

SPECIFICATION

of work to be done and materials to be used in carrying out the works shown on the accompanying drawings

~

(project name)

~

(project address)

~

(owners name)

Job Number: ~

Date: ~

5311PC POTTER ACOUSTIC SUSPENDED CEILING PANELS AND GRID

1. GENERAL

This section relates to the manufacture, supply and installation of **Potter Interior Systems** and AMF and USG suspended ceiling systems, including all elements offered by the manufacturer to complete the system.

1.1 RELATED WORK

Refer to ~ for ~.

1.2 ABBREVIATIONS AND DEFINITIONS

The following abbreviations are used throughout this part of the specification:

NRC	Noise reduction coefficient
CAC	Ceiling attenuation class
STC	Sound transmission class
AWCINZ	Association of Wall and Ceiling Industries of New Zealand Inc

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC C/AS1-AS7	Protection from fire
NZBC C/VM2	Protection from fire
AS/NZS 1170.1	Structural design actions - Permanent, imposed and other actions
NZS 1170.5	Structural design actions - Earthquake actions - New Zealand
AS/NZS 1530.3	Methods for fire tests on building materials, components and structures - Simultaneous determination of ignitability, flame propagation, heat release and smoke release
AS 1530.4	Methods for fire tests on building materials, components and structures - Methods of tests on building materials, components and structures - Fire-resistance test of elements of construction
AS/NZS 2589	Gypsum linings - Application and finishing
AS/NZS 2785	Suspended ceilings - Design and installation
AS 2946	Suspended ceilings, recessed luminaires and air diffusers - Interface requirements for physical compatibility
AS/NZS 3837	Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter (cone test)
NZS 4219	Seismic performance of engineering systems in buildings
NZS 4221	Fibrous plaster sheet
ISO 6308	Gypsum plasterboard - Specification
ASTM C423	Test method for sound absorption and sound absorption coefficients by the reverberation room method
ASTM C 635	Standard specification for the manufacture, performance and testing of metal suspension systems for acoustical tile and lay-in panel ceilings
ASTM C636	Standard practice for installation of metal ceiling suspension systems for acoustical tile and lay-in panels
ASTM E1414	Standard test method for airborne sound attenuation between rooms sharing a common ceiling plenum (two room method)

1.4 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:

AMF Warranty
AMF Thermatex Alpha One 1.0 NRC 29CAC
AMF Thermatex Silence 0.9 NRC 44CAC
AMF Thermatex Alpha 0.9 NRC 26CAC
AMF Thermatex Acoustic 0.7 NRC 38CAC
AMF Thermatex Db Acoustic 0.7 NRC 41CAC

AMF Thermatex Acoustic RL 0.15 NRC 38CAC
AMF Thermatex Thermofon 0.85 NRC 22CAC
AMF Thermatex Laguna Micro Perf 0.6 NRC 34CAC
AMF Thermatex Star Complete 0.7 NRC 34CAC
AMF Thermatex SF Acoustic 0.7 NRC
AMF Soundmosaic with 180 deg Sound Emission
AMF Beamex Projector Ceiling Void System
AMF Pan light box Acoustic and Fire Rated

Potters Metal Pan
Series C.S.P. BO/BA

USG Lifetime Warranty
USG Clean Room ClimaPlus
USG Impressions ClimaPlus
USG Mars ClimaPlus
USG Olympia Micro ClimaPlus
USG Radar ClimaPlus
USG Radar ClimaPlus High NRC
USG Geometrix™
USG Donn® Brand Grid Suspension Systems
USG Fire Rated Exposed Grid Ceiling System
USG Early Fire Reaction - [AS/NZS 3837](#)
USG Seismic Design Guide
USG Donn® ScrewFix™ Plasterboard Suspension System
USG ScrewFix™ Ceiling Batten System
USG Drywall Grid Suspension System
USG Maintenance Guidelines

Copies of the above literature are available from **Potter Interior Systems**

Web: www.potters.co.nz
Email: info@potters.co.nz
Telephone: 0800 POTTER (0800 768 837)
Facsimile: 09 579 5661

