QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR PLUMBING

Contents

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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Introduction

Qualifications Pack – Wastewater Systems Design Engineer

SECTOR: PLUMBING INDUSTRY

SUB-SECTOR: Consultants

OCCUPATION: Plumbing

REFERENCE ID: PSC/ Q 0207

ALIGNED TO: NCO-2004/ 2142.72

Wastewater Systems Design Engineer: Wastewater Systems Design Engineer is an important job role in 'consultants' segment of plumbing industry. This job role requires the individual to design of wastewater / sewerage systems of a city, township or large housing / commercial / institutional setups.

Brief Job Description: A Wastewater Systems Design Engineer is responsible for design of wastewater / sewerage systems of a city, township or large housing / commercial / institutional setups.

Personal Attributes: He should be able to work independently on his assignment. He should have problems solving skills through creative and innovative thinking. He should be a good team leader. He should be result oriented and positive in attitude.

Job Details

Qualifications Pack Code	**PSC/ Q 0207**		
Job Role	**Wastewater Systems Design Engineer**		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	**TBD**	**Version number**	**0.1**
Sector	**Plumbing**	**Drafted on**	**01/09/13**
Sub-sector	**Consultants**	**Last reviewed on**	**30/10/13**
Occupation	**Plumbing**	**Next review date**	**30/04/14**

Job Role	**Wastewater Systems Design Engineer**
Role Description	Responsible for design of wastewater / sewerage systems of a city, township or large housing / commercial / institutional setups.
NVEQF/NVQF level **Minimum Educational Qualifications*** **Maximum Educational Qualifications***	8 Diploma / Degree in Civil Engineering N.A.
Training (Suggested but not mandatory)	On-the-job training.
Experience	Minimum 6 years of relevant experience of working on wastewater projects.
Applicable National Occupational Standards (NOS)	**Compulsory:** 1. PSC/ N 0206 (Detailed designing of water and wastewater systems) 2. PSC/ N 0213 (Design of rainwater harvesting system) 3. PSC/ N 0202 (Supervision and review of drawing works in a project) 4. PSC/ N 0209 (Management of a design project) 5. PSC/ N 0211 (Work effectively with colleagues) 6. PSC/ N 0212 (Maintain a healthy, safe and secure working environment) **Optional:** 7. N.A.
Performance Criteria	As described in the relevant OS units

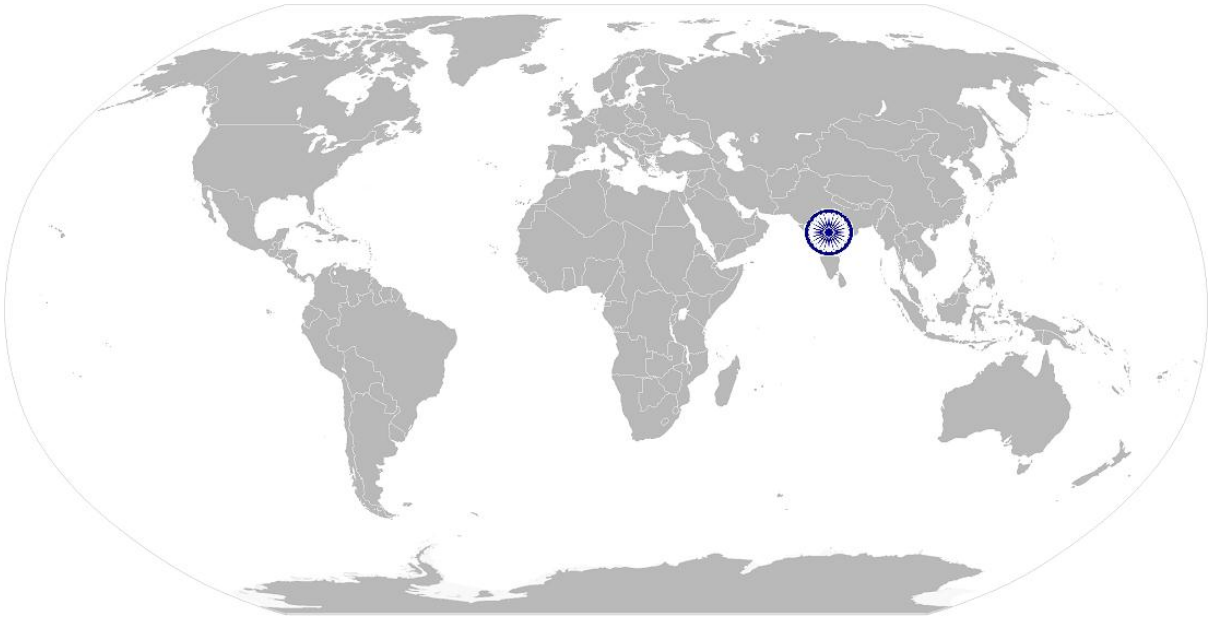
Definitions

Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar businesses 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.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Job Role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
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 that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
NOS	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Qualifications Pack	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Unit Code	Unit Code is a unique identifier for an Occupational Standard , which is denoted by an 'N'.
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
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 or 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
IPSC	Indian Plumbing Skills council
NOS	National Occupational Standards
NSQF	National Skills Qualification Framework
NVEQF	National Vocational Educational Qualification Framework
NVQF	National Vocational Qualification Framework
OS	Occupational Standards
PC	Performance Criteria
QP	Qualification Pack
SSC	Sector Skills Council

National Occupational Standard



Overview

This unit is about design of wastewater systems including network lines, treatment plant, pump stations, sump, etc. as per the requirement of a given locality, city, township, etc. and in adherence to the applicable laws and regulations.

PSC/N0206 Detailed designing of wastewater systems

National Occupational Standard

Unit Code	PSC/N0206
Unit Title (Task)	**Detailed designing of water and wastewater systems**
Description	This OS unit is about design of wastewater systems including network lines, treatment plant, pump stations, sump, etc. as per the requirement of a given locality, city, township, etc. and in adherence to the applicable laws and regulations
Scope	This unit/task covers the following: Layout preparation • preparation of network and associated systems layout as per project requirement • selection of system design considering project objectives, cost parameters, applicable regulations, hydraulics principles, etc. Network and associated system design • preparation of detailed water/wastewater network design as per layout and in adherence to the applicable laws and regulations • preparation of design for associated systems such as pump stations, sump, over head tanks, etc. Wastewater treatment plant design • preparation of detailed system design of the wastewater treatment plant as per the layout and in adherence to applicable laws and regulations

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Layout preparation	To be competent, the user/individual on the job must be able to: PC1. access existing documents, design standards, templates and design tools from organization's knowledge base PC2. identify, analyse and prioritise relevant technical, environmental and cost factors which are likely to influence design and execution of the water treatment plant PC3. choose suitable techniques for investigation, calculation, and testing to be used in preparation of a detailed system design PC4. analyse design concepts to identify best fit with the design requirements and constraints PC5. guide drafting engineer(s) in preparing initial layout based on selected/ approved design process

