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# CHAPEL

*Учебное пособие*



Нижний Новгород  
2024

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## CHAPEL

Утверждено редакционно-издательским советом университета  
в качестве учебного пособия

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Instructions for completing a course project in the discipline “Architectural Design” are given, the content and sequence of implementation of the course project are considered, recommendations and requirements for designing a structure with minimal functionality are given using the example of “Chapel in the Park” or “Chapel in the Square”.

Intended for students at NNGASU to complete a course project in the field of study 03.07.01 Architecture.

A methodology for designing a chapel has been developed. Urban planning, functional, compositional aspects of chapel design are consistently considered. Examples of graphic execution of drawings in ink and color wash are given, various techniques for identifying the plasticity, material and texture of a structure are considered. The sequence of implementation of the educational project is revealed. Examples of educational projects completed at the Department of History of Architecture and Fundamentals of Architectural Design are presented.

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## 1. Introduction

A chapel is a building intended for public and private prayer. Unlike a temple, a chapel is not designed for the celebration of liturgy and therefore does not have an altar (liturgy - Greek “public service” - a divine service during which the sacrament of communion is performed).

The word «chapel» - a small Christian religious building - comes from the service of the “hours”. The word “hours” in the Book of Hours (the church liturgical book) refers to the services of the first, third, sixth and ninth hours of the day. The first place among liturgical books is occupied by the Gospel, the Apostle and the Psalter. These books are taken from the Holy Scriptures - the Bible, and therefore are called sacred and liturgical. Then follow the books: Service Book, Book of Hours, Trebnik, etc. Book of Hours is a book that serves as a guide for readers and singers in the choir. The Book of Hours contains the order of all daily services, except the liturgy. In ancient times, the services of the hours in monasteries and hermits were performed separately, at the appointed time for each of them. But then, for the convenience of believers, they were combined into three services: evening, morning and afternoon. According to the Reference Theological Dictionary of Church History, «The hours are daily services. Of these, the service of the 1st hour is usually connected with Matins, the service of the 3rd and 6th hours with the Liturgy, and the service of the 9th hour with Vespers. In the service of the 1st hour, the taking of the Lord to Pilate is remembered, in the service of the 3rd hour - the Descent of the Holy Spirit on the Apostles, in the service of the 6th - the crucifixion of Christ, in the service of the 9th hour - the death of Christ ...» [1].

## 2. Historical reference. The emergence and development of chapels

The most ancient purpose of memorial signs in the form of a cross or chapels (without internal space) were their arrangement above the early Christian catacomb (underground) church to mark the place of the altar, over the grave of a martyr, or to mark the entrance to an underground cemetery. The first simple chapels appeared among the Slavs with the spread of Christianity. Chapels were most often located in natural surroundings, in mountains, forests, fields, at the intersection of roads, in deserted and deserted places. Gradually, in architectural and spatial terms, they became a kind of landmarks. The Trinity-Sergius Lavra began with a chapel cut down by St. Sergius in the thicket of the Radonezh forests. Deserted places were then overgrown with villages. Roadside cross-chapels are one of the first types of chapels; then gable or hipped roofs were placed over the chapels in the form of gazebos. The first log chapels resembled four- and five-

walled huts in plan. The next stage in the development of chapels can be called a certain complication of the square shape. To increase the area of the structure, with an optimal log length of three fathoms, the square or rectangle of the plan was turned into an octagon, or several cages of the structure appeared.

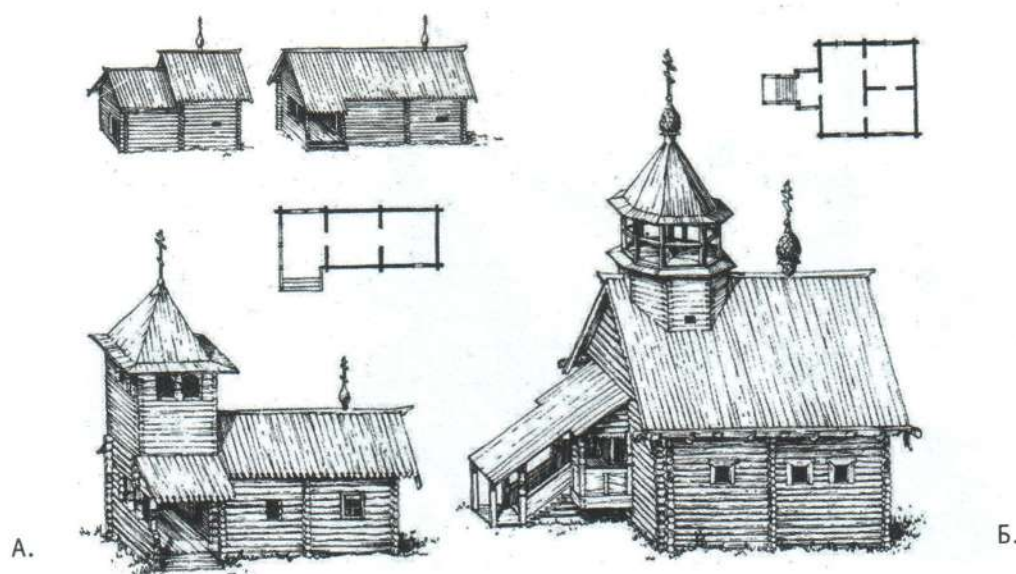


Fig. 1 Development of the simplest chapels.

The evolution of chapels. According to reconstructions by V.P. Orfinsky.

A – evolution of the chapel in the village of Kangozero (the square develops into a rectangle).

B – chapel in the village of Chuinavolok (the squares form a larger square)

The architectural forms of chapels, unlike churches, were much more modest and simpler. The size and composition of the chapels ranged from a small cage under a simple gable roof to large and rather complex structures, sometimes no less significant than some winter churches. Most of all, wooden chapels have been preserved in various parts of the Onega region. Among them are chapels located in the vicinity of Kizhi and on the island itself. The absence of an altar, and with it a priest, made it possible for schismatics to perform divine services, which became the reason for the decrees issued by Peter I in 1702 and 1712. on the destruction of all chapels in Russia, both those subordinate to the Synod and schismatic ones, the

decrees were confirmed in 1727. These orders were not carried out everywhere, especially in areas remote from churches. Only in 1853 did the Synod authorize the construction of chapels. Chapels were erected in places «marked by some kind of God's mercy or in memory of historical events in church and state life...».

In the 19th century, chapels were built from wood, brick, stone and even metal. They vary significantly in size, but even more in architecture and decoration. Chapels appeared in neo-Romanesque, neo-Gothic, and neo-Russian styles. Chapels appeared - “monastery courtyards”, above holy springs, in which the sick and suffering were washed, in memory and consecration of the place of the found icon, in cemeteries over the graves of wealthy Christians. Nowadays chapels are erected in the absence of a church or to house revered icons, as well as in memory of disappeared Orthodox churches.

**3. Classification of chapels.** Identification of the main types of chapels used in the course project by shape in plan (Table 1), by volumetric-spatial construction (Table 2)

Table 1.

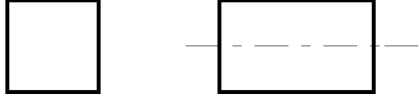
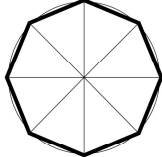
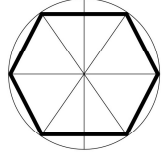
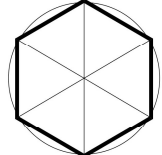
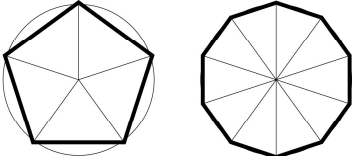
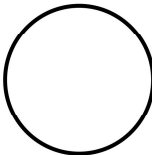
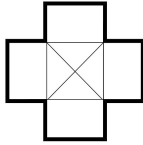

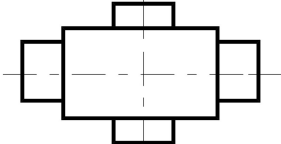
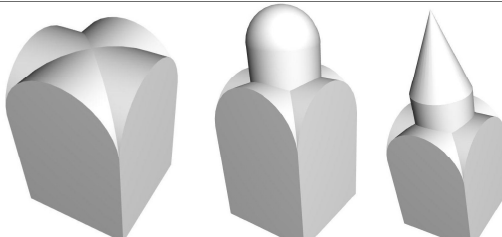
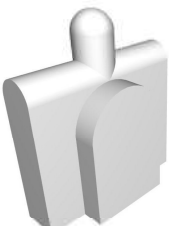
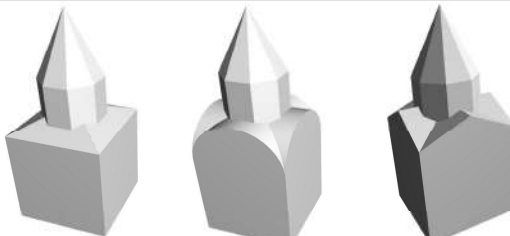
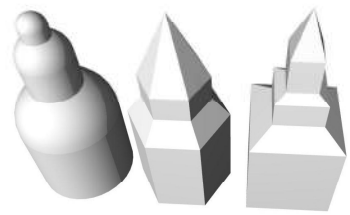
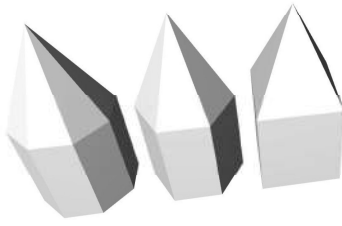

N	Name of the chapel according to the plan form	Geometric plan diagram
1.	Square or rectangular	
2.	Octagonal with equal sides	
3.	Octagonal with unequal sides	
4.	Hexagonal	
5.	Polygonal	
6.	Round	
7.	Cross-shaped	
8.	Uniaxial (consisting of several figures located along the same axis)	
9.	Biaxial (consisting of several figures located along two axes)	

Table 2.

N	Volume-spatial type	Visual scheme
1.	A chapel of simple volume, covered with a cross vault (closed, box, cylindrical, etc.)	
2.	A chapel of complex volume, covered with vaults or a system of vaults	
3.	Chapel of the “octagon on a quadruple” or “hexagon on a quadrangle” type	
4.	Tiered (multi-tiered) chapels	
5.	Tent chapels	
6.	Rotunda-type chapels	

According to the number of chapters, the chapels are distinguished as chapels with one chapter, three chapters, five and chapels with a multi-domed ending. One chapter in places of worship signifies heaven; two heads mean two natures (divine and human) in Jesus Christ; three chapters mean the three persons of the Holy Trinity, five chapters – Jesus Christ and the four evangelists [2]. The form of chapters may be different:

- a) helmet-shaped (symbol of military valor);
- b) bulbous (the embodiment of prayer, the desire for heaven);
- c) bulbous with a fracture;
- d) cubical, etc. d) pear-shaped
- e) conical
- g) spherical (symbol of eternity)

According to the functional purpose of the chapels, they can be:

- a) water-sanctified (over-kladezny);
- b) funeral;
- c) memorial;
- d) liturgical.

Water-blessed chapels are built over wells, reservoirs, boreholes and other sources of water in the form of canopies or closed structures. Funeral chapels are built over burial chambers and graves in the form of closed or open structures. Memorial chapels mark places significant to the church. Liturgical chapels are most often set up in the absence of a temple or to house revered icons; their capacity can range from 5 to 50 people [3].

It is possible to include a small belfry of several bells in the chapel complex. The belfry is located, as a rule, on the western side of the chapel or temple. Belfries are arranged in the form of a covered platform or wall with openings for hanging bells, which can be rung from the platform or from ground level. The belfry, regardless of the number of bells, consists of three groups of bells: large (annunciation), medium (ringing) and small (belling). The ringing of bells is carried out in order to call believers to prayer, to worship, as well as in order to announce the most important parts of the service being performed.

The ringing of one bell is called "blagovest". One bell is struck several times to indicate the beginning of the service (the good, joyful news of the service). The ringing of all bells, expressing joy about a church holiday and the beginning of ceremonial services, is called "trezvon" (several bells together in three steps). The ringing of bells to mark a sad event is called "chime." It is also carried out during religious processions - they strike each bell once and, having gone through them, strike all the bells at once. The ringing of bells reminds us of the higher, heavenly world [2].

## **4. The objectives of the project**

**4.1. Purpose of the task:** mastering the basic principles of a compositional solution for an open space with a complex functional purpose and a small structure included in it.

### **4.2. Two options for the task:**

1. The chapel is erected in memory of the disappeared Orthodox church at or near its former location (memorial chapel).
2. The chapel is being built in a new place (liturgical chapel). As an option, it is possible to design a water-blessed chapel. Water-blessed chapels are built over wells, ponds and other sources of water.

## **5. Project objectives:**

### **5.1. Urban planning solution**

Familiarize yourself with the allocated area and analyze the situation, determining the nature of the relief, surrounding buildings, and landscaping. To study urban planning factors influencing the volumetric-spatial structure of a structure. Take into account the inextricable connection of the newly constructed building with the environment. Everything created by man is perceived in a certain environment. The main advantage of the best works of architecture is an inextricable and organic connection with the environment:

- connection with the natural environment;
- connection with the environment created by man.

With all the variety of proposed urban planning situations (Appendix 7), when constructing a chapel, it should be assumed that it should be one of the most expressive components of the urban environment. When carrying out a chapel educational project, it is necessary to balance the construction with the local natural conditions and the scale of the surrounding buildings and structures.

### **5.2. Historical analysis**

Study the traditions of Orthodox church architecture. Familiarize yourself with bibliographic and iconographic materials representing the lost monument (in the case of designing a memorial chapel), study its location and description (N. Khramtsovsky. Brief sketch... see references). In the abstract it is necessary to show the external appearance of the lost temple, as far as possible, using materials from the photo albums of A. Karelin and M. Dmitriev [4,5]. In the project of a memorial chapel, it is possible to use some details of the lost temple, or volume-spatial repetition of any fragments (or parts) of the destroyed church, or some other “historical reminder” in the

material about the loss of the existing temple, for example, preserving the style of the lost church in the new construction, or repetition of completion forms, etc.

### **5.3. Search for an artistic image**

Find an artistically expressive image, both in the external appearance and in the design of the internal space of the chapel. In an architectural work, its emotional impact on a person plays an important role. This category of buildings primarily includes religious buildings. The chapel can be made in the traditions of Russian church architecture, or in modern forms. According to Patriarch Kirill of Moscow and All Rus': "Modern church architecture is called upon to take into account in its development the principle of a harmonious combination of new forms and styles with the traditions of architecture already established in history." When designing a liturgical chapel, stylization in the forms of ancient Vladimir-Suzdal or Pskov-Novgorod architecture, ancient Russian architecture of the 17th century, baroque, "Russian style", classicism, and modernism is possible (Appendices 5,6).

### **5.4. Constructive solution**

Determine the structural design of the building that best corresponds to the overall volumetric-spatial solution. The wall material uses both traditional building materials (wood, stone, brick) and modern ones (concrete, glass, metal, plastics). In floor systems it is possible to use both traditional vaulted floors found in Russian architecture (see Appendix 2) and modern ones (monolithic reinforced concrete, rod structures). In old buildings, the vaults, as a rule, were made of brick (except for monuments made entirely of white stone). The usual thickness of the vaults, starting with the Assumption Cathedral of the Moscow Kremlin, is one brick (about 30 cm). Relatively rarely, the heel parts of the vaults of large spans were laid out in one and a half bricks. The use of octagonal hipped tops on a square base, as well as domes covering a square room in plan, required the use of trumpets. Tromps were usually made arched (see Appendix 3).

### **5.5. Coloristic solution**

The most important elements in the figurative reading of the chapel are its color, i.e. color of the walls, color of the dome or dome, etc.

It is customary to distinguish four main colors of the dome and domes - gold, blue, green, gray and black.

The most popular are gold or gilded domes. The golden dome is a symbol of heaven, a symbol of joy and resurrection. Symbol of divine light and glory. The golden dome is visible from afar and attracts the gaze of believers. Temples with golden domes are dedicated to Christ and the most



important church holidays - Christmas, Candlemas, and the Annunciation. Such chapters crown the Moscow Cathedral of Christ the Savior and the Assumption, Annunciation and Archangel Cathedrals of the Kremlin. Also, golden domes can often be seen on the main temple of the city or monastic monastery.

Yellow wall color, along with white, is one of the most common, symbolizing royalty, glory and Divine light. Temples dedicated to the prophets and apostles have a similar coloring. The white color of the domes is associated with innocence and purity. Most often found in churches dedicated to the Resurrection and Transfiguration of the Lord. White domes symbolize purity.

The blue and light blue color with stars symbolizes the heavenly purity and purity of the Virgin Mary, the Most Holy Theotokos. The domes decorated with stars are reminiscent of the Star of Bethlehem, which announced the birth of the Christ Child. A striking example is the Suzdal Cathedral of the Nativity of the Blessed Virgin Mary (1222-1225). But there are churches with blue domes that are not associated with the name of the Virgin Mary. A similar exception is the Trinity Cathedral in St. Petersburg. It was built in 1838 for the Izmailovsky Regiment of the Russian Imperial Guard, whose officers wore blue uniforms. That is why this color was chosen for the domes.

The blue and blue colors of the walls denote chastity and purity, and also symbolize the Blessed Virgin Mary.

Silver or gray domes are quite rare. It symbolizes holiness, purity and spirituality, as well as the radiance of Divine glory. Usually this color is associated with saints, as well as churches in honor of the Transfiguration of the Lord and His Ascension. An example would be the Transfiguration Cathedral in the Varlaamo-Khutyn Spaso-Preobrazhensky Monastery in Khutyn (Novgorod region) or the Church of St. Nicholas on Lipna near Veliky Novgorod.

The green domes symbolize eternal life and the Holy Spirit. Domes of this color are crowned by churches dedicated to the Holy Trinity. For example, the temple in the name of the Life-Giving Trinity on the Sparrow Hills in Moscow. Green domes are also found at churches built in honor of Orthodox saints, whose monastic feat united them with the Savior and elevated them to the Kingdom of Heaven. The green color of the walls is the color of the Holy Trinity, the color of new life.

Black domes usually crown churches as part of monastery complexes. Black color is a symbol of monasticism, renunciation of worldly goods. Black domes crown, for example, the cathedrals of the Marfo-Mariinsky Convent and the Church of the Resurrection of the Word in the Intercession Monastery in Moscow.

Red color in domes is quite rare. It is a symbol of martyrdom and shed blood. It is also the color of God the Father. The red color of the walls is more common in Resurrection churches dedicated to the memory of martyrs, with an allusion to their blood shed in the name of Christ. Red color is Easter.

Purple domes are also quite rare. They symbolize submission and repentance. The purple color of the walls serves as a reminder of the Savior's death on the Cross, as a combination of the earthly and the heavenly. Used for churches illuminated in honor of the Exaltation of the Cross.

The multi-colored domes symbolize the grandeur and radiance of Heavenly Jerusalem. Typical examples are the Church of the Savior on Spilled Blood in St. Petersburg and St. Basil's Cathedral in Moscow.

These color combinations may be of a recommendatory nature, in the context of use, in relation to a certain type of chapel.

## **6. Composition of the project, sequence of training project, basic requirements**

### **6.1 A clause**

Clause, independent development of a sketch-idea, is carried out in class after an introductory lecture on the topic "Chapel" on a sheet of A 2 format using various techniques for graphic design of the idea: pencils, watercolors, ink, felt-tip pen, etc. The clause includes: facades from the entrance side (main) and side, plan at the level of window and door openings (not to be confused with the roof plan), section, perspective or axonometry of the building. To visually determine the scale, it is necessary to depict a human figure on the facade of the chapel.

### **6.2 Essay**

The abstract is completed and evaluated before the preliminary design is approved. The experience of designing and building chapels, both pre-revolutionary and modern, is independently studied. The abstract depicts (drawings - 20 examples, 2-3 examples per sheet, technique - pen, ink) chapels, religious buildings, details of religious buildings (for example images, see Appendix 5). Under each of the drawings you must indicate the name of the object, location, author, year of construction, and a link to the source. Find stylistic differences in the examples of chapels (show 3-4 different architectural styles in chapel structures: Old Russian, Baroque, Classicism, Eclecticism, Art Nouveau). Also show several chapels of different types of volumetric-spatial construction (tent, tiered, octagonal on quadrangle, caged, etc.). When designing a memorial chapel, one should depict the Nizhny Novgorod temple (according to iconography: photographic

documents, drawings, other visual material) in whose memory the chapel is being built.

### **6.3 Sketch-idea**

To approve the sketch-idea, facades, plans, sections, general plans are presented, made in the form of drawings, sketches, reflecting the main idea. The student must present a situation plan linking the (preliminary) construction of the chapel to a specific location. If it is impossible to locate a chapel on the site of a lost temple, the chapel is located nearby, urban planning factors of continuity with the environment and tactful integration into the existing environment are taken into account.

### **6.4 Sketch drawing, working layout**

After approval of the sketch-idea, a sketch drawing and a working layout are made on a scale of 1:100, 1:50, which reflects the volumetric-spatial solution of the designed chapel. The graphic part of the project sketch is carried out on a 55x75 cm subframe. The project sketch specifies the proportions of the structure and the design solution. The scale of the projections, their location on the sheet, examples of the color scheme of the facade (main), the design of the floor tiles in plan, the color scheme of the interior walls in the section correspond to the final project. The explanatory note (annotation), the names of the projections in pencil must be completed in full, like all projections of the drawing. Ink tracing of projections and inscriptions are done partially.

### **6.5 Draft design, layout**

- abstract;
- facade from the main entrance - M 1:25, M 1:20, linear;
- facade M 1:50;
- plan M 1:50
- section showing the interior wall where the icons are located, M 1:50;
- general plan of the site M 1:200;
- an inscription indicating the name of the chapel, for example: "Alekseevskaya Chapel";
- situation plan on a scale of 1:500, 1:1000, 1:2000;
- abstract (see sample);
- layout M 1:50.

Chapels must be crowned with a chapter(s) with a cross (different types of crosses in Appendix 1). Above the entrance to the chapel, provide a place for the icon in whose honor the chapel is consecrated (named). A porch or canopy is installed in front of the entrance.

At the initial stages of design, a rough compositional model is performed. For final delivery, a final model of the chapel M 1:50 is being completed.

## 6.6 Project requirements

Dimensions of the area and main volume:

- dimensions of the site 20 x 30 m (situation attached);
- chapel area 15-25 m<sup>2</sup>, height 7-15 m (with a one-time stay of no more than 50 people - if one entrance is designed, according to evacuation standards).

Sample annotation for the chapel project.

The Assumption Chapel was built in memory of those destroyed in the 1930s. church in the name of the icon of the Assumption of the Blessed Virgin Mary.

Constructed of brick with architectural details made of limestone (plaster, etc.). The roofs are iron, painted with oil paint (galvanized,...), the dome and the cross are gilded. The walls inside are painted (yellow,...) color, draft (white,...). The basement is lined with granite (limestone, concrete,...) slabs.

## 7. Locations and names of the designed chapels (see Appendix 7)

1. In Kremlin: **Simeonovskaya Chapel** near the Ivanovskaya Tower on the site of the lost church. Simeon Stylite 1743 (place for designing a wooden chapel).

2. **Chapel of St. Tatiana** - in the NNGASU park opposite the Nautilus.

3. **Alekseevskaya Chapel**, on the square. Minin and Pozharsky on the site of the lost church. Alexy Metropolitan 1823, in front of the entrance to the square, opposite the exhibition hall.

4. **Varvarskaya Chapel** on Oktyabrskaya Square, on Varvarskaya Street. in place of the lost c. Varvarskaya, 1760 3. Makaryevskaya Chapel, in front of the Main Fair House on the site of the lost chapel of St. Macarius of Zheltovodsk (1866) or on the coastal slope of the Oka River.

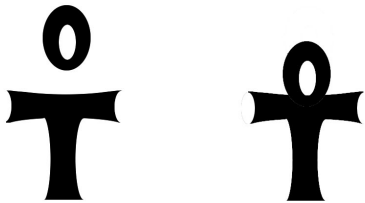
5. The open water-blessed chapel above the springs (near the bus stop), on the slope, opposite the Kanavinsky Bridge. (for example, the **chapel of St. Theodora**).

**References:**

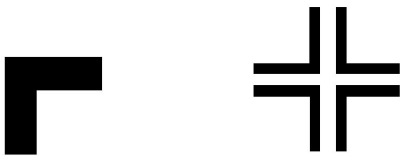
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### Crosses. Symbolism of the image [20].



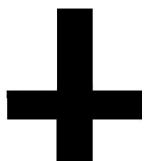
To depict the cross, from the first centuries of Christianity, the Egyptian hieroglyph ankh (anekh) was used, meaning life. It combines two symbols: the cross as a symbol of life and the circle as a symbol of eternity. Together they mean immortality.



From the letter G (gamma) of the Greek alphabet the gamma cross or gammadion originated, it symbolizes Christ as the cornerstone of the church. Such a cross with crossbars of equal length is called Greek.



We call the letter X in which the name of Christ is hidden the St. Andrew's cross, because the Apostle Andrew was crucified on a cross of this shape.



Illiterate opponents of Christianity believe that an inverted cross is a symbol hostile to the church. In fact, this is also a Christian symbol; St. Peter was crucified head down, which is why this cross bears his name.

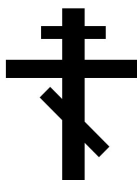


From such a cross Christ was taken down, this is the Latin cross or crucifix, the most common Christian religious symbol in the Western world.

## Appendix 1 (continuation)



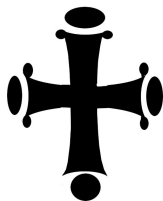
A six-pointed cross with a crossbar at the bottom, which symbolizes a footrest, is one of the symbols of the Russian Orthodox Church. The lower crossbar is depicted tilted from right to left, because the thief crucified to the right of Christ repented and was ascended to the Kingdom of Heaven, and the thief crucified on the left was brought down to hell by the burden of blasphemy.



The eight-pointed cross with the upper crossbar "titulus", where the name was written, is also called "Russian".



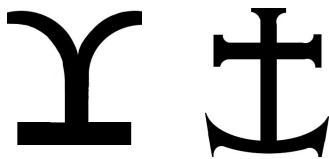
The clover leaves on the trefoil cross symbolize the Trinity or the resurrection of Christ.



The circles at the ends of the drop-shaped cross are drops of Christ's blood, which, having sprinkled the cross, imparted Christ's power to it.

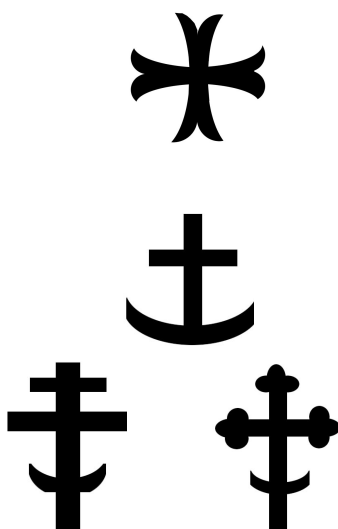


The pointed circle is a symbol of the crown of thorns that Roman soldiers placed on the head of Christ.



Crosses with rounded lines at the ends - "anchor" - appeared in the first centuries of Christianity; according to the Apostle Paul, the anchor hid the true meaning of the sign from the infidels and covered it from desecration. The anchor also symbolizes the Kingdom of Heaven, where at the end of his earthly journey, every believer strives to get on the ship of the Church.





A domed cross with a crescent is also an “anchor of salvation,” but there are other interpretations: the crescent is considered a symbol of the Eucharistic cup in which the body of Christ is located, or a symbol of the cradle in which the infant Christ lies, or the font in which the church baptized in Christ is clothed into him in the sun of truth.

Examples of crosses in Orthodox churches and chapels.

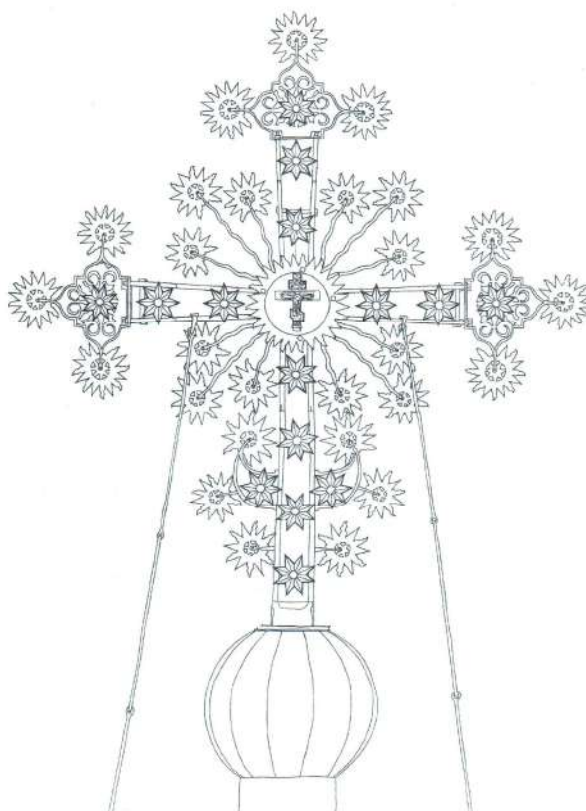


Fig. 1 Forged cross of the Stroganov Church in N. Novgorod

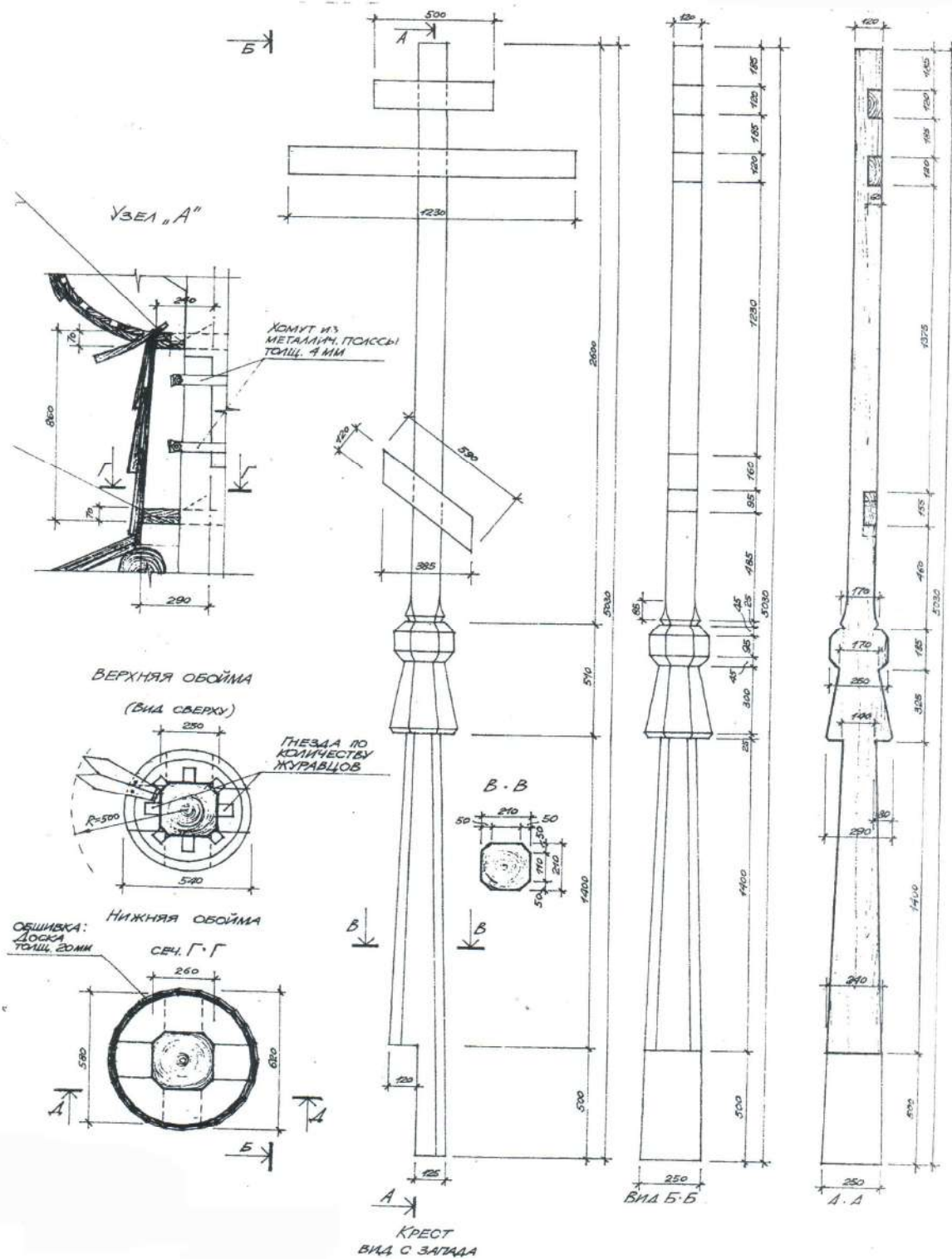


Fig. 2 Cross. Chapter details. Kazan Church of the 17th century. in the village Yurino

## Appendix 1 (continuation)



Four-pointed power. Church of St. Mitrofan  
in the Gdov district of the Pskov region  
(XIX century)



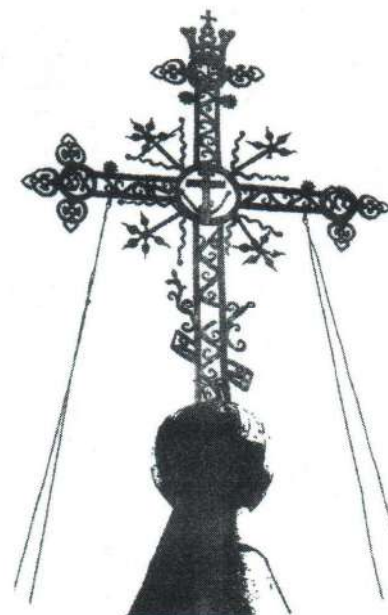
Tripartite cross.  
Church of the Kazan Icon of the Mother of God  
in Kolomenskoye  
(1649-1653)



Vine. Church of St. Nicholas the  
Wonderworker in the village of Batyushkovo,  
Dmitrovsky district, Moscow region.  
(1666)



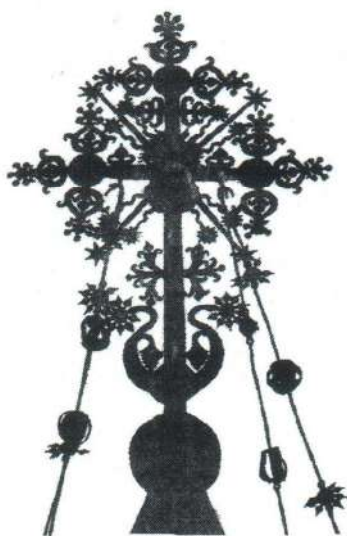
The spirit is peaceful. Cathedral  
of Dmitry Solunsky  
in Vladimir (1194-1197)



Passion of Christ.  
Church of St. Nicholas the Wonderworker  
in Lyubiatovo (140-1560)

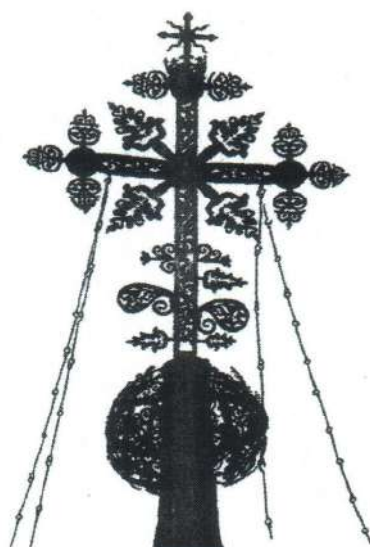
Fig. 3 Cross. Details of the glavka (dome).

