<table>
<thead>
<tr>
<th>Occupational Code</th>
<th>Qualification Title</th>
<th>NQF Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>641403</td>
<td>Occupation Certificate: Civil Engineering Constructor (Civil Road Construction Constructor)</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Phone</th>
<th>Logo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development Quality Partner</td>
<td>Construction Seta</td>
<td><a href="mailto:madibengt@ceta.co.za">madibengt@ceta.co.za</a></td>
<td>011 5900</td>
</tr>
<tr>
<td>Assessment Quality Partner</td>
<td>Construction Seta</td>
<td><a href="mailto:madibengt@ceta.co.za">madibengt@ceta.co.za</a></td>
<td>011 5900</td>
</tr>
</tbody>
</table>

______________________  ____________________
DQP Representative Signature             Date
QUALIFICATION DETAILS

Qualification Title: Occupational Certificate: Civil Engineering Constructor (Road Construction Constructor)
Occupational Code: 641403
Curriculum Code: 641403003

Quality Assuring Body: Quality Council for Trades and Occupations (QCTO)
Sub Framework: Occupational Qualifications Sub-Framework
Field: Field 12 - Physical Planning and Construction
Subfield: Civil Engineering Construction

NQF Level: 4
Credits: 285

Originator/Development Quality Partner (DQP):
Originating Provider/Assessment Quality Partner (AQP): Construction Education and Training Authority (CETA)

Qualification Type: Occupational Certificate

Registered qualifications and or learning programmes to be replaced:
- National Certificate: Construction Roadworks (24133) NQF Level 2
- National Certificate: Construction Roadworks (24173) NQF Level 3
- National Certificate: Building and Civil Construction (65409) (civil related electives) NQF Level 3
- National Certificate: Construction Concreting (49016) NQF Level 3
- National Certificate: Construction (49410) NQF Level 2

RATIONALE

The civil construction industry and the Department of Higher Education and training have identified a need to develop a Road Constructor qualification to address the scarce skills identified for the various road occupations involved in road construction for the Strategic Integrated Projects (SIPs). The qualification will replace expired qualifications. The qualification will ensure the standardisation of training for various Road Constructor occupations within the Civil Construction Industry, this will allow for mobility and recognition of a worker’s skills set.

The South Africa Forum of Civil Engineering Contractors (SAFCEC) identified the need to develop the Road Constructor qualification to meet the training needs of the industry. This qualification reflects the role of a skilled person working in road construction and maintenance, who applies a broad range of skills in a varied work context, using some discretion and judgement and relevant theoretical, practical and workplace knowledge. The individual may provide theoretical advice and support a team.
The qualification will allow learners to develop skills required in the workplace for the construction layering of roads, airport runways, rails etc. The generic competence will enable learners to transfer this competence to other streams of specialisation within the Civil Construction Industry.

There is a critical need in the industry to have suitably trained people who are able to conduct the essential operations associated with the construction of roads, rail and airport runways safe and efficiently. This will lead to competence in the civil construction sector and thereby add value to the industry by constructing the necessary infrastructure which is a critical component of the National Infrastructure Plan to grow the South African economy and boost the much needed job creation. It will also lead to a balanced society in that learners will understand how the work they do fits into the greater construction industry and contributes to the inclusive economic growth and social development.

PURPOSE
The purpose of this qualification is to prepare a learner to operate as an/a Road Construction Constructor

An/A Road Construction Constructor Constructs and maintains earthworks and pavement layers including surfacing and ancillary works for roads, rail, runways and related storm water drainage systems.

A qualified learner will be able to:

• Plan, set out and prepare for road, rail and runway construction
• Construct storm water drainage system
• Coordinate the construction and maintenance of earthworks and pavement layers
• Coordinate, construct and maintain road/rail/runway and ancillary works

RULES OF COMBINATION
This qualification is made up of the following compulsory Knowledge and Practical Skill Modules:

Knowledge Modules:

