CPCCBC4010

PRACTICAL TASK 1

1.1A. Read the plans to determine and document the intended use of the building, class and climate zone from the ncc. (refer to attached document HO3)

1.1B. Analyse the project documents for compliance with ncc bushfire, high wind, earthquake and alpine environment requirements.

Where existing trees are to remain on the allotment (or on adjacent properties) and lie within the zone of influence when at full mature height, or
The removal of large trees prior to construction is to occur, measures must be taken to reduce the possibility of damage. It is considered prudent that the client obtain professional advice from an arborist with regard to the behaviour of particular tree species.
Trees which have the potential to adversely affect the future performance of the footing / slab system, these have been referenced on the drawings and considered in the design process.

Established trees can cause distress to the footings, slab and superstructure of buildings through direct physical contact or through the
Removal of soil moisture in reactive / expansive soils. Conversely, the removal of trees from a site can cause an increase in soil moisture, ground
Swell and subsequent heave.

Provision of fire protection to penetrations for services to comply with ncc vol.1 part c3.12 to c3.16.
Provision of fire extinguishers to comply with the requirements of as2444.
Position of smoke alarms within units to comply with ncc vol.2 part 3.7.2

1.1C. Analyse and document building design and structural integrity from project plans and specifications, building standards and codes. (refer to attached doc HO3)

Inspections of the works during construction to confirm that the ground conditions are as expected and that the drawings have been correctly interpreted.
Such construction inspections are limited in extent and do not remove the builder's responsibility for supervision and to build in accordance with the drawings.
To confirm compliance with the structural engineering design inspections shall be carried out at the following elements as applicable:
· pier excavation and reinforcement prior to placement of concrete,
· footings and slab reinforcement prior to placement of concrete,
· blockwork reinforcement prior to placement of core filling,
· any structural element shown in the structural engineering documentation prior to concealment behind linings and/or finishes.

The owner is responsible for ongoing plumbing, building and site maintenance, and observing precautions regarding the effect of garden development on the structure of the house.
Structural damage to the residence can arise in the event of abnormal moisture conditions which can occur due to inappropriate site and garden
Development, poor site drainage, leaking taps and damaged plumbing.
The owner shall ensure that the site drainage, together with roof water, water supply, and sewerage pipes, are maintained in good operating condition and free of leaks, during the life of the house.
Established trees can cause distress to the footings, slab and superstructure of buildings through direct physical contact or through the
Removal of soil moisture in reactive / expansive soils. Conversely, the removal of trees from a site can cause an increase in soil moisture, ground
Swell and subsequent heave.

It is important that the site stormwater drainage be installed in a manner to prevent ponding of water against the edge of the slab. The owner is
Responsible for ensuring any surface stormwater drainage pits are installed with the inlet below the underside of the waffle slab. Where adjacent ground levels are higher than the underside of the residence slab, the use of subsoil “ag drains” are highly recommended in addition to the surface drainage.

Plywood structural wall bracing as per table 8.18 as1684.2 type (g) , (h) & (i)
Fastener - 30x2.8mm dia. Galv. Flat
Head nails at the following centres:
- 50 top & btm plate
- 100 vertical edges
- 50 nogging
- 100 intermediate studs
Fastener - 30x2.8mm dia.
Galv. Flat head nails at
The following centres:
- 50 top & btm plate
- 150 vertical edges
- 50 nogging
- 300 intermediate studs
For double sheeted walls the depth of the bottom plate shall be a minimum of 45mm and tie down rods at each end to be double either 2/m12 or 1/m16 rod
M12 tie down rod at each end of bracing wall.

1.1D. Determine and document the effect of section properties on various materials. (refer to attached document HO3)

1.1E. Determine and document if structural performance meets the general requirements and performance requirements of ncc. (refer to attached document HO3)

1.1F. Confirm analysis of structural integrity with relevant industry professionals.

