

"STAGE 4-ISSUED FOR TENDER"
22-10-2018

TENDERING AND PRE-CONTRACT INFORMATION

AND

SPECIFICATION

for the construction of

THORNDON PARK ESTATE

for

Mr. Pat Belperio

at

Lot 52 Reservoir Road, PARADISE

Prepared by:

ASPEX Building Designers

SPEEDSPEC EDITION 7

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SECTION 02050 DEMOLITION

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*

Demolish in accordance with demolition drawings

Clean site thoroughly on completion

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Excavation & fill.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 2187 Explosives - storage, transport and use. *Parts 2187.0 – 2187.2 1998-2006.*

AS 2436 1981 Guide to noise control on construction, maintenance and demolition sites.

AS 2601 2001 Demolition of structures.

Public and Property Protection: Provide measures required by municipal and state ordinances, laws, and regulations for the protection of surrounding property, footpaths, streets, kerbs, the public, occupants and workmen during demolition operations. Comply with the above ordinances, laws etc. in carrying out measures including barricades fences, warning lights and signs, rubbish chutes, etc.. No blasting for demolition purposes will be permitted. Exercise due care in executing this work. Make good to original condition, damage to structures to be retained and to adjacent property which results from demolition operations. Perform restoration work without expense to the proprietor. Pay fees in connection with this trade.

Comply throughout with the current edition of the Building Code.

MATERIALS

Item

Material required to be demolished becomes the property of the contractor. Remove it from the site. Exceptions to this clause are as follows:

Supply equipment required to perform the work of sufficient capacity to meet the stated completion date.

Provide disposal containers for disposal required.

PREPARATION *Inspect conditions at site before starting work*

Before demolishing and removing parts of building having electrical wiring, gas and water pipes, conduit or similar items embedded in them, notify the architect and authorities having jurisdiction, and make sure that these items are out of service so that they can be removed without danger. Arrange for a professional quality photographic record of demolition. Produce for the proprietor 10" x 8" (250 x 200mm) prints of "before and after" demolition of typical work involved in demolition and surfaces of structures, street crossings, pavements etc.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Burn no debris on the site. Shoring: Provide necessary shoring in accordance with structural engineering instructions. Alter, adapt, and maintain temporary works as necessary, and strike or withdraw them progressively as the work proceeds. Obtain the written consent of the architect/structural engineer if such works are to be left in position at the completion of the work.

Restore to original condition, without expense to the proprietor, any damage to remaining construction resulting from failure to provide adequate protection.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to the proprietor a Warranty covering stability of remaining structure.	n/a

SECTION 02150 ASBESTOS REMOVAL

ADVICE TO OWNER AND ARCHITECT REGARDING ASBESTOS REMOVAL

The building owner is responsible for the detection of any asbestos material on an existing site, or in an existing building to be demolished or renovated. It is a responsibility of the owner to engage a specialist consultant to identify asbestos material, hazardous or toxic substances from the site or adjacent areas and to comply with applicable laws and regulations. Building work on such sites may only proceed after the architect has received a written document from the relevant authority which states that asbestos and hazardous materials have been totally removed.

If any such material is discovered on the site after work has started the work will be authorised by the Project Manager to cease immediately, the client advised and asked to proceed in accordance with the previous paragraph. The architect will require the client to indemnify the architect against any claim relating to liability or loss relating to the detection, abatement, removal and disposal of asbestos, hazardous and toxic substances.

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:* Identification, removal and safe disposal of materials containing asbestos fibres. Refer to drawings supplied as part of the contract documents. Nominate material to be removed. Examine relevant documents for requirements which will affect the work of this section.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work.*

- A. Coordination: coordinate with other trades affecting or affected by the work of this section. Cooperate as necessary to ensure steady and satisfactory progress of the work.
- B. Unit prices: submit with tender a schedule of rates for work required to be done not identified at time of tender. The schedule of rates is required to reflect costs on a square metre rate for sheets or panels to be removed and on a metre run basis for other work.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition*

Perform asbestos removal in accordance with:

- A. National Code Practice for the Safe removal of Asbestos 2nd Edition[NOHSC: 2002 (2005)]. Visit <http://www.ascc.gov.au>.
- B. Relevant State Government Department or State statutory authority, which has jurisdiction over the work of this section, and which is in force at the time of tendering.
- C. Submit as and when required all of the reports and submissions required by the statutory authorities.
- D. Submit the data required in the National Code of Practice.
- E. Submit tenders conforming with documents.
- F. Provide notices to statutory authority which needs data relating to asbestos removal. Pay fees due to any statutory authority which require, by law, fees to be paid.

PREPARATION *Inspect conditions at site before starting work.*

- A. Prepare for asbestos removal in full accordance with the requirements of the National Code of Practice.
- B. Install decontamination facilities in a location agreed upon with the architect and other relevant parties.
- C. Install required labelling and warning signs.
- D. Remove from the work area items which may be damaged by the work of this section.
- E. Protect item of furniture, surface, equipment or plant which may be damaged or soiled during the preparation for and action of asbestos removal. Be responsible for damage resulting from asbestos removal actions, processes and other works.

ON-SITE ACTIONS *Start of work means total acceptance of conditions.*

- A. Advise the superintendent in advance of proposed removal methods.
- B. Comply with the requirements of the National Code of Practice and with the instructions of the authorised superintendent of the work.

Arrange with relevant local authorities the identification of the place to which asbestos material is to be taken from the demolition site. Comply with requirements of the authorities.

CLEANING

Thoroughly clean areas in which work has been performed and those adjacent to the work area. Remove and dispose of traces of the asbestos removal process, protective materials, etc.

SECTION 02150 ASBESTOS REMOVAL

COMPLETION

Complete contracted work in accordance with contract documents and written variation orders issued by the Project Manager, and/or superintendent. Leave the site in a condition suitable for the work of other trades. in cooperation with Project Manager and builder or contractor.

SECTION 02315 EXCAVATION & FILL

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Prepare site, excavate for roads, paving, drains, pits, foundations, slabs. Remove trees and other vegetation, including roots, where they prevent building work, paving, trenches etc. Allow for installation of material required for termite control.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Water distribution, sanitary sewerage, storm drainage, pavements, concrete.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 1289 Methods of testing soils for engineering purposes. *There are 72 parts to this Standard 1991-2005.*

1289.5.1.1 2003 Soil compaction and density tests.

AS 2187 Explosives - Storage, transport and use. *(2187.0 -2187.2 1998-2006).*

AS 3660 2000 Termite management. *There are 3 parts to this Standard, 2000.*

AS 3798 2007 Guidelines on earthworks for commercial and residential developments.

AS/NZS 4200 1994 Pliable building membranes and underlays. *There are 2 parts to this Standard.*

AS 4678 2002 Earth-retaining structures.

Comply with particular specifications in Building Regulations and/or Local Council publications.

Definitions:

Rock: natural or artificial material encountered in the excavation which cannot be removed until broken up by mechanical means such as rippers, jack-hammers or percussion drills.

Rippable Rock: Means rock which can be removed by a single tine, "D9" ripper.

Non-Rippable Rock: Means all other rock. Other than Rock: other material encountered in excavation.

Sub-Grade: The natural ground below the excavations. Filling: A general term for material spread and compacted over the sub-grade to make up levels to the underside of the base. Sub Base: Selected filling spread and completed over sub-grade to compacted over sub-grade to make up levels to the underside of the base. Base: A selected filling layer spread and compacted to form an acceptable working surface directly under the building. *Comply throughout with the current edition of the Building Code.*

MATERIALS TO BE USED

Item	Description	Manufacturer
Termite control	Stainless steel termite protection to all penetrations through the concrete slab. Chemical spray to comply with standards.	
Rock removal	TBA	
Filling	Hardcore: 15 to 40mm, 100 mm thick Fine crushed rock: 5 to 15mm, 50mm thick Sand: clean, salt free, 50mm thick Refer to Engineering Report for details	
Waterproof membrane	0.2mm thick plastic film	
Back filling	Approved clean excavated inorganic material	

PREPARATION *Inspect conditions at site before starting work*

Clear site under building and paving of plants, trees, rocks shown on plan.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

-Below slabs on ground: Hardcore

-Below footings, beams and other structural elements: Concrete of strength equal to the structural element, minimum 15MPa. - In service trenches: 1:2:4 concrete/approved compacted pipe bedding material.

Excavation for strip footings and edge beams, paving, water and piped supply and drains, pits. Apply termite protection. Provide fill and compact in 150 mm layers, to 95% of maximum density, by vibrating or watering. Protect excavations from damage. Maintain excavations free of water. Install waterproof membrane over sand. Seal laps. Take underlay in walls to level of top of slab. Seal service pipes. Inspect and repair membrane before concrete pour.

SECTION 02315 EXCAVATION & FILL

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	5 years

SECTION 02510 WATER DISTRIBUTION

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*

Supply and install pipes to distribute water from water main supply to each required outlet.

Supply and install pipes from hot water heater to each required outlet.

Apply for permits and pay required fees and charges to responsible authorities. Provide permits and approval certificates to builder.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*

Sanitary sewerage, concrete, carpentry, plumbing fixtures and equipment.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS/NZS 1260 2002 PVC-U pipes and fittings for drain, waste and vent application.

AS 1432 2004 Copper tubes for plumbing, gasfitting and drainage applications.

AS/NZS 1477 2006 PVC pipes and fittings for pressure applications.

AS 2492 1994 Cross-linked polyethylene (PE-X) pipe for hot and cold water applications.

AS/NZS 3500 2003 Plumbing and drainage.

There are 10 parts to this Standard, 1996-2003.

AS 3688 2005 Water supply - Metallic fittings and end connectors.

AS 4809 2003 Copper pipe and fittings – Installation and commissioning.

AS/NZS 5065 2005 Polyethylene and polypropylene pipes and fittings for drainage and sewerage applications.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Refer to the engineer's design and details.

Item	Description			Manufacturer/Supplier
Cold water pipes	Galvanised steel	Size from main:		
	Polyethylene	Size of branches:		
	Copper			
	Polybutylene			
	PVC			
Hot water pipes	Prelagged copper			
	Polybutylene			

PREPARATION *Inspect conditions at site before starting work*

Prepare trenches and paths of pipes through structure.

builder to form cutouts of minimum size to take pipes. Not to be done by plumber.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Coordinate with others trades, connect supply pipes to fittings. Conceal where possible and discuss concealment with designer. Ensure correct pipe sizes and connect with complete seal. Jointing of pipes: On manufacturer's advice, select from: Capillary, brazed, compression, pushfit, solvent-welded. Chrome plating : all exposed pipes. Provide "as built" drawings to architects showing actual dimensions and locations of pipes. Cover no pipes until local authority has issued certificate. Protect installation until completion of project.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	5 years

SECTION 02530 SANITARY SEWERAGE

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
 Supply and install a complete system of sewer drains to discharge sewage waste to the authority's sewer main, or to on-site septic tank.
 Apply for permits and pay required fees and charges to responsible authorities. Provide permits and approval certificates to builder.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
 Excavation, water distribution, concrete, floor construction, wall construction.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS/NZS 1260 2002	PVC-U pipes and fittings for drain, waste and vent application.
AS 2032 2006	Installation of PVC pipe systems.
AS/NZS 3500 2003	Plumbing and drainage. <i>There are 10 parts to this Standard, 1996-2003.</i>
AS/NZS 3500.2 2003	Sanitary plumbing and drainage.
AS/NZS 3500.5 2000	Domestic installations.
AS/NZS 4494 1998	Discharge of commercial and industrial liquid waste to sewer - General performance requirements.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Refer to engineer's design and details.

Item	Description	Manufacturer/Supplier
Sewer drain pipes	UPVC sewer grade with solvent joints	
Concrete for pits etc.	20MPa	
Pit covers	Cast iron or galv. pressed metal	
Septic tanks		

Schedule of Sanitary Items, see page 2

PREPARATION *Inspect conditions at site before starting work*

Preparation by Excavation & fill contractor. Provide a design for installation of sanitary sewerage prior to construction.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Form straight and true trenches, maintain size and keep free of water. Bottoms of trenches to provide constant fall. Lay pipes 600mm clear of walls. Connect sanitary fittings to sewer pipes with permanently secure joints. Comply throughout with requirements of local Council and/ or authority. Backfill only after inspection.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	5 years

SECTION 02530 SANITARY SEWERAGE

Item	Location	Manufacturer	Description	Size	Colour	Taps, etc.
Toilet Suite	Bathrooms Throughout		Refer to Internal Selection Schedule by Interior Designer.			
Bath	N/A					
Shower Base	N/A					
Basin	Bathrooms Throughout		Refer to Internal Selection Schedule by Stile Interiors.			
Sink	Kitchens throughout		Refer to Internal Selection Schedule by Stile Interiors.			
Wash Trough	Laundries throughout		Refer to Internal Selection Schedule by Stile Interiors.			
Washing Machine	By client					
Floorwaste	TBS					
Gully Trap	TBS					
Hot Water System	As per engineers selection					

SCHEDULE OF SANITARY ITEMS

SECTION 02550 PIPED ENERGY DISTRIBUTION

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Connection to supply main pipe or to onsite gas tank, distribution material, fittings valves and gasfueled water and air heaters, cooking equipment etc.

Apply for permits and pay required fees and charges to responsible authorities. Provide permits and approval certificates to builder.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Sanitary sewerage, concrete, carpentry, plumbing fixtures and equipment.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS/NZS 1260 2002	PVC-U pipes and fittings for drain, waste and vent application.
AS 1432 2004	Copper tubes for plumbing, gasfitting and drainage applications.
AS 1464 1984	Plastic pipes and fittings for gas reticulation (UPVC). <i>There are 2 parts to this Standard.</i>
AS/NZS 3500	Plumbing and drainage <i>There are 10 parts to this Standard, 1996-2003.</i>
AS/NZS 4130 2003	Polyethylene (PE) pipes for pressure applications.
AS 4809 2003	Copper pipe and fittings – Installation and commissioning.
AS 5601 2004	Gas Installations.

Comply with requirements of statutory authorities having jurisdiction.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Refer to engineer's design and details.

Item	Description	Manufacturer/Supplier
Gas meter	By gas supply authority	
Pipe from main	Galv. steel	
Branches to heater	Galv. steel	
Branches to boilers	Galv. steel	
Pressure reducing valve		
Water heater		
Air heater		
Water boiler		
Gas cooker		
Gas oven	n/a	

PREPARATION *Inspect conditions at site before starting work*

Prepare trenches and paths of pipes through structure. Builder to form cutouts of minimum size to take pipes.