• 641403003-KM-01, Asphalt surfacing and related operations, NQF Level 4, Credits 10
• 641403003-KM-02, Earthworks and Layer works, NQF Level 4, Credits 10
• 641403003-KM-03, Ancillary road works, NQF Level 4, Credits 9
• 641403003-KM-04, Theories and principles of storm water drainage, NQF Level 4, Credits 6
• 641403003-KM-05, Subsoil drains and service ducts, NQF Level 4, Credits 6
• 641403003-KM-06, Set out the work areas, NQF Level 2, Credits 6
• 641403003-KM-07, Concrete for road works, NQF Level 3, Credits 6
• 641403003-KM-08, Safety, Health and Environment Legislation, NQF Level 2, Credits 3
• 641403003-KM-09, Supervisory Skills, NQF Level 4, Credits 9
• 641403003-KM-10, Construction planning and administration, NQF Level 4, Credits 9
• 641403003-KM-11, Construction drawings and specifications, NQF Level 4, Credits 9
• 641403003-KM-12, Introduction to construction materials, NQF Level 3, Credits 6
• 641403003-KM-13, Construction Plant, NQF Level 2, Credits 6
• 641403003-KM-14, Types, purposes and uses of hand and power tools, NQF Level 2, Credits 6
• 641403003-KM-15, Small plant and equipment, NQF Level 3, Credits 6

Total number of credits for Knowledge Modules: 107

Practical Skill Modules:
• 641403003-PM-01, Interpret the construction drawings, specifications and programme, NQF Level 4, Credits 9
• 641403003-PM-02, Set out and transfer levels, NQF Level 3, Credits 2
• 641403003-PM-03, Plan and prepare for construction work, NQF Level 3, Credits 6
• 641403003-PM-04, Construct kerbs, channels and inlets, NQF Level 4, Credits 7
• 641403003-PM-05, Construct and maintain storm water drainage systems, NQF Level 4, Credits 7
• 641403003-PM-06, Construct manholes/chambers and junction boxes, NQF Level 4, Credits 8
• 641403003-PM-07, Install precast- and in-situ concrete culverts, NQF Level 4, Credits 5
• 641403003-PM-08, Co-ordinate plant operations, NQF Level 4, Credits 5
• 641403003-PM-09, Coordinate the construction and compaction of all pavement layers, NQF Level 4, Credits 9
• 641403003-PM-10, Coordinate road and runway surfacing operations, NQF Level 4, Credits 9
• 641403003-PM-11, Prepare and control application rate of the prime/tack coat, NQF Level 3, Credits 5
• 641403003-PM-12, Coordinate and construct the road/ rail/ runway ancilliary works, NQF Level 4, Credits 6

Total number of credits for Practical Skill Modules: 78

This qualification also requires the following Work Experience Modules:
• 641403003-WM-01, Processes and procedures for setting out, planning and preparing for civil roads construction, NQF Level 2, Credits 3
• 641403003-WM-02, Processes and procedures for the construction of kerbs and channels, NQF Level 4, Credits 16
• 641403003-WM-03, Processes and procedures for laying, repairing and maintaining storm water pipe systems and associated infrastructure, NQF Level 4, Credits 33
• 641403003-WM-04, Processes and procedures for constructing earthworks and pavement layers, NQF Level 4, Credits 16
• 641403003-WM-05, Processes and procedures for maintaining roads, NQF Level 4, Credits 16
• 641403003-WM-06, Processes and procedures for conducting road markings and installing road signs, NQF Level 4, Credits 16

Total number of credits for Work Experience Modules: 100

ENTRY REQUIREMENTS
• NQF level 4 with mathematics
EXIT LEVEL OUTCOMES AND ASSOCIATED ASSESSMENT CRITERIA

• Exit Level Outcome 1
  Plan, set out and prepare for road, rail and runway construction (25%)
  
  Associated Assessment Criteria
  - Interpretation of construction drawings, specifications and programmes are in accordance with job requirements and standard operating procedures.
  - Civil construction work is planned and set out according to job card.
  - Transfer levels are set out as per job requirements and standard operating procedures.

• Exit Level Outcome 2
  Construct storm water drainage system (25%)
  
  Associated Assessment Criteria
  - Kerbs, channels and inlets are constructed according to job requirements and standard operating procedures.
  - Maintain storm water drainage systems are constructed according to job requirements and standard operating procedures.
  - Manholes/chambers and junction boxes are constructed according to job requirements and standard operating procedures.
  - Precast- and in-situ concrete culverts are installed according to job specifications and standard operating procedures.

• Exit Level Outcome 3
  Coordinate the construction and maintenance of earthworks and pavement layers (25%)
  
  Associated Assessment Criteria
  - Plant operations are coordinated.
  - Compaction of all pavement materials are according to standard operating procedures.

