

QUALIFICATION FILE – CONTACT DETAILS OF SUBMITTING BODY

Name and address of submitting body:

Construction Skill Development Council of India

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List of documents submitted in support of the Qualifications File

1. Career Map of Construction Electrical Works Occupation - Annexure 1
2. QP CON/Q0605- Annexure 2

QUALIFICATION FILE SUMMARY

Qualification Title	Supervisor – Electrical Works - QP CON/Q0605		
Body/bodies which will assess candidates	<ul style="list-style-type: none"> • MCG • Star Projects 		
Body/bodies which will award the certificate for the qualification.	CSDCI		
Body which will accredit providers to offer the qualification.	CSDCI		
Occupation(s) to which the qualification gives access	Construction Electrical Works		
Proposed level of the qualification in the NSQF.	6		
Anticipated volume of training/learning required to complete the qualification.	1000 hrs		
Entry requirements / recommendations.	Preferably 12th standard and compulsorily having Low Voltage license from any Govt. recognized licensing authority		
Progression from the qualification.	Engineer P&M		
Planned arrangements for RPL.	Work is under progress		
International Comparability	Comparable with UK Standard and Australia Standard		
Formal structure of the qualification			
Title of unit or other component (include any identification code used)	Mandatory/ Optional	Estimated size (learning hours)	Level
CON/N0614: Provide work related information to concerned engineer and subordinates	Mandatory	350	6
CON/N0615: Organise and deploy resources as per electrical work requirement	Mandatory	220	6
CON/N0616: Monitor the execution of electrical works and take corrective action as per requirements	Mandatory	350	6
CON/N9002: Manage workplace for safe and healthy work environment	Mandatory	80	6

Please attach any document giving further detail about the structure of the qualification – eg a Curriculum or Qualification Pack.

Give details of the document here:

1. QP CON/Q0605- Annexure 2

SECTION 1

ASSESSMENT

Name of assessment body:

If there will be more than one assessment body for this qualification, give details.

- MCG
- Star Projects

Will the assessment body be responsible for RPL assessment?

Give details of how RPL assessment for the qualification will be carried out and quality assured.

The RPL assessment will be carried out through screening, identifying the skills gaps, provide bridge training to cover the competency gap and then conduct final assessment of the candidates.

Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, consistent and fair and show that these are in line with the requirements of the NSQF:

Assessment is done through third parties who are affiliated to CSDCI as Assessment Body. Assessors are trained & certified by CSDCI through Training of Trainers program. The assessment involves two processes. The first process is gathering the evidence of the competency of individuals. The second part of the assessment process is the judgement as to whether a person is competent or not. The assessment plan contains the following information:

- What will be assessed, i.e. the competency based on each NOS
- How assessment will occur i.e. methods of assessment
- When the assessment will occur
- Where the assessment will take place i.e. context of the assessment (workplace/simulation)
- The criteria for decision making i.e. those aspects that will guide judgements and
- Where appropriate, any supplementary criteria used to make a judgement on the level of performance.

The assessment is conducted through theory, viva voce and practical.

Please attach any documents giving further information about assessment and/or RPL.

Give details of the document(s) here:

Not Applicable

ASSESSMENT EVIDENCE

Complete the following grid for each grouping of NOS, assessment unit or other component as per the assessment criteria. Insert the required number of rows.

CRITERIA FOR ASSESSMENT OF TRAINEES

Supervisor – Electrical Works

CON/Q0605

Construction Skill Development Council Of India

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.

