NSDA Reference
To be added by NSDA

QUALIFICATION FILE – CONTACT DETAILS OF SUBMITTING BODY

Name and address of submitting body:

Construction Skill Development Council of India

Address:- 204, Aashirwad Complex, D-1, Green Park, New Delhi - 110016

Tel: +91-11-46584466

Name and contact details of individual dealing with the submission

Name: Ms. Jancy Mathew

Position in the organisation: Head Standards and Research

Address if different from above:

Same as above

Tel number(s): +91-11-46584466

E-mail address: standards@csdcindia.org

List of documents submitted in support of the Qualifications File

1. Career Map of Assistant Laboratory & Field Technician - Annexure 1
2. QP CON/Q0402- Annexure 2

3. QUALIFICATION FILE SUMMARY

Qualification Title	Assistant Laboratory & Field Technician QP CON/Q0402
Body/bodies which will assess candidates	• 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	Quality Assurance and Quality Control
Proposed level of the qualification in the NSQF.	2
Anticipated volume of training/learning required to complete the qualification.	350 hrs
Entry requirements / recommendations.	10th standard
Progression from the qualification.	Quality Technician
Planned arrangements for RPL.	Work is under progress
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/N0018:Health, Safety & Environment	Mandatory	36	2
CON/N0023:Testing of Aggregates	Mandatory	58	2
CON/N0024:Testing of Soil	Mandatory	80	2
CON/N0025:Testing of Cement & Cement Mortar	Mandatory	80	2
CON/N0026:Testing of Concrete	Mandatory	96	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:

1. QP CON/Q0402- 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.
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:

trained & certified by CSDCI trough 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 Laboratory & Field Technician

CON/Q 0402

Construction Skill 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

			Marks Allocation		
Assessable Outcome	Assessment criteria	Total Mark	Out Of	Theory	Practical Skills
CON/ N 0018: Health, Safety & Environment	PC1.Demonstrate and use the Personal Protective Equipments such as Head Protection, Fall Protection, Foot Protection, Face & eye Protection, Ear Protection, Hand & Body Protection and Respiratory Protection.	32	6	2	3
	PC2. Follow Do's and Don'ts while working in lab and field		6	3	4
	PC3. Make out the First Aid with identification and use of basic dressing materials and bandages, resuscitation practices and actions		7	3	3
	PC4. Ensure the material handling such as shifting, lifting and carrying as per the procedure.		7	3	4
	PC5. Practice safety towards fire hazards and chemical hazards.		6	3	4

	Total		32	14	18
CON/ N 0023: Testing of Aggregates	PC1. Identify the sample as per the numbering/coding/labeling.		1	23	34
	PC2. Distinguish the aggregate as per the size & required test.		1		
	PC3. Weigh the metal as per the requirements and enter in to the table.		1		
	PC4. Sort & Arrange the sieve as per the IS number in an ascending order bottom to top.		1		
	PC5. Start & Complete the sieve test as per the stipulated time.		1		
	PC6. Enter the readings in a table based on retained aggregates in each sieve number.		1		
	PC7. Conform the test procedure, follow and complete as per the demand.		1		
	PC8. Dispose/Reuse the materials based on quantity/quality.		1		
	PC9. Clean the working area then & there.		1		
	PC10. Compute the result and tabulate in a register for approval from Lab in charge.		1		
	PC11. Ensure the safety in each action such as lifting, sieving and disposing the aggregates.		1		
	PC12. Identify the sample as per the numbering/coding/labeling.		1		
	PC13. Distinguish the aggregate as per the size & required test.		1		
	PC14. Weigh the metal as per the requirements and enter in to the table.		1		
	PC15. Handle the testing equipment accurately.		1		
	PC16. Conform the test procedure, follow and complete as per the demand.		1		
	PC17. Dispose/Reuse the materials based on quantity/quality.		1		
	PC18. Clean the working area then & there.		1		
	PC19. Compute the result and tabulate in a register for approval from Lab in charge.		1		

