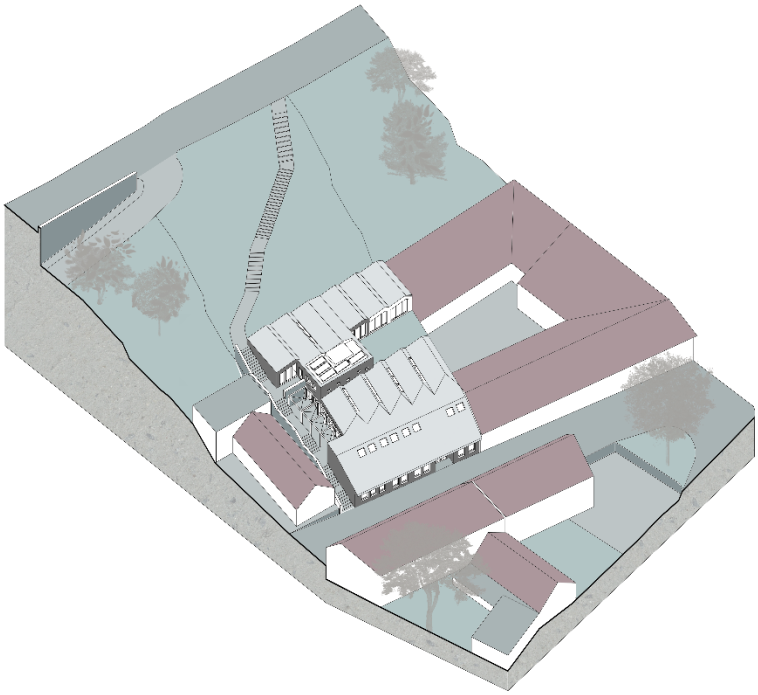
BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS
FACULTY OF ARCHITECTURE
DEPARTMENT OF URBAN PLANNING AND DESIGN

DIPLOMA PROJECT

ELEVATE SCHOOL OF MUSIC



Student: Karina Kasatkina

2020

BUDAFOK

XXII DISTRICT OF BUDAPEST
POPULATION - 54515 (2017)

MUSIC HISTORY

DOHNÁNYI ORCHESTRA BUDAFOK

FOUNDED IN 1970
WELL-KNOWN WORLD-WIDE ORCHESTRA
PERFORMING CLASSICAL MUSIC

WINE INDUSTRY

WINE CELLARS

THE MOST FAMOUS CELLAR
TÖRLEY SPARKLING WINE CELLAR
AND MANY OTHERS

TERRAIN

HILLY AREA

CREATES SYSTEM OF
PUBLIC STAIRS, INCLINED STREETS
AND RETAINING WALLS

01

Drawing HISTORY

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina

BUDAFOK CENTRE

EDUCATION BUILDING IN THE DISTRICT

02

Drawing DISTRICT ANALYSIS

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina

TERRAIN

PUBLIC TRANSPORTATION

03

Drawing DISTRICT ANALYSIS

Budapest University of Technology and Economics
Department of Urban Planning and Design
Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina

FUNCTIONAL LAYOUT

FAMILY HOUSE

RESTAURANT

ABANDONED HOUSE

REPAIR SHOP

CHOSEN SITE
MOSTLY SURROUNDED BY
RESIDENTIAL DEVELOPMENTS

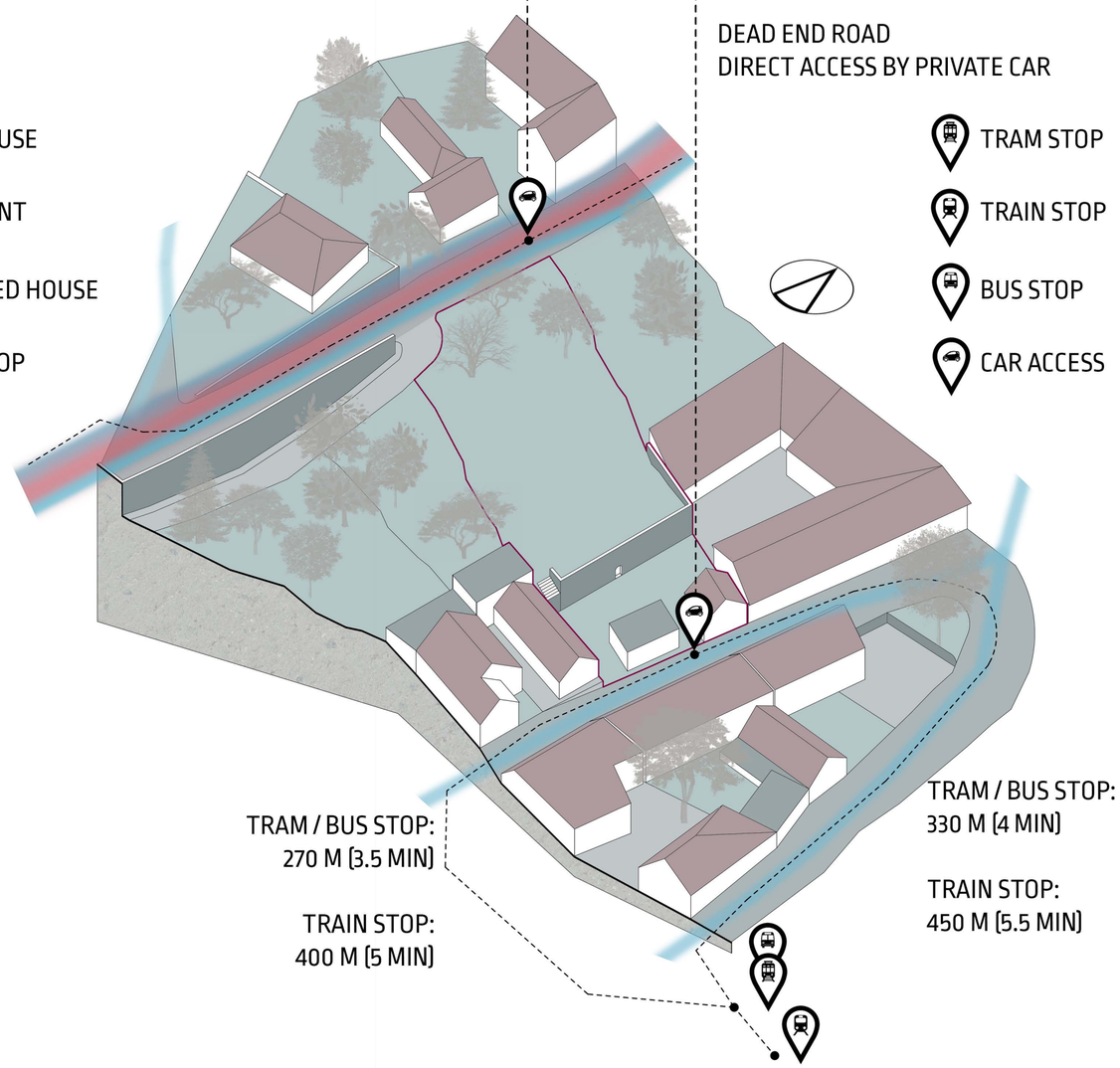
TRANSPORT ACCESIBILITY

KÁLVÁRIAHEGY U

INCLUDED TO ROAD NETWORK
DIRECT ACCESS BY PRIVATE CAR

FEHÉRHEGY U

DEAD END ROAD
DIRECT ACCESS BY PRIVATE CAR



TRAM STOP

TRAIN STOP

BUS STOP

CAR ACCESS

TRAM / BUS STOP:
270 M (3.5 MIN)

TRAIN STOP:
400 M (5 MIN)

TRAM / BUS STOP:
330 M (4 MIN)

TRAIN STOP:
450 M (5.5 MIN)

04

Drawing AREA ANALYSIS

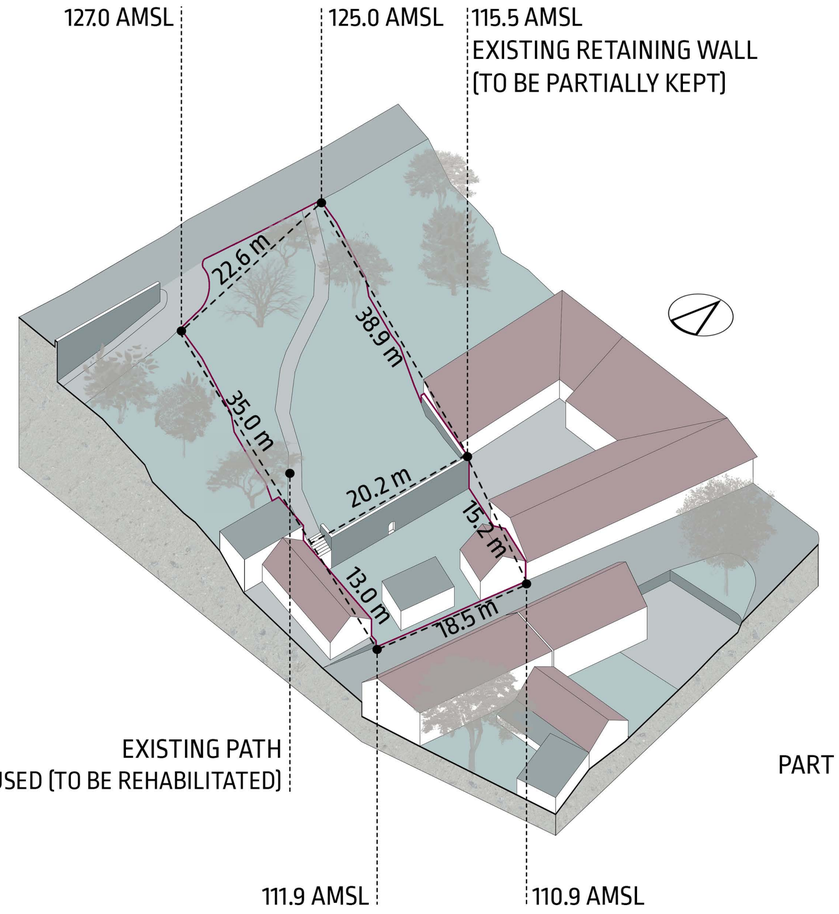
Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

