



Model Curriculum

1. Foreman Roads & Runways

SECTOR: Construction

SUB-SECTOR: Real Estate and Infrastructure Construction

OCCUPATION: Roads & Runway Construction

REF ID: CON/Q1003, V1.0

NSQF LEVEL: 5





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Foreman Roads & Runways

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Foreman Roads & Runways Layer”, in the “Construction” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Foreman Roads & Runways		
Qualification Pack Name & Reference ID	CON/Q1003, v1.0		
Version No.	1.0	Version Update Date	23-08-2017
Pre-requisites to Training	Preferably 12th Standard with 12 years site experience in same occupation for non-trained worker/7 years site experience as a certified pavement layer for trained worker		
Training Outcomes	After completing this programme, participants will be able to: <ul style="list-style-type: none">• Organize and allocate resources for pavement construction work- to organize resource at site and engage manpower and resources• Conduct laying of base and sub base course of pavements-complete survey and preparatory work• Conduct laying of binding and wearing course of pavements:-check construction of binding and wearing course of rigid and flexible pavements• Conduct laying of pipes for drainage works/ service lines:- lay drainage pipes and service lines as per specification• Work effectively in a team to deliver desired results at the workplace – Introduction to team working and effective communication procedures to be followed at construction sites• Manage workplace for safe and healthy work environment :-Effective implementation of health ,safety policies and procedures ,hazards and emergencies associated with workplace		

This course encompasses 6 out of 6 National Occupational Standards (NOS) of “Foreman Roads & Runways” Qualification Pack issued by “Construction Skill Development Council of India”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p>Introduction</p> <p>Theory Duration (hh:mm) 8:00</p> <p>Practical Duration (hh:mm) 00:00</p>	<ul style="list-style-type: none"> • Necessity to construct durable and quality pavement and function of the same in transportation/ infrastructure development • pavement construction, job roles involved in the “Roads & Runways Construction” occupation • Job opportunities for foreman-Road and runways in construction sector • training session and training delivery plan • Basic knowledge of Unit of measurement and their conversion • Basic knowledge of arithmetic calculation • Different parts of a pavement by showing a cross sectional view of pavement 	<p><u>Classroom Requirement</u></p> <ol style="list-style-type: none"> 1. Classroom of 30 students capacity 2. Black/White board 3. Projector/LED Monitor 4. Computer 5. Trade specific charts and other teaching aids
2	<p>Organize and allocate resources for pavement construction work</p> <p>Theory Duration (hh:mm) 67:00</p> <p>Practical Duration (hh:mm) (Recommend that this practical is done in industry set up)</p> <p>106:00</p> <p>Corresponding NOS Code CON/N1007</p>	<p>Theory: -</p> <ul style="list-style-type: none"> • Concept of rigid and flexible pavements and under which requirement they are constructed • The sequence of construction of flexible and rigid pavement. • Construction drawings required for pavement construction • Characteristics of Construction Materials used for pavement construction • Types and functions of construction Equipments and vehicles in pavement construction. • Estimation and calculation of material ,manpower and tools in pavement construction • Minimizing wastage and recycling of construction wastages <p>Practical: -</p> <ul style="list-style-type: none"> • Read and interpret drawings and specifications • Estimate the quantity of materials manpower, tools /machinery for each activity of pavement construction. • Carryout standard method of storing and stacking materials tools • Demonstrate Standard method of functioning of Equipments used in pavement work • Assign tasks to workmen or subordinates for activities involved in construction of flexible and rigid pavement • Monitor consumption and wastage of construction materials ,disposing off waste and recycle usable wastes 	<p><u>Hand tools</u></p> <ol style="list-style-type: none"> 1. Broom 2. Spade 3. Shovel 4. Raker 5. Pickaxe 6. Crowbar 7. Hammer with chisel 8. Spray gun 9. Wheel Barrow 10. basket <p><u>Power tools</u></p> <p>Needle vibrator Screed vibrator Plate vibrator</p> <p><u>Measuring Instruments</u></p> <ol style="list-style-type: none"> 10. Measurement Tape 11. Chalk line/masons line 12. Water level 13. Straightedges 14. Camber board 15. Spirit level <p><u>Equipments required</u></p> <ol style="list-style-type: none"> 16. 8-10 ton (three wheel or tandem) Roller 17. Motor Grader 18. Excavator 19. Dumper/tippers 20. Water tankers <p>Safety Instruments</p> <ol style="list-style-type: none"> 21. Safety Helmet 22. Safety goggles 23. Safety shoes

