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: ~

4311M METALCRAFT PROFILED ROOFING

1. GENERAL

This section relates to the supply and fixing of **Metalcraft Roofing** profiled roofing complete with accessories.
It includes:
- Trough section roofing profiles
- Asymmetrical rib roofing profiles
- Corrugated roofing profile
- Translucent roofing

1.1 RELATED WORK
Refer to 4161 UNDERLAYS, FOIL AND DPC for underlays, foils and DPC.
Refer to ~ for ~.

1.2 ABBREVIATIONS AND DEFINITIONS
The following abbreviations apply specifically to this section:

BMT	Base metal thickness
NZMRM	New Zealand Metal Roofing Manufacturers Inc
MS	Modified silicone
LBP	Licensed Building Practitioner

Documents

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

NZBC E2/AS1	External moisture
NZBC G12/AS1	Water supplies
AS/NZS 1170.2	Structural design actions - Wind actions
AS 1397	Continuous hot-dip metallic coated steel sheet and strip - Coatings of zinc and zinc alloyed with aluminium and magnesium
AS 3566	Self-drilling screws for the building and construction industries
NZS 3604	Timber-framed buildings
ISO 9223	Corrosion of metals and alloys - Corrosivity of atmosphere - Classification determination and estimation
NZMRM CoP	NZ metal roof and wall cladding Code of Practice (CoP)

1.4 MANUFACTURER/SUPPLIER DOCUMENTS
Manufacturer's and supplier's documents relating to this part of the work:
Metalcraft Roofing Metdek400 product literature
Metalcraft Roofing Metdek500 product literature
Metalcraft Roofing Metdek855 product literature
Metalcraft Roofing Metrib750 product literature
Metalcraft Roofing Metrib760 product literature
Metalcraft Roofing MC700 product literature
Metalcraft Roofing MC770 product literature
Metalcraft Roofing MC760 product literature
Metalcraft Roofing T-Rib product literature
Metalcraft Roofing MC1000 product literature
Metalcraft Roofing Metcom7 product literature
Metalcraft Roofing Metcom930 product literature
Metalcraft Roofing Corrugate 760 product literature
Metalcraft Roofing Alsynite Topglass® product literature

Manufacturer/supplier contact details

Company:	**Metalcraft Roofing**
Web:	www.metalcraftroofing.co.nz
Email:	frances.charles@unitedindustries.co.nz
Telephone:	09 274 0408

Warranties

1.5 WARRANTY - MANUFACTURER/SUPPLIER
Provide a material manufacturer/supplier warranty:
~ years for failure of coating adhesion
~ years for weatherproofing by material penetration
For Warranty requirements in excess of this contact Metalcraft Roofing.

1.6 WARRANTY - INSTALLER/APPLICATOR
Provide an installer/applicator warranty:
5 years for workmanship

- Provide this warranty on the material manufacturers standard warranty form.
- Commence the warranty from the date of practical completion of the contract works.

Include a copy of the Metalcraft Roofing maintenance requirements with the warranty.
Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.7 NO SUBSTITUTIONS
Substitutions are not permitted to any specified system, or associated components and products.

1.8 QUALIFICATIONS
Roof Installers shall be experienced, competent roofers familiar with Metalcraft products. And for Restricted Building Work shall also be, an LBP or supervised by an LBP.
Carry out work with experienced, competent installers familiar with the products being used and preferably with appropriate qualifications such as the National Certificate in Metal Roofing and Cladding.

Performance - wind

1.9 WIND - NON SPECIFIC DESIGN
Building wind zone:
~ / ~kPa ULS (refer to NZS 3604, table 5.4)
Refer to Metacraft for "Wind Load Span Design Graphs" for load parameters.

1.10 WIND - SPECIFIC DESIGN
The design wind pressures are to AS/NZS 1170.2:
SLS ~kPa
ULS ~kPa
Refer to Metalcraft for "Wind Load Span Design Graphs" for load parameters.

1.11 FIXINGS, WIND
Design and use the fixings/fixing pattern appropriate for the wind design parameters and NZMRM CoP NZ metal roof and wall cladding Code of Practice. Refer to Metalcraft profiled roofing product literature for profile details. Allow for specific loadings at corners and the periphery of the roof, where localised pressure factors apply. Fixing pattern to also take into account fixing method and purlin spacings.

Performance - General

1.12 PERFORMANCE
Install roofing materials in accordance with the NZMRM CoP NZ metal roof and wall cladding Code of Practice, and Metalcraft profiled roofing product literature, to form a weather-tight performance for the completed roofing system, including all penetrations through the roof and junctions with walls and parapets.

1.13 DRINKING WATER
Roofing for collecting potable water to NZBC G12/AS1.

1.14 CO-ORDINATE
Co-ordinate to ensure substrate and preparatory work is complete and other work programmed in the order required for access and completion of the roof. Ensure that all necessary members are positioned so that flashings can be fastened at both edges through the roof profile or cladding to the primary structure.