5.6.1 as 2870 ‘residential slabs and footings’
In assessing the site classification, the following has been considered:-
• the subsurface profile (as per borehole records).
• laboratory test results.
• geotechnical data held by soil surveys engineering.
• that the site is considered to be a reactive site (as per as 2870-2011).
• that the site is subject to abnormal moisture conditions due to the presence of trees (on
The building site and adjacent sites) and or proposed removal of trees (as per clause
1.3.3 of as 2870-2011).
• that the site is subject to abnormal moisture conditions due to the presence of an
Existing building and proposed removal of the existing building (as per clause 1.3.3 of
As 2870-2011).
• likely future development.
Considering the above, and other factors, the site is classified class ‘p’.

Given the subsurface profile encountered it is recommended that all footings extend through the
Existing natural soils and be founded into the weathered phyllite to provide uniform founding
Conditions. Foundation and slab on ground systems that could be considered include:-
• foundation systems
O high level footings (at basement level)
O deep foundations (piers)
• slab on ground floors

High level strip/pad footings should found a minimum of 300mm into the weathered phyllite.

Bored piers could be considered.
The design of a deep foundation system should consider the following:-

• capacity
• construction considerations
It is recommended that the deep foundation system on this project be designed in accordance With as 2159-2009 'piling - design and installation'. This code uses the limit state design Method.

1.1G. Conduct pre-commencement site inspection to confirm analysis.

To confirm compliance with the structural engineering design inspections shall be carried out at the following elements as applicable:
· pier excavation and reinforcement prior to placement of concrete,
· footings and slab reinforcement prior to placement of concrete,
· blockwork reinforcement prior to placement of core filling,
· any structural element shown in the structural engineering documentation prior to concealment behind linings and/or finishes.

A maximum panel height of 2.0m is recommended; inspection by soil surveys Engineering is recommended at the commencement of construction to confirm panel Height.

1.1H. Assess new and emerging building technologies for application to the construction process and their compliance with NCC requirements and relevant Australian standards.

New and emerging building technologies are revolutionizing the construction process in Australia, aligning with the national construction code NCC) requirements and relevant Australian standards - prefabrication and modular construction techniques are gaining prominence, allowing for faster, more efficient construction while maintaining compliance with structural integrity and safety standards.

Sustainable building practices, such as the use of renewable materials and energy-efficient designs, are becoming essential to meet NCC's environmental provisions and reduce the carbon footprint of buildings.

Advanced building information modeling (BIM) systems are enhancing project management, enabling precise coordination, and streamlining compliance checks, ensuring adherence to NCC guidelines.

Additionally, the integration of smart technologies like sensors and automation systems is optimizing building performance, aligning with NCC's requirements for functionality and safety. These innovations promise a more sustainable, efficient, and compliant future for Australian construction.

2 plan, coordinate and manage the laying of footings.

1.2A. Identify earthworks and footing or slab configuration from project plans and specifications.

400 minimum overall depth from top of slab to underside of Footing to be maintained at setdowns in slabs. (i.e. At carport, Patio etc.)
2. Cover to reinforcement:-
30mm to internal slabs
40mm to external slabs
40mm to ground
3. Slab has been designed based on the use of an appropriate Flexible bedding for all tiled floors

Reinforcement laps:
1. Lap n12 bars 500 as required.
2. Lap trench mesh 500 as required.
3. Slab mesh to be overlapped one mesh spacing plus 25mm minimum.

1.2B. Establish cut and fill, excavation and compaction compliance with geotechnical report.

As per:
As 1726-2017 - geotechnical site investigations
As 1289 - methods of testing soils for engineering purposes
As 1289 6.7.2
Clause 5.5 of as 3798-2007
As 1289 (standard compaction).
As 3798-2007, section 8.0.

It is understood that earthworks will comprise predominately excavations of up to 3.5m for Basement construction. Some minor filling is expected within the northern section of the site.

Clearing, stripping and grubbing should be carried out in areas subject to earthworks (as Trafficability conditions allow). Also all soils containing organic matter should be stripped From the construction area; this material is not considered suitable for use as structural Fill.
Depressions formed by the removal of vegetation, underground elements etc. Should Have all disturbed weakened soil cleaned out and be backfilled with compacted select Material.
The subgrade should be proof rolled (where appropriate) under the supervision of a Suitably qualified person in accordance with methods and equipment as per clause 5.5 Of as 3798-2007. In areas of cut, proof rolling may be deferred until after the cut Operation. Areas demonstrating excessive movement should be treated (dried and Recompacted) or removed and replaced with compacted fill. Treatment should be to a Standard sufficient so that the subgrade passes proof rolling and that compaction can be Achieved in the first layer of fill.