• Exit Level Outcome 4
  Coordinate, construct and maintain road/ rail/ runway and ancillary works (25%)
  
  Associated Assessment Criteria
  - Application rate of the prime coat are prepared and controlled as per specification.
  - The road/ rail/ runway ancillary works are coordinated and constructed as per job requirements.
INTERNATIONAL COMPARABILITY

INTRODUCTION
This report is based on an International Comparability study undertaken to examine a selected number of civil construction occupations, including their levels of qualifications and related curricula. The purpose is to provide baseline information towards benchmarking the curricula under development for the South African Federation of Civil Engineering Contractors (SAFCEC) and the Construction Education Training Authority (CETA). The following civil construction occupations part of the review:

• Civil Engineering Construction Constructor (Road Constructor)
• Civil Engineering Construction Constructor (Civil Services Constructor):
• Civil Engineering Construction Constructor (Civil Structures Constructor)

The countries included in the comparability review were Australia, New Zealand and South Africa.

OVERALL SUMMARIES FOR EACH COUNTRY

New Zealand
New Zealand has nationally recognised trade and occupational qualifications ranging from NZQF levels 1 to 5 and all three occupations under investigation are offered at certificate level from levels 2 to 4:

• National Certificate in Civil Construction Works with strands in Civil Construction
• Highway Construction, and Highway Maintenance
• National Certificate in Civil Works and Services
• National Certificate in Road Construction [Ref: 0772]
• National Certificate in Roading Maintenance [Ref: 0773]
• National Certificate in Civil Construction Works (Foreperson) with optional strands in Kerb and Channel; Concreting; High Capacity Highways; and Roading

These certificates recognise the knowledge and skills required by people working in the civil construction industry. People credited with a National Certificate in Civil Construction Works qualification have fundamental knowledge of earthworks, and are able to install safety and culvert structures, locate, identify and dismantle services, and install civil constructions on works sites.

This qualification allows for optional strands in Kerb and Channel, Concreting, High Capacity Highways, and Roading.

Australia
Australia has a similar qualification system to that of New Zealand. Industry Skills Council (ISC) aims at equipping students with practical skills that are transferable to the workplace. Australia’s Industry Skills Councils (ISCs) are independent, industry-led, not for profit companies funded by Government. In broad terms, their role is to identify and respond to the skill development and workforce planning needs of their
respective industries which collectively, comprise all sectors in the Australian economy. ISCs achieve this through the:

- development and maintenance of high quality qualifications, support materials and support for the national training system;
- Effective networks, partnerships and real-time industry intelligence;
- Responsive workforce development activities.

Therefore, most courses offered under ISC are based on national competency set of standards geared towards workplace training packages. Qualifications are offered from level 2 to 4:

- Certificate II in Civil Foundations
- Certificate III in Civil Foundations
- Certificate II in Concreting
- Certificate III in Concreting
- Certificate III in Road Construction and Maintenance
- Certificate II in Civil Construction
- Certificate III in Civil Construction

The Certificate III in Civil Construction reflects the role of a skilled operator working in civil construction, who applies a broad range of skills in a varied work context, using some discretion and judgement and relevant theoretical knowledge.

The qualification applies to specialist occupations in Bituminous Surfacing Bridge Construction and Maintenance, Pipe Laying, Road Construction and Maintenance, Road Marking, Tunnel Construction, Timber Bridge Construction and Maintenance and Civil Construction general occupations. The individual may provide theoretical advice and support a team.

The Certificate III in Civil Construction qualification has core and elective units of competency requirements that cover the general and specialist skills for seven (7) specialist and one (1) general civil construction stream.

- Stream 1 – Bituminous Surfacing
- Stream 2 – Bridge Construction and Maintenance
- Stream 3 – Pipe Laying
- Stream 4 – Road Construction and Maintenance
- Stream 5 – Road Marking
- Stream 6 – Tunnel Construction
- Stream 7 – Timber Bridge Construction and Maintenance
- Stream 8 – Civil Construction General

Flowing from intelligence gained through the Environmental Scan process, each ISC produces a Continuous Improvement Plan which outlines the changes to be made to Training Package qualifications in order for them to meet industry’s new and emerging skill needs or comply with new industry licensing or regulatory requirements.
South Africa

