

## What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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## Contents

1. Introduction and Contacts.....P1
2. Qualifications Pack.....P2
3. Glossary of Key Terms .....P4
4. OS Units.....P5
5. Assessment Criteria.....P48

## Introduction

### Qualifications Pack – Foreman Concrete

**SECTOR:** CONSTRUCTION

**SUB-SECTOR:** Real Estate and Infrastructure Construction

**OCCUPATION:** MASONRY

**REFERENCE ID:** CON/Q0110

**ALIGNED TO:** NCO-2004/3112.90

**Foreman Concrete:** This job role is responsible for ensuring completion of overall concreting work within agreed time schedule with desired quality.

**Brief Job Description:** The job role is responsible for reading and interpreting drawings, standards and specifications, ensuring completion of preparatory work prior to concreting and directing and monitoring the execution of concreting works. The job holder also plans, arranges and manages resources and work efficiently in a team ensuring safe practices are adhered to by the team members.

**Personal Attributes:** The individual is expected to be physically and mentally fit to oversee the concreting works at a construction site. The person should be having strong organizational, interpersonal and communication skills along with comprehensive technical knowledge of concrete works and ability to monitor and supervise construction crew.

<b>Job Details</b>	<b>Qualifications Pack Code</b>	CON/Q0202		
	<b>Job Role</b>	Foreman - Concrete		
	<b>Credits (NSQF)</b>	TBD	<b>Version number</b>	1.0
	<b>Sector</b>	Construction	<b>Drafted on</b>	07/05/2015
	<b>Sub-sector</b>	Real Estate and Infrastructure Construction	<b>Last reviewed on</b>	23/05/2015
	<b>Occupation</b>	Masonry	<b>Next review date</b>	23/05/2017
	<b>NSQC Clearance on</b>	05/08/2015		

Job Role	Foreman – Concrete
<b>Role Description</b>	The job role is responsible for reading and interpreting drawings, standards and specifications, ensuring completion of preparatory work prior to concreting, directing and monitoring the execution of concreting works and allocation of work and resources.
<b>NSQF level</b>	5
<b>Minimum Educational Qualifications</b>	Preferably 10 <sup>th</sup> standard
<b>Maximum Educational Qualifications</b>	N.A
<b>Training</b> (Suggested but not mandatory)	Recommended training period of 16-20 weeks as per QP of Foreman - Concrete
<b>Minimum Job Entry Age</b>	18 years
<b>Experience</b>	Desirable: <ol style="list-style-type: none"> <li>Non trained worker : 8 years site experience in same occupation</li> <li>Trained worker: 3 years site experience as a certified Mason Form Finished and Special Concrete</li> </ol>
<b>Applicable National Occupational Standards (NOS)</b>	<b>Compulsory:</b> <ol style="list-style-type: none"> <li><a href="#">CON/N0129: Read and interpret working drawings ,concrete specification and standards for concreting works</a></li> <li><a href="#">CON/N0130: Check and ensure completion of preparatory works prior to concreting</a></li> <li><a href="#">CON/N0131: Direct and monitor the execution of concreting works as per specifications and standard practices</a></li> <li><a href="#">CON/N7001: Plan, arrange and manage resources for execution of relevant work</a></li> <li><a href="#">CON/N8001: Work effectively in a team to deliver desired results at the workplace</a></li> </ol>



	<ol style="list-style-type: none"><li>6. <a href="#">CON/N8002: Plan and organize work to meet expected outcomes</a></li><li>7. <a href="#">CON/N8003: Supervise, monitor and evaluate performance of subordinates at workplace</a></li><li>8. <a href="#">CON/N9002: Manage workplace for safe and healthy work environment</a></li></ol> <p><b>Optional:</b> N.A.</p>
<b>Performance Criteria</b>	As described in the relevant OS units

**Definitions**

Keywords / Terms	Description
Sector	Sector is conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-Sector	Sub-Sector is derived from a further breakdown based on the characteristics and interests of its components
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet the standard consistently. Occupational Standards are applicable both in the Indian contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
Qualifications Pack (QP)	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualification Pack is assigned a unique qualification pack code
Qualification Pack Code	Qualification Pack Code is a unique reference code that identifies a qualifications pack.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context.
Scope	Scope is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on the quality of performance required.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard
Organizational Context	Organizational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills / Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.

**Acronyms**

Keywords /Terms	Description
CON	Construction
NSQF	National Skill Qualifications Framework
QP	Qualification Pack
OS	Occupational Standards
TBD	To Be Decided



CON/N0129 Read and interpret working drawings, concrete specification and standards for concreting works

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# National Occupational Standard



## Overview

This NOS covers the skills and knowledge required by a workman to be proficient in reading & interpreting working drawings, concrete specification and standards for concreting works

**CON/N0129 Read and interpret working drawings, concrete specification and standards for concreting works**

National Occupational Standard

<b>Unit Code</b>	<b>CON/N0129</b>
<b>Unit Title (Task)</b>	<b>Read and interpret working drawings, concrete specification and standards for concreting works</b>
<b>Description</b>	This unit describes the skills and knowledge required to read & interpret working drawings, concrete specification and standards for concreting works
<b>Scope</b>	<p>The scope covers the following:</p> <ul style="list-style-type: none"> <li>• Read &amp; interpret working drawings, concrete specification and standards for concreting works</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Read &amp; interpret working drawings, concrete specification and standards for concreting works</b>	<p>To be competent, the user / individual on the job must be able to:</p> <p>PC1. read &amp; interpret details like location, concrete grade, pour area, pouring volume and reinforcement detail from relevant working drawings for concreting works</p> <p>PC2. read and understand specification provided in the relevant drawing for concreting works</p> <p>PC3. read and understand schedule for concreting works</p> <p>PC4. read ,understand operational standards /manufacture’s specification of all relevant concreting tools and equipment</p> <p>PC5. read and understand method statement for concrete works</p> <p>PC6. read and understand standard technical specification within scope of work</p> <p>PC7. prepare hand sketches for describing work to sub-ordinates</p> <p>PC8. carryout calculation for required quantity of material from structural drawing for reconciliation and records</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. standard practices for concreting works</p> <p>KA2. safety rules and regulations for handling and storing required tools, equipment and materials</p> <p>KA3. personal protection including the use of related safety gears &amp;equipment</p> <p>KA4. how to request tools and materials as per set procedures</p> <p>KA5. maintenance of tools and equipment</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. principles involved in reading and interpreting various relevant drawings</p> <p>KB2. how to read general arrangement drawing</p> <p>KB3. simplified sketch preparation from the drawing</p> <p>KB4. how to read plan, elevation and sectional drawing</p> <p>KB5. manufacturer’s specification/ instructions for various concreting tools and</p>



**CON/N0129 Read and interpret working drawings, concrete specification and standards for concreting works**

	<p>equipment</p> <p>KB6. components, materials and tools used in concreting</p> <p>KB7. basic principal of measurement, arithmetic and geometric calculations</p> <p>KB8. terminology used in concreting</p> <p>KB9. linear conversion of units</p> <p>KB10. units of measurement</p> <p>KB11. basic computer literacy</p>
<b>Skills (S)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. write in at least two languages, preferably in the local language of the site and basic English</p> <p>SA2. provide clear and simple written instructions, details &amp; sketches to subordinates</p> <p>SA3. record and document details regarding daily productivity report, daily labor attendance &amp; work done</p> <p>SA4. prepare basic status updates for the superiors in the prescribed format</p>
	<b>Reading Skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA5. read in at least two languages, preferably in the local languages of the site and basic English</p> <p>SA6. read drawings or instructions/specifications provided for the work</p> <p>SA7. read key documents including quality standards, standards working methods &amp; applicable tolerance limits</p> <p>SA8. read manufacturer's specification and instruction for different concreting works</p> <p>SA9. read various, sign boards, safety rules and safety tags and instructions related to exit routes during emergencies at the work place at the construction site</p>
<b>B. Professional Skills</b>	<b>Decision Making</b>
	<p>The user/individual on the job needs to know and understand how to:</p>

**CON/N0129 Read and interpret working drawings, concrete specification and standards for concreting works**

	SB1. estimate and allocate material and resources required for work SB2. decide on alternate course of action in case of hindrance to work
	<b>Plan and Organize</b>
	The user/individual on the job needs to know and understand how to: SB3. plan work targets, schedules, for workers engaged in concreting works SB4. plan work & organize required resource in coordination with team members and superior
	<b>Customer centricity</b>
	The user/individual on the job needs to know and understand how to: SB5. ensure completion of work as per agreed time schedule and quality
	<b>Problem solving</b>
	The user/individual on the job needs to know and understand how to: SB6. suggest remedial action to workers for corrective action SB7. resolve and solve any conflict within the team
	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB8. estimate required quantity of material from drawing SB9. optimize resources SB10. minimize wastages
	<b>Critical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB11. assess complexity of the tasks and provide guidance for carrying out corrective action as per requirement SB12. identify and assess how violation of any safety norms may lead to accidents



**CON/N0129** Read and interpret working drawings, concrete specification and standards for concreting works

**NOS Version Control**

<b>NOS Code</b>	<b>CON/N0129</b>		
<b>Credits (NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	<b>Construction</b>	<b>Drafted on</b>	<b>07/05/2015</b>
<b>Industry Sub-sector</b>		<b>Last reviewed on</b>	<b>23/05/2015</b>
<b>Occupation</b>	<b>Masonry</b>	<b>Next review date</b>	<b>23/05/2017</b>



# National Occupational Standard



## Overview

This NOS covers the skills and knowledge required by a workman to be proficient in checking & ensuring completion of preparatory work prior to concreting.

