



**Heritage Impact Statement (Conservation Strategy)
Supplementary Report
The Burano
832 Bay Street
Toronto, Ontario**

PREPARED FOR:
Bay Grosvenor Developments Limited

PREPARED BY:
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ISSUED:
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EXECUTIVE SUMMARY

- This report supplements the Heritage Impact Statement (HIS) dated August 11, 2006 (Application submission)
- It provides an update on issues arising from the development of the project and proposes a revision to the heritage conservation strategy. The revised strategy deals with anticipated geotechnical site conditions and technical issues arising from the proposed construction methodology, as investigated by E.R.A. in consultation with the geotechnical and construction experts on the project
- The basic configuration of the proposed 48-storey residential condominium tower including a 2-storey podium, incorporating the heritage designated facades on Bay and Grenville Streets of the former Addison car sales showroom, is not altered
- The HIS of August 2006 proposed that the heritage facades plus part of the 2-storey heritage building would be retained in place during the excavation and construction of the basement parking garage. The retained portion of the building would contain the designated interior decorative columns and ceiling of the former car showroom
- Detailed site investigations and information learned from a construction site directly adjacent to the Burano, also owned by Lanterra Developments, indicate that the soils beneath the foundations of the heritage facades are low quality glacial deposits that are poorly consolidated
- Because of the narrow width of the property, the basement garage walls need to be constructed as close to the lot lines as possible
- This means excavating for the new foundation walls within 0.5 m of the designated facades
- The Geotechnical Engineer for the project has advised that, however well and carefully the foundation wall trench is excavated, the risk of subsidence of the strata beneath the foundations of the designated facades is high
- Subsidence will result in settlement and cracking of the façade masonry and concrete frame

Revised strategy

- The revised strategy therefore proposes that the designated facades would be measured, dismantled, salvaged, stored and reconstructed on the new concrete building structure once it is constructed
- The new basement garage foundations walls are to be formed by the slurry wall technique, but the logic would be no different if they were to be done in the more-conventional augured caisson wall technique

- A supplementary reason that reinforces the reconstruction logic of the changed strategy is that the excavating equipment is large and cumbersome and adds the risk of the facades being damaged when it is working in close proximity
- The revised strategy also proposes that the southern part of the building be demolished and the decorative interior elements reconstructed within the new building, from moulds and accurate survey drawings
- The proposed demolition results from the necessary extension of the basement, parking garage to the south lot line, to meet the minimum necessary parking supply
- The structure of the new building has been adjusted to locate the columns of the correct octagonal section to permit an accurate reconstruction of the interior features
- The extension of the parking garage also extends the part of the designated façade at risk from subsidence, associated with the excavation, to its full length

Developed Conservation Strategy

- The remainder of this report deals with conservation issues of dismantling and reconstruction, fenestration and designated substances
- Current plans of the development and information about previous conservation work are contained in Appendices

Conclusion

- The dismantling and reconstructing of the facades will result in a more predictable and satisfactory finished result
- Proposed revisions to the conservation strategy have only been made following careful investigation and analysis of the possible heritage conservation alternatives and balancing loss of heritage authenticity against potential substantial damage to the designated elements.
- This proposal represents the best solution recognizing the various heritage, planning and technical issues affecting the important heritage components of the development

1 . I N T R O D U C T I O N

The Heritage Impact Statement for the Burano mixed-use development was submitted to the City in August 2006. The evolution of the project, since then, has been affected by a public consultation process and by the requirements of the construction methods related to its constrained inner city site.

This supplementary report is intended to provide an update on the evolution of the project since 2006, describing the related changes to the construction methods and defining the potential impact on the heritage resources on the site. It should be read with reference to the existing Heritage Impact Statement, as well as the drawings prepared by architectsAlliance, dated February 29, 2008.

The basic configuration of the proposed development, as shown in the drawings by architectsAlliance, dated February 29, 2008, has not altered from that presented in the Heritage Impact Statement of August 2006. The essential elements of a 48-storey residential tower, including a 2-storey mixed-used podium, remains the same. The podium will still house retail and a residential lobby at grade, residential units on the second floor and an outdoor/indoor amenity space on the third floor/ roof.