PSC/N0206 Detailed designing of wastewater systems

Network and associated system design	PC6. evaluate region/site and other systems for proposed waste water network line system PC7. estimate ward/ locality wise future waste generation based on population projections PC8. develop detailed network design indicating mains, secondary lines and tertiary lines PC9. develop detailed network design indicating location, type, length and diameter of various pipes and its accessories PC10. estimate requirement and capacity of pump stations, treatment systems, etc. PC11. conform to applicable laws, codes and regulations PC12. select products which meet required project criteria and industry standards, balancing cost and quality PC13. provide the project stakeholders with enough relevant and accurate information to agree on the detailed network design PC14. review documents with appropriate people and incorporate their inputs PC15. prepare bills of materials (BOMs) for finalized network design if required in the project
Sewerage treatment plant design	PC16. identify and evaluate sites for the proposed sewage treatment plant PC17. project future sewage/wastewater flow based on available flow data PC18. estimate the capacity of treatment plant based on existing capacity and future wastewater production PC19. determine the physical and chemical characteristics of sewage/wastewater and treated water PC20. develop detailed system design including primary, secondary and tertiary treatment system design to meet end requirement of the treated water PC21. evaluate and incorporate relevant biological treatment in secondary system design if feasible with the project specifications PC22. conform to applicable laws, codes and regulations PC23. select products which meet required project criteria and industry standards, balancing cost and quality PC24. provide the project stakeholders with enough relevant and accurate information to agree on the detailed system design PC25. review documents with appropriate people and incorporate their inputs PC26. prepare bills of materials (BOMs) for finalized designs if required in the project
Knowledge and Understanding (K)	

PSC/N0206 Detailed designing of wastewater systems

A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on: quality and delivery standards, design norms, safety and hazards, integrity, laws and codes, compliances, and guidelines for knowledge sharing KA2. the purpose and scope of the work to be carried out and the importance of keeping within those boundaries KA3. who to involve when developing network designs and their roles and responsibilities KA4. the importance of verifying data and other information obtained for the design KA5. risk and impact of not following defined codes and norms
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. various site/other system evaluation techniques KB2. probable issues that can occur during execution because of faulty design KB3. various designing parameters such as amount of wastewater flow, pressure, head loss gradient, velocity, etc. KB4. physical and chemical water quality parameters such as alkalinity, turbidity, TDS, iron content, fluoride content, etc. KB5. various designing parameters related to primary and secondary such as flow filtration, sedimentation, flocculation, disinfection, residual management, discharge requirement, etc. KB6. various designing parameters related to primary, secondary and tertiary treatment such as flow equalisation, filtration, clarification, sedimentation, flocculation, disinfection, residual management, discharge requirement, etc. KB7. hydraulic principles related to design of water/wastewater network and treatment systems such as fluid mechanics, flow dynamics, etc. KB8. comprehensive knowledge of various materials used in water/waste water network and treatment system and their market rates KB9. various design techniques that can be used, their constraints and impacts KB10. different types of manual drawing tools KB11. software related to drawings and design such as AutoCAD, SewerCAD, Microsoft Project, etc. KB12. design codes and norms related to wastewater network design KB13. drawing and system design terminologies KB14. importance of collating feedback on network designs
Skills (S)	
A. Core Skills/	**Communication skills**

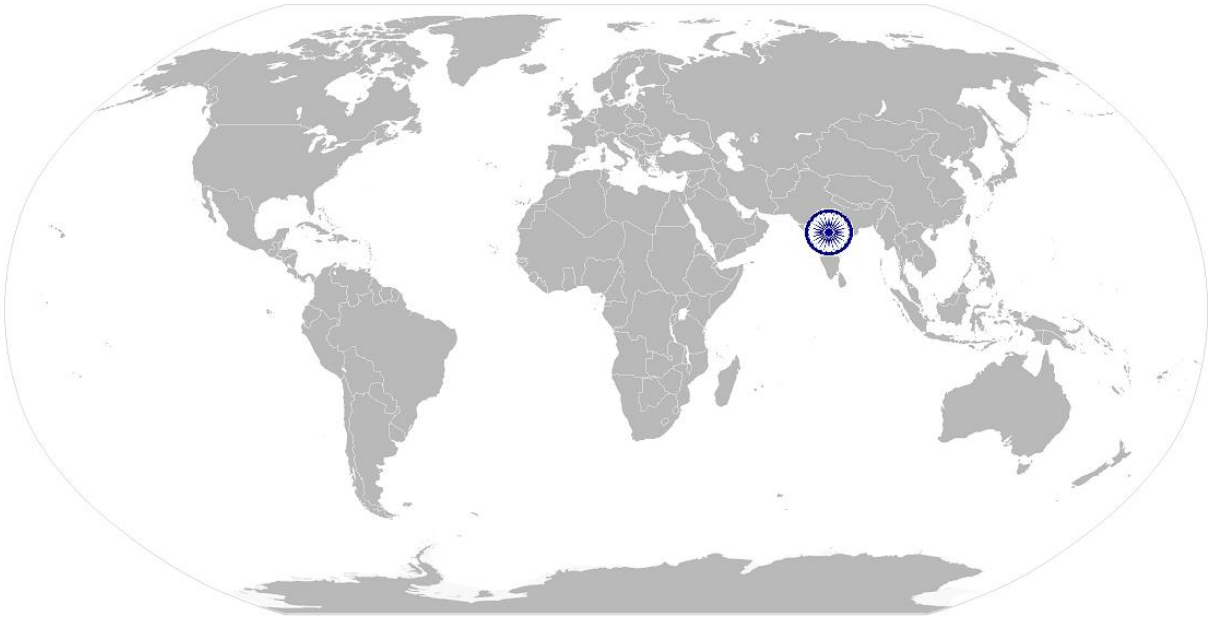
PSC/N0206 Detailed designing of wastewater systems

Generic Skills	The user/individual on the job needs to know and understand how to: SA1. communicate in Hindi, English and/or regional language
	Measurement/calculation skills
	SA2. perform measurements/testing as per requirements SA3. perform calculations pertaining to drawing and design
	Teamwork
	SA4. accept and interpret instructions and requirements correctly SA5. follow the instructions of the reporting authority SA6. co-ordinate with co-workers SA7. supervise sub-ordinates SA8. prioritize and complete necessary tasks in a fast-paced environment
B. Professional Skills	**Software usage**
	The user/individual on the job needs to know and understand how to: SB1. use relevant software and produce output in terms of drawings and layouts as per instructions SB2. produce 3D network layouts as required SB3. debug and modify common errors in drawings/layout preparation
	Designing skills
	SB4. design the water/wastewater network and treatment systems manually considering all design parameters SB5. adhere to relevant codes and regulations while preparing the design SB6. use relevant designing software
	Manual sketching
	SB7. produce output in form of manual drawings and sketches SB8. ensure accuracy and scale in the manual sketches SB9. do a preliminary review of drawings and layouts for compliance of norms

