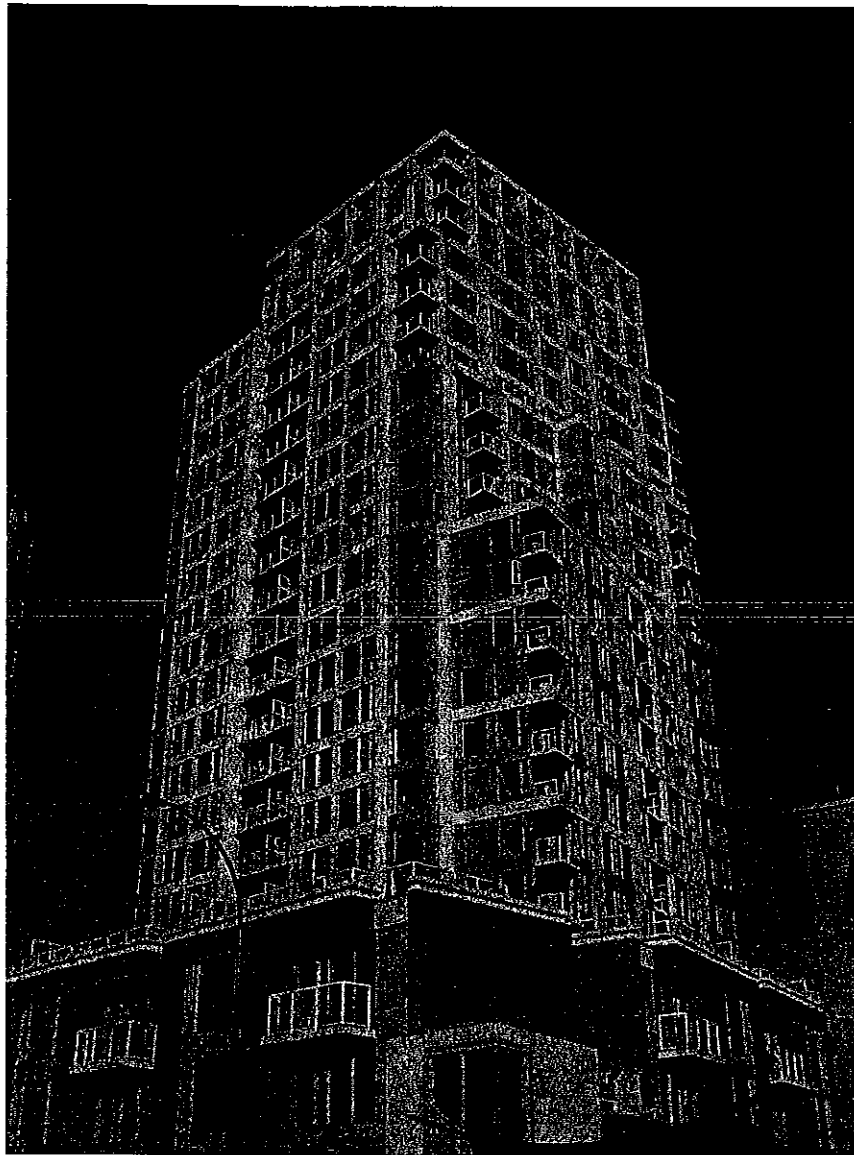


# Building Enclosure Warranty Review

The Taylor, 550 Taylor Street, Vancouver, BC



CLIENT The Owners, Strata Plan BCS 1559  
c/o Ms. Sherry McCuaig  
The Wynford Group  
815-1200 West 73rd Ave.  
Vancouver, BC V6P 6G5  
Canada

SUBMITTED BY RDH Building Engineering Ltd.  
224 West 8<sup>th</sup> Avenue  
Vancouver, BC V5Y 1N5  
Canada

REPORT 2688.00

DATE May 7, 2007

Draft

## Table of Contents

1.	Introduction .....	1
1.1.	Terms of Reference .....	1
1.2.	Scope of Services .....	1
1.3.	Report Organization .....	1
1.4.	Documents Provided .....	1
1.5.	Building Description .....	2
1.6.	Owner/Occupant Survey Review .....	2
2.	Observations .....	4
2.1.	Exterior Walls .....	4
2.2.	Exterior Wall Penetrations .....	8
2.3.	Balconies .....	10
2.4.	Roofs and Decks .....	11
2.5.	At-Grade and Below-Grade Assemblies .....	12
3.	Summary of Observations .....	15

Appendix A – Owner/Occupant Questionnaires

# 1. Introduction

## 1.1. Terms of Reference

RDH Building Engineering Ltd. (RDH) was retained by the Owners, Strata Plan BCS 1559, to undertake a warranty review of the building enclosure at The Taylor, 550 Taylor Street, Vancouver, BC. The review was performed in general conformance with our proposal dated February 21, 2006, and authorized November 30, 2006.

## 1.2. Scope of Services

The purpose of this building enclosure review was to assess the current condition of building enclosure assemblies and components, which typically include the exterior walls, windows, doors, decks, balconies, roofs, and parking garage. Particularly, we focused on identifying defects that may be covered in the building's third-party home warranty insurance.

Minimum standards of home warranty insurance are:

- twelve months of coverage for defects in labour and materials supplied for non-common property in strata units
- fifteen months of coverage for defects in labour and materials supplied for common property in strata buildings
- two years of coverage for defects in labour and materials supplied for major systems (e.g. building enclosure, electrical, plumbing, heating, ventilation, air conditioning)
- five years of coverage for defects in the building enclosure, including defects that permit unintended water penetration such that material damage has resulted or is likely to result
- ten years of coverage for defects in labour and materials related to the building structure.

Please note the following regarding this report:

- The report was prepared to approximately coincide with the end of the fifteen month of labour and materials warranty. We recommend that building enclosure assessments be conducted prior to expiry of the two and five year warranties as well.
- The report only includes building enclosure issues. Defects that are not building enclosure related remain the responsibility of the Strata to report. Specific remedial actions required to correct defects are not within the scope of the report.

→ The report is an assessment of current conditions, within the terms of reference and limitations outlined in our proposal. Our assessment is based solely on a visual sampling of select areas; no comprehensive review or intrusive testing was conducted. Also, no comprehensive review of the architectural drawings and details, or confirmation of the design to as-built conditions, was conducted.

→ The report is not intended to provide our opinions regarding the actions or services provided by individuals or organizations which may have contributed, or caused, the observed conditions.

We do not distinguish whether defects are covered by warranty. If the Strata wish to pursue a warranty claim, we can provide technical assistance during the claim process.

## Report Organization

Section 2 of this report is organized into the five main building enclosure assemblies:

- Exterior Walls
- Exterior Wall Penetrations
- Balconies
- Decks and Roofs
- At-Grade and Below-Grade Assemblies.

Each building enclosure assembly is described. Defects are listed, including their significance and general actions that should be taken. Photographs are included where appropriate.

Section 3 of this report includes a summary of Section 2 in table format.

## 1.4. Documents Provided

The documents provided to RDH to assist in our review are listed in Table 1.4.1 below.

Table 1.4.1 - Documents Provided	
DOCUMENT DESCRIPTION	
Architectural Drawings	By: Hancock Bruckner Eng + Wright Drawings: A0.0, A1.1, A2.1 to A2.3, A3.1 to A3.11, A4.1 to 4.6, A5.1 to A5.2, A6.1 to A6.5, A7.1 to A7.8. Latest Date: March 30, 2004
Architectural Details Door & Frame Schedule Room Finish Schedule	By: Hancock Bruckner Eng + Wright Issued for Construction Latest Date: March 19, 2004
Mechanical Drawings	By: SRC Engineering Consultants Drawings: Plumbing, In-slab Ducts Latest Date: January 5, 2004
Electrical Drawings	By: SRC Engineering Consultants Latest Date: February 5, 2004

## 1.5. Building Description

A description of the building is provided in Table 1.5.1.

Table 1.5.1 - Description of Building	
DESCRIPTION	
Name	The Taylor
Address	550 Taylor Street, Vancouver
Date of Construction	2005 (estimated completion)
Number of suites	251 residential suites
Building code classification	Part 3
Building envelope requirements	Part 5
Number of storeys	27-storey high-rise and 3-storey townhouses over a 3-level parking garage
Type of construction	Non-combustible
Sprinklered	Yes
Principal occupancy	Residential
Structural system	Reinforced concrete

## 1.6. Owner/Occupant Survey Review

A questionnaire was issued to each suite occupant to determine whether there were concerns with the performance of the building enclosure. It is assumed that the occupants that did not respond to the questionnaire have no concerns. Eighty-eight of the 251 residential suites in the building (35%) returned the questionnaires. Table 1.6.1 below is a summary of the information gathered from the questionnaires. The completed owner/occupant questionnaires have been included in Appendix B.

Table 1.6.1 - Response to Owner/Occupant Questionnaire	
1) Does your suite have current leaks (within the past year)?	13/88 (15%)
2) Has your suite experienced leaks in the past that have now been corrected (no leaks within last year)?	3/88 (3%)
3) Do you have problems with condensation?	17/88 (19%)
4) Do you have problems with mould, fungi or mildew?	9/88 (10%)
5) Does cold air penetrate your suite?	23/88 (26%)
6) Are there any walls or floors that are unusually cold during periods of cold weather?	6/88 (7%)

Several observations can be made based on the responses to the questionnaire:

- Active water ingress was reported in a relatively high number (13) of suites. Many of these were in the townhouses, and related to doors. It appears that lack of cover over hinged doors is leading to water ingress and is a significant concern of the Owners.
- Condensation was reported in a relatively high number (17) of suites. The condensation was typically reported at windows, and especially at the townhouses. Issues with mould, fungi, or mildew were often related to the condensation.
- Cold air infiltration was reported in a relatively high number (23) of suites. The infiltration was typically related to windows and doors, especially townhouse doors. In the highrise, five of the reports indicate cold air entering suites through the entry door from the hallway. This is not a building enclosure issue, as this is a separation between two interior spaces.
- Reported cold surfaces were typically related to the cold air infiltration described above.

- We were given access to eleven suites for review: Townhouses 4, 6, 7, 8, 18, and 20, and Suites 402, 506, 510, 811, and 1607. Where relevant, the results of these reviews are included in Section 2. Suites 402 and 811 did not have building enclosure issues: Suite 402 reported water ingress in the questionnaire but in our visit indicated this was in error; Suite 811 problem appeared to be related to plumbing only.
- If we were not given suite access we could not confirm the reported building enclosure defect and therefore made no specific mention of it in this report. However, the completed owner/occupant questionnaires included in Appendix B serve as a record of reported building defects. Also, based on our review of suites we had access to, we were able to identify common building enclosure concerns that would apply to many suites, including those that did not complete a questionnaire.