Warranties

- 1.5 WARRANTY
Supply a warranty as follows:
Type: USG's System Lifetime Warranty
(maximum 30 years - exposed grid and acoustical panel)
Donn® suspension system (15 years)
AMF Acoustical ceiling panels (10 years)
USG acoustical ceiling panels (15 years)
USG Drywall Grid suspension system (15 years)
USG Donn ScrewFix suspension system (15 years)

Requirements

- 1.6 NO SUBSTITUTIONS
Substitutions are not permitted to any specified system, or associated components and products.
- 1.7 SAMPLE SECTION
Allow to erect a sample section of the suspended ceiling system offered. Subject to confirmation in writing, the sample section may form part of the completed installation. Refer to SELECTIONS for location.
- 1.8 INSTALLATION
To [AS/NZS 2785](#). Installation by a manufacturer's accredited installer, using the manufacturer's technical services. Accredited installers must be members of the AWCINZ or provide evidence of experience, listing completed projects of similar size and complexity.

Installation to comply with the requirements of [NZS 4219](#); with related building services installations complying specifically with clauses 5.9 **Ducting**, 5.14 **Luminaires**, and 5.13 **Ceiling-suspended equipment and equipment in ceiling voids**.

1.9 CLEANING INSTRUCTIONS

Supply information on the materials and method of cleaning the ceiling system over its expected life.

1.10 SPARES

Provide spare matching ceiling elements in the quantities specified below. Deliver into a dry store at the site or elsewhere as directed and at agreed times. Refer to SELECTIONS for quantity.

Performance

1.11 LOADING CODE REQUIREMENT

Comply with the requirements of [NZS 1170](#), section 8.

1.12 CERTIFICATION

Provide:

- certification of compliance with [NZS 1170](#), section 8 for evaluation
- certificates and other evidence that the system offered complies with the standards of performance specified
- a Producer Statement on completion.

1.13 ACOUSTIC REQUIREMENTS

Use an independent testing authority to test a specimen of the ceiling system to ASTM C423 and ASTM E1414. Refer to SELECTIONS for acoustic performance requirements. Submit the results if requested.

1.14 FIRE GROUP NUMBERS

The Group Number Classification to NZBC C/AS2-AS7, table 4.1, has been determined in accordance with NZBC C/Vm2 Appendix A, followed by testing and data reduction to ISO 5660.1.

TILE	GROUP NUMBER
Clean Room ClimaPlus	1-S
Eclipse ClimaPlus	1-S
Impressions ClimaPlus	1-S
Mars ClimaPlus	1-S
Olympia Micro ClimaPlus	1-S
Olympia II Micro ClimaPlus	1-S
Radar ClimaPlus	1-S
Radar ClimaPlus Firecode	1-S
Radar ClimaPlus High NRC/High CAC	1-S
Radar Ceramic ClimaPlus	1-S
Rock Face ClimaPlus	1-S

All other products tested to AS/NZS 1530.3

1.15 FIRE RATING REQUIREMENT, EXPOSED GRID SUSPENSION SYSTEM

Design the ceiling system so that together with the floor or roof is to [NZBC C/AS1-C/AS7](#); when tested to AS 1530.4.

Location	FRR (mimimum)	Ceiling design	Floor or roof system
~	60/60/60	USG FC-61	Timber floor, timber joists
~	60/60/60	USG FC-62	Reinforced concrete
~	60/60/60	USG FC-63	Timber floor, concrete joists
~	30/30/30	USG FC-31	Timber floor, timber joists
~	30/30/30	USG FC-32	Timber floor, steel joists
~	60/60/60	USG RC-61	Timber roof sarking, timber structure
~	60/60/60	USG RC-62	Concrete roof, timber structure

~	30/30/30	USG RC-31	Any roof, timber structure
~	30/30/30	USG RC-32	Any roof, steel structure

1.16 FIRE RATING REQUIREMENT, FLUSH SUSPENSION SYSTEM

Design the ceiling system so that together with the floor or roof to [NZBC \(old\) C/AS1 Part 5](#): Fire resistance ratings; when tested in accordance with AS 1530.4.