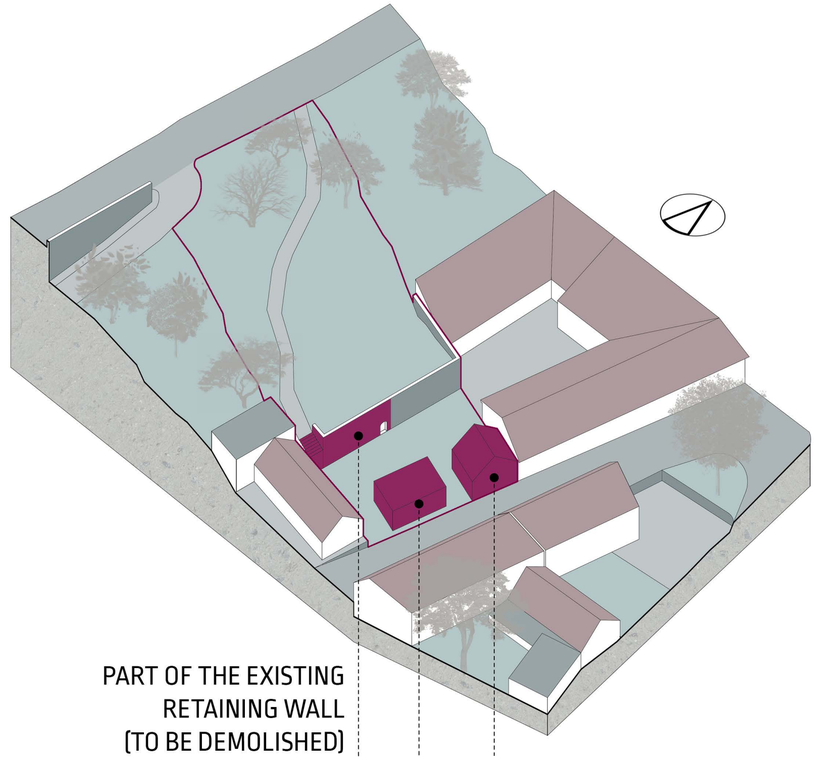
ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina

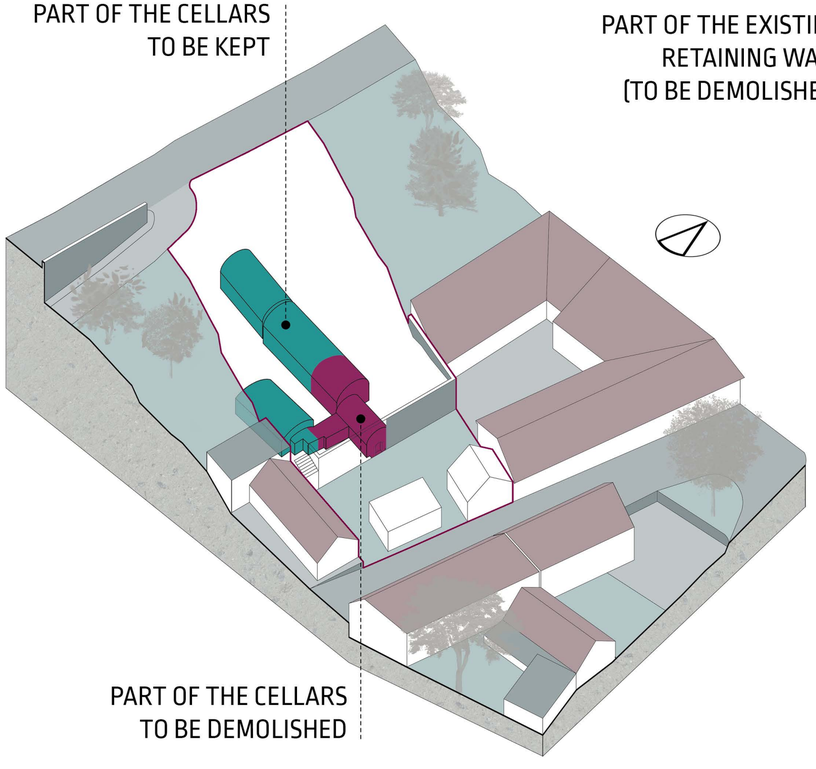
SITE DIMENTIONS



DEMOLITION PLAN



EXISTING CELLARS



05

Drawing SITE ANALYSIS

Budapest University of Technology and Economics
Department of Urban Planning and Design
Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina

SCHOOL OF MUSIC ELEVATE

BUDAPEST, FEHÉRHEGY U. 4, 1222

MUSIC SCHOOL FOR 120 PUPILS
(BASED ON 2.2/1000 PEOPLE RATIO)

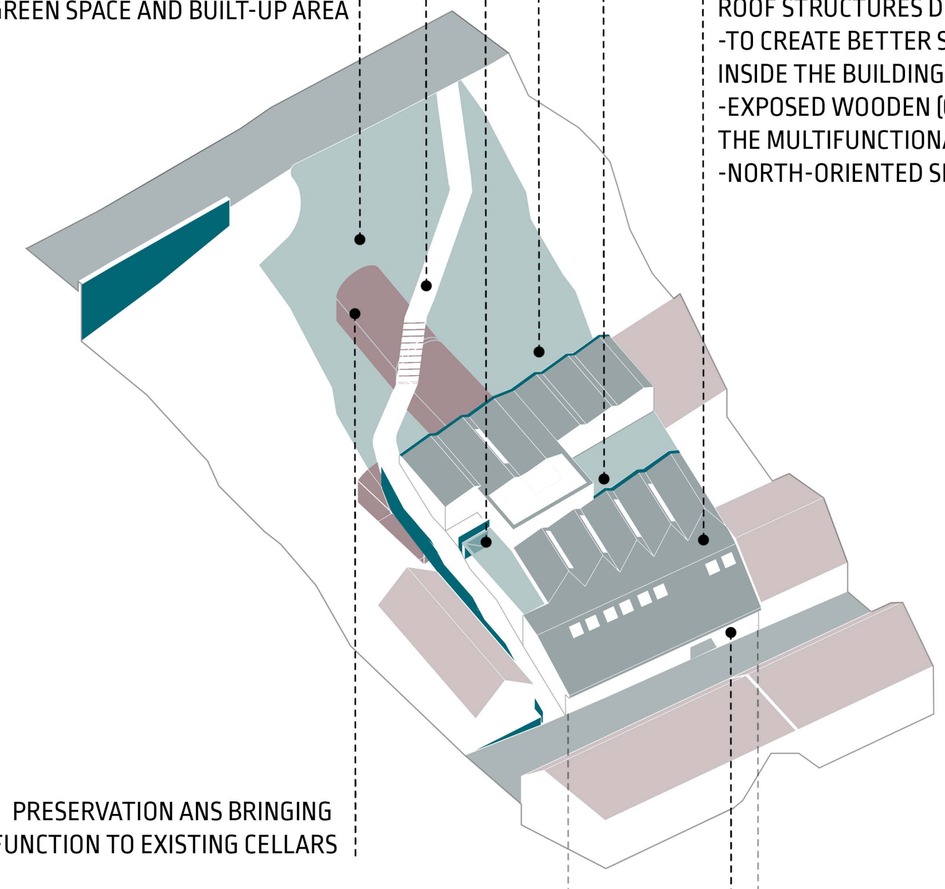
SEQUENCE OF RETAINING WALLS
BUILDING IS GRADUALLY RAISING UP

PUBLIC PATH CREATES CONVENIENT
CONNECTION FOR CITIZENS

BALANCED RATIO BETWEEN
GREEN SPACE AND BUILT-UP AREA

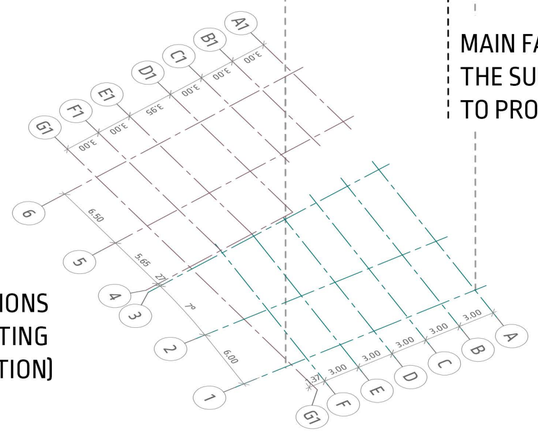
ROOF STRUCTURES DESIGNED
-TO CREATE BETTER SOUND DISTRIBUTION
INSIDE THE BUILDING
-EXPOSED WOODEN (CLT) SURFACE INSIDE
THE MULTIFUNCTIONAL HALL
-NORTH-ORIENTED SKYLIGHTS

