

**TALO**

**2000**

# **Construction 2000 Classification**

## **Project Classification**

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# Building 2000 Project Classification

The Building 2000 Project Classification covers building elements, building services elements, structural parts of the former two, as well as project, property management and user tasks. In project estimating and accounting related to new construction or renovation, as well as in price setting, the classification also covers project provisions.

Building elements are designed according to the Production Classification. For that purpose, building elements are divided into structural parts whenever several types of production work are required to produce a single building element. A structural element comprises one or more building products as well as their installation and the so-called installation products. The classification is suggestive and should be applied on a case-by-case basis.

The principles of quantity measurement of building elements have been made independent of design and production solutions, and the measured quantities usually differ from production quantities. Thus, for instance, an external wall is always measured the same way and on the same bases. The different production items required to construct a building element are determined as required by the design solution. For instance, if the external wall includes masonry, the masonry can be considered a production part of the external-wall building element.

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# 1 Building elements

## 11 Site elements

Site elements consist of ground elements, support and reinforcement structures, surfacings, site equipment and constructions. In addition to elements outside the building, site elements also include those needed inside to build building and space elements. The site is bounded by the boundaries of the plot layout and building elements.

### 111 Ground elements

Ground elements include clearing of the building site, trenches, channels, fills, embankments, draining elements, and other ground elements.

#### 1111 Clearing elements

Clearing elements are intended to make the plot fit to build on. Clearing elements are divided into the following structural elements:

- 1 Site to be cleared
- 2 Existing buildings and constructions

*The area to be cleared is bounded in plans by the boundaries of the area to be built as well as building elements and is measured as a horizontal projection area specifying its different sections. Buildings to be demolished are measured by volume notifying their number. Their foundation structures and structures to be demolished are notified separately in square metres.*

#### 1112 Trenches

Trenches are cavities over 3 metres in width excavated in soil or rock on site to receive the foundations of a building.

*Trenches are bounded by the surface of cleared ground, the boundaries of areas to receive subgrade reinforcement, and the soffits of foundations and ground floors. Trenches are measured horizontally in square metres. Their depth, circumference and slopes of their ramps are notified separately.*

#### 1113 Channels

Channels consist of e.g. channels for pipes, wiring and cables less than 3 metres in width excavated in soil or rock.

*Channels are bounded by their inner surface, bottom and the surface of the cleared ground. Channels are measured horizontally in linear metres notifying the excavating depth and width of the channel bottom. Slope of ramps is notified separately.*

**1114 Filling on site**

Filling on site includes filling up of site constructions and channels, other site fill-ups and building-related fill-ups with the attendant insulation structures and subsurface drainage layers. Site fillings are classified as fill structures of the construction site or channels, or structures within or outside the building.

*Site fillings are bounded by the excavation level and soffit of the structural layers of the superstructure. Channel fills are bounded by the insides of channel walls. Fills outside the building are bounded by the soffits of foundations and the structural layers of the superstructure. Fills within the building are bounded by the excavation level and the soffit of the structural layers of the ground floor. Site fillings are measured theoretically as per plans notifying the size of the area to be filled. The filling of channels is measured in linear metres notifying depth, slope of ramps and width of trench bottom. Filling along the building's exterior wall line is measured on the basis of the external dimensions of the external wall in linear metres, specified by fill heights, if necessary. Filling within the building is measured as a horizontal projection area of the building based on the external dimensions of the external wall in square metres, specified by fill heights, if necessary. Any possible thermal insulations, frost protections and filter fabrics are measured as a horizontal projection in square metres.*

**1115 Embankments**

Embankments consist of fills above ground level such as ground raising with fill material, loading berms, etc.

*Embankments are measured theoretically as per plans from existing ground level notifying their height.*

**1116 Draining elements**

Draining elements consist of subsurface drains, drainage wells as well as other wells and culverts that are not part of building services with their supports, support and substructures, initial and back fills, levelling courses and drainage maintenance and inspection wells.

*Subsurface drains are measured horizontally along the centre line from the middle of the inlet well to the middle of the outlet well without deducting the well diameters. The number, type and height of drainage wells is notified in the bill of quantities. Wells and culverts are measured in pieces notifying their length and size.*

**1117 Other ground elements**

Other ground elements consist of ones not included in the above-mentioned such as storm and wastewater infiltration structures and radon ventilation pipes.

**112 Soil stabilisation and reinforcement elements**

Soil is stabilised and reinforced by the piles, supports and reinforcements installed on site to support the building.

**1121 Piles**

Piles consist of the site's or building ground's reinforced concrete, steel, cast-in-place and drilled piles including pile shoes and splices.

*Piles are bounded by the underside of pile footings and the tops of pile shoes. Piles are measured in linear metres or in pieces by pile types. Shoes and pile splices are notified separately.*

**1122 Soil stabilisation elements**

Soil stabilisation elements consist of construction-phase and permanent support walls built in connection with foundation construction such as retaining walls of supported trenches. These elements include the required anchoring, bracing and root beams.

*Soil stabilisation elements are bounded by the surface of the ground at the site to be built, the inner surface of the area to be supported, and the underside of the stabilising structure. The elements are measured in square metres or linear metres notifying their height and specifying different types of elements.*

**1123 Reinforcement elements**

Reinforcement elements consist of preliminary soil preparation works such as lime stabilisation and construction-phase stabilisation of soil as well as reinforcing of existing buildings' foundations prior to launching construction proper.

*Reinforcement elements are bounded by the boundaries of the area to be reinforced. Preliminary soil preparation works are measured as a horizontal projection in square metres notifying depth and specifying the number of existing buildings' foundations reinforced by various reinforcement methods in accordance with a special reinforcement plan.*

**1124 Other soil stabilisation and reinforcement elements**

Other soil stabilisation and reinforcement elements consist of those not included in the above.

**113 Paved and green areas**

Paved and green areas of the site consist of traffic, parking, leisure and play areas, kerbs, structures for leading off surface waters and vegetation.

**1131 Traffic area pavings**

Traffic area pavings consist of the surface layers of the site required by its use and appearance including access roads, levelling and support layers, jointings, kerbs, storm water channels and paving markings. Traffic area pavings are divided into structural elements as follows:

- 1 Surface layer
- 2 Bearing layer
- 3 Distributing layer
- 4 Filter fabric or layer

*Traffic area pavings are bounded by the outer edges of paved area kerbs, another paving, or the facade of the building. Traffic area pavings are measured as a horizontal projection in square metres without deducting wells and other similar openings.*

### **1132 Parking area pavings**

Parking area pavings consist of the surfaced layers of the site required by its use and appearance including access roads, levelling and support layers, jointings, kerbs, storm water channels and paving markings. Parking area pavings are divided into structural elements as follows:

- 1 Surface layer
- 2 Bearing layer
- 3 Distributing layer
- 4 Filter fabric or layer

*Parking area pavings are bounded by the outer edges of paved area kerbs, another paving, or a building. Parking area pavings are measured as a horizontal projection in square metres without deducting wells and other similar openings.*

### **1133 Leisure and play area pavings**

Leisure and play area pavings consist of the surface layers of the site required by its use and appearance including access roads, levelling and support layers, jointings, kerbs, storm water channels and paving markings. Leisure and play area pavings are divided into structural elements as follows:

- 1 Surface layers
- 2 Bearing layer
- 3 Distributing layer
- 4 Filter fabric or layer

*Leisure and play area pavings are bounded by the outer edge of paved area kerbs, another paving, or a facade of the building. Leisure and play area pavings are measured as a horizontal projection in square metres without deducting wells and other similar openings.*

### **1134 Green areas**

Green areas consist of plants planted and sowed on the site as well as their substrates, turf and grass covers with irrigation, drainage and protective structures, supports and shelters as well as rehabilitation of areas in a natural state.

*Green areas are bounded by the edge of the site or a facade of a building. Lawns are measured as a horizontal projection in square metres without deducting wells and other similar openings. Plants to be planted are measured in pieces specifying different types of trees and bushes.*

### **1135 Special area pavings**

Special area pavings consist of pavings not included in the above areas such as sports area pavings. The pavings include levelling and support layers, jointings, kerbs, gutters and paving markings in accordance with a special plan.

*Special areas are bounded by the boundaries of the paved area, kerbs or a facade of a building. Special pavings are measured as a horizontal projection in square metres specifying different paving types.*

## **114 Site equipment**

Site equipment generally consist of ready-made outdoor equipment including foundations and installation. Site equipment also include ready-made fences and lighting structures, etc.

*Site equipment are notified as a list that indicates equipment type, size and requirements for installation.*

### **1141 Building equipment**

Building equipment consist of building-specific items such and flag poles, dusting and drying racks, shoe scrapers, letter boxes and ready-made fences with footings, fastenings and surface treatment. Building equipment also include waste disposal equipment such as waste bins, skips, containers and sheds with foundations and anchorings. Building equipment are divided as follows:

- 1 Building-specific equipment
- 2 Waste disposal equipment

### **1142 Leisure equipment**

Leisure equipment include leisure area fixtures such as tables, benches and grills with their foundations and finishes.