Appendix 1 (continuation)



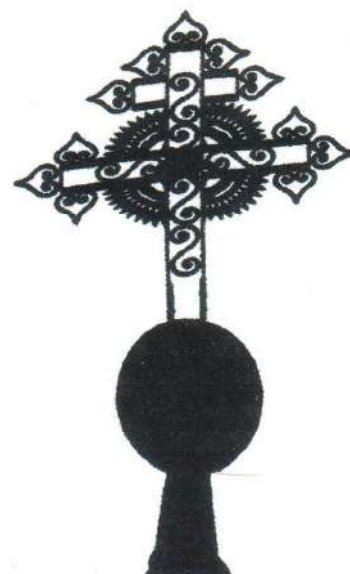
Plant of the Resurrection.

Church of the Smolensk Icon of the Mother of God.  
Nizhny Novgorod (1697)



Tree of Eternal Life.

Church of Cosmas and Domian  
in the village Primostya. Pskov. (XV century)



Crown of glory.

Church of the Nativity of the Virgin Mary  
in the village of Gorodnya,  
Tver region. (XV century)



Church of the reigning  
Joseph of Volokalamsk.

Assumption Monastery. (1688-1696)



The standard is righteous.

Church of the Archangel Gabriel (Menshikov Tower)  
in Moscow (1704-1707)



The victorious scepter.

Church of the Ascension of the Lord  
in Veliky Ustyug, Vologda region (1648)

Fig. 4. Details of the glavka (dome).



## Schemes of the main types of vaults [12]

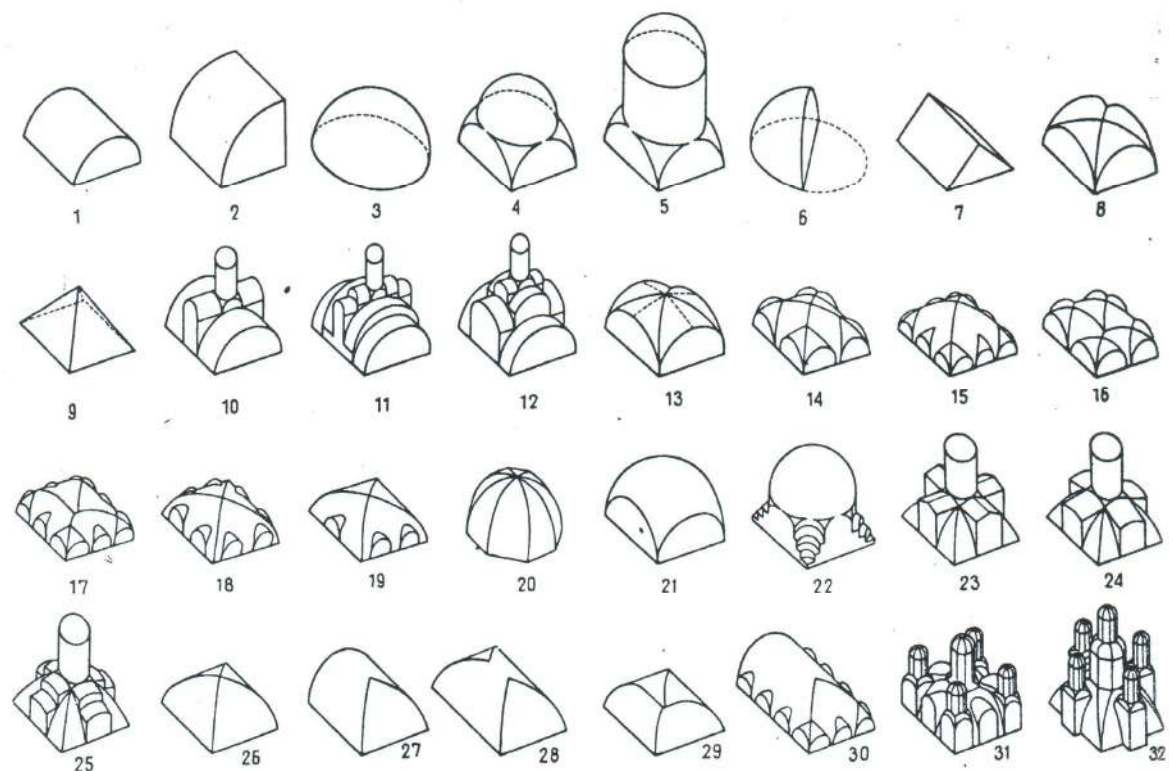


Fig. 5 Schemes of the main types of vaults found in Russian architecture [11].  
 1 – box-shaped, 2 – quarter-cylindrical, 3 – domed, 4 – domed on sails without a drum, 5 – domed on a drum, 6 – conch, 7 – gable, 8 – cross, 9 – hipped, 10-12 – stepped-arched, 13 - open cross, 14, 15 - closed on formworks converging to the corner, 16,17 - vaulted ceiling of a single-column chamber on formworks converging to the corner, 18 - closed on formworks receding from the corner, 19 - closed with a free arrangement of formworks, 20 - faceted dome, 21 - sailing, 22 - dome on tromps, 23 - cross-shaped with horizontal formwork sheets, 24 - cross-shaped with inclined formwork sheets, 25 - cross-shaped with stepped formwork, 26 - closed without formwork, 27, 28 - semi-tray and tray , 29 – vaulted ceiling of a single-pillar chamber without formwork, 30 – tray on formwork, 31, 32 – variants of the illuminated five-domed church without pillars.

## Main types of tromps

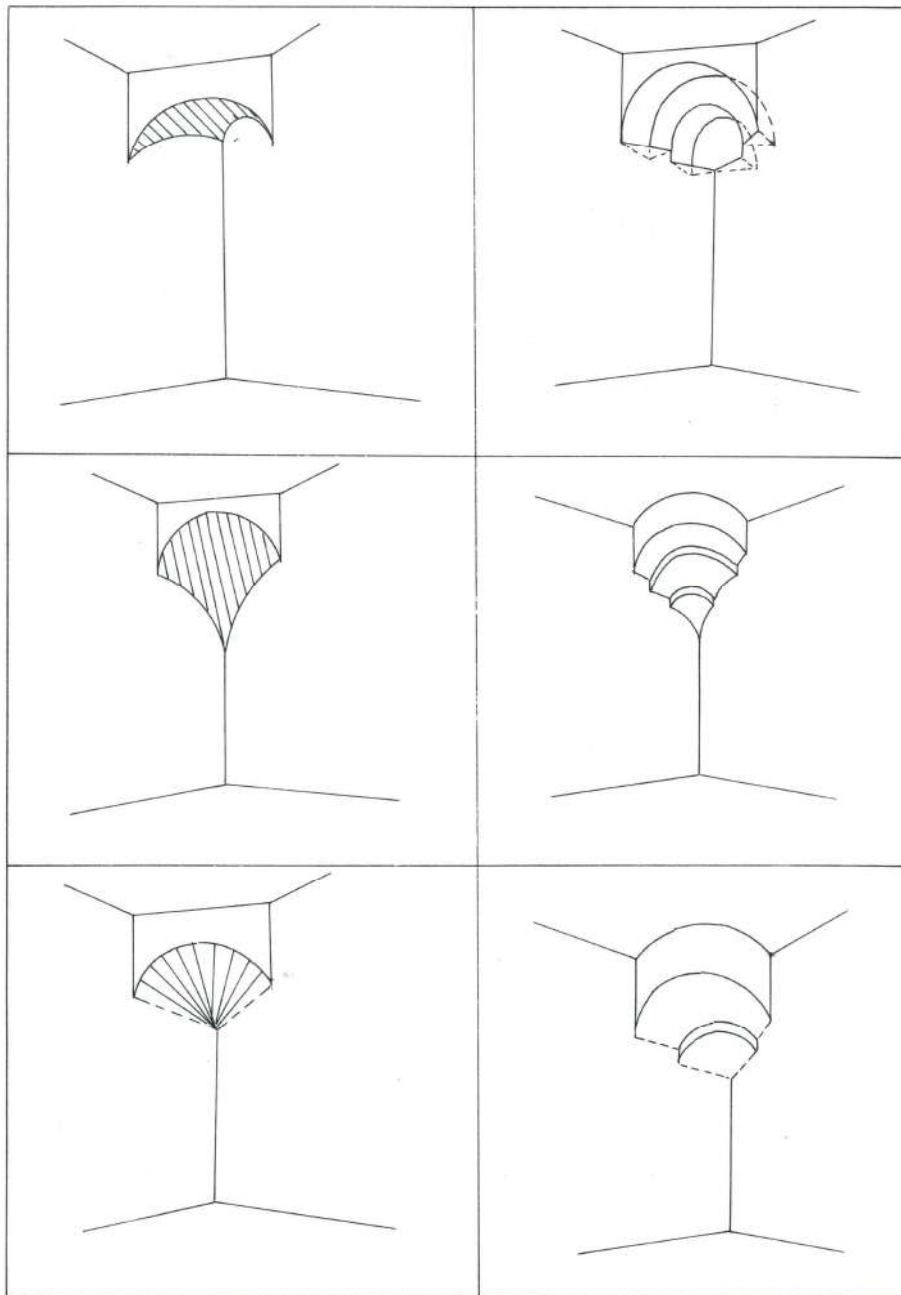


Рис. 6 Main types of tromps

The top row is in the form of a cylindrical vault with a horizontal roof; middle row - the same, with an inclined shell; the bottom row is in the form of a conical vault; on the left is the main type, on the right is the stepped version.

## Examples of different types of chapels [2], [10]

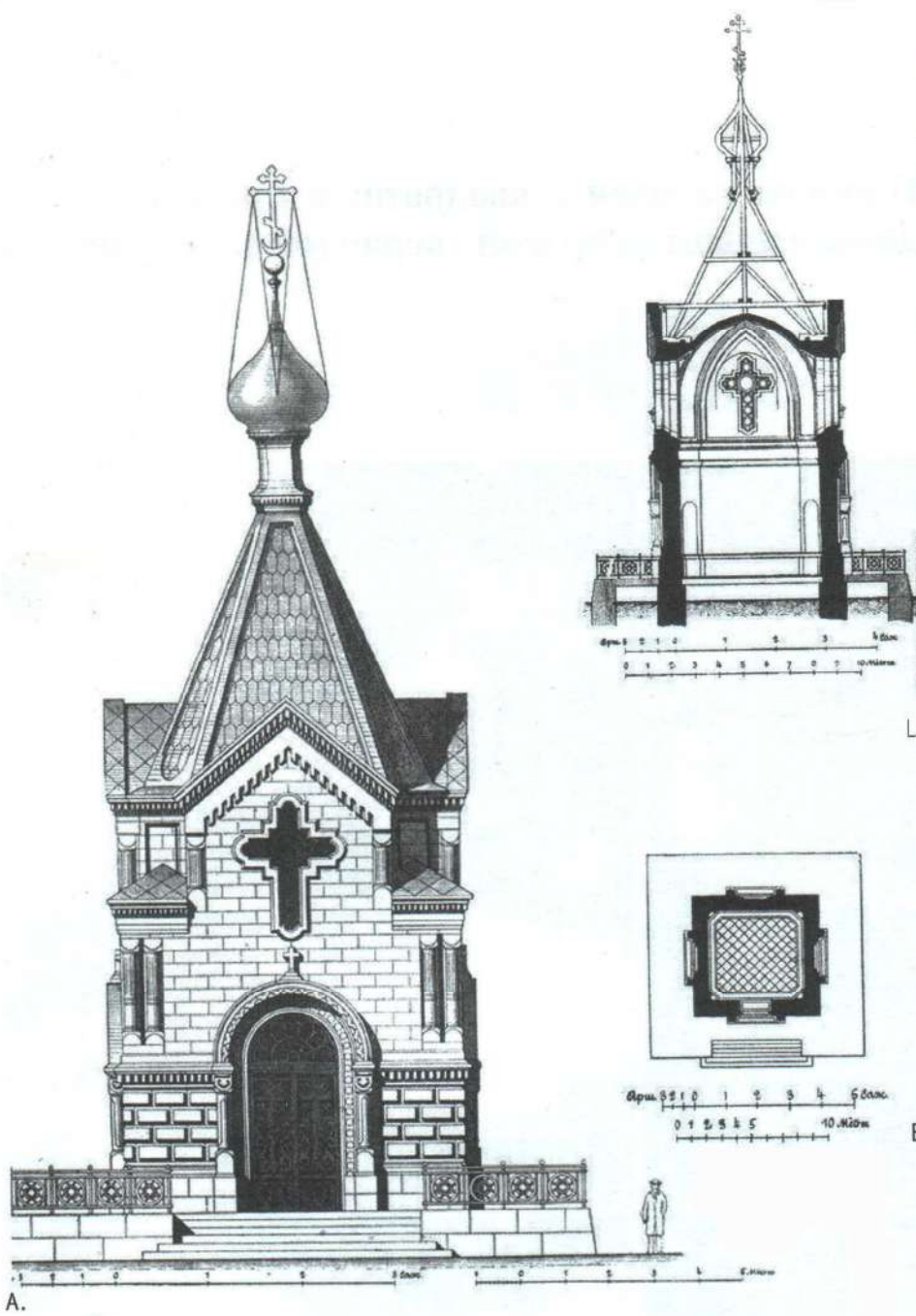
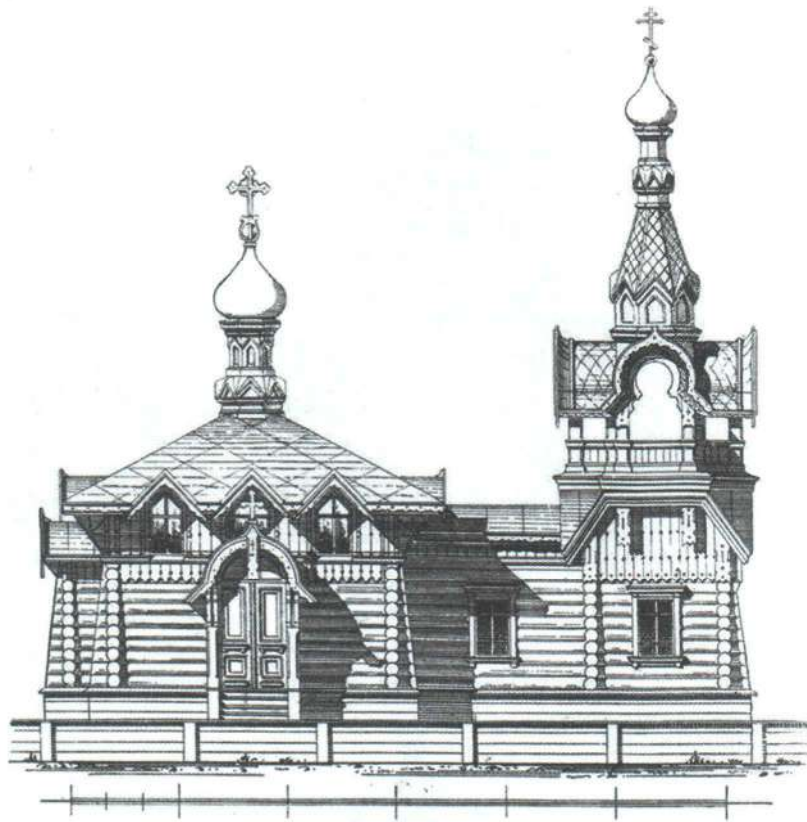
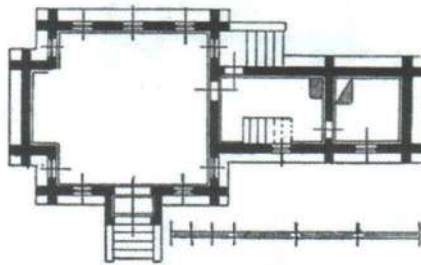


Fig. 7 Project of a chapel in Ufa. Arch. A. Semenov. 1866

## Appendix 4 (continuation)



A.



Б.

Fig. 8 Wooden chapel at the Church of the Mother of God in St. Petersburg.  
Arch. V.A. Kosyakov. 1888.



## Appendix 4 (continuation)

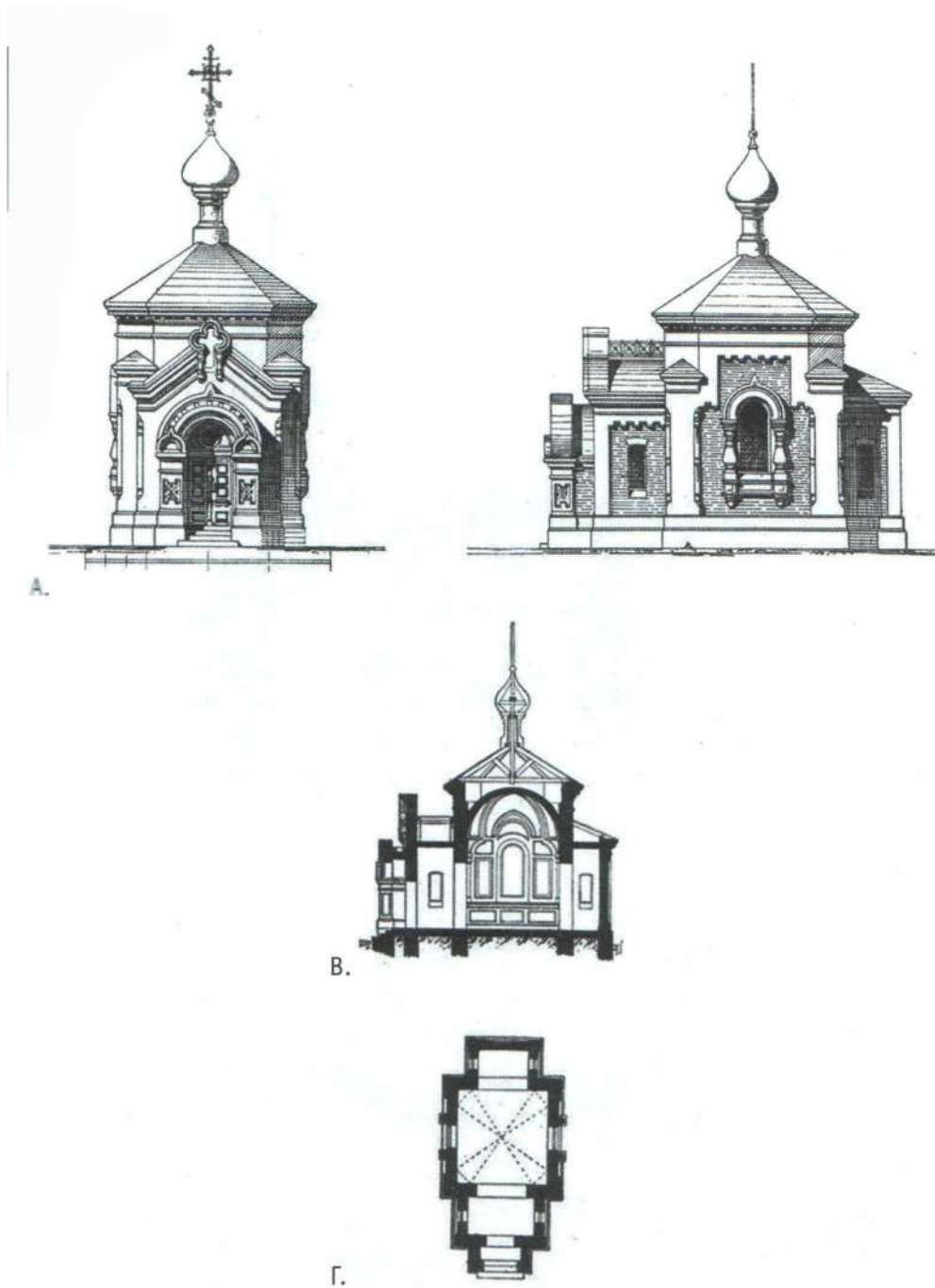


Fig. 9 Chapel in the village Pilipy, Starokonstantinovsky district, Volyn province, ch. Eng. V.A. Kosyakov  
 A – main facade; B – side facade; B – section; Г – plan;

## Appendix 4 (continuation)

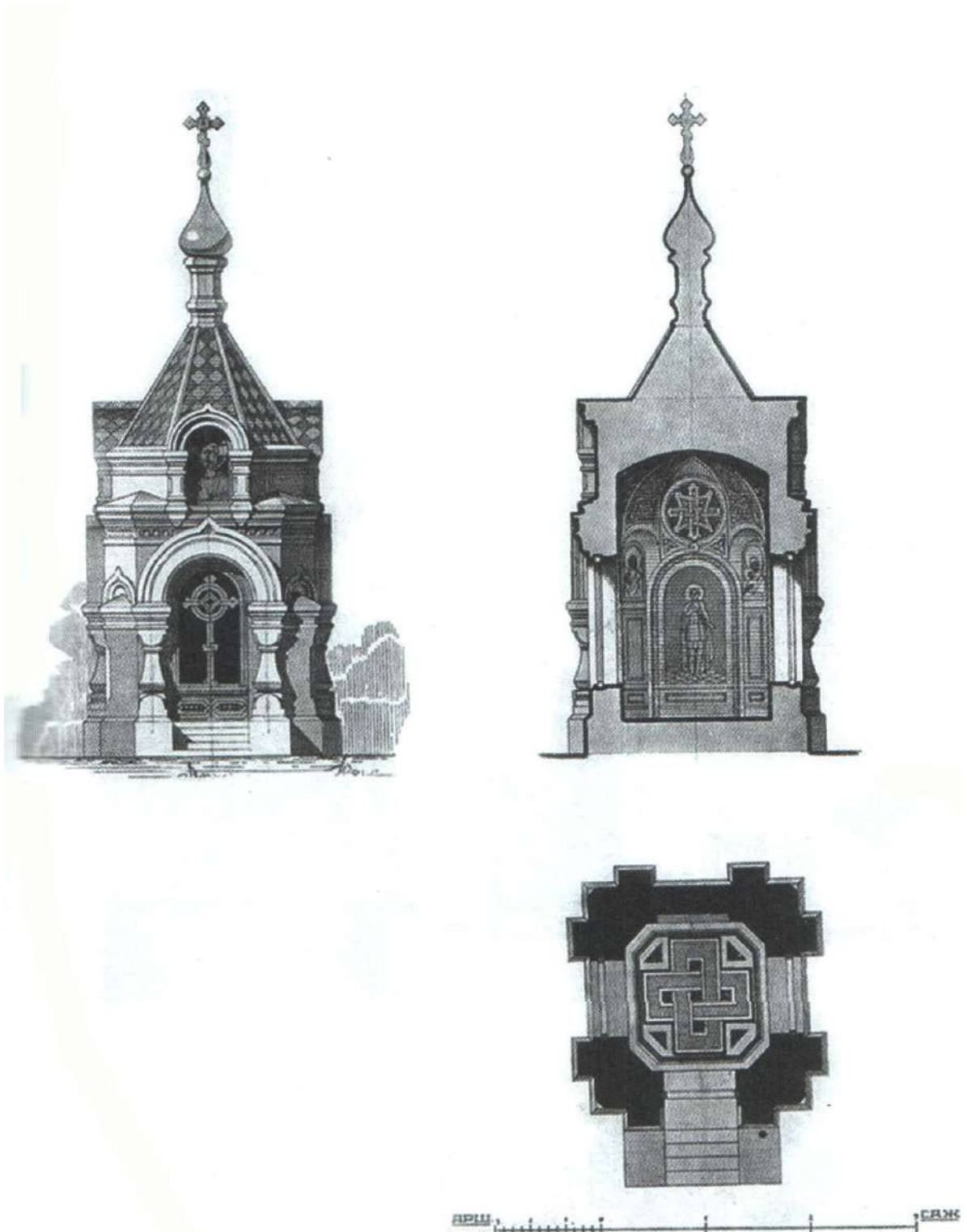


Fig. 10 Chapel in the village Koe, Kashinsky district, Tver province.  
Arch. R.R. Marfeld.

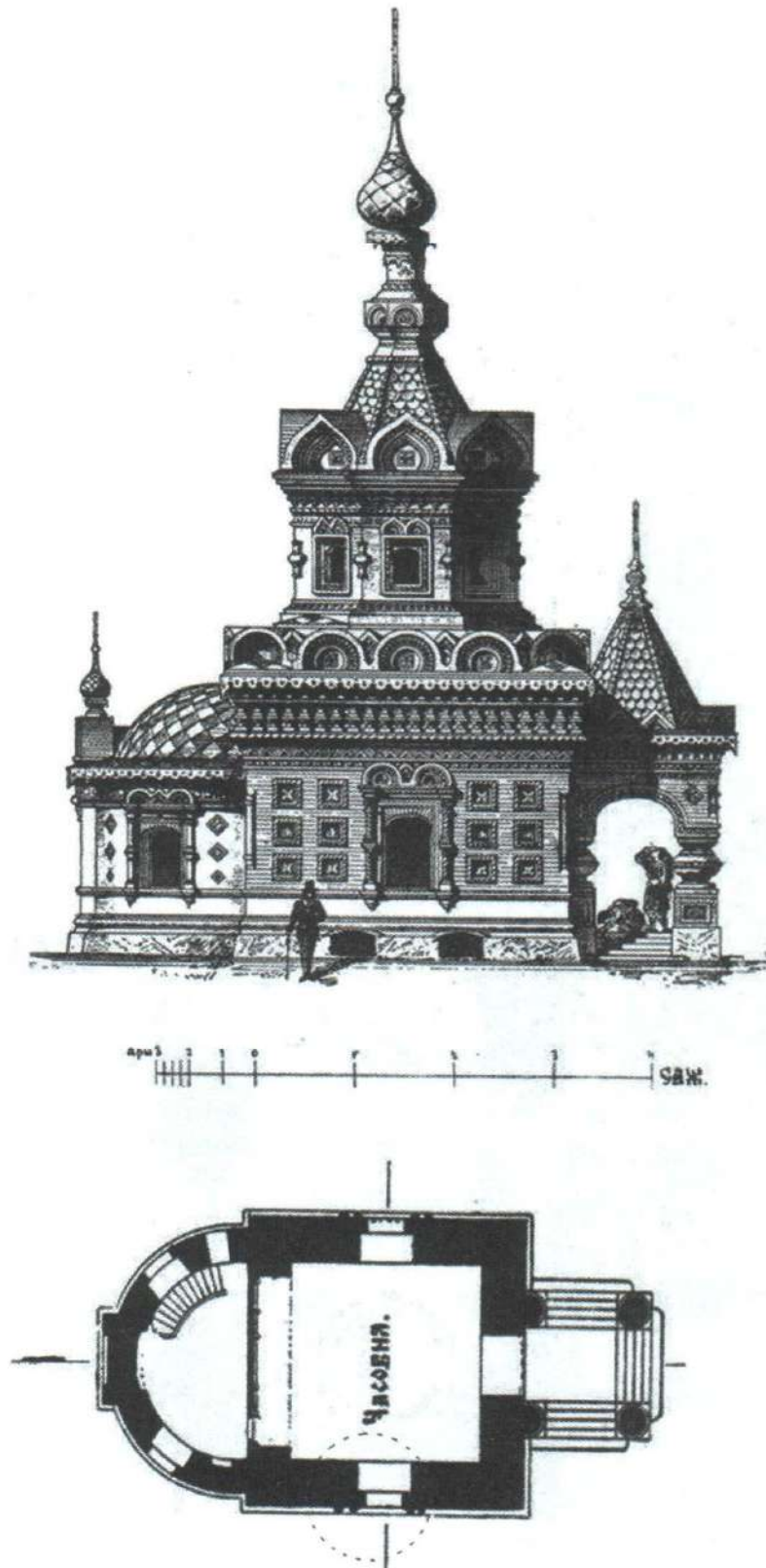


Fig. 11 Chapel in Yaroslavl. Arch. N. Pozdeev.