Sr. No.	Module	Key Learning Outcomes	Equipment Required
			24. Safety belt 25. Cotton gloves 26. Ear plugs 27. Reflective jackets 28. Dust mask 29. Fire Prevention kit 30. Barricade tape 31. Safety Tags
3	<p>Conduct laying of base and sub- base course of pavements</p> <p>Theory Duration (hh:mm) 67:00</p> <p>Practical Duration (hh:mm) (Recommend that this practical is done in industry set up) 106:00</p> <p>Corresponding NOS Code CON/N1008</p>	<p>Theory: -</p> <ul style="list-style-type: none"> • Relevance of layouts, survey points, coordinates in pavement work • Preparatory work before laying subbase and base course in pavement • Construction drawings for pavement laying • Sequence of operations involved in construction of subgrade, sub-base and base courses in pavement • Acceptance criteria of construction materials used in pavement layers. • Tolerance limit in construction of each layers of pavement. • Standard procedure of compaction by rollers/Equipments • Sequence of Quality checks involved in construction of subgrade, sub-base and base layer of pavement • Methods of checking line, level and surface irregularity of pavement. • Repairing and treatment methodology of loose soils • Documentation in pavement work <p>Practical: -</p> <ul style="list-style-type: none"> • Check level, line and surface regularity of each layer of pavement within permissible tolerances. • Check sequential methodology of construction of sub-base and base courses • Read and interpret pavement construction drawings. • Monitor void filling by finer materials (sand/ murrum/ stone • Monitor Preparatory work before laying next layer. • conduct application of prime coating using specified compounds by specified application methods • Carryout compaction as standard work methodology • Carryout documentation required in pavement work • Conduct visual checking of construction materials as per specification. 	<p>Hand Tools</p> <ol style="list-style-type: none"> 1. Broom 2. Shovel 3. Rake 4. Wheel Barrow 5. Hammer 6. basket <p>Equipments required</p> <ol style="list-style-type: none"> 7. 8-10 ton (three wheel or tandem) Roller 8. Motor Grader 9. Excavator 10. Dumper/tippers 11. Water tankers <p>Measuring Instruments</p> <ol style="list-style-type: none"> 12. Measurement Tape 13. Chalk line/masons line 14. Water level 15. Spirit level 16. Plumb bob 17. Straightedges <p>Safety Instruments</p> <ol style="list-style-type: none"> 18. Safety Helmet 19. Safety goggles 20. Safety shoes 21. Safety belt 22. Cotton gloves 23. Ear plugs 24. Reflective jackets 25. Dust mask 26. Fire Prevention kit 27. Barricade tape 28. Safety Tags

