



CTU in Prague
Faculty of Civil Engineering
Department of Building Structures

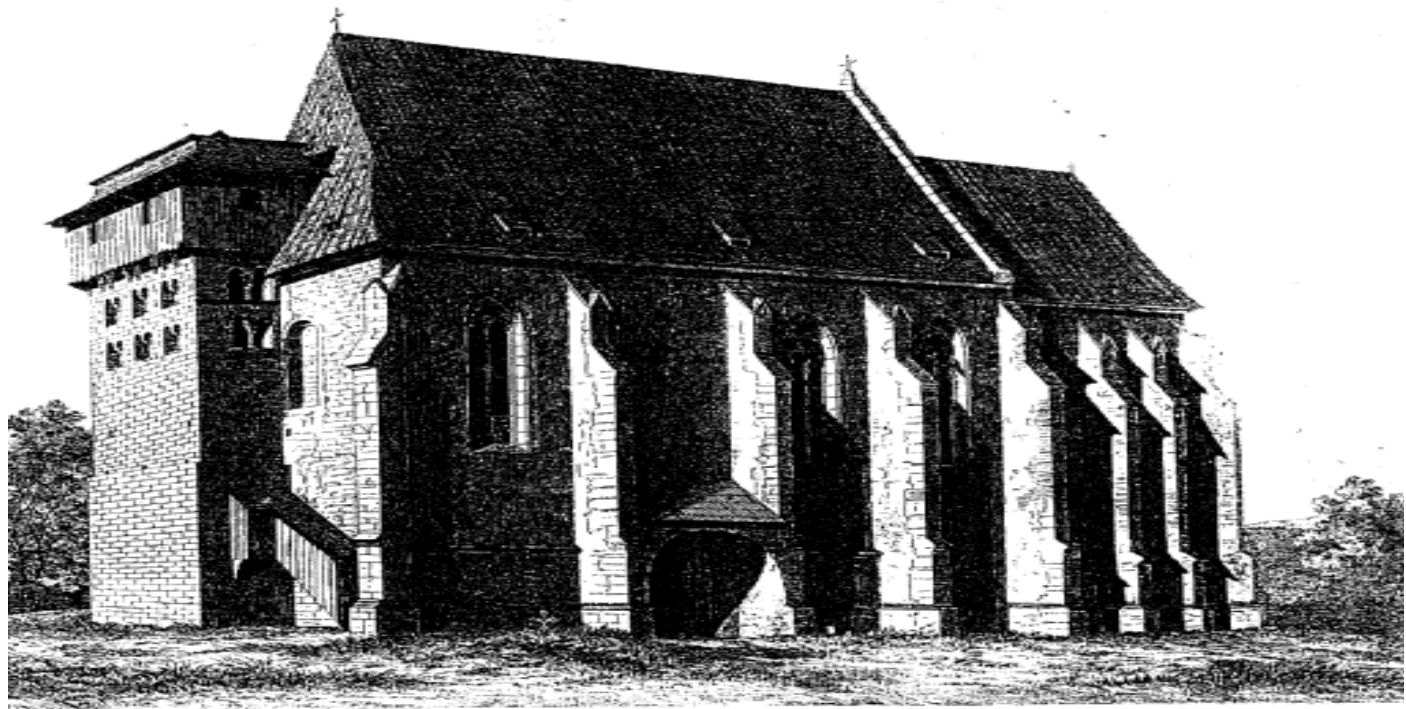
Restoration of masonry

Church of St. Giles in Milevsko

Presentation was created with the kind support of Ministry of Education Grant FRVŠ
2960/2011.