**Draft**

## 2. Observations

### 2.1. Exterior Walls

#### 2.1.1. Architectural Concrete

The typical exterior wall assembly is architectural concrete. This wall assembly is shown on architectural details to consist of the following (from exterior to interior):

- Poured-in-place concrete, painted with acrylic elastomeric coating
- Lightweight steel framing with 2" rigid insulation in the stud space
- Vapour barrier
- 1/2" gypsum board.

This and similar types of exterior wall assembly are relatively common in the Lower Mainland, especially for high-rise residential construction, due to its lower construction cost (relative to rainscreen walls, such as masonry veneer on the lower areas of the building).

For poured-in-place concrete walls, the first line of water penetration resistance is the face of the concrete, which can be made more watertight through the use of a coating. The concrete itself creates the second line of resistance, since concrete has mass to limit the movement of water and to absorb moisture. Some of this moisture can dry back to the exterior at some point in the future.

Unfortunately, the wall is vulnerable to water penetration at cracks, construction joints (joints between separate pours of concrete), control joints (joints deliberately designed to control the location of cracking), and at transitions to other building enclosure elements (e.g. windows).

Note that this type of wall must incorporate a face-sealed strategy against water ingress, as by its nature it is unable to provide the same redundancy as a rainscreen type wall.

While rain penetration control is the most important attribute of exterior walls in this climate, the walls must also be able to control air leakage, vapour diffusion, and provide adequate thermal performance. The design of the exterior wall assembly is such that there is some risk for condensation moisture problems on the inside of the concrete wall due to inherently imperfect control of the above factors. Due to thermal bridging, there is also a risk for stud shadowing on the interior gypsum board, and cold wall and floor areas (see Item 4. below).

None of the questionnaires indicated a problem with condensation at concrete walls (although condensation at windows was reported), however if condensation was occurring on the inside face of the concrete walls it would not be easily noticed by occupants. We did not make any interior openings to review the inside face of the walls, as our scope of services was limited to visual review only. The concrete does have capacity to absorb water; over the long term, however, there may be a risk of corrosion to lightweight steel framing and/or mold growth on the gypsum board. It would be prudent to conduct exploratory openings in the future (within the next 5 years) to monitor the situation.

We performed a visual review of the concrete walls from ground level, balconies, and from the main roof, and observed the following:

1. Cracks in the concrete, typically at construction joints (Fig. 2.1.1.1, Fig. 2.1.1.2). The architectural details indicate the use of waterstops to help reduce water ingress, however we could not confirm if they had been installed. **Significance:** May lead to water ingress. Reveals should have been incorporated at construction joints to allow easier installation of sealant.
2. Evidence of past water ingress at elevator penthouse concrete wall cracks (Fig. 2.1.1.3). Remedial sealant has been installed over the cracks on the exterior of the concrete. **Significance:** Water ingress may reoccur; therefore the situation must be monitored.
3. Paint on the architectural concrete appears to be thinly applied for an elastomeric coating. An elastomeric coating is indicated on architectural details. **Significance:** Reduced water resistance at the face of the exterior wall. The product should be confirmed.
4. Insulation appears to be missing at numerous soffit locations (Fig. 2.1.1.4). Suite 510 reported cold floors at these areas. See also 2.3 Balconies. **Significance:** Incomplete thermal barrier, resulting in higher energy usage, possible condensation at windows, and possible uncomfortably cold floors in the winter.
5. Suite 2701 reported concrete missing from suite above. There appears to be concrete missing from under the planter (Southwest planter, South elevation) cap flashing of Suite 2801 (Fig. 2.1.1.5). **Significance:** If the concrete spalled from the building, this would be a hazard to people/property. Reasons for the missing concrete should be reviewed with the original design team.

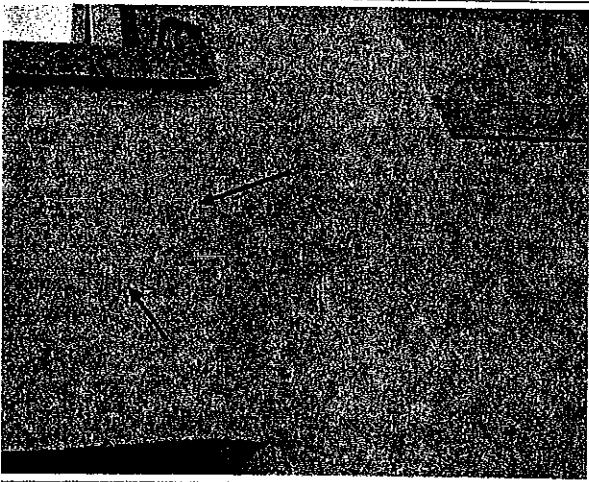


Figure 2.1.1.1. - Cracks in the architectural concrete at the ground floor level.

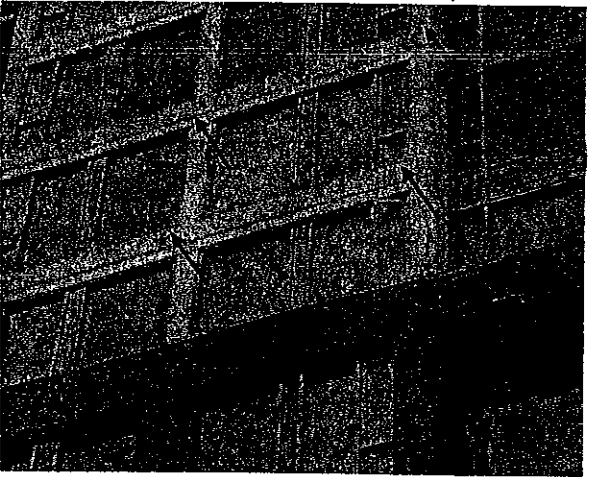


Figure 2.1.1.2. - Cracks in the architectural concrete at the window frame.

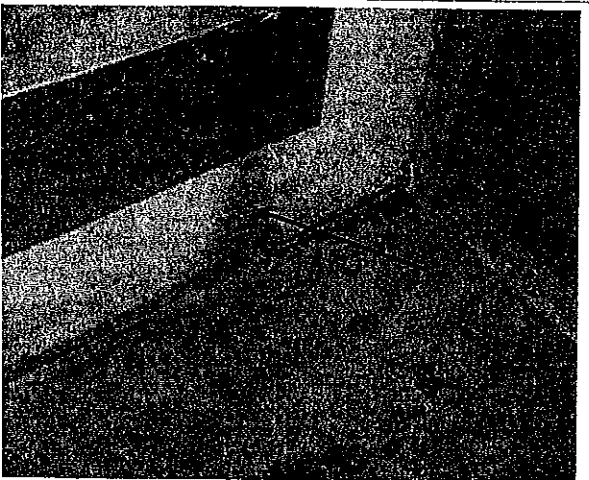


Figure 2.1.1.3. - Evidence of water ingress in mechanical room.



Figure 2.1.1.4. - Missing insulation at soffits.

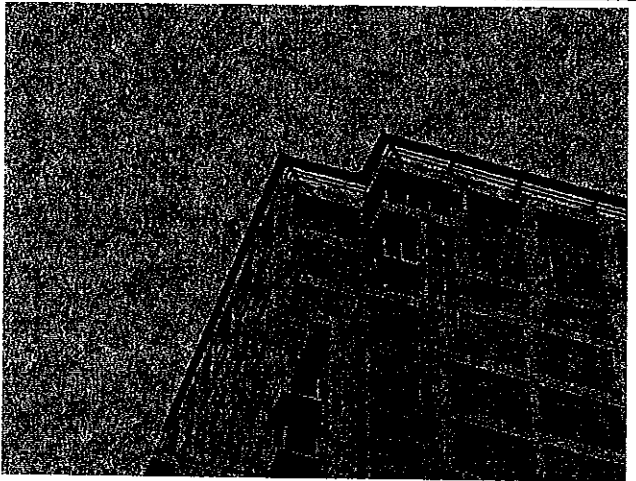


Figure 2.1.1.5. - Apparent missing concrete at Suite 2801.

### 2.1.2. Masonry Veneer

There are exterior walls with masonry veneer at the lower floors of the high-rise, and at the townhouses. The typical assemblies are shown on architectural drawings to consist of the following (from exterior to interior):

#### Assembly 1:

- Masonry veneer
- 1" air space
- Self-adhered membrane
- Poured-in-place concrete
- Lightweight steel framing with 2" rigid insulation in the stud space
- Vapour barrier
- 1/2" gypsum board.

#### Assembly 2:

- Masonry veneer
- 3/4" air space
- 2" insulation
- Self-adhered membrane
- Poured-in-place concrete
- Lightweight steel framing
- 1/2" gypsum board.

Based on the architectural drawings, Assembly 1 is more common. Because of their rainscreen design, both assemblies have good resistance to rain penetration. However, they are most vulnerable at transitions to other building enclosure components (e.g. windows, other types of wall assemblies).

Assembly 2 occurs mostly at the townhouses. This assembly has better thermal, air, and vapour barrier performance because the primary insulation and air/vapour barrier are located outside of the structural framing (poured-in-place concrete).

We performed a visual review of the masonry walls from suites and ground level, and observed the following:

1. Detail D1A-26 (Fig. 2.1.2.1) illustrates a situation at the high-rise where lightweight steel framing has been used to frame in areas between structural concrete and windows. This wall is similar to Assembly 1, but instead of concrete there is sheathing. **Significance:** The self-adhered membrane on the sheathing has low vapour permeance; therefore there exists the possibility of condensation on the sheathing. A risk for deterioration exists because sheathing is less durable than concrete. It may have been

preferable to use a more permeable sheathing membrane than the self-adhered membrane shown. However, we could not confirm what the as-built condition was, we recognize that these areas may be limited, and the transitions between window/sheathing and sheathing/concrete required self-adhered membrane stripping, therefore limiting the area for vapour permeable sheathing membrane. Exploratory openings should be made at select locations to check the condition of the sheathing within 5 years.

2. Significant gaps between masonry and adjacent wall components (SE corner of courtyard, Suite 506 deck) (Fig. 2.1.2.2). **Significance:** Incomplete finishing, an opening for water and pest entry.
3. Missing sealant at some horizontal expansion joints, for example, near parking garage ramp on west elevation and on north elevation (Fig. 2.1.2.3). **Significance:** Incomplete finishing, an opening for water and pest entry.
4. Missing sealant around canopy anchor over the parking garage ramp (Fig. 2.1.2.4). **Significance:** Incomplete finishing, an opening for water and pest entry.
5. Unsupported masonry veneer at the east elevation, northeast corner (Fig. 2.1.2.5). **Significance:** May be a hazard to people/property. The original design team should review the situation.