Sr. No.	Module	Key Learning Outcomes	Equipment Required
4	<p>Conduct laying of binding and wearing course of pavements</p> <p>Theory Duration (hh:mm) 68:00</p> <p>Practical Duration (hh:mm) (Recommend that this practical is done in industry set up) 104:00</p> <p>Corresponding NOS Code CON/N1009</p>	<p>Theory</p> <ul style="list-style-type: none"> • Introduction and types of wearing and binding course in rigid and flexible pavement. • Procedure of preparation of asphalt mix manually. • Handling ,placing ,spreading methods of asphalt mix • Laying methodology of asphalt mix by paver machine • Rolling and Compacting methodology of binding course and wearing course in flexible pavement by roller/equipment • Quality checks involved in construction of binding and wearing course in flexible pavement • Types of Checks on reinforcement bars in rigid pavement. • Types of checks performed in shuttering work in rigid pavement • Types of joints in rigid pavement • Requirement and types of marking and measurement in pavement construction • Laying methodology of concrete by paver machine • Standard procedure of finishing and curing of concrete • Quality checks in concreting work • Admixtures and their functions in concrete • Safe working practice for pavement construction work. <p>Practical:-</p> <ul style="list-style-type: none"> • Demonstrate preparation of bitumen mix by plants and manually • Demonstrate laying of bitumen mix by paver machine/equipment and manually • Perform checks in construction of binding and wearing course in flexible pavement • Perform checks in construction of binding and wearing course in rigid pavement • Monitor laying of concrete by paver machine and manually • Monitor laying and rolling of binding and wearing course in rigid pavement • Monitor motion of paver and asphalt feeding to the paver at required interval • Conduct final rolling till required profile and compactness is achieved by suitable roller • Ensure level, slopes, curves are constructed as per drawing by conducting repetitive survey at required interval throughout the pavement laying process 	<p>Hand Tools</p> <ol style="list-style-type: none"> 1. Spade 2. Shovel 3. Pick axe 4. raker 5. wheel barrow 6. trowel 7. Hand pump or compressor sprayer. <p>Measuring Instruments</p> <ol style="list-style-type: none"> 8. Measurement tape 9. Water level 10.Chalk line/mason line 10. Plumb bob 11. straight edge 12. camber board 13. Spirit level <p>Equipments required</p> <ol style="list-style-type: none"> 10 Hot mix plant 11.Bitumen boiler 10.paver finisher 11.static/vibratory roller 13.pressure distributor 14.dumpers/tippers 15. water tankers <p>consumables required</p> <ol style="list-style-type: none"> 14. Rubber ring/Gasket 15. cement 16. chalk powder <p>Safety instruments</p> <ol style="list-style-type: none"> 17. Safety Helmet 18. Safety goggles 19. Safety shoes 20. Safety belt 21. Cotton gloves 22. Ear plugs 23. Reflective jackets 24. Dust mask 25. Fire Prevention kit

Sr. No.	Module	Key Learning Outcomes	Equipment Required
5	<p>Conduct laying of pipes for drainage works/ service lines</p> <p>Theory Duration (hh:mm) 70:00</p> <p>Practical Duration (hh:mm) (Recommend that this practical is done in industry set up) 104:00</p>	<p>Theory: -</p> <ul style="list-style-type: none"> Standard practices for handling circular pipe sections Standard method of aligning and joining pipe segments in to their position Standard procedure of providing temporary supports to the pipelines using specified supporting system Method of stacking pipe segments as per standard practice Methods of linear measurements and checking of orientation/ level Use of hand tools and measuring instruments used for laying pipelines Use of pipes, valves and their accessories in drainage works <p>Practical :-</p> <ul style="list-style-type: none"> Ensure Stacking of pipes as per standard procedure Demonstrate shifting of pipes safely Demonstrate correct method of laying pipe as per level, line or grade Ensure pipe segments are locked properly and joints are provided with specified sealants Conduct check on orientation and level of pipe Ensure proper joining of pipelines with drainage structure like manholes, storm water cat pits etc 	<p>Hand Tools</p> <ol style="list-style-type: none"> Spade Shovel Pick axe Crow bar wheel barrow trowel <p>Measuring Instruments</p> <ol style="list-style-type: none"> Measurement tape Water level Chalk line/mason line Plumb bob Equipments Excavator Dumper crane <p>Safety instruments</p> <ol style="list-style-type: none"> Safety Helmet Safety goggles Safety shoes Safety belt Cotton gloves Ear plugs Reflective jackets Dust mask Fire Prevention kit
6	<p>Work effectively in a team to deliver desired results at the workplace</p> <p>Theory Duration (hh:mm) 16:00</p> <p>Practical Duration (hh:mm) (Recommend that this practical is done in industry set up) 24:00</p> <p>Corresponding NOS Code CON/N8001</p>	<p>Theory: -</p> <ul style="list-style-type: none"> Different types of communication and its usage Importance of effective communication and establishing strong working relationships with co-workers Concept of team working and its importance Risks of a failure in teamwork in terms of effects on project outcomes, Importance and need of supporting co-workers facing problems for smooth functioning of work timelines, safety at the construction site <p>Demonstration/ Practical (D/P) :-</p> <ul style="list-style-type: none"> Communicate clearly within the team while performing to ensure laying of pavement layers as per method statement. Report to senior on witnessing any hazardous working condition/ safety violation Handing over procedure of tools, materials, equipments 	<p>Hand tools</p> <ol style="list-style-type: none"> Broom Spade Shovel Raker Pickaxe Crowbar' Hammer with chisel Spray gun Wheel Barrow basket <p>Measuring Instruments</p> <ol style="list-style-type: none"> Measurement Tape Chalk line/masons line Water level Straightedges Camber board Spirit level

