CPCCBC4011B APPLY STRUCTURAL PRINCIPLES TO COMMERCIAL LOW RISE CONSTRUCTIONS

Practical Task 2

Description of task:
A suitable observer is to verify the participant's ability to apply structural principles to the erection and demolition of a low rise commercial structure (Classes 2 to 9 with a gross floor area not exceeding 2000m^2, but not including Type A or Type B construction).

The participant is to gather evidence of how they have completed each component of the Practical Task, which is to be submitted with this Practical Assessment sheet. Evidence to be submitted may include:

- Photographic evidence of projects, including detailed descriptions of all structural elements
- Documentation from a commercial works structurally designed; including:
  - A copy of the plans and/or specifications
  - Identification of site classification, uplift forces, wind ratings
  - Component selection methods – for example; BCA references, Australian Standard references

The observer is to provide detailed comments on the tasks completed by the participant. The assessor is to verify the observer's comments in the Assessor Comments section, and provide the Practical Assessment outcome on the front cover of this document.

Resources required:
Plans, computer, suitable work area appropriate to the construction process.

Assessment of task

Name of participant:	Nathan Weiss
Name of observer:	Laurence Court
Role of observer (Confirm suitability to sign)	Builder
Email address of observer	laurencemcourt@outlook.com
Signature of observer:	
Date:	29/05/2021

When completing the task, did the participant:		**Tick if satisfactorily completed. Provide comments if left unticked.**
1 Apply structural principles to planning		
2.1A.	Identify main structural principles that apply to the erection or demolition of the structure.	☑
2.1B.	Describe structural performance in terms of the effect of section properties on various materials.	☑
2.1C.	Explain structural performance characteristics of the slabs, beams, columns and retaining walls – and apply to the planning of the construction work.	☑
2.1D.	Coordinate demolition of existing structures in accordance with safe work practices, legislative, environmental and planning requirements.	☑

	2 Structural integrity of buildings	
2.2A.	Consult relevant industry professionals to provide advice regarding the design process and structural integrity of the proposed building – using language and concepts appropriate to cultural differences (including non-verbal communication).	☑
2.2B.	Collect and analyse project documentation to assist with the analysis of plans and specifications.	☑
2.2C.	Analyse project documentation for compliance with National Construction Code requirements for bushfire, high wind, earthquake and alpine environments.	☑
2.2D.	Assess new and emerging building technologies, techniques and materials for application to the construction process and their compliance with National Construction Code requirements and Australian standards.	☑
2.2E.	Conduct pre-commencement site inspection to confirm analysis.	☑
	3 Footing system	
2.3A.	Set out footing systems in accordance with building plans.	☑
2.3B.	Assess structural integrity of the footings specified in the plans for compliance with relevant codes and accepted industry construction principles.	☑
2.3C.	Lay footings specified in building's plan, checking for compliance with project documentation.	☑
2.3D.	Plan, implement and check damp coursing, provision of termite barriers and other relevant techniques in accordance with codes, standards and industry practice.	☑
	4 Floor system	
2.4A.	Assess floor system components specified in building plan for structural integrity and compliance with relevant codes and accepted industry construction principles.	☑
2.4B.	Supervise laying of structural floor system specified in building's plan, checking for compliance with project documentation.	☑
	5 Structural wall systems and wall cladding systems	
2.5A.	Identify and analyse technical construction principles and performance characteristics of structural wall systems and wall cladding systems in the planning of the building and construction project.	☑
2.5B.	Identify, implement and check processes for erecting wall systems and wall cladding systems for compliance with manufacturer specifications and relevant Australian standards and codes.	☑
2.5C.	Identify and implement building plans and relevant standards and codes to ensure appropriate allowances were made for relevant services to be installed.	☑
2.5D.	Install windows and external doors in compliance with relevant codes, manufacturer specifications and accepted industry construction principles.	☑
	6 Structural roof systems and roof cladding systems	
2.6A.	Assess structural integrity of the structural roof system and roof cladding system components specified in the building's plan for compliance with relevant codes and accepted industry construction principles.	☑
2.6B.	Plan and implement and check construction of roof system and roof cladding system (including details of service penetrations, skylights and roof ventilators) according to building plan's requirements, type of roof being constructed, relevant codes and accepted industry construction principles.	☑
2.6C.	Put processes in place to ensure quality of finished roof system.	☑

The Participant's performance was: ☑ **Satisfactory** ☐ **Not Satisfactory**

OBSERVER COMMENTS

Nathan has shown that he can successfully apply structural principles to commercial low rise construction. Nathan is able to apply relevant building codes and Australian Standards in ensuring the project is ~~built to~~ structually sound. Nathan is also able to find the relevant wind and soil classifications for the job. Nathan understands the correct ~~way~~ process to build a small commercial project and the importance of ensuring the structural integrity is sound.