OCCUPATIONAL QUALIFICATION STANDARD

Construction Site Manager, EstQF Level 6

An occupational qualification standard is a document which describes the set of skills, knowledge and attitudes, i.e. competence requirements, needed to successfully accomplish duties. Occupational qualification standards are used for compiling curricula and awarding qualifications.

Occupational title	Level of Estonian Qualifications Framework (EstQF)
Construction Site Manager, EstQF Level 6	6

Possible specialisation and titles on occupational certificate	
Specialisation	**Title on occupational qualification certificate**
General construction	Construction Site Manager, EstQF Level 6 General construction
Construction of indoor climate control systems	Construction Site Manager, EstQF Level 6 Construction of indoor climate control systems
Construction of water supply and sewerage systems within buildings or belonging to them	Construction Site Manager, EstQF Level 6 Construction of water supply and sewerage systems within buildings or belonging to them
Construction of public water supply or sewerage	Construction Site Manager, EstQF Level 6 Construction of public water supply or sewerage
Performance of owner's supervision	Construction Site Manager, EstQF Level 6 Performance of owner's supervision

Part A
DESCRIPTION OF WORK

A.1 Description of work

A construction site manager is responsible for the technical and economic activities taking place on the building site and, if necessary, for occupational safety. They manage construction work, conduct meetings (with subcontractors, suppliers, clients and designers) and examine whether the work has been performed according to the design documentation and building codes. For a construction site manager, management skills are essential in addition to construction-related skills and knowledge.

The occupation of construction site manager comprises five specialisations:
1) General construction
2) Construction of indoor climate control systems
3) Construction of water supply and sewerage systems within buildings or belonging to them
4) Construction of public water supply or sewerage
5) Performance of owner's supervision

When specialising in general construction, construction of indoor climate control systems and owner's supervision, either full specialisation or at least one of the following more specific fields (elective competences) can be selected, depending on work experience:
1. General construction
- construction of stone and concrete structures
- construction of wooden structures
- construction of steel structures
- performance of demolition work
- performance of façade work

2. Construction of indoor climate control systems
- construction of heating systems
- construction of cooling systems
- construction of ventilation systems
3. Performance of owner's supervision
- performance of owner's supervision in general construction
- performance of owner's supervision in the construction of indoor climate control systems
- performance of owner's supervision in the construction of water supply and sewerage systems within buildings or belonging to them

The occupational qualification of Construction Site Manager, Level 6 entitles the bearer, on a statutory basis, to act as a competent person in terms of the Building Code.
The bearer of this occupational qualification certificate may lead construction operations independently and at their own risk within the limits described as follows:
I CONSTRUCTION OF STONE AND CONCRETE STRUCTURES
II CONSTRUCTION OF WOODEN STRUCTURES
III CONSTRUCTION OF STEEL STRUCTURES
IV PERFORMANCE OF DEMOLITION WORK
V PERFORMANCE OF FAÇADE WORK
a) Construction and performance of demolition and façade work on buildings and their structures up to 45 m above the ground and up to 8 m below the ground, bearing in mind the following span restrictions:
- monolithic concrete constructions – up to 18 m
- prefabricated concrete constructions – up to 25 m;
- stone constructions;
- steel constructions – up to 36 m;
- wooden constructions – up to 18 m;
- composite constructions – up to 18 m.
b) Buildings of geotechnical categories 1 and 2.
c) Roads within plots of land, sites and transport facilities which are not open to the public and are situated in uncomplicated geotechnical conditions.

VI CONSTRUCTION OF INDOOR CLIMATE CONTROL SYSTEMS
a) Residential buildings (code 11000[1])
b) Buildings (not residential buildings[2]) without special requirements which are up to 45 m high, have heated floors and an area of up to 10,000 m^2, with the exception of:
- buildings or rooms with higher indoor climate requirements (air purity, temperature, noise, and moisture) such as museums, hospitals and cleanrooms
- production facilities with specific requirements of their indoor climate
- high-rise buildings
- water parks and swimming pools
- research and scientific laboratories
- tunnels and underground constructions
- buildings subject to a high fire risk

VII CONSTRUCTION OF WATER SUPPLY AND SEWERAGE SYSTEMS WITHIN BUILDINGS OR BELONGING TO THEM
Indoor water supply and sewerage systems and accompanying piping and equipment up to the connection point (including individual wastewater treatment, pumping stations on the property and bore well pumping stations with a project-specific output of less than 10 m^3 per 24 hours for one immovable or up to 50 people) with the following restrictions:
a) Residential buildings (code 11000[1])
b) All buildings with a heatable area up to 10 000 m^2, with the exception of
- buildings that are divided into two or more water pressure zones due to their architectural features
- water parks and swimming pools
- research and scientific laboratories
- tunnels and underground constructions
- buildings subject to a high fire risk

VIII CONSTRUCTION OF PUBLIC WATER SUPPLY OR SEWERAGE
a) Public water supply systems with an internal pipeline diameter not exceeding 300 mm
b) Public sewerage systems with an internal pipeline diameter not exceeding 1000 mm
c) Wastewater treatment plants with a load capacity of 5000 p.e. not located in a weakly protected or unprotected groundwater area
d) Water plants with output of up to 2500 m^3/d

