THE NATIONAL COUNCIL FOR TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING



OCCUPATION: ARCHITECTURAL ENGINEER

LEVEL: NTA LEVEL 7

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ABBREVIATIONS

BIM	Building Information Model	
CAD	Computer-aided Design	
СРМ	Critical Path Method	
CBET	Competency Based Education and Training	
ISO 9001	Quality Management System Standard	
NACTVET	National Council for Technical and Vocational Education and	
	Training	
NOS	National Occupational Standards	
OS	Occupational Standards	
TET	Technical Education and Training	
TVET	Technical and Vocational Education and Training	

GLOSSARY OF TERMS

Circumstantial Knowledge:	Detailed knowledge, which allows the decision-making in regard to different circumstances and cross cutting issues.	
Competence:	The ability to use knowledge, understanding, practical, and thinking skills to perform effectively to the workplace standards required in employment.	
Competency:	A description of the ability one possesses when able to perform a given occupational task effectively and efficiently.	
Competency-based Education:	An instructional programme that derives its content from validated tasks and bases assessment on the learner's performance.	
Curriculum:	A description or composite of statements about "what is to be learned" by the trainee/student in a particular instructional programme; a product that states the "intended learning outcomes".	
Educational/Training Programme:	The complete curriculum and instruction (what and how) that is designed to prepare a person for employment in a job or other particular performance situation.	
Occupation:	A specific position requiring the performance of specific tasks – essentially the same tasks are performed by all employees having the same title. (Example: baker)	
Occupational Area:	This is a broad grouping of related jobs. (Example: food service)	
Occupational Competence:	The application of knowledge and skills that consistently meet the standards required by the work context.	
Occupational Standards:	Specific requirements of competences people are expected to demonstrate in a particular occupational area, including knowledge and relevant attitudes. They also act as a performance tool of assessment of the prescribed outcomes.	
Occupational/Job Analysis:	A process used to identify the tasks that are important to employees in any given occupation.	
Performance Criteria:	Indicate expected end results or outcomes in the form of evaluative statements.	
Skills:	The ability to perform occupational tasks with a high degree of proficiency within a given occupation. Skill is conceived of as a composite of three completely interdependent components: cognitive, affective, and psychomotor.	

Standards:	A set of statements, which if proved true under working conditions, means that an individual is meeting an expected level and type of performance.
Task Analysis:	The process of analysing each task to determine the steps, circumstantial knowledge, attitudes, performance standards, tools and materials needed, as well as safety concerns required for the employees performing it.
Task:	A work activity that has a definite beginning and ending, is observable or measurable, and consists of two or more definite steps that leads to a product, service, or decision.
Underpinning Knowledge:	Crucial knowledge that an individual must acquire in order to demonstrate competences that are associated in performing a given task.
Verification Process:	The process of having experts review and confirm the importance of the task (competency) statements identified through occupational analysis. Other questions, such as the degree of task learning difficulty are also frequently asked. This process is also sometimes referred to as validation.

1.0. INTRODUCTION

Technical Education and Training (TET) is one of the most important education sub-sectors in Tanzania, responsible for developing a skilled workforce to support the country's industrialization economic agenda. Tanzania's *Development Vision 2025* intends to raise the country's economy to a middle-income status, with a high level of human development. This requires a skilled workforce that is aligned with the needs of the public and private sectors of the economy. The National Council for Technical and Vocational Education and Training (NACTVET) has begun the job of drafting Occupational Standards (OS) that will eventually be adopted as National Occupational Standards (NOS) for use in the delivery of TET that meets the needs of the labour market and the country's economic agenda.

Occupational Standards (OS) are performance criteria that are matched with labour market demands. Each of them describes the functions, performance standards, and understanding or knowledge underpinning a given occupation. They combine skills, knowledge, and attitudes to describe best practice. They are useful tools for establishing job roles, personnel recruitment, supervision, and appraisal, as well as TET Standards. They are also helpful for benchmarking and harmonizing job qualifications on a national and international level. Standards, in general, provide a solid framework for high-quality TET that is labour market-relevant, current, and consistent in application across all public and private institutions.

However, it must be noted that Occupational Standards are different from Training /Education Standards. Occupational standards are defined in terms of activities performed by a person in a selected occupation (e.g., an electrical engineer designs electrical circuits, performs troubleshooting in electrical circuits, etc.), and are usually defined by Employers following procedures as agreed upon by all the stakeholders. On the other hand, Training and Education Standards are developed from the activities defined in the occupational standards, and they specify learning objectives to ensure that the necessary skills and knowledge are developed by a person to enable him/her to function at an agreed level in an occupation. Training and Education Standards are used to define curricula in training institutions. It is critical, however, to establish a direct link between the occupational standards for both of them to respond collaboratively to the demands of the labour market.

For the purpose of TET delivery, Tanzania has adopted the Competence Based Education and Training (CBET) approach. The CBET approach focuses on providing learners with the skills and knowledge required to meet the occupational standards. Occupational standards are thus the starting point for developing competency-based training (CBET) programmes. Therefore, it is quite pertinent

for TET institutions to use the relevant occupational standards as a benchmark for formulating their curricula.

Occupational Standards are developed based on a given occupation's current and future demands. As a result, they serve as a means of bridging the gap between the worlds of employment and technical education and training.

The document explains how the occupational standards were developed, as well as the scope, the occupational profile in the form of DACUM charts, and the Occupational Standards.

2.0. OCCUPATIONAL STANDARD DEVELOPMENT PROCESS

The process of developing these Occupational Standards involved both local and international expertise. The process began with an examination of major documents that guide Tanzanian skills development including the *10-year National Skills Development Strategy (2016-2026)*. NACTVET labour market reports were also used in the literature review to determine the skills demand in the Tanzanian labour market as a whole.

After the literature review, a team of experts in consultation with practitioners developed draft occupational standards. The draft document was used to develop an occupational profile for each occupation (DACUM Chart), which is attached as an **Appendix** to every Occupational Standard.

The occupational standards were validated during the stakeholders' forum held on 22nd and 23rd February 2024 at Morogoro. The information from the stakeholders' forum provides insight from the workplace, professional bodies, regulatory bodies and sector ministries regarding trends and changes in the profession, including how well graduates are prepared for working in the occupation.

3.0. THE SCOPE AND OVERVIEW OF THE OCCUPATION STANDARDS FOR ARCHITECTURAL ENGINEERS

These standards cover a broad range of duties and tasks that can be performed by an Architectural Engineer. However, the occupational standards are not meant to replace individual job descriptions. Instead, they are to be used for guidance in defining skill levels and knowledge for the technician in specific settings or positions. Architectural Engineers may perform tasks in a number of key areas of the occupational standards, but not necessarily in all areas. For example, in large operations, other individuals may be employed or designated to perform specific tasks.

The Architectural Engineer shall conduct construction organization and planning, construction technology management, construction quality control, construction schedule control, construction cost control, safety and environmental management, data information management, and project resource management at the construction site.

