Branded worksection
This branded worksection Template has been developed by NATSPEC in conjunction with Rondo Building Services Pty Ltd (the Product Partner) and may be used whilst the Product Partner is licensed to distribute it. The copyright remains with NATSPEC. As with all NATSPEC worksections, it is the responsibility of the user to make sure it is completed appropriately for the project. The user should also review its applicability for local conditions and regulations. Check www.natspec.com.au for the latest updated version.

Worksection abstract
This worksection Template is applicable to flushlined and proprietary ceiling units to suspended internal ceilings and external soffits of dry construction with RONDO ceiling support systems attached to a supporting structure.

Guidance text
All text within these boxes is provided as guidance for developing this worksection and should not form part of the final specification. This Guidance text may be hidden or deleted from the document using the hidden text Hide and Delete functions of your word processing system. For additional information visit FAQs at www.natspec.com.au.

Optional style text
Text in this font (blue with a grey background) covers items specified less frequently. It is provided for incorporation into Normal style text where it is applicable to a project.

Related material located elsewhere in NATSPEC
If a listed worksection is not part of your subscription package and you wish to purchase it, contact NATSPEC.

Related material may be found in other worksections. See for example:
- 0342 Light steel framing for structural ceiling framing.
- 0382 Light timber framing for structural ceiling framing.
- 0472 Acoustic insulation for acoustic insulation to walls and ceiling systems.
- 0511 Lining for screw-up lining to structural ceiling framing and direct fix ceilings.
- 0521 Partitions – demountable or 0522 Partitions – framed and lined for plenum baffles.
- 0522p RONDO in partitions - framed and lined.
- 0574 Window coverings for ceiling mounting or ceiling fixed concealed track for curtains and blinds.

Material not included by RONDO
This branded worksection includes generic material which may not be provided by the Product Partner including:
- Ceiling units.
- Linings.

Documenting this and related work
You may document this and related work as follows:
- Show ceiling types and coordination of combined services on reflected ceiling plans and sections.
- Show particular requirements for the sheet linings, which can be on the drawings or scheduled either in this worksection or in 0511 Lining. Do not duplicate.
- Detail bulkheads and curtain recesses on drawings and coordinate with 0574 Window coverings.

The Normal style text of this worksection may refer to items as being documented elsewhere in the contract documentation. Make sure they are documented.

Specifying ESD
The following may be specified using included options:
- Demountability, e.g. modular ceiling panel systems can be disassembled and re-used during tenancy fitouts.

The following may be specified by including additional text:
- Recycled material content, e.g. steel and aluminium for ceiling panels and ceiling suspension systems, recycled paper, synthetic mineral wool manufactured from slag, a waste product of steel production.
- Renewable raw materials, e.g. ceiling panels with corn or wheat starch binders, wood wool panels made from sustainable timber.
- Mineral tiles with post-consumer contents and an off-cut recycling program.
- Ceiling panels with zero or low formaldehyde emission.
1 GENERAL

1.1 RESPONSIBILITIES

RONDO is a market leading manufacturer and supplier of wall and ceiling systems, and complementary accessories. RONDO is dedicated to providing the systems needed to realise visions effectively and in the most economical way possible, including systems where specific wind pressure, seismic design or acoustic design is to be accommodated. RONDO’s commitment to providing market leading solutions, customer service and high quality products has led it to being behind the best buildings throughout the world.

General

Requirement: Provide suspended ceilings using RONDO ceiling support system, as documented.

Documented is defined in 0171 General requirements as meaning contained in the contract documents.

The responsibility of the designer is to select a product that is:

- Appropriate for the suspended ceiling type.
- Appropriate for expected environmental conditions, e.g. for external soffits in a corrosive atmosphere and ceilings to indoor swimming pools, see NATSPEC TECHnote DES 010 for information on atmospheric corrosivity categories.

1.2 COMPANY CONTACTS

RONDO technical contacts
Website: www.rondo.com.au/contact-us/

1.3 CROSS REFERENCES

General

Requirement: Conform to the following:
- 0171 General requirements.

The 0171 General requirements worksection contains umbrella requirements for all building and services worksections.

- 0453p RONDO in doors and access panels.