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> Exhibit adherence to timelines while performing earthwork, pavement laying , rolling 	<p><u>Equipments required</u></p> <ul style="list-style-type: none"> 16. 8-10 ton (three wheel or tandem) Roller 17. Motor Grader 18. Excavator 19. Dumper/tippers 20. Water tankers Safety Instruments 21. Safety Helmet 22. Safety goggles 23. Safety shoes 24. Safety belt 25. Cotton gloves 26. Ear plugs 27. Reflective jackets 28. Dust mask 29. Fire Prevention kit 30. Barricade tape 31. Safety Tags
7	<p>Manage workplace for safe and healthy work environment</p> <p>Theory Duration (hh:mm) 24:00</p> <p>Practical Duration (hh:mm) (Recommend that this practical is done in industry set up) 36:00</p> <p>Corresponding NOS Code CON/N9002</p>	<p>Theory: -</p> <ul style="list-style-type: none"> Common types of hazards involved in construction sites Types of hazards involved in handling of hot asphalt mix works Types of hazards involved in laying different courses in flexible and rigid pavement. Safe working practices in construction of pavement by machinery and manually Safe working practice while rolling of layers by rollers/Equipments Safe working methods as per standard norms and actions to be taken under emergency situations Identification of unsafe act and unsafe condition and reporting procedure of the same. Basic concept of: - <ol style="list-style-type: none"> 1. First Aid process 2. Use of fire extinguisher 3. Classification of fires and fire extinguisher 4. Safety drills and its purpose 5. Types and use of PPEs required for pavement laying works Standard procedure of handling, storing and stacking material safe disposal of waste Basic ergonomic principles to be followed while carrying out heavy material handling <p>Demonstration/ Practical: -</p>	<p>PPEs</p> <ol style="list-style-type: none"> 1. Safety Helmet 2. Safety goggles 3. Safety shoes 4. Safety belt 5. Cotton gloves 6. Ear plugs 7. Reflective jackets 8. Dust mask 9. Fire Prevention kit 10. Barricade tape 11. Safety Tags

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> Select PPEs and use them appropriately as per working need of pavement construction activities Practice handling, storing, stacking and shifting of material, tools and equipment's Demonstration safe working practice while laying bitumen and concrete in different courses of pavement by paver/Equipments and manually Demonstrate safe working practice while compaction/rolling by machines/Equipments and manually use of fire extinguisher and standard practice of storing & stacking firefighting equipment's/ materials at work locations Demonstrate waste disposal Methodology of materials 	
	<p>Total Duration</p> <p>Theory Duration 320:00</p> <p>Practical Duration 480:00</p>	<p><u>Unique Equipment Required:</u></p> <p><u>Classroom Requirement</u> Classroom of 30 students capacity, Black/White board, Projector/LED Monitor, Computer, Trade specific charts and other teaching aids</p> <p><u>Hand Tools</u> Broom, Shovel, Rake, Wheel Barrow, Tray, Hammer, Spade, Pick axe, trowel</p> <p><u>Measuring Instruments</u> Measurement Tape, Chalk line/masons line, Water level, Spirit level, Plumb bob, Straightedges</p> <p><u>Material and consumables</u> Bitumen, Water, Bitumen drums, Rubber ring/Gasket, cement, chalk powder</p> <p><u>Equipments required</u> 8-10 ton (three wheel or tandem) Roller, Mixer, Chain and pulley arrangement, lifting appliances (belts, ropes)</p> <p><u>Safety instruments</u> Safety Helmet, Safety goggles, Safety shoes, Safety belt, Cotton gloves, Ear plugs, Reflective jackets, Dust mask, Fire Prevention kit, Barricade tape, Safety Tags</p>	

Grand Total Course Duration: **800 Hours, 0 Minutes**
Recommended **432 hours of OJT**