2 . C H A N G E S T O T H E C O N S E R V A T I O N S T R A T E G Y

The original conservation strategy described in the 2006 Heritage Impact Statement called for the retention in place and conservation of:

- **the heritage-designated facades along the Bay and Grenville Streets elevations**
- **the southern part of the 2-storey heritage building to protect the designated interior elements**

However, technical information about soil conditions on the site, which has come to light since 2006, has serious implications for both of these heritage elements included in the Reasons for Designation.

New geotechnical information about the Burano site has been learnt from the excavation of the basement of the Murano, a residential condominium by the same developer, Lanterra Developments, on Bay Street, directly to the east, which is well into construction. There poor quality glacial deposits were encountered when excavation had reached the sixth level of the basement floor.

On the Burano site, recent geotechnical boreholes and an investigation pit dug through the ground floor slab, both revealed similarly poor soils, both near the surface and deeper down, that have far-reaching implications.

Heritage facades

The walls of the heritage facades are carried on conventional concrete spread footings that bear on these unconsolidated glacial soils. See Fig.1 for the configuration. There is a very great risk of subsidence in these soils when the new foundation walls for the basement parking garage are excavated. If the facades were kept in place, the excavation would necessarily be very close, approximately 0.5 metres away, because the narrowness of the site requires that the new foundation walls be constructed as close as possible to the lot line to maximize parking space.

It is the opinion of the project geotechnical engineers, McClymont and Rak, Engineers, that the risk of subsidence of the soils beneath the façade foundations is very high, leading to local loss of support and settlement and cracking of the heritage masonry and the concrete support frame. Please see the engineer's letter in Appendix 6.3.

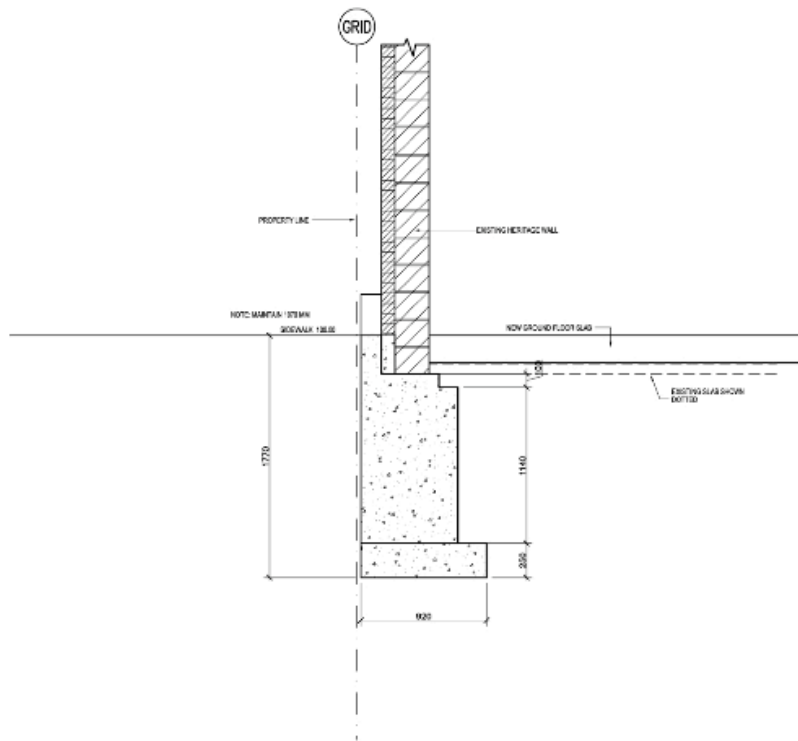


Fig 1. Existing footing condition at heritage wall

The basement foundation walls are very deep at 22 m (75 ft.) and therefore 600 mm wide for structural strength. That means that large amounts of material will be removed by every pass of the clamshell excavator, which only increases the risk of subsidence.



Fig. 2 Clamshell excavator for the foundation walls

The clamshell excavator is operated by a crane and suspended on a steel cable. It is laterally restrained, but operating within 500 mm (20") of the heritage wall any small movement of such a large piece of equipment due to wind or operator error could cause disproportional damage to the masonry through collision.

The strategy was reviewed with the construction experts and engineers on the project, and a specialist heritage contractor, in order to be assured that the protection of the historic fabric was always the principal concern.

