

QUALIFICATION FILE – CONTACT DETAILS OF SUBMITTING BODY

Name and address of submitting body:

Construction Skill Development Council of India

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Name and contact details of individual dealing with the submission

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List of documents submitted in support of the Qualifications File

1. Career Map of Assistant Bar Bender and Steel Fixer- Annexure 1
2. QP CON/Q 0202- Annexure 2

3. QUALIFICATION FILE SUMMARY

Qualification Title	Assistant Bar Bender and Steel Fixer QP CON/Q 0202		
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	Bar Bending		
Proposed level of the qualification in the NSQF.	2		
Anticipated volume of training/learning required to complete the qualification.	350 hrs		
Entry requirements / recommendations.	5th Standard / Helper Bar Bender & Fixer Level-I qualified		
Progression from the qualification.	Bar Bender & Steel Fixer Level 3		
Planned arrangements for RPL.	The curriculum is in place for 56 hrs. It has pre assessment having components of generic NOS and technical NOS and demonstration as well		
International Comparability	Compared with UK NOS		
Formal structure of the qualification			
Title of unit or other component (include any identification code used)	Mandatory/ Optional	Estimated size (learning hours)	Level
CON/N0007:Health, Safety & Environment	Mandatory	30	2
CON/N0009:Material Handling & Storing	Mandatory	32	2
CON/N0006:Erection and dismantling of 3.6 meter temporary scaffold	Mandatory	32	2
CON/N0041:Understand Bar Bending Schedule and drawing	Mandatory	48	2
CON/N0037:Identification and Use of different type of Stirrups and Cranks / Shear Bars	Mandatory	40	2
CON/N0038:Fabricate reinforcement in lintel, slab and projections	Mandatory	56	2
CON/N00039:Fabricate beam reinforcement with & without Shear bar	Mandatory	56	2
CON/N0040:Fabricate reinforcement cage of column and base in situ position while incorporating crank bars	Mandatory	56	2

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:

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:

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

Assistant Bar Bender & Fixer

CON/Q0202

Construction Skills Development Council of India

Guidelines for Assessment

1. Criteria for assessment for Qualification Pack has been created based on the NOSs and performance criteria by CSDCI. Each Performance Criteria (PC) has been assigned marks proportional to its importance within NOS and weightages have also been given among the NOSs accordingly. CSDCI has laid down the proportion of marks for Skills, Theory/Knowledge and Behaviour / Attitudes for each PC.
2. The assessment of the theory/knowledge will be based on written test/viva-voce or both while skill test shall be hands on practical. Behavior and attitude will be assessed while performing the task.
3. The assessment shall be done as per the assessment sheets devised by CSDCI and accordingly the assessment agencies in consultation with CSDCI will create unique question papers for theory/knowledge and attitude for each candidate at each CSDCI accredited testing centers (as per assessment criteria below).
4. The assessment agencies will conduct the assessment as per the guidelines given by CSDCI giving unique evaluations for skill & knowledge for every student at each CSDCI accredited testing center.
5. To pass the Qualification Pack, every trainee should score a minimum of 80% in Skill, 50% in Knowledge & Behavior and 50% in Written test separately in each attribute. In addition, he should pass in each NOS with minimum 40% marks.
6. Each student at Level-2 has to pass in Skill, Knowledge and Behavior as per the percentage given below in totality while individual failing to score minimum pass marks of 40% in any one of the NOS then he will have to re-appear for that one NOS only within 60 days of his test for final certification. After 60 days he will have to appear in all NOSs

Assessable Outcome	Assessment criteria	Marks Allocation			
		Total Mark	Out Of	Theory	Skills Practical
CON/N0007: Health, Safety & Environment	PC1: Demonstrate and use Personal Protective Equipment such as Head Protection, Fall Protection, Foot Protection, Face & eye Protection, Ear Protection, Hand & Body Protection and Respiratory Protection.	23	4	1	3
	PC2: Follow the Do's and Don'ts during working at heights		3	1	2
	PC3: Carry out various safety measures, mock drills, relevant to task during work and evacuation at emergency.		4	1	3
	PC4: First Aid Practice such as use of basic dressing materials and bandages, resuscitation practices		3	1	2
	PC5: Follow standard safety practices while cutting, stacking and fabricating reinforcement bars		4	1	3
	PC6: Practice safety while lifting of materials manually		3	1	2
	PC7: Practice safety while mechanical operations for lifting, shifting and placing materials		2	1	1

