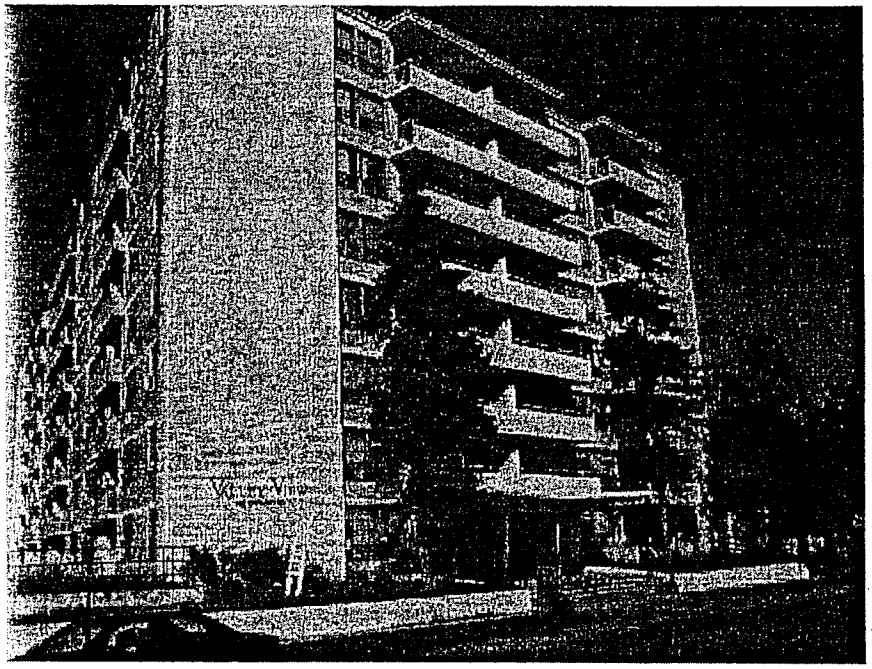
PRETIUM
ENGINEERING LIMITED

320 Woolwich St. S., Breslau, ON N0B 1M0 • Tel: 519-648-3526 • Fax: 519-648-3165 • Email: info@pretiumeng.com



Property Condition Report
165 Ontario St.
St. Catharines, Ontario

Prepared for:

TransGlobe
Property Management Services

5310 Explorer Drive
Mississauga, ON L4W 5H8

Attention: Mr. Daniel Drimmer, M.A., M.B.A.

July 24, 2008
Project: 80-13-089426

Professional Engineers
Ontario

2.2.3. Balconies

Description

Deck	
Structure	Front and rear – cantilevered reinforced concrete slabs Sides – partially cantilevered reinforced concrete slabs
Waterproofing	None

Guards	
Description	Steel frames with solid panels at front and vertical steel pickets at sides
Anchors	Cast into slabs
Photographs	B22, B23, B24, B25, B26, B27

Observations

1. Delamination and spalling was observed on the top sides of approximately 10% of the balcony slabs.
2. Narrow cracks on the top of the balcony slabs running perpendicular to the building were typical. There was generally little evidence of water movement through the cracks. The cracking appears to be positioned at the steel reinforcement and is likely thermally induced.
3. Evidence of previous repairs was observed on the balcony slabs. It was reported that the repairs took place in 2000.
4. The slab soffits have cast drip edges. Peeling paint was observed at the edges and on many balconies past the drip edges to approximately 12" from the edge.
5. The balcony guards are approximately 42" in overall height. The tops of panels are approximately 33-1/2" in height and the opening between the panel and the top rail is approximately 8". The picket spacing at the sides of the guards is 5". The guards are considered climbable (36" minimum to top of panel) and the picket spacing and opening at the top rails exceeds the allowable size (4").
6. The paint finish on the guards and privacy panels is weathered and peeling. Surface corrosion was observed throughout and severe corrosion was noted in a few locations.

Discussion and Recommendations

The balcony decks were generally in fair to good condition. The cracks appear to be at the reinforcing steel. They appear to be thermally induced. The cracks are not a structural concern at this time. Repairs to the spalled areas should be completed. The cracks should be routed and sealed in the near future. If left as-is, concrete deterioration will continue and extensive repairs will eventually be required. Consideration could be given to waterproofing the balcony slab subsequent to the concrete repairs.

The balcony guards are in fair structural condition. Repairs and refinishing the guards will be required in the near future. The guards do not meet the dimensional requirements of the current Building Code. Complete replacement of the guards is at the discretion of the Owner, but should be considered.