PSC/N0206 Detailed designing of wastewater systems

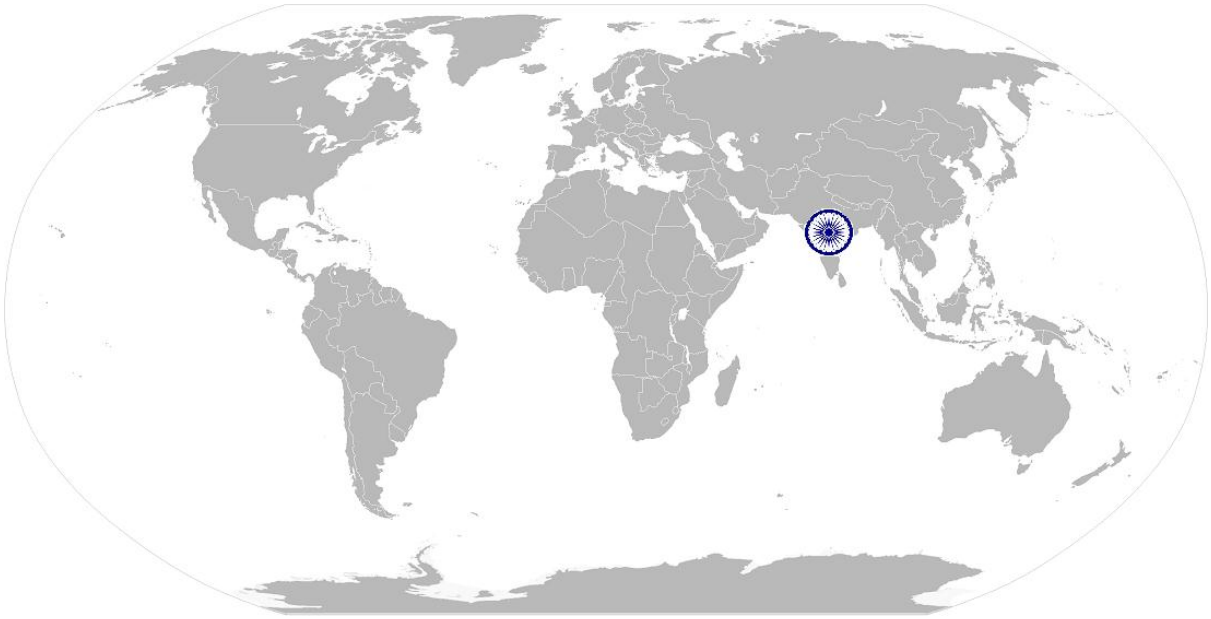
NOS Version Control

NOS Code	PSC/N0206		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	TBD	Version number	0.1
Industry	Plumbing	Drafted on	01/09/13
Industry Sub-sector	Consultants	Last reviewed on	30/10/13
		Next review date	30/04/14



PSC/N0213 Design of rainwater harvesting system

National Occupational Standard



Overview

This unit is about design of rain water harvesting (RWH) system in a housing / commercial/ institutional setups for conservation and environmental purpose.

PSC/N0213 Design of rainwater harvesting system

National Occupational Standard

Unit Code	PSC/N0213
Unit Title (Task)	**Design of rainwater harvesting system**
Description	This OS unit is about design of rain water harvesting (RWH) system in a housing / commercial / institutional setup for conservation and environmental purpose
Scope	This unit/task covers the following: Inspection and layout preparation • inspection and evaluation of a building for the RWH system • preparation of preliminary layout of the systems as per requirement RWH system design • preparation of detailed RWH system design as per layout and in adherence to the applicable laws and regulations
Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Inspection and layout preparation	To be competent, the user/individual on the job must be able to: PC1. inspect and evaluate a building (domestic, commercial or institutional) for the RWH system PC2. access existing documents, design standards, templates and design tools from organization's knowledge base PC3. identify, analyse and prioritise relevant technical, environmental and cost factors which are likely to influence design and execution of the RWH system PC4. choose suitable techniques for investigation, calculation, and testing to be used in preparation of a detailed system design PC5. analyse design concepts to identify best fit with the design requirements and constraints PC6. guide drafting engineer(s) in preparing initial layout based on selected/ approved design process
RWH system design	PC7. estimate the average monthly rainfall in the area based on historic rainfall data PC8. calculate the catchment area of rainfall PC9. develop detailed system design considering conveyance, storage, overflow, outlet and delivery of rain water PC10. develop detailed conveyance design indicating location, type, length and diameter of various pipes and its accessories PC11. estimate the type and capacity of storage tank, submersible pumps, etc.

PSC/N0213 Design of rainwater harvesting system

	PC12. conform to applicable laws, codes and regulations PC13. select products which meet required project criteria and industry standards, balancing cost and quality PC14. provide the project stakeholders with enough relevant and accurate information to agree on the detailed system design PC15. review documents with appropriate people and incorporate their inputs PC16. prepare bills of materials (BOMs) for finalized system design if required in the project
Knowledge and Understanding (K)	
A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on: quality and delivery standards, design norms, safety and hazards, integrity, laws and codes, compliances, and guidelines for knowledge sharing KA2. the purpose and scope of the work to be carried out and the importance of keeping within those boundaries KA3. who to involve when developing network designs and their roles and responsibilities KA4. the importance of verifying data and other information obtained for the design KA5. risk and impact of not following defined codes and norms
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. various evaluation techniques for building and related system KB2. probable issues that can occur during execution because of faulty design KB3. rain water harvesting engineering methods and practices KB4. rainfall historical data KB5. applicable building codes and RWH system designing norms KB6. RWH equipments, its uses and limitations KB7. comprehensive knowledge of various materials used in RWH system and their market rates KB8. hydraulic principles related to design of RWH system such as fluid mechanics, flow dynamics, etc. KB9. various designing parameters such as amount of water flow, velocity, etc. KB10. various design techniques that can be used, their constraints and impacts KB11. different types of manual drawing tools KB12. software related to drawings and design such as AutoCAD, WaterCAD, Microsoft Project, etc. KB13. drawing and system design terminologies

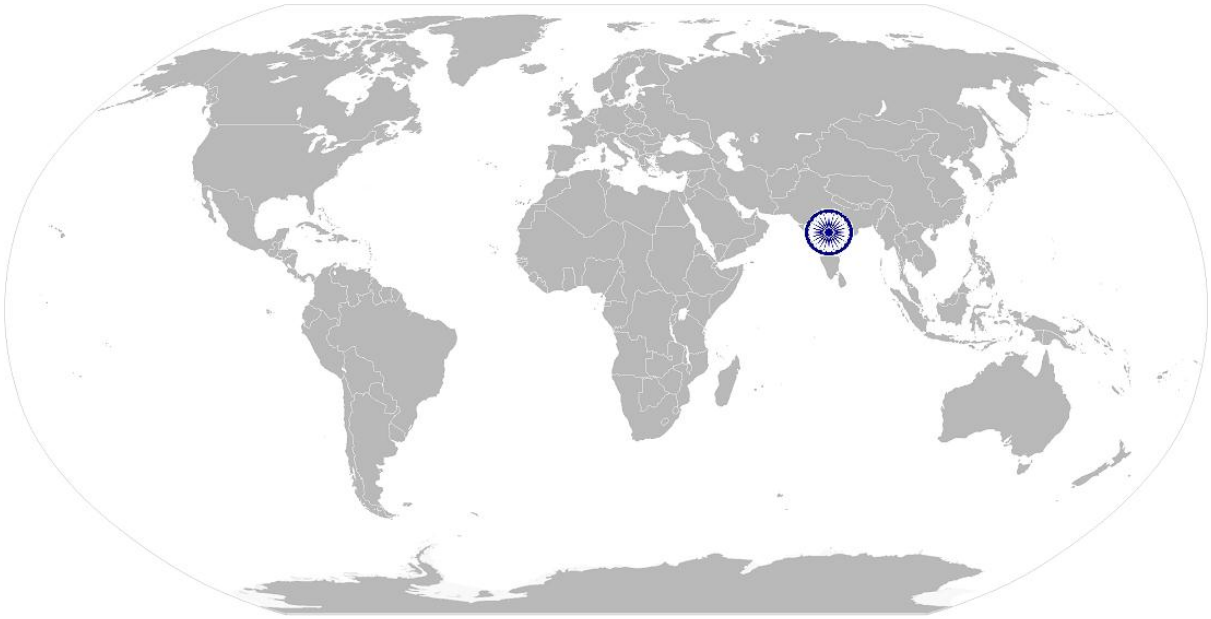
PSC/N0213 Design of rainwater harvesting system