		Total	23	7	16
CON/N0009: Material Handling & Storing	PC1:loading, unloading and shifting reinforcement material as per standard procedure.	23	7	2	5
	PC2:Storage, stacking and sorting of reinforcement steel per size, length, sequence and as per standard procedure		5	1	4
	PC3:Protection of steel from corrosion and weathering action		3	1	2
	PC4:Arrangement of various slings as per configuration and requirement		3	1	2
	PC5:Understand identify and use of hooks, rings and shackles		5	1	4
		Total	23	6	17
CON/N0006:Erection and dismantling of 3.6 meter temporary scaffold	PC1:Arrange, shift, and stack the required materials, tools and tackles at the identified location.	23	4	1	3
	PC2:Use the required safety gadgets and follow trade safety during erection and dismantling operation		8	2	6
	PC3:Erect and dismantle 3.6 meter temporary scaffold within stipulated time		8	2	6
	PC4:Maintain tidiness at sites.		3	1	2
		Total	23	6	17
CON/N0041:Understand Bar Bending Schedule and drawing	PC1:Read and understand relevant specification given in drawing	30	3	1	2
	PC2:Identify types, grades and shape code of rebar		4	1	3
	PC3:Understand spacing and length of reinforcement bar		4	1	3
	PC4:Recognize main bars and distributors		6	2	4
	PC5:Calculate quantity of additional rebar required		5	1	4
	PC6:Understand rebar plan and section drawings		5	1	4
	PC7:Compute cutting length and weight of reinforcement		3	1	2
		Total	30	8	22
CON/N0037:Identification and Use of different type of Stirrups and Cranks / Shear Bars	PC1:Selection of right tools, pin plate and its safe use	30	30	7	1
	PC2:Compute length and mark accordingly.				2
	PC3:Cut and bend bars, hooks and stirrups as per required shape, size and as per specification				3
	PC4:Identify & use various type of rings				3
	PC5:Bundles together same type of bent bars				3
	PC6:Maintain angle of crank bar as per specification				3

	<p>PC7:Tolerances for task wherever applicable are as given below.</p> <ul style="list-style-type: none"> • Cutting length : Tolerance limit within±15m • Stirrups size – Length, Breadth and Diagonal : ±5mm • Hook Length : ±5mm • Dia along x axis : ±5mm • Dia along y axis : ±5mm • End to end after bending : Tolerance limit- ±5mm 				4
	PC8:Follow sequence as per method statement				2
	PC9:Safety & Housekeeping as per standard practices				2
	Total	30	7		23
CON/N0038: Fabricate reinforcement in lintel, slab and projections	PC1:Read and understand drawing and bar bending schedules				1
	PC2:Cut and bend rebar as per requirement of Bar Bending Schedule				2
	PC3:Mark rebar for bending as per specification				2
	PC4:Measures and set out rebar mesh as per given drawing and specifications				3
	PC5:Use correct ties at correct place				2
	PC6:For lintel size 2400 x 230 mm and depth 150 mm. The tolerance shall be as given below: <ul style="list-style-type: none"> • Top bar length (-) 5 mm / + 3mm • Bottom bar length (-) 5 mm / + 3mm • Top bar bent length (-) 5 mm / + 3mm • Bottom bent length (-) 5 mm / + 3mm • Ring Size ±5mm • Ring Spacing ±10mm / 5 spacing 				4
	PC5:For slab size 3500 x 2600 mm and thickness 150 mm . The tolerance shall as given below: <ul style="list-style-type: none"> • Squareness of mat ±5mm • Spacing of rebar ±10mm/5 spacings • Level of mat (planeness) ±5mm • Length of slab ±5mm • Width of slab ±5mm • Diagonal of slab ±5mm • Cut length of main / secondary bars ±5mm 	31	31	7	4
	PC6:Place & tie stirrups, cover blocks appropriately				2
	PC7:The sequence of task should be as per method statement				2
PC8:Follow safety and housekeeping procedures				2	

