# GO Transit

## TYPE TREATMENTS REPORT

Prepared for

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## Project overview

As an adjunct to the May 2002 written report on Pickering GO signage, we prepared typeface samples for use in future candidate signage redesigns. The purpose was to provide visible examples comparing the performance characteristics of a number of fonts that could be used to replace the current Helvetica, which was also included in the sample range.

## Range of type samples

The six typefaces were shown in four variations each – positive and negative sharp and blurry. "Positive" means black type on white; "negative" means white type on black. "Sharp" means normal unaltered type. The "blurry" settings used an Adobe Illustrator effect (19 points of Gaussian blur) to simulate severe visual impairment. (The available research on simulated visual impairment was either unavailable or inapplicable. We used our own simulation.)

## Sign format and copy

The same sign format and copy were used in all cases, with unchanged type sizes and linespacing throughout and exactly the same symbols (arrows, wheelchair icon, elevator icon, exit block). The only variation was the typefaces used in the copy.

The sign we designed is a composite simulation of a plausibly complex sign with multiple hierarchy levels; it indicates destinations with arrows pointing in several directions. The simulation does not correspond to any real sign or architectural configuration anywhere in the GO system, nor should it be considered a proper template for any improved signage system.

## Type terminology

Some terms used in typeface specification are helpful to understand here.

- *X-height* is the height of a lowercase letter like *x, e,* or *a.*

- A *descender* is the part of a character that hangs below the invisible baseline on which most characters sit; *g, y, p, q,* and *j* are letters with descenders, though some other characters can have them. An *ascender* is the part of a character (almost always a lower-case letter) that extends upward from the highest point of typical lower-case letter; *b, d, h, k,* and *l* have ascenders, among other characters.

- *Lining figures* are numerals that all occupy the same area (an imaginary box surrounding the number) and do not descend or ascend. Nearly all the numerals one might find in printed text are lining figures. *Ranging figures* have descenders (usually 3, 4, 5, 7, 9) and ascenders (usually 6, 8).

- *Small capitals* are upper-case letters designed to be slightly larger than lower-case letters while having the same stroke weight (darkness or colour) as the rest of the font. (Regular capital letters that are shrunk down in size look lighter and spindlier than custom-designed small caps.)

- *Sans-serif* typefaces have no or few finishing strokes at the ends of letters. *Serif* fonts have such strokes.

## Functional comparisons

As detailed in the previous report, typeface selection for a signage system must rely on function or performance and not on extraneous factors like familiarity, habituated usage, or æsthetics.

Here, the issue is "How well does it perform? Can people read it?" and not "Do I like it? Does it look familiar?"

"Performance" in this context includes:

- Materials used to construct signage

- Light levels

- Placement

- Ruthlessly consistent usage throughout a system (including signage, schedules, notices, ticketing, and marketing collateral)

- Usability under adverse conditions (nighttime, inclement weather, while in motion, under visual impairment)

Attractive and appealing typefaces and treatments can and should be adopted, but if and only if they meet functional criteria. Make it work first, then make it look nice.

## Goals of an improved signage system

- Reduce visual clutter

- Consolidate functions

- Make every sign look explicitly, carefully, and systematically designed. Viewing such signs, passengers think "They really mean it"

- Streamline accessibility and safety

## Typeface comparisons

- Helvetica is used strictly as a control sample. The other five typefaces are provided for discussion purposes; all are sans-serif typefaces designed within the last decade.

- Samples use small capitals and italics to indicate hierarchy and emphasis when they are present in the typeface family.

- A font chosen for a signage system has to work not only on signs per se but in related printed matter, like schedules and legal notices. This criterion alone will eliminate some candidate fonts.

The following discussion gives some of the pros and cons of each typeface's performance characteristics and only makes sense when read alongside the actual printouts.

**Helvetica** (Max Miedinger, 1957 [!]): Very large x-height; no small caps; conspicuously constructed, quasi-geometric, hence confusable character shapes; numerals hard to differentiate even in sharp versions; recent variations have superb, and very tight, default letterspacing; overused, though rarely used as a result of conscious choice and due diligence



**Agro Sans** (Luc[as] de Groot, 1997): Strong x-height; ascender and cap heights similar; full character gamut, including small caps; lining figures only; *l* has a tail; bold is quite noticeably bolder than roman; well-differentiated numerals; adequately legible in blur

**Kievit** (Mike Abbink, 2001): Ranging figures and small capitals; ranging figures too literary and hard to differentiate; unremarkable generally; poor performance in blur
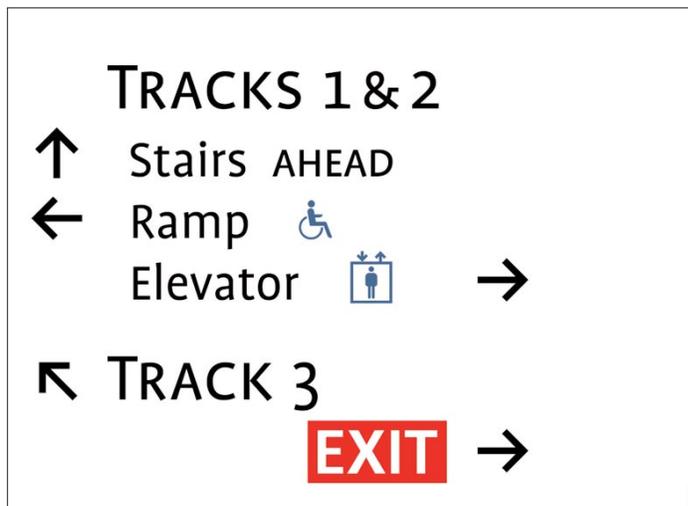


**Profile** (Martin Wenzel, 1999): X-height appears small because height of capitals is low and height of ascending characters like *l* and *d* is high; bowl of letter *a* sits very low, but bowl of *e* sits very high; lapidary chiselled stroke endings too fussy and distracting; blurs to obscurity

**Tiresias** (John Gill et al., 1998): Typeface family ostensibly designed for legibility by the visually-impaired. Single weight, without even italics, let alone small caps; very bold – too bold for use in signage-related printed matter; highly-discernible character shapes; default letterspacing is very wide, allowing it to survive blur very well



**Transit** (MetaDesign, 1997): Typeface family designed for usage in signage systems. Has custom-designed positive and negative versions and a separate version for backlit signs; sets very narrow; tight letterspacing by default; ascender and cap height almost identical, with high x-height; no small capitals; survives blur reasonably well

## Challenge for GO Transit

GO is faced with the challenge of bringing its signage and wayfinding unequivocally into the 21st century. The standard of comparison in transit-system signage is Europe, not Canada; European transit systems engage qualified designers to apply state-of-the-art research and design acumen to a problem that, in Canada, has historically been given short shrift.

GO Transit needs to understand the magnitude of the project. The existing system cannot and should not be fixed by tinkering; it needs wholesale replacement. Outside experts can assess the existing system objectively.

## Recommendations

Each candidate typeface has pros and cons, so we have elected not to provide a firm recommendation for one face over the other. Nonetheless, we recommend ruling out Helvetica for any future signage redesign.

A final typeface choice would have to take place in, for example, a project in which the entire signage system is conceived as a whole, with full testing and much more detailed real-world design mockups. We would consult with typeface designers (and explore development of custom fonts or custom font variants) and test a wider range of candidate faces.

We will, however, recommend that GO Transit engage a project in which Pickering station's entire signage program is rethought, rationalized, researched, redesigned, tested, installed, and re-tested. We would be pleased to submit a bid for any such project (including a bid submitted under tender).