Location	FRR (minimum)	Ceiling design	Floor or roof system
~	60/60/60	USGDG FC-61	Timber floor, timber joists
~	60/60/60	USGDG FC-62	Reinforced concrete
~	60/60/60	USGDG FC-63	Timber floor, concrete joists
~	30/30/30	USGDG FC-31	Timber floor, timber joists
~	30/30/30	USGDG FC-32	Timber floor, steel joists
~	60/60/60	USGDG RC-61	Timber roof sarking, timber structure
~	60/60/60	USGDG RC-62	Concrete roof, timber structure
~	30/30/30	USGDG RC-31	Any roof, timber structure
~	30/30/30	USGDG RC-32	Any roof, steel structure

1.17 ENVIRONMENTAL REQUIREMENTS

Design the ceiling system for use over its expected life without deterioration within the required temperature and humidity range. Refer to SELECTIONS for details.

1.18 REFLECTANCE

To ASTM C523. Refer to SELECTIONS for reflectance and colour.

2. PRODUCTS

Materials - exposed grid systems

2.1 GRID SUSPENSION SYSTEM

Manufactured in New Zealand by USG Interiors Pacific Limited. Hot-dip galvanized steel elements to ASTM C635 for carrying ceiling panels, light fixtures and air distribution elements and complying with [NZS 1170](#), section 8.

Brand: USG Donn®
Grid finish/colour: Pacific White

2.2 PERIMETER TRIM

Manufactured by USG Interiors Pacific Limited. Hot-dip galvanized pre-painted steel.

Brand/form: USG Donn®
Material: Hot-dip galvanized steel
Finish/colour: Pacific White

2.3 CEILING TILES

Brand: AMF/USG
Edge profile: to suit grid
Performance: ASTM C423, ASTM E1414

Materials - suspended flush ceilings

2.4 SUSPENSION SYSTEM

System: USG Drywall Grid suspension system or USG Donn® ScrewFix™ plasterboard suspension system

Finish: Hot-dip galvanized steel
Compliance: [AS/NZS 2785](#), [AS/NZS 1170](#), [NZS 1170.5](#), ASTM C635

2.5 RESILIENT CLIP AND CHANNEL
ST-001NZ resilient sound insulation clip and USG FC37 furring channel for sound rated systems.

2.6 PLASTERBOARD SHEET
Manufactured by a member of the AWCI drywall division. Gypsum plaster core encased in a durable face and backing papers to ISO 6308.

2.7 FIBROUS PLASTER SHEET
Manufactured by a member of the AWCI Fibrous Plaster Association. Gypsum plaster, casting grade reinforced with fibreglass or sisal hemp to [NZS 4221](#).

Materials - specialty ceilings

2.8 POTTER METAL PAN
Manufactured from powder coated steel or aluminium
Brand: Potters Series C, S, P, BO/BA
Colour: Flat white/custom
Grid system: USG Donn 24mm, 15mm or custom grid

2.9 METAL PAN
Manufactured from pre-painted aluminium
Brand: USG Geometrix 3D Metal Ceiling
Colour: Flat white/silver satin/custom
Grid system: USG Donn Centricitee.

Components

2.10 SCREWS
Screws to suit the lining manufacturer.

3. EXECUTION

Conditions

3.1 CO-ORDINATE SERVICES
Co-ordinate and co-operate with electrical and mechanical work to avoid conflict between suspension members and luminaires, diffusers, pipework and ducting. Confirm the provision of extra hangers and fixings.

Ensure co-operation with work in and above the ceiling, including the marking of specific ceiling tiles below major access points to above-ceiling services. Colour coded markings to follow the standards laid down by mechanical and electrical services.

3.2 SITE CONDITIONS
Do not begin installation until the building is closed in, fully glazed, the roof watertight, the atmospheric conditions within the manufacturer's guidelines, and mechanical and electrical duct work above the ceiling completed.

3.3 COMPLY
Comply with AS 2946 for interface requirements for physical compatibility.

3.4 RESPONSIBILITY
Ensure that conditions are suitable for the ceiling installation. Arrange for the programming of the work to suit required practice.

