Architecture Inc.

Owner: E. Mathers Holding Co Ltd

Planning Area(s): Trites Area (Steveston Area Plan)

	Existing	Proposed
Site Area:	8,090 m ²	Remains the same
Land Uses:	Formerly Industrial	Multi-Family Residential
OCP Designation:	ALR buffer along No. 2 Road	Complies
Area Plan Designation:	Three-Level Townhouses	Complies
Zoning:	Formerly LI	Currently ZT48
Number of Units:	Formerly 6 Industrial units	44 Townhouse units

	Bylaw Requirement	Proposed	Variance
Floor Area Ratio:	0.69	0.69	None permitted
Lot Coverage – Building:	Max. 46%	37%	None
Lot Size:	Min. 4,050 m ²	8,090 m ²	None
Setback – Public Road:	Min. 6 m	6.3 m	None
Setback – Side Yard:	Min. 3 m	3.1 m	None
Setback – Rear Yard:	Min. 3 m	8.2 m	None
Height (m):	Max. 12 m & three-storey	12 m & three-storey	None
Off-street Parking: Resident	66	86	None
Visitor	9	10	
(Accessible)	(2)	(2)	
Off-street Parking Spaces – Total:	75	96	None
Small Car Parking Spaces:	Max. 50%	13% (12 spaces in 12 units)	None
Tandem Parking Spaces:	Permitted	67% (64 spaces in 32 units)	None
Bicycle Parking: Resident	55	62	None
Visitor	9	9	
Amenity Space – Indoor:	Min. 70 m ²	Cash in lieu	None
Amenity Space – Outdoor:	Min. 264 m ²	340 m ²	None

**Annotated Excerpt from the Minutes from
Advisory Design Panel**

Wednesday, December 17, 2008 – 4:00 p.m.

APPLICANT: Interface Architecture
PROPERTY: 12351 No. 2 Road

Panel Discussion

Comments from the Panel were as follows:

- public walkway near the chain-link fence is a concern;
- minimal planting at the back of the units; consider planting large rhododendrons instead of dwarf varieties;
- small strips of lawn, for example east of the visitor parking area and south of unit C to the left of the visitor area, could be replaced with shrubs;
- consider a more effective location of the trellises in the amenity area;
- amenity area could be made better by adding step stone pavers to the seating area which could be used as a walkway throughout the year;
- width of C units is awkward for wood construction; very minimal walls on the second level of C units has structural integrity consequence;
- A units' structure is weak due to the location of stairs and lack of garage walls; walls of A units do not line up vertically; consider narrowing the plans and lining up the walls; structural consultant can provide advice on the matter;
- consider shrinking the unit width by at least a foot to achieve the same quantity of units and decreased building length; this would also allow better spatial separation to mitigate the long lanes of rowhouses;
- efforts made on the exterior and architectural vocabulary are appreciated;
- some of the blocks could be stepped in plan to mitigate the overall length which would benefit the overall development;
- variation or breaks in the paving patterns could provide relief to the linear length of the internal drive aisle streetscape;
- development could benefit from a third colour palette; can be introduced as a sub-scheme in the overall development;
- stepping buildings, using an additional colour scheme or different gable treatment may provide some relief from the long and linear development;
- A1 units are a good alternate choice for adaptable units; there is potential for vertical installation of a lift;
- the den-washroom arrangement in A1 units could also be made in the B units to improve their design and enhance their adaptability; den can also be used as a home office;
- stair lifts accommodate some people with disabilities; internal vertical lifts are economical and can accommodate more people;
- good response to the serious challenge posed by the tall industrial building adjacent to the west property line like providing adequate landscaped areas in the backyards and moving them to the north as far as possible to get more daylight;
- consider adding more texture and detail to the upper floors of the north, south and east elevations of the buildings to add visual interest as these faces of the buildings are visible from the development to the north and will be visible from future development to the south;

shingle treatment could be used in gable ends or a finish change in the indented areas; added visual interest would relieve length of building visible from the generous spaces between the buildings to the north;

- units fronting the walkway need some front facade treatment to create pedestrian interest and to make the path an attractive place to be;
- consider not using exactly the same garage door in all buildings; try two different garage door styles; faces that front on to the driveway are nicely done; any articulation that can be made to the driveway would benefit the development; and pushing trees out into the driveway as far as possible would make the space more appealing.

Panel Decision

It was moved and seconded

That DP 08-432193 move forward to the Development Permit Panel, taking into consideration the following comments of the Advisory Design Panel:

[Applicant design response added in '*bold italics*']

1. consider full size rhododendrons in the rear yards rather than the dwarf variety – *Incorporated;*
2. consider replacing small areas of lawns with shrubs – *Incorporated;*
3. consider use of trellis in the amenity area and whether it is in the most appropriate location and configuration – *Trellis relocated to bench in amenity area at the link to public path;*
4. consider adding more step stone pavers for a path to seating in the amenity area to provide year round access – *Incorporated;*
5. consider the seismic requirements of the unit designs to ensure both cost-effectiveness and stability – *Will incorporate through structural design;*
6. consider stepping the buildings that front onto the drive aisle – *Have added articulation and raised porches to façades;*
7. consider breaking up drive aisle length by adding paving strips – *Pavers added in consolidated areas to reinforce amenity area;*
8. consider three colour schemes – *Considered. Two colour schemes incorporated due to limited colour selection for materials;*
9. consider A1 units as alternative adaptable units – *Considered, but B layout preferred;*
10. consider using similar configuration of den and washroom in B units to A1 units – *Considered, but B layout preferred.*

CARRIED

Development Permit Considerations

12351 No. 2 Road ("the lands")

Prior to forwarding this application to Council for approval, the developer is required to complete the following:

- 2) Registration of an Industrial Noise Sensitive Use Restrictive Covenant on Title to ensure mitigation of industrial noise potential is incorporated into dwelling unit design and construction to achieve the following:

- a) indoor sound level criteria (with doors and windows closed):

Portion of Dwelling Unit	Maximum Noise Levels (decibels)
Bedrooms	35 dB
Living, dining, and recreation rooms	40 dB
Kitchen, bath, hallways, and utility rooms	45 dB

- b) indoor thermal comfort standard (with doors and windows closed throughout all seasons):
ASHRAE 55-2004 "Thermal Environmental Conditions for Human Occupancy"

- 3) Receipt of a Letter-of-Credit for landscaping in the amount of \$225,062.

