



COMPETENCY STANDARD

TILES AND MARBLE WORKS

Level: 2

(Construction Sector)

Competency Standard Code: CS-CS-TMW-L2-EN-V1



National Skills Development Authority
Prime Minister's Office
Government of the People's Republic of Bangladesh

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This Competency Standard for Tiles and Mable Works is a document for the development of curricula, teaching and learning materials, and assessment tools. It also serves as the document for providing training consistent with the requirements of industry in order to meet the qualification of individuals who graduated through the established standard via competency-based assessment for a relevant job.

This document has been validated by NSDA in association with Construction Sector, industry representatives, academia, related specialist, trainer and related employee.

Public and private institutions may use the information contained in this standard for activities benefitting Bangladesh.

Introduction

The NSDA aims to enhance an individual's employability by certifying completeness with skills. NSDA works to expand the skilling capacity of identified public and private training providers qualitatively and quantitatively. It also aims to establish and operationalize a responsive skills ecosystem and delivery mechanism through a combination of well-defined set of mechanisms and necessary technical supports.

Key priority economic growth sectors identified by the government have been targeted by NSDA to improve current job skills along with existing workforce to ensure required skills to industry standards. Training providers are encouraged and supported to work with industry to address identified skills and knowledge to enable industry growth and increased employment through the provision of market responsive inclusive skills training program. "**Tiles and Marble Works** " is selected as one of the priority occupations of Construction Sector. This standard is developed to adopt a demand driven approach to training with effective inputs from Industry Skills Councils (ISC's), employer associations and employers.

Generally, a competency standard informs curriculum, learning materials, assessment and certification of trainees enrolled in Skills Training. Trainees who successfully pass the assessment will receive a qualification in the National Skills Qualification Framework (NSQF) under Bangladesh National Qualification Framework and will be listed on the NSDA's online portal.

This competency standard is developed to improve skills and knowledge in accordance with the job roles, duties and tasks of the occupation and ensure that the required skills and knowledge are aligned to industry requirements. A series of stakeholder consultations, workshops were held to develop this document.

The document also details the format, sequencing, wording and layout of the Competency Standard for an occupation which is comprised of Units of Competence and its corresponding Elements.

Overview

A competency standard is a written specification of the knowledge, skills and attitudes required for the performance of an occupation, trade or job corresponding to the industry standard of performance required in the workplace.

The purpose of a competency standards is to:

- provide a consistent and reliable set of components for training, recognising and assessing people's skills, and may also have optional support materials
- enable industry recognised qualifications to be awarded through direct assessment of workplace competencies
- encourage the development and delivery of flexible training which suits individual and industry requirements
- encourage learning and assessment in a work-related environment which leads to verifiable workplace outcomes

Competency standards are developed by a working group comprised of representative from NSDA, Key Institutions, ISC, and industry experts to identify the competencies required of an occupation in Informal Sector.

Competency standards describe the skills, knowledge and attitude needed to perform effectively in the workplace. CS acknowledge that people can achieve technical and vocational competency in many ways by emphasizing what the learner can do, not how or where they learned to do it.

With competency standards, training and assessment may be conducted at the workplace or at training institute or any combination of these.

Competency standards consist of a number of units of competency. A unit of competency describes a distinct work activity that would normally be undertaken by one person in accordance with industry standards.

Units of competency are documented in a standard format that comprises of:

- unit title
- nominal duration
- unit code
- unit descriptor
- elements and performance criteria
- variables and range statement
- curricular content guide
- assessment evidence guides

Together, all the parts of a unit of competency:

- describe a work activity
- guide the assessor to determine whether the candidate is competent or not yet competent

The ensuing sections of this document comprise of a description of the relevant occupation, trade or job with all the key components of a unit of competency, including:

- a chart with an overview of all Units of Competency for the relevant occupation, trade or job including the Unit Codes and the Unit of Competency titles and corresponding Elements
- the Competency Standard that includes the Unit of Competency, Unit Descriptor, Elements and Performance Criteria, Range of Variables, Curricular Content Guide and Assessment Evidence Guide.

Competency Standards for National Skill Certificate, Level-2 in Tiles and Marble Works in Construction Sector

Level Descriptors of NSQF (BNQF 1-6)

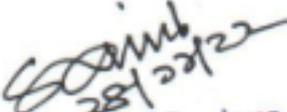
Level & Job classification	Knowledge Domain	Skills Domain	Responsibility Domain
6-Mid-Level Manager/ Sub Assistant Engineer	Comprehensive actual and theoretical knowledge within a specific work or study area with an awareness of the validity and limits of that knowledge, able to analyse, compare, relate and evaluate.	Specialised and wider range of cognitive and practical skills required to provide leadership in the development of creative solutions to defined problems. Communicate professional issues and solutions to the team and to external partners/users.	Work under broad guidance and self-motivation to execute strategic and operational plan/s. Lead lower-level management. Diagnose and resolve problems within and among work groups.
5-Supervisor	Broad knowledge of the underlying, concepts, principles, and processes in a specific work or study area, able to scrutinize and break information into parts by identifying motives or causes.	Broad range of cognitive and practical skills required to generate solutions to specific problems in one or more work or study areas. Communicate practice-related problems and possible solutions to external partners.	Work under guidance of management and self-direction to resolve specific issues. Lead and take responsibility for the work and actions of group/team members. Bridge between management.
4-Highly Skilled Worker	Broader knowledge of the underlying, concepts, principles, and processes in a specific work or study area, able to solve problems to new situations by comparing and applying acquired knowledge.	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying the full range of methods, tools, materials and information. Communicate using technical terminology and IT technology with partners and users as per workplace requirements.	Work under minimal supervision in specific contexts in response to workplace requirements. Resolve technical issues in response to workplace requirements and lead/guide a team/ group.
3-Skilled Worker	Moderately broad knowledge in a specific work or study area, able to perceive ideas and abstract from drawing and design according to workplace requirements.	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools. Communicate with his team and limited external partners upholding the values, nature and culture of the workplace	Work or study under supervision with considerable autonomy. Participate in teams and responsible for group coordination.
2-Semi Skilled Worker	Basic understanding of underpinning knowledge in a specific work or study area, able to interpret and apply common occupational terms and instructions.	Skills required to carry out simple tasks, communicate with his team in the workplace presenting and discussing results of his work with required clarity.	Work or study under supervision in a structured context with limited scope of manipulation
1 –Basic Skilled Worker	Elementary understanding of ability to interpret the underpinning knowledge in a specific study area, able to interpret common occupational terms and instructions.	Specific Basic skills required to carry out simple tasks. Interpret occupational terms and present the results of own work within guided work environment/ under supervision.	Work under direct supervision in a structured context with limited range of responsibilities.

List of Abbreviations

CS	Competency Standard
ISC	Industry Skills Council
NSDA	National Skills Development Authority
NSQF	National Skills Qualifications Framework
OSH	Occupational Safety and Health
PPE	Personal Protective Equipment
SCVC	Standards and Curriculum Validation Committee
STP	Skills Training Provider
SOP	Standard Operating Procedure
UoC	Unit of Competency
ISO	International Organization for Standardization
MSDS	Material Safety Data Sheet
OSH	Occupational Safety and Health
PPE	Personal Protective Equipment
SOP	Standard Operating Procedures

Approval of Competency Standard

Approved by
22nd Authority Meeting of NSDA Held on 24.11.2022


Md. Saniul Ferdous
Deputy Director (Admin)
National Skills Development Authority
Prime Minister's Office

Deputy Director (Admin)
and
Officer of Secretarial Duties for Authority Meeting
National Skills Development Authority

Contents

Copyright.....	i
Introduction.....	ii
Overview	iii
Level Descriptors of NSQF (BNQF 1-6).....	iv
List of Abbreviations.....	v
Course Structure	1
Units & Elements at Glance	2
Generic Units of Competencies	6
GU-02-L2-V1: Apply Occupational Safety and Health (OSH) Procedure in the Workplace.....	7
GU-08-L2-V1: Work in a Team Environment	11
GU-12-L2-V1: Communicate in the Workplace.....	13
Sector Specific Units of Competencies	16
SU-CON-01-L2-V1: Work Effectively in the Construction Sector	17
SU-CON-02-L2-V1: Interpret Drawings and Specifications in Construction Manuals.....	20
Occupation Specific Units of Competencies	22
OU-CON-TMW-01-L2-V1: Perform Fundamental Works of Tiles and Marble Works	23
OU-CON-TMW-01-L2-V1: Use Tools for Tiles and Marble Works	27
OU-CON-TMW-03-L2-V1: Prepare Surface for Tiles and Marble Works	31
OU-CON-TMW-04-L2-V1: Fix Floor Tiles	35
OU-CON-TMW-05-L2-V1: Fix Wall Tiles	39
OU-CON-TMW-06-L2-V1: Perform Marble Works	43
OU-CON-TMW-07-L2-V1: Repair Tiles and marble Works	47
Development of Competency Standard	51
Validation of Competency Standard	52
Workshop Minutes	53

