

**STATEMENT OF WORK EXPERIENCE/LOGBOOK**

<b>Instructional Programme Code:</b>	50908401 National N Diploma: Engineering Studies: Civil Engineering
<b>SAQA Qualification ID:</b>	90674: National N Diploma, Engineering Studies: Civil Engineering NQF Level 6, 360 credits
<b>SAQA Learning Programme ID:</b>	67043 National N Diploma: Engineering Studies: Civil Engineering, NQF Level 6, 360 credits

<b>Learner Details</b>	
<b>Name &amp; Surname:</b>	
<b>ID Number:</b>	

<b>Employer Details</b>	
<b>Company Name:</b>	
<b>Address:</b>	
<b>Supervisor Name:</b>	
<b>Work Telephone:</b>	
<b>E-Mail:</b>	

<b>Employer Details</b>	
<b>Company Name:</b>	
<b>Address:</b>	
<b>Supervisor Name:</b>	
<b>Work Telephone:</b>	
<b>E-Mail:</b>	

## Civil engineering

Civil engineers play an instrumental role in planning, designing, constructing, maintaining and managing the physical environment around us, including buildings and structures, transport systems and water collection, treatment and distribution etc. Civil engineering is one of the most diverse professions in the engineering sector. There are several areas of specialisation including structural, construction, geotechnical, traffic, water resources, urban planning, materials, and many other emerging areas.

The following occupations relate to this qualification.

- Bridge Constructor
- Leading Hand (Civil Construction)
- Road Builder
- Road Marker
- Road Paver
- Site Maintenance Construction Worker
- Timber Bridge Constructor
- Tunnel Constructor
- Utilities Industry Worker (Transmission Laying)

**Candidate completed a relevant Trade Test or worked in a technical environment relevant to the specialised theoretical subjects:**

OFO-CODE	TRADE	[√]	COMMENTS
641201	Bricklayer		
641301	Stonemason		
641303	Refractory Mason		
641501	Carpenter		
641503	Joiner		
642201	Wall and Floor Tiler		
642302	Plasterer		
642601	Plumber		
682201	Cabinetmaker		
682303	Wood Machinist		
682304	Wood Turner		
652206	Patternmaker		

Due to specialisation and the variety of specialisations that lead to this diploma a learner needs at complete at least 10 work activities related to the specialisation to confirm relevance in practical training. The competencies cover the following seven Civil Construction specialisations:

- Bituminous Surfacing
- Bridge Construction and Maintenance
- Pipe Laying

- Road Construction and Maintenance
- Tunnel Construction
- Timber Bridge Construction and Maintenance
- Civil Construction General

The competencies covered may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

	<b>Scope Work Experience</b>	<b>Date</b>	<b>Signature</b>
WA001	Place and fix reinforcement materials		
WA002	Plan and organise work		
WA003	Identify and rectify site operating problems		
WA004	Run on-site operations		
WA005	Strip pile heads		
WA006	Maintain concrete bridges		
WA007	Install pre-cast girders		
WA008	Install pre-cast parapets		
WA009	Operate a bridge inspection unit		
WA010	Install pre-cast concrete bridge decks		
WA011	Undertake concreting work on concrete bridges		

WA012	Construct formwork and false work on concrete bridges		
WA013	Conduct tack coat spraying operations		
WA014	Hand spread asphalt		
WA015	Safely handle bituminous materials		
WA016	Conduct aggregate spreader box operations		
WA017	Roll aggregate in sprayed sealing operations		
WA018	Conduct pavement sweeping operations		
WA019	Take samples of materials used in road surfacing		
WA020	Conduct road maintenance operations		
WA021	Conduct profile planer operations		
WA022	Conduct paver screeding operations		
WA023	Conduct materials transfer vehicle operations		
WA024	Compact asphalt with rollers		
WA025	Conduct asphalt paver operations		
WA026	Conduct slurry sealing operations		

WA027	Conduct bitumen sprayer operations		
WA028	Load aggregate using a purpose built loader		
WA029	Conduct self-propelled aggregate spreader operations		
WA030	Conduct patching operations		
WA031	Produce asphalt products		
WA032	Conduct bitumen tanker operations		
WA033	Apply the principles for the application of bituminous sprayed treatment		
WA034	Carry out measurements and calculations		
WA035	Identify, locate and protect underground services		
WA036	Read and interpret plans and job specifications		
WA037	Carry out manual excavation		
WA038	Support plant operations		
WA039	Spread and compact materials manually		
WA040	Carry out basic levelling		
WA041	Carry out concrete work		

WA042	Install trench support		
WA043	Erect and dismantle temporary fencing and gates		
WA044	Construct and dismantle fences and gates		
WA045	Construct underpinning		
WA046	Install temporary and permanent rock anchors		
WA047	Install primary ground support		
WA048	Conduct pile driving operations		
WA049	Direct pile driving operations		
WA050	Direct cast in-situ piling operations		
WA051	Communicate in the workplace		
WA052	Install water mains pipelines		
WA053	Install stormwater systems		
WA054	Install sewer pipelines		
WA055	Install pre-cast gully pits		
WA056	Install pre-cast access chambers		

