

How To Design An  
Accessible Compliant  
Commercial Washroom





## INTRODUCTION

The importance in providing access to public washrooms for the one in five Australian's living with some type of disability is reflected by current Australian Standards for disabled access and mobility and their adoption as deemed-to-satisfy provisions in the Building Code of Australia (BCA). In commercial projects, an accessible washroom is defined as; toilets, bathrooms with showers, or a combination of both of these in one space.

Australian Standard AS 1428.1-2009 - Design for Access and Mobility relates directly to the accessibility of the built environment for the disabled. They specify the design requirements for

new building work, as required by the BCA and the Premises Standards, to provide access for people with disabilities.

Specifying the right products to meet AS 1428.1-2009 at the beginning of a project is critical to ensuring regulatory approval and avoiding potential costly and time consuming removal and replacements.

*This whitepaper explores the design and specification of accessible compliant commercial washrooms to comply with Australian Standard 1428.1-2009.*

“ Specifying the right products to meet AS 1428.1-2009 at the beginning of a project is critical to ensuring regulatory approval ”

## SPECIFYING ASI JD MACDONALD COMPLIANT PRODUCTS

ASI JD MacDonald supply a range of commercial washroom products required to gain regulatory approval, including; grab rails, back rests, toilet roll holders, soap dispensers, mirrors, hand dryers, paper towel dispensers, waste bins, combination

units, hooks, shelves, shower seats, baby change stations, sanitary disposal units and shower heads. All products suitable for use in accessible compliant washrooms are easily identifiable on the ASI JD MacDonald website.

## REQUIREMENTS FOR ACCESSIBLE COMPLIANT UNISEX TOILETS – GENERAL

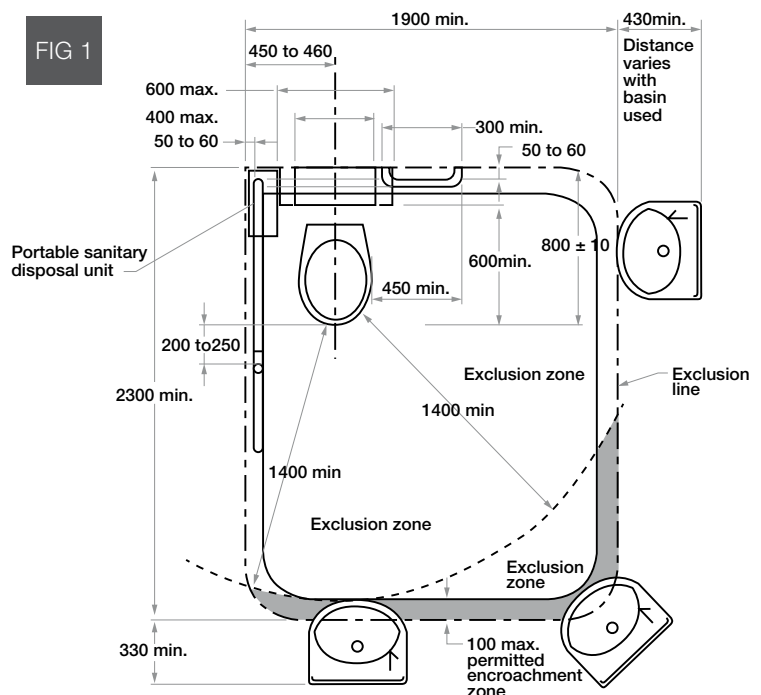
If two or more accessible sanitary facilities are provided, at least one must be of the opposite hand.

Spatial layouts of accessible compliant commercial toilets shall include wheelchair access to a toilet with the required compartment circulation space dictated by AS1428.1-2009. The general requirements regarding circulation space are as follows:

For each WC, the unobstructed circulation space from the finished floor to a height of not less than 2000mm shall be as per Figure 1 (NB – there are exceptions for particular products – please refer to the section titled 'Requirements For Accessible Compliant Unisex Toilets - By ASI JD MacDonald Product' for clarification).