**CON/N0131 Direct and monitor the execution of concreting works as per specifications and standard practices**

National Occupational Standard	<b>Unit Code</b>	<b>CON/N0130</b>	
	<b>Unit Title (Task)</b>	<b>Check and ensure completion of preparatory works prior to concreting</b>	
	<b>Description</b>	This unit describes the skills and knowledge required to check and ensure the completion of preparatory works prior to concreting	
	<b>Scope</b>	<p>This scope covers the following:</p> <ul style="list-style-type: none"> <li>Check, inspect and ensure completion of preparatory works prior to concreting at construction site/yard</li> </ul>	
	<b>Performance Criteria (PC) w.r.t. the Scope</b>		
	<b>Element</b>	<b>Performance Criteria</b>	
	<b>Check ,inspect and ensure completion of preparatory works prior to concreting at construction site/yard</b>	To be competent, the user/individual on the job must be able to:	
		PC1. prepare a detailed work plan for execution of concreting work at construction site/yard	
		PC2. check and ensure setting out for concreting work is as per the approved drawings	
		PC3. check and ensure working platforms, hand rails and access stairs are safe for working	
PC4. check and ensure workplace is clear of debris and guard rails, safety nets & kerb boards are in place			
PC5. instruct & ensure that the concrete used is prepared in the specified proportions within the specified workability in case of manual mixing of concrete			
PC6. check the grade of concrete prior to concreting			
PC7. inspect the required formwork/molds for gaps/misalignment of reinforcement/cover			
PC8. inspect and check the formwork/molds for leaks during concreting			
PC9. inspect and ensure cleaning of formwork prior to concreting			
PC10. inspect the shoring and bracing of concrete forms to ensure their stability during pour			
PC11. indicate route and position for pouring of concrete			
PC12. inspect the fixing and setting of pump line ,machinery for pouring of concrete			
PC13. instruct of the use of suitable type of pump w.r.t the discharge and head of concrete			
PC14. record details of the concreting works covering grade of concrete, area and volume of pour, number of workers ,tools and equipment deployed for work and achieved productivity			
PC15. oversee and inspect the pumping of concrete			
<b>Knowledge and Understanding (K)</b>			

**CON/N0131 Direct and monitor the execution of concreting works as per specifications and standard practices**

<p><b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> <li>KA1. standard practices for concreting works</li> <li>KA2. safety rules and regulation for handling and storing required tools, equipment and materials</li> <li>KA3. personal protection including the use of related safety gears &amp; equipment</li> <li>KA4. how to request tools and materials as per set procedures</li> <li>KA5. maintenance of tools and equipment</li> </ul>
<p><b>B. Technical Knowledge</b></p>	<p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> <li>KB1. structural drawings relevant to concreting works</li> <li>KB2. basic principles of measurement along with simple geometry</li> <li>KB3. methodology for estimation of required resource and material</li> <li>KB4. standard tolerance levels for of concreting work</li> <li>KB5. difference and comparison between pre cast and in situ concreting works</li> <li>KB6. appropriate proportions for the mixing of concrete to ensure consistency</li> <li>KB7. appropriate techniques (including use of tools, equipment and material) for all aspects of concreting work (including pouring, screening, leveling and finishing)</li> <li>KB8. methodology for checking line ,level and alignment for various concreting works</li> <li>KB9. methodology of concreting works</li> <li>KB10. different mix proportions for concrete</li> <li>KB11. knowledge of cover to reinforcement with respect to size of reinforcement</li> <li>KB12. knowledge of different type of vibrators, their influence area and use</li> <li>KB13. knowledge of construction and expansion joints</li> <li>KB14. how to inspect shoring and bracing of concrete forms</li> <li>KB15. fixing of pump line for concrete flow</li> <li>KB16. knowledge of different type on concrete pumps with respect to head and f flow of concrete</li> <li>KB17. basic computer literacy</li> <li>KB18. preventive and corrective action to ensure the completion of preparatory works prior to concreting</li> </ul>
<p><b>Skills (S)</b></p>	
<p><b>A. Core Skills/ Generic Skills</b></p>	<p><b>Writing Skills</b></p> <p>The user/ individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SA1. write in at least two language, preferably in the local language of the site and basic English</li> <li>SA2. provide clear and simple written instructions, details and sketches to subordinates</li> <li>SA3. record and document details regarding daily productivity report, daily labor attendance &amp; work done</li> </ul>

**CON/N0131 Direct and monitor the execution of concreting works as per specifications and standard practices**

<b>B. Professional Skills</b>	SA4. prepare basic status updates for the superiors in the prescribed format
	<b>Reading Skills</b>
	The user/ individual on the job needs to know and understand how to:
	SA5. read in at least two language, preferably in the local language of the site and basic English
	SA6. read various types of drawing related to structural works
	SA7. read key documents including details capturing quality standards, standards working methods
	SA8. read instructions, guidelines, sign boards, safety rules and safety practices
	SA9. read instructions and exit routes during emergencies at the work place
	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/ individual on the job needs to know and understand how to:
	SA10. speak in at least two language, preferably in one of the local languages of the site and basic English
	SA11. listen and follow instructions given by the supervisor
SA12. provide clear instructions to subordinates for completion of task as per work plan, time schedule and quality	
<b>Decision Making</b>	
The user/individual on the job needs to know and understand how to:	
SB1. decide whether workplace is safe for working and also his work is not creating hazardous conditions for other	
SB2. decide on acceptance criteria for the checked work	
SB3. decide on correct method to be adopted for checking	
SB4. decide alternate course of action in case of hindrance to work	
SB5. decide on material and resource requirement for assigned activity	
<b>Plan and Organize</b>	
The user/individual on the job needs to know and understand how to:	
SB6. plan work & organize required resource in coordination with team members and superiors	
SB7. plan work targets, schedules, for workers engaged in concreting works	
<b>Customer centricity</b>	
The user/individual on the job needs to know and understand how to:	
SB8. ensure satisfaction for level of productivity under given condition	
SB9. ensure completion of work as per agreed time schedule and quality	
<b>Problem solving</b>	

**CON/N0131 Direct and monitor the execution of concreting works as per specifications and standard practices**

	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SB10. rectify the setting/alignment or level of surface relevant to task</li> <li>SB11. resolve and solve any conflict within the team</li> </ul>
	<p><b>Analytical Thinking</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SB12. reconcile material consumption</li> <li>SB13. optimize resources</li> <li>SB14. minimize wastages</li> <li>SB15. assess quantity and quality of materials for day work</li> </ul>
	<p><b>Critical Thinking</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SB16. assess complexity of task and carry out corrective action as per requirement</li> <li>SB17. identify and assess how violation of any safety norms may lead to accidents</li> </ul>





**CON/N0131 Direct and monitor the execution of concreting works as per specifications and standard practices**

**NOS Version Control**

<b>NOS Code</b>	<b>CON/N0130</b>		
<b>Credits (NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	<b>Construction</b>	<b>Drafted on</b>	<b>07/05/2015</b>
<b>Industry Sub-sector</b>	<b>Real Estate and Infrastructure Construction</b>	<b>Last reviewed on</b>	<b>23/05/2015</b>
<b>Occupation</b>	<b>Masonry</b>	<b>Next review date</b>	<b>23/05/2017</b>



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CON/N0131 Direct and monitor the execution of concreting works as per specifications and standard practices

# National Occupational Standard



## Overview

This NOS covers the skills and knowledge required by a workman to be proficient in directing and monitoring the execution of concreting works as per specifications and standard practices