		Marks Allocation			
Assessable Outcome	Assessment criteria	Total Marks	Out Of	Theory	Practical Skills
CON/N0614: Provide work related information to concerned	PC1. assist concerned engineer to make/ modify work plan and sequencing of electrical activities as per construction work requirement by providing required information	100	6	3	3
	PC2. report to the concerned engineer about location of electrical installations/ maintenance		6	3	3
	PC3. report concerned engineer about status of work with respect to planned target		6	3	3

engineer and subordinates	PC4. inform concerned authorities for stopping/ suspending construction/ other activities as required before and after electrical works		6	3	3	
	PC5. provide requirement of construction equipments/ vehicles to concerned authority to execute electrical works		7	3.5	3.5	
	PC6. provide inputs to concerned engineer regarding requirements for manpower, tools, and materials as per electrical work requirements		7	3.5	3.5	
	PC7. provide information to concerned authorities regarding equipment breakdown/ mobilization, work delay/ stoppage, quality issues and any anticipated causes that might obstruct work progress		7	3.5	3.5	
	PC8. analyze hazards in workplace and report to concerned authorities for necessary actions		6	3	3	
	PC9. brief subordinate workers about scopes and timelines to be adhered for respective activities		7	3.5	3.5	
	PC10. brief subordinate about use of tools, electrical measuring devices, material handling/ storing practices and sequence of activities		7	3.5	3.5	
	PC11. provide information about hazards and risks involved in working at height, live electrical power lines and working at proximity to heavy electrical machineries		7	3.5	3.5	
	PC12. brief subordinate about standard procedure of handling and storing of electrical fixtures, materials and devices		7	3.5	3.5	
	PC13. provide direction regarding PPEs to be used during electrical installations and maintenance		7	3.5	3.5	
	PC14. brief about emergency treatment/ first aid to be provided in case of electrical shocks, burns and fall from height		7	3.5	3.5	
	PC15. provide direction for reporting procedure to be maintained during electrical works activity and under emergency situations		7	3.5	3.5	
		Total	100	50	50	
	CON/N0615: Organise and deploy resources as per electrical work requirement	PC1. collate information regarding requirement of electrical tools, devices, fixtures etc. necessary for conducting electrical repair/ maintenance work at site	100	8	4	4
		PC2. check specification and number of electrical goods mentioned in requirements are appropriate as per respective electrical works		8	4	4
PC3. coordinate with store for availability of required electrical goods and report to concerned senior if found otherwise		8		4	4	
PC4. prepare indent for material and take necessary approval from concerned engineer		8		4	4	
PC5. ensure availability of consumable electrical goods which are commonly replace/ used at site, such as bulbs for lighting system, circuit breakers, fuses, switches etc.		8		4	4	
PC6. carry out coordination with concerned persons and take follow-ups for arrival of intend		8		4	4	
PC7. ensure sorting and stacking of re-usable electrical goods (considering safe condition) separately at designated locations to minimise/ control wastage		8		4	4	
PC8. review specification and number of electrical goods mentioned in material requisition vouchers, prior to taking necessary approval for issuing the same		8		4	4	
PC9. read and interpret electrical drawing, work plan, specification and guidelines (if required) prior to check		8		4	4	