List the worksections cross referenced by this worksection. The 0171 General requirements worksection references the 018 Common requirements subgroup of worksections. It is not necessary to repeat them here. However, you may also wish to direct the contractor to other worksections where there may be work that is closely associated with this work.

NATSPEC uses generic worksection titles, whether or not there are branded equivalents. If you use a branded worksection, change the cross reference here.

1.4 STANDARDS

General

Suspended ceilings: To AS/NZS 2785.

AS/NZS 2785 specifies the minimum requirements for the design, construction, installation, maintenance and testing for suspended ceiling systems of dry construction with suspension systems attached to a supporting structure. It is intended for use in commercial, industrial and residential applications.

AS/NZS 2785 clause 3.1.2 requires that the ceiling system remain structurally sound, without maintenance for a period of 15 years. AS/NZS 2785 Appendix F (Informative) addresses material selection and performance.

The AS/NZS 2785 definitions do not include timber systems that form part of the gypsum lining standard AS/NZS 2589.

1.5 MANUFACTURER’S DOCUMENTS

Technical manuals
Resources: www.rondo.com.au/resources
1.6 INTERPRETATION

Definitions
General: For the purposes of this worksection the definitions given in AS/NZS 2785 and the following apply:
- Ceiling unit: Tile, panel, plank, strip or open grid supported within a ceiling suspended system.

Edit the Definitions subclause to suit the project or delete, if not required. List alphabetically.

1.7 TOLERANCES

Suspension system
Flatness, twist, winding and bow: 1.5 mm deviation from a 1.5 m straightedge placed in any position.

Sheeted or flush ceiling system
Suspension system bearing surface for flush lined ceiling: To AS/NZS 2589 Table 4.2.2.
Suspended grid system deflection: To AS/NZS 2785 Table 3.4.4.

1.8 SUBMISSIONS

Fire performance
Fire hazard properties: Submit evidence of conformity to PRODUCTS, FIRE PERFORMANCE, Fire hazard properties.
Fire-resistance level: Submit evidence of conformity to PRODUCTS, FIRE PERFORMANCE, Fire-resistance of building elements.

Operation and maintenance manuals
General: On completion, submit manufacturer’s recommendations for the care and maintenance of the ceiling, and operating instructions for demounting, if applicable.

Products and materials
Type tests: Submit results as follows:
- Weighted suspended ceiling normalized level difference: To AS/NZS ISO 717.1.
- Weighted sound absorption coefficient: To AS ISO 11654, as tested to AS ISO 354.

Prototypes
General: Provide a prototype of the ceiling system, including at least one example of each of the specified components, including services terminals.
Size: At least 10 m².
Location: [complete/delete]
Preferably show the location and extent on the drawings or nominate a room. Delete if a prototype is not required.

Samples
General: Submit samples as follows:
- Suspension system: Sections proposed for the suspension system, including suspension rods, clips, wall angles and trim.
- Ceiling material: Lining and ceiling units, with insulation, showing the extremes and mean of variation in colour, pattern, or texture of the proposed finish.
- Methods: Methods of jointing, fixing, height adjustment, retaining and removing ceiling units.
If prototypes are specified, separate samples of visible components may not be necessary.

Shop drawings
Set-out drawings: Submit proposed set-out, indicating cut ceiling units if any, before installation. Coordinate with plenum services layouts, building structure and other factors affecting the layout.
The drawings should show the ceiling grid or building grid, or both. When choosing a grid module, consider the availability of ceiling unit sizes, and building access.

Warranties
Requirement: Submit warranties conforming to EXECUTION, COMPLETION, Warranties.
Describe the requirements of warranties in PRODUCTS or EXECUTION, as appropriate, and list the submissions required here.
1.9 INSPECTION

Notice
Inspection: Give notice so that inspection may be made of the following:
- The suspension system before the installation of ceiling units or lining.
- The ceiling assembly before the installation of fittings and site painting, if applicable.
- The completed ceiling.

Amend to suit the project, adding critical stage inspections required.
Hold points, if required, should be inserted here.

2 PRODUCTS

2.1 GENERAL

Product substitution
Other products: Conform to PRODUCTS, GENERAL, Substitutions in 0171 General requirements.