(This syllabus/ curriculum has been approved by **Construction Skill Development Council of India**)

Trainer Prerequisites for Job role: “Foreman Roads & Runways” mapped to Qualification Pack: “CON/Q1003, v1.0”

Sr. No.	Area	Details
1	Description	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “CON/Q1003”.
2	Personal Attributes	Aptitude for conducting training, and pre/ post work to ensure competent, employable candidates at the end of the training. Strong communication skills, interpersonal skills, ability to work as part of a team; a passion for quality and for developing others; well-organised and focused, eager to learn and keep oneself updated with the latest in the mentioned field
3	Minimum Educational Qualifications	ITI/12th
4a	Domain Certification	Trainer/Assessor-80% in each NOS of Qualification Pack “MEP/Q0102” or “MEP/Q0104” and Lead trainer/Lead Assessors- 90% in each NOS of Qualification Pack “MEP/Q0101” or “MEP/Q0103”
4b	Platform Certification	Trainer/Assessor-50% in each NOS of Qualification Pack “MEP/Q0102” or “MEP/Q0104”& 80% overall, Lead trainer/ Lead Assessors- 50% in each NOS of Qualification Pack “MEP/Q0101” or “MEP/Q0103”and overall 90%
5	Experience	i. Technical Degree holder with minimum three years of Field experience and preferably two years of teaching experience or, ii. In case of a Diploma Holder five years of field experience and preferably two years of teaching experience or, iii. In case of ITI/12 th pass minimum eight years of field experience and preferably two years of teaching Experience.



CRITERIA FOR ASSESSMENT OF TRAINEES

<u>Job Role</u>	Foreman Roads & Runways
<u>Qualification Pack</u>	CON/Q1003
<u>Sector Skill Council</u>	Construction

Guidelines for Assessment

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

Assessment outcomes	Assessment Criteria for outcomes	Total Mark	Marks Allocation		
			Out Of	Theory	Skills Practical
CON/N1007: Organise and allocate resources for pavement construction work	PC1. Confirm work targets from superior or concerned authority to be achieved in a day/ week as per applicability	100	6	2.4	3.6
	PC2. Read and interpret drawings and relevant specifications to determine type and quantity of required material		6	2.4	3.6
	PC3. Communicate to superior regarding requirement of material for daily construction work such as aggregates, fines, bitumen etc.		6	2.4	3.6
	PC4. Communicate to superior regarding requirement of vehicle/ equipment relevant to construction work and for resource mobilization		6	2.4	3.6
	PC5. Communicate to superior regarding requirement of manpower as per work target		7	2.8	5.2
	PC6. Conduct storing and stacking of materials and tools at work locations following standard practice of storing		7	2.8	5.2
	PC7. Conduct erection of protective and safety cover/ barrication for material and equipment to prevent wastage or unauthorized access		7	2.8	5.2
	PC8. Conduct erection of barrication, dividers, safety signage as per applicable safe work methodology		6	2.4	3.6
	PC9. Assign specific tasks to respective workmen groups		7	2.8	5.2
	PC10. Brief safe work methods and parameters to be followed by subordinates while handling/ storing materials, carrying out earthwork or laying layers of pavements		7	2.8	5.2
	PC11. Ensure required tools are available at worksite prior to commencement of relevant activity		7	2.8	5.2
	PC12. Monitor consumption and wastage of construction material		7	2.8	5.2
	PC13. Dispose waste to specified location and recycle usable wastes		7	2.8	5.2
	PC14. Confirm that the equipments to be used for compaction, material shifting, grading, surfacing are properly functioning		7	2.8	5.2
	PC15. Confirm that the material shifting vehicle operators have valid driving license		7	2.8	5.2
	Total	100	40	60	
CON/N1008: Conduct laying of base and sub-base course of pavements	PC1. Coordinate with surveyor for lay-outs, marking of level and edges prior to preparation of sub-grade for pavement	100	5	2	3
	PC2. Check level/ slope of earthwork in sub-grade by conducting checks and ensure it is as per drawing/ specification		5	2	3
	PC3. Conduct repair to the potholes, unstable/ loose soil by suitable methods as instructed by superior or quality department		5	2	3

