



**Government of the People's Republic of Bangladesh  
Skills Development Project**



# National Competency Standards for Masonry

Qualification Title: **National Skills Certificate-I in Masonry  
(Construction Sector)**

Qualification Code: **CONMAS030112**



**Bangladesh Technical Education Board**  
May 2014

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## Approval Sheet

The National Competency Standards for **National Skills Certificate-I Masonry (Construction Sector)** Qualification is a document developed by the Technical sub Committee for Masonry under the Skills Development Project ADB Loan 2425 – BAN (SF).

It was approved by the Bangladesh Technical Education Board (BTEB) upon the endorsement of the Sector Working Committee at a meeting held on 10 April 2012 at the office of the Industry Skills Council.

The Standard also approved by Standard and Curriculum Development Committee (SCDC) on 16<sup>th</sup> April 2014, at BTEB CBT Cell.

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## Preface

The TVET system has a large role to play in economic growth and social development as workforce provider to the labor market and as provider of skills to those who are looking for employment. In the case of Bangladesh, the TVET sector needs major reforms to ensure that issues of quality and capacity, relevance, and access are properly addressed.

The Directorate of Technical Education (DTE) with funding from the Asian Development Bank (ADB), Swiss Agency Development for Cooperation SDC and the Government of Bangladesh (GOB) is implementing a project known as Skills Development Project (SDP). The main target of the Skills Development Project (SDP) is to improve the relevance of TVET in labor market by introducing competency-based training system: a system that proceeds from the development of a qualifications framework, competency standards, curriculum, training delivery, assessment, and quality assurance mechanisms in order to develop a competitive workforce.

The development of competency standards is regarded as the heart of a competency-based training regime. Each standard defines sets of knowledge, skills and attitudes (KSAs) that a Bangladeshi trainee should be able to demonstrate at a recognized level of competence. It provides a common framework of outcomes between the labor and education sectors, as well as among workers, trainers and trainees.

In the process of development, *Industry Skills Council* (ISC) was organized to determine competencies expected of an occupation in Bangladesh. The ISC, whose membership come from “top performers” in the industry, performed occupational, competency and unit analyses based on their rich experiences in the field, existing documents, and on the advice of national and international experts. Competency standards of Sri Lanka, Philippines, Australia, Korea, Malaysia, Maldives and other countries were examined.

A series of workshops – development, review and finalization - were conducted to ensure a workable National Competency Standards for the occupation. Further, a validation instrument was developed and administered to other top industry performers to verify and confirm the draft being developed.

It is hoped that this document reflects the real needs of the industry thereby providing a concrete basis for the curriculum development and assessment. In such a way, the development of relevant and competent workforce is not farfetched.

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### Acronyms

MoE	Ministry of Education
DG	Director General
DTE	Directorate of Technical Education
SDP	Skills Development Project
PD	Project Director
PIU	Project Implementation Unit
GOB	Government of Bangladesh
ADB	Asian Development Bank
SC	Swiss contact
ANTA	Australian National Training Authority
APEC	Asia Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
BMET	Bureau of Manpower Employment and Training
NTVQ	National Technical Vocational Qualification
NTVQF	National Technical Vocational Qualification Framework
BTEB	Bangladesh Technical Education Board
CBT	Competency Based Training
CS	Competency Standard
HSC (Voc)	Higher Secondary Certificate (Vocational)
KSA	Knowledge, Skills, Attitude
MoLE	Ministry of Labor and Employment
NTVQF	National Technical Vocational Qualification Framework
NTVQ	National Technical Vocational Qualification
OHS	Occupational Health and Safety
PSC	Project Steering Committee
RMG	Ready Made Garments
RPL	Recognition of Prior Learning
SSC (Voc)	Secondary School Certificate (Vocational)
STEP	Skills and Training Enhancement project (WB)
ISC	Industry Skills Council
TESDA	Technical Education and Skills Development Authority
TL	Team Leader
TSC	Technical Sub Committee
TVET	Technical and Vocational Education and Training
WB	World Bank
DACUM	Development of a Curriculum
CBLM	Competency based learning Materials

**Section 1: The Qualification**

1. Title of Qualification: National Skills Certificate - I in Masonry (Construction Sector)	
2. Qualification code:	3. Endorsement date:
CONMAS030112	10 April 2012
4. Purpose of the qualification	<p>The NSC I in Masonry Qualification consists of a set of competencies that a person must achieve in order to work competently in the Construction Sector as a Masonry.</p> <p>In particular, he/she should be able to:</p> <ol style="list-style-type: none"> <li>1. Communicate in the workplace</li> <li>2. Work in a team environment</li> <li>3. Practice workplace cleanliness</li> <li>4. Practice occupational health and safety (OHS)</li> <li>5. Work in the Construction Sector</li> <li>6. Interpret Drawings and Specifications in Construction Manuals</li> <li>7. Use Hand Tools and Power Tools for the Construction Sector</li> <li>8. Prepare Masonry Mortar</li> <li>9. Perform Paving Work.</li> <li>10. Perform Basic masonry works.</li> <li>11. Perform Plaster on masonry surface.</li> </ol>
5. Regulatory Arrangements	The holder of this qualification should have been assessed by a BTEB certified assessor and found to be competent in the units listed in Section 2.
6. Accreditation requirements	The qualifications shall be offered in compliance with the accreditation requirements set by BTEB.
7. Transition arrangements	In the absence of certified assessors, the BTEB shall appoint trainers who have undergone assessment trainings.
8. Contact for comments	Chairperson Bangladesh Technical Education Board (BTEB) Agargaon, Sher-E-Bangla Nagar, Dhaka-1207



**Section -2: National Competency Standards**  
for  
**National Skills Certificates in Masonry**

**Generic Competencies**

Code	Unit of Competency	Level	No. of Hrs.
GN0100112A	Communicate in the workplace	1	30
GN0100212A	Work in a team environment	1	18
GN0100312A	Practice workplace cleanliness	1	18
GN0100412A	Practice occupational health and safety (OHS)	1	30
GN0300512A	Demonstrate work values	3	18
GN0300612A	Lead small team	3	18
GN0300712A	Practice negotiation skills	3	24
<b>Total</b>			156 hours

**Sector Specific Competencies**

Code	Unit of Competency	Level	No. of Hrs.
CON0100112A	Work in the Construction Sector	1	24
CON0100212A	Interpret Drawings and Specifications in Construction Manuals	1	30
CON0100312A	Use Hand Tools and Power Tools for the Construction Sector	1	30
CON0200412A	Perform Measurement and Calculations in Construction Sector	2	48
CON0200512A	Maintain tools and equipment	2	30
<b>Total</b>			162

## Occupation Specific Competencies

Code	Unit of Competency	Level	No. of Hrs.
CONMAS0100112A	Prepare Masonry Mortar	1	39
CONMAS0100212A	Perform Paving Work	1	48
CONMAS0100312A	Perform Basic masonry works	1	45
CONMAS0100412A	Perform Plaster on masonry surface	1	48
CONMAS0200512A	Lay Brick/Block For Structure	2	18
CONMAS0200612A	Perform damp proof course	2	15
CONMAS0200712A	Perform Arch work	2	48
CONMAS0200812A	Construct decorative brick work	2	30
CONMAS0200912A	Perform Concreting work	2	24
CONMAS0201012A	Perform Plaster on Concrete Surface	2	36
CONMAS0201112A	Install brick cladding	2	21
CONMAS0301212A	Install pre-cast and fabricated components	3	60
CONMAS0301312A	Apply special cement finishes to concrete and masonry surfaces	3	45
CONMAS0301412A	Repair defective concrete and masonry surfaces	3	48
CONMAS0301512A	Perform water proofing	3	57
<b>Total</b>			582 hours
<b>Grand Total</b>			900 hours

## Course Structure for National Skills Certificate in Masonry For Level -1

The units of competencies this qualification are summarized as follows:

### Generic Competencies

Code	Unit of Competency	Level	No. of Hrs
GN0100112A	Communicate in the workplace	1	30
GN0100212A	Work in a team environment	1	18
GN0100312A	Practice workplace cleanliness	1	18
GN0100412A	Practice occupational health and safety (OHS) procedures	1	30
<b>Total</b>			96

### Sector Specific Competencies

Code	Unit of Competency	Level	No. of Hrs
CON0100112A	Work in the Construction Sector	1	24
CON0100212A	Interpret Drawings and Specifications in Masonry Manuals	1	30
CON0100312A	Use Hand Tools and Power Tools for Masonry	1	30
<b>Total</b>			84

### Occupation Specific Competencies

Code	Unit of Competency	Level	No. of Hrs
CONMAS0100112A	Prepare Masonry Mortar	1	39
CONMAS0100212A	Perform Paving Work	1	48
CONMAS0100312A	Perform Basic Masonry works	1	45
CONMAS0100412A	Perform Plaster on masonry surface	1	48
<b>Total</b>			180
<b>Grand Total</b>			360 hours off job

**Section 3: The Generic Competencies**

Unit of Competency	<b>Communicate in the Workplace</b>
Unit Code	GN0100112A
Unit Descriptor	This unit covers the knowledge, skills and attitudes (KSAs) required to communicate in the workplace.  It includes the use of verbal and written forms of communication to receive, interpret, convey, and document information/ instruction using appropriate communication equipment.
Nominal Hours	30 hours

<b>Elements of Competency</b>	<b>Performance Criteria</b> <i><b>Bold italicized</b></i> words are detailed 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. <b>Written instructions</b> are interpreted. 2.2. Work <b>signages</b> 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 <b>communication</b> 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 <b>tools and equipment</b> are operated and faults are identified and reported. 3.5. Information is conveyed using appropriate <b>forms</b> .
4. Complete written documentation	4.1. All required <b>documentation</b> 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.
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### Range Of Variables

<b>Variable</b>	<b>Range</b> (Include but are not limited to):
1. Written instructions	1.1. Supervisor's/Manager's Instructions 1.2. Memoranda 1.3. Rules and Regulations 1.4. Signage 1.5. Approved Work Plan 1.6. External communications
2. Workplace guidelines	2.1. Labor Policies and Guidelines 2.2. Written Instructions 2.3. Operations Manual 2.4. Organizational Manuals 2.5. Quality Assurance Handbook
3. Signage	3.1. On-site direction signs 3.2. Common site warnings 3.3. Location signs 3.4. Traffic signs
4. Communication	4.1. Verbal instructions 4.2. Written instructions 4.3. Online communication
5. Tools and machinery	5.1. Telephone 5.2. Mobile Phone 5.3. Fax machines 5.4. Two-way radio 5.5. Computers 5.6. Forms 5.7. Memo 5.8. Two-way radio
6. Forms	6.1. Memorandum 6.2. Requisitioning Form 6.3. Personnel Form 6.4. Safety Report Form

7. Documentation	<p>7.1. Reports (Monthly, Quarterly, Half-Yearly, Annual)</p> <p>7.2. Plans (Strategic Plan, Operational Plan, Monthly Schedule)</p> <p>7.3. Monitoring and Evaluation Report</p> <p>7.4. Minutes of Meetings</p>
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### Evidence Guide

1. Critical Aspects of competency	<p>Assessment required evidence that the candidate:</p> <p>1.1 Demonstrated knowledge of workplace procedures in receiving, interpreting and conveying verbal &amp; written communication.</p> <p>1.2 Satisfied the requirements mentioned in the Performance Criteria and Range of Variables</p>
2. Underpinning knowledge	<p>2.1. Workplace Communication Policies, Standards and Procedures</p> <p>2.2. Verbal and Non-verbal communication</p> <p>2.3. Modes of Communication</p> <p>2.4. Communication Equipment: Types, Uses and Faults</p> <p>2.5. Channels of Communication</p>
3. Underpinning Skills	<p>3.1. Receiving verbal instructions.</p> <p>3.2. Interpreting verbal and written information/ instruction</p> <p>3.3. Conveying instructions using verbal and written forms of communication</p> <p>3.4. Completing written documentation</p> <p>3.5. Participating in work place meetings and discussions</p>
4. Underpinning Attitudes	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Environmental concerns</p> <p>4.3 Eagerness to learn</p> <p>4.4 Tidiness and timeliness</p> <p>4.5 Respect for rights of peers and seniors in workplace</p> <p>4.6 Communication with peers and seniors in workplace</p>
5. Resource Implication	<p>5.1. Pens</p> <p>5.2. Telephone</p> <p>5.3. Computer</p> <p>5.4. Writing materials</p> <p>5.5. Online communication</p>

6. Methods of Assessment	Competency should be assessed by 6.1 Workplace observation 6.2 Demonstration 6.3 Oral Interview 6.4 Written examinations 6.5 Portfolio
7. Context of Assessment	For certification competency should be assessed individually in the actual work place after completion of the module.
<p><b>Accreditation Requirements</b></p> <p>Training providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification.</p> <p>Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

Unit of Competency	<b>Work in a Team Environment</b>
Unit Code	GN0100212A
Unit Descriptor	This unit covers the knowledge, skills and attitudes (KSAs) required in working in a team environment.  It includes the following: identify OHS policies and procedures, follow personal safety measures, report hazards and risks, respond to emergencies, and maintain personal well-being.
Nominal Hours	18 hours

<b>Elements of competency</b>	<b>Performance Criteria</b>
	Bold italicized words are detailed 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 <b>sources</b> .
2. Identify individual role and responsibility	2.1. Individual roles and responsibilities of <b>team members</b> 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 as <b>work place context</b> . 4.3. OHS practices are followed.

#### Range Of Variables

<b>Variable</b>	<b>Range</b> (Include but are not limited to):
1. Sources	1.1. Standard Operating Procedures 1.2. Job Description 1.3. Operations Manual 1.4. Organizational Structure



2. Team Members	<ul style="list-style-type: none"> <li>2.1. Coach/mentor</li> <li>2.2. Supervisor/Manager</li> <li>2.3. Peers/Colleagues</li> <li>2.4. Employee representative</li> </ul>
3. Workplace context	<ul style="list-style-type: none"> <li>3.1. National Laws and Statutes</li> <li>3.2. Standard Operating Procedures</li> <li>3.3. Workplace Rules and Regulations</li> </ul>

### Evidence Guide

1. Critical Aspects of competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Demonstrated knowledge in working in a team environment.</li> <li>1.2 Satisfied the requirements mentioned in the Performance Criteria and Range of Variables</li> </ul>
2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1. Team Structure, Role and Responsibility</li> <li>2.2. Individual Members' Roles and Responsibilities</li> <li>2.3. Communication Flow and Reporting Structures</li> <li>2.4. Team Planning</li> <li>2.5. Interpersonal Communication Skills</li> <li>2.6. Team Meeting Procedures</li> <li>2.7. OHS Practices</li> </ul>
3. Underpinning Skills	<ul style="list-style-type: none"> <li>3.1. Identifying the role and responsibility of the team</li> <li>3.2. Identifying roles and responsibilities of individual members</li> <li>3.3. Participating in team discussions</li> <li>3.4. Working as a team member</li> </ul>
4. Underpinning Attitudes	<ul style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Environmental concerns</li> <li>4.3 Eagerness to learn</li> <li>4.4 Tidiness and timeliness</li> <li>4.5 Respect for rights of peers and seniors in workplace</li> <li>4.6 Communication with peers and seniors in workplace</li> </ul>

5. Resource Implication	5.1 Pens 5.2 Telephone 5.3 Computer 5.4 Writing materials 5.5 Online communication
6. Methods of Assessment	Competency should be assessed by 6.1 Workplace observation 6.2 Demonstration 6.3 Oral Interview 6.4 Written examinations 6.5 Portfolio
7. Context of Assessment	For certification competency should be assessed individually in the actual work place after completion of the module.
<p><b>Accreditation Requirements</b></p> <p>Training providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification.</p> <p>Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