MAIN FACADE ORIENTED TO THE EAST
TO BE WELL-LIGHTENED
BUT AVOID THE DIRECT LIGHT



PRESERVATION ANS BRINGING
NEW FUNCTION TO EXISTING CELLARS

MAIN FACADE DESIGNED REFLECTING
THE SURROUNDING BUILDINGS
TO PROTECT THE STREET SCALE



GRID FOLLOWS THE DIRECTIONS
OF FEHÉRHEGY U AND EXISTING
RETAINING WALL (7 DEGREES ROTATION)

06

Drawing CONCEPT

Budapest University of Technology and Economics
Department of Urban Planning and Design
Diploma Project

ELEVATE
SCHOOL
OF MUSIC

Student: Karina Kasatkina

PUBLIC TERRACE
(VIEW POINT, RELAXING AREA)
STRUCTURES ACT AS RAILING

CLASSROOMS
(GROUP PRACTICE)

CLASSROOMS
(2 INDIVIDUAL UNITS)

ENTRANCE

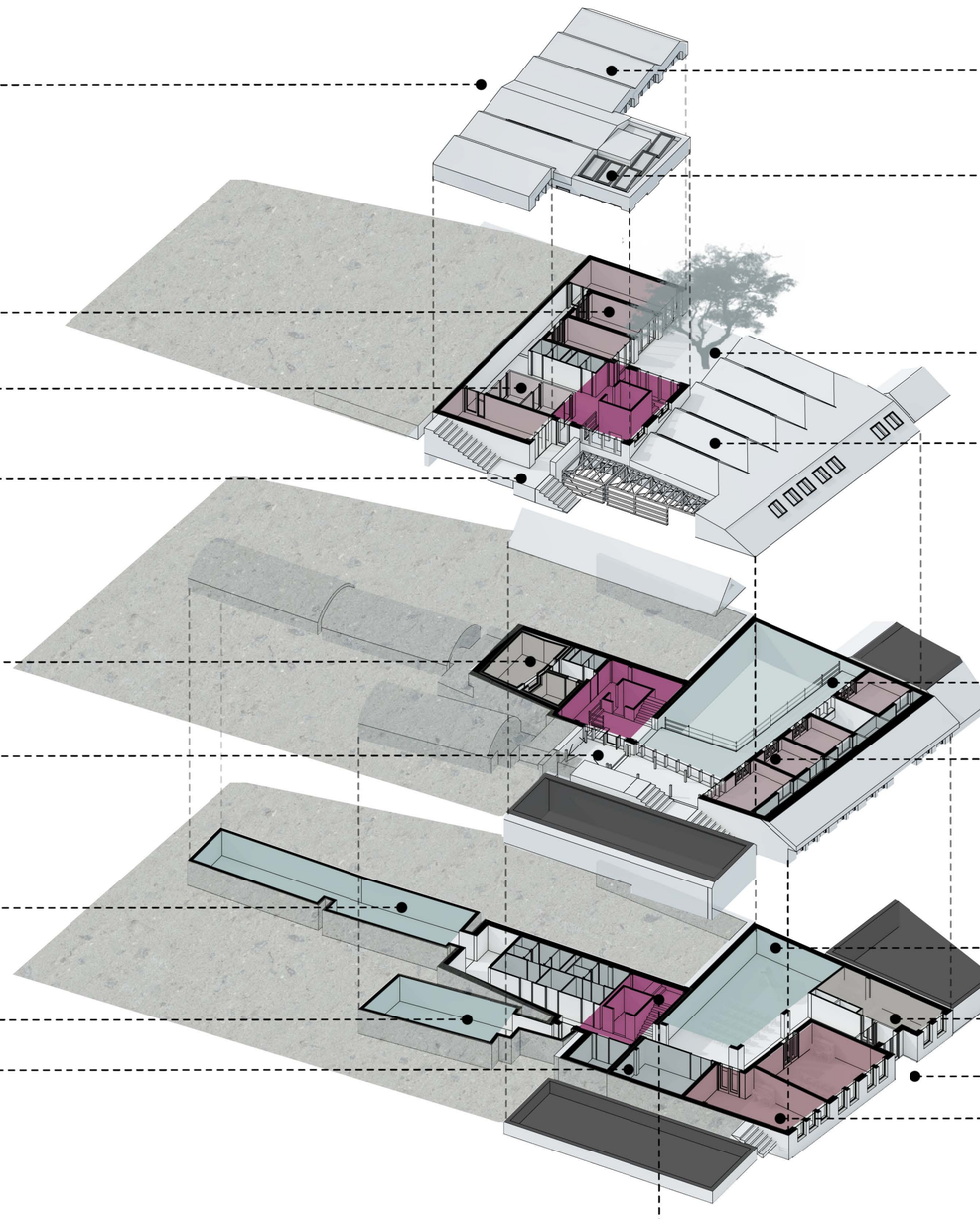
RECORDING STUDIO
(RECORDING ROOM, TECHNICAL ROOM)

TERRACE
(OPENED FROM THE MULTIFUNCTIONAL HALL
IN CASE OF EVENT) PERGOLA FOR SHADING

SOUND LABORATORY - CELLAR

SOUND LABORATORY - CELLAR

STORAGE
(EASY CONNECTION TO MULTIFUNCTIONAL HALL)



FOLDED ROOF STRUCTURES
(PROPER SOUND DISTRIBUTION,
LIGHT FROM THE SKYLIGHTS)

FLAT ROOF
(SOLAR PANELS ON TOP)

PRIVATE COURTYARD
(STRUCTURES ACT AS RAILING)

FOLDED ROOF STRUCTURES
(PROPER SOUND DISTRIBUTION,
LIGHT FROM THE SKYLIGHTS)

MULTIFUNCTIONAL HALL (2ND LEVEL)
(BALCONY)

CLASSROOMS
(INDIVIDUAL PRACTICE)
CONNECTED STORAGE

MULTIFUNCTIONAL HALL (1ST LEVEL)
(WELCOMING SPACE, CONCERT HALL,
SPEECH EVENTS, COMMUNITY SPACE)

TEACHER'S ROOM

MAIN ENTRANCE

CLASSROOMS
(THEORY LEARNING)

VERTICAL CIRCULATION CORE

07

Drawing CIRCULATION SCHEME

Budapest University of Technology and Economics
Department of Urban Planning and Design
Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina

CAR-ACCESS POINT
PEDESTRIAN CROSSING

FLAT AREA
(PLAYGROUND, SHADING-PERGOLA)
STEEL AND WOODEN ELEMENTS

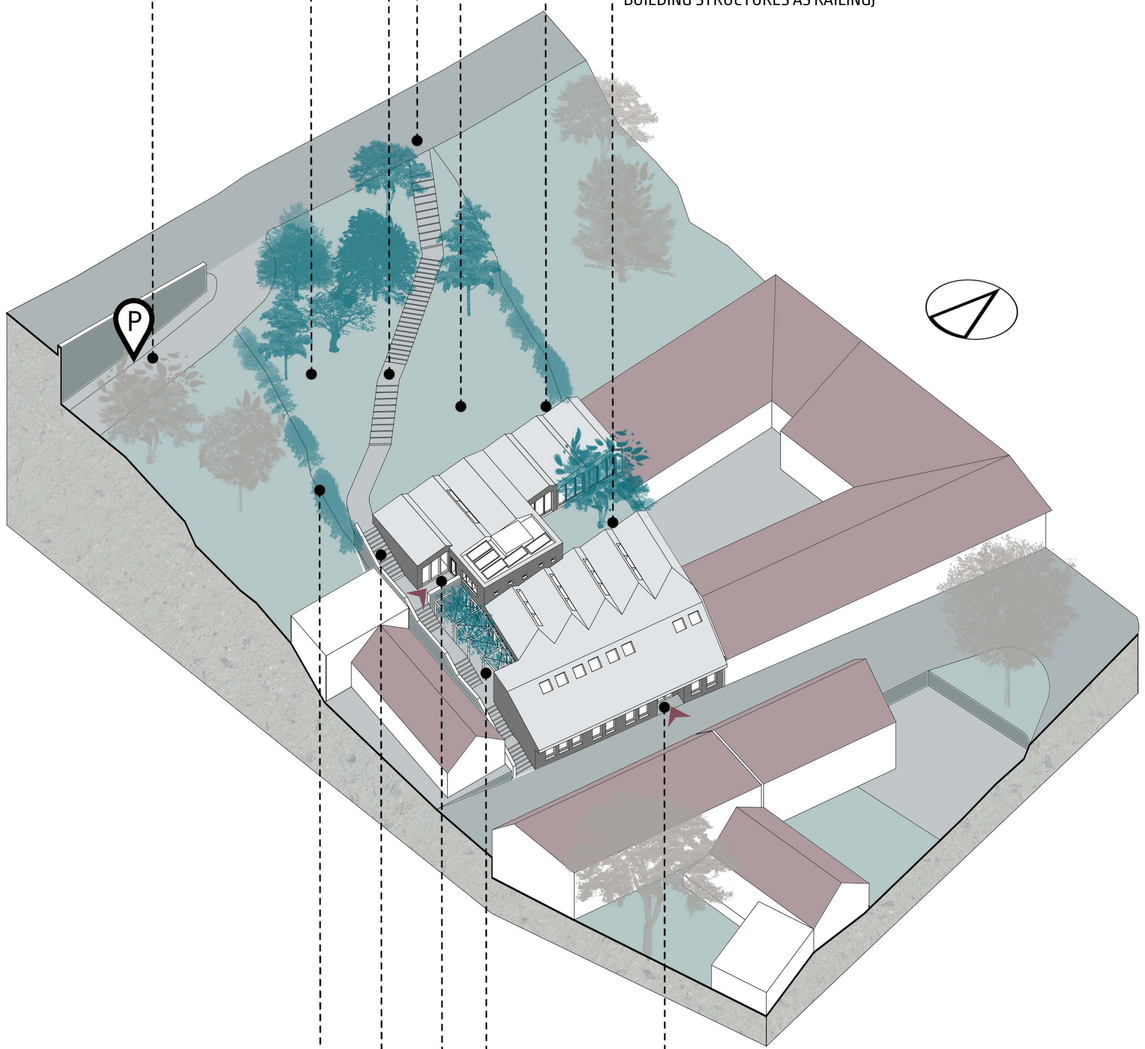
STEEP GREEN AREA

PUBLIC PATH

PARKING
(5 PLACES)