Designated interior elements

The risk of poor quality soils at deeper levels, as encountered at the Murano, has led to the decision to limit the basement of the Burano to 6 levels, rather than the seven originally planned. The deficiency in the required parking stall provision needs to be made up by extending the basement floor plate to the site boundary at Grenville Street over six floors.

The southern portion of the existing building cannot be supported in place during this basement excavation and thus the designated interior showroom with its decorated columns and ornate coffered ceiling cannot be retained in place and conserved.

The decorative plaster elements in the showroom are all applied directly to the concrete frame of the building. The parts of the frame such as the columns are integral to the structure and cannot be separated for salvaging.

Thus it is proposed to form the new concrete structure to suit the decorative scheme, including new columns, cast in the existing locations and replicating the octagonal shape and the high slab ceiling with downstand beams reconstructed to enable the original ornamental plaster decoration to be replicated.

Site moulds of each plaster element will be made and new components cast to replicate the ceiling and column ornament. These will be fastened onto the concrete and finished in the traditional manner, matching also the original paint scheme if that still survives for analysis.

These changes to the previous HIS result from the design development process for the project, as well as a more complete understanding of the construction strategies necessary to complete the work while simultaneously protecting the designated heritage building fabric. Retention and protection of the character defining heritage attributes of the building was of primary concern throughout the evaluation process, and used as the basis for the conservation strategy put forward in this supplementary report.

3 . DEVELOPED CONSERVATION STRATEGY

Heritage facades

To safeguard the east and south elevations, including the angled main entrance elevation at the corner of Bay and Grenville Streets, of the building described in the Reasons for Designation, we recommend the following procedures for their conservation by dismantling and rebuilding:

1. The decorative elements - stone veneer, brick veneer and metal windows - would be protected by salvaging, dismantling, temporarily moving them off site, storing, repairing and rebuilding on the concrete frame of the new building.
2. The salvaged elements, removed prior to the start of new construction, would be numbered and catalogued, and their location noted on drawings so that they could be returned to their original positions and orientations.
3. Also prior to the dismantling, the designated elevations would be measured, recorded and photographed from the scaffolding to capture the existing geometry and size accurately.
4. A stockpile of bricks would also be removed from the non-designated elevations to supplement the salvaged bricks during the rebuilding.
5. All stone elements would be crated and bricks palletized for protection during transport to the storage site and shop.
6. While at the shop existing damage to the limestone units would be repaired with stone Dutchmen or patching compound.
7. Metal windows while at the shop would also be repaired by piecing in or replacement of elements with matching sections and prime painted for reinstallation.
8. Reconstruction of the salvaged elements on the new concrete building frame would be undertaken using the survey drawings, heritage architectural working drawings and shop drawings prepared for the jointing and anchoring of the stones.
9. The brickwork panels would be reconstructed as a 205 mm (8") thick, double wythe veneer to provide sufficient mass to prevent frost damage and detailed with a cavity, cavity trays and weep holes.
10. The masonry work will be laid up using lime-based mortars suitable for the limestone and rugged bricks.
11. All masonry elements will be fastened with stainless steel anchors for durability.

12. Window lintels will be replaced where necessary (many were replaced in the 1990s) with hot-dip galvanized engineered steel sections.
13. The reconstruction work will be undertaken by a specialist, heritage masonry contractor.
14. The ground floor windows of the existing building have been altered over the years and are now mostly modern storefront inserts. The only surviving bays with divided light windows on the ground floor are at the north end of the Bay Street façade. See the photomontage of this elevation as existing in Fig. 3 and the drawing as proposed in Fig 4.