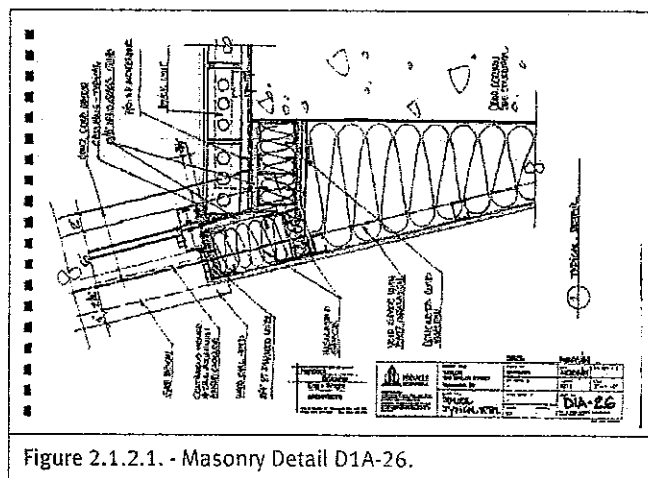


Figure 2.1.2.1. - Masonry Detail D1A-26.



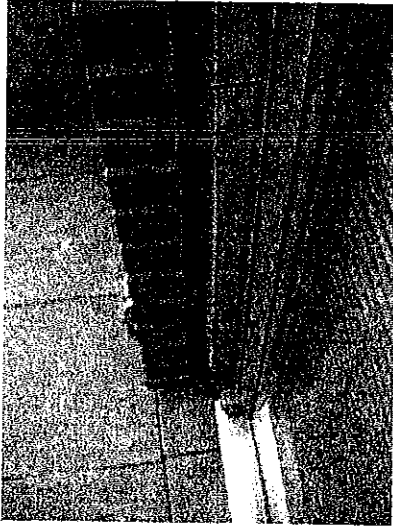
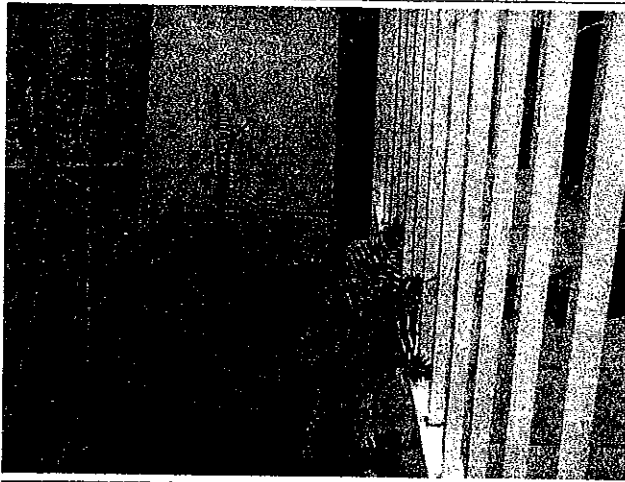


Figure 2.1.2.2. - Gaps between masonry and adjacent wall components (e.g. SE corner of courtyard, Suite 506 deck).

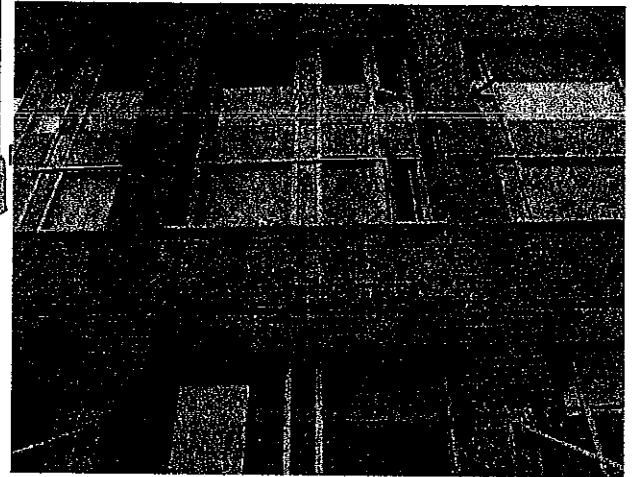


Figure 2.1.2.3. - Missing sealant at some horizontal expansion joints (e.g. near parking garage ramp on west elevation, north elevation).

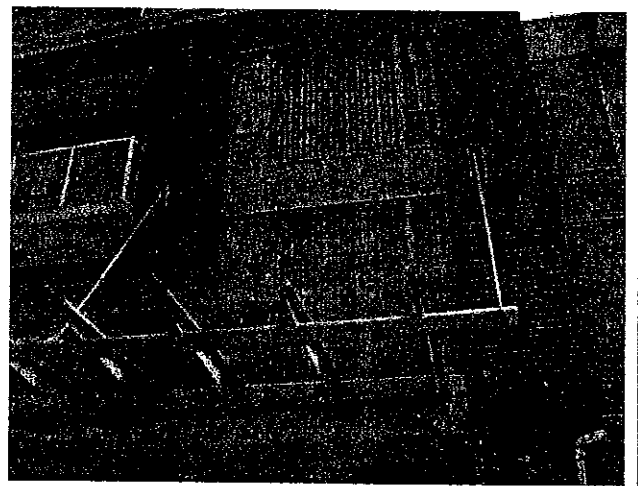


Figure 2.1.2.4. Missing sealant around canopy anchor over the parking garage ramp

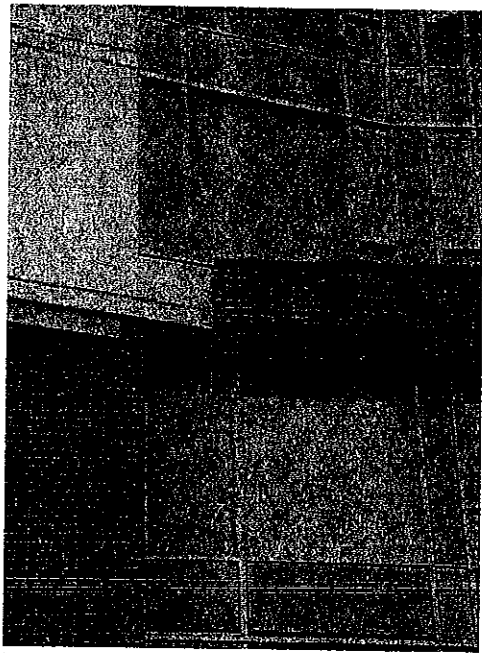


Figure 2.1.2.5. Unsupported masonry at the east elevation northeast corner.

Draft

## 2.2. Exterior Wall Penetrations

Penetrations through the exterior walls are typically windows and doors. Since they are more complicated to address in design and construction than the field of the wall, they are more susceptible to water ingress.

We performed a visual review of the wall penetrations from suites and ground level, and observed the following:

### 2.2.1. Windows

1. Condensation at windows was reported at many suites, primarily at the townhouses (Fig. 2.2.1.1). The situation was reportedly worse in colder weather and with the windows closed. Ventilation, especially at the townhouses, may not be adequate for the occupants' needs. **Significance:** Damage to interior finishes, fungal growth, and a nuisance to occupants. Increased air circulation will reduce condensation and the likelihood of fungal growth. Periodically opening windows, using bathroom and kitchen fans, and leaving open drapes and blinds, may improve the situation. The original design team should review the situation.

### 2.2.2. Doors

1. Many townhouse occupants reported water ingress at door thresholds. We reviewed Townhouses 4, 6, 7, and 8; all of these townhouses have a front door at street level and a rear door to the courtyard. All the rear doors we reviewed had evidence of past water ingress (Fig. 2.2.2.1) because of the lack of canopies above. **Significance:** Damage to interior finishes, fungal growth, and a nuisance to occupants.
2. Front doors to townhouses at street level had less evidence of water ingress because of the canopy above. But there is a gap between this canopy and the building (Fig. 2.2.2.2). Architectural Detail D2B.06 indicates that a flashing should have been installed. **Significance:** Damage to interior finishes, fungal growth, and a nuisance to occupants.

At many townhouse doors there is air leakage because the weather-stripping is not tight to the doors (Fig. 2.2.2.3). At some high-rise suites, occupants complained of drafts at the balcony doors. **Significance:** Energy loss, lack of comfort.

4. At all ground floor common doors (Fig. 2.2.2.4), there were reports of water ponding outside the doors and/or water ingress under the doors. There are no canopies above these doors. **Significance:** Damage to interior finishes, and a nuisance to occupants.
5. Reported water ingress at door to Southeast Stairwell (Stair #4) (Fig. 2.2.2.5). There is no canopy above this door. **Significance:** Nuisance to occupants.

### 2.2.3. Others

1. Evidence of past water ingress through at ceiling of ground floor east corridor (Fig. 2.2.3.1). There is a vent grill outside that does not have head flashing or sealant. **Significance:** Damage to interior finishes, and a nuisance to occupants.

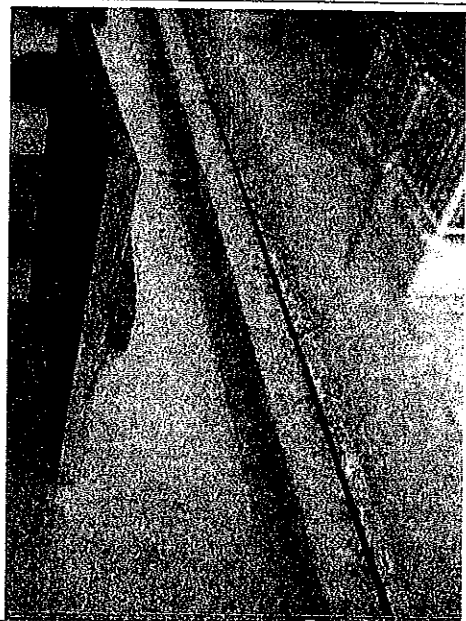


Figure 2.2.1.1. - Condensation and fungal growth at Townhouse 18.

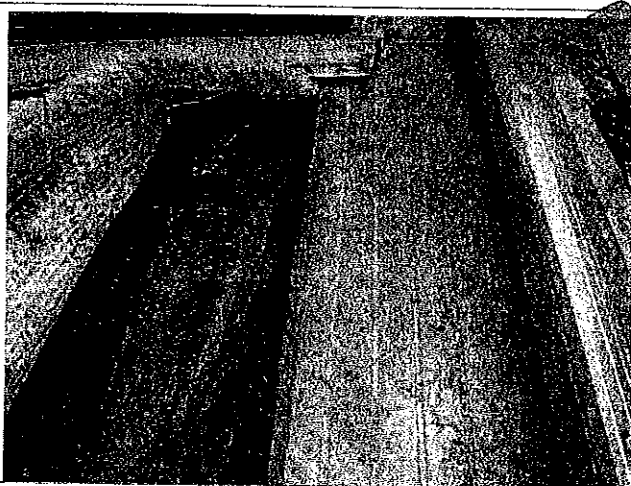


Figure 2.2.2.1 - Evidence of water ingress at Townhouse 4 rear door.