	material requisition vouchers				
	PC10. carry out necessary calculations regarding quantity requirements of consumable materials considering sequence and stage of activities and report to superior in advance		9	4.5	4.5
	PC11. allocate manpower to specified electrical works as per work requirement considering criticality of works		9	4.5	4.5
	PC12. coordinate with sub-contractors to finalize work measurements and labour report		8	4	4
		Total	100	50	50
CON/N0616: Monitor the execution of electrical works and take corrective action as per requirements	PC1. monitor progress of electrical works to ensure that work all timeline milestones are being met as per plan	100	6	3	3
	PC2. maintain 'as-built' details/ drawings of the permanent electrical works as per laid down documentation procedures		6	3	3
	PC3. ensure proper access/ work platform is created prior to undertake electrical connections at height/ confined space		7	3.5	3.5
	PC4. coordinate with concerned authority if any support required for mechanical works department during electrical maintenance/ repairing works		7	3.5	3.5
	PC5. check for hazards involved in electrical operations and ensure safety control measures are deployed according to applicable electrical norms		6	3	3
	PC6. ensure isolation of electrical installations are done as per standard practice		6	3	3
	PC7. suggest specification of electrical devices/ materials to be used for installation/ maintenance work if required one is not available		7	3.5	3.5
	PC8. prioritize electrical works as per requirement of construction works		6	3	3
	PC9. ensure that all temporary electrical works on site meet compliance and regulatory requirements		6	3	3
	PC10. ensure modifications are incorporated in electrical drawings as per 'as-built' details and updates are recorded according to the applicable documentation procedure		6	3	3
	PC11. ensure that all preventive maintenance activities for temporary site electrical units are completed in due intervals manner as per plan		6	3	3
	PC12. ensure that all tests and diagnostic works for temporary site electrical are carried out using correctly calibrated electrical devices		6	3	3
	PC13. ensure that all installations and repair of temporary electrical works on site are carried out using electrical fixtures/ materials of approved brand and specification		6	3	3
	PC14. ensure completed electrical installations are safely protected against rain, fire and access of unauthorized persons		6	3	3
	PC15. ensure erection of safety signage, display/ caution boards surrounding the electrical installations/ outlets, as per electrical safety norms		6	3	3
	PC16. inspect faulty electrical installations and carry out troubleshooting using appropriate measuring devices as per manufacturer's guidelines/ applicable specifications		7	3.5	3.5
	Total	100	50	50	

CON/N9002: Manage workplace for safe and healthy work environment	PC1. ensure proper housekeeping at workplace	100	5	2.5	2.5			
	PC2. implement safe handling , stacking methods at workplace / store		5	2.5	2.5			
	PC3. insure that health and safety plan is followed by all subordinates		5	2.5	2.5			
	PC4. identify any hazard in workplace and notify them to appropriate authority		5	2.5	2.5			
	PC5. ensure that all safety and protection installation are correctly placed & adequate		5	2.5	2.5			
	PC6. ensure safe access is available at work place for movement of workers & materials		5	2.5	2.5			
	PC7. ensure safe use of tools and tackles by the workmen as per applicability		5	2.5	2.5			
	PC8. ensure appropriate use of following Personal Protective Equipment (PPE) as per applicability:		10	5	5			
	• Head Protection (Helmets)							
	• Ear Protection							
	• Fall Protection							
	• Foot Protection							
	• Face and Eye Protection,							
	• Hand &Body Protection		5	2.5	2.5			
	• Respiratory Protection							
	PC9. maintain entrances & exit from confined spaces , excavated pits and other location in concurrence with safety parameters or instruction form safety personals.							
	PC10. ensure organizational policies and procedures are followed for health , safety and welfare, in relation to:					10	5	5
	• methods of receiving or sourcing information							
	• dealing with accidents and emergencies associated with the work and environment							
	• reporting							
	• stooping work							
	• evacuation							
	• fire risks and safe exit procedures		5	2.5	2.5			
	PC11. follow procedures for accident recording and reporting as per organizational and statutory requirements							
	PC12. ensure effective adherence to response to emergency procedures / protocols					7.5	3.75	3.75
	PC13. report any case of emergency / risks to the concern people at the construction site					7.5	3.75	3.75
PC14. report any perceived risk hazards to the superiors / concerned EHS	7.5	3.75				3.75		
PC15. demonstrate the use of fire protection equipments for different type of fire hazard	7.5	3.75				3.75		
PC16. implement control measures to reduce risk & meet legal requirement as per organizational policies	5	2.5	2.5					
	Total	100	50	50				

SECTION 2

EVIDENCE OF NEED

What evidence is there that the qualification is needed?

Please refer to the attached list of job roles and occupations identified in construction sector. These job roles have been derived through extensive industry interactions facilitated from 10 workshops and various site visits conducted and interaction with 500+representatives from different construction sector organizations all over the country.

What is the estimated uptake of this qualification and what is the basis of this estimate?