Generally, the Architectural Engineer performs the following responsibilities:

- a) Analysis of architectural design schemes
- b) Assistance in engineering surveying
- c) Preparation of construction drawings and construction schemes
- d) Supervision of construction quality and schedule at the construction site
- e) Coordination of various types of work during the construction process
- f) Inspection of the quality and qualification certificates of construction materials
- g) Resolution of technical problems and difficulties at the construction site
- h) Detection and assessment of safety risks at the construction site
- i) Assurance of the construction site compliance with relevant laws, regulations, and safety standards
- j) Quality acceptance and rectification at the construction site;
- k) Assistance in preparing work safety management plans for the construction project
- 1) Cost control and budget management at the construction site;
- m) Detection and monitoring of environmental factors at the construction site;
- n) Coordination of the communication and collaboration with relevant parties such as the owner and the supervisor
- o) Participation in technical disclosure and training for the construction project
- p) Preparation of completion files and acceptance reports for the construction project

The Occupational Standards have been clustered into NTA qualification levels, i.e. NTA 7 and 8.

4.0. VALIDITY PERIOD

Due to the rapid development of technology, the validity period of occupational standards is 3-5 years. The review will proceed in the same manner as the one before it, with new occupational standards being developed based on current trends of the labour market.

5.0. OCCUPATIONAL STANDARDS

5.1 OCCUPATIONAL STANDARDS FOR ARCHITECTURAL ENGINEER - NTA LEVEL 7

OCCUPATION	ARCHITECTURAL	ENGINEER	OCCUPATION CODE	
DUTY TITLE	IMPLEMENT CONSTRUCTION ORGANIZATION		DUTY NO.	701
TASK TITLE	IMPLEMENT DESI CONSTRUCTION	IGN OF	TASK NO.	7011
PERFORMANCE CRITERIA	The person performing this task must be able to implement correctly design and construction in accordance with relevant laws, regulations and technical requirements			
RANGE STATEMENT	 The task can be performed in construction areas and offices under the supervision of senior architectural engineers. The tools and equipment to be used include: Computers; Printers; Projectors; Safety construction equipment; 			
	EVIDENC	E REQUIREMENT		
PRACTICAL PERF	ORMANCE	UNDERPINNING KNOWLEDGE		
 PRACTICAL PERFORMANCE The person performing this task must be able to do the following: Implement the elements of the construction organization design; Analyse the preparation of the construction site; Explain the significance of the construction organization design; Execute the construction organization design process; Implement the requirements of the construction organization design; Observe health, occupational and environmental safety rules and regulations. 		 Detailed knowledge 1.0 Methods The person performine explain how to: 1.1 Implement the construction by judging the action of the person performine execute the construction des 2.0 Principles The person performine explain the following 2.1 The principles of organization des 2.2 The process of organization des 2.3 Implementation des 3.0 Theories The person performines 	about: ng this task must be onstruction organiza ctual situation on sit ions at the construct truction organizatio ng this task must be g principles: for preparing the o ign; implementing the o ign; of the design require anization.	able to ation design te; tion site and on design. able to construction construction ments of the
		The person performine explain the following	ng this task must be g:	able to

	3.1 Requirements and reasons for the preparation of the construction organization design;	
	3.2 Preparation requirements for implementing the construction organization design;	
	3.4 Measures to implement the construction organization design;	
	3.5 Architectural construction requirements.	
	4.0 Essential Skills	
	4.1 Skills in analyzing the conditions at the construction site;	
	4.2 Comprehension;	
	4.3 Communication skills;	
	4.4 Teamwork skills;	
	4.5 Computer operation skills;	
	4.6 Competence to implement the construction organization design;	
	4.7 Competence to present the elements of a construction organization design.	
DESCRIPTION OF THE END PRODUCT / SERVICE	The construction organization design requirements are implemented in accordance with relevant laws and regulations.	
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about:	
	1. Specific requirements of relevant laws and regulations.	

OCCUPATION	ARCHITECTU	RAL ENGINEER	OCCUPATION CODE	
DUTY TITLE IMPLEMENT OF ORGANIZATION		CONSTRUCTION DN	DUTY NO.	701
TASK TITLE	PREPARE CON SCHEMES	ISTRUCTION	TASK NO.	7012
PERFORMANCE CRITERIA	The person per construction sch technical requir	forming this task must be eme in accordance with re ements.	e able to correctly plevant laws and regu	prepare the ilations and
RANGE STATEMENTThe task can be architectural en The tools and ed 1. Computers 2. Printers; 3. Projectors; 4. Communic		performed in the office area gineers. quipment to be used includ ation devices. ENCE REQUIREMENT	a under the supervisi e:	on of senior
PRACTICAL PERF	ORMANCE	UNDERPINNING KNO	WLEDGE	
 The person performin be able to do the follo 1. Implement req preparation of schemes; 2. Analyse the con construction site; 3. Understand the preparation of schemes; 4. Prepare construct 	g this task must wing: uirements for construction nditions of the purpose of construction	 Detailed knowledge abor 1.0 Methods The person performing the how to: 1.1 Prepare a construct actual situation on site 2.0 Principles The person performing the following principles: 2.1 Principles for prepare 2.2 The implementation scheme; 2.3 Requirements for scheme. 3.0 Theories The person performing the person performing the person performing the scheme. 	ut: is task must be able ion scheme by ana te. is task must be able ing a construction so n process of a c implementing a c	to explain alyzing the to explain cheme; construction construction
		 1 ne person performing the following: 3.1 Relevant provisions of 3.2 Requirements for the scheme; 3.3 Preparation content of 3.4 Purpose of construction 4.0 Essential Skills 	of relevant laws and n e preparation of a c of a construction sch ion scheme preparat	regulations; construction neme; ion.

	4.1 Skills in analyzing the conditions at the construction site;	
	4.2 Comprehension;	
	4.3 Communication skills;	
	4.4 Teamwork skills;	
	4.5 Computer operation skills;	
	4.6 Competence to prepare construction schemes.	
DESCRIPTION OF THE END PRODUCT / SERVICE	Construction schemes are prepared and implemented in accordance with relevant laws and regulations.	
CIRCUMSTANTIAL	Detailed knowledge about:	
KNOWLEDGE	1. Specific requirements of relevant laws and regulations	

OCCUPATION ARCHITECTUR		RAL ENGINEER	OCCUPATION CODE	
DUTY TITLE ORGANIZE CO		ONSTRUCTION	DUTY NO.	701
TASK TITLE	IMPLEMENT N SYSTEMS	MANAGEMENT	TASK NO.	7013
PERFORMANCE CRITERIA	The person per management sy construction org	forming this task must by stems in accordance w ganization design.	be able to impleme ith the requireme	ent the site nts of the
RANGEThe task can houses under The tools an 1. Comput 2. Printers		e performed in construction e supervision of senior arcl quipment to be used includ	on areas, offices and hitectural engineers. e:	residential
	4. Communic	ation devices;		
	5. Safety cons	EXECTION EQUIPMENT.		
PRACTICAL PERF	ORMANCE	UNDERPINNING KNO	WLEDGE	
The person performin	of this task must	Detailed knowledge abo		
5. Safety cons EVIDI PRACTICAL PERFORMANCE The person performing this task must be able to do the following: 1. Analyse the elements of the construction design; 2. Comply with construction management systems; 3. Analyse the preparatory conditions of the construction site; 4. Communicate the requirements of construction management systems; 5. Implement construction management systems; 5. Implement systems.		 UNDERPINNING KNOWLEDGE Detailed knowledge about: Methods Methods The person performing this task must be able to explain how to: Communicate and be responsible for construction management systems by analyzing the actual situation on site. 2.0 Principles The person performing this task must be able to explain the following principles: Principles for implementing construction management systems; Requirements for implementing construction management systems; The process of implementing construction management systems; 3.0 Theories The person performing this task must be able to explain the following: 3.1 Requirements of relevant laws and regulations and technical documents;		
		3.3 Content of constructi	s; ion management sys	tems;