2. PRODUCTS

Materials

2.1 PRE-FINISHED HOT-DIPPED ALUMINIUM/ZINC COATED STEEL
Formability steel sheet, G550 for roll forming or G300 for flashings, coated to AS 1397.

2.2 HOT-DIPPED ALUMINIUM/ZINC/MAGNESIUM COATED STEEL, UNPAINTED
Formability steel sheet, G550 for roll forming or G300 for flashings, coated to AS 1397.

Fixings

2.3 FASTENERS GENERALLY
Fixings and fasteners are to be compatible with all materials, the environment and meeting the requirements of the NZ Building Code. Installation is to be in accordance with E2/AS1 and/or the NZ Metal Roof and Wall Cladding - Code of Practice and Metalcraft profiled roofing product literature.
For fixing patterns refer to Metalcraft product literature for roofing profile.

2.4 FIXING SCREWS
To AS 3566. Screws appropriate to the roofing material and the supporting structure, as required by Metalcraft and with a Class 4 or 5 durability and not less than the material being fixed. Screws into timber to penetrate by minimum 30mm. Screw fasteners to be head stamped identifying the manufacturer and class. Refer to SELECTIONS.

2.5 RIVETS
Sealed aluminium, minimum diameter 4.0mm. Refer to Metalcraft for requirements..

2.6 FLASHINGS GENERALLY
Formable grade 0.55 BMT for galvanized, aluminium/zinc, aluminium/zinc/magnesium - coated and pre-painted steel and for Metdek500 (only) 0.70 BMT aluminium (or 0.7mm for small aluminium flashings) to the same standards as the profiled sheets, notched where across profile or provided with a soft edge.

Components

2.7 FLASHINGS TO VERGE, RIDGE AND HIP
To NZBC E2/AS1, 4.0, Flashings.
Supplied by the roofing manufacturer to match or to suit the roofing.

Accessories

2.8 WIRE NETTING AND SAFETY MESH
Refer to 4161 UNDERLAYS, FOIL AND DPC.

2.9 UNDERLAY AND REFLECTIVE FOIL
Refer to 4161 UNDERLAYS, FOIL AND DPC.

2.10 SEALANT
Neutral curing silicone or polymer sealant as required by Metalcraft and used as directed.

2.11 CLOSURE STRIPS
Polyurethane profiled closed cell foam strips to fit the sheet profile.
Brand: Ecofoam
Profile: To suit selected cladding profile

3. EXECUTION

Conditions

3.1 INSPECTION
Inspect the roof framing and supporting structure to ensure that it is complete and fully braced ready for roofing and free from any misalignments or protrusions that could damage the roofing.

3.2 FRAMING TIMBER MOISTURE
When continuous metal cladding etc. Runs along a long continuous timber member and is directly fixed to it, the timbers equilibrium moisture content (EMC) to be 18% or less. For flashings in this situation (sometimes called transverse flashings) the framing EMC to be maximum 16%, and preferably as low as 12%. Transverse flashings can be temporarily tacked in place and final fixing done when moisture content is acceptable.

3.3 STORAGE
Upon delivery visually inspect sheets for damage and accept packs of undamaged roofing. Reject all damaged material. Store on a level firm base clear of the ground, with packs well ventilated and completely protected from weather and damage. Do not allow moisture to build up between sheets. If sheet packs become wet, fillet or cross stack to allow air circulation and drying between sheets.

3.4 HANDLING
Do not drag sheets across each other or other materials. Avoid distortion and contact with damaging substances, including cement. Long lengths of roofing should be lifted onto the roof using an approved load spreading beam. Protect edges and surface finishes from damage, keep under cover and remove as the product is being installed. Use soft, flat sole shoes when fixing and for all other work on the roof. Walk along the purlin line whenever possible.

3.5 SEPARATION
Isolate dissimilar materials (metals and non-metals) in close proximity as necessary by painting the surfaces or fitting separator strips of compatible materials. Place isolators between metals and treated timber and cement based materials. Do not use lead sheet or copper in contact with or allow water run-off onto galvanized or aluminium/zinc coated steel.

Application

3.6 FIX INSULATION
Refer to thermal insulation sections.

3.7 SET-OUT
Carefully set out with consideration of the position of side laps to take account of the prevailing wind and line of sight. Ensure all sheets are square and oversailing the gutter true to line. Check during fixing to eliminate creep or spread and string lines along purlin centres to keep fastenings in line.

3.8 END LAPS
End laps are not recommended, except where specifically detailed.

3.9 THERMAL MOVEMENT
Fix for Thermal Movement to Metalcraft requirements for thermal movement.

3.10 FIXING GENERALLY
Install and fix in accordance with the NZMRM CoP recommendations, and to Metalcraft required fixing patterns and details for each area of the building roofing. Use only screws as required by Metalcraft. Paint colour matched fixings and accessories before installation.