V PERFORMING OWNER'S SUPERVISION
The qualification entitles the bearer to perform owner's supervision in general construction, the construction of indoor climate control systems, the construction of water supply and sewerage systems within buildings or belonging to them and the construction of accompanying plumbing and equipment up to the connection point on the following sites:
1) Buildings (except for those with an underground car park) with an area of up to 1000 m^2 which, according to the purpose of use of the building (codes 11100, 11210 and 11220)[1]
2) and consequence class CC1 (EVS-EN 1990:2002+NA:2002), are classed as other buildings

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[1] Regulation no. 51 of the Minister of Economic Affairs and Communications of 2 June 2015, 'List of purposes of use of buildings'

A.2 Tasks

A.2.1 Compiling tenders
1. Examination of procurement documentation
2. Inquiring about quotes for materials, equipment and subcontracting
3. Drawing up a schedule for construction work
4. Calculating the cost price of construction work
5. Determining general and personalised expenses and preparing calculations
6. Drawing up a financial plan for construction work
7. Compiling and submitting tenders

A.2.2 Preparation and planning of construction work
1. Entering into a management contract
2. Drawing up procurements and a schedule for construction
3. Defining the organisational chart of the project
4. Preparing and entering into subcontracting contracts
5. Ordering a work project
6. Obtaining the permits required for construction
7. Drawing up an organisational chart for the building site

A.2.3 Resource management
1. Planning material requirements
2. Calculating workload and working hours
3. Planning the work of building mechanisms and means of transport
4. Planning the general costs of the building site
5. Comparing actual construction costs with the financial plan

A.2.4 Leading, organising and coordinating construction work on the building site in compliance with the schedule
1. Managing the required design documentation
2. Demarcation of construction dimensions and allocation of bench marks
3. Leading work meetings
4. Documenting of construction work according to requirements
5. Coordinating and conducting additional work and modifications

A.2.5 Organisation of safe work during construction
1. Recognising and defining the main hazards on the building site
2. Ensuring accordance with the requirements of occupational health and safety
3. Ensuring the environmental safety and general maintenance of the building site

4. Taking control in emergencies (occupational accident, breakdowns, fires, degradation of structures, etc.) A.2.6 Ensuring quality during construction 1. Planning checks to ensure the high quality of construction work 2. Ensuring that construction work is in compliance with quality requirements 3. Conducting inspections of work covered and elements of the building A.2.7 Transfer of construction work and adoption of structure for use 1. Planning and managing the transfer and acceptance of the building 2. Assembling the execution documentation for the building 3. Conducting a final inspection of construction work, including technical systems 4. Conducting the necessary user training for the managing agent of the structure 5. Conducting warranty period procedures A.2.8. Energy-efficient construction
Specialised areas of work
Specialisation is according to the field of construction, in either general construction, construction of climate control systems, construction of water supply and sewerage systems within buildings or belonging to them, construction of public water supply and sewerage or performance of owner's supervision. The mandatory areas of work and elective competences described in the occupational qualification standard are directly related to the specialisation.
Elective areas of work
A.2.9 Construction of stone and concrete structures 1. Conducting work based on construction technology 2. Quality assurance of construction work 3. Fulfilling occupational and environmental safety requirements related to the construction of stone and concrete structures A.2.10 Construction of wooden structures 1. Conducting work based on construction technology 2. Quality assurance of construction work 3. Fulfilling occupational and environmental safety requirements related to the construction of wooden structures A.2.11 Construction of steel structures 1. Conducting work based on construction technology 2. Quality assurance of construction work 3. Fulfilling occupational and environmental safety requirements related to the construction of steel structures A.2.12 Performance of demolition work 1. Drawing up a risk analysis of the building to be demolished 2. Performing demolition work based on technology 3. Fulfilling occupational and environmental safety requirements related to demolition work A.2.13 Performance of façade work 1. Conducting work based on construction technology 2. Quality assurance of construction work 3. Fulfilling occupational and environmental safety requirements related to the construction of façades A.2.14 Construction of heating systems 1. Conducting work based on construction technology 2. Quality assurance of construction work 3. Fulfilling occupational and environmental safety requirements related to the construction of heating systems A.2.15 Construction of cooling systems 1. Conducting work based on construction technology

2. Quality assurance of construction work
3. Fulfilling occupational and environmental safety requirements related to the construction of cooling systems

A.2.16 Construction of ventilation systems
1. Conducting work based on construction technology
2. Quality assurance of construction work
3. Fulfilling occupational and environmental safety requirements related to the construction of ventilation systems

A.2.17 Construction of water supply and sewerage systems within buildings or belonging to them
1. Conducting work based on construction technology
2. Quality assurance of construction work
3. Fulfilling occupational and environmental safety requirements related to the construction of water supply and sewerage systems within buildings or belonging to them

A.2.18 Construction of public water supply or sewerage
1. Conducting work based on construction technology
2. Quality assurance of construction work
3. Fulfilling occupational and environmental safety requirements related to the construction of public water supply and sewerage