Unit of Competency	<b>Practice Workplace Cleanliness</b>
Unit Code	GN0100312A
Unit Descriptor	This unit covers the knowledge, skills and attitudes (KSAs) required to Practice Workplace Cleanliness. It includes five steps, namely: sort, systematize, sweep, standardize, and sustain activities.
Nominal Hours	18 hours

<b>Elements of Competency</b>	<b>Performance Criteria</b> Bold italicized words are detailed in the Range of Variables
1. Sort to dispose unnecessary items	1.1. Items in the workplace are identified and differentiated into necessary and unnecessary. 1.2. <b>Unnecessary items</b> are removed and disposed. 1.3. Inventory of necessary items is updated and maintained.
2. Systematize the workplace	2.1. Necessary items are supplied with identification marks and arranged. 2.2. The best location to place the necessary items is identified. 2.3. Necessary items are regularly checked in their assigned location.
3. Sweep the workplace	3.1. The workplace is kept neat, clean and tidy before, during and after work hours. 3.2. Tools and equipment are kept clean. 3.3. <b>Minor repairs</b> are done to tools and equipment, when necessary. 3.4. Defective tools and equipment are reported to proper authorities.
4. Standardize activities	4.1. Workplace activities are done. 4.2. Workplace <b>decorum</b> is maintained. 4.3. Accidents are reported to authority immediately. 4.4. Work is performed.
5. Sustain housekeeping activities	5.1. <b>5S</b> procedure is implemented 5.2. Bottlenecks are identified, improvements are recommended, and actions are taken

**Range Of Variables**

<b>Variable</b>	<b>Range</b> (Include but are not limited to):
1. Unnecessary Items	1.1. Waste materials 1.2. Papers and other printed materials not related to work activities 1.3. Damaged tools and equipment 1.4. Non-recyclable materials
2. Minor repairs	2.1. Sharpening of tools 2.2. Tightening of nuts, bolts and screws 2.3. Replacing of parts 2.4. Application of oil and lubricants
3. Decorum	3.1. Workplace rules and regulations 3.2. Workplace Code of Ethics
4. 5S	A system of work developed in Japan for housekeeping purposes. It consists of: 4.1. Sort 4.2. Systematize 4.3. Sweep 4.4. Standardize 4.5. Sustain

**Evidence Guide**

1. Critical Aspects of competency	Assessment required evidence that the candidate: 1.1 Followed Evidence of routine practice of 5S in the workplace. 1.2 Satisfied the requirements mentioned in the Performance Criteria and Range of Variables
2. Underpinning knowledge	2.1. Meaning and Application of 5S 2.2. Purposes of 5S 2.3. Methods of Identifying Weaknesses and Recommending Improvements 2.4. Principles of Efficient Workplace
3. Underpinning Skills	3.1. Communicating 3.2. Planning 3.3. Organizing 3.4. Prioritizing 3.5. Recording 3.6. Problem Solving

4. Underpinning Attitudes	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 4.6 Communication with peers and seniors in workplace
5. Resource Implication	5.1 Pens 5.2 Telephone 5.3 Computer 5.4 Writing materials 5.5 Online communication
6. Methods of Assessment	Competency should be assessed by 6.1 Workplace observation 6.2 Demonstration 6.3 Oral Interview 6.4 Written examination 6.5 Portfolio
7. Context of Assessment	For certification competency should be assessed individually in the actual work place after completion of the module.
<p><b>Accreditation Requirements</b></p> <p>Training providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification.</p> <p>Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

Unit of Competency	<b>Practice Occupational Health and Safety (OHS) procedures</b>
Unit Code	GN0100412A
Unit Descriptor	<p>This unit covers the knowledge, skills and attitudes (KSAs) required by Practice Occupational Health and Safety (OHS) procedures.</p> <p>It includes the following: identify OHS policies and procedures, follow personal safety measures, report hazards and risks, respond to emergencies, and maintain personal well-being.</p>
Nominal Hours	30 hours

<b>Elements of Competency</b>	<b>Performance Criteria</b> Bold italicized words are detailed in the Range of Variables
1. Identify OHS policies and procedures	<p>1.1. <b>OHS policies</b> and <b>safe operating procedures</b> are accessed, clarified.</p> <p>1.2. <b>Safety signs and symbols</b> are identified and followed</p> <p>1.3. Emergency response, evacuation procedures and other contingency measures are determined.</p> <p>1.4. Workplace safety conditions are regularly reported to authority.</p>
2. Apply personal health and safety practices	<p>2.1. <b>Personal protective equipment (PPE)</b> is Selected and used.</p> <p>2.2. A clear and tidy workplace is maintained.</p> <p>2.3. OHS equipment is maintained to keep them operational and compliant.</p>
3. Report hazards and risks.	<p>3.1. <b>Hazards</b> and risks are identified, assessed and controlled.</p> <p>3.2. Terms of tolerable limits are identified</p> <p>3.3. Incidents arising from hazards and risks are reported to authority</p> <p>3.4. Details of incidents are recorded.</p>
4. Respond to emergencies	<p>4.1. Alarms and warning devices are responded to.</p> <p>4.2. Workplace <b>emergency procedures</b> are followed.</p> <p>4.3. Emergency response plans and procedures are implemented.</p>

5. Maintain personal well-being	5.1. OHS policies and procedures are adhered to. 5.2. OHS awareness programs are participated in. 5.3. Corrective actions are implemented to correct unsafe conditions in the workplace 5.4. <b>“Fit to work” records</b> are updated and maintained.
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### Range Of Variables

Variable	Range (Include but are not limited to):
1. OHS Policies and Procedures	1.1. Bangladesh standards for OHS 1.2. Building Code 1.3. Fire Safety Rules and Regulations 1.4. Code of Practice 1.5. Industry Guidelines
2. Safe Operating Procedures	2.1. Orientation on emergency exits, fire extinguishers, fire escape, etc. 2.2. Emergency procedures 2.3. First Aid procedures 2.4. Tagging procedures 2.5. Use of PPE 2.6. Safety procedures for hazardous substances
3. Safety Signs and symbols	3.1. Direction signs (exit, emergency exit, etc.) 3.2. First aid signs 3.3. Danger Tags 3.4. Hazard signs 3.5. Safety tags 3.6. Warning signs
4. Personal Protective Equipment (PPE)	4.1. Apron 4.2. Gas Mask 4.3. Gloves 4.4. Safety boots 4.5. Helmet 4.6. Face mask 4.7. Overalls 4.8. Goggles and safety glasses 4.9. Ear plugs 4.10. Sun block 4.11. Chemical/Gas detectors

5. Hazards	5.1. Chemical hazards 5.2. Biological hazards 5.3. Physical Hazards
6. Emergency Procedures	6.1. Fire fighting 6.2. Medical and first aid 6.3. Evacuation
7. “Fit to Work” records	7.1. Medical Certificate every year 7.2. Accident reports, if any

### Evidence Guide

1. Critical Aspects of competency	Assessment required evidence that the candidate: 1.1 Demonstrated knowledge in practicing occupational health and safety in the workplace. 1.2 Satisfied the requirements mentioned in the Performance Criteria and Range of Variables
2. Underpinning knowledge	2.1. OHS Workplace Policies and Procedures 2.2. Work Safety Procedures 2.3. Emergency Procedures 2.4. Types of Hazards (Biological, Chemical and Physical) and Their Effects 2.5. PPE types and uses 2.6. Personal Hygiene Practices 2.7. OHS Awareness
3. Underpinning Skills	3.1. Identifying OHS policies and procedures 3.2. Following personal work safety practices 3.3. Reporting hazards and risks 3.4. Responding to emergency procedures 3.5. Maintaining physical well-being in the workplace
4. Underpinning Attitude	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 Implication	5.1 Pens 5.2 Telephone 5.3 Computer