**CON/N0131 Direct and monitor the execution of concreting works as per specifications and standard practices**

National Occupational Standard	<b>Unit Code</b>	<b>CON/N0131</b>
	<b>Unit Title (Task)</b>	<b>Direct and monitor the execution of concreting works as per specifications and standard practices</b>
	<b>Description</b>	This unit describes the skills and knowledge required to direct and monitor the execution of concreting works as per the specifications and standard practices and carry out checks and corrective action as per requirement.
	<b>Scope</b>	<p>This scope covers the following:</p> <ul style="list-style-type: none"> <li>• Ensure execution of concreting in formwork/precast molds and for form finished structures as per standard practices and specification</li> <li>• Ensure execution of concreting in extreme hot/cold weather as per standard practices and specification</li> <li>• Examine concrete after stripping forms and instruct works to repair concrete as per applicability</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>		
<b>Element</b>	<b>Performance Criteria</b>	
<b>Ensure execution of concreting in formwork/precast molds and for form finished structures as per standard practices and specification</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. visually assess the workability and usability of concrete mix &amp; discard detrimental concrete mix</p> <p>PC2. oversee and inspect the pumping of concrete to various structures</p> <p>PC3. prescribe method for pouring, leveling and finishing of concrete as per standard practices and specifications</p> <p>PC4. conduct checks and inspections to ensure that:</p> <ul style="list-style-type: none"> <li>• concrete is poured from required height</li> <li>• concrete does not scrape form or mould</li> <li>• correct type of vibrator is used in the specified manner</li> </ul> <p>PC5. inspect and assist in using tools and equipment relevant to task</p> <p>PC6. ensure that concrete is compacted to desired consistency and surface is finished to specified uniformity and smoothness/finish</p> <p>PC7. ensure leveling of edges and corners within tolerance levels</p> <p>PC8. direct and monitor the grooving/cutting for expansion/contraction joints</p> <p>PC9. ensure that the appropriate technique for finishing of concrete works like broom finish, float and trowel finish etc. has been employed as per drawing</p> <p>PC10. ensure synchronization of all above concreting activities to ensure rapid placement and compaction of concrete with respect to the setting time of concrete in case of form finished structure</p> <p>PC11. prescribe method and monitor curing of concrete</p> <p>PC12. highlight errors to workers, suggest remedial action &amp; demonstrate correct work processes as per applicability</p>	

**CON/N0131 Direct and monitor the execution of concreting works as per specifications and standard practices**

<p><b>Ensure execution of concreting in extreme hot/cold weather as per standard practices and specification</b></p>	<p>PC13. monitor wind, air, concrete temperature and humidity</p> <p>PC14. manage schedule of concreting in accordance with the temperature change in day and night as per hot/cold weather concreting</p> <p>PC15. provide sunshades/windbreaks/heated enclosures as per the concreting requirement</p> <p>PC16. check that evaporative retarders/anti-freeze is used in hot/cold weather concreting</p> <p>PC17. ensure correct preventive measures are taken wrt the hot/cold weather concreting</p> <p>PC18. ensure rapid placement and compaction of concrete as per concreting requirement</p> <p>PC19. monitor the placing and grooving/cutting of expansion/construction joint as per concreting requirement</p> <p>PC20. monitor the curing of concrete for a specified period of time in hot/cold weather concreting</p>
<p><b>Examine concrete after stripping forms and instruct works to repair concrete as per applicability</b></p>	<p>PC21. examine concrete after stripping of forms for surface deformities and defects</p> <p>PC22. direct the removal and repair of concrete with porosity, honey comb, or segregated materials, as approved by senior/client</p> <p>PC23. prescribe method for repair as per applicability</p> <p>PC24. ensure proper curing of repaired concrete</p>
<p><b>Knowledge and Understanding (K)</b></p>	
<p><b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. standard practices for concreting works</p> <p>KA2. safety rules and regulation for handling and storing required tools, equipment and materials</p> <p>KA3. personal protection including the use of related safety gears &amp; equipment</p> <p>KA4. how to request tools and materials as per set procedures</p> <p>KA5. maintenance of tools and equipment</p>

**CON/N0131 Direct and monitor the execution of concreting works as per specifications and standard practices**

<p><b>B. Technical Knowledge</b></p>	<p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> <li>KB1. structural drawings relevant to concreting works</li> <li>KB2. basic principles of measurement along with simple geometry</li> <li>KB3. methodology for estimation of required resource and material</li> <li>KB4. standard tolerance levels for all aspects of concreting work (including pouring, screening, leveling and finishing)</li> <li>KB5. difference and comparison between pre cast and in situ concreting works</li> <li>KB6. basic properties and mix proportions of concrete</li> <li>KB7. appropriate proportions for the mixing of concrete to ensure consistency</li> <li>KB8. appropriate techniques (including use of tools, equipment and material) for all aspects of concreting work (including pouring, screening, leveling and finishing)</li> <li>KB9. methodology for checking line ,level and alignment for various concreting works</li> <li>KB10. methodology of concreting works in horizontal, vertical and inclined surfaces</li> <li>KB11. different type of high quality concrete finish</li> <li>KB12. sequence of pour</li> <li>KB13. variation of slump w.r.t rate of pour</li> <li>KB14. different type of vibrators used(internal/external vibrators),their accessibility and influence area</li> <li>KB15. vibration in congested areas</li> <li>KB16. knowledge of Construction joints/cold joints</li> <li>KB17. curing technique of form finished concrete</li> <li>KB18. knowledge of self-compact concrete</li> <li>KB19. initial, final setting of concrete and their checking</li> <li>KB20. correct positioning of the pump hose when pumping the SCC</li> <li>KB21. methodology for hot/cold weather concreting works</li> <li>KB22. major risks associated with hot and cold weather concrete pouring</li> <li>KB23. knowledge of wind breaks, wind velocity</li> <li>KB24. different type &amp; use of evaporative retarder/anti-freeze compound</li> <li>KB25. type of defects in concrete</li> <li>KB26. different method of repair of concrete</li> <li>KB27. methods of curing of concrete</li> <li>KB28. basic computer literacy</li> <li>KB29. preventive and corrective action to ensure that the concreting work meets the quality requirements</li> </ul>
<p><b>Skills (S)</b></p>	
<p><b>A. Core Skills/ Generic Skills</b></p>	<p><b>Writing Skills</b></p> <p>The user/ individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SA1. write in at least two language, preferably in the local language of the site and</li> </ul>

**CON/N0131 Direct and monitor the execution of concreting works as per specifications and standard practices**

	<p>basic English</p> <p>SA2. provide clear and simple written instructions, details and sketches to subordinates</p> <p>SA3. record and document details regarding daily productivity report, daily labor attendance &amp; work done</p> <p>SA4. prepare basic status updates for the superiors in the prescribed format</p>
	<p><b>Reading Skills</b></p>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA5. read in at least two language, preferably in the local language of the site and basic English</p> <p>SA6. read various types of drawing related to structural works</p> <p>SA7. read key documents including details capturing quality standards, standards working methods</p> <p>SA8. read instructions, guidelines, sign boards, safety rules and safety practices</p> <p>SA9. read instructions and exit routes during emergencies at the work place</p>
	<p><b>Oral Communication (Listening and Speaking skills)</b></p>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA10. speak in at least two language, preferably in one of the local languages of the site and basic English</p> <p>SA11. listen and follow instructions given by the supervisor</p> <p>SA12. provide clear instructions to subordinates for completion of task as per work plan, time schedule and quality</p>
<b>B. Professional Skills</b>	<p><b>Decision Making</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. decide whether work place is safe for working and also relevant task is not creating hazardous condition for others</p> <p>SB2. decide whether work is adequately defined for the day, work front is clear, and adequate materials and tools are available for performing work</p> <p>SB3. decide on material and resource requirement for assigned activity</p> <p>SB4. decide on acceptance criteria for the checked work</p> <p>SB5. decide on correct method to be adopted for checking</p> <p>SB6. decide alternate course of action in case of hindrance to work</p>
	<p><b>Plan and Organize</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB7. plan work &amp; organize required resource in coordination with team members and superiors</p> <p>SB8. plan work targets, allocate time schedule to sub-ordinates and organize completion of task within allocated time</p>



**CON/N0131 Direct and monitor the execution of concreting works as per specifications and standard practices**

	<b>Customer centricity</b>
	The user/individual on the job needs to know and understand how to: SB6. ensure satisfaction for level of productivity under given condition SB7. ensure completion of work as per agreed time schedule and quality
	<b>Problem solving</b>
	The user/individual on the job needs to know and understand how to: SB8. rectify the setting/alignment or level of surface relevant to task SB9. rectify workability of cement mortar mix SB10. resolve and solve any conflict within the team
	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB11. reconcile material consumption SB12. optimize resources SB13. minimize wastages SB14. assess quantity and quality of materials for day work
<b>Critical Thinking</b>	
The user/individual on the job needs to know and understand how to: SB15. assess complexity of task and carry out corrective action as per requirement SB16. identify and assess how violation of any safety norms may lead to accidents	

**CON/N0131 Direct and monitor the execution of concreting works as per specifications and standard practices**

**NOS Version Control**

<b>NOS Code</b>	<b>CON/N0131</b>		
<b>Credits (NSQF)</b>	TBD	<b>Version number</b>	1.0
<b>Industry</b>	Construction	<b>Drafted on</b>	07/05/2015
<b>Industry Sub-sector</b>	Real Estate and Infrastructure Construction	<b>Last reviewed on</b>	23/05/2015
<b>Occupation</b>	Masonry	<b>Next review date</b>	23/05/2017



# National Occupational Standard



## Overview

This NOS covers the skills and knowledge required by a workman to be proficient in planning, arranging and managing resources for execution of relevant work.