Imported select fill (if required) should be cohesive in nature and conform to the Following specifications:
Liquid limit 35%, maximum
Plasticity index 10%, maximum
Aggregate size 75mm, maximum
Passing 19mm sieve 80%, minimum
Passing 0.075mm sieve 20%, minimum
Shrink/swell index maximum of 0.5%
Soaked cbr 15%, minimum

Further, imported inert select fill material, when placed and compacted to specification Requirements, is to be of low permeability, i.e. When a sample is remoulded to a target Density and moisture content consistent with specification requirements, and tested in Accordance with as 1289 6.7.2, kh2 (based on kh head (1988) manual of laboratory Testing, 10.7, permeability by falling head test), the sample permeability is equal to or Less than 5 x 10-7 m/s. Please note that permeability testing does take significant time to Be carried out. Enquiries with specialist soil testing laboratories is recommended to Establish their timing with regard to turnaround times for this testing.

Fill placed in the area of the buildings should be compacted in layers (approximately 250mm loose thickness) to a density not less than 95% of maximum dry density in Accordance with as 1289 (standard compaction).
• field density testing should be carried out to check the standard of compaction achieved And the placement moisture content. The frequency and extent of testing should be as Per guidelines in as 3798-2007, section 8.0.
• backfilling for service trenches, etc. (if required) should use good quality material. The Backfill should be placed in uniform layers over the full width of the excavations with the Layers not exceeding 200mm thickness, loosely placed using wheeled plant and 100mm Loose thickness using hand held vibrating plates. The backfill material should be Compacted to the specifications outlined above for insitu or imported cohesive material.

1.2C. Assess performance of reinforcement, concrete and other elements which contribute to structural integrity of specified footings. (refer to attached document HO3)

1.2D. Determine compliance with building and construction regulations, standards and codes. (refer to attached document HO3)

1.2E. Set out footings in accordance with project plans and specifications.

The design of footings and slab system has been based on the requirements of as 2870 “residential slabs and footings”. Construction practices and standard of workmanship are to be strictly in accordance with the requirements of that standard.

Piers shall be provided in accordance with the pier details for services and adjacent structures whether indicated on plan or not. Where notification and details of such services and structures have been provided by others, the design has been modified as required to maintain the structural integrity of the footing and slab system.
The builder shall check for such services and adjacent structures and confirm the location and depth.

If any part of the residence foundation system is founded on rock, all areas of the footing and slab system supporting masonry or loadbearing elements shall be piered to rock to avoid problems associated with differential settlement across the platform. Refer to the footing and slab plan and detail drawings for the pier requirements.
Any slabs constructed adjacent to the residence slab, such as water tank or air conditioning equipment slabs, shall be structurally isolated from the
Habitable slab. Any services connections such as downpipes, air conditioning lines and water supply lines shall be installed to accommodate differential movement between the residence and the external element.
Provide formwork if required to ensure lagging extends

Beyond edge of concrete

If any part of the edge rib or footings founds in weathered rock, then all of the
Edge rib and footings are to extend into weathered rock or are to be piered 300 min. Into weathered rock.
Refer pier notes for size and spacing

Where edge footing is not found 100min into weathered rock, provide 300 dia. Bored piers at 2100 max. Crs. Piers to extend 300 min. Into weathered rock.
Where internal footings do not found 100 min. Into natural firm material, provide 300 dia. Bored piers at 2100 max. Crs. Piers to extend 600 min. Into natural firm material.
Where depth of uncontrolled fill under slab exceeds 300mm, (including slab bedding and any existing fill) provide 300 dia. Bored piers at 2300 max. Crs. Piers to extend 600 min. Into natural
Firm material or 300 min. Into weathered rock.
Where depth of bored piers exceeds 1500mm, bored piers to be reinforced with 4/n12 verticals and r6 ties at 500.

Grade n25 concrete.
F2 50mm clear concrete cover to reinforcement to be maintained.
F3 foundation material to be firm natural material or approved
Compacted material with minimum allowable bearing capacity of 100 kpa.