A.2.19 Performance of owner's supervision in general construction
1. Drawing up a supervision programme
2. Checking the integrity of the construction project
3. Checking geodetic work related to the demarcation of the structure
4. Verifying the actual conditions of foundation design
5. Verifying the compliance of construction work
6. Verifying that the requirements of the technical construction documents are fulfilled in a timely manner
7. Inspecting work covered
8. Preparing records of construction work
9. Participation in the transfer and acceptance of the building
10. Verifying that environmental safety requirements are being met
11. Verifying that occupational safety requirements are being met

A.2.20 Performance of owner's supervision in the construction of indoor climate control systems
1. Drawing up a supervision programme
2. Checking the integrity of the construction project
3. Checking geodetic work related to the demarcation of the structure
4. Verifying the compliance of construction work
5. Verifying that the requirements of the technical construction documents of heating, ventilation and cooling systems are fulfilled in a timely manner
6. Inspecting work covered
7. Preparing records of construction work
8. Participation in the transfer and acceptance of the building
9. Verifying that environmental safety requirements are being met
10. Verifying that occupational safety requirements are being met

A.2.21 Performance of owner's supervision in the construction of water supply and sewerage systems within buildings or belonging to them
1. Drawing up a supervision programme
2. Checking the integrity of the construction project
3. Checking geodetic work related to the demarcation of the structure
4. Verifying the compliance of construction work
5. Verifying that the requirements of the technical construction documents of water supply and sewerage systems are fulfilled in a timely manner
6. Inspecting work covered
7. Preparing records of construction work
8. Participation in the transfer and acceptance of the building

9. Verifying that environmental safety requirements are being met 10. Verifying that occupational safety requirements are being met
A.3 Work environment and specific nature of work
The main work of a construction site manager is carried out on the building site and in the office. Working hours are flexible: the general rule is a five-day working week, but in some cases it is necessary to work on weekends as well. The work may be intense depending on construction technology needs, seasonality or the work schedule. Depending on the building site, the construction site manager may have to work at heights or in pits. There are higher risks involved in working on site, which is why it is crucial for the construction manager to follow environmental and occupational health and safety requirements.
A.4 Tools
A construction site manager uses office equipment in their work (computers, communication devices, etc.) and the appropriate measuring technology for the initial verification of compliance with requirements.
A.5 Personal qualities required for work: abilities and characteristics
A construction site manager must be able to make decisions independently as well as lead a team and work in a team. They must have high stress tolerance, good communication skills and the ability to assert themselves. Analytical skills, initiative and skills in both oral and written self-expression are also needed for the job. A construction site manager must also have a sense of duty and correctness.
A.6 Professional preparation
Construction Site Manager, Level 6 has acquired higher education in construction or other technical fields or vocational secondary education in structural engineering (Tallinn Technical School for Building and Mechanics), has completed in-service training and has practical work experience that is in accordance with the prerequisites of the occupation.
A.7 Most common occupational titles
Site manager, project manager
A.8 Regulations governing profession
Building Code and its relevant implementing acts Other professional standards, guidelines and norms

Part B
COMPETENCY REQUIREMENTS

B.1 Structure of occupation
The occupational qualification standard of Construction Site Manager, EstQF Level 6 consists of eight mandatory competences (B.2.1-B.2.8), 14 specialised elective competences (B.2.9-B.2.21) and six recurring competences (B.2.22-B.2.27). The occupational qualification of Construction Site Manager is specialisation-based. In order to obtain the qualification, at least one elective competence must be chosen in accordance with the specialisation. Competences are assessed according to the specialisation and elective competence(s). In addition, the applicant must certify all recurring competences.

B.2 Competences

MANDATORY COMPETENCES

B.2.1 Compiling tenders	**EstQF Level 6**
Performance indicators: 1. Examines the documentation submitted by the tendering authority, seeking clarification where necessary. 2. Draws up a subcontracting plan and tender documents. Submits price inquiries to potential subcontractors. 3. Compiles a schedule for construction work based on their technological processes.	

4. Calculates the cost price of construction, taking into account the cost of work that can be done without outside help and quotes from potential subcontractors. 5. Calculates general and personalised expenses of construction, taking into account, among other things, seasonality, location and duration. 6. Prepares a financial plan for construction work based on the estimated cost of construction, general and personalised cost calculations and time and payment schedules and taking into account the need for self-financing and the conditions presented in the procurement documentation. 7. Draws up and submits tenders to tendering authorities, taking into account the requirements set out in the procurement documentation, the economic situation of the company and the current market situation.
Knowledge: 1) principal construction materials and their qualities; 2) principal construction technologies; 3) general terms and concepts of construction; 4) building norms, standards and guidelines; 5) building structures; 6) technological sequence of construction work; 7) construction drawing and reading construction drawings; 8) legislation and regulations covering the field of construction; 9) construction economics; 10) construction surveying; 11) basics of engineering geology; 12) best practice in construction; 13) occupational and environmental safety requirements in construction; 14) execution documentation in construction.
B.2.2 Preparation and planning of construction work **EstQF Level 6**
Performance indicators: 1. Negotiates with the client and enters into a management contract. 2. Draws up a schedule for procurements and construction work, taking into consideration the conditions of the contract and the construction technology selected. 3. Assembles the team required for performing work and their own labour and selects the required subcontracting. Assigns tasks and responsibilities to the management team on the site (creates a responsibility assignment matrix). 4. Specifies quotes, holds negotiations and selects and enters into subcontracting contracts. 5. Where necessary, orders work projects for construction. 6. Obtains the permits needed for fulfilling the construction contract from the appropriate institutions (digging permits, felling licences, permits for closing down streets, etc.) 7. Where necessary, draws up an organisational chart for the building site.
Knowledge: 1) general terms and concepts of construction; 2) building norms, standards and guidelines; 3) technological sequence of construction work; 4) construction drawing and reading construction drawings; 5) legislation and regulations covering the field of construction; 6) construction economics; 7) best practice in construction; 8) occupational and environmental safety requirements in construction; 9) execution documentation in construction.
B.2.3 Resource management **EstQF Level 6**
Performance indicators: 1. Plans material requirements and orders the required materials, taking into account the construction schedule and delivery time. Controls the use of materials during construction. 2. Plans the workload of construction and assembles the necessary labour force accordingly, taking into account the work schedule. Assigns the necessary orders and tasks. Ensures the optimal implementation of labour. 3. Plans the need for machinery and means of transport needed for construction work and orders them, taking into account the work schedule.