### **1143 Play equipment**

Play equipment consist of play and exercise area equipments such as swings, sand boxes, slides and exercise equipment with their foundations and finishes.

### **1144 Site signage**

Site signage include e.g. traffic signs, traffic area equipment such as posts, traffic signs and barriers, street signs and address numbers as well as traffic signs with their foundations, constructions and finishings. Site signage are divided as follows:

- 1 External signs
- 2 Traffic area equipment

### **1145 Other site equipment**

Other site equipment consist of site equipment not included in the above such as sports facilities' equipment. The equipment include foundations, constructions and markings as per a special plan.



## 115 Site constructions

Site constructions include yard sheds, yard shelters and pergolas, terraces, retaining walls, fences and walls, cast-in-situ channels and special wells, basins, vehicle ramps and stairs with their foundations, finishes and insulations that are separate from the building.

### 1151 Yard sheds

Yard sheds consist of storage facilities, waste sheds and comparable storage facilities separate from the building including the necessary earth constructions, foundations, insulations and finishes. Yard sheds are treated as an entity, and are measured as gross areas according to the principle of measuring net room areas, or are divided further, if necessary, into structural elements according to the pertaining items of the project classification. Then, the structural elements consist of:

- 1 Yard shed foundations
- 2 Yard shed ground slabs
- 3 Yard shed frame
- 4 Yard shed facades
- 5 Yard shed roofs
- 6 Yard shed doors
- 7 Yard shed windows
- 8 Yard shed space surfaces
- 9 Yard shed space equipment

### 1152 Yard shelters and pergolas

Yard shelters consist of shelters, pergolas and comparable structures separate from the building including their foundations, insulations and finishes.

### 1153 Fences and retaining walls

Fences and retaining walls consist of structural and light fences, gates, walls, retaining walls and railings with their foundations.

### 1154 Site stairs, ramps and terraces

Site stairs, ramps and terraces consist of outdoor stairs, slopes, ramps, landscape steps and terraces with their foundations, railings and finishes separate from the building.

### 1155 Site parking facilities

Site parking facilities include e.g. parking decks separate from the building.

### 1156 Other site constructions

Other site constructions include those not included in the above such as channels poured outside the building or precast channels, special wells, containment trays and basins.

## 12 Building elements

Building elements consist of foundations, the ground floor, the frame, the facades, the roof and external decks.

### 121 Foundations

Foundations consist of structures below the ground floor such as footings, enclosure walls, foundation columns and beams, and special foundation structures.

#### 1211 Footings

Footings consist of the building's wall footings, column footings, pile footings and enclosure wall footings.

*A footing is bounded by the underside of the footing and the enclosure wall, foundation column or framework; it never comes higher than the soffit of the bearing structure of the ground floor. Footings are measured in linear metres or in pieces specified by size.*

#### 1212 Enclosure walls, foundation columns, foundation beams

Enclosure walls and foundation columns and beams comprise the foundation columns, enclosure walls, well-ring foundations and foundation beams, with their thermal insulation and water and damp proofings and finishings, that are located under the ground floor. Enclosure walls and foundation columns and beams are divided into structural elements as follows:

- 1 Surface of enclosure wall, foundation column, and foundation beam
- 2 External surface element
- 3 Enclosure wall, foundation column, or beam structure
- 4 Thermal insulation
- 5 Water and damp proofing

*Enclosure walls and foundation columns are bounded by the upper surface of the footing or rock face and the soffit of the bearing structure of the ground floor. Foundation beams are bounded by the inner surface of the bearing vertical structure. Enclosure walls and foundation beams are measured in linear metres specified by structure height and width. Foundation columns are measured in pieces specifying column sizes.*

#### 1213 Special foundations

Special foundations include machine and equipment beds or purpose-built foundations of production machinery with attachment parts.

*Special foundations are bounded by the soffit of the bearing structure or the ground floor or replace the ground-floor structure. Special foundations are measured in square metres, specifying foundation sizes, and are divided into structural elements, if necessary.*

## 122 Ground floors

Ground floors consist of ground floor slabs, ground floor channels, and special ground floors.

### 1221 Ground floor slabs

Ground floor slabs include bearing and ground-supported flat structures with insulations and vapour barriers. Ground floor slabs are divided into structural elements as follows:

- 1 Ground-floor structure
- 2 Ground floor thermal insulation

*The ground floor slab is bounded vertically by the upper surface of the enclosure wall or foundation column or ground (filled-up) and horizontally by the inner surface of the external wall. The ground floor is measured in square metres deducting openings in excess of 1 m<sup>2</sup>. Ground floor areas are specified by differences in structure and structural thickness. Sloping ground floors are measured as a horizontal plane (projection area).*

### 1222 Ground floor ducts

Ground floor ducts are structures underneath the ground floor element such as tunnels, containment basins and maintenance, etc. special pits. Ground floor ducts are divided into structural elements as follows:

- 1 Duct structure
- 2 Thermal insulation of ground floor duct
- 3 Waterproofing of ground floor duct
- 4 Grates, covers and hatches of ground floor duct

*A ground floor duct is bounded vertically by the upper surface of the duct's subbase and the soffit of the ground floor, and horizontally by the outer surface of the duct walls. Ground floor ducts are measured in square metres based on the opening they cover. The wall structures of ducts are measured in square metres and specified by structural types. Sloping ground floor ducts are measured as a horizontal plane (projection area). Grates, covers and hatches are measured in pieces and specified by size. Ground floor duct connections to the ground floor structure are measured in square or linear metres and notified, if necessary.*

### 1223 Special ground floors

Special ground floors are structures essentially different than normal ground floor structures such as ramps and pool structures. Special ground floors are divided into structural elements as follows:

- 1 Special ground floor structure
- 2 Special ground floor thermal insulation
- 3 Special ground floor waterproofing
- 4 Grates, covers and hatches of special ground floor

*Special ground floors are bounded by the soffit of the actual floor structure. Special ground floors and their wall-like parts are measured in square metres, based on the opening they cover, and specified by types. Sloping special ground floors are measured as a horizontal plane (projection area). Grates, covers and hatches are measured in pieces or in square metres and pieces. The connections of special ground floors to the ground floor structure are measured in square or linear metres and notified separately.*

## 123 Structural frame

The structural frame consists of the building's bearing and protective building elements as well as those used for fire compartmentation, such as civil defence shelters, bearing walls, columns, beams, intermediate floors, roofing decks and structural frame stairs.

### 1231 Civil defence shelters

Civil defence shelters consist of K, S1 and S3 Class shelters including internal space elements (infills) and civil defence shelter equipment. A civil defence shelter does not include the equipment installed there for peace-time use. The structural elements of a civil defence shelter are as follows:

- 1 Ground floor structure
- 2 Surrounding walls, bearing partitions and roof structure
- 3 Closed space, emergency exit corridor or opening
- 4 Protective doors and hatches
- 5 Crisis-time equipment and municipality-specific equipment.
- 6 Levelling and drainage layers on top of bearing roof structures

*A civil defence shelter is measured as a horizontal area based on the external dimensions of the surrounding bearing walls. The protective area of the shelter is measured on the basis of the internal dimensions of the bearing walls bounding it deducting the horizontal area of the shelter's internal bearing structures as well as the area occupied by defence shelter equipment. Thus, the gross area of the shelter is larger than its protective area.*

### 1232 Bearing walls

Bearing walls include the building's internal load bearing and transmitting walls and deep beams.

*A bearing wall is bounded by the upper surface of the slab under the wall and the soffit of the slab above the wall. A bearing wall of a civil defence shelter is considered part of the shelter while the bearing portion of an external wall is considered part of the external wall. Bearing walls are measured in square metres deducting all openings exceeding 1 m<sup>2</sup> in size. Quantities are specified by bearing wall types.*

### 1233 Columns

Columns consist of the columns of the building and pilasters of the frame and external walls.

*A column is bounded by the upper surface of the slab underneath and the soffit of the slab above. A pilaster is also bounded by the inner wall surface. Columns are measured in linear metres or cubic metres based on their external dimensions. The quantity and number of haunches, brackets, etc. is notified separately, if necessary. In the case of steel columns, also their size, material thickness, possible concrete filling and reinforcement, and number are notified.*

### 1234 Beams

Beams consist of the building's bearing beams.