The 0171 General requirements clause sets out the submissions required if the contractor proposes alternative products. Refer also to NATSPEC TECHnote GEN 006 for more information on proprietary specification.

Storage and handling
Requirement: Store suspended ceiling system components in a dry and secure storage area, unaffected by weather.

Product identification
General: Marked to show the following:
- Manufacturer’s identification.
- Product brand name.
- Product type.
- Quantity.
- Product reference code and batch number.
- Date of manufacture.

Edit the list to suit the project or delete if not required.

2.2 FIRE PERFORMANCE

Fire hazard properties
Group number: To AS 5637.1.

Non-sprinklered buildings: Wall and ceiling linings must either have an average specific extinction area less than 250 m²/kg or a smoke growth rate index not more than 100 as determined by AS 5637.1.

Refer to NATSPEC TECHnote DES 020 for information on fire hazard properties.

Fire-resistance of building elements
Fire-resistance level: Tested to AS 1530.4.

Refer to NATSPEC TECHnote DES 020 for information on fire-resistance levels.

2.3 SUSPENSION SYSTEM

RONDO ceiling systems
General: As documented.

Seismic systems are available for RONDO KEY-LOCK® concealed suspended ceiling system, RONDO DUO® exposed grid ceiling system and RONDO steel stud and track drywall framing system. Contact RONDO’s technical representative for help with design and further information.

Ceiling systems:
- RONDO KEY-LOCK® Concealed ceiling system.

Available in direct-fix or suspended applications, RONDO KEY-LOCK® produces a high-quality structure that has the ability to hold multiple layers of board, can be used in both fire-rated and non-fire-rated environments, as well as being suitable for acoustic, bulkhead and seismic designs.

- RONDO DUO® Exposed grid ceiling system.
Expertly engineered for fast assembly on site, RONDO DUO® has cross tees that positively lock into each other through the main tee to create a sturdy exposed grid ceiling system. Seismic designs that have been fully tested are available.

- RONDO Xpress® Drywall grid ceiling system.

RONDO Xpress® is a fast and simple lightweight, concealed grid system suitable for a variety of applications including flush ceilings, bulkheads and boxed soffits. It may be used in direct fix or fully suspended applications.

- RONDO DONN® Exposed grid ceiling system.

RONDO DONN® Exposed Grid Ceiling System provides the framework for a variety of lay-in tiles including acoustic, perforated plasterboard, PVC laminated and metal. The well-known DONN® branded Quick Release Clips (QRC) are located on the ends of RONDO DONN® Cross Tees to enable fast and easy installations without the need for mechanical tools.

- Accessories: To RONDO’s recommendations.

Protective coatings for steel components: To AS/NZS 2785 Table F1.

If the ceiling is installed in a corrosive atmosphere such as heavy industrial, maritime or indoor swimming pool enclosures, the protection of all steel components, especially hangers and suspension clips needs special consideration.

2.4 CEILING UNITS

General
Ceiling units: As documented.

2.5 LINING

Plasterboard
Standard: To AS/NZS 2588.

Fibre cement
Standard: To AS/NZS 2908.2.
Wall and ceiling linings: Type B category 2.
Minimum thickness: 4.5 mm.

Cladding and soffit linings are manufactured as Type A Category 3, internal linings are Type B Category 2 and compressed sheets are Type A Category 5.

Sealants
Fire-resisting sealant: Non-hardening sealant compatible with the ceiling materials and documented fire-resistance level.
Acoustic sealant: Non-hardening sealant compatible with the ceiling materials and rated to match the ceiling system’s acoustic performance.

Alternatives: Fire-resistance rated sealants are claimed to satisfy most acoustic properties.

3 EXECUTION

3.1 CONSTRUCTION GENERALLY

Working environment
General: Do not start work before the building is enclosed, wet work is complete and dry, and all work above the ceiling, including services, is complete.

Protection
General: Protect existing work from damage during the installation.

Partitions
General: If partitions are attached to the underside of the ceiling systems, include the partition mass in the seismic mass of the ceiling.
Bracing: Brace partitions attached to the ceiling at concentrated load points such as window and door openings and shelving.

Stability
General: Install the ceilings level, to the nominated plane and fix to prevent looseness or rattling of ceiling components under normal conditions.