## Appendix 4 (continuation)

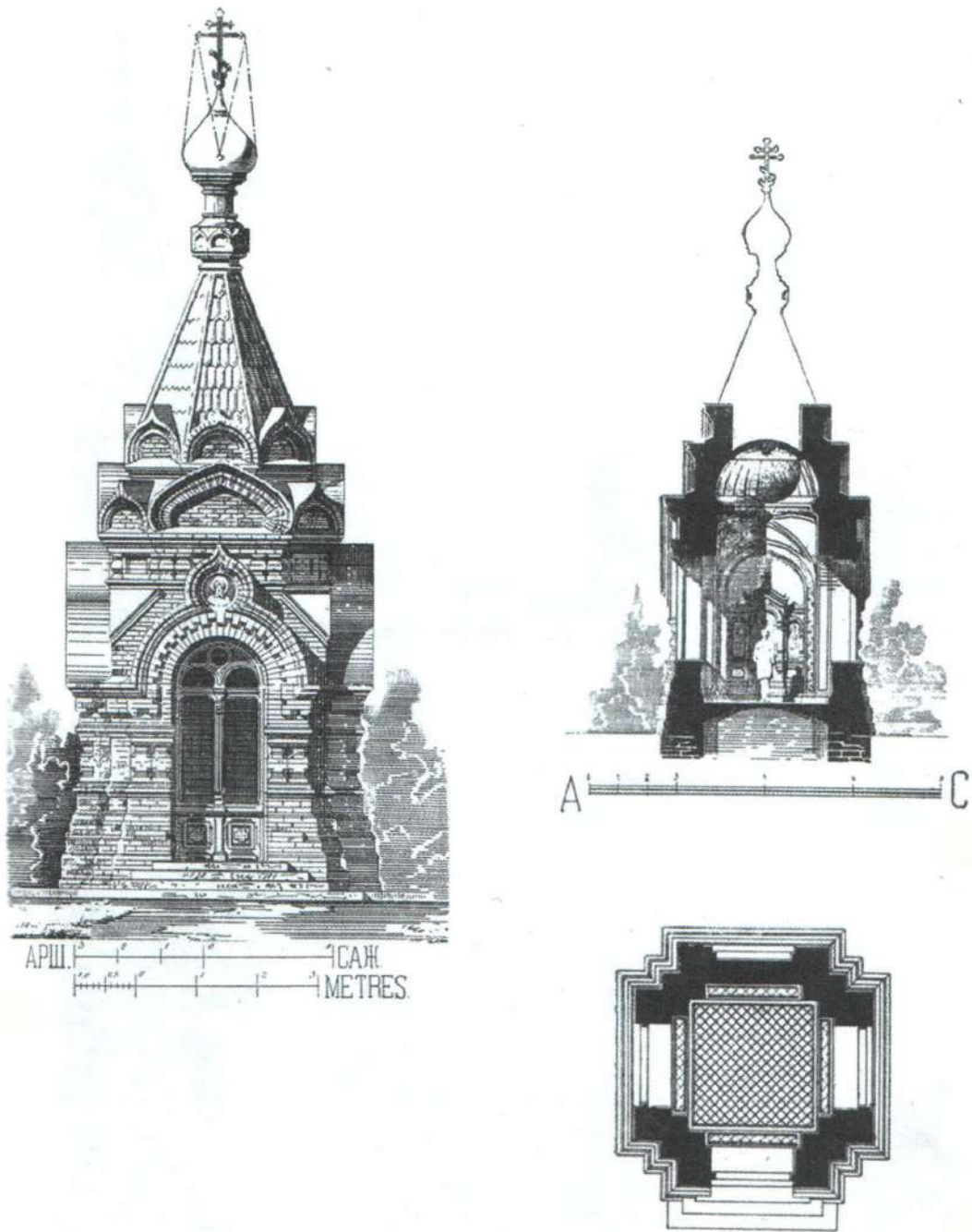


Fig. 12 Chapel in St. Petersburg (Novo-Peterhofsky Ave.) Arch. V.A. Kosyakov. 1890.

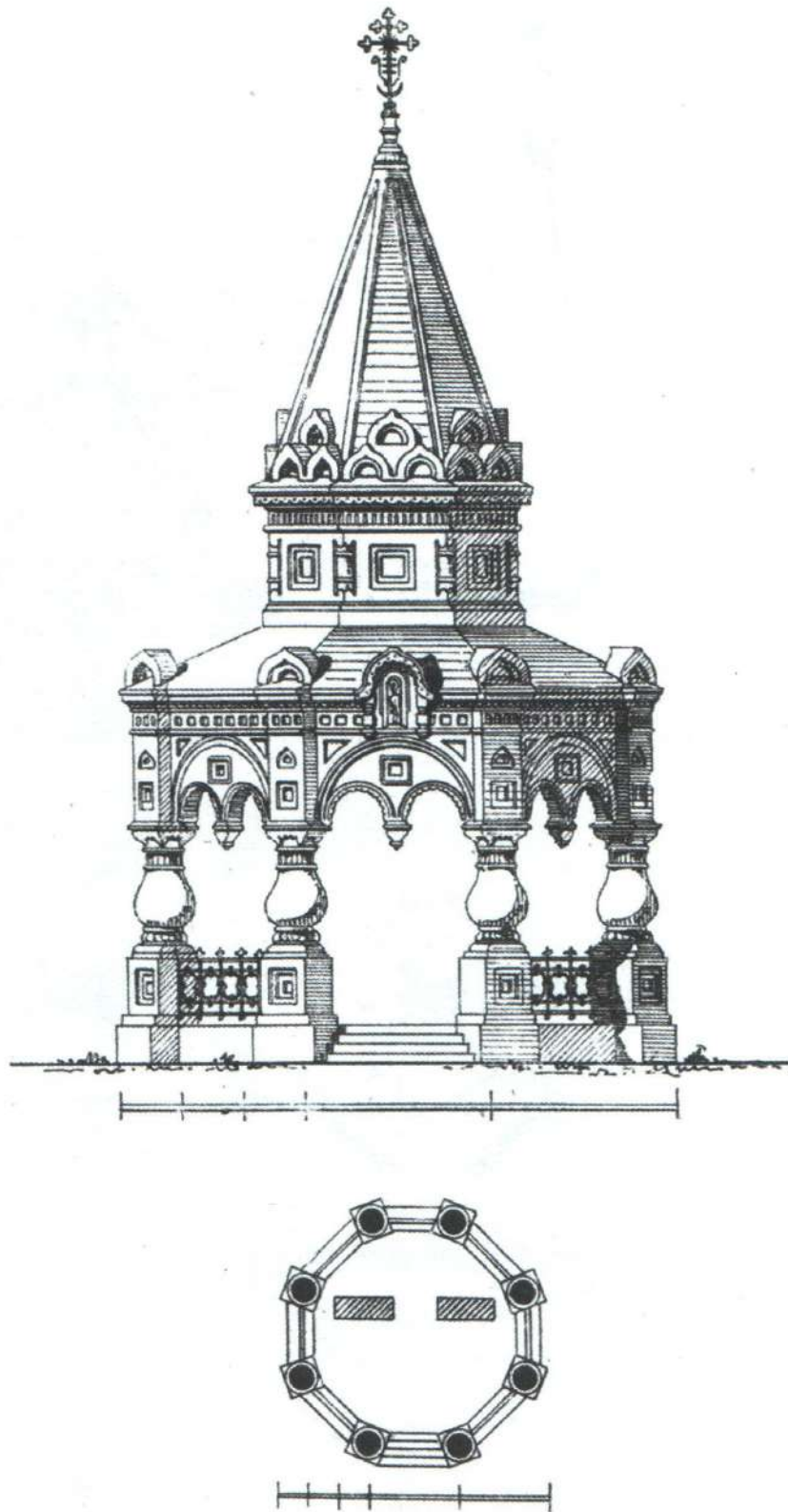


Fig. 13 Chapel project. Arch. prof. N.V. Sultanov.



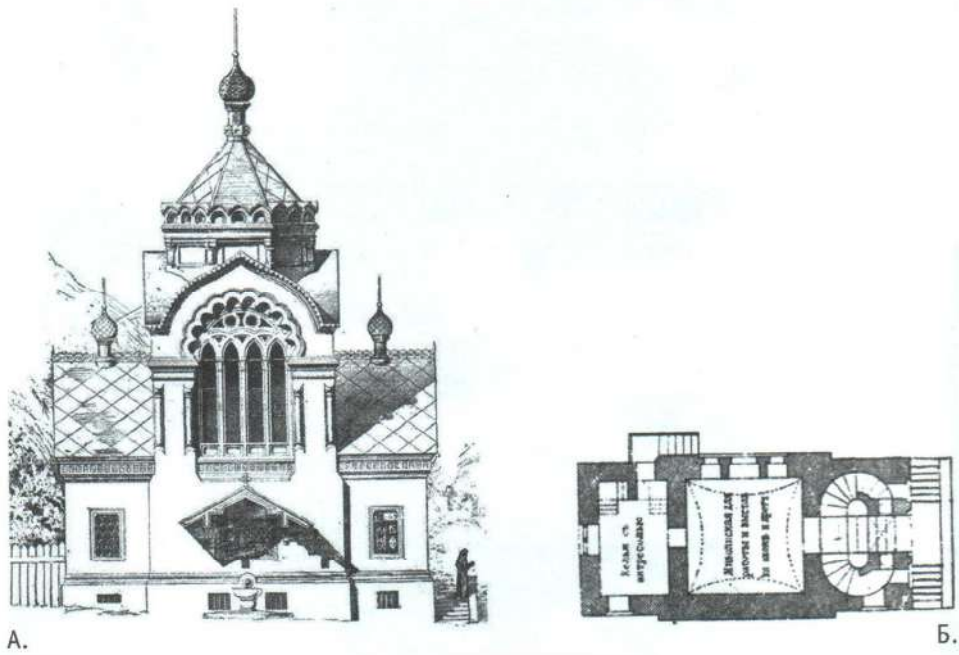
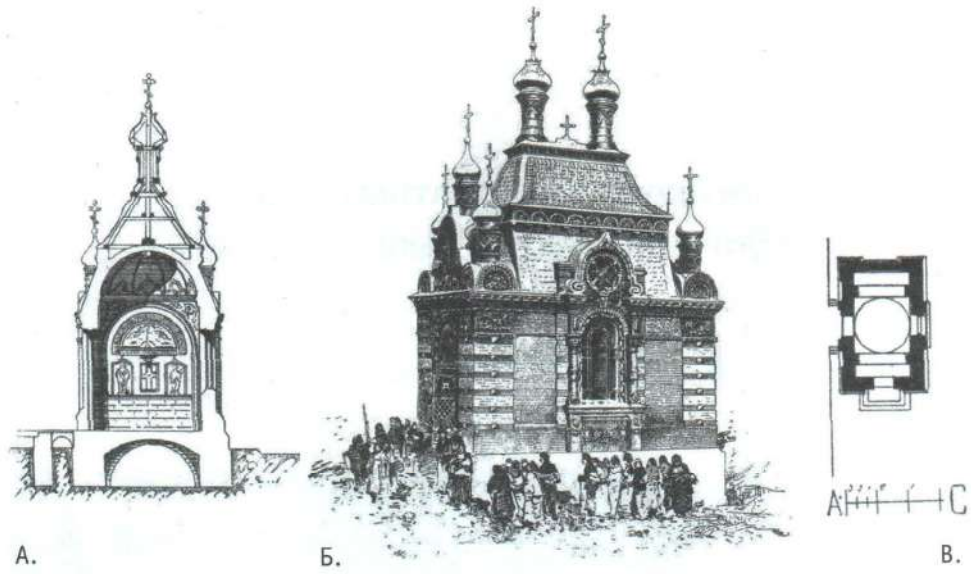
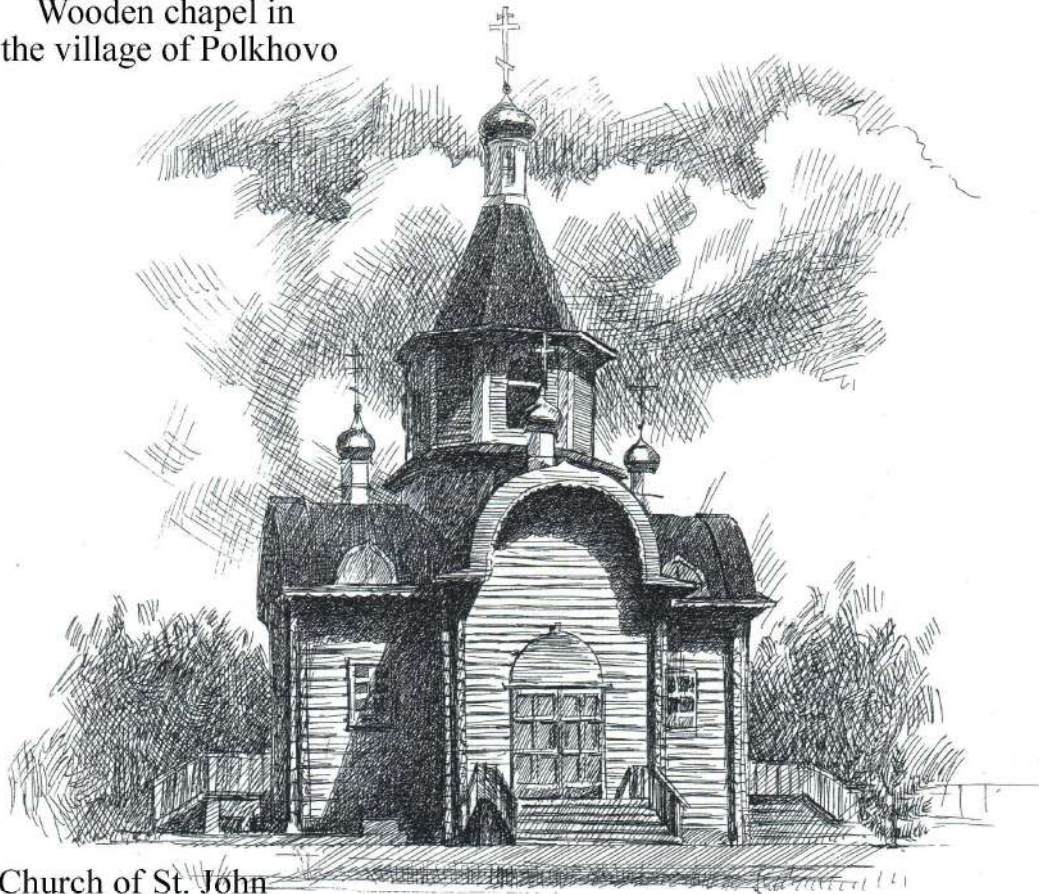


Fig. 14 Chapel at Lozovaya station. Arch. I.S. Kitner. 1890 Chapel of the Seraphim Monastery in Nizhny Novgorod, Arch. L. Dahl, 1879

An example of the design of chapels in an abstract.

Wooden chapel in  
the village of Polkhovo



Church of St. John  
the Evangelist  
on the Ishna River,  
XVII century

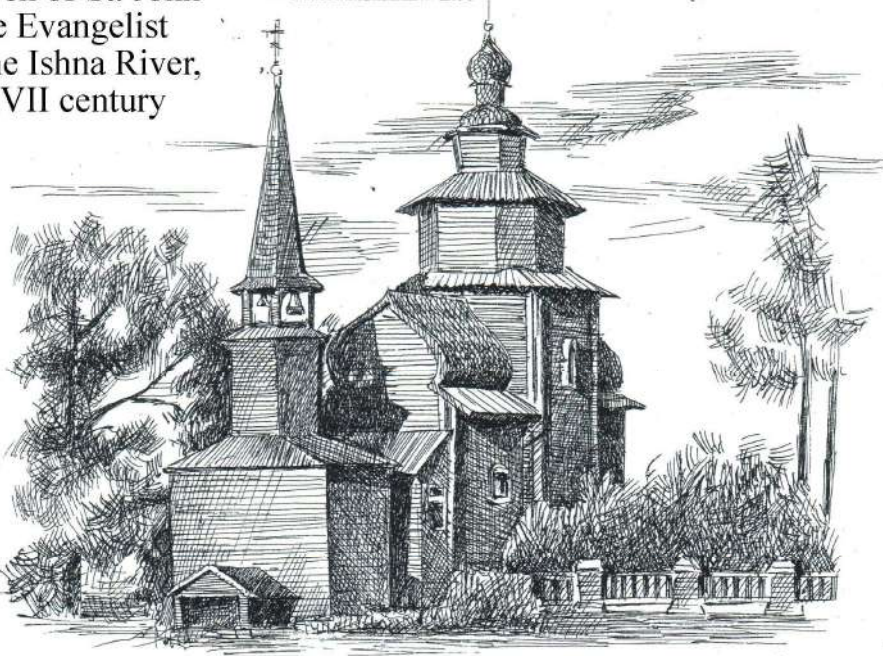
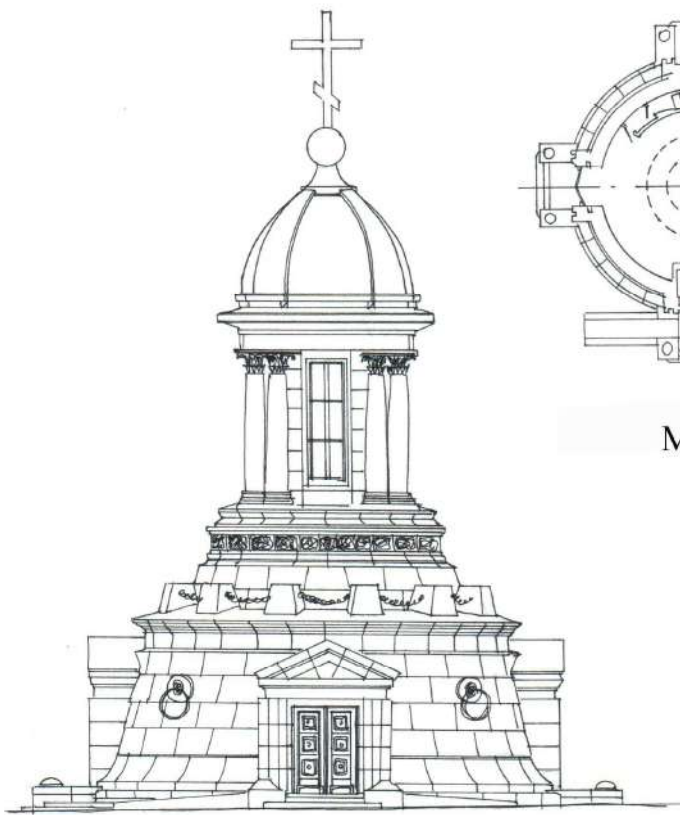


Fig. 15 a) modern architecture b) ancient Russian architecture

## Appendix 5 (continuation)



Memorial church-chapel  
in the name  
of the Holy Trinity,  
St. Petersburg, 2003.

Chapel of Alexander Nevsky  
in Korolev, 1999

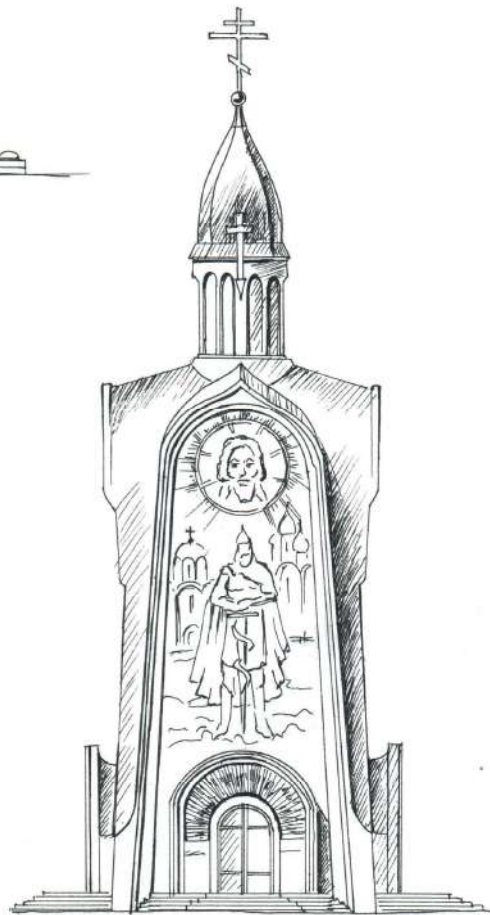
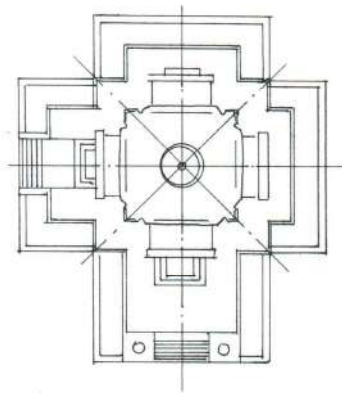


Fig. 16 c) classicism d) modern



Appendix 5 (continuation)

Catherine's Chapel



Chapel of Peter I  
near the village  
of Perovskoye

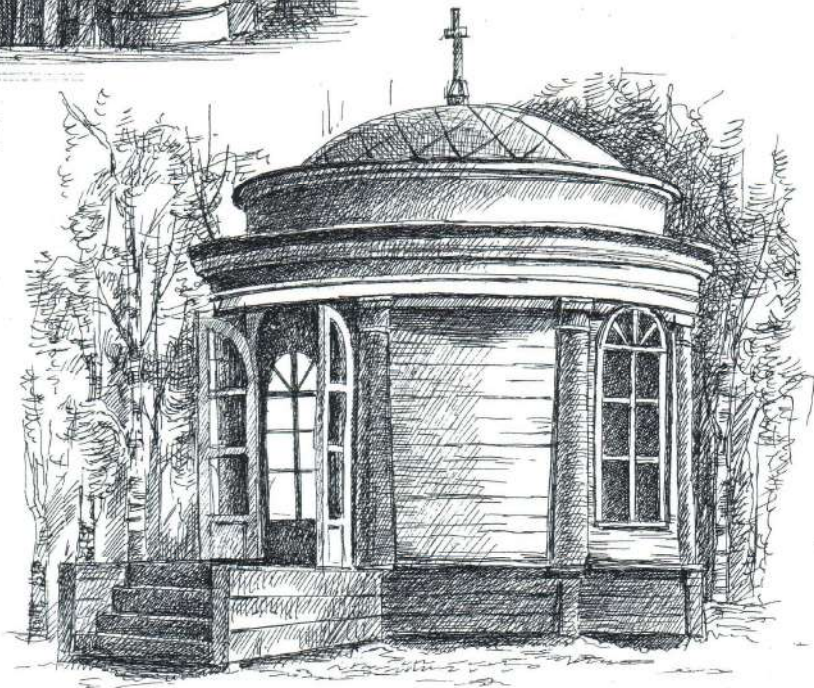
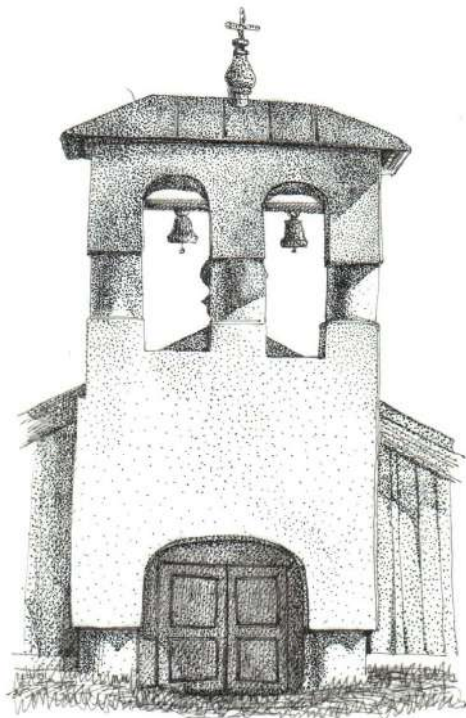


Fig. 17 e) Russian style: five-domed chapel f) classicism: rotunda chapel



Church of the Ascension in Torzhok, 1653



Belfry of St. Sergius Church in Izborsk

Fig. 18 g) Old Russian style: wooden, tiered h) belfry



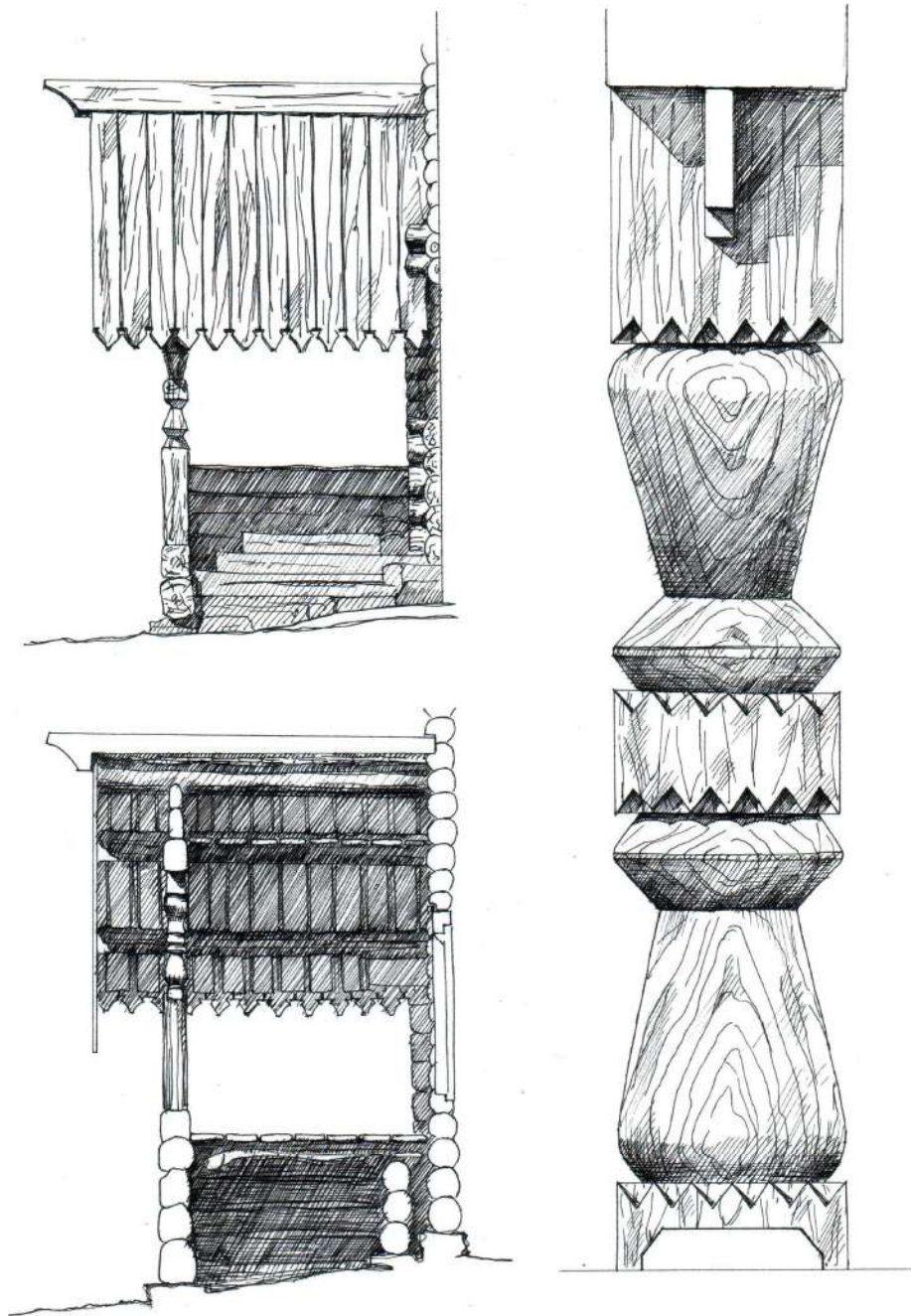


Fig. 19 Chapel in the village Keftenitsa. Porch details. Reconstruction

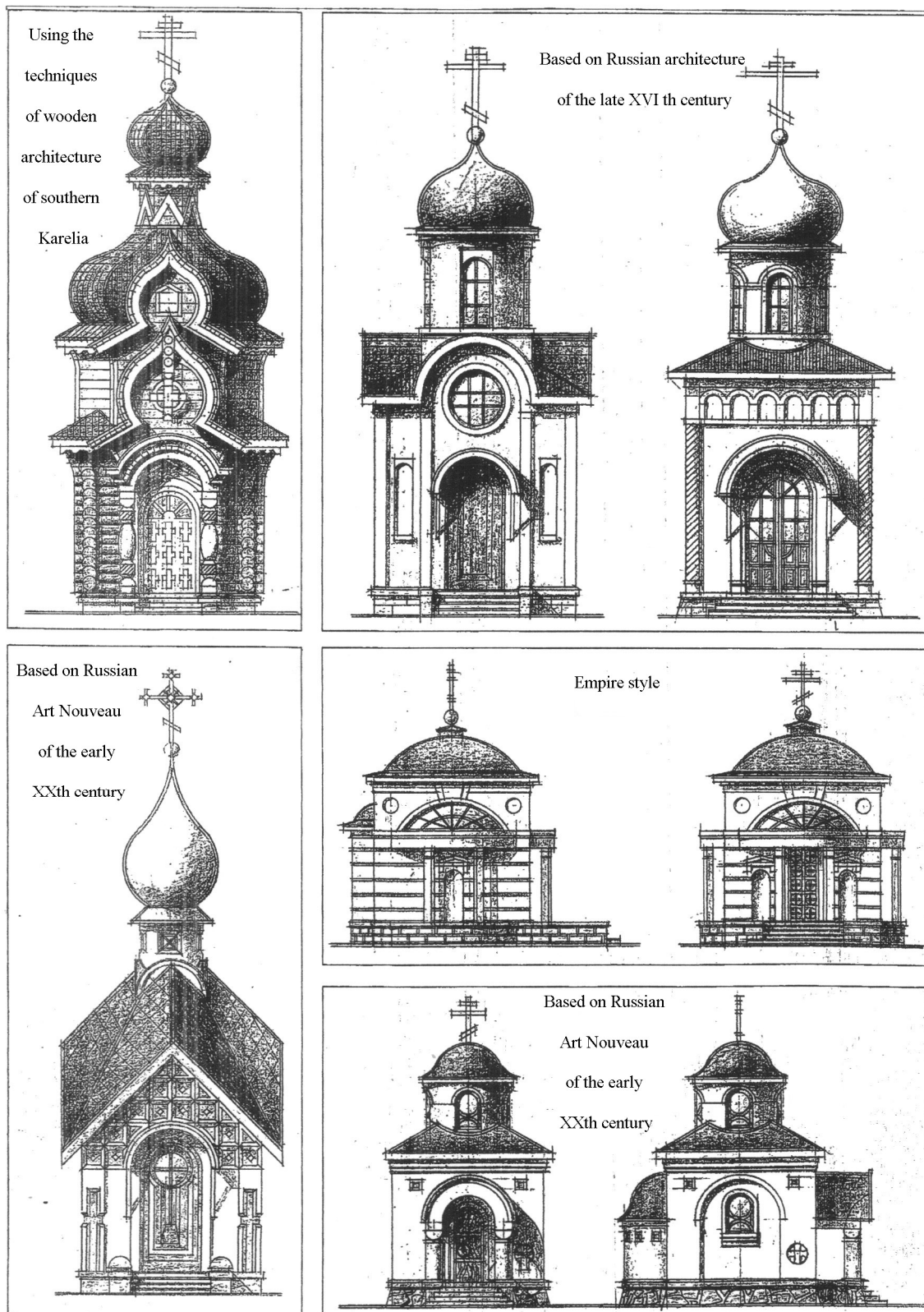


Fig. 20 An example of the stylization of newly erected chapels. [21]