	KB14. the importance of collating feedback on designs
Skills (S)	
A. Core Skills/ Generic Skills	**Communication skills**
	The user/individual on the job needs to know and understand how to: SA1. communicate in Hindi, English and/or regional language
	Measurement/calculation skills
	SA2. perform measurements/testing as per requirements SA3. perform calculations pertaining to drawing and design
	Teamwork
	SA4. accept and interpret instructions and requirements correctly SA5. follow the instructions of the reporting authority SA6. co-ordinate with co-workers SA7. supervise sub-ordinates SA8. prioritize and complete necessary tasks in a fast-paced environment
B. Professional Skills	**Software usage**
	The user/individual on the job needs to know and understand how to: SB1. use relevant software and produce output in terms of drawings and layouts as per instructions SB2. produce 3D network layouts as required SB3. debug and modify common errors in drawings/layout preparation
	Designing skills
	SB4. design the RWH system manually considering all design parameters SB5. adhere to relevant codes and regulations while preparing the design SB6. use relevant designing software
	Manual sketching
	SB7. produce output in form of manual drawings and sketches SB8. ensure accuracy and scale in the manual sketches SB9. do a preliminary review of drawings and layouts for compliance of norms

PSC/N0213 Design of rainwater harvesting system

NOS Version Control

NOS Code	PSC/N0213		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	TBD	Version number	0.1
Industry	Plumbing	Drafted on	01/09/13
Industry Sub-sector	Consultants	Last reviewed on	30/10/13
		Next review date	30/04/14



PSC/N0202 Supervision and review of drawing works in a project

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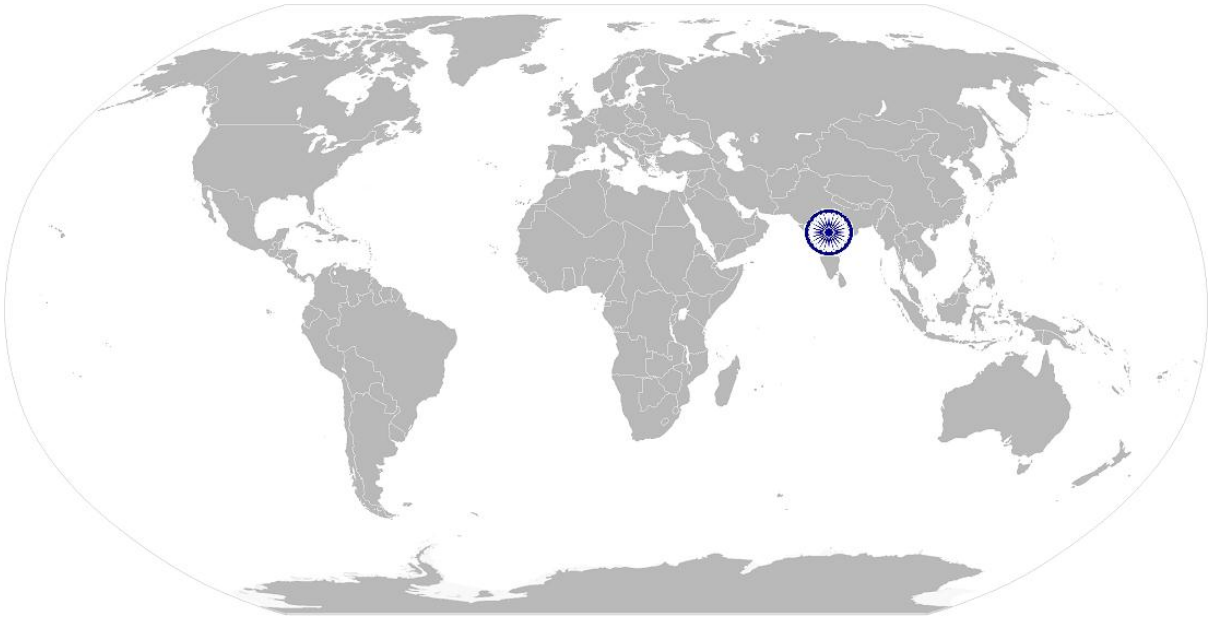
National Occupational Standard



Overview

This unit is about supervision and review of basic drawings prepared by draftsmen related to plumbing projects.

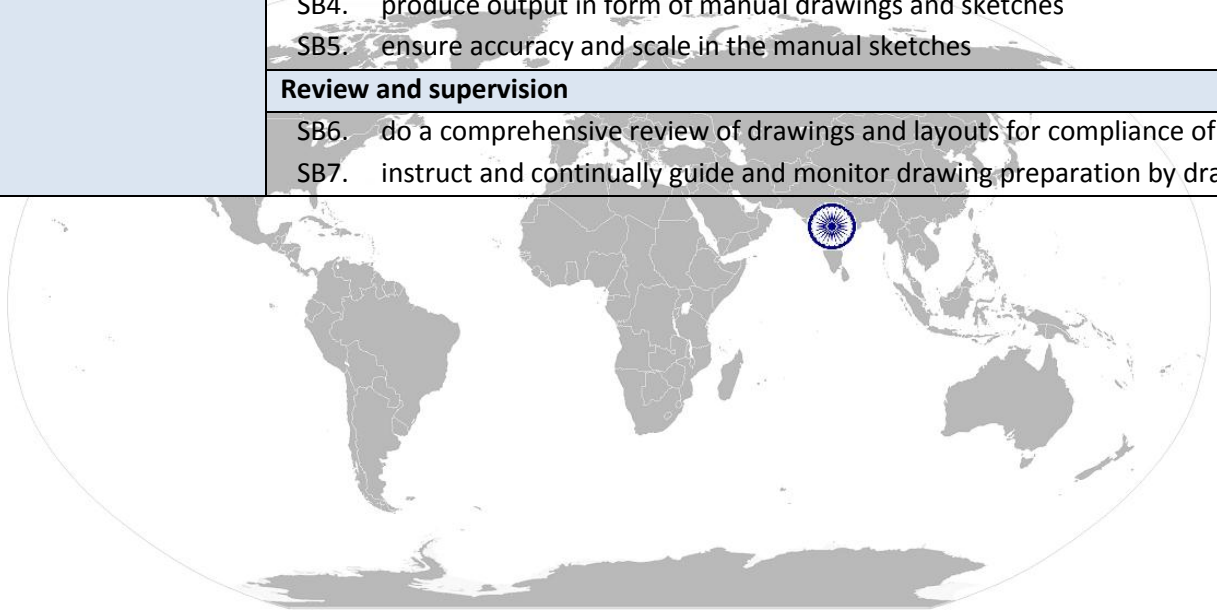
PSC/N0202 Supervision and review of drawing works in a project