*A beam is bounded horizontally by a column or a wall surface and vertically by the soffit of a slab. Beams are measured in linear metres or cubic metres based on their external dimensions. The quantity and number of haunches, brackets, etc. is notified separately, if necessary. In the case of steel beams, also their size, material thickness, possible concrete filling and reinforcement, and number are notified.*

### **1235 Intermediate floors**

Intermediate floors consist of the floor slabs of different storeys, or in-situ cast flat horizontal bearing structures forming an integrated whole with their thermal and acoustic insulations. Space elements below and above the intermediate floor are building elements of spaces. The intermediate floor structure is divided into structural elements as follows:

- 1 Intermediate floor structure
- 2 Thermal and acoustic insulation

*An intermediate floor is bounded horizontally by the inner surface of an external wall and vertically by the upper surface of a beam and a column. Intermediate floors are measured in square metres deducting openings exceeding 1 m<sup>2</sup>. Quantities are specified by intermediate floor types. Connecting structures to external walls are measured in linear metres and are separately notified. Sloping intermediate floors are measured as a horizontal plane (projection area).*

### **1236 Roofing decks**

Roofing decks are slabs above the top floor of a building, or the highest horizontal flat structures forming an integrated whole with their thermal and acoustic insulations and connecting structures. The roofing deck is divided into structural elements as follows:

- 1 Bearing roofing deck structure
- 2 Thermal and acoustic insulation
- 3 Sheathing
- 4 Vapour barrier

*The roofing deck is bounded horizontally by the inner surface of the external wall and vertically by the roof substructure or roofing above and by space elements below. Roofing decks are measured in square metres deducting openings exceeding 1 m<sup>2</sup>. Quantities are specified by roofing deck types. Sloping roofing decks are measured as a horizontal plane (projection area). Connecting structures to external walls are measured in linear metres by types and are notified separately.*

### **1237 Structural frame stairs**

Structural frame stairs consist of factory-finished flights of stairs, treads and landings permanently attached to the building's bearing structure. They also include the, often unheated, emergency exit stairs outside the building. Structural frame stairs are divided into structural elements as follows:

- 1 Flight of stairs
- 2 Landing

*Structural frame stairs are measured in square metres from the surface of the adjoining wall assembly, or if there is no connection to the wall assembly, from the edge of the stairs. Area is measured as a horizontal projection specifying different stair types. The structures connecting structural frame stairs to walls and landings are measured in linear metres and notified separately, if necessary.*

**1238 Other structural elements**

Other structural elements consist of those not included in the above such as framed structures, pool structures on floors and on the roof, as well as the steel frames of ventilation equipment rooms, and structures falling under other structural element designations.

**124 Facades**

Facades are structures that separate the building spaces from the outdoors or covered, unheated space such as clad external walls, windows, glass walls and external doors.

**1241 External walls**

External walls consist of bearing, non-bearing, built-on-site and prefabricated external walls as well as curtain walling with sheathing and thermal insulation. Facade sections above the roofing deck are also parts of the external wall. External walls are divided into structural elements as follows:

- 1 External wall frame
- 2 Water and damp proofing
- 3 Thermal and acoustic insulation
- 4 Sheathing
- 5 Curtain walling
- 6 Curtain walling finish

*External wall assemblies are measured in square metres based on the external dimensions of the wall deducting openings in excess of 1 m<sup>2</sup>. Quantities are classified by external wall and curtain walling types. Connecting structures of external walls to foundations, roof substructures and roofing are measured separately in linear metres. External walls extending above the roofing are measured and notified separately.*

**1242 Windows**

Windows consist of facade windows of different materials as well as their frame structures with surrounding components, equipment and connecting structures. Windows are divided into structural elements as follows:

- 1 Windows with frames and casings and glazing beads
- 2 Panes and glazing supplies
- 3 Window fittings and locks
- 4 Metal window sills
- 5 Cover strips
- 6 Built-in replacement air vents of window structure
- 7 Auxiliary window frames

*Connecting structures to an external wall such as cover strips, flashings, metal window sills, sealing and caulking are specified and measured separately in square and linear metres. The window components on the side of the internal space such as window sills and protective structures and equipments are considered part of the building element that is part of the internal space.*

**1243 External doors**

External doors comprise wooden and metal external doors, French doors, special external doors such as swing, revolving, sliding, folding, overhead, tip-up and concertina doors and other external doors with their frames, connecting structures and fittings. External doors are divided into structural elements as follows:

- 1 External door including frame, threshold and door leaf
- 2 External door glazings
- 3 Frame components such as electric jambs
- 4 Locks and fittings
- 5 Door drives
- 6 Cover strips

*An external door is bounded by the external wall, facade section, and the space. External doors are measured in pieces grouped by size and type. The connecting structures of the external door to the external wall (cover strips, flashings, metal window sills, sealing and caulking) are specified, measured and notified separately.*

**1244 Facade attachments**

Facade attachments consist of fixed facade ladders, awnings, sun screens and other gratings, hatches and the like. The attachments are bounded by facade sections and are measured in linear metres, pieces or square metres specified by types.

**1245 Other facade sections**

Other facade sections consist of ones not included in the above.

**125 External decks**

External decks consist of balconies, shelters and terraces attached to the building.

**1251 Balconies**

Balconies consist of the building's balconies with their railings, dividers and roofs as well as balcony support structures and their surface elements. A balcony is divided into structural elements as follows:

- 1 Balcony surface
- 2 Balcony surface element
- 3 Balcony slab structure
- 4 Balcony support structure
- 5 Balcony roof structure
- 6 Roof support structure
- 7 Walls and dividers
- 8 Balcony railing
- 9 Balcony handrail
- 10 Balcony glazing
- 11 Drainage system

*A balcony is bounded horizontally by the outer surface of the external wall. Vertically the support structure of the balcony is bounded by the upper surface of the balcony slab and the soffit of the slab above, or the balcony roof. The soffit of the support structure of*

*the lowest balcony slab is bounded by the soffit of the ground floor. Balcony slabs are measured in square metres as a horizontal area (projection area) based on external dimensions. Balcony roofs are measured in square metres as a horizontal area (projection area) based on external dimensions. The balcony railing is measuring in linear metres. Balcony glazing is measured in square metres from the top of the railing.*

## **1252 Shelters and pergolas**

Shelters and pergolas consist of structures serving the building, their support structures and surface elements as well as their connections to other structures. They are divided into structural elements as follows:

- 1 Shelter or pergola construction
- 2 Shelter or pergola support structures

## **1253 Special external decks**

Special external decks include the building's external decks, roof terraces and access galleries with their railings, dividers and roofs, support structures, stairs and surface elements as well as their connections to other structures. Special external decks are divided into structural elements as follows:

- 1 External deck surface
- 2 External deck surface element
- 3 External deck slab structure
- 4 Stairs
- 5 Roof structure
- 6 Support structure
- 7 Railings
- 8 Handrails
- 9 Walls and dividers
- 10 Glazing of external decks
- 11 Water drainage systems

*Special external decks are bounded by the external wall or a facade section. Special external decks, roof terraces and access galleries are measured in square metres based on external dimensions. Roofs are measured as a horizontal area (projection area) in square metres based on external dimensions. In the case of stairways, the number and width of steps from one floor to another is notified. Railings are measured in linear metres, and glass walls in square metres based on external dimensions of the frame structure. Support structures are measured in square metres (supporting walls) or are notified in cubic metres of concrete used for support columns, or in linear metres of steel columns and their weight per linear metre. The surface treatment and surface elements of special external decks are notified in square metres. The bounding of special external decks on adjacent structures is measured and notified separately.*

## **126 Roofs**

Roofs consist of roof substructures built on top of the bearing section of the roofing deck as well as the eaves, roofings, roof safety products, glass roof structures and skylights built in a separate work phase. Self-supporting roofing deck structures are considered roofing decks.



**1261 Roof substructures**

Roof substructures consist of structures built above the bearing sections of the roofing deck with their thermal insulations and vapour barriers, as well as the cement screeds of flat roofs. Roof substructures also include the equipment protections and beds built or installed under the roofing when the structures are constructed as well as related partitions. Roof substructures are divided into structural elements as follows:

- 1 Structural element of roof substructure
- 2 Damp proofing
- 3 Thermal insulation
- 4 Cement screed of roof substructure
- 5 Fire compartmentation of roofing deck
- 6 Catwalks
- 7 Hatches

*Roof substructures are bounded below by the upper surface of the bearing slab of the roofing deck, ceiling surface elements of the indoor space, or the surface of the ceiling, and above by the roofing. Roof substructures are measured as a horizontal area (projection area) based on the external dimensions of the external wall deducting openings exceeding 1 m<sup>2</sup>. Different roof substructure types are specified. The roof structures of the roof are notified separately in pieces or linear metres.*

**1262 Eaves**

Eaves structures and related components are built in a separate work phase. They are divided into structural elements, if necessary.