Prior to future Building Permit* issuance, the developer is required to complete the following:

- Incorporation of accessibility measures in Building Permit drawings for two (2) convertible units in conformance with the Development Permit Plans.
- Incorporation of accessibility measures for aging in place in Building Permit drawings for all units in conformance with the Development Permit Plans.
- Submission of acoustic report, mechanical engineering report, and incorporation of identified noise attenuation construction measures to mitigate industrial noise potential from the neighbouring industrial sites.
- Submission of a construction traffic and parking management plan* to the satisfaction of the City's Transportation Division (<http://www.richmond.ca/services/tp/special.htm>).
- The applicant is required to obtain a Building Permit* for any construction hoarding associated with the proposed development. If construction hoarding is required to temporarily occupy a street, or any part thereof, or occupy the air space above a street or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit.

Note:

- * This requires a separate application.
- Where the Director of Development deems appropriate, the preceding agreements are to be drawn not only as personal covenants of the property owner but also as covenants pursuant to Section 219 of the Land Title Act.
- All agreements to be registered in the Land Title Office shall have priority over all such liens, charges and encumbrances as is considered advisable by the Director of Development. All agreements to be registered in the Land Title Office shall, unless the Director of Development determines otherwise, be fully registered in the Land Title Office prior to enactment of the appropriate bylaw.
- The preceding agreements shall provide security to the City including indemnities, warranties, equitable/rent charges, letters of credit and withholding permits, as deemed necessary or advisable by the Director of Development. All agreements shall be in a form and content satisfactory to the Director of Development.

[Signed copy in file]

Signed _____

Date _____



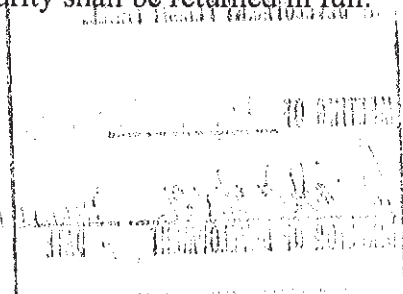
City of Richmond
Planning and Development Department

Development Permit

No. DP 08-432193

To the Holder: INTERFACE ARCHITECTURE INC.
Property Address: 12351 NO. 2 ROAD
Address: C/O MR. KEN CHOW
INTERFACE ARCHITECTURE INC.
#230 - 11590 CAMBIE ROAD
RICHMOND, BC V6X 3Z5

1. This Development Permit is issued subject to compliance with all of the Bylaws of the City applicable thereto, except as specifically varied or supplemented by this Permit.
2. This Development Permit applies to and only to those lands shown cross-hatched on the attached Schedule "A" and any and all buildings, structures and other development thereon.
3. Subject to Section 692 of the Local Government Act, R.S.B.C.: buildings and structures; off-street parking and loading facilities; roads and parking areas; and landscaping and screening shall be constructed generally in accordance with Plans #1 to #11 attached hereto.
4. Sanitary sewers, water, drainage, highways, street lighting, underground wiring, and sidewalks, shall be provided as required.
5. As a condition of the issuance of this Permit, the City is holding the security in the amount of \$225,062. to ensure that development is carried out in accordance with the terms and conditions of this Permit. Should any interest be earned upon the security, it shall accrue to the Holder if the security is returned. The condition of the posting of the security is that should the Holder fail to carry out the development hereby authorized, according to the terms and conditions of this Permit within the time provided, the City may use the security to carry out the work by its servants, agents or contractors, and any surplus shall be paid over to the Holder. Should the Holder carry out the development permitted by this permit within the time set out herein, the security shall be returned to the Holder. The City may retain the security for up to one year after inspection of the completed landscaping in order to ensure that plant material has survived.
6. If the Holder does not commence the construction permitted by this Permit within 24 months of the date of this Permit, this Permit shall lapse and the security shall be returned in full.



Development Permit

No. DP 08-432193

To the Holder: INTERFACE ARCHITECTURE INC.

Property Address: 12351 NO. 2 ROAD

Address: C/O MR. KEN CHOW
INTERFACE ARCHITECTURE INC.
#230 - 11590 CAMBIE ROAD
RICHMOND, BC V6X 3Z5

7. The land described herein shall be developed generally in accordance with the terms and conditions and provisions of this Permit and any plans and specifications attached to this Permit which shall form a part hereof.

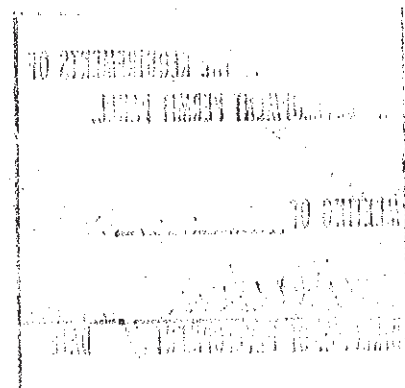
This Permit is not a Building Permit.