	3.4 Measures to implement construction management systems;		
	3.5 Analysis of the implementation effect of the construction management systems.		
	4.0 Essential Skills		
	4.1 Skills in analyzing the conditions at the construction site;		
	4.2 Comprehension;		
	4.3 Communication skills;		
	4.4 Teamwork skills;		
	4.5 Computer operation skills;		
	4.6 Competence to implement construction management systems.		
DESCRIPTION OF THE END PRODUCT / SERVICE	The relevant management systems are implemented in accordance with the relevant construction management system requirements.		
CIRCUMSTANTIAL	Detailed knowledge about:		
KNOWLEDGE	1. Specific requirements of relevant laws and regulations		

OCCUPATION	ARCHITECTU	RAL ENGINEER	OCCUPATION CODE	
DUTY TITLE DISCLOSE CO TECHNOLOGY		NSTRUCTION SCHEMES	DUTY NO.	702
TASK TITLE	ANALYSE AN TECHNICAL V	D IMPLEMENT ERIFICATION	TASK NO.	7021
PERFORMANCE CRITERIA	The person perfected technical disclered requirements.	orming this task must be abl osure documents based	le to implement the c on the actual sit	construction uation and
RANGE STATEMENTThe task can be supervision of a The tools and eq 1. Computers; 2. Printers; 3. Projectors; 4. Communica 5. Safety cons		e performed in construction rchitectural engineers. quipment to be used include ation devices; truction equipment.	on areas and offices	s under the
	EVID	ENCE REQUIREMENT		
The person performin	ORMANCE	UNDERPINNING KNOWLEDGE		
 EVIDE PRACTICAL PERFORMANCE The person performing this task must be able to do the following: Analyse the actual situation of the construction site; Implement the quality and safety requirements of the construction technology scheme; Verify the quality and safety disclosure documents for the construction technology scheme; Implement the quality and safety disclosure documents for the construction technology scheme. 		 1.0 Methods The person performing the how to: 1.1 Analyse and disclose the construction technactual situation on site 2.0 Principles The person performing the following principles: 2.1 Principles of quality construction technolo 2.2 Requirements of qual construction technolo 2.3 Process of quality construction technolo 3.0 Theories The person performing the following: 3.1 Requirements of releatechnical documents; 3.2 Purpose of the condisclosure; 3.3 Content of the condisclosure: 	his task must be able e the disclosure doc nology scheme by ar te. his task must be able y and safety disclos ogy scheme; lity and safety disclos ogy scheme; and safety disclos ogy scheme; and safety disclos ogy scheme. his task must be able evant laws and regu ; nstruction technolo	to explain suments for halyzing the to explain ure for the osure for the ure for the to explain dations and gy scheme gy scheme

	3.4 Measures to implement the construction technology scheme disclosure;		
	3.5 Technical methods for on-site construction.		
	4.0 Essential Skills		
	4.1 Skills in analyzing the conditions at the construction site;		
	4.2 Comprehension;		
	4.3 Communication skills;		
	4.4 Teamwork skills;		
	4.5 Computer operation skills;		
	4.6 Executive capacity to implement the construction technology scheme disclosure.		
DESCRIPTION OF THE END PRODUCT / SERVICE	Quality and safety disclosure documents are implemented in accordance with the requirements for the construction technology scheme disclosure.		
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about:1. Specific requirements of relevant laws and regulations.		

OCCUPATION	ARCHITECTU	RAL ENGINEER	OCCUPATION CODE	
DUTY TITLE	DISCLOSE CO TECHNOLOGY	NSTRUCTION SCHEMES	DUTY NO.	702
TASK TITLE	PREPARE ANI TECHNICAL D	D IMPLEMENT DISCLOSURE	TASK NO.	7022
PERFORMANCE CRITERIA	The person per construction tec on site and the p	forming this task must be hnical disclosure documen preparation requirements.	e able to correctly plats based on the actu	prepare the al situation
RANGE STATEMENT	The task can be architectural en The tools and ed 1. Computers; 2. Printers; 3. Communication	e performed in the office gineers. quipment to be used includ ation devices.	area under the sup e:	ervision of
PRACTICAL PERF	EVIDI ORMANCE	ENCE REQUIREMENT	WLEDGE	
 The person performin be able to do the folloo 1. Analyse the actual construction site; 2. Investigate the r the preparation safety disclosure construction tech 3. Prepare quality disclosure do construction tech 	g this task must wing: I situation of the equirements for of quality and documents for nology; and safety cuments for nology.	 Detailed knowledge abor 1.0 Methods The person performing the how to: 1.1 Analyse the actual site 1.2 Prepare the disclosure technology scheme. 2.0 Principles The person performing the following principles: 2.1 Principles for preparing disclosure documents 2.2 Requirements for presente disclosure technology; 2.3 Content of the preparing scheme disclosure technology; 3.0 Theories 	ut: his task must be able tuation of the constr e documents for the c his task must be able ng the quality and sat s for construction te eparing the quality documents for c ration of the quality documents for c	to explain uction site; construction to explain fety scheme chnology; and safety construction y and safety
		 3.0 Theories The person performing the following: 3.1 Requirements of releated technical documents 3.2 Purpose of preparing disclosure document 3.3 Content of the quality documents for construction 	his task must be able evant laws and regu the quality and saf s for construction ter by and safety scheme ruction technology;	to explain lations and fety scheme chnology; e disclosure

	3.4 Measures to implement the disclosure of the construction technical, quality and safety schemes.	
	4.0 Essential Skills	
	4.1 Skills in analyzing the conditions at the construction site;	
	4.2 Comprehension;	
	4.3 Communication skills;	
	4.4 Teamwork skills;	
	4.5 Computer operation skills;	
	4.6 Competence to prepare the disclosure documents for the construction technology scheme.	
DESCRIPTION OF THE END PRODUCT / SERVICE	The disclosure documents for the construction technology scheme are prepared in accordance with the requirements of relevant laws and regulations and the actual situation.	
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about:	