## Appendix 6 (continuation)

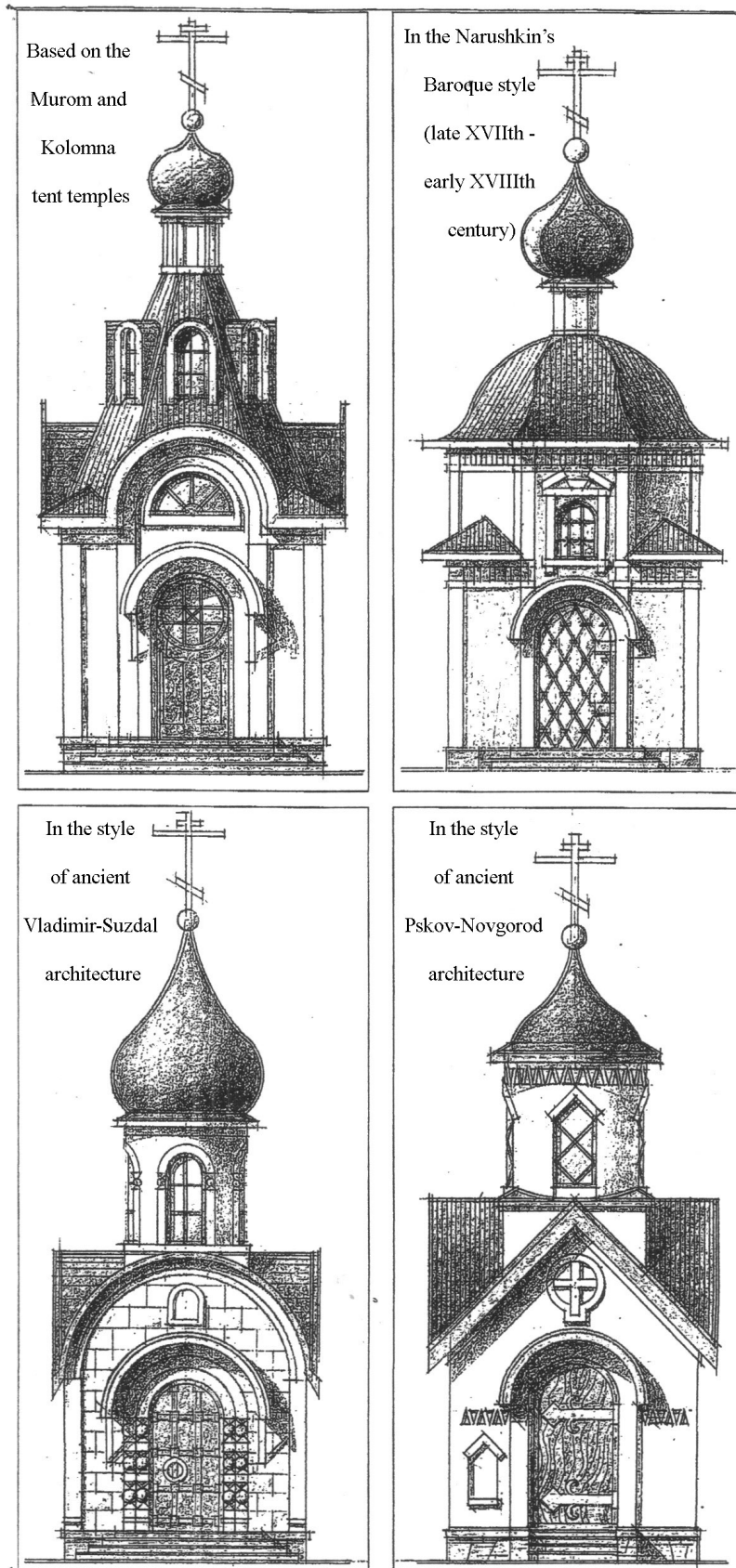


Fig. 20 An example of the stylization of newly erected chapels. [21]

## Appendix 6 (continuation)

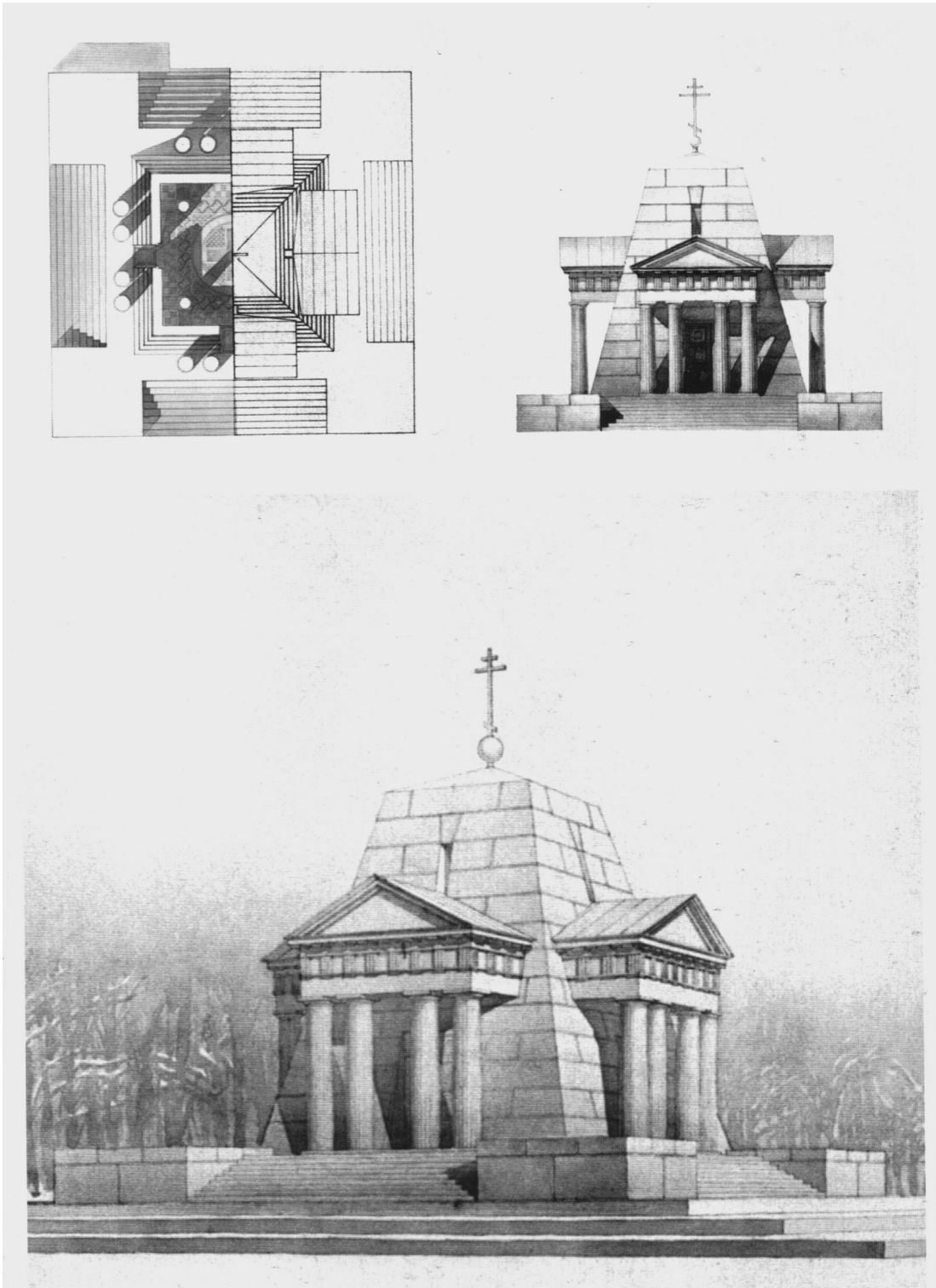


Fig. 21 Project of a memorial chapel on the Black River near the site of the duel of A.S. Pushkin. 1998 Archit. M. Mamoshin.

## Situation plan diagrams for chapel binding

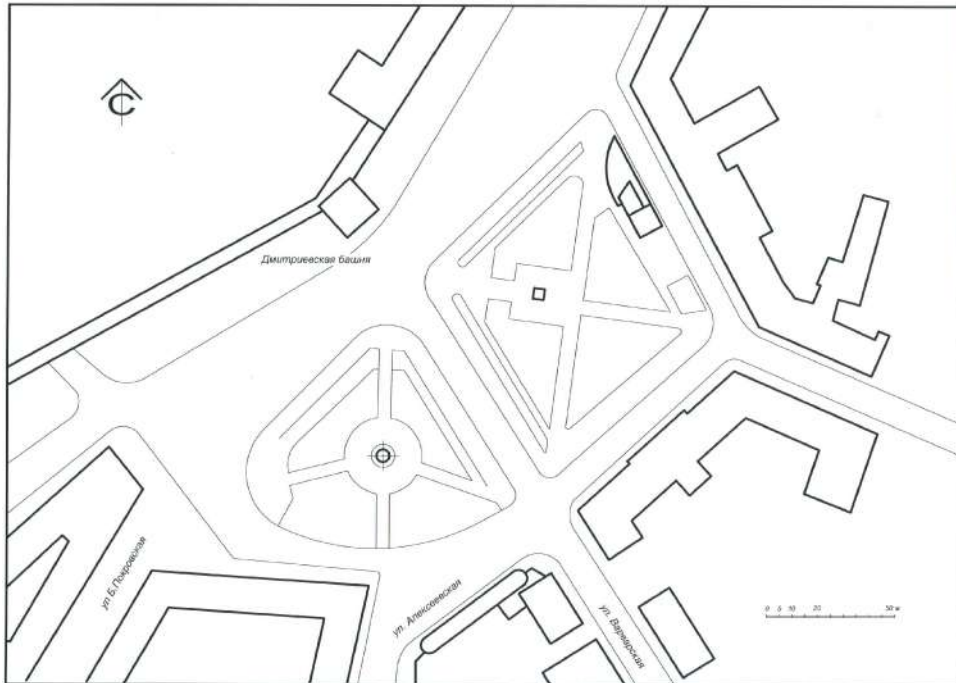


Fig. 22 Situation plan diagram for linking the Alekseevskaya Chapel, pl. Minin and Pozharsky

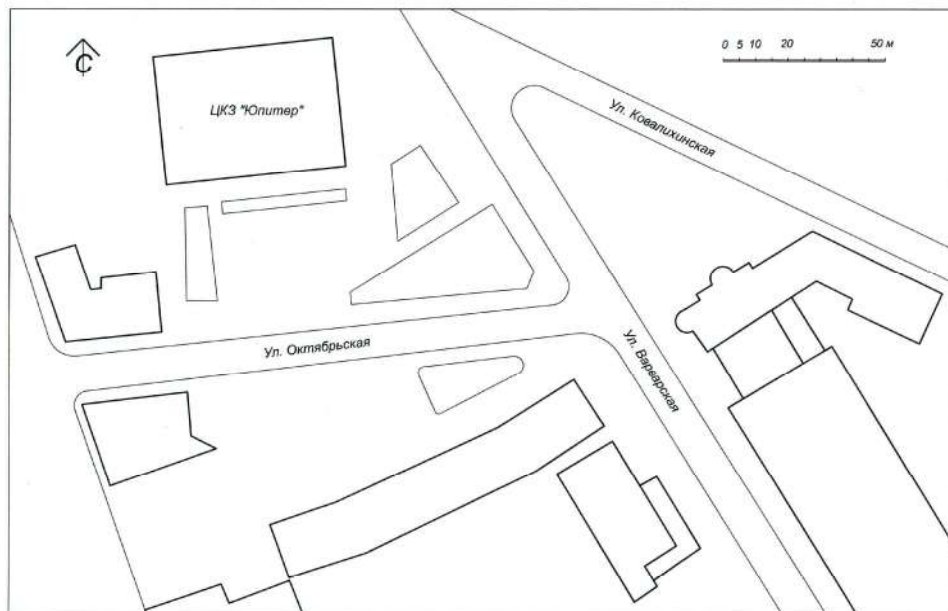


Fig. 23 Situation plan diagram for linking the Varvarskaya Chapel, Oktyabrskaya Square, st. Varvarskaya



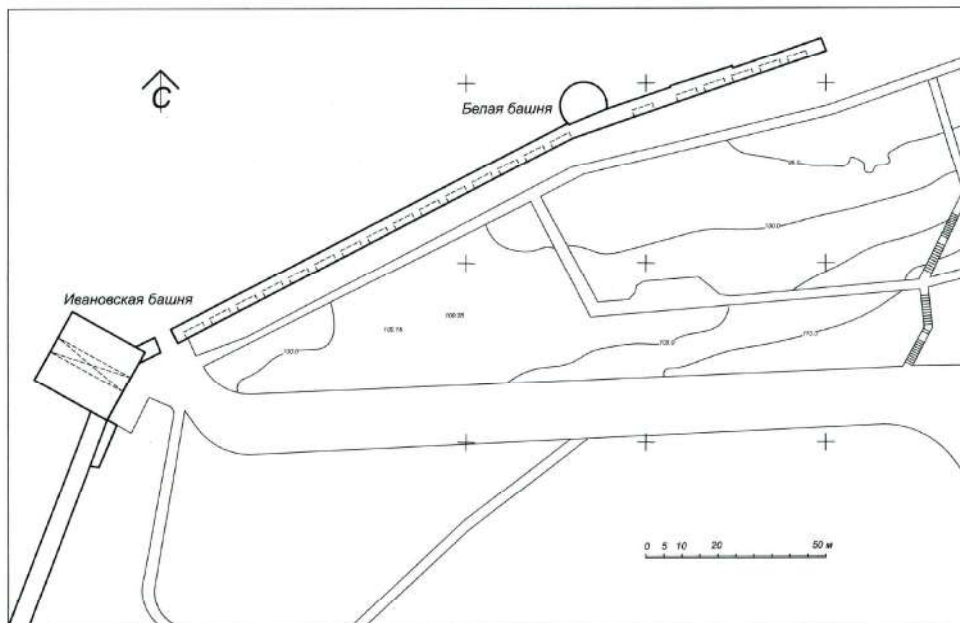


Fig. 24 Situation plan diagram for linking the Simeonovskaya Chapel, Kremlin, Ivanovo Congress, area between the Belaya (White) and Ivanovskaya towers

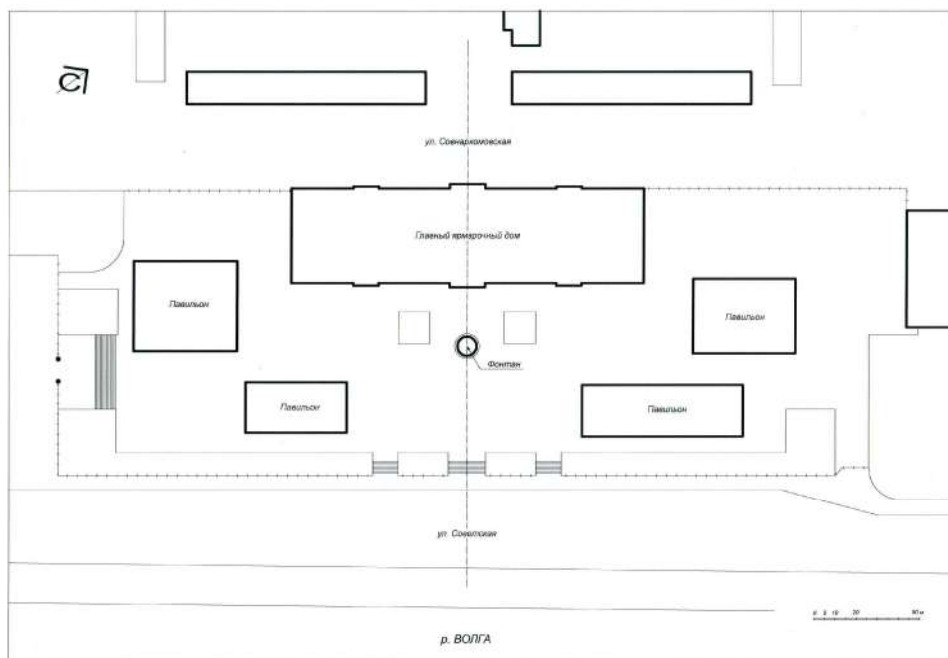


Fig. 25 Situation plan diagram for linking the Makaryevskaya Chapel at the Main Fair House.



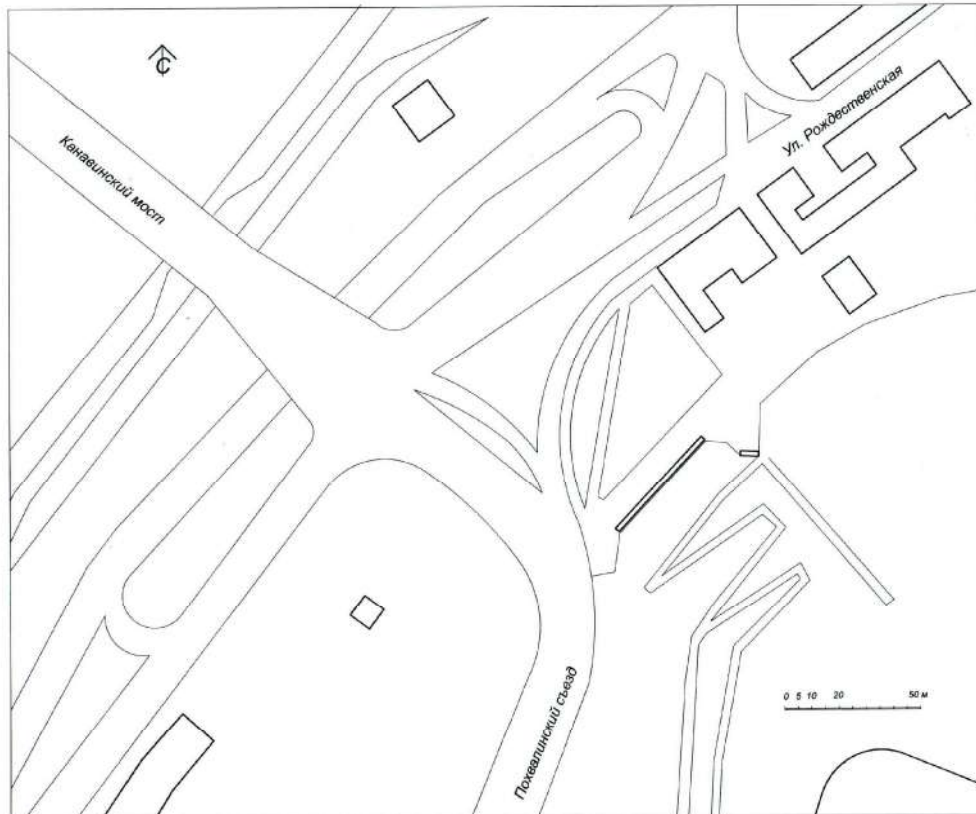


Fig. 26 Diagram of the situational plan for linking the overhead chapel of St. Theodora on the bridgehead near the Kanavinsky Bridge.

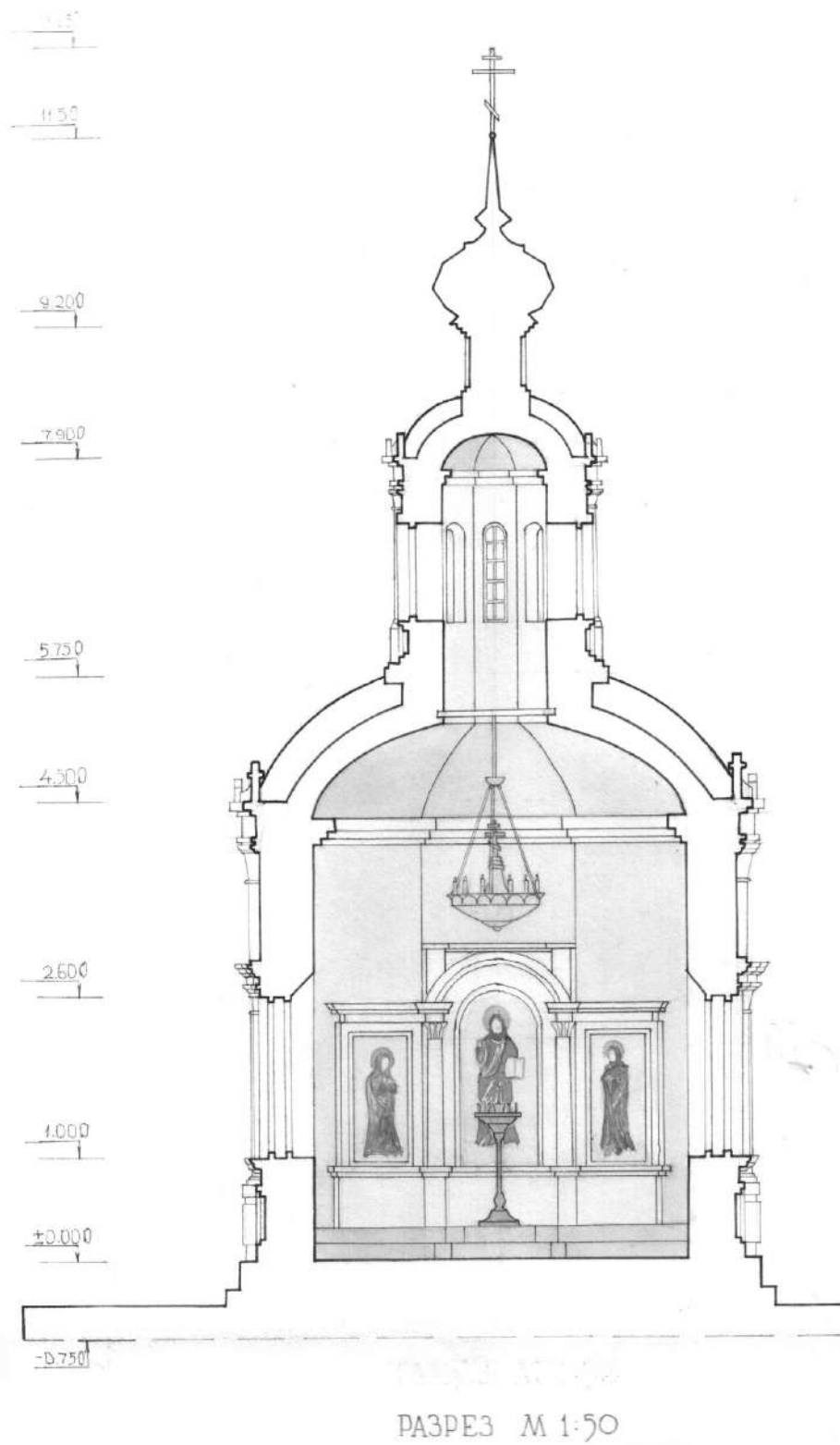


Fig. 27 An example of the graphic design of a section of the chapel.

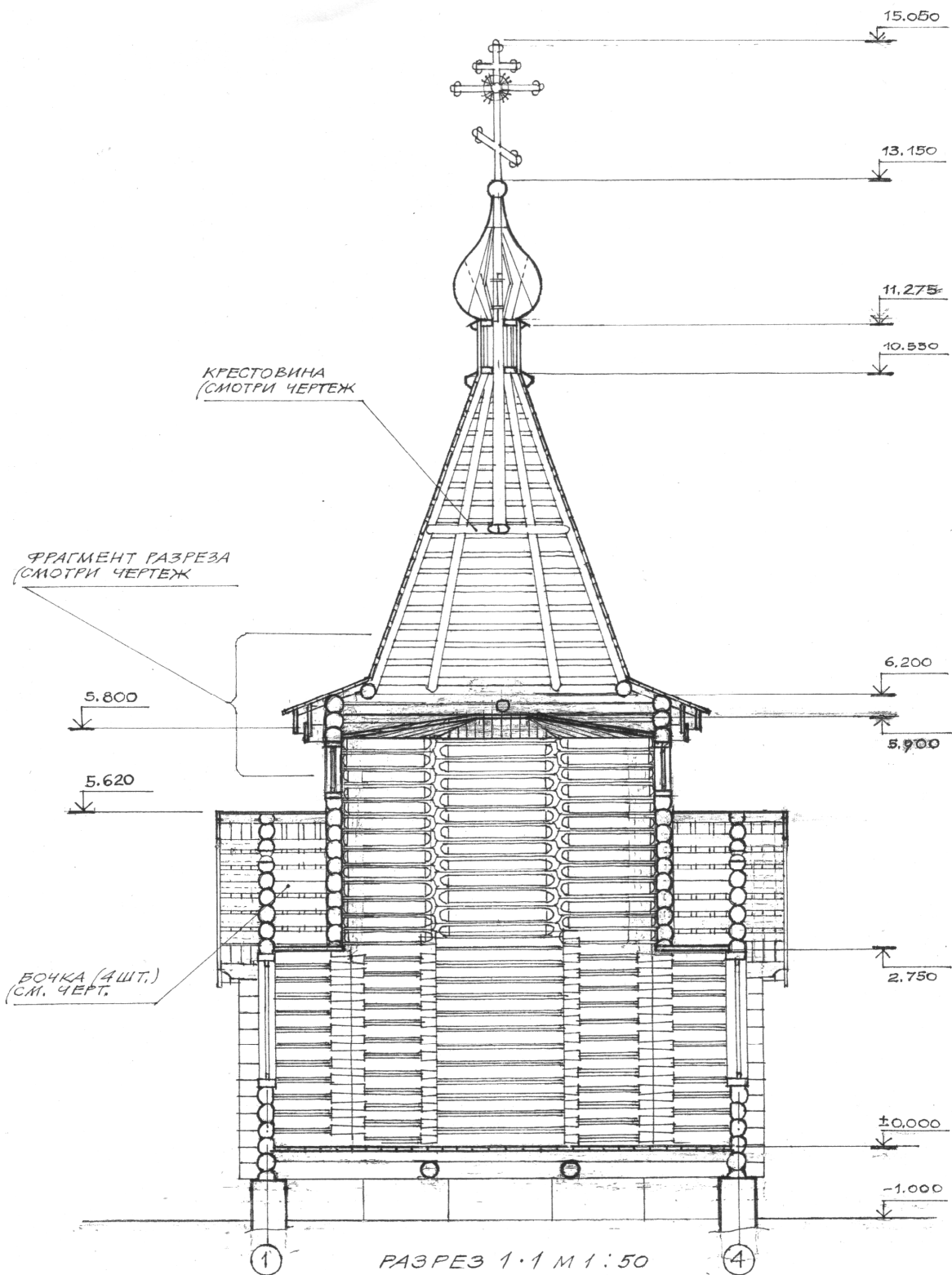


Fig. 28 An example of graphic design of a section of a wooden chapel.

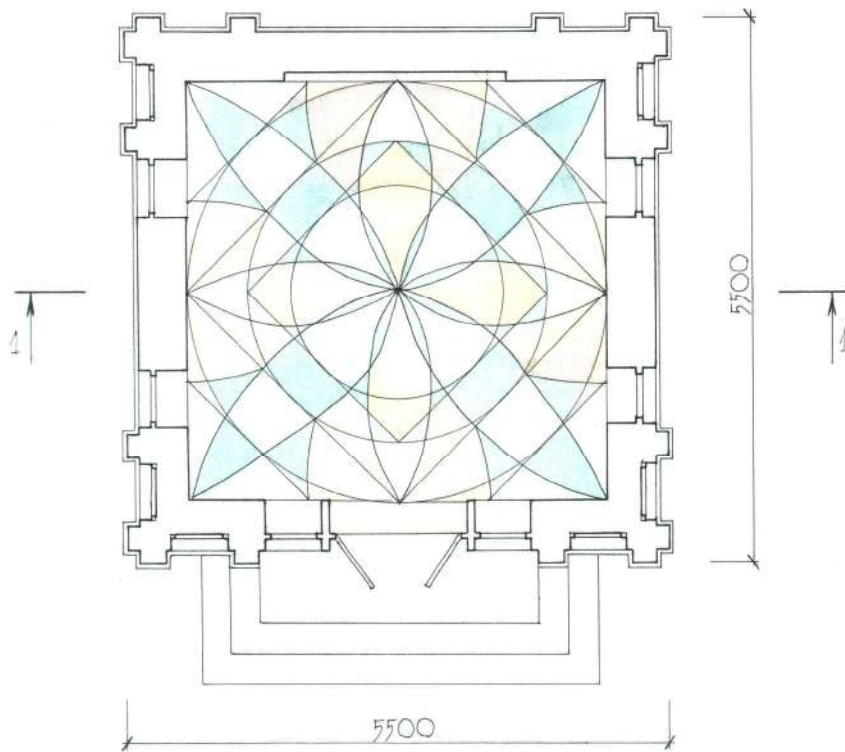


Fig. 29 An example of a graphic design for a chapel plan.

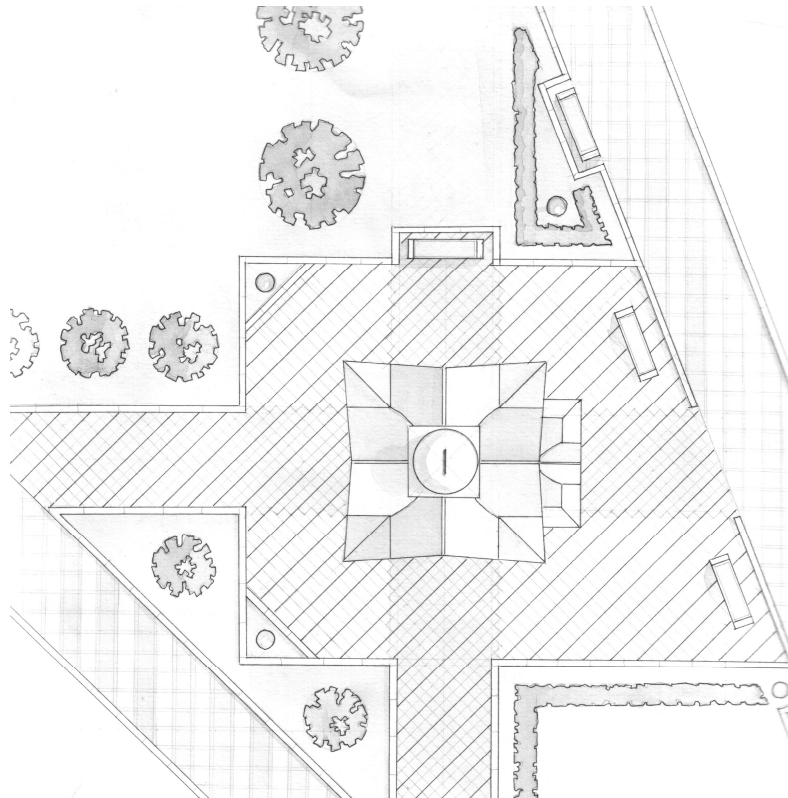


Fig. 30 An example of the graphic design of the general plan of the chapel.

Appendix 8.  
Examples of chapels in Nizhny Novgorod. Varvorskaya Chapel (Varvorskaya  
St.). Restoration project.