History of the object

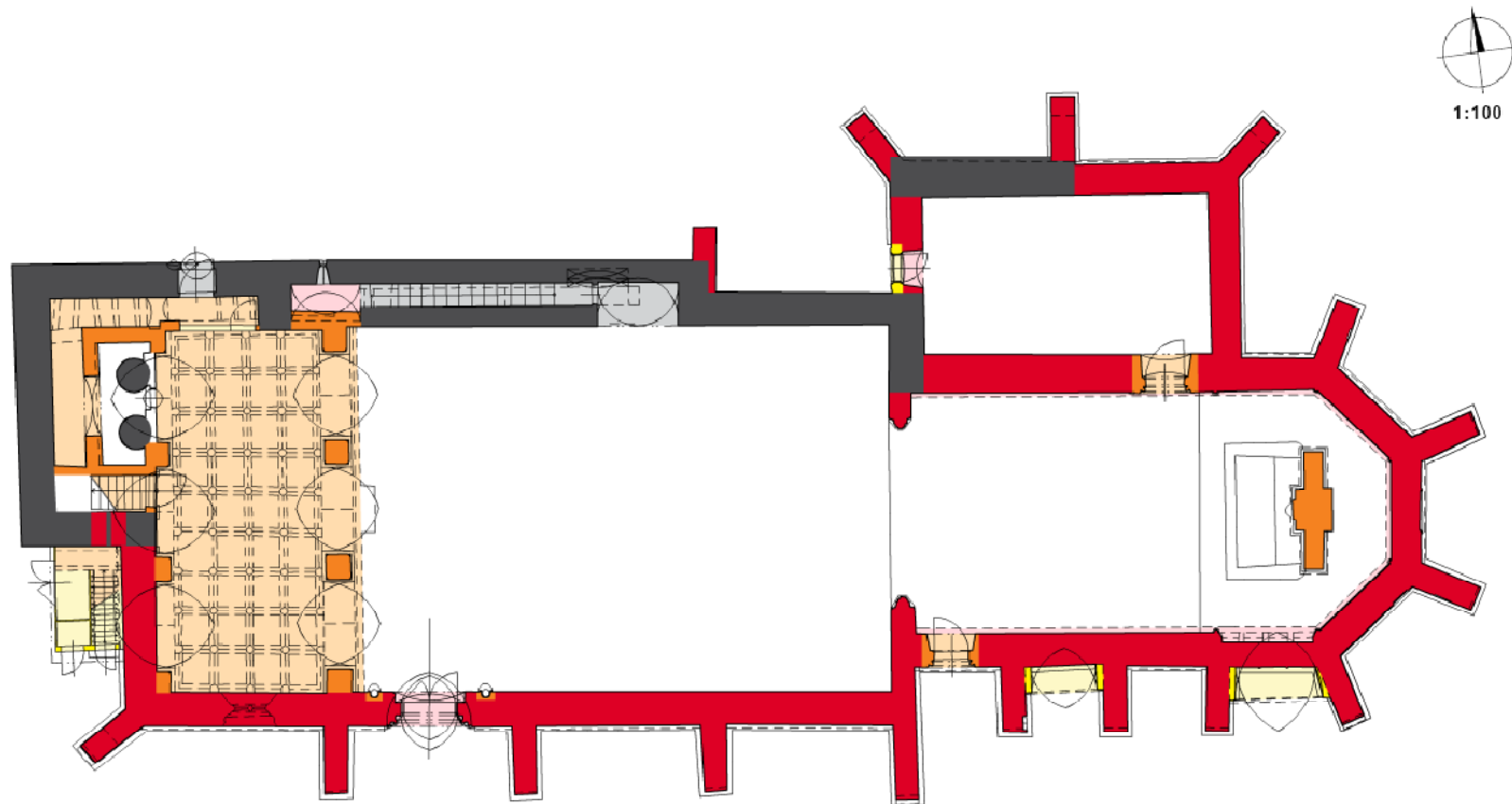
- ▶ 1407 – rebuilding lead by master Staněk, Gothic building was originally built into the smaller Romanesque church



Chrám sv. Jilji v Milevsku.