### LEGEND

- - - - - Circulation space line





## REQUIREMENTS FOR ACCESSIBLE COMPLIANT UNISEX TOILETS - BY ASI JD MACDONALD PRODUCT

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Commercial washroom products available from ASI JD MacDonald for Accessible Compliant toilets are; Baby Change Stations, Back Rests, Grab Rails, Hand Dryers, Hooks (Clothes Hanging Devices), Mirrors, Paper Towel Dispensers, Sanitary Disposal Units (Portable or Recessed), Shelves, Soap Dispensers, Toilet Paper Dispensers and Waste Bins. The requirements regarding installation of these products to comply with AS1428.1-2009 are outlined below, by product category (NB for the purpose of this document, specific requirements regarding what makes a product compliant have been left out as all products suitable for use in an accessible compliant unisex toilet and supplied by ASI JD MacDonald are clearly indicated on the website and price list, therefore this information relates solely to the installation requirements of the products):

*\* Indicates products that are allowed to intrude into the circulation space as long as the other stated requirements are met.*

1. **Baby Change Station** – whilst not specifically required within an accessible sanitary compartment, it is usually a preferred location. Where installed, the unit must be operable by one hand and be installed with the height of the operative component (in this case, the handle to pull the unit open) not less than 900mm and not more than 1100mm above the plane of the finished floor and no closer than 500mm from an internal corner. There must be a maximum height of 820mm AFFL and a minimum clearance underneath of 720mm when in the open position. When closed (in the folded up position) the unit must not encroach into the circulation space of any other toilet facility.
2. **Back Rest** – must be supplied for every toilet. The unit must be capable of withstanding a force in any direction of 1100N; have a height, at the lower edge of backrest to the top of the WC pan, of 120-150mm; have a vertical height of 150–200mm and a width of 350–400mm. The front edge of the centre of the backrest must be positioned to achieve an angle of between 95° to 100° back from the seat hinge.
3. **Grab Rails\*** – must be capable of withstanding a force in any direction of 1100N (without deformation or loosening or rotation of the fastenings or fittings); the clearance above a horizontal grab rail shall extend above the top of the grab rail by not less than 600mm; the clearance below a horizontal or angled rail shall be a minimum of 50mm except at fixing points. Grab rails shall be fixed so that there is no obstruction to the passage of the hand along the top 270° arc of horizontal and angled grab rails. There shall be no obstruction to the passage of the hand for the full length of vertical grab rails.  
  
For a concealed or high-level cistern or flush valve a continuous grab rail is required across the rear wall and side wall nearest the WC pan as shown in the drawing below. For a low-level non-concealed cistern or flush valve the grab rail shall be terminated at each side of the cistern, as shown in Figure 2.
4. **Hand Dryers\*** – must be operable by one hand and be installed with the height of the operative component or outlet (in this case, the area that hands are placed to dry and/or where a button needs to be pushed to activate the dryer) not less than 900mm and not more than 1100mm above the plane of the finished floor and no closer than 500mm from an internal corner.
5. **Hooks (Clothes Hanging Devices)\*** – must be installed 1200-1350mm above the plane of the finished floor and not less than 500mm from any internal corner.
6. **Mirrors** – for all facilities the mirror must be installed either above or adjacent the washbasin. For sole occupancy units the mirror must be centred over the washbasin. Where provided, a vertical mirror with a reflective surface not less than 350mm wide shall extend from a height of not more than 900mm to a height of not less than 1850mm above the plane of the finished floor. Where provided, a second vertical mirror shall extend from a height of not less than 600mm to a height of not less than 1850mm above the plane of the finished floor. (NB - angled or tilted mirrors can't be used as they're not suitable for all users.)
7. **Paper Towel Dispensers\*** – must be operable by one hand and be installed with the height of the operative component or outlet (in this case, the outlet where paper towel is dispensed from) not less than 900mm and not more than 1100mm above the plane of the finished floor and no closer than 500mm from an internal corner.
8. **Sanitary Unit – Portable\*** – to be located as per Figure 1.
9. **Sanitary Unit – Recessed** – to be located within 500mm from the pan.
10. **Shelves\*** – shelf space must be provided adjacent to the washbasin in one of two ways:
  - a) As a vanity top at a height of 800-830mm and a minimum width of 120mm and depth of 300-400mm without encroaching into any circulation space.
  - b) As a separate fixture;
    - i. Within any circulation space at a height of 900-1000mm with a width of 120-150mm and length of 300-400mm; and
    - ii. External to all circulation spaces at a height of 790-1000mm with a minimum width of 120mm and minimum length of 400mm.