The South African national qualifications framework recognises all the civil occupations at different levels. Further education and training certificate levels run from levels 2 to 4. The qualifications and NQF levels in South Africa are as follows:

- National Certificate: Construction: Concrete Reinforcing
- National Certificate: Construction: Concreting
- National Certificate: Construction: Roadworks
- National Certificate: Construction
- National Certificate: Community Water, Health and Sanitation Promotion

SIMILARITIES AND DIFFERENCES AMONG THE VARIOUS OCCUPATIONS

In both Australia and New Zealand, qualifications were developed specifically for Civil Engineering, Civil Plant Operation and Management, Civil Works and Services, Road Construction and Maintenance, Pavement Surfacing. All these qualifications contain unit standards or modules relevant to the South African Construction Industry.

The formatting of these qualifications differs from the South African Qualifications Criteria for qualification compilation. Small qualifications with a total of 50 credits are allowed. Fundamental unit standards are not specified, as is the case in South Africa.

The closest New Zealand qualifications can be compared to the contextual model is that they refer to "strand" or "stream"- which is similar in concept to our part qualification in the QCTO developed qualifications.

In one qualification they specified the following "strand" options: Demolition strand, drainage strand and Earthworks strand. In this particular qualification, the core component was 182 credits - ranging from level 1 to 5 with the bulk at level 4. Depending on the "strand" selected - the total qualification credits came to a maximum of 223 credits for this level 4 qualification.

This implies that a qualification with a high number of credits at some of the lower NQF levels is not uncommon. Training is delivered in theoretical knowledge, practical and work based learning.

SUMMARY

This comparability review reflects the current status of the availability of related curricula in the two countries and according to the findings the South African qualification is directly comparable to what is found in the chosen benchmark, in terms of what the qualification covers and the level of skills that have to be developed together with the concept of standardised part qualifications.
The qualification is designed to accommodate the changing skills requirements and to meet the needs of the South African civil construction industry strategically positioned for growth and innovation as well as to meet the current transformational challenges in South Africa.

INTEGRATED ASSESSMENT

Integrated formative assessment:
The skills development provider will use the curriculum to guide them on the stipulated internal assessment criteria and weighting. They will also apply the scope of practical skills and applied knowledge as stipulated by the internal assessment criteria. This formative assessment leads to entrance into the integrated external summative assessment.

Integrated summative assessment:
An external integrated summative assessment, conducted through the relevant QCTO Assessment Quality Partner is required for the issuing of this qualification. The external integrated summative assessment will focus on the exit level outcomes and associated assessment criteria.

RECOGNITION OF PRIOR LEARNING
RPL for access to the external integrated summative assessment: Accredited providers and approved workplaces must apply the internal assessment criteria specified in the related curriculum document to establish and confirm prior learning. Accredited providers and workplaces must confirm prior learning by issuing a statement of result or certifying a work experience record.
RPL for access to the qualification: Accredited providers and approved workplaces may recognise prior learning against the relevant access requirements.

ARTICULATION
Horizontal articulation is possible to qualify for other occupational specialisations related to the Civil Construction Constructor i.e. Civil Structures Constructor and Civil Services Constructor. Vertically articulation- the candidate can progress into middle management, training and mentorship, Road Reserve Managers and Area managers etc.

NOTES

Qualifying for external assessment:
In order to qualify for an external assessment, learners must provide proof of completion of all required modules by means of a statement of results and work experience including the Foundational Learning Competence or equivalent.
Foundational learning competence is a prerequisite for the awarding of this qualification

Additional legal or physical entry requirements:
None

Criteria for the accreditation of providers
Accreditation of providers will be done against the criteria as reflected in the relevant curriculum on the QCTO website.
The curriculum title and code is: 641403003: Road Construction Constructor

This qualification encompasses the following trades as recorded on the NLRD:

- None

Part Qualifications

Part Qualification 1:
Title: Earthworks Hand, NQF Level 3, Credits 77

Purpose:
An Earthworks Hand undertakes earth works related activities for the construction of roads, railways and runways, using specialized earth moving plant, equipment and personnel.