If the ceiling is subjected to internal pressurisation, refer to the RONDO Professional Manual for details of grid configurations and down-strutting requirements.
Structure-borne sound
General: Provide a ceiling system which does not amplify structure-borne sound. Provide suitable proprietary products or systems for reducing contact vibrations between structure and ceiling.

Control of movement
Abutments: Install the ceiling to allow for differential movement at abutting surfaces.

Exterior ceiling systems are subjected to additional thermal movement, due to the uncontrolled nature of the environment. The spacing of control joints should take into account these additional thermal effects.

Alignment: Align ceiling control joints with structural control joints. Do not bridge structural control joints.

Or show on the drawings. See AS/NZS 2785, clause 4.13.

Prefinishes
General: Repair damaged prefinishes by recoating.

Curtain recesses
General: Provide curtain recesses, including the following:
- Lining.
- Curtain track support.
- Accommodation for motors and cabling.

Edit and coordinate with drawings.

3.2 SUSPENSION SYSTEM

Show on the drawings the location and extent of the suspended ceiling and where appropriate the basic grid layout. See AS/NZS 2785 Appendix C. See also AS/NZS 2785 Section 4 on installation. Delete the installation clauses for materials not required for the project.

Alterations
General: Dismantle and re-use ceiling suspension system members and supplement with compatible new members, as required.

Consider including this Optional style text by changing to Normal style text if re-using existing ceiling suspension members.

Installation of RONDO ceiling support systems
Requirement: To the RONDO Professional Design Manual.

Ceiling grid
Set-out: Align ceiling unit joints and centrelines of visible suspension members with documented grid lines. If not documented, set out with equal margins. Maintain a consistent and uniform grid set-out conforming to RONDO’s span tables, or as documented.

Clearances: Allow for adequate clearance between ceiling grid and building facade elements.

Suspension system
The suspension system may comprise hangers or struts depending on which direction the load is applied. External ceilings will be subjected to upward loads from wind actions and will therefore require strutting members, see AS/NZS 2785 Appendix A.

Note also that internal ceilings in cyclonic regions may be required to resist wind loads if being allowed for in the design.

Give special consideration to ceilings subject to seismic actions as follows:
• If ceiling systems abut glazing, the horizontal seismic forces generated by the ceiling can damage the glazing.
• If large runs of ceilings are terminated at bulkheads, the horizontal seismic forces generated by the ceiling can cause separation between the ceiling and bulkhead if not properly designed.
• If the ceiling is terminated at a partition, design the partition for the seismic force generated by the ceiling.
• If the partition is terminated at the ceiling, design for the seismic force generated by the partition.

Support members: Install support members as follows:
- Space as required by the loads on the system and the type of ceiling.

Refer to the RONDO Professional Manual for details of grid configurations and allowable loads.
- Allow for the installation of services and accessories, including ductwork, light fittings and diffusers.
- Provide additional back support or suspension members for the fixing of access panels or air registers to prevent distortion, overloading or excessive vertical deflection.
- Allow for access for maintenance of services.
Alignment: Align suspension system with ceiling grid members.
- Vertical misalignment: < 5º (9H in 100V) in either direction.

Clearances: Provide minimum clearance between suspension system and services in the plenum space, to RONDO’s recommendations.

Height adjustment: Provide height adjustment with a length adjustment device at each suspension point, permitting length adjustment of at least 50 mm.

If particular height adjustment devices are not permitted, say so here. The use of threaded rod systems does not necessarily constitute a stronger ceiling grid system.

Grid members: If required, notch grid members at the junction with the perimeter trim to make sure the ceiling units lay flat on the perimeter trim.
- Minimum bearing length: 7 mm.

Restriction: Do not attach the suspension system to the lip or flange of purlins.

If flange connections are necessary, they should be specifically designed and as close as possible to the web.

Services
Support: Conform to the following:
- Do not fix suspension members to services (e.g. ductwork).
- If services obstruct the ceiling supports, provide bridging and suspension on each side of the services.
- Do not support services terminals on ceiling units.
- Clearances: Maintain clearance between services and the suspension system to RONDO’s recommendations.

