Fair Trading

Regulated Design Guidance Material

This Regulated Design Guidance Material is approved by the Secretary of the Department of Customer Service (the Secretary), under clause 9(1)(c) of the Design and Building Practitioners Regulation 2021.

Introduction

Under the *Design and Building Practitioners Act 2020*, registered design practitioners are required to provide design compliance declarations when they provide a person with a regulated design prepared by the practitioner and the design is in a form suitable for use by that person or another person in connection with building work.

Regulated designs are designs prepared for a building element or a performance solution for building work.

Please refer to the *Design Practitioners Handbook* for more information on how to determine whether a design is a regulated design, including information on *building elements* and *building work*.

A design compliance declaration is a declaration regarding a number of matters. One of those is, under clause 9(1)(c) of the Design and Building Practitioners Regulation 2021, whether the design accords with relevant elements of this Regulated Design Guidance Material.

Persons preparing regulated designs must therefore ensure that the designs accord with relevant elements of this Regulated Design Guidance Material.

Structure of this Guidance Material

This Guidance material is comprised of a table identifying a number of classes of designs.

Note: It is up to the design practitioner to determine whether the design they are preparing is a regulated design. The Design Practitioners Handbook provides further guidance on how to determine this.

Each row of the table is a category of design within that class. The table then identifies in relation to each category the:

1) minimum scale of design for that category;
2) “design aspects and details” for that category, noting not all designs will be relevant for a particular project; and
3) minimum requirements for that category.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
Class of design: Architectural/Building Design (prepared by a registered design practitioner in the class of architectural/building design, with support from specialised consultants)			
1:100	General Arrangement Plans	The General Arrangement Plan set should consist of: – A cover page that identifies the drawings in the set and includes the site and building details. – A site plan that shows the building in the context of the site, such as location from boundaries and fire source features and reduced levels. – A site setout plan appropriately dimensioned with grids and survey points. – Floor plans for each floor of the building, including roofs and basements, with the detail listed below. – Elevations of each aspect of the building, with the detail listed below. – Appropriate dimensioned sections and details commensurate to the building design. The General Arrangement Plans should: – demonstrate coordination with services and structural documentation. – show relevant elements of performance solutions as necessary. – Include appropriate notes, annotations, legends and the like specific to the plans set and design – Include references, tags, and callouts to relevant sections, details, schedules and specifications. Where matters are unable to be shown these can be detailed in specifications or schedules.	**Minimum requirements for design category:** all designs must at a minimum include a site plan, floor plans for each level, elevations of each aspect, and appropriate sections and details, which are appropriately scaled, dimensioned and suitable for construction.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
1:100	General floor plans	Floor plans should include the general layout and elements of each floor of the building to show compliance with the regulated building elements. Floor plans are also critical for coordinating other regulated designs. Floor plans should include: – The layout of each floor plate, including location of walls, columns, doors, windows and the like – The dimensions of elements and rooms of the floor plate – The layout and location of all shafts (e.g. stair and lift shafts), service risers and the like – Floor levels e.g. finished floor levels, slab levels – Reference to integrated designs, setout plans, service designs – Each room name/use on the floor plate – The layout and location of exits e.g. stairways, passageways, ramps, doors Layout and location of areas/rooms required to be fire separated e.g. fire services, plant rooms, substations	**Minimum requirements for design category:** floor plans are provided for each level of the building including roofs and basements. Floor plans must be suitable for construction and sufficiently detailed and dimensioned.
1:100 (or 1:200 if detailed Facade Documentation is provided)	General elevations	Elevations will show the external appearance and elements of the building. Elevations should include: – Proposed external materials and finishes, with particular consideration for BCA requirements e.g. fire protection, weatherproofing and energy efficiency requirements. – Locations and sizes of window and door openings, balconies and other external features. – Heights of floor levels dimensioned	**Minimum requirements for design category:** elevations are provided for each external aspect of the building. Elevations must be suitable for construction and sufficiently detailed and dimensioned with grids.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
		Overall heights e.g. ground levels and roof levels.	
1:100 (or 1:200 if details are provided)	General sections	Sections should include at least two intersecting sections through the building. Sections should include: – Grid lines, key dimensions e.g. floor/ceilings heights, ground levels etc. – Room names/uses Callouts to detailed drawings	**Minimum requirements for design category:** at least two intersecting sections should be provided for each building. Sections must be suitable for construction, sufficiently detailed, dimensioned, and integrate (coordinate) other relevant designs.
1:20, (for some design, 1:10, 1:5 will be appropriate)	General details	Details should be provided for all construction methods that cannot be shown on the plans, elevations and sections. Details should include: – Junctions and interfaces between and within key parts of the building e.g. external wall interface with floor slabs – Strip wall details for differing external wall construction Egress system design: – Riser and going dimensions, stairway widths, landing location and sizes, head clearance – Ramp gradients – Barriers and handrails – Doorway details e.g. direction of swing, door hardware, hold open devices etc. Door hardware schedule and door schedule	**Minimum requirements for design category:** details must be suitable for construction and sufficiently comprehensive and dimensioned.
	Reflected ceiling plans	Showing emergency lighting and exit signs.	
	Specific regulated designs	There are specific building elements that are required to demonstrate compliance with the BCA. The plans can be	