Applicable Modules (Rules of Combination)

Knowledge Modules:

- 641403003-KM-02, Earthworks and Layer works, NQF Level 4, Credits 10
- 641403003-KM-06, Set out the work areas, NQF Level 2, Credits 6
- 641403003-KM-08, Safety, Health and Environment Legislation, NQF Level 2, Credits 3
- 641403003-KM-11, Construction drawings and specifications, NQF Level 4, Credits 9
- 641403003-KM-12, Introduction to construction materials, NQF Level 3, Credits 6
- 641403003-KM-13, Construction Plant, NQF Level 2, Credits 6
- 641403003-KM-14, Types, purposes and uses of hand and power tools, NQF Level 2, Credits 6
- 641403003-KM-15, Small plant and equipment, NQF Level 3, Credits 6

Total number of credits for Knowledge Modules: 52

Practical Skill Modules:

- 641403003-PM-01, Interpret the construction drawings, specifications and programme, NQF Level 4, Credits 9
- 641403003-PM-02, Set out and transfer levels, NQF Level 3, Credits 2
- 641403003-PM-03, Plan and prepare for construction work, NQF Level 3, Credits 6
- 641403003-PM-08, Co-ordinate plant operations, NQF Level 4, Credits 5

Total number of credits for Practical Skill Modules: 22

This qualification also requires the following Work Experience Modules:

- 641403003-WM-01, Processes and procedures for setting out, planning and preparing for civil roads construction, NQF Level 2, Credits 3

Total number of credits for Work Experience Modules: 3

Assessment Qualification Standards:
• Plan, set out and prepare for road, rail and runway construction (25%)
• Coordinate the construction and maintenance of earthworks and pavement layers (25%)
Part Qualification 2:
Title: Layerworks Hand, NQF Level 3, Credits 86

Purpose:
A layer works hand undertakes layer works related activities for roads, railways and runways, using specialized plant, materials and personnel.

Applicable Modules (Rules of Combination)
Knowledge Modules:

- 641403003-KM-02, Earthworks and Layer works, NQF Level 4, Credits 10
- 641403003-KM-06, Set out the work areas, NQF Level 2, Credits 6
- 641403003-KM-08, Safety, Health and Environment Legislation, NQF Level 2, Credits 3
- 641403003-KM-11, Construction drawings and specifications, NQF Level 4, Credits 9
- 641403003-KM-12, Introduction to construction materials, NQF Level 3, Credits 6
- 641403003-KM-13, Construction Plant, NQF Level 2, Credits 6
- 641403003-KM-14, Types, purposes and uses of hand and power tools, NQF Level 2, Credits 6
- 641403003-KM-15, Small plant and equipment, NQF Level 3, Credits 6

Total number of credits for Knowledge Modules: 52

Practical Skill Modules:

- 641403003-PM-01, Interpret the construction drawings, specifications and programme, NQF Level 4, Credits 9
- 641403003-PM-02, Set out and transfer levels, NQF Level 3, Credits 2
- 641403003-PM-03, Plan and prepare for construction work, NQF Level 3, Credits 6
- 641403003-PM-08, Co-ordinate plant operations, NQF Level 4, Credits 5
- 641403003-PM-09, Coordinate the construction and compaction of all pavement layers, NQF Level 4, Credits 9

Total number of credits for Practical Skill Modules: 31

This qualification also requires the following Work Experience Modules:

- 641403003-WM-01, Processes and procedures for setting out, planning and preparing for civil roads construction, NQF Level 2, Credits 3

Total number of credits for Work Experience Modules: 3

Assessment Qualification Standards:

- Plan, set out and prepare for road, rail and runway construction (25%)
- Coordinate the construction and maintenance of earthworks and pavement layers (25%)
Part Qualification 3:
Title: Surfacing Hand, NQF Level 3, Credits 85

Purpose:
A surfacing hand undertakes surfacing work on roads and runways using specialized plant, materials and personnel

Applicable Modules (Rules of Combination)
Knowledge Modules:
- 641403003-KM-01, Asphalt surfacing and related operations, NQF Level 4, Credits 10
- 641403003-KM-08, Safety, Health and Environment Legislation, NQF Level 2, Credits 3
- 641403003-KM-11, Construction drawings and specifications, NQF Level 4, Credits 9
- 641403003-KM-12, Introduction to construction materials, NQF Level 3, Credits 6
- 641403003-KM-13, Construction Plant, NQF Level 2, Credits 6
- 641403003-KM-14, Types, purposes and uses of hand and power tools, NQF Level 2, Credits 6
- 641403003-KM-15, Small plant and equipment, NQF Level 3, Credits 6