National Occupational Standard

Unit Code	**PSC/N0202**
Unit Title (Task)	**Supervision and review of drawing works in a project**
Description	This OS unit is about supervision and review of basic drawings prepared by draftsmen related to plumbing projects
Scope	This unit/task covers the following: Supervision and review • supervision and review of drawings prepared by draftsmen
Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Supervision and review	To be competent, the user/individual on the job must be able to: PC1. instruct draftsmen regarding the project specification and corresponding drawing preparation PC2. supervise the work of a team of plumbing draftsmen PC3. review final drawings in terms of project requirements and code compliance PC4. answer internal and external queries related to drawings PC5. maintain records and files of the previous drawing works
Knowledge and Understanding (K)	
A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on: quality and delivery standards, safety and hazards, integrity, code, compliance, etc. KA2. risk and impact of not following defined codes and norms
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. software related to drawings such as AutoCAD, Autodesk Revit, etc. KB2. knowledge of plumbing principles KB3. drawing codes and norms KB4. drawing and design terminologies KB5. common drawing errors and their resolution
Skills (S)	
A. Core Skills/ Generic Skills	**Communication skills**
	The user/individual on the job needs to know and understand how to: SA1. communicate in Hindi, English and/orregional language
	Measurement/calculation skills
	SA2. perform measurements as per requirement SA3. perform basic and advance calculations pertaining to drawing and design

PSC/N0202 Supervision and review of drawing works in a project

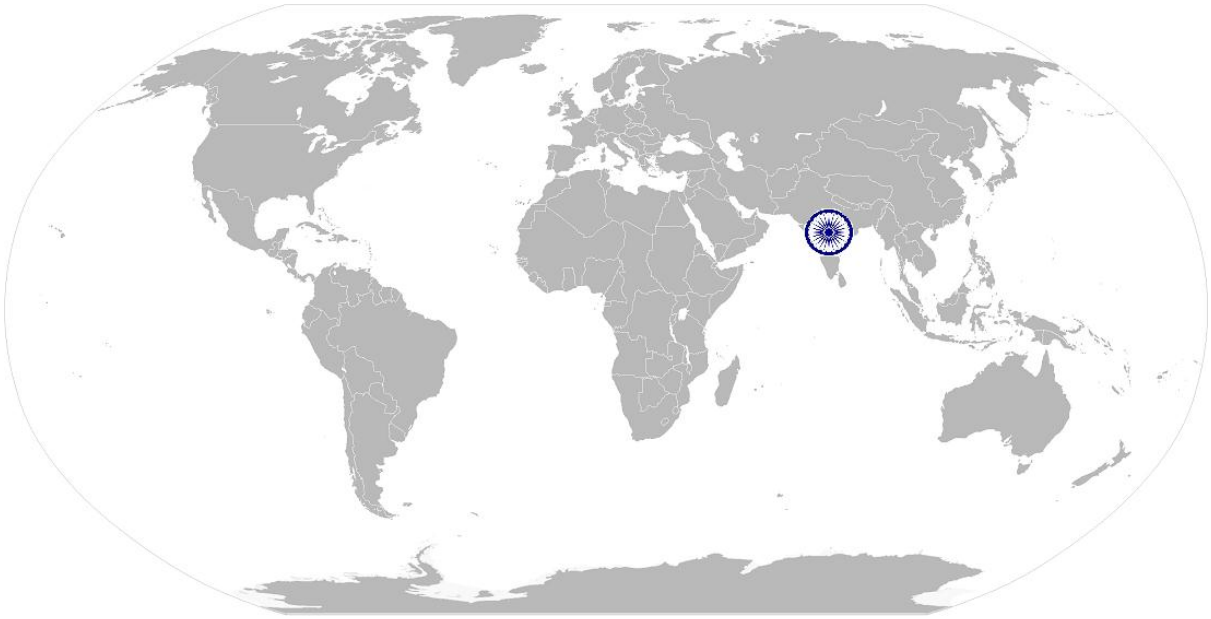
	Teamwork
	SA4. accept, interpret and provide instructions and requirements correctly SA5. co-ordinate with co-workers and sub-ordinates SA6. prioritize and complete necessary tasks in a fast-paced environment
B. Professional Skills	**Software usage**
	The user/individual on the job needs to know and understand how to: SB1. use relevant software and produce output in terms of drawings and layouts as per requirements SB2. produce 3D layouts as required SB3. debug and modify common errors in drawings
	Manual sketching
	SB4. produce output in form of manual drawings and sketches SB5. ensure accuracy and scale in the manual sketches
	Review and supervision
	SB6. do a comprehensive review of drawings and layouts for compliance of norms SB7. instruct and continually guide and monitor drawing preparation by draftsmen



PSC/N0202 Supervision and review of drawing works in a project

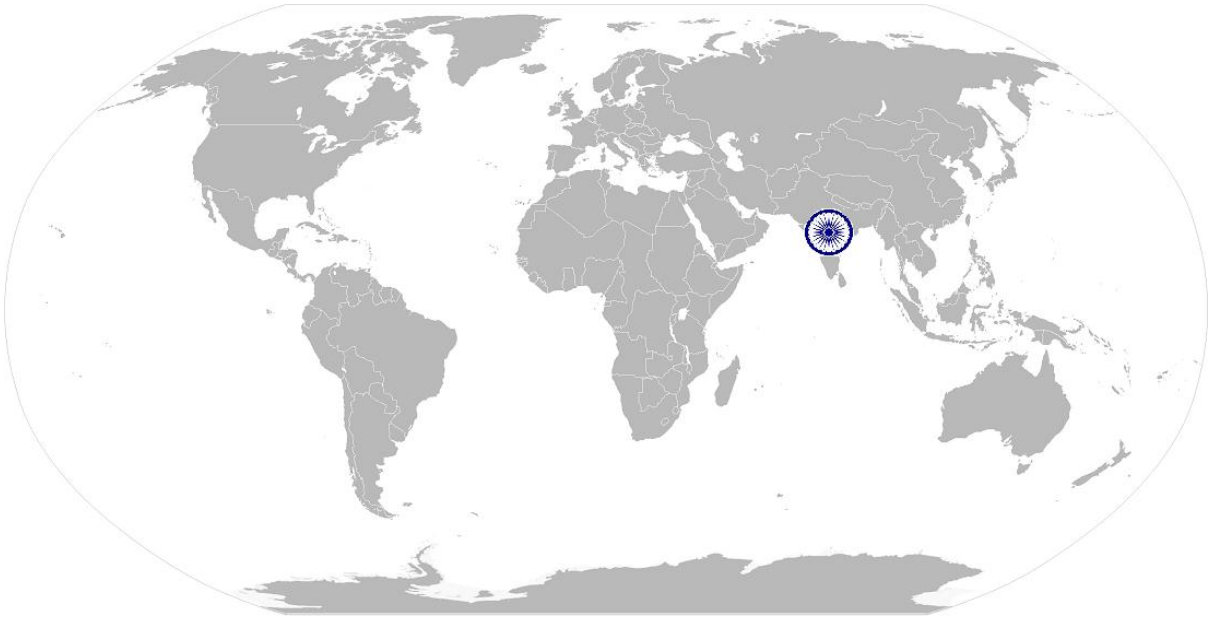
NOS Version Control

NOS Code	PSC/N0202		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	TBD	Version number	0.1
Industry	Plumbing	Drafted on	15/07/13
Industry Sub-sector	Consultants	Last reviewed on	30/07/13
		Next review date	31/01/14



PSC/N0209 Management of a design project

National Occupational Standard



Overview

This unit is about management of a design project during the designing phase of a project.