Min scale	Design category	Design aspects and details	Minimum requirements for design category
		incorporated into the general architectural plans or as separate sets.	
1:100, (for some designs 1:50, 1:20 or 1:10 will be required to present the detail required)	Passive fire safety	The passive fire safety designs must show all elements that relate to fire safety systems such as to restrict the spread of fire. Passive fire includes, but not limited to: – Fire-resisting elements (FRL), incipient spread ceilings, non-combustibility (i.e. external), concrete/masonry. – Compartmentation fire and smoke, bounding construction. – Shafts – fire isolated exits, lifts, services. – Fire separation e.g. spandrels, substations, equipment etc. – Openings in fire resisting and bounding construction e.g. doors, windows, shaft openings. – Protection of penetrations through fire resisting construction. – Finishes and linings. The passive fire safety set should include: Plans that show: – the location and layout of fire-resisting walls, columns, shafts, risers etc. – the minimum fire-resistance levels to be achieved for construction – walls that are required be non-combustible, concrete or masonry – fire/smoke compartments and bounding construction – location and types of openings e.g. doors, windows – that reference wall construction e.g. wall type drawings Sections that show:	**Minimum requirements for design category:** The passive fire safety designs must be suitable for construction.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
		– horizontal elements e.g. floor slabs, ceilings etc. – through fire-resisting construction e.g. walls, shafts, scissor stair fire separation etc – junctions between fire resisting construction Details that show: – junctions between fire resisting construction – protection of penetrations (fire stopping) through fire-resisting construction – minimum fire-resistance levels to be achieved for wall, floors, columns etc. – openings in fire-resisting construction – Construction of fire-resting doorsets Schedule that: – Detail each proposed wall type and how the passive fire safety requirements are to be met. – Identifies where services are to be protected within a shaft or at the floor. – Identifies doorset types including details of fire/smoke resistance etc. Specifications/schedules – detailing the methods of protecting each type of penetration through fire-resisting elements. Information that explains how an FRL will be achieved and maintained where a penetration occurs e.g. a fire matrix, reference to specifications, details.	
1:50 (for some designs 1:20, 1:10 or 1:5 will be appropriate)	Waterproofing	Internal wet areas – bathrooms/laundries Plans that: – Identify areas that require waterproofing – Specify floor gradients	**Minimum requirements for design category:** details must be suitable for construction.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
		– Locations of floor wastes Elevations/Sections/Details that show: – Floor and wall construction/substrates – Waterproofing membrane/system and extent of coverage – Location and type of water stops – Intersection of wall/floors e.g. bond breakers – Shower screen types e.g. enclosed/unenclosed – Detail of waterproofing fixtures – Detail of termination of membrane into floor wastes – Details of bathtubs e.g. intersection of wall/bathtub External waterproofing - balconies/roofs/planters Plans that: – Identify areas that require a waterproofing membrane e.g. balconies, roofs, planter boxes – Specify balcony/roof gradients – Location of floor wastes/overflow Elevations/Sections/Details that show: – Extent of waterproofing membrane to balcony/roof/planter box – Termination of waterproofing membrane – Overflow details Waterproofing membrane around fixtures	
	Building enclosure	Components of the building enclosure include external walls, roofs, and basement construction Plans that show: – Construction methods/materials of external walls/systems	**Minimum requirements for design category:** design must be suitable for construction.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
		– Construction methods and materials of roofs – Details of basement wall construction – Water stop details of basement walls/piling – Tanking/waterproofing required to basement walls – References to wall schedule/details – Cladding – Slab edge details e.g. where façade is supported – Weatherproofing of external walls – Details of insulation, sarking, weepholes etc. – Details external window weatherproofing, e.g. head, jamb and sill flashings, weepholes. – Details of external door weatherproofing, e.g. flashings, sill heights – Details of external flashing – Details of external wall and floor/balcony interface – Details of interface between different external wall building materials – Parapet and eave details – Building sealing, energy efficiency	