Application

- 3.5 **INSTALL**
Install the system to [AS/NZS 2785](#) minimum standards and the ceiling manufacturer's requirements.
- 3.6 **ACCESSIBILITY**
Provide access to the ceiling system and the in-ceiling and above-ceiling services so that maintenance and removal of any part can be carried out without damage to the ceiling system or panels.
- 3.7 **PENETRATIONS**
Accommodate recessed light fittings, air conditioning outlets and other electrical and/or mechanical services that are fixed to or pass through the ceiling system. Provide independent support for these as necessary. Such fittings are not to be supported by the acoustical ceiling panels.
- 3.8 **RETURN AIR PLENUM**
Tiles to prevent release of fibres into the ceiling space, air conditioning or ventilation system. Clip tile down to the grid to stop lifting if required.
- 3.9 **FLUSH CEILING**
Install the suspension system to USG Interiors Pacific Limited requirements and [AS/NZS 2785](#) minimum standards. Screw-fix sheets to sections at the centres required by the ceiling lining manufacturer to [AS/NZS 2589](#). Stagger joints and fully support on sections, at centres to suit the load and the ceiling system manufacturer's requirements. Refer to 5112 FIBROUS PLASTER LININGS for fibrous plaster stopping, or to 5113 PLASTERBOARD LININGS for plasterboard stopping.
- 3.10 **PROTECT EXISTING WORK**
Protect adjacent existing work from damage during the installation.

Completion

- 3.11 **REPLACE**
Replace damaged or marked elements.
- 3.12 **LEAVE**
Leave work to the standard required by following procedures.
- 3.13 **REMOVE**
Remove debris, unused elements and elements from the site.
- 3.14 **CLEAN**
Clean soiled or marked units.

4. SELECTIONS

Requirements

- 4.1 **SAMPLE SECTION**
Location: ~

Performance

- 4.2 **ACOUSTIC REQUIREMENTS**
NRC: ~ minimum
CAC: ~ minimum room to room
- 4.3 **ENVIRONMENTAL REQUIREMENTS**
Range: ~ - ~°C
Relative humidity: ~ % maximum
- 4.4 **REFLECTANCE**
Reflectance: ~ % minimum

For (colour): ~

Materials

- 4.5 SCHEDULE
Area: ~
Reference: ~
Fire rating: ~
Acoustical rating: NRC: ~
CAC: ~
STC: ~

Materials - exposed grid system

- 4.6 SUSPENSION SYSTEM, ACOUSTICAL
Type: Donn[®] ~
Module: ~mm x ~mm
Rail face: ~mm
- 4.7 SUSPENSION SYSTEM, FIRE RATED
Type: Donn[®] DXL Fire rated 24mm face
Module: ~mm x ~mm
- 4.8 PERIMETER TRIM - ACOUSTIC
Type: ~
- 4.9 PERIMETER TRIM - FIRE RATED
Type: ~
- 4.10 CEILING TILES
Type: ~
Pattern: ~
Thickness: ~mm
Size: ~ x ~mm
- 4.11 CEILING TILES - FIRE RATED
Type/pattern: ~
Thickness: ~mm
Size: ~mm x ~mm

Materials - suspended flush ceilings

- 4.12 SUSPENSION SYSTEM
Ceiling lining: ~
- 4.13 CEILING LINING
Brand: ~
Thickness: ~mm
Type: ~
- 4.14 RESILIENT CLIP AND CHANNEL
Clip: ST-001NZ resilient sound insulation clip
Channel: USG FC37 furring channel
Location: ~
- 4.15 POTTER ACCESS HATCHES
Brand/type: Potter Hatch
Material: ~
Finish/colour: ~
Size: ~mm x ~mm to suit grid

Materials - specialty ceilings

4.16 POTTER METAL PAN
Panel size: ~mm x ~mm
Panel type: ~
Perforations: ~mm
Pitch: ~mm
Open area: ~%
Royalin Acoustic backer: ~

4.17 METAL PAN
Manufactured from pre-painted aluminium.
Brand: USG Geometrix 3D Metal Ceiling
Colour: ~
Grid system: USG Donn Centricitee

Spares

4.18 SPARES
Panels: ~