CICA – Vic / Tas Branch
Crane Safety Bulletin
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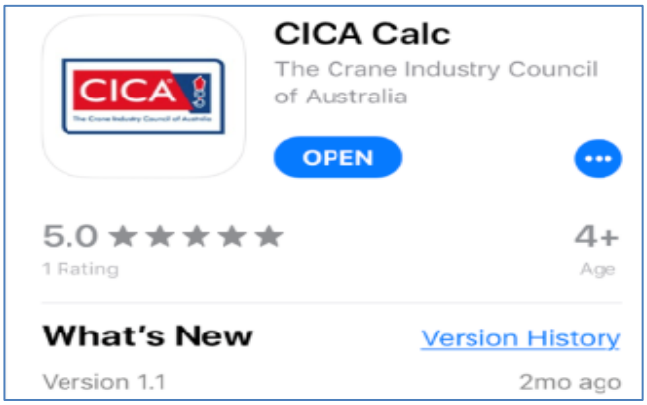
Greetings all, today we will discuss a great new tool for calculating the minimum outrigger support for a given lift.



There are many reasons why a crane can tip over, but it usually boils down to, is either exceeding crane lifting capabilities or the ground bearing pressure. Regardless of whether a crane is lifting within its charts or not, it's only as stable as the ground it's set up on. You can be doing everything right as an operator but if you have a greater pressure under the outrigger than the ground can support, you have a problem.

Steve Gonano from the CICA QLD Branch, has led the committee of volunteers to commission development of a **free** app for use on smart phones and tablets that will assist crane operators, riggers, and doggers in assessing ground conditions and calculating the minimum area required of the outrigger mats or timbers before the crane is even set up.

Using the calculations that draw from the current Qld Mobile Crane Code of Practice, the app will firstly prompt the operator to define the ground type i.e. solid rock, asphalt or compacted sand etc to ascertain the estimated ground bearing capacity. From here, the operator nominates the mass of the crane including counterweight + load and the outrigger mat or timber dimensions of which the area will be instantly calculated and compared to the minimum required under the QLD code. The equation is not a complex one, but operators may not understand that the ground under a single outrigger needs to be capable of holding 65% of the combined crane and load mass. And with a click of a button they will know the minimum outrigger pad/timber area required to support this load on the type of ground they have nominated.

The app is easy to use and takes the guesswork out of the situation which is perfect for an industry where last minute changes to the lift plan commonly occur due to unanticipated ground conditions, site restraints and mass of the load itself!

Imagine being able to simply adjust the numbers and compare your new outrigger pad pressure to that of the ground capacity and then lift with confidence, or draw a line in the sand and have a 'rethink' and approach the lift with either more timbers, larger pads or on a different location with firmer ground.

Importantly, the data is retained for record keeping and inclusion as part of the safety management system. This calculation tool will benefit all projects, particularly those that are quoted with a few uncertainties and sometimes require changes and adjustments at the last minute. Even if everything is set up and ready to lift, running the numbers through this app can pick up errors and allow for a "hey, that doesn't sound right…" moment rather than a "what went wrong here? moment.

Which would you prefer? *Stay Safe -CICA*