**Competency Standards for National Skill Certificate, Level- 2 in
Tiles and Marble Works in Construction Sector**

Course Structure

SL No	Unit code and Title	UOC Level	Nominal (hours)
Generic Units of Competencies			
1.	GU-02-L2-V1	Apply Occupational Safety and Health (OSH) Procedure in the Workplace	2 15
2.	GU-08-L2-V1	Work in a Team Environment	2 20
3.	GU-12-L2-V1	Communicate in the Workplace	2 20
Sub Total			55
Sector Specific Units of Competencies			
4.	SU-CON-01-L2-V1	Work Effectively within Construction Sector	2 15
5.	SU-CON-02-L2-V1	Interpret Drawings and Specifications in Construction Manuals	2 20
Sub Total			35
Occupation Specific Units of Competencies			
6.	OU-CON-TMW-01-L2-V1	Perform Fundamental Works of Tiles and Marble Fittings	2 20
7.	OU-CON-TMW-02-L2-V1	Use Tools for Tiles and Marble Works	2 20
8.	OU-CON-TMW-03-L2-V1	Prepare Surface for Tiles and marbles Work	2 60
9.	OU-CON-TMW-04-L2-V1	Fix Floor Tiles	2 50
10.	OU-CON-TMW-05-L2-V1	Fix Wall Tiles	2 40
11.	OU-CON-TMW-06-L2-V1	Perform Marble Works	2 50
12.	OU-CON-TMW-07-L2-V1	Repair Tiles and marble Works	2 30
Sub Total			270
Total Duration			360

Units & Elements at Glance

Generic Competencies

Code	Unit of competency	Elements of competency	Duration (hours)
GU-02-L2-V1	Apply Occupational Safety and Health (OSH) procedure in the Workplace	<ol style="list-style-type: none"> 1. Identify OSH policies and procedures 2. Follow OSH procedure 3. Report hazards and risks 4. Respond to emergencies 5. Maintain personal well-being 	15
GU-08-L2-V1	Work in a Team Environment	<ol style="list-style-type: none"> 1. Define team role and scope 2. Identify individual role and responsibility 3. Participate in team discussions 4. Work as a team member 	20
GU-12-L2-V1	Communicate in the Workplace	<ol style="list-style-type: none"> 1. Receive verbal instructions. 2. Interpret verbal and written information/ instruction 3. Convey instructions using verbal and written forms of communication 4. Complete written documentation 5. Participate in work place meetings and discussions 	20
Total hours			55

Sector specific competencies

Code	Unit of competency	Elements of competency	Duration (hours)
SU-CON-01-L2-V1	Work Effectively within Construction Sector	<ol style="list-style-type: none"> 1. Identify the organizational structure 2. Interpret processes and procedures 3. Identify workplace requirements 4. Organize own workload 	15
SU-CON-02-L2-V1	Interpret Drawings and Specifications in Construction Manuals	<ol style="list-style-type: none"> 1. Identify information from manuals 2. Identify drawings and specifications 3. Interpret drawings and specifications 	20
Total hours			35

Occupation specific competencies

Code	Unit of competency	Elements of competency	Duration (hours)
OU-CON-TMW-01-L2-V1	Perform Fundamental Works of Tiles and Marble Fittings	<ol style="list-style-type: none"> 1 Identify building components 2 Identify materials for tiles and marble work 3 Interpret working drawing 4 Apply basic measurement 	20
OU-CON-TMW-02-L2-V1	Use Tools for Tiles and Marble Works	<ol style="list-style-type: none"> 1 Identify tools 2 Use hand tools 3 Use power tools 4 Perform basic preventive maintenance 5 Maintain workplace and store tools and equipment 	20
OU-CON-TMW-03-L2-V1	Prepare Surface for Tiles and marbles Work	<ol style="list-style-type: none"> 1 Prepare for work 2 Prepare materials for surface preparation 3 Prepare underlay surface 4 Prepare substrate surface 5 Maintain workplace and store tools and equipment 	60
OU-CON-TMW-04-L2-V1	Fix Floor Tiles	<ol style="list-style-type: none"> 1 Prepare for work 2 Cut tiles 3 Lay floor tiles 4 Fill the tiles joint 5 Maintain workplace and store tools and equipment 	50
OU-CON-TMW-05-L2-V1	Fix Wall Tiles	<ol style="list-style-type: none"> 1 Prepare for work 2 Cut tiles 3 Set wall tiles 4 Fill the tiles joint 5 Maintain workplace and store tools and equipment 	40

OU-CON-TMW-06-L2-V1	Perform Marble Works	<ol style="list-style-type: none"> 1 Select tools, equipment and materials 2 Cut marble 3 Fix marble 4 Set riser 5 Fill the marble joints 	50
OU-CON-TMW-07-L2-V1	Repair Tiles and marble Works	<ol style="list-style-type: none"> 1. Prepare for works 2. Repair damaged tiles/ marble works 3. Fill the tiles/marbles 4. Maintain workplace, tools, equipment and materials 	30
Total Hours			270

Generic Units of Competencies

Unit Code and Title	GU-02-L2-V1: Apply Occupational Safety and Health (OSH) Procedure in the Workplace
Unit Descriptor	<p>This unit covers the knowledge, skills and attitudes required to apply occupational safety and health (OSH) procedure in the workplace.</p> <p>It specifically includes the task of identifying OSH policies and procedures, following OSH procedure, reporting hazards and risks, responding to emergencies and maintaining personal well-being.</p>
Nominal Hours	15 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Identify OSH policies and procedures	<p>1.1. <u>OSH policies</u> and <u>safe operating procedures</u> are accessed and stated</p> <p>1.2. <u>Safety signs and symbols</u> are identified and followed</p> <p>1.3. Emergency response, evacuation procedures and other contingency measures are determined according to workplace requirements</p>
2. Follow OSH procedure	<p>2.1 <u>Personal protective equipment (PPE)</u> is selected and collected as required</p> <p>2.2 Personal protective equipment (PPE) is correctly used in accordance with organization OSH procedures and practices</p> <p>2.3 A clear and tidy workplace is maintained as per workplace standard</p> <p>2.4 PPE is maintained to keep them operational and compliant with OSH regulations</p>
3. Report hazards and risks	<p>3.1 <u>Hazards</u> and risks are identified, assessed and controlled</p> <p>3.2 Incidents arising from hazards and risks are reported to designated authority</p>
4. Respond to emergencies	<p>4.1 Alarms and warning devices are responded</p> <p>4.2 Workplace <u>emergency procedures</u> are followed</p> <p>4.3 <u>Contingency measures</u> during workplace accidents, fire and other emergencies are recognized and followed in accordance with organization procedures</p> <p>4.4 First aid procedures are applied during emergency situations</p>
5. Maintain personal well-being	5.1 OSH policies and procedures are adhered to OSH awareness programs are participated in as per workplace guidelines and procedures.

	<p>5.2 Corrective actions are implemented to correct unsafe condition in the workplace</p> <p>5.3 <u>“Fit to work” records</u> are updated and maintained according to workplace requirements</p>
Range of Variables	
Variables	Range (may include but not limited to):
1. OSH policies	<p>1.1. Bangladesh standards for OSH</p> <p>1.2. Fire Safety Rules and Regulations</p> <p>1.3. Code of Practice</p> <p>1.4. Industry Guidelines</p>
2. Safe operating procedures	<p>2.1 Orientation on emergency exits, fire extinguishers, fire escape, etc.</p> <p>2.2 Emergency procedures</p> <p>2.3 First Aid procedures</p> <p>2.4 Tagging procedures</p> <p>2.5 Use of PPE</p> <p>2.6 Safety procedures for hazardous substances</p>
3. Safety signs and symbols	<p>3.1 Direction signs (exit, emergency exit, etc.)</p> <p>3.2 First aid signs</p> <p>3.3 Danger Tags</p> <p>3.4 Hazard signs</p> <p>3.5 Safety tags</p> <p>3.6 Warning signs</p>
4. Personal Protective Equipment (PPE)	<p>4.1 Gas Mask</p> <p>4.2 Gloves</p> <p>4.3 Safety boots</p> <p>4.4 Face mask</p> <p>4.5 Overalls</p> <p>4.6 Goggles and safety glasses</p> <p>4.7 Sun block</p> <p>4.8 Chemical/Gas detectors</p>
5. Hazards	<p>5.1 Chemical hazards</p> <p>5.2 Biological hazards</p> <p>5.3 Physical Hazards</p> <p>5.4 Mechanical and Electrical Hazard</p> <p>5.5 Mental hazard</p> <p>5.6 Ergonomic hazard</p>
6. Emergency procedures	<p>6.1 Fire fighting</p> <p>6.2 Earthquake</p> <p>6.3 Medical and first aid</p> <p>6.4 Evacuation</p>

7. Contingency measures	7.1 Evacuation 7.2 Isolation 7.1 Decontamination
8. "Fit to Work" records	8.1 Medical Certificate every year 8.2 Accident reports, if any 8.3 Eye vision certificate
Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 stated OSH policies and safe operating procedures 1.2 followed safety signs and symbols 1.3 used personal protective equipment (PPE) 1.4 maintained workplace clear and tidy 1.5 assessed and Controlled hazards 1.6 followed emergency procedures 1.7 followed contingency measures 1.8 implemented corrective actions
2. Underpinning knowledge	2.1 Define OSH 2.2 OSH Workplace Policies and Procedures 2.3 Work safety procedures 2.4 Emergency procedures 2.5 Hazard control procedure 2.6 Different types of hazards 2.7 PPE and there uses 2.8 Personal hygiene practices 2.9 OSH awareness
3. Underpinning skills	3.1 Accessing OSH policies 3.2 Using of PPE 3.3 Handling cleaning tools and equipment 3.4 Writing report 3.5 Responding to emergency procedures
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	5.1 Workplace