*Eaves are bounded by the roof substructure and a facade section. They are measured in linear metres from the intersection of the external wall and the roofing deck based on external dimensions. Different eaves structures are specified. The length of an eaves is notified.*

**1263 Roofings**

Roofings consist of an underlay, a built-up roofing with a gravel or slag surface, tile roofing, sheet-metal and profile sheet roofing, with roof boards or battens and flashings such as pipe and hatch flashings and roof outlets. Roofings are divided into structural elements as follows:

- 1 Roofing
- 2 Battens and roof boards, purlins and counter battens
- 3 Roofing underlay
- 4 Roof outlets

*The roofing is bounded vertically by the roof substructure or a self-supporting roofing deck and horizontally by a facade section and an eaves structure. Roofing is measured on the basis of the external dimensions of the area to be covered as a horizontal area (projection area) notifying the slope of the roofing and deducting openings and structures exceeding 1 m<sup>2</sup>. Different roofing types are specified. The number and size of penetration, upright element and hatch flashings are notified. Connection structures of roofing to other building elements are measured in linear metres and cove height is notified separately.*

**1264 Roof safety products**

Roof safety products include catwalks, roof ladders, snow guards, etc. as well as eaves gutters and downpipes.

*Roof safety products are bounded by the roofing, the facade and the eaves structure. They are measured in linear metres or pieces.*

**1265 Glass roof structures**

Glass roof structures consist of glass roofings and their bearing structures and fittings as well as comparable building elements and their complementary structures. A glass roof is divided into structural elements as follows:

- 1 Glass roofing with glazing materials and fittings
- 2 Bearing structures of glass roof
- 3 Wall-like roof structure of glass roof
- 4 Smoke-extraction structures
- 5 Items such as heating elements, break-in protection, fall protections
- 6 Maintenance platforms

*A glass roof structure is bounded vertically by the roof substructure, the roofing deck or an external wall, and horizontally by the bearing structures of the building. Glass roof structures are measured on the basis of the external dimensions of the frame structure as a horizontal area (projection area). The connecting structures of the glass roof to an external wall and the roofing deck are specified, measured and notified separately.*

**1266 Skylights and hatches**

Skylights and hatches consist of skylights, dormers, smoke vents, and comparable building elements with complementary structures. Skylights and vents are divided into structural elements as follows:

- 1 Skylight or vent including its structures, glazing materials and fittings
- 2 Wall-like roof structures of skylight
- 3 Smoke-extraction structures
- 4 Items like heating elements, break-in protection, fall protections
- 5 Maintenance platforms

*Skylights and vents are bounded by the roof substructure and roofing. Skylights and vents are measured based on the opening they cover specifying different window and vent types. The connecting structures of skylights and vents to other structural elements are specified, measured and notified separately.*

**1267 Special roof substructures**

Special roof substructures consist of those not part of other roof substructures.

**13 Internal space elements (infills)**

Internal space elements consist of internal dividers, internal space surfaces, internal fixtures as well as other elements such as maintenance platforms, catwalks and box units.

## 131 Internal dividers

Internal dividers consist of elements independent of the frame such as partitions, special walls, balustrades and railings, and internal and special doors that divide space.

### 1311 Partitions

Partitions are non-bearing internal walls, built on-site or prefabricated, that bound and divide spaces.

*Partitions are bounded vertically by the upper surface of the slab below and the soffit of the slab above and horizontally by the inner surface of the frame building element or another partition bounding the space. Partitions are measured in square metres deducting openings in excess of 1 m<sup>2</sup>. Areas are specified by partition types. Partitions are typed based on structural differences. Connecting structures of partitions to frame building elements and other partitions are measured in linear metres and notified separately.*

### 1312 Glass partitions

Glass partitions are partitions between spaces made of glass. They are divided into structural elements, when necessary.

*Glass partitions are bounded vertically by the upper surface of the slab below and the soffit of the slab above and horizontally by the inner surface of the frame building element or another partition bounding the space. A glass partition is measured in square metres deducting openings in excess of 1 m<sup>2</sup>. Areas are specified by glass partition types. The connecting structures of a glass partition are measured in linear metres and notified separately.*

### 1313 Special partitions

Special partitions consist of adjustable partition, compartmentation and movable walls as well as chicken-wire walls. Shower and toilet partitions with their doors are also special partitions. Special partitions are divided into structural elements as follows:

- 1 Special partition
- 2 Special partition drives

*Special partitions are bounded vertically by the top of the surface element of the slab below and the soffit of the slab above, or the room space when wall height is less than room height. Horizontally special partitions are bounded by the frame building element bounding the space or the inner surface of another partition. Special partitions are measured in square metres based on the opening they cover when they are bounded by building elements or based on structural dimensions when not bounded by building elements. Openings in a special partition exceeding 1 m<sup>2</sup> are deducted. Connecting structures of special partitions are measured in linear metres and notified separately.*

### 1314 Balustrades and railings

Balustrades and railings consist of the balustrades, railings and handrails that divide a building's internal space as well as those of space and structural frame stairs and landings. The railings of maintenance platforms and catwalks are classified separately. Balustrades and railings are divided into structural elements as follows:

- 1 Frame of balustrade or railing
- 2 Balustrade or railing structure
- 3 Handrail

*Balustrades and railings are bounded vertically by the top of the surface element of the slab below and the room space. Horizontally they are bounded by the inner surface of the frame building element or another partition bounding the space.*

*Balustrades and railings are measured in linear metres notifying their height based on the opening they cover. Balustrades and railings of different types are specified. Those extending beyond the frame building element or a partition are included and notified separately. Balustrade and railing connecting structures are measured in linear metres and notified separately.*

### **1315 Internal doors**

Internal doors consist of doors bounding the building's internal spaces such as internal doors, dwelling entry doors and fire doors. Internal doors also include door frames and their components and connecting structures. Internal doors are divided into structural elements as follows:

- 1 Internal door including door leaf, frame and threshold
- 2 Internal door glazing
- 3 Frame-related components like electric jambs, glass side lights and transoms
- 4 Locks and fittings
- 5 Door drives
- 6 Architraves

*Internal doors are bounded vertically and horizontally by the inner surface of the frame or partition structure. Internal doors are measured in pieces or square metres based on the opening they cover in the bounding structure. A double door is measured as a single door. Door types are specified. Internal door connecting structures are measured in linear metres and notified separately.*

### **1316 Special doors**

Special doors consist of other than the conventional doors of a building such as concertina, folding and overhead doors and related drives and connecting structures. Vault and arch doors, scissor gates and hatch & ladder systems providing access to mechanical rooms, etc. are also considered special doors. Special doors are divided into structural elements as follows:

- 1 Special doors including door structure, frame and threshold
- 2 Frame-related components such as electric jambs, glass side lights and transoms
- 3 Locks and fittings
- 4 Door drives
- 5 Architraves

*Special doors are bounded vertically and horizontally by the inner surface of the frame or partition structure. Special doors are measured in pieces or square metres based on the opening they cover in the bounding structure. Door types are specified. The connecting structures of special doors are measured in linear metres and notified separately.*

### **1317 Space stairs**

Space stairs are stairs within spaces that do not belong to the structural frame stairs of the building's bearing system, such as stair flights, treads and landings. Space stairs are divided into structural elements as follows:

- 1 Stair flight
- 2 Landing

*Space stairs are bounded vertically by the top of the ground or intermediate floor slab and horizontally by the wall surface bounding the stairs or a balustrade. The landings between slabs are part of the stairs. Stairs are included in the area of the floor to which they rise. Space stairs are measured in square metres from the surface of the connecting wall, or in case there is no connection to the wall, from the edge of the stairs. Area is measured as a horizontal plane notifying separately the areas of the stair treads and the connecting landings. Different stair types are specified. If necessary, the side and centre beams, risers and treads or steps are measured and notified separately. The connections of space stairs to walls and floor planes are measured in linear metres and notified separately, if necessary.*

### **1318 Other internal dividers**

Other internal dividers consist of those that do not belong to the above-mentioned dividers. Their boundaries are determined, and they are measured, according to the principles applied to other dividers.

## **132 Space surfaces**

Space surfaces consist of the surface elements and surface layers of the building's internal floors, ceilings and walls including their attachment structures and surfaces and finishes. Space surfaces are specified by spaces in the schedule of finishes.

### **1321 Floor surface elements**

Floor surface elements consist of structures built on top of the ground or intermediate floor slabs with their insulations and hollow floors. They consist e.g. of screeds, floating floor constructions and wet-area sloping structures. Hollow floors consist of raised and cavity floors built on a bearing horizontal structure with their thermal and acoustic insulation and damp proofing.