**CON/N7001 Plan, arrange and manage resources for execution of relevant work**

National Occupational Standard

<b>Unit Code</b>	<b>CON/N7001</b>
<b>Unit Title (Task)</b>	<b>Plan, arrange and manage resources for execution of relevant work</b>
<b>Description</b>	This unit describes the skills and knowledge required to plan, arrange and manage resources for execution of relevant work
<b>Scope</b>	<p>The scope covers the following:</p> <ul style="list-style-type: none"> <li>• Arrange and manage manpower</li> <li>• Arrange allocate and manage tools, material and equipment</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Arrange and manage manpower</b>	<p>To be competent, the user / individual on the job must be able to:</p> <p>PC1. determine quantum and nature of work under assigned activity            PC2. calculate requirement of manpower for assigned activities            PC3. submit manpower requirement to superiors            PC4. allocate and extract work as per plan            PC5. provide clear instructions to workmen for execution of work            PC6. ensure optimum utilization of manpower resources            PC7. record the daily labour attendance            PC8. record the daily productivity report</p>
<b>Arrange allocate and manage tools, material and equipment</b>	<p>PC9. estimate quantity of assigned work            PC10. estimate requirement for material, components and fixtures            PC11. estimate equipment, tools and accessories required            PC12. submit material, equipment and tool requirement to superiors            PC13. allocate material, equipment and tools to workmen and extract the work as per plan            PC14. provide clear instructions for optimized use of resources</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. standard practices for execution of relevant work            KA2. safety rules and regulations for handling and storing required tools, equipment and materials            KA3. personal protection including the use of related safety gears &amp; equipments            KA4. service request procedures for tools, materials and equipments            KA5. statutory compliance requirement related to workmen engagement</p>

CON/N7001

**Plan, arrange and manage resources for execution of relevant work**

<p><b>B. Technical Knowledge</b></p>	<p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> <li>KB1. construction drawing of relevant work</li> <li>KB2. manpower requirement on the basis of quantum of work and productivity</li> <li>KB3. sequence and priority of activities</li> <li>KB4. how to identify priority and critical activity of relevant task</li> <li>KB5. method and technique on briefing team members about relevant work</li> <li>KB6. different check to evaluate progress and quality of relevant works</li> <li>KB7. importance of daily productivity report</li> <li>KB8. importance of daily attendance register</li> <li>KB9. standard working practices for relevant works</li> <li>KB10. principles of measurements</li> <li>KB11. conversion of units</li> <li>KB12. arithmetic and geometric calculation</li> <li>KB13. how to calculate quantum of relevant work</li> <li>KB14. calculation of tools and material requirement</li> <li>KB15. optimize use of available resources</li> <li>KB16. computer basics auto-cad software application for 2D drawing</li> </ul>
<p><b>Skills (S)</b></p>	
<p><b>A. Core Skills/ Generic Skills</b></p>	<p><b>Writing Skills</b></p>
	<p>The user/ individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SA1. write in at least two language, preferably in the local language of the site and basic English</li> <li>SA2. provide clear and simple instructions, details &amp; sketches to sub-ordinate</li> <li>SA3. record and document daily productivity report, daily labour attendance &amp; details regarding work done</li> <li>SA4. prepare basic status updates for the superiors in the prescribed format</li> </ul>
	<p><b>Reading Skills</b></p>
	<p>The user/ individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SA5. read in one or more language, preferably in the local language of the site</li> <li>SA6. read relevant drawing, specification and standards</li> <li>SA7. read key documents including quality standards, standards working methods &amp; applicable tolerance limits</li> <li>SA8. read manufacturer instruction and specification for relevant work</li> <li>SA9. read various, sign boards, safety rules and safety tags , instruction related to exit routes during emergency at the workplace</li> </ul>
	<p><b>Oral Communication (Listening and Speaking skills)</b></p>
<p>The user/ individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SA10. speak in one or more language, preferably in one of the local languages of the site</li> </ul>	

CON/N7001

**Plan, arrange and manage resources for execution of relevant work**

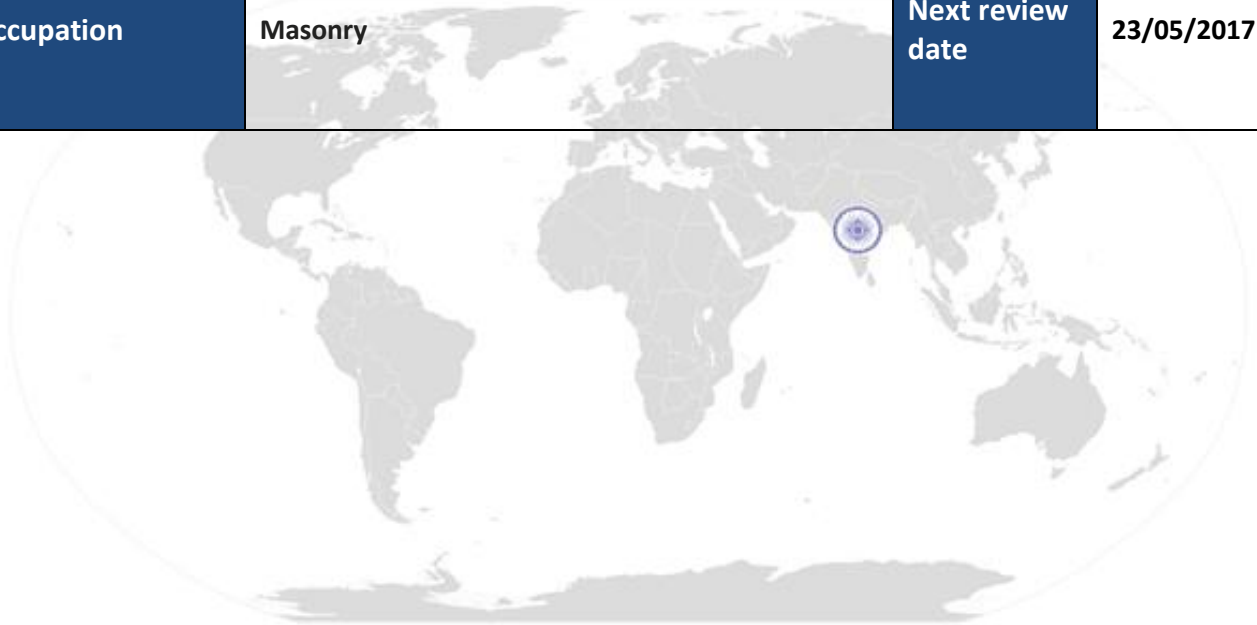
	<p>SA11. listen and follow instructions clearly given by the superior</p> <p>SA12. provide clear instructions to subordinates for completion of task as per work plan, time schedule and quality</p>
<p><b>B. Professional Skills</b></p>	<p><b>Decision Making</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. decide whether workplace is safe for working and also his work is not creating hazardous conditions for other</p> <p>SB2. decide on manpower, tools , material and equipment for relevant work</p> <p>SB3. decide alternate course of action in case of hindrance to work</p>
	<p><b>Plan and Organise</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB4. plan work &amp; organize required resource in coordination with team members and superior</p> <p>SB5. plan work targets, schedules for subordinates for completion of task as per work plan, time schedule and quality</p>
	<p><b>Customer centricity</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB6. ensure completion of work as per agreed time schedule and quality</p>
	<p><b>Problem solving</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB7. suggest remedial action to workers for making corrections</p> <p>SB8. resolve and solve any conflict within the team</p>
	<p><b>Analytical Thinking</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB9. reconcile material consumption</p> <p>SB10. assess quantity of resources required for day work</p> <p>SB11. optimize resources</p> <p>SB12. minimize wastages</p>
<p><b>Critical Thinking</b></p>	
<p>The user/individual on the job needs to know and understand how to:</p> <p>SB13. assess complexity of the tasks and carry out corrective action as per requirement</p> <p>SB14. identify and assess how violation of any safety norms may lead to accidents</p>	



CON/N7001 Plan, arrange and manage resources for execution of relevant work

**NOS Version Control**

<b>NOS Code</b>	<b>CON/N7001</b>		
<b>Credits (NSQF)</b>	TBD	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	Construction	<b>Drafted on</b>	<b>07/05/2015</b>
<b>Industry Sub-sector</b>	Real Estate and Infrastructure Construction	<b>Last reviewed on</b>	<b>23/05/2015</b>
<b>Occupation</b>	Masonry	<b>Next review date</b>	<b>23/05/2017</b>



CON/N8001

Work effectively in a team to deliver desired results at the workplace

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# National Occupational Standard



## Overview

This NOS covers the skill and knowledge required to work effectively within a team to achieve the desired results.