Not to be done by plumber.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Coordinate with others trades, connect supply pipes to fittings. Conceal where possible. Ensure correct pipe sizes and connect with complete seal. Cover no pipes until local authority has issued approval certificate. Protect installation until completion of project.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	10 years

SECTION 02630 STORM DRAINAGE

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
 Supply and lay a complete system of site storm water drainage including agricultural drains, drains below slabs and pavements, retaining wall drains, culverts, pits, frames, manhole covers.
 Apply for permits and pay required fees and charges to responsible authorities. Provide permits and approval certificates to builder.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
 Sanitary sewerage, concrete, concrete pavement, masonry pavers, excavation & fill, bituminous concrete pavement.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 1379 1997 Specification and supply of concrete.
 AS/NZS 3500.3 2003 Stormwater drainage
 AS/NZS 3500.3.1 1998 Stormwater drainage - Performance requirements.
 AS/NZS 3500.5 2000 Domestic installations.
 AS 3600 2001 Concrete structures.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Refer to engineer's design and details.

Item	Description	Manufacturer/Supplier
A. Stormwater pipes	Reinforced concrete Un-reinforced concrete	
B. Stormwater pipes other	Untested vitrified clay with rubber joints UPVC stormwater grade pipes Low density	
C. Steel pipes	Galvanised steel	
D. Agricultural drains	Aggregate	
E. Culverts	Concrete, metal or plastic	
F. Pits	Concrete, plastic	
G. Manhole frames and covers	Concrete, metal	

PREPARATION *Inspect conditions at site before starting work*

Form straight and true trenches 600mm clear of walls, maintain sides, and free from water. Form trenches and bedding to provide constant falls as approved by the local authorities. Prepare trenches and paths of pipes through structure.

Builder to form cutouts of minimum size to take pipes. Not to be done by plumber.

After inspection (and testing) where required, back-fill with material approved by Local Council Engineer and architect.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Ensure correct pipe sizes. Provide upstands to and connect to bottom of downpipes. Provide inspection openings where authority requires (usually at 6 metre intervals), bends and junctions. Provide complete seals at junctions and ends in accordance with manufacturers written instructions.

Arrange for inspection by local authority. When issued, back fill with material approved by authority. Remove debris and clean areas beside excavation for drains.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	5 years

SECTION 02740 BITUMINOUS CONCRETE PAVEMENT

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Excavation, Preparation of sub-grade, base courses, laying and compaction, bituminous concrete surfacing, lane marking.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work:*
Excavation & fill, sanitary sewerage, storm drainage, concrete pavement, kerbs and gutters.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition*

AS 2150 2005 Hot mix asphalt – A guide to good practice.
AS 2758 Aggregates and rock for engineering purposes. *There are 5 parts to this Standard 1996-2000.*
AS 2876 2000 Concrete kerbs and channels (gutters) - Manually or machine placed.
AS 4049 Paints and related materials - Pavement marking materials. *There are 4 parts to this Standard 2005-2006.*

AUSTROADS Supplies a range of technical bulletins. Where relevant, comply with Standards of pavement construction as available from State Road Construction authority.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Comply with the material specification of the appropriate State Road Construction authority. Spec No. []. Such specifications define materials required for various classes of load capacity.
Refer to engineer's design and details.

Item	Description	Manufacturer/Supplier
Crushed rock		
Base course		
Aggregate		
Bitumen		
Cut back bitumen		
Bitumen emulsion		
Tack coat		

Lane Marking

Local council will provide specification.

Equipment

Provide and employ equipment required for satisfactory completion of the work.

PREPARATION *Inspect conditions at site before starting the work.*

Ensure that suitable conditions exist at the time of start of work. Prevent delay in job schedule. Remove surface material to required depth. Test compaction capacity of natural material. Fill soft spots with crushed rock to required compaction. Shape to specified falls. Allow for installation by other trades of drainage and other items. Comply with civil engineer's instructions.

ON SITE ACTIONS *Start of work means total acceptance of conditions.***Installation of Base Course**

Comply with State Road Construction authority, Spec No. []. See above or spread base course material in layers between 100 and 150mm thick. Compact to 100% of standard maximum dry density with minimum 10 tonne roller. Employ a vibrating roller as necessary. Maintain damp condition of material until seal is applied. Employ 15 tonne roller for final compaction.

Testing

Allow for 3 separate compaction density tests to be conducted in random locations by a NATA approved testing organisation. Should tests prove unsatisfactory, repair the work and repeat tests to a satisfactory result without cost to the proprietor.

SECTION 02740 BITUMINOUS CONCRETE PAVEMENT

Pavement Courses

Finish pavement courses consisting of layers of wet-mix crushed rock to smooth and uniform surfaces and conform to the lines, grades and cross sections shown on the drawings, within the following limits :

- A. Level : The top of each pavement course : within 10 mm of level shown on drawing.
- B. Thickness : of the top course of the Wet Mix pavement : within the tolerance of +5, -10mm.
- C. Shape : Finished surface of the pavement course: within 10mm either way from a 3 metre straight-edge laid parallel to the centre line of the pavement or from a template placed at right angles to the centre-line.

Prime Coat

Prime with cut back bitumen suitable for the surface of base material and prevailing weather conditions. Apply in compliance with state authority specification.

Tack Coat

If required, apply tack coat to clean dry surface. Consulting engineer will determine necessity for this item. Apply in compliance with state authority specification.

Bituminous Concrete

Prepare adjacent surfaces such as longitudinal joints, kerbs, channels, headers, manholes, etc. with a thin uniform tack coat. Install bituminous concrete with approved equipment in suitable climatic conditions. Form straight and waterproof joints with even texture and density.

Compact without delay, and finish smooth and true to established grades.

Thoroughly compact areas around kerbs, channels, manholes to same density as other surfaces.

Thickness of bituminous concrete is not to vary more than 7mm from that indicated on drawings.

Replace low or defective areas immediately by cutting out and replacing with fresh hot mix and compacting to conform to surrounding areas. Entire area is to be free draining on completion.

The finished work is not to be less than 97% of laboratory tested specified density.

Lane Marking

Comply with local authority requirements regarding sizes of parking bays and traffic control.

Mark pavement surface as instructed. Comply with AS 4049.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	5 years

SECTION 02769 TACTILE WARNING SURFACES

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install tactile warning surface material.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Concrete, floor finishes, tiles.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 1428 Design for access and mobility. *There are 4 parts to this Standard 1992-2002.*
AS 1428.4 - 2002 Tactile indicators.
AS/NZS 3661.2 1994 Slip resistance of pedestrian surfaces - Guide to the reduction of slip hazards.
AS/NZS 4586 - 2004 Slip resistance classification of new pedestrian surfaces materials.
AS/NZS 4663 - 2004 Slip resistance measurement of existing pedestrian surfaces.
Comply also with instructions of manufacturers of materials to be installed.

MATERIALS TO BE USED

Suppliers include:

Comcork Flooring – www.comcork.com.au

DTAC Pty Ltd – www.dtac.com.au

Item	Description	Manufacturer/Supplier
Hazard indicators (EXTERNAL ONLY)	'StyleStone' Tactile Pavers Colour: charcoal	BORAL Adelaide
	Stainless steel	N/A
	Cork	N/A

PREPARATION *Inspect conditions at site before starting work*

Examine the surfaces to be treated. Ensure that flooring material is secure and clear.

Test the dryness of concrete.

Install the first area of indicators. Stop. When approved by architect, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Comply throughout with manufacturers current written instructions.

Remove excess adhesive and guide lines from completed areas.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering complete installation that it will remain waterproof and weathertight. Warranty to include each roof penetration.	15 years

SECTION 02780 UNIT PAVERS (MASONRY)

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install pavers on prepared base with materials described below.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Excavation, concrete, stormwater drainage.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 2876 2000 Concrete kerbs and channels (gutters) - Manually or machine placed.
AS 3727 1993 Guide to residential pavements.
AS/NZS 4455 1997 Masonry units and segmental pavers.
AS 4586 2004 Slip resistance classification of new pedestrian surface materials.

Comply throughout with the current edition of the Building Code

MATERIALS TO BE USED

Refer to engineer's design and details.

Item	Description	Manufacturer/Supplier
Capping layer		
Sub-base		
Road base		
Base colour		
Bedding sand		
Joint filling sand		
Edge restraints		
Clay pavers	N/A	
Concrete pavers	BORAL Adelaide	
Name:	Promenade Pavers	
Colour:	Charcoal	
Shape:	300x300x60	
Specials:	All the driveways to have a boarder made of BORAL 'Clasicpave 60' (120x240x60). Colour: charcoal	
Comprehensive strength:	Suitable for light commercial vehicle use	

Of each paver type supply 1% extra.

PREPARATION *Inspect conditions at site before starting work*

Prepare areas for pavers. Excavate to required depth. Dispose of surplus material where directed.
Install a sample of 3 square metres. Stop. When approved by architect, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Install edge restraints. Install layers to depth and density as described in manual No.1, see above. Lay to patterns shown. Trim with a concrete saw against edge restraints, or use trimming units from supplier. Fill joints with specified sand and vibrate.

COMPLETION	WARRANTY	Period
Remove broken units, equipment etc. Complete work in accordance with instructions and variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	3 years

SECTION 02820 FENCES & GATES

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and installation of boundary, site and gates all of metal.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Carpentry, metalwork, concrete, painting.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 1379 1997 Specification and supply of concrete.
AS 1725 2003 Chain-link fabric security fencing and gates.
AS 1926 Swimming pool safety. *There are 3 parts to this Standard 1993-2003.*
AS 2820 1993 Gate units for private swimming pools.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description		Manufacturer/Supplier
Boundary Fence and gates to ILU: 1800mm high	type:	Colorbond 'Good Neighbour'	STRATCO
	Posts:	Colorbond	STRATCO
	Rails:	Colorbond	STRATCO
	Infill:	Colorbond CGI style Colour "Dune"	STRATCO
Front Feature Fence: 1800mm high	type:	Tubular Powder Coated 'T20 horizontal Steel Picket' Colour: charcoal gloss Masonry Piers (2000mm high) as per engineering and architectural details. Render finish.	ADELAIDE FENCE CENTRE (or similar approved)
Automatic Sliding Gate: 1800mm high (connected to intercom)	type:	Tubular Powder Coated 'T20 horizontal Steel Picket' Colour: charcoal gloss	ADELAIDE FENCE CENTRE (or similar approved)
Front Personal Access Gate: 1800mm high (connected to intercom)	type:	Tubular Powder Coated 'T20 horizontal Steel Picket' Colour: charcoal gloss	ADELAIDE FENCE CENTRE (or similar approved)

PREPARATION *Inspect conditions at site before starting work*
Prepare footings for posts of concrete or timber.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Place concrete or timber bracing for footings. Construct fence vertical, straight and brace at corners. Construct to manufacturer's instructions, and according to detail drawing.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	25 years

SECTION 03305 WATERPROOF CONCRETE

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install waterproof concrete, formwork, finishing where indicated.
Floor slabs, footings, pit floors and walls, retaining walls and other walls to be backfilled, exposed concrete decks.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work.*
Excavation & fill, concrete, wet area membrane, membrane, blockwork, brickwork.

MATERIALS AND METHODS

Waterproofing Concrete – Xypex Additive.

General

Location: To all concrete up to the floor level of the ground floor.

Proprietary item: Provide concrete waterproofing material manufactured by Concrete Waterproofing Manufacturing Pty Ltd trading as XYPEX Australia, of the cementitious crystalline type known as "XYPEX Waterproofing by Crystallization".

Note: XYPEX crystalline products should not be considered to be flexible.

Storage: Store manufacturers' sealed and labelled material containers off the ground in a dry enclosed area at a minimum temperature of 7°C. The shelf life is 1 year when stored under proper conditions.

Manufacturer's Warranty: Comply with on-site supervision, quality procedures, testing and all other requirements for issuance of manufacturer's Warranty. Refer document "PROCEDURE FOR SUPERVISION OF XYPEX POURS" by XYPEX.

Dosage

By weight: Percentage dosage rates of XYPEX Admix C-1000NF / C-2000NF to the cementitious (ordinary Portland cement [O.P.C.] and reactive pozzuolana {eg; reactive fly ash}) content of the concrete.

Dosage rate must be between 0.8% and 1.0% by weight of cementitious (BWC) unless otherwise specified.

Example; 230 kg O.P.C. and 75 kg Fly Ash, total cementitious = 305 kg.

Dose rate @ 0.8% = 2.44 kg and @ 1.0% = 3.05 kg.

Refer to XYPEX Dosage Chart for applicable number of bags to be dosed in regard to cementitious content. Instances where this chart does not apply require that XYPEX Australia be contacted for determination and advice.

Cement content: THE CEMENT (O.P.C.) CONTENT OF THE MIX IS NOT TO BE LESS THAN 10% BY WEIGHT.

Special applications: Chemical storage and constant high water pressure applications should be referred to Xypex Australia for suitable dose rates.

Batching and Mixing

Batching plant procedures, facilities and manpower will dictate the preferred / required batching technique. For example it is anticipated that the method described for Central mix plants is not generally feasible in Australian conditions.

Ready Mix Plant – Dry Batch Operation:

Prior to batching, add XYPEX Admix in powder form to the drum of the ready-mix truck. After batching, mix the materials for 2-3 minutes to ensure the Admix is distributed evenly throughout the batch. (The batch must be agitated at high speed to ensure thorough dispersion.) A minimum of 10 minutes must elapse before discharge of the concrete. A further 1 minute of mixing at high speed immediately prior to discharge is recommended.

SECTION 03305 WATERPROOF CONCRETE

Ready Mix Plant – Central Mix Operation:

Mix XYPEX Admix with water to form a thin slurry (e.g. 7.0 kg of powder mixed with 13.0 litres of water). Pour the required amount of material into the drum of the ready mixed truck. The aggregate, cement and water should be batched and mixed in the plant in accordance with standard practices (taking into account the quantity of water that has already been placed in the ready mix truck). Pour the concrete into the truck and mix for at least 5 minutes, to ensure even distribution of the XYPEX Admix throughout the concrete.

Precast Batch Plant:

Add XYPEX Admix to the rock and sand, then mix thoroughly for 2-3 minutes before adding the cement and water. The total concrete mass should be blended using standard practices.

NOTE: It is important to obtain a homogeneous mixture of XYPEX Admix with the concrete. Therefore, do not add dry powder directly to wet concrete as this may cause clumping and thorough dispersion will not occur. It is however suitable to add wet concrete to dry powder ensuring that thorough mixing is achieved (as per Dry Batch Operation).

XYPEX soluble bags are most suited for use in the Dry Batch operation.

Maximum water cement ratio should not exceed 0.5. Requirements for higher water cement ratios must be referred to XYPEX Australia.

The XYPEX Admix C-1000NF/ C-2000NF will act as a plasticiser and takes at least 10 minutes to become fully activated and will last approximately 30 minutes after placement of concrete.

