



SCHEDULE 9 TO THE MINUTES  
OF THE REGULAR MEETING OF  
COUNCIL FOR PUBLIC  
HEARINGS HELD ON  
WEDNESDAY, SEPTEMBER 9,  
2009.

**City of Richmond**  
Planning and Development Department

<b>To Public Hearing</b>
Date: <u>Sept 9, 2009</u>
Item # <u>11</u>
Re: <u>Bylaws 8516 +</u> <u>8517</u>

**Memorandum**

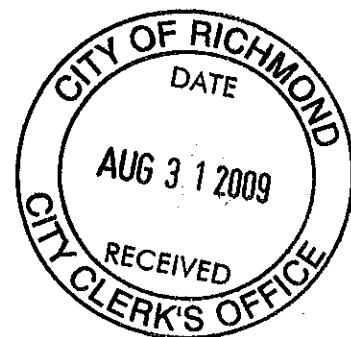
**To:** Mayor and Council  
**From:** Sara Badyal, MCIP  
Acting Planner 2 (Urban Design)  
**Date:** August 31, 2009  
**File:** 08-4430-20-AMANDA  
#/2009-Vol 01  
**Re:** **Supplementary Assessment of Sustainability Features for RZ 07-402059**

During the July 21, 2009 Planning Committee meeting, members of the Planning Committee commented that more sustainability features should be included in the development as well as in other developments in the City.

Attached is a response from the Architect for the application by Minglian Holdings Ltd. for rezoning at 7500 Alderbridge Way to permit a 12-storey building consisting of approximately 97 dwelling units, including 6 affordable housing units, 4 live/work units, and structured parking.

Sara Badyal, MCIP  
Acting Planner 2 (Urban Design)

sb:sb



# W.T LEUNG ARCHITECTS INC.

Suite 300 973 West Broadway, Vancouver, British Columbia V5Z 1K3 Tel. 604 736 9711 Fax. 604 736 7991

18 August 2009

**Project:** 7500 Alderbridge Way DP 07-402062

**Re:** Response to Planning Committee 21 July 09

## **Geothermal Heating /Cooling:**

The applicant is exploring other means of implementing an energy efficient heating system utilizing heat reclamation from transformer room and common area ventilation systems. Also a rough in for future connection to a district energy system is planned

The development team has considered geothermal heating for this project and has come to the conclusion that it is not feasible for this specific project for the following reasons:

The site area available for the borehole field is extremely limited. In order to achieve a necessary minimum number of boreholes the field would need to be placed under the building making it impossible to maintain / replace failing loops.

In the coastal climate mostly heating and very little cooling would be achieved by the geothermal system which relies on an equal heating / cooling load to avoid freezing / heating of the ground around the boreholes. This imbalance has been a problem in the past making it necessary to pump supplemental heat into the ground during summertime in order to keep the system efficient in winter.

Due to the restricted size of the geothermal system the initial cost for construction are very high compared to potential savings in monthly energy bills. Under current market conditions it is questionable whether potential buyers are willing to pay this premium.

## **Sustainable strategies:**

**The below list is structured according to Leed Canada "Green Building Rating System". Although the building will not be Leed's accredited below listed measures are comparable to a Leed silver building.**

### **Sustainable Sites**

The proposed development creates a unique streetscape at the pedestrian level along Alderbridge Way and Elmbridge Way. Wide sidewalks and an urban plaza at the corner of both streets in conjunction with live/work units at grade encourage pedestrian traffic. The arcade along Elmbridge Way and deep canopies along Alderbridge Way ensure that yearlong use is possible. Pedestrian friendly developments together with a growing rapid transit network will encourage residents to use alternative transportation and will result in a lively and healthy neighbourhood.

The proposed development features green roofs and planters above the parking structure as well as "living walls" (approximately 44 % of the site area) diverting the storm water run off from the storm sewer system and also reduce the urban heat island effect.

Specifically designed community gardens on the podium for the residents of the building also promote an active and sustainable lifestyle.

### **Water Efficiency**

Fresh water consumption will be reduced by specifying low flow fixtures and water efficient appliances such as but not limited to

- Dual-flush toilets.
- Low-flow faucets and showerheads.
- Front-loading washers.
- Water efficient dishwashers.
- Planting on the green roofs will consist of native drought resistant plants reducing irrigation needs to a minimum.
- Where necessary a low emitting irrigation system will be installed.

#### Energy and Atmosphere

An overall optimized energy performance of the building is achieved by:

- Considered design of facades according to their orientation. The west facade is heavily shaded by the screen structure, which also accommodates the balconies. On the south facade recessed balconies and architectural fins also provide shading minimizing heat gain.
- Low-e glazing reduces heat gain.
- High insulation value at all exterior walls.
- Motion sensors and timers in public areas.
- An "all off" switch is considered for each unit.
- Efficient fixed lights (fluorescent tubes, compact fluorescent light bulbs or LED)
- Efficient fans and heating equipment as well as increased occupant control (heating zones within the unit).
- Heat recovery systems to supplement hot water boiler.
- Light coloured roofing material to reduce heat gain.

#### Material and Resources

- Demolition / Construction waste management will be implemented to divert waste from landfills. Comprehensive recycling program for construction site including education, signage and bins.
- Products made out of recycled material or with recycled content will be used where applicable.
- Concrete with fly ash content will be specified where possible.
- Locally / regionally harvested and manufactured products will be preferred throughout the project.

#### Indoor Environmental Quality

- Low VOC emitting materials as sealants, adhesives, paints, carpets and composite wood will be used where applicable.
- Well placed operable windows especially in the larger units will contribute to the quality of the indoor environment.
- Positive pressurization of all lobbies and hallways will keep common areas smoke and odour free treating each unit as a contained smoking room.