

## IPAC-16 | Requirements for design and as-built drawings

Audience: PBS Assessors and Certifiers

Effective Date: 1 March 2024

This IPAC provides guidance to PBS Assessors and Certifiers on the requirements for design and as-built drawings. It outlines the essential elements that must be included on the drawing while avoiding unnecessary information.

This IPAC replaces IPAC-6 Removal of VINs from as-built drawings.

### Fifth-Wheel Offset direction on design and as-built drawings

For consistency, the following Fifth-Wheel Offset (FWO) direction convention must be used on all drawings.

- FWO forward of the centre of an axle group can be referred to as a plain number i.e., a dimension '200' means the FWO is 200mm forward of the centre of an axle group.
- FWO rear of the centre of an axle group must be clearly labelled as 'lag'.

For example, a FWO range that spans from forward to rear should be labelled as '200 – lag 100' or 'lead 200 – lag 100'.

### As-built drawing requirements

To ensure compliance, promote consistency in certification submissions, and facilitate the efficient processing of PBS Vehicle Approvals (VAs), PBS Certifiers are required to adhere to the following as-built drawing protocol.

#### Drawing number

Each as-built drawing must contain a drawing title block.

As a *minimum*, the following must be included in the drawing title block:

- a unique drawing number
- revision number
- drawing title
- date
- author.

Additionally, we recommend that a drawing frame be included along with a drawing title block.

#### Dimension position and font size

Please ensure that the dimensions are clear and readable. Use a sufficiently large font size and ensure a clear position of dimensions.

Captions of as-built drawings are inserted into

[www.nhvr.gov.au](http://www.nhvr.gov.au)

the VA document, which may affect the quality of the drawing. To ensure ease of use and interpretation by all parties in the process – operators, drivers, road managers, and Safety Compliance Officers (SCOs) – please ensure that the drawings are clearly readable.

If the drawing or dimensions are not clearly readable, we may ask you to modify the drawing, increase the font size and/or modify the dimension position.

#### Lift axle and steer axle

If steer and/or lift axles are fitted to the vehicle, these must be clearly shown on the as-built drawing. For ease of interpretation, it is preferred that the word 'lift' or 'steer' is shown directly beneath the axle.

#### Exclusion of VINs

As-built drawings must not include Vehicle Identification Numbers (VINs).

The inclusion of VINs on the as-built drawing would require an update to the drawings every time vehicles are added or removed from a VA. It also creates a significant administrative burden for both the NHVR and Certifiers having to cross-check the VINs on the drawings against the Certifier's Certificate. For these reasons, VINs must not be included on the as-built drawing.

#### Dimensions as per Design Approval

As-built drawings must mirror the dimensions shown on the relevant Design Approval (DA) drawing. The dimensions shown on the DA have been identified as critical to vehicle performance and, therefore, must be checked and verified at the certification stage.

Additionally, avoid adding dimensions that are not relevant to PBS certification and VA.

#### Unnecessary labelling must not be included

As-built drawings must not include labels other than those required by [IPAC-8 - Vehicle labelling requirements](#).

#### Exclusion of irrelevant information

Please do not include information not relevant for certification and vehicle approval purposes, such as any disclaimers of it being a sales drawing and/or final design may vary from the layout shown.

## Grandfathering

Previously accepted drawings not conforming to this protocol will continue to be accepted - Certifiers and Assessors are not required to amend previously submitted drawings.

When modifying previously accepted drawings, i.e. adding prime movers or trailers to existing drawings, these drawings are considered new and, therefore, must conform to this IPAC.

## Contact

This IPAC was produced by the PBS Operations Team; for queries, please email [pbs@nhvr.gov.au](mailto:pbs@nhvr.gov.au).

IPAC-16: Revision history	
First Published	July 2023
Version 2	October 2023
Version 3	November 2023
Version 4	November 2023
Version 5	February 2024

### For more information:

Visit: [www.nhvr.gov.au](http://www.nhvr.gov.au)

Subscribe: [www.nhvr.gov.au/subscribe](http://www.nhvr.gov.au/subscribe)

Email: [pbs@nhvr.gov.au](mailto:pbs@nhvr.gov.au) for Vehicle Approvals

Email: [pbsdesigns@nhvr.gov.au](mailto:pbsdesigns@nhvr.gov.au) for Design Approvals

Phone: 13 NHVR\* (13 64 87)

\*Standard 13 call charges apply. Please check with your phone provider.

© Copyright National Heavy Vehicle Regulator 2020, [creativecommons.org/licenses/by-sa/3.0/au](https://creativecommons.org/licenses/by-sa/3.0/au) Disclaimer: This information is only a guide and should not be relied upon as legal advice.