Extension of set time may occur when using XYPEX Admix C-1000NF / C-2000NF. Amount of extension will depend on concrete mix design, temperatures and dosage rate of XYPEX. Care should be exercised when other admixtures are being used. When mixed with XYPEX extended set times can result. This category includes set retarders and may include water reducers, plasticisers etc.

Reinforcement

General: In accordance with the pertinent, current Australian Standards.

Concrete slabs: Provide reinforcement of “rib deformed bar” or “welded wire fabric” (other than fitments) and designed in accordance with AS 3600-2001.

Exposed concrete decks: Joint free exposed concrete decks must contain reinforcement to minimise thermal movement, for which the content and placement of reinforcement steel required is sufficient to satisfy the requirements of AS 3600-2001 - Exposure Classification.

Minimum steel: In the event that the requirements of AS 3600-2001 are less than 1.0% (exposure classification A1 or A2) reinforcement steel requirement will in no case be less than 1.0% applied proportionately throughout the concrete and apportioned at not less than 0.5% on the top and 0.5% on the bottom face of the concrete. (i.e.; 0.25% either direction at both faces). 1.0% equates to a degree of crack control between moderate and strong as defined by AS 3600-2001.

Prestressing (Post Tensioning): Is to conform to the above standards and or other current pertinent standards and requirements where applicable.

Compaction

Standard: Comply with AS 3600-2001.

General: Compact the concrete until the following conditions are attained;

Entrapped air is expelled,

Formwork is completely filled to the intended level,

All reinforcement, penetrations and the like are completely surrounded, and

The required properties of the concrete are achieved.

Finishing

Standard: Comply with AS 3600-2001.

General: In finishing of the concrete, include the process of “re-working” the surface of the concrete. This will involve either power trowelling of the surface and or vigorous hand steel trowelling. Subsequent to this finishing any desired finish can then be applied.

SECTION 03305 WATERPROOF CONCRETE

Alcohol: In hot weather (above 25°C) aliphatic alcohol **must** be used during placement and finishing to control the early loss of bleed water, and which may also assist in the control of shrinkage.

Curing

Standard: Comply with AS 3600-2001.

General:

Cure the concrete in accordance with the above references, to enable the achievement of maximum potential XYPEX crystalline growth.

Curing should begin immediately following the final set. The use of aliphatic alcohol does not take the place of standard concrete curing practices.

In formed concrete, formwork provides good protection and curing for concrete, and should be left in place for a period of seven (7) days, only exposed surfaces need to be kept moist.

Alternate Curing (AS 3799): Curing compounds complying with the above and having retention levels of 90% or more are a satisfactory curing agent for XYPEX Admix C-1000NF / C-2000NF treated concrete.

Backfilling

Normal backfilling procedures, after curing of the concrete, may take place. If backfilling takes place within seven (7) days after the initial set, the backfilling material must be moist so as not to draw moisture from the concrete.

Applied Finishes

The crystalline formation of dendritic fibres will fill the pores and capillaries thus reducing the suction characteristics of the concrete, therefore, an additional bonding system may be required for the adhesion of applied finishes such as paint, epoxy, grout, cement parget coat, plaster, stucco or the like.

It is the responsibility of the installer of the applied finish to take whatever measures are necessary, including testing, to ensure acceptance by or adhesion to the concrete surface.

COMPLETION	WARRANTY	Period
Complete contract work in accordance with contract documents and written variation orders issued by the architect.	Manufacturer of Xypex Additive is required to provide a 20 year Warranty based on written approval of the trained installer.	20 years

SECTION 03310 CONCRETE

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install termite control, concrete, reinforcing steel, formwork, for strip footings, floor slabs, paving, pits, curbs etc.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Excavation & fill, storm drainage, sanitary sewerage, pavements, concrete screeds.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

CCA* T49 2003	Guide to Residential Floors (*Cement and Concrete Assoc).
AS 1012	Methods of testing concrete. <i>There are 27 parts to this Standard, 1991-2000.</i>
AS 1379 1997	Specification and supply of concrete.
AS 2870 1996 (Amended)	Residential slabs and footings - Construction.
AS 2876 2000	Concrete kerbs and channels (gutters) - Manually or machine placed.
AS 3600 2001	Concrete structures.
AS 3610 1995	Formwork for concrete.
AS 3727 1993	Guide to residential pavements.
AS/NZS 4586 2004	Slip resistance classification of new pedestrian surface materials.
AS/NZS 4671 2001	Steel re-inforcing materials.
SAA HB64 2002	Guide to concrete construction.
SAA HB71 2002	Re-inforced concrete design in accordance with AS 3600 2001.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Refer to engineer's design and details:

Item	Description	Location
Formwork	Timber, steel, or manufactured formwork	
1. Highest quality finish		
2. Good quality		
3. To be painted		
4. To be rendered or concealed		
5. For footings or in ground		
Reinforcing steel:	Clean, no mud, oil or rust. Provide bar chairs	
Waterproofing membrane:	0.2mm thick plastic premium quality	
Concrete	at 28 days. Use no additives without authority	
Termite control	Refer to Excavation & Fill trade section	

PREPARATION *Inspect conditions at site before starting work*

Prepare surfaces to receive concrete smooth, clean and stable under concrete load.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Arrange for installation of pipes, cables, conduits etc.. Over prepared surface, install WP membrane. Place reinforcement, secure in place and prevent movement during pour, maintain required concrete cover.

Comply with structural engineer's requirements for joints, splices etc. of reinforcement.

Finish exposed floor surfaces: broom, steel trowel, other. Provide set downs for concrete screeds. Provide fall to outlets: See Schedule of Finishes.

Cure finished slabs for 5 days with plastic film secured in place. Use packing sand for curing concrete paving.

Keep damp for 5 days. Slump Tests: Provide and pay for slump test reports: one on first batch and one for every 15 cubic meters of concrete delivered thereafter. Tests and rejection criteria in accordance with AS 3600.

Vibrate concrete to achieve compaction. Do not "travel" vibrators. Strip formwork in accordance with Table in AS 3610 Minimum stripping times.

Exposed concrete edges to be free from all imperfections, membrane ripples, air pockets, honeycombing etc.

Substandard surface: Finishes cement rendered/made good to architects and/or proprietors satisfaction at no cost to proprietor.

SECTION 03310 CONCRETE

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation, and required strength at 28 days	28 days

SECTION 03530 CONCRETE SCREEDS (GRANOLITHIC)

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install concrete screeds on a prepared base, with coves, risers, kerbs, margins, pit covers etc.
Screeding, curing and protection.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Concrete, sanitary sewerage, drainer, wall construction trades, ceramic tile, wet area membranes.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 1379 1997	Specification and supply of concrete.
AS 3600 2001	Concrete structures.
AS/NZS 3661.2 1994	Slip resistance of pedestrian surfaces – Guide to the reduction of slip hazards.
AS 3740 2004	Waterproofing of wet areas within residential buildings.
AS 3972 1997	Portland and blended cements.
AS/NZS 4586 2004	Slip resistance classification of new pedestrian surface materials.
AS/NZS 4663 2002	Slip resistance classification of existing pedestrian surfaces.
SAA HB 71 2002	Reinforced concrete design in accordance with AS 3600 2001.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description	Manufacturer/Supplier
A. Cement	Portland cement, comply with AS 3972	
B. Stone (granolithic screeds)	Clean granite screenings of maximum size 6mm	
C. Stone dust (protective screeds)	Clean bluestone fines of maximum size 4mm	
D. Sand	Washed, sieved, sharp sand, passing a No.16 (1.19mm) sieve	
E. Aggregate for screeds	Dense aggregate graded as follows: Passing 4.75mm sieve 80% Passing 6.00mm sieve 90%	
F. Water	Clean drinking quality	
G. Mesh	Galvanised welded wire fabric. Minimum 2.5mm diameter wires at 100mm each way	
H. Pigments	Compatible with other components	
I. Floor joint sealant	Polyurethane, 2 part, self levelling. Colour:	

PREPARATION *Inspect conditions at site before starting work*

Clean so that no mortar, honeycombing cavities, oil, dust, exist. Roughen the surface as necessary to form key for granolithic.

- A. Mix screeds with minimum water to produce screed material that is workable and will consolidate uniformly. The proportion will depend on the sand in use and is found by practical trial. Minimise random variations once the proportions are established. Carefully control water quantity.
- B. Granolithic finish mix: 1 part cement, 2 parts stone, 1 part sand.
- C. Protective screed mix: 20 MPa concrete with maximum aggregate size of 6mm.
- D. Batching by shovelful is not allowed. Batch by weight only. Add pigment as instructed by manufacturer to a sample colour approved by the architect.

Install a sample of 3 square metres. Stop. When approved by architect, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

REFER TO WET AREA MEMBRANE SPECIFICATION.

- A. Dense screeds: thickness of not less than 35mm, except 25mm at outlets. Reinforce with steel mesh.
- B. Protective screeds: 50mm thick parallel to substrate. Reinforce with light galvanised steel mesh. Provide control joints 3 metres apart maximum, each 8mm wide. Dust on and trowel in bluestone fines. Install joint sealant to manufacturer's instructions.

SECTION 03530 CONCRETE SCREEDS (GRANOLITHIC)

- C. Set downs: for screeds to receive other finishes, consult with other subcontractors for those finishes to determine the set down required.
- D. Walls and upstands: finish at junction with walls and upstands with galvanised wire mesh and 50mm radius cove.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	1 year

SECTION 04210 BRICKWORK

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*

Supply labour and install materials. Build in miscellaneous materials (flashing, wall ties, damp proof course, anchors etc.)

Include staging, scaffolding and cleaning.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*

Concrete, structural steel, wall framing, doors and windows.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 1316 2003 Masonry cement.

AS/NZS 1576 Scaffolding. *There are 6 parts to this Standard, 1991-2000.*

AS/NZS 2904 1995 Damp-proof courses and flashings.

AS 3700 2001 Masonry structures

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description	Manufacturer/Supplier
Bricks		
Sizes	standard	
Colour	Red (selection to be confirm)	Provide a sample to be approved by Project Manager
Mortar	6 parts sand, 1 part cement, 1 part lime	
Pigment for mortar	Brightonlite	
Reinforcement	Galvanised mesh	
Wall ties	As per engineer's details	
Damp proof course	As per engineer's details	
Expansion (control) joints	As per engineer's design	
Lintels	See Schedule below	
Anchors to columns or beams	As per engineer's design	

PREPARATION *Inspect conditions at site before starting work*

Review work with other trades, piping, ducts etc. Clean base before laying masonry. Set doors and windows plumb and brace. Construct a sample wall of 3 square metres. Stop. When approved by Project Manager, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Machine mix. Mortar life: 2 Hours. Joints: tooled, struck, recessed, other. Weep holes at 1200mm centres.

Bonding: Stretcher bond, Bed joints: 10mm. Install DPC, wall ties, reinforcement, flashing to AS 3700. Install ties to anchor masonry to structure, doors, windows etc. Remove mortar from wall ties in cavity walls at the end of each day. Construction joints @ max. 6000mm centre. Clean with 5% hydrochloric acid to face work.

Bagged finish on completion same material as for mortar.

External openings		LINTELS in Brick walls or Block walls		Internal openings
SPAN	SIZE	END BEARINGS	SPAN	SIZE
up to 950mm	74 x 10 flat	150mm	up to 950mm	74 x 10 flat
950 to 1200	76x76x10L	200mm	950 to 1200	75x12 flat
1200 to 1650	102x76x10L	230mm	1200 to 1650	102x76x10L
1650 to 2400	127x76x10L	230mm	1650 to 2400	127x76x10L
2400 to 3000	152x89x10L	230mm	2400 to 3000	152x89x10L

Hot dip galvanise lintels in external openings.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	N/A	

SECTION 04220 STONework

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
 Supply labour and install materials. Build in miscellaneous materials (flashing, wall ties, damp proof course, anchors etc.)
 Include staging, scaffolding and cleaning.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
 Concrete, structural steel, wall framing, doors and windows.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 1316 2003 Masonry cement.
 AS/NZS 1576 Scaffolding. *There are 6 parts to this Standard. 1991-2000.*
 AS/NZS 2699 2000 Built-in components for masonry construction. *There are 3 parts to this Standard.*
 AS/NZS 2904 1995 Damp-proof courses and flashings.
 AS 3700 2001 Masonry structures.
 AS/NZS 4455 1997 Masonry units and segmental pavers.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description	Manufacturer/Supplier
Sandstone	Clubhouse: Smooth face sandstone veneer. Coursed Ashlar pattern Flush pointing Colour: "Sand Dune" or equal approved Independent Living Units: Rock Face sandstone veneer. Random Ashlar pattern Flush points Colour: "Sand Dune or equal approved	"Allstone" or similar approved Provide a sample to be approved by Project Manager
Mortar	6 parts sand, 1 part cement, 1 part lime	
Reinforcement	Galvanised mesh	
Wall ties	As per engineer's design	
Damp proof course	As per engineer's design	
Expansion (control) joint	As per engineer's design	
Lintels	See Schedule below	
Bondbeams	As per engineer's design	

PREPARATION *Inspect conditions at site before starting work*

Review work with other trades, piping, ducts etc. Clean base before laying masonry. Set doors and windows plumb and brace. Construct a sample wall of 3 square metres. Stop. When approved by Project Manager continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Machine mix. Mortar life: 2 Hours. Joints: tooled, struck, recessed, other. Weep holes at 1200mm centres.
 Bonding: Stretcher bond, : Bed joints: 10mm. Install DPC, wall ties reinforcement, flashing to AS 3700. Install ties to anchor masonry to structure, doors, windows etc. Remove mortar from wall ties in cavity walls at the end of each day. Construction joints at max. 6000mm centre. Clean with 5% hydrochloric acid to face work.
 Bagged finish on completion same material as for mortar. Chasing walls: not more than 1/3 wall thickness for conduits etc.