CON/N8001

Work effectively in a team to deliver desired results at the workplace

National Occupational Standard

<b>Unit Code</b>	CON/N8001
<b>Unit Title (Task)</b>	Work effectively in a team to deliver desired results at the workplace
<b>Description</b>	This unit describes the skills and knowledge required to work effectively within a team to achieve the desired results.
<b>Scope</b>	<p>The scope covers the following:</p> <ul style="list-style-type: none"> <li>• Interact and communicate effectively with co-workers, superiors and subordinates across different teams</li> <li>• Support co-workers, superiors and subordinates within the team and across interfacing teams to ensure effective execution of assigned task</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Interact and communicate in effective and conclusive manner</b>	<p>To be competent, the user / individual on the job must be able to:</p> <p>PC1. pass on work related information/ requirement clearly to the team members</p> <p>PC2. inform co-workers and superiors about any kind of deviations from work</p> <p>PC3. address the problems effectively and report if required to immediate supervisor appropriately</p> <p>PC4. receive instructions clearly from superiors and respond effectively on the same</p> <p>PC5. communicate to team members/subordinates for appropriate work technique and method</p> <p>PC6. seek clarification and advice as per the requirement and applicability</p>
<b>Support co-workers to execute project requirements</b>	<p>PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams</p> <p>PC8. work together with co-workers in a synchronized manner</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. own roles and responsibilities</p> <p>KA2. importance of effective communication and establishing strong working relationships with co-workers</p> <p>KA3. risks of a failure in teamwork in terms of effects on project outcomes, timelines, safety at the construction site, etc.</p> <p>KA4. different modes of communication, and its appropriate usage</p> <p>KA5. importance of creating healthy and cooperative work environment among the gangs of workers</p>

CON/N8001

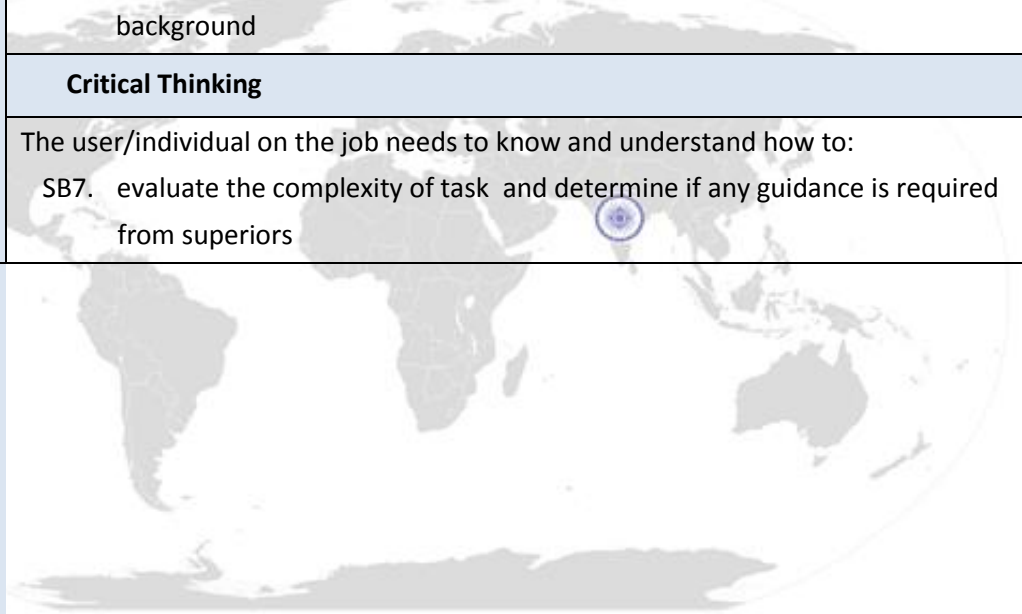
Work effectively in a team to deliver desired results at the workplace

<p><b>B. Technical Knowledge</b></p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. different activities within his work area where an interaction with other workers is required</p> <p>KB2. applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co-workers might need as per the requirement</p> <p>KB3. importance of proper and effective communication and the expected adverse effects in case of failure relating to quality, timelines, safety, risks at the construction project site</p> <p>KB4. importance and need of supporting co-workers facing problems for smooth functioning of work</p>
<p><b>Skills (S)</b></p>	
<p><b>A. Core Skills/ Generic Skills</b></p>	<p><b>Writing Skills</b></p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. write in one or more languages, preferably in the local language of the site</p> <p><b>Reading Skills</b></p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA2. read in one or more languages, preferably in the local language of the site</p> <p>SA3. read communication from team members regarding work completed, materials used, tools and tackles used, support required</p> <p><b>Oral Communication (Listening and Speaking skills)</b></p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA4. speak in one or more languages, preferably in one of the local languages of the site</p> <p>SA5. listen and follow instructions / communication shared by superiors/ co-workers regarding team requirements or interfaces during work processes</p> <p>SA6. orally communicate with co-workers regarding support required to complete the respective work</p>
<p><b>B. Professional Skills</b></p>	<p><b>Decision Making</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. decide on what information is to be shared with co-workers within the team or from interfacing gang of workers</p> <p><b>Plan and Organise</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB2. plan work and organize required resources in coordination with team members</p>

CON/N8001

Work effectively in a team to deliver desired results at the workplace

	<b>Customer centricity</b>
	The user/individual on the job needs to know and understand how to: SB3. complete all assigned task in coordination with team members
	<b>Problem solving</b>
	The user/individual on the job needs to know and understand how to: SB4. take initiative in resolving issues among co-workers or report the same to superiors
	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB5. ensure best ways of coordination among team members SB6. communicate with co-workers considering their educational / social background
	<b>Critical Thinking</b>
The user/individual on the job needs to know and understand how to: SB7. evaluate the complexity of task and determine if any guidance is required from superiors	



CON/N8001

Work effectively in a team to deliver desired results at the workplace

## NOS Version Control

<b>NOS Code</b>	<b>CON/N8001</b>		
<b>Credits (NSQF)</b>	TBD	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	Construction	<b>Drafted on</b>	<b>07/05/2015</b>
<b>Industry Sub-sector</b>	Real Estate and Infrastructure Construction	<b>Last reviewed on</b>	<b>23/05/2015</b>
<b>Occupation</b>	Masonry	<b>Next review date</b>	<b>23/05/2017</b>





# National Occupational Standard



## Overview

This NOS covers the skills and knowledge required to plan and organize work in order to meet expected quality in established time frame.