VIEW POINT (+8.64)
(BUILDING STRUCTURES AS RAILING)

PRIVATE COURTYARD (+6.08)
(GREEN SPACE, VIEW POINT,
BUILDING STRUCTURES AS RAILING)



BUSHES
(INDICATE THE BORDER, PROTECT)

PUBLIC STAIR (PATH)
RETAINING WALL AND PERGOLA AS RAILING

ENTRANCE (+6.08)

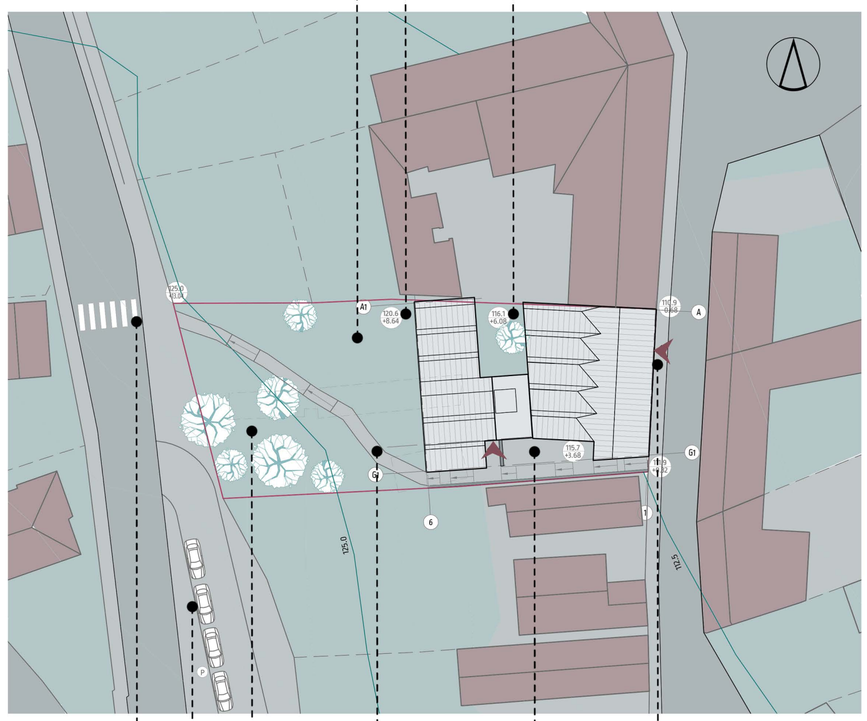
TERRACE (+3.66)
(OPENED FROM THE MULTIFUNCTIONAL HALL
IN CASE OF EVENT) PERGOLA FOR SHADING

MAIN ENTRANCE (0.00)

FLAT AREA
(PLAYGROUND, SHADING-PERGOLA)
STEEL AND WOODEN ELEMENTS

VIEW POINT (+8.64)
(BUILDING STRUCTURES AS RAILING)

PRIVATE COURTYARD (+6.08)
(GREEN SPACE, VIEW POINT,
BUILDING STRUCTURES AS RAILING)



CAR-ACCESS POINT
PEDESTRIAN CROSSING

PARKING
(5 PLACES)

STEEP GREEN AREA

PUBLIC PATH

TERRACE (+3.66)
(OPENED FROM THE MULTIFUNCTIONAL HALL
IN CASE OF EVENT) PERGOLA FOR SHADING

MAIN ENTRANCE (0.00)

1:500

08

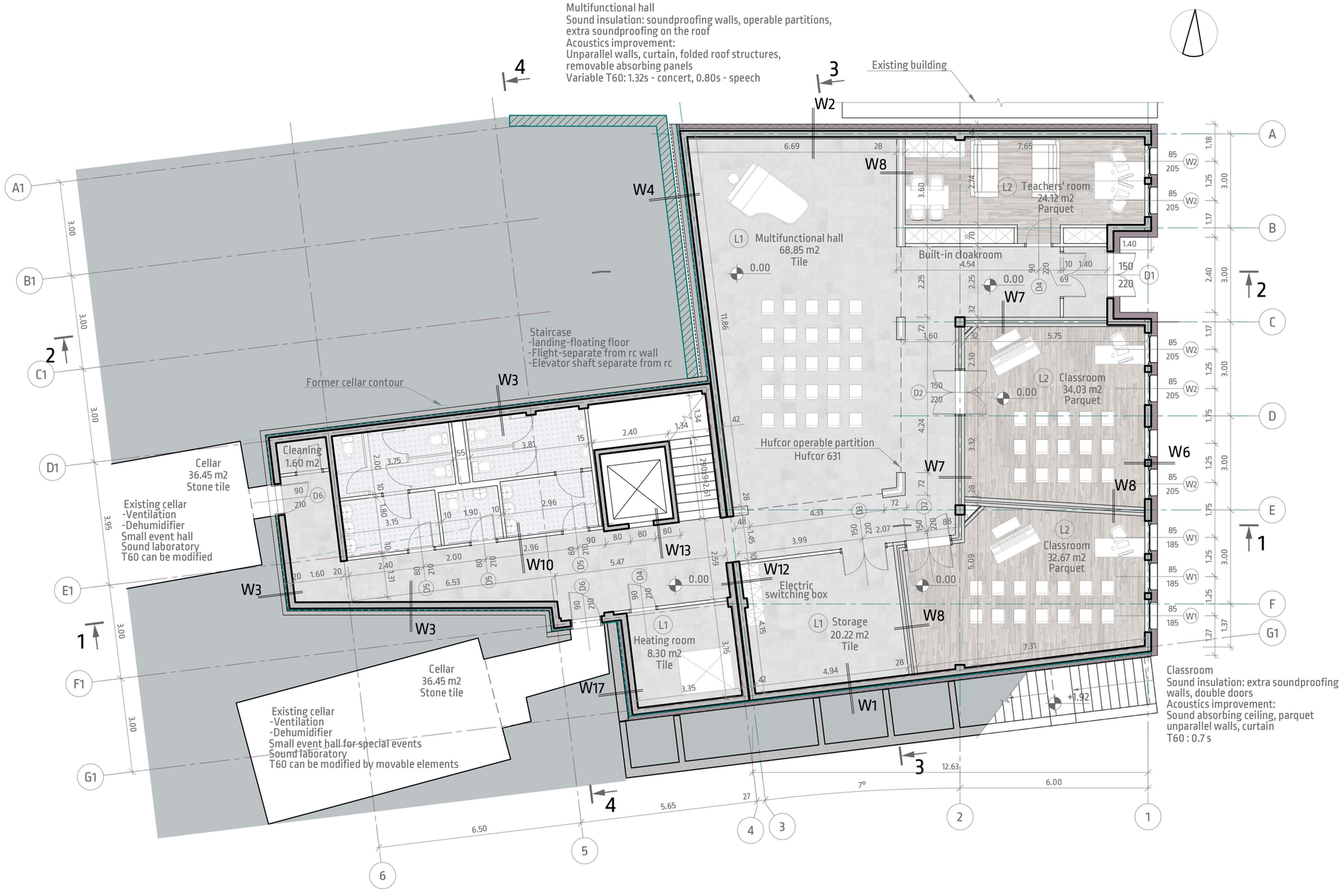
Drawing SITE PLAN

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



Classroom
Sound insulation: extra soundproofing walls, double doors
Acoustics improvement:
Sound absorbing ceiling, parquet unparallel walls, curtain
T60 : 0.7 s

W10
12.5 mm - Knauf Plasterboards
12.5 mm - Knauf Plasterboards
50 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards
12.5 mm - Knauf Plasterboards

W12
10 mm - Plaster
200 mm - Reinforced concrete wall
20 mm - dilatation joint (mineral wool)
200 mm - Reinforced concrete wall
10 mm - Plaster

W13
10 mm - Plaster
150 mm - Reinforced concrete wall

W17
300 mm - Retaining wall (shotcrete technology)
1 layer - Cold bitumen patching compound (about 300 g/m2)
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
100 mm - XPS foam (thermal insulation)
200 mm - Reinforced concrete wall
10 mm - Plaster

L1
22 mm - Stone tile
3 mm - Cement-based layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
140 mm - EPS foam (thermal insulation + installation layer)
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
1 layer - Cold bitumen patching compound (about 300 g/m2)
120 mm - Reinforced concrete slab
80 mm - Concrete blinding

L2
19 mm - Wooden floor
6 mm - Bedding layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
140 mm - EPS foam (thermal insulation + installation layer)
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
1 layer - Cold bitumen patching compound (about 300 g/m2)
120 mm - Reinforced concrete slab
80 mm - Concrete blinding

W1
150 mm - XPS foam (thermal insulation)
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
1 layer - Cold bitumen patching compound (about 300 g/m2)
200 mm - Reinforced concrete wall