SECTION 04220 STONEWORK

External openings			LINTELS in Brick walls or Block walls		Internal opening
SPAN	SIZE	END BEARINGS	SPAN	SIZE	
up to 950mm	74 x 10 flat	150mm	up to 950mm	74 x 10 flat	
950 to 1200	76x76x10L	200mm	950 to 1200	75x12 flat	
1200 to 1650	102x76x10L	230mm	1200 to 1650	102x76x10L	
1650 to 2400	127x76x10L	230mm	1650 to 2400	127x76x10L	
2400 to 3000	152x89x10L	230mm	2400 to 3000	152x89x10L	

Hot dip galvanise lintels in external openings.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	N/A	

SECTION 05100 STRUCTURAL STEEL

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply, fabricate apply surface treatment, anchor bolts and other attachments, field welding, permanent grouting.
Submit shop drawings to Project Manager.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Concrete, wall construction, roof construction, painting.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS/NZS 1554 Structural steel welding, *There are 7 parts to this Standard 1994-2006.*
AS 1627 Metal Finishing - Preparation and pretreatment of surfaces. *There are 7 parts to this Standard, 1997-2005.*
AS 4100 1998 Steel structures.
AS/NZS 4680 2006 Hot-dip galvanised (zinc) coatings on fabricated ferrous articles.
SAA HB 48 1999 Steel structures design handbook.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description	Manufacturer/Supplier
Lintels	Comply with shop drawings	
Beams	Refer to engineer's documentation	
Columns	Refer to engineer's documentation	
Trusses	Refer to engineer's documentation	
Connections	Refer to engineer's documentation	
Bolts etc.	Refer to engineer's documentation	
Finish A	Wire brush, descale. Hot-dip galv. before delivery. Bolts, cleats, brackets etc treated as for steel	
Finish B	Zinc finish. Sand blast class 2½ then apply coat of inorganic zinc silicate 100 microns thick	

PREPARATION *Inspect conditions at site before starting work*

Advise structural engineer when fabrications may be inspected before delivery. Steel components bent or buckled before erection may be rejected.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Provide holding down bolts to concretor for building in. Comply with structural engineer's instructions. Erect plumb and secure in place. Erect so that components can be fixed without distortion. Provide temporary bracing against wind and other stresses. Weld in accordance with AS/NZS 1554. Advise engineer when erected steel is ready for inspection. Adjust as required. Grout under base plates in high strength mortar. Touch up steel with zinc-rich paint after installation.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	N/A	

SECTION 05400 COLD FORMED METAL FRAMING (LOAD BEARING)

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*

Design, engineer, supply and install cold formed metal framing;

Load bearing or non-load bearing wall framing. Load bearing roof framing. Miscellaneous framing.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*

Floor construction trades, windows and door installation, internal and external finishing trades.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS/NZS 1170 Structural design actions. *There are 5 parts to this Standard, 1993-2003.*

AS 3623 1993 Domestic metal framing.

AS/NZS 4600 2005 Cold-formed steel structures.

Comply throughout with the current edition of the Building Code

MATERIALS TO BE USED

Design, engineer and fabricate by an approved fabricator in the workshop before delivery to the site

Commission supplier to design the framing member sizes, schedule and supply frame.

Fabrication - Form junctions so that no fixing, such as pins, screws, pressure indentations and the like are visible on exposed faces not to be covered.

Show on shop drawings fixings which will be exposed.

Cut edges, drill holes, rivet joints and clean flat sheets, neat, free from burrs and indentations.

Remove sharp edges without excessive deformation.

Fit mitred joints accurately to a fine hairline.

Preassemble and match mark before delivery.

PREPARATION *Inspect conditions at site before starting work*

Prepare surfaces to receive framing. Install inert isolating material such as from a roll of black flashing strip to isolate metal from mortar, concrete, plaster, masonry or other metals.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Install frame anchorage at spacing required by frame manufacturer. Install metal framing and connect the parts together as indicated by manufacturer. Touch up damage surfaces with zinc rich paint. Prepare frame for installation of other trades.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	20 years

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*

Design engineer supply and install metal stairs and handrails including stringers, treads, risers handrails and balustrades, landings, finishing, fabricated spiral stairs, fixed ladders.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*

Floor and wall framing, masonry, concrete, metalwork, painting, floor finishes.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS/NZS 1554 Structural steel welding. *There are 7 parts to this Standard, 1994-2006.*

AS 1657 1992 Fixed platforms, walkways, stairways and ladders.

AS 1664 1997 Aluminium structures, *There are 2 parts to this Standard.*

AS 3715 2002 Metal finishing - Thermoset powder coatings for architectural applications.

AS/NZS 4680 2006 Hot-dip galvanised (zinc) coatings on fabricated ferrous articles.

Comply throughout with the current edition of the Building Code

MATERIALS TO BE USED

Refer to engineers design for details

Item	Description	Manufacturer/Supplier
Plates		

SECTION 05400 COLD FORMED METAL FRAMING (LOAD BEARING)

Bolts		
Treads		
FINISH	A. Hot-dip galvanised B. Pretreatment and polyester powdercoat C. Sandblast class 2½ and inorganic zinc silicate paint	

PREPARATION *Inspect conditions at site before starting work*

Prepare surfaces to which stairs are to be fixed. Install anchor or holding down bolts. Weld steel items and grind smooth. Provide smooth finishes to exposed surfaces with sharp well-defined lines and arrises. Mill machined joints to a close fit. Design necessary lugs, brackets and similar items so that work can be assembled and installed in a neat, substantial manner. Provide holes and connections as required to accommodate the work of other trades and for site assembly of metalwork. Drill or punch and ream in the shop.

Fasteners : Provide required bolts, screws, inserts, fasteners, templates and other accessories required for a complete installation. Coordinate with other trades as to the proper fastening systems suitable for the substrates to which the item is to be secured. Refer to Project Manager if in doubt. Fasten galvanised items with galvanised fasteners.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Measure at site before manufacture. Fixing: Base plates to concrete with expanding masonry anchorage fixings. Base Plates to timber with coach screws. Tubular Handrails: Provide to situations shown on detail drawings, tubular handrails of the sections indicated, neatly stop ended, fixed to handrail posts by retractable pins. Installation: Assemble treads, handrail and stair components in the position indicated or the stairwell provided. Join mechanically on site without site welding. Adjust to suit floor to floor heights with factory cut spacers only. Ensure every surface is smooth with no fixings which could damage hands.

COMPLETION

Complete work in accordance with instructions and written variation orders.

SECTION 05580 ARCHITECTURAL METALWORK & WHITEGOODS

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install metalwork items shown on the schedule.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Electrical installation, gas installation.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS/NZS 1554 Structural steel welding, *There are 7 parts to this Standard 1994-2006.*
AS 1627 Metal finishing – Preparation and pretreatment of surfaces. *There are 7 parts to this Standard, 1997-2005.*
1627.5 2003 Pickling
AS/NZS 1664 1997 Aluminium structures, *There are 2 parts to this Standard.*
AS/NZS 1841 Portable fire extinguishers:
Part 1 1997 General requirements, Part 2 1997 Specific..... water type, Part 3 1997 Specific..... wet chemical type, Part 4 1997 Specific..... foam type, Part 5 1997 Specific..... powder type, Part 6 1997 Specific..... carbon dioxide type, Part 7 1997 Specific..... vaporising-liquid type, Part 8 1997 Specific..... non-rechargeable type.
AS/NZS 4353 1995 Portable fire extinguishers - Aerosol type.
AS/NZS 4680 2006 Hot-dip galvanised (zinc) coatings on fabricated ferrous articles.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Refer Schedule following.

PREPARATION *Inspect conditions at site before starting work*

Field measurements: Do not delay job progress. Allow for adjustments and fitting of the work in the field where taking of measurements might cause delay.

Provide smooth finishes to exposed surfaces with sharp well-defined lines and arrises. Mill to a close fit machined joints. Design necessary lugs, brackets and similar items so that work can be assembled and installed in a neat, substantial manner.

Provide holes and connections as required to accommodate the work of other trades and for site assembly of metalwork. Drill or punch and ream in the shop.

Fasteners : Provide required bolts, screws, inserts, fasteners, templates and other accessories required for a complete installation. Coordinate with other trades as to the proper fastening systems suitable for the substrates to which the item is to be secured. Refer to architect if in doubt.

Fasten galvanised items with galvanised fasteners.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Inspect fabrication on arrival at site. Do not repair on site. Replace damage items. Install each item by bolting or screwing to structural elements of building. Locate anchorages accurately and ensure secure installation. Do not cut metal on site. Remove weld spatter and touch up with zinc rich paint immediately. Protect work until project completion.

Install whitegoods and similar items in accordance with manufacturer's instructions.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	20 years

Metalwork Schedule						
ITEM	Manufacturer	Cat No.	Material	Finish	Colour	Size
Bathroom cabinet	N/A					
Bench supports						
Folding Frame Clotheslines	Hills	Supa Fold 120	Steel	Powder Coated	White	2.2x0.76
Extract ventilator	N/A					
Fire extinguishers	To Australian Standards					
Garage door	Panel Lift Door		Steel	Colorbond		2100H x 2400W
Gate	Refer to section 02820 Fence & Gates		Steel	Colorbond / Powder Coated	Dune/ Charcoal Gloss	
Grab rails	JD McDonald	GRC63	Stainless Steel	Natural	Natural	
Hand driers	JD McDonald	Pronto			White	450x360x 265
Fold down Ironing board (accessible unit type A only)	Robinhood (or similar approved)	IC100 or IC200				
Letterbox	Mailsafe (or similar approved)	MSF3	Anodised aluminium	Natural	Natural	
Manhole cover	Plasterboard painted to match ceiling					
Paper towel dispensers	N/A					
Rangehood	Refer to Internal Selection schedules by Interior Designer					
Sanitary disposal	"Fresh and Clean" slim line sanitary disposal unit as per BCA – Alternative selection will be considered.					
Shelves (accessible bath only)	450x150 shelf as per BCA table F2.4 and architectural drawings (WD47) provide a sample to be approved.					
Shower curtain rail	TBS – L shape 1200x1200 rail with ceiling support. Provide a sample to be approved.					
Shower enclosure door	Refer to Internal Selection schedules by Interior Designer					
Smoke detectors	TBS/As per BCA					
Toilet paper holder	Refer to Internal Selection schedules by Interior Designer					
Towel rails	Refer to Internal Selection schedules by Interior Designer					
Wall oven (elec)	Refer to Internal Selection schedules by Interior Designer					
Wash trough cupb	Refer to Internal Selection schedules by Interior Designer					
Soap dish (accessible bath only)	Refer to Internal Selection schedules by Interior Designer					

SECTION 06100 CARPENTRY

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and erect framing both structural and substructural. Include floor panels, wall cladding, roof framings, incidental framing. Refer Schedule following.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Concrete, brickwork, wall lining, plumbing, electrical, insulation, painting, fibre cement products.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS/NZS 1170 Structural design actions. *There are 5 parts to this Standard 1993-2003.*

AS 1684 Residential timber-framed construction.

1684.2 2006 Non-cyclonic areas.

1684.3 2006 Cyclonic areas.

1684.4 2006 Simplified - Non-cyclonic areas.

AS 1720 Timber structures. *There are 3 parts to this Standard, 1997-2006.*

AS 1860.2 2006 Particleboard flooring – Installation.

AS 4055 2006 Wind loads for housing.

SAA HB 44 1993 Guide to AS 1684 1992, The National Timber Framing Code.

Comply with recommendations of the National Assoc. of Forest Industries Technical bulletins.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Refer Schedule following

PREPARATION *Inspect conditions at site before starting work*

Store timber on site above ground, flat and horizontal. Protect from rain, damage and other material.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Comply with National framing code.

Review drawings when erecting framing and provide additional framing at every location where extra loads will be applied to finished walls.

Perform operations including grooving, rebating, framing, housing, beading, mitring, scribing, nailing, screwing and gluing as necessary to carry out the works. Use timber in single lengths whenever possible. If joins are necessary, make them over supports unless otherwise shown or specified.

Arris visible edges in sawn work and in dressed work arris with sandpaper to 1.5mm radius unless otherwise shown or specified.

Back plough boards liable to warping (for example, if exposed on one face). Make the width, depth number and distribution of ploughs appropriate to the dimensions of the board and the degree of its exposure.

Provide necessary templates, linings, blocks, stops, ironwork and hardware, screws, bolts, plugs and fixings generally.

Trim framing where necessary for openings, including those required by other trades.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	5 years

SECTION 06100 CARPENTRY

Refer to engineer's design for details of Timber Framing.

Carpentry				
ITEM	F No.	TIMBER NAME	SIZE	SPACING
Stump	N/A			
Bearer				
Floor joist				
Upper floor joist				
Bottom plate				
Top plate				
Studs				
Jamb studs				
Lintels				
Noggins				
Bracing				
Ceiling joists				
Hanging beams				
Rafters				
Underpurlins				
Struts				
Ridge				
Hip				
Valley				
Collar ties				
Eaves bearer				
Fascia				
Barge				
Verandah post				
Pergola beams				
Timber cladding				

SECTION 06165 FIBRE CEMENT PRODUCTS

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*

Supply and install fibre cement and associated equipment and fixing to:

Wall linings internal, ceiling linings internal, fire-rated walls, external cladding, wet area wall lining, eaves lining, fascias, partitions, wet area flooring, underlays, external decks, lattice, bracing panels, ceramic faced panels, fibre cement pipe columns.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*

Wall framing, ceiling framing, external decks, plumbing, electrical.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 2329 1999 Mastix adhesives for fixing wallboards.

AS/NZS 2908 2000 Cellulose-cement products,

2908.2 2000 Flat sheet.

Comply with relevant Technical Bulletins and published instructions produced by manufacturer.

Comply with requirements of relevant statutory authorities, and Building Code.

MATERIALS TO BE USED

JAMES HARDIE PRODUCTS		CSR BUILDING MATERIALS EQUIVALENT	
Hardiflex	Thickness: 4.5, 6.0	Cladding sheet	4.5, 6.0
Villaboard	Thickness: 6.0, 9.0, 12.0	Wallboard FC	6.0, 9.0
Versilux	Thickness: 6.0	sq. edge	6.0, 9.0
Hardies eaves	4.5mm	Eaves lining	4.5
Compressed sheet	6.0, 9.0, 12.0, 15.0, 18.0, 24.0	Compressed sheet decking	
Pineridge (impact resistant)		X	
Underlay for ceramic tile		CT Underlay	
Hardietex (external sheet)	7.5	Texture base sheet	7.5
Hardiebrace	5.0	X	
Partitions toilet and shower		X	

Supply all those required for each application.

PREPARATION *Inspect conditions at site before starting work*

Tradesmen with wide experience and knowledgeable in this class to undertake the work.

Coordinate with other trades prior to commencement of work and arrange for fixing grounds required for satisfactory execution of the work of this trade including penetrations.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Comply with the manufacturer's installation instructions. Take care of and protect surrounding work, including other finishes, equipment and components, during installation. Provide protective covering where necessary.

Finish joints and secure fasteners. Remove surface defects to achieve uniform appearance of each type of installation. Make good damage in every respect at no additional cost to the proprietor.

Clean exposed surfaces including trim, edge mouldings, and comply with manufacturer's instructions for cleaning and touch-up of minor finish damage.