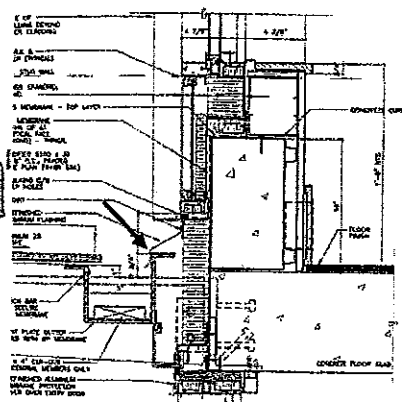
[illegible]

Figure 2.2.2.2. - Townhouse canopies do not have a transition flashing at gutters. Note that Detail D2B.06 shown above has the flashing indicated.

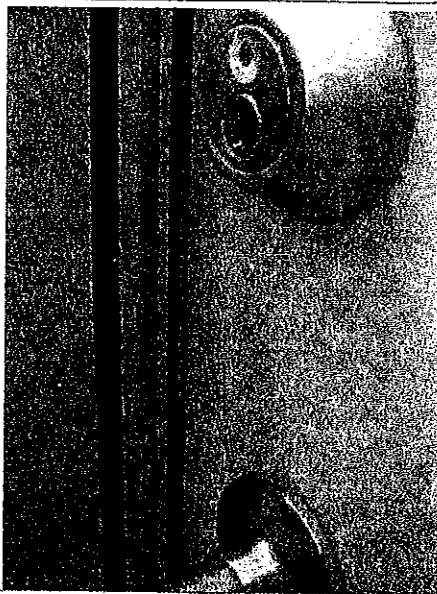


Figure 2.2.2.3. - Poorly fitted weather-stripping at Townhouse 4 rear door.

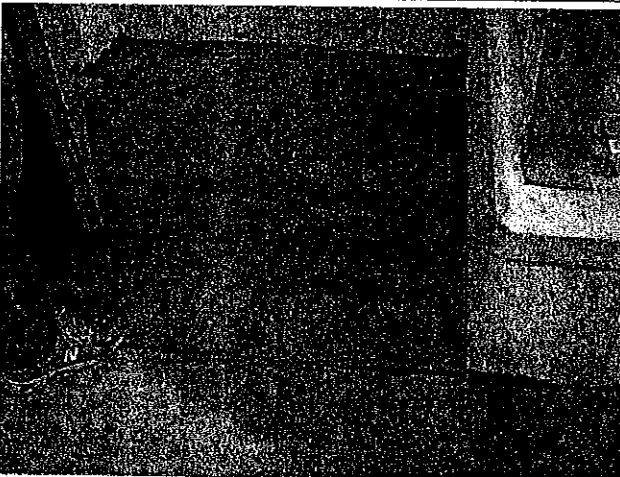


Figure 2.2.2.4. - Ponded water outside exit door.

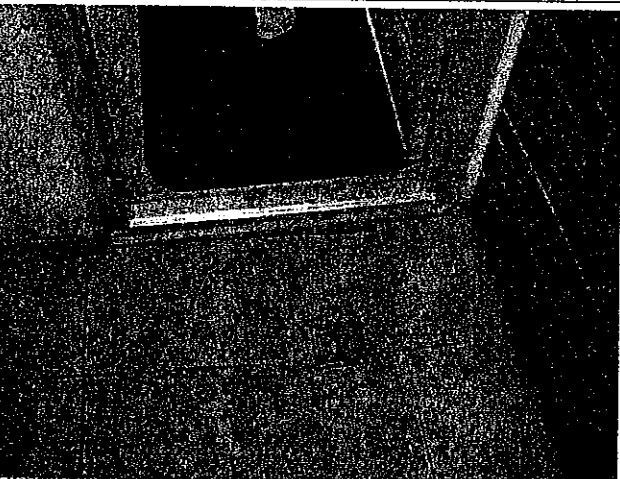


Figure 2.2.2.5. - Reported water ingress reported at door to SE stairwell (Stair #4).

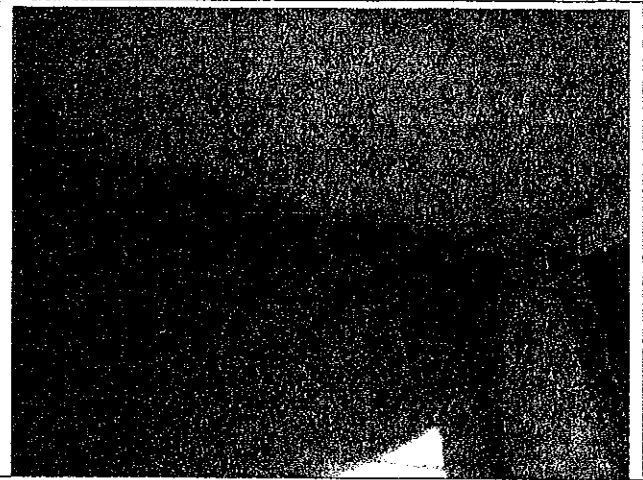


Figure 2.2.3.1. Water damage to ceiling gypsum board at ground floor east corridor.

## Balconies

Balconies are exterior horizontal surfaces intended for pedestrian use, but are not located over occupied space (therefore not a roof).

The balconies at The Taylor are concrete with polyurethane liquid-applied traffic membrane applied as waterproofing. There are balconies at the high-rise and at the townhouses. Some of the balconies have been enclosed with window wall.

We performed a visual review of the balconies from suites, and observed the following:

1. Reported cold floors at enclosed balconies of Suite 510 (Fig. 2.3.1) and townhouses (Fig. 2.3.2). Enclosed balconies are not considered occupied space; therefore there are no requirements for insulation (although the walls between the enclosed balcony and the suite must be insulated). However, some enclosed balconies (Suite 503) have soffit insulation and were detailed that way (Fig. 2.3.3 - Detail D1B-19A). Further to this, there are electric baseboard heaters in the enclosed balconies of Suite 510 and the townhouses we had access to (Townhouses 18 and 20), indicating that they may be considered occupied space, but they have no soffit insulation. See also 2.1.1 Architectural Concrete, item 4. **Significance:** Uncomfortably cold floors in the winter, virtually rendering the space unusable. Condensation at windows.

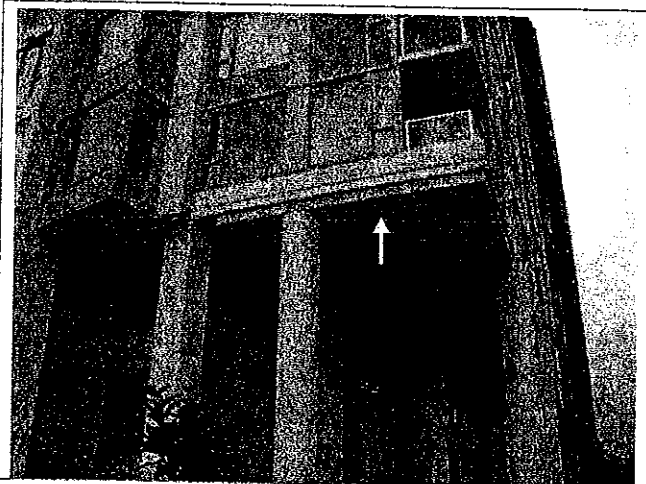


Figure 2.3.1. - No soffit insulation at Suite 510 enclosed balcony (red arrow). Note the soffit insulation at the adjacent area (yellow arrow).

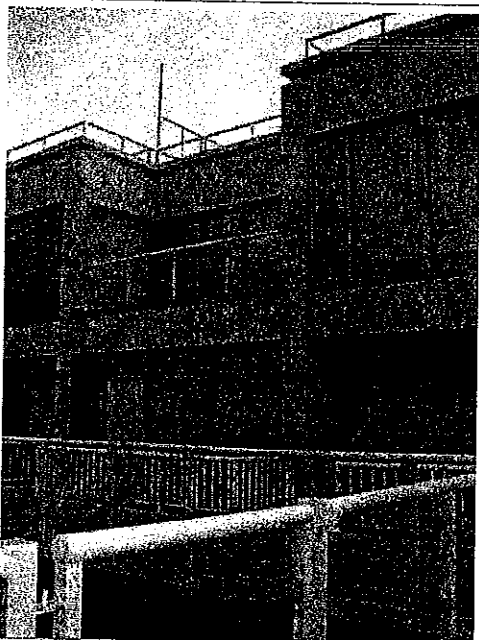


Figure 2.3.2. - No soffit insulation at townhouses.

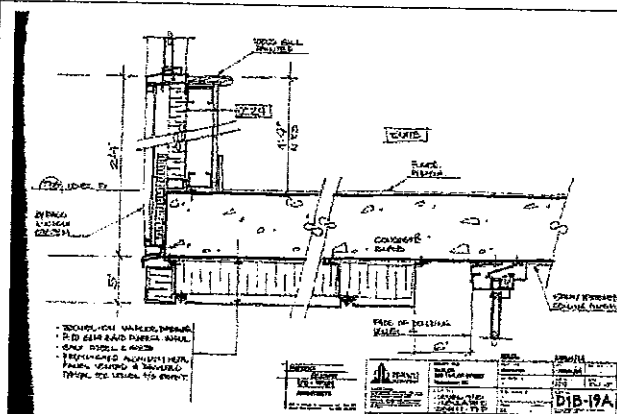


Figure 2.3.3. Soffit insulation Detail D1B-19A.

## 2.4. Roofs and Decks

The main roof assembly was confirmed on site to be (from exterior to interior):

- Concrete pavers on pedestals
- Filter fabric
- Extruded polystyrene insulation
- Drainage mat (not confirmed by RDH)
- Waterproofing membrane
- Poured-in-place concrete.

Around the perimeter of the main roof there are planters; we assume the construction is similar to that above, except there is landscaping rather than concrete pavers.

There are many decks (roofs intended for pedestrian use) at the townhouses and the high-rise. All components of the assembly were not confirmed on site, but the assembly appears to be similar to the main roof.