*A floor surface element is bounded horizontally by the inner surface of frame building elements and partitions and vertically by the upper surface of the ground or intermediate floor structure. Floor surface elements are measured in square metres deducting openings in excess of 1 m<sup>2</sup>. The areas are specified by surface element types. Sloping surface elements are measured as a horizontal plane (projection area). Connecting structures to external walls and partitions are measured in linear metres and are notified separately.*

### **1322 Floorings**

Floorings comprise space floorings, skirtings, flooring surface treatment and other surface courses with screeds and related base layers. Floorings are divided into structural elements as follows:

- 1 Surface treatment
- 2 Flooring
- 3 Water and damp proofing
- 4 Base layer treatment
- 5 Skirtings

*A flooring is bounded horizontally by the inner surface of frame building elements and partitions and vertically by the top surface of the roof assembly, intermediate floor structure or the floor surface element. Floor surfaces are measured as net room areas deducting openings in excess of 1 m<sup>2</sup>. Skirtings are measured in linear metres by types. Quantities are specified by flooring types. Connecting structures to frame building elements and partitions are measured in linear metres and notified separately.*

### **1323 Ceiling surface elements**

Ceiling surface elements include ceilings suspended from a bearing slab with accessories, thermal and acoustic insulations installed as ceiling lining with their backing and attachment elements, as well as ceiling linings with their backing and attachment elements.

*Ceiling surface elements are bounded horizontally by the inner surface of frame building elements and partitions and vertically by the soffit of the ceiling or intermediate floor structure. Ceiling surface elements are measured as net room areas deducting openings in excess of 1 m<sup>2</sup>. Suspended ceiling fascias are measured in linear metres notifying height. Quantities are specified by ceiling surface element types. Sloping ceiling surface elements are measured as a horizontal projection area of the ceiling surface. Connecting structures to frame building elements and partitions are measured in linear metres and notified separately.*

### **1324 Ceiling finishings**

Ceiling finishings consist of plastered and painted surfaces with screeds/fillers and ceiling surfacings.

*Ceiling finishings are bounded horizontally by the inner surface of frame building elements and partitions and vertically by the soffit of the ceiling or intermediate floor structure. Ceiling finishings are measured as net room areas deducting openings in excess of 1 m<sup>2</sup>. Quantities are specified by ceiling finishing types. Sloping ceiling surfaces are measured as a horizontal projection of the ceiling surface.*

### **1325 Wall surface elements**

Wall surface elements consist of internal wall coverings laid on top of frame and space elements and their backing. They also include the continuous surface layers of special facilities like saunas, refrigeration rooms, machine rooms, etc. Surface elements of window sills and embrasures are also included in wall surface elements.

*Wall surface elements are bounded horizontally by the inner surface of frame building elements and partitions and vertically by the upper surface of the ground or intermediate floor and the soffit of the intermediate floor or roofing decks. Wall surface elements are measured in square metres deducting openings in excess of 1 m<sup>2</sup>. Quantities are specified by wall surface element types. Inclined wall structures are measured as a vertical projection area. Connecting structures to frame building elements are measured in linear metres and notified separately.*

### **1326 Wall finishings**

Wall finishings consist of paint and filler, tiling with waterproofing, wallpaper and plaster. Surfacing of window sills and embrasures are included in wall finishings. Wall finishings are divided into structural elements as follows:

- 1 Wall finishing
- 2 Water and damp proofing
- 3 Substrate treatment

*Wall finishings are bounded vertically by the inner surface of the frame building elements and partitions or the wall surface element and vertically by the upper surface of the ground or intermediate floor and the soffit of the intermediate floor or roofing deck. Wall finishings are measured in linear metres deducting openings in excess of 1 m<sup>2</sup>. Quantities are specified by wall finishing types. Inclined wall structures are measured as a vertical projection area. Connecting structures to frame building elements are measured in linear metres and notified separately. The numbers of window sills and embrasures are notified separately.*

### **1327 Other space surfaces**

Other space surfaces consist of those not included in the above building elements.

## **133 Internal fixtures**

Internal fixtures consist of fixtures, installations and standard equipments inside the building that do not belong to movables, as well as fittings and signage. Internal fixtures are specified in the schedule of spaces.

### **1331 Standard fittings**

Standard fittings include the building's internal standardised fittings such as closets, cupboards, shelving and sinks with facings, enclosures and linings.

*The quantities of standard fittings are specified by fitting type and material and measured in pieces or linear metres (horizontal length). The bill of quantities gives the height, depth and width of a fitting.*

### **1332 Special fittings**

Special fittings consist of the building's internal separately designed and made-to-order fittings such as closets, cupboards, shelves and sinks with linings, sheetings, enclosures and cover strips. The quantities of special fittings are specified by fitting type and material and measured in pieces or linear metres (horizontal length). The bill of quantities gives the height, depth and width of a fitting.

### **1333 Accessories**

Accessories include coat racks, hooks, mirrors, airing racks, retrofitted window sills, shoe scrapers, stair carpets, sports equipment racks, pelmets, curtain tracks, Venetian blinds and the like.

*Accessories are measured in pieces, in linear metres based on the greatest long measure, or in square metres based on nominal dimensions. Quantities are specified by accessories and types.*

### **1334 Standard appliances**

Standard appliances include cookers, refrigerators, freezers, sauna stoves and the like. Standard appliances are measured in pieces according to type.

**1335 Internal signage**

Internal signage consist of signboards, name boards and directories. Internal signage is measured in pieces by type.

**1336 Other internal fixtures**

Other internal fixtures consist of those not part of the above-mentioned building elements.

**134 Other internal space elements (infills)**

Other internal space elements consist of e.g. maintenance platforms and catwalks as well as fireplaces and their ducts.

**1341 Maintenance platforms and catwalks**

Maintenance platforms and catwalks consist of retrofitted maintenance platforms, catwalks, ladders and lightweight stairs with railings that complement platforms. They are divided into structural elements as follows:

- 1 Maintenance platforms and catwalks including stairs and treads
- 2 Frame structures separate from the building frame
- 3 Balustrades, railings and handrails
- 4 Lining, surface layers and surface treatment of maintenance platforms and catwalks

*Maintenance platforms and catwalks are measured in square metres based on external dimensions. The bill of quantities shows the treads and stair structures of maintenance platforms. Those structures of maintenance platforms not connected to the building frame are measured and notified separately. The railings of maintenance platforms are measured in linear metres. The lining and surface layers and surface treatment of maintenance platforms and catwalks are measured in square metres.*

**1342 Fireplaces and flues**

Fireplaces and flues comprise on-site built in-room hearths, fireplaces and ovens with protections, fire insulation and flues. Fireplaces and flues are divided into structural elements as follows:

- 1 Fireplace including its shell, fire box and doors
- 2 Flue including dampers
- 3 Fireplace lining and surface treatment including lining's fire insulation

*Fireplaces are measured in pieces and specified by type and material. Flues are measured in linear metres.*

**1343 Other special internal space elements (infills)**

Other special internal space elements include those not included in the above.



## 135 Box units

Lightweight box units can replace several building elements, and may include fittings and building services elements. A box unit is treated as a single entity which is why its internal space elements, inner surfaces, and building fixtures and fittings are considered part of it.

### 1351 Box unit bathrooms

Box unit bathrooms are splash-water proof units intended for washing and bathing that include space dividers, space surfaces, internal fixtures, and space-related services elements. Box unit bathrooms may comprise several rooms.

*Bathrooms are measured in pieces and specified by type, size and fittings. Connecting structures to other building elements are specified and measured.*

### 1352 Box unit refrigeration rooms

Box unit refrigeration rooms are thermally insulated and damp proof box units intended for cold storage that comprise space dividers, space surfaces, internal fixtures and space-related services elements.

*Refrigeration rooms are measured in pieces and specified by type, size and fittings. Connecting structures to other building elements are specified and measured.*

### 1353 Box unit saunas

Box unit saunas are thermally insulated box units intended for taking a sauna bath that comprise space dividers, space surfaces, internal fixtures, and internal services elements.

*Box unit saunas are measured in pieces and specified by type, size and fittings. Connecting structures to other building elements are specified and measured.*

### 1354 Box units for services systems

Box units for services systems are intended to protect building services equipment. They contain the frame and space elements in whole or part as well as internal services elements.

*Box units for building services are measured in pieces and specified by type, size and fittings. Connecting structures to other building elements are specified and measured.*

### 1355 Flue and duct components

Flue and duct components consist of prefabricated installation shafts that comprise the building and space building elements that bound the shaft as well as the mechanical elements of building services.

*Flue and duct components are measured in pieces and specified by type, size and fittings. Connecting structures to other building elements are specified and measured.*

### 1356 Other box units

Other box units include box units that are not part of the above-mentioned ones.

## 2 Services elements

Services elements consist of plumbing, air conditioning, electrical, data transfer and mechanical elements.

### 21 Plumbing elements

### 22 Air conditioning elements

### 23 Electrical elements

### 24 Data transfer elements

### 25 Mechanical elements

Building equipment consist of transportation equipment and space-specific machines and devices.

#### 251 Transportation equipment

Transportation equipment consist of mechanical equipment that serve traffic and materials handling within the building such as lifts, escalators and conveyors. Functional and dimensioning principles of transportation equipment are presented in addition to their quantification.