**11. Soap Dispensers\*** – must be operable by one hand and be installed with the height of the operative component or outlet (in this case, the area that hands are placed to collect the soap and/or where a button needs to be pushed to allow the soap to be dispensed) not less than 900mm and not more than 1100mm above the plane of the finished floor and no closer than 500mm from an internal corner.

**12. Toilet Paper Dispenser\*** – the outlet must be located within the zone shown in Figure 3 and must not encroach upon the clearance space required around the grab rail (refer to Grab Rail requirements):

**13. Waste Bins** – must be operable by one hand and be installed with the height of the operative component or outlet (in this case, the opening) not less than 900mm and not more than 1100mm above the plane of the finished floor and no closer than 500mm from an internal corner.

**14. Combination Units** – must be operable by one hand and be installed with the height of the operative component or outlet (in this case, the area that hands are placed to dry and the outlet where paper towel is dispensed from) not less than 900mm and not more than 1100mm above the plane of the finished floor and no closer than 500mm from an internal corner.

FIG 2

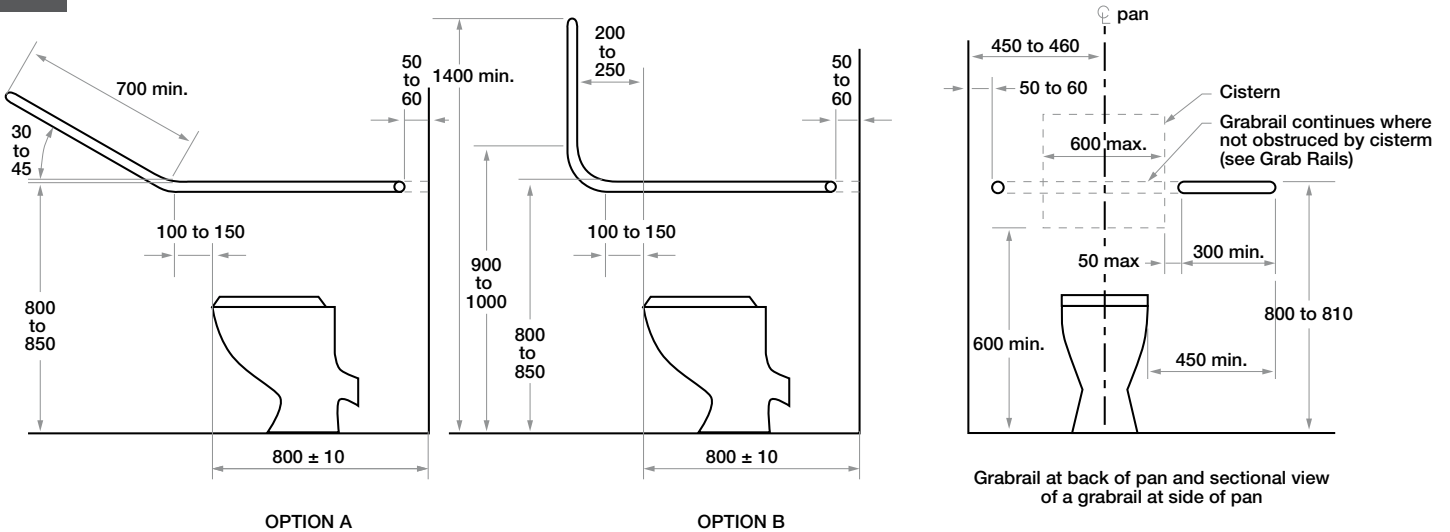
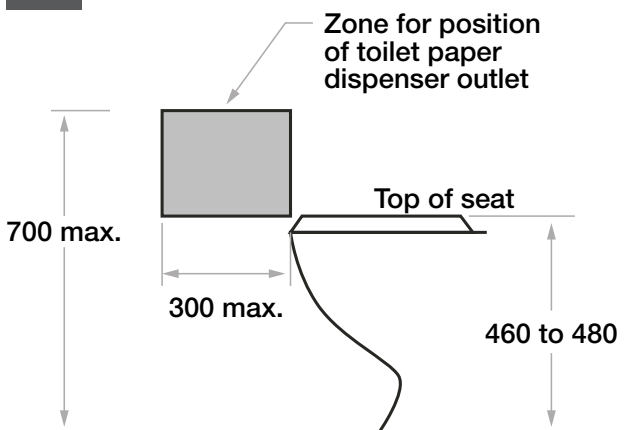