We performed a visual review of the main roof, and decks from suite access, and observed the following:

1. The as-built condition townhouse parapet detail varies from Detail D1B-26A (Fig. 2.4.1) in that there is no precast cornice with continuous waterproofing underneath (the cornice is poured-in place concrete instead, not precast), and the waterproofing membrane is not terminated 3" above the paver level. **Significance:** As-built detail is less reliable from a waterproofing perspective. Water staining on the ceiling in Townhouse 17 (252-35 Keefer Place) has been reported. Water ingress has been reported at Townhouse 19 (257-35 Keefer Place).
2. Evidence of past water ingress in master bedroom of Suite 1607 (Fig. 2.4.2). The origin of the water ingress is likely the planter on the deck outside. The planter has been partially excavated, however it is unclear if remedial work was conducted. The termination of the membrane lacks a reglet, base flashing, and sealant, as shown on Architectural Detail D1B.03. **Significance:** A nuisance to occupants, damage to interior finishes, and may lead to deterioration of moisture sensitive building components and fungal growth.
3. Reported past water ingress in master bedroom of Suite 506. The origin of the water ingress is likely the deck outside. The occupant reports that remedial work was conducted on the deck and the problem has not reoccurred. **Significance:** A nuisance to occupants, damage to interior finishes, and may lead to deterioration

of moisture sensitive building components and fungal growth. The extent of the remedial work conducted is unknown.



Figure 2.4.1. - Townhouse parapet.

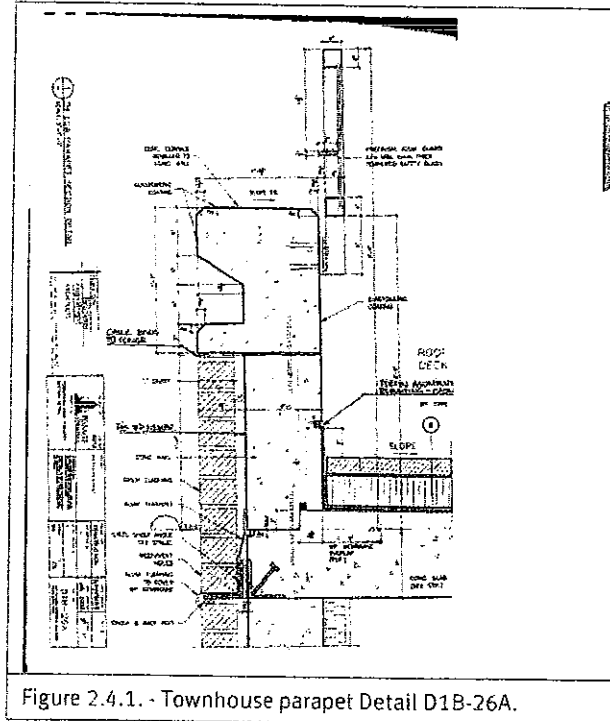


Figure 2.4.1. - Townhouse parapet Detail D1B-26A.

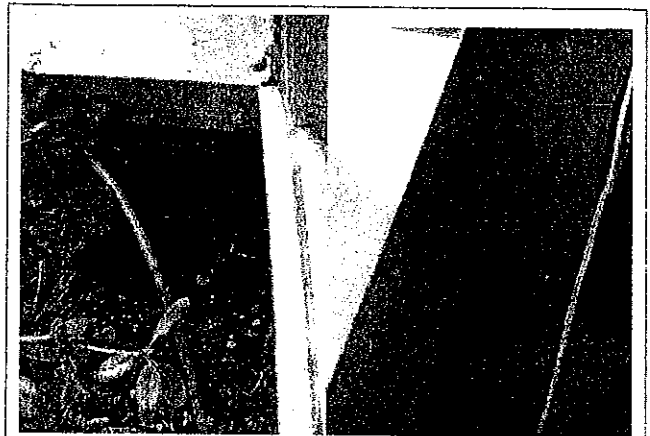


Figure 2.4.2. - Evidence of past water ingress at Suite 1607.

## 2.5. At-Grade and Below-Grade Assemblies

### Podium

The podium is the landscaped area above the parking garage. Most of this area is in the courtyard between the high-rise and the townhouses.

Based on our site observations and architectural details, the podium assembly is (from exterior to interior):

- Concrete pavers on pedestals or sand bed, landscaping
- Filter fabric and drainage mat
- Waterproofing membrane
- Poured-in-place concrete.

We performed a visual review of the podium and observed the following:

1. Exposed waterproofing membrane at the base of high-rise in the courtyard and at planters (Fig.2.5.1.2). The membrane must be covered at all locations. The terminations in the planters are missing a reglet, base flashing, and sealant, as shown on Architectural Detail D1B.03. **Significance:** Will result in premature deterioration of the membrane.
2. Missing sealant at metal flashing gum lip termination in the courtyard (Fig.2.5.1.3). **Significance:** May result in water ingress behind the waterproofing membrane.

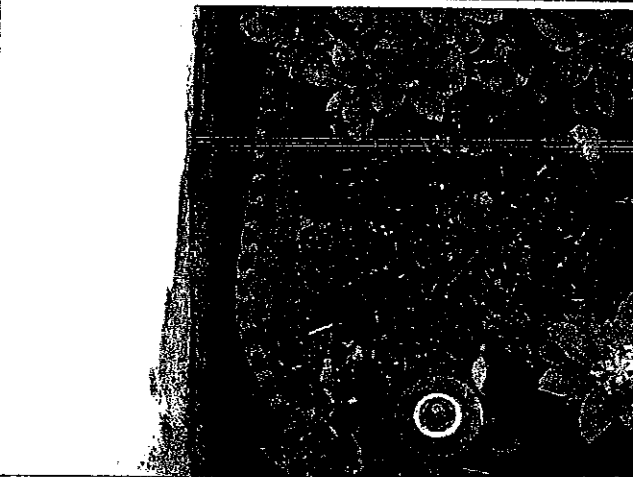
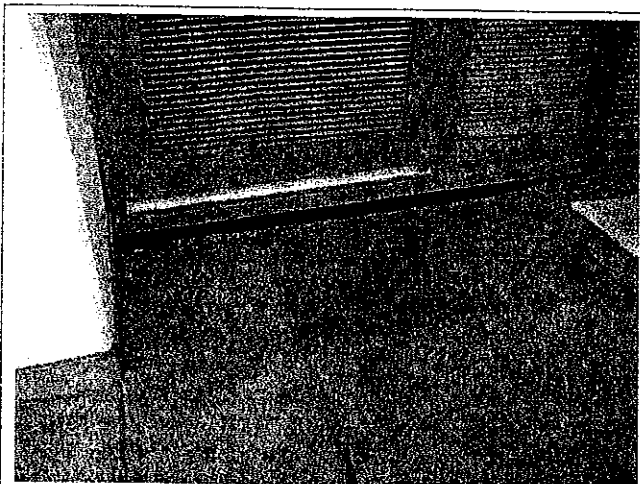


Fig. 2.5.1.2. - Exposed waterproofing membrane at the courtyard.

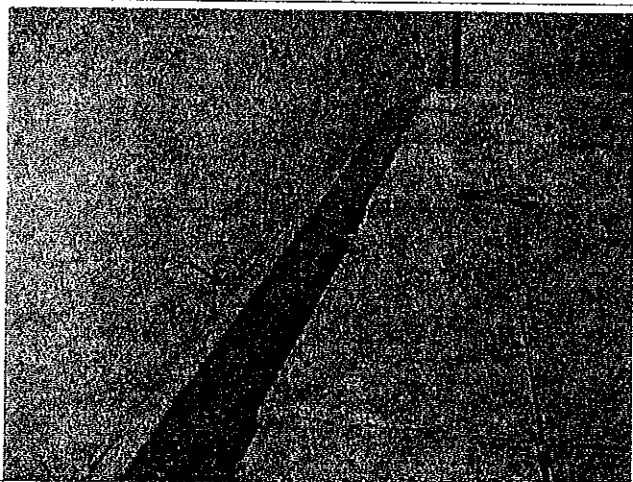


Fig. 2.5.1.3. - Missing sealant at metal flashing gumlip termination.

## 2.5.2 Underground Parkade

There are three levels of underground parking. We performed a visual review of the parkade, and observed the following:

1. Various cracks in the polyurethane liquid-applied traffic membrane on suspended slabs (Fig. 2.5.2.1). Water ingress reported at various locations, including above Stalls 205, 319, and P3 elevator entrance door. **Significance:** Water ingress into the parking level below is a nuisance for parkade users, may damage automobiles, and may lead to corrosion of the reinforcing steel over the longterm.
2. Ponded water at various stalls (e.g. 147, 225, 235, 272 (Fig. 2.5.2.2)). **Significance:** A nuisance to parkade users.
3. Water ingress through foundation walls at Stalls 247 (Fig. 2.5.2.3) and 169, and at ground floor, northeast stairwell (Stair #6). **Significance:** A nuisance to parkade users, and may lead to corrosion of the reinforcing steel over the longterm.
4. Water ingress through soffit at P2, Locker 4 (Fig. 2.5.2.4). The mechanical room is above. **Significance:** May damage materials stored in locker and potential corrosion of the reinforcing steel over the longterm.
5. Evidence of past water ingress through soffit above stalls 141/142 (Fig. 2.5.2.5), 151. Landscaped areas are above. **Significance:** If the water ingress is active, it will be a nuisance for parkade users, damage to automobiles may occur, and corrosion of the reinforcing steel over the longterm is a possibility.

There are various cracks in the concrete slab on grade (P3 level) and in the suspended slabs (P1 and P2 levels). Such cracks are not abnormal in reinforced concrete.

Water ingress is a nuisance (especially over parking stalls) and over the long term may result in corrosion of the structural reinforcing steel. This would become apparent if a substantial amount of rust-colored staining and concrete spalling occurs.



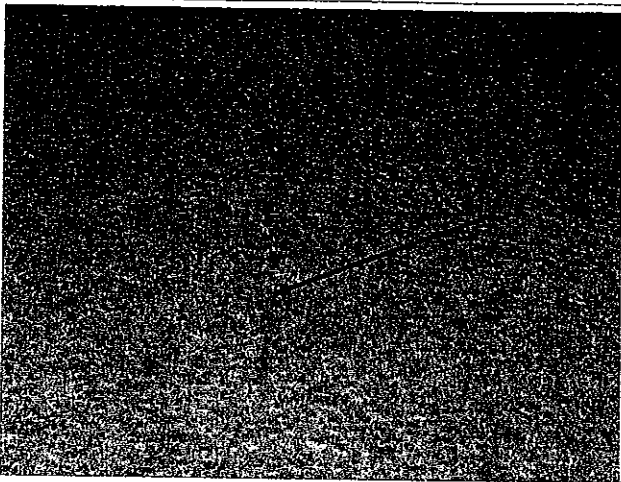


Figure 2.5.2.1 - Cracks in the liquid- applied traffic membrane at P2.