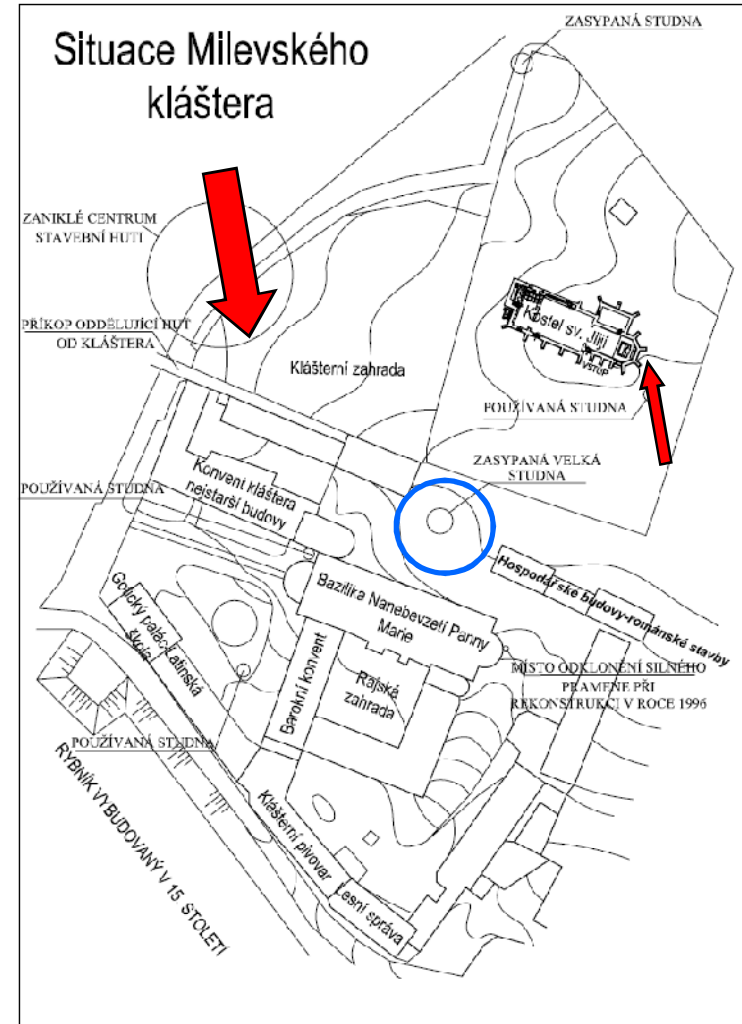
History of the object

- ▶ unique structure composed of two styles blended together (from Romanesque time the northwest wall and „westverk“ preserved)



History of the object

- ▶ 11 to 12 century.
 - ▶ system of deep foundation wells of different sizes and depths
 - ▶ position refers to the purposeful, coherent deployment