##### 2511 Lifts

Lifts include the building's internal lifts as well as those serving the spaces installed outside on external walls. The designation "lift" covers the lift cage with fittings, the lift machinery, the control system, protective housing of the machinery or a machine room, non-bearing walls of the lift shaft, shaft equipment, door facings and internal linings, surface elements and surfaces inside the lift cage, and the services elements within the lift and shaft.

*As to building elements, lifts are bounded by the inner surfaces of bearing or compartmentation structures, as to electrical elements to the electric supply system, and as to air conditioning elements to the ventilation ducts of the building.*

*Lifts are measured in pieces specifying different types. The maximum capacity of a lift (persons and kilogrammes), stopping levels, travel speed, machinery configuration, control system and need of machine room, door type and number of doors per floor, fire resistance requirements for doors, as well as the surface elements and fittings of the cage and around the lift doorway are notified.*

**2512 Escalators and conveyors**

Escalators and conveyors consist of internal escalators, moving walkways and goods conveyors with machinery, control systems, railings, linings and mouldings.

*As to building elements, escalators and conveyors are bounded by the inner surfaces of bearing structures, and as to services elements, to the building's building services supply systems. They are measured in pieces and linear metres specifying different types. Their dimensioning principle, width, number of treads, speed, length, machinery configuration, control system and need of machine room, as well as surface elements and fittings are notified.*

**2513 Other transportation equipment**

Other transportation equipment consist of equipment not mentioned above such as hoists, lifting tables, patient and chair lifts, and overhead cranes. Other transportation equipment are specified by use-purpose and type.

**252 Space-specific machines and devices**

Space-specific machines and devices are installations that constitute functional and design entities such as the equipments of an institutional kitchen, a laundry, a swimming pool, a civil defence shelter, etc.

**2521 Kitchen equipment**

Kitchen equipment consist of the equipment of an institutional kitchen designated in a separate kitchen equipment plan such as pots, cookers, ovens, refrigerators and freezers, and serving counters.

*As to building elements, kitchen equipment are bounded by space surfaces, and as to services elements, by building services supply systems. Kitchen equipment are dimensioned on the basis of kitchen type and portion size.*

**2522 Laundry machines**

Laundry machines consist of the machines of institutional laundries such as washers and spin and other dryers.

*As to building elements, laundry machines are bounded by space surfaces, and as to service elements, by building services supply systems. Laundry machinery is dimensioned on the basis of laundry type and the amount and properties of the washed material.*

**2523 Civil defence shelter equipment**

Civil defence shelter equipment consist of the air conditioning equipment for times of crises.

**2524 Pool machines and devices**

Pool machines and devices consist of equipment designated in a separate plan such as water purification devices, pumps, chemical dispensers and pipe systems.

**2525 Other space-specific machines and devices**

Other space-specific machines and devices are those not included in the above.

## 3 Project-related tasks

Project-related tasks consist of project management tasks, construction management tasks, site tasks and design tasks. Project-related task designations are not divided into separate production designations. All designations are independent corresponding to construction and services elements and include all tasks, work performances, equipment, devices and materials required by the designation based on terms of bought services. All tasks serving the realisation of a single construction or services element designation are placed under the the designation in question.

### 31 Project management tasks

Project management tasks consist of construction preparation, site supervision and project administration.

#### 311 Construction preparation

Construction preparation consists of project preparation, design preparation and supervision, preparation and supervision of construction, supervision of handover and commissioning of a construction output or a part thereof, as well as guarantee period management tasks.

##### 3111 Project preparation

Project preparation consists of devising the project plan required to launch design. The project plan describes the activity, presents the space programme, the properties of spaces, the aims of the project and property management, the surveys and studies on the site, surveys related to the plans and official permits required for the project, the project's target price for investment and maintenance costs, a survey on project financing and profitability, and the implementation timetable in accordance with Items C1 and C2 of Task List RAP 95 of Building Information File RT 10-10575. The required amount of the services intended for project design are used in preparing the project plan.

##### 3112 Design preparation and supervision

Design preparation and supervision include selection of the design organisation and designers, preparation of contracts and supervision of design such as supervision of designers, comparison of alternatives in respect of functional and economic goals, cost engineering, acquisition of necessary permits, and presenting grounds for acceptance of designs in accordance with Items C3 and C4 of Task List RAP 95 of Building Information File RT 10-10575.

##### 3113 Preparation for construction

Preparation for construction involves selecting the procurement method, preparation of tender documents, quantity takeoff by the owner, invitation and comparison of tenders, as well as preparation of procurement contracts in accordance with Item C5 of Task List RAP 95 of Building Information File RT 10-10575.

**3114 Supervision of construction**

Supervision of construction involves time-wise, financial and contractual supervision of construction, overseeing additional and alteration works, and implementing procurements for the owner in accordance with Item C6 of Task List RAP 95 of Building Information File RT 10-10575.

**3115 Supervision of handover and commissioning**

Supervision of handover and commissioning involves inspection of structures and equipment systems, acceptance of the building, making final financial reviews as well as preparing use and maintenance documentation in accordance with Item C7 of Task List RAP 95 of Building Information File RT 10-10575.

**3116 Guarantee-period construction management**

Guarantee-period construction management covers guarantee-period inspections, final financial reviews, reimbursement of security, and other guarantee-period tasks in accordance with Item C8 of Task List RAP 95 of Building Information File RT 10-10575.

**3117 Other construction management**

Other construction management tasks are those not included in the above.

**312 Site supervision**

Site supervision involves supervision of construction work proper and technical and mechanical work on site.

**3121 Supervision of construction work**

Supervision of construction work is supervision on site in accordance with the Task Lists of Building Information File RT 16-10746 and Building Information File RT 16-10466 (on civil engineering site supervision).

**3122 Supervision of technical and mechanical work**

Supervision of technical and mechanical work is supervision on site in accordance with the Task List of Building Information File RT 16-10747.

**3123 Other site supervision**

Other site supervision consists of supervision tasks not included in the above.

**313 Project administration**

Project administration consists of administrative tasks, permission-related tasks, taking out construction insurance, as well as other administration of construction management.

**3131 Project administration tasks**

Project administration tasks consist of the establishment and management of a project committee or equivalent, or a company, on behalf of which the project is built. Administration tasks also include ensuring that the owner takes security and liability insurance.

**3132 Building and other permits**

Building and other permits need to be acquired, and fees and tasks charged by authorities paid, for the project to proceed. A building permit is sought in the name of the party undertaking the construction project.

**3133 Construction insurances**

Construction insurances refer to constructor's all risks insurance or equivalent. The insurance is taken in the name of the party undertaking the construction project. The insurance covers the entire site.

**3134 Other administration of construction management**

Other administration of construction management includes administration by the owner in addition to the above.

**32 Design tasks**

Design tasks consist of spatial design, building design, expert tasks of design, and project information tasks.

**321 Spatial design**

Spatial design consists of functional space design and space connections design.

**3211 Functional space design**

Functional space design involves planning of space needs, location of activities, and the project's investment and maintenance programme on the basis of the company's strategy for premises utilisation and activities. Functional space design includes temporal and geometric modelling of spaces. Functional space design also includes charting of the present situation in order to create preconditions for implementing construction design.

**3212 Space connections design**

Space connections design involves determining the functional requirements of connections between spaces, preparation of space connections diagrams, and planning of the activity that takes places within the spaces.

## 322 Building design

Building design tasks consist of making the construction and special drawings and other designs and design documents necessary to produce a building, preparing various sections of the maintenance manual, acquiring expert opinions, and preparing handover documents such as documentation drawings, measurement records and the like. Building design involves principal design, architectural design, structural design, building services design, electrical design and interior design.

### 3221 Principal design

Principal design consists of the design co-ordination and integration tasks stipulated in the Land Use and Building Act as well as project-specifically agreed tasks of the task list.

### 3222 Architectural design

Architectural design consists of the expert tasks of architectural design, preparation of architectural designs at the project's proposal, sketch, working drawing and construction phases, preparation of building permit and other documentation for authorities, as well as supervision of issues related to the architectural design of construction works in accordance with Task List ARK 95 of Building Information File RT 10-10576.

### 3223 Structural design

Structural design involves structural design expert tasks, dimensioning and design of structures at the project's proposal, sketch, working drawing and construction phases, preparation of element and other production and engineering drawings, as well as construction-period supervision of structures in accordance with Task List RAK 95 of Building Information File RT 10-10577.

### 3224 Building services design

Building services design includes building services expert tasks, dimensioning and design of heating, plumbing and other piped systems and air conditioning at the project's proposal, sketch, working drawing and construction phases, and construction-period supervision of implementation of the above-mentioned designs in accordance with Task List TATE 95 of Building Information File RT 10-10579.

### 3225 Electrical design

Electrical design consists of electrical engineering expert tasks, dimensioning and design of electrical and information systems at the project's proposal, sketch, working drawing and construction phases, and construction-period supervision of implementation of the above-mentioned designs in accordance with Task List TATE 95 of Building Information File RT 10-10579.