RONDO DUO ceiling grids: If the weight of the service exceeds 7.5 kg, provide independent suspension to the service.

Bracing
General: If the ceiling grid is unable to transfer sufficient load at the perimeter junction, provide plenum bracing to RONDO’s recommendations to prevent lateral movement of the ceiling grid and to resist the imposed horizontal seismic force.

The RONDO Seismic Wizard can be used to determine when ceiling plenum bracing will be required.
Consider bracing the ceiling at concentrated load points, such as door openings and window openings, or where partitions are attached to the ceiling.
Consider bracing the ceiling at the perimeter where it abuts glazing to prevent the transfer of horizontal load to the glazing under seismic activity.

Bulkheads
General: Integrate bulkheads with the ceiling structure and brace to prevent lateral movement. If the ceiling is terminated at a bulkhead, provide for the resulting seismic force within the bulkhead bracing.

External suspended soffits
Do not use RONDO DUO and RONDO RAPID systems in external applications.

RONDO KEY-LOCK® ceiling grid system: Provide rigid down-strutting members as documented, at each suspension point to prevent ceiling uplift.

Determine the appropriate grid set out in accordance with the design pressure tabulated in the RONDO Professional Manual. Wind loading and load combinations to AS/NZS 1170.2, as required.

Fasteners
General: Provide concealed fasteners to the manufacturer’s recommendations. If material supporting hangers is less than 1.2 mm thick, do not use single screw fasteners in tension.

3.3 CEILING UNITS

Alterations
General: Re-use existing ceiling units and supplement with matching new ceiling units to suit the suspension system, as required.

Consider including this Optional style text by changing to Normal style text if re-using existing ceiling units.

Installation
Fitting: Fit ceiling units accurately and neatly, without distortion, and free from air leakage and staining.
Consult the ceiling system manufacturer if additional support and bracing is required to ceiling units which are required to carry loads from permanent actions other than their own weight.

Tile hold down clips: If ceiling units are required to be restrained for security or to prevent dislodgement of the ceiling tile under seismic actions, insert tile hold down clips at the junction of carrier rails and units.

Pattern and texture: Set out patterned or heavily textured materials with a consistent direction of pattern or texture, or as documented.

**Service penetrations**

General: Provide openings for all services elements, including light fittings, ventilation outlets, detectors, sprinklers and loudspeakers.

Repair: If services pass through ceiling grid members, provide additional grid members and support or relocate service.

**Cut ceiling unit edges**

General: Conceal, or finish to match prefinished edges, including at openings for services elements.

Generally only plain ceiling units or units within a random pattern should be considered for cutting.

### 3.4 PLASTERBOARD LINING

**Delete this clause, if not applicable**

**Installation**

Gypsum plasterboard and fibre reinforced gypsum plaster: To AS/NZS 2589.

Suspended flush ceilings: Fix using screw or screw and adhesive to ceiling members or support frame.

**Multiple sheet layers**

Application: Fire-resisting and acoustic rated ceilings.

Joints: Fill and flush up all joints and fixings in each layer and caulk up perimeters and penetrations before installing following layers. Stagger all sheet joints by minimum 200 mm in both directions.

**Joints**

Flush joints: Provide recessed edge sheets and finish flush using perforated paper reinforcing tape.

Butt joints: Make joints over framing members or otherwise provide back blocking.

External corner joints: Make joints over RONDO P01 corner beads.

Control joints: Align lining control joints with structural control joints and as follows:

- Ceilings: At maximum 12 m centres.
- Control joint beads: RONDO P35 expansion joint.
- Location: If possible, position joints to intersect light fixtures, vents or air diffusers.

Wet areas: Install additional supports, flashings, trim and sealants, as required.

### 3.5 FIBRE CEMENT LINING

**Delete this clause, if not applicable.**

**Installation**

General: Run sheets across the framing members. In flush jointed applications, stagger end joints in a brick pattern and locate them on framing members, away from the corners of large openings. Provide supports at edges and joints.

Suspended flush ceilings: Screw or screw and adhesive fix to ceiling members or support frame.

External areas: Close up ceiling grid spacing to the manufacturer’s recommendations for fibre cement, as appropriate.

**Multiple sheet layers**

Application: Fire-resisting and acoustic rated ceilings.