Fig. 3: Photomontage of the Bay Street (East) Elevation as existing

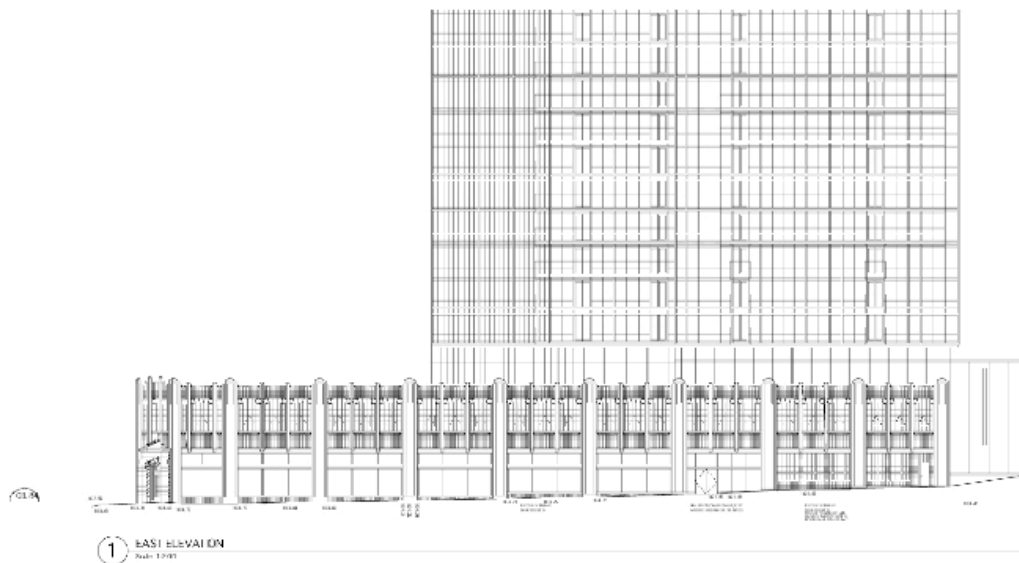


Fig. 4: East elevation of the existing building as reconstructed

15. To suit the new ground floor uses it is proposed that the pattern of storefront windows will be maintained, the service bay entrance will be altered to match the typical storefront and the north vehicle entrance will be made to match the original bay adjacent to provide windows for a new retail space.
16. The third bay from the north on Bay Street becomes the main entrance to the residential condominium and is aligned with the tower circulation and elevator core. Heritage elements from this bay will be salvaged to alter the north vehicle entrance bay.

17. The existing divided light, single-glazed, steel windows on the second floor, mostly replaced in the 1999 restoration to match the original pattern, will be salvaged, refurbished and reinstalled in the rebuilt façade. Interior storm glazing may be installed as these windows will serve residential units. The existing opening lights will be maintained to provide ventilation to the units.
18. The wood doors and windows above on the splayed corner entrance will be salvaged, refurbished and reinstalled in the reconstructed masonry openings. The original McLaughlin building name, incised into the stonework over the entrance will be maintained.

Designated showroom

1. Because of the practical requirements of providing storage, bicycle storage, elevators and the parking ramp on the ground floor, the showroom will be smaller than the existing area. See the ground floor plan in Section 6.1.
2. However it has been planned so that the two main original column lines will be reinstated so that both the grid of ceiling coffers and the adaptation of coffers to suit the wedge shape of the room along Bay Street will be interpreted.
3. Before any demolition occurs latex rubber moulds of all the plaster elements will be taken on site and the geometry of the ceiling and columns measured and documented.
4. The survey documentation will be submitted to Heritage Preservation Services for review. The moulds will be available for review by HPS at the fabrication shop before any castings are made.
5. The cast in place concrete work for the columns and downstand beams needs to be accurate and well finished for the surfaces will be coated with a skim coat of plaster to give them the same soft texture of the originals where they are not concealed by plaster mouldings.
6. There is no obvious site evidence of a colour scheme associated with the plasterwork. However during the demolition of the building further detailed site investigations will be made regarding colours and finishes.

4 . SUPPLEMENTARY INFORMATION

As part of this necessary re-evaluation of the heritage conservation strategy, limited selective opening up of the fabric was undertaken to ensure that the construction assemblies were amenable to safe dismantling and re-erection.

Bricks were removed from the veneer panels at the junction with the stone-clad columns. The stones are a 100 mm (4") thick veneer with a 25 mm (1") cavity tied back to the concrete structure. The brickwork is a 205 mm (8") thick, brick veneer, in Common Bond, with a small cavity and tied back to concrete blockwork backup.

The construction has a simple geometry, with some variations at the columns that will be recorded before dismantling begins.