Remove splatterings, droppings and surplus material.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	5 years

SECTION 06175 TIMBER TRUSSES (NAILPLATE)

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply engineer and install timber trusses with working drawings, nailplates, ties to wall and other structural components, bracing.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work.*
Carpentry, wall framing, brickwork, blockwork, roof tiles, metal roofing.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition*

AS/NZS 1170 Structural design actions. *There are 5 parts to this Standard 1993-2003.*

AS 1720 Timber Structures
1720.1 1997 Design methods

AS 4440 2004 Installation of nailplated timber roof trusses

Comply throughout with the current edition of the Building Code.

MATERIALS AND METHODS

Item	Description
Timber	Pine F5, A grade. Kiln dried hardwood mechanically stress graded. Comply with engineer's design and shop drawings.
Connector plates	Zinc coated steel to class Z300. Minimum 1mm thick. Within 10km of coast, hot dipped galvanised plates.

PREPARATION *Inspect conditions at site before starting work.*

Ensure wall and other building components are secure and that adequate grounds are in place.

Deliver trusses in waterproof wrapping.

ON-SITE ACTIONS *Start of work means total acceptance of conditions.*

Provide and install a safety system to comply with OH and S requirements.

Ensure that installers are fully trained in use of the equipment.

Handle and erect trusses to avoid damage and permanent sets.

Comply with recommendations of truss manufacturer. Brace each truss as it is installed.

Ensure that trusses are placed at correct spacing.

Where necessary, request structural engineer to check installation.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	15 years

SECTION 06400 JOINERY (SITE BUILT)

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
The work of this section covers the supply and installation of site built joinery items. It includes:
Service cupboards, wardrobes, coat cupboards, benches, shelves, rails, stairs, handrails, architraves, skirting, pelmets.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Floor, wall and ceiling construction, window and door installations, finishing trades, electrical.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS/NZS 1859	Reconstituted wood-based panels - Specifications
1859.1 2004	Particleboard
1859.2 2004	Dry processed fibreboard. <i>There are 2 other parts to this Standard.</i>
AS 2754.2 1991	Adhesives for timber and timber products – Polymer emulsion adhesives
AS 2796	Timber - Hardwood - Sawn and milled products. <i>There are 3 parts to this Standard, 1999-2006.</i>
AS/NZS 4364 1996	Adhesives, phenolic and aminoplastic for load-bearing timber structures: Classification and performance requirements.
AS/NZS 4785	Timber – Softwood - Sawn & milled products
4785.1 2002	Product specification
4785.2 2002	Grade description
4785.3 2002	Timber for furniture components

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Refer to selection schedule for details.

Item	Description	Manufacturer/Supplier
Service cupboards, wardrobes, coat cupboards	MDF Laminate	TBA
Door frames: timber, steel	Timber	
Doors:	MDF Laminate, plain square edge	
Benches: material, frame, supports, boards etc.	Caesar Stone / Squareform Laminate	
Shelves: material, assembly, wall stripping, brackets	Laminate	
Architraves	MDF	
Skirtings	MDF	

PREPARATION *Inspect conditions at site before starting work*

Construct a sample installation of door frame and door, bench, shelves, architraves and other trim. Stop. When approved by project Manager and interior Designer, complete remaining work.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Provide necessary anchoring devices. Use concealed shims to install work plumb, level, straight and distortion free within the following tolerances:

- 1mm in 800mm for plumb and level.
- 0.5mm maximum offsets in flush adjoining surfaces.
- 0.2mm maximum offsets in revealed adjoining surfaces.

Scribe and cut to fit adjoining work; refinish cut surfaces or repair damaged finishes at cuts.

Secure joinery with anchors or blocking built-in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing as required to complete the installation. Except where prefinished matching fastener heads are required, use fine finishing nails, countersunk and filled flush. Use a matching filler where a transparent finish is required. Install without distortion.

SECTION 06400 JOINERY (SITE BUILT)

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	5 years

SECTION 07130 TANKING

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install tanking to areas shown on drawings plus preparatory and protective work and associated materials including but not limited to the following: Waterproofing of garden containers etc.
Concrete and masonry patching and filling, membrane installation and surface protection.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Blockwork, brickwork, concrete, cement render.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
Current written instructions provided by tanking material manufacturer.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description	Manufacturer/Supplier
Membrane	To selection / as per BCA	
Waterproof coating	To selection / as per BCA	
Bituminous coating	To selection / as per BCA	
Protective board	To selection / as per BCA	

PREPARATION *Inspect conditions at site before starting work*
Remove projections which could penetrate tanking membrane. Fill holes in surface to be tanked.
Employ subcontractors licensed by materials manufacturer.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

- Method A: Install tanking membrane or other material strictly in accordance with written instructions of manufacturer. Make no variation without the manufacturer's written order, but then, only after the architect has given his approval. Execute seals around penetrations, upstands, etc. as instructed by the manufacturer. Install the complete sheet membrane tanking in compliance with the manufacturer's instructions. Apply protective board over membrane on outside of tanked walls.
- Method B: Apply three coats of natural asphalt in accordance with the manufacturer's instructions. Finish with protective board.
- Method C: Apply two coats of aqueous bitumen in accordance with the manufacturer's instructions. Protect with scratch coat and finishing coat of cement render.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	15 years

SECTION 07140 WET AREA MEMBRANE

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*

Location

Refer Waterproofing Schedule and drawings.

Typically to floors and walls of wet areas: Including bathrooms, ensuites, laundries and garbage rooms, and to walls areas immediately adjacent and behind a bath, sink or similar fixture.

Carry the membrane under fixtures, baths, shower bases, toilets, vanities and the like and extend into the full area of shower recess.

To a minimum height of 2100mm to walls of shower recess extending 300mm beyond the horizontal extent of the designated tiled wall area.

To a height and width not less than 450mm to wall areas immediately adjacent and behind a bath, sink or similar fixture.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work.*

Blockwork, brickwork, concrete, cement render, fibre cement, plasterboard, ceramic tile.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition*

AS 3740 2004

Waterproofing of wet areas within residential buildings.

Current written instructions provided by tanking material manufacturer.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Type: Liquid applied, moisture curing, polyurethane liquid membrane.

Proprietary item: "Vulkem Non-exposed" system by Tremco Pty Ltd, phone (02) 9638 2755.

Alternatives

Type: Any proposed alternatives to the system specified below: provide a proprietary liquid applied or sheet membrane system which: has a current Australian Building Product and Systems Certification Scheme certificate (Australian Building Codes Board); or has a current technical opinion issued by the Australian Building Systems Appraisal Council (CSIRO) stating that the system is suitable for use as a waterproofing system for use in wet areas, shower recess bases and associated floors and wall/floor junctions which are to be tiled.

PREPARATION *Inspect conditions at site before starting work.*

Curing: Allow concrete to cure for a minimum of 28 days prior to the application of the membrane.

Cleaning: Clean down the substrate surface to remove all curing agents, wax, grease, oil, dirt, dust and other foreign material and leave it clean, dry, dust free, smooth and free of undulations.

Voids: Patch with a non shrinking quick setting grout and allow to cure for a minimum of 7 days prior to applying the membrane.

ON-SITE ACTIONS *Start of work means total acceptance of conditions.*

Fillet: Wherever a vertical penetration or upstand occurs install a 12mm x 12mm fillet of Tremflex PUI at the intersection of the vertical and horizontal surfaces.

Primer: Prime porous substrate (concrete/cement) typically with Vulkem 171.

Prime non-porous materials (metals/plastics) typically with Tremco Primer No 181.

Joints and penetrations: On the same day of priming, seal joints and penetrations with Vulkem 931 sealant.

First coat: On the same day as priming, apply a coat of Tremco Vulkem Non-exposed to a minimum wet film thickness of 1.5mm to floors and walls in a single operation. If delayed beyond that day reprime-prime in accordance with manufacturers instructions.

Detailing

Detail the membrane in accordance with the manufacturer's recommendations, as shown on the drawings and as follows:

Turn the membrane down into the puddle flange of outlets.

Turn the membrane up at and seal to all penetrations, pipes, waste outlets, etc.

Turn the membrane up for 100mm at all walls, plinths, and other upstands.

Dress the membrane over the horizontal leg of angle tile trims at doorways and turn up the vertical face of the angle to terminate level with the bottom of the floor tiles.

Similarly dress the membrane up the face of door jambs to terminate at the underside of the floor tiles.

The membrane turn up is to create a complete waterproof envelope to the floor area of the space being treated.

Detail the membrane at movement joints in the substrate as detailed on the drawings.

SECTION 07140 WET AREA MEMBRANE

Membrane curing: Allow 72 hrs for the membrane to cure prior to carrying out water tests or applying finishes, toppings etc.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide a Warranty for materials and application of the membrane for a period of ten (10) years from the date of Practical Completion, to be in a form approved by the principal.	10 years

SECTION 07200 THERMAL INSULATION

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
The supply and installation of thermal insulation.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Wall and roof framing, roofing, wall lining, brickwork, blockwork, suspended ceiling.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 3999 1992

Thermal insulation of dwellings - Bulk insulation - Installation requirements.

AS/NZS 4200

Pliable building membranes and underlays.

4200.1 1994 Materials.

4200.2 1994 Installation requirements.

AS/NZS 4859.1 2002

Materials for the thermal insulation of buildings.

SAA HB 63 1994

Home insulation in Australia.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

No variations to the selected materials will be accepted without written approval

Item	Description	R-Rating	Location	Manufacturer/ Supplier
Floor insulation	N/A			
Wall insulation	Refer Consultants			
Roof insulation and sarking	Refer Consultants			
Building paper	Refer Consultants			
Reflective type	Refer Consultants			
Flame retardants	N/A			
Sarking	Refer Consultants			
Vapour barriers	Refer Consultants			
Bulk	Refer Consultants			

PREPARATION *Inspect conditions at site before starting work*

Prepare surfaces and or framing material and ensure that no obstructions will prevent rapid and effective installation.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Comply with manufacturer's current written instruction. Install insulation to the following areas and structures.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	20 years

SECTION 07610 METAL ROOFING, SIDING & PLUMBING

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Metal roofing and sarking, downpipes, gutters, skylights, translucent roofing.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Roof framing, wall cladding, storm drainage, fall arrest equipment (mandatory).

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS/NZS 1170 Structural design actions. *There are 5 parts to this Standard, 1993-2003.*
AS 1273 1991 Unplasticized PVC (UPVC) downpipe and fittings for rainwater.
AS 1562 Design and installation of sheet roof and wall cladding, *There are 3 parts to this Standard 1992-2006.*
AS/NZS 3500.3 2003 Plumbing and drainage – Stormwater drainage
AS 3500.3.1 1998 Plumbing and drainage – Stormwater drainage – Performance requirements
AS 3999 1992 Thermal insulation of dwellings – Bulk insulation – Installation requirements
AS 4285 1995 Skylights.
AS/NZS 4389 1996 Safety mesh.
SAA HB 39 1997 Installation code for metal roof and wall cladding.
SAA HB 63 1994 Home insulation in Australia.
SAA HB 114 1998 Guidelines for the design of eaves and box gutters.
Comply with State requirements and codes of practice in relation to work on roofs.
Comply throughout with the current edition of the Building Code.
Refer Fall Arrest equipment trade section.

MATERIALS TO BE USED

Item	Material Supplier	Trade Name	Finish	Base Metal Thickness
Metal roof - ILU	Lysaght or equal approved.		Colorbond – Custom Orb	
Metal Roofing - Clubhouse	Lysaght or equal approved.		Zincalume - Trimdek	
Sarking	TBS			
Skylights	TBS			
Flashing	Lysaght or equal approved.		Colorbond / Zincalume	
Accessories	Lysaght or equal approved.			
Wire safety mesh	Onesteel	Roofsafe or Ausmesh		
Insulation	Refer to consultants			
Box gutter support	Lysaght or equal approved.		Zincalume	
Box gutters and sumps	Lysaght or equal approved.		Zincalume	
Rainwater heads	Lysaght or equal approved.		Colorbond	
Downpipes	Lysaght or equal approved.		Colorbond	

PREPARATION *Inspect conditions at site before starting work*

Ensure framing is in place and secure. Terrain Category:

Ensure safety equipment is in place.

Install safety mesh in accordance with AS/NZS 4389 Safety mesh.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Comply with recommendations in HB 39 (see above), Installation code for metal roof and wall cladding. Install each item in accordance with manufacturer's current written instructions. Form penetration flashings neatly with material matching roofing material or install EPDM collars. Provide flashings at all upstands lapped 150mm at junctions. Step flashings evenly. Finish top corners to a line parallel to the roof slope.

SECTION 07610 METAL ROOFING, SIDING & PLUMBING

Close and seal ends of cut ribs. Form back gutters not less than 100mm wide with falls towards the sides of the penetration collars. Seal joints with compatible sealant. Secure downpipes through cladding to structure. Seal at stormwater pipe upstands. Remove debris from gutters and downpipes. Test on completion.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to the proprietor a Warranty covering any penetrations through the roof and the satisfactory performance of the complete installation.	15 years

SECTION 07725 FALL-ARREST EQUIPMENT

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*

Supply and install fall arrest equipment in accordance with OH and S legislation.

Equipment to be provided includes:

Anchor points, static lines, harness gear, eaves platforms and fences and safety signs.

Refer to document 00800 Supplementary Conditions of Contract Clause 31, OH and S.

Ensure that every person working above ceiling or eaves level is fully trained in use of the equipment.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*

Roof framing, roof installation, eaves construction.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS/NZS 1891 Industrial fall-arrest systems and devices. *There are 4 parts to this Standard 1995-2001.*

AS/NZS 4801 2001 Occupational health and safety management systems - Specification with guidance for use.

Comply with State requirements and codes of practice in relation to work on roofs.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Submit relevant drawings to suppliers or manufacturers of suitable equipment.

Obtain suppliers lists of recommended materials and included lists here.

Item	Description	Manufacturer
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PREPARATION *Inspect conditions at site before starting work*

Check roof framing and other items to which safety equipment is to be fixed.

Ensure that structures local to the installed items are secure.

A senior technical representative of the material supplier is required to be present to check each part of the installation.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Secure each item in accordance with Australian Standards.

Arrange with the builder and roofer for penetrations if required through roof materials.

Ensure that penetrations are completely watertight after installation and on completion of the work.

Erect equipment and install eaves platforms and fences.