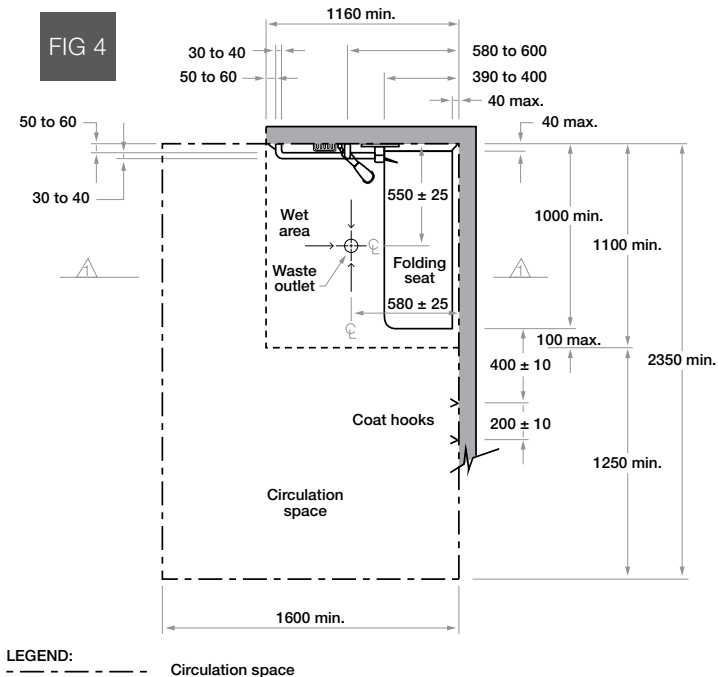
FIG 3



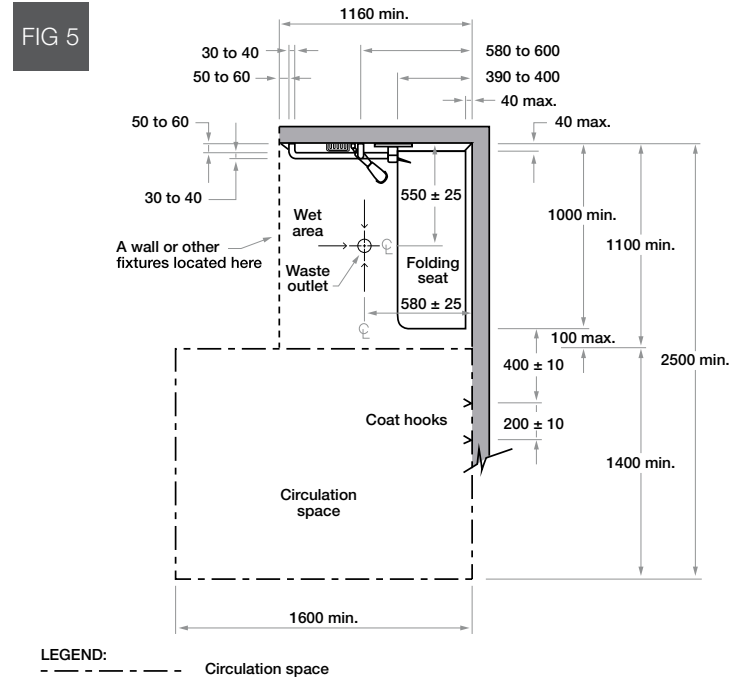
# REQUIREMENTS FOR ACCESSIBLE COMPLIANT SHOWERS - GENERAL

The only fixtures permitted in an Accessible Compliant Shower recess are; Grab Rails, Shower Hose Fittings, Taps, Soap Holders, Folding Seats and Shelves (if provided).