AUTHORIZING RESOLUTION NO.
DAY OF

ISSUED BY THE COUNCIL THE

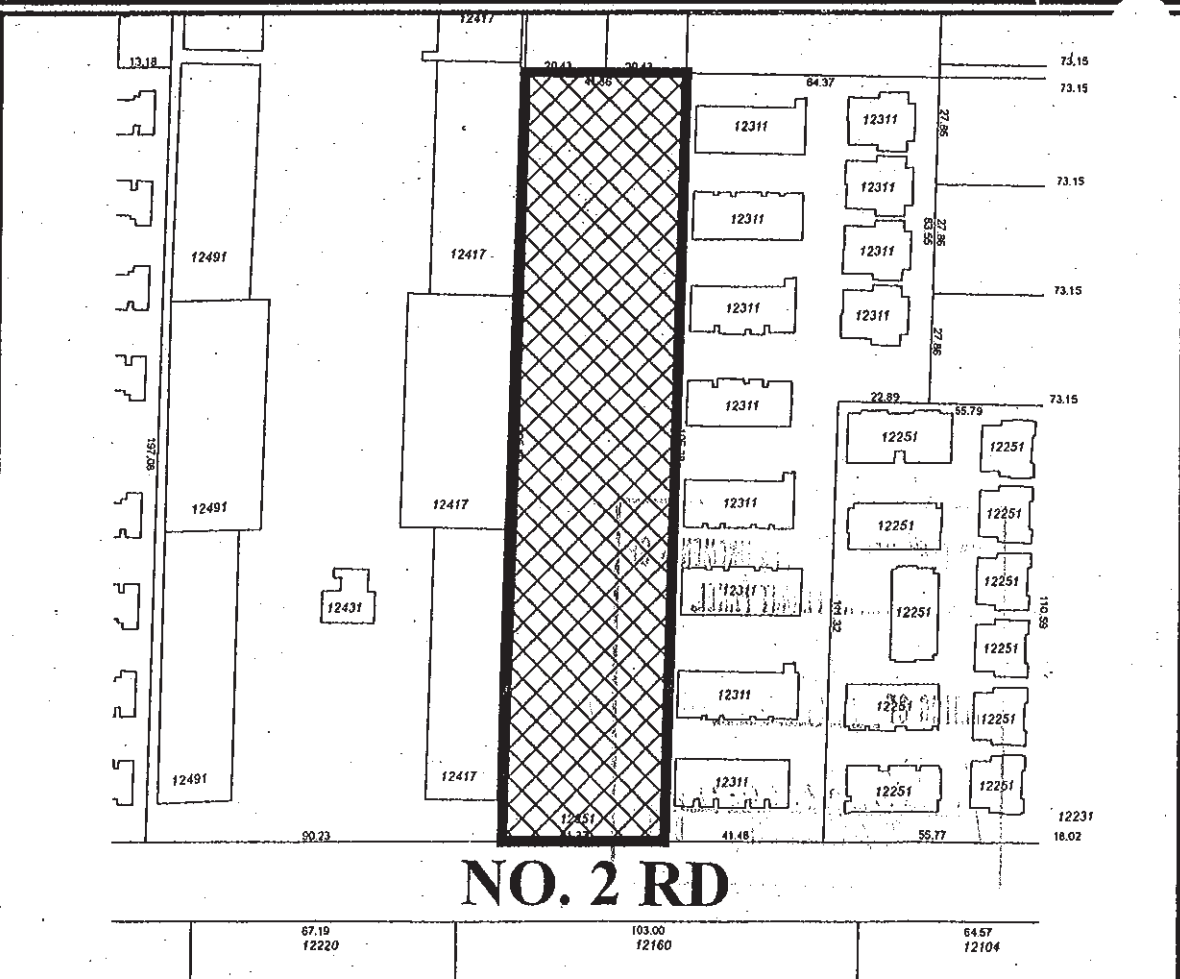
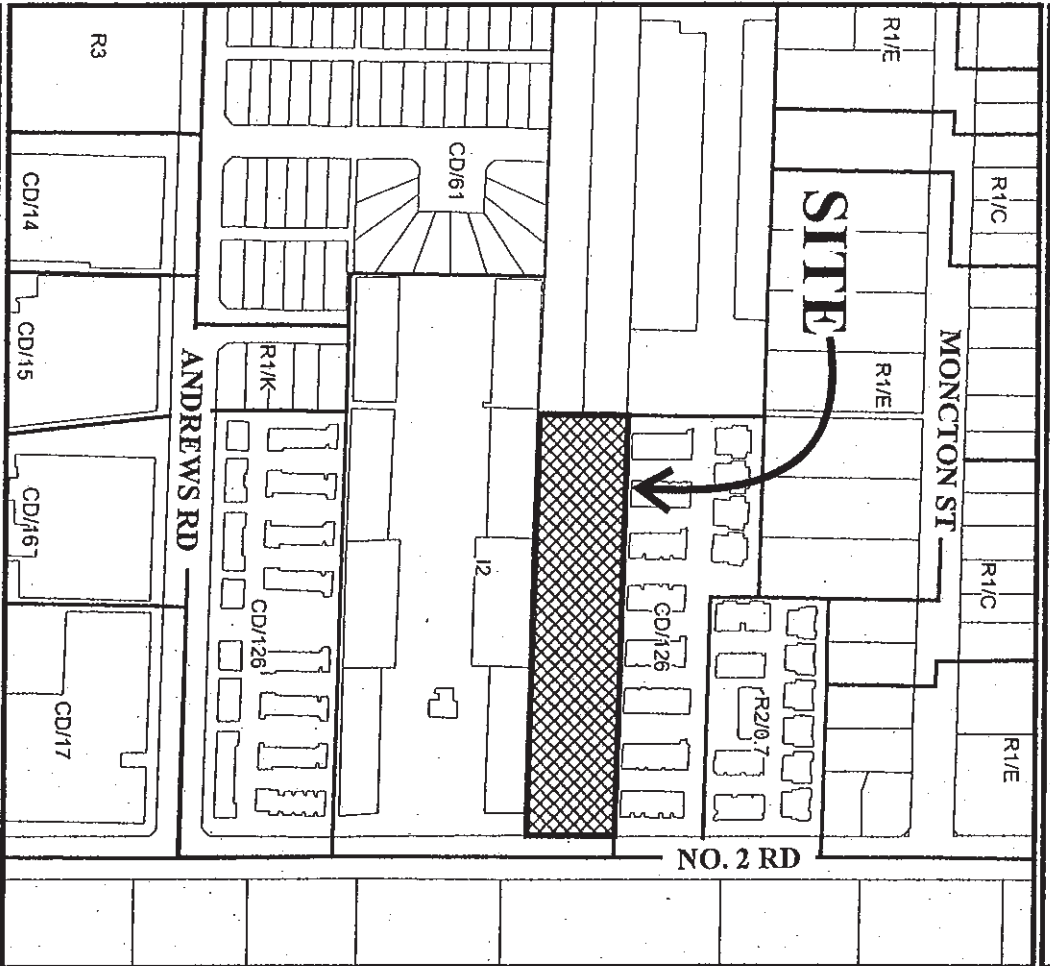
DELIVERED THIS DAY OF