			CODE	
DUTY TITLE	DISCLOSE CONSTRUCTION TECHNOLOGY SCHEMES		DUTY NO.	702
TASK TITLE	IMPLEMENT 7	TECHNICAL REVIEW	TASK NO.	7023
PERFORMANCE CRITERIA	The person per implementation on the actual s documents.	forming this task must be of the construction techn ituation on site and the	be able to correctly ical disclosure docum requirements for the	review the nents based disclosure
RANGE STATEMENT	 The task can be supervision of s The tools and ed Computers; Printers; Projectors; Communication Safety constitution 	e performed in construct enior architectural engine quipment to be used inclue ation devices; truction equipment.	ion areas and office ers. de:	s under the
	EVID	ENCE REQUIREMENT		
PRACTICAL PERF	ORMANCE	UNDERPINNING KNO	OWLEDGE	
 The person performing be able to do the folic Analyse the actual construction site: Comply with requirements for technical, qualischemes; Implement the disclosure of the technical, qualischemes. 	g this task must owing: al situation of the the disclosure the construction ty, and safety review of the he construction ty and safety	 Detailed knowledge about 1.0 Methods The person performing the how to: 1.1 Analyse the consecution site; 1.2 Review the implement construction technic 2.0 Principles The person performing the following principles: 2.1 Content and requires scheme disclosure technology. 3.0 Theories The person performing the following: 3.1 Requirements of related technical documents 3.2 Requirements of the disclosure document 4.0 Essential Skills 	his task must be able struction preparatio entation of the discle eal, quality and safety his task must be able ements of the quality documents for c his task must be able levant laws and regu s; he quality and safe ts for construction te	to explain ns at the osure of the y schemes. to explain and safety construction to explain alations and ety scheme chnology.

	4.1 Skills in analyzing the conditions at the construction
	site;
	4.2 Comprehension;
	4.3 Communication skills;
	4.4 Teamwork skills;
	4.5 Computer operation skills;
	4.6 Competence to review the disclosure documents for
	the construction technology scheme.
DESCRIPTION OF THE END PRODUCT / SERVICE	The implementation of the disclosure of the construction technology scheme is reviewed in accordance with the requirements of relevant laws, regulations and the
	disclosure documents.
CIRCUMSTANTIAL	Detailed knowledge about:
KNOWLEDGE	

OCCUPATION	ARCHITECTU	RAL ENGINEER	OCCUPATION CODE	
DUTY TITLE	MAINTAIN CONSTRUCTION QUALITY ASSURANCE		DUTY NO.	703
TASK TITLE	DEVELOP QUA EVALUATION	ALITY CONTROL SYSTEM	TASK NO.	7031
PERFORMANCE CRITERIA	The person performing this task must be implement the quality plans in accord regulations and quality control systems.		able to correctly a ance with relevant	nalyse and laws and
RANGE STATEMENT	 The task can be performed in construction supervision of senior architectural engineers. The tools and equipment to be used include: 1. Computers; 2. Printers; 		on areas and offices ers. e:	s under the
	 Projectors; Communication 	ation devices;		
	5. Safety cons	truction equipment.		
PRACTICAL PERFORMANCE		UNDERPINNING KNO	WLEDGE	
 The person performine be able to do the follow 1. Analyse the actual preparations at the site; 2. Comply with control systems; 3. Implement construction plans. 	g this task must owing: Il situation of the construction struction quality truction quality	 Detailed knowledge abor 1.0 Methods The person performing the how to: 1.1 Analyse the construct 1.2 Implement quality construct 2.0 Principles The person performing the the following principles: 2.1 Principles for preparts systems. 3.0 Theories The person performing the the following: 3.1 Requirements of release technical documents; 3.2 Principles for preparts systems; 3.3 Requirements of systems; 3.4 Measures to implements 	ut: iis task must be able tion at the construct ontrol systems. iis task must be able ing construction qua is task must be able evant laws and regu ing construction qualit ent construction qualit	to explain ion site; to explain lity control to explain lations and lity control ty control lity control

	4.0 Essential Skills
	4.1 Skills in analyzing the conditions at the construction
	site;
	4.2 Comprehension;
	4.3 Communication skills;
	4.4 Teamwork skills;
	4.5 Computer operation skills;
	4.6 Competence to implement quality control systems.
DESCRIPTION OF THE END PRODUCT / SERVICE	The implementation of the quality control systems is guaranteed in accordance with relevant laws and regulations.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about:

OCCUPATION	ARCHITECTUR	AL ENGINEER	OCCUPATION CODE	
DUTY TITLE	ANALYSE AND PROCESS CONSTRUCTION QUALITY		DUTY NO.	703
TASK TITLE	IMPLEMENT QUALITY PRE- CONTROL, ANALYSE AND HANDLE QUALITY PROBLEMS, AND IMPLEMENT QUALITY ACCIDENTS MEASURES		TASK NO.	7032
PERFORMANCE CRITERIA	The person performing this task must be able to con analyse and handle quality problems, and impl handling measures in accordance with relevant la construction quality analysis results.		e to control construc ad implement quali evant laws, regulati	tion quality, ty accident ons and the
RANGE STATEMENT	The task can be senior architectu The tools and eq 1. Communica 2. Safety const	performed in construction ral engineers. uipment to be used include tion devices; rruction equipment.	a areas under the sup	pervision of
	EVID	ENCE REQUIREMENT		
PRACTICAL PERF	FORMANCE	UNDERPINNING KNC)WLEDGE	
 The person performing be able to do the follown. 1. Analyse the quadratic construction; 2. Implement qualities 3. Analyse and problems; 4. Implementation accident handling 	ng this task must owing: ality of the site ty pre-control; handle quality of quality g measures.	 Detailed knowledge abo 1.0 Methods The person performing the how to: 1.1 Judge the quality of a second sec	ut: his task must be able on-site construction quality problems and quality accidents. his task must be able pre-control; ndling quality accident his task must be able evant laws and regu; ty of on-site construct quality accident analysis and proces	e to explain ; l implement e to explain ents. e to explain alations and action; t handling sing.

	4.1 Skills in analyzing the conditions at the construction
	site;
	4.2 Comprehension;
	4.3 Communication skills;
	4.4 Teamwork skills;
	4.5 Competence to implement measures to handle quality
	accidents.
DESCRIPTION OF THE END	Quality pre-control is implemented, quality problems are
PRODUCT / SERVICE	handled, and measures to handle quality accidents are
	established in accordance with relevant laws and
	regulations and technical requirements.
CIRCUMSTANTIAL	Detailed knowledge about:
KNOWLEDGE	

OCCUPATION	ARCHITECTURAL	L ENGINEER	OCCUPATION CODE	
DUTY TITLE	IMPLEMENT THE SCHEDULE	CONSTRUCTION	DUTY NO.	704
TASK TITLE	IMPLEMENT CON OPERATION PLAI	ISTRUCTION NS	TASK NO.	7041
PERFORMANCE CRITERIA	The person perform construction operation and the requirement	ning this task must be ion plans in accordance ts of the construction scl	able to reasonably with relevant laws, hedule.	implement regulations
RANGE STATEMENT	 The task can be performed in construction areas under the supervision of senior architectural engineers. The tools and equipment to be used include: Communication devices; Safety construction equipment. 		pervision of	
PRACTICAL PER	FORMANCE	UNDERPINNING KI	NOWLEDGE	
The person performi able to do the follow1. Analyse the con2. Implement con plans.	ng this task must be ing: struction schedule; struction operation	 Detailed knowledge at 1.0 Methods The person performing explain how to: 1.1 Implement constantly analyzing the constantly of the constant of the co	bout: this task must be al ruction operation struction schedule.	ble to plans by
		 The person performing explain the following p 2.1 Purposes of imschedule; 2.2 Content of the construction schedule; 3.0 Theories The person performing explain the following: 3.1 Requirements of retechnical documer 3.2 Theory of impconstruction schede 3.3 Requirements for construction operation 	this task must be all principles: plementing the c struction schedule. this task must be all elevant laws and regn ts; lementation of t lule; measures to imp tion plan;	ole to construction ble to ulations and he on-site element the
		 3.4 Methods of prepar 4.0 Essential Skills 4.1 Construction sched 4.2 Comprehension; 4.3 Communication sh 	ing the construction dule control abilities cills;	s;