4. Plans the general costs of the construction site (administration and maintenance costs, temporary structures and fencing, surveillance systems, etc.) and orders relevant services. Controls the general costs of the site during construction. Compares and analyses actual construction costs against the predetermined financial plan during construction.	
Knowledge: 1) building norms, standards and guidelines; 2) technological sequence of construction work; 3) construction economics; 4) awareness of best practice in construction; 5) occupational and environmental safety requirements in construction; 6) execution documentation in construction.	
B.2.4 Leading, organising and coordinating construction work on the building site in compliance with the schedule	**EstQF Level 6**
Performance indicators: 1. Ensures the existence of valid and sufficiently detailed project documentation. 2. Determines and lays down all dimensions and locations needed for construction (except for geodetic work). 3. Prepares, leads and documents work meetings. 4. Ensures that construction work is being documented in accordance with valid legislation. 5. Performs the assessment, coordination, management and documentation of necessary additional work and modifications.	
Knowledge: 1) general terms and concepts of construction; 2) building norms, standards and guidelines; 3) building structures; 4) technological sequence of construction work; 5) construction drawing and reading construction drawings; 6) legislation and regulations covering the field of construction; 7) construction economics; 8) construction surveying; 9) basics of engineering geology; 10) awareness of best practice in construction; 11) occupational and environmental safety requirements in construction; 12) execution documentation in construction.	
B.2.5 Organisation of safe work during construction	**EstQF Level 6**
Performance indicators: 1. Draws up a risk analysis of the building site and an action plan for risk management. 2. Ensures that occupational health and safety requirements are being met on site, taking into account valid legislation. 3. Ensures the maintenance of the building site. Ensures environmental safety on the building site, taking into account valid legislation. 4. Takes control of emergencies occurring on the construction site, responding according to the situation and within the limits of their authorisation.	
Knowledge: 1) principal construction materials and their qualities; 2) principal construction technologies; 3) general terms and concepts of construction; 4) building norms, standards and guidelines; 5) building structures; 6) technological sequence of construction work; 7) construction drawing and reading construction drawings; 8) legislation and regulations covering the field of construction; 9) awareness of best practice in construction; 10) occupational and environmental safety requirements in construction.	

B.2.6 Ensuring quality during construction	EstQF Level 6
Performance indicators: 1. Draws up a quality plan for construction in accordance with the requirements set out in the contract and project documentation. 2. Verifies quality of construction work, taking into account the quality plan and project documentation. 3. Organises an inspection of work to be covered and parts of the structure (getting competent experts involved, where necessary) and documents this in accordance with valid legislation.	
Knowledge: 1) principal construction materials and their qualities; 2) principal construction technologies; 3) general terms and concepts of construction; 4) building norms, standards and guidelines; 5) building structures; 6) technological sequence of construction work; 7) construction drawing and reading construction drawings; 8) legislation and regulations covering the field of construction; 9) awareness of best practice in construction; 10) occupational and environmental safety requirements in construction; 11) execution documentation in construction.	
B.2.7 Transfer of construction work and adoption of structure for use	**EstQF Level 6**
Performance indicators: 1. Where necessary, draws up a plan for the transfer and acceptance of the site or follows an existing plan. Organises activities related to the transfer and acceptance of the site according to the plan. 2. Ensures the completion of the documentation required for transfer and acceptance. Assembles the execution documentation set out in the contract (construction logs, as-built drawings, acts of work to be covered, surveying protocols, pressurisation test reports, etc.). 3. Arranges for the final inspection of the site's equipment and technical systems based on the transfer and acceptance plan. 4. Arranges for user training on the structure and technical systems for the structure's managing agent in accordance with the contract. Passes on user manuals and maintenance files. 5. Organises the periodic inspections set out in the contract, formalises acts and plans activities for the warranty period. In the event that construction errors emerge, arranges for their assessment and elimination.	
Knowledge: 1) general terms and concepts of construction; 2) building norms, standards and guidelines; 3) technological sequence of construction work; 4) construction drawing and reading construction drawings; 5) legislation and regulations covering the field of construction; 6) construction economics; 7) awareness of best practice in construction; 8) occupational and environmental safety requirements in construction; 9) execution documentation in construction.	
B.2.8 Energy-efficient construction	**EstQF Level 5**
Performance indicators: 1. Before starting work on the construction site, draws up a work execution project, bearing in mind energy efficiency principles (electricity, water, waste management costs during construction, etc.). 2. If possible, applies energy-efficient technologies in construction management. 3. Where necessary, gets competent experts involved to assess compliance with energy efficiency requirements. 4. Ensures that the following technology and quality requirements are being met: - the indoor climate being in accordance with the technological requirements of construction - the quality requirements affecting the energy efficiency of the building envelope - the technical parameters of the building's technical systems (ventilation, heating, water, sewerage and cooling) being in accordance with project documentation and the energy-efficient interaction of technical systems.	