MAYOR





City of Richmond

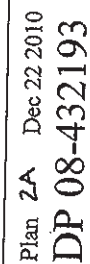


DP 08-432193
SCHEDULE "A"

Original Date: 08/06/08
Revision Date:
Note: Dimensions are in METRES

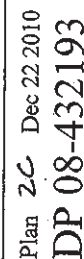
[illegible][illegible][illegible]

Development Permit: 44-unit Townhouse Development - 12351 No. 2 Road, R



A1.1

[illegible]

[illegible]

A32[illegible]

Suite 250
11100 Cumble Road
Richmond BC
Canada V6X 3Z5
E 604 821 1162
F 604 821 1165
www.infraredsearchlights.com

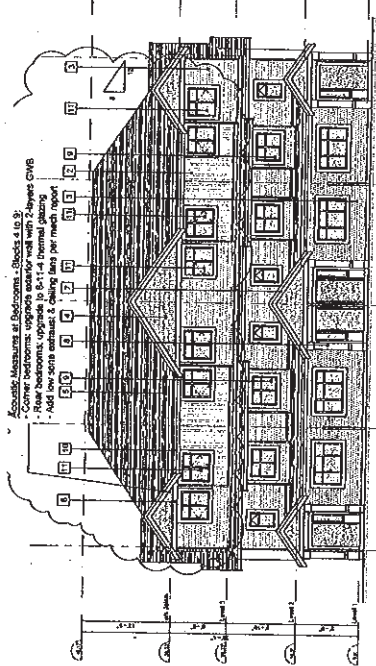
Plan 6 Dec 22 2010
DP 08-432193

PROJECT NO.	0601
SCALE	1/8" = 1'-0"
DATE	December 18, 2008
DESIGNED BY	NYC
CHECKED BY	NYC
SHEET TITLE	PLANS AND ELEVATIONS - BLOCK 8
ISSUING	A3.3

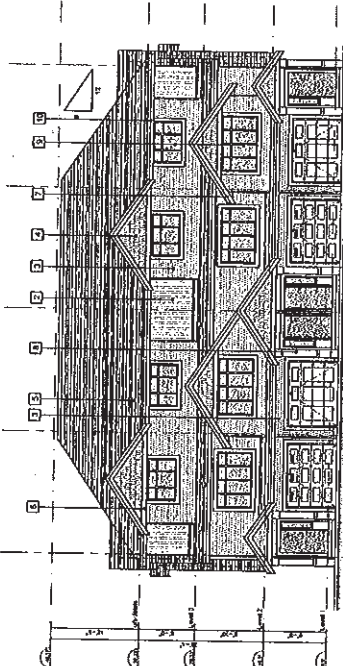
A3.3

EXTERIOR FINISHES

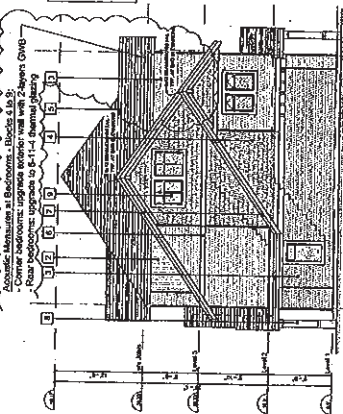
- [illegible]