CON/N8002

Plan and organize work to meet expected outcomes

National Occupational Standard

<b>Unit Code</b>	CON/N8002
<b>Unit Title (Task)</b>	Plan and organize work to meet expected outcomes
<b>Description</b>	This unit describes the knowledge and the skills required for an individual to plan and organize own work in order to meet expected outcome.
<b>Scope</b>	<p>This scope covers the following:</p> <ul style="list-style-type: none"> <li>• Prioritize work activities to achieve desired results</li> <li>• Organize desired resources prior to commencement of work</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Prioritize work activities to achieve desired results</b>	<p>To be competent, the user / individual on the job must be able to:</p> <p>PC1. understand clearly the targets and timelines set by superiors</p> <p>PC2. plan activities as per schedule and sequence</p> <p>PC3. provide guidance to the subordinates to obtain desired outcome</p> <p>PC4. plan housekeeping activities prior to and post completion of work</p>
<b>Organize desired resources prior to commencement of work</b>	<p>PC5. list and arrange required resources prior to commencement of work</p> <p>PC6. select and employ correct tools, tackles and equipment for completion of desired work</p> <p>PC7. complete the work with allocated resources</p> <p>PC8. engage allocated manpower in an appropriate manner</p> <p>PC9. use resources in an optimum manner to avoid any unnecessary wastage</p> <p>PC10. employ tools, tackles and equipment with care to avoid damage to the same</p> <p>PC11. organize work output, materials used, tools and tackles deployed,</p> <p>PC12. processes adopted to be in line with the specified standards and instructions</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. importance of proper housekeeping</p> <p>KA2. policies, procedures and work targets set by superiors</p> <p>KA3. roles and responsibilities in executing the work for subordinates and self</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. standard practices of work to be adopted for assigned task</p> <p>KB2. how to use available resources in a judicious and appropriate manner to minimize wastages or damage</p>

CON/N8002

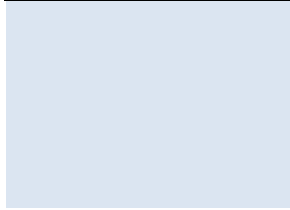
Plan and organize work to meet expected outcomes

Skills (S)	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	The user/ individual on the job needs to know and understand how to: SA1. write in one or more language, preferably in the local language of the site SA1. list out the assigned works and targets
	<b>Reading Skills</b>
	The user/ individual on the job needs to know and understand how to: SA2. read in one or more language, preferably in the local language of the site SA3. read communication from co-workers, superiors and notices from other departments as per requirement of the level
	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/ individual on the job needs to know and understand how to: SA4. speak in one or more language, preferably in one of the local language of the site SA5. listen and follow communication shared by co-workers regarding standard work processes, resources available, timelines, etc. SA6. communicate effectively with co-workers and subordinates
<b>B. Professional Skills</b>	<b>Decision Making</b>
	The user/individual on the job needs to know and understand how to: SB1. decide on what sequence is to be adopted for execution of work
	<b>Plan and Organise</b>
	The user/individual on the job needs to know and understand how to: SB2. plan and organize the materials, tools, tackles and equipment required to execute the work
	<b>Customer centricity</b>
	The user/individual on the job needs to know and understand how to: SB3. complete all assigned task with proper planning and organizing
	<b>Problem solving</b>
	The user/individual on the job needs to know and understand how to: SB4. arrange or seek help to arrange for material, tools and tackles in case of shortfall
<b>Analytical Thinking</b>	

CON/N8002

Plan and organize work to meet expected outcomes

	The user/individual on the job needs to know and understand how to: SB5. analyze areas of work which could result in a delay of work, wastage of material or damage to tools and tackles
	<b>Critical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB6. evaluate potential solutions to minimize avoidable delays and wastages at the construction site



CON/N8002

Plan and organize work to meet expected outcomes

## NOS Version Control

<b>NOS Code</b>	CON/N8002		
<b>Credits (NSQF)</b>	TBD	<b>Version number</b>	1.0
<b>Industry</b>	Construction	<b>Drafted on</b>	07/05/2015
<b>Industry Sub-sector</b>	Real Estate and Infrastructure Construction	<b>Last reviewed on</b>	23/05/2015
<b>Occupation</b>	Masonry	<b>Next review date</b>	23/05/2017



CON/N8003 Supervise, monitor and evaluate performance of subordinates at workplace

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# National Occupational Standard



## Overview

This NOS covers the skills and knowledge require by workmen to supervise, monitor and evaluate the performance of subordinates at workplace.



**CON/N8003 Supervise, monitor and evaluate performance of subordinates at workplace**

National Occupational Standard

<b>Unit Code</b>	CON/N8003
<b>Unit Title (Task)</b>	Supervise, monitor and evaluate performance of subordinates at workplace
<b>Description</b>	This OS covers the skills and knowledge required by an individual to supervise, monitor and evaluate performance of subordinates at work place
<b>Scope</b>	<p>The scope covers the following:</p> <ul style="list-style-type: none"> <li>Monitor all construction work activities performed by subordinates, evaluate their performance and ensure strict adherence to quality instructions and timelines as per organizational policies and procedures</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Supervise, monitor and evaluate performance of all subordinates and ensure adherence to organizational policies and procedures</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. fix expected targets for the respective gang as per site requirements and allocate work to subordinates</p> <p>PC2. establish expected performance standards and expectations for the respective gang of workers to meet the desired outcomes</p> <p>PC3. inspect assigned work to the respected gang of workers through progressive checking</p> <p>PC4. observe and verify the work activities performed by the subordinates at the construction site</p> <p>PC5. monitor overall performance of subordinates on the designed measures to ensure quality requirements set by the concerned authority</p> <p>PC6. ensure adherence to the organizational policies and procedures for all relevant construction activities by the workmen subordinations</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. policies, procedures and work targets for performance evaluation and appraisals</p> <p>KA2. organizational policies, procedures and protocol for smooth completion of work at the respective workplace</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. how to complete work/task accurately by following standard specifications and procedures by optimized and correct used of materials , tools, tackles and equipment</p>

CON/N8003 Supervise, monitor and evaluate performance of subordinates at workplace

Skills (S)	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	The user/ individual on the job needs to know and understand how to: SA1. write in at one or more language, preferably in the local language of the site
	<b>Reading Skills</b>
	The user/ individual on the job needs to know and understand how to: SA2. read in at one or more language, preferably in the local language of the site
	<b>Oral Communication (Listening and Speaking skills)</b>
<b>B. Professional Skills</b>	The user/ individual on the job needs to know and understand how to: SA3. speak in at one or more language, preferably in one of the local languages of the site SA4. effectively communicate with team members at workplace
	<b>Decision Making</b>
	The user/individual on the job needs to know and understand how to: SB1. rectify errors, select workman according to the performance and carry out appropriate allocation of task SB2. motivate the subordinate for better quality work
	<b>Plan and Organize</b>
	The user/individual on the job needs to know and understand how to: SB3. plan work as per right sequence and organize required resources in coordination with the team members
	<b>Customer centricity</b>
	The user/individual on the job needs to know and understand how to: SB4. complete work as per the requirement
	<b>Problem solving</b>
	The user/individual on the job needs to know and understand how to: SB5. solve any anomalies in work processes, critical problems & cause for delays at workplace
	<b>Analytical Thinking</b>
The user/individual on the job needs to know and understand how to: SB6. sort workers activities in order of sequence and importance workers SB7. identify root cause and effects of workers conflicts at workplace	
<b>Critical Thinking</b>	

**CON/N8003 Supervise, monitor and evaluate performance of subordinates at workplace**

	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"><li>SB8. evaluate and find solutions to minimize errors and suggest improvements for optimizing resource utilization</li><li>SB9. assess which situations would require intervention of superiors</li></ul>
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CON/N8003 Supervise, monitor and evaluate performance of subordinates at workplace

## NOS Version Control

NOS Code	CON/N8003		
Credits (NSQF)	TBD	Version number	1.0
Industry	Construction	Drafted on	07/05/2015
Industry Sub-sector	Real Estate and Infrastructure Construction	Last reviewed on	23/05/2015
Occupation	Masonry	Next review date	23/05/2017



# National Occupational Standard



## Overview

This NOS covers the skills and knowledge required by a workman to be proficient in maintaining a healthy & safe working environment for the group of people working under an individual.

CON/N9002

Manage workplace for safe and healthy work environment

National Occupational Standard	<b>Unit Code</b>	CON/N9002
	<b>Unit Title (Task)</b>	Manage workplace for safe and healthy work environment
	<b>Description</b>	This unit describes the skill and knowledge required to maintain a healthy & safe working environment for the group of people working under an individual
	<b>Scope</b>	<p>The scope covers the following:</p> <ul style="list-style-type: none"> <li>• Ensure healthy and safe working environment for subordinates.</li> <li>• Ensure effective implementation of health, safety and environment policies and procedures</li> <li>• Identify and respond to risks / fire and emergencies associated with the work practices, workplace and ensure related organizational &amp; statutory requirement as followed</li> </ul>
	<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>	
<b>Ensure a healthy and safe working environment for subordinates.</b>	<p>To be competent, the user / individual on the job must be able to:</p> <p>PC1. ensure proper housekeeping at workplace</p> <p>PC2. implement safe handling , stacking methods at workplace / store</p> <p>PC3. ensure that health and safety plan is followed by all subordinates</p> <p>PC4. identify any hazard in workplace and notify them to appropriate authority</p> <p>PC5. ensure that all safety and protection installation are correctly placed &amp; adequate</p> <p>PC6. ensure safe access is available at work place for movement of workers &amp; materials</p> <p>PC7. ensure safe use of tools and tackles by the workmen as per applicability</p> <p>PC8. ensure appropriate use of following Personal Protective Equipment (PPE) as per applicability:</p> <ul style="list-style-type: none"> <li>• Head Protection (Helmets)</li> <li>• Ear Protection</li> <li>• Fall Protection</li> <li>• Foot Protection</li> <li>• Face and Eye Protection,</li> <li>• Hand &amp;Body Protection</li> <li>• Respiratory Protection</li> </ul> <p>PC9. maintain entrances &amp; exit from confined spaces , excavated pits and other location in concurrence with safety parameters or instruction form safety personals</p>	
<b>Identify and respond to risks / emergencies</b>	PC10. ensure organizational policies and procedures are followed for health , safety and welfare, in relation to:	