5. Assesses the estimated cost of construction work designed to improve the energy efficiency of the building.
Knowledge: 1) general concepts of energy efficiency and their meanings; 2) factors affecting energy efficiency; 3) main energy sources in Estonia (including sources of renewable energy); 4) requirements regarding the total specific heat loss of the building envelope of small residential buildings applicable in relation to proving compliance with the limit value of the energy performance indicator in accordance with the simplified method; 5) quality requirements of construction and their effects on energy efficiency; 6) factors affecting the thermal conductivity of the building envelope and energy consumption of a building (including qualities of construction materials and products); 7) various technical systems and the effect their choice has on the energy efficiency of a building; 8) options for improving the energy efficiency of buildings; 9) the impact of working culture on energy costs in construction; 10) planning and organising employees' activities and other resources; 11) the impact of weather conditions on building envelopes; 12) the impact of behaviour on energy costs in the use of buildings.
Kompetents on välja töötatud Buildest projekti raames.

OPTIONAL COMPETENCES

In order to obtain the qualification, at least one elective competence (B.2.9 – B.2.22) must be chosen in accordance with the specialisation. Competences are assessed according to the specialisation and elective competence(s).

B.2.9 Construction of stone and concrete structures	**EstQF Level 6**
Performance indicators: 1. Manages operations related to the construction of stone and concrete structures, taking into account the technological sequence of processes and project documentation. 2. Ensures the high quality of construction work, taking into account best practice in construction and the requirements set out in the project documentation and best practice in construction. 3. Ensures compliance with occupational and environmental safety requirements in construction.	
Knowledge: 1) construction materials and their qualities; 2) construction physics; 3) construction machinery and equipment; 4) materials used in stone structures (natural stones, artificial stones, etc.); 5) types of stone structures and their characteristics; 6) technologies used in constructing stone structures; 7) materials used in reinforced concrete structures (prefabricated reinforced concrete elements or monolithic concrete), reinforcement and partition walls; 8) types of concrete structures and their characteristics; 9) technologies used in constructing concrete structures, technological devices (formworks etc.). 10) types of soil and construction technologies used depending on their characteristics; 11) various foundations (individual, slab, pile, strip, etc.), retaining walls and sheet-pile walls; 12) embankments in soil, soil dams and earthwork; 13) bridge girders; 14) ground anchors and other fastening systems.	
B.2.10 Construction of wooden structures	**EstQF Level 6**
Performance indicators: 1. Manages operations related to the construction of wooden structures, taking into account the technological sequence of processes and project documentation. 2. Ensures the high quality of construction work, taking into account best practice in construction and the requirements set out in the project documentation and best practice in construction.	

3. Ensures compliance with occupational and environmental safety requirements in construction.	
Knowledge: 1) construction materials and their qualities; 2) construction physics; 3) construction machinery and equipment; 4) materials used in wooden structures (qualities of wood, wood classification, etc.); 5) wood joints; 6) types of wooden structures (industrial structures etc.) and their characteristics; 7) technologies used in constructing wooden structures; 8) types of soil and construction technologies used depending on their characteristics; 9) various foundations (individual, slab, pile, strip, etc.), retaining walls and sheet-pile walls; 10) bridge girders.	
B.2.11 Construction of steel structures	**EstQF Level 6**
Performance indicators: 1. Manages operations related to the construction of steel structures, taking into account the technological sequence of processes and project documentation. 2. Ensures the high quality of construction work, taking into account best practice in construction and the requirements set out in the project documentation and best practice in construction. 3. Ensures compliance with occupational and environmental safety requirements in construction.	
Knowledge: 1) construction materials and their qualities; 2) construction physics; 3) construction machinery and equipment; 4) materials used in steel structures; 5) types of steel structures and their characteristics; 6) technologies used in constructing steel structures; 7) types of soil and construction technologies used depending on their characteristics; 8) various foundations (individual, slab, pile, strip, etc.), retaining walls and sheet-pile walls; 9) bridge girders.	
B.2.12 Performance of demolition work	**EstQF Level 6**
Performance indicators: 1. Draws up a risk analysis of the structure to be demolished. 2. Chooses the appropriate technology and performs the demolition work according to requirements, taking into account project documentation, building codes and best practice in construction. 3. Ensures compliance with occupational and environmental safety requirements in demolition work.	
Knowledge: 1) construction materials and their qualities; 2) construction machinery and equipment; 3) demolition technologies related to various structures: - concrete structures - metal structures - stone structures - wooden structures; 4) types of soil and demolition technologies used depending on their characteristics; 5) retaining walls and sheet-pile walls; 6) embankments in soil and earthwork.	
B.2.13 Performance of facade work	**EstQF Level 6**
Performance indicators: 1. Manages operations related to the performance of façade work, taking into account the technological sequence of processes and project documentation. 2. Ensures the high quality of work, taking into account best practice in construction and the requirements set out in the project documentation and best practice in construction.	