	PC20. Ensure the safety in each action such as lifting, handling of equipment and disposing the aggregates		1		
	PC21. Identify the sample as per the numbering/coding/labeling.		1		
	PC22. Distinguish the aggregate as per the size & required test.		1		
	PC23. Weigh the metal as per the requirements and enter in to the table.		1		
	PC24. Handle the testing equipment accurately.		1		
	PC25. Conform the test procedure, follow and complete as per the demand.		1		
	PC26. Dispose/Reuse the materials based on quantity/quality.		1		
	PC27. Clean the working area then & there.		1		
	PC28. Compute the result and tabulate in a register for approval from Lab in charge.		1		
	PC29. Ensure the safety in each action such as lifting, handling of equipment and disposing the aggregates		1		
	PC30. Identify the sample as per the numbering/coding/labeling.		1		
	PC31. Distinguish the aggregate as per the size & required test.		1		
	PC32. Weigh the metal as per the requirements and enter in to the table.		1		
	PC33. Handle the testing equipment accurately.		1		
	PC34. Conform the test procedure, follow and complete as per the demand.		1		
	PC35. Dispose/Reuse the materials based on quantity/quality.		1		
	PC36. Clean the working area then & there.		1		
	PC37. Compute the result and tabulate in a register for approval from Lab in charge.		1		
	PC38. Ensure the safety in each action such as lifting, handling of equipment and disposing the aggregates		1		
	PC39. Identify the sample as per the numbering/coding/labeling.		1		

	PC40. Distinguish the aggregate as per the size & required test.		1		
	PC41. Weigh the metal as per the requirements and enter in to the table.		1		
	PC42. Handle the testing equipment accurately.		1		
	PC43. Conform the test procedure, follow and complete as per the demand.		1		
	PC44. Dispose/Reuse the materials based on quantity/quality.		1		
	PC45. Clean the working area then & there.		1		
	PC46. Compute the result and tabulate in a register for approval from Lab in charge.		1		
	PC47. Ensure the safety in each action such as lifting, handling of equipment and disposing the aggregates		1		
	PC48. Identify the sample as per the numbering/coding/labeling.		1		
	PC49. Distinguish the aggregate as per the size & required test.		1		
	PC50. Weigh the metal as per the requirements and enter in to the table.		1		
	PC51. Handle the testing equipment accurately.		1		
	PC52. Conform the test procedure, follow and complete as per the demand.		1		
	PC53. Dispose/Reuse the materials based on quantity/quality.		1		
	PC54. Clean the working area then & there.		1		
	PC55. Compute the result and tabulate in a register for approval from Lab in charge.		3		
	PC56. Ensure the safety in each action such as lifting, handling of equipment and disposing the aggregates				
	Total		57	23	34
CON/ N 0024: Testing of Soil	PC1. Identify the sample as per the numbering/coding/labeling.		1	23	38
	PC2. Distinguish the soil as per the nature & required test.		1		
	PC3. Weigh the metal as per the requirements and enter in to the table.		2		

	PC4. Handle the testing equipment accurately.		1		
	PC5. Conform the test procedure, follow and complete as per the demand.		2		
	PC6. Dispose the materials based on in nature.		1		
	PC7. Clean the working area then & there.		1		
	PC8. Compute the result and tabulate in a register for approval from Lab in charge.		1		
	PC9. Ensure the safety in each action such as lifting, handling of equipment and disposing the soil.		2		
	PC10. Identify the sample as per the numbering/coding/labeling.		1		
	PC11. Distinguish the soil as per the nature & required test.		1		
	PC12. Weigh the metal as per the requirements and enter in to the table.		2		
	PC13. Handle the testing equipment accurately.		2		
	PC14. Conform the test procedure, follow and complete as per the demand.		1		
	PC15. Dispose the materials based on in nature.		2		
	PC16. Clean the working area then & there.		1		
	PC17. Compute the result and tabulate in a register for approval from Lab in charge.		1		
	PC18. Ensure the safety in each action such as lifting, handling of equipment and disposing the soil.		1		
	PC19. Identify the sample as per the numbering/coding/labeling.		1		
	PC20. Distinguish the soil as per the nature & required test.		2		
	PC21. Weigh the metal as per the requirements and enter in to the table.		2		
	PC22. Handle the testing equipment accurately.		1		
	PC23. Conform the test procedure, follow and complete as per the demand.		2		
	PC24. Dispose the materials based on in nature.		2		