Total number of credits for Knowledge Modules: 46

Practical Skill Modules:
- 641403003-PM-01, Interpret the construction drawings, specifications and programme, NQF Level 4, Credits 9
- 641403003-PM-02, Set out and transfer levels, NQF Level 3, Credits 2
- 641403003-PM-03, Plan and prepare for construction work, NQF Level 3, Credits 6
- 641403003-PM-08, Co-ordinate plant operations, NQF Level 4, Credits 5
- 641403003-PM-10, Coordinate road and runway surfacing operations, NQF Level 4, Credits 9
- 641403003-PM-11, Prepare and control application rate of the prime/tack coat, NQF Level 3, Credits 5

Total number of credits for Practical Skill Modules: 36

This qualification also requires the following Work Experience Modules:
- 641403003-WM-01, Processes and procedures for setting out, planning and preparing for civil roads construction, NQF Level 2, Credits 3

Total number of credits for Work Experience Modules: 3

Assessment Qualification Standards:
- Plan, set out and prepare for road, rail and runway construction (25%)
- Coordinate, construct and maintain road/ rail/ runway and ancillary works (25%)
**Part Qualification 4:**

**Title:** Road Drainage Hand, NQF Level 3, Credits 100

**Purpose:**
A road drainage hand undertakes the providing of drainage and associated infrastructure work on roads, railways and runways

**Applicable Modules (Rules of Combination)**

**Knowledge Modules:**
- 641403003-KM-04, Theories and principles of storm water drainage, NQF Level 4, Credits 6
- 641403003-KM-05, Subsoil drains and service ducts, NQF Level 4, Credits 6
- 641403003-KM-06, Set out the work areas, NQF Level 2, Credits 6
- 641403003-KM-07, Concrete for road works, NQF Level 3, Credits 6
- 641403003-KM-08, Safety, Health and Environment Legislation, NQF Level 2, Credits 3
- 641403003-KM-11, Construction drawings and specifications, NQF Level 4, Credits 9
- 641403003-KM-12, Introduction to construction materials, NQF Level 3, Credits 6
- 641403003-KM-13, Construction Plant, NQF Level 2, Credits 6
- 641403003-KM-14, Types, purposes and uses of hand and power tools, NQF Level 2, Credits 6
- 641403003-KM-15, Small plant and equipment, NQF Level 3, Credits 6

Total number of credits for Knowledge Modules: 60

**Practical Skill Modules:**
- 641403003-PM-01, Interpret the construction drawings, specifications and programme, NQF Level 4, Credits 9
- 641403003-PM-02, Set out and transfer levels, NQF Level 3, Credits 2
- 641403003-PM-03, Plan and prepare for construction work, NQF Level 3, Credits 6
- 641403003-PM-05, Construct and maintain storm water drainage systems, NQF Level 4, Credits 7

Total number of credits for Practical Skill Modules: 24

This qualification also requires the following Work Experience Modules:
- 641403003-WM-04, Processes and procedures for constructing earthworks and pavement layers, NQF Level 4, Credits 16

Total number of credits for Work Experience Modules: 16

**Assessment Qualification Standards:**
- Construct storm water drainage system (25%)
- Coordinate, construct and maintain road/ rail/ runway and ancillary works (25%)
Part Qualification 5:
Title: Road Maintenance Hand, NQF Level 3, Credits 136

Purpose:
A road maintenance hand undertakes infrastructure maintenance related work on existing roads, railways and runways

Applicable Modules (Rules of Combination)
Knowledge Modules:
- 641403003-KM-01, Asphalt surfacing and related operations, NQF Level 4, Credits 10
- 641403003-KM-06, Set out the work areas, NQF Level 2, Credits 6
- 641403003-KM-07, Concrete for road works, NQF Level 3, Credits 6
- 641403003-KM-08, Safety, Health and Environment Legislation, NQF Level 2, Credits 3
- 641403003-KM-11, Construction drawings and specifications, NQF Level 4, Credits 9
- 641403003-KM-12, Introduction to construction materials, NQF Level 3, Credits 6
- 641403003-KM-13, Construction Plant, NQF Level 2, Credits 6
- 641403003-KM-14, Types, purposes and uses of hand and power tools, NQF Level 2, Credits 6
- 641403003-KM-15, Small plant and equipment, NQF Level 3, Credits 6
Total number of credits for Knowledge Modules: 58