W2
150 mm - EPS foam (thermal insulation)
60 mm - LEIER crust panel
200 mm - RC wall
60 mm - LEIER crust panel
10 mm - Plaster

W3
150 mm - Supporting wall
1 layer - Cold bitumen patching compound (about 300 g/m2)
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
100 mm - XPS foam (thermal insulation)
200 mm - Reinforced concrete wall
10 mm - Plaster

W4
Existing retaining wall structures (anchored to the soil)
50 mm - Draining layer
150 mm - Supporting wall
1 layer - Cold bitumen patching compound (about 300 g/m2)
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
100 mm - XPS foam (thermal insulation)
200 mm - Reinforced concrete wall

W6
20 mm - Plaster
200 mm - Mineral wool (thermal insulation)
200 mm - Reinforced concrete wall
10 mm - Plaster

W7
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
100 mm - Frame Knauf C-Stud with mineral wool
75 mm - Gap with self-adhesive insulation strip
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant

W8
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
100 mm - Frame Knauf C-Stud with mineral wool
25 mm - Gap with self-adhesive insulation strip
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant

1:100

09

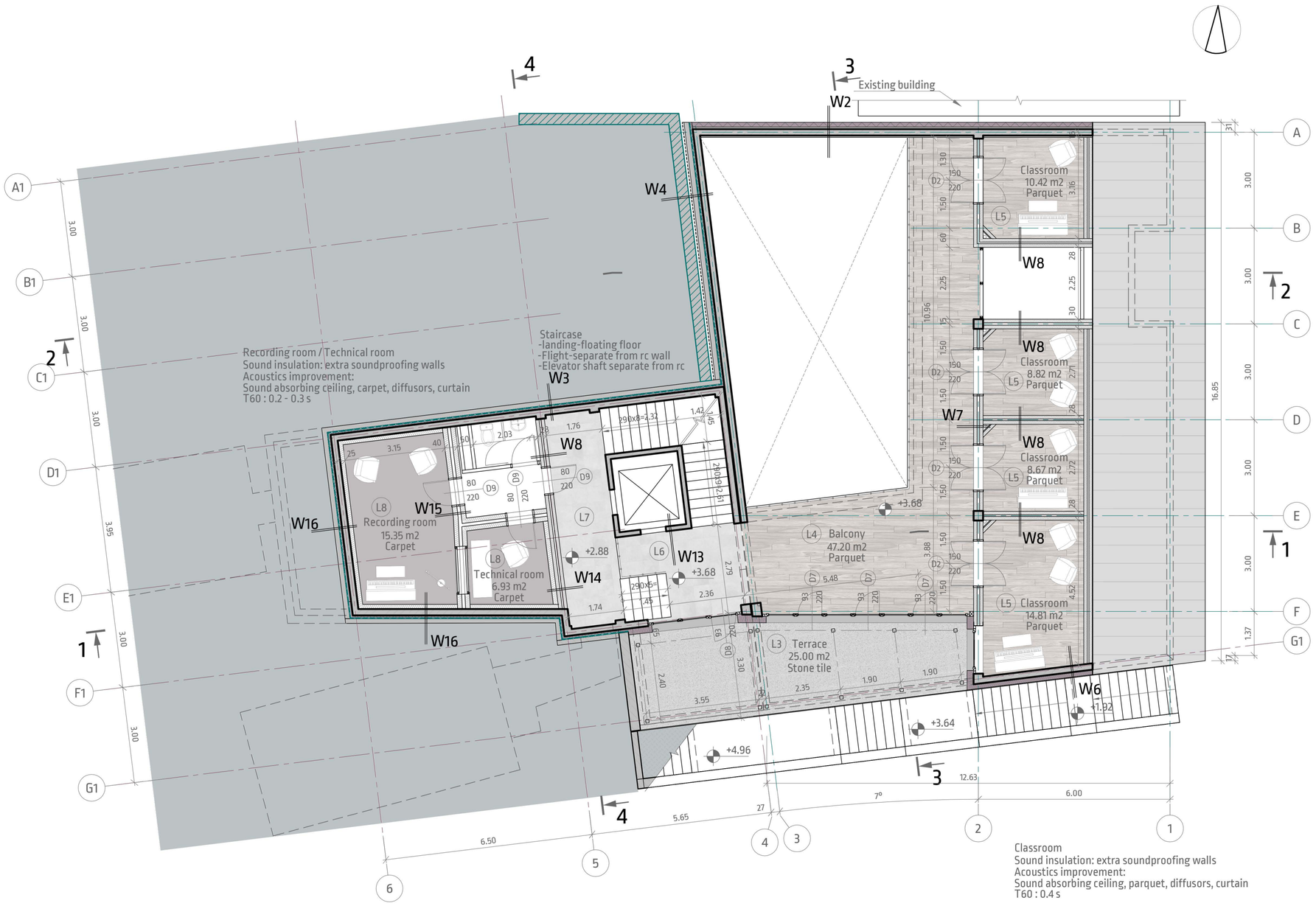
Drawing GROUND FLOOR

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



L8
15 mm - Carpet
70 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
40 mm - EPS foam (thermal insulation + installation layer)
200 mm - Reinforced concrete slab
155 mm - Air gap
50 mm - Carrying channel 60/27 filled with 50 mm acoustic mineral wool
12.5 mm - Knauf baseboard
12.5 mm - Knauf baseboard

L7
22 mm - Stone tile
3 mm - Cement based layer
100 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
200 mm - Reinforced concrete slab
155 mm - Air gap
50 mm - Carrying channel 60/27 filled with 50 mm acoustic mineral wool
12.5 mm - Knauf baseboard
12.5 mm - Knauf baseboard

W15
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
50 mm - Gap with self-adhesive insulation strip
12.5 mm - Knauf Plasterboards Diamant (shaft wall construction)
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant

W16
150 mm - Supporting wall
1 layer - Cold bitumen patching compound (about 300 g/m2)
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
100 mm - XPS foam (thermal insulation)
200 mm - Reinforced concrete wall
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant

L3
40 mm - Granite stone paving
40 mm - d8-15 mm stone chipping and drainage layer
1 layer - Synthetic filter layer with specific density of 125 g/m2
200 mm - XPS thermal insulation
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
1 layer - Cold bitumen patching compound (about 300 g/m2)
40-85 mm - Concrete inclination layer (substructure, dilatation by 50 m2)
200 mm - Reinforced concrete slab

L4
19 mm - Wooden floor
6 mm - Bedding layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
40 mm - EPS foam (thermal insulation + installation layer)
200 mm - Reinforced concrete slab
425 mm - Air gap
50 mm - Carrying channel 60/27 filled with 50 mm mineral wool
12.5 mm - Knauf baseboard
12.5 mm - Knauf baseboard

L5
19 mm - Wooden floor
6 mm - Bedding layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
40 mm - EPS foam (thermal insulation + installation layer)
200 mm - Reinforced concrete slab
180 mm - Air gap
50 mm - Carrying channel CD 60/27 filled with sound insulating mineral wool 50 mm
27 mm - Furring channel CD 60/27
12.5 x 2 mm - Knauf plasterboard
27 mm - Furring channel CD 60/27 filled with 25 mm acoustic mineral wool
12.5 mm - Cleaneo linear
(Circular perforation 8/18 R)

L6
22 mm - Stone tile
3 mm - Cement based layer
100 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
200 mm - Reinforced concrete slab
425 mm - Air gap
50 mm - Carrying channel 60/27 filled with 50 mm mineral wool
12.5 mm - Knauf baseboard
12.5 mm - Knauf baseboard

W2
150 mm - EPS foam (thermal insulation)
60 mm - LEIER crust panel
200 mm - RC wall
60 mm - LEIER crust panel
10 mm - Plaster

W3
150 mm - Supporting wall
1 layer - Cold bitumen patching compound (about 300 g/m2)
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
100 mm - XPS foam (thermal insulation)
200 mm - Reinforced concrete wall
10 mm - Plaster

W4
Existing retaining wall structures (anchored to the soil)
50 mm - Draining layer
150 mm - Supporting wall
1 layer - Cold bitumen patching compound (about 300 g/m2)
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
100 mm - XPS foam (thermal insulation)
200 mm - Reinforced concrete wall

W6
20 mm - Plaster
200 mm - Mineral wool (thermal insulation)
200 mm - Reinforced concrete wall
10 mm - Plaster

W7
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
100 mm - Frame Knauf C-Stud with mineral wool
75 mm - Gap with self-adhesive insulation strip
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant

W8
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
100 mm - Frame Knauf C-Stud with mineral wool
25 mm - Gap with self-adhesive insulation strip
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant

W13
10 mm - Plaster
150 mm - Reinforced concrete wall

W14
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
100 mm - Frame Knauf C-Stud with mineral wool
25 mm - Gap with self-adhesive insulation strip
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant

1:100

10

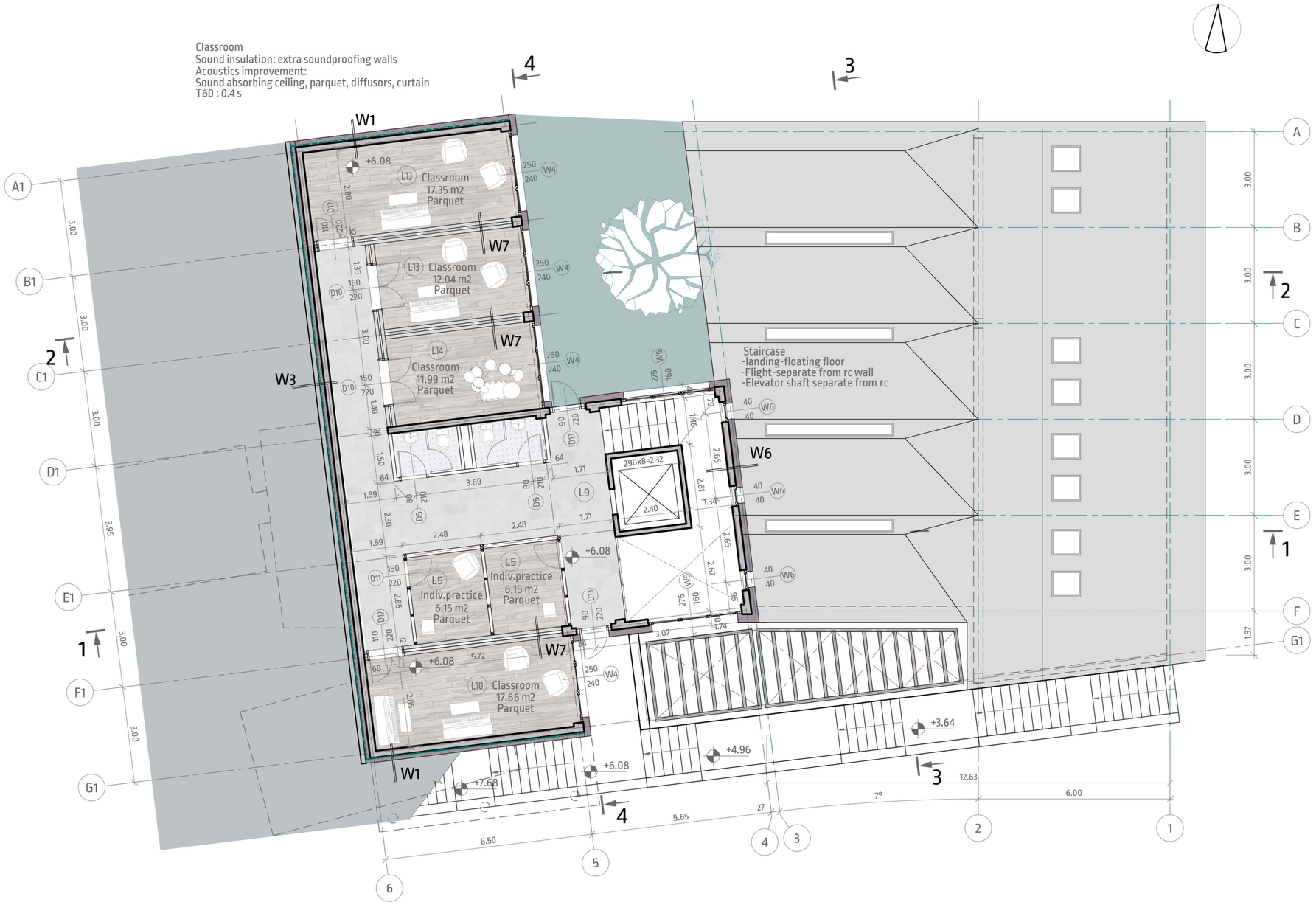
Drawing FIRST FLOOR

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



L5
19 mm - Wooden floor
6 mm - Bedding layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
40 mm - EPS foam (thermal insulation + installation layer)
200 mm - Reinforced concrete slab
180 mm - Air gap
50 mm - Carrying channel CD 60/27 filled with sound insulating mineral wool 50 mm
27 mm - Furring channel CD 60/27
12.5 x 2 mm - Knauf plasterboard
27 mm - Furring channel CD 60/27 filled with 25 mm acoustic mineral wool
12.5 mm - Cleaneo linear
(Circular perforation 8/18 R)

L9
22 mm - Stone tile
3 mm - Cement based layer
100 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
200 mm - Reinforced concrete slab
1 cm - Plaster

L10
19 mm - Wooden floor
6 mm - Bedding layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
140 mm - EPS foam (thermal insulation + installation layer)
450 mm - Reinforced concrete slab
80 mm - Concrete blinding

L13
19 mm - Wooden floor
6 mm - Bedding layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
140 mm - EPS foam (thermal insulation + installation layer)
300 mm - Reinforced concrete slab
80 mm - Concrete blinding

L14
19 mm - Wooden floor
6 mm - Bedding layer
60 mm - Screed
1 layer - PE foil
115 mm - EPS foam (thermal insulation + installation layer)
50 mm - Resilient pads (sound insulation in drum room)
300 mm - Reinforced concrete slab
80 mm - Concrete blinding

W1
150 mm - XPS foam (thermal insulation)
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
1 layer - Cold bitumen patching compound (about 300 g/m2)
200 mm - Reinforced concrete wall

W3
150 mm - Supporting wall
1 layer - Cold bitumen patching compound (about 300 g/m2)
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
100 mm - XPS foam (thermal insulation)
200 mm - Reinforced concrete wall
10 mm - Plaster

W7
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
100 mm - Frame Knauf C-Stud with mineral wool
75 mm - Gap with self-adhesive insulation strip
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant

W8
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
100 mm - Frame Knauf C-Stud with mineral wool
25 mm - Gap with self-adhesive insulation strip
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant

W9
12.5 mm - Knauf Plasterboards
12.5 mm - Knauf Plasterboards
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards
12.5 mm - Knauf Plasterboards

W10
12.5 mm - Knauf Plasterboards
12.5 mm - Knauf Plasterboards
50 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards
12.5 mm - Knauf Plasterboards

1:100

11

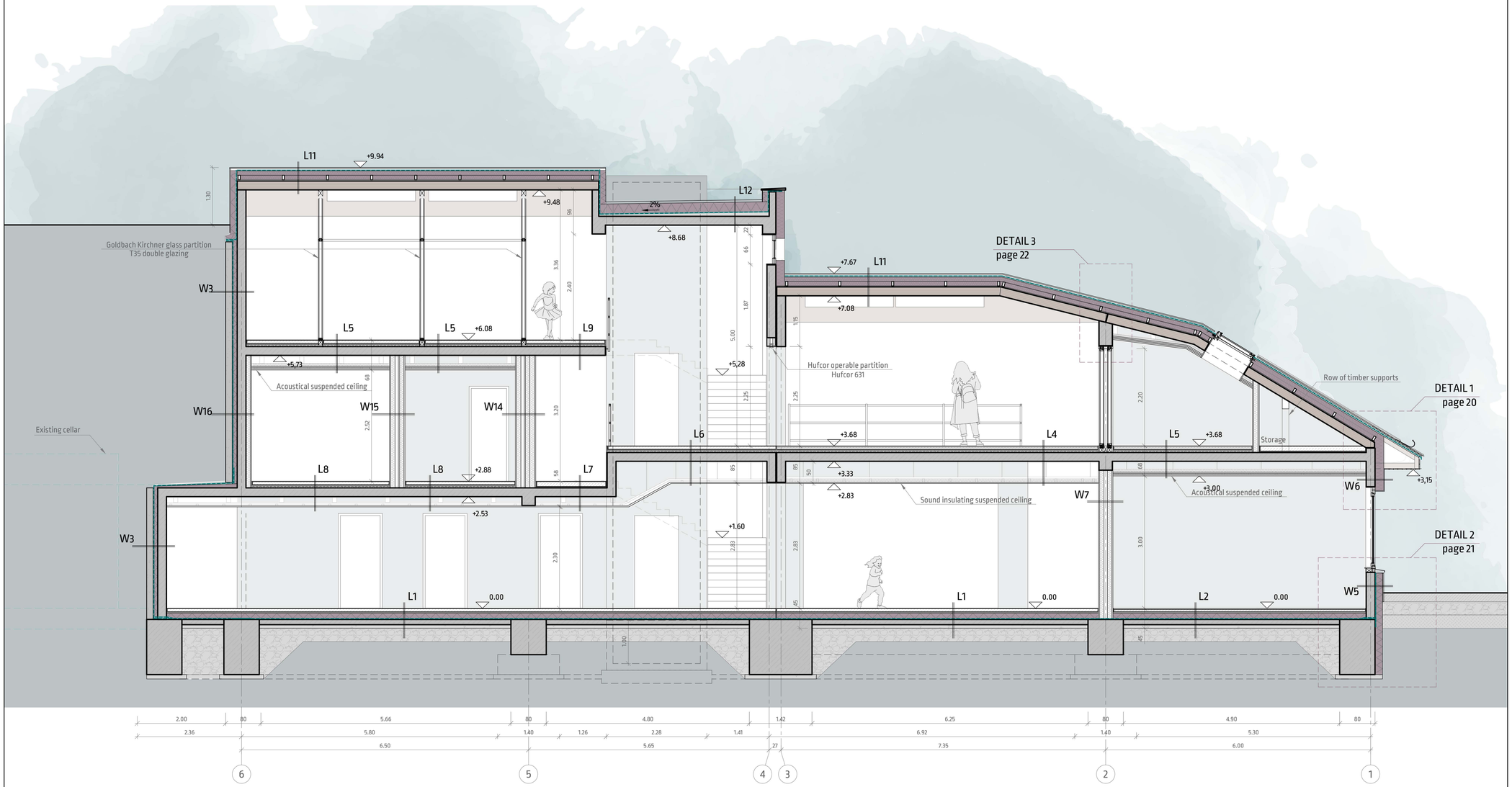
Drawing SECOND FLOOR

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



L1
22 mm - Stone tile
3 mm - Cement-based layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
140 mm - EPS foam (thermal insulation + installation layer)
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
1 layer - Cold bitumen patching compound (about 300 g/m2)
120 mm - Reinforced concrete slab
80 mm - Concrete blinding