	<p>5.4 Writing materials</p> <p>5.5 Online communication</p>
6. Methods of Assessment	<p>Competency should be assessed by</p> <p>6.1 Workplace observation</p> <p>6.2 Demonstration</p> <p>6.3 Oral Interview</p> <p>6.4 Written examination</p> <p>6.5 Portfolio</p>
7. Context of Assessment	<p>For certification competency should be assessed individually in the actual work place after completion of the module.</p>
<p><b>Accreditation Requirements</b></p> <p>Training providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification.</p> <p>Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

### Section 4: The Sector Specific Competencies

Unit of Competency	<b>Work in the Construction Sector (Masonry)</b>
Unit Code	CON0100112A
Unit Descriptor	<p>This unit covers the skills, knowledge and attitude in working in the construction sector.</p> <p>It includes the following steps: describe the organizational structure within the construction sector; identify processes and procedures; identify tools, equipment and materials; identify workplace practices; organize own workload; and practice OHS.</p>
Nominal Hours	24 hours

<b>Elements of Competency</b>	<b>Performance Criteria</b>
	<b><i>Bold italicized</i></b> words are detailed in the Range of Variables
1. Describe the organizational structure within the sector	<p>1.1. Scope, nature and <b><i>major fields</i></b> of the construction sector are determined</p> <p>1.2. Profile of the construction sector in relation to Bangladesh <b><i>employment conditions</i></b> is determined</p> <p>1.3. Trends and technologies relevant to the sector are explained.</p> <p>1.4. Relevant policies and guidelines are identified and interpreted.</p> <p>1.5. <b><i>Instructions</i></b> as to procedures in achieving quality are obtained, understood, and clarified.</p>
2. Identify processes and procedures	<p>2.1. Construction processes are identified, described and explained.</p> <p>2.2. Work activities are correctly identified.</p> <p>2.3. Adjustments are interpreted.</p>
3. Identify tools, equipment and materials	<p>3.1. Appropriate <b><i>manuals</i></b> are accessed to ensure up-to-date specifications of tools, materials and equipment.</p> <p>3.2. Construction <b><i>tools, equipment and materials</i></b> are identified.</p> <p>3.3. Substitutes are identified in case of non-availability.</p>
4. Identify workplace requirements	<p>4.1. <b><i>Workplace requirements</i></b> are identified and clarified.</p> <p>4.2. Roles and responsibilities of all personnel are described.</p> <p>4.3. Workplace's practices are identified.</p> <p>4.4. <b><i>Problem-solving strategies</i></b> are used to</p>

	address bottlenecks, inconsistencies and other concerns.
5. Organize own workload	<p>5.1. Own work activities are planned and progress of work is communicated to relevant staff.</p> <p>5.2. Work activities are completed.</p> <p>5.3. Difficulties and bottlenecks are identified, and solutions are put forwarded.</p> <p>5.4. Own work is monitored against workplace standards and areas for improvement identified and acted upon.</p>
6. Practice OHS	<p>6.1. Relevant <b>OHS</b> practices are identified.</p> <p>6.2. Relevant <b>OHS</b> practices are interpreted and implemented.</p>

### Range of Variables

<b>Variables</b>	<b>Range</b> (Include but are not limited to):
1. Major Fields	<p>1.1. Construction Site Support (Dogging, Rigging, etc.)</p> <p>1.2. Carpentry and Form Works</p> <p>1.3. Masonry, Brick/Block Laying and Concreting</p> <p>1.4. Surface Finishing, Tiling and Painting</p> <p>1.5. Roofing</p> <p>1.6. Masonry</p> <p>1.7. Residential Electrical Wiring and Cabling</p>
2. Employment conditions	<p>2.1. Code of Practice</p> <p>2.2. Salary/Wage System</p> <p>2.3. Labor Practices</p> <p>2.4. Anti-Discrimination Policy</p> <p>2.5. Gender Issues</p> <p>2.6. Collective Bargaining and Other Practices</p> <p>2.7. Awards</p> <p>2.8. Procedures for Handling Disputes</p> <p>2.9. Innovations in the Sector</p>
3. Instructions	<p>1.1. Specifications and requirements</p> <p>1.2. Standard operating procedures</p> <p>1.3. Manuals of Instruction</p> <p>1.4. Operations Manual</p> <p>1.5. Environmental Guidelines</p> <p>1.6. Gender and Develop Guidelines</p>

4. Manuals	<ul style="list-style-type: none"> <li>4.1. Manual of Instructions</li> <li>4.2. Manual of Specifications</li> <li>4.3. Repair Manual</li> <li>4.4. Quality Manual</li> <li>4.5. Maintenance Procedure and Troubleshooting</li> </ul>
5. Workplace requirements	<ul style="list-style-type: none"> <li>5.1. Goals and objectives</li> <li>5.2. Strategic and Operational Plans</li> <li>5.3. Systems and Processes</li> <li>5.4. Monitoring and Evaluation</li> <li>5.5. Reports and Documentation</li> </ul>
6. Tools, equipment and materials	Refers to all tools, equipment and materials appropriate to any of the constructions fields
7. Problem-solving strategies	<ul style="list-style-type: none"> <li>7.1. Asking questions</li> <li>7.2. Feedback and Feed forward system</li> <li>7.3. Reference to Standard Operating Procedures</li> <li>7.4. Accessing Information</li> <li>7.5. Reviews</li> <li>7.6. Brainstorming</li> </ul>
8. OHS	<ul style="list-style-type: none"> <li>8.1. Reporting hazards, risks and emergencies</li> <li>8.2. Arrangement of workplaces</li> <li>8.3. Standard Operating Procedure</li> <li>8.4. Workplace environment and safety</li> <li>8.5. Safe storage of tools and equipment</li> <li>8.6. Use of PPE</li> </ul>

### Evidence Guide

1. Critical aspects of competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Demonstrated knowledge in working in the construction sector</li> <li>1.2 Satisfying all the requirements mentioned in the Performance Criteria and Range of Variables</li> </ul>
2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1. Scope and Major Divisions of the Construction Sector</li> <li>2.2. Relevant Policies and Guidelines in the Construction Sector</li> <li>2.3. Manuals used in the Construction Sector</li> <li>2.4. Relevant Terminologies and Acronyms</li> <li>2.5. Types and Uses of Construction Tools and Materials</li> </ul>

	<p>2.6. Workplace Practices</p> <p>2.7. Occupational Health and Safety Practices</p> <p>2.8. Recording and Reporting practices</p>
3. Underpinning Skills	<p>3.1. Describing organization structure</p> <p>3.2. Identifying construction processes and procedures</p> <p>3.3. Identifying tools, equipment and materials</p> <p>3.4. Identifying workplace practices</p> <p>3.5. Organizing own workload</p> <p>3.6. Practicing OHS</p>
4. Underpinning Attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Environmental concerns</p> <p>4.3 Eagerness to learn</p> <p>4.4 Tidiness and timeliness</p> <p>4.5 Respect for rights of peers and seniors in workplace</p>
5. Resource Implications	<p>5.1 Pens</p> <p>5.2 Telephone</p> <p>5.3 Computer</p> <p>5.4 Writing materials</p> <p>5.5 Online communication</p>
6. Method of Assessment	<p>Competency should be assessed by</p> <p>6.1 Workplace observation</p> <p>6.2 Demonstration</p> <p>6.3 Oral Interview</p> <p>6.4 Written examination</p> <p>6.5 Portfolio</p>
7. Context of Assessment	<p>For certification competency should be assessed individually in the actual work place after completion of the module.</p>

#### **Accreditation Requirements**

Training providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification.

Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

Unit of Competency	<b>Interpret Drawings and Specifications in Construction Manuals</b>
Unit Code	CON010212A
Unit Descriptor	This unit covers the knowledge, skill and attitude required in interpreting drawings and specifications in construction documents.  It includes the following steps: identify information, identify drawings and specifications, interpret drawings and specifications, and apply occupational health and safety procedures.
Nominal Hours	30 hours

<b>Elements of Competency</b>	<b>Performance Criteria</b> Bold italicized words are detailed in the Range of Variables
1. Identify information from manuals	1.1. Appropriate <b><i>manuals</i></b> 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 <b><i>drawings</i></b> and <b><i>specifications</i></b> are correctly identified. 2.2. <b><i>Terms and abbreviations</i></b> are identified. 2.3. <b><i>Signs and symbols</i></b> are identified
3. Interpret drawings and specifications	3.1. Drawings and specifications are interpreted. 3.2. Schedules, dimensions and specifications contained in the drawings are interpreted.
4. Store manuals	4.1. Documents are collected and packed. 4.2 Documents are stored to prevent damage, and ready access and updating of information when required.

### Ranges of Variables

<b>Variable</b>	<b>Range</b> (Include but are not limited to):
1. Documents	1.1 Manufacturer's Specification Manual 1.2 Repair Manual 1.3 Maintenance Procedure Manual 1.4 Periodic Maintenance Manual 1.5. Quality Manual

	1.6. Manual of Instruction
2. Drawings	2.1. Technical Drawings 2.2. Sketch
3. Specifications	3.1. Product specifications 3.2. Performance specifications 3.3. Method specifications
4. Instructions	4.1. Orders 4.2. Special Orders
5. Terms and abbreviations	Refers to all terms and abbreviations associated with the construction sector
6. Signs and symbols	Include all signs and symbols associated with the construction sector

### Evidence Guide

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Interpret drawings and specifications in construction documents 1.2. Satisfying the requirements mentioned in the Performance Criteria and Range of Variables
2. Underpinning knowledge	2.1 Types of Construction Manuals 2.2 Identification of Signs and Symbols 2.3 Identification of Units of Measurement 2.4 Identification of Units of Conversion 2.5. Drawings and Specifications 2.6. Terms and Abbreviations Used
3. Underpinning skills	3.1. Identifying appropriate manuals 3.2. Identifying drawings and specifications 3.3. Interpreting drawings and specifications 3.4. Storing manuals
4. Underpinning Attitude	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	5.1 Pens 5.2 Telephone 5.3 Computer 5.4 Writing materials 5.5 Online communication

6. Methods of assessment	Competency should be assessed by 6.1 Workplace observation 6.2 Demonstration 6.3 Oral Interview 6.4 Written examinations 6.5 Portfolio
7. Context of assessment	For certification competency should be assessed individually in the actual work place after completion of the module.
<p><b>Accreditation Requirements</b></p> <p>Training providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification.</p> <p>Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	



Unit of Competency	<b>Use Hand Tools and Power Tools for the Construction Sector</b>
Unit Code	CON0100312A
Unit Descriptor	This unit covers the skills, knowledge and attitude in using hand tools and power tools for the construction sector.  It includes the following steps: identify tools, use hand tools, use power tools, practice OHS, and clean up.
Nominal Hours	30 hours

<b>Elements of Competency</b>	<b>Performance Criteria</b> Bold italicized words are detailed in the Range of Variables
1. Identify tools	1.1. Appropriate <b><i>tools</i></b> are selected. 1.2. <b><i>Applications</i></b> of tools are defined. 1.3. <b><i>Hand tools</i></b> and <b><i>power tools</i></b> are prepared. 1.4. Sources of power supply for power tools recognized.
2. Use hand tools	2.1. Appropriate tool is used. 2.2. Proper hand-eye coordination is applied in the use of hand tools. 2.3. Unsafe or faulty tools are identified and marked for repair.
3. Use power tools	3.1. Route for power supply established in accordance with worker safety requirements. 3.2. Proper sequence of operations is applied in using power tools to produce results. 3.3. Power tools are used.
4. Perform basic preventive maintenance	4.1. Tools and equipment are cleaned. 4.2. Appropriate lubricants are identified. 4.3. Tools and equipment are lubricated. 4.4. Measuring instruments are checked and calibrated. 4.5. Defective instruments, equipment and accessories are inspected and corrected or replaced 4.6. Tools are inspected, repaired and replaced after use. 4.7. The workplace is cleaned and cleared of debris and unwanted materials.

5. Practice OHS	5.1. <b>PPE</b> are used. 5.2. Waste materials are disposed. 5.3. Hazardous materials are identified for separate handling. 5.4. Devices to suppress dust are used. 5.5. Safety requirements are being adhered to before, during and after use. 5.6. Accidents and emergency cases are reported. 5.7. The workplace is cleaned and cleared of debris and unwanted materials.
6. Store tools and equipment	6.1. Inventory of tools equipment are conducted, and recorded as per stock register by using <b>forms</b> . 6.2. Tools and equipment are cleaned and stored safely in appropriate location.

### Range of Variables

Variables	Range (Include but are not limited to):
1. Tools	1.1. Hand Tools 1.2. Power Tools
2. Applications	2.1. Adjusting 2.2. Aligning 2.3. Assembling 2.4. Boring 2.5. Clamping 2.6. Cleaning 2.7. Cutting 2.8. Dismantling 2.9. Finishing 2.10. Hand sharpening 2.11. Lubricating 2.12. Scraping 2.13. Simple Tool Repairs 2.14. Threading 2.15. Tightening
3. Hand tools	3.1. Adjustable spanners 3.2. Auger bits 3.3. Bars (crow and pitch) 3.4. Bench vise

	3.5. Bolt cutters
	3.6. Brace
	3.7. C-clamp
	3.8. Chisels
	3.9. Crosscut saws
	3.10. Die and stock
	3.11. Drill bits
	3.12. Files of all cross-sectional shapes and types
	3.13. Gouges
	3.14. Grin let
	3.15. Hacksaw
	3.16. Hammer
	3.17. Hand drill
	3.18. Hand saw
	3.19. Measuring Tapes
	3.20. Nips
	3.21. Paint Brushes/Rollers
	3.22. Picks/Mattocks
	3.23. Pliers
	3.24. Plumb bob
	3.25. Punches
	3.26. Rip saw
	3.27. Scarpers
	3.28. Screwdrivers
	3.29. Sealant Gun
	3.30. Shovel/Spades
	3.31. Sledge Hammers
	3.32. Sockets
	3.33. Spanners and Wrenches
	3.34. Spatula/Putty Knives
	3.35. Steel tape measure
	3.36. String Lines
	3.37. Taps
	3.38. Trowels and Floats
	3.39. Try square
	3.40. Vice grip
	3.41. Wire Cutters
	3.42. Wood Planners

4. Power Tools	<ul style="list-style-type: none"> <li>4.1. Power Drills</li> <li>4.2. Nail guns</li> <li>4.3. Angle Grinders</li> <li>4.4. Pneumatic wrenches</li> <li>4.5. Grinders</li> <li>4.6. Nibblers</li> <li>4.7. Threading machine</li> <li>4.8. Sanders Machine</li> <li>4.9. Planers</li> <li>4.10. Routers</li> <li>4.11. Pedestal drills</li> <li>4.12. Pedestal grinders</li> </ul>
5. Instructions	<ul style="list-style-type: none"> <li>5.1. Manufacturer's Specifications and Instructions for specific tools/equipment</li> <li>5.2. Workplace orders and instructions</li> <li>5.3. Work schedule documentation</li> <li>5.4. Procedures</li> </ul>
6. PPE	<ul style="list-style-type: none"> <li>6.1. Dust mask</li> <li>6.2. Safety glasses/Goggles</li> <li>6.3. Gloves</li> <li>6.4. Safety shoes/boots</li> <li>6.5. Aprons</li> <li>6.6. Face masks</li> <li>6.7. Overalls</li> <li>6.8. Safety Helmet</li> </ul>
7. Forms	<ul style="list-style-type: none"> <li>7.1. Maintenance schedule forms</li> <li>7.2. Requisition slip</li> <li>7.3. Inventory Form</li> <li>7.4. Inspection Forms</li> <li>7.5. Procedures</li> </ul>