Joints: Fill and flush up all joints and fixings in each layer and caulk up perimeters and penetrations before installing following layers. Stagger all sheet joints by minimum 200 mm in both directions.

**Joints**

Flush joints: Provide recessed edge sheets and finish flush using perforated paper reinforcing tape.

External corner joints: Make joints over RONDO P01 corner beads.

Dry joints: Provide square edged sheet and join with a RONDO Extreme PDM joining section.
Control joints: Align lining control joints with structural control joints and for flush jointing as follows:
- Ceilings: To divide into bays not larger than 10.8 x 7.2 m.
- Soffit linings: To divide into bays not larger than 4.2 x 4.2 m or 5.6 x 3.6 m.
- Control joint beads: RONDO P35 expansion joint.
- Support: Provide framing parallel to the joint on each side. Do not fix the lining to abutting building surfaces.
- Location: If possible, position joints to intersect light fixtures, vents or air diffusers.
Wet areas: Install additional supports, flashings, trim and sealants, as required.

3.6 ACCESS PANELS

Provide for ceiling access panels where necessary for access to light fittings, sprinklers control valves and the like.

General
Requirement: Provide RONDO access panels to 0453p RONDO in doors and access panels.
Finish: Match the access panels to the ceiling in appearance and performance.
Identification: Provide each access panel with an identification mark.

Non-demountable ceilings
General: Provide access panels supported and anchored to permit ready removal and refixing.

Reinforcement
Frames: Frame the ceiling opening on all sides to allow fixing of the access panel. Provide independent suspension to the framing, as required.

3.7 SMOKE RESERVOIRS

General

Material: [complete/delete]
Frame: [complete/delete]
Depth: [complete/delete]
Location: [complete/delete]

See BCA Spec E2.2b for design requirements for smoke reservoirs.

3.8 TRIM

General
Trim: Provide trim at junctions with other building elements and surfaces, including walls, beams and penetrations, consistent with the materials and finishes of the ceiling system.

Accessories
General: Provide accessories as part of the proprietary ceiling system necessary to complete the installation.

Plasterboard cornices
Fixing: Mitre at corners and adhesive fix with cornice cement. Pin in place at cornice edges until adhesive sets, remove pins and fill holes.
Vertical movement: If minor vertical movement of the ceiling is anticipated, use flexible mastic to joints to vertical surfaces.

Fibrous plaster cornices and roses
Fixing: Pin or prop in place and fix with wet gypsum plaster and scrim straps over framing members.

Alternative: Nominate fixing by the supplier.

Fire-resisting walls
Requirement: Seal to soffit with sealant with an equivalent fire-resistance level before fixing decorative cornices, if any.

3.9 COMPLETION

Spares

Applies mainly to demountable systems where the ceiling units are liable to suffer from handling. Suspension system members should need less replacement. Vary the quantities stated, as required.
General: Provide spare matching ceiling components, as follows and store the spare materials on site where directed:
- Supporting system: One spare supporting member (hanger or framework member) for every 100 members or part thereof of the same type installed in the ceiling.
- Ceiling units: One spare unit for every 50 units or part thereof installed in the ceiling.
- Accessories: One spare of each type for every 50 units or part thereof installed in the ceiling.

**Warranties**

Requirement: Provide warranties for materials and workmanship in the form of interlocking warranties from the supplier and the installer.

Form: Against failure of materials and execution under normal environment and conditions of use.

**Warranty terms:** [complete/delete]

**Period:** [complete/delete]

Consult or negotiate with manufacturers for warranty terms and period, and specify only such terms as are actually available.

Warranty terms: State requirements, if any, additional to those in the worksection, for each relevant item.

### 4 SELECTIONS

Schedules are a way of documenting a selection of proprietary or generic products or systems by their properties. Indicate their locations here and/or on the drawings. Refer to NATSPEC TECHnote GEN 024 for guidance on using and editing schedules.

**4.1 GENERAL**

**Suspended ceiling performance schedule**

The performance values apply to the complete ceiling assembly.

Document sound insulation properties by the appropriate quantities and using the correct terms, symbols and units.

