The ‘Plate House’ plywood transitional shelter

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Abstract
Folded sandwich structures are a new type of modular structural form that can be rapidly fabricated with non-specialist manufacturing plant and rapidly assembled without tools or lifting equipment. This presentation will describe the outcomes of a three-year project to develop a low-cost transitional shelter application, utilizing the folded sandwich structure technology. The latest version of the ‘Plate House’ transitional shelter design introduces a number of new innovations, including use of lost-cost floor cassettes for tilt-up assembly, external post-tensioned packaging strapping, and reduction to 7mm plywood sheet material thickness. Cumulatively, these result in reduced weight and packaging volume and faster manufacture and assembly times.

\textbf{Figure 1:} 20m\textsuperscript{2} ‘Plate House’ transitional shelter prototype, constructed February 2019. Top: erected structure. Bottom: packaged kit-of-parts.