Description of defects

- ▶ Masonry defects

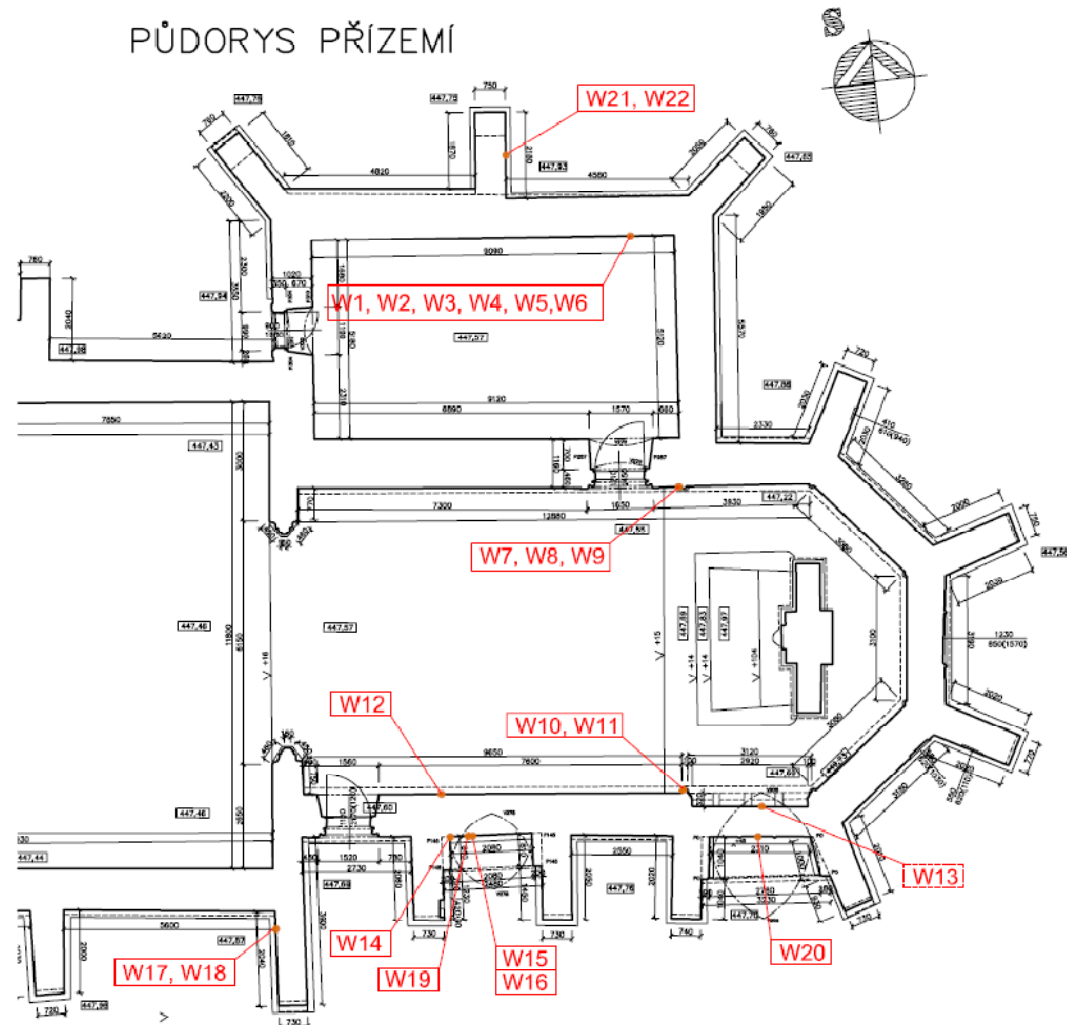


Description of defects



Description of defects

- ▶ Diagram of measurement of moisture in the masonry



Analysis of defects

- ▶ high groundwater level
- ▶ the object is so called „drowned“ in not compressed earthworks
- ▶ paving of polished granite into the cement mortar
- ▶ roof structure has no effective system of rainwater drain
- ▶ inappropriate moisture regime of internal space, especially the impossibility of systematic and regular ventilation

Restoration of defects

- ▶ Design of restoration of humid masonry
 - ▶ restore the original drainage system and modification of the terrain around the church
 - ▶ restoration using ventilated air channels in the outer and inner peripheral face of the masonry
 - ▶ making downpipes and effective rainwater drainage
 - ▶ restoration of surface treatments - interior flooring, stone masonry and plasters

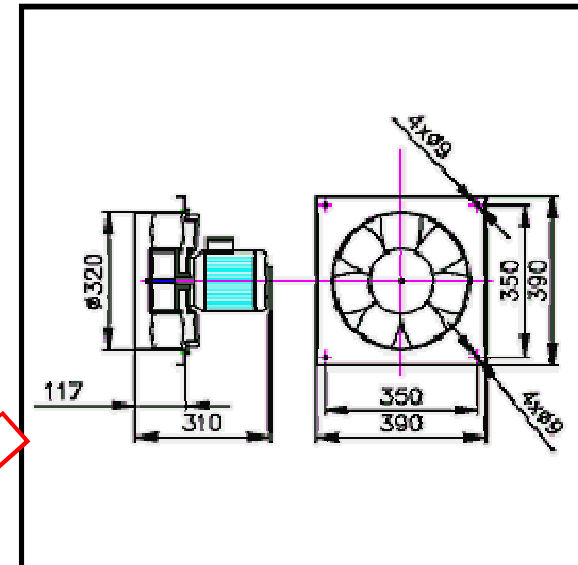
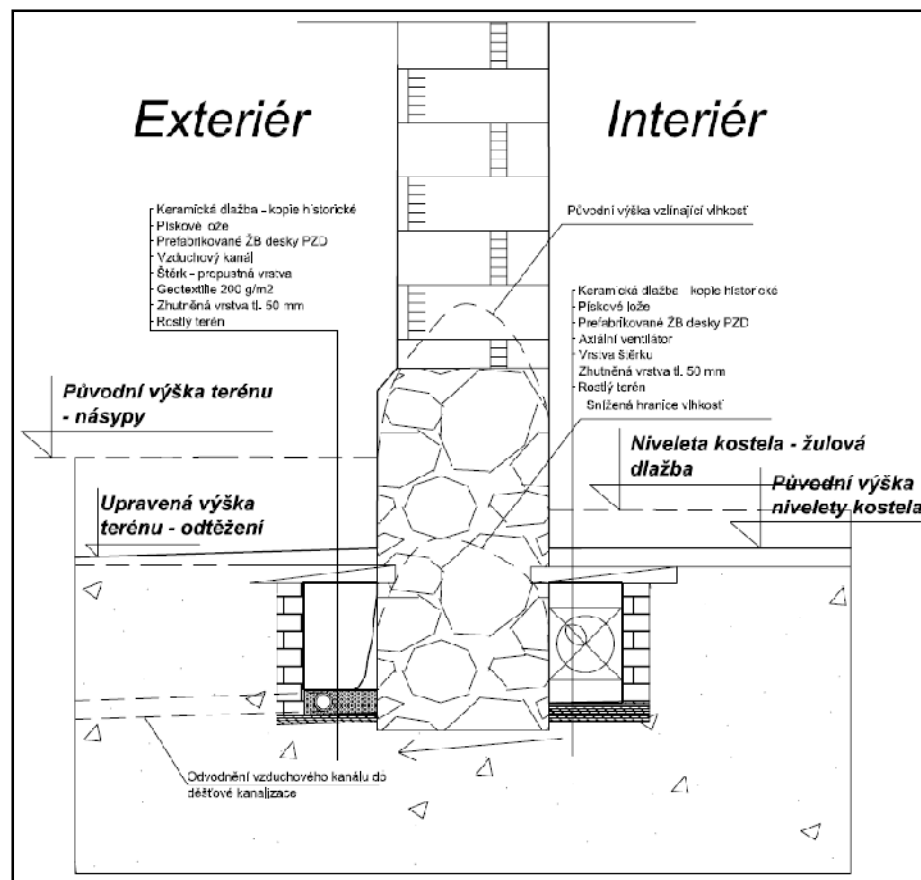
Restoration of defects