Check again that each person is fully trained in use of the equipment.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering complete installation that it will remain waterproof and weathertight. Warranty to include each roof penetration.	15 years

SECTION 08200 DOORS & DOOR FRAMES

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
 Supply and install door frames and doors for external and internal door openings. Refer Schedule following.
 Timber frames, metal frames, doors, glazed, solid core, waterproof, louvred, flyscreen, security, acoustic, flush panel - hollow core, expressed framed doors.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
 Carpentry, door hardware, wall construction, glass, painting.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 1288 2006 Glass in buildings - Selection and installation.
 AS 4145 Locksets. There are 4 parts to this Standard, 1993-2002.
 AS 5039 2003 Security screen doors and security window grilles.
 AS/NZS 5040 2003 Installation of security screen doors and window grilles.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description	Manufacturer
Door frames: Timber	Thickness: 40mm Material: Cedar, kiln dried hardwood.	Refer to building schedules
Door frames: Steel	Pressed steel 1.6mm thick single (or double) rebate fully welded frames with floor spreader. Provide 8 or 10, 3mm wireties per frame for building into walls and two black stops on closing side. Fully grout back of frames with cement mortar. Supply steel frames with shop applied rust inhibitive paint.	Refer to building schedules
External doors		
Doors solid core	Thickness: 40mm Core: Particleboard Face: Plywood veneer, hardboard, waterproofing plywood, edge strips of 10mm hardwood	Refer to building schedules
Fly screen doors	N/A	
Internal doors		
Flush panel hollow core Hume Doors HMC1	Core: paper, honeycomb, metal. Face: 4.5mm hardboard. veneer. Edge strips: to 2,3 or 4 sides of door, 10mm thick hardwood Thickness: 35mm	Refer to internal selection schedules by interior designer.

PREPARATION *Inspect conditions at site before starting work*

Prepare openings in walls. Install fixing grounds to secure frames.

Erect a sample frame and door of each type complete. Stop. When approved by architect, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Erect frames plumb and true. Comply with named Standard listed. At head and jambs allow 3mm clearance.

At floor allow 10 mm over floor covering. Check and clean on completion.

Refer to ASPEX Building Designers drawings for Door Schedule and details.

Doors & Door Frames Schedule			
Item			
External	Frame type	Door type	Height, Width, Thickness
Entry	Timber	Solid core – 'Cricket Batt'	2100H x 920W
Flywire	N/A		
Security	N/A		
Aluminium frame			
Frames	Timber single rebated		
Internal	Frame type	Door type	Height, Width, Thickness
Moulded panel	Ply/Hardboard	Hume Doors HMC I	2100H x 920W/ 820W
Sliding doors (moulded)	Timber	Hume Doors	2100H x 920W
Double door (moulded)	Timber	Hume Doors	2100H x 1800W
Frames	Timber single rebated		

SECTION 08520 METAL WINDOWS & GLAZING

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install metal window frames and glass, glazed door, flyscreens, hardware, flashing, sun control material.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Carpentry, frames, brickwork, blockwork, wall framing.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS/NZS 1170 Structural design actions. *There are 5 parts to this Standard, 1993-2003.*
AS 1288 2006 Glass in buildings – Selection and installation.
AS 2047 1999 Windows in buildings – Selection and installation.
AS 3715 2002 Metal finishing - Thermoset powder coatings for architectural applications...
AS 3959 1999 Construction of buildings in bushfire-prone areas.
AS/NZS 4680 2006 Hot-dip galvanised (zinc) coatings on fabricated ferrous articles.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Refer to ASPEX building Designers drawings for Window Schedules and details.

Note: Clubhouse windows to be commercial type aluminium CAPRAL 400 serie or similar approved.

PREPARATION *Inspect conditions at site before starting work*

Prepare for installation of aluminium frames. Isolate aluminium from steel wall frames.

Provide necessary anchors for building into masonry openings.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Ensure frame anchors are already built in. Comply with AS 2047. Install glass to manufacturer's instructions with correct sealants. Install flyscreens fixed, hinged, or removable, where directed. Install window winders catches locks etc

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	10 years

SECTION 08710 DOOR HARDWARE

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install door hardware listed in the Schedule for doors.

COOPERATE WITH THESE OTHER TRADE *to resolve possible problems before starting work*
Doors and door frames, Metal windows, Timber windows.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS 4145 1993 Locksets. *There are 3 parts to this Standard 1993-2002.*
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description	Manufacturer/Supplier
Hinges	TBS	
Pivots	N/A	
Sliding hardware	TBS	Gainsborough
Locks	TBS	Gainsborough
Cylinders	TBS	Gainsborough
Closers	TBS	Gainsborough
Holders	TBS	Gainsborough
Weather stripping	TBS	

PREPARATION *Inspect conditions at site before starting work*
Install a complete set of hardware as scheduled.
Install samples of each type. Stop. When approved by architect, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Install with accordance with AS 4145 and written instructions of each manufacturer. Check deliveries on arrival.
Lock away until needed and assume responsibility for hardware. Fit accurately at correct heights and protect until completion of project. Lubricate hinges and locks and provide two keys to each lock.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	5 years

Refer to Building Schedules for details

Door	Hinges	Latch	Cylinder Lock	Sliding Hardware	Turn Button	Magnetic Lock	Closer	Holder	Push Plate	Pull Plate	Kick Plate	Weather Strip	Acoustic Seal
INDEPENDENT LIVING UNITS													
Entry	TBS		TBS									TBS	
Screen	TBS	TBS	TBS				TBS	TBS					
Sliding				TBS									
Internal (bath)	TBS				TBS								
Internal	TBS												
Internal sliding				TBS	TBS								
CLUBHOUSE													
Entry automatic			TBS	TBS								TBS	
Internal dis.bath	TBS				TBS								
Internal bath	TBS						TBS	TBS					
Internal general	TBS		TBS										

SECTION 09210 CEMENT RENDER

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Preparation of substrate, application of cement render.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Concrete, brickwork, blockwork, painting, door and window installation.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 1672 Limes and limestones.
1672.1 1997 Limes for building.
AS 3972 1997 Portland and blended cements.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description	Manufacturer/Supplier
Lathing (over framed walls and construction joints)	Galvanised expanded metal colour, PL25. Or other approved.	Lysaght
Materials: sand	Clean sharp river sand	
	Sieve size	% Retain on sieve
	4	0
	8	5
	16	30
	30	65
	50	95
	100	100
Cement	Grey Portland. Conform to AS 3972	
Lime (if required)	Hydrated lime	
Plaster accessories	External cover bead R01, 03, 04 Bullnose external corner, R06 Expansion joints R45 Stopping bead: R11, R12 or R13	Rondo
Mixes	Generally 3 parts sand:1 part cement. For render over masonry and concrete substrates, not greater than 6 parts sand, 1 part lime, 1 part cement by volume. Machine mix materials.	
Pigment		

PREPARATION *Inspect conditions at site before starting work*

Ensure dirt, grease, and other material which could reduce bonding of render to the surface, are removed.
Provide cement based key to smooth surfaces. Check substrate for suitability. Prevent damage to adjacent surfaces.

Install sample area of 3 square metres. Stop. When approved by Project Manager, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Fix lath over junctions of dissimilar substrates. Apply material within 30 minutes of the addition of water. Do not retemper temper. Finish external corners with a 4mm radius round. Extend rendering into recesses, jambs, returns etc. Form V-joints in render at junctions with other materials. Apply base coat 13 - 15 mm thick, screed to a smooth level and even surface. Allow to dry. Finish with wood trowel to smooth even surface.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	15 years

SECTION 09250 PLASTERBOARD

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install plasterboard, water-resistant plasterboard, flexible plasterboard, lining of masonry walls, ceilings, dropwalls, bulkheads. Fire-rated walls.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Wall, frames, carpentry, brickwork, blockwork, suspended ceiling, electrical.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS/NZS 2589 Gypsum linings in residential and light commercial construction – Application and finishing – Gypsum plasterboard. *There are 2 parts to this Standard. 1997.*
AS 3740 2004 Waterproofing of wet areas within residential buildings.
Comply throughout with the current edition of the Building Code.
Comply with manufacturer's technical bulletins:

MATERIALS TO BE USED

Item	Description	Manufacturer/Supplier
Plasterboard walls	10mm	
Plasterboard ceilings	10mm	
Plasterboard wet areas	Villaboard 6mm	
Plasterboard for:		
bulkheads	10mm	
dropwalls	10mm	
Flexible plasterboard	N/A	
Fire-rated plasterboard	N/A	
Metal sections		Rondo
Cornice	Plasterboard (Independent Living Units)	
	Square set (Clubhouse)	

PREPARATION *Inspect conditions at site before starting work*
Ensure framing is complete and electrical and other wiring is in place.
Install a sample, width of one wall (about 3 metres). Stop. When approved by Project Manager, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Comply with plasterboard manufacturer's current written instructions. Form dropwalls, recesses, manholes as required.
In wet areas ensure compliance with AS 3740 Waterproofing of wet areas. Install cornices.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	5 years

SECTION 09260 DRY WALL PARTITIONS

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install dry wall partitions consisting of steel or timber framing with plasterboard, plywood or other lining.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Carpentry, brickwork, blockwork, suspended ceiling, electrical.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS/NZS 1859	Reconstituted wood-based panels - Specifications
1859.1 2004	Particleboard
1859.2 2004	Dry-processed fibreboard. <i>There are 2 other parts to this Standard.</i>
AS/NZS 2589 1997	Gypsum linings in residential and light commercial construction. <i>There are 2 parts to this Standard.</i>
AS 3623 1993	Domestic metal framing.
AS 3740 2004	Waterproofing of wet areas within residential buildings.
AS/NZS 4600 2005	Cold formed steel structures.
<i>Comply throughout with the current edition of the Building Code.</i>	

MATERIALS TO BE USED

Item	Description	Manufacturer/Supplier
Metal wall framing	Select from manufacturer's technical bulletins	
Timber framing	F 5 pinus plates, studs, nogging generally 90mm x 38-45 thick.	
Plasterboard walls	10mm thick	
Plasterboard wet areas	6mm, 10mm thick water resistant	
Flexible plasterboard	10mm thick	
Metal sections		Rondo
Wall lining material	10mm Plasterboard / Villaboard in wet area	
Cornice	Plasterboard (Independent Living Units)	
	Square set (Clubhouse)	

PREPARATION *Inspect conditions at site before starting work*

Ensure electrical wiring and other work is completed before installing linings.

Install a sample, width of one wall (about 3 metres). Stop. When approved by architect, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Installation of frames: install frame anchorage at floor, walls and ceilings at spacings required by frame manufacturer.

Comply with plasterboard manufacturer's current written instructions. Form dropwalls, recesses, openings as required.

In wet areas ensure compliance with AS 3740 Waterproofing of wet areas.

Install other wall lining materials in accordance with manufacturer's written instructions.

Install cornices.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	5 years

SECTION 09300 CERAMIC TILE

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
 Prepare surfaces to be tiled. Supply and install bedding as required. Wall tile, floor tiles, external paving tiles.
 Cleaning of finished work.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
 Concrete, carpentry, plasterboard.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 2358 1990 Adhesives - For fixing ceramic tiles.
 AS/NZS 3661.2 1994 Slip resistance of pedestrian surface – Guide to the reduction of slip hazards.
 AS 3740 2004 Water proofing of wet areas within residential buildings.
 AS 3958 Ceramic Tiles. *There are 2 parts to this Standard, 1992-2007.*
 AS/NZS 4586 2004 Slip resistance classification of new pedestrian surface materials.
 AS/NZS 4663 2002 Slip resistance classification of existing pedestrian surfaces.
Comply throughout with the current edition of the Building Code.
Comply with material manufacturer's current written instructions.

MATERIALS TO BE USED

Item	Name	Colour	Size	Texture	Manufacturer/ Supplier
Floor tiles	Refer to Internal Selection Schedules for details				
Wet area	Porcelain				
Kitchen					
Laundry					
External	Refer to Building Selection Schedules for details				
Wall ties	Refer to Internal Selection Schedules for details				
Feature	Glass mosaic				
Bathroom	Ceramic				
Ensuite					
Kitchen	Mosaic				
Laundry	Ceramic				

Screed for walls and floors: 1 part cement 4 parts sand. Adhesives: to be supplied by:
 Expansion joints, walls: 5mm. Floors: 8mm. Fill both with silicone rubber.
 Grout for wall: Epoxy based mildew resistant. Grout for floors: prepared grout acid resistant.
 Over floor screed apply waterproof membrane (ABA or similar).

PREPARATION *Inspect conditions at site before starting work*

Ensure surfaces are clean and dry and no variation on walls greater than 5mm under a 2000 long straight edge.
 Tile a sample panel of each type, 3 square metres. Stop. When approved by Project Manager, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Install floor backing boards as required for floor tile on timber. Form expansion joints no more than 2500mm apart. Comply with adhesive manufacturer's instructions. Install wall tiles with expansions joints not more than 2500mm apart and at floor level and at corners of walls, and at change of background material. Alternatively, apply cement render to masonry wall to smooth even surface for wall tiling. Install grout of selected colour to manufacturer's instructions. Clean each surface on completion.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	5 years

* APPROX. "5% HEAVY FLOOR TILE AREAS REQUIRED FOR FULL PROTECTION

SECTION 09500 SUSPENDED CEILING (CLUBHOUSE)

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install a complete system of suspended ceilings including suspension systems, plasterboard ceilings, acoustic tile ceilings, bulkheads, ceiling access panels, perimeter trim.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Roof framing, concrete, mechanical services, carpentry, electrical installation.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS/NZS 2785 2000 Suspended ceilings - Design and installation.
AS 2946 1991 Suspended ceilings, recessed luminaires and air diffusers - Interface requirements for physical compatibility.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description	Manufacturer/Supplier
Suspension system	two way exposed aluminium grid	Rondo
Plasterboard	10mm	
Acoustic tile	600x1200	
Ceiling access panels	1200x1200 or 600x1200	
Cornice	Square set	
Beads, straps, etc		
Casing beads, stop-ends		
Other items		

PREPARATION *Inspect conditions at site before starting work*

Space Enclosure: Do not install interior acoustical ceilings until space is enclosed and weatherproof, and until work above ceilings completed.

Erect sample panel of about 10 square metres. Stop. When approved by Project Manager continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Comply throughout with applicable portions of AS/NZS 2785, or AS 2946, and the data sheets supplied by material manufacturer. When requested by architect, arrange for manufacturer's representative to visit site and check installation. Adjust installation to permit installation of such items as light fittings, mechanical vent registers. Clean surfaces exposed to view. Replace sections or components which cannot be cleaned. Make good damaged sections or panels affected by later work of other trades.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	10 years

SECTION 09630 STONE WALL PANELS

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*

Preparation and installation of stone flooring and wall panels.

Required accessories, screeds, anchorages, etc. and as follows:

Area :

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work:*

Concrete, brick walls, block walls, windows, doors.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition*

AS 3700 2001 Masonry structures.

AS 3972 1997 Portland and blended cements.

BS 8298 1994 Code of practice for design and installation of natural stone cladding and lining (British Standard).

Comply with the requirements of any authority having jurisdiction over this work. and Building Code of Australia.

MATERIALS TO BE USED

Source Supplier	Name of Stone	Thickness	Finish
'Allstone' or similar approved	sandstone	15mm	Smooth face and rock face veneer Sand Dune or equal approved Refer to Section 04220 for details

Stone samples: Provide a total of 2 samples of each stone panel specified.