3.11 MARKING AND CUTTING

Use ink pen, chalk line or coloured pencil for marking roof sheets prior to cutting. Do not use lead pencil for marking Zincalume® and Colorsteel®. Cut by shear only, using nibblers or hand snips. Remove all cutting and drilling debris from the roof.

3.12 STOP ENDS AND DOWNTURNS

Form stop-ends at the upper end of sheets. Form downturns at the gutter line where the roof pitch is less than 8 degrees. Form using the required tools.

3.13 INSTALL FLASHINGS

Flash roof to parapets, walls and penetrations to detail. Flashings to be installed on timber framing with moisture content of less than 20%. Where no detail is provided flash to NZMRM CoP NZ metal roof and wall cladding Code of Practice recommendations and Metalcraft and NZBC E2/AS1 requirements. Cut accurately and fix using sealant and rivets to detail and to Metalcraft requirements to form a weatherproof cover. For visible flashings, plan joints/junction to take account of the aesthetic requirements.

3.14 USE OF SEALANTS

Select and use sealants only as recommended by Metalcraft. Apply sealant in two narrow beads transversely across flashing intersections, close to the two edges. Avoid exposing sealant on outside surfaces.

3.15 FLASHING PENETRATIONS

Flash all penetrations through the roof. Fit pipe flashings with a proprietary collar flashing, with other penetrations flashed as detailed and to provide a weathertight installation. Ensure that flashings are set to avoid any ponding of water.

Completion

3.16 REPLACE

Replace damaged or marked elements. Do not attempt to repair coatings by applying colour match paint to pre-finished surfaces.

3.17 LEAVE

Leave this work complete with all necessary flashings, undercloaks, valleys, ridges and hips all properly installed as the work proceeds so the finished roof is completely weathertight.

3.18 REMOVE

Remove all trade rubbish, swarf and unused materials from the roof and surrounds daily during the work. Sweep down at the end of each day, and clean out spouting, gutters and rainwater pipes on completion of the roof. Remove debris, unused materials and elements from the site.

4. SELECTIONS

For further details on selections go to www.metalcraftroofing.co.nz.
Substitutions are not permitted to the following, unless stated otherwise.

Coating system

4.1 COATING SYSTEM - EXPOSURE ZONE B-C (CAT 1-3)

Project Exposure Zone B-C to NZS 3604, C 1-3 to ISO 9223.
Profile/location: ~
Base material: ~
Coating system: ~
Paint colour: ~

4.2 COATING SYSTEM - EXPOSURE ZONE D (CAT 4)
Project Exposure Zone D to NZS 3604, C 4 to ISO 9223.
Profile/location: ~
Base material: ~
Coating system: ~
Paint colour: ~

4.3 COATING SYSTEM - EXPOSURE ZONE E (CAT 5)
Project Exposure Zone E to NZS 3604, C 5 to ISO 9223, plus geothermal.
Profile/location: ~
Base material: ~
Coating system: ~
Paint colour: ~

Roofing - asymmetrical rib profile

4.4 MC700 ASYMMETRICAL RIB PROFILE ROOFING
Location: ~
Manufacturer: Metalcraft Roofing
Profile: MC700~
Dimensions: Sheet width 785mm, cover 710mm, rib height 32mm, and roll formed to any length
Roof pitch: ~
BMT/material: ~
Purlin material: ~
Fixings: ~

4.5 MC770 ASYMMETRICAL RIB PROFILE ROOFING
Location: ~
Manufacturer: Metalcraft Roofing

Profile: MC770~
Dimensions: Sheet width 835mm, cover 770mm, rib height 27mm, and roll formed to any length
Roof pitch: ~
BMT/material: ~
Purlin material: ~
Fixings: ~

4.6 MC760 ASYMMETRICAL RIB PROFILE ROOFING
Location: ~
Manufacturer: Metalcraft Roofing
Profile: MC760~
Dimensions: Sheet width 810mm, cover 760mm, rib height 29mm, and roll formed to any length
Roof pitch: ~
BMT/material: ~
Purlin material: ~
Fixings: ~

4.7 T-RIB ASYMMETRICAL RIB PROFILE ROOFING
Location: ~
Manufacturer: Metalcraft Roofing
Profile: T-Rib~
Dimensions: Sheet width 810mm, cover 760mm, rib height 29mm, and roll formed to any length
Roof pitch: ~
BMT/material: ~
Purlin material: ~
Fixings: ~

4.8 MC1000 ASYMMETRICAL RIB PROFILE ROOFING
Location: ~
Manufacturer: Metalcraft Roofing
Profile: MC1000~
Dimensions: Sheet width 1063mm, cover 1000mm, rib height 32mm, and roll formed to any length
Roof pitch: ~
BMT/material: ~
Purlin material: ~
Fixings: ~

Translucent roofing

4.9 ALSYNITE TRANSLUCENT ROOFING
Location: ~
Brand: Alsynite
Type: ~
Colour: ~

Accessories

4.10 FLASHINGS - GENERALLY

Profile:	~
BMT/material:	~
Coating system:	To match roofing
Paint colour:	To match roofing