- ▶ 1) restore the original drainage system and modification of the terrain around the church



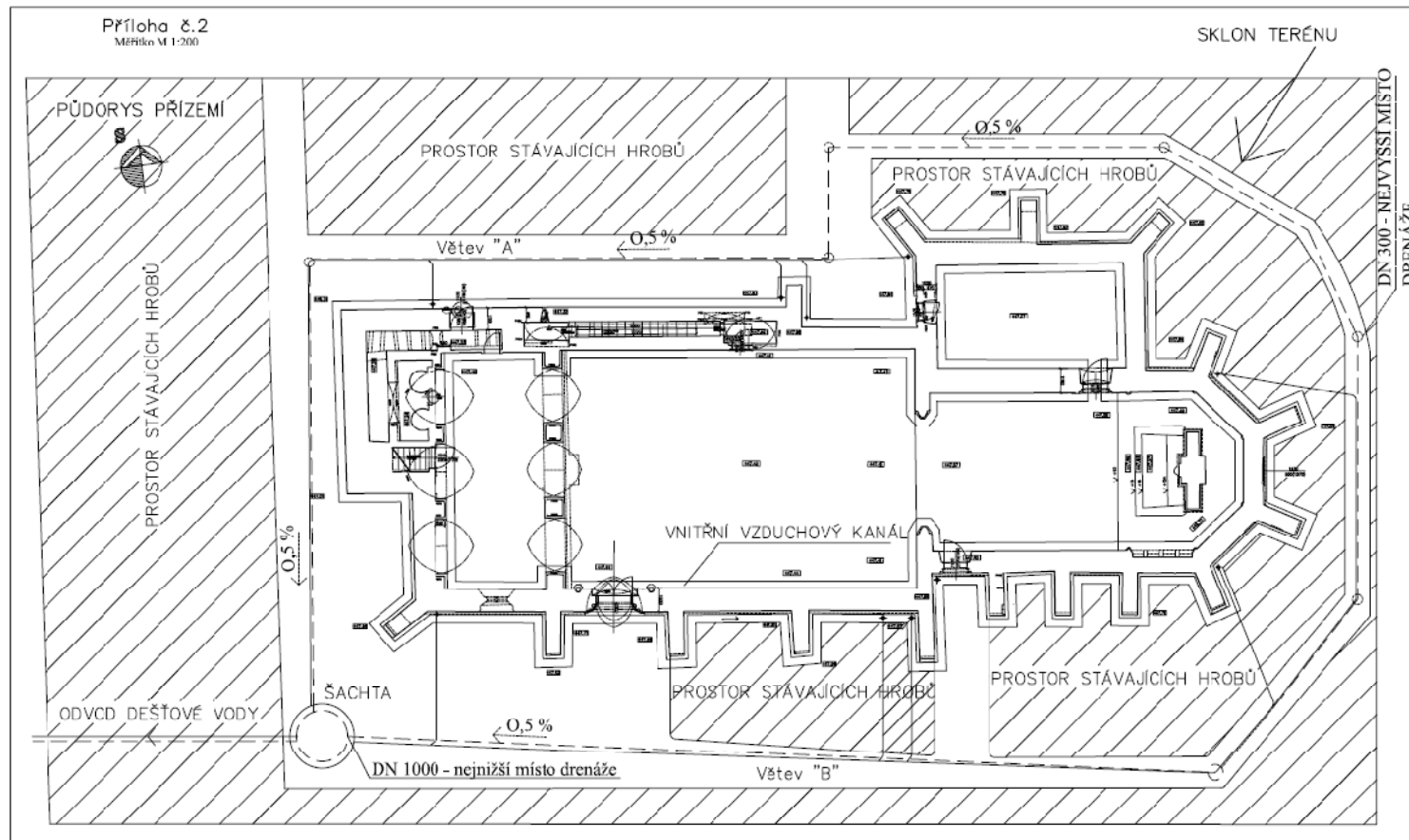
Restoration of defects

- 2) restoration using ventilated air channels in the outer and inner peripheral face of the masonry



Restoration of defects

- 3) making downpipes and effective rainwater drainage



Restoration of defects