	PC25. Clean the working area then & there.		1		
	PC26. Compute the result and tabulate in a register for approval from Lab in charge.		1		
	PC27. Ensure the safety in each action such as lifting, handling of equipment and disposing the soil.		2		
	PC28. Identify the sample as per the numbering/coding/labeling.		1		
	PC29. Distinguish the soil as per the nature & required test.		1		
	PC30. Weigh the metal as per the requirements and enter in to the table.		2		
	PC31. Handle the testing equipment accurately.		1		
	PC32. Conform the test procedure, follow and complete as per the demand.		1		
	PC33. Dispose the materials based on in nature.		1		
	PC34. Clean the working area then & there.		1		
	PC35. Compute the result and tabulate in a register for approval from Lab in charge.		2		
	PC36. Ensure the safety in each action such as lifting, handling of equipment and disposing the soil.		1		
	PC37. Identify the sample as per the numbering/coding/labeling.		1		
	PC38. Distinguish the soil as per the nature & required test.		2		
	PC39. Weigh the metal as per the requirements and enter in to the table.		1		
	PC40. Handle the testing equipment accurately.		2		
	PC41. Conform the test procedure, follow and complete as per the demand..		1		
	PC42. Dispose the materials based on in nature.		2		
	PC43. Clean the working area then & there.		1		
	PC44. Compute the result and tabulate in a register for approval from Lab in charge.		1		

	PC45. Ensure the safety in each action such as lifting, handling of equipment and disposing the soil.		1		
	Total		61	23	38
CON/ N 0025: Testing of Cement & Cement Mortar	PC1. Identify the sample as per the numbering/coding/labeling.		1	24	34
	PC2. Distinguish the Cement as per the nature & required test.		2		
	PC3. Weigh the metal as per the requirements and enter in to the table.		1		
	PC4. Handle the testing equipment accurately.		2		
	PC5. Conform the test procedure, follow and complete as per the demand.		1		
	PC6. Dispose the materials based on in nature.		2		
	PC7. Clean the working area then & there.		1		
	PC8. Compute the result and tabulate in a register for approval from Lab in charge.		1		
	PC9. Ensure the safety in each action such as lifting, handling of equipment and disposing the Cement.		1		
	PC10. Identify the sample as per the numbering/coding/labeling.		2		
	PC11. Distinguish the Cement as per the nature & required test.		1		
	PC12. Weigh the metal as per the requirements and enter in to the table.		1		
	PC13. Handle the testing equipment accurately.		2		
	PC14. Conform the test procedure, follow and complete as per the demand.		1		
	PC15. Dispose the materials based on in nature.		2		
	PC16. Clean the working area then & there.		2		
	PC17. Compute the result and tabulate in a register for approval from Lab in charge.		2		
	PC18. Ensure the safety in each action such as lifting, handling of equipment and disposing the Cement.		1		

	PC19. Identify the sample as per the numbering/coding/labeling.		2		
	PC20. Distinguish the Cement as per the nature & required test.		1		
	PC21. Weigh the metal as per the requirements and enter in to the table.		2		
	PC22. Handle the testing equipment accurately.		1		
	PC23. Conform the test procedure, follow and complete as per the demand.		2		
	PC24. Dispose the materials based on in nature.		2		
	PC25. Clean the working area then & there.		2		
	PC26. Compute the result and tabulate in a register for approval from Lab in charge.		1		
	PC27. Ensure the safety in each action such as lifting, handling of equipment and disposing the Cement.		1		
	PC28. Identify the samples, cement, sand and water as per the standard and quantity.		2		
	PC29. Dry mix the ingredients as the recommended ration.		1		
	PC30. Pour the water for mixing as per the water cement ratio.		2		
	PC31. Mould the cement mortar as per the required numbers of test and size.		2		
	PC32. Demould as per the standard timings.		1		
	PC33. Take care of curing as per the recommended days.		2		
	PC34. Conform the test procedure, follow and complete as per the demand.		2		
	PC35. Dispose the materials based on in nature.		1		
	PC36. Clean the working area then & there.		1		
	PC37. Compute the result and tabulate in a register for approval from Lab in charge.		2		
	PC38. Ensure the safety in each action such as lifting, handling of equipment and disposing the Cement.		2		

	Total		58	24	34
CON/ N 0026: Testing of Concrete	PC1. Identify the samples, cement, fine aggregates, coarse aggregate and water as per the standard and quantity.		1	21	49
	PC2. Dry mix the ingredients as the recommended ration.		1		
	PC3. Pour the water for mixing as per the water cement ratio.		1		
	PC4. Mould the concrete using cube Mould as per the required numbers of test and size.		1		
	PC5. Demould as per the standard timings.		2		
	PC6. Take care of curing as per the recommended days.		1		
	PC7. Conform the test procedure, follow and complete as per the demand.		1		
	PC8. Dispose the materials based on in nature.		1		
	PC9. Clean the working area then & there.		1		
	PC10. Compute the result and tabulate in a register for approval from Lab in charge.		1		
	PC11. Ensure the safety in each action such as lifting, handling of equipment and disposing the Cement.		1		
	PC12. Collect the sample as per the location and testing norms.		2		
	PC13. Distinguish the concrete as per the water cement ratio and workability.		2		
	PC14. Handle the testing equipment accurately.		1		
	PC15. Conform the test procedure, follow and complete as per the demand.		1		
	PC16. Dispose/Reuse the materials based on quantity/quality.		1		
	PC17. Clean the working area then & there.		2		
	PC18. Compute the result and tabulate in a register for approval from Lab in charge.		1		
	PC19. Ensure the safety in each action such as lifting, handling of equipment and disposing the aggregates		2		