The building underwent a \$1.5 million restoration and renovation in 1999, under the direction of Taylor Hazell Architects Ltd. We understand from the current owner and conclude from site investigation that this work was confined to the exterior walls and parapet elements, and was thoroughly executed and addressed the necessary repair issues.

Stainless steel helical ties were extensively used to secure the stone cladding on the Grenville Street and Bays Street elevations. They were installed through the stone face and the holes filled. There was a concern that the ties might make dismantling difficult. The selective opening up showed that the ties, located near the top of the stones, can be readily cut from the cavity behind.

The 1999 repairs and the resulting good condition of the fabric will aid the success of the proposed dismantling and reconstruction of the elevations

5 . DESIGNATED SUBSTANCES

A hazardous substances survey of the Addison Motors building was carried out during the design development stage. Testing showed elevated levels of lead in the bricks and in the mortar up to 190 ppm. This level is typical of urban environments and probably was deposited when lead additives were common in gasoline and formed part of exhaust fumes.

At lead concentrations in the soil below 400 ppm, site-specific action is usually not necessary. In the salvaged bricks the lead is less accessible than in soil and therefore at levels less than 200 ppm can safely be reused.

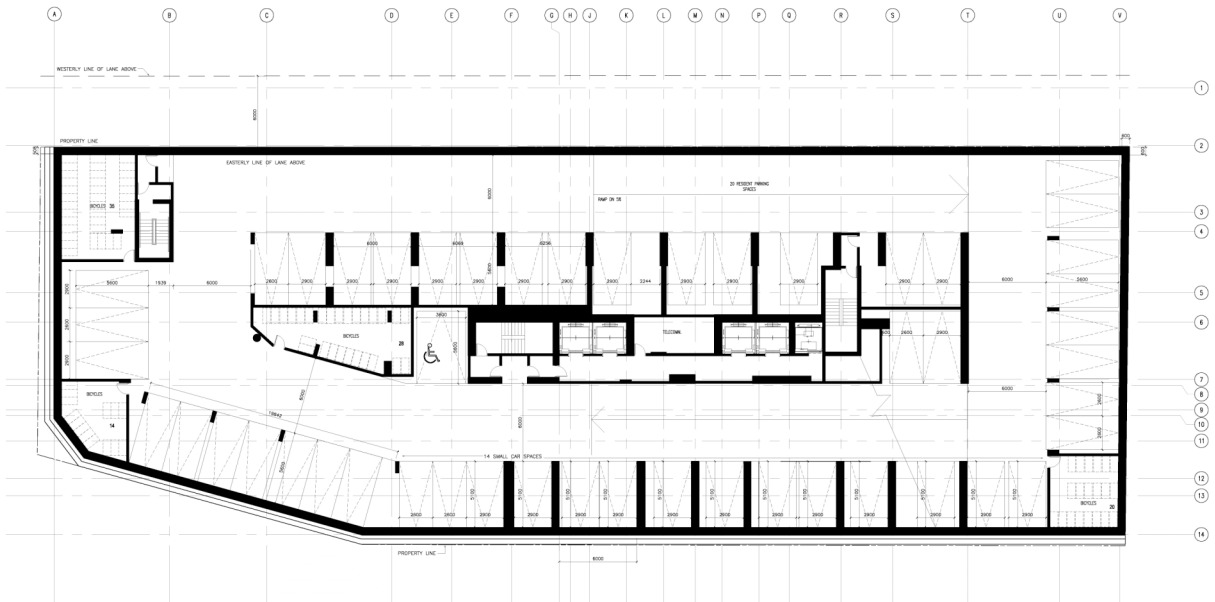
The stones did not show any absorption of lead contaminants.

APPENDIX 6.1 PROPOSED ARCHITECTURAL CHANGES

Changes to the plans since the August 2006 submission are provided for information.