3 plan, coordinate and manage laying of flooring systems.

1.3A. Identify flooring systems materials, components and configuration from project plans and specifications.

Floor joist layout to avoid plumbing wastes.
All lvl framing shown on this drawing to be grade "lvl15" u.n.o.
All external above ground timber to be durability class 1 or 2 or treated to hazard level h3

1.3B. Determine footing type and tie-down details.

Edge footing
Internal footing
Grated drain in slab

Pier adjascent to pool
Pier at underground services
Pier adjacent to retaining wall
Refer to attached document ho3 as well.

Lap n12 bars 500 as required.
Lap trench mesh 500 as required.
Slab mesh to be overlapped one mesh spacing plus 25mm minimum

1.3C. Assess suspended flooring system component sections' compliance with standards and codes' span requirements. (refer to attached document HO3)

1.3D. Determine if floor framing and flooring is compliant with ncc performance requirements for climate zone, fire resistance and rising damp requirements. (refer to attached document HO3)

1.3E. Supervise and confirm laying of specified floor system complies with project documentation

The steps undertaken in supervising this are as follows:

1. Preparation and Planning: Before the floor system installation begins, ensure that all necessary permits and approvals are in place. Review the architectural and structural plans to understand the design requirements and specifications for the floor system.
2. Material Procurement: Coordinate with suppliers to ensure that all materials required for the floor system, including beams, joists, subflooring, and finish flooring, are on-site and ready for installation.
3. Site Preparation: Verify that the construction site is properly graded, leveled, and cleaned. Ensure that any necessary utilities (plumbing, electrical, etc) have been routed or installed as per the plans.
4. Quality Control: Regularly inspect materials for quality and compliance with relevant standards. Check that the structural components are appropriately sized and spaced according to engineering and architectural plans.
5. Workforce Management: Oversee the team responsible for laying the floor system, which may include carpenters, laborers, and subcontractors. Ensure they have the necessary tools and equipment for the job.
6. Installation: Monitor the installation process closely, making sure that beams and joists are properly aligned and securely fastened. Ensure that the subflooring is installed level and with the correct spacing. Check for any deviations from the plans and address them promptly.
7. Compliance and Safety: Ensure that the floor system installation complies with all relevant building codes, NCC requirements, and Australian Standards. Prioritize safety by enforcing the use of appropriate personal protective equipment and safe work practices.
8. Documentation: Keep detailed records of the installation process, including any changes, inspections, and approvals. Maintain a record of materials used and their compliance with specifications.
9. Communication: Maintain open communication with the project team, including architects, engineers, and subcontractors. Address any issues or challenges that arise during the installation promptly and effectively.
10. Quality Assurance: Conduct final inspections to ensure the floor system meets quality standards and specifications. Rectify any defects or issues before proceeding with subsequent construction phases.
11. Completion and Handover: Once the floor system installation is successfully completed and meets all compliance requirements, document the milestone and prepare for the next phase of construction.
12. Cost and Schedule Management: Keep track of the project's budget and timeline to ensure that the floor system installation stays within the allocated resources and does not cause delays.
13. Documentation: Maintain thorough records of all activities related to the floor system installation, including permits, inspections, and any changes or modifications made during the process.

4 plan, coordinate and manage the building of wall systems.

1.4A. Determine and analyse structural and non-structural wall systems used in the planning of the building and construction project. (refer to attached doc HO3)

Walls less than 900mm long
Penetration walls
Steel post end of wall
Double sheeted wall
Walls parallel to trusses/joists
Walls perpendicular to trusses/joists

1.4B. Determine materials used for timber and steel framing and structural steel members meet the performance requirements of the ncc and timber framing complies with as 1684 residential timber-framed construction. (refer to attached doc HO3

1.4C. Adhere to and check processes for erecting structural and non-structural wall systems to ensure these comply with manufacturer's specifications and building and construction standards and codes.