3. Ensures compliance with occupational and environmental safety requirements in façade work.	
Knowledge: 1) construction materials and their qualities; 2) construction physics; 3) construction machinery and equipment; 4) façade work on various load-bearing structures: - metal structures - wooden structures; 5) materials used in wooden structures (qualities of wood, wood classification, etc.); 6) technologies used in constructing wooden load-bearing structures; 7) materials used in metal load-bearing structures; 8) types of metal load-bearing structures and their characteristics; 9) technologies used in constructing metal load-bearing structures.	
B.2.14 Construction of heating systems	**EstQF Level 6**
Performance indicators: 1. Manages operations related to the construction of heating systems, taking into account the technological sequence of processes and project documentation. 2. Ensures the high quality of construction work, taking into account best practice in construction and the requirements set out in the project documentation and best practice in construction. 3. Ensures compliance with occupational and environmental safety requirements in construction.	
Knowledge: 1) various heating systems and their operating principles; 2) various heaters and their installation requirements; 3) devices used in modern heating systems, pipe materials and their fasteners; 4) construction technologies used in the construction of heating systems.	
B.2.15 Construction of cooling systems	**EstQF Level 6**
Performance indicators: 1. Manages operations related to the construction of cooling systems, taking into account the technological sequence of processes and project documentation. 2. Ensures the high quality of construction work, taking into account best practice in construction and the requirements set out in the project documentation and best practice in construction. 3. Ensures compliance with occupational and environmental safety requirements in construction.	
Knowledge: 1) indoor climate of buildings; 2) various cooling system solutions; 3) materials used in the construction of cooling systems (metal, plastic and other pipes, insulation materials, etc.); 4) devices used in the construction of cooling systems (compressors, pumps, tanks, heat exchangers, etc.); 5) construction technologies used in the construction of cooling systems; 6) basics of hydrotechnical engineering; 7) basics of aerodynamics.	
B.2.16 Construction of ventilation systems	**EstQF Level 6**
Performance indicators: 1. Manages operations related to the construction of ventilation systems, taking into account the technological sequence of processes and project documentation. 2. Ensures the high quality of construction work, taking into account best practice in construction and the requirements set out in the project documentation and best practice in construction. 3. Ensures compliance with occupational and environmental safety requirements in construction.	
Knowledge: 1) various ventilation solutions; 2) modern ventilation systems and the devices used in them, materials of ducts and their fasteners; 3) basics of aerodynamics; 4) construction technologies used in the construction of ventilation systems.	

B.2.17 Construction of water supply and sewerage systems within buildings or belonging to them	EstQF Level 6
Performance indicators: 1. Manages operations related to the construction of water supply and sewerage systems within buildings or belonging to them, taking into account the technological sequence of processes and project documentation. 2. Ensures the high quality of construction work, taking into account best practice in construction and the requirements set out in the project documentation and best practice in construction. 3. Ensures compliance with occupational and environmental safety requirements in construction.	
Knowledge: 1) water and sewerage systems and their operating principles; 2) modern materials of water and sewerage piping and their fasteners; 3) operating principles of the main sanitary appliances; 4) devices used in the construction of water supply and sewerage systems (pumps, tanks, etc.); 5) construction technologies used in the construction of water supply and sewerage systems. 6) construction materials used in the construction of external water supplies and sewerage systems (metal, plastic and other pipes, insulation materials, etc.) and their qualities; 7) basics of geophysics; 8) basics of hydrotechnical engineering; 9) construction machinery and equipment; 10) construction technologies used in the field of technical facility construction: - concrete structures; - metal structures; - pumping stations - pumps and tanks.	
B.2.18 Construction of public water supply or sewerage	**EstQF Level 6**
Performance indicators: 1. Manages operations related to the construction of public water supply and sewerage, taking into account the technological sequence of processes and project documentation. 2. Ensures the high quality of construction work, taking into account best practice in construction and the requirements set out in the project documentation and best practice in construction. 3. Ensures compliance with occupational and environmental safety requirements in construction.	
Knowledge: 1) water and sewerage systems and their operating principles; 2) modern materials of water and sewerage piping and their fasteners; 3) devices used in the construction of water supply and sewerage systems (pumps, tanks, etc.); 4) construction technologies used in the construction of water supply and sewerage systems; 5) construction materials used in the construction of public water supplies and sewerage systems (metal, plastic and other pipes, insulation materials, etc.), their qualities; 6) basics of geophysics; 7) basics of hydrotechnical engineering; 8) construction machinery and equipment; 9) construction technologies used in the field of technical facility construction: - concrete structures; - metal structures; - pumping stations - pumps and tanks.	
B.2.19 Performance of owner's supervision in general construction	**EstQF Level 6**
Performance indicators: 1. Draws up a programme of supervision procedures in order to fulfil their tasks. 2. Ensures that the construction project is in accordance with requirements so as to guarantee the integrity of the project and compliance with the building code. 3. Ensures that geodetic work related to the demarcation of the structure has been performed by a competent expert. Ensures that the project complies with the geodetic survey report.	