### 3226 Interior design

Interior design consists of interior design expert tasks, preparation of the proposal, sketch, working and production drawings related to the building elements and movables of internal spaces as well as supervision of the implementation of the above-mentioned designs in accordance with Task List SIS 95 of Building Information File RT 10-10581.

## **323 Expert tasks in design**

Expert tasks in design incorporate partial design solutions into project designs. They include e.g. preparation of geotechnical, acoustical, landscaping, and fire and rescue plans, as well as economic expert tasks, etc.

### **3231 Geotechnical expert tasks**

Geotechnical expert tasks include foundation engineering tasks, conducting of ground investigations and presentation of the results, as well as preparation of a description of the foundation method and necessary work specifications, and construction-period supervision of the implementation of the above plans in accordance with Task List GEO 95 of Building Information File RT 10-10580.

### **3232 Acoustical expert tasks**

Acoustical expert tasks consist of the designs made during the proposal, sketch, working drawing and construction phases of the project, as well as construction-period supervision of acoustics.

### **3233 Landscaping expert tasks**

Landscaping expert tasks consist of making the proposal, sketch, working and production drawings related to the project's site elements and site movables as well as sufficient construction-period supervision of realisation of designs.

### **3234 Fire expert tasks**

Fire expert tasks consist of plans and statements made during the proposal, sketch, working drawing and construction phases (proposal, general, implementation, and construction-element and production phases).

### **3235 Economic expert tasks**

Economic expert tasks consists of calculations and statements made during the proposal, sketch, working drawing and construction phases (proposal, general, implementation, and construction-element and production phases).

### **3236 Other design and expert tasks**

Other design and expert tasks consist of those not included in the above items such as design of specific parts of the building and scale models and model rooms.

## **324 Project information tasks**

Project information tasks consist of copying, database, maintenance manual, and special tasks.

### **3241 Copying**

Copying tasks consist of having copies made at a copying establishment as well as making copies unrelated to project management and design tasks.



**3242 Database tasks**

Database tasks consist of creating and maintaining a project and a property database during the project and their transfer to the owner following project handover. The project database is a project bank used during design and construction. The property database is used to store data needed in the use and maintenance of a property.

**3243 Maintenance manual tasks**

Maintenance manual tasks consist of data gathering, compiling and maintenance during the project and their transfer to the owner following handover, as well as preparation and compiling of use instructions and use guidance.

**3244 Special project information tasks**

Special project information tasks consist of those not included in the above.

## **33 Construction management tasks**

Construction management tasks consist of general construction management and site management. Construction management tasks correspond to the site supervision tasks set out in Sec. 4 of the General Conditions of Contract (YSE 98) except for the procuring of constructor's all risks insurance which is part of project administration.

### **331 General construction management**

General construction management consists of site management, accounting and procurement tasks, corporate functions, as well as other general management and administrative tasks.

**3311 Site management**

Site management consists of setting up and supervising the site management organisation and securing its operating conditions, planning, management and co-ordination of construction tasks, launching, monitoring and supervision of construction, as well as organising and co-ordination of the activity between construction management and site management. Site management is also responsible for establishing a connection between the owner and the site.

**3312 Quantity surveying and calculation tasks**

Quantity surveying and calculation tasks consist of quantity surveying, cost estimating, tender calculations and construction cost monitoring, as well as monitoring of the financial situation of contracts.

**3313 Procurement tasks**

Procurement tasks consist of procuring contracts, materials and implementers of construction and building services tasks in accordance with Task List A4 (Procurement) of Building Information File RT 10-10846, as well as contract negotiations and preparation of contracts.

**3314 Corporate functions**

Corporate functions consist of the contractual and administrative tasks of the organisation responsible for construction management such as tending to contracts, contract penalties and interruption costs, costs of guarantees such as commissions, interest and expenses, corporate insurances, overheads of central administration and preparing for risks.

**3315 Other general construction management**

Other general construction management consists of tasks not included in the above.

**332 Site management tasks**

Site management tasks consist of responsible site management, work planning and supervision, ensuring site work safety, as well as management and supervision of construction work.

**3321 Responsible site management**

Responsible site management performs the tasks set by the Land Use and Building Act, building regulations and authorities for a responsible site manager, such as site management, quality control of construction works, observance of good building practice, site arrangements, co-ordination of construction works, preparation, monitoring and supervision of work schedule, as well as the tasks set for the implementer in occupational safety and health legislation. Responsible site management has the duty to establish a contact between construction supervision and the site. Responsible management of various special sectors performs the tasks set for it by the Land Use and Building Act, building regulations and authorities.

**3322 Work planning and supervision**

Work planning and supervision include work planning that serves construction tasks, co-ordination of construction tasks, processing, inspection and co-ordination of plans, preparation and monitoring of work and work-phase schedules, as well as processing of additional and alteration works.

**3323 Site work safety tasks**

Site work safety tasks include supervision of general site safety as well as other work safety obligations set by occupational safety and health legislation for the implementer in keeping with the Government Decree on construction work safety.

**3324 Supervision of construction work**

Supervision of construction work involves site management and supervision of several construction tasks, as well as other supervisory tasks, not included in the above, required by legislation, authorities, the project organisation, or the owner.

## 34 Site tasks

Site tasks consist of site services for the entire site as well as site equipment operations. Site tasks serve indirectly the building of construction and services elements and directly the site or a part of it.

### 341 Site services

Site services cover site huts, site area, supplies and energy, site heating and drying, site cleaning and sheltering, site guarding, as well as other site services.

#### 3411 Site huts

Site huts consist of site-serving office facilities, workers' welfare facilities, work shelters, storage facilities and workshops with their equipment, and other similar facilities. The designation covers transportation, erection and demolition, rents, repairs, supplies and energy, as well as hut furniture. A site hut includes office supplies, office equipment, site computer hardware, connections and maintenance, telephone and postal costs, and copiers.

#### 3412 Temporary installations

Temporary installations consist of site huts and roads serving site work, construction-period water supply, sewage and heating pipes, temporary installations serving site electrification, site fencing, site signage and site rents.

#### 3413 Auxiliary construction work

Auxiliary construction work consists of general surveying, building protections, snow and ice clearance, traffic control, and site tests and reviews and the like that serve performers of both construction and building services tasks.

#### 3414 Energy and supplies

Energy and supplies consist of electricity, water, district heat, steam, gas and related works and procurements.

#### 3415 Site heating and drying

Site heating and drying covers heaters, dryers and warm air blowers serving construction and services task as well as related works and procurements, energy and supplies.

#### 3416 Site cleaning and protections

Site cleaning covers maintenance of site facilities, final cleaning, management of wastes to be transported from site, as well as consumables that cannot be placed under designations such as protective cardboards and plastics and cleaning agents.

**3417 Site guarding**

Site guarding consists of perimeter guarding, access control, site camera monitoring, and an intrusion alarm system.

**3418 Other site services**

Other site services consist of those not included in the above.

**342 Site equipment operations**

Site equipment operations consist of separately agreed lifting and transporting tasks that serve construction and building services, erection of scaffoldings, site transports, and other related tasks.

**3421 Lifting and transporting equipment operations**

Lifting and transporting equipment operations are realised using separately agreed equipment that serve construction and building services tasks such as tower cranes, mobile cranes, building hoists and reach stackers. The designation covers the foundation, reinforcement and other earth works required by lifting and transporting equipment; laying, maintenance and dismantling of the track for the tower crane and transport of the crane to the site, its operation, servicing, erecting and dismantling; operation of mobile and other similar cranes; erection, on-site servicing, dismantling and operation of building hoists; as well as the operation and servicing of hoists and reach stackers.

**3422 Scaffolding work**

Scaffolding work covers the erection, transport, use and dismantling of scaffolds and similar receiving platforms serving those performing various construction and building services tasks.

**3423 Site transports**

Site transports serve several performers of construction and building services tasks excluding transportation of building materials and products. They include e.g. pick-up transports of small items, transports of machinery and equipment, and supply transports to site.

**3424 Other site equipment**

Other site equipment consist of equipment serving several work teams not included in the above.

# 4 Property management tasks

## 41 Site tasks

Site tasks consist of plot tasks, establishing service connections, and site development.

### 411 Plot tasks

Plot tasks consist of acquiring and renting plots, paying related stamp duties and capital transfer and other taxes, determining whether there are mortgages or other encumbrances on the plot, as well as special plot tasks.

#### 4111 Plot acquisition and renting

Plot acquisition and renting involve certain tasks, obligations, agreements and costs that need to be tended to.

#### 4112 Taxes and encumbrances

Taxes and encumbrances consist of the capital transfer and other taxes pertaining to plot acquisition as well as encumbrances on the property and related tasks.

#### 4113 Special plot tasks

Special plot tasks include surveying and parcelling of the plot as well as other plot tasks not included in the above-mentioned ones.

## 412 Connections

Connections are connections to buildings and networks as well as special connections.