As per survey the incremental Manpower Gap between 2008 and 2022 found out to be 473000

What steps were taken to ensure that the qualification(s) does/do not duplicate already existing or planned qualifications in the NSQF?

QPs for Job Roles of various related SSC's were studied to ensure that there is no duplicity.

What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated?

Standards department of CSDCI will do periodic review and monitor the industry feedbacks, Training Partners feedback on the qualification and will incorporate them appropriately at the designated revision time.

The revision of this qualification is scheduled after 2 years i.e. 23/08/2017

Please attach any documents giving further information about any of the topics above.

Give details of the document(s) here:

1. List of job roles

SECTION 3

SUMMARY EVIDENCE OF LEVEL

Summary of Direct Evidence:

Justify the NSQF level allocated to the QP by building upon the five descriptors of NSQF. Explain the reasons for allocating the level to the QP.

Generic NOS is/are linked to the overall authority attached to the job role.

Supervisor – Electrical Works QP CON/Q0605

Process required	Professional Knowledge	Professional Skills	Core Skills	Responsibility	Level
<p>The job role is expected to exhibit special technical skills, problem solving skills and resource managing skills related to execution of electrical installation and repairing works. The job holder also monitors performance of subordinates, suggest remedial/ corrective measures and coordinates among concerned authorities to achieve assigned work milestones as per applicable safety and quality norms.</p>	<p>The job holder should have thorough and broad knowledge of guidelines/ specifications of material and work methods to be adopted, sequence and timelines of each activity/ work progress status, management of resources and planning of activities in co-ordination with superior personnel. Individual should also know applicable quality parameters to be followed in each step of pavement construction and detailed function of paving equipments/ machineries used for electrical works at construction sites.</p> <p>The knowledge is acquired by practising domain specific operations in a vast range of application over a long period of time and by studying applicable documents as required for execution of rigging operations.</p>	<p>The job holder is expected to keep coordination by providing required inputs to concerned engineer, briefing subordinate team about applicable quality and safety norms of electrical installations and repairing works, manage resources, equipments and manpower for assigned tasks, coordinate with concerned authorities for execution of assigned works, suggest and conduct corrective measures/ repairing methods to faulty/ damaged works. A range of practical and problem solving skills as mentioned above are required to be demonstrated during various stages of construction process by the job holder.</p>	<p>The job holder is expected to provide instructions to subordinates verbally and in written to meet the work requirement. Individual in this job role collects required data, prepare status/ note sheets, fill up check lists/ quality formats, seeks inputs from superior and subordinates, manage resources by coordinating with concerned authorities, as per agreed plan. The job holder carries out arithmetical and geometrical calculations relevant to conversion of units, material requirement as and when necessary.</p>	<p>The job holder is responsible for own work (ref. professional skills column) and fully responsible for subordinates works. Individual at this job role is expected to check for defects, faults in completed works, suggest or take remedial/ corrective actions as per agreed quality norms, oversee lifting and erection works by providing instructions to subordinates and gather inputs from them in order to monitor progress, unresolved issues and ensure timely action by self or concerned authorities. The job holder is also responsible for implementation of prescribed work methodology, applicable quality and safety norms at workplace under supervision.</p>	6
Level 6	Level 6	Level 6	Level 6	Level 6	

OTHER EVIDENCE OF LEVEL [This need only be filled in where evidence other than primary outcomes was used to allocate a level] **(Optional)**

Summary of other evidence (if used): **Not applicable.**

SECTION 4

EVIDENCE OF RECOGNITION OR PROGRESSION

What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?

Please refer to attached career path as per annexure 1 which clearly define the clear career path.