4. Compares the actual conditions of foundation design with the soil data or data from the geotechnical research upon which the design project was based. 5. Ensures that the building and its parts are in accordance with the construction project and the requirements and quality agreed upon by the building contractor and owner of the building. Ensures that the construction products being permanently installed in the building, including devices, are in accordance with the construction project, on the basis of the documents submitted. Where necessary, makes proposals for performing additional measurements, testing and expert analyses according to quality assessments and, based on the data obtained, oversees the fulfilment of the decisions taken. 6. Ensures the existence of documentation pertaining to the construction products being used. Based on the documents submitted, ensures that the construction products and devices being permanently installed in the building are in accordance with the construction project. 7. Ensures that covered work is in accordance with the construction project and building codes and authorises subsequent work. Ensures that covered work is being documented according to requirements. 8. Participates in the transfer and acceptance of the building or its parts as the representative of the owner. Ensures that the volume of work recorded by the contractor is in accordance with the actual volume of work. 9. Participates in the transfer and acceptance of the building, verifying that all required execution documentation has been prepared and whether the data presented therein are correct and in accordance with requirements. 10. Verifies that environmental safety requirements are being met on the building site. 11. Makes notes of any instances of non-compliance with occupational safety requirements that are discovered. Notifies the Technical Regulatory Authority about a breakdown or accident occurring during construction as a result of the building or construction work not being in accordance with requirements, in the event that it has caused or may cause injuries or material damage and if it has not already been reported by the contractor or owner of the building.
Knowledge: 1) requirements for the documenting of structures; 2) legislative acts regulating the performance of owner's supervision; 3) principal construction materials and their qualities; 4) principal construction technologies; 5) building norms, standards and guidelines; 6) building structures; 7) technological sequence of construction work; 8) construction surveying; 9) best practice in construction; 10) occupational and environmental safety requirements in construction; 11) execution documentation in construction.
B.2.20 Performance of owner's supervision in the construction of indoor climate control systems **EstQF Level 6**
Performance indicators: 1. Draws up a programme of supervision procedures in order to fulfil their tasks. 2. Ensures that the construction project is in accordance with requirements so as to guarantee the integrity of the project and compliance with the building code. 3. Ensures that geodetic work related to the demarcation of the structure has been performed by a competent expert. Ensures that the project complies with the geodetic survey report. 4. Ensures that the building and its parts are in accordance with the construction project and the requirements and quality agreed upon by the building contractor and owner of the building. Where necessary, makes proposals for performing additional measurements, testing and expert analyses according to quality assessments and, based on the data obtained, oversees the fulfilment of the decisions taken. 5. Ensures the existence of documentation pertaining to the construction products being used. Based on the documents submitted, ensures that the construction products and devices being permanently installed in the building are in accordance with the construction project. 6. Ensures that covered work is in accordance with the construction project and building codes and authorises subsequent work. Ensures that covered work is being documented according to requirements. 7. Participates in the transfer and acceptance of the building or its parts as the representative of the owner. Ensures that the volume of work recorded by the contractor is in accordance with the actual volume of work. 8. Participates in the transfer and acceptance of the building, verifying that all required execution documentation has been prepared and whether the data presented therein are correct and in accordance with requirements.

9. Verifies that environmental safety requirements are being met on the building site. 10. Makes notes of any instances of non-compliance with occupational safety requirements that are discovered. Notifies the Technical Regulatory Authority about a breakdown or accident occurring during construction as a result of the building or construction work not being in accordance with requirements, in the event that it has caused or may cause injuries or material damage and if it has not already been reported by the contractor or owner of the building.
Knowledge: 1) requirements for the documenting of structures; 2) legislative acts regulating the performance of owner's supervision; 3) various heating systems and their operating principles; 4) various heaters and their installation requirements; 5) various ventilation solutions; 6) modern devices used in heating and ventilation systems, materials of piping and ducts and their fasteners; 7) indoor climate of buildings; 8) basics of hydrotechnical engineering; 9) basics of aerodynamics; 10) operating principles of devices and systems used in technical facility construction; 11) construction machinery and equipment; 12) construction technologies used in the field of technical facility construction: 13) concrete structures; 14) metal structures; 15) culverts, conduits, tunnel collectors and pumping stations.
B.2.21 Performance of owner's supervision in the construction of water supply and sewerage systems within buildings or belonging to them **EstQF Level 6**
Performance indicators: 1. Draws up a programme of supervision procedures in order to fulfil their tasks. 2. Ensures that the construction project is in accordance with requirements so as to guarantee the integrity of the project and compliance with the building code. 3. Ensures that geodetic work related to the demarcation of the structure has been performed by a competent expert. Ensures that the project complies with the geodetic survey report. 4. Ensures that the building and its parts are in accordance with the construction project and the requirements and quality agreed upon by the building contractor and owner of the building. Where necessary, makes proposals for performing additional measurements, testing and expert analyses according to quality assessments and, based on the data obtained, oversees the fulfilment of the decisions taken. 5. Ensures the existence of documentation pertaining to the construction products being used. Based on the documents submitted, ensures that the construction products and devices being permanently installed in the building are in accordance with the construction project. 6. Ensures that covered work is in accordance with the construction project and building codes and authorises subsequent work. Ensures that covered work is being documented according to requirements. 7. Participates in the transfer and acceptance of the building or its parts as the representative of the owner. Ensures that the volume of work recorded by the contractor is in accordance with the actual volume of work. 8. Participates in the transfer and acceptance of the building, verifying that all required execution documentation has been prepared and whether the data presented therein are correct and in accordance with requirements. 9. Verifies that environmental safety requirements are being met on the building site. 10. Makes notes of any instances of non-compliance with occupational safety requirements that are discovered. Notifies the Technical Regulatory Authority about a breakdown or accident occurring during construction as a result of the building or construction work not being in accordance with requirements, in the event that it has caused or may cause injuries or material damage and if it has not already been reported by the contractor or owner of the building.
Knowledge: 1) requirements for the documenting of structures; 2) legislative acts regulating the performance of owner's supervision; 3) construction materials used in the construction of external water supplies and sewerage systems (metal, plastic and other pipes, insulation materials, etc.) and their qualities; 4) basics of geophysics; 5) basics of hydrotechnical engineering; 6) operating principles of devices and systems used in public water supply;