CON/N9002

**Manage workplace for safe and healthy work environment**

<p>associated with the work practices, workplace</p>	<ul style="list-style-type: none"> <li>• methods of receiving or sourcing information</li> <li>• dealing with accidents and emergencies associated with the work and environment</li> <li>• reporting</li> <li>• stooping work</li> <li>• evacuation</li> <li>• fire risks and safe exit procedures</li> </ul> <p>PC11. follow procedures for accident recording and reporting as per organizational and statutory requirements</p> <p>PC12. ensure effective adherence to response to emergency procedures / protocols</p> <p>PC13. report any case of emergency / risks to the concern people at the construction site</p> <p>PC14. report any perceived risk hazards to the superiors / concerned EHS</p> <p>PC15. demonstrate the use of fire protection equipments for different type of fire hazard</p> <p>PC16. implement control measures to reduce risk &amp; meet legal requirement as per organizational policies</p>
<p><b>Knowledge and Understanding (K)</b></p>	
<p><b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. the policies, procedures and protocol set up by the EHS Department With respect to Health , Safety and Environment at the respective construction site</p> <p>KA2. reporting procedures in cases of breaches or hazards in site safety, accidents or emergency situations</p> <p>KA3. safe working practices for tools, tackles and equipment</p> <p>KA4. workplace policies and health and safety requirements for dealing with potential risks as defined by the EHS department</p>
<p><b>B. Technical Knowledge</b></p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. how to respond to accidents &amp; emergencies</p> <p>KB2. the appropriate personal protective equipment to be used based on various working conditions</p> <p>KB3. how to use necessary material ,tools, tackles and equipment in a safe and appropriate manner as specified by site EHS for each level and respective workman gang</p> <p>KB4. how to monitor working in workplace keeping safety &amp; health in mind</p>
<p><b>Skills (S)</b></p>	
<p><b>A. Core Skills/ Generic Skills</b></p>	<p><b>Writing Skills</b></p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. write in one or more language</p>

CON/N9002

**Manage workplace for safe and healthy work environment**

	<b>Reading Skills</b>
	The user/ individual on the job needs to know and understand how to: SA2. read in one or more languages SA3. read instructions, rules, guidelines, sign boards related to safety as per the requirements
	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/ individual on the job needs to know and understand how to: SA4. speak in one or more language, preferably in one of the local languages of the site SA5. listen and follow instructions shared by site EHS and superiors regarding site safety SA6. communicate reporting of site conditions, hazards, accidents, etc.
	<b>Decision Making</b>
	The user/individual on the job needs to know and understand how to: SB1. decide upon the appropriate application & installation of safety equipments like barricades and nets SB2. decide upon the tools box talks contents
<b>B. Professional Skills</b>	<b>Plan and Organise</b>
	The user/individual on the job needs to know and understand how to: SB3. identify any hazards in workplace organize safety equipments prior to commencing work
	<b>Customer centricity</b>
	The user/individual on the job needs to know and understand how to: SB4. work to ensure safe and healthy environmental conditions at workplace
	<b>Problem solving</b>
	The user/individual on the job needs to know and understand how to: SB5. identify analysis & report hazards, accidents, health and safety risks, etc. or seek help from the appropriate authorities to address the same as per the guidelines laid down by site EHS
	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB6. analyze areas of work which are potential safety hazards and could result in damage to life or property for the respective gang at the construction site
	<b>Critical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB7. respond to critical health risks or accidents on an urgent basis through appropriate actions

CON/N9002

Manage workplace for safe and healthy work environment

## NOS Version Control

<b>NOS Code</b>	<b>CON/N9002</b>		
<b>Credits (NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	<b>Construction</b>	<b>Drafted on</b>	<b>07/05/2015</b>
<b>Industry Sub-sector</b>	<b>Real Estate and Infrastructure Construction</b>	<b>Last reviewed on</b>	<b>23/05/2015</b>
<b>Occupation</b>	<b>Masonry</b>	<b>Next review date</b>	<b>23/05/2017</b>



*Assessment Criteria for Foreman Concrete*

**CRITERIA FOR ASSESSMENT OF TRAINEES**

<b><u>Job Role</u></b>	Foreman Concrete
<b><u>Qualification Pack</u></b>	CON/Q0110
<b><u>Sector Skill Council</u></b>	Construction

**Guidelines for Assessment**

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the knowledge part will be based on knowledge bank of questions created by Assessment Bodies subject to approval by SSC
3. Individual assessment agencies will create unique question papers for knowledge/theory part for assessment of candidates as per assessment criteria given below
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on assessment criteria.
5. The passing percentage for each QP will be 70%. To pass the Qualification Pack, every trainee should score a minimum of 70% individually in each NOS.
6. The Assessor shall check the final outcome of the practices while evaluating the steps performed to achieve the final outcome.
7. The trainee shall be provided with a chance to repeat the test to correct his procedures in case of improper performance, with a deduction of marks for each iteration.
8. After the certain number of iteration as decided by SSC the trainee is marked as fail, scoring zero marks for the procedure for the practical activity.
9. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack within the specified timeframe set by SSC.
10. Minimum duration of Assessment of each QP shall be of 4hrs/trainee.

Assessment outcomes	Assessment Criteria for outcomes	Marks Allocation			
		Total Mark	Out Of	Theory	Skills Practical
CON/N0129:Read and interpret working drawings, concrete specification and standards for concreting works	PC1. read & interpret details like location, concrete grade, pour area, pouring volume and reinforcement detail from relevant working drawings for concreting works	<b>100</b>	13	5	8
	PC2. read and understand specification provided in the relevant drawing for concreting works		13	5	8
	PC3. read and understand schedule for concreting works		12	5	7
	PC4. read ,understand operational standards /manufacture’s specification of all relevant concreting tools and equipment		12	5	7

*Assessment Criteria for Foreman Concrete*

	PC5. read and understand method statement for concrete works		12	5	7
	PC6. read and understand standard technical specification within scope of work		13	5	8
	PC7. prepare hand sketches for describing work to sub-ordinates		13	5	8
	PC8. carryout calculation for required quantity of material from structural drawing for reconciliation and records		12	5	7
		<b>Total</b>	<b>100</b>	<b>40</b>	<b>60</b>
CON/N0130: Check and ensure completion of preparatory works prior to concreting	PC1. prepare a detailed work plan for execution of concreting work at construction site/yard	<b>100</b>	6	2	4
	PC2. check and ensure setting out for concreting work is as per the approved drawings		7	3	4
	PC3. check and ensure working platforms, hand rails and access stairs are safe for working		7	3	4
	PC4. check and ensure workplace is clear of debris and guard rails, safety nets & kerb boards are in place		6	2	4
	PC5. instruct & ensure that the concrete used is prepared in the specified proportions within the specified workability in case of manual mixing of concrete		7	3	4
	PC6. check the grade of concrete prior to concreting		6	2	4
	PC7. inspect the required formwork/molds for gaps/misalignment of reinforcement/cover		7	3	4
	PC8. inspect and check the formwork/molds for leaks during concreting		7	3	4
	PC9. inspect and ensure cleaning of formwork prior to concreting		6	2	4
	PC10. inspect the shoring and bracing of concrete forms to ensure their stability during pour		7	3	4
	PC11. indicate route and position for pouring of concrete		7	3	4
	PC12. inspect the fixing and setting of pump line ,machinery for pouring of concrete		7	3	4
	PC13. instruct of the use of suitable type of pump w.r.t the discharge and head of concrete		7	3	4
	PC14. record details of the concreting works covering grade of concrete, area and volume of pour, number of workers ,tools and equipment deployed for work and achieved productivity		7	3	4
	PC15. oversee and inspect the pumping of concrete		6	2	4
		<b>Total</b>	<b>100</b>	<b>40</b>	<b>60</b>
CON/N0131: Direct and monitor the execution of	PC1. visually assess the workability and usability of concrete mix & discard detrimental concrete mix	<b>100</b>	2	1	1
	PC2. oversee and inspect the pumping of concrete to various structures		3	1	2