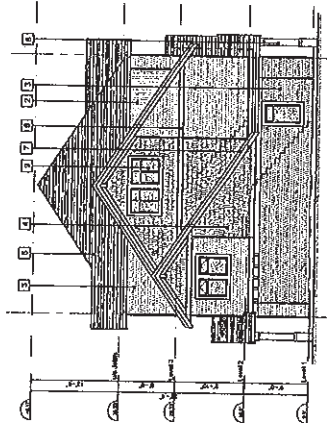
WALKWAY ELEVATION



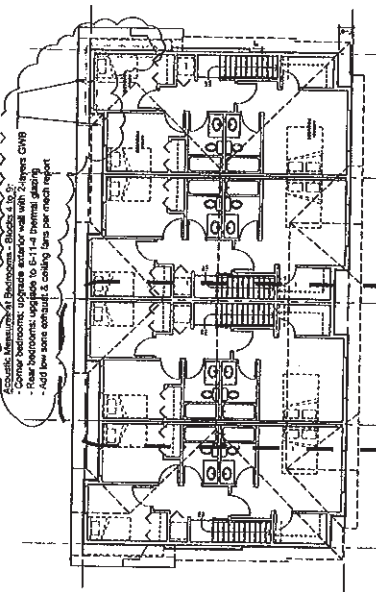
DRIVE AISLE ELEVATION



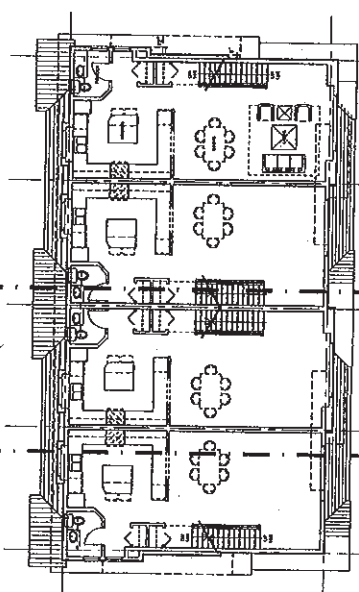
SIDE ELEVATION



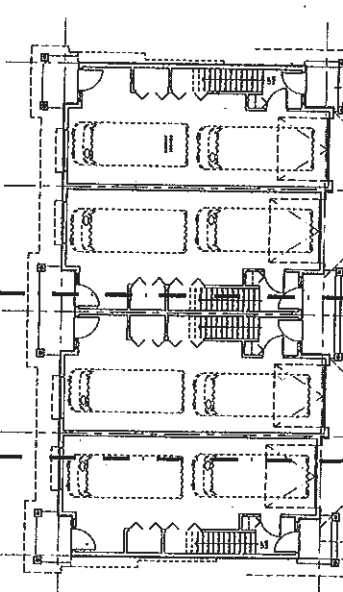
SIDE ELEVATION



LEVEL 3



LEVEL 2



—

TYP. UNIT B

REVISIONS	DATE	BY	DESCRIPTION
1	Jan 17, 2011	ASD	Initial Design
2	Jan 21, 2011	ASD	Client Meeting
3	Jan 28, 2011	ASD	Architect Meeting
4	Jan 27, 2011	ASD	Architect Meeting
5	Jan 27, 2011	ASD	Architect Meeting
6	Jan 27, 2011	ASD	Architect Meeting
7	Jan 27, 2011	ASD	Architect Meeting
8	Jan 27, 2011	ASD	Architect Meeting
9	Jan 27, 2011	ASD	Architect Meeting
10	Jan 27, 2011	ASD	Architect Meeting

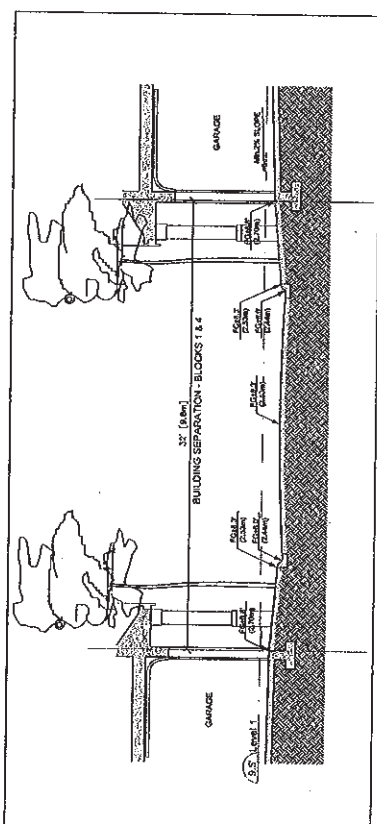
REVISIONS	DATE	BY	DESCRIPTION
1	Jan 17, 2011	ASD	Initial Design
2	Jan 21, 2011	ASD	Client Meeting
3	Jan 28, 2011	ASD	Architect Meeting
4	Jan 27, 2011	ASD	Architect Meeting
5	Jan 27, 2011	ASD	Architect Meeting
6	Jan 27, 2011	ASD	Architect Meeting
7	Jan 27, 2011	ASD	Architect Meeting
8	Jan 27, 2011	ASD	Architect Meeting
9	Jan 27, 2011	ASD	Architect Meeting
10	Jan 27, 2011	ASD	Architect Meeting

INTERFACE

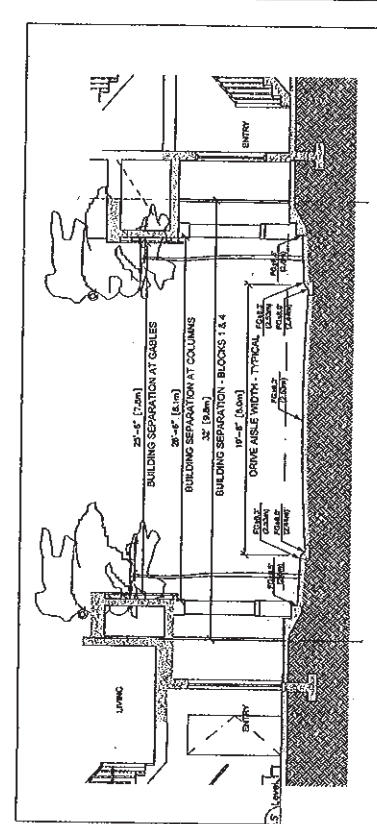
Plan 8 Jan 17 2011
DP 08-432193

REVISIONS	DATE	BY	DESCRIPTION
1	Jan 17, 2011	ASD	Initial Design
2	Jan 21, 2011	ASD	Client Meeting
3	Jan 28, 2011	ASD	Architect Meeting
4	Jan 27, 2011	ASD	Architect Meeting
5	Jan 27, 2011	ASD	Architect Meeting
6	Jan 27, 2011	ASD	Architect Meeting
7	Jan 27, 2011	ASD	Architect Meeting
8	Jan 27, 2011	ASD	Architect Meeting
9	Jan 27, 2011	ASD	Architect Meeting
10	Jan 27, 2011	ASD	Architect Meeting