	4.4 Teamwork skills;4.5 Capabilities to implement construction operation plans.
DESCRIPTION OF THE END PRODUCT / SERVICE	The implementation of the construction operation plan is guaranteed in accordance with the relevant laws and regulations and the requirements of the construction schedule.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about:

OCCUPATION	ARCHITECTURAL ENGINEER OCCUPATION CODE			
DUTY TITLE	IMPLEMENT THE CONSTRUCTION DUTY N SCHEDULE		DUTY NO.	704
TASK TITLE	IMPLEMENT I MANAGEMEN CONSTRUCTIO	DYNAMIC T OF THE DN PLANE LAYOUT	TASK NO.	7042
PERFORMANCE CRITERIA	The person performing this task must be able to reasonably implement the construction plane layout and conduct dynamic management of material changes in accordance with relevant laws and regulations and technical requirements.			
RANGE STATEMENT	 The task can be performed in construction areas and offices under the supervision of senior architectural engineers. The tools and equipment to be used include: Computers; Printers; Projectors; Communication devices; Safety construction equipment. 		s under the	
	EVID	ENCE REQUIREMENT		
 The person performin be able to do the follo 1. Analyse the cor layout principles; 2. Implement dynamic management of the plane. 	g this task must wing: astruction plane mic layout and the construction	Detailed knowledge abor 1.0 Methods The person performing the how to: 1.1 Implement the dynamo plane; 1.2 Manage the construct	ut: his task must be able mic layout of the c tion plane.	to explain
		 2.0 Principles The person performing the following principles: Construction plane letc.; Purpose of dynamic replane layout of person Requirements for construction plane lay 3.0 Theories The person performing the following: Requirements of reletee technical documents; Measures for dynamics 	is task must be able ayout of personnel management of the c onnel, materials, etc. dynamic managemen yout of personnel, ma his task must be able evant laws and regun mamic managemen	to explain , materials, construction ; ent of the aterials, etc. to explain dations and at of the

	4.0 Essential Skills
	4.1 Skills in analysing the rationality of the construction plane layout;
	4.2 Comprehension;
	4.3 Communication skills;
	4.4 Teamwork skills;
	4.5 Computer operation skills;
	4.6 Dynamic management skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The dynamic management of construction plane layout is implemented in accordance with relevant laws and regulations and the requirements of the construction schedule.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about:

OCCUPATION	ARCHITECTUR	AL ENGINEER	OCCUPATION CODE	
DUTY TITLE	IMPLEMENT T SAFETY ENVIE	HE CONSTRUCTION RONMENT	DUTY NO.	705
TASK TITLE	PRE-CONTROL AND OCCUPAT SAFETY, AND EMERGENCY I FOR SAFETY II CONSTRUCTIO	ENVIRONMENTAL TIONAL HEALTH AND IMPLEMENT RESPONSE PLANS NCIDENTS AT THE IN SITE	TASK NO.	7051
PERFORMANCE CRITERIA	The person per arrangement of t plans for safety in laws and regulat	forming this task must b the technical personnel to in ncidents at the construction ions and technical requirer	be able to make a implement emergend site in accordance wanents.	reasonable cy response rith relevant
RANGE STATEMENT	The task can be senior architectu The tools and eq 1. Communic 2. Safety cons 3. Environme 4. First aid eq EVID	performed in construction ral engineers. uipment to be used include ation devices; struction equipment; ntal testing equipment; uipment. ENCE REOUIREMENT	areas under the sup	pervision of
PRACTICAL PERF	PRACTICAL PERFORMANCE UNDERPINNING KNOWLEDGE			
The person performine be able to do the follow 1. Analyse the environmentation occupational here conditions at the 2. Pre-control environmentation occupational here risks;	ng this task must owing: vironmental and alth and safety site; ironmental and alth and safety	Detailed knowledge above 1.0 Methods The person performing the how to: 1.1 Analyse site safety conditions 1.2 Pre-control safety rist 1.3 Implement emergence	ut: his task must be able onditions; sks; cy response plans.	to explain
3. Implement emer plans for safety construction site	rgency response incidents at the	 2.0 Principles The person performing the following principles: 2.1 Purpose of preparing safety incidents at the 2.2 Pre-control of environ and safety risks. 3.0 Theories The person performing the following: 3.1 Requirements of releated technical documents: 3.2 Pre-control schemes occupational health at the following: 	his task must be able g emergency respons e construction site; nmental and occupat his task must be able evant laws and regu for environmental and safety risks:	to explain se plans for ional health to explain ilations and safety and

	3.3 Emergency response plans for safety incidents at the construction site.
	4.0 Essential Skills
	4.1 Environmental and occupational health and safety risk analysis skills;
	4.2 Comprehension;
	4.3 Communication skills;
	4.4 Teamwork skills;
	4.5 Competence to implement emergency response plans for safety incidents at the construction site.
DESCRIPTION OF THE END PRODUCT / SERVICE	Emergency response plans for safety incidents at the construction site are implemented, and environmental and occupational health and safety risks are pre-controlled in accordance with the requirements of relevant laws and regulations and technical documents.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about:

OCCUPATION	ARCHITECTUR	AL ENGINEER	OCCUPATION CODE	
DUTY TITLE	IMPLEMENT THE CONSTRUCTION SAFETY ENVIRONMENT		DUTY NO.	705
TASK TITLE	MANAGEME THE CONSTRUCTION SITE ENVIRONMENT AND IMPLEMENT THE ENVIRONMENTAL MANAGEMENT OPERATION PLAN		TASK NO.	7052
PERFORMANCE CRITERIA	The person perfection site management oper and technical req	orming this task must be e environment and in ration plan in accordance wind uirements.	able to correctly an nplement the envith relevant laws and	nanage the vironmental regulations
RANGE STATEMENT	The task can be senior architectur The tools and equ 1. Communicat 2. Safety constr 3. Environment	performed in construction ral engineers. hipment to be used include tion devices; ruction equipment; tal testing equipment.	areas under the sup	pervision of
	EVIDI	ENCE REQUIREMENT		
PRACTICAL PERI	FORMANCE	UNDERPINNING KNO	WLEDGE	
 The person performing be able to do the foll Manage envirous such as sanita associated construction; Comply with the management op sanitation and new sanitation sanit	ing this task must owing: onmental issues ation and noise with on-site the environmental eration plans for oise; e environmental eration plans for oise.	 1.0 Methods The person performing the how to: 1.1 Manage the site constant of the person performing the following principles: 2.1 Purpose of managenvironment; 2.2 Preparation of environ plans; 2.3 Requirements for environmental managenvironment in the following: 3.0 Theories The person performing the following: 3.1 Requirements of relevant of the following: 3.2 Methods of construction of the person performing the following for environment in the following: 3.3 Measures to implements of the person performance of	is task must be able struction environment nental management is task must be able oging the site of onmental management the implement gement operation pl his task must be able evant laws and reguns tion environment matching ent environment matching is task must be able	e to explain nt; t operation e to explain construction nt operation ntation of ans. e to explain anagement; nanagement