Samples of stone are to average 600 x 600 and are to be complete to the extent of surface finishes - face and edges.

Selection of colours is made by the Interior Designer from a range offered by the supplier through the builder.

Stone installed is to match the approved samples in all respects except size.

Substitutions offered as a result of non-availability of stone will not be accepted.

Cement : Sulphate-resisting (Type D) Portland cement, conforming to AS 3972.

Sand : Washed concrete sand or screened gravel, conforming to AS 3700, with a maximum of 5% being less than 75 microns in sieve size. Ordinary mason's sand will not be permitted.

Lime : Hydrated lime, conforming to AS 3700.

Water : Drinkable quality.

Mortar below floor panels

- A. Mortar mix : 4 parts sand, 1 part cement, minimum 30mm thick.
- B. Reinforcement : to entire area, with break under control joint, light gauge galvanised wire, minimum 2.5mm diameter wire at 100mm both ways.
- C. Adhesive for stone flooring:

Wall Panel Fixing Materials

- A. Metal fixings: required panel fixing materials including M12 bolts, nuts, shelf angles, pins, dowels, masonry anchors, and other fixing devices, between panels, are to be stainless steel type 304 or 316 austenitic stainless steel. Type 302 steel is not to be used.
- B. Shims : Pack or shim between masonry, concrete and stainless steel fixing angles with inert material such as nylon or other suitable material.
- C. Sealant backer rod: Compressible rod stock of closed cell polyethylene foam, polyethylene jacketed polyurethane foam, butyl rubber foam, neoprene foam or other flexible, permanent, durable non-absorptive material as recommended by sealant manufacturer for compatibility with sealant.
- D. Bond breaker tape: Polyethylene tape or other plastic as recommended by sealant manufacturer to be applied to sealant-contact surfaces where bond to substrate or joint filler is to be avoided for proper performance of sealant. Provide self-adhesive tape where applicable.
- E. Joint filler: Bitumen or acrylic saturated polyurethane foam strip (under shelf angles only).

Adhesive and Sealant

- A. Epoxy adhesive:
A 2-part epoxy adhesive specifically applicable to securing metal to stone and capable of being poured or readily inserted into small diameter holes in stone.
- B. Joint sealant system

Sealant :

Low modulus neutral curing polysulphide or silicone rubber compounds.

1. Composition : As recommended by manufacturer for this installation
2. Colour : To match stone : A non-standard colour is required.
3. Primer : As and if recommended by sealant manufacturer.

Panel Layout Schedule

- A. Prepare layout plan(s) showing location of panels, each panel numbered with a coding system that gives each panel a unique number. After cutting, lay out, full size, each section of the wall or floor to determine the most aesthetic arrangement of the panels within the colour and figuring limitations of the control samples. Reject panels which do not blend into the overall colour and texture pattern.
 1. Notify Project Manager (24 hours notice) of full size layouts. Project Manager will inspect to approve layouts prior to panel numbering.
 2. Make layout adjustments as requested by Project Manager.
 3. After receiving approval, number panels, to match the panel layout number system.
- B. Panel fixings schedule for walls

General : Drawings indicate typical arrangements for panel fixing.
Develop additional details in the Shop Drawings to describe those conditions not shown on the drawings.
Wall panels : Schedule of fixings : Subject to the detailed Shop Drawing development of fixing conditions or each panel condition, the following schedule applies :
Two (2) rod supports at the base of each panel up to 1200 in width.
Two (2) pairs at the top of each panel greater than 800 in height.
Lowest row : Pack behind tiles with mortar to 300 above floor surface.

Fixing : fixing devices, bolts, anchors, clips, shims, spacers, lugs and other installation accessories are to be stainless steel.

PREPARATION *Inspect conditions at site before starting work*

Provide comprehensively detailed and dimensioned Shop Drawings for every panel, showing details of fabrication finishing, penetrations, anchor slots, dowel cores, steel stripping, angles, bolts, ties, etc., with locations in building and necessary explanatory notes.

Provide 2 samples of each stone panel specified, each to average 600 x 600 and complete to the extent of surface finishes - face and edges.

Selection of colours is made by the architect from a range offered by the supplier through the builder.

Grinding and Polishing : Machine polish exposed faces, edges, birdsmouth, etc., to a distortion-free mirror finish.

Edges : Grind the straight cut edges to a smooth finish. Reverse face: Rough surface to provide key for mortar bed for floor tiles.

Stone Tolerances :

Finish polished stone with a tolerance of 0.5mm

Thickness tolerance: +2mm or -2mm.

Grout floor and wall panels with cement coloured to match the wall panel colour, to architect's selection.

Weather Conditions : Do not proceed with installation of liquid sealants or wall sealers under unfavourable weather conditions.

ON-SITE ACTIONS *Start of work means total acceptance of conditions.*

On arrival at site inspect panels and ensure that stone supplied matches samples precisely. Panels with chipped or broken edges, cracks or other damage or of improper colour or texture, will be rejected, removed and replaced.

Check panel fit: Before panel is lifted onto the wall, accurately measure the panel and the supporting structure and check generally that requirements for the support of the panel are met, and in particular ensure that :

- A. Levels and projections are correct within the specified tolerances.
- B. Fixings are located within specified tolerances and are correctly aligned to receive panels.
- C. Flashings, baffles, seals and ancillary items on the adjoining panels are inserted or fixed to ensure proper sequential execution of the whole of the work.
- D. The erection tolerances of the surrounding panels and panel joints are correct.

The maximum deviation from a 2m straight edge placed in position on a nominally plane surface should not generally exceed 2mm.

Location of dowels :

+ or -2mm relative to the theoretical line of the centre of the panel.

SECTION 09630 STONE WALL PANELS

+ or -2mm relative to the width.

Maintain tolerances by preventing concavity or convexity of the unit caused by inaccuracies in the manner in which the surface is formed or finished.

Grouting

Install 1 metre long grout sample. Obtain Project Manager's approval before proceeding further.

Cleaning

Remove mortar, and other matter from both surfaces and interfaces of stone panels. Remove shims exposed to view.

Protection

Protect installed stone from damage by suitable means until Practical Completion.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	20 years

SECTION 09680 CARPET

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and installation of underlay, carpet and accessories. Provide spare carpet.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Concrete, carpentry, installation of floors, joinery, preparation of surfaces under and adjacent to floors to receive carpet.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS 1385 1985 Textile floor coverings - Metric units and commercial tolerances for measurement.
AS/NZS 2455 Textile floor coverings - Installation practice.
2455.1 1995 General
2455.2 1996 Carpet tiles.
AS 4288 2003 Soft underlays for textile floor coverings.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description				Manufacturer/Supplier
Underlay	Type:	TBS	Name		
Carpet fixings	Name	TBS			
Metal finishing bar	Heavy duty hammer finish aluminium bar				
Adhesives	Direct stick or dual fix. Non solvent type				
	Carpet Type	Name	Colour	Pile Height	
Carpet Type A Independent Living	broadloom	Refer to Internal Selection Schedule for details			
Carpet Type B clubhouse	broadloom	Refer to Internal Selection Schedule for details			

PREPARATION *Inspect conditions at site before starting work*
Ensure floors are dry, clean with no hills or valleys. Comply with AS/NZS 2455.1.

Comply with Appendix B to ensure moisture content of concrete does not exceed the stated limit. Repair imperfection of the floor surface which might impair the finished carpeted surfaces. Broom clean or vacuum clean surfaces upon which carpet is to be laid.

Install carpet in one room. Stop. When approved by Project Manager, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Test concrete for moisture content to AS/NZS 2455. Secure carpet fixings to manufacturer's instructions. Lay underlay. Stretch carpet and secure to fixings. On completion of laying each section of carpet, vacuum the surface clean. Provide spare carpet of each type laid, 3 % of area laid. Store where instructed.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	7 years

SECTION 09910 PAINTING

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and apply paints and other finish coatings. Refer Schedule of Finishes.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Each trade as listed to be painted. Refer Schedule.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS/NZS 2311 2000 Guide to the painting of buildings.
AS/NZS 2312 2002 Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Surface or Item	Catalogue/Product No.	Manufacturer/Supplier
Internal		
Walls: dry areas	Wash and wear acrylic full strength	Refer to Internal Selection Schedule for details. Provide paint sample to be approved.
Walls: wet/other areas		
Ceilings: dry areas	Ceiling flat half strength	
Ceilings: wet areas		
Cornices	Wash and wear acrylic half strength	
Concrete	N/A	
Steel		
External		
Block/brickwork	Refer to building schedules	Provide paint sample to be approved by Project Manager.
Concrete	N/A	
Fibre cement	Refer to building schedules	
Timber		
Steel		

PREPARATION *Inspect conditions at site before starting work*

Prepare each surface to be painted in accordance with manufacturer's instructions.

Prepare a sample panel of 2 square metres of each paint type. Stop. When approved by Project Manager, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Project Manager will check each prepared surface. Do not proceed with painting until check completed. Apply scheduled coats and paint types to manufacturer's instructions, and AS/NZS 2311.

Delivery storage and handling:

- A. Store materials in designated spaces in a manner which meets the requirements of applicable codes and fire regulations. When not in use, keep such spaces locked and inaccessible to those not employed under this section. Provide each space with a fire extinguisher of carbon dioxide or dry chemical type bearing a tag of recent inspection.
- B. Bring materials to the building and store in manufacturer's original sealed containers, bearing the manufacturer's standard label, indicating type and colour. Deliver materials in sufficient quantities in advance of the time needed in order that work will not be delayed in any way.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	7 years

SECTION 10150 TOILET & SIMILAR COMPARTMENTS

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install compartment assemblies for toilets, showers, dressing, constructed of metal, fibre cement, plastic, laminate, particle board, stone, including hardware and accessories.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
floor construction, wall construction, ceiling construction, ceramic tile.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
In the absence of standards, comply with current printed instructions supplied by manufacturer.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description	Model No.	Manufacturer/Supplier
Doors	As per HARDIE COLOR 'James Hardie' washroom partitions or equal approved		James Hardie Building Systems or equal approved
Upstands (pedestals)			
Suspension system			
Hardware			
Other			

PREPARATION *Inspect conditions at site before starting work*
Obtain approval to disturb floor and wall tiles before securing pedestals and wall fixings. Install one compartment. Stop. When approved by Project Manager, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Secure or hang components straight and plumb according to manufacturers instructions. Install hardware and accessories. Ensure all components work as manufacturer intends. Clean all surfaces on completion.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	5 years

SECTION 10185 GLASS SHOWER COMPARTMENTS

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install compartments of glass for showers with or without frames including but not limited to:
Hinges, door furniture and fixings devices.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Floor construction, wall construction, wall surfaces, ceramic tile, metalwork.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 1288 2006 Glass in buildings – Selection and installation.
AS/NZS 2208 1996 Safety glazing materials in buildings.
AS 3588 1996 Shower bases and shower modules.
AS 3740 2004 Waterproofing of wet areas within residential buildings.

Comply with manufacturer's current technical bulletin.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

NOTE: Refer to AS 1288 for glass thickness. Do not list thickness here.

Item	Description	Manufacturer/Supplier
Side light	Toughened	Refer to building schedules
Door panel	As above	
Fixed frame	Aluminium, finish	
Door frames	Aluminium, finish	
Shower base	N/A	
Hardware	Stainless steel	
Hinges		

PREPARATION *Inspect conditions at site before starting work*

Cooperate with installers of other related materials and surfaces.

Check floor levels of adjacent finished surfaces.

Install one compartment. Stop. When approved by Project Manager, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Comply with AS 3740 2004. See above.

Secure shower base and set framing materials in place.

Ensure that water cannot pass beyond screen and door.

Apply silicone rubber at junctions.

Install hardware and accessories.

Clear surfaces on completion.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering complete installation that it will remain waterproof.	15 years

SECTION 12300 MANUFACTURED CASEWORK - SHOP BUILT

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*

Supply and installation of manufactured casework items, including but not limited to:

Kitchen cabinets and cupboards, shelving, display units, bathroom cabinets, laundry cabinets, counters, tearoom cupboards, wardrobes.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*

Carpentry, wall finishes, floor finishes, ceiling finishes, water distribution, electrical installation.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS/NZS 1859 Reconstituted wood-based panels - Specifications

1859.1 2004 Particleboard

1859.2 2004 Dry-processed fibreboard. *There are 2 other parts to this Standard.*

AS 2754.2 1991 Adhesives for timber and timber products -- Polymer emulsion adhesives.

AS/NZS 2924 1998 High pressure decorative laminates - Sheets made from thermosetting resins. *There are 2 parts to this Standard.*

AS/NZS 4386 1996 Domestic kitchen assemblies. *There are 2 parts to this Standard.*

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED *No variations to the selected materials will be accepted without written approval*

Refer to Internal Selection Schedules for details

Item	Description	Manufacturer/Supplier
Carcass units:	MDF Thickness	
Vertical components	18mm	
Floors	18mm	
Shelves	18mm	
Doors	18mm	
Base (below floor)	32mm	
Bulkheads	16mm	
Back	3mm	
Edge strips	32mm	
Laminates: Refer to Internal Selection Schedules for details		
Bench tops	1mm thick	
Doors, carcass drawers	0.8mm thick	
Bench tops	Refer to Internal Selection Schedules	
Fasteners	TBS	
Hardware	TBS	
Hinges	TBS	
Drawer handles	Refer Building Schedules	
Adjustable shelf brackets	TBS	
Glazed shelves	n/a	

PREPARATION *Inspect conditions at site before starting work*

Construct by screwing and gluing or other approved method. A dry stapled assembly will not be approved.

Fabricate bench tops as recommended by the materials' manufacturer. Locate openings accurately using templates or roughing-in diagrams for proper size and shape. Where located in bench tops, seal edges of cut-outs with a water resistant coating. Back prime concealed solid timber surfaces prior to installation. Install fasteners hinges etc. in accordance with manufacturer's instructions.

SECTION 12300 MANUFACTURED CASEWORK - SHOP BUILT

ON-SITE ACTIONS *Start of work means total acceptance of condition*

Use concealed shims as required to install the work plumb, level, straight and distortion free within the following tolerances: 1mm in 800mm for plumb and level (including bench tops), 0.5mm maximum offsets in flush adjoining surfaces, 2mm maximum offsets in revealed adjoining surfaces. Scribe and cut to fit adjoining work; refinish cut surfaces or repair damaged finishes at cuts. Secure joinery with anchors to substrates, or secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing. Install casework without distortion so that doors will fit openings properly and be accurately aligned. Install door and joinery hardware as scheduled.