	<p>5.2 Equipment and outfits appropriate in applying safety measures</p> <p>5.3 Tools, equipment, materials and documentation required</p> <p>5.4 OSH Policies and Procedures</p>
6. Methods of assessment	<p>Competency should be assessed by:</p> <p>6.1 Written test</p> <p>6.2 Demonstration</p> <p>6.3 Oral questioning</p>
7. Context of assessment	<p>7.1 Competency assessment must be done in NSDA accredited assessment centre</p> <p>7.2 Assessment should be done by a NSDA certified/nominated assessor</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code and Title	GU-08-L2-V1: Work in a Team Environment
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to work in a team environment. It specifically includes the task of defining team role and scope, identifying individual role and responsibility, participating in team discussions and working as a team member.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Define team role and scope	1.1. Role and objectives of the team are defined 1.2. Team structure, responsibilities and reporting relations are identified from team discussions and other external sources
2. Identify individual role and responsibility	2.1 Individual roles and responsibilities of <u>team members</u> are identified 2.2 Reporting relationships among team members are defined and clarified 2.3 Reporting relationships external to the team are defined and clarified
3. Participate in team discussions	3.1 Ideas related to team plans are contributed 3.2 Recommendations for improving team work are put forward
4. Work as a team member	4.1 Effective forms of communication are used to interact with team members 4.2 Communication channels are followed 4.3 OHS practices are followed
Range of Variables	
Variables	Range (may include but not limited to):
1. Team Members	1.1 Coach/mentor 1.2 Supervisor/Manager 1.3 Peers/Colleagues 1.4 Employee representative
Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 demonstrated knowledge in working in a team environment. 1.2 satisfied the requirements mentioned in the

	1.3 Performance Criteria and Range of Variables
2. Underpinning knowledge	2.1 Team structure, role and responsibility 2.2 Individual members' roles and responsibilities 2.3 Communication flow and reporting structures 2.4 Team planning 2.5 Interpersonal communication skills 2.6 Team meeting procedures 2.7 OHS practices
3. Underpinning skills	3.1 Identifying the role and responsibility of the team 3.2 Identifying roles and responsibilities of individual members 3.3 Participating in team discussions 3.4 Working as a team member
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	5.1 workplace (actual or simulated) 5.2 Pens 5.3 Telephone 5.4 Computer 5.5 Writing materials 5.6 Online communication
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor

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Unit Code and Title	GU-12-L2-V1: Communicate in the Workplace
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to communicate in the workplace. It specifically includes the task of receiving verbal instructions, interpreting verbal and written information/ instruction, conveying instructions using verbal and written forms of communication, completing written documentation and participating in workplace meetings and discussions.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Receive verbal instructions.	1.1 Instructions are accessed and interpreted 1.2 Questions are asked to clarify understanding or gain more information. 1.3 Information/instruction is recorded.
2. Interpret verbal and written information/ instruction	2.1 <u>Written instructions</u> are interpreted. 2.2 Work <u>signage's</u> are properly responded. 2.3 Routine written instructions are followed in sequence. 2.4 Feedback is given to workplace supervisor.
3. Convey instructions using verbal and written forms of communication	3.1 Relevant <u>communication</u> methods are used to transmit instructions. 3.2 Appropriate non-verbal communication is used. 3.3 Channels of communication are identified and followed 3.4 Communication <u>tools and equipment</u> are operated and faults are identified and reported. 3.5 Information is conveyed using appropriate <u>forms</u> .
4. Complete written documentation	4.1 All required <u>documentation</u> is completed 4.2 Workplace data are recorded 4.3 Written information/instruction is passed to personnel.
5. Participate in work place meetings and discussions	5.1 Meetings are attended regularly and on time. 5.2 Meeting inputs are consistent with the meeting purpose and established protocols. 5.3 Opinions are expressed without interruption. 5.4 Meeting outputs are processed and implemented.
Range of Variables	
Variables	Range (may include but not limited to):
1. Written instructions	1.1 Supervisor's/manager's instructions 1.2 Memoranda 1.3 Rules and regulations

	<ul style="list-style-type: none"> 1.4 Signage 1.5 Approved work plan 1.6 External communications
2. Signage	<ul style="list-style-type: none"> 2.1. On-site direction signs 2.2. Common site warnings 2.3. Location signs 2.4. Traffic signs
3. Communication	<ul style="list-style-type: none"> 3.1 Verbal instructions 3.2 Written instructions 3.3 Online communication
4. Tools and machinery	<ul style="list-style-type: none"> 4.1 workplace (actual or simulated) 4.2 Telephone 4.3 Mobile phone 4.4 Fax machines 4.5 Two-way radio 4.6 Computers 4.7 Forms 4.8 Memo
5. Forms	<ul style="list-style-type: none"> 5.1 Memorandum 5.2 Requisitioning form 5.3 Personnel form 5.4 Safety report form
6. Documentation	<ul style="list-style-type: none"> 6.1 Reports (Monthly, Quarterly, Half-Yearly, Annual) 6.2 Plans (Strategic Plan, Operational Plan, Monthly Schedule) 6.3 Monitoring and Evaluation Report 6.4 Minutes of Meetings
Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 demonstrated knowledge of workplace procedures in receiving, interpreting and conveying verbal & written communication. 1.2 satisfied the requirements mentioned in the Performance Criteria and Range of Variables.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Workplace Communication Policies, Standards and Procedures 2.2 Verbal and non-verbal communication 2.3 Modes of communication 2.4 Communication equipment: types, uses and faults 2.5 Channels of communication

3. Underpinning skills	3.1 Receiving verbal instructions. 3.2 Interpreting verbal and written information/ instruction 3.3 Conveying instructions using verbal and written forms 3.4 of communication 3.5 Completing written documentation 3.6 Participating in workplace meetings and discussions
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	5.1 workplace (actual or simulated) 5.2 Pens 5.3 Telephone 5.4 Computer 5.5 Writing materials 5.6 Online communication
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor

Accreditation Requirements

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Sector Specific Units of Competencies

Unit Code and Title	SU-CON-01-L2-V1: Work Effectively in the Construction Sector
Unit Descriptor	This unit covers the skills, knowledge and attitude required to work effectively in the construction sector. It specifically includes the task of identifying the organizational structure, interpreting processes and procedures, identifying workplace requirements and organizing own workload.
Nominal Hours	15 Hours
Elements of Competency	Performance Criteria <u>Bold and Underlined</u> terms are elaborated in the Range of Variables.
1. Identify the organizational structure	1.1 Scope, nature and <u>major fields</u> of the construction sector are identified 1.2 The profile of the construction sector in relation to Bangladesh <u>employment conditions</u> is identified 1.3 Trends and technologies relevant to the sector are interpreted. 1.4 Relevant policies and guidelines are identified and accessed. 1.5 <u>Instructions</u> as to procedures in achieving quality are maintained.
2. Interpret processes and procedures	2.1 Construction processes and procedure are interpreted 2.2 Work activities are identified. 2.3 Adjustments are interpreted.
3. Identify workplace requirements	3.1 <u>Workplace requirements</u> are identified. 3.2 Own roles and responsibilities in the workplace are interpreted. 3.3 Workplace practices are interpreted. 3.4 <u>Problem-solving strategies</u> are identified.
4. Organize own workload	4.1 Own work activities are planned and progress of work is communicated to relevant staff. 4.2 Work activities are performed. 4.3 Difficulties are identified and solutions are put forwarded. 4.4 Own work is monitored against workplace standards and areas for improvement identified and acted upon.
Range of Variables	
Variables	Range (may include but not limited to):
1. Major Fields	1.1 Residential building construction 1.2 Industrial and commercial building construction

	<ul style="list-style-type: none"> 1.3 Roads & highway construction 1.4 Bridge & culvert construction 1.5 Railway construction 1.6 Foundation works (anchoring and piling) 1.7 Pipelaying 1.8 Tunnel/marine construction 1.9 Mass rapid transit (MRT) and Bus rapid transit (BRT)
2. Employment conditions	<ul style="list-style-type: none"> 2.1 Code of practice 2.2 Salary/wage system 2.3 Labor practices 2.4 Gender issues 2.5 Awards 2.6 Procedures for handling disputes
3. Instructions	<ul style="list-style-type: none"> 3.1 Specifications and requirements 3.2 Standard operating procedures 3.3 Manuals of instruction 3.4 Operations manual 3.5 Environmental guidelines 3.6 Gender and develop guidelines
4. Workplace requirements	<ul style="list-style-type: none"> 4.1 Goals and objectives 4.2 Strategic and operational plans 4.3 Systems and processes 4.4 Monitoring and evaluation 4.5 Reports and documentation
5. Problem-solving strategies	<ul style="list-style-type: none"> 5.1. Asking questions 5.2. Feedback and feed forward system 5.3. Reference to standard operating procedures 5.4. Accessing information 5.5. Reviews 5.6. Brainstorming
<p>Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> 5.1 identified the organizational structure 5.2 interpreted processes and procedures 5.3 identified workplace requirements 5.4 organized own workload
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Scope and major divisions of the construction workplace 2.2 Relevant policies and guidelines in the construction workplace 2.3 Manuals used in the construction workplace

