

Regulations concerning to the construction

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Department of construction technology and management

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Controlling of construction technology

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Rules and prescriptions

Hierarchy of law

Regulations in construction

Standards

Controlling

Introduction

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Rules and regulations for construction

**WHAT KIND OF REGULATIONS ARE APPLIED?
WITH WHAT PURPOSE?**

planning material

protection



standards construction

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Detailed description: This slide features a central architectural cross-section of a house. The drawing is divided into two halves by a vertical dashed line. The left half shows the interior of the house, including a chimney, a window, and a door. The right half shows the exterior, including a gabled roof with a brick chimney, a window, and a door. The drawing is surrounded by four labels: 'planning' at the top left, 'material' at the top right, 'protection' on the left side, and 'standards' at the bottom left. The word 'construction' is written at the bottom right. A small 'ss' label is visible near the foundation line. The slide is framed by a black border with a vertical grey bar on the left containing the text 'Rules and regulations for construction' and a small box with the number '1'. At the bottom, there is a black bar with the text 'Vidovszky – BUTE – Department of Construction Technology and Management'.


1

Rules and regulations for construction

**WHAT KIND OF REGULATIONS HAVE YOU GOT
AT YOUR HOME COUNTRY?**

planning material

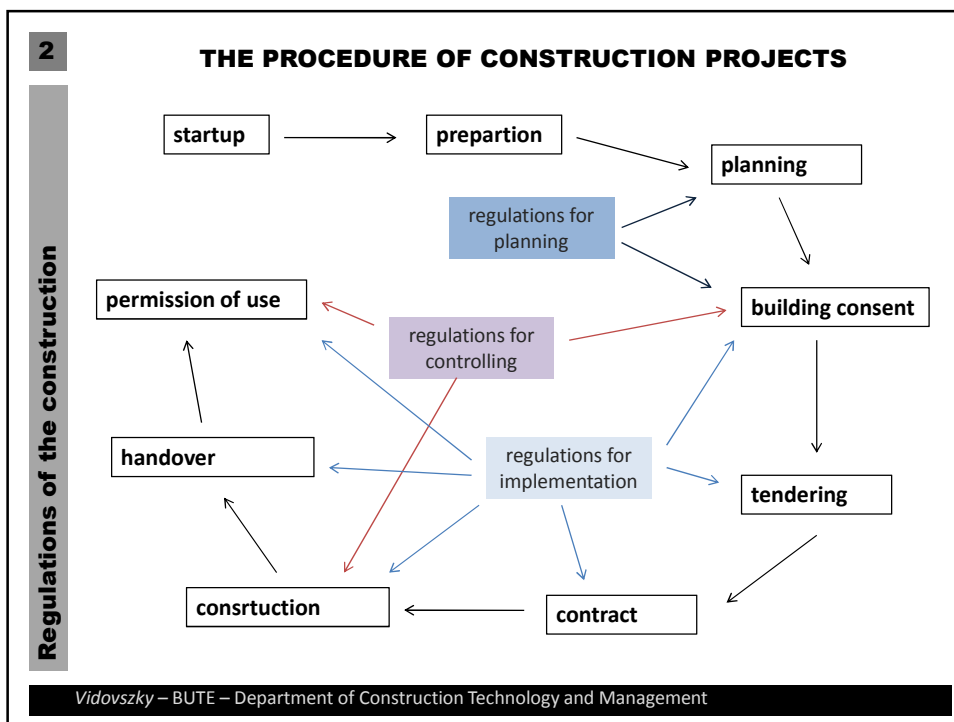
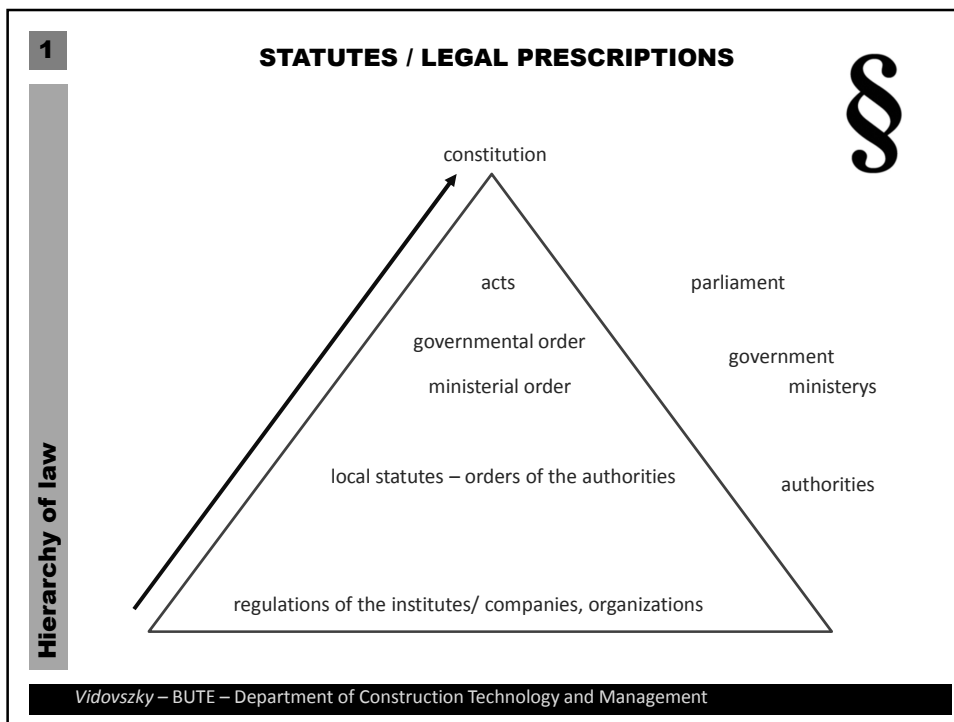
protection