	PC20. Collect the sample as per the location and testing norms.		1		
	PC21. Distinguish the concrete as per the water cement ratio and workability.		1		
	PC22. Handle the testing equipment accurately.		2		
	PC23. Conform the test procedure, follow and complete as per the demand.		1		
	PC24. Dispose/Reuse the materials based on quantity/quality.		2		
	PC25. Clean the working area then & there.		1		
	PC26. Compute the result and tabulate in a register for approval from Lab in charge.		2		
	PC27. Ensure the safety in each action such as lifting, handling of equipment and disposing the aggregates		1		
	PC28. Collect the sample as per the location and testing norms.		2		
	PC29. Distinguish the concrete as per the water cement ratio and workability.		1		
	PC30. Handle the testing equipment accurately.		1		
	PC31. Conform the test procedure, follow and complete as per the demand.		1		
	PC32. Dispose/Reuse the materials based on quantity/quality.		1		
	PC33. Clean the working area then & there.		1		
	PC34. Compute the result and tabulate in a register for approval from Lab in charge.		2		
	PC35. Ensure the safety in each action such as lifting, handling of equipment and disposing the aggregates		1		
	PC36. Collect the sample as per the location and testing norms.		1		
	PC37. Distinguish the concrete as per the water cement ratio and workability.		1		
	PC38. Handle the testing equipment accurately.		1		
	PC39. Conform the test procedure, follow and complete as per the demand.		1		
	PC40. Dispose/Reuse the materials based on quantity/quality.		1		

	PC41. Clean the working area then & there.		1		
	PC42. Compute the result and tabulate in a register for approval from Lab in charge.		1		
	PC43. Ensure the safety in each action such as lifting, handling of equipment and disposing the aggregates		1		
	PC44. Distinguish the concrete as per the water cement ratio and workability.		1		
	PC45. Handle the testing equipment accurately.		1		
	PC46. Conform the test procedure, follow and complete as per the demand.		1		
	PC47. Dispose/Reuse the materials based on quantity/quality.		1		
	PC48. Clean the working area then & there.		1		
	PC50. Compute the result and tabulate in a register for approval from Lab in charge.		1		
	PC51. Ensure the safety in each action such as lifting, handling of equipment and disposing the aggregates		2		
	PC52. Identify the sample as per the numbering/coding/labeling.		1		
	PC53. Distinguish the aggregate as per the size & required test.		1		
	PC54. Weigh the metal as per the requirements and enter in to the table.		1		
	PC55. Handle the testing equipment accurately.		1		
	PC56. Conform the test procedure, follow and complete as per the demand.		1		
	PC57. Dispose/Reuse the materials based on quantity/quality.		1		
	PC58. Clean the working area then & there.		1		
	PC59. Compute the result and tabulate in a register for approval from Lab in charge.		1		
	PC60. Ensure the safety in each action such as lifting, handling of equipment and disposing the aggregates.		1		
	Total		70	21	49

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 1892000 under Shuttering Carpentry 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 Laboratory & Field Technician CON/Q0402					
Process required	**Professional Knowledge**	**Professional Skills**	**Core Skills**	**Responsibility**	**Level**
Job holder performs works which are regular and repetitive such as identify different types of material sample which is to be tested, handling of testing tools and equipments, collect material sample from field, and assist in conducting various test for basic construction material. The major activities undertaken by the job holder are more practical in nature which are less complex and are always performed under instruction of superior and therefore Job holder is kept at Level 2	Job holder is expected to have basic knowledge about testing tools, equipments and construction material. He/she should also have knowledge related to basic maintenance of testing tools and equipments, and test procedure which are require of performing simple test of basic construction material. The job holder is also expected to understand working instruction and work under close supervision and therefore it kept at Level 2	Job holder is expected to select and use hand testing tools and equipments which are regularly required for material sample testing, able to identify & use personal protective equipments and take regular safety measures while handling tools and equipments. He/she performs task and demonstrate skills which are routine and repetitive in nature under the assistance of trade senior, therefore it is kept at Level 2	Job holder is expected to have reading and writing skills in atleast one language along with basics of arithmetic calculation. Job holder is expected to read and understand instructions, guideline, sign boards, safety rules and shall be able communicate orally and effectively with team members in atleast one language. Since the required skill level refers to be entry levelled as it may be obtained by very basic educational qualification, the job role can be place at level 2	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 conduct test for basic construction material under instruction and close supervision. The overall work is always checked by superiors and therefore job holder is kept at Level 2	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?