	<ul style="list-style-type: none"> 2.4 Relevant terminologies and acronyms 2.5 Workplace practices 2.6 Recording and reporting practices
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Interpreting the organization structure 3.2 Identifying construction processes and procedures 3.3 Identifying tools, equipment and materials 3.4 Identifying workplace practices 3.5 Organizing own workload 3.6 Practicing OHS
4. Underpinning attitudes	<ul style="list-style-type: none"> 4.1 Commitment to occupational health and safety 4.2 Environmental concerns 4.3 Eagerness to learn 4.4 Tidiness and timeliness 4.5 Respect for rights of peers and seniors in workplace
5. Resource implications	<p>The following resources must be available:</p> <ul style="list-style-type: none"> 5.1 workplace (actual or simulated) 5.2 tools, equipment, materials and physical facilities appropriate to perform activities 5.3 relevant drawings, manuals and reference materials 5.4 required PPE.
6. Methods of assessment	<p>Competency should be assessed by</p> <ul style="list-style-type: none"> 5.1 Demonstration 5.2 Oral questioning 5.3 Written test
7. Context of assessment	<ul style="list-style-type: none"> 5.1 Competency assessment must be done in NSDA accredited assessment centre 5.2 Assessment should be done by a NSDA certified/nominated assessor
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any NSQF qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code and Title	SU-CON-02-L2-V1: Interpret Drawings and Specifications in Construction Manuals
Nominal Hours	20 Hours
Unit Descriptor	This unit covers the knowledge, skill and attitude required to interpret drawings and specifications in construction manuals. It specifically includes the task of identifying information from manuals, drawings and specifications and interpreting drawings and specifications.
Elements of Competency	Performance Criteria <u>Bold and Underlined</u> terms are elaborated in the Range of Variables.
1. Identify information from manuals	1.1 Appropriate <u>manuals</u> are identified and accessed. 1.2 Version and date of the manual are checked to ensure up-to-date specifications of tools, equipment, materials and procedures.
2. Identify drawings and specifications	2.1 Relevant <u>drawings</u> and specifications are identified. 2.2 Terms and abbreviations are identified. 2.3 Signs and symbols are identified
3. Interpret drawings and specifications	3.1 Drawings and specifications are interpreted. 3.2 Dimensions and specifications contained in the drawings are interpreted. 3.3 Documents are stored to prevent damage, and ready access and updating of information when required.
Range of Variables	
Variables	Range (may include but not limited to):
1. Manuals	1.1 Maintenance Procedure Manual 1.2 Periodic Maintenance Manual 1.3 Quality Manual 1.4 Manual of Instruction
2. Drawings	2.1 Technical drawings 2.2 Working drawings
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 identified information from manuals 1.2 identified drawings and specifications 1.3 interpreted drawings and specifications

2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Types of drawing 2.2 Identification of signs and symbols 2.3 Identification of units of measurement 2.4 Identification of units of conversion 2.5 Terms and abbreviations used 2.6 Construction manual
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Identifying appropriate manuals 3.2 Identifying drawings and specifications 3.3 Interpreting drawings and specifications 3.4 Identifying sign and symbols
4. Underpinning attitudes	<ul style="list-style-type: none"> 4.1 Commitment to occupational health and safety 4.2 Environmental concerns 4.3 Eagerness to learn 4.4 Tidiness and timeliness 4.5 Respect for rights of peers and seniors in workplace
5. Resource implications	<p>The following resources must be available:</p> <ul style="list-style-type: none"> 5.1 workplace (actual or simulated) 5.2 tools, equipment, materials and physical facilities appropriate to perform activities 5.3 relevant drawings, manuals and reference materials 5.4 required PPE.
6. Methods of assessment	<p>Competency should be assessed by:</p> <ul style="list-style-type: none"> 6.1 Written test 6.2 Demonstration 6.3 Oral questioning
7. Context of assessment	<ul style="list-style-type: none"> 7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor

Accreditation Requirements

Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any NSQF qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.

Occupation Specific Units of Competencies

Unit Code and Title	OU-CON-TMW-01-L2-V1: Perform Fundamental Works of Tiles and Marble Works
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to perform fundamental works of tiles and marble works. It specifically includes - identify building components; identify materials for tiles and marble work; interpret working drawing; and apply basic measurement.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Identify building components	1.1 <u>Building components</u> are identified for tiles and marble works. 1.2 Name of building components is listed.
2. Identify materials for tiles and marble work	2.1 <u>Materials</u> are identified for tiles and marble works. 2.2 <u>Tiles</u> are identified as per size, patterns, colours and characteristics in accordance with job requirement. 2.3 Materials quantity are calculated as per job requirement.
3. Interpret working drawing	3.1 Relevant <u>drawings</u> are correctly identified as per requirement. 3.2 All specifications are interpreted from the relevant drawing. 3.3 All terms and abbreviations are interpreted from the relevant drawing. 3.4 <u>Sign and symbols</u> are identified as per drawing.
4. Apply basic measurement	4.1 Measuring systems are determined as per drawings. 4.2 Appropriate <u>measuring instruments</u> are selected as per requirement. 4.3 <u>Measurement</u> of <u>shapes</u> is taken using appropriate measuring instrument. 4.4 Measurements are performed using appropriate <u>calculation</u> techniques.
Range of Variables	
Variable	Range (may include but not limited to):
1. Building components	1.1 Column 1.2 Lintel 1.3 Sunshade 1.4 False slab 1.5 Beam 1.6 Slab 1.7 Brick wall 1.8 Parapet wall

	<ul style="list-style-type: none"> 1.9 Drop wall 1.10 Shear wall 1.11 Balcony 1.12 Stair 1.13 Overhead water tank 1.14 Underground water reservoir
2. Materials	<ul style="list-style-type: none"> 2.1 Tiles 2.2 Granite 2.3 Marble 2.4 Porcelain 2.5 Stone 2.6 Adhesive 2.7 Nails 2.8 Thread 2.9 Cement 2.10 Sand 2.11 Water 2.12 Putting 2.13 White cement 2.14 Coloring pigment
3. Tiles	<ul style="list-style-type: none"> 3.1 Homogeneous 3.2 Pavements 3.3 Ceramics 3.4 Terracotta 3.5 Rustic stone tiles
4. Drawings	<ul style="list-style-type: none"> 4.1 Technical drawing 4.2 Working drawing 4.3 Free hand sketch
5. Signs and symbols	<ul style="list-style-type: none"> 5.1 All signs refer to tiles and marble works 5.2 All symbols refer to tiles and marble works
6. Measuring instruments	<ul style="list-style-type: none"> 6.1 Ruler 6.2 Measuring tape 6.3 Try square 6.4 Calculator
7. Measurements	<ul style="list-style-type: none"> 7.1 Length 7.2 Width 7.3 Height 7.4 Curve

8. Shapes	<ul style="list-style-type: none"> 8.1 Square 8.2 Rectangular 8.3 Circular 8.4 Angular 8.5 Trapezium
9. Calculations	<ul style="list-style-type: none"> 9.1 Area 9.2 Tiles quantity
<p>Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 identified basic building components according to industry standard 1.2 identified materials and tiles as per work requirement 1.3 interpreted working drawings 1.4 performed measurement of shapes 1.5 used leveling and alignment tools.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Building components. 2.2 Types and sizes of tiles, marble and granite. 2.3 Quality criteria for selecting tiles and marble. 2.4 Types of cement. 2.5 Types of measuring and leveling instrument for tiles and marble fitting. 2.6 Terms and abbreviation related to tiles and marble work. 2.7 Interpretation of tiles works related signs and symbols.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Identifying basic building components from a model building structure. 3.2 Identifying types of tiles and marbles. 3.3 Identifying materials for tiles and marble. 3.4 Performing measurements and calculation for tiles and marble works. 3.5 Using leveling and alignment tools.
4. Required attitudes	<ul style="list-style-type: none"> 4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for rights of peers and seniors at workplace. 4.8 Communication with peers and seniors at workplace.