Min scale	Design category	Design aspects and details	Minimum requirements for design category
Class of design: Structural (prepared by a registered design practitioner in the class of structural engineering)			
1:200	Structural concept plans	– Structural systems – Typical foundation, column grid and framing systems – Proprietary/subcontracted floor/wall systems (including PT and precast)	
1:100	Structural design plans and details	Detailed load drawings outlining the design loads adopted for each floor and roof area, as well as formwork and propping stripping assumptions, including for: – foundation plans (including any piles and temporary or permanent shoring) – flooring plans and structure, including walling plans and framing plan – roof plans and structure – prestressed detailed design drawings – balustrade structural design (including load category considered and nominated concrete fastenings) – support and lateral resisting structure plans – seismic restraints for all building elements and services with actions determined in B1.2 – provision for lightning protection interfaces, if required., with finials, down conductors, ties to the reo etc	**Minimum requirement for design category**: detailed structural drawings are required to show location, section, and detail of all structural and loadbearing members, components and connections, plus a construction specification to clearly articulate material and testing requirements for construction. Location of all expansion, movement and control joints when they are located in an element of the building which is exposed to rainwater, groundwater, shower water or garden watering device. Joint to be shown as red dotted line on architectural drawings. Joint to have predicted 10 year movement marked
1:100	Structural design sections	Detailed section drawings outlining the following: – Reinforcement detailing – Relationship to external building elements such as Facade cladding – Post Tensioning details – Structural connections for Balustrades and other critical elements	**Minimum requirements for design category:** design must be suitable for construction.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
1:100	Structural elevations	Detailed elevation drawings outlining the following: – Reinforcement detailing – Relationship to external building elements such as Facade cladding	**Minimum requirements for design category:** all elevations must include the geographical orientation for the Project. All elevations should include a 'mini' block plan to cross-reference the location of elevations on plan. Elevations must also show the aesthetic qualities of the proposed design and must be sufficiently annotated and/or coloured to communicate the external materials and finishes. They must also have the movement joints and control joints marked. Structural engineer to provide a movement report which includes but not limited to horizontal and vertical movement of building elements, including any differential movements over the life of the building.
1:100	Design loads	– Detailed load drawings outlining the design loads adopted for each floor and roof area, as well as formwork and propping stripping assumptions – Earthquake, snow, wind and cyclone resilience designs – Movement report – Wind report/ air pressurisation details – Environmental Exposure category – Design Life	**Minimum requirements for design category:** details must be suitable for construction.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
1:100	Flood hazard area designs	– Flood resistance requirements including reference to Authority overland flow contours	
1:100	Design fire ratings	– Structural adequacy of each Fire Rating Level – Designs specifying compliance with bushfire requirements in the BCA	
1:50	Penetration plans coordinated with services	– Services penetrations, shafts and horizontal reticulation	**Minimum requirements for design category:** All penetrations requiring fire safety considerations be documented and declared accordingly. Should include corridor ceiling zones showing structural fixings for services and penetrations with fire collars etc