'B3' denotes ply sheet bracing to achieve 3.0kn/m bracing resistance ultimate. Refer typical detail.
'B5.2' denotes ply sheet bracing to achieve 5.2kn/m bracing resistance ultimate. Refer typical detail.
'B7.6' denotes ply sheet bracing to achieve 7.6kn/m bracing resistance ultimate with 7mm ply sheets, to be fixed to slab with m12 rod at each
End of wall and m12 bolts at 600 crs in between epoxy grouted to slab using 'chemset 801' with 50mm min. Edge distance, and 110mm min. Embedment. (or approved equivalent to achieve 13.0kn for m12 bolts/rods) refer
Typical detail.
All bracing panels to be fixed to timber with a minimum joint group of 'jd5'. (u.n.o.)
It is the builder's responsibility to ensure any fixings to concrete have been installed to manufacturer's specifications to achieve the minimum capacities as specified on the engineering drawings.
Provide m12 anchor rods at each end of ply bracing walls less than 900mm long. Refer typical detail.
Bracing walls shall be connected to the ceiling or roof frame and/or external wall frame in accordance with `as 1684.2-2021'. The connection shall be of equivalent strength to the bracing strength of that particular bracing wall.
Bracing walls shall be connected to slab or floor structure in accordance with `as 1684.2-2021'. The connection shall be of equivalent strength to the bracing strength of that particular bracing wall.
'B5.2' sheeted walls to be fixed to slab with m12 cast-in bolts or epoxy grouted bolts using 'chemset 801' with 50mm min. Edge distance and 110mm min. Embedment. (or approved equivalent to achieve 13.0kn/bolt)
'b5.2' bracing walls sheeted on both sides to be fixed to slab with 2/m12 or 1/m16 rods at each end of wall and m12 bolts at 600 crs in between epoxy grouted to slab using 'chemset 801' with 50mm min. Edge distance, and 110mm min. Embedment. (or approved equivalent to achieve 13.0kn for m12 bolts/rod or 26kn for m16 rods) refer typical detail.
Height reduction factor has been applied to walls higher than 2700.

1.4D. Apply bracing, tie-downs, tolerances, allowances, and fixing and installation of wall frame components for compliance with relevant australian standards, codes and manufacturer specifications.

Refer to as1684.2 - 2010.

Joint group jd5
Ceiling height varies
Roof sheeting metal roof sheeting pitch varies
Truss/rafter spacing 600
Batten spacing 900

Lower storey of two storey
Nominal fixings - refer table 9.4 of as1684.2 - 2010.

Single storey
Roof batten to
Truss/rafter 1/75 no.14 type 17 screw.
Truss/rafter to top
Plate
1 framing anchor with 4/2.8mm dia.
Nails each leg.

Top plate to floor
M12 anchor rods at corners, sides of openings, and at 1800 max. Crs. Between.
Top plate to lower level top plate
M12 anchor rods at corners, sides of openings, and at 1800 max. Crs. Between.
Balcony bearer to shs post 2/m12 bolts through post.
Lintel to shs post 8 cap plate. 2/m12 bolts.
Shs post to footing/slab
8 base plate. 2/m12 bolts in chemical anchors.
Shs post to bearer 8 base plate. 2/m12 bolts.
All other fixings to be in accordance with as1684.2-2010 and good building practice.

'B3' denotes ply sheet bracing to achieve 3.0kn/m bracing resistance ultimate. Refer typical detail.
'B5.2' denotes ply sheet bracing to achieve 5.2kn/m bracing resistance ultimate. Refer typical detail.
'B7.6' denotes ply sheet bracing to achieve 7.6kn/m bracing resistance ultimate with 7mm ply sheets, to be fixed to slab with m12 rod at each
End of wall and m12 bolts at 600 crs in between epoxy grouted to slab using 'chemset 801' with 50mm min. Edge distance, and 110mm min. Embedment. (or approved equivalent to achieve 13.0kn for m12 bolts/rods) refer
Typical detail.
All bracing panels to be fixed to timber with a minimum joint group of 'jd5'. (u.n.o.)
It is the builder's responsibility to ensure any fixings to concrete have been installed to manufacturer's specifications to achieve the minimum capacities as specified on the engineering drawings.
Provide m12 anchor rods at each end of ply bracing walls less than 900mm long. Refer typical detail.
Bracing walls shall be connected to the ceiling or roof frame and/or external wall frame in accordance with `as 1684.2-2021'. The connection shall be of equivalent strength to the bracing strength of that particular bracing wall.
Bracing walls shall be connected to slab or floor structure in accordance with `as 1684.2-2021'. The connection shall be of equivalent strength to the bracing strength of that particular bracing wall.
'B5.2' sheeted walls to be fixed to slab with m12 cast-in bolts or epoxy grouted bolts using 'chemset 801' with 50mm min. Edge distance and 110mm min. Embedment. (or approved equivalent to achieve 13.0kn/bolt)
'b5.2' bracing walls sheeted on both sides to be fixed to slab with 2/m12 or 1/m16 rods at each end of wall and m12 bolts at 600 crs in between epoxy grouted to slab using 'chemset 801' with 50mm min. Edge distance, and 110mm min. Embedment. (or approved equivalent to achieve 13.0kn for m12 bolts/rod or 26kn for m16 rods) refer typical detail.
Height reduction factor has been applied to walls higher than 2700.