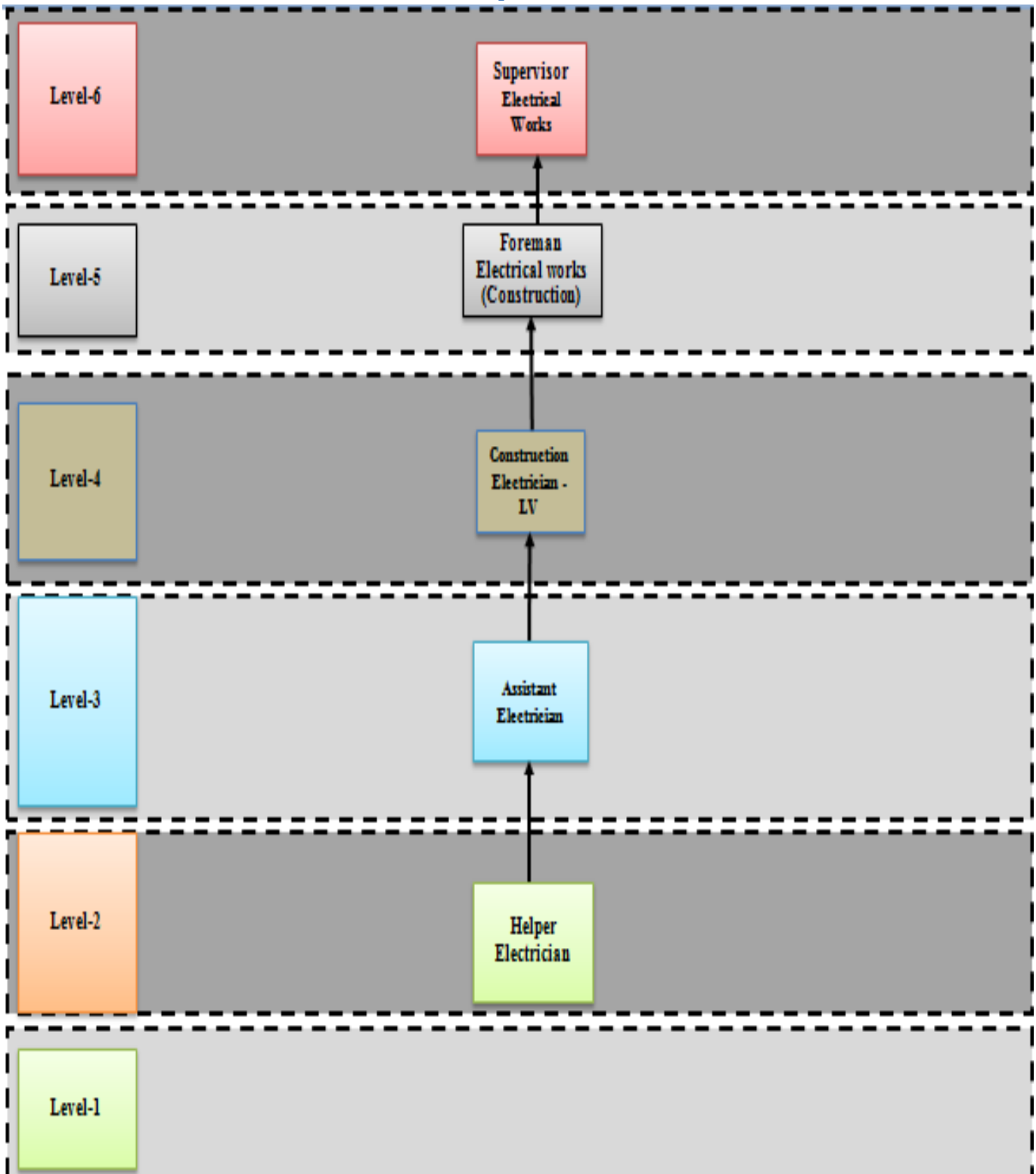
Please attach any documents giving further information about any of the topics above.

Give details of the document(s) here:

1. Annexure 1
 - Overall Career map
 - Career map of Construction – Electrical Works Occupation
2. QP CON/Q0605- Annexure 2

Annexure 1

Career
Map



Annexure 2- QP CON/Q0605