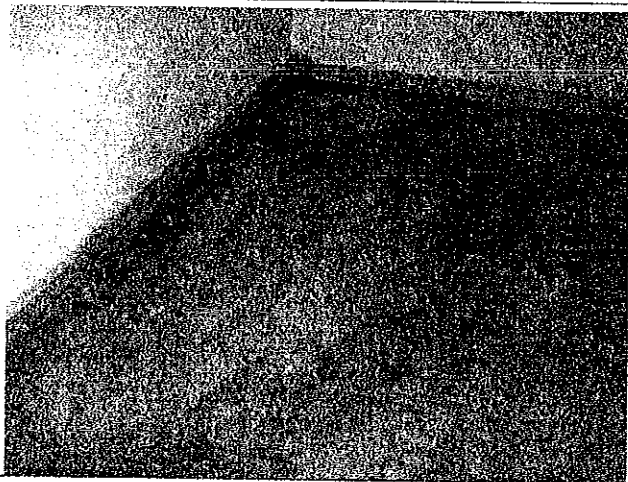


Figure 2.5.2.2 - Ponded water in Stall 272.

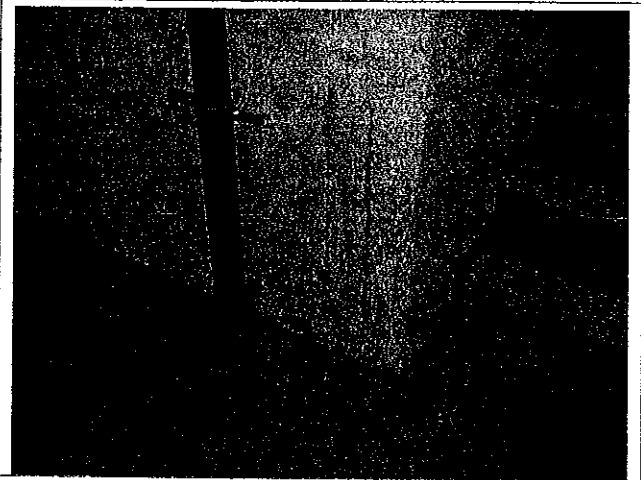
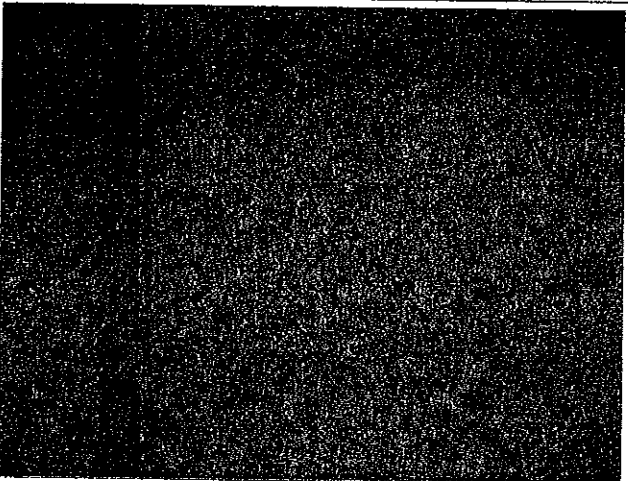


Figure 2.5.2.3 - Water ingress through foundation wall at Stall 247. Evidence of past water ingress through wall at northeast stairwell (Stair #6).

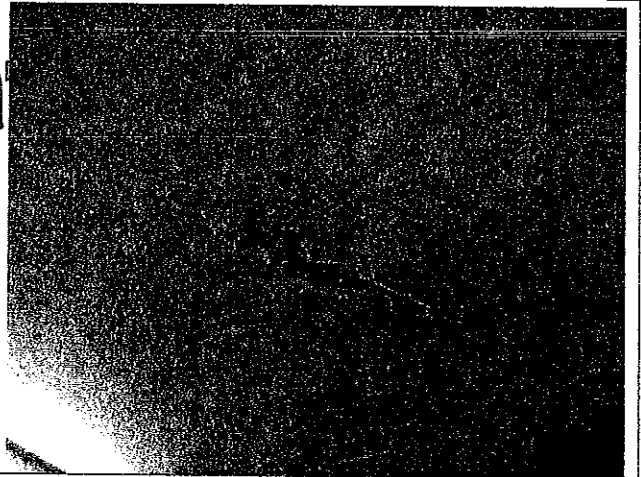


Figure 2.5.2.4 - Water ingress through soffit in Locker 4.



Figure 2.5.2.5 - Evidence of past water ingress through soffit above Stalls 141/142.



### 3. Summary of Observations

All items discussed in Section 2. Observations are summarized in Table 3.1.

Table 3.1		
BUILDING ENCLOSURE DEFECTS		
Item	Defect	Significance
2.1.1.1	Concrete cracks	May lead to water ingress
2.1.1.2	Past water ingress at elevator penthouse	Water ingress may reoccur
2.1.1.3	Thinly applied paint on concrete	Reduced water resistance
2.1.1.4	Missing soffit insulation	Incomplete thermal barrier, resulting in higher energy usage, possible condensation at windows, possible uncomfortably cold floors in the winter
2.1.1.5	Spalled concrete	May be a hazard to people/property
2.1.2.1	Low vapour permeance membrane on cold side of primary insulation	Possible condensation on the sheathing
2.1.2.2	Gaps between masonry and adjacent wall components	Incomplete finishing, an opening for water and pest entry
2.1.2.3	Missing sealant at expansion joints	Incomplete finishing, an opening for water and pest entry
2.1.2.4	Missing sealant at canopy anchor	Incomplete finishing, an opening for water and pest entry
2.1.2.5	Unsupported masonry veneer	May be a hazard to people/property
2.2.1.1	Condensation at windows	Damage to interior finishes, fungal growth, and a nuisance to occupants
2.2.2.1	Water ingress at suite door thresholds	Damage to interior finishes, fungal growth, nuisance to occupants

2.2.2.2	Missing flashing at door canopies, resulting in water ingress at door thresholds	Damage to interior finishes, fungal growth, nuisance to occupants
2.2.2.3	Air leakage at doors	Energy loss, lack of comfort
2.2.2.4	Water ingress at common door thresholds	Damage to interior finishes, fungal growth, and a nuisance to occupants
2.2.2.5	Water ingress at SE stair door threshold	Nuisance to occupants
2.2.3.1	Water ingress at vent grill	Damage to interior finishes, nuisance to occupants
2.3.1	No insulation at enclosed balcony soffits	Cold floors
2.4.1	Townhouse parapet waterproofing differs from design detail	Less reliable waterproofing
2.4.2	Water ingress at Suite 1607	Damage to interior finishes, fungal growth, nuisance to occupants
2.4.3	Water ingress at Suite 506	Damage to interior finishes, fungal growth, nuisance to occupants
2.5.1.1	Exposed waterproofing at base of wall	Premature deterioration of membrane
2.5.1.3	Missing sealant at base flashing	May result in water ingress behind the membrane
2.5.2.1	Cracks in liquid-applied traffic membrane (various locations) and water ingress through suspended slabs	Nuisance for parkade users, damage to autos, corrosion of reinforcing steel over the longterm
2.5.2.2	Ponded water (various locations)	Nuisance to parkade users
2.5.2.3	Water ingress through foundation wall (various locations)	Nuisance to parkade users, corrosion of reinforcing steel over the longterm

2.5.2.4	Water ingress through soffit in Locker 4	May damage materials stored in locker, corrosion of reinforcing steel over the longterm
2.5.2.5	Water ingress through roof slab soffit (various locations)	Nuisance for parkade users, damage to autos, corrosion of reinforcing steel over the longterm

In addition to Table 3.1, refer to the completed owner/occupant questionnaires in Appendix B. These also serve as a record of reported building defects.

RDH Building Engineering Ltd.

---

Sean Liaw, M.Eng., BEP, P.Eng.  
Senior Building Science Specialist

**Draft**

**APPENDIX A:**  
**Owner/Occupant Questionnaires**

Project Name: Chelsea Court  
 Project Number: 3122.00  
 Date: March 1, 2007

## OWNER/OCCUPANT QUESTIONNAIRE

Please complete the following questionnaire regarding building envelope performance by March 14, 2007. Your help will assist us in identifying items that need to be addressed for the condition assessment. If you have any questions regarding the questionnaire please call Marcus Dell at RDH Building Engineering Ltd. (604) 873-1181.

Please place the completed questionnaire in the green box in the main lobby area.

Suite Number: 1

Occupants Name: Eve Aymang

Phone Number: (604) 812-7474

Note, we may call you to discuss the information noted in this questionnaire or to arrange access to your suite. Your number will not be used for any other purpose.

Exterior Wall Facing: North ☒ East ☒ South ☐ West ☐

Y/N and Comments

GENERAL	
1) Have you had any water leaks, within the last year, which have not yet been repaired?	No
2) Has your suite experienced water leaks in the past that have now been corrected (no leaks within last year)?	Yes.
3) Do you have any moisture staining or performance issues at your exterior walls or ceiling below roofs or decks?	No
3) Do you have any problems with condensation on the exterior walls or windows?	Yes
4) Do you have any problems with mould, fungi, or mildew on the exterior walls or windows?	Yes
5) Have you noticed any areas where cold air infiltrates your suite?	Front Door
6) Is there "fogging" (moisture between the panes of glass) of any of your windows?	No
7) Is there a problem with your dryer vent exhausting properly? Is it clogged?	No
8) Does water pond on your balcony.	No

Provide additional details of any problems noted:

Thank you,

RDH Building Engineering Ltd.

MAR 16 2007

Project Name:

Chelsea Court

Project Number:

3122.00

Date:

March 1, 2007

## OWNER/OCCUPANT QUESTIONNAIRE

Please complete the following questionnaire regarding building envelope performance by March 14, 2007. Your help will assist us in identifying items that need to be addressed for the condition assessment. If you have any questions regarding the questionnaire please call Marcus Dell at RDH Building Engineering Ltd. (604) 873-1181.

Please place the completed questionnaire in the green box in the main lobby area. March 12 2007

Suite Number: Suite 2Occupants Name: Evelyn and Melvin DennisPhone Number: 604 266 2172

Note, we may call you to discuss the information noted in this questionnaire or to arrange access to your suite. Your number will not be used for any other purpose.