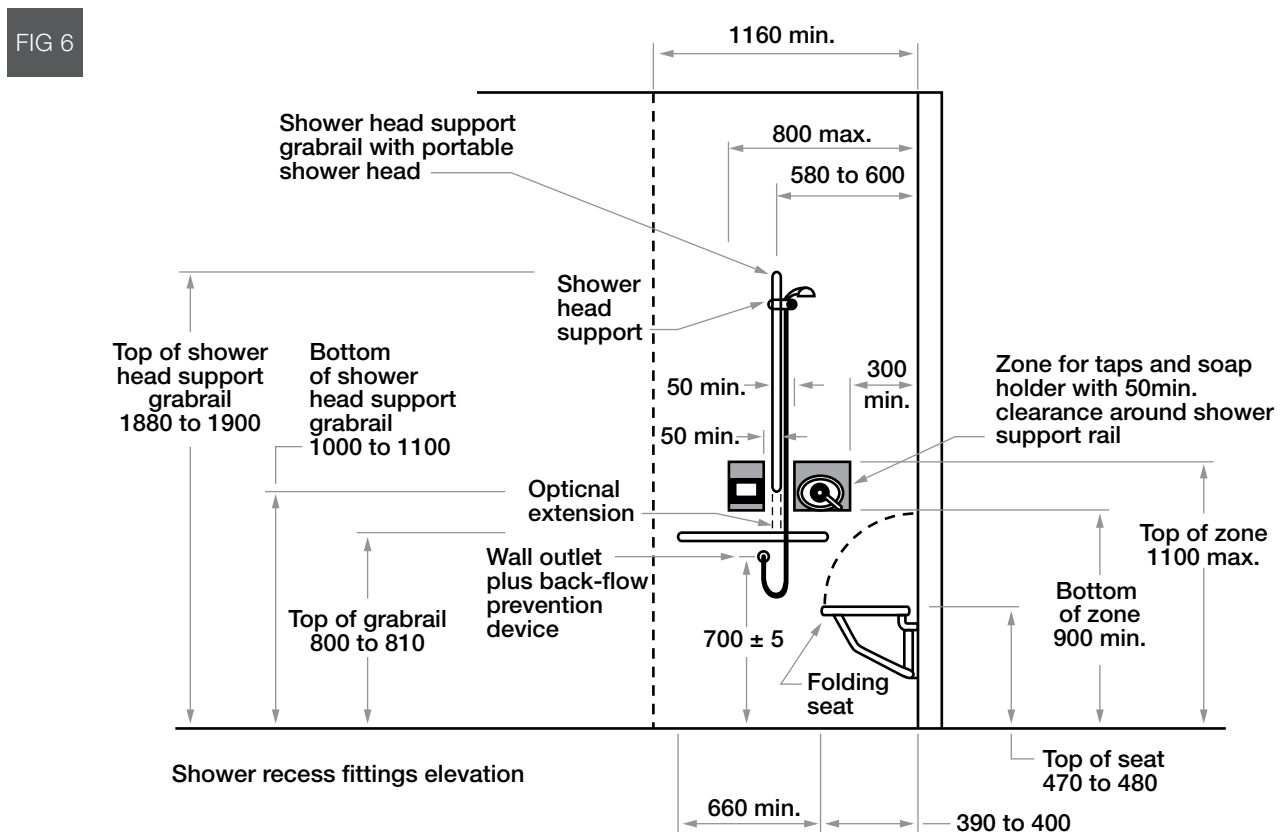
If two or more shower recesses are provided, at least one must be of the opposite hand. Shower recesses and the circulation space for each shower recess from the finished floor to a height of not less than 900mm shall be as shown in Figures 4 & 5. Shower recess fittings shall be provided as shown in Figures 4, 5 & 6.



Shower recess with two walls



Shower recess with a third side provided by a wall or other fixtures



Shower recess fittings elevation

## REQUIREMENTS FOR ACCESSIBLE COMPLIANT SHOWERS - BY ASI JD MACDONALD PRODUCT

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Commercial washroom products available from ASI JD MacDonald for Accessible Compliant shower spaces are; Grab Rails (including Shower Head Support Grab Rail), Hooks (Clothes Hanging Devices), Shower Heads (Portable), Shower Seats (Folding), and Soap Holders. The requirements regarding installation of these products to comply with AS1428.1-2009 are outlined below, by product category (NB for the purpose of this document, specific requirements regarding what makes a product compliant have been left out as all products suitable for use in an accessible compliant shower and supplied by ASI JD MacDonald are clearly indicated on the website and price list, therefore this information relates solely to the installation requirements of the products):

- 1. Grab Rails (including Shower Head Support Grab Rail) –** must be capable of withstanding a force in any direction of 1100N (without deformation or loosening or rotation of the fastenings or fittings). Grab rails must be fixed on the walls in the positions shown in Figures 4, 5 & 6. The clearance above a horizontal grab rail shall extend above the top of the grab rail by not less than 600mm. The clearance below a horizontal or angled rail shall be a minimum of 50mm except at fixing points. Grab rails shall be fixed so there is no obstruction to the passage of the hand along the top 270° arc of horizontal and angled grab rails. There shall be no obstruction to the passage of the hand for the full length of vertical grab rails.