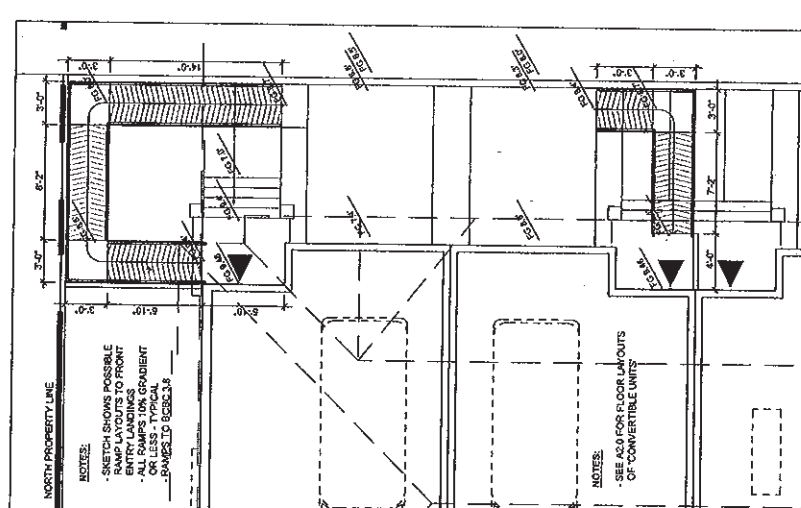
A5.1



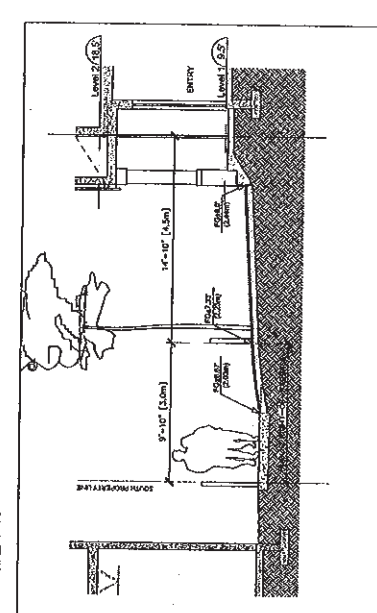
1. PARTIAL SITE SECTION 1
AT FRONTING GARAGES
SCALE: 1/8"=1'-0"



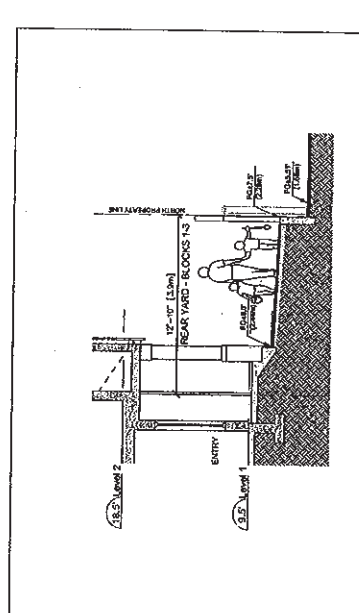
2. PARTIAL SITE SECTION 2
AT FRONTING ENTRIES
SCALE: 1/8"=1'-0"



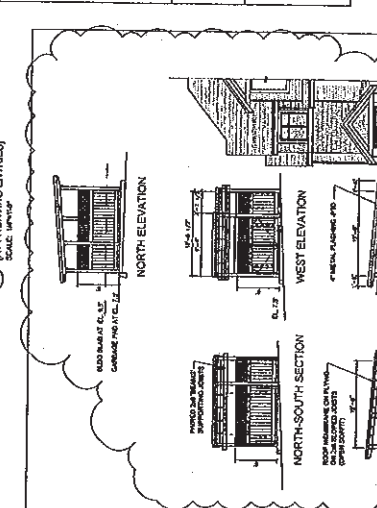
3. PARTIAL PLAN: CONVERTIBLE UNIT RAMP
NORTH 2 UNITS AT BLOCK 7
SCALE: 1/8"=1'-0"



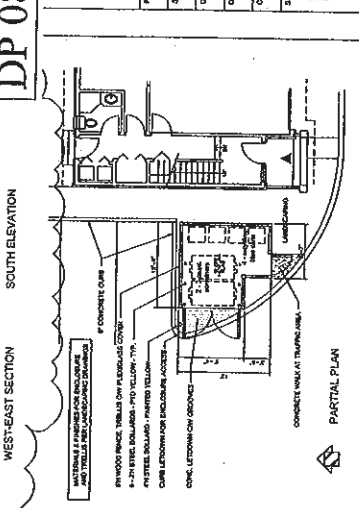
3. PARTIAL SITE SECTION 3
AT PEDESTRIAN WALKWAY
SCALE: 1/8"=1'-0"