<table>
<thead>
<tr>
<th>Property</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional structural design actions</td>
<td></td>
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<tr>
<td>Fire hazard properties:</td>
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<tr>
<td>Group number</td>
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<tr>
<td>Fire-resistance level (FRL)</td>
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<tr>
<td>Weighted suspended ceiling normalized level difference ($D_{n,c,w}$)</td>
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<tr>
<td>Weighted sound absorption coefficient ($\alpha_w$)</td>
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</tbody>
</table>

A, B, C: These designate each instance or type or location of the item scheduled. Edit codes in the Schedule to match those on drawings.

Additional structural design actions: See AS/NZS 2785 clause 3.2. Document only those actions additional to those given in 0171 General requirements.

- Suspended ceilings designed in conformance with AS/NZS 2785 only cover non-trafficable ceiling systems. If the plenum or roof space will be accessible for maintenance personnel on temporary or permanent walkways, make appropriate provision here and, if necessary, on the drawings. Document the imposed loadings for the supporting framework of access panels and loading from access ladders. Document the supporting framework and any structures e.g. catwalks, under the appropriate worksection e.g. 0342 Light steel framing.
- For earthquake mass of the ceiling, see AS/NZS 2785 clause 3.3.4.2.

Consider other actions e.g. from ductwork, bulkheads, equipment, not carried independently of the ceiling system.

Group number: Refer to BCA Spec C1.10.

Fire-resistance level: Refer to AS/NZS 2785 clause 3.5.
Acoustic performance: Refer to NATSPEC TECHnote DES 027 for information on impact sound insulation and NATSPEC TECHnote DES 032 for information on airborne sound insulation.

Weighted sound absorption coefficient: AS ISO 11654 documents the method to convert sound absorption into a single number. It can be used for routine applications but not appropriate for products in a qualified environment requiring acoustical design by expertise.

WHS considerations
For guidance on occupational noise management, refer to the AS/NZS 1269 series of standards.

4.2 SUSPENSION SYSTEM

RONDO ceiling support system schedule

<table>
<thead>
<tr>
<th>Property</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
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<tr>
<td>Application</td>
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<tr>
<td>Grid</td>
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<tr>
<td>Grid finish/colour</td>
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<tr>
<td>Fixing type</td>
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<tr>
<td>Wall trim</td>
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</tr>
</tbody>
</table>

A, B, C: These designate each instance or type or location of the item scheduled. Edit codes in the Schedule to match those on drawings.

Product: Nominate the product suitable for flush set ceilings or ceiling units. Select from:
- RONDON KEY-LOCK® Concealed ceiling system.
- RONDON DUO® Exposed grid ceiling system.
- RONDON RAPID® Drywall grid system.
- RONDON DONN® Exposed grid ceiling system.

Contact RONDON for the design of seismic ceiling systems and further information.

Application: Internal or External. If external, document wind pressure here or in the Suspended ceiling performance schedule.

Grid: Exposed or Concealed.

Grid finish for DUO©: Powder coat with AkzoNobel Interpon MA2889 cool white. Delete if grid is concealed.

Fixing type: Suspended or Direct fix.

Wall trim: Select from the following:
- RONDON KEY-LOCK©: Wall track 140, 142 or 340, Wall angle DUO 5 or DUO 6, or Shadowline combination set bead P51, P52 or P53.
- RONDON DUO®: Wall angle DUO5, DUO6, DUO7 or DUO8.
- RONDON RAPID®: Wall track RAP6, Locking wall trim RAP7 or Wall trim RAP8.

Trim for curved walls and columns: Contact RONDON for options.

4.3 CEILING UNITS

Ceiling units schedule

<table>
<thead>
<tr>
<th>Property</th>
<th>A</th>
<th>B</th>
<th>C</th>
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<td>Type</td>
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<td>Form</td>
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<td>Size (mm)</td>
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<td>Thickness (mm)</td>
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<td>Pattern</td>
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<tr>
<td>Property</td>
<td>A</td>
<td>B</td>
<td>C</td>
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<td>Colour</td>
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<tr>
<td>Mineral fibre content</td>
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<tr>
<td>Edge type</td>
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<td>Surface</td>
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<tr>
<td>Finish</td>
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</tbody>
</table>

A, B, C: These designate each instance or type or location of the item scheduled. Edit codes in the Schedule to match those on drawings.