Min scale	Design category	Design aspects and details	Minimum requirements for design category
Class of design: Façade			
	Weatherproofing plans	– Clarification whether the façade is a pressure equalised system or a face sealed system. – must account for the wind, roof/wall junctions, façade types including interfaces, eaves width, envelope complexity, decks, porches and balconies – Must account for all junctions between systems (where testing does not occur) – Wind report – Design life – Service life – Warranties – Maintenance – Cyclone and level of importance requirements – Durability of façade and façade components – Provision for lightning protection interfaces, if required., with finials, down conductors and earthing pits, etc – External drenchers through the façade – Signage details	**Minimum requirements for design category:** design must be suitable for construction.
	Elevations and sections	– Coordination with relevant designs such as Architectural, Mechanical, Structural, Electrical, Drainage and Fire Safety Engineer – Details of all external façade types. Elevation and sections	**Minimum requirements for design category:** all elevations must include the geographical orientation for the Project. All elevations should include a 'mini' block plan to cross-reference the location of elevations on plan. Elevations must also show the aesthetic qualities of the proposed design and must be sufficiently annotated and/or coloured to communicate the external materials and finishes.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
			All façade types to be clearly labelled and coordinated with the Architect. They must also have the movement joints and control joints marked. Each joint should be labelled with the expected 10-year movement (expansion or contraction), with overflow for external balconies specified. All elevations should show façade types and include detail of all interfaces between systems
1:100	Design fire ratings	– Fire rated structural elements – Designs specifying compliance with bushfire requirements in the BCA	
1:100	Structural designs	– External wall and façade details, including showing sun protection and external glazing. Needs to include detail of interface between elements for waterproofing – Membrane systems, junctions and bond breaker compatibility – Façade framing elements including non-load bearing walls and glazing – external loadbearing components, including walls, columns, beams and the like. – flooring plans and structure, including walling plans and framing plan relevant to the external façade – roof plans and structure – balustrade structural design (including load category considered and nominated concrete fastenings) – Confirmation of design for building movement in accordance with the structural engineer's movement	**Minimum requirements for design category:** design must be suitable for construction.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
		report (aiming to ensure all projections / screens / operable elements are designed for building movement)	
1:5	Detailed drawings for waterproofing/weatherproofing	Facade – All façade types – Interface details between façade types and façade types with superstructure. – Joint design – Facade/ balcony junction section – including setdowns – Facade podium junction Balconies and external floor-to-wall details: – External wall to floor detail at glazing - Section – External wall to floor detail at solid wall - Section – Door threshold detail - Section – Balcony edge + overflow detail – Section – Courtyard drainage details – Interface between all façade systems / types Podiums – Expansion joint - section – Planter box section – Main facade junction with podium section Roof Parapet/perimeter detail junction to roof - Section	**Minimum requirements for design category:** Weatherproofing to be assessed between façade systems Designs should specify lightning protection on parapets
	Thermal Compliance	Provide thermal targets	**Minimum requirements for design category:** Statement confirming facades meet the thermal requirements of the NCC / minimum requirements in Basix / NatHERS.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
Class of design: Geotechnical (prepared by a registered design practitioner in the class of structural engineering with geotechnical expertise and/or by a class of geotechnical engineering)			
N/A	Overall development design	The structural engineering report must detail an accurate geometry of the retention scheme, load and design assumptions, load cases, structural section properties / material parameters including analysis output (such as moment and shear envelopes and deflections). Cross sections at critical sections of the proposed excavation showing the geotechnical model used for design must be clearly indicated. The geotechnical report on which the design is based must be provided with the design documentation. The design report must include both temporary and permanent structures where applicable	
	Shoring design (relating to the 'below grade wall' element)	N/A	**Minimum requirements for design category:** Compliance with requirements set out in Ministerial Order regarding section drawing, showing shoring design, boundary and neighbouring footings
	Ground anchor design	The prediction of vertical and horizontal deflections of the proposed retaining structure for each stage of construction and in the long term	**Minimum requirements for design category:** Compliance with requirements set out in Ministerial Order relating to verification of easements
	Earthworks design		
	Geological assumptions		