5. Resources implication	<p>The following resources must be provided:</p> <p>5.1 workplace (actual or simulated)</p> <p>5.2 materials relevant to the proposed activity</p> <p>5.3 drawings and specifications relevant to the task</p> <p>5.4 measurement tools relevant to the proposed activity.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test</p> <p>6.2 demonstration</p> <p>6.3 oral questioning</p>
7. Context for assessment	<p>7.1 Competency assessment must be done in NSDA accredited assessment centre</p> <p>7.2 Assessment should be done by a NSDA certified/ nominated assessor</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code and Title	OU-CON-TMW-01-L2-V1: Use Tools for Tiles and Marble Works
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to use tools for tiles and marble works. It specifically includes - identify tools; use hand tools; use power tools; perform basic preventive maintenance; and maintain workplace, tools and equipment.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Identify tools	<p>1.1 Occupational Safety and Health (OSH) guidelines are followed as per job requirement.</p> <p>1.2 <u>Personal Protective Equipment (PPE)</u> are used as per nature of job.</p> <p>1.3 <u>Tools and equipment</u> are selected based on job requirements.</p> <p>1.4 <u>Applications</u> of tools are defined.</p>
2. Use hand tools	<p>2.1 Hand tools are prepared according to workplace procedures.</p> <p>2.2 Proper hand-eye coordination is applied in the use of hand tools.</p> <p>2.3 Safety requirements are complied with before, during and after use.</p> <p>2.4 Unsafe or faulty tools are identified and marked for repair according to workplace procedures.</p>
3. Use power tools	<p>3.1 Power sources are recognized.</p> <p>3.2 Power tools are prepared according to workplace procedures.</p> <p>3.3 Route for power supply established in accordance with work safety requirements.</p> <p>3.4 Power tools are used as per job requirement following Standard Operating Procedure (SOP).</p>
4. Perform basic preventive maintenance	<p>4.1 Tools and equipment are cleaned according to workplace instructions.</p> <p>4.2 Tools are inspected and reported to supervisor as per work place procedure.</p> <p>4.3 Tools are lubricated with appropriate <u>lubricants</u>.</p>

5. Maintain workplace, tools and equipment	<p>5.1 Work area is cleaned in accordance with workplace procedures.</p> <p>5.2 Unused materials are stored for re-use or disposed following workplace procedures.</p> <p>5.3 Waste and scrap materials are disposed with following workplace procedures.</p> <p>5.4 Inventory of tools equipment are conducted and recorded as per checklist.</p> <p>5.5 Tools and equipment are cleaned and stored as per manufacturer's recommendation in appropriate location.</p>
Range of Variables	
Variable	Range (may include but not limited to):
1. Personal Protective Equipment (PPE)	<p>1.1 Dust mask</p> <p>1.2 Safety glasses/Goggles</p> <p>1.3 Gloves</p> <p>1.4 Harness</p> <p>1.5 Safety belt</p> <p>1.6 Safety shoes/gumboots</p> <p>1.7 Aprons</p> <p>1.8 Face masks</p> <p>1.9 Helmet</p>
2. Tools and equipment	<p>2.1 Manual tiles cutting machine</p> <p>2.2 Measuring tape</p> <p>2.3 Steel rule</p> <p>2.4 Chipping hammer</p> <p>2.5 Ballpeen hammer</p> <p>2.6 Mallet</p> <p>2.7 Nail removing handle</p> <p>2.8 Try square</p> <p>2.9 Spirit level</p> <p>2.10 Water level</p> <p>2.11 Plumb bob</p> <p>2.12 Steel wire brush</p> <p>2.13 Chisel</p> <p>2.14 Brooms</p> <p>2.15 Brushes</p> <p>2.16 Buckets</p> <p>2.17 Mug</p> <p>2.18 Tiles cutter pen</p> <p>2.19 Trowel</p> <p>2.20 Shovels</p> <p>2.21 Masonry tray</p>

	<ul style="list-style-type: none"> 2.22 Spade 2.23 String lines 2.24 Wooden floats 2.25 Aluminum straight edge 2.26 Hose and water sprays 2.27 Marking pen/ Pencil 2.28 Trolley 2.29 Scraper 2.30 Formica 2.31 Scaffolding 2.32 Working table 2.33 Tiles cutting auto machine 2.34 Grinding machine
3. Applications	<ul style="list-style-type: none"> 3.1 Adjusting 3.2 Aligning 3.3 Assembling 3.4 Clamping 3.5 Cleaning 3.6 Cutting 3.7 Finishing 3.8 Hand sharpening 3.9 Lubricating 3.10 Scraping 3.11 Simple tool repairs 3.12 Tightening 3.13 Testing
4. Lubricants	<ul style="list-style-type: none"> 4.1 Mobil /oil 4.2 Grease 4.3 Kerosene oil
<p>Evidence Guide</p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.</p>	
1. Critical aspect of competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 followed OSH as per job requirement 1.2 identified appropriate tools 1.3 used hand tools as per job requirement 1.4 used power tools following standard operating procedure. 1.5 performed preventive maintenance.

2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Definition of tools and types of tools. 2.2 Types of power source. 2.3 Application of power tools and hand tools. 2.4 Interpretation uses of hand tools and power tools 2.5 Safety requirements for using tools. 2.6 Preventive maintenance of tools.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Identifying appropriate tools. 3.2 Using hand tools with appropriate application. 3.3 Using power tools with appropriate application. 3.4 Performing preventive maintenance of tools and workplace.
4. Required attitudes	<ul style="list-style-type: none"> 4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for rights of peers and seniors at workplace. 4.8 Communicate with peers and seniors at workplace.
5. Resource implication	<p>The following resources must be available:</p> <ul style="list-style-type: none"> 5.1 workplace (actual or simulated) 5.2 materials relevant to the proposed activity 5.3 hand tools and power tools to appropriate activity 5.4 measurement tools relevant to the proposed activity.
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <ul style="list-style-type: none"> 6.1 written test 6.2 demonstration 6.3 oral questioning
7. Context of assessment	<ul style="list-style-type: none"> 7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by NSDA certified/nominated assessor.
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code and Title	OU-CON-TMW-03-L2-V1: Prepare Surface for Tiles and Marble Works
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to prepare surfaces for tiles and marble works. It specifically includes - prepare for works; prepare materials for surface preparation; prepare underlay surface; prepare substrate surface; and maintain workplace, tools and equipment.
Nominal Hours	60 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlines</u> terms are elaborated in the Range of Variables
1. Prepare for work	<p>1.1 Occupational Safety and Health (OSH) are followed as per job requirement.</p> <p>1.2 Personal Protective Equipment (PPE) are used as appropriate to work.</p> <p>1.3 <u>Tools and Equipment</u> are selected in accordance with safe operating requirements for this job.</p> <p>1.4 <u>Materials</u> are checked in accordance with plan and specifications and quality requirements.</p> <p>1.5 Work area is marked according to requirement.</p>
2. Prepare materials for surface preparation	<p>2.1 <u>Surface types</u> are identified through visual inspection.</p> <p>2.2 <u>Mortars</u> are prepared mixing materials in appropriate <u>mixing ratio</u> as per workplace requirement.</p> <p>2.3 Grouting is prepared as per workplace procedure.</p>
3. Prepare underlay surface	<p>3.1 Appropriate tools and equipment are collected as per job requirement.</p> <p>3.2 The marked area for underlay surface is cleaned as per job requirement.</p> <p>3.3 Cracks of underlay surface are flushed and sealed with mortar as per job requirement.</p>
4. Prepare substrate surface	<p>4.1 Appropriate tools and equipment are selected and collected as per job specification.</p> <p>4.2 Mounted surface is detached and removed safely as required.</p> <p>4.3 Surfaces are leveled and cleaned in accordance with job requirements.</p> <p>4.4 Grouting is applied as per job requirement following workplace procedure.</p> <p>4.5 Mortar is placed over underlay surface as per requirement.</p>

5. Maintain workplace and store tools and equipment	5.1 Work area is cleaned in accordance with workplace procedures. 5.2 Unused materials are stored for re-use or disposed following workplace procedures. 5.3 Waste and scrap materials are disposed with following workplace procedures. 5.4 Inventory of tools equipment are conducted and recorded as per checklist. 5.5 Tools and equipment are cleaned and stored as per manufacturer’s recommendation in appropriate location.
Range of Variables	
Variable	Range (may include but not limited to):
1. Tools and equipment	1.1 Measuring tape 1.2 Chipping hammer 1.3 Ball pin hammer 1.4 Claw hammer 1.5 Nail removing handle 1.6 Try square 1.7 Sprit level 1.8 Water level 1.9 Plumb bob 1.10 Steel wire brush 1.11 Chisel 1.12 Brooms 1.13 Brushes 1.14 Buckets 1.15 Mug 1.16 Trowel 1.17 Shovels 1.18 Masonry tray 1.19 Spade 1.20 String lines 1.21 Aluminum straight edge 1.22 Hose and water sprays 1.23 Grinding machine 1.24 Trolley 1.25 Scaffolding 1.26 Working Table
2. Materials	2.1 Water 2.2 Cement 2.3 Sand

3. Surface types	<ul style="list-style-type: none"> 3.1 Brick surface 3.2 Block surface 3.3 Concrete surface 3.4 Asbestos cement sheet 3.5 Rendered surfaces 3.6 Timber
4. Mortar	<ul style="list-style-type: none"> 4.1 Saturated mortar 4.2 Wet mortar
5. Mixing Ratio	<ul style="list-style-type: none"> 5.1 Wall: 1:3 5.2 Floor: 1:4
Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.	
1. Critical aspect of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 collected tools equipment and materials as per job requirement 1.2 identified the types of surfaces with visual inspection 1.3 prepared mortar and grouting as per job requirement 1.4 flushed and sealed crack of underly surface with mortar. and grouting as per job requirement 1.5 detached and removed mounted surface.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Tools and equipment required. 2.2 Materials required for preparing mortar and grouting. 2.3 Mortar mixing ratio. 2.4 Grouting mixing ratio 2.5 Curing process of brick and concrete surface.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Preparing mortar as per surface requirement. 3.2 Preparing grout as per job requirement measurements. 3.3 Flushing and sealing of surfaces as per requirement. 3.4 Chipping surface works. 3.5 Surfaces are leveled and cleaned in accordance with job requirements. 3.6 Preparing mortar with proper ratio for plastering. 3.7 Plastering wall is as required.