If the names of firms and proprietary types are quoted here, much of the miscellaneous data for various products required by this schedule may be unnecessary. Edit as required.

- Type: Nominate grid type e.g. concealed, 1-way exposed or 2-way exposed.
- Material: e.g. Mineral fibre, plasterboard or fibrous plaster.
- Finish: e.g. for plasterboard nominate vinyl faced or paint prefinish.

### 4.4 LINING

#### Sheet lining schedule

<table>
<thead>
<tr>
<th>Property</th>
<th>A</th>
<th>B</th>
<th>C</th>
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</thead>
<tbody>
<tr>
<td>Location</td>
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<tr>
<td>Material</td>
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<tr>
<td>Thickness: Plasterboard (mm)</td>
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<tr>
<td>Thickness: Fibre cement (mm)</td>
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<tr>
<td>Configuration</td>
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<tr>
<td>Level of finish to AS/NZS 2589:</td>
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<td>Lining trim: Re-entrant corners</td>
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<tr>
<td>Lining trim: Salient angles</td>
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<tr>
<td>Size</td>
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<td>Profile</td>
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<tr>
<td>Fibrous plaster rose:</td>
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<td>Fibrous plaster rose:</td>
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<td>Control joint</td>
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<tr>
<td>Access panels</td>
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</tbody>
</table>
A, B, C: These designate each instance or type or location of the item scheduled. Edit codes in the Schedule to match those on drawings.

Location: e.g. bulkheads, fire-resisting ceiling, room type or identifier, or use lining designation on drawings or in a Finishes schedule.

Grade: Plasterboard: AS/NZS 2588 classifies plasterboard by four grades and by performance requirements. Select from:
- Bracing.
- Fire-resistant.
- Standard.
- Water-resistant.

Configuration: e.g. Single or Double layer. Note thickness of each layer.

Level of finish to AS/NZS 2589: Plasterboard:
- Level 3: For concealed surfaces.
- Level 4: Default level for gypsum lining unless specified otherwise.
- Level 5: For gloss or semi-gloss paint finish.

Plasterboard cornice: Size 55 mm, 75 mm or 90 mm. Select profile.

Fibrous plaster cornice and roses: Usually heritage revival profiles.

Control joint: Nominate a product.

Access panels: Proprietary item, nominate size and purpose.

REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:
- AS ISO 354 2006 Acoustics - Measurement of sound absorption in a reverberation room
- AS ISO 717  Acoustics - Rating of sound insulation in buildings and of building elements
- AS/NZS ISO 717.1 2004 Airborne sound insulation
- AS 1530 2014 Methods for fire tests on building materials, components and structures
- AS 1530.4 2018 Fire-resistance tests for elements of construction
- AS/NZS 2588 2018 Gypsum plasterboard
- AS/NZS 2589 2017 Gypsum linings - Application and finishing
- AS/NZS 2785 2000 Suspended ceilings - Design and installation
- AS/NZS 2908 2018 Cellulose-cement products
- AS/NZS 2908.2 2000 Flat sheets
- AS 5637 2005 Determination of fire hazard properties
- AS 5637.1 2015 Wall and ceiling linings
- AS ISO 11654 2002 Acoustics - Rating of sound absorption - Materials and systems

The following documents are mentioned only in the Guidance text:
- AS/NZS 1170 2011 Structural design actions
- AS/NZS 1170.2 2011 Wind actions
- AS/NZS 1269 2019 Occupational noise management
- AS/NZS 1170 2019 Fire resistance - Fire hazard properties
- BCA Spec E2.2b 2019 Services and equipment - Smoke exhaust systems
- NATSPEC DES 010 2020 Atmospheric corrosivity categories for ferrous products
- NATSPEC DES 020 2018 Fire behaviour of building materials and assemblies
- NATSPEC DES 027 2016 Impact sound insulation
- NATSPEC DES 032 2018 Airborne sound insulation
- NATSPEC GEN 006 2015 Product specifying and substitution
- NATSPEC GEN 024 2015 Using NATSPEC selections schedules
- NATSPEC TR 01 2019 Specifying ESD