The lower panel on the guards covers the balcony slab edges. This will trap debris and moisture and lead to accelerated deterioration of the guard panel and balcony slab. Modifying or completely replacing the guards could be considered.

2.3. Roof Systems

Main Roof

Location	Main
Type	Flat
Estimated Age	20 years
System	Conventional (membrane above insulation)
Protection	Pea gravel
Membrane	Multi-ply built-up asphalt/felt membrane
Insulation	Unknown
Vapour Retarder	Unknown
Deck	Concrete slab
Drainage	4 internal drains
Flashing	Painted metal
Photographs	B28, B29, B30, B31, B32, B33

Observations

1. No destructive testing was conducted; therefore, the exact composition of the roof assembly is unknown.
2. The main roof is divided into two sections by a roof curb.
3. The west end of the roof and the Penthouse roof appear to be older. Ponding, scouring, patching, exposed felts and blisters were observed.
4. Evidence of water leakage was observed on the corridor and suite ceilings at the west end of the building. Evidence of water leakage was also observed at the expansion joint.
5. The balance of the roof appeared to be in better condition, although it appears to be approaching the end of its useful life.
6. There is an expansion joint on the roof. The flashings at the joint are in poor condition and are debonded at laps in the flashing.
7. The masonry chimney has been repaired. The repairs used mismatched brick units wherein two different colours of brick were used.

The operable windows throughout the building are not equipped with limiting devices. Although in some jurisdictions retrofitting existing buildings is not required, Pretium recommends that windows greater than 2 metres above grade be limited to opening no more than 4 inches (as per current Code requirements). The installation of limiting devices is recommended but optional.

The wood balcony doors and frames should be refinished in the near future. The more severely damaged doors should be replaced.

The wood garage doors should be refinished in the near future.

The garage emergency exit doors should be replaced immediately.

A phased sealant replacement program is recommended. The sealants on the south elevation require replacement in the near future. The sealants at the north and east elevations have some remaining life.

2.5. Exterior Walls / Building Envelope

Description

Location	Main
Exterior	Single wythe of glazed clay brick backed with a single wythe of concrete block masonry spanning between the exposed floor slabs.
Insulation	Unknown
Vapour Retarder	Unknown
Interior Finish	Plaster
Photographs	B40, B41, B42, B43, B44

Observations

1. The extent and type of insulation within the wall is unknown, but given the age of the buildings it is likely to be no more than 1 to 2 inches of rigid EPS type insulation, or a 3-1/2" thick batt of fiberglass insulation. The existence of a vapour retarder within the wall system is unknown.
2. The east and a small section of the north elevations have a continuous brick wall that appears to be supported at each floor level by a steel shelf angle. Stains from corroding steel were observed at the floor level. Localized deterioration of the mortar joints at the shelf angle was observed.
3. Localized brick spalling was observed. The spalling was limited to a few small areas on the building. Larger areas of spalled brick were observed on the exterior parking garage walls.
4. A vertical crack spanning most of the height of the building was observed at the south-east corner of the building.
5. Extensive brick replacement has been completed at the chimney. The replacement bricks do not match the original brick in colour or texture.

6. Sealants have been installed at the tops and bottoms of the floor slabs on the west elevation.
7. Efflorescence was observed on the interior of the Penthouse walls.
8. Staining was observed under the windows throughout the building.
9. The paint finish on the exposed concrete floor slabs and shear walls is weathered and peeling.

Discussion and Recommendations

The exterior masonry walls at the east end of the building are supported at each floor level by a steel shelf angle. Staining and mortar joint deterioration indicate that the steel shelf angles are corroding. The corrosion does not appear to be a structural concern at this time; however, the corrosion can eventually result in problems with brick spalling or shelf angle strength diminution.

In the short term, the cracks in the brick mortar joints should be repaired. Areas with loose bricks should be repaired immediately due to the hazard they present. Application of a water repellant or breathable coating could be considered. These actions will minimize water ingress and the rate of corrosion of the shelf angles.

The condition of the shelf angles should be monitored periodically. Notwithstanding the work identified above, the shelf angles will continue to corrode.

Repairs to the spalled bricks on the garage walls are recommended. The garage walls are subject to more freeze-thaw cycles than the building's walls, due to the fact that they are not heated on the inside. This results in accelerated deterioration of the bricks. Application of an insulated cladding system could be considered.