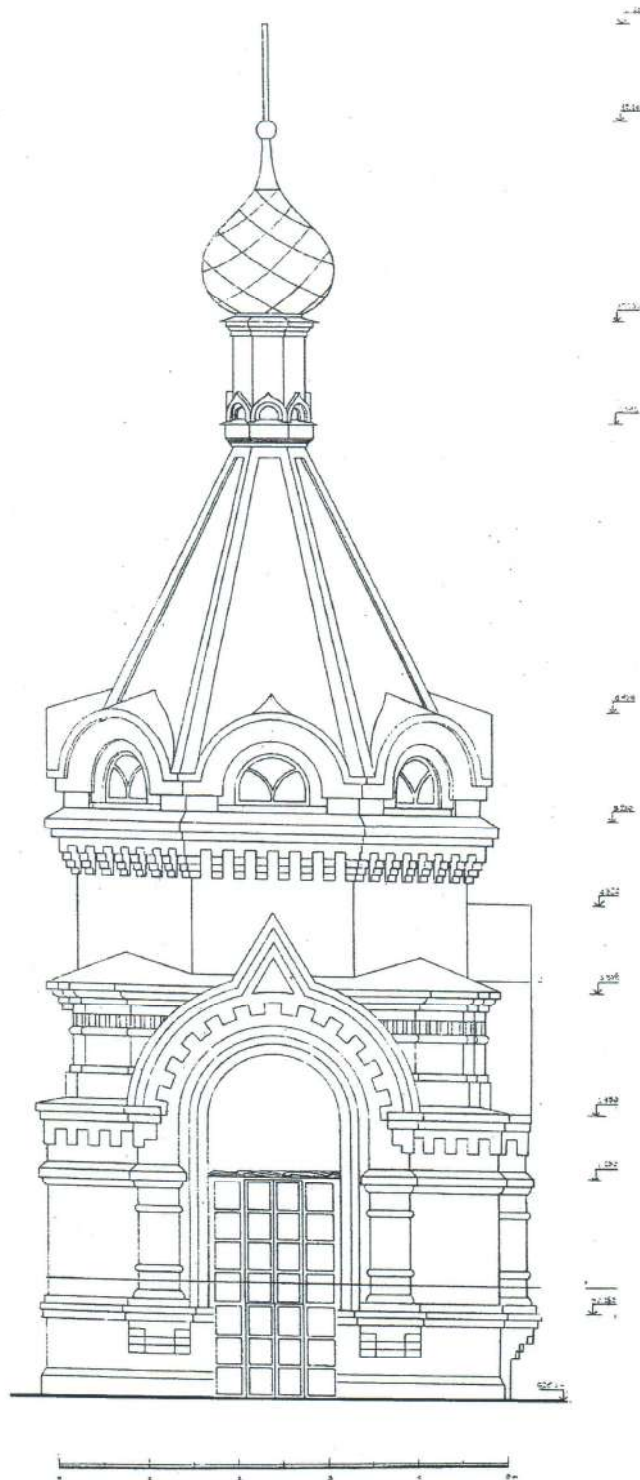


Fig. 31 South facade

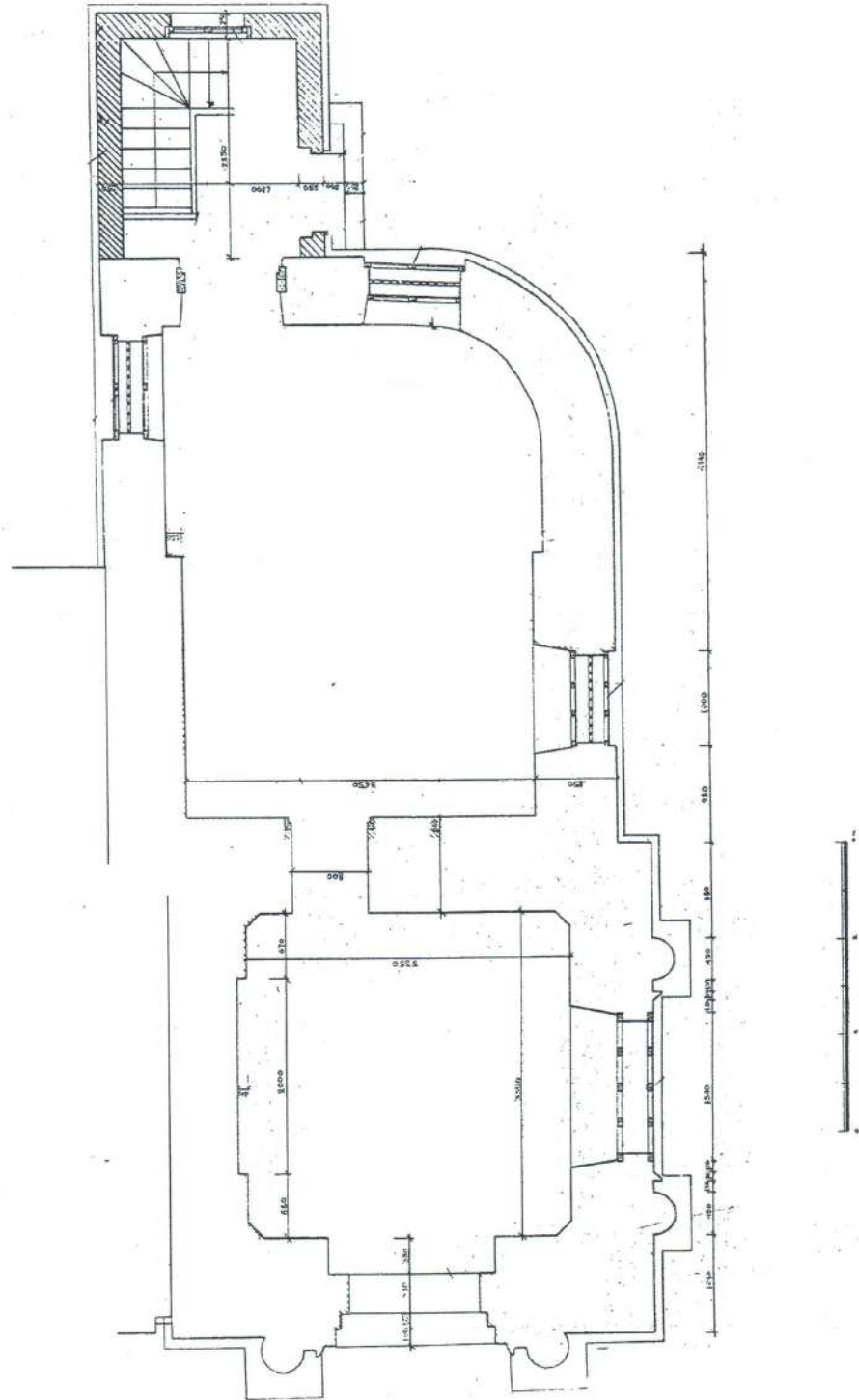


Fig. 32 Plan

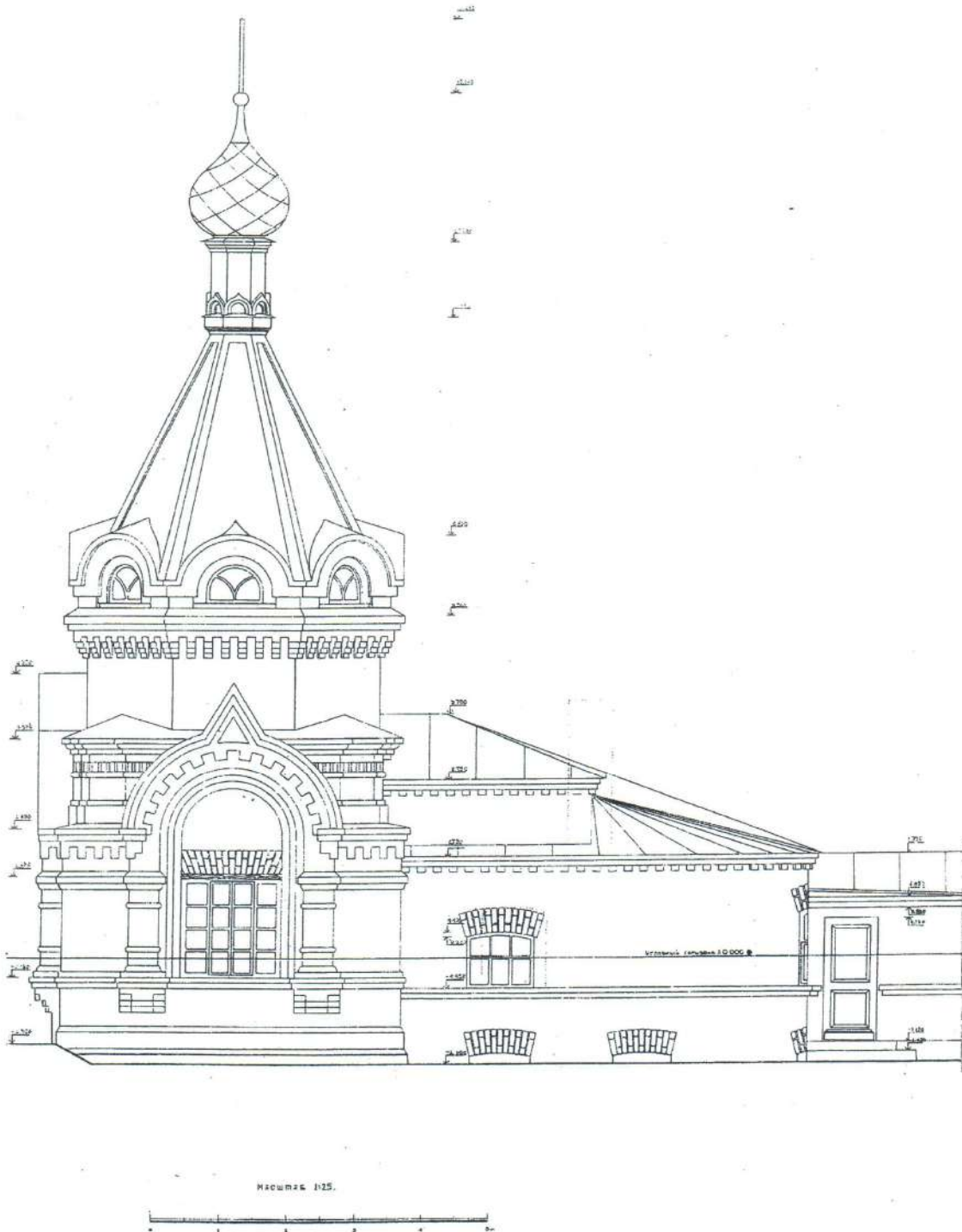


Fig. 33 East facade



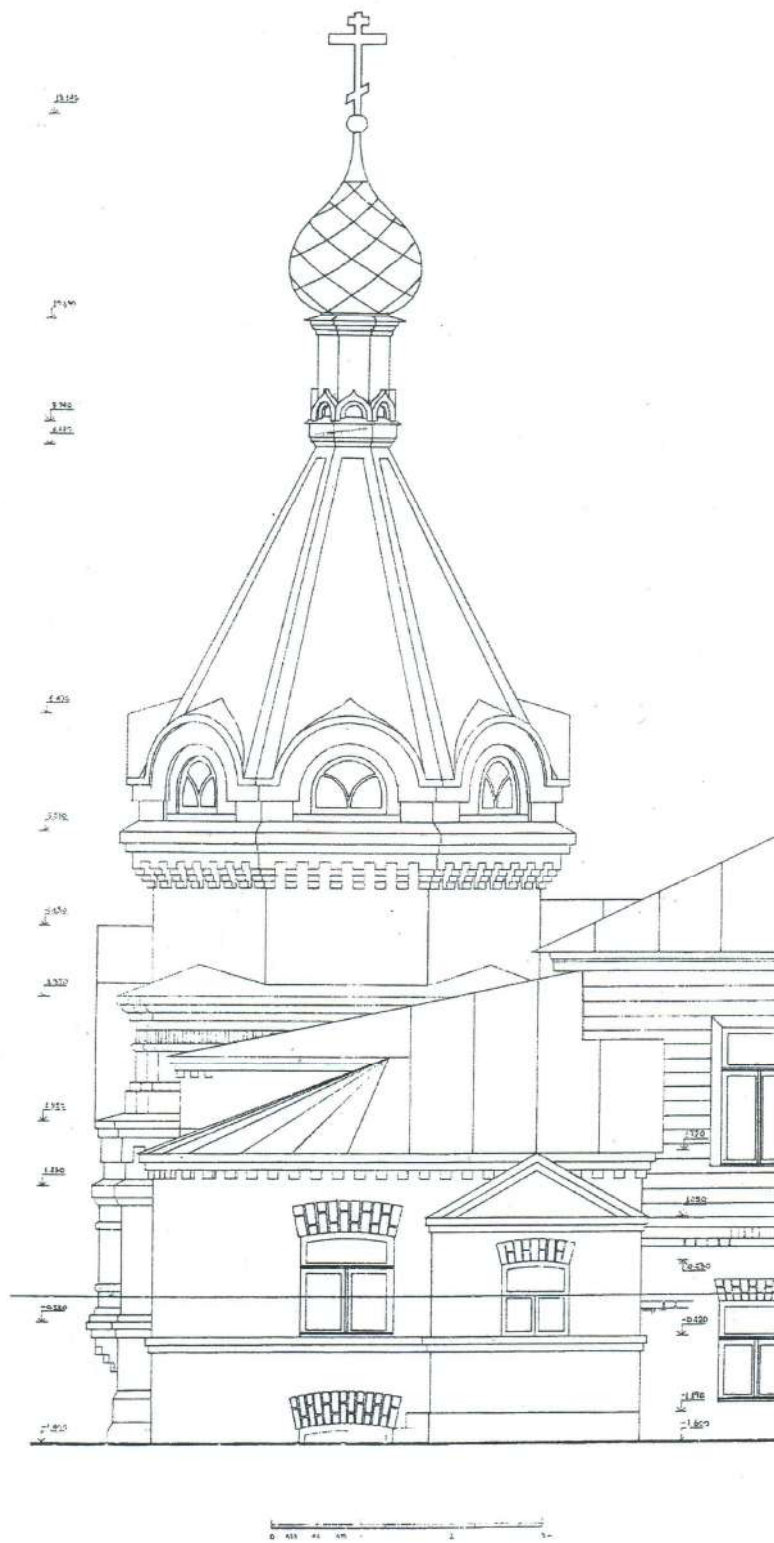


Fig. 34 North facade



## Appendix 9 (continuation)

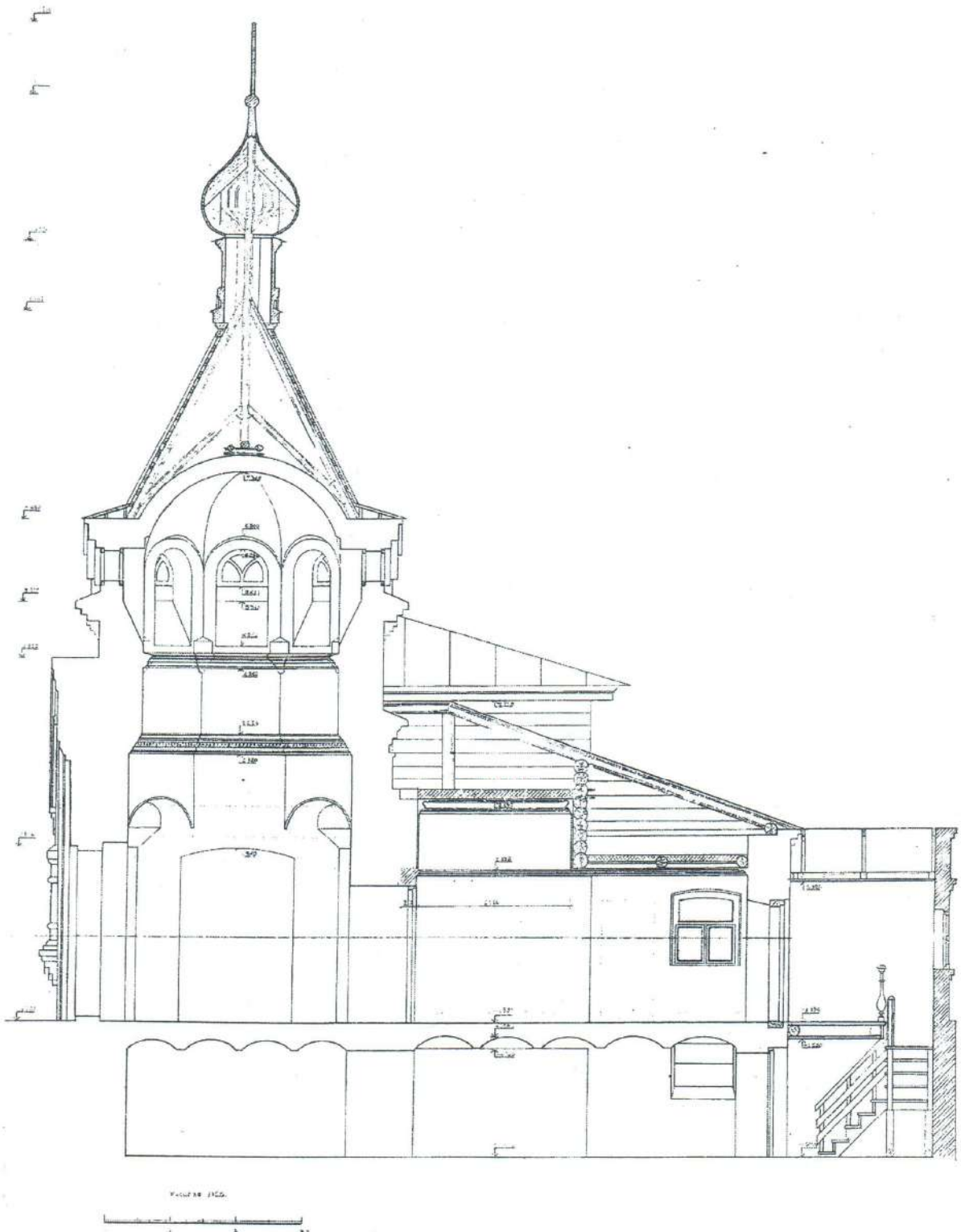


Fig. 35 Section

Appendix 9 (continuation)  
Chapel of the Ascension Church (on Ilyinskaya Street). Restoration project.

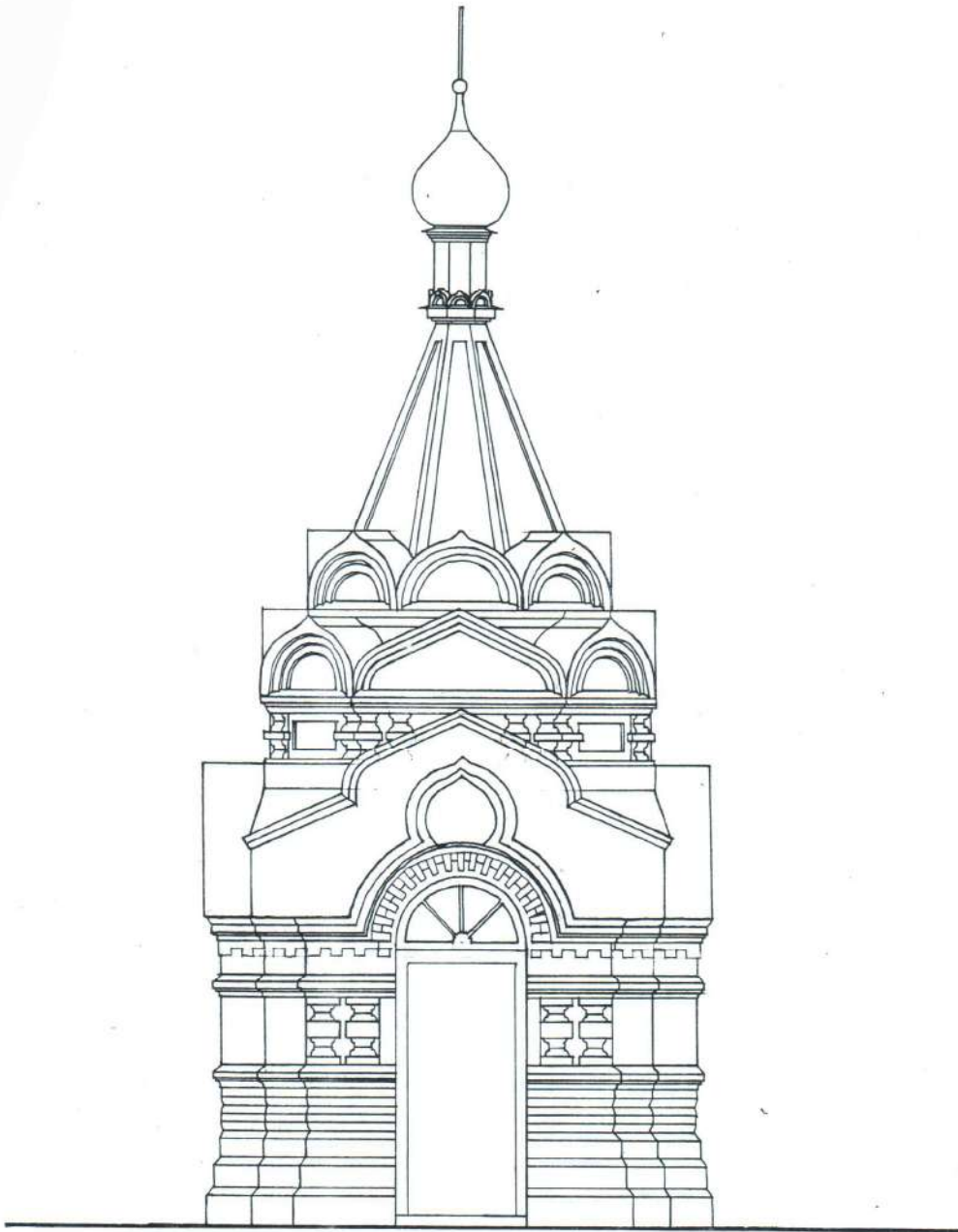


Fig. 36 Western facade

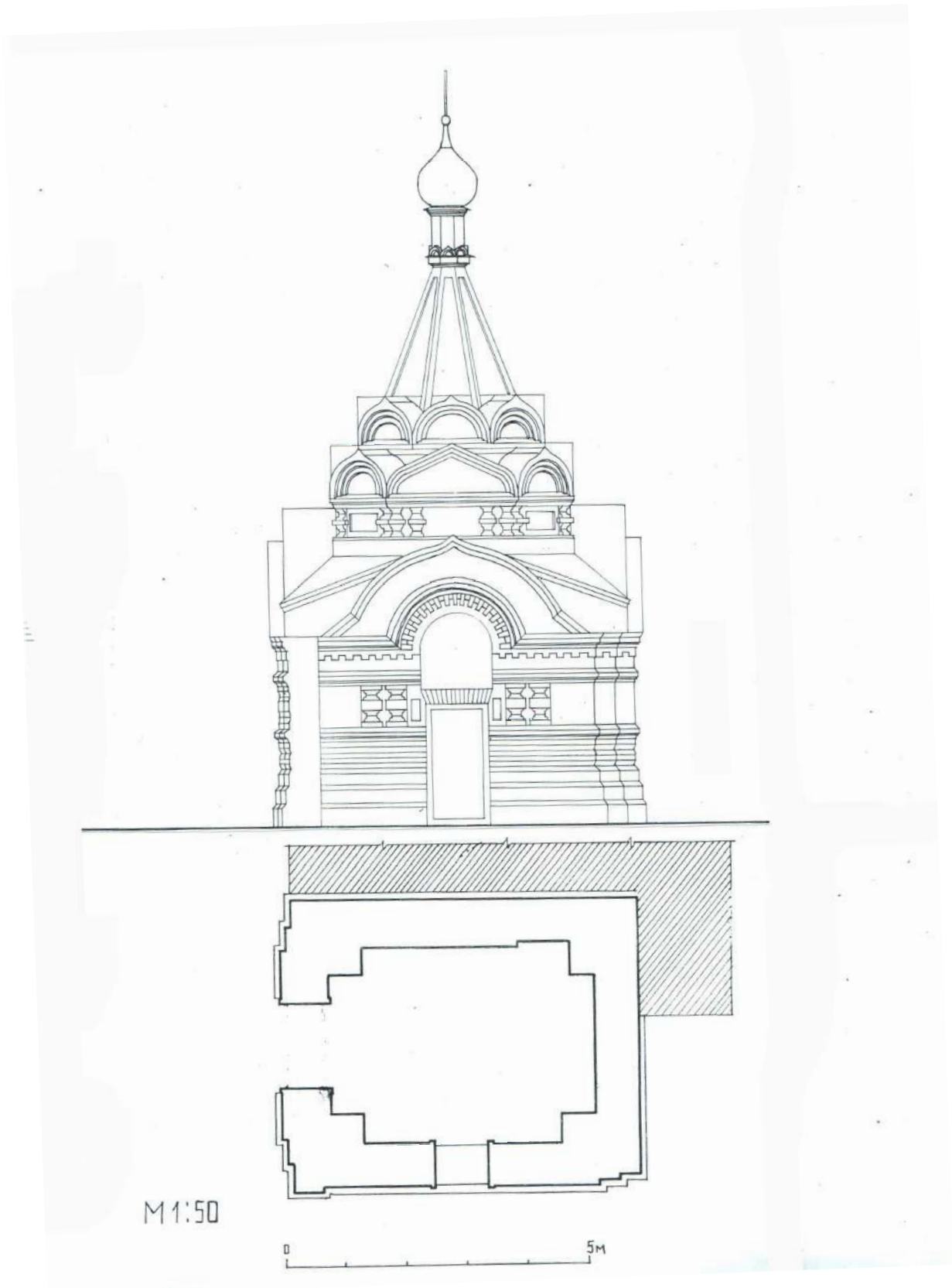


Fig. 37 South facade, plan.



Fig. 38 An example of the graphic design of a chapel project in the style of Russian church architecture.





Fig. 39 An example of the graphic design of a chapel project in the “neo-Gothic” style.



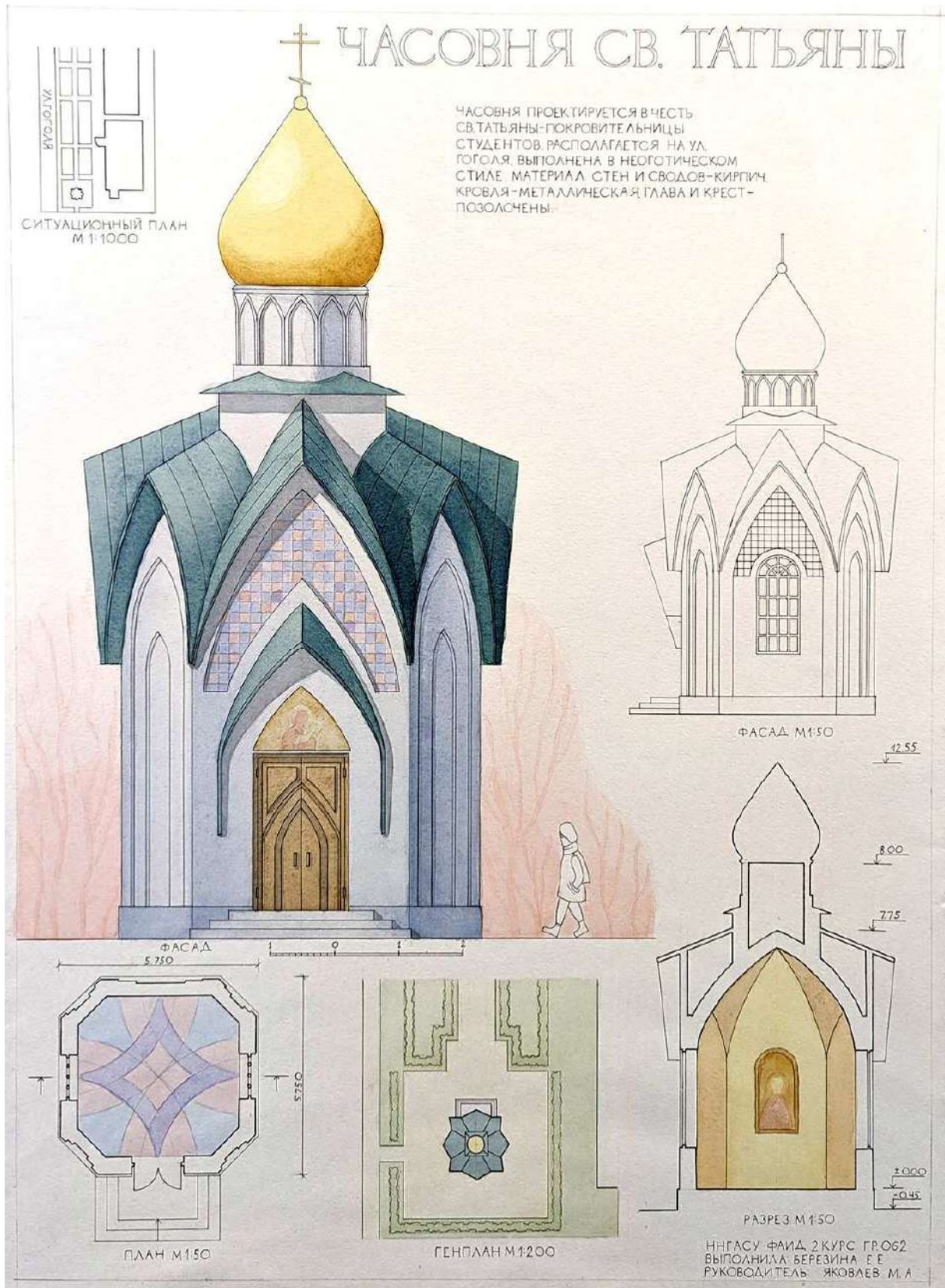


Fig. 40 An example of the graphic design of a chapel project, with Gothic elements.



Fig. 41 An example of the graphic design of a chapel project, with Gothic elements.





Fig. 42 An example of the graphic design of a chapel project, with elements of Art Nouveau style.



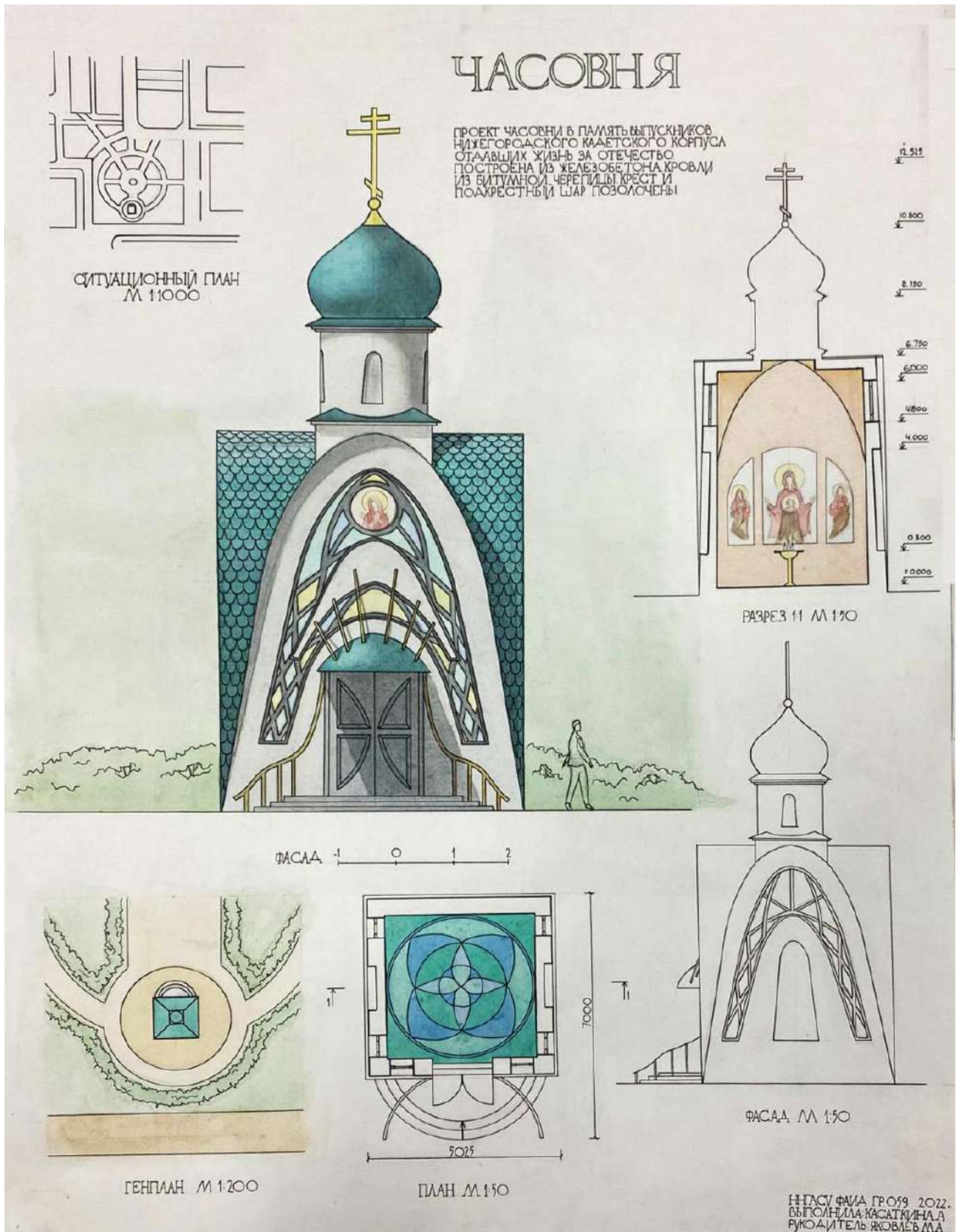


Fig. 43 An example of the graphic design of a chapel project, with elements of Art Nouveau style.



Fig. 44 An example of the graphic design of a chapel project, with elements of Art Nouveau style.





Fig. 45 An example of the graphic design of a chapel project in the style of Pskov-Novgorod architecture.