4. Required attitudes	4.1 Commitment to occupational safety and health. 4.2 Sincere and honest to duties. 4.3 Promptness in carrying out activities. 4.4 Eagerness to learn. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect of peers and seniors at workplace. 4.8 Communicate with peers and seniors at workplace.
5. Resource implication	The following resources must be provided: 5.1 workplace (actual or simulated) 5.2 materials relevant to the proposed activity 5.3 hand tools and power tools to appropriate activity.
6. Methods of assessment	Methods of assessment may include but not limited to: 6.1 written test 6.2 demonstration 6.3 oral questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA</p>	

Unit Code and Title	OU-CON-TMW-04-L2-V1: Fix Floor Tiles
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to fix floor tiles. It specifically includes -prepare for works; cut tiles; lay floor tiles; fill the tiles joint; and maintain workplace, tools and equipment.
Nominal Hours	50 Hours
Elements of Competency	Performance Criteria <u>Bold and Underlined</u> terms are elaborated in the Range of Variables
1. Prepare for work	<p>1.1 Occupational Safety and Health (OSH) are followed as per job requirement.</p> <p>1.2 Personal Protective Equipment (PPE) is used.</p> <p>1.3 <u>Tools and equipment</u> are selected in accordance with safe operating requirements of the workplace.</p> <p>1.4 <u>Materials</u> are collected in accordance to the workplace requirements.</p>
2. Cut tiles	<p>2.5 <u>Tiles</u> quantity requirement are calculated as per drawing/ instruction;</p> <p>2.6 Tiles are measured and marked for cutting as per job requirement.</p> <p>2.7 Floor tiles are cut without damage in accordance with workplace procedures and manufacturer recommendations.</p> <p>2.8 Edges of tiles are smoothed with grinding machine as requirement.</p> <p>2.9 Cut tiles are stacked in an appropriate place as required.</p>
3. Lay floor tiles	<p>3.1 Floor is checked for level / falls in accordance with workplace procedures;</p> <p>3.2 Floor is chipped and cleaned as job requirement.</p> <p>3.3 Grout is mixed and applied in accordance with workplace requirements.</p> <p>3.4 Saturated mortar is placed on floor surface as per job requirement.</p> <p>3.5 Tiles are laid over the grouted substrate surface as per job requirement.</p> <p>3.6 Gaps between adjacent tiles are ensured;</p> <p>3.7 Laid tiles are cured as per standard;</p>
4. Fill the tiles joint	<p>4.1 Tiles joint, alignment and void are checked as per job requirements.</p> <p>4.2 Tiles surface is cleaned with appropriate tools as per requirement.</p>

	<p>4.3 Joints are racked and cleaned as per job requirement,</p> <p>4.4 Putty is mixed and applied in the racking areas as per job requirement.</p> <p>4.5 Tiles are cleaned and polished by using saturated cloth or foam.</p>
5. Maintain workplace, tools and equipment	<p>5.1 Work area is cleaned in accordance with workplace procedures.</p> <p>5.2 Unused materials are stored for re-use or disposed following workplace procedures.</p> <p>5.3 Waste and scrap materials are disposed with following workplace procedures.</p> <p>5.4 Inventory of tools equipment are conducted and recorded as per checklist.</p> <p>5.5 Tools and equipment are cleaned and stored as per manufacturer's recommendation in appropriate location.</p>
Range of Variables	
Variable	Range (may include but not limited to):
1. Tools and equipment's	<p>1.1 Brooms</p> <p>1.2 Brushes</p> <p>1.3 Buckets</p> <p>1.4 Caulking guns</p> <p>1.5 Hammers</p> <p>1.6 Chipping hammer</p> <p>1.7 Rubber hammer</p> <p>1.8 Mug</p> <p>1.9 Grinding machine</p> <p>1.10 Tiles cutter pen</p> <p>1.11 Tiles cutting auto machine</p> <p>1.12 Scrappers</p> <p>1.13 Tri Square</p> <p>1.14 V notch trowel</p> <p>1.15 U notch trowel</p> <p>1.16 Chisel</p> <p>1.17 Hose and water sprays</p> <p>1.18 Water level</p> <p>1.19 Spirit level</p> <p>1.20 Measuring tapes and rules</p> <p>1.21 Masonry tray</p> <p>1.22 Shovels</p> <p>1.23 Spade</p> <p>1.24 String lines</p> <p>1.25 Wooden floats</p> <p>1.26 Aluminum straight edge</p>

	<ul style="list-style-type: none"> 1.27 Multiple plug 1.28 Adhesive mixture machine 1.29 Spacer 1.30 Scaffolding 1.31 Working table
2. Materials	<ul style="list-style-type: none"> 2.1 Cement 2.2 Adhesive 2.3 Sand 2.4 Water 2.5 Floor tiles 2.6 Grinding disc 2.7 Tiles cleaner 2.8 Marking cloth
3. Tiles	<ul style="list-style-type: none"> 3.1 Homogeneous 3.2 Porcelain 3.3 Pavements 3.4 Ceramics
4. Putty	<ul style="list-style-type: none"> 4.1 White cement 4.2 Silicon 4.3 Readymade filler
<p>Evidence Guide</p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 calculated tiles quantity as per requirement 1.2 measured and cut tiles without damaging as per job requirement 1.3 leveled floor surface to prepare surface 1.4 checked substrate surface by using spirit level as per job requirement 1.5 placed saturated mortar on the floor surface as per job requirement 1.6 laid tiles on the floor as per floor layout 1.7 maintained gap between two tiles.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Tools, equipment and materials. 2.2 Calculating tiles quantity. 2.3 Tiles types and sizes. 2.4 Tiles cutting technique. 2.5 Floor leveling process. 2.6 Preparation of grout.

3. Underpinning skills	3.1 Cutting tiles with grinding machine. 3.2 Leveling floor as per job requirement. 3.3 Performing chipping on floor surface. 3.4 Mixing putty as per job requirement.
4. Required attitudes	4.1 Commitment to occupational safety and health. 4.2 Sincere and honest to duties. 4.3 Promptness in carrying out activities. 4.4 Eagerness to learn. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect to peers and seniors at workplace. 4.8 Communicate with peers and seniors at workplace.
5. Resource implication	The following resources must be provided: 5.1 workplace (actual or simulated) 5.2 construction materials 5.3 tools appropriate to the construction process 5.4 information and documentation 5.5 product specifications 5.6 manual, codes, standards and reference materials.
6. Methods of assessment	Methods of assessment may include but not limited to: 6.1 written test 6.2 demonstration 6.3 oral questioning 6.4 portfolio.
7. Context for assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code and Title	OU-CON-TMW-05-L2-V1: Fix Wall Tiles
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to fix wall tiles. It specifically includes - prepare for works; cut tiles; fix wall tiles; fill the tiles joint; and maintain workplace, tools and equipment.
Nominal Hours	40 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Prepare for work	<p>1.1 Occupational Safety and Health (OSH) are followed as per job requirement.</p> <p>1.2 Personal Protective Equipment (PPE) are collected and worn as per job requirement.</p> <p>1.3 <u>Tools and equipment</u> are selected in accordance with safe operating requirements of the workplace.</p> <p>1.4 <u>Materials</u> are collected in accordance to the workplace requirements.</p>
2. Cut tiles	<p>2.1 Tiles quantity requirement are calculated as per job requirement;</p> <p>2.2 Tiles are measured and marked for cutting as per job requirement.</p> <p>2.3 Tiles are cut without damage;</p> <p>2.4 Edges of tiles are smoothed with grinding machine as per requirement.</p> <p>2.5 Cut tiles are stacked in an appropriate place as required.</p>
3. Set wall tiles	<p>3.1 Wall is chipped or raked and cleaned as per job requirement.</p> <p>3.2 Wall surfaced are leveled by Water level pipe and plumb bob.</p> <p>3.3 Wall surfaced are grouted as per job requirement.</p> <p>3.4 Wet mortar is mixed and placed to the tiles as per job requirement.</p> <p>3.5 Tiles are fixed in the wall with standards specification, maintaining bond with joint as per requirements.</p> <p>3.6 Bottom course is cut and fixed to create a rake or square corner in accordance with drawings.</p> <p>3.7 Both vertical and horizontal level are maintained as per job requirement.</p> <p>3.8 Fixed tiles are cured as per standard.</p>

4. Fill the tiles joint	<p>4.1 Tiles joint, alignment and void are checked as per job requirements.</p> <p>4.2 Tiles surface is cleaned with appropriate tools as per requirement.</p> <p>4.3 Joints are raked and cleaned as per job requirement,</p> <p>4.4 Putty is mixed and applied in the racking areas as per job requirement.</p> <p>4.5 Tiles are cleaned and polished by using Saturated cloth or foam.</p>
5. Maintain workplace and store tools and equipment	<p>5.1 Work area is cleaned in accordance with workplace procedures.</p> <p>5.2 Unused materials are stored for re-use or disposed following workplace procedures.</p> <p>5.3 Waste and scrap materials are disposed with following workplace procedures.</p> <p>5.4 Inventory of tools equipment are conducted and recorded as per checklist.</p> <p>5.5 Tools and equipment are cleaned and stored as per manufacturer's recommendation in appropriate location.</p>
Range of Variables	
Variable	Range (may include but not limited to):
1. Tools and equipment's	<p>1.1 Brooms</p> <p>1.2 Brushes</p> <p>1.3 Buckets</p> <p>1.4 Caulking guns</p> <p>1.5 Hammers</p> <p>1.6 Chipping hammer</p> <p>1.7 Rubber hammer</p> <p>1.8 Mug</p> <p>1.9 Grinding machine</p> <p>1.10 Tiles cutter pen</p> <p>1.11 Tiles cutting auto machine</p> <p>1.12 Scrappers</p> <p>1.13 Tri square</p> <p>1.14 Trowel</p> <p>1.15 Chisel</p> <p>1.16 Hose and water sprays</p> <p>1.17 Water level</p> <p>1.18 Spirit level</p> <p>1.19 Measuring tapes and rules</p> <p>1.20 Masonry tray</p> <p>1.21 Shovels</p>