Efflorescence on the interior of the Penthouse walls indicates that water is penetrating the walls. Application of a breathable coating or cladding system could be considered.

The crack at the south-east corner of the building appears to be thermally induced and is not a structural concern. The crack should be sealed to prevent water ingress. The crack should be monitored and any loose masonry removed due to the hazard it would present.

The sealants at the tops of the floor slabs on the west elevation will trap moisture within the wall. They should be removed.

Consideration should be given to refinishing the exposed slab edges and shear walls. This is a cosmetic repair and is at the discretion of the Owner.

C#4

Durex®

Dur-X-Cel 100

Exterior Grade Acrylic Latex Paint

PRODUCT DESCRIPTION:

DUR-X-CEL 100 is a 100 % flat acrylic based paint.

BASIC USES:

DUR-X-CEL 100 is used as a premium quality paint for exterior masonry and concrete surfaces.
DUR-X-CEL 100 can be pigmented to match almost any colour.

ADVANTAGES:

- exceptional exterior durability
- excellent water repellency; protects wall from moisture penetration
- breathable coating; allows water vapour within the wall system to evaporate
- excellent adhesion to substrate
- abrasion resistant
- colourfast (no colour change under ultra-violet rays)

LIMITATIONS:

DUR-X-CEL 100 is not recommended for use:

- over previously treated surfaces without proper preparation
- surfaces where oils and other contaminants are present
- when ambient, surface and material temperatures are below 5°C (41°F) during application and curing period
- under hot sun conditions nor under high humidity conditions
- for 48 hours prior to, during and for minimum 24 hours after inclement weather conditions

APPLICATION:

DO NOT SUBSTITUTE NOR COMPENSATE **DUR-X-CEL 100** WITH WATER OR OTHER ADDITIVES.

Substrate to be treated must be dry, clean and sound, free of weak and powdery surfaces, free from ice, snow, dew and frost, oil, grease and other deleterious materials detrimental to a positive bond.

Check with **Durabond Products Limited** for questionable surfaces.

Thoroughly stir **DUR-X-CEL 100** in its' own pail before each use. Discard all frozen materials, materials which have formed solid lumps at the

TECHNICAL DATA

Physical Properties:

Product type:	Water based acrylic coating
Appearance:	Dense paint-like consistency
Viscosity:	10,000 to 15,000 cps
Ph level:	9.0 to 9.5
Toxicity:	Non-toxic

Performance Characteristics:

Please refer to Dur-X-Cel 50 data sheet in Group D for test results.

0990.0 PHOTOCREATIVE PRODUCTIONS

bottom of the container and materials which do not appear to be of a homogeneous viscosity.

Using a 6.4 mm (1/4") pile roller dip roller into stirred pail of material. Apply the paint with several passes of the roller, evenly spreading the paint over the entire substrate surface. Allow a minimum of 24 hours for drying between coats.

CLEAN-UP:

Clean all tools promptly after each use with clean water. Do not allow paint to dry on tools. **Durex Cleaning Solution CS-100** is available to aid cleaning of soiled areas where the **DUR-X-CEL 100** has dried.

STORAGE:

Store **DUR-X-CEL 100** in a dry, vented, waterproof location, stacked off the ground with ambient temperatures above 5°C (41°F). Keep materials dry, protected from rapid temperature changes, from dampness and moisture and away from direct sunlight.

KEEP FROM FREEZING.

PACKAGING:

DUR-X-CEL 100 is packaged in 18.9 litre pails.

DUR-X-CEL 100 is available in 28 standard colours. Custom colour matching is available upon request at a slight additional charge.

COVERAGE:

Coverage will vary according to the porosity of the substrate, colour of original substrate and colour of the **DUR-X-CEL 100** to be applied.

Average coverage:

one coat : 5.6 m2/L (1200 ft2/pail)
two coats : 3.9 m2/L (800 ft2/pail)

A TEST SAMPLE SHOULD BE APPLIED TO ESTABLISH PRACTICAL COVERAGE ON THE ACTUAL SUBSTRATE.

WARRANTY:

Durabond Products Limited fully warrants their products when used and applied in strict accordance with the printed instructions on product mixing and product application. In any case **Durabond's** responsibility shall not exceed either the refund of the purchase price, or the replacement of the purchased product.

TECHNICAL SERVICES:

Technical assistance for unique applications and design is available upon request from **Durabond Products Limited**.