L2
19 mm - Wooden floor
6 mm - Bedding layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
140 mm - EPS foam (thermal insulation + installation layer)
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
1 layer - Cold bitumen patching compound (about 300 g/m2)
120 mm - Reinforced concrete slab
80 mm - Concrete blinding

L4
19 mm - Wooden floor
6 mm - Bedding layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
40 mm - EPS foam (thermal insulation + installation layer)
200 mm - Reinforced concrete slab
425 mm - Air gap
50 mm - Carrying channel 60/27 filled with 50 mm sound insulating mineral wool
12.5 mm - Knauf baseboard
12.5 mm - Knauf baseboard

L5
19 mm - Wooden floor
6 mm - Bedding layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
40 mm - EPS foam (thermal insulation + installation layer)
200 mm - Reinforced concrete slab
180 mm - Air gap
50 mm - Carrying channel CD 60/27 filled with sound insulating mineral wool 50 mm
27 mm - Furring channel CD 60/27
12.5 x 2 mm - Knauf plasterboard
27 mm - Furring channel CD 60/27 filled with 25 mm acoustic mineral wool
12.5 mm - Cleaneo linear
(Circular perforation 8/18 R)

L6
22 mm - Stone tile
3 mm - Cement based layer
100 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
200 mm - Reinforced concrete slab
425 mm - Air gap
50 mm - Carrying channel 60/27 filled with 50 mm sound insulating mineral wool
12.5 mm - Knauf baseboard
12.5 mm - Knauf baseboard

L7
22 mm - Stone tile
3 mm - Cement based layer
100 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
200 mm - Reinforced concrete slab
155 mm - Air gap
50 mm - Carrying channel 60/27 filled with 50 mm sound insulating mineral wool
12.5 mm - Knauf baseboard
12.5 mm - Knauf baseboard

L8
15 mm - Carpet
70 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
40 mm - EPS foam (thermal insulation + installation layer)
200 mm - Reinforced concrete slab
155 mm - Air gap
50 mm - Carrying channel 60/27 filled with 50 mm mineral wool
12.5 mm - Knauf baseboard
12.5 mm - Knauf baseboard

L9
22 mm - Stone tile
3 mm - Cement based layer
100 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
200 mm - Reinforced concrete slab
1 cm - Plaster

L11
0.7 mm - VMZINC Natural Zinc, seam height 25 mm
20 x 96 mm - Wooden boards
60 mm - Ventilation gap
1 layer - PVC membrane Thermofol U
200 mm - Mineral wool
30 mm - Honeycomb acoustic infill FERMACELL
1 layer - Vapour barrier
200 mm - CLT structures

L12
50 mm - d16-32 mm gravel ballasting and protecting layer
1 layer - Synthetic filter with specific density of 125 g/m2
200 mm - XPS foam (thermal insulation, with staggered joints)
4 mm - Modified bitumen waterproofing membrane (polyester fibre reinforced),
fully bonded by torch applied welding
4 mm - Modified bitumen waterproofing membrane (glass fibre reinforced), fully bonded
1 layer - Cold bitumen patching compound (about 300 g/m2)
40-80 mm - Concrete inclination layer
200 mm - Reinforced concrete slab
10 mm - Plaster

W3
150 mm - Supporting wall
1 layer - Cold bitumen patching compound (about 300 g/m2)
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
100 mm - XPS foam (thermal insulation)
200 mm - Reinforced concrete wall
10 mm - Plaster

W5
20 mm - Revco footing plaster
180 mm - EPS foam (thermal insulation)
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
1 layer - Cold bitumen patching compound (about 300 g/m2)
200 mm - Reinforced concrete wall
10 mm - Plaster

W6
20 mm - Plaster
200 mm - Mineral wool (thermal insulation)
200 mm - Reinforced concrete wall
10 mm - Plaster

W7
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
100 mm - Frame Knauf C-Stud with mineral wool
75 mm - Gap with self-adhesive insulation strip
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant

W8
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
100 mm - Frame Knauf C-Stud with mineral wool
25 mm - Gap with self-adhesive insulation strip
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant

W14
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
100 mm - Frame Knauf C-Stud with mineral wool
25 mm - Gap with self-adhesive insulation strip
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant

W15
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant
50 mm - Gap with self-adhesive insulation strip
12.5 mm - Knauf Plasterboards Diamant (shaft wall construction)
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant

W16
150 mm - Supporting wall
1 layer - Cold bitumen patching compound (about 300 g/m2)
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
100 mm - XPS foam (thermal insulation)
200 mm - Reinforced concrete wall
100 mm - Frame Knauf C-Stud with mineral wool
12.5 mm - Knauf Plasterboards Diamant
12.5 mm - Knauf Plasterboards Diamant

1:50

12

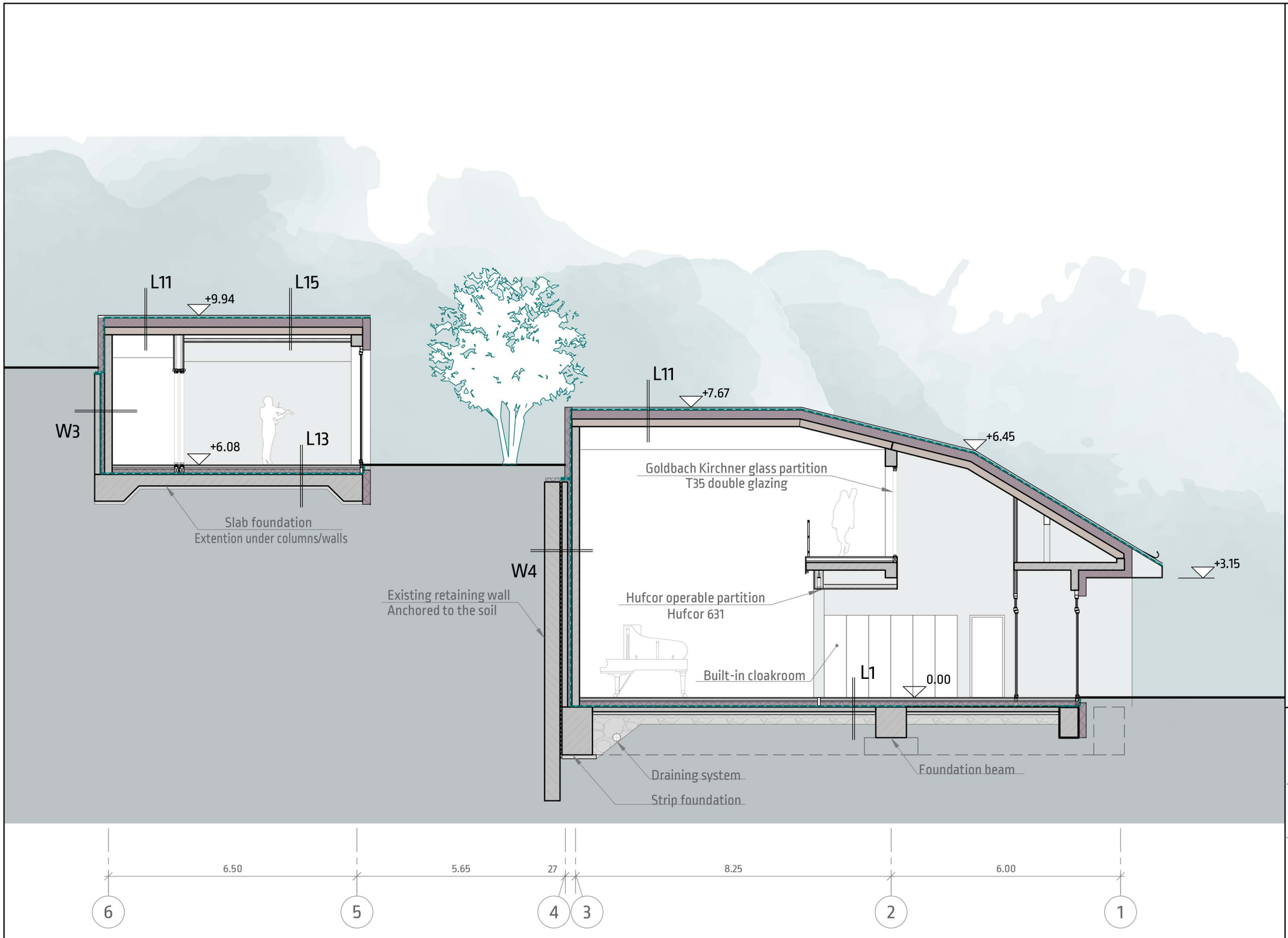
Drawing SECTION 01

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



W3
150 mm - Supporting wall
1 layer - Cold bitumen patching compound (about 300 g/m2)
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
100 mm - XPS foam (thermal insulation)
200 mm - Reinforced concrete wall
10 mm - Plaster

W4
Existing retaining wall structures (anchored to the soil)
50 mm - Draining layer
150 mm - Supporting wall
1 layer - Cold bitumen patching compound (about 300 g/m2)
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
100 mm - XPS foam (thermal insulation)
200 mm - Reinforced concrete wall

L1
22 mm - Stone tile
3 mm - Cement-based layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
140 mm - EPS foam (thermal insulation + installation layer)
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
1 layer - Cold bitumen patching compound (about 300 g/m2)
120 mm - Reinforced concrete slab
80 mm - Concrete blinding