standards construction

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Detailed description: This slide is identical in layout and content to the one above. It features a central architectural cross-section of a house with labels 'planning', 'material', 'protection', 'standards', and 'construction'. The slide is framed by a black border with a vertical grey bar on the left containing the text 'Rules and regulations for construction' and a small box with the number '1'. At the bottom, there is a black bar with the text 'Vidovszky – BUTE – Department of Construction Technology and Management'.



Regulations for planning

2

ARCHITECTURAL PLANNING PROCESS

WHAT IS REGULATED?

Limitations:

- building height
- gross built area
- minimum green surface
- functional limitations – building areas

Heritage protection

- world heritage sites
- national listed monuments
- local listed buildings
- protected heritage area

Technical requirements:

- use performances (light, air, etc.)
- energy consumption
- endurance requirements
- material quality

Safety rules

- fire protection
- safeguarding
- work and use safety
- load bearing capacity
- weather resistance

Process

- documentation requirements
- process protocol

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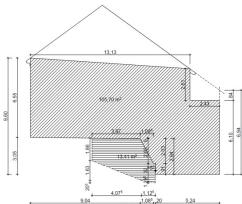
Regulations for planning

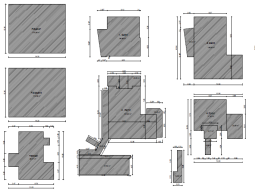
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LIMITATIONS

Limitations:

- building height
- gross built area
- minimum green surface
- functional limitations – zones of utilization
 - urban (U1-Ui)
 - industrial
 - agricultural





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TECHNICAL REQUIREMENTS

Regulations for planning

use performances

- light (windows, artificial light)
- air
- stairs
- room areas
- universal design (for disabled people)
- parking spaces
- standards for utilization (special functions)

energy consumption

- heat insulation
- thermal envelop
- building installation system
- energy consumption of the building/
of the equipment /
of the production of the applied material

material quality
(performance)

- certified product (by the producer / supplier)

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PROCEDURE FOR BUILDING CONSENT

Regulations for planning

documentation requirements

- What kind of documentations are required? In what form?
- What kind of consent/ permission are required?
- What kind of drawings are required? In what form?

process protocol

Which authority is responsible for what?
What institutes/offices have to be involved?
What is the prescribed timing?
What are the cost?
Who is responsible for the controlling?