The shower head support grab rail is to be located in the zone shown in Figure 6. (NB – generally the clearance requirement above a horizontal grab rail would extend above the top of the

grab rail by not less than 600mm, but there is an exception to this rule for the shower head support grab rail).

- 2. Hooks (Clothes Hanging Devices) –** no less than 2 hooks are required to be fitted outside the shower recess. As well as being installed 1200-1350mm above the plane of the finished floor and not less than 500mm out from any internal corner, one device must be within 400±10mm and the other within 600±10mm of the folding seat (refer to Figure 5).
- 3. Shower Heads (Portable) –** a hand-held shower head with a flexible hose of 1500mm (min) must be provided. An adjustable shower head holder must also be provided and must be installed on the shower head holder support grab rail as shown in Figure 6 and it must allow the graspable portion of the shower head to be positioned at various angles and heights between 1000-1800mm above the plane of the finished floor and allow access and adjustment from a seated position.
- 4. Shower Seats (Folding) –** must be provided inside the recess (refer Figures 4, 5 & 6). It must fold in an upwards direction and when folded the grab rail shall be accessible.
- 5. Soap Holders –** to be located in the zone indicated in Figure 6. (NB – generally the clearance requirement above a horizontal grab rail would extend above the top of the grab rail by not less than 600mm, but there is an exception to this rule for this product).

“ ASI JD MacDonald provide a complete range of products specifically designed to be used in Accessible Compliant spaces ”

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### ASI JD MACDONALD – ACCESSIBLE COMPLIANT COMMERCIAL WASHROOM SOLUTIONS

ASI JD MacDonald provide a complete range of products specifically designed to be used in Accessible Compliant spaces. All products suitable for use in Accessible Compliant spaces are indicated on the website and price list.

In addition to the comprehensive range of suitable products, ASI JD MacDonald have also developed the 'Germ Shield' system for grab rails. The Germ Shield system offers an additional layer of protection to prevent soap-scum, body fluid and other unwanted bacteria creating fluids, from collecting under the flange.

ASI JD MacDonald's Sales and Customer Service teams can easily identify all products suited to all manner of Accessible Compliant situations akin to the three scenarios described here.

With over 50 years' experience in the manufacture and supply of commercial washroom equipment, ASI JD MacDonald is ideally positioned to assist architects, designers and specifiers in ensuring a high quality, accessible compliant washroom.

# WELCOME TO **ASI JDMACDONALD**: WHERE INNOVATION, SPEED AND RELIABILITY PROVIDE **PEACE OF MIND**

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JD MacDonald expanded into Washroom Accessories in 1959 - since then we have developed a following among Building Owners, Architects and Construction Professionals who count on us because we consistently deliver on a promise of quality, value, impeccable customer service and choice.

In 2013 JD MacDonald was acquired by the ASI Group and as the newly founded ASI JD MacDonald, we continue to provide more choices in hand dryers, paper towel dispensers, waste bins, combination units, grab rails, baby changing stations, soap dispensers, toilet paper dispensers and much more. We also offer a range of waste management products consisting of garbage / linen chutes and rotobins.

## **ASI GROUP**

Privately owned and operated since inception the ASI Group now has operating units and offices in the US, Canada, Australia, Belgium, UK, Middle East and China, with sales in over 50 countries.

For over 50 years our companies have been known for innovative products and the widest choice in product and material for Washroom Accessories, Toilet Partitions, Lockers and other storage devices. Our nimble management philosophy allows us to deliver more products in 48 hours than anyone else in our industry and our flexibility allows us to create unique products to suit specific needs.

You will find one common thread that ties our family of companies together - a singular focus on our customer. That focus is captured in our mission statement: "To make our customers successful by providing a value greater than price and an excellent service experience." [www.asigroup.us](http://www.asigroup.us)

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**ASI JD MacDonald: Your *single source* for privacy, hygiene, safety and eco-friendly products.**

## REFERENCES

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Standards Australia 2009, AS 1428.1-2009 *Design for access and mobility*, Standards Australia, Sydney

*\*While this white paper addresses Australian Standards 1428.1-2009, other regulations such as the Disability Discrimination Act (DDA) 1992, Premises Standard and Building Code of Australia (BCA) should also be considered in the design and construction of accessible compliant commercial washrooms.*