4. PARTIAL SITE SECTION 4
AT NORTH REAR YARD
SCALE: 1/8"=1'-0"

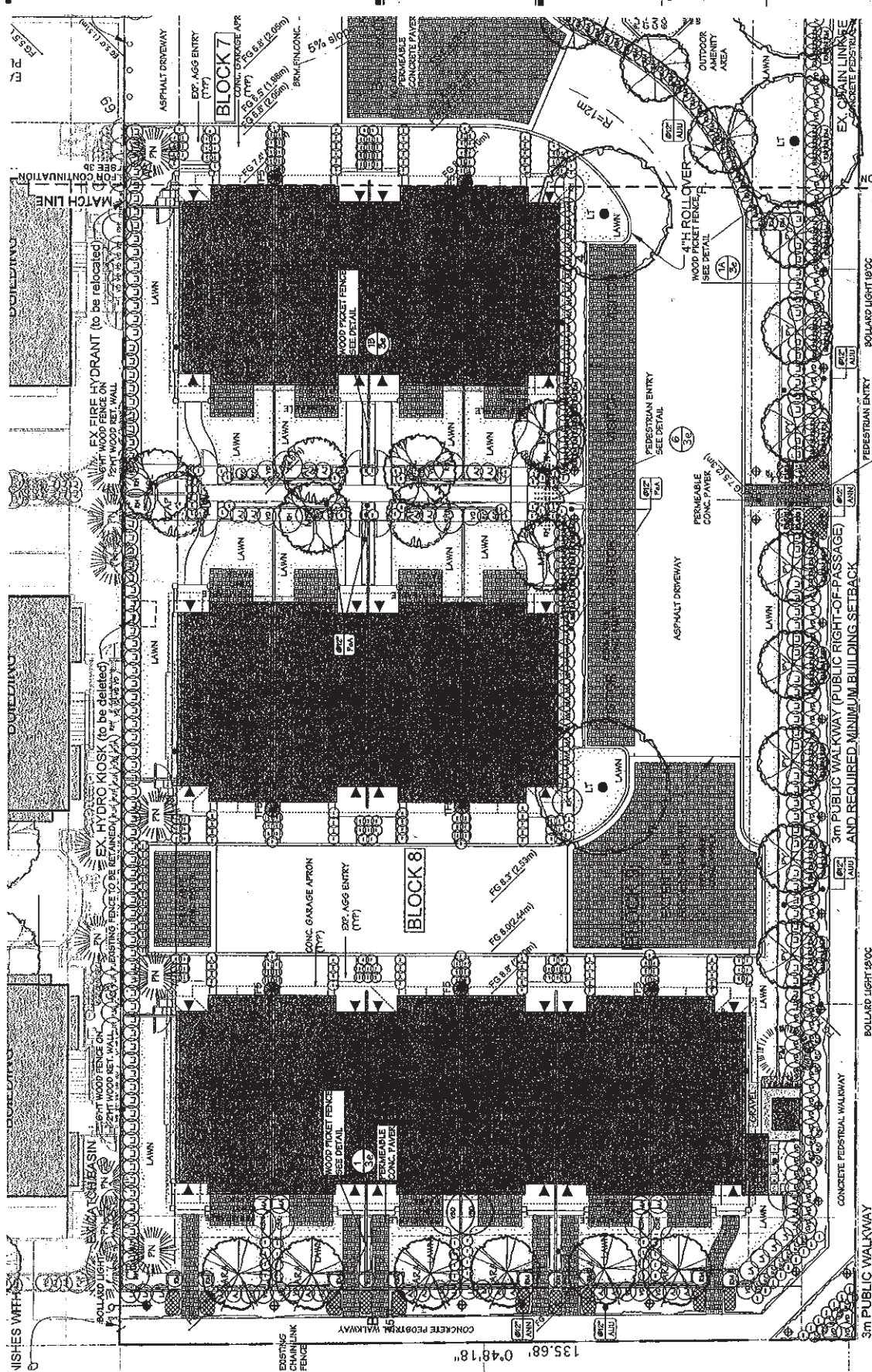


Plan 8 Jan 17 2011
DP 08-432193



5. PARTIAL PLAN: GARBAGE/RECYCLE ENCLOSURE DETAILS
AT MID-SITE LOCATION
SCALE: 1/8"=1'-0"

Plan 9 Apr 11 2011
DP 08-432193



135.68' 0'48.18"

Dec 19 2010
 12351 NO. 2 RD,
 RICHMOND B.C.
 ITO & ASSOCIATES
 LANDSCAPE ARCHITECTS
 1842 E. 5th Ave.
 Vancouver, BC V6M 1A2
 TEL: (604) 255-5009
 GMAIL: ITO@ITOARCH.COM



LANDSCAPE PLAN
 (WEST)

Plan 11C Dec 22 2010
 DP 08-432193

PLANT LIST

PROJECT ADDRESS 12351 HWY 2 RD, RICHMOND

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE
TREES				
ACC	2	ACER OBUSIATUM	YIN MAPLE	7.5m HT. BAB 3 STEMS MN
ACC	3	ACER PALMATICUM	JAPANESE MAPLE	2.0m HT. BAB
AP	24	ACER RUBRUM "ARMSTRONG"	ARMSTRONG MAPLE	8.0m CAL BAB 1.8m STD
AP	4	CORNUS KODIA "SATSUM"	PRINCE OF WALES DOGWOOD	5.0m CAL BAB STD
CL	0	CRATAEGUS MONSIEUR	THORN CHERRY	2.0m HT. BAB STD
CL	4	LIRIODENDRON TULIPIFERA	TULIP TREE	10.0m CAL BAB 1.8m STD
MSL	5	MAGNOLIA SOULANGIANA "RUSTIC DUBRA"	PURPLE SAUCER MAGNOLIA	2.0m HT. BAB
MSL	1	PRUNUS PRINCE	AUSTRIAN PRINCE	3.0m HT. BAB
POT	1	PRUNUS SEROTINA	AMERICAN PRUNE	3.0m HT. BAB
PY	4	PRUNUS SEROTINA "TAWANOK"	FLOWERING CHERRY	11.0m CAL BAB 1.8m STD
PY	11	PRUNUS YEDOENSIS "YAMONAI"	DAIYABAKU CHERRY	11.0m CAL BAB 1.8m STD
TS	1	QUERCUS CECILIA	SCARLET OAK	8.0m CAL BAB
TS	4	QUERCUS DOUGLASSII	PRINCETON OAK	8.0m CAL BAB
TS	22	THALIA OCCIDENTALIS "FASCICATA"	FRAGRANT CEDAR	1.50m HT. CL 1.1m STD
TS	11	THALIA OCCIDENTALIS "SASAGAO"	EMERALD CEDAR	1.25m HT.
TS	49	THALIA OCCIDENTALIS "SASAGAO"	EMERALD CEDAR	1.5m HT.
SHRUBS				
AA	4	AMELANCHIER ALNICOHA	SAXATON BERRY	#3 POT
AA	62	AZALEA JAPONICA **	JAPANESE AZALEA	#2 POT
BA	20	BUXUS SEMPERVIRENS	COMMON DOGWOOD	#3 POT
BA	20	BUXUS SEMPERVIRENS	COMMON DOGWOOD	#3 POT
CA	83	ERICA GALEA	WINTER HEATHER	#2 POT
LA	1	LEUCOTHEME ANGLICA	COAST LEODITH	#2 POT
LA	236	LOUSTREUM JAPONICUM "TEANUM"	JAPANESE PRIVET	#3 POT
LA	29	PHODODENDRON **	RHODODENDRON	1.00m HT.
RN	7	RIESES SANDERLIN	RED FLOWERING CURRENT	#3 POT
RN	292	ROSA MOSSIE	MOSS ROSE	#2 POT
RD	4	ROSA MOSSIE "KANSAS"	MOSS ROSE	#2 POT
VB	59	VERBENA DAVENI	DAVEY'S VERBENA	#2 POT
VRB	28	VERBENA X BODIANTESE "DAVY"	DAVY VERBENA	2.00m HT.
GROUND COVERS				
AU	1860	ACTINOTROPIS UVA URSI	KINRINNOCK	#593 POT
PA	1860	PERILLA FRUTICOSA	PERILLA FRUIT	#593 POT
PA	165	PISCARIA AFFINS	Fence Power	#593 POT
VINES				
CR	4	CAMPIS RADICANS	TRAMPET VINE	#1 POT STAKED
PERENNIALS/ANNUALS/FERNS/GRASSES/AQUATIC PLANTS				
CAH	16	CAREX MORROWII "AUREO-VAREGATA"	CAREX	#1 POT
CAH	16	CAREX MORROWII "AUREO-VAREGATA"	CAREX	#1 POT
HA	289	HELIOTROPION SEMPERVIRENS	BLUE CAT GRASS	#1 POT
HA	289	HELIOTROPION SEMPERVIRENS	BLUE CAT GRASS	#1 POT
LVA	289	LAVALANDIA ANGSTFOLIA	ENGLISH LAVENDER	#1 POT
PJA	19	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#593 POT
PJA	620	ANNUALS **		

