

# HumeSlab<sup>®</sup> bridge decking

Issue 1





## HumeSlab® bridge decking

The HumeSlab® system is a unique formwork solution ideal for heavy duty bridge decks and localised load areas.

The HumeSlab® panel forms the bottom portion of the slab and the platform for the deck above – a cost effective way to maintain the structural integrity of a monolithic slab.

The HumeSlab® system is ideal for heavy duty bridge decks and localised load areas as it easily accommodates varied designs, shapes, thicknesses, penetrations and cast-in fittings.

The precast concrete panels are between 55 mm and 100 mm thick and incorporate the bottom steel of the slab with specially designed steel trusses to increase spans between temporary props.

Polystyrene void formers can be attached to HumeSlab® panels to reduce the volume of in-situ concrete topping required and reduce the overall mass of the slab.

Top:  
HumeSlab® panels  
used for curved  
flyover structures  
on Brisbane's  
AirportLinkM7

## Transport and installation

Top:  
HumeSlab® panel  
with cast-in voids

Bottom:  
HumeSpan™  
system

HumeSlab® panels are generally limited to 12 m in length to minimise transport constraints. Experience shows that panels around 8 m in length are the most economical, reducing crane size and construction time.

Panels are delivered to site in the order which they will be placed to avoid storage and subsequent handling issues on site.

Set out markings on site allows panels to be positioned directly from delivery truck to final location.



## HumeSpan™ permanent formwork

This simple variation on the HumeSlab® system is generally made with lightweight concrete and polystyrene void formers, to provide a fast and cost effective approach to constructing concrete slabs. The HumeSpan™ system is an extremely lightweight slab solution for new and retrofitted commercial applications.

The HumeSpan™ system consists of concrete beams 230 mm wide x 50 mm thick, fitted with a standard HumeSlab® truss separated by a polystyrene tee block. Dimension details vary depending on the specific applications and designs required.



## Construction times using the HumeSlab® system versus traditional formwork

**Table 1 – Construction times using the HumeSlab® system**

Activity	Labour	Days	Hours
Erect and prop wall panels	2 Dogman	1	16
	2 Labourers	1	16
Grout wall panels	2 Labourers	1	16
Support frames	3 Scaffolders	1	24
Place HumeSlab® panels	2 Dogman	1	16
	2 Carpenters	1	16
Place top reinforcement	4 Steel fixers	1	32
Pour concrete	8 Labourers	1	64
Remove propping frames	2 Scaffolders	1	16
<b>Total cycle (approximate hours)</b>			<b>216</b>
<b>Typical cycle rate</b>			<b>0.29 hrs/m<sup>2</sup></b>

**Table 2 – Construction times using traditional formwork**

Activity	Labour	Days	Hours
Erect and prop wall panels	2 Dogman	1	16
	2 Labourers	1	16
Grout wall panels	2 Labourers	1	16
Support frames	2 Scaffolders	2	48
Place ply formwork	4 Carpenters	3	96
	2 Labourers	3	48
Place reinforcement	4 Steel fixers	2	64
Pour concrete	8 Labourers	1	64
Strip formwork and clean up	4 Carpenters	2	64
	2 Scaffolders	2	32
<b>Total cycle (approximate hours)</b>			<b>464</b>
<b>Typical cycle rate</b>			<b>0.62 hrs/m<sup>2</sup></b>



National sales 1300 361 601

[humes.com.au](http://humes.com.au)

[info@humes.com.au](mailto:info@humes.com.au)

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