Exterior Wall Facing: North ☒ East ☐ South ☐ West ☐

Y/N and Comments

GENERAL	Y/N and Comments
1) Have you had any water leaks, within the last year, which have not yet been repaired?	North Elevation No
2) Has your suite experienced water leaks in the past that have now been corrected (no leaks within last year)?	North Elevation No
3) Do you have any moisture staining or performance issues at your exterior walls or ceiling below roofs or decks?	North Elevation No
3) Do you have any problems with condensation on the exterior walls or windows?	Condensation on windows from top to bottom
4) Do you have any problems with mould, fungi, or mildew on the exterior walls or windows?	from top to bottom Don't know
5) Have you noticed any areas where cold air infiltrates your suite?	No
6) Is there "fogging" (moisture between the panes of glass) of any of your windows?	North Elevation No
7) Is there a problem with your dryer vent exhausting properly? Is it clogged?	Not applicable to this suite
8) Does water pond on your balcony.	North Elevation

Provide additional details of any problems noted:

Some caulking failures reported by Suite 1 and Suite 2.  
North Elevation approaching the end of a five  
year warranty for caulking and elastomeric pointing.  
The contractor has been notified in writing  
but no work has been made arrangements to do so.

Thank you, received with cc in letter to the City Council's committee

We will be happy to help you with any issues. RDH Building Engineering Ltd.  
 approved will identify the failures. Kindly contact  
 the owner's of numbers #1 & 2 so they can show us work  
 - March 2007

Project Name:	Chelsea Court
Project Number:	3122.00
Date:	March 1, 2007

# OWNER/OCCUPANT QUESTIONNAIRE

Please complete the following questionnaire regarding building envelope performance by March 14, 2007. Your help will assist us in identifying items that need to be addressed for the condition assessment. If you have any questions regarding the questionnaire please call Marcus Dell at RDH Building Engineering Ltd. (604) 873-1181.

Please place the completed questionnaire in the green box in the main lobby area. *March 12, 2007*

Suite Number: Suite #2

Occupants Name: Furber and McI Derrin

Phone Number: 604 266 5572

Note, we may call you to discuss the information noted in this questionnaire or to arrange access to your suite. Your number will not be used for any other purpose.

Exterior Wall Facing: North ☐ East ☒ South ☐ West ☐

## Y/N and Comments

GENERAL	Y/N and Comments
1) Have you had any water leaks, within the last year, which have not yet been repaired?	East Elevation with the wrap around the South Yes - in the east wall, below the #5 problem - moisture buildup on the exterior wall
2) Has your suite experienced water leaks in the past that have now been corrected (no leaks within last year)?	moisture on the window - some staining
3) Do you have any moisture staining or performance issues at your exterior walls or ceiling below roofs or decks?	
3) Do you have any problems with condensation on the exterior walls or windows?	Yes - on windows - Varying with temperature and wind days - including wrap around
4) Do you have any problems with mould, fungi, or mildew on the exterior walls or windows?	Don't know
5) Have you noticed any areas where cold air infiltrates your suite?	No
6) Is there "fogging" (moisture between the panes of glass) of any of your windows?	Yes - two on wrap around section
7) Is there a problem with your dryer vent exhausting properly? Is it clogged?	There is an exhaust Don't know if it is clogged
8) Does water pond on your balcony.	Not applicable

Provide additional details of any problems noted:

Problems noted on the east wall and the wrap around section, water leaks, moisture, staining, condensation, mould, fungi, or mildew on the exterior walls or windows. The wrap around section was caulked with rope and the wrap around had a bright indication

This should not have been done

Thank you,

We would appreciate your assistance on this  
RDH Building Engineering Ltd.

Project Name:	Chelsea Court
Project Number:	3122.00
Date:	March 1, 2007

# OWNER/OCCUPANT QUESTIONNAIRE

Please complete the following questionnaire regarding building envelope performance by March 14, 2007. Your help will assist us in identifying items that need to be addressed for the condition assessment. If you have any questions regarding the questionnaire please call Marcus Dell at RDH Building Engineering Ltd. (604) 873-1181.

Please place the completed questionnaire in the green box in the main lobby area.

March 12 2007

Suite Number: Suite 2

Occupants Name: Evelyn and Melvin Danna

Phone Number: 604-266-5578

Note, we may call you to discuss the information noted in this questionnaire or to arrange access to your suite. Your number will not be used for any other purpose.

Exterior Wall Facing: North ☐ East ☐ South ☒ West ☐

## Y/N and Comments

GENERAL	Y/N and Comments
1) Have you had any water leaks, within the last year, which have not yet been repaired?	South Elevation No
2) Has your suite experienced water leaks in the past that have now been corrected (no leaks within last year)?	No
3) Do you have any moisture staining or performance issues at your exterior walls or ceiling below roofs or decks?	Yes Staining on Deck roof
3) Do you have any problems with condensation on the exterior walls or windows?	Yes
4) Do you have any problems with mould, fungi, or mildew on the exterior walls or windows?	Don't Know
5) Have you noticed any areas where cold air infiltrates your suite?	No
6) Is there "fogging" (moisture between the panes of glass) of any of your windows?	No
7) Is there a problem with your dryer vent exhausting properly? Is it clogged?	Don't Know exactly
8) Does water pond on your balcony.	Yes last year

Provide additional details of any problems noted:

Understand there is water leakage on 2nd floor. This has caused a problem with our telephone line, the building is not allowed to be used.

Thank you,

RDH Building Engineering Ltd.

Project Name:	Chelsea Court
Project Number:	3122.00
Date:	March 1, 2007

# OWNER/OCCUPANT QUESTIONNAIRE

Please complete the following questionnaire regarding building envelope performance by March 14, 2007. Your help will assist us in identifying items that need to be addressed for the condition assessment. If you have any questions regarding the questionnaire please call Marcus Dell at RDH Building Engineering Ltd. (604) 873-1181.

Please place the completed questionnaire in the green box in the main lobby area. *March 12 2007*

Suite Number: Suite #2

Occupants Name: Evelyn and Alai Derrin

Phone Number: 604 266 5572

Note, we may call you to discuss the information noted in this questionnaire or to arrange access to your suite. Your number will not be used for any other purpose.

Exterior Wall Facing: North ☐ East ☐ South ☐ West ☒

Y/N and Comments	
GENERAL	West Elevation
1) Have you had any water leaks, within the last year, which have not yet been repaired?	No
2) Has your suite experienced water leaks in the past that have now been corrected (no leaks within last year)?	No
3) Do you have any moisture staining or performance issues at your exterior walls or ceiling below roofs or decks?	No
3) Do you have any problems with condensation on the exterior walls or windows?	Yes - in kitchen area of window
4) Do you have any problems with mould, fungi, or mildew on the exterior walls or windows?	Don't know
5) Have you noticed any areas where cold air infiltrates your suite?	No
6) Is there "fogging" (moisture between the panes of glass) of any of your windows?	No
7) Is there a problem with your dryer vent exhausting properly? Is it clogged?	There is an air vent but don't know if it's clogged
8) Does water pond on your balcony.	Not applicable

Provide additional details of any problems noted:

The Caulking and Finishing warranty on the West elevation has expired before problems became evident. There was a spider web of cracks caulked over the entire wall. We suspect the

expansion joints were caulked because the contractor had this concept. Furthermore to meet the coating thickness specification there were as many as four coats of elastomeric paint applied, one  
Wonders if the thickness was exceeded to the detriment of

RDH Building Engineering Ltd.



## OWNER/OCCUPANT QUESTIONNAIRE

Project Name: Chelsea Court  
 Project Number: 3122.00  
 Date: March 1, 2007

Please complete the following questionnaire regarding building envelope performance by March 14, 2007. Your help will assist us in identifying items that need to be addressed for the condition assessment. If you have any questions regarding the questionnaire please call Marcus Dell at RDH Building Engineering Ltd. (604) 873-1181.

Please place the completed questionnaire in the green box in the main lobby area.

MAR 26 2007

Suite Number: # 3

Occupants Name: Sarah Sair

Phone Number: 604-261-3574

Note, we may call you to discuss the information noted in this questionnaire or to arrange access to your suite. Your number will not be used for any other purpose.

Exterior Wall Facing: North ☐ East ☒ South ☐ West ☐

Y/N and Comments

GENERAL	
1) Have you had any water leaks, within the last year, which have not yet been repaired?	Yes
2) Has your suite experienced water leaks in the past that have now been corrected (no leaks within last year)?	No
3) Do you have any moisture staining or performance issues at your exterior walls or ceiling below roofs or decks?	
3) Do you have any problems with condensation on the exterior walls or windows?	Some - Yes
4) Do you have any problems with mould, fungi, or mildew on the exterior walls or windows?	No
5) Have you noticed any areas where cold air infiltrates your suite?	Yes
6) Is there "fogging" (moisture between the panes of glass) of any of your windows?	<del>Yes</del> No
7) Is there a problem with your dryer vent exhausting properly? Is it clogged?	Not well connected
8) Does water pond on your balcony.	yes

Provide additional details of any problems noted:

panel  
 I have blistered paint on inside (one side) ~~west~~ wall.  
 I have moisture and cracked sills in main  
 bedroom and possibly others. No floor issues (mould  
 etc) None visual.

Thank you,

RDH Building Engineering Ltd.

*Art or Marie  
for council  
meeting 5 March.  
B.M.H.*

From: "Marcus Dell" <MDell@rdhbe.com>  
Subject: **Chelsea Court - Occupant Questionnaire**  
Date: March 1, 2007 4:22:15 PM PST (CA)  
To: <charpentier@telus.net>  
2 Attachments, 92.7 KB Save

Marie

Thank you for agreeing to assist with distribution of the occupant questionnaire. The information gathered will assist us in planning our field review and in understanding the performance of the building enclosure.

The owners can either return the completed questionnaires to me via e-mail, post mail, or Fax. We are hoping to get a response from the majority of the owners/occupants by March 14, 2007.

Don Lowe has provided us with a copy of the Architectural drawings, which will be very useful.

Marcus Dell, P.Eng.  
RDH Building Engineering Ltd.  
224 W8th Avenue  
Vancouver, B.C.  
V5Y 1N5  
Fax 604-873-0933

Marcus Dell, P.Eng.  
Senior Building Science Specialist  
Principal  
P 604-873-1181  
C 604-831-4117

MAR 06 2007

Project Name:	Chelsea Court
Project Number:	3122.00
Date:	March 1, 2007

#### OWNER/OCCUPANT QUESTIONNAIRE

Please complete the following questionnaire regarding building envelope performance by March 14, 2007. Your help will assist us in identifying items that need to be addressed for the condition assessment. If you have any questions regarding the questionnaire please call Marcus Dell at RDH Building Engineering Ltd. (604) 873-1181.

Please place the completed questionnaire in the green box in the main lobby area.