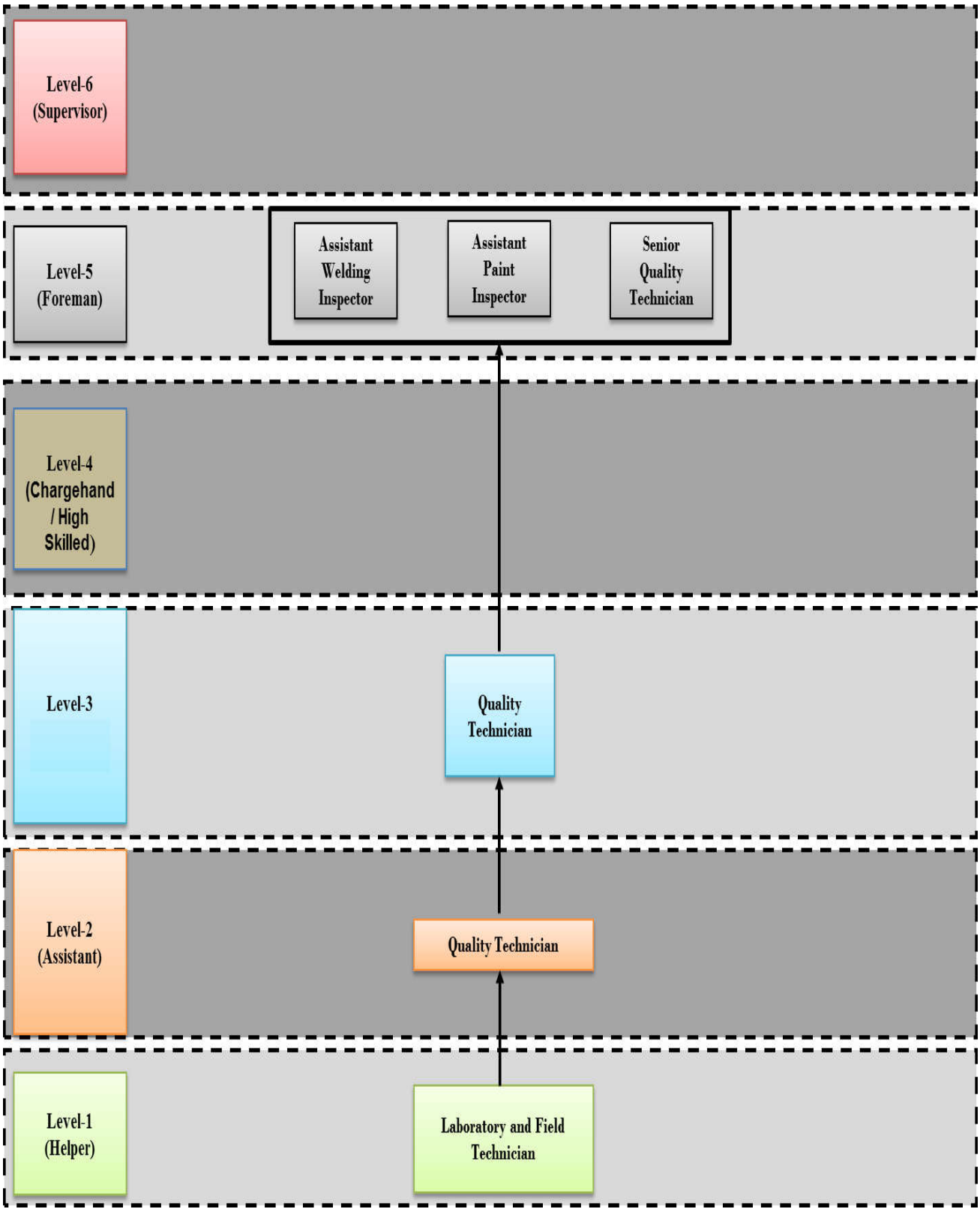
Please refer to attached career path as per annexure 1 which clearly defines the career path.

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 Construction Laboratory Technician - Annexure 1
2. QP CON/Q 0402- Annexure 2

Annexure 1

Career Map



Annexure 2- QP CON/Q 0402