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SAFETY REQUIREMENTS

Regulations for planning

- fire protection
 - materials
 - structures
 - fire extinguishing equipments
 - emergency evacuations
- work and use safety
 - health protection
 - built environment, ergonomics
- load bearing capacity
 - standards

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HERITAGE PROTECTION

Regulations for planning

•protected heritage area

UNESCO world heritage sites

blue shield (protected even in case of war)

national listed monuments

local listed buildings

partial protected

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REGULATIONS FOR ARCHITECTURAL PLANNING IN HUNGARY (EXAMPLES)

acts e.g.:

- 1997 LXXVIII. Act – On the build environment
- 2001 LXIV. Act – On the protection of the cultural heritage

governmental orders e.g.:

- 253/1997 governmental order – On the national requirements of construction and shaping of settlements

ministerial orders e.g.:

- 37/2007 Order of the Ministry for Authorities – On the procedures of the local authorities and the content of the architectural documentation
- 28/2011 Order of the Ministry for Home Affairs – On the regulation of fire protection

local orders e.g.:

- 47/1998 Order of the General Assembly of Budapest City – On the frame regulations about the building process and the urban shaping of Budapest

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REGULATIONS FOR CONSTRUCTION PROCESS

Technical requirements:

- environmental requirements (waste management)
- use of standards

Safety rules

- fire protection
- work safety
- environment protection

Process

- documentation requirements
- process protocol
- protocol of controlling

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CONSTRUCTION PROCESS
(technical requirements)

Regulations for the construction

construction management

- environmental requirements (lifecycle of the applied materials)
- temporary structures (standards, duration)

material quality

- use of standards
- certifications
- performance

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CONSTRUCTION PROCESS

Regulations for the construction

documentation requirements

- construction logbook
- to provide certifications by the producers or the suppliers
- statement of completeness
- permission of use

process protocol

- tender
- contract
- site arrangement – territories of responsibility
- cooperation with quality surveyor/client/architect
- hand over process

control protocol

- application of standards
- controlling methods
- quality surveyor
- to demand certifications from the producers or the suppliers

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SAFETY REGULATIONS CONSTRUCTION PROCESS

Regulations for the construction

environmental tasks

- treatment of chemicals / waste management

fire protection

- on the site

work safety

- protective equipment - PPE (mechanical/chemical harm/radiation)
- organizational tasks (site management)

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REGULATIONS FOR CONSTRUCTION PROCESS IN HUNGARY (EXAMPLES)

Regulations for construction

acts:

- 1997 LXXVIII. Act – On the build environment
- 2001 LXIV. Act – On the protection of the cultural heritage
- 2011 CVIII. Act – On the public procurement

governmental orders:

- 191/2009 governmental order – On the construction process

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STANDARDS

DEF:

A **technical standard** is an established norm or requirement. It is a formal document that establishes uniform engineering or technical criteria, methods, processes and practices.

Standards

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HIERARCHY OF STANDARDS

- for a product
- for a procedure

The diagram is a pyramid with an upward-pointing arrow on its right side. The levels from bottom to top are:

- local standards** (at the base)
- company standards** (second level)
- Guidelines (used by a group of company)** (third level)
- national standards** (fourth level, containing a blue oval with the text: ANSI, NS, TSE, SA, MSZ, DIN, ÖN, BS)
- international standards** (at the peak, containing the text: CE, EN)

Standards

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CITATION OF THE STANDARDS
in regulations

- in general -> all the concerning standards are prescribed
- with name -> a specific standard (the latest version) is compulsory
- with name and date -> a specific standard (the cited version) is compulsory

Standards

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THE PRINCIPAL OF APPLICATION OF STANDARDS

- the use of the standards is *elective* –BUT only positive alteration is accepted

↓

to ensure the chance for development

Standards

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STANDARDS OF THE EUROPEAN UNION

Standards

National standards

Have to be harmonized with the EU regulations (standards)!

