

## GREEN PHOENIX UPDATE (May 2005)

### Church Design Committee

The church design committee has met, communicated with the architect, and hosted a congregational meeting Sunday May 1<sup>st</sup>. A large portion of the congregation attended that meeting and valuable feedback was given directly to the architect Seteve Hilditch. In general, the congregation was approving of a new King Street main entrance to the church, separate from the apartment lobby, ensured that all areas of the church related space would be accessible to the mobility-impaired, and was enthusiastic about a new east-west alignment of the sanctuary. The architect has produced drawings revised as above and these have been circulated to the committee and to the congregation. The church was setup in roughly the proposed way on Sunday May 8<sup>th</sup>, and again this was met with support, although it pointed out some problems. The architect will now work on refining detail.

### Community Consultation Committee

The first meeting of this group was March 5<sup>th</sup>. The second was April 11<sup>th</sup>. Minutes are circulated widely, and include local agencies, the local resident's association, the city councillor and her assistant, the local public school and its parent council, many neighbours, and persons on the present waiting list. The purpose of the committee is to act as an access point for community input, and also to assist in the flow of information to the public. A meeting was set for Monday night, May 16<sup>th</sup>, and advertised widely to the public, including the councillor's regular e-newsletter. *[These notes are being written prior to that meeting.]*

### The Integrated Design Process ("IDP")

The purpose of designing the project this way is to maximize the potential for good design, and minimize disruptive and expensive changes later. Therefore all of the design and engineering consultants should be available from the very beginning. Thus no-one will be designing work which will have to be undone or changed later when a new consultant comes on stream. Three IDP meetings have been scheduled.

Two IDP meetings have already been held, on April 27<sup>th</sup> and May 5<sup>th</sup>. The 3<sup>rd</sup> and final one is set for May 26<sup>th</sup>.

The most important results have been:

**Structural:** Slab-on-grade construction using precast panels for speed and economy. Foundation by tubular caissons. Because a large part of the cost of this method is bringing boring equipment to the site and the actual drilling, we can save money by boring the holes wider and deeper, and using them as the geothermal wells. If the caissons are three feet in diameter or so, the wells need not be deeper than the 50-foot depth of the shale bedrock. Many issues need to be worked out, relating to attachment to the existing building, the wall assembly, and construction techniques for a portion of the fourth floor which may be cantilevered.

**Heat source:** Besides geothermal, there will be solar hot water collectors and a solarwall to preheat ventilation air. Various designs are being developed to capture waste heat (water/air).

**Layout:** because of feedback from the community, more multi-bedroom and fewer bachelor units are being designed into the new construction portion.

**Electrical:** because of various conservation measures over the past few years, it's now been determined that we have enough capacity in the existing electrical service to 1355 King for both the new construction and the conversion of 1339 to residential. 1339 will need to be completely rewired.

**Landscaping:** A plan has been formulated to install green roofs on all new roof surfaces. One portion will be intensive ( deep soil, possible food production) and one will be extensive (thin soil, grasses and potted plants.) There will continue to be (potted) trees at sidewalk level.

**Stormwater management:** A cistern to store rainwater is being investigated for its structural implications. Using the water for flushing toilets is feasible. We have representatives attending a City of Toronto design charrette this month which may identify construction projects as pilots for rainwater re-use.

**Brownfield remediation:** A portion of the subsurface under the parking lot has tested over the guidelines for lead and polyaromatics. I have authorized further lab testing and also more drilling to define the extent of the hazardous contamination. One set of lab tests came back the week of May 9, eliminating some worries regarding groundwater, and focusing the problem to one horizon in a limited area of the parking lot. As I write this, I am visiting the drill rig in operation today and the findings are consistent: a layer of combusted coal and ash was spread over the loose brick backfill when the church was demolished in 1976. This layer will have to be excavated and trucked to a landfill which is licensed for this purpose. ( A by-product of the environmental assessment is that we have a very good picture of all the services which criss-cross our site.) Also, the red brick backfill is extremely porous. If it can stay clean during the remediation, it may provide an opportunity for stormwater retention.

**Retrofit of 1355:** An important result of the IDP is the decision to include the upgrading of the existing 28-year-old high-rise in the design plans. So far, that means:

- a radiant heat retrofit has been sketched out to convert space heating from electricity;
- a way of collecting the apartment exhaust air so its heat can be recaptured;
- a way of insulating the floor slab exterior edges (the greatest source of thermal bridge);
- a way of capturing the heat from waste water with a module at the main sanitary drain;
- include line meters so heavy electricity use by individuals can be monitored for surcharge.