Practical Skill Modules:
- 641403003-PM-01, Interpret the construction drawings, specifications and programme, NQF Level 4, Credits 9
- 641403003-PM-02, Set out and transfer levels, NQF Level 3, Credits 2
- 641403003-PM-03, Plan and prepare for construction work, NQF Level 3, Credits 6
- 641403003-PM-04, Construct kerbs, channels and inlets, NQF Level 4, Credits 7
- 641403003-PM-05, Construct and maintain storm water drainage systems, NQF Level 4, Credits 7
- 641403003-PM-06, Construct manholes/chambers and junction boxes, NQF Level 4, Credits 8
- 641403003-PM-09, Coordinate the construction and compaction of all pavement layers, NQF Level 4, Credits 9
- 641403003-PM-10, Coordinate road and runway surfacing operations, NQF Level 4, Credits 9
- 641403003-PM-11, Prepare and control application rate of the prime/tack coat, NQF Level 3, Credits 5
Total number of credits for Practical Skill Modules: 62

This qualification also requires the following Work Experience Modules:
- 641403003-WM-05, Processes and procedures for maintaining roads, NQF Level 4, Credits 16
Total number of credits for Work Experience Modules: 16

Assessment Qualification Standards:
- Plan, set out and prepare for road, rail and runway construction (25%)
- Coordinate, construct and maintain road/ rail/ runway and ancillary works (25%)
Part Qualification 6:

Title: Road Marking Hand, NQF Level 3, Credits 97

Purpose:
A road marking hand undertakes the marking of traffic line and symbols on roads and runways

Applicable Modules (Rules of Combination)

Knowledge Modules:
- 641403003-KM-03, Ancillary road works, NQF Level 4, Credits 9
- 641403003-KM-06, Set out the work areas, NQF Level 2, Credits 6
- 641403003-KM-08, Safety, Health and Environment Legislation, NQF Level 2, Credits 3
- 641403003-KM-11, Construction drawings and specifications, NQF Level 4, Credits 9
- 641403003-KM-12, Introduction to construction materials, NQF Level 3, Credits 6
- 641403003-KM-14, Types, purposes and uses of hand and power tools, NQF Level 2, Credits 6
- 641403003-KM-15, Small plant and equipment, NQF Level 3, Credits 6

Total number of credits for Knowledge Modules: 45

Practical Skill Modules:
- 641403003-PM-01, Interpret the construction drawings, specifications and programme, NQF Level 4, Credits 9
- 641403003-PM-02, Set out and transfer levels, NQF Level 3, Credits 2
- 641403003-PM-03, Plan and prepare for construction work, NQF Level 3, Credits 6

Total number of credits for Practical Skill Modules: 17

This qualification also requires the following Work Experience Modules:
- 641403003-WM-01, Processes and procedures for setting out, planning and preparing for civil roads construction, NQF Level 2, Credits 3
- 641403003-WM-05, Processes and procedures for maintaining roads, NQF Level 4, Credits 16
- 641403003-WM-06, Processes and procedures for conducting road markings and installing road signs, NQF Level 4, Credits 16

Total number of credits for Work Experience Modules: 35

Assessment Qualification Standards:
- Coordinate, construct and maintain road/rail/runway and ancillary works (25%)
Part Qualification 7:
Title: Road Signage Hand, NQF Level 3, Credits 87

Purpose:
A road signal hand undertakes the installation of signs on roads, railways and runways

Applicable Modules (Rules of Combination)
Knowledge Modules:
- 641403003-KM-03, Ancillary road works, NQF Level 4, Credits 9
- 641403003-KM-06, Set out the work areas, NQF Level 2, Credits 6
- 641403003-KM-07, Concrete for road works, NQF Level 3, Credits 6
- 641403003-KM-08, Safety, Health and Environment Legislation, NQF Level 2, Credits 3
- 641403003-KM-11, Construction drawings and specifications, NQF Level 4, Credits 9
- 641403003-KM-12, Introduction to construction materials, NQF Level 3, Credits 6
- 641403003-KM-14, Types, purposes and uses of hand and power tools, NQF Level 2, Credits 6
- 641403003-KM-15, Small plant and equipment, NQF Level 3, Credits 6
Total number of credits for Knowledge Modules: 51