Adjust joinery to achieve a uniform appearance. Lubricate and clean hardware making final adjustments needed for proper operation. Remove handling marks from visible joinery surfaces.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	15 years

SECTION 12480 FLOOR MATS & FRAMES (CLUBHOUSE)

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install floor mat and frame recessed into concrete floor slab at each entry to building.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Concrete, floor coverings.

COMPLY WITH APPLICABLE CLAUSES OF THE BUILDING CODE *Current Edition.*

MATERIALS TO BE USED *No variations to the selected materials will be accepted without written approval*

Item	Description		Manufacturer/Supplier
Mat frame	Size 20 x 30 x 3mm thick Brass angle Anchors, brass or galvanised steel		"CORAL BRUSH" Or similar approved
Mat	Size	1200mm x 600mm	
	Type	brush	
	Colour	Charcoal	
	Location	Entry Door -Clubhouse	
Screed	Sand, cement, water to match screed in wet areas		
Mesh	Galvanised welded wire fabric		

PREPARATION *Inspect conditions at site before starting work*

Inspect conditions at site before starting work. Provide plywood or solid timber slab to concreter for placement in position of future floor mat before concrete is poured.

Allow for depth of screed and timber slab.

ON-SITE ACTIONS *Start of work means total acceptance of condition*

Secure the brass angle frame to concrete with galvanised masonry anchors. Place concrete screed so that top of screed is level with top of horizontal leg of the brass angle.

When screed is dry, clean the material in the recess and place mat in recess.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	10 years

SECTION 13700 ENTRY SURVEILLANCE

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*

Supply and install surveillance equipment with associated cable installation. Equipment may include video, door answering, intrusion detection, movement detection and monitoring.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work:*

Floor construction, electrical installation, wall construction, communications cabling, ceiling construction, finishing trades.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition*

ISO/IEC 15018 2004 Information technology - Generic cabling for homes.

AS/ACIF S008 2006 Requirements for customer cabling products.

AS/ACIF S009 2006 Installation requirements for customer cabling (Wiring Rules).

MATERIALS TO BE USED

Item	Description	Manufacturer
Intercom system	Refer to engineers design and details	
'Blue Phone' system	Refer to engineers design and details	
Movement detection - clubhouse	Domestic type of security system to be provided to clubhouse only	

PREPARATION *Inspect conditions at site before starting work*

Examine carefully the proposed route for cable installation and installation of other components. Obtain architect's approval before executing the work.

Provide necessary safety or security controls where required to ensure safe practices and installations.

Provide needed penetration, openings, chases and structures for safe secure and effective installation of cable.

If installation is required in the electrical riser, cooperate with the electrician.

ON-SITE ACTIONS *Start of work means total acceptance of conditions.*

Comply with codes listed above. Refer also to installation clauses for each item.

Mark and identify as required.

Complete all administration as required.

Where requested by supply authority supply test data obtainable from component manufacturer.

Arrange for inspections by component manufacturer's representative to ensure correct application, use and installation.

Adjust installations of components to ensure proper fit and alignment. Remedy items of inefficient operation or of doubtful performance. Clean visible items to original condition. Remove debris from installation in concealed spaces.

Protect installed items from damage from any source until Practical Completion.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	10 years

SECTION 15150 FLOOR DRAINS

SCOPE OF WORK Perform work described here and shown on drawings including but not limited to:

Supply and install floor drains recessed into floor surface constructed of concrete, timber, .

Location for floor drains: Bathrooms, shower rooms.

COOPERATE WITH THESE OTHER TRADES to resolve possible problems before starting work

Concrete, resilient flooring, ceramic, carpentry, waterproofing, storm drainage.

Perform the entire installation in accordance with the requirements of the statutory authority having jurisdiction.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS Current Edition.

AS 3500.3.1 1998 Stormwater drainage – Performance requirements.

AS/NZS 3500.3 2003 Plumbing and drainage - Stormwater drainage.

AS/NZS 3500.5 2000 National Plumbing and Drainage - Domestic installations.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Supply only products which bear the required indication of approval of the statutory authority having jurisdiction.

Item	Description	Manufacturer

PREPARATION Inspect conditions at site before starting work

Ensure that adequate depth, falls and other conditions exist before ordering and installing floor drains.

Prepare for installation of formwork and pipes through structures.

Cooperate fully with each trade involved with the installation.

ON-SITE ACTIONS Start of work means total acceptance of conditions

Comply fully with manufacturers' written instructions. Locate accurately the depth and falls required. Install formwork and provide for openings to drain pipes, before pouring concrete or constructing floor. Arrange for inspection by manufacturer and local authority. Ensure that surface level of installed work matches that of finished floor surfacing material

Connect to stormwater drains or sanitary drains as advised by local authority.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	10 years

SECTION 15450 WATER STORAGE TANKS

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install water storage materials and equipment for storage of rain and other potable water, including tanks, stands, filters, reticulation.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Concrete, metal work, carpentry, water distribution.
Perform the entire installation in accordance with the requirements of the statutory authority having jurisdiction.

COMPLY WITH APPLICABLE CLAUSES OF BUILDING STANDARDS INCLUDED IN THE BUILDING CODE. *Current Edition*

MATERIALS TO BE USED

Supply only products which bear the required indication of approval of the statutory authority having jurisdiction.

Item	Description	Manufacturer
Tank stands	2000 Litres Retention / Detention modular painted steel tank for each unit.	TBS
Tanks		
Filters	Provide all the necessary accessories, stand, filters.	TBS
Pipes		
Connections		
	Colour: Dune	

PREPARATION *Inspect conditions at site before starting work*

Ensure that each part of the site or building to which equipment will be connected is secure and will permanently support components.

Ensure that adequate falls will maintain water flows.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Arrange installed components in logical sequence. Form secure connections without causing damage to existing building or structures.

Install reticulation pipes to match where possible the materials described in Water Distribution trade section.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	7 years

SECTION 15738 DOMESTIC AIRCONDITIONING

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply, install and commission split-system airconditioning consisting of but not limited to a separate condenser unit and wall or ceiling mounted reverse cycle unit which supply heated or cooled air – refer to engineers design and details.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Wall, floor and ceiling construction, finishing trades, electrical installation.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 1324 Air filters for use in general ventilation and airconditioning. *There are 2 parts to this Standard, 2001-2003*

AS 1668 The use of Ventilation and Air-conditioning in buildings. *There are 3 parts to this Standard, 1998-2002.*

AS/NZS 3000 2000 Electrical installations (Australian/New Zealand Wiring Rules) (Amended).

AS 4254 2002 Ductwork for air-handling systems in buildings.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

PREPARATION *Inspect conditions at site before starting work*

Provide necessary safety or security controls where required to ensure safe practices and installations.

Provide needed penetration, openings, chases and structures for safe secure and effective installation of components. If installation is required in a duct or riser cooperate with the other relevant trades.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Comply with the written requirements of the manufacturer and those of the relevant Australian Standards.

Ensure that the structure required to support the equipment is adequate for the purpose. Make good any surfaces damaged or marked during the installation. Arrange for inspection of installation by manufacturer's representative to ensure correct installation.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	10 years

SECTION 16350 ELECTRICAL DISTRIBUTION

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Design, supply and installation of electrical transmission and reticulation materials from mains supply to required electrical power and light outlets, telephone, internal communication system and television antenna.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Floor construction, wall construction, ceiling construction, carpentry, joinery.
Licensed electrical technicians only may perform work, experienced in the requirements of the project. Licences are those issued by the State authority having direct control or interest in the work.
Perform the entire installation in accordance with the requirements of the statutory authority having jurisdiction.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 1680 Interior lighting. *There are 9 parts to this Standard, 1991-2006.*
AS/NZS 2293 Emergency escape lighting and exit signs for buildings. *There are 3 parts to this Standard, 1995-2005*
AS/NZS 3000 2000 Electrical installations (Australian/New Zealand Wiring Rules) (Amended).
AS/NZS 3018 2001 Electrical installations - Domestic installations.
AS 3786 1993 Smoke alarms.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Refer to architectural and engineering drawings for details.

Supply only products which bear the required indication of approval of the statutory authority having jurisdiction.

Item	Description	Manufacturer/Supplier
Temporary supply		
Wiring material		
Light outlets		
Power outlet		
Fittings		
Mains connection to building	By supply authority	
Meters	By supply authority	
Switchboards and other control		
Reticulation cable		
Power outlets		
Light fittings		
Emergency evacuation lighting		
Conduits		
Cable tray		
Cable ducts		
Identification materials		
Power factor correction		
Lamps		
Floodlighting		
Site lighting		
Earthing		
Alarm and detection systems		
Clock systems		
Telephone systems		
Inter-communication system		
Television antenna		
Heating cables and units		
Fans, exhaust and heating		
Smoke alarms		

PREPARATION *Inspect conditions at site before starting work*

Provide necessary safety or security controls where required to ensure safe practices and installations.

The following preparatory actions are to be performed by the builder for the electrician:

- A. Slab penetrations for floor-mounted GPO's, telephone outlets etc.
- B. Chasing and making good for conduit access for skirting

SECTION 16350 ELECTRICAL DISTRIBUTION

- C. Chasing and wiring duct, GPO's switches etc.
- D. Supply and installation for access opening where required.
- E. Provision of electrical riser.
- F. Provision of signwriting to main switchroom and distribution board.
- G. Forming, trimming, patching and making good of openings for luminaires to sizes required by the electrician.
- H. Provision of concrete.
- I. Making good existing roadway etc.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Comply with Standards throughout and requirements of supply authority. Install light fittings, switchboard and distribution board, metre board and box. Arrange for inspection by supply authority inspector. Obtain compliance certificate. Connect to main supply.

Cable: Secure cable, using materials specified above, at centres recommended by regulations and/or manufacturer.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	10 years

Electrical Installation				
Arrange for temporary power supply. Connect to power supply on completion. Install meterbox : M.D.F or metal. Install switchboard. Circuit breaker/fuses.				
LIGHT OUTLETS: Refer architectural and engineering drawings and documents				
Item	Manufacturer	Model No.	Type	Colour
Front door				
Rear door				
Verandah/porch				
Other				
Switches				
Switches (2way)				
Dimmer				
Switches w/proof				
Lamp holders				
POWER OUTLETS: Refer drawings and building schedules				
Internal:				
GPO's double				
GPO's single				
External:				
GPO's double				
GPO's single				
Specials				
Connect power to the following items (circle choice) : Security system, intercom.				
KITCHEN:	Refrigerator		Dishwasher	
	Microwave oven		Rangehood	
	Hot Plate		Oven	
LAUNDRY:	Washing machine		Drying machine	
BATHROOMS:			Ceiling heater	
GENERAL:	Hot water unit			
AIRCONDITIONING				

SECTION 16510 LOW VOLTAGE LIGHTING

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Low voltage lighting and reticulation, transformers, quartz or tungsten halogen lamps with dichroic reflectors, mounting devices and reflectors.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Electrical installation, ceiling construction, wall construction and finishes.
Licensed electrical technicians only may perform work, experienced in the requirements of the project. Licences are those issued by the State authority having direct control or interest in the work. Perform the entire installation in accordance with the requirements of the statutory authority having jurisdiction.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS 1680 Interior lighting. *There are 9 parts to this Standard, 1991-2006.*
AS/NZS 3000 2000 Electrical installations (Australian/New Zealand Wiring Rules) (Amended).
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Refer to architectural and engineering drawings for details.

Item	Description	Manufacturer/Supplier
Lamps	12 volt system AC +3%-6%	
Transformers	Fully enclosed designed to be concealed from view, with performance compatible with lamp. Provide transformers on a ratio of 1 transformer to 1 lamp. Provide mounting for securing each transformer in place. Transformer properties : 5% regulation or better short circuit protected, fitted with fuse on the secondary output.	

Lamp Watts	Lamp Volts	Nominal 1mm	Cable Size 1.5mm	Cable Size 2.5 mm	Cable Size 4 mm
20W	12 V	7 m	10 m	17 m	27 m
50W	12 V	2.5 m	4 m	7 m	11 m
75W	12 V	-	3 m	4 m	7 m

Where light dimmers are used of the thyristor type provide a tuned inductance between the dimmer and the primary of the isolating transformer.

PREPARATION *Inspect conditions at site before starting work*

Provide necessary safety or security control where required to ensure safe practices and installations.
Remove material or insulation from within 150mm above or beside lamp reflectors. Ensure adequate ventilation.
Comply with AS/NZS 3000 clause 4.3.6.3.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Cable: Secure cable, using materials specified above, at centres recommended by regulations and/or manufacturer.
Conceal wiring and cable equipment. Conduit cable where necessary or required in approved material.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering satisfactory performance of the complete installation.	10 years

SECTION 16710 COMMUNICATION CABLING

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and installation of communication including ISDN, systems for home and office units in single or multiple unit buildings. It covers telephone and high speed data communication systems with a limit of 4 lines into each unit. Refer to engineering drawings for the details.

The work includes:

Connection to the carrier's main cable (by carrier)
Cabling routing design
Use of cabling
Distribution devices
Compliance with Australian Standards

COOPERATE AND COORDINATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*

Electrical installation, floor construction, wall construction, ceiling construction, finishing trades.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

ISO/IEC 15018:2004 Information technology – Generic cabling for homes.

AS/ACIF S008 2006 Requirements for customer cabling products.

AS/ACIF S009 2006 Installation requirements for customer cabling (Wiring Rules).

Perform work employing experienced tradespeople familiar with the quality of work required and who are L-licensed in accordance with requirements of AS/ACIF S009.

Arrange for a conference with relevant other trades to decide upon matters which affect them.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Refer to ISO/IEC 15018 2004.

Before ordering materials submit to the carrier a list of components and their descriptions, for carrier's approval.

Provide and install the equipment specified in the Standard and AS/ACIF instructions.

PREPARATION *Inspect conditions at site before starting work*

Examine carefully the proposed route for cable installation and installation of other components. Obtain Project Manager's approval before executing the work.

Provide necessary safety or security controls where required to ensure safe practices and installations.

Provide needed penetration, openings, chases and structures for safe secure and effective installation of cable.

If installation is required in the electrical riser, cooperate with the electrician.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Comply with codes listed above.. Refer also to installation clauses for each item.

Refer to drawings for locations of connections, equipment and outlets.

Provide field quality control

A. Where requested by supply authority supply test data obtainable from component manufacturer.

B. Arrange for inspections by component manufacturer's representative to ensure correct application, use and installation.

Adjust installations of components to ensure proper fit and alignment.

Remedy items of inefficient operation or of doubtful performance.

Clean visible items to original condition.

Remove debris from installation in concealed spaces.

COMPLETION	WARRANTY	Period
Complete work in accordance with instructions and written variation orders.	Provide to proprietor a Warranty covering complete installation that it will remain waterproof and weathertight. Warranty to include each roof penetration.	15 years