PSC/N0209 Management of a design project

National Occupational Standard

Unit Code	**PSC/N0209**
Unit Title (Task)	**Management of a design project**
Description	This OS unit is about management of a design project during the designing phase of a project
Scope	This unit/task covers the following: Management of design project • management of design work of various systems such as water/wastewater system, hydraulic fire protection system, rainwater harvesting system, groundwater extracting system, etc.
Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Management of design project	To be competent, the user/individual on the job must be able to: PC1. understand the nature of design work and requirement of the task PC2. assign the drafting task to draftsmen and/or drafting engineer PC3. checking prepared drawings and design for accuracy PC4. validate the designs, ensuring that designs meet the site/project's requirement PC5. understand and apply relevant codes as related to buildings and plumbing design PC6. do a quality check of all the completed design work to ensure its compliance with applicable codes and norms PC7. assist in preparing quantity and construction cost estimates as requested PC8. works to meet design schedules and complete tasks on budget
Knowledge and Understanding (K)	
A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on: quality and delivery standards, safety and hazards, design codes and norms, integrity, dress code, etc. KA2. importance of review of designs and plans KA3. risk and impact of not following defined procedures/work plans KA4. how to obtain previous designs and plans from organization existing database
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB6. basic plumbing principles related to design, planning and execution KB7. relevant designing and planning software such as AutoCAD, MS Office, etc. KB8. design and plumbing terminologies KB9. units of measurements

PSC/N0209 Management of a design project

	KB10. basic runtime errors and their resolution ensuring minimal deviation from the design/plan KB11. how to calculate material requirements as per drawing/layout
Skills (S)	
A. Core Skills/ Generic Skills	**Communication and reading skills**
	The user/individual on the job needs to know and understand how to: SA1. communicate in Hindi, English and/or regional language SA2. read designs and plans
	Estimation skills
	SA3. perform mathematical calculations SA4. basic quantity and time estimations from the prepared design/plan
B. Professional Skills	**Critical thinking and decision making**
	The user/individual on the job needs to know and understand how to: SB1. spot signs of deviation from codes/norms and take appropriate action SB2. learn from past errors
	Quality check
	SB3. ensure quality at work-in-progress stage according to design requirements SB4. check for quality in the final system design
	Co-ordination and supervision
	SB5. allocate work to sub-ordinates as required SB6. communicate instructions and requirements correctly SB7. co-ordinate with co-workers, sub-ordinates and seniors for design/plan related compliance

PSC/N0209 Management of a design project

NOS Version Control

NOS Code	PSC/N0209		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	TBD	Version number	0.1
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Industry Sub-sector	Consultants	Last reviewed on	30/10/13
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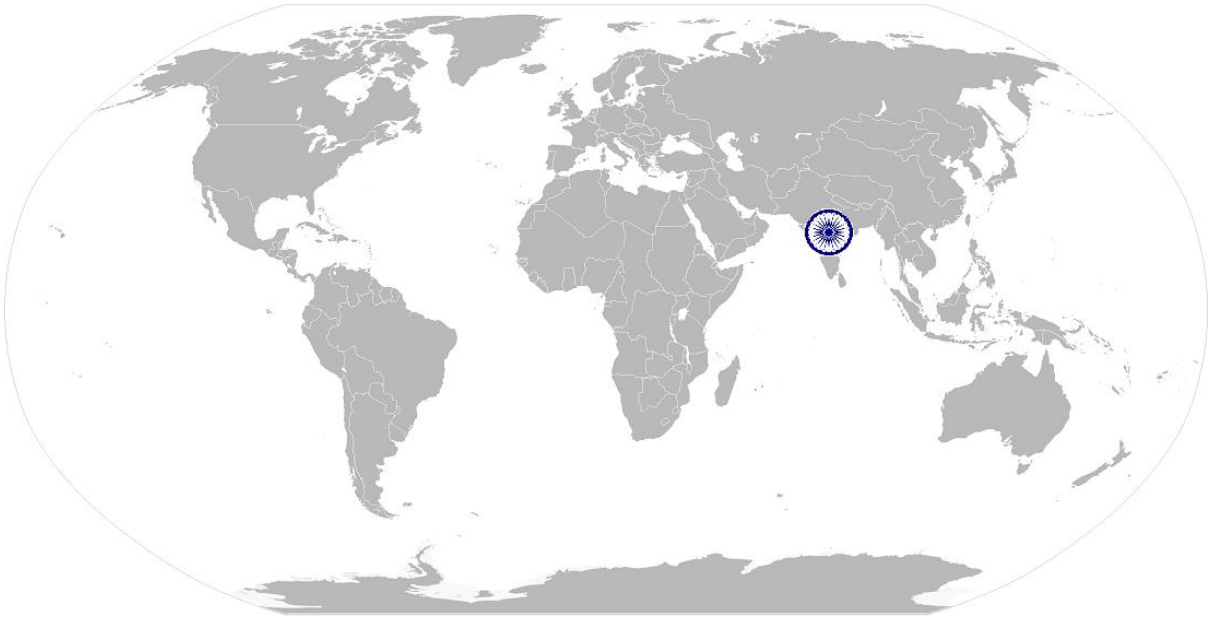
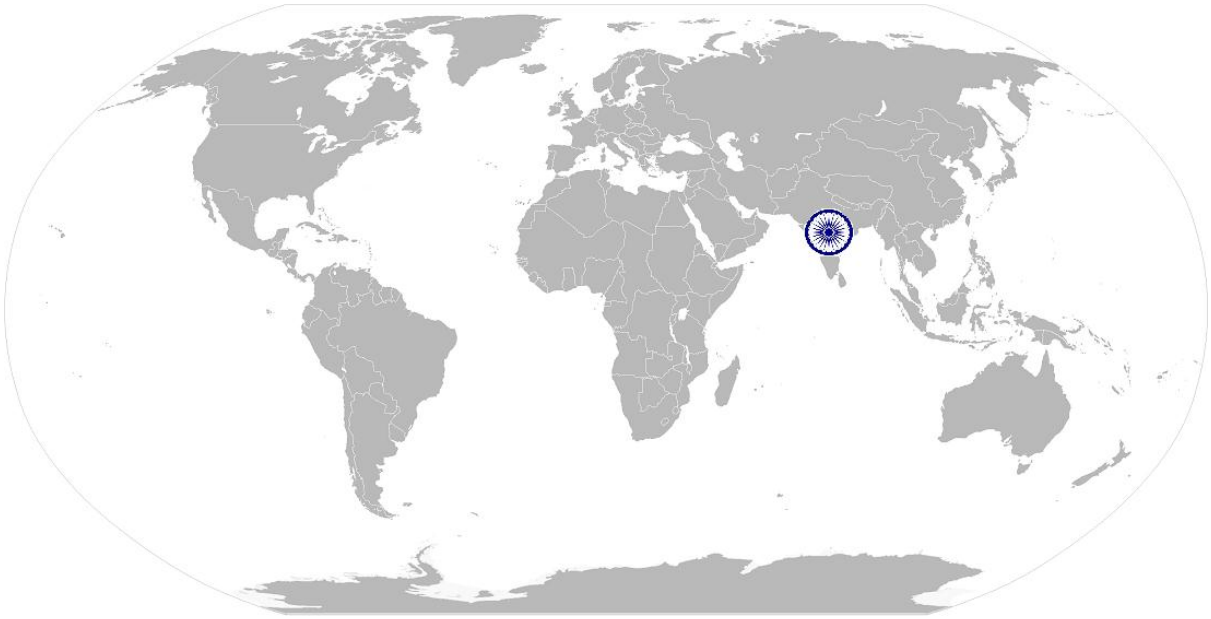


PSC/N0211 Work effectively with colleagues

National Occupational Standard



Overview

This unit is about working effectively with colleagues, either within team or in other working teams for a plumbing project.