7) construction machinery and equipment; 8) construction technologies used in the field of technical facility construction: 9) concrete structures; 10) metal structures; 11) culverts, conduits, tunnel collectors and pumping stations. 12) pumps and tanks; 13) water and sewerage systems and their operating principles; 14) modern materials of water and sewerage piping and their fasteners; 15) operating principles of the main sanitary appliances; 16) devices used in the construction of water supply and sewerage systems (pumps, tanks, etc.); 17) construction technologies used in the construction of water supply and sewerage systems.

RECURRING COMPETENCES

B.2.22 Following the principles of professional ethics	**EstQF Level 6**
Performance indicators: 1. Is guided in their activities by best practice in construction. 2. Knows and accepts the best practice that forms the basis of the behaviour of partners. 3. Focuses on the satisfaction of the client and end user. 4. Considers ethical beliefs and values important and is consistent in word and deed. Displays initiative, a sense of responsibility and management and team work skills.	
B.2.23 Participation in team work	**EstQF Level 6**
Performance indicators: 1. Is capable of working in a multidisciplinary and international team and of adjusting their communication style to different situations and people. 2. Is capable of showing initiative and performs their duties with confidence. 3. Understands their role in the team, is capable of operatively assessing situations and conflicts as they arise and of responding adequately, taking an understanding approach to criticism.	
B.2.24 Self-development and participation in lifelong learning	**EstQF Level 6**
Performance indicators: 1. Uses their field-specific knowledge to handle work tasks and develops their competence though continuous professional development, making use of the development and training opportunities offered to them. 2. Is aware of technological developments in the construction sector and society as a whole and is committed to innovative and creative self-improvement.	
B.2.25 Following the principles of environmentally friendly work	**EstQF Level 6**
Performance indicators: 1. Understands why it is necessary to follow environmentally friendly working principles in their field and follows them. 2. Understands the possibilities and necessity of saving energy and resources and acts accordingly. 3. Understands the impact of their activities on the surrounding environment.	
B.2.26 Language skills	**EstQF Level 6**
1. Words ideas related to the performance of their duties in Estonian that is terminologically correct (required level: B2). 2. Communicates professionally in one foreign language (recommended level: B1). See Annex 1 Language skills level descriptions.	
B.2.27 Computer skills and general digital competence	**EstQF Level 6**
1. Uses a computer on a daily basis at the Independent user level in the following areas: information-processing, communication, security and problem-solving. 2. Uses a computer on a daily basis at the Basic user level in the area of content creation. 3. Is capable of using field-specific software programmes to the extent required and of using modern technological tools and applications (e.g. smart devices). See Annex 2 Scale of self-assessment in digital competence.	

Part C
GENERAL INFORMATION AND ANNEXES

C.1 Information concerning compilation and certification of occupational qualification standard and reference to classification of occupations	
1. ID of occupational qualification standard in register of occupational qualifications	22-15092019-01/11k
2. Occupational qualification standard compiled by:	Indrek Peterson, Eesti Ehitusettevõtjate Liit Enn Tammaru, Tallinna Tehnikakõrgkool Meelis Kann, AS Nordecon Enno Põder, Merko Ehitus Eesti AS Ago Rehand, OÜ Viljandi Õhumeister
3. Occupational qualification standard approved by:	Architecture, Geomatics, Construction and Real Estate
4. No. of decision of Sectoral Council	25
5. Date of decision of Sectoral Council	15.09.2019
6. Occupational qualification standard valid until	07.02.2024
7. Occupational qualification standard version no.	11
8. Reference to International Standard Classification of Occupations (ISCO 08)	3123 Construction Supervisors
9. Reference to European Qualifications Framework (EQF)	6
C.2 Occupational title in foreign language	
English:	Construction Site Manager, EstQF Level 6
C.3 Annexes	
Lisa 1 Language skills level descriptions	
Lisa 2 Scale of self-assessment in digital competence	