Plywood structural wall bracing as per table 8.18 as1684.2 type (g) , (h) & (i)
Fastener - 30x2.8mm dia. Galv. Flat
Head nails at the following centres:
- 50 top & btm plate
- 100 vertical edges
- 50 nogging
- 100 intermediate studs

Fastener - 30x2.8mm dia.
Galv. Flat head nails at
The following centres:
- 50 top & btm plate
- 150 vertical edges
- 50 nogging
- 300 intermediate studs

For double sheeted walls the depth of the bottom plate shall be a minimum of 45mm and tie down rods at each end to be double either 2/m12 or 1/m16 rod
M12 tie down rod at each end of bracing wall.

All timber framed wall to wet areas to be lined with waterproof cladding with a
Waterproofing works to be carried out by a qualified professional and compliance certificates supplied upon completion

1.4E. Manage processes to ensure quality of the frame, whether factory pre-cut and pre-nailed, factory pre-cut and assembled on site, or cut and assembled on site.

Managing processes to ensure the quality of a frame, whether it's factory pre-cut and pre-nailed, factory pre-cut and assembled on-site, or cut and assembled on-site, is critical to the overall structural integrity and safety of a building. To achieve this, a comprehensive quality management approach is implemented and as follows:

Design Review and Compliance: Begin by thoroughly reviewing the architectural and engineering designs to ensure they comply with relevant codes and standards. Verify that the frame components, whether pre-cut or on-site, match the approved plans.

Material Selection and Inspection: Carefully select materials, including lumber and fasteners, based on their quality and compliance with industry standards. Regularly inspect incoming materials for defects and conformance to specifications.

Skilled Workforce: Employ skilled carpenters and framers who are experienced in working with the chosen construction method. Provide them with ongoing training to keep them updated on the latest techniques and safety protocols.

Quality Control at Every Stage: Implement a rigorous quality control process at each stage of frame assembly. This includes checking for accurate measurements, proper fastening, plumbness, and alignment. Any deviations from the plans should be documented and addressed promptly.

Inspection and Testing: Conduct regular inspections by qualified inspectors to ensure that all aspects of the frame, from the foundation connections to the roof trusses, meet safety and quality standards. Perform load tests and structural analyses as required.

Documentation and Records: Maintain detailed records of the entire frame construction process, including inspections, measurements, and any corrective actions taken. This documentation provides a clear trail of accountability and serves as a reference for future construction stages.

Supplier Accountability: Hold suppliers accountable for delivering materials that meet specified quality standards. Establish clear communication channels for addressing any material-related issues.

Communication and Collaboration: Foster open communication and collaboration among all stakeholders, including architects, engineers, contractors, and subcontractors. Encourage proactive problem-solving and issue resolution.

Continuous Improvement: Continuously evaluate and improve frame construction processes based on lessons learned from each project. Implement feedback mechanisms to gather input from the workforce and stakeholders.

Adherence to Codes and Standards: Ensure that the frame construction adheres to all relevant building codes, NCC requirements, and Australian Standards throughout the entire process.

1.4F. Determine and apply allowances for services to be installed.