Min scale	Design category	Design aspects and details	Minimum requirements for design category
Class of design: Vertical Transportation (prepared by a registered design practitioner in the class of vertical transportation)			
1:500	Services masterplans	Design report identifying the end user's requirements, and the scope and details of the vertical transportation services to be provided to meet the requirements. Details to include number of lifts, speed, size of lift car and type of loads expected to be transported in lifts, including furniture sizes, material access for repairs and maintenance to building plant.	N/A
1:50	Vertical transportation (i.e. lifts)	– Details of lift car numbers, types, speed and car sizes (to align with 1:200 and 1:500 architectural plans), lift shaft, lift pits, overruns, levels served, machinery access and lift travel distance. – Lift car interior finishes with compliant fire indices, lighting and passenger signalling equipment – Emergency lifts and Stretcher lifts – Provide access to building plant levels where possible for building maintenance personal and materials. – Redundancy during maintenance or repair outage. – Provisions for accessibility including lift cars, landings, operating and safety facilities – Lift pit access / egress doors (where lift over run pits are 2.5 m or deeper) – Lift pits that do not extend to solid earth – Lift blind shaft emergency egress doors – Access and egress to and from lift entrance landings, lift machine rooms and plant rooms to emergency egress stairs – Access for persons and materials for maintenance and or repair of Lift plant – Design that integrates products in accordance with their authorisation under s.42 Work Health and Safety Act	**Minimum requirements for design category:** Design details must include reference to earthquake forces, and address building specific fire safety engineering requirements, including those for emergency evacuation for ambulant and non-ambulant people. Access for plant and material to include safe lifting points, hatches, lift car loading and size to suit building plant items required to be transported. Maximum blind shaft travel 11.0m

Min scale	Design category	Design aspects and details	Minimum requirements for design category
		– Permanent means of Emergency communication systems and WIP	
	Escalators, Moving Walkways and service hoists	– Design report identifying the end user's requirements, and the scope and details of the vertical transportation services to be provided to meet the requirements. Details to include number of Escalator, Moving Walkways, speed, transition type, – Establish fall protection system adjacent to escalator and or Moving Walkways including intersection to building balustrades with minimum height of 1.4m – Details for Commissioning and project completion documentation	Design details must include reference to earthquake forces, and address building specific fire safety engineering requirements
1:50	Service hoists, Car Storage Systems (Stackers).	– Design specification to identifying the end user's requirements, and the scope and details of the vehicle movement demand, number of cars to be stored. – Method of entry and exist of the system to be documented setting out emergency retrieval of vehicles. – Details of car numbers, types, and car sizes (to align with 1:200 and 1:500 architectural plans), shaft, pits, overruns, levels served, machinery access and travel distance. – Design of automated parking systems to be treated as registrable Plant. – Entrance doors to be integrated in to the storage system safety monitoring system and be of a robust design. – Integration to other services and operation for Security, BAS and emergency power (if provided) Details for Commissioning and project completion documentation	**Minimum requirements for design category:** Design details must include reference to earthquake forces, and address building specific fire safety engineering requirements, Vehicle lift capable of carrying passengers must include safety systems in accordance with AS1735