PSC/N0211 Work effectively with colleagues

National Occupational Standard

Unit Code	**PSC/N0211**
Unit Title (Task)	**Work effectively with colleagues**
Description	This OS unit is about working effectively with colleagues, either within team or in other working teams for a plumbing project
Scope	This unit/task covers the following: Interact with seniors • receive work instructions, discuss task status and receive feedback Interact with colleagues within and outside the team • communicate and discuss work flow, problems faced, possible solutions and pass on the learning within and outside the team

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Interaction with seniors	To be competent, the user/individual on the job must be able to: PC1. receive work instructions and discuss the project/design with seniors PC2. communicate to reporting senior about task status, repairs and maintenance of tools and equipment as required PC3. communicate any potential hazards and expected process disruptions PC4. get the work reviewed and handover completed task to seniors PC5. receive feedback from reporting senior PC6. report any anticipated reasons for delays
Interact with colleagues within and outside the team	To be competent, the user/individual on the job must be able to: PC7. work as a team with colleagues and share work as per the work load and skills PC8. work with colleagues of other teams PC9. communicate and discuss work flow related difficulties in order to find solution with mutual agreement PC10. put team over individual goals PC11. resolve conflicts

Knowledge and Understanding (K)	
A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on: preferred language of communication, quality delivery standards and personnel management KA2. reporting structure

PSC/N0211 Work effectively with colleagues

B. Technical Knowledge	The user/individual on the job needs to know and understand: KB12. effective ways of communication KB13. building team co-ordination
Skills (S)	
A. Core Skills/ Generic Skills	**Communication skills**
	The user/individual on the job needs to know and understand how to: SA1. communicate in Hindi, English and/or regional language
	Teamwork
	SA2. share work load as required SA3. accept and interpret instructions and requirements correctly SA4. co-ordinate with co-workers and sub-ordinates
B. Professional Skills	**Decision making**
	The user/individual on the job needs to know and understand: SB1. how to spot and communicate potential areas of disruptions to work process and report the same SB2. when to report to supervisor and when to deal with a colleague individually, depending on the type of concern
	Reflective thinking
	SB3. improve work processes by interacting with others and adopting best practices

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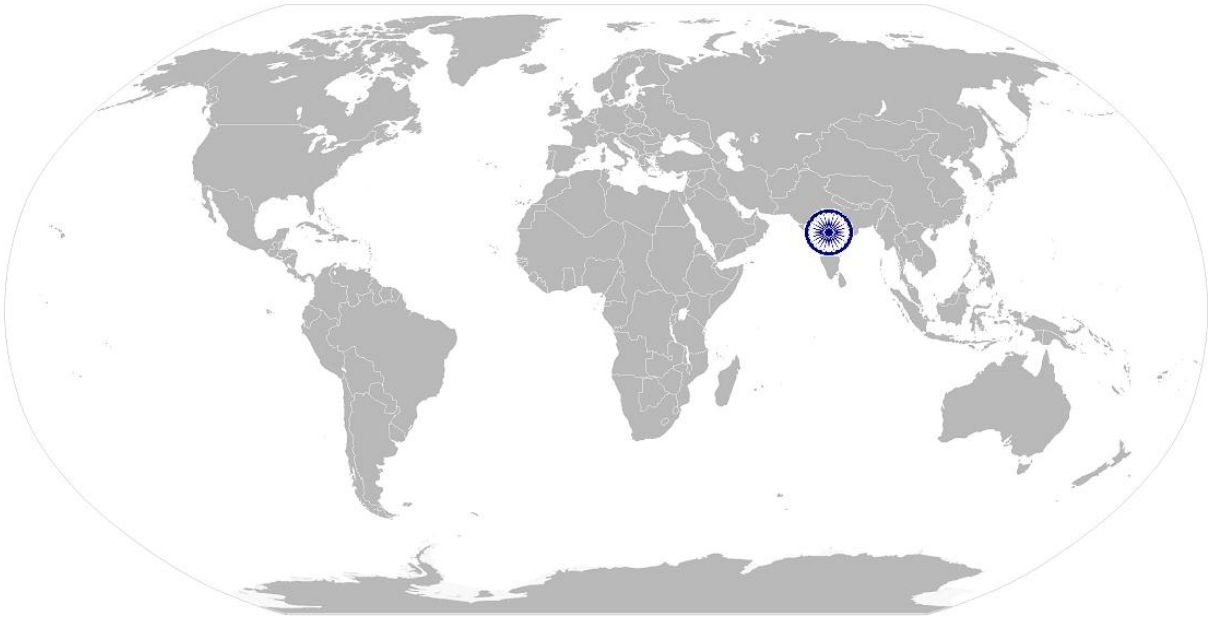
NOS Version Control

NOS Code	PSC/N0211		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	TBD	Version number	0.1
Industry	Plumbing	Drafted on	01/09/13
Industry Sub-sector	Consultants / Manufacturers	Last reviewed on	30/10/13
		Next review date	30/04/14



PSC/N0212 Maintain a healthy, safe and secure working environment

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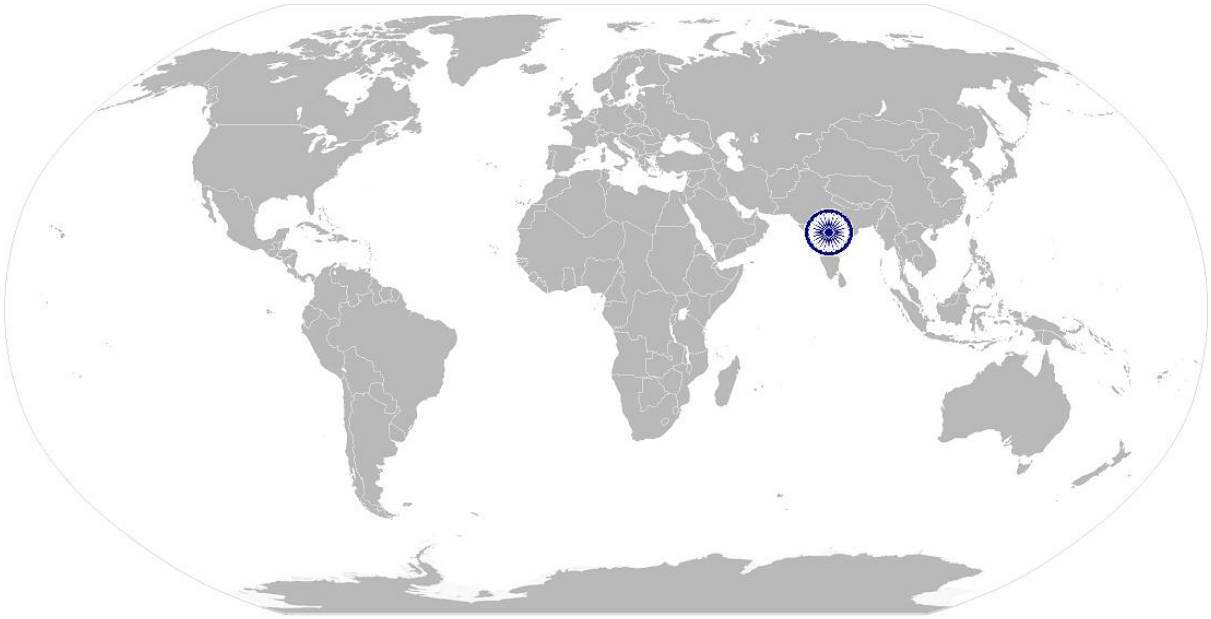
National Occupational Standard



Overview

This unit is about being aware of, communicating and taking steps towards minimizing potential hazards and dangers of accidents on the job and maintaining occupational health and safety.