NOTES

*** DENOTES SPECIES AND VARIETY TO BE APPROVED BY THE LANDSCAPE ARCHITECT. ALL MATERIALS AND EXECUTION SHALL BE IN ACCORDANCE TO THE MOST RECENT EDITION CALIFORNIA LANDSCAPE STANDARDS.

PLANTS IN THIS PLANT LIST ARE SPECIFIED ACCORDING TO THE CITY STANDARDS FOR NURSERY STOCK AND THE IRLA STANDARDS FOR CONTAINER GROWN PLANTS.

ALL PLANT QUANTITIES DESCRIBED BETWEEN PLANT AND PLANT LIST SHALL BE REFERENCED TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO SUBMITTING BIDS.

ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR ONE FULL YEAR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE LANDSCAPE. THE CONTRACTOR SHALL COMPLETED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.

THE CONTRACTOR SHALL MAINTAIN ACCORDANCE TO THE LANDSCAPE STANDARDS UNTIL THE WORK IS TURNED OVER TO THE OWNER.

Dec. 17, 2010: The bridge collapsed within 100 ft. of the pier. The bridge was damaged for 100 ft. of the pier.



LANDSCAPE ASSOCIATES
Landscape Architects
942 E 5th Ave.
Vancouver, BC V5N 1
Tel: (604) 255 5009

References:

12351 NO.2 RD.
RICHMOND B.C.

Journal of Management Education

PLANT LIST

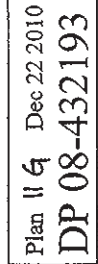
- CONE BASE
CONSULT WITH
STRUCTURAL ENGINEER
FOR A STEEL BEAM.



MW

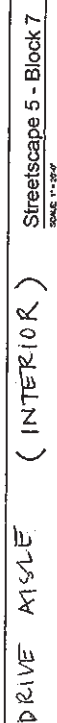
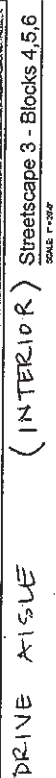
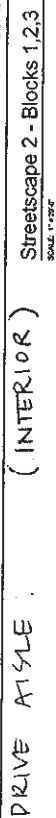
LIGHTING LEGEND

△ FLOOD LIGHT : HADCO B3 or EQ,
□ WALL MOUNT LIGHT: HADCO B177 or EQ,
✦ BOLLARD LIGHT : HADCO RL72 or EQ.



- ☒ FLOOD LIGHT : HADCO S3 or EQ.
- ☐ WALL MOUNT LIGHT: HADCO S171 or EQ.
- ☒ BOLLARD LIGHT : HADCO RL72 or EQ.

REVIEWS	<p>Oct 18, 2016 Approved: [Signature] Approved: [Signature]</p> <p>Jan 17, 2017 Approved: [Signature] Approved: [Signature]</p> <p>Jan 17, 2017 Approved: [Signature] Approved: [Signature]</p> <p>April 4, 2017 Approved: [Signature] Approved: [Signature]</p> <p>Jan 17, 2018 Approved: [Signature] Approved: [Signature]</p> <p>Apr 11, 2018 Approved: [Signature] Approved: [Signature]</p> <p>CONTRACT VALUE</p>	<p>INTERFAC[®]</p> <p>11000 72nd Avenue Road Richmond BC V6V 1K5 Tel 604 271 1145 Fax 604 271 1145 www.interfaceproduction.com</p> <p>PRODUCT</p> <p>Proposed 44-1474 Townhouse Development</p> <p>Plan Dec 22 2016 8-43219</p> <p>December 18, 2016</p> <p>2016/12/18</p> <p>CHD/MT BY</p> <p>CHD/MT BY</p> <p>SHEET TITLE</p> <p>STREETSCAPES</p> <p>DRAWING</p> <p>A8.0</p>
---------	--	---



Reference Plan Dec 22 2010
DP 08-432193

A8.0