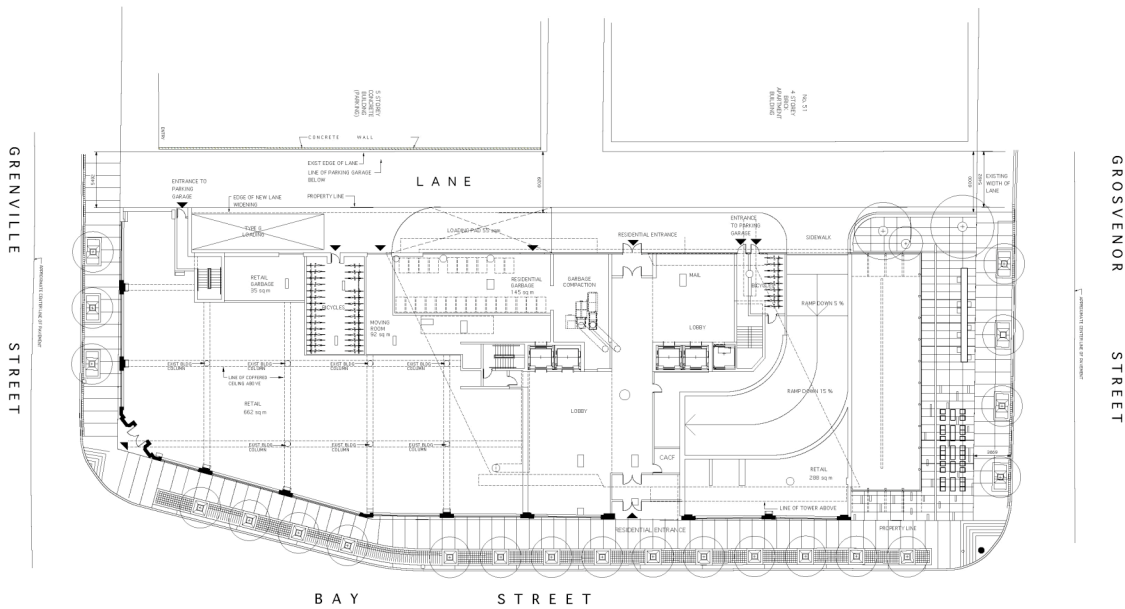
Basement Plans:

- Parking now extends over the whole site on six levels, whereas before it was limited to area north of the partial basement
- This plan shows the proposed structural wall system



Ground Floor Plan:

- The significant change is the removal from the project of the two-storey part of the existing building previously proposed to be retained
- The additional area of new building would still serve as retail space on this floor
- Other changes to the ground floor layout, in particular a new recessed loading area, tenant entrance and parking garage ramp, do not affect the heritage elements



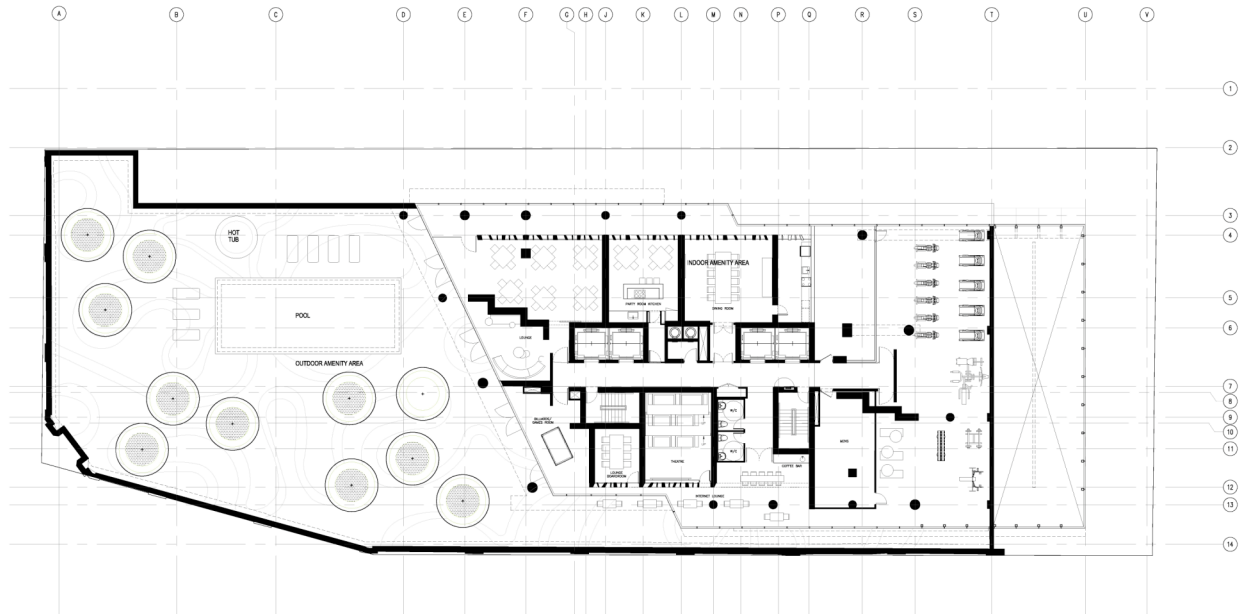
Second Floor Plan:

- The new part of the second floor at the south end of the site, where previously the existing building was to be retained, would now house new residential units, the pool mechanical area and offices
- The remainder of the second floor is changed only in the refinement of the previously proposed accommodation



Third Floor/ Podium Rooftop Plan:

- The new part of the third floor/ podium roof at the south end of the site, where previously the existing building was to be retained, would change only in the detailing of the pool deck landscaping
- Changes to the third floor accommodation are limited to layout details



End of Appendix One

A P P E N D I X 6 . 2 S U M M A R Y O F C O N S E R V A T I O N W O R K
C A R R I E D O U T B Y T A Y L O R H A Z E L L
A R C H I T E C T S

The building underwent a \$1.5 million restoration and renovation in 1999, under the direction of Taylor Hazell Architects Ltd. We understand from the current owner and from site investigation that this work was largely confined to exterior walls and parapet elements, which includes but is not limited to:

- Complete dismantling and reconstruction of upper floor exterior walls on the east and south elevations above the second floor window sill line, between the wide stone piers, including replacement of steel framed divided-lite windows to historic appearance.
- Dismantling of roof parapet to the concrete beam and removal of roof asphalt paving to the concrete deck and approximately 1066mm from the parapet face. The parapet was repaired, waterproofed and rebuilt, and the roof adjacent to the parapet resurfaced with asphalt.
- The addition of concrete block back-up behind the narrow limestone piers on the interior side of the second floor widows, with new structural steel columns installed behind the piers and tied into the concrete roof deck and second floor deck to stabilize the rebuilt second floor outer walls.
- Dismantling, repair and reconstruction of upper portions of the wide limestone faced piers on the east and south elevations separating the bays, including some to the window sill line or even to grade.
- The insertion of helical masonry ties on the entire height of the wide limestone piers between the bays to tie the stone facing to reinforced concrete blockwork backup. On the east elevation, the ties were inserted into the thin joints between the limestone units, and on the south elevation the helical ties were inserted through the facing stones.
- Complete replacement of deteriorated narrow limestone pier and window arches above second storey windows on the south elevation.
- Dismantling, repair and reconstruction of some brick spandrel panels between the first and second floors.
- Replacement and/or repair of ground-floor decorative lanterns on the stone piers, east and south elevations.
- Selective replacement of steel lintels over first floor window and door openings and Jahn patching compound repairs to damaged limestone lintels above.
- Selective stone Jahn repairs on limestone piers and above window and door openings, east and south elevations.
- Selective replacement of the steel-framed, single-glazed, multi-paned windows with matching frame sections

APPENDIX 6.3 LETTER FROM GEOTECHNICAL ENGINEER

02/26/2008 12:42 FAX 9058311722

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G3080

February 26, 2008

Lanterra Developments, Ltd.
3625 Dufferin Street
Toronto, Ontario
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Attention: Mr. Mark Mandelbaum, LLB
Chairman

Dear Mark,

**Re: Heritage Wall
Burano Condominium**

As you know, I have been doing deep shoring/foundations in Toronto for the last four decades, always hands on/in the excavation.

Our firm completed a borehole investigation of the site, and the results indicate that the masonry wall is supported on relatively weak soft clayey silt tills. Details of the investigation are presented in our geotechnical report G3080 dated August 2007.

It is my opinion that there is a high probability that the masonry wall, which is supported on these weak/soft soils, will start cracking, uncontrollably, during the proposed deep shoring installation/excavation.



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Therefore, I recommend that, in order to protect the heritage wall, it should be dismantled prior to the shoring/excavation stage.

Respectfully,
McClymont & Rak Engineers Inc.

Lad Rak, P.Eng.

LJR/tr