PSC/N0212 Maintain a healthy, safe and secure working environment

National Occupational Standard

Unit Code	PSC/N0212
Unit Title (Task)	Maintain a healthy, safe and secure working environment
Description	This OS unit is about monitoring your working environment and making sure it meets requirements for health and safety
Scope	This unit/task covers the following: Emergency procedures to be followed in case of • accidents • fires • illness • breach of security • other reasons to evacuate the premises
Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Emergency procedures	To be competent, the user/individual on the job must be able to: PC1. comply with organization's current health, safety and security policies and procedures PC2. report any identified breaches in health, safety, and security policies and procedures to the designated person PC3. identify and remove any hazards that can be dealt safely, competently and within the limits of individual's authority PC4. report hazards to the relevant person in line with organizational procedures and warn other people who may be affected PC5. follow organization's emergency procedures promptly, calmly, and efficiently PC6. identify and recommend opportunities for improving health, safety, and security to the designated person PC7. complete any health and safety records legibly and accurately
Knowledge and Understanding (K)	
A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policy on: safety and hazards, personnel management, role and responsibilities KA2. reporting structure KA3. what is meant by a hazard, including the different types of health and safety hazards that can be found in the workplace KA4. organization's emergency procedures for different emergency situations and

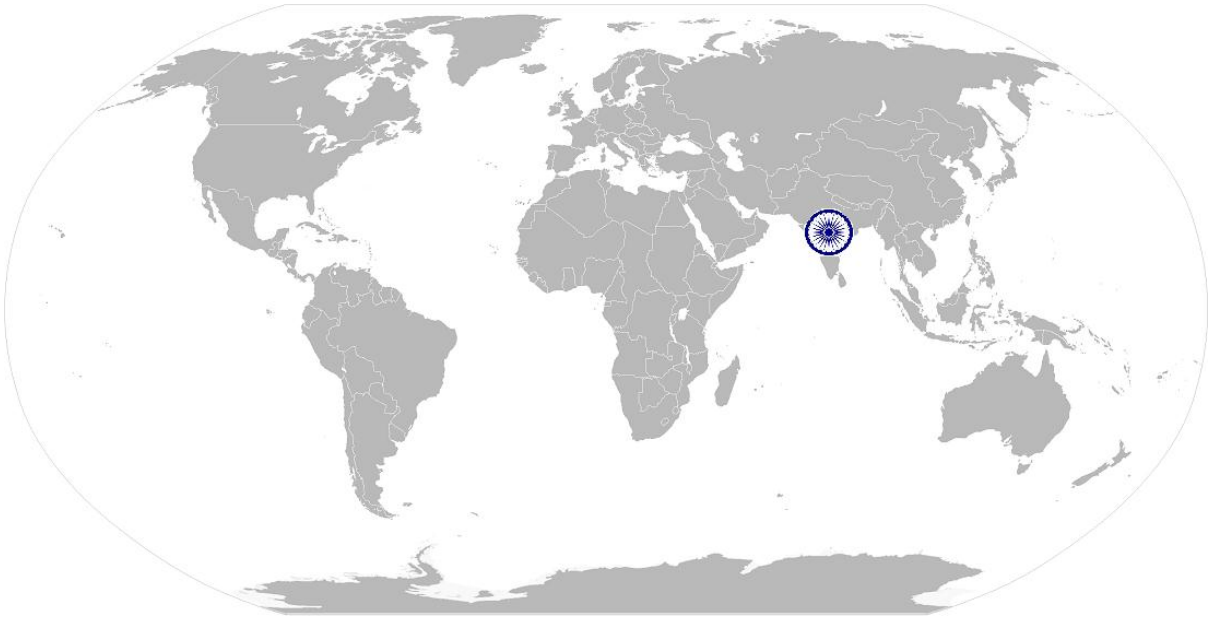
PSC/N0212 Maintain a healthy, safe and secure working environment

	the importance of following these KA5. importance of maintaining high standards of health, safety and security KA6. implications that any non-compliance with health, safety and security may have on individuals and the organization
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. different types of breaches in health, safety and security and how and when to report these KB2. evacuation procedures for workers and visitors
Skills (S)	
A. Core Skills/ Generic Skills	**Communication skills**
	The user/individual on the job needs to know and understand how to: SA1. effectively communicate the danger
	Organising skills
	SA2. keep the work environment safe and clean
B. Professional Skills	**Decision making**
	The user/individual on the job needs to know and understand how to: SB1. report potential sources of danger SB2. follow prescribed procedure in the event of an accident SB3. plan and organize your work to meet health, safety and security requirements
	Reflective thinking
	SB4. learn from past mistakes and apply balanced judgments to different situations

PSC/N0212 Maintain a healthy, safe and secure working environment

NOS Version Control

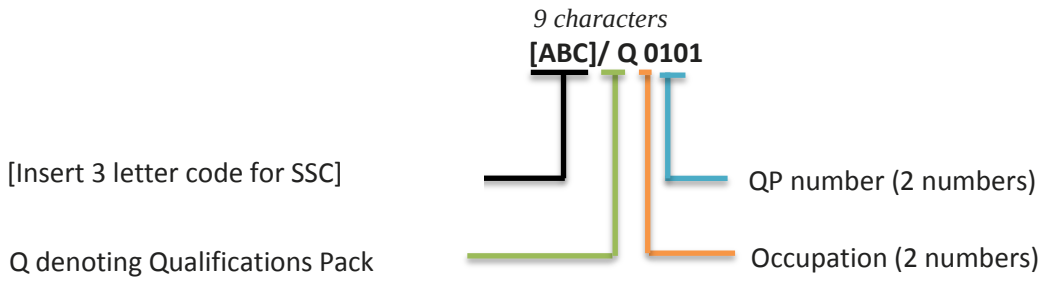
NOS Code	PSC /N0212		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	TBD	Version number	0.1
Industry	Plumbing	Drafted on	15/07/13
Industry Sub-sector	Consultants / Manufacturers	Last reviewed on	30/07/13
		Next review date	31/01/14



Annexure

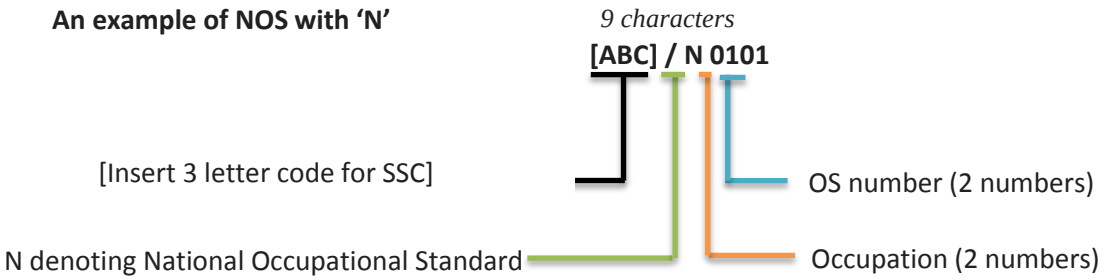
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



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The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Contractors	01-30
Consultants	30-60
Manufacturers	60-90

Sequence	Description	Example
Three letters	Industry name	PSC
Slash	/	/
Next letter	Whether **Q**P or **N**OS	N
Next two numbers	Occupation code	01
Next two numbers	OS number	01