Plumbing and Drainage: $44240

- Disconnect all plumbing connections (Kitchen, Bathrooms, Laundry) prior to demolition
- Reconnect all plumbing to their new and existing locations as per the plans
- Fixings and fixtures /Toilet seats / Shower heads
- As required including basement pump set up
- Labour
- Materials

Electrical and communication: $60838

- As per lighting layout
- General security camera set up
- Gate, door, panel door intercom system
- Downlights
- Labour
- Materials

Air conditioning: $40803

- 3 AC units to service house and basement
- Ducted zoned system
- Labour
- Materials

1.4G. Ensure the installation of windows and doors is compliant with building and construction standards and code and manufacturer's specifications.

Windows must be compliant with: current NCC - 3.9.2.6 "protection of openable windows"

All doors and windows are:
- clear glass unless stated otherwise on the plans or noted in the energy efficiency report
- aluminium frame doors and windows to be powder coated to owners selection
- timber framed doors or windows to be stained or painted to owners selection
- all windows and doors are nominal only and all sizes and tolerances are to be confirmed by the selected window and door manufacture.
- all windows and doors are to be site measured and any conflicts between the plan/elevations and the schedule special requirements are to be confirmed between the construction manager and the client prior to ordering.
- all commercial doors to comply with ncc requirements and disability (access to premisesbuildings) standards code

Glazing to be in accordance with as1288 and as2047 and bca vol. 2 part 3.6.
Sound insulation in accordance with bca vol.2 part 3.8.6

Door to sanitaries compartments on the ground floor to be readily openable from the outside.

Door handles to required exits to be lever action complying with the requirements of ncc vol.1 part d2.21.

A) a window opening must be provided with protection, if the floor below the window in a bedroom is 2 m or more above the surface beneath.
(b) where the lowest level of the window opening is less than 1.7 m above the floor, a window opening covered by (a) must comply with the following:
(i) the openable portion of the window must be protected with—
(a) a device capable of restricting the window
Opening; or
(b) a screen with secure fittings.
(ii) a device or screen required by (i) must—
(a) not permit a 125 mm sphere to pass through the window opening or screen; and
(b) resist an outward horizontal action of 250 n

Against the
(aa) window restrained by a device; or
(bb) screen protecting the opening; and
(c) have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden.
(c) where a device of screen provided in accordance with (b)(i) is able to be removed, unlocked, or overridden, a barrier with a
Height not less than 865mm above the floor is required to the openable window in addition to window protection
(d) a barrier covered by (c) must not—
(i) permit a 125 mm sphere to pass through it; and
(ii) have any horizontal or near horizontal elements between 150mm and 760 mm above the floor that facilitate climbing.

5. Plan, coordinate and manage the building of structural roof systems.

1.5A. Identify type of structural roof system and components and determine compliance with performance requirements of ncc. (refer to attached doc HO3)

1.5B. Plan, implement and check erection of structural roof, roof trusses or hand cut roof members comply with building and construction standards and codes and accepted industry construction practices. (refer to attached doc ho HO3)

1.5C. Plan, implement and check installation of roof sarking and cladding, skylights, roof ventilators and service penetrations comply with building standards, codes and manufacturer specifications. (refer to attached doc HO3)

1.5D. Manage processes to ensure roof systems' quality finish.

Managing the processes to ensure the roof systems quality finish entails the following:

Thorough Planning and Design Review:
- Begin by thoroughly reviewing architectural and engineering plans to understand the roof system's design, materials, and specifications.
- Verify that the design complies with relevant building codes, NCC requirements, and Australian Standards.

Material Selection and Inspection:
- Carefully select roofing materials, including shingles, tiles, membranes, insulation, and fasteners, based on quality and suitability for the project.
- Regularly inspect incoming materials for defects, damage, and compliance with specifications.

Skilled Workforce:
- Employ experienced and trained roofing contractors who are knowledgeable about the chosen roofing materials and installation techniques.
- Ensure that the roofing team is equipped with proper safety gear and follows safety protocols.

Quality Control During Installation:
- Implement a rigorous quality control process during roof installation.
- Verify that materials are installed according to manufacturer's guidelines and architectural plans.
- Ensure proper flashing, sealing, and waterproofing details are meticulously followed.

Regular Inspections:
- Conduct regular inspections throughout the roof installation process to check for correct alignment, secure fastening, and adherence to design specifications.
- Address any issues or deviations immediately.