	<ul style="list-style-type: none"> 1.22 Spade 1.23 String lines 1.24 Wooden floats 1.25 Aluminum straight edge 1.26 Multi plug 1.27 Adhesive mixture machine 1.28 Spacer 1.29 Scaffolding 1.30 Working table
2. Materials	<ul style="list-style-type: none"> 2.1 Cement 2.2 Adhesive 2.3 Sand 2.4 Water 2.5 Wall tiles 2.6 Grinding disc 2.7 White cement 2.8 Marking cloth 2.9 Tiles cleaner
Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.	
1. Critical aspect of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 cut tiles as per measurement 1.2 fixed wall tiles as required 1.3 checked wall tiles level.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Tools and materials. 2.2 Pattern. 2.3 Decorative tiles. 2.4 Level.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Marking grout as per measurements. 3.2 Performing chipping. 3.3 Performing level checking. 3.4 Smoothing tiles cutting.
4. Required attitudes	<ul style="list-style-type: none"> 4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for rights of peers and seniors at workplace. 4.8 Communicate with peers and seniors at workplace.

5. Resource implication	<p>The following resources must be available:</p> <ul style="list-style-type: none"> 5.1 workplace (actual or simulated) 5.2 construction materials 5.3 tools appropriate to the construction process 5.4 information and documentation 5.5 product specifications 5.6 manual, codes, standards and reference materials.
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <ul style="list-style-type: none"> 6.1 written test 6.2 demonstration 6.3 oral questioning 6.4 portfolio.
7. Context of assessment	<ul style="list-style-type: none"> 7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code and Title	OU-CON-TMW-06-L2-V1: Perform Marble Works
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to perform marble works. It specifically includes - select tools, equipment and materials; cut marble; fix marble; set riser; fill the marble joints; and maintain workplace, tools and equipment.
Nominal Hours	50 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Select tools, equipment and materials	<p>1.1 Occupational Safety and Health (OSH) are followed as per job requirement.</p> <p>1.2 Personal Protective Equipment (PPE) is used.</p> <p>1.3 <u>Tools and equipment</u> are selected collect in accordance with safe operating requirements of the workplace.</p> <p>1.4 <u>Materials</u> are selected on accordance to the work requirement.</p> <p>1.5 Material quantity requirement are calculated in accordance with plans and specifications and quality requirements.</p>
2. Cut marble	<p>2.1 Marbles are measured and marked for cutting as per job requirement.</p> <p>2.2 Marbles are cut without damage as per specification.</p> <p>2.3 Marble edges are smoothed by grinding machine.</p>
3. Fix marble	<p>3.1 Work area is selected and measured as per requirement.</p> <p>3.2 Surfaces are chipped and cleaned as required.</p> <p>3.3 Marbles are soaked using water as per requirement.</p> <p>3.4 Surfaces are checked for leveled as per job requirement.</p> <p>3.5 Surfaces are grouted as per job requirement.</p> <p>3.6 Wet/Saturated mortar are placed to the marble and granite.</p> <p>3.7 Marbles are fixed/laid on the wall/floor according to speciation.</p> <p>3.8 Marbles are polished after fixing.</p>
4. Set riser	<p>4.1 Setting area is chipped and cleaned as per job requirement.</p> <p>4.2 Grout is applied as per job requirement.</p> <p>4.3 Riser is fixed after placing marble as per job requirement.</p> <p>4.4 Both vertical and horizontal levels are checked with appropriate tools.</p> <p>4.5 Bottom side of the riser is supported as per requirement.</p> <p>4.6 Clean the top surface of marble</p>

5. Fill the marble joints	5.1 Filling requirement is identified with through visual inspection. 5.2 Joints are raked and cleaned as per job requirement. 5.3 Filler are mixed and applied in the racking area as required. 5.4 Surface is cleaned and polished as per job requirement.
6. Maintain workplace and store tools and equipment	6.1 Work area is cleaned in accordance with workplace procedures. 6.2 Unused materials are stored for re-use or disposed following workplace procedures. 6.3 Waste and scrap materials are disposed with following workplace procedures. 6.4 Inventory of tools equipment are conducted and recorded as per checklist. 6.5 Tools and equipment are cleaned and stored as per manufacturer's recommendation in appropriate location.
Range of Variables	
Variable	Range (may include but not limited to):
1. Tools and equipment	1.1 Brooms 1.2 Brushes 1.3 Buckets 1.4 Caulking guns 1.5 Hammers 1.6 Chipping hammer 1.7 Rubber hammer 1.8 Mug 1.9 Marble polishing machine 1.10 Grinding machine 1.11 Tiles cutter pen 1.12 Tiles cutting auto machine 1.13 Scrappers 1.14 Tri Square 1.15 Trowel 1.16 Chisel 1.17 Hose and water sprays 1.18 Water level 1.19 Spirit level 1.20 Measuring tapes and rules 1.21 Masonry tray 1.22 Shovels 1.23 Spade 1.24 String lines 1.25 Wooden floats 1.26 Aluminum straight edge

	<ul style="list-style-type: none"> 1.27 Multi plug 1.28 Scaffolding 1.29 Working table
2. Materials	<ul style="list-style-type: none"> 2.1 Cement 2.2 Sand 2.3 Water 2.4 Marble 2.5 Grinding disc 2.6 Pumice stone (G40, G80, G120) 2.7 Oxalic acid 2.8 Yellow stone 2.9 Marking cloth
<p>Evidence Guide</p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.</p>	
1. Critical aspect of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 cut marble as per measurement 1.2 fixed marble as required 1.3 molded marble as per job requirement 1.4 set riser as per requirement 1.5 checked horizontal and vertical level.
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Tools and equipment. 2.2 Application of measurement. 2.3 Application of grout. 2.4 Knowledge about smooth marble cutting. 2.5 Application of level.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Making grout as per measurements. 3.2 Performing chipping. 3.3 Performing level. 3.4 Smooth marble cutting. 3.5 Perform molding.
4. Required attitudes	<ul style="list-style-type: none"> 4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for rights of peers and seniors at workplace. 4.8 Communicate with peers and seniors at workplace.
5. Resource implication	<p>The following resources must be available:</p> <ul style="list-style-type: none"> 5.1 workplace (actual or simulated) 5.2 tools and equipment appropriate to maintain workplace

	<p>5.3 materials relevant to the proposed activity</p> <p>5.4 equipment and outfits appropriate in applying safety measures</p> <p>5.5 relevant drawings, manuals, codes, standards and reference material.</p>
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <p>6.1 written test</p> <p>6.2 demonstration</p> <p>6.3 oral questioning</p>
7. Context of assessment	<p>7.1 Competency assessment must be done in NSDA accredited assessment centre</p> <p>7.2 Assessment should be done by a NSDA certified/nominated assessor</p>
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Unit Code and Title	OU-CON-TMW-07-L2-V1: Repair Tiles and marble Works
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to repair tiles and marbles work. It specifically includes - prepare for works; repair damaged tiles/ marbles work; fill the tiles/ marbles; and maintain workplace, tools, equipment and materials.
Nominal Hours	30 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Prepare for works	<p>1.1 Occupational Safety and Health (OSH) are followed as per job requirement.</p> <p>1.2 Personal Protective Equipment (PPE) is used.</p> <p>1.3 <u>Tools and equipment</u> are selected and collected in accordance with safe operating requirements of the workplace.</p> <p>1.4 <u>Materials</u> are selected on accordance to the workplace.</p>
2. Repair damaged tiles/ marble works	<p>2.1 <u>Damage or defects</u> are identified through visual inspection.</p> <p>2.2 Defective tiles/ marbles are removed avoiding damage to surrounding tiles.</p> <p>2.3 Damaged area is chipped and cleaned as job required.</p> <p>2.4 Damaged area is grouted as per job requirement.</p> <p>2.5 Saturated or wet mortar are mixed and placed to damaged area according to requirements.</p> <p>2.6 Tiles/ marbles are fixed as per job requirement.</p> <p>2.7 Top <u>surface</u> of tiles is cleaned by foam.</p>
3. Fill the tiles/marbles	<p>3.1 Putty and filling area are Identified and selected.</p> <p>3.2 Tools and equipment are selected and collected as per job specification.</p> <p>3.3 Joints are racked and cleaned.</p> <p>3.4 Putting and filler is mixed and applied in the racking areas as job specification.</p> <p>3.5 Tiles are cleaned and polished by using Saturated cloth or foam.</p>