### 4121 Connections to buildings

Connections to buildings consist of connections to facilities other than the building to be constructed. They include connections to car parks, club rooms, and civil defence shelters. The designation covers also related tasks, agreements, obligations and compensations.

### 4122 Connections to networks

Connections to networks are connections to networks outside the project to be built. They include district heating, district cooling, water supply and sewerage, electricity, gas and IT connections. IT connections include e.g. connections to telephone, cable and data networks.

### 4123 Other connections

Other connections consist of those not included in the above.

## **413 Site development**

Site development consists of property development and planning.

### **4131 Property development**

Property development is the development of a site or existing buildings for a new use and related tasks and agreements.

### **4132 Planning**

Planning consists of drawing a master and a town plan as well as related tasks, agreements and obligations.

## **42 Financing and marketing**

Financing and marketing consist of financing and marketing tasks.

### **421 Financing tasks**

Financing tasks consist of acquiring financing, incorporation tasks, and other financing tasks.

#### **4211 Acquiring financing**

Acquiring financing covers the tasks and costs of raising and drawing construction-period loans as well as paying the interest and other payments on the loans. Loan processing and administration costs include capital transfer taxes, commissions and bank charges.

#### **4212 Incorporation tasks**

Incorporation tasks consist of incorporation of companies that serve the project by preparing their articles of association and registering them, as well as related tasks, agreements and expenses.

#### **4213 Other financing tasks**

Other financing tasks consist of ones not mentioned above.

### **422 Marketing tasks**

Marketing tasks consist of the marketing of housing and business premises as well as other marketing.

#### **4221 Marketing of housing**

Marketing of housing consists of the tasks performed, agreements signed and expenses accrued in marketing, selling and renting housing.

#### **4222 Marketing of business premises**

Marketing of business premises consists of the tasks performed, agreements signed and expenses accrued in marketing, selling and renting business premises.

#### **4223 Other marketing**

Other marketing consists of marketing not included in the above.

# 5 User tasks

## 51 Space equipment

Space equipment consist of movables, business devices and machines, as well as special operational equipment.

### 511 Movables

Movables consist of the movable furniture and equipment, as well as special movables, brought in by the space user which are needed in the business.

#### 5111 Movable furniture

Movable furniture consist of pieces placed in the spaces considered movable property independent of how they may be attached. Movable furniture is not considered an appurtenance to the property and may be removed if the user moves out. Movable furniture include e.g. desks, office chairs, shelving and cabinetry, as well as pictures and the like hung on walls.

#### 5112 Movable equipment

Movable equipment consist of user-specific equipment considered movable property such as writing and note-taking implements, desk pads, as well as other office or production supplies.

## 512 Business devices and machines

Business devices and machines consist of devices and machines, or equipment entities including designs, that are not considered appurtenances of the property.

### 5121 Business devices

Business devices consist of movable devices such as computers, photocopiers and printers.

### 5122 Business machines

Business machines consist of equipment entities required by the process whose acquisition and taking into use require planning. They include industrial equipment, maintenance equipment and telephone exchanges.

## 52 Maintenance of operation

Maintenance of operation involves temporary activity and commissioning.

### 521 Temporary activity

Temporary activity requires construction-period temporary spaces, as well as temporary constructions and equipment to maintain the activity.

#### 5211 Temporary spaces

Temporary spaces consist of spaces purchased or rented for maintaining operations during construction as well as the tasks, agreements and expenses related to their taking into use.

#### 5212 Temporary constructions and equipment

Temporary constructions and equipment consist of temporary constructions, equipment and installations required for maintaining operations during construction as well as the tasks, agreements and expenses related to their taking into use.

#### 5213 Other temporary activity

Other temporary activity includes activity required to maintain the operations not part of the above, such as personnel-related tasks.

### 522 Taking into use

Taking into use consists of moving into the premises to be built, user training for spaces and equipment, as well as use instructions and other tasks which enable the space user to use the premises as planned.

#### 5221 Moving in

Moving in involves tending to the tasks, agreements and costs related to moving into the premises to be built. The tasks also include those related to launching operations.

#### 5222 User training

User training consists of guiding, training and informing users about the properties of the building to be built.

#### 5223 Other taking into use

Other taking into use involves tasks not mentioned above such as personnel-related tasks.



# 6 Project provisions

## 61 Document and price level changes

Document and price level changes are included in the classification only for project accounting purposes. The designation covers expenses due to changes in documents and price level during design and construction.

### 611 Document changes

Document changes consist of design and construction changes.

#### 6111 Design changes

Design changes are changes made to design documents as a result of contradictions or errors in designs, changes required by authorities, as well as construction-period changes to designs required by activities. Changes are documented in final documents on completion of construction.

#### 6112 Construction changes

Construction changes are changes in the performance of construction tasks due e.g. to work methods, materials or conditions.

### 612 Price level changes

A price level change is a predicted design- or construction-period change in price level, accounted for in investment plans, compared to investment calculations, target price or cost estimate.

#### 6121 Price level change during design

A price level change during design is a change in the level of construction prices due to economic or other trends, which is accounted for in budgeting as a price-level provision.

#### 6122 Price level change during construction

A price level change during construction is a change in the level of construction prices due to economic or other trends, which is accounted for in budgeting as a price-level provision.

#### 6123 Other price changes

Other price changes are those not included in the above which are accounted for in budgeting. Preparation for them may be necessary e.g. in the case of an exceptionally large or complicated building project compared to general construction activity.

## 62 Other provisions

Other provisions consist of risk provisions or specific provisions for which preparations have to be made, and which have to be considered in the project's investment calculations, target price or cost estimate.

### 621 Risks

Risks consist of location, condition and other risks.

#### 6211 Location risks

Location risks result from the exceptional location of a construction site which impedes the carrying out of construction tasks. Such sites may be at long transport distances, on an island, or otherwise surrounded by water bodies.

#### 6212 Condition risks

Condition risks result from climatic conditions, ground conditions or the neighbourhood.

#### 6213 Other risks

Other risks are those not included in the above. They include costs due to project delays or loss of profit.

### 622 Special provisions

Special provisions consist of the procurement-method provision and other special provisions.

#### 6221 Procurement-method provision

The procurement method provision is a cost-level provision related to the building procurement method.

#### 6222 Other special provisions

Other special provisions consist of those not included in the above.

# **Building 2000 Production Classification**



# Building 2000 Production Classification

Production classification describes the various trades or procurements of building. In the following there are the titles of the production classification.

## **1 Demolition and Preservation**

**11 Construction Element Demolition**

**12 Hazardous Materials Removal**

**13 Moving of Buildings and Structures**

## **2 Earth Construction**

**21 Soil Stabilisation and Remediation**

**22 Earth Construction**

**23 Rock Construction**

**24 Foundation Construction**

**25 Building Pit Drainage**

## **3 Site Construction**

**31 Stone Paving**

**32 Wood Paving**

**33 Asphaltting**

**34 Special Site Surfacing**

<b>35</b>	<b>Green Areas Construction</b>
<b>36</b>	<b>Outfitting of Site</b>
<b>4</b>	<b>Concrete Construction</b>
<b>41</b>	<b>In-situ Concrete Construction</b>
<b>42</b>	<b>Precast Concrete Construction</b>
<b>43</b>	<b>Special Concrete Construction</b>
<b>44</b>	<b>Cast-in situ screeding</b>
<b>5</b>	<b>Masonry</b>
<b>51</b>	<b>Brick and Block</b>
<b>52</b>	<b>Natural and Artificial Stone</b>
<b>53</b>	<b>Roof Tile Laying</b>
<b>54</b>	<b>Tiling</b>
<b>6</b>	<b>Metal Construction</b>
<b>61</b>	<b>Metal Frame construction</b>
<b>62</b>	<b>Sandwich Panel Construction</b>
<b>63</b>	<b>Prefabricated Metal Component</b>
<b>64</b>	<b>Complementary Metal Construction</b>
<b>65</b>	<b>Sheet Metal</b>

- 7      Carpentry**
- 71      Timber-Frame
- 72      Prefabricated Wood Panel
- 73      Prefabricated Wood Component
- 74      Boarding and Facing
- 75      Wood Paneling
  
- 8      Glass Construction**
- 81      Glazing
- 82      Special Glazing
  
- 9      Insulation and Proofing**
- 91      Thermal and Acoustic Insulation
- 92      Waterproofing
- 93      Fire Insulation
- 94      Jointing and Sealing
  
- 10     Surface Finishing**
- 101     Plastering
- 102     Leveling
- 103     Painting and Wallpapering
- 104     Floor and Wall Covering Installation

- 105    Composition Flooring Installation**
- 106    Other Surface Finishing**
- 107    Finish Moulding Installation**

## **11    Fitting out**

- 111    Fittings and Locking**
- 112    Fixed Furniture**
- 113    Equipment**
- 114    Accessories**