Suite Number: 4

Occupants Name: Michael Goldie

Phone Number: (604) 261-4144

Note, we may call you to discuss the information noted in this questionnaire or to arrange access to your suite. Your number will not be used for any other purpose.

Exterior Wall Facing: North ☐ East ☐ South ☒ West ☐

	Y/N and Comments
<b>GENERAL</b>	
1) Have you had any water leaks, within the last year, which have not yet been repaired?	Yes
2) Has your suite experienced water leaks in the past that have now been corrected (no leaks within last year)?	not known
3) Do you have any moisture staining or performance issues at your exterior walls or ceiling below roofs or decks?	see 6
4) Do you have any problems with condensation on the exterior walls or	

windows?	
4) Do you have any problems with mould, fungi, or mildew on the exterior walls or windows?	not known
5) Have you noticed any areas where cold air infiltrates your suite?	no
6) Is there "fogging" (moisture between the panes of glass) of any of your windows?	not now. Some years ago we replaced one
7) Is there a problem with your dryer vent exhausting properly? Is it clogged?	no
8) Does water pond on your balcony.	only when wind and rain are from the south east.

placed one window on south wall

Provide additional details of any problems noted:

---



---



---



---

Thank you,

RDH Building Engineering Ltd.

Occupant Q....doc (30.0 KB)

03/22/2007 12:53 FAX 604 873 0893

RDH BUILDING ENGINEERING

002/002

att: Carrie Downing

## OWNER/OCCUPANT QUESTIONNAIRE

Project Name: Chelsea Court  
 Project Number: 3222.00  
 Date: March 1, 2007

Please complete the following questionnaire regarding building envelope performance by March 14, 2007. Your help will assist us in identifying items that need to be addressed for the condition assessment. If you have any questions regarding the questionnaire please call Marcus Dell at RDH Building Engineering Ltd. (604) 873-1151.

Please place the completed questionnaire in the green box in the main lobby area.

Suite Number: 5

Occupants Name: Don + Joyce Low

Phone Number: 604 321-8458 FAX 324-0348

Note, we may call you to discuss the information noted in this questionnaire or to arrange access to your suite. Your number will not be used for any other purpose.

Exterior Wall Facing: North ☐ East ☐ South ☐ West ☐

Don + Joyce Low @ 5000, CA

Y/N and Comments

GENERAL	
1) Have you had any water leaks, within the last year, which have not yet been repaired?	Yes
2) Has your suite experienced water leaks in the past that have now been corrected (no leaks within last year)?	No
3) Do you have any moisture staining or performance issues at your exterior walls or ceiling below roofs or decks?	Yes
3) Do you have any problems with condensation on the exterior walls or windows?	No
4) Do you have any problems with mould, fungi, or mildew on the exterior walls or windows?	No
5) Have you noticed any areas where cold air infiltrates your suite?	Yes - Most Windows
6) Is there "fogging" (moisture between the panes of glass) of any of your windows?	No
7) Is there a problem with your dryer vent exhausting properly? Is it clogged?	No
8) Does water pond on your balcony.	No

Provide additional details of any problems noted:

Don Low #5

Thank you.

RDH Building Engineering Ltd.

Project Name: Chelsea Court  
 Project Number: 3122.00  
 Date: March 1, 2007

## OWNER/OCCUPANT QUESTIONNAIRE

Please complete the following questionnaire regarding building envelope performance by March 14, 2007. Your help will assist us in identifying items that need to be addressed for the condition assessment. If you have any questions regarding the questionnaire please call Marcus Dell at RDH Building Engineering Ltd. (604) 873-1181.

873-0933

Please place the completed questionnaire in the green box in the main lobby area.

Suite Number: 6

Occupants Name: Susan Katz / Mark Winston

Phone Number: 604-261-5143

Note, we may call you to discuss the information noted in this questionnaire or to arrange access to your suite. Your number will not be used for any other purpose.

Exterior Wall Facing: North ☐ East ☐ South ☐ West ☐

## Y/N and Comments

GENERAL	
1) Have you had any water leaks, within the last year, which have not yet been repaired?	Yes, kitchen sink window, office window, dining room wall
2) Has your suite experienced water leaks in the past that have now been corrected (no leaks within last year)?	No
3) Do you have any moisture staining or performance issues at your exterior walls or ceiling below roofs or decks?	Yes - wall on ceiling above deck
3) Do you have any problems with condensation on the exterior walls or windows?	Yes No
4) Do you have any problems with mould, fungi, or mildew on the exterior walls or windows?	some moss on balcony deck
5) Have you noticed any areas where cold air infiltrates your suite?	Yes - E wall of kitchen
6) Is there "fogging" (moisture between the panes of glass) of any of your windows?	Yes - master bathroom
7) Is there a problem with your dryer vent exhausting properly? Is it clogged?	very slow today clothes
8) Does water pond on your balcony.	No

Provide additional details of any problems noted:

Almost all windows sills have water damage, eg cracked paint & warped wood. They are wet when there is rain & office & kitchen windows have water drip down in a "curtain" of drops from the top of frame, then pools at the lower frame of window.

Thank you,

RDH Building Engineering Ltd.

Project Name: Chelsea Court  
 Project Number: 3122.00  
 Date: March 1, 2007

## OWNER/OCCUPANT QUESTIONNAIRE

Please complete the following questionnaire regarding building envelope performance by March 14, 2007. Your help will assist us in identifying items that need to be addressed for the condition assessment. If you have any questions regarding the questionnaire please call Marcus Dell at RDH Building Engineering Ltd. (604) 873-1181.

Please place the completed questionnaire in the green box in the main lobby area.

Suite Number: 7

Occupants Name: Herbert R. Delores Sturhahn

Phone Number: 604-266-6833

Note, we may call you to discuss the information noted in this questionnaire or to arrange access to your suite. Your number will not be used for any other purpose.

Exterior Wall Facing: North ☐ East ☐ South ☐ West ☐

MAR 12 2007

ec

Y/N and Comments

GENERAL	
1) Have you had any water leaks, within the last year, which have not yet been repaired?	Yes
2) Has your suite experienced water leaks in the past that have now been corrected (no leaks within last year)?	Don't know
3) Do you have any moisture staining or performance issues at your exterior walls or ceiling below roofs or decks?	No
3) Do you have any problems with condensation on the exterior walls or windows?	Yes
4) Do you have any problems with mould, fungi, or mildew on the exterior walls or windows?	No
5) Have you noticed any areas where cold air infiltrates your suite?	No
6) Is there "fogging" (moisture between the panes of glass) of any of your windows?	No - they've been replaced
7) Is there a problem with your dryer vent exhausting properly? Is it clogged?	No
8) Does water pond on your balcony.	No

Provide additional details of any problems noted:

Suspect windows in kitchen. Suspect wall below window  
in enclosed patio on the north side.

Thank you,

RDH Building Engineering Ltd.

Project Name:	Chelsea Court
Project Number:	3122.00
Date:	March 1, 2007

## OWNER/OCCUPANT QUESTIONNAIRE

Please complete the following questionnaire regarding building envelope performance by March 14, 2007. Your help will assist us in identifying items that need to be addressed for the condition assessment. If you have any questions regarding the questionnaire please call Marcus Dell at RDH Building Engineering Ltd. (604) 873-1181.

Please place the completed questionnaire in the green box in the main lobby area.

Suite Number: #9

Occupants Name: CHARPENTIER - ART & MARIE

Phone Number: 604 261 5815

Note, we may call you to discuss the information noted in this questionnaire or to arrange access to your suite. Your number will not be used for any other purpose.

Exterior Wall Facing: North ☐ East ☐ South ☐ West ☐

(all)

Y/N and Comments

GENERAL	
1) Have you had any water leaks, within the last year, which have not yet been repaired? <i>Telephone repairman reported moisture in S. WALL</i>	1. 2nd Bedroom ceiling S. Wall 2. Kitchen bay window - water enters from the top
2) Has your suite experienced water leaks in the past that have now been corrected (no leaks within last year)? <i>connection.</i>	Living room ceiling NE corner
3) Do you have any moisture staining or performance issues at your exterior walls or ceiling below roofs or decks?	Rust lines on South wall
3) Do you have any problems with condensation on the exterior walls or windows?	No
4) Do you have any problems with mould, fungi, or mildew on the exterior walls or windows?	Some black around windows near bathroom shower.
5) Have you noticed any areas where cold air infiltrates your suite?	FRONT DOOR - needs weather stripping
6) Is there "fogging" (moisture between the panes of glass) of any of your windows?	Kitchen window
7) Is there a problem with your dryer vent exhausting properly? Is it clogged?	Seems OK
8) Does water pond on your balcony.	Some - but dries up soon

Provide additional details of any problems noted:

---



---



---



---

Thank you,

## OWNER/OCCUPANT QUESTIONNAIRE

Project Name:	Chelsea Court
Project Number:	3122.00
Date:	March 1, 2007

Please complete the following questionnaire regarding building envelope performance by March 14, 2007. Your help will assist us in identifying items that need to be addressed for the condition assessment. If you have any questions regarding the questionnaire please call Marcus Dell at RDH Building Engineering Ltd. (604) 873-1181.

Please place the completed questionnaire in the green box in the main lobby area.

Suite Number: #10

Occupants Name: J.E. 2nd A.A. Miller

Phone Number: 604-261-6008

Note, we may call you to discuss the information noted in this questionnaire or to arrange access to your suite. Your number will not be used for any other purpose.

Exterior Wall Facing: North ☐ East ☐ South ☐ West ☐ ??

## Y/N and Comments

GENERAL	
1) Have you had any water leaks, within the last year, which have not yet been repaired?	Minor leak in East corner of Living Rm Main Window.
2) Has your suite experienced water leaks in the past that have now been corrected (no leaks within last year)?	Major leak at Floor level on 10th Fl. den- 2nd B.R. Repaired during
3) Do you have any moisture staining or performance issues at your exterior walls or ceiling below roofs or decks?	2005 major renovation Yes: in 11th floor den
3) Do you have any problems with condensation on the exterior walls or windows?	NO
4) Do you have any problems with mould, fungi, or mildew on the exterior walls or windows?	NO
5) Have you noticed any areas where cold air infiltrates your suite?	NO
6) Is there "fogging" (moisture between the panes of glass) of any of your windows?	1 pane in kitchen replaced in 2006
7) Is there a problem with your dryer vent exhausting properly? Is it clogged?	When owners moved in 1999 vent was blocked over - has been fixed
8) Does water pond on your balcony.	See below

Provide additional details of any problems noted:

The south balcony cannot be washed/cleaned properly because the open-ended drains spray water on lower floor balconies. A new down-pipe servicing all the balconies would be very helpful.

Thank you,

RDH Building Engineering Ltd.