

# How do I use Elevate to design to the Property Council of Australia guidelines?

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Most country guidelines summarise key design parameters in order to localise international design recommendations published by international authors and lift companies. Because of the brevity of these documents, they are subject to interpretation. Often there are arguments as to whether or not the lift service can be said to reach the required standard.

On 3 December 2013 Dr Peters hosted an open forum meeting in Sydney, Australia to review the lift planning recommendations “A Guide to Office Building Quality” published by the Property Council of Australia (PCA) in 2012, make suggestions for improvements, and host an open discussion. Dr Peters’ comments included:

- In Australia the term Waiting Interval has been used to describe Interval. This can be confusing and inconsistent with the rest of the world.
- The Interval targets given by PCA for conventional and destination control are both given in terms of “Waiting Interval”. This is confusing as (Waiting) Interval has no value as a quality of service measure for destination control; a fact that is dealt with by the PCA using a different definition of Waiting Interval (akin to Average Waiting Time) when analysing destination control performance.
- A proposal to move towards consistency of definition by using the published CIBSE Guide D for definitions, which is updated on a regular basis, represents the latest research and is peer reviewed.
- A suggestion that when the PCA guidelines are next revised, a more robust and definitive guide line is set out for lift traffic analysis and simulation, prepared in consultation with a wide range of industry experts.

All attendees agreed with these points. However, it was acknowledged that irrespective of the limitations of the PCA guidelines, commercial imperatives dictate that consultants and designers working in Australia are obliged to use the published PCA “A guide to Office Building Quality” to provide comparative building performance evaluations.

To help the industry provide more consistent design evaluations, it was agreed that the meeting should decide on standard Elevate inputs for use when performing a simulation analysis to the 2012 PCA “A guide to Office Building Quality” guidelines. The following input criteria were agreed for simulations:

## **Up Peak**

Run simulation for 1 hour using “Barney Up Peak” profile. Results should be reported for 5 minute period of highest demand (between 00:35 and 00:40).

## **Lunch Time Peak**

Run constant traffic simulation for 1 hour with 45% incoming, 45% outgoing and 10% interfloor traffic. Results should be reported for the whole hour.

## Car Loading

Based on 80% car capacity factor by mass, with passenger mass at 75kg. Ignore loading by area by setting passenger area to 0 m<sup>2</sup>/person.

## Passenger Transfer times

Allow 1 second per passenger loading and unloading, 0.8 seconds per passenger with destination control.

## Door Dwell time 1 and 2

Allow a minimum of 0.5 s.

## Start Delay

Allow 0.5 seconds.

## Pre-Open

Normally 0 seconds, but up to 0.5 seconds if the equipment is capable of demonstrating performance.

## Door times

Based upon equipment specified, performance should be confirmed on site.

## Acceleration and Jerk

Based on CIBSE Guide D table 3.4.

Improvements to the above may only be applied where equipment is capable of demonstrating the enhancement and the parameters are intended to be the installed performance parameters.

In Elevate, the Number of simulations to be run for each configuration should be the default, 10.

It is recognised that the analysis is undertaken for the purposes of benchmarking the lift system design performance against the recommended criteria of PCA guidelines "A guide to Office Building Quality - 2012" and may not reflect actual performance.

## Meeting participants:

Richard Peters, Peters Research  
Chris Anderson, Integralift  
Wayne Blair, Aecom  
Robin Butler, Bestec  
Brendan Byrne, NDY  
Sean Cadogan, Integralift  
Greg Callander, Liftronic  
John Carroll, NDY  
Leonard Charles, Liftronic  
Chris Finegan, Aecom  
Ian Hanna, NDY  
Dennis Hughes, Liftronic  
Bryden King, NDY  
Osvaldo Kirszman, Integralift  
Adam Magee, Aecom

Graeme McRae, Floth  
Nat Paola, WSP  
Rod Post, Thomson Elevator Consultancy Ltd  
Mark Randle, Arup  
Ian Robinson, Lend Lease  
Lyll Senior, Lift Solutions Ltd  
John Thomson, Thomson Elevator Consultancy Ltd  
Peter Tomlinson, Arup  
Steve Tulai, NDY  
Terry Viccars, Kone NZ  
John Whitfield, Whitfield Rose Pty Ltd  
Stephen Williams, Thomson Elevator Consultancy Ltd

A representative from PCA was due to attend but did not.