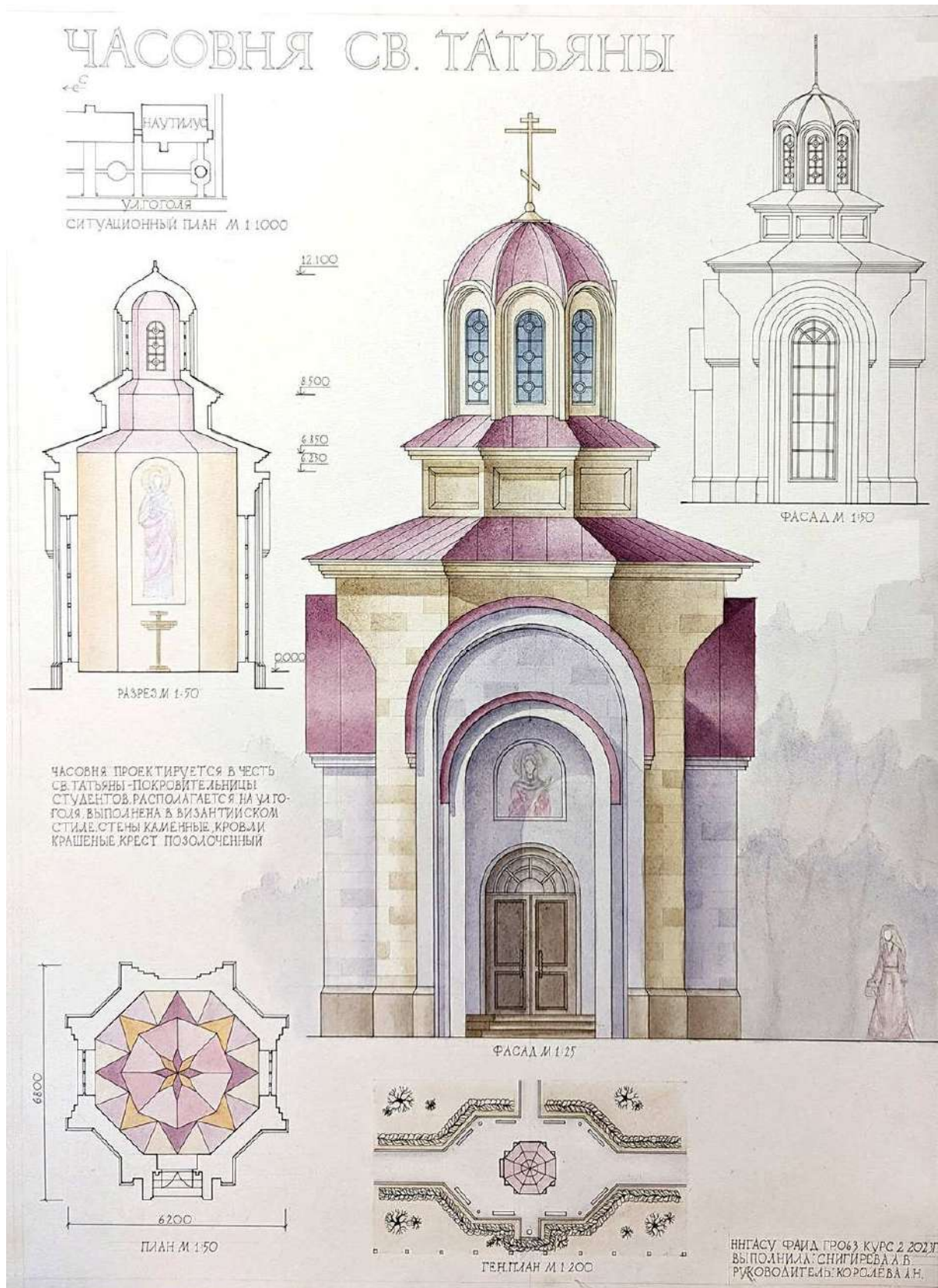


Fig. 46 An example of the graphic design of a chapel project in the “Byzantine” style.



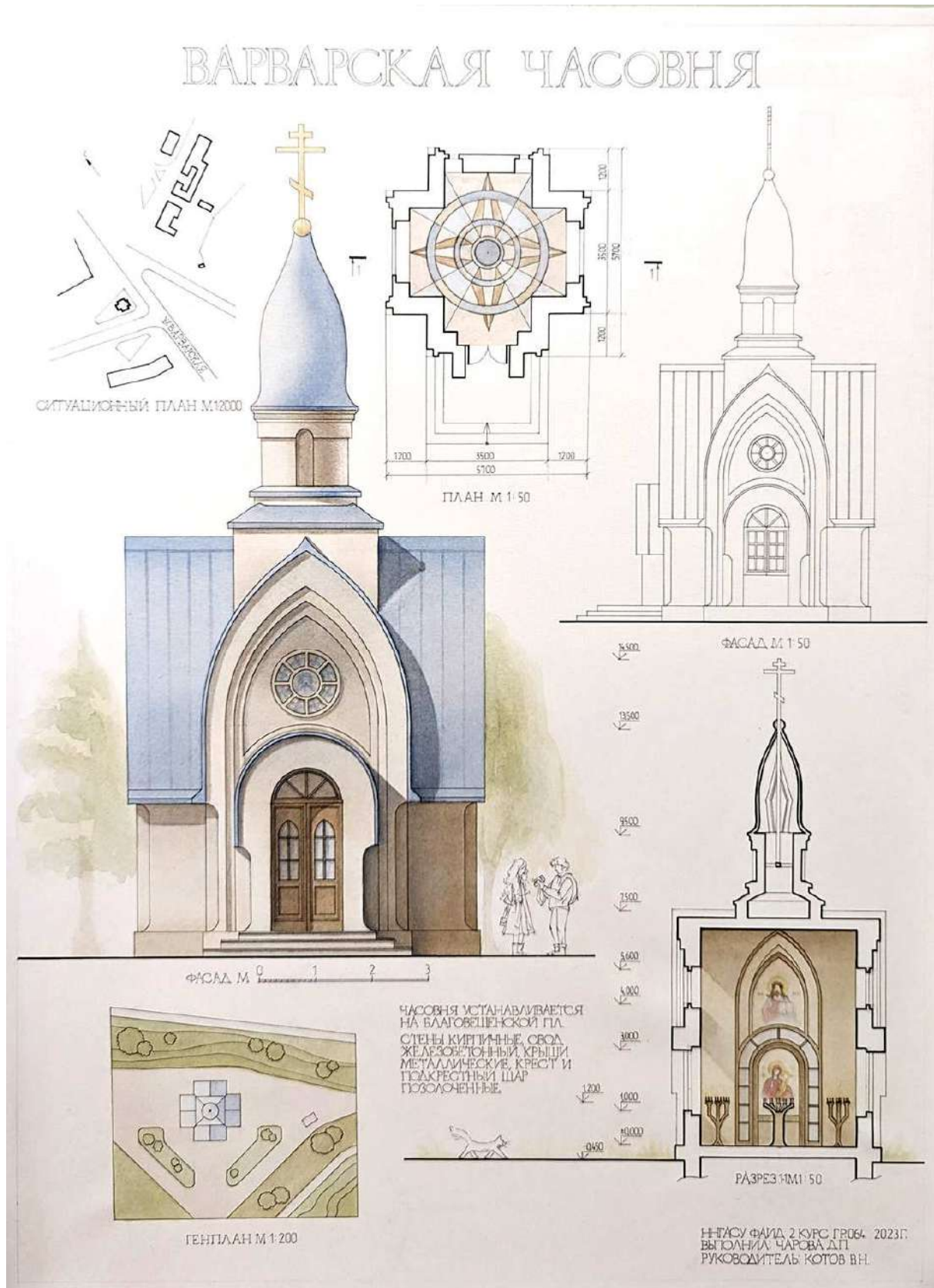


Fig. 47 An example of the graphic design of a chapel project in the “Russian” style.

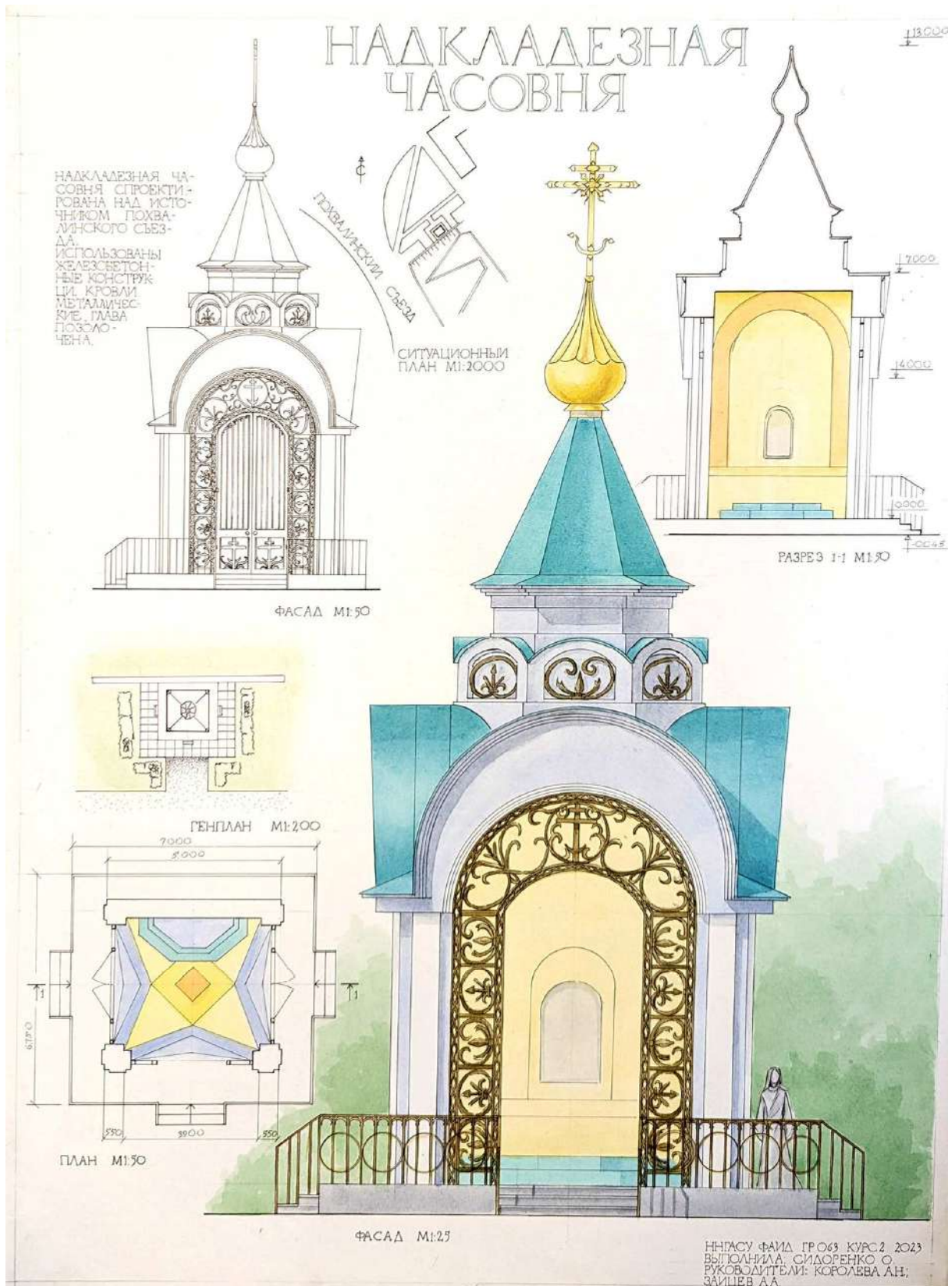


Fig. 48 An example of the graphic design of a chapel project with elements of Tatar architecture.



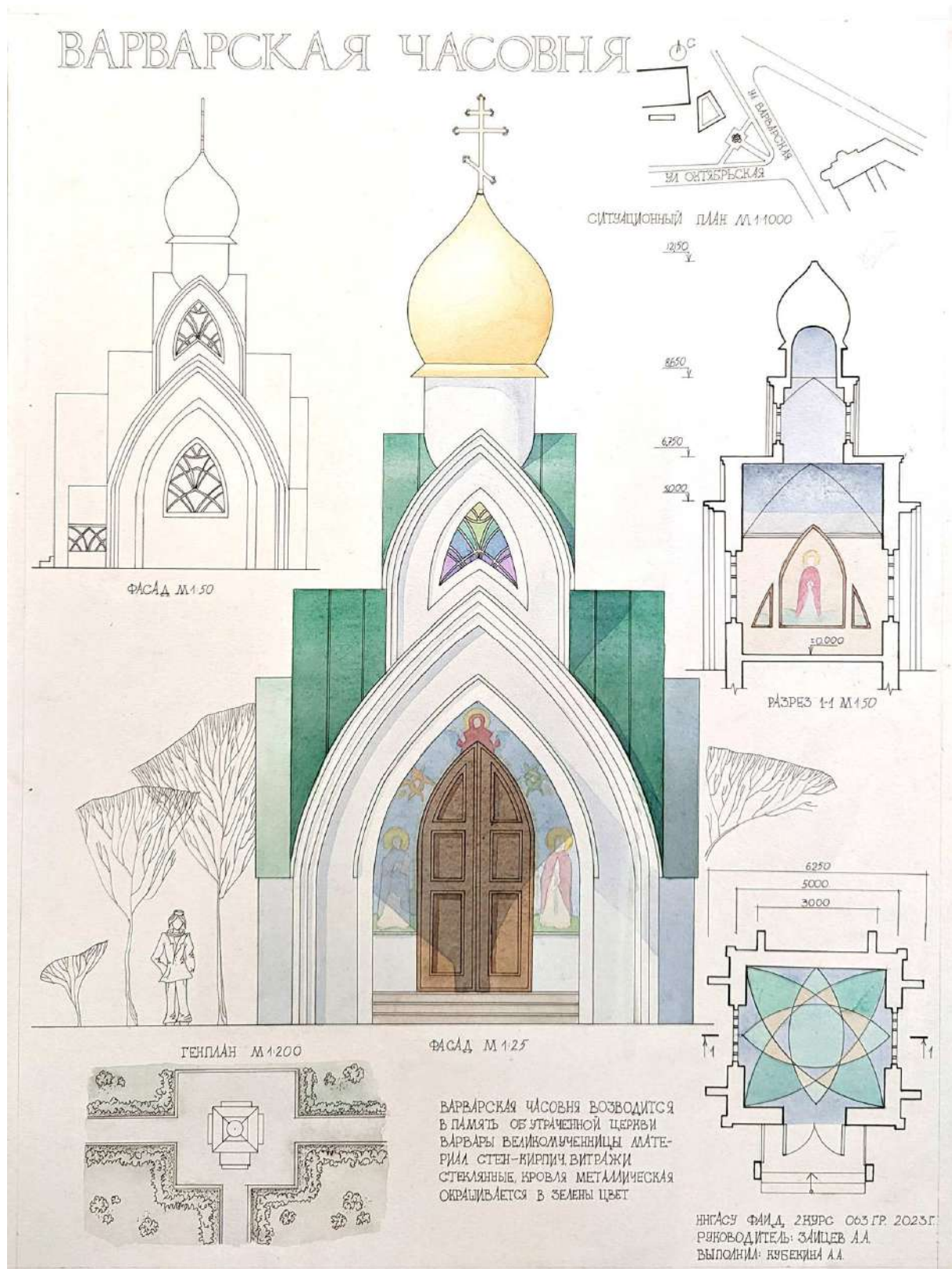


Fig. 49 An example of the graphic design of a chapel project, in the style of Russian church architecture.



## Appendix 10 (continuation)



Fig. 50,51 An example of the graphic design of a chapel project, with Baroque elements (above) and with elements of the “Russian” style (below).





Fig. 52 An example of the graphic design of a tented chapel project in the style of Armenian architecture.





Fig. 53 An example of the graphic design of a tented chapel project in the style of Russian church architecture.

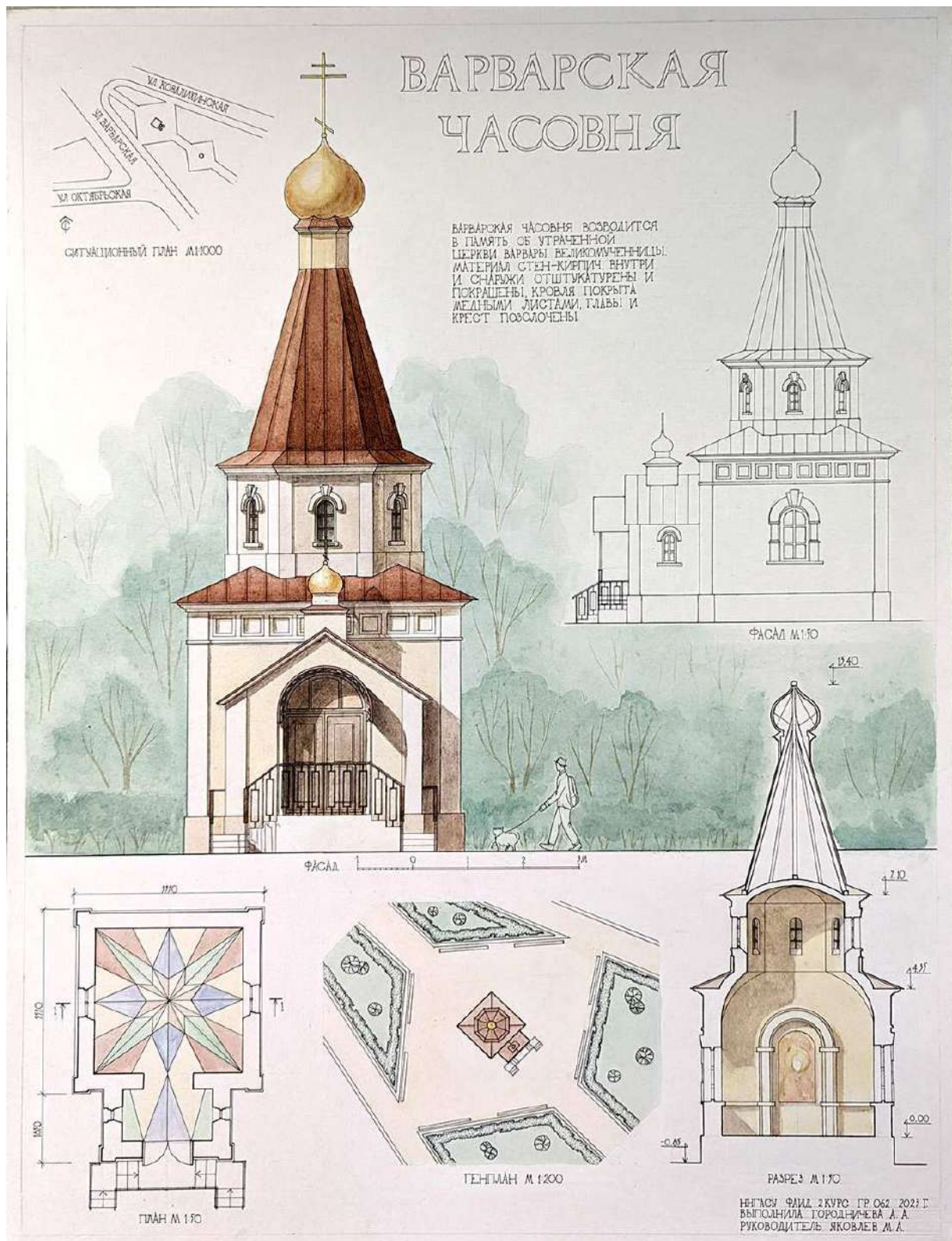


Fig. 54 An example of the graphic design of a tented chapel project in the style of “Russian classicism”.



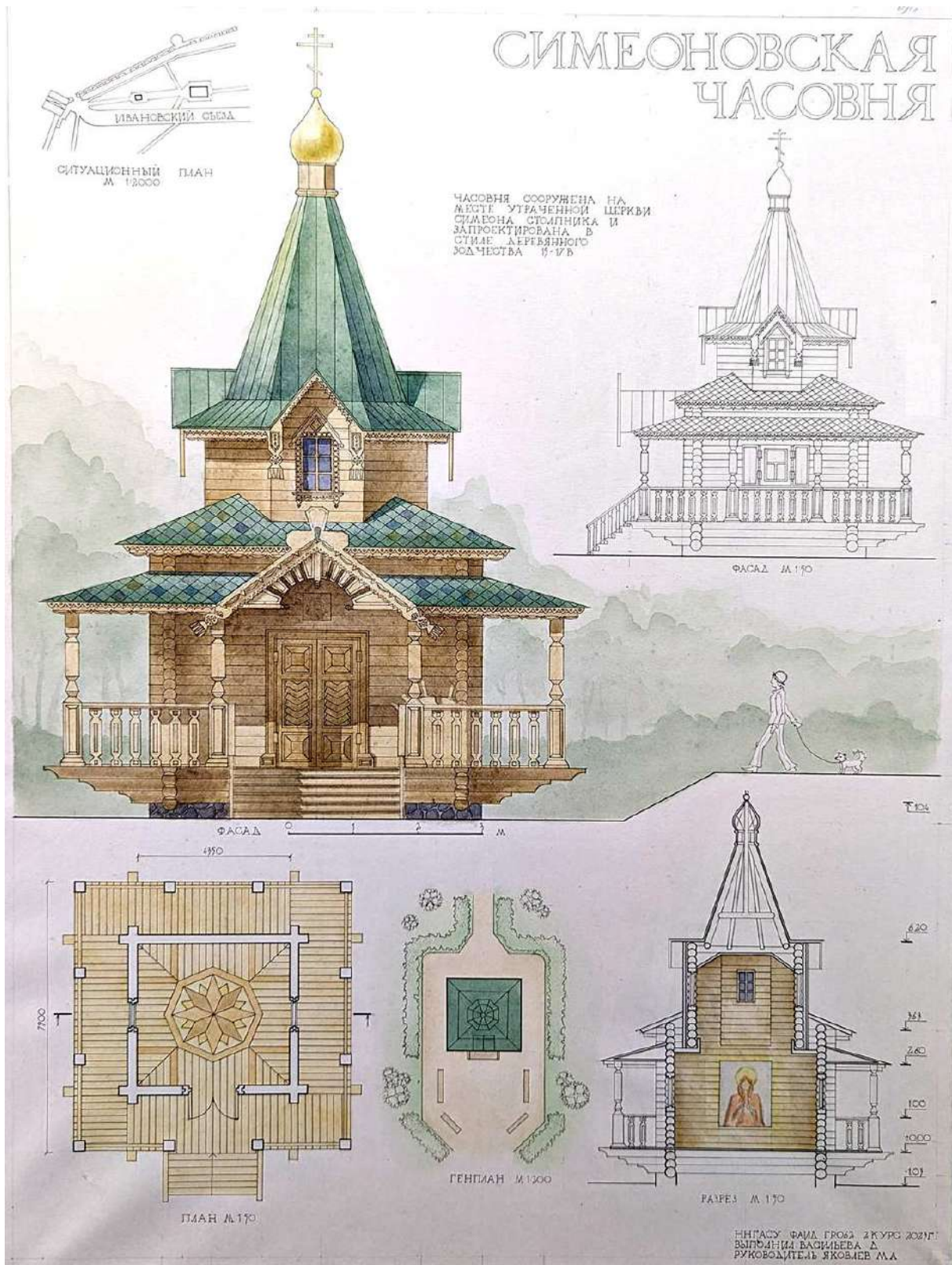


Fig. 55 An example of the graphic design of a chapel project made of rounded logs with a walkway.



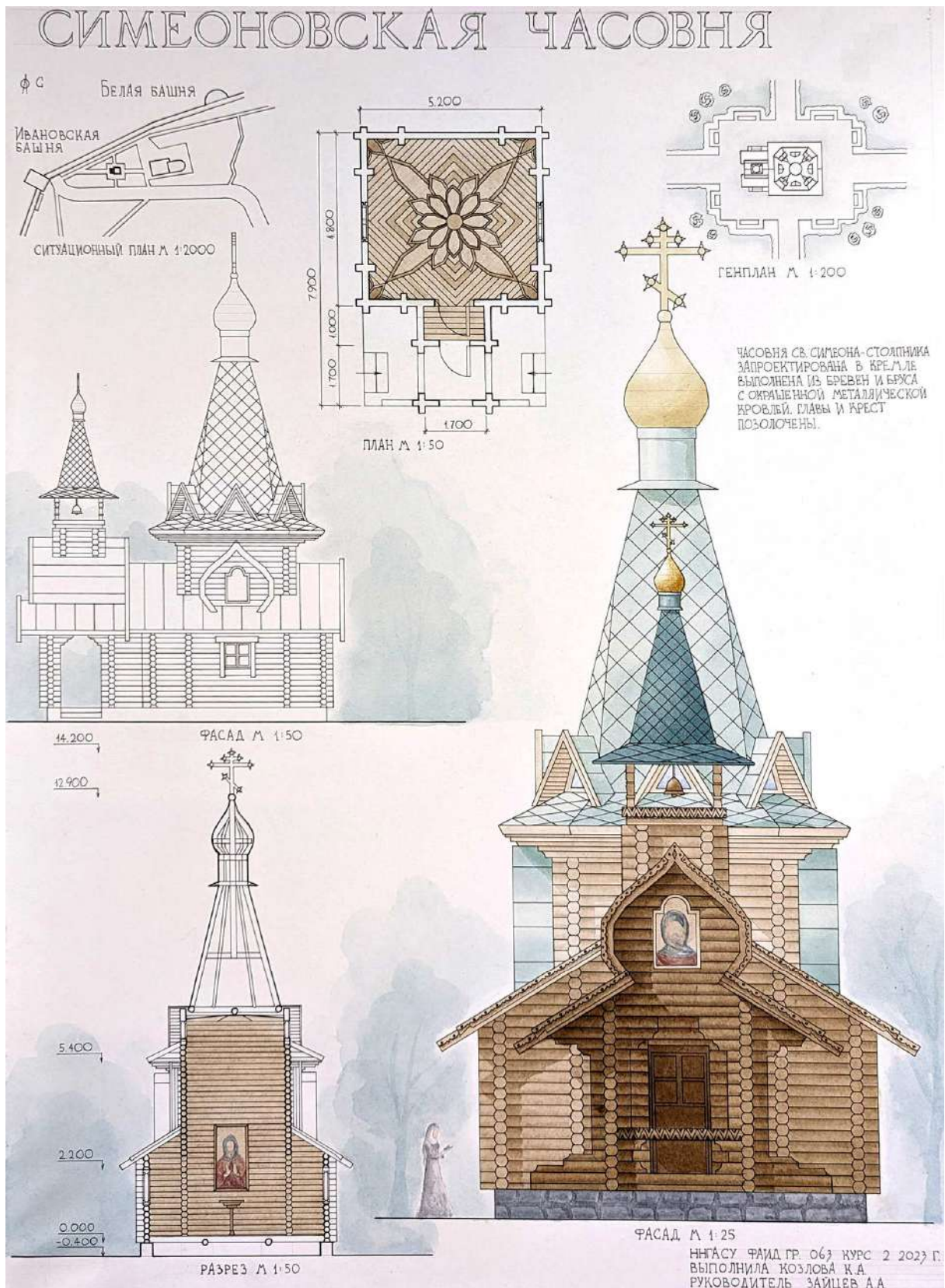


Fig. 56 An example of a graphic design for a chapel project made of rounded logs with a bell.





Fig. 57 An example of a graphic design for a chapel project made from rounded logs.



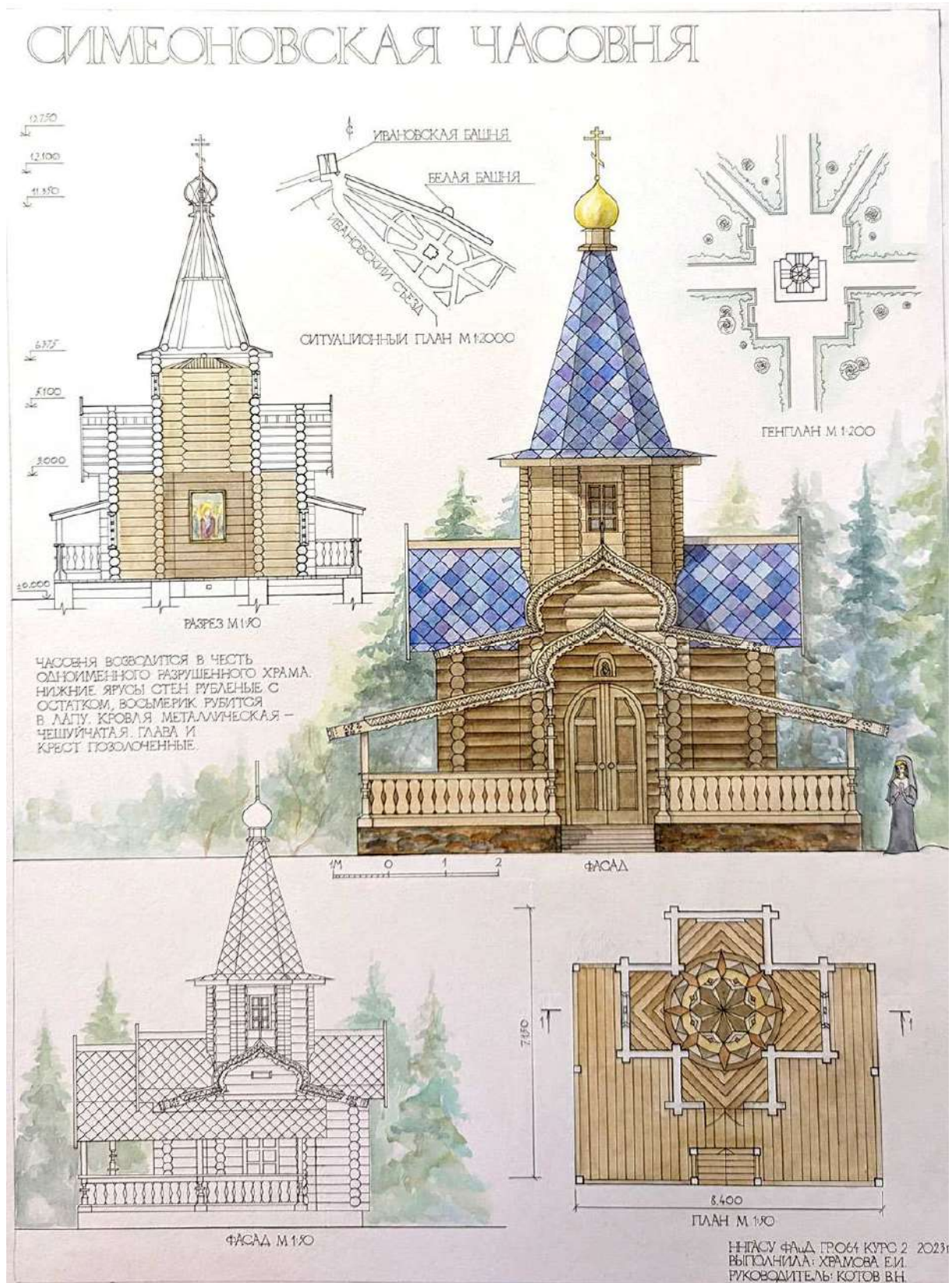


Fig. 58 An example of the graphic design of a chapel project made of rounded logs with a walkway.