↓

If there are a harmonized standards and it is applied, the conformance mark can be applied...

...on the market in the European Economic Area (EEA)

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CONFORMANCE MARK


Certifications

CE = conformance mark

The manufacturer on his sole responsibility declares, that the product met the EU consumer safety requirements.

Building construction

The building is met with the EU consumer safety requirements if **all used material** is met with the EU consumer safety requirements :

 are marked with CE marking.

or

 are uniquely certified.

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UNIQUE CERTIFICATIONS

International certifications e.g.:

ETA = European Technical Approval


in the basis of ETAG = European technical approval guideline

by EOTA = European Organization for Technical Approvals

National certifications e.g.:

EME = Építőipari Műszaki Engedély
(Hungarian national certification by the ÉMI institute)



Certifications

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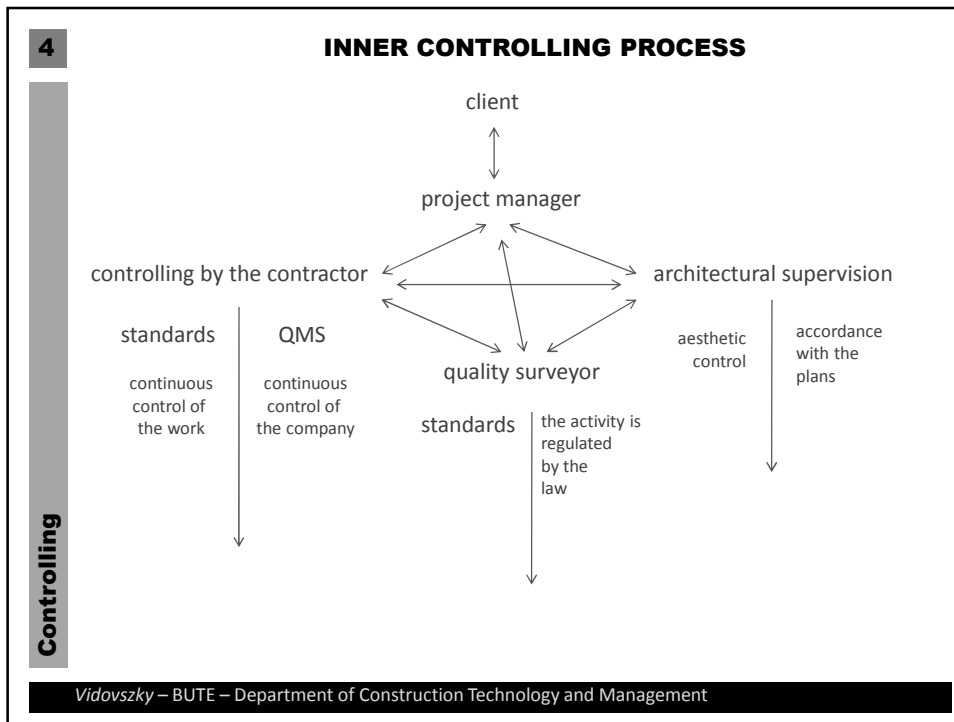
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CONTROLLING PROCESSES

<i>participant</i>	<i>contolling process</i>	<i>contolling aspect</i>	
client	quality surveyor	every aspect	INNER CONTROLLING
designers	architectural supervision	aesthetical quality/ accordance with the plan	
contractor	daily controlling routine	every aspect	
authority	before construction,after hand over	accordance with the plan	OUTER CONTROLLING
state	during the construction	every legal aspect	

Controlling

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QUALITY SURVEYOR
(supervisor)

The education, the competences and the activity of the quality surveyor is legally prescribed .