	PC4. Conduct cleaning of surface of every pavement layers as per specification, prior to lay next layer		5	2	3
	PC5. Ensure derbies or wastes are disposed/ dumped to specified location as per work plan		5	2	3
	PC6. Carry out analysis of hazards conditions at work sites due to movement of vehicles or equipments, handling of hot asphalt for pavements, vehicular traffic and report to concerned authority		6	2.4	3.6
	PC7. Coordinate with superior or concerned departments to arrange safety measures, electrical connections and quality checks for progression of works		6	2.4	3.6
	PC8. Fill up permits, checklists, labour report formats as per organizational procedure and take approval from superior		6	2.4	3.6
	PC9. Read and interpret drawing, material specification prior to start pavement laying operation and as per requirement thereafter		6	2.4	3.6
	PC10. Check construction materials, pipe segments visually for their usability as per material specification		5	2	3
	PC11. Monitor and check filling work to construct sub grade by using suitable material and ensure impurities are cleared and disposed to the specified location		6	2.4	3.6
	PC12. Check that aggregates are raked properly, spread along the width and stretch maintaining uniform thickness and edge within the acceptable tolerance limit		6	2.4	3.6
	PC13. Monitor and conduct compaction of sub-base/ base course layer using roller of specified weight as per applicable/ standard work methodology		6	2.4	3.6
	PC14. Monitor void filling by finer materials (sand/ morrum/ stone dust), application of water and further rolling		6	2.4	3.6
	PC15. Report to superior/ concerned authority regarding inspection/ checks to be carried out to determine the completion of compaction process		5	2	3
	PC16. Conduct application of prime coating using specified compounds by specified application methods		6	2.4	3.6
	PC17. Carry out necessary measurements using appropriate measuring instruments		6	2.4	3.6
	PC18. Report to superior/ concerned authority regarding inspection/ checks to be carried out to determine the penetration of prime coat compound in to the laid base course layers		5	2	3
		Total	100	40	60
CON/N1009: Conduct laying of binding and wearing course of pavements	PC1. Monitor preparation of asphalt mix by checking proportion of construction materials and heating arrangement if done manually	100	5	2	3
	PC2. Supervise and monitor asphalt spreading both by mechanically or manually		5	2	3
	PC3. Ensure that the hot asphalt is handled, placed and spread safely (if spread manually)		4	1.6	2.4
	PC4. Ensure uniformity in thickness and area of coverage by binding layer (asphalt mix)		5	2	3
	PC5. Monitor motion of paver and asphalt feeding to the paver at required interval		5	2	3

	PC6. Monitor and conduct compaction of binding course layer using roller of specified weight as per applicable/ standard work methodology		5	2	3
	PC7. Report to superior/ concerned authority regarding inspection/ checks to be carried out to determine the completion of compaction process		5	2	3
	PC8. Monitor application of tack coats to completed binding course surface or existing pavement surface by manual means or by equipments		5	2	3
	PC9. Conduct application and spreading of wearing course asphalt by mechanical means or manually		4	1.6	2.4
	PC10. Conduct final rolling till required profile and compactness is achieved by suitable roller		5	2	3
	PC11. Conduct surfacing of pavements as per specification using suitable surface materials		5	2	3
	PC12. Ensure level, slopes, curves are constructed as per drawing by conducting repetitive survey at required interval throughout the pavement laying process		5	2	3
	PC13. Ensure erection of barrication, safety signage and installation of proper illumination systems at workplace		5	2	3
	PC14. Check cleanliness of bed of pavement prior to lay reinforcement bars		4	1.6	2.4
	PC15. Check diameter, number, cleanliness and completion of tying of reinforcement bars as per instruction		4	1.6	2.4
	PC16. Check location of expansion joints by carrying out suitable measurements and ensure their location is as per relevant drawing		5	2	3
	PC17. Carry out marking and measurements to ensure location of shuttering arrangements, supporting arrangements, expansion joints and utility drainage structures are as per drawing/ schematics		5	2	3
	PC18. Monitor paving activity when paver is used for laying wearing course		5	2	3
	PC19. Monitor concreting work when wearing course is laid manually		5	2	3
	PC20. Ensure poured concrete is finished within the specified time limit as per specification		4	1.6	2.4
	PC21. Allocate labour for curing of concrete, organize curing arrangements and ensure curing is as per specification		5	2	3
		Total	100	40	60
CON/N1010: Conduct laying of pipes for drainage works/ service lines	PC1. Ensure that the pipe segments are handled properly by labours or equipments and stored/stacked as per standard practise	100	10	4	6
	PC2. Measure pipe dimension and perform visual checks and confirm with relevant drawing		10	4	6
	PC3. Confirm that the level of the base of the pipe trench is in appropriate profile and centre line matches with specification		10	4	6
	PC4. Monitor lowering and placement of pipes in to their specified location by instructing equipment operators		10	4	6
	PC5. Carry out necessary measurements to check orientation and levels of laid pipes		10	4	6