Weather Considerations:
- Schedule roof installation during favorable weather conditions to prevent moisture damage and ensure proper sealing.
- Implement temporary weather protection measures when necessary.

Ventilation and Insulation:

- Ensure proper roof ventilation and insulation are installed to prevent condensation, improve energy efficiency, and comply with building codes.

Documentation and Records:

- Maintain detailed records of all activities related to the roof installation, including inspections, measurements, and any corrective actions taken.
- Document the condition of materials upon arrival and any changes made during the installation process.

Coordination and Communication:

- Foster open communication and coordination among all stakeholders, including roofers, contractors, inspectors, and project managers.
- Ensure that changes to the roof design or materials are communicated and documented.

Compliance with Standards:

- Ensure that the roof installation complies with all relevant building codes, NCC requirements, and Australian Standards.
- Confirm that safety measures, such as fall protection systems, are in place and followed.

Final Inspection and Testing:

- Conduct a comprehensive final inspection of the roof system to ensure that it meets quality standards and specifications.
- Perform water leak tests and other relevant tests as needed.

Documentation and Handover:

- Compile a comprehensive documentation package for the roof system, including warranties, maintenance instructions, and any certifications.
- Provide training or guidance to the building owner or facility manager on roof maintenance.

6. Plan, coordinate and manage wall cladding.

1.6A. Assess structural performance of cladding to be used for bracing in the frame construction for compliance with building and construction standards, codes and manufacturer specifications. (refer to attached doc HO3)

1.6B. Determine cladding, vapour permeable sarking or waterproof membrane and components meet the performance requirements of ncc. (refer to attached doc HO3)

1.6C. Supervise and check installation of specified cladding complies with building and construction standards, codes and industry-accepted industry practices.

Supervising the installation of brick cladding and concrete-look fiber cement (FC) cladding as below:

Review Plans and Specifications:

- Start by thoroughly reviewing architectural plans, engineering drawings, and specifications to understand the design requirements for both the brick and FC cladding systems.
- Verify that the design complies with the National Construction Code (NCC), Australian Standards, and local building codes.

Material Selection and Inspection:

- Collaborate with suppliers to select high-quality cladding materials that meet the specified standards.
- Regularly inspect incoming materials, including bricks and FC cladding panels, to ensure they conform to the approved specifications.

Workforce Training and Certification:

- Ensure that the installation team responsible for cladding is well-trained and certified in the installation techniques for both brick and FC cladding.
- Verify that the workforce understands and follows safety protocols.

Quality Control During Installation:

- Implement a rigorous quality control process during the installation of both brick and FC cladding.
- Verify that materials are installed according to manufacturer's guidelines, architectural plans, and applicable standards.
- Check for proper fastening, alignment, and spacing.

Regular Inspections:

- Conduct regular inspections throughout the installation process to monitor progress and identify any deviations from the plans or standards.
- Address issues or discrepancies promptly to maintain compliance.

Weather Considerations:

- Schedule cladding installation during suitable weather conditions to ensure proper bonding and curing of materials.
- Implement temporary weather protection measures as needed to prevent moisture intrusion.

Flashing and Waterproofing:

- Pay close attention to flashing details and waterproofing around openings, joints, and intersections to prevent water infiltration, as per industry standards and codes.

Documentation and Records:

- Maintain detailed records of all activities related to cladding installation, including inspections, measurements, and any corrective actions taken.
- Document the condition of materials upon arrival and any changes made during installation.

Coordination and Communication:

- Foster open communication and coordination among all project stakeholders, including cladding installers, contractors, inspectors, and project managers.
- Ensure that changes to the cladding design or materials are communicated and documented.

Compliance with Standards and Codes:

- Ensure that the cladding installation complies with all relevant building codes, NCC requirements, and Australian Standards, including fire safety and structural integrity standards.

Final Inspection and Testing:

- Conduct a comprehensive final inspection of both brick and FC cladding systems to ensure they meet quality standards, specifications, and safety requirements.
- Perform water infiltration tests and other relevant tests as necessary.

Documentation and Handover:

- Compile a comprehensive documentation package for the cladding systems, including warranties, maintenance instructions, and any certifications.
- Provide the building owner or facility manager with guidance on cladding maintenance and care.