		Total	31	7	24
CON/N00039: Fabricate beam reinforcement with & without Shear bar	PC1:Read and understand drawing and Bar Bending Schedule.	32	32	7	3
	PC2:Mark and bend the bar as per schedule				3
	PC3:Mark, Set out cage as per spacing and as per drawing				4
	PC4:Use proper ties at proper places				3
	PC5:Bend Stirrups keeping specified hook length and place stirrups hooks in alternate position				5
	PC6:For beam without and with Shear the tolerance given below shall govern : <ul style="list-style-type: none"> • Top bar length (-) 5mm / +3mm • Bottom bar length (-) 5 mm / + 3mm • Top bent length (-) 5 mm / + 3mm • Bottom bent length (-) 5 mm / + 3mm • Ring Size ± 5mm • Ring Spacing ± 10mm / 5 spacings • Cage Squareness ± 5mm 				
	PC7:Place cover blocks properly				2
	Follow sequence as per method statement				3
	PC8:Maintain safety norms and housekeeping practices				2
					Total
CON/N0040: Fabricate reinforcement cage of column and base in situ position while incorporating crank bars	PC1:Read and understand drawing and Bar Bending Schedule	31	31	7	2
	PC2:Mark rebar for bending				2
	PC3:Cut and bend rebar as per requirement of the schedule				4
	PC4:Bend Stirrups keeping specified hook length and spacing				3
	PC5:Place cover block as specified				1
	PC6:Position rebar cage for column & base as per spacing given in drawing				3
	PC7:For column the tolerance is as given below: <ul style="list-style-type: none"> • Column bar length (-) 5 mm / + 3mm • Ring Size ± 5mm • Ring Spacing ± 10mm / 5 Spacing • Corbel bar length (-) 5mm / +3mm • Corbel bar spacing ± 10mm / 5 spacing • Corbel ring size ± 5mm • Corbel bar tapering ± 5mm 				5
	PC8:Follow sequence of task as per method statement				2
	PC9:Follow safety procedure and housekeeping relevant to the task				2
					Total

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 as per the attachment and their career paths as per Annexure 1, which have been derived through extensive industry interactions facilitated from 10 workshops and site visits conducted and interaction with 500+representatives from different organizations all over the country.

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

The incremental Manpower Gap between 2008 and 2022 is 14,19,000 under Bar Bending Occupation

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?

The comments, feedback and suggestions were collected through interaction with industry during August'14 to Feb'15. The same will be compiled and justifiable changes will be incorporated in the next/updated version of the QP. This QP is set to be revised post 31st March 2015

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

Give details of the document(s) here:

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.

Assistant Bar Bender and Steel Fixer QP CON/Q 0202

Process required	Professional Knowledge	Professional Skills	Core Skills	Responsibility	Level
<p>The job holder in this level undertakes works of preparing reinforcement cages for lintel, columns, slabs, projections etc. by fabricating the required number of crank bars, stirrups, distribution bars etc. as the requirement of fabrication of these cages is very high thus the individual is mostly engaged in routine works consisting of limited activities which are repeated multiple times. Thus the job holder is pegged at level-2</p>	<p>The job holder in this level is expected to have enough knowledge for loading, unloading, shifting, stacking and segregating reinforcement materials as per prevalent norms on the site. He is also expected to know the operations of various tools and tackles, equipments and machineries regularly employed in bar bending works.</p> <p>Form the above outcomes the job holder is placed at level-2</p>	<p>The jobholder is expected to be employed in repetitive activities of preparing and fabricating reinforcement cages for slabs, columns, extensions etc and work as per instructions. He/she complete these tasks by using appropriate tools and tackles.</p> <p>He/she performs task and demonstrate skills which are routine and repetitive in nature under the guidance of trade senior, therefore it is kept at Level 2</p>	<p>The jobholder is expected to understand simplified bar bending schedules and drawings. They are also expected to write and read the specification tags for marking and segregating materials. They should also have some knowledge of measurements which is applied in cutting, bending and spacing the re-bars as per drawings</p> <p>Apart from these the job-holder is expected to read and understand safety signage, boards, guidelines and other instructions and information as circulated on site.</p> <p>As the core skills</p>	<p>Job holder always works under instructions and close supervision of trade senior. The job holder is not responsible for the completion of activity or quality of outcome as main work is to assist in fabrication and preparation of reinforcement cages for slabs, columns, extensions etc. The overall work is always checked by superiors and outcomes are measured in quantitative terms rather than qualitative terms therefore job holder is kept at Level 2</p>	<p align="center">2</p>

			displayed by the jobholder are basically reading, writing and understanding the instructions and information this person is pegged at level-2		
Level-2	Level-2	Level-2	Level-2	Level-2	Level-2

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):

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 defines the career path.