Practical Skill Modules:
- 641403003-PM-01, Interpret the construction drawings, specifications and programme, NQF Level 4, Credits 9
- 641403003-PM-02, Set out and transfer levels, NQF Level 3, Credits 2
- 641403003-PM-03, Plan and prepare for construction work, NQF Level 3, Credits 6
Total number of credits for Practical Skill Modules: 17

This qualification also requires the following Work Experience Modules:
- 641403003-WM-01, Processes and procedures for setting out, planning and preparing for civil roads construction, NQF Level 2, Credits 3
- 641403003-WM-05, Processes and procedures for maintaining roads, NQF Level 4, Credits 16
Total number of credits for Work Experience Modules: 19

Assessment Qualification Standards:
- Coordinate, construct and maintain road/ rail/ runway and ancillary works (25%)
Part Qualification 8:
Title: Kerb Layer, NQF Level 3, Credits 204

Purpose:
A Kerb layer undertakes the construction of kerbing and other surface drainage related infrastructure on roads and runways.

Applicable Modules (Rules of Combination)
Knowledge Modules:
- 641403003-KM-01, Asphalt surfacing and related operations, NQF Level 4, Credits 10
- 641403003-KM-02, Earthworks and Layer works, NQF Level 4, Credits 10
- 641403003-KM-03, Ancillary road works, NQF Level 4, Credits 9
- 641403003-KM-04, Theories and principles of storm water drainage, NQF Level 4, Credits 6
- 641403003-KM-05, Subsoil drains and service ducts, NQF Level 4, Credits 6
- 641403003-KM-06, Set out the work areas, NQF Level 2, Credits 6
- 641403003-KM-07, Concrete for road works, NQF Level 3, Credits 6
- 641403003-KM-08, Safety, Health and Environment Legislation, NQF Level 2, Credits 3
- 641403003-KM-09, Supervisory Skills, NQF Level 4, Credits 9
- 641403003-KM-10, Construction planning and administration, NQF Level 4, Credits 9
- 641403003-KM-11, Construction drawings and specifications, NQF Level 4, Credits 9
- 641403003-KM-12, Introduction to construction materials, NQF Level 3, Credits 6
- 641403003-KM-13, Construction Plant, NQF Level 2, Credits 6
- 641403003-KM-14, Types, purposes and uses of hand and power tools, NQF Level 2, Credits 6
- 641403003-KM-15, Small plant and equipment, NQF Level 3, Credits 6

Total number of credits for Knowledge Modules: 107

Practical Skill Modules:
- 641403003-PM-01, Interpret the construction drawings, specifications and programme, NQF Level 4, Credits 9
- 641403003-PM-02, Set out and transfer levels, NQF Level 3, Credits 2
- 641403003-PM-03, Plan and prepare for construction work, NQF Level 3, Credits 6
- 641403003-PM-04, Construct kerbs, channels and inlets, NQF Level 4, Credits 7
- 641403003-PM-05, Construct and maintain storm water drainage systems, NQF Level 4, Credits 7
- 641403003-PM-06, Construct manholes/chambers and junction boxes, NQF Level 4, Credits 8
- 641403003-PM-07, Install precast- and in-situ concrete culverts, NQF Level 4, Credits 5
- 641403003-PM-08, Co-ordinate plant operations, NQF Level 4, Credits 5
- 641403003-PM-09, Coordinate the construction and compaction of all pavement layers, NQF Level 4, Credits 9
- 641403003-PM-10, Coordinate road and runway surfacing operations, NQF Level 4, Credits 9
- 641403003-PM-11, Prepare and control application rate of the prime/tack coat, NQF Level 3, Credits 5
- 641403003-PM-12, Coordinate and construct the road/ rail/ runway ancillary works, NQF Level 4, Credits 6

Total number of credits for Practical Skill Modules: 78

This qualification also requires the following Work Experience Modules:
- 641403003-WM-01, Processes and procedures for setting out, planning and preparing for civil roads construction, NQF Level 2, Credits 3
- 641403003-WM-05, Processes and procedures for maintaining roads, NQF Level 4, Credits 16

Total number of credits for Work Experience Modules: 19

Assessment Qualification Standards:
- Coordinate the construction and maintenance of earthworks and pavement layers (25%)
- Coordinate, construct and maintain road/ rail/ runway and ancillary works (25%)