WA057	Repair potholes		
WA058	Install signs		
WA059	Install sub-soil drainage		
WA060	Install and maintain roadside fixtures		
WA061	Install utility poles		
WA062	Install pre-cast concrete crash barriers		
WA063	Install noise barriers		
WA064	Lay pipes		
WA065	Lay reinforced concrete box culverts		
WA066	Maintain drainage systems		
WA067	Place and form concrete kerb, channel and fixtures		
WA068	Lay pavers		
WA069	Maintain sealed roads		
WA070	Conduct road construction paver screeding operations		
WA071	Conduct earthworks		

WA072	Conduct road pavement construction		
WA073	Conduct stabiliser operations		
WA074	Conduct concrete road paver operations		
WA075	Setup and maintain concrete paver stringlines		
WA076	Conduct concrete road curing and texturing operations		
WA077	Handle concrete materials		
WA078	Use concreting materials and equipment		
WA079	Place and compact concrete		
WA080	Finish concrete pavements		
WA081	Saw and cut concrete pavements to initiate planned cracks		
WA082	Seal concrete pavements		
WA083	Receive, check and record concrete deliveries		
WA084	Insert tie bars in fresh concrete		
WA085	Escort mobile works		
WA086	Handle and store road marking materials		



WA087	Prepare surface for road marking		
WA088	Conduct road marking measuring operations		
WA089	Install raised pavement markers		
WA090	Conduct ride on road marking operations		
WA091	Conduct long line road marking operations		
WA092	Conduct thermo plastic road marking operations		
WA093	Maintain timber bridges		
WA094	Apply bridge durability treatment		
WA095	Produce drawings and sketches		
WA096	Undertake visual inspection		
WA097	Install temporary support members		
WA098	Erect a temporary modular support system (bailey) on an existing bridge		
WA099	Install or replace sub-structure members		
WA0100	Install or replace super-structure members		
WA0101	Splice and connect timber members		

WA0102	Assemble a temporary modular bridge		
WA0103	Install or replace truss members		
WA0104	Construct, maintain and remove coffer dams		
WA0105	Construct specialised timber deck systems		
WA0106	Install tunnelling constructions services		
WA0107	Line tunnel		
WA0108	Excavate tunnel by machine		
WA0109	Muck out tunnel earthworks		
WA0110	Construct portals		
WA0111	Conduct of fluid assisted directional boring		
WA0112	Conduct impact moling, ramming and augering		
WA0113	Control micro tunnelling and pipe-jacking		
WA0114	Undertake on-line replacement for existing pipeline systems		
WA0115	Undertake localised repair and sealing of existing pipeline systems		

WA0116	Install cure in-place linings for existing pipeline systems		
WA0117	Spray linings for existing pipeline systems		
WA0118	Install close-fit linings for existing pipeline systems		
WA0119	Install slip lining in existing pipeline systems		
WA0120	Renovate large diameter pipes and chambers		
WA0121	Comply with site work processes/procedures		
WA0122	Operate a forklift		
WA0123	Perform dogging		
WA0124	Conduct basic scaffolding operations		
WA0125	Operate elevating work platform		
WA0126	Load and unload plant		
WA0127	Conduct telescopic materials handler operations		
WA0128	Maintain site records		
WA0129	Conduct civil construction skid steer loader operations		

WA0130	Conduct pipe layer operations		
WA0131	Conduct skid steer loader operations using attachments		
WA0132	Operate drilling fluids and mud pits		
WA0133	Operate mud systems		
WA0134	Maintain and monitor site quality standards		
WA0135	Respond to site based spills		
WA0136	Handle resources and infrastructure materials and safely dispose of nontoxic materials		
WA0137	Use hand and power tools		
WA0138	Operate small plant and equipment		
WA0139	Cut, weld and bend materials		
WA0140	Apply shot-crete underground		
WA0141	Drain and dewater civil construction site		
WA0142	Control construction site water table		
WA0143	Construct and lay distribution pipelines and services		

	<b>Supporting Evidence Look for evidence that confirms skills in:</b>	<b>Date</b>	<b>Signature</b>
SE0101	Reading, interpreting and following information on written job sheets, instructions, charts, lists, drawings and other applicable reference documents and drawings		
SE0102	Obtaining instructions for tasks from correct source of information (job card, supervisor, work colleagues and others)		
SE0103	Checking and clarifying task related information		
SE0104	Planning and prepare plans for tasks and sequencing operations		
SE0105	Performing numerical operations, geometry and calculations/formulae within the scope of the work activities		
SE0106	Setting up work using tools, techniques and equipment		
SE0107	Checking for conformance to specifications		
SE0108	Applying safe work practices and procedures against established control measures		
SE0109	Communicate and work effectively and safely with others		
SE0110	Safely and effectively use tools, plant and equipment		
SE0111	Comply with organisational policies and procedures, including quality requirements		
SE0112	Identifying and managing risks		
SE0113	Identifying, addressing and reporting environmental issues		

SE0114	Site isolation, signage, erecting barriers and traffic control		
SE0115	Selecting and checking for faults, tools and equipment to carry out tasks		