### Evidence Guide

1. Critical aspects of competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Demonstrated knowledge in using hand tools and power tools</li> <li>1.2 Satisfied the requirements mentioned in the</li> </ul>
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	Performance Criteria and Range of Variables
2. Underpinning knowledge	2.1. Types of Tools 2.1.1. Hand Tools 2.1.2. Power Tools 2.2. Technical Application of Tools 2.3. Procedures in the Use of Hand Tools and Power Tools 2.4. Policies and procedures for Occupational health and Safety 2.4.1. Use of PPE 2.4.2. Handling of Tools and Equipment 2.4.3. Reporting and Documentation 2.5. Preventive Maintenance 2.5.1. Methods and Techniques 2.5.2. Quality Procedures 2.6. Storage Procedures
3. Underpinning Skills	3.1. Identifying Appropriate Tools 3.2. Using Hand Tools Correctly 3.3. Using Power Tools Correctly 3.4. Performing Preventive Maintenance 3.5. Practicing OHS 3.6. Storing tools and equipment 3.7. Cleaning Up
4. Underpinning Attitude	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	The following resources must be provided 5.1. Adequate workplace 5.2. Availability of construction materials 5.3. Tools and equipment appropriate to the construction process 5.4. Information and documentation 5.5. Product specifications 5.6. Manual, Codes, Standards and reference materials
6. Method of Assessment	Competency should be assessed by

	6.1 Workplace observation 6.2 Demonstration 6.3 Oral Interview 6.4 Written examinations 6.5 Portfolio
7. Context of Assessment	For certification competency should be assessed individually in the actual work place after completion of the module.
<p><b>Accreditation Requirements</b></p> <p>Training providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification.</p> <p>Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

### Section 5: The Occupation Specific Competencies

Unit Competency	<b>Prepare Masonry Mortar</b>
Unit Code	CONMAS010112A
Unit Descriptor	This unit covers the knowledge, skills and attitude required to Prepare Masonry Mortar.  It includes Collect tools equipments and materials, preparing platform, preparing mortar and cleaning the work place for masonry work.
Nominal hrs	39 hours

<b>Elements of Competency</b>	<b>Performance Criteria</b> <i><b>Bold italicized</b></i> words are detailed in the Range of Variables
1. Collect tools materials	1.1 <b>PPE</b> are selected and used. 1.2 <b>Tools Equipment &amp; Materials</b> are selected and collected
2. Prepare Platform	2.1 Platform area is selected. 2.2 Platform area is cleaned. 2.3 Platform area is prepared as per instruction.
3. Prepare mortar	3.1 <b>Transport</b> is used to carry materials at the working place. 3.2 Sand and cement ratio are maintained and measured. 3.3 <b>Materials</b> are laid on Platform as per instruction. 3.4 Sand, cement and water are mixed.
4. Clean the work place	4.1 Tools & equipment are cleaned. 4.2 Platform area is cleaned. 4.3 Waste materials are disposed in proper place.

**Range of Variables**

<b>Variables</b>	<b>Range</b> (Include but not limited to):
1. PPE	1.1 Dust mask. 1.2 Goggles. 1.3 Safety shoes. 1.4 Apron. 1.5 Hand Gloves. 1.6 Safety Helmet
2. Tools and Equipment	2.1 Measuring box/Fera 2.2 Sieve 2.3 Shovel 2.4 Pan 2.5 Bucket 2.6 Mug
3. Transport	3.1 Trolley /Wheel barrow 3.2 Rickshaw Van
4. Materials	4.1 Sand 4.2 Cement 4.3 Water 4.4 Waste cotton

**Evidence Guide**

1. Critical Aspects of Competency	Assessment required evidence that the candidate: 1.1 Prepared platform properly 1.1 Maintained ratio of sand, cement and water 1.2 Mixed materials as per Instruction.
2. Underpinning knowledge	2.1 Mortar mixing tools and equipment and their function 2.2 Mortar mixing ratio 2.3 Mortar preparation procedure
3. Underpinning skills	3.1 Preparing platform 3.2 Determining ratio of sand and cement 3.3 Preparing mortar
4. Underpinning Attitude	4.1 Commitment to occupational health and safety 4.2 Environmental concerns



	<p>4.3 Eagerness to learn</p> <p>4.4 Tidiness and timeliness</p> <p>4.5 Respect for rights of peers and seniors in workplace</p>
5. Resource Implication	<p>The following resources should be provided</p> <p>5.1 Workplace location.</p> <p>5.2 Tools and equipment are available.</p> <p>5.3 Materials relevant to proposed activity.</p> <p>5.4 Drawing and specifications relevant to the task.</p>
6. Methods of Assessment	<p>Competency should be assessed by</p> <p>6.1 Workplace observation</p> <p>6.2 Demonstration</p> <p>6.3 Oral Interview</p> <p>6.4 Written examinations</p> <p>6.5 Portfolio</p>
7. Context of Assessment	<p>For certification competency should be assessed individually in the actual work place after completion of the module.</p>
<p><b>Accreditation Requirements</b></p> <p>Training providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification.</p> <p>Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

Unit Competency	<b>Perform Paving Work</b>
Unit Code	CONMAS0100212A
Unit Descriptor	This unit covers the knowledge, skills and attitude required to perform paving work. It includes: collecting materials; preparing paving materials; preparing the base for paving; and finishing the work.
Nominal Hours	48 hours

<b>Elements Of Competency</b>	<b>Performance Criteria</b> <i><b>Bold italicized</b></i> words are detailed in the Range of Variables
1. Collect materials	1.1 <b>PPE</b> is selected and used. 1.2 Bricks, Paving tiles & Block are selected. 1.3 Bricks, Paving tiles & Block are collected and stocked at work site.
2. Prepare paving materials	2.1 <b>Tools &amp; equipment</b> are collected for preparing Paving. 2.2 Brick, Paving tiles and block are broken into specified sizes by power saw or Paving tile cutters. 2.4 Site is identified and located. 2.5 Cement and water are mixed for grouting by maintaining ratio. 2.3 Materials, tools and machines are carried to the work site.
3. Prepare base for paving	3.1 Base is selected. 3.2 Unnecessary materials are removed from the site. 3.3 Base is leveled. 3.4 Cement grouting is prepared & used as per instruction.
4. Place paving Brick, Paving tiles & blocks in the work area	4.1 Paving line is aligned in the work site. 4.2 Paving line and perpendicular line are set up at two ends of the line. 4.3 Paving blocks is placed and leveled.
5. Finish the work	5.1 Gap between blocks or bricks are filled up with appropriate fillers. 5.2 Unnecessary materials are removed and

	cleaned from blocks or bricks.
6. Clean the work place	6.1 Tools and equipment are cleaned 6.2 Work place is cleaned 6.3 Waste materials are disposed in proper place.

**Range of Variables**

<b>Variables</b>	<b>Range</b> (Include but not limited to):
1. PPE	1.1 Dust mask. 1.2 Goggles. 1.3 Safety shoes. 1.4 Apron. 1.5 Hand Gloves.
2. Tools and Equipment	2.1 Measuring Tape (30m) 2.2 Try square 2.3 Pocket tape (3m) 2.4 Claw hammer / crow bar 2.5 Center pins 2.6 Water tube 2.7 Wooden gauge 2.8 Safety Kit 2.9 Masonry Trowel 2.10 Concrete pans 2.11 Pre-cast concrete components 2.12 Buckets 2.13 Trolley 2.14 Van
3. Materials	3.1 Brick 3.1.1 1 <sup>st</sup> class 3.1.2 2 <sup>nd</sup> class 3.1.3 3 <sup>rd</sup> class 3.2 Concrete 3.3 Sand 3.4 Cement 3.5 Concrete Tile 3.6 Waste cotton