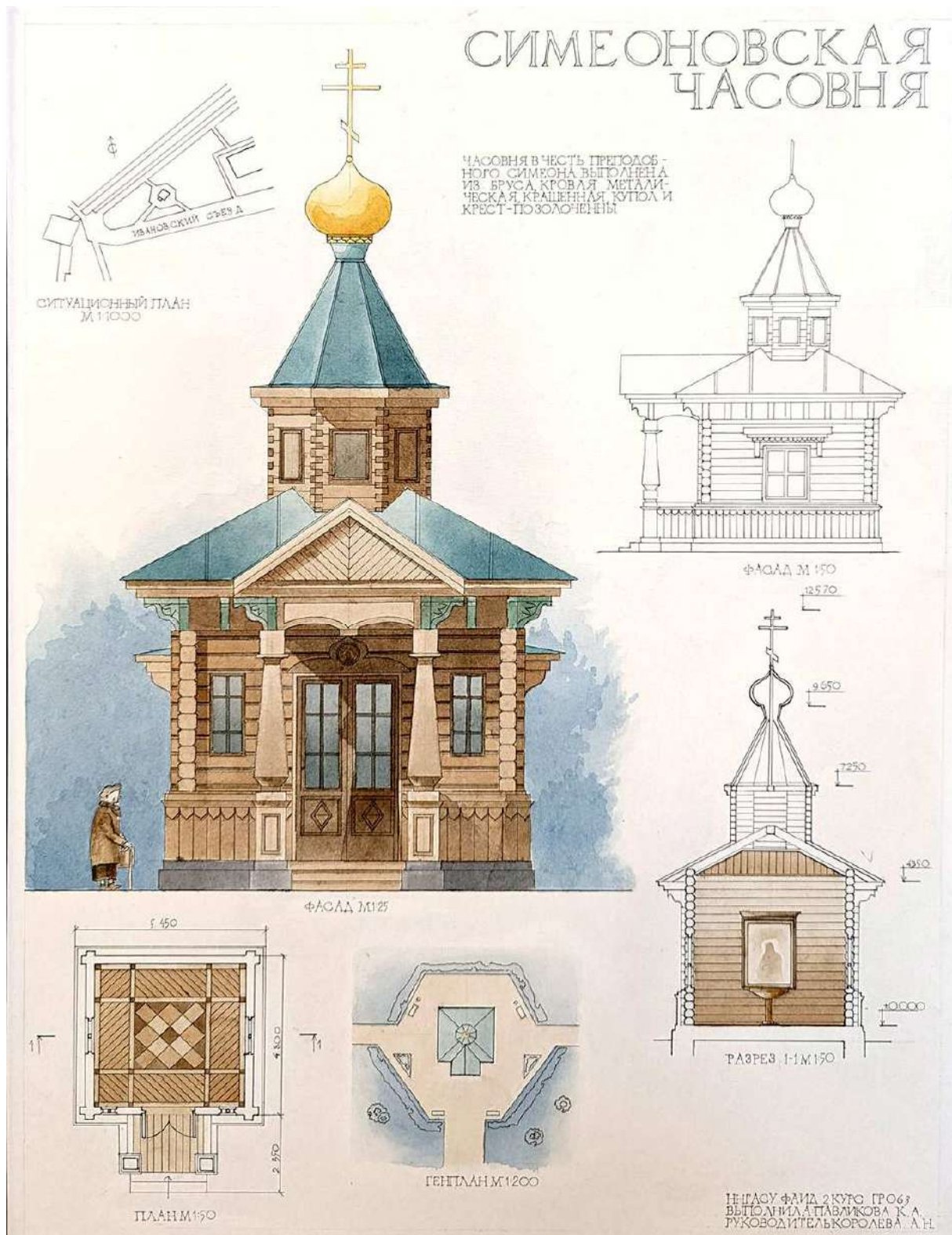


Fig. 59 An example of a graphic design for a chapel project made of laminated veneer lumber.

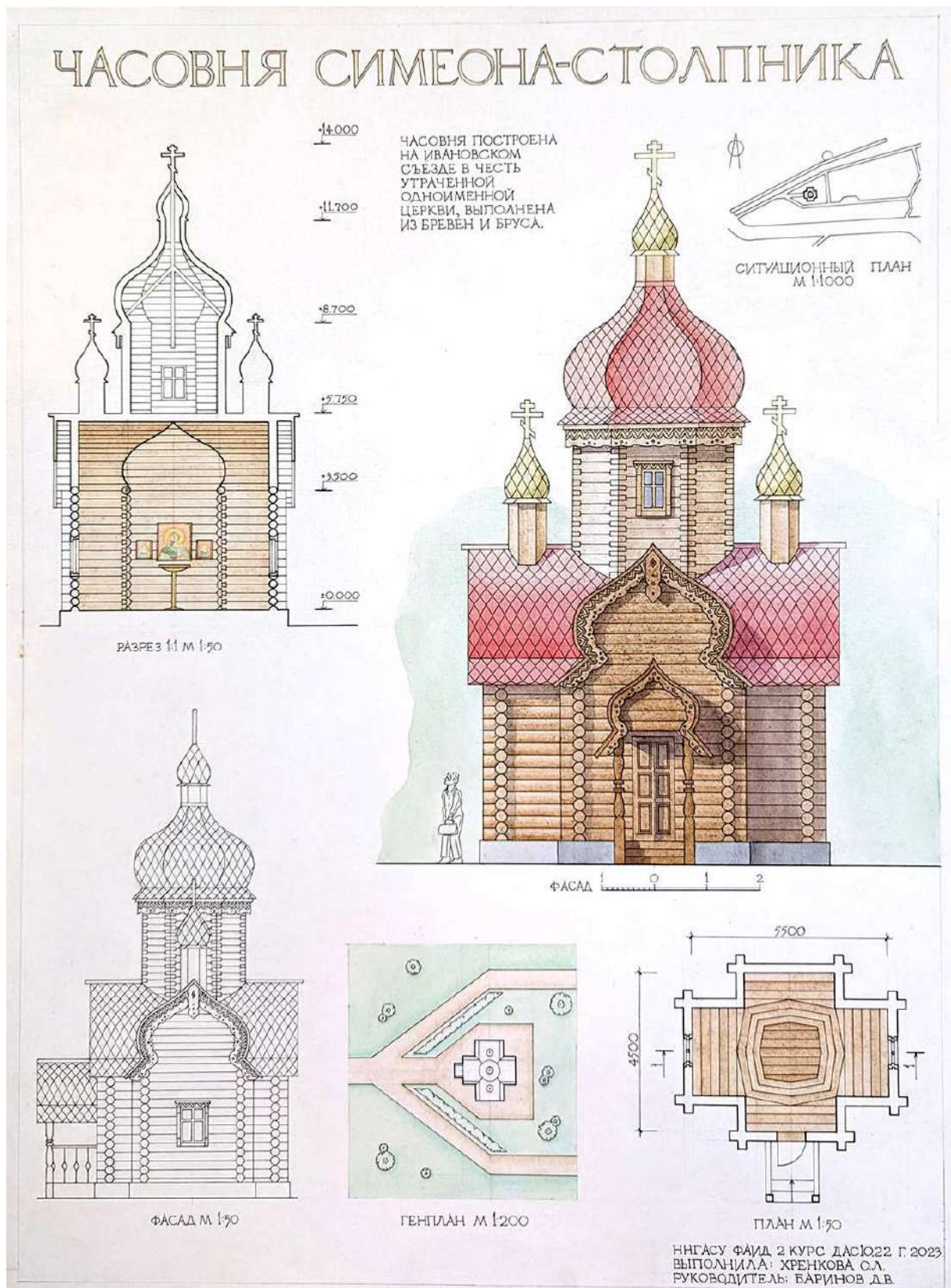


Fig. 60 An example of a graphic design for a chapel project made from rounded logs.





Fig. 61,62 An example of the graphic design of a chapel project covered with a wooden plank of the “blockhouse” type (above) and from rounded logs (below).



## Appendix 11 (continuation)

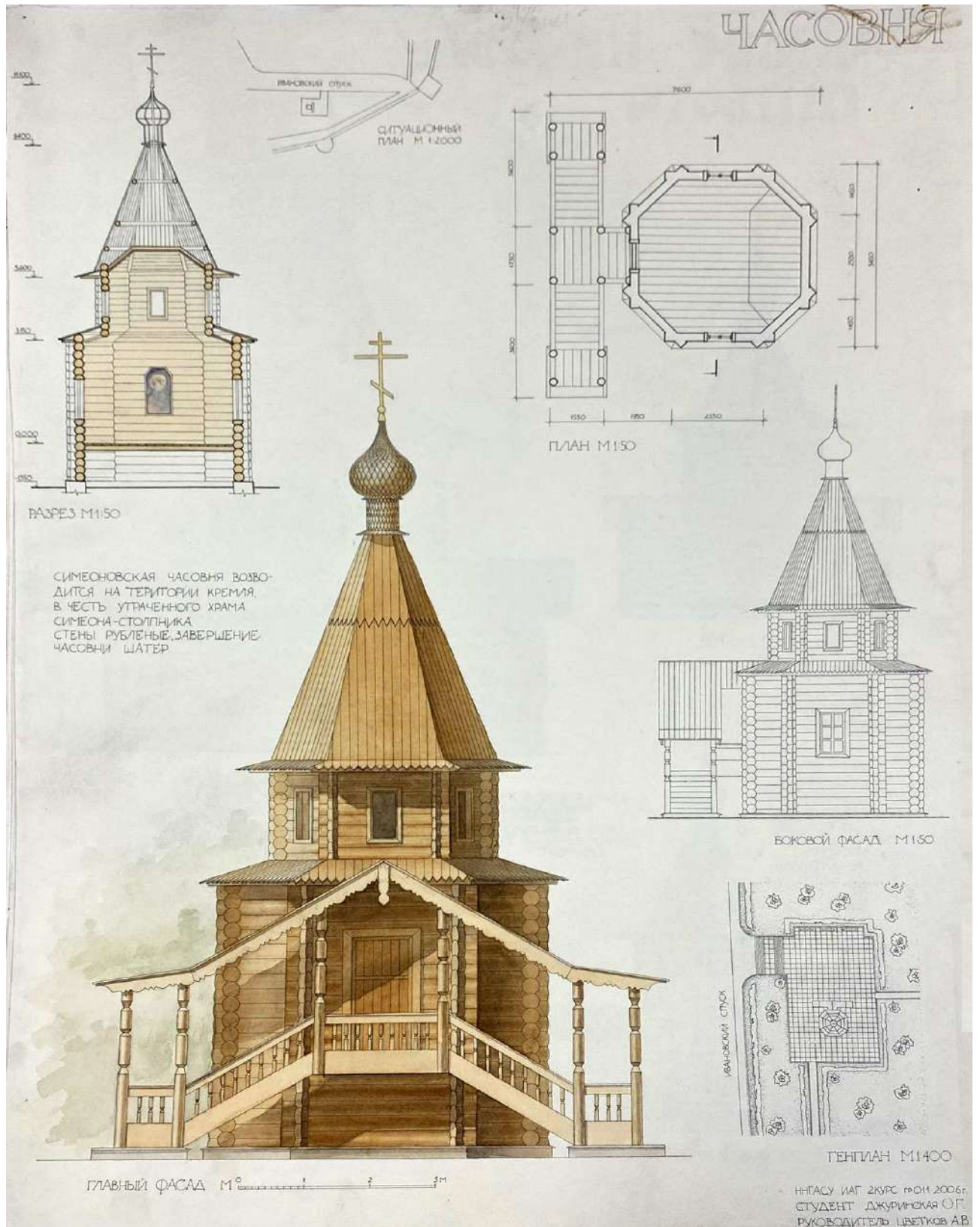


Fig. 63 An example of a graphic design for a chapel project made from rounded logs.



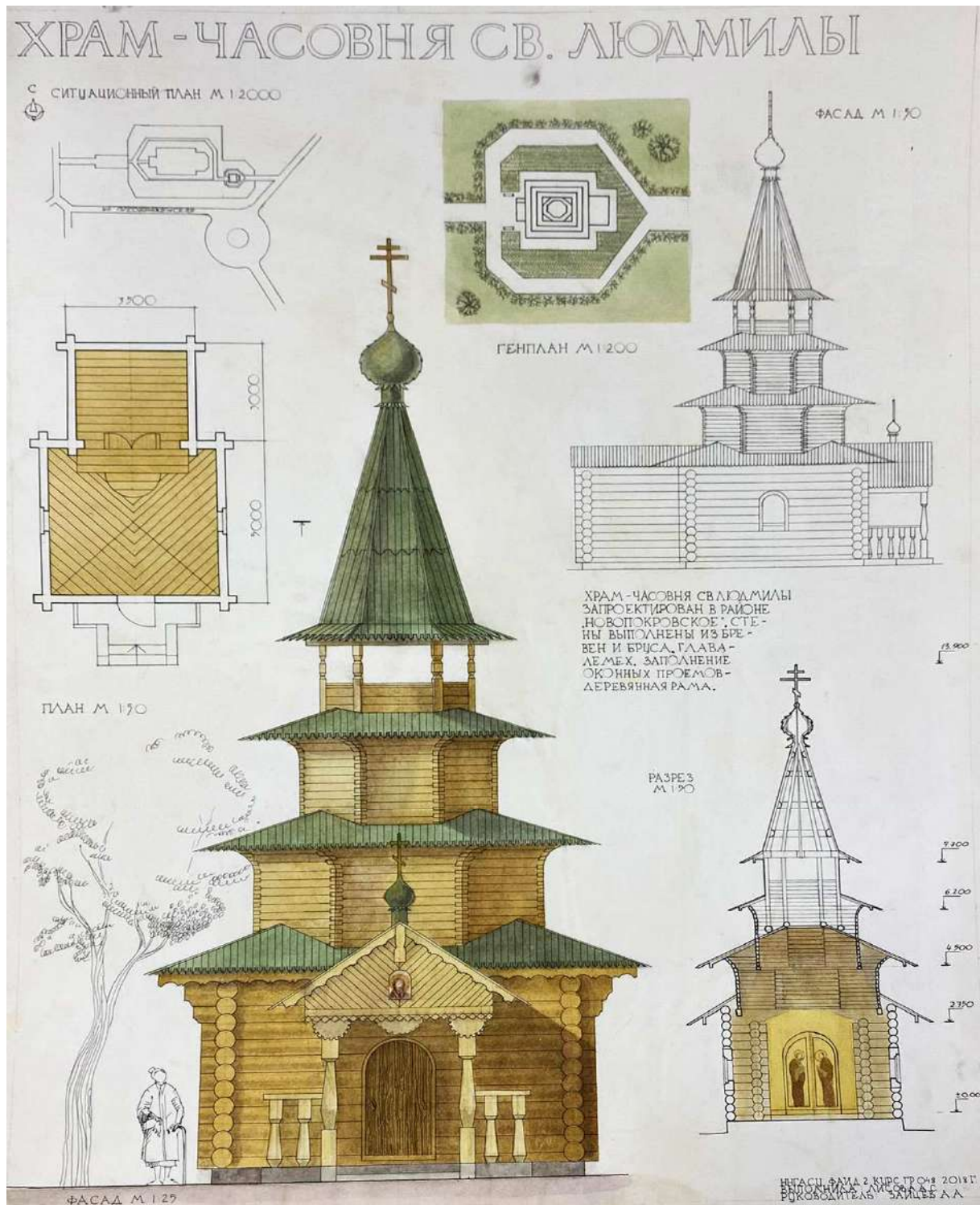


Fig. 64 An example of a graphic design for a chapel project made from rounded logs.

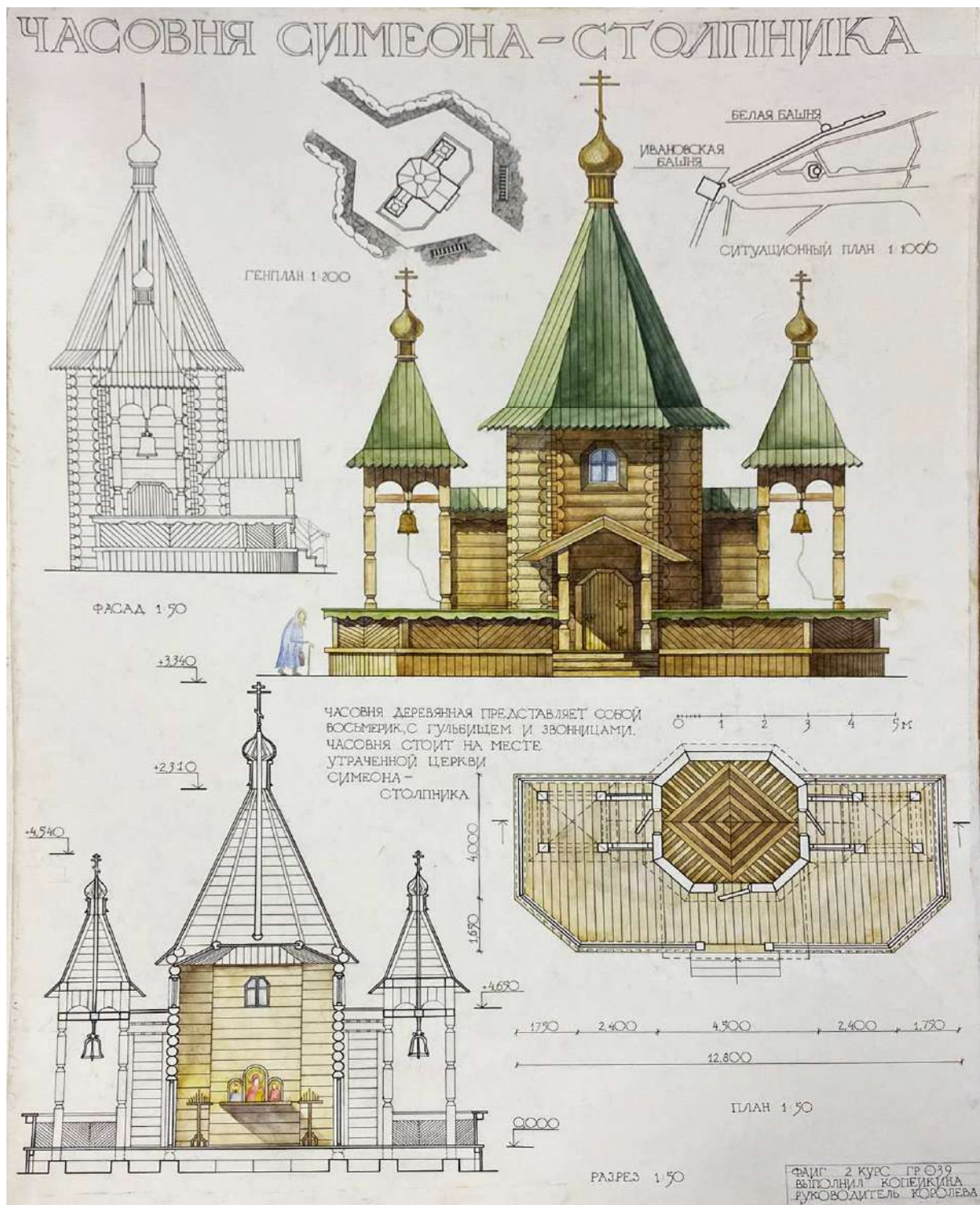


Fig. 65 An example of a graphic design for a chapel project made of rounded logs with two bell towers.



## Appendix 11 (continuation)



Fig. 66 An example of a graphic design for a chapel project made from rounded logs.

## Appendix 11 (continuation)



Fig. 67 An example of the graphic design of a chapel project made of rounded logs with a walkway.





Fig. 68 An example of the graphic design of a chapel project in the neoclassical style.



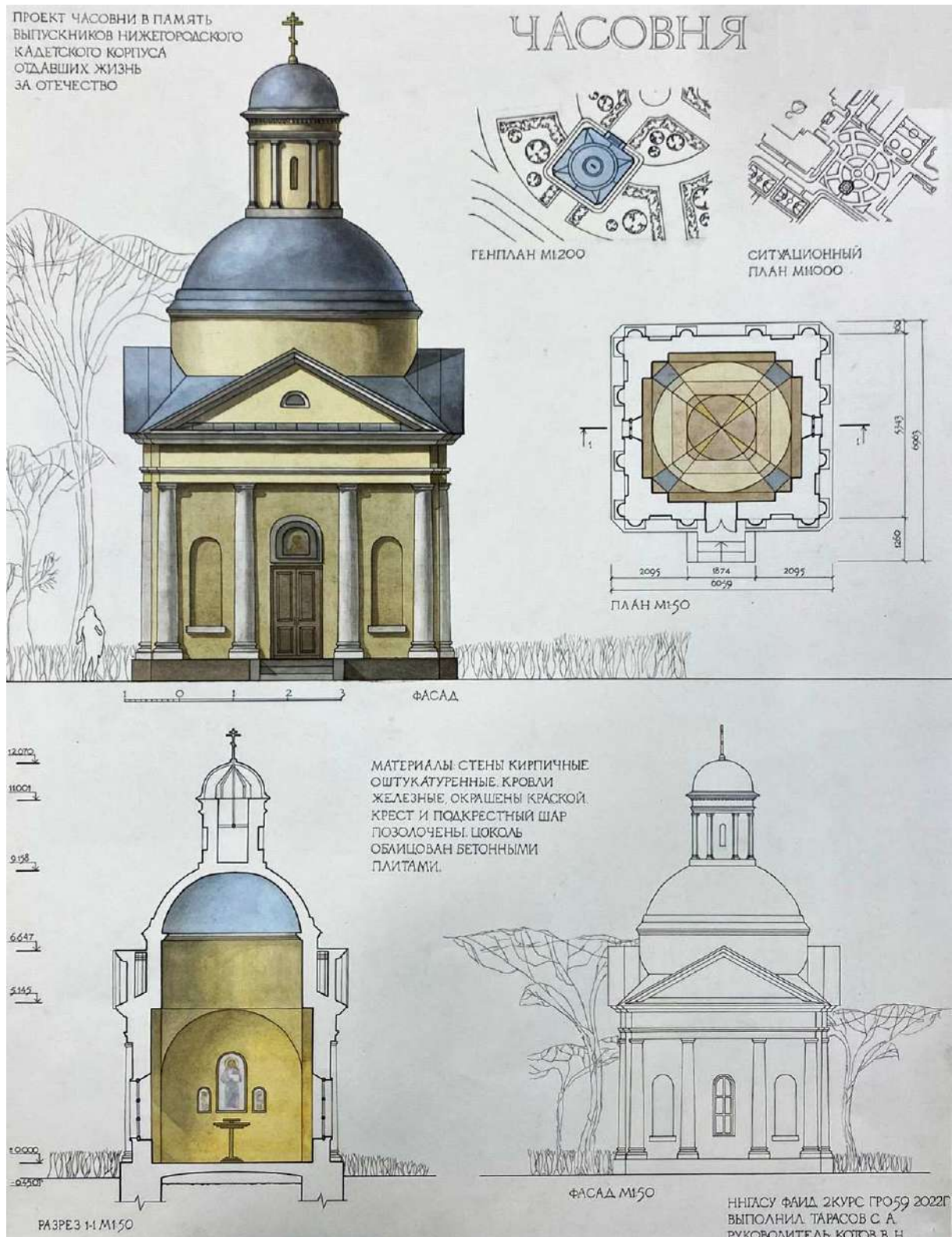


Fig. 69 An example of the graphic design of a chapel project in the neoclassical style.

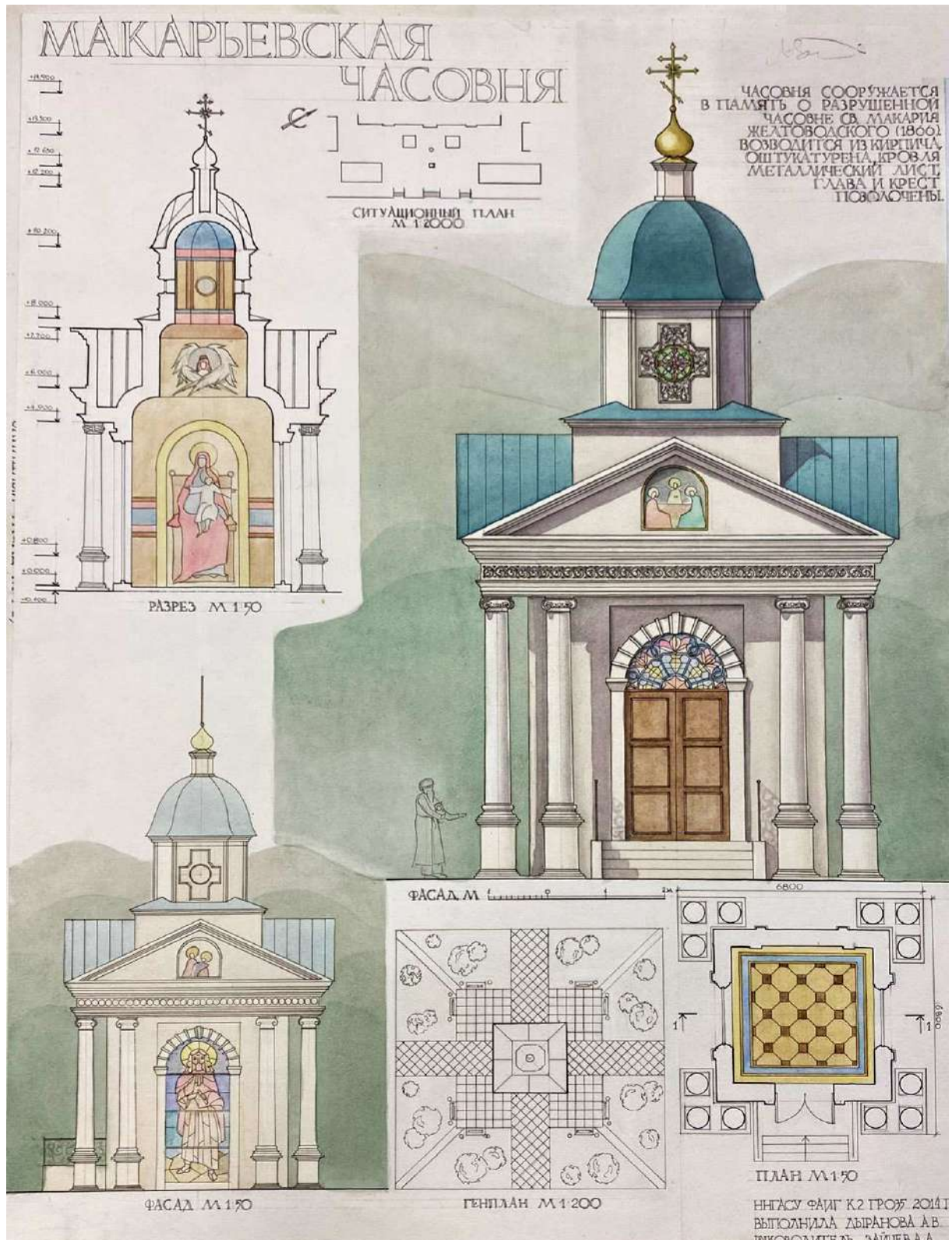


Fig. 70 An example of the graphic design of a chapel project in the neoclassical style.



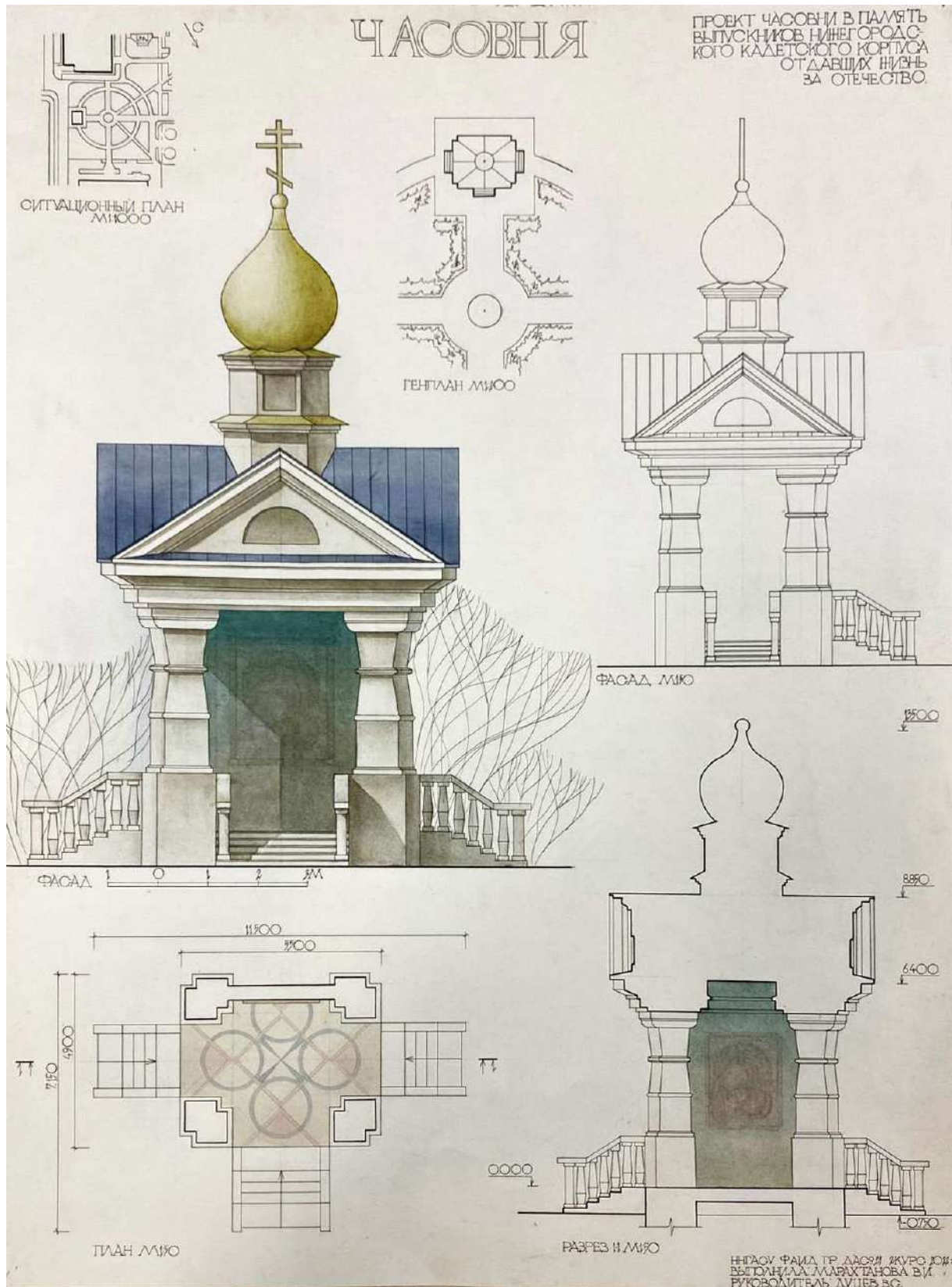


Fig. 71 An example of the graphic design of an “open” type chapel project in the neoclassical style.





Fig. 72 An example of the graphic design of an “open” type chapel project in the neoclassical style.

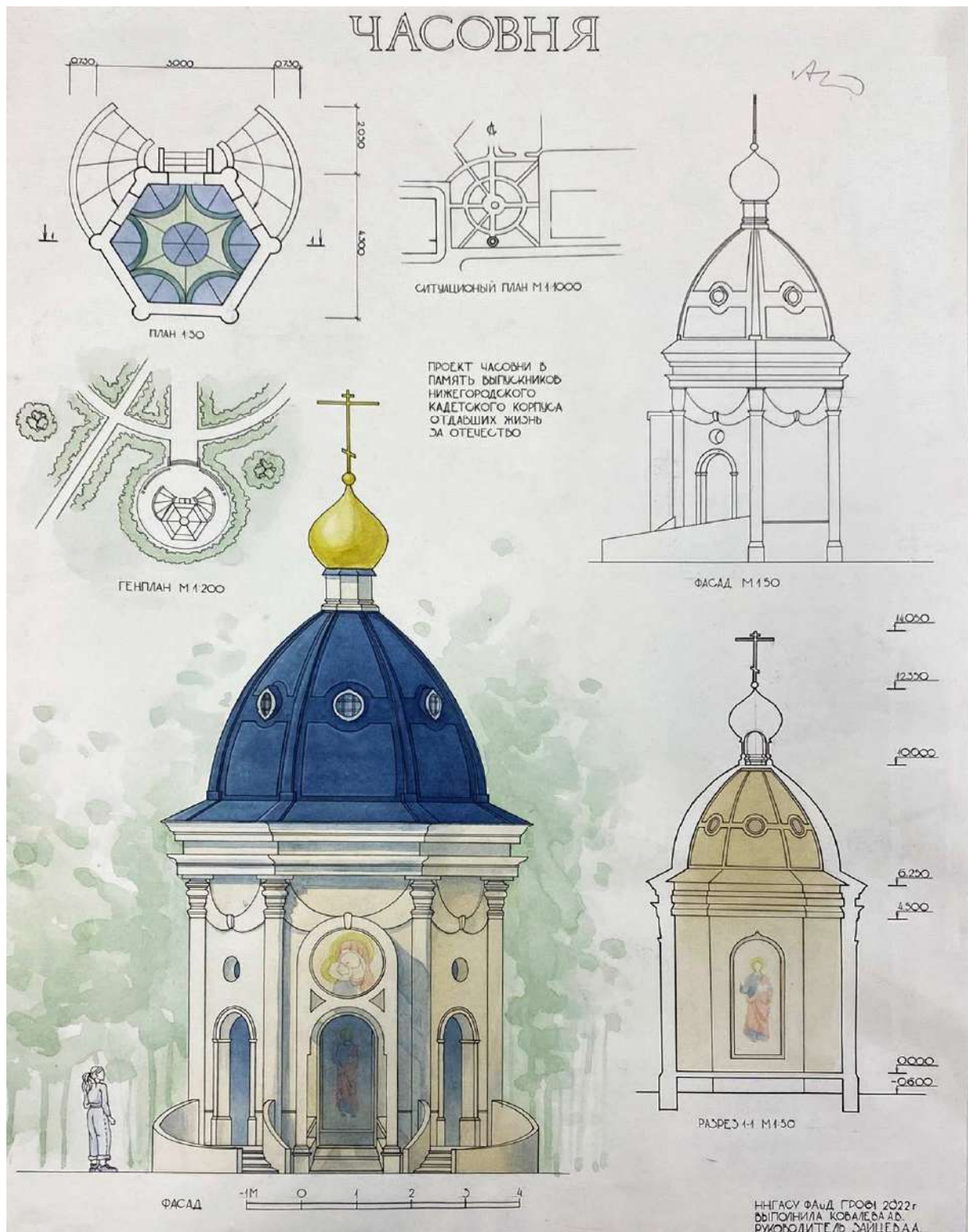


Fig. 73 An example of the graphic design of an “open” type chapel project with Baroque elements.