Min scale	Design category	Design aspects and details	Minimum requirements for design category
Class of design: Mechanical (prepared by a registered design practitioner in the class of mechanical engineering)			
1:500	Services masterplans	– Routes of pipework, pits and cabling on the site – Identify those services that are unable to be concealed – All distribution methods and arrangements for Utilities required for compliance with the BCA – Controls to essential maintenance systems (EMS) items, including fire and life safety and mechanical	
1:100	Mechanical Ventilation plans	Details demonstrating compliance with mechanical ventilation in accordance with F4.5, F4.11 and F4.12 – Heating Ventilation and Air Conditioning (HVAC) plans for all systems, including: o Bathroom, laundry and rangehood exhaust and make-up air solutions o Outdoor air ventilation solutions o Corridor and lobby ventilation solutions o Car park ventilation solutions o Plant and utility room ventilation solutions o Any commercial kitchen ventilation provisions for associated retail spaces o Ducted and non-ducted air conditioning systems o Filtration provisions, including the requirements of AS 1668.2 and the NSW Public Health Regulation. o Refrigerant, heating water and chilled water pipework systems serving the air conditioning, including details of all insulation requirements. o Coordinated condensate drainage provisions o Coordinated intake, exhaust and make-up openings through the façade o Provisions for maintenance access, balancing and commissioning	**Minimum requirements for design category:** design must be suitable for construction.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
		○ Coordinated details and finishes of non-mechanical building elements used as shafts and plenums to convey air ○ Occupant control interfaces – Schematic representation of air-side, water-side and refrigeration systems, (but only) where necessary to convey the requirements of the design. – any provisions for supplementary tenancy services, including future board/meeting rooms heat loads and air pressurisation systems – Scaled elevations, sections and details where necessary to convey the requirements of the design. – Mechanical services switchboard schedules, single line diagrams and interfaces for coordination – Heating water and chilled water layouts, equipment and infrastructure, including: – chilled water pipes supply and return from plant rooms to relevant floor take-offs ○ domestic hot water generation (if not provided under the plumbing trade) – Details of equipment supports, including seismic restraints required by AS 1170.4 – Functional Control Description Operating instructions for occupants, including identification of design assumptions and expectations relating to their use of the space.	