Education:

- intermediate education (+ 5 year practice)
- BSc or higher degree (+ 3 year practice)

+ 6 months education as quality surveyor - exam

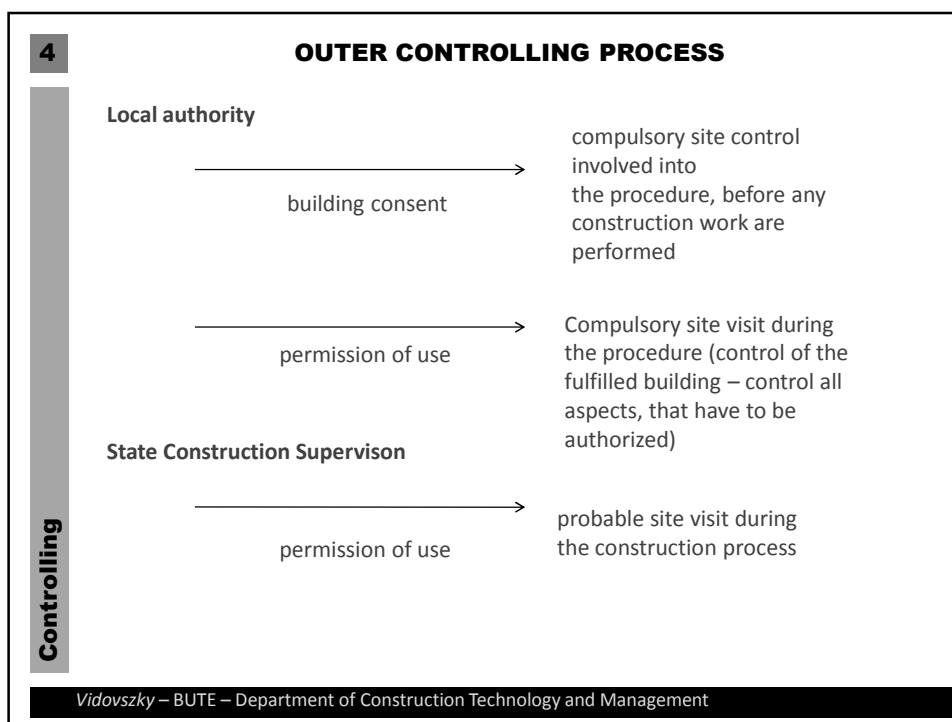
Competences: trained in building construction and building law

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4	QUALITY SURVEYOR (duties)
	<p>1. ensure professionalism</p> <ul style="list-style-type: none">•control of the plans in accordance with the standards and the legal prescriptions•proposing alteration of the plan for the client, if it is technically or financially reasonable•control of the assignment of the building•ensure the prosecution of the prescribed tests (e.g. soil mechanics)•controlling quality prescribed by the standards
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4	QUALITY SURVEYOR (duties)
	<p>2. following and controlling the construction work</p> <ul style="list-style-type: none">•continuous control of the construction logbook•note all failures (deficiencies and faults) in the construction logbook•controlling hidden structures and volume of the completed work before getting covered (e.g. reinforcement)•control of the conformance of the applied material (CE, etc.)•controlling volume of the completed work•informs the client if the completed work is according to the contract (volume, standards, prescriptions, etc.) – (Is it suggested for the client to pay all the bills or not?)•take part in the hand over process
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SOURCES

Sources

Wikipedia http://en.wikipedia.org/wiki/CE_mark

Neszmélyi L. (szerk.): Építési műszaki ellenőri szakképzés. Szabványügyi ismeretek. Minőségügyi és minőségirányítási ismeretek. Terc, 2011.

Neszmélyi L. (szerk.): Építési műszaki ellenőri szakképzés. Jogi ismeretek. Munkavédelem. Tűzvédelem. Terc, 2011.

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