Assessment Criteria for Foreman Concrete

concreting works as per specifications and standard practices	PC3. prescribe method for pouring, levelling and finishing of concrete as per standard practices and specifications		2	1	1
	PC4. conduct checks and inspections to ensure that: <ul style="list-style-type: none"> <li>• concrete is poured from required height</li> <li>• concrete does not scrape form or mould</li> <li>• correct type of vibrator is used in the specified manner</li> </ul>		7	3	4
	PC5. inspect and assist in using tools and equipment relevant to task		2	1	1
	PC6. ensure that concrete is compacted to desired consistency and surface is finished to specified uniformity and smoothness/finish		5	2	3
	PC7. ensure leveling of edges and corners within tolerance levels		2	1	1
	PC8. direct and monitor the grooving/cutting for expansion/contraction joints		2	1	1
	PC9. ensure that the appropriate technique for finishing of concrete works like broom finish, float and trowel finish etc .has been employed as per drawing		4	1	3
	PC10. ensure synchronization of all above concreting activities to ensure rapid placement and compaction of concrete with respect to the setting time of concrete in case of form finished structure		5	2	3
	PC11. prescribe method and monitor curing of concrete		3	1	2
	PC12. highlight errors to workers, suggest remedial action & demonstrate correct work processes as per applicability		3	1	2
	PC13. monitor wind, air, concrete temperature and humidity		5	2	3
	PC14. manage schedule of concreting in accordance with the temperature change in day and night as per hot/cold weather concreting		5	2	3
	PC15. provide sunshades/windbreaks/heated enclosures as per the concreting requirement		5	2	3
	PC16. check that evaporative retarders/anti-freeze is used in hot/cold weather concreting		5	2	3
	PC17. ensure correct preventive measures are taken w.r.t the hot/cold weather concreting		5	2	3
	PC18. ensure rapid placement and compaction of concrete as per concreting requirement		5	2	3
	PC19. monitor the placing and grooving/cutting of expansion/construction joint as per concreting requirement		5	2	3
	PC20. monitor the curing of concrete for a specified period of time in hot/cold weather concreting		5	2	3



Assessment Criteria for Foreman Concrete

	PC21. examine concrete after stripping of forms for surface deformities and defects		4	1	3
	PC22. direct the removal and repair of concrete with porosity, honey comb, or segregated materials, as approved by senior/client		8	3	5
	PC23. prescribe method for repair as per applicability		6	3	3
	PC24. ensure proper curing of repaired concrete		2	1	1
		<b>Total</b>	<b>100</b>	<b>40</b>	<b>60</b>
CON/N7001: Plan, arrange and manage resources for execution of relevant work	PC1. determine quantum and nature of work under assigned activity	<b>100</b>	5	2	3
	PC2. calculate requirement of manpower for assigned activities		8	3	5
	PC3. submit manpower requirement to superiors		5	2	3
	PC4. allocate and extract work as per plan		8	3	5
	PC5. provide clear instructions to workmen for execution of work		8	3	5
	PC6. ensure optimum utilization of manpower resources		8	3	5
	PC7. record the daily labour attendance		8	3	5
	PC8. record the daily productivity report		8	3	5
	PC9. estimate quantity of assigned work		8	3	5
	PC10. estimate requirement for material, components and fixtures		8	3	5
	PC11. estimate equipment, tools and accessories required		8	3	5
	PC12. submit material, equipment and tool requirement to superiors		8	3	5
	PC13. allocate material, equipment and tools to workmen and extract the work as per plan		8	3	5
	PC14. provide clear instructions for optimized use of resources		8	3	5
		<b>Total</b>	<b>100</b>	<b>40</b>	<b>60</b>
CON/N8001: Work effectively in a team to deliver desired results at the workplace	PC1. pass on work related information/ requirement clearly to the team members	<b>100</b>	10	4	6
	PC2. inform co-workers and superiors about any kind of deviations from work		10	4	6
	PC3. address the problems effectively and report if required to immediate supervisor appropriately		20	8	12
	PC4. receive instructions clearly from superiors and respond effectively on the same		10	4	6
	PC5. communicate to team members/subordinates for appropriate work technique and method		10	4	6
	PC6. seek clarification and advice as per the requirement and applicability		10	4	6
	PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams		15	6	9

Assessment Criteria for Foreman Concrete

	PC8. work together with co-workers in a synchronized manner		15	6	9
		<b>Total</b>	<b>100</b>	<b>40</b>	<b>60</b>
CON/N8002: Plan and organize work to meet expected outcomes	PC1. understand clearly the targets and timelines set by superiors	<b>100</b>	13	5	8
	PC2. plan activities as per schedule and sequence		10	4	6
	PC3. provide guidance to the subordinates to obtain desired outcome		13	5	8
	PC4. plan housekeeping activities prior to and post completion of work		8	3	5
	PC5. list and arrange required resources prior to commencement of work		10	4	6
	PC6. select and employ correct tools, tackles and equipment for completion of desired work		8	3	5
	PC7. complete the work with allocated resources		8	3	5
	PC8. engage allocated manpower in an appropriate manner		5	2	3
	PC9. use resources in an optimum manner to avoid any unnecessary wastage		5	2	3
	PC10. employ tools, tackles and equipment with care to avoid damage to the same		5	2	3
	PC11. organize work output, materials used, tools and tackles deployed,		10	4	6
	PC12. processes adopted to be in line with the specified standards and instructions		8	3	5
		<b>Total</b>	<b>100</b>	<b>40</b>	<b>60</b>
CON/N8003: Super vise, monitor and evaluate performance of subordinates at workplace	PC1. fix expected targets for the respective gang as per site requirements and allocate work to subordinates	<b>100</b>	15	6	9
	PC2. establish expected performance standards and expectations for the respective gang of workers to meet the desired outcomes		15	6	9
	PC3. inspect assigned work to the respected gang of workers through progressive checking		20	8	12
	PC4. observe and verify the work activities performed by the subordinates at the construction site		20	8	12
	PC5. monitor overall performance of subordinates on the designed measures to ensure quality requirements set by the concerned authority		15	6	9
	PC6. ensure adherence to the organizational policies and procedures for all relevant construction activities by the workmen subordinations		15	6	9
		<b>Total</b>	<b>100</b>	<b>40</b>	<b>60</b>
CON/N9002: Manage workplace for safe and healthy work environment	PC1. Ensure proper housekeeping at workplace	<b>100</b>	5	2	3
	PC2. Implement safe handling , stacking methods at workplace / store		5	2	3
	PC3. Ensure that health and safety plan is followed by all subordinates		5	2	3

Assessment Criteria for Foreman Concrete

PC4. Identify any hazard in workplace and notify them to appropriate authority	5	2	3
PC5. ensure that all safety and protection installation are correctly placed & adequate	5	2	3
PC6. Ensure safe access is available at work place for movement of workers & materials.	5	2	3
PC7. Ensure safe use of tools and tackles by the workmen as per applicability	5	2	3
PC8. ensure appropriate use of following Personal Protective Equipment (PPE) as per applicability: <ul style="list-style-type: none"> <li>· Head Protection (Helmets)</li> <li>· Ear Protection</li> <li>· Fall Protection</li> <li>· Foot Protection</li> <li>· Face and Eye Protection,</li> <li>· Hand &amp;Body Protection</li> <li>· Respiratory Protection</li> </ul>	10	4	6
PC9. Maintain entrances & exit from confined spaces, excavated pits and other location in concurrence with safety parameters or instruction form safety personals.	5	2	3
PC10. Ensure organizational policies and procedures are followed for health , safety and welfare, in relation to: <ul style="list-style-type: none"> <li>· methods of receiving or sourcing information</li> <li>· dealing with accidents and emergencies associated with the work and environment</li> <li>· reporting</li> <li>· stooping work</li> <li>· evacuation</li> <li>· fire risks and safe exit procedures</li> </ul>	10	4	6
PC11. follow procedures for accident recording and reporting as per organizational and statutory requirements	5	2	3
PC12. ensure effective adherence to response to emergency procedures / protocols	7.5	3	4.5
PC13. report any case of emergency / risks to the concern people at the construction site	7.5	3	4.5
PC14. report any perceived risk hazards to the superiors / concerned EHS	7.5	3	4.5
PC15. demonstrate the use of fire protection equipments for different type of fire hazard	7.5	3	4.5
PC16. implement control measures to reduce risk & meet legal requirement as per organizational policies	5	2	3
<b>Total</b>	<b>100</b>	<b>40</b>	<b>60</b>