	PC6. Conduct necessary adjustments to pipelines and provide supports to the assembly by using appropriate supporting system		10	4	6
	PC7. Ensure pipe segments are locked properly and joints are provided with specified sealants		10	4	6
	PC8. Ensure proper joining of pipelines with drainage structure like manholes, storm water cat pits etc.		10	4	6
	PC9. Offer pipelines for quality tests as per proposed quality plan		10	4	6
	PC10. Carry out remedial/ repairing works as per agreed work method		10	4	6
	Total		100	40	60
CON/N8001: Work effectively in a team to deliver desired results at the workplace	PC1. pass on work related information/ requirement clearly to the team members	100	10	4	6
	PC2. inform co-workers and superiors about any kind of deviations from work		10	4	6
	PC3. address the problems effectively and report if required to immediate supervisor appropriately		20	8	12
	PC4. receive instructions clearly from superiors and respond effectively on the same		10	4	6
	PC5. communicate to team members/subordinates for appropriate work technique and method		10	4	6
	PC6. seek clarification and advice as per the requirement and applicability		10	4	6
	PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams		15	6	9
	PC8. work together with co-workers in a synchronized manner		15	6	9
	Total		100	40	60
CON/N9002: Manage workplace for safe and healthy work environment	PC1. ensure proper housekeeping at workplace		5	2	3
	PC2. implement safe handling , stacking methods at workplace / store		5	2	3
	PC3. insure that health and safety plan is followed by all subordinates		5	2	3
	PC4. identify any hazard in workplace and notify them to appropriate authority		5	2	3
	PC5. ensure that all safety and protection installation are correctly placed & adequate		5	2	3
	PC6. ensure safe access is available at work place for movement of workers & materials		5	2	3
	PC7. ensure safe use of tools and tackles by the workmen as per applicability		5	2	3
	PC8. ensure appropriate use of following Personal Protective Equipment (PPE) as per applicability: <input type="checkbox"/> Head Protection (Helmets) <input type="checkbox"/> Ear Protection <input type="checkbox"/> Fall Protection <input type="checkbox"/> Foot Protection <input type="checkbox"/> Face and Eye Protection, <input type="checkbox"/> Hand &Body Protection		10	4	6

<input type="checkbox"/> Respiratory Protection			
PC9. maintain entrances & exit from confined spaces , excavated pits and other location in concurrence with safety parameters or instruction form safety personals.	5	2	3
PC10. ensure organizational policies and procedures are followed for health , safety and welfare, in relation to: <ul style="list-style-type: none"> <input type="checkbox"/> methods of receiving or sourcing information <input type="checkbox"/> dealing with accidents and emergencies associated with the work and environment <input type="checkbox"/> reporting <input type="checkbox"/> stooping work <input type="checkbox"/> evacuation <input type="checkbox"/> fire risks and safe exit procedures 	10	4	6
PC11. follow procedures for accident recording and reporting as per organizational and statutory requirements	5	2	3
PC12. ensure effective adherence to response to emergency procedures / protocols	7.5	3	4.5
PC13. report any case of emergency / risks to the concern people at the construction site	7.5	3	4.5
PC14. report any perceived risk hazards to the superiors / concerned EHS	7.5	3	4.5
PC15. demonstrate the use of fire protection equipments for different type of fire hazard	7.5	3	4.5
PC16. implement control measures to reduce risk & meet legal requirement as per organizational policies	5	2	3
Total	100	40	60