	4.0 Essential Skills	
	4.1 Competence to analyse and judge the conditions of the on-site construction environment;	
	4.2 Comprehension;	
	4.3 Communication skills;	
	4.4 Teamwork skills;	
	4.5 Competence to implement environmental management operation plans.	
DESCRIPTION OF THE END	The environment at the construction site is managed and	
PRODUCT / SERVICE	the environmental management operation plan is	
	regulations and technical requirements.	
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about:	

OCCUPATION	ARCHITECTU	RAL ENGINEER	OCCUPATION CODE	
DUTY TITLE	IMPLEMENT THE CONSTRUCTION SAFETY ENVIRONMENTDUTY NO.705			705
TASK TITLE	IDENTIFY THI HAZARDS AT SITE AND ANA SAFETY AND ISSUES	E SOURCE OF THE CONSTRUCTION ALYSE AND HANDLE ENVIRONMENTAL	TASK NO.	7053
PERFORMANCE CRITERIA	The person perfe at the construct issues in accorrequirements.	orming this task must be ion site and analyse and dance with relevant lav	able to accurately iden handle safety and en vs and regulations ar	tify hazards vironmental nd technical
RANGE STATEMENT	 The task can be senior architect. The tools and ed Communic Safety cons Environme Construction 	performed in construction ural engineers. quipment to be used incl ation devices; struction equipment; ntal testing equipment; on safety testing equipment	on areas under the sujude: ent.	pervision of
EVIDENCE REQUIREMENT				
PRACTICAL PERFORMANCE		UNDERPINNING KN	OWLEDGE	
 The person performine be able to do the follow 1. Identify the haze construction performine, etc.; 2. Analyse and have environmental is with personne. 	g this task must wing: ards to on-site ersonnel, fire ndle safety and ssues associated el and fire	Detailed knowledge al 1.0 Methods The person performing how to: 1.1 Identify hazards to 1.2 Analyse and hand issues.	bout: this task must be able on-site construction; e with safety and en	e to explain vironmental
protection.		2.0 Principles		
		The person performing the following principle 2.1 Identification of ha 2.2 Analysis of safety 2.3 Handling of safety	this task must be able s: azards to on-site const and environmental iss and environmental is	e to explain ruction; sues; sues;
		3.0 Theories		
		 The person performing the following: 3.1 Requirements of r technical document 3.2 Methods for identi 3.3 Measures to hand 	this task must be able elevant laws and regu ts; fying construction has e with safety and en	e to explain ulations and zards; vironmental
		issues.	e with safety and ell	monnentai

	4.0 Essential Skills
	4.1 Competence to identify hazards to on-site construction;
	4.2 Competence to analyse safety and environmental issues;
	4.3 Comprehension;
	4.4 Communication skills;
	4.5 Teamwork skills;
	4.6 Competence to handle with safety and environmental issues.
DESCRIPTION OF THE END PRODUCT / SERVICE	The hazards at the construction site are identified and safety and environmental issues are analysed and handled in accordance with relevant laws and regulations and technical requirements.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about:

OCCUPATION	ARCHITECTU	RAL ENGINEER	OCCUPATION CODE	
DUTY TITLE	ORGANISE CONSTRUCTION DATA DUTY NO. 706 INFORMATION			706
TASK TITLE	IMPLEMENT CONSTRUCTION TASK NO. DATA MANAGEMENT PLANS AND MANAGEMENT SYSTEMS		TASK NO.	7061
PERFORMANCE CRITERIA	The person performing this task must be able to reasonably implement the construction data management plans and management systems in accordance with relevant laws and regulations and technical requirements.			
RANGE STATEMENT	 The task can be performed in construction areas and offices under the supervision of senior architectural engineers. The tools and equipment to be used include: Communication devices; Safety construction equipment; Computers; Printers. 			
	EVIDENCE REQUIREMENT			
PRACTICAL PERF	ORMANCE	UNDERPINNING KNO	WLEDGE	
The person performine be able to do the follo	g this task must wing:	Detailed knowledge above 1.0 Methods	ut:	
 Analyse construction and indoor data management systems; Implement the construction and 		The person performing th how to: 1.1 Implement the co	is task must be able nstruction and in	to explain door data
 Implement the construction and indoor data management systems. 		1.2 Implement the co management systems	nstruction and in s.	door data
		2.0 Principles		
		The person performing th the following principles:	is task must be able	to explain
		2.1 Preparation of consystems;	nstruction data m	nanagement
		2.2 Purpose of preparing plans;	construction data n	nanagement
		2.3 Requirements for in management systems	nplementing constr 5.	uction data
		3.0 Theories		
		The person performing th the following:	is task must be able	to explain
		3.1 Requirements of rele technical documents	evant laws and regu	lations and
		3.2 Methods for preparin systems;	g construction data n	nanagement

	3.3 Methods for preparing construction data management plans;
	3.4 Measures to implement construction data management systems.
	4.0 Essential Skills
	4.1 Competence to implement the construction data management plans;
	4.2 Competence to analyse site management issues;
	4.3 Comprehension;
	4.4 Communication skills;
	4.5 Teamwork skills;
	4.6 Competence to implement construction data management systems.
DESCRIPTION OF THE END PRODUCT / SERVICE	The construction data management plans and management systems are implemented in accordance with relevant laws and regulations and technical requirements.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about:

OCCUPATION	ARCHITECTURAL ENGINEER OC		OCCUPATION CODE	
DUTY TITLE	ORGANISE CONSTRUCTION DATA DUTY NO. 70 INFORMATION		706	
TASK TITLE	SUMMARISE, ORGANISE AND HAND OVER CONSTRUCTION DATATASK NO.		7062	
PERFORMANCE CRITERIA	The person performing this task must be able to accurately summarize, organize and hand over construction data in accordance with relevant laws and regulations and technical requirements.			
RANGE STATEMENT	 The task can be performed in the office area under the supervision of senior architectural engineers. The tools and equipment to be used include: Communication devices; Office supplies; Computers; Printers. 		on of senior	
EVIDENCE R		LINDERPINNING KNO	WIFDCF	
The person performin	g this task must	Detailed knowledge abo	ut:	
 Analyse informat systems for con indoor data, etc.; Summarize con indoor data, etc.; Organize cons indoor data, etc.; Hand over con indoor data, etc. 	ion management istruction data, struction data, truction data, istruction data,	 The person performing the how to: 1.1 Accurately summaric construction data. 2.0 Principles The person performing the following principles: 2.1 Reasons for preparing systems; 2.2 Purpose of summaric over construction data 2.3 Requirements for summaric handing over construction data 3.0 Theories The person performing the following: 	is task must be able ize, organize and his task must be able g construction data n izing, organizing a ta; summarizing, orga iction data.	e to explain hand over e to explain nanagement nd handing nizing and e to explain
		 3.1 Requirements of relationships 3.2 Methods for preparine systems; 3.3 Methods for summare 3.4 Methods for organization 	evant laws and regues g construction data r rizing construction data ing construction dat	ulations and nanagement lata; a;