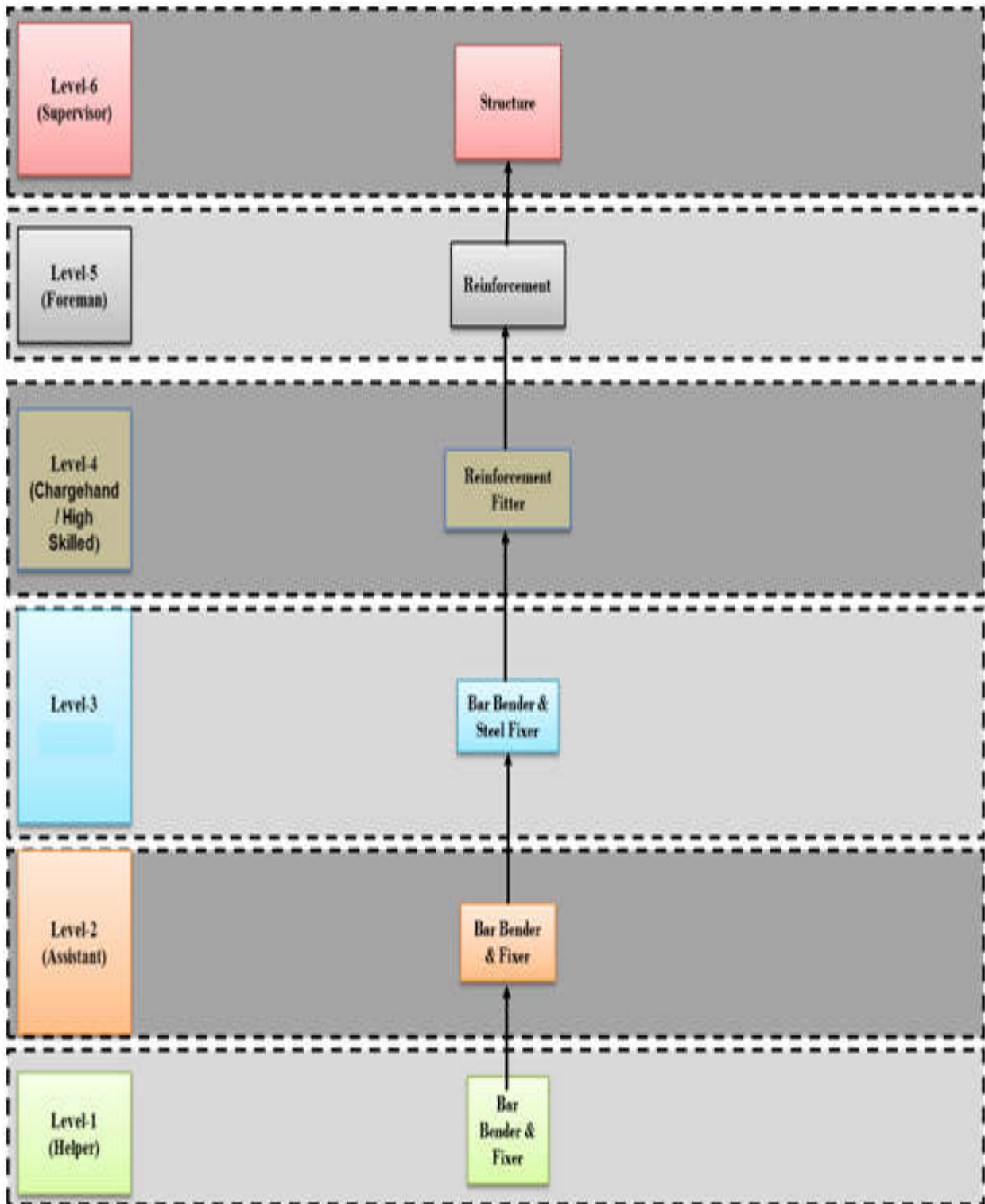
Please attach any documents giving further information about any of the topics above.

Give details of the document(s) here:

1. Career Map of Assistant Bar Bender and Steel Fixer QP CON/Q 0202- Annexure 1
2. QP CON/Q 0202- Annexure 2

Annexure 1

Career Map



Annexure 2- QP CON/Q 0202 Attached