## Appendix 12 (continuation)



Fig. 74,75 An example of the graphic design of a chapel project in the neoclassical style and in the neoclassical style with elements of Byzantine architecture.





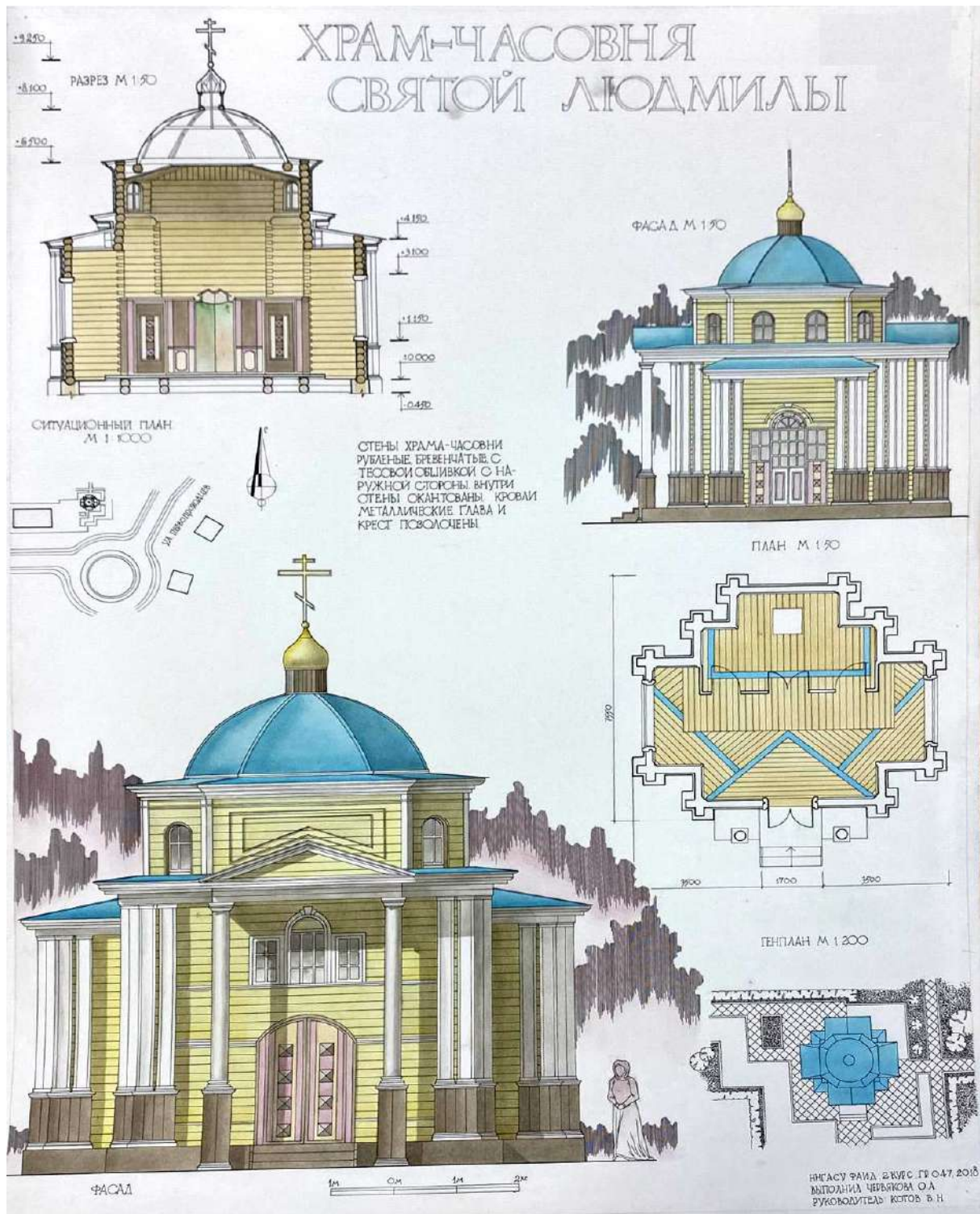


Fig. 76 An example of the graphic design of a chapel project in the style of Russian classicism.



Fig. 77,78 An example of the graphic design of a chapel project of an “open” type, in a modern style (above) and in a traditional style.





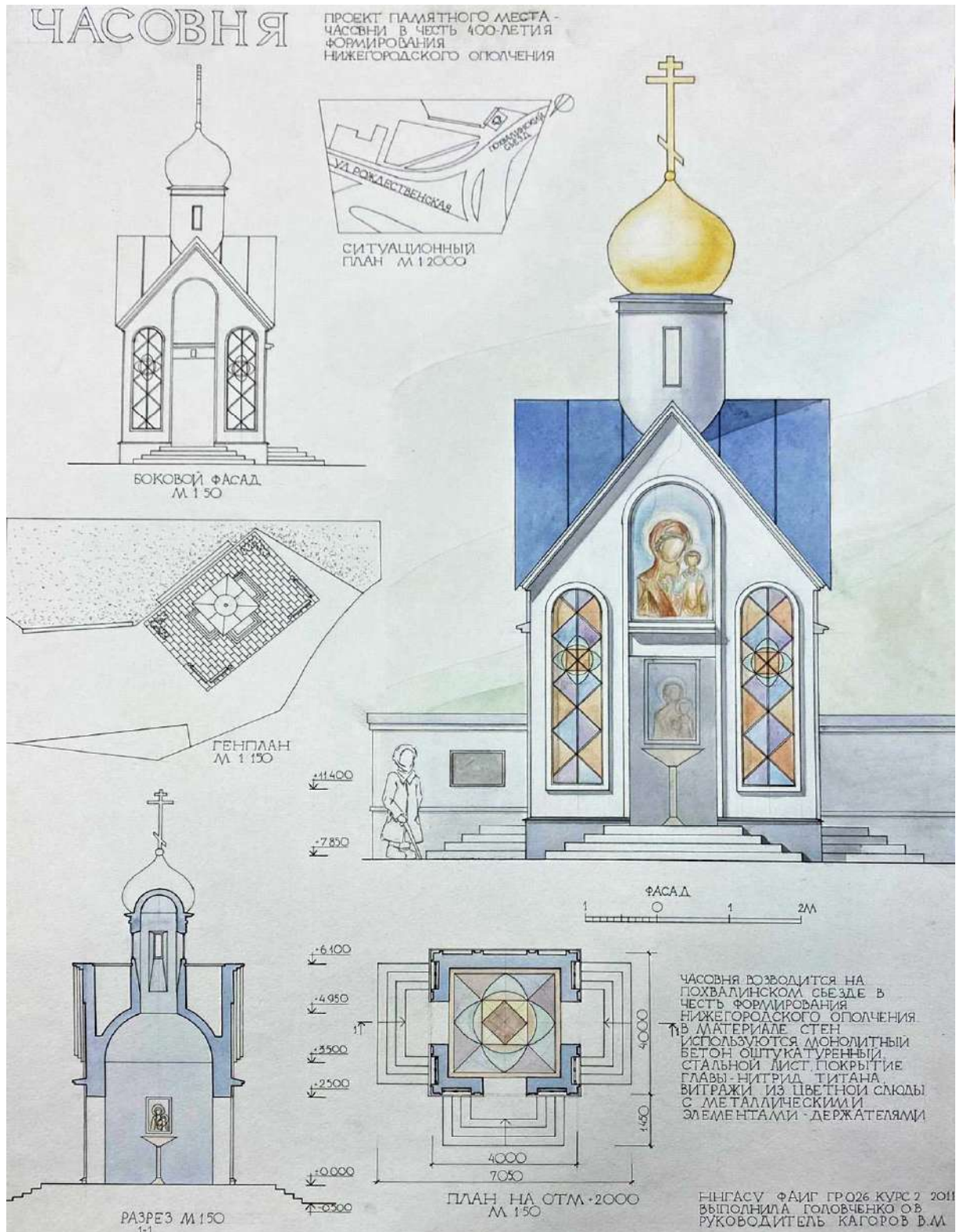


Fig. 79 An example of the graphic design of a chapel project of an “open” type, in a modern style.





Fig. 80 An example of the graphic design of a chapel project of an “open” type, in a modern style.

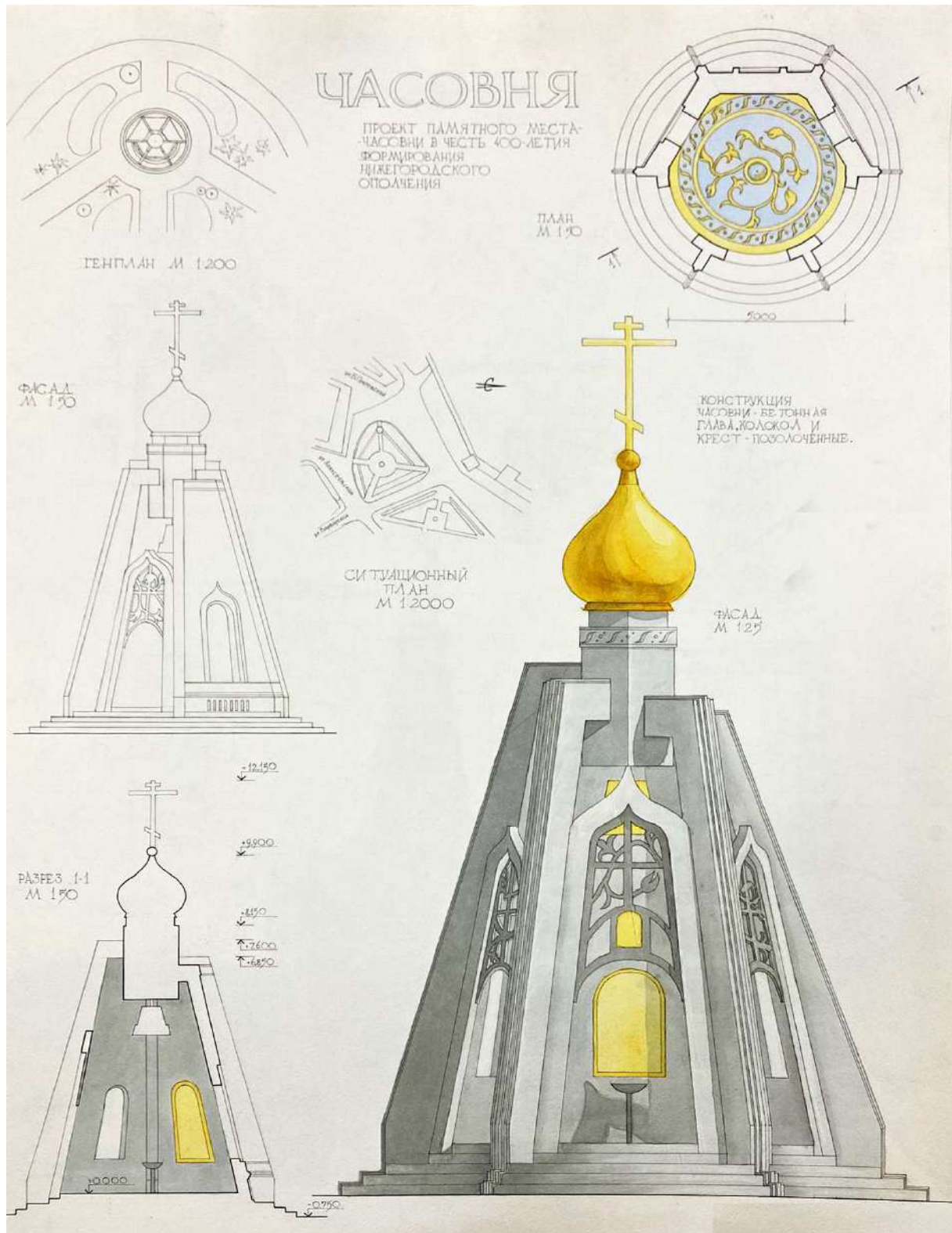


Fig.. 81 An example of the graphic design of a chapel project of an “open” type, in a modern style.





Fig. 82,83 An example of the graphic design of a chapel project of an “open” and “closed” type, in a modern style.

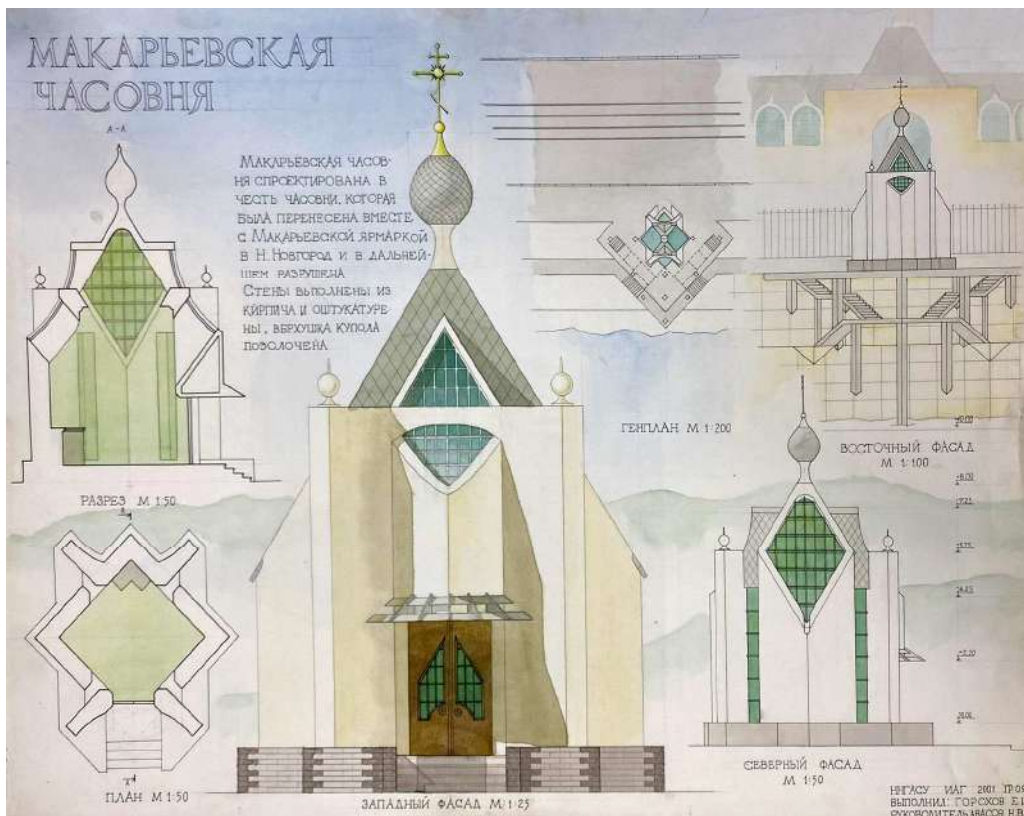






Fig. 84 An example of the graphic design of a chapel project of an “open” type, in a modern style.



Fig. 85 An example of the graphic design of a chapel project of an “open” type, in a modern style.





Fig. 86 An example of the graphic design of a chapel project of an “open” type, in a modern style.



## Appendix 13 (continuation)

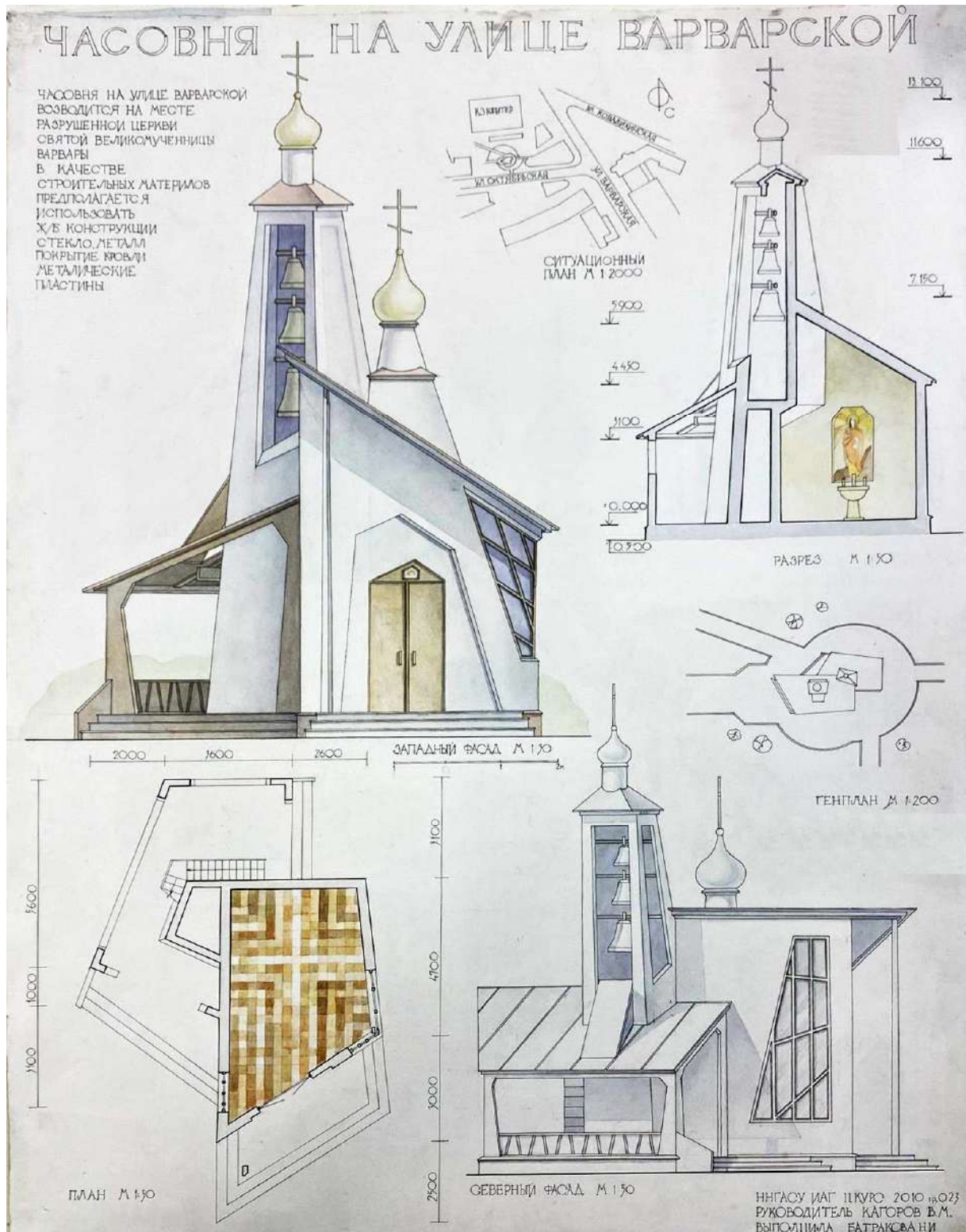


Fig.87 An example of a graphic design for a chapel project in a modern style.

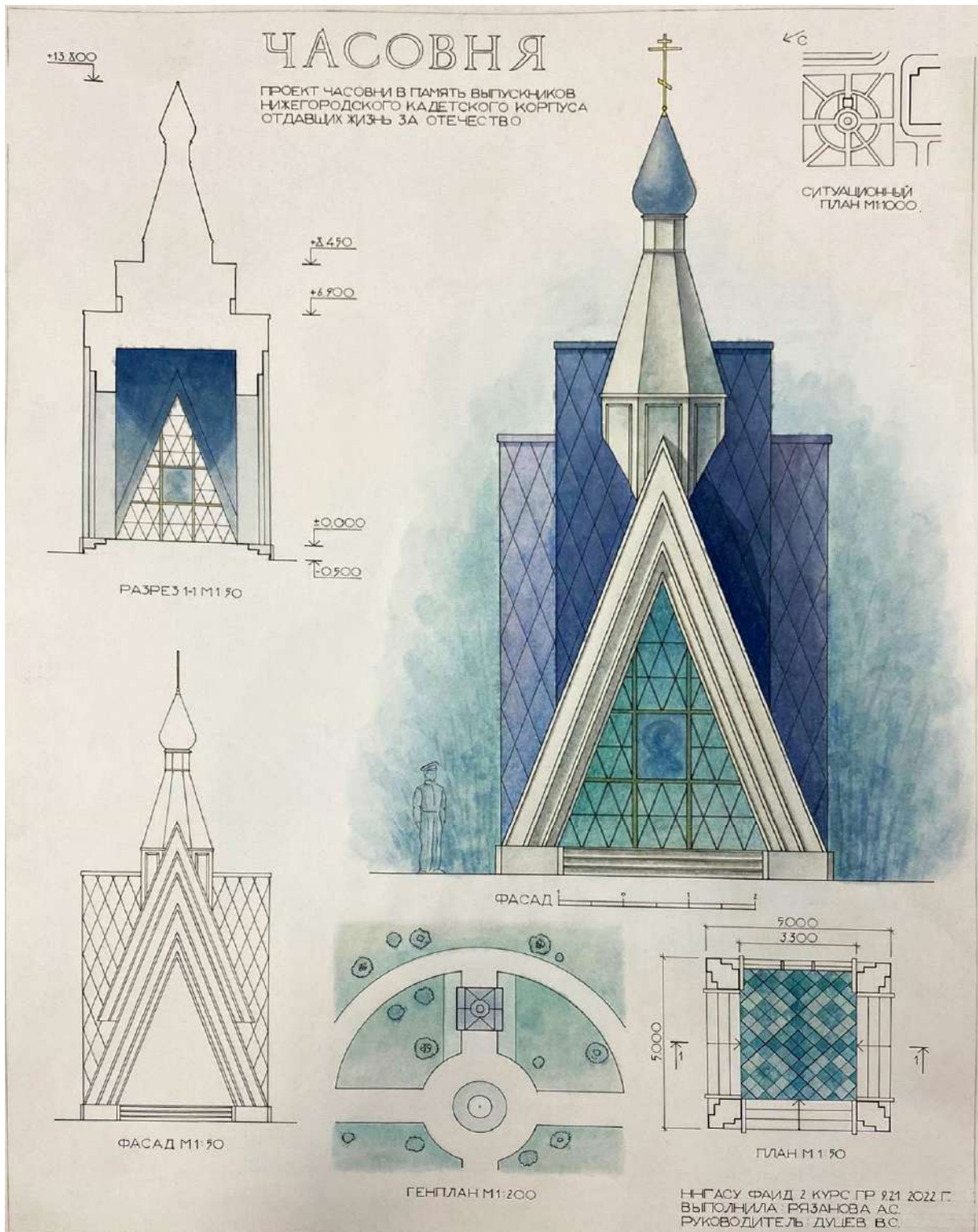


Fig. 88 An example of the graphic design of a chapel project of an “open” type, in a modern style.





Fig. 89,90 An example of the graphic design of a chapel project in a modern style (above) and in a “brick” style (below).







Fig. 91 Example of a chapel maquette



Fig. 92 Example of a chapel maquette

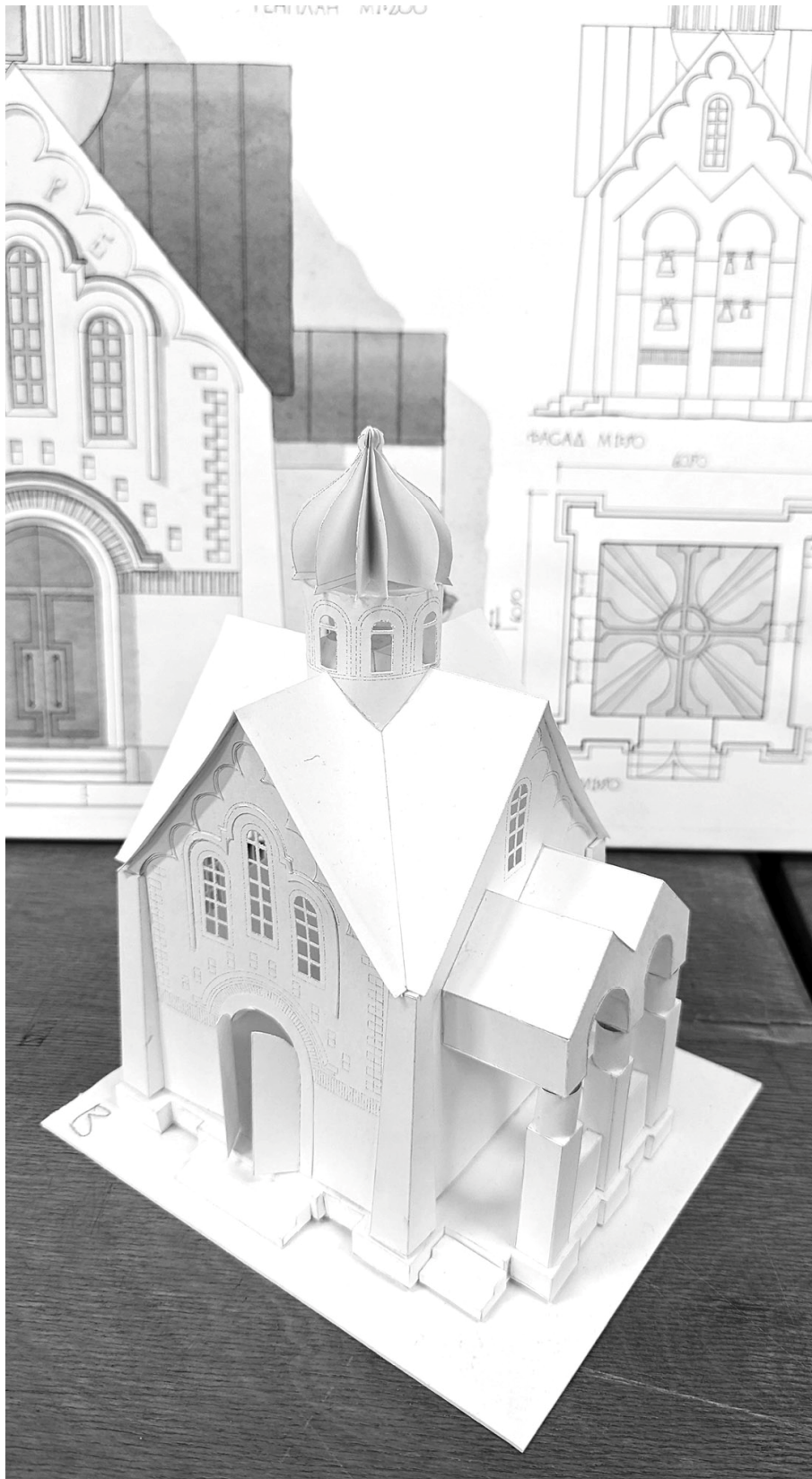


Fig. 93 Example of a chapel maquette





Fig. 94 Example of a chapel maquette

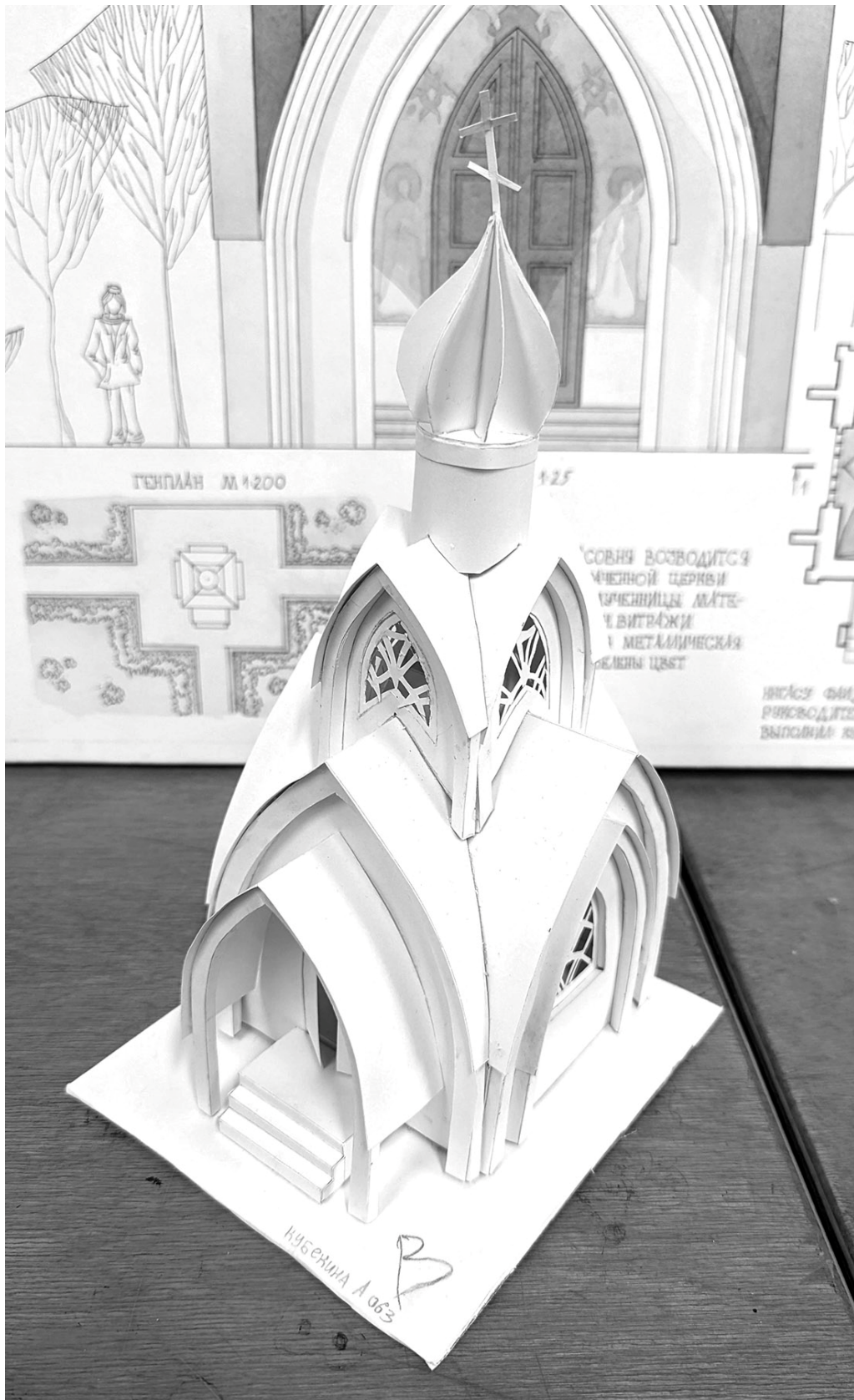


Fig. 95 Example of a chapel maquette





Fig. 96 Example of a chapel maquette





Fig. 97 Example of a chapel maquette



Fig. 98 Example of a chapel maquette





Fig. 99 Example of a chapel maquette





Fig. 100 Example of a chapel maquette



Fig. 101 Example of a chapel maquette



Fig. 102 Example of a chapel maquette



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## CHAPEL

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