<p>4. Maintain workplace, tools, equipment and materials</p>	<p>4.1 Work area is cleaned in accordance with workplace procedures.</p> <p>4.2 Unused materials are stored for re-use or disposed following workplace procedures.</p> <p>4.3 Waste and scrap materials are disposed with following workplace procedures.</p> <p>4.4 Inventory of tools equipment are conducted and recorded as per checklist.</p> <p>4.5 Tools and equipment are cleaned and stored as per manufacturer's recommendation in appropriate location.</p>
<p>Range of Variables</p>	
<p>Variable</p>	<p>Range (may include but not limited to):</p>
<p>1. Tools and equipment</p>	<p>1.1 Brooms</p> <p>1.2 Brushes</p> <p>1.3 Buckets</p> <p>1.4 Caulking guns</p> <p>1.5 Hammers</p> <p>1.6 Chipping hammer</p> <p>1.7 Rubber hammer</p> <p>1.8 Mug</p> <p>1.9 Grinding machine</p> <p>1.10 Tiles cutter pen</p> <p>1.11 Tiles cutting auto machine</p> <p>1.12 Scrappers</p> <p>1.13 Tri Square</p> <p>1.14 Trowel</p> <p>1.15 Chisel</p> <p>1.16 Hose and water sprays</p> <p>1.17 Water level</p> <p>1.18 Spirit level</p> <p>1.19 Measuring tapes and rules</p> <p>1.20 Masonry tray</p> <p>1.21 Shovels</p> <p>1.22 Spade</p> <p>1.23 String lines</p> <p>1.24 Wooden floats</p> <p>1.25 Aluminum straight edge</p> <p>1.26 Multi plug</p> <p>1.27 Scaffolding</p> <p>1.28 Working table</p>

2. Materials	<ul style="list-style-type: none"> 2.1 Cement 2.2 Sand 2.3 Water 2.4 Pavement tiles 2.5 Grinding disc 2.6 Readymade putting
3. Damage or defects	<ul style="list-style-type: none"> 3.1 Chips or dents 3.2 Cracks and splits 3.3 Holes 3.4 Loose and flaked surface materials 3.5 Material drumming 3.6 Missing, cracked or damaged substrate or tiles or marbles 3.7 Rough imperfect surfaces 3.8 Surface depressions or dents.
4. Surface	<ul style="list-style-type: none"> 4.1 Brick surface, 4.2 Concrete surface 4.3 Block surface 4.4 Board surface
<p>Evidence Guide</p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency.</p>	
1. Critical aspect of competency	<p>Assessment required evidences that the candidate:</p> <ul style="list-style-type: none"> 1.1 identified the damage and defects through visual inspection 1.2 removed damaged tiles and marbles 1.3 applied grouting as required 1.4 fixed tiles/ marbles without damaging surrounding area;
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1 Defects and damage of tiles/ marbles. 2.2 tools required for removing damaged tiles/ marbles.
3. Underpinning skills	<ul style="list-style-type: none"> 3.1 Removing tiles/ marbles without damaging 3.2 Performing chipping works. 3.3 Mixing grouts as per required ratio. 3.4 Fixing tiles/ marbles in the gaps.
4. Required attitudes	<ul style="list-style-type: none"> 4.1 Commitment to occupational safety and health. 4.2 Promptness in carrying out activities. 4.3 Sincere and honest to duties. 4.4 Eagerness to learn. 4.5 Tidiness and timeliness. 4.6 Environmental concerns. 4.7 Respect for rights of peers and seniors at workplace. 4.8 Communicate with peers and seniors at workplace.

5. Resource implication	<p>The following resources must be available:</p> <ul style="list-style-type: none"> 5.1 workplace (actual or simulated) 5.2 construction materials 5.3 tools appropriate to the construction process 5.4 information and documentation 5.5 product specifications 5.6 manual, codes, standards and reference materials.
6. Methods of assessment	<p>Methods of assessment may include but not limited to:</p> <ul style="list-style-type: none"> 6.1 written test 6.2 demonstration 6.3 oral questioning
7. Context of assessment	<ul style="list-style-type: none"> 7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
<p>Accreditation Requirements</p> <p>Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.</p>	

Development of Competency Standard

The Competency Standards for National Skills Certificate in Tiles and Marble Works, Level-2 is developed by experts of various construction companies in an industry consultative workshop held at the Bangladesh Association of Construction Industry (BACI) on the 14th of February 2016.

List of Members

SI No	Name and Address	Position in the committee
1.	Nibir Kanti Sarker, Head, Machinery Division, Project Builders Ltd(PBL)	Member
2.	Faysoluzzaman, Project Engineer, Diligent Engineers	Member
3.	Md. Samin Yasar, Site Engineer, Building Design & Consultant	Member
4.	Md. Monirul Islam, Project Engineer, National Development Engineers	Member
5.	Md. Jalal Mia, Manager, Atlanta group of industries	Member
6.	Engr. Dilip Kumar Sarker, Deputy Chief engineer, Project Builders Ltd(PBL)	Member
7.	Md. Mohiuddin Ahmed, Sr. Site Engineer, Samsuddin Mia & Associates Ltd.	Member
8.	Md. Amanulla, Sr. Engineer, Engineer foundation & Consultant	Member
9.	Md. Khairuzzaman Mia, sr. Project Engineer, Asset development and holding Ltd.	Member
10.	Md. Majed Ali, Sr. Project Engineer, Asset development and holding Ltd.	Member

Validation of Competency Standard

The Competency Standards for National Skills Certificate in Tiles and Marble Works, Level-2 is validated by NSDA 28th September 2022.

List of Members of SCVC

Sl No	Name and Address	Position in the committee	Signature
1	Engr Shafiqul Alam Bhuiyan, Chairman, CISC, Email: sabhuiyan63@gmail.com , Mobile: 01711522766	Chairperson	
2	Md. Farid Hossain, Deputy Project Officer, BTI Ltd. Dhaka, Mobile: 01817636816, Email: farid2015bti@gmail.com	Member	
3	Md. Zillur Rahman Khan, Instructor (Civil), Dhaka Polytechnic Institute, Mobile: 01711158084, Email: zillurznf99@gmail.com	Member	
4	Md. Mizanur Rahman, Manager (Construction), H. I. Technology Properties Ltd., Dhaka, Mobile: 01712184303, Email: engrmijanrahman@gmail.com	Member	
5	Bikash Chandra Saha, Lead Trainer, UCEP, Jatrabari TVET Institute, Mobile: 01717308084, Email: bikashchandra16@yahoo.com	Member	
6	B. M Mofizur Rahman, Curriculum Development and Training Executive, CISC, Dhaka, Mobile: 01717518730, Email: mofizur.cisc@gmail.com	Member	
7	Md. Abdulla al Mabud, Specialist (LMD), BTEB, Mobile: 01718406271, Email: mabud82@gmail.com	Member	
8	Engr. Abdur Razzaque, Specialist-01, NSDA, Mobile: +88 01742734313, Email: razzaque159@gmail.com	Member	

Workshop Minutes

Government of the People's Republic of Bangladesh
Prime Minister's Office
National Skills Development Authority
 Level: 10-11, Biniyog Bhaban,
 E-6 / B, Agargaon, Sher-E-Bangla Nagar Dhaka-1207, Bangladesh.
 Email: ec@nsda.gov.bd
 Website: www.nstda.gov.bd

Minutes of the Competency Standard Validation Workshop on “Tiles and Marble Works” Occupation.

Chairman	: Engr Shafiqul Alam Bhuiyan, Chairman, CISC,
Date	: 28 th September 2022
Time	: 8:30 am - 3:00 pm
Place	: ISC Conference Room, NSDA, Biniyog Bhaban, Agargaon, Dhaka-1207

The Chairman inaugurated the workshop by welcoming the expert participants attended in the workshop. He urges the participants to share their expert opinion to make the standard effective, job market responsive and updated one. During the day-long workshop, the competency standard of “Tiles and Marble Works” occupation was reviewed, modified and finalized in detail. The following changes and modification were made to validate and finalize the competency standard.

Serial No.	Content of validation	Whether it was appropriate		What actions have been taken if not appropriate?
		Yes	No.	
1.	Name and level of occupation	Yes		
2.	Nominal Hour	Yes		360 hours
3.	Unit of Competency		No.	<ul style="list-style-type: none"> Out 7 UoC, name of 4 UoC have changed and nominal also changed
4.	Element		No.	<ul style="list-style-type: none"> Total 09 elements are edited 03 element is added or deleted
5.	Performance Criteria		No.	<ul style="list-style-type: none"> Total 22 performance criteria edited and finetuned as per elements
6.	Variables		No.	<ul style="list-style-type: none"> 32 new variables are added
7.	Critical Aspect of Competence		No.	<ul style="list-style-type: none"> Necessary changes have been made in the critical aspect of competency according to above changes.
8.	Underpinning knowledge		No.	<ul style="list-style-type: none"> Necessary changes have been made in the underpinning knowledge according to above changes.
9.	Underpinning Skills		No.	<ul style="list-style-type: none"> Necessary addition, changes and fine tuning have been made.
10.	Attitude	Yes		
11.	Resources	Yes		
12.	Assessment methods	Yes		

13.	Others			<ul style="list-style-type: none"> • The nominal hours of the units of competencies have been rescheduled for content consideration. • Overall, the occupation has been included in Level-3 according to NSQF (BNQF 1-6).
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Through the above activities, the Competency Standard has been finalized and validated as “**Tiles and Marble Works**”

Chairman

Committee on Standard and Curriculum

Validation,

Chairman – CS ISC