**Evidence Guide**

1. Critical Aspects of Competency	<p>Assessment required evidence that the candidate:</p> <p>8.1 Prepare bricks, tiles and block into specified sizes</p> <p>1.2 Aligned paving lines</p> <p>1.3 Mixed sand, cement and water according to the ratio.</p> <p>1.4 Set paving bricks, tiles and block.</p>
2. Underpinning knowledge	<p>2.1 Different types of paving work</p> <p>2.2 Quality of materials used for paving work</p> <p>2.3 Tools, equipment and machinery used for paving work</p>
3. Underpinning skills	<p>3.1 Select and use tools, equipment &amp; machinery related to the paving work</p> <p>3.2 Selecting appropriate materials as per schedule</p> <p>3.3 Preparing grouting</p> <p>3.4 Preparing base</p> <p>3.5 Aligning paving line</p> <p>3.6 Setting of paving block</p> <p>3.7 Removing Materials</p>
4. Underpinning Attitude.	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Environmental concerns</p> <p>4.3 Eagerness to learn</p> <p>4.4 Tidiness and timeliness</p> <p>4.5 Respect for rights of peers and seniors in workplace</p>
5. Resource Implications	<p>The following resources should be provided-</p> <p>5.1 Workplace location.</p> <p>5.2 Tools and equipment are available.</p> <p>5.3 Materials relevant to proposed activity.</p>

	5.4 Drawing and specifications relevant to the task.
6. Methods of Assessment	Competency should be assessed by 6.1 Workplace observation 6.2 Demonstration 6.3 Oral Interview 6.4 Written examinations 6.5 Portfolio
7. Context of Assessment	For certification competency should be assessed individually in the actual work place after completion of the module.
<p><b>Accreditation Requirements</b></p> <p>Training providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification.</p> <p>Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

Unit Competency	<b>Perform Basic Masonry Works</b>
Unit Code	CONMAS0100312A
Unit Descriptor	This unit covers the knowledge, skills and attitude required to perform basic masonry works. It includes collecting tools and materials at site, preparing for brickworks, preparing cement mortar and Setting out brick work for masonry.
Nominal Hours	45 hours

<b>Elements Of Competency</b>	<b>Performance Criteria</b> <i><b>Bold italicized</b></i> words are detailed in the Range of Variables
1. Collect tools and materials at site	1.1 <b>PPE</b> is selected & used. 1.2 <b>Transports</b> are used for carrying materials. 1.3 Scaffolding is set for masonry works. 1.4 Tools and materials are kept for easy working.
2. Prepare bricks	2.2 <b>Bricks</b> are <i>cleaned &amp; soaked</i> . 2.1 Quality of bricks are checked
3. Prepare cement mortar	3.1 Quality of cement, sand and water are determined. 3.2 Ratio of sand, cement and water are decided. 3.3 Sand, cement and water are mixed.
4 Layout for brick work	4.1 Centre lines of the brick work of Construction is measured and marked as per drawing. 4.2 Levels marks are obtained to set out complicated levels from given reference. 4.3 Different levels of building structure are obtained by transferring levels from one point to the other using spirit level or dumpy level. 4.4 Linear and angular measurements are marked as required. 4.5 Offset measurements are taken and checked according to drawing or instructions given. 4.6 String lines are established using threads to facilitate trenching without disturbing the set out marking.

5. Perform brick work	<p>5.1 Bricks are watered for laying as per instruction.</p> <p>5.2 Cement mortar are applied uniformly.</p> <p>5.3 <b>Bricks</b> are laid and aligned along the set out lines following accepted bond patterns.</p> <p>5.4 Brick closer and bats are used to various standard shapes and sizes as required when laying.</p> <p>5.5 Brick joints are filled up with mortar for better adhesion.</p> <p>5.6 Brick courses are aligned vertically &amp; horizontally as per drawing</p> <p>5.7 Racking out of brick joints are done as per instruction.</p>
6. Clean the work place	<p>6.1 Tools and equipment are cleaned</p> <p>6.2 Work place is cleaned</p> <p>6.3 Waste materials are disposed in proper place.</p>

**Range of Variables**

<b>Variables</b>	<b>Range</b> (Include but are not limited to):
1. PPE	1.1 Safety shoes 1.2 Safety Gloves 1.3 Safety helmet 1.4 Body harness/ Safety belt 1.5 Proper clothes (long sleeves and long pants)
2. Transport	2.1 Track 2.2 Trolley 2.3 Pickup 2.4 Van
3. Plans	3.1 Drawings 3.2 Scale 3.3 Measurement 3.4 Electrical plans 3.5 Architectural plans 3.6 Masonry plan
4. Tools & equipment	4.1 Measuring tap (30m) 4.2 Masonry Trowel 4.3 Try square 4.4 Spirit level 4.5 Plumb bob 4.6 Water Tube 4.7 Cold chisel 4.8 Center pegs 4.9 Steel tap (3m) 4.10 Pointing trowel 4.11 Spade 4.12 Shovel 4.13 Pans 4.14 Buckets 4.15 Brush 4.16 Pegs 4.18 Scaffolding



	4.19 Sieve
5. Materials	5.1 Brick 5.2 Cement 5.3 Sand 5.4 Water 5.5 Adhesives 5.6 Nails 5.7 Thread
6. Quality	6.1 Size 6.2 shape 6.3 Color

### Evidence Guide

1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 Interpreted and identified drawing. 1.2 Maintained sand cement ratio. 1.3 Maintained water cement ratio for required consistency. 1.4 Marked center line and levels. 1.5 Marked angular and linear measurement 1.6 Taken and checked offset measurement 1.7 Filled up brick joints 1.8 Checked thickness of brick courses 1.9 Checked horizontal & vertical alignment.
2. Underpinning knowledge	2.1 Reading and interpretation of drawings, 2.2 Methods of communication as practiced at construction site 2.3 Quality of cement, sand, water and bricks 2.4 Tools and equipment 2.5 Stretcher, English and Flemish bonds 2.6 Mortar preparation 2.7 Brick work setting
3. Underpinning skills	3.1 Interpreting of drawings 3.2 Selecting of appropriate materials, tools and equipment. 3.3 Preparing of materials, tools and equipment

	<p>for the size of the works</p> <p>3.4 Handling of tools and equipment.</p> <p>3.5 Laying of bricks uniformly</p> <p>3.6 Fixing of levels</p> <p>3.7 Transferring of levels</p> <p>3.8 Establishing lines for laying of bricks</p> <p>3.9 Aligning of bricks</p> <p>3.10 Mixing of cement, sand and water</p> <p>3.11 Filling up of joints</p> <p>3.12 Working on temporary platform and at height</p>
4. Underpinning Attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Environmental concerns</p> <p>4.3 Eagerness to learn</p> <p>4.4 Tidiness and timeliness</p> <p>4.5 Respect for rights of peers and seniors in workplace</p>
5. Resource implications	<p>The following resources should be provided:</p> <p>5.1 Workplace location</p> <p>5.2 Tools and equipment are available</p> <p>5.3 Materials relevant to proposed activity</p> <p>5.4 Drawing and specifications relevant to the task</p>
6. Methods of assessment	<p>Competency should be assessed by</p> <p>6.1 Workplace observation</p> <p>6.2 Demonstration</p> <p>6.3 Oral Interview</p> <p>6.4 Written examinations</p> <p>6.5 Portfolio</p>
7. Context of assessment	<p>For certification competency should be assessed individually in the actual work place after completion of the module.</p>
<p><b>Accreditation Requirements</b></p> <p>Training providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national</p>	

qualification.

Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

Unit Competency	<b>Perform plaster on masonry surface</b>
Unit Code	CONMAS0100412A
Unit Descriptor	This unit covers the knowledge, skills and attitude required to Perform Plaster on masonry surface.  It includes preparing masonry surfaces, performing plastering work and curing on plastering work.
Nominal Hours	48 hours

<b>Elements Of Competency</b>	<b>Performance Criteria</b> Bold italicized words are detailed in the Range of Variables
1. Prepare masonry surfaces for plastering	1.1 Appropriate <b>PPE</b> is collected and used. 1.2 Plans and drawings are interpreted. 1.3 Scaffolding is prepared as required. 1.4 <b>Tools, equipment and Materials</b> are selected and prepared in line. 1.5 Materials are properly staged and must be free from any foreign matters. 1.6 Racking out of joints and chipping are performed as required. 1.7 Surface is <b>prepared</b> for plastering.
2. Perform plaster on plain surface	2.1 <b>Sand</b> is screened and washed as required. 2.2 Sand and cement mixture is screened before applying water. 2.3 Mortar is prepared as per ratio of sand, cement and clean water. 2.4 Mortar is applied on the surface according to required thickness. 2.5 Distribution of mortar is applied on the surface evenly and leveled. 2.6 Plastering surface is cured as required.
3. Perform corner plastering	3.1 Jamb is set. 3.2 Sill is prepared and set. 3.3 Right angle, acute angle and obtuse angle are checked and adjusted.
4. Clean the work place	4.1 Tools and equipment are cleaned 4.2 Work place is cleaned 4.3 Waste materials are disposed in proper place.

**Range of Variables**

<b>Variables</b>	<b>Range</b> (Include but are not limited to):
1. PPE	1.1 Safety goggles 1.2 Safety shoes 1.3 Working Gloves 1.4 Dust mask 1.5 Safety belt 1.6 Safety helmet 1.7 Apron
2. Tools and equipment	May include but not limited to : 2.1 Mason's hammer 2.2 Scaffolding 2.3 Steel tape / push-pull rule 2.4 Plumb bob 2.5 Leveling tools (leveling hose, spirit level) 2.6 Nail 2.7 Mortar box/Fera 2.8 Pointed trowel 2.9 Wooden float 2.10 Steel float 2.11 Shovel 2.12 Foam / paper 2.13 Straight edge(large) 2.14 Mason's brush 2.15 Claw hammer
3. Materials	3.1 Cement 3.2 Fine sand 3.3 Water
4. Final checks	4.1. Plumpness 4.2. Levelness 4.3. Corners 4.4. Evenness or flatness of surface
5. Surface preparation	5.1 Cleaning 5.2 Sweeping 5.3 Watering

**Evidence Guide**

1. Critical aspects of competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Interpreted and identified plans and drawings</li> <li>1.2 Performed chipping and racking out of joints.</li> <li>1.3 Watered surface properly</li> <li>1.4 Maintained ratio of sand and cement</li> <li>1.5 Screened sand and cement-sand mixture</li> <li>1.6 Maintained uniform thickness of plastering</li> <li>1.7 Adjusted jamb and sill</li> <li>1.8 Check and adjusted Right angle, Acute angle and Obtuse angle</li> </ul>
2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1 Safe work practices and first aid regulations</li> <li>2.2 Materials staging</li> <li>2.3 Chipping and racking</li> <li>2.4 Surface Sweeping and Watering</li> <li>2.5 Mortar preparation</li> <li>2.6 Plastering</li> <li>2.7 Plastered surface leveling</li> </ul>
3. Underpinning skills	<ul style="list-style-type: none"> <li>3.1 Collecting and using tools and materials</li> <li>3.2 Staging materials</li> <li>3.3 Racking and chipping surface</li> <li>3.4 Screening of sand and cement-sand mixture</li> <li>3.5 Preparing mortar</li> <li>3.6 Performing plaster work</li> <li>3.7 Leveling plastered surface</li> </ul>
4. Underpinning Attitude	<ul style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Environmental concerns</li> <li>4.3 Eagerness to learn</li> <li>4.4 Tidiness and timeliness</li> <li>4.5 Respect for rights of peers and seniors in workplace</li> </ul>
5. Resource implications	<p>The following resources should be provided :</p> <ul style="list-style-type: none"> <li>5.1 Workplace location.</li> <li>5.2 Tools and equipment appropriate to construction processes.</li> <li>5.3 Materials relevant to the proposed activity.</li> <li>5.4 Drawings and specifications relevant to the task.</li> </ul>

6. Methods of Assessment	Competency should be assessed by 6.1 Observation 6.2 Demonstration 6.3 Oral Interview 6.4 Written examinations 6.5 Portfolio
7.Context of assessment	For certification competency should be assessed individually in the actual work place after completion of the module.
<p><b>Accreditation Requirements</b></p> <p>Training providers must be accredited by Bangladesh Technical Education Board (BTEB), 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 national qualification.</p> <p>Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	





## Annex 2: Bangladesh National Qualifications Framework

TVQF Level	Education Type			Current Qualification Structure	Job Classification
	Pre-Voc	VE	TE		
<b>TVQF 6</b>			Diploma	4-year Diploma	Supervisor/Middle Manager/Sub-Assistant Engineer
<b>TVQF 5</b>		**NSC-V		NSS Master	Highly-Skilled Worker/Supervisor
<b>TVQF 4</b>		**NSC-IV		NSS 1/HSC (Voc) Year 11/12	Skilled Worker
<b>TVQF 3</b>		**NSC-III		NSS 2/SSC (Voc) Year 10	Semi-Skilled Worker
<b>TVQF 2</b>		**NSC-II		NSS 3/SSC (Voc) Year 9	Basic Skilled Worker
<b>TVQF 1</b>		**NSC-I		NSS Basic/ Basic Trade Course	Basic Worker
<b>Pre-Voc 2</b>	*NPVC-II			None	Pre-Vocational Trainee
<b>Pre-Voc 1</b>	*NPVC-I			None	Pre-Vocational Trainee

\*NPVC – National Pre-Vocational Certificate

\*\*NSC – National Skill Certificate

**Annex 3: Qualification Level Descriptors**

<b>BTVQF Level</b>	<b>Knowledge</b>	<b>Skill</b>	<b>Responsibility</b>	<b>Job Class</b>
6	Comprehensive actual and theoretical knowledge within a specific study area with an awareness of the limits of that knowledge.	Specialised and restricted range of cognitive and practical skills required to provide leadership in the development of creative solutions to defined problems	Manage a team or teams in workplace activities where there is unpredictable change Identify and design learning programs to develop performance of team members	Supervisor/Middle-Level Manager/Sub Assistant Engineer
5	Very broad knowledge of the underlying, concepts, principles, and processes in a specific study area	Very broad range of cognitive and practical skills required to generate solutions to specific problems in one or more study areas.	Take overall responsibility for completion of tasks in work or study Apply past experiences in solving similar problems	Highly Skilled Worker/ Supervisor (NSC 4)
4	Broad knowledge of the underlying, concepts, principles, and processes in a specific study area	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	Take responsibility, within reason, for completion of tasks in work or study Apply past experiences in solving similar problems	Skilled Worker
3	Moderately broad knowledge in a specific study area.	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	Work or study under supervision with some autonomy	Semi Skilled worker
2	Basic underpinning knowledge in a specific study area.	Basic skills required to carry out simple tasks	Work or study under indirect supervision in a structured context	Medium Skilled Worker
1	Elementary understanding of the underpinning knowledge in a specific study area.	Limited range of skills required to carry out simple tasks	Work or study under direct supervision in a structured context	Basic Skilled Worker

<b>BTVQF Level</b>	<b>Knowledge</b>	<b>Skill</b>	<b>Responsibility</b>	<b>Job Class</b>
Pre-Voc 2	Limited general knowledge	Very limited range of skills and use of tools required to carry out simple tasks	Work or study under direct supervision in a well-defined, structured context.	Pre-Vocation Trainee (NPVC 2)
Pre-Voc 1	Extremely limited general knowledge	Minimal range of skills required to carry out simple tasks	Simple work or study exercises, under direct supervision in a clear, well defined structured context	Pre-Vocation Trainee (NPVC 1)

**Annex 4: Key for Coding**

Code	Description
Occupational Sector	
RMG	Ready-Made Garments
LEG	Light Engineering
CON	Construction
INF	Informal Sector
Occupation	
MAS	Mason
PLM	Plumbing
PNT	Painter
SFF	Scaffold and Form Fitter
TMS	Tiles and Mosaic Setter
ECN	Electrician
Competencies	
GN	Generic Competencies
CC	Common Competency
CC	Core competency

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