	3.5 Methods for handing over construction data.
	4.0 Essential Skills
	4.1 Competence to summarize construction data;
	4.2 Competence to organize construction data;
	4.3 Competence to hand over construction data;
	4.4 Comprehension;
	4.5 Communication skills;
	4.6 Teamwork skills;
	4.7 Competence to implement construction data management systems.
DESCRIPTION OF THE END PRODUCT / SERVICE	The construction data are accurately summarized, organized and handed over in accordance with relevant laws and regulations and technical requirements.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about:

OCCUPATION	ARCHITECTURA	L ENGINEER	OCCUPATION CODE	
DUTY TITLE	ORGANISE CON INFORMATION	STRUCTION DATA	DUTY NO.	706
TASK TITLE	PROCESS ENGINEERING CONSTRUCTION DATA USING COMPUTER SOFTWARETASK NO.7063			
PERFORMANCE CRITERIA	The person performing this task must be able to make reasonable use of computer software to process engineering construction data in accordance with relevant laws and regulations and technical requirements.			
RANGE STATEMENT	The task can be per architectural engine The tools and equal 1. Communication 2. Computer soft 3. Computers; 4. Printers; 5. Office supplie	rformed in the office area neers. ipment to be used includ on devices; tware; es.	a under the supervisi	on of senior
PRACTICAL PERF	EVIDENCE KEQUIKEMENT			
 The person performin able to do the followin 1. Analyse con information mana 2. Process enginee data using compu- 	g this task must be ng: struction data agement systems; rring construction tter software.	Detailed knowledge al 1.0 Methods The person performing explain how to: 1.1 Process indoor engineering constr software.	bout: this task must be al data and technica ruction using relevan	ole to al data of nt computer
		 2.0 Principles The person performing explain the following p 2.1 Processing of engi 2.2 Application of com 2.3 Basic knowledge of 2.4 Application of spe 3.0 Theories The person performing explain the following: 3.1 Requirements of reacted the technical document 3.2 Methods for proceed at a using compute 4.0 Essential Skills 	this task must be all principles: neering construction nputer software; of computers; cialized computer so this task must be all elevant laws and regists; essing engineering of er software.	ole to n data; oftware. ole to ulations and construction

	4.1 Computer application skills;
	4.2 Computer software learning skills;
	4.3 Comprehension;
	4.4 Communication skills;
	4.5 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	Engineering construction data are processed by making reasonable use of relevant computer software in accordance with relevant laws and regulations and technical requirements.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about:

OCCUPATION	ARCHITECTU	RAL ENGINEER	OCCUPATION CODE	
DUTY TITLE	INTEGRATE A PROJECT RES	ND IMPLEMENT DURCES	DUTY NO.	707
TASK TITLE	IMPLEMENT O RESOURCE DE MANAGEMEN	CONSTRUCTION EMAND PLANS AND T SYSTEMS	TASK NO.	7071
PERFORMANCE CRITERIA	The person performing this task must be able to accurately implement the construction resource demand plans and management systems in accordance with relevant laws and regulations and technical requirements.			
RANGE STATEMENT	 The task can be performed in construction areas and offices under the supervision of senior architectural engineers. The tools and equipment to be used include: Communication devices; Safety construction equipment; Computers; 			
	EVID	ENCE REQUIREMENT		
PRACTICAL PERF	ORMANCE	UNDERPINNING KNOWLEDGE		
 be able to do the following: 1. Analyse construction resource management systems; 2. Implement construction resource demand plans. 		 1.0 Methods The person performing this task must be able to explain how to: 1.1 Implement construction resource demand plans; 1.2 Implement construction resource management systems. 		
		 2.0 Principles The person performing this task must be able to explain the following principles: Preparation of construction resource management systems; Purpose of construction resource demand plans; Requirements of construction resource demand plans. 3.0 Theories The person performing this task must be able to explain the following: Requirements of relevant laws and regulations and technical documents; Methods for preparing construction resource management systems; 3.3 Measures to implement the construction resource domand plans.		

	3.4 Measures to implement construction resource management systems.	
	4.0 Essential Skills	
	4.1 Competence to implement the construction resource demand plans;	
	4.2 Competence to implement construction resource management systems;	
	4.3 Competence to analyse resource management at the construction site;	
	4.4 Comprehension;	
	4.5 Communication skills;	
	4.6 Teamwork skills.	
DESCRIPTION OF THE END PRODUCT / SERVICE	The construction resource demand plans and management systems are accurately implemented in accordance with relevant laws and regulations and technical requirements.	
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about:	

OCCUPATION	ARCHITECTU	RAL ENGINEER	OCCUPATION CODE	
DUTY TITLE	INTEGRATE AND IMPLEMENT PROJECT RESOURCES		DUTY NO.	707
TASK TITLE	SELECT AND CONSTRUCTIO EQUIPMENT	RE-INSPECT ON MATERIALS AND	TASK NO.	7072
PERFORMANCE CRITERIA	The person perf inspect construc laws and regula	forming this task must be a etion materials and equipm tions and technical require	able to accurately se ent in accordance w ments.	lect and re- ith relevant
RANGE STATEMENT	 The task can be performed in construction areas under the supervision of senior architectural engineers. The tools and equipment to be used include: Communication devices; Safety construction equipment; Material inspection equipment; Equipment inspection instruments. 		pervision of	
	EVID	ENCE REQUIREMENT		
PRACTICAL PERF	ORMANCE	UNDERPINNING KNOWLEDGE		
 The person performine be able to do the follow Select materials equipment for construction. Re-inspect mechanical enconstruction. 	ig this task must owing: and mechanical nstruction; naterials and quipment for	 Detailed knowledge abo 1.0 Methods The person performing the how to: 1.1 Select construction reference in the select construction of the select construct in the select construct in the select construct in the following principles: 2.1 Selection of construct in the selection of construct in	ut: his task must be able naterials; equipment; ion materials; ion equipment; his task must be able etion materials; etion equipment; struction materials; struction equipment	to explain to explain
		 3.0 Theories The person performing the following: 3.1 Requirements of release technical documents 3.2 Methods for selecting equipment; 3.3 Methods for re-inspering equipment. 	is task must be able evant laws and regu ; ng construction ma cting construction m	to explain lations and aterials and aterials and

	4.0 Essential Skills
	4.1 Competence to inspect construction materials and equipment;
	4.2 Competence to identify construction materials and equipment;
	4.3 Comprehension;
	4.4 Communication skills;
	4.5 Teamwork skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The construction materials and equipment are accurately selected and re-inspected in accordance with relevant laws and regulations and technical requirements.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about:

OCCUPATION	ARCHITECTU	RAL ENGINEER	OCCUPATION CODE	
DUTY TITLE	INTEGRATE AND IMPLEMENT PROJECT RESOURCES		DUTY NO.	707
TASK TITLE	INVESTIGATE CONSTRUCTIO	AND TRAIN DN PERSONNEL	TASK NO.	7073
PERFORMANCE CRITERIA	The person perf train constructi regulations and	Forming this task must be a ion personnel in accordate technical requirements.	ble to properly inve ance with relevant	estigate and laws and
RANGE STATEMENT	 The task can be performed in construction areas and offices under the supervision of senior architectural engineers. The tools and equipment to be used include: Communication devices; Safety construction equipment; Computers; Printers; Projectors; Certificate recognition instruments. 			
	EVID	ENCE REQUIREMENT		
PRACTICAL PERF	ORMANCE	UNDERPINNING KNO	WLEDGE	
 The person performing this task must be able to do the following: 1. Review the qualifications of the on-the-job personnel; 2. Train construction personnel on construction technology, and safety and data management skills. 		 Detailed knowledge about 1.0 Methods The person performing the how to: 1.1 Review the proconstruction personnel 1.2 Train construction technology, etc. 	ut: is task must be able fessional qualific el; personnel on c	to explain ations of construction
		 2.0 Principles The person performing the following principles: 2.1 On-the-job personnel 2.2 Purpose of construction 2.3 Requirements of construction 3.0 Theories The person performing the following: 3.1 Requirements of release technical documents; 3.2 Methods of on-the-journal documents; 3.3 Methods of construction 4.0 Essential Skills 	is task must be able investigation; on personnel trainin struction personnel is task must be able evant laws and regu- b personnel investig ion personnel traini	to explain ng; training. to explain lations and gation; ng.

	4.1 Competence to identify certificates;	
	4.2 Training presentation skills;	
	4.3 Comprehension;	
	4.4 Communication skills;	
	4.5 Teamwork skills.	
DESCRIPTION OF THE END	The construction personnel are properly investigated and	
PRODUCT / SERVICE	trained in accordance with relevant laws and regulations and technical requirements.	
CIRCUMSTANTIAL	Detailed knowledge about:	
KNOWLEDGE		

DUTIES	TASKS	ENABLERS
1.0 Implement construction organization	 1.1 Implement design of the construction organization. 1.2 Prepare construction schemes. 1.3 Implement management systems. 	 General skills and knowledge Competence to analyse the preparation of personnel, materials, etc. at the construction site Competence to comprehend schemes, systems, etc. Team communication skills Teamwork skills Computer operation skills Competence to implement the construction organization design Competence to present the elements of a construction organization design
		 Tools and equipment Computers Printers Projectors Safety construction equipment Communication devices Materials Paper and pens
2.0 Disclose	2.1 Analyse and implement	Requirements for employees• Observance of law and discipline• Teamwork spirit• Integrity• Emphasis on commitmentGeneral skills and knowledge
construction technology schemes	technical verification. 2.2 Prepare and implement technical disclosure. 2.3 Implement technical review.	 Competence to analyse the preparation of personnel, materials, etc. at the construction site Competence to comprehend schemes, systems, etc. Team communication skills Teamwork skills Computer operation skills Site construction capacity Tools and equipment Computers

APPENDIX: DACUM CHARTS FOR ARCHITECTURAL ENGINEER - NTA LEVEL 7

DUTIES	TASKS	ENABLERS
		 Printers Projectors Safety construction equipment Communication devices Materials
		 Paper and pens Requirements for employees Observance of law and discipline Teamwork spirit Integrity Emphasis on commitment
3.0 Analyse and process construction quality	 3.1 Implement quality control systems, and analyse and implement quality plans. 3.2 Implement quality precontrol, analyse and handle quality problems, and implement quality accidents measures. 	 General skills and knowledge Competence to analyse the preparation of personnel, materials, etc. at the construction site Competence to comprehend schemes, systems, etc. Team communication skills Teamwork skills Computer operation skills Competence to analyse construction quality Tools and equipment Safety construction equipment Communication devices Materials Paper and pens Requirements for employees Observance of law and discipline Teamwork spirit Integrity Emphasis on commitment
4.0 Implement the construction schedule	 4.1 Implement construction operation plans 4.2 Implement dynamic management of the construction plane layout 	 General skills and knowledge Competence to analyse the preparation of personnel, materials, etc. at the construction site Competence to comprehend schemes, systems, etc. Team communication skills

DUTIES	TASKS	ENABLERS
		 Teamwork skills Computer operation skills Competence to implement the construction organization design
		 Tools and equipment Computers Printers Projectors Safety construction equipment Communication devices Materials Paper and pens Requirements for employees Observance of law and discipline Teamwork spirit Integrity
5.0 Implement the construction safety environment	 5.1 Pre-control environmental and occupational health and safety, and implement emergency response plans for safety incidents at the construction site. 5.2 Manage the construction site environment and implement the environmental management operation plan. 5.3 Identify the source of hazards at the construction site and analyse and handle safety and environmental issues. 	 Emphasis on commitment General skills and knowledge Competence to analyse the preparation of personnel, materials, etc. at the construction site Competence to comprehend schemes, systems, etc. Team communication skills Teamwork skills Computer operation skills Competence to implement construction safety management systems Tools and equipment Safety construction equipment Communication devices Materials
		 Paper and pens Requirements for employees Observance of law and discipline Teamwork spirit Integrity

DUTIES	TASKS	ENABLERS	
		• Emphasis on commitment	
6.0 Organise construction data information	 6.1 Implement construction data management plans and management systems 6.2 Summarise, organise and hand over construction data. 6.3 Process engineering construction data using 	 General skills and knowledge Competence to analyse the preparation of personnel, materials, etc. at the construction site Competence to comprehend schemes, systems, etc. Team communication skills Teamwork skills 	
	computer software.	 Computer operation skills Competence to organize construction data 	
		· Computers	
		Printers	
		Projectors	
		Safety construction equipment	
		Communication devices	
		Materials Pens, paper, folders and staplers 	
		Requirements for employees	
		• Observance of law and discipline	
		• Teamwork spirit	
		• Integrity	
		• Emphasis on commitment	
7.0 Integrate and implement project resources	 7.1 Implement construction resource demand plans and management systems. 7.2 Select and re-inspect construction materials and equipment. 7.3 Investigate and train construction personnel. 	 General skills and knowledge Competence to analyse the preparation of personnel, materials, etc. at the construction site Competence to comprehend schemes, systems, etc. Team communication skills Teamwork skills Computer operation skills Competence to integrate construction resources 	
		Tools and equipment	
		• Computers	
		Printers Drojoctors	
		· Projectors	

DUTIES	TASKS	ENABLERS
		Safety construction equipment
		Communication devices
		• Testing instruments
		Materials
		• Pens, paper and ID cards
		Requirements for employees
		• Observance of law and discipline
		• Teamwork spirit
		• Integrity
		• Emphasis on commitment