Min scale	Design category	Design aspects and details	Minimum requirements for design category
Class of design: Mechanical (prepared by a registered design practitioner in the class of mechanical engineering or fire systems -mechanical smoke control)			
1:100	Fire and Smoke Control Systems (Mechanical Services)	– Methods of protecting penetrations in elements required to have an FRL, including fire dampers, subducts and enclosed ductwork construction, all coordinated with associated trades – Details of all smoke hazard management systems in accordance with E2, including all required fire and smoke control systems in accordance BCA Specifications and AS 1668.1 including: o Stair pressurisation and relief o Shutdown systems o Miscellaneous ventilation systems o Carpark ventilation control o Any commercial kitchen ventilation provisions for associated retail spaces o Coordinated interfaces with fire safety design including a Fire Matrix – Details of all fire and smoke control systems required by a Performance Solution applicable to the development – Baseline Data design documentation in accordance with AS 1668.1	**Minimum requirements for design category:** design must be suitable for construction.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
Class of design: Fire Safety Engineer			
N/A	Fire Safety Engineering Report	Report prepared in accordance with NCC A2.2, the ABCB NCC Guidance Document; Performance Solutions Process, and the International Fire Engineering Guidelines (IFEG) (soon to be replaced by the AFEG) .	**Minimum requirements for design category:** Elements requested in the FER must be integrated with relevant designs such as the architectural, structural and engineering services plans.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
Class of design: Fire safety systems (prepared by a registered design practitioner in the relevant class of fire safety system design)			
1:500	Fire Safety Services masterplans	– For hydraulic fire systems: System block plans and system schematics showing water supplies, pumps, booster connections and other arrangements to the satisfaction of the Water Authority, the Fire Brigade and BCA. – For detection and alarm systems: system block plans – Fire systems control matrix	**Minimum requirements for design category:** design must be suitable for construction.
1:100	Water supply for fire systems, including reduced pressure zone devices (RPZs)		**Minimum requirements for design category:** design must be suitable for construction.
1:100	Fire safety systems generally	– Plans – Scaled sections and elevations – Specifications – Controls and single line diagrams – Baseline data	**Minimum requirements for design category:** This covers the systems listed in detail below including extinguishers, hydrants, hose reels, sprinklers, tanks and pumps, detection & alarm systems, BOWS and interface to BMS and other systems controlled by the detection system, mechanical services, duct dampers, magnetic hold open devices, lifts and any other essential fire safety measure listed in Clause 166 of the EP&A Reg.
1:100	Portable fire extinguishers	– Locations, specifications, Warning and operational signs	**Minimum requirements for design category:** design must be suitable for construction.
1:100	Fire hydrant system plans and hose reel and hydrant coverage	– Fire hose reel systems – Fire hydrant systems – For combined systems: Completed hydrant and sprinkler pipework layout internal plans, including fire hydrant, fire hydrant head locations, hose reel and	**Minimum requirements for design category:** design must be suitable for construction.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
		sprinkler pipes' risers supply and return from intake valves or plant rooms to relevant floor take-offs and associated isolation valves for fire sprinklers, hydrants and hose reels, boosters, as required Warning and operational signs	
1:100	Sprinkler system plans	– For combined systems: Completed hydrant and sprinkler pipework layout internal plans, including fire hydrant, hose reel and sprinkler pipes' risers supply and return from intake valves or plant rooms to relevant floor take-offs and associated isolation valves for fire sprinklers, hydrants and hose reels, as required Scaled sprinkler valve rooms, including risers supply and return from intake valves or plant rooms to relevant floor take-offs and associated isolation valves for fire water, and fire sprinkler control valves, isolation valves and drain down points, including water capture and recycling	**Minimum requirements for design category:** design must be suitable for construction.
1:50 or 1:20	Fire water supply tanks and pumps	Pump rooms and infrastructure	
1:100	Fire detection, alarm and evacuation systems	The following items may form part of the overall system, depending on the detail of the design, the requirements of the Building Code of Australia and the local fire brigade: – Smoke and heat detection – Emergency Warning and Intercommunication System or Building Occupant Warning (BOWs) speakers or alarm sounders – Strobes – Fire brigade intercoms	**Minimum requirements for design category:** design must be suitable for construction.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
		– Master Emergency Control Panel, fire fan control panel, location of fire control rooms and sprinkler control room/valves and manual call points – Fire brigade/warden intercoms points – Magnetic hold open devices for smoke and fire doors plans – Warning and operational signs – Smoke alarm systems if provided in lieu of AS1670 installation	
1:100	Automatic smoke-and-heat vents	– Automatic smoke exhaust system or automatic smoke and heat vents – fire compartments – Fire and smoke damper locations	**Minimum requirements for design category:** design must be suitable for construction.
	Special hazards plans		**Minimum requirements for design category:** design must be suitable for construction.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
Class of design: Drainage (prepared by a registered design practitioner in the class of drainage design)			
1:500	Services masterplans	– Routes of pipework, pits and cabling on the site – Identify those services that are unable to be concealed – All distribution methods and arrangements for the Utilities	
1:100	Stormwater systems designs	– Downpipes – Rainwater harvesting – Stormwater connection (prepared by a civil engineer) – Designs to demonstrate compliance with any special planning permit conditions – Single line diagrams for rainwater and stormwater infrastructure mains plans and building servicing – stormwater drainage stacks dropping to points of discharge – stormwater overflow path	**Minimum requirements for design category:** design must be suitable for construction.

Min scale	Design category	Design aspects and details	Minimum requirements for design category
Class of design: Electrical (prepared by a registered design practitioner in the class of electrical engineering)			
1:500	Services masterplans	– Routes of pipework, pits and cabling on the site for electrical services required for compliance with the BCA – Identify those services that are unable to be concealed – All distribution methods and arrangements for the Utilities	
1:50	Electrical services	– Layout plans of all major electrical plant/equipment including for major equipment served such as automated vehicle storage systems, loading dock lifters, lifts, fire safety equipment, security systems and other engineering services equipment required for compliance with the BCA	**Minimum requirements for design category:** design must be suitable for construction.
1:100	Emergency and exit lighting layouts and emergency warning systems	– Emergency lighting systems and lightning protection system (if required) – Smoke alarm system – Smoke detection system – Building Occupant warning system – Emergency warning and intercom system – Exit signs	**Minimum requirements for design category:** design must be suitable for construction.
1:100	Controls systems for EMS	– Power supplies and controls to relevant fire safety system) items, including fire and life safety, lifts and mechanical – Standby generation plant details (if required)	**Minimum requirements for design category:** design must be suitable for construction.