1:100

13

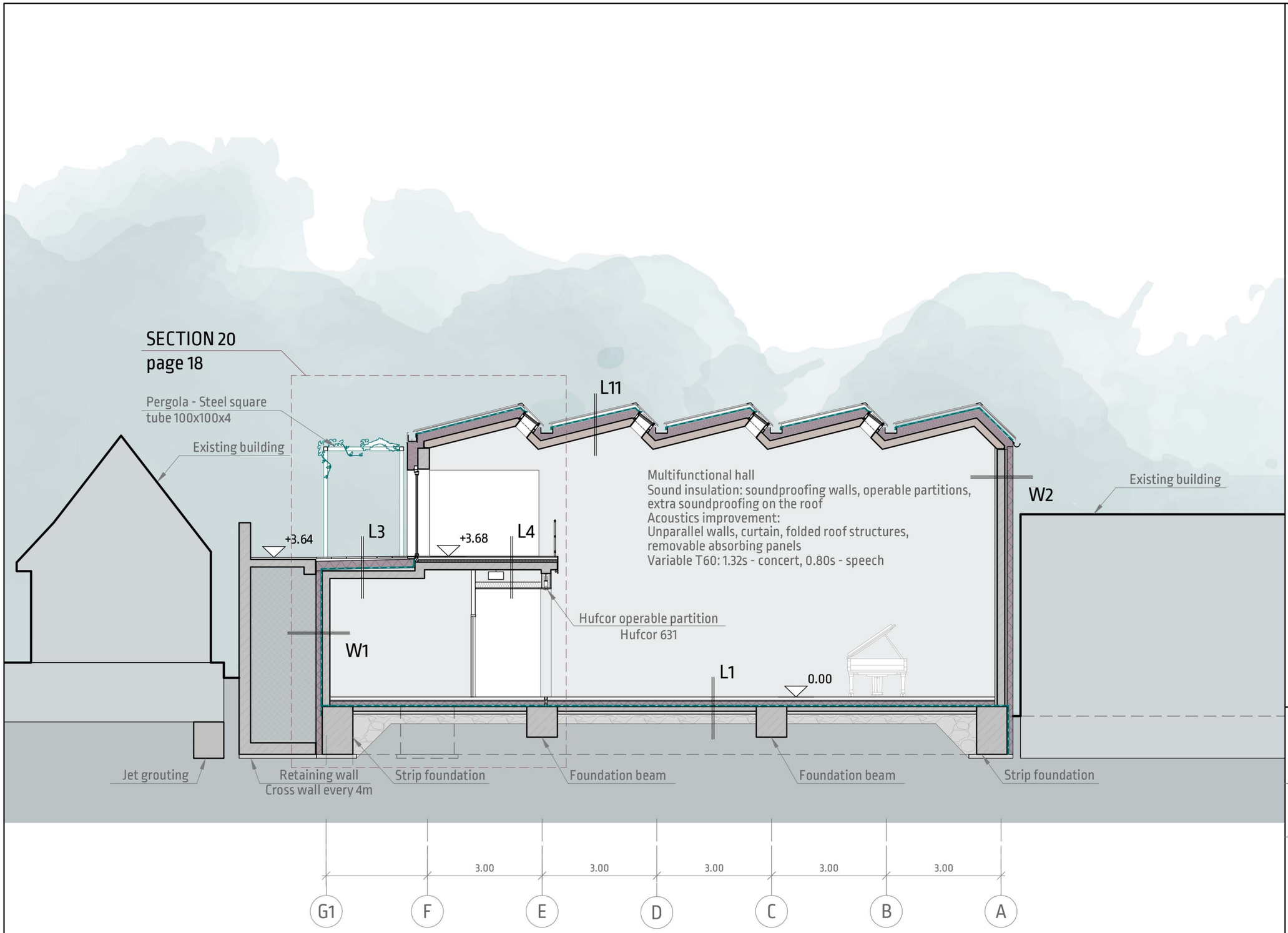
Drawing SECTION 02

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



W1
150 mm - XPS foam (thermal insulation)
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
1 layer - Cold bitumen patching compound (about 300 g/m2)
200 mm - Reinforced concrete wall

W2
150 mm - EPS foam (thermal insulation)
60 mm - LEIER crust panel
200 mm - RC wall
60 mm - LEIER crust panel
10 mm - Plaster

L1
22 mm - Stone tile
3 mm - Cement-based layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
140 mm - EPS foam (thermal insulation + installation layer)
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
1 layer - Cold bitumen patching compound (about 300 g/m2)
120 mm - Reinforced concrete slab
80 mm - Concrete blinding

L11
0.7 mm - VMZINC Natural Zinc, seam height 25 mm
20 x 96 mm - Wooden boards
60 mm - Ventilation gap
1 layer - PVC membrane Thermofol U
200 mm - Mineral wool
30 mm - Honeycomb acoustic infill FERMACELL
1 layer - Vapour barrier
200 mm - CLT structures

1:100

14

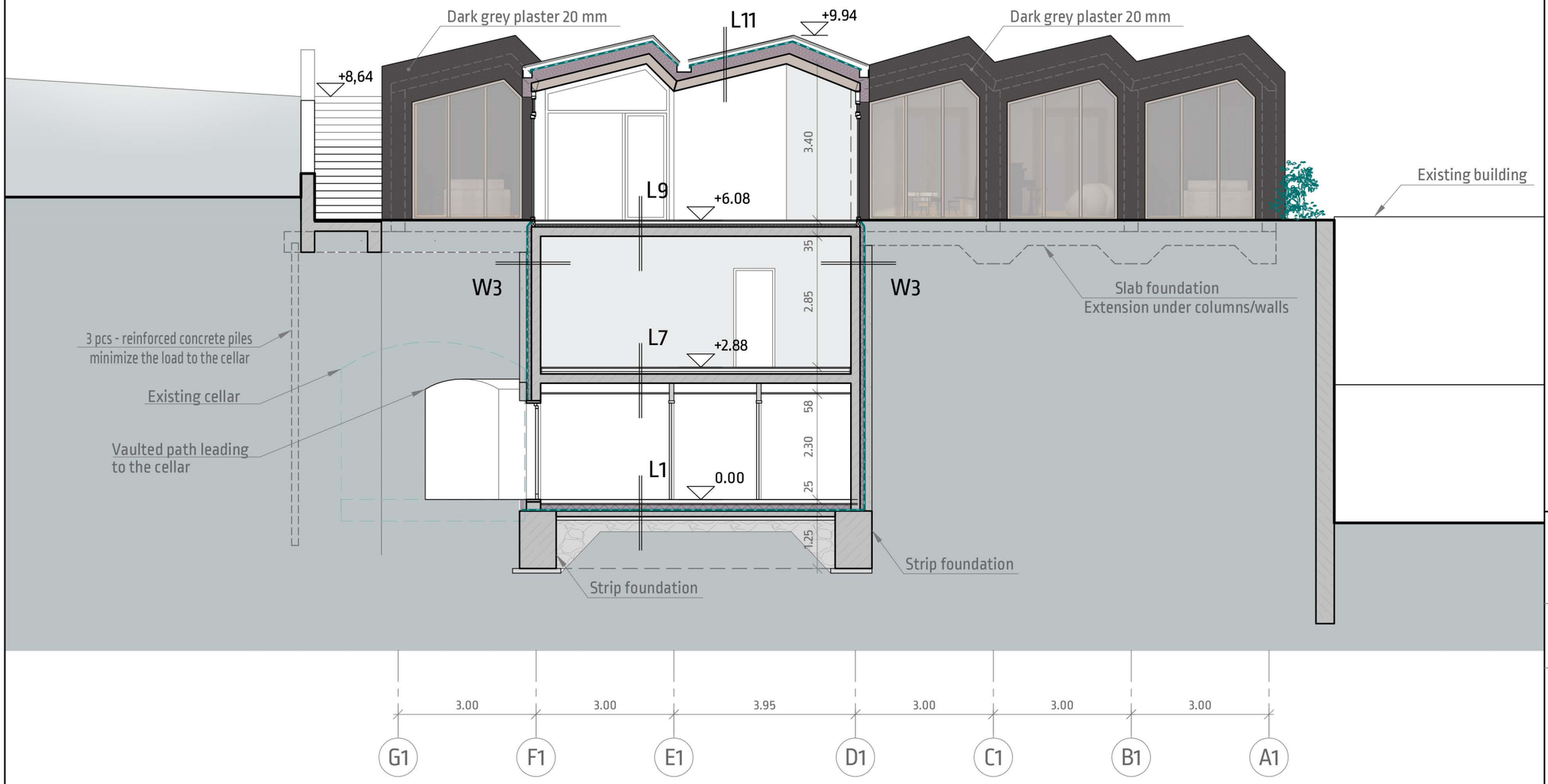
Drawing SECTION 03

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



W3
150 mm - Supporting wall
1 layer - Cold bitumen patching compound (about 300 g/m2)
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
100 mm - XPS foam (thermal insulation)
200 mm - Reinforced concrete wall
10 mm - Plaster

L1
22 mm - Stone tile
3 mm - Cement-based layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
140 mm - EPS foam (thermal insulation + installation layer)
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
1 layer - Cold bitumen patching compound (about 300 g/m2)
120 mm - Reinforced concrete slab
80 mm - Concrete blinding

L11
0.7 mm - VMZINC Natural Zinc, seam height 25 mm
20 x 96 mm - Wooden boards
60 mm - Ventilation gap
1 layer - PVC membrane Thermofol U
200 mm - Mineral wool
30 mm - Honeycomb acoustic infill FERMACELL
1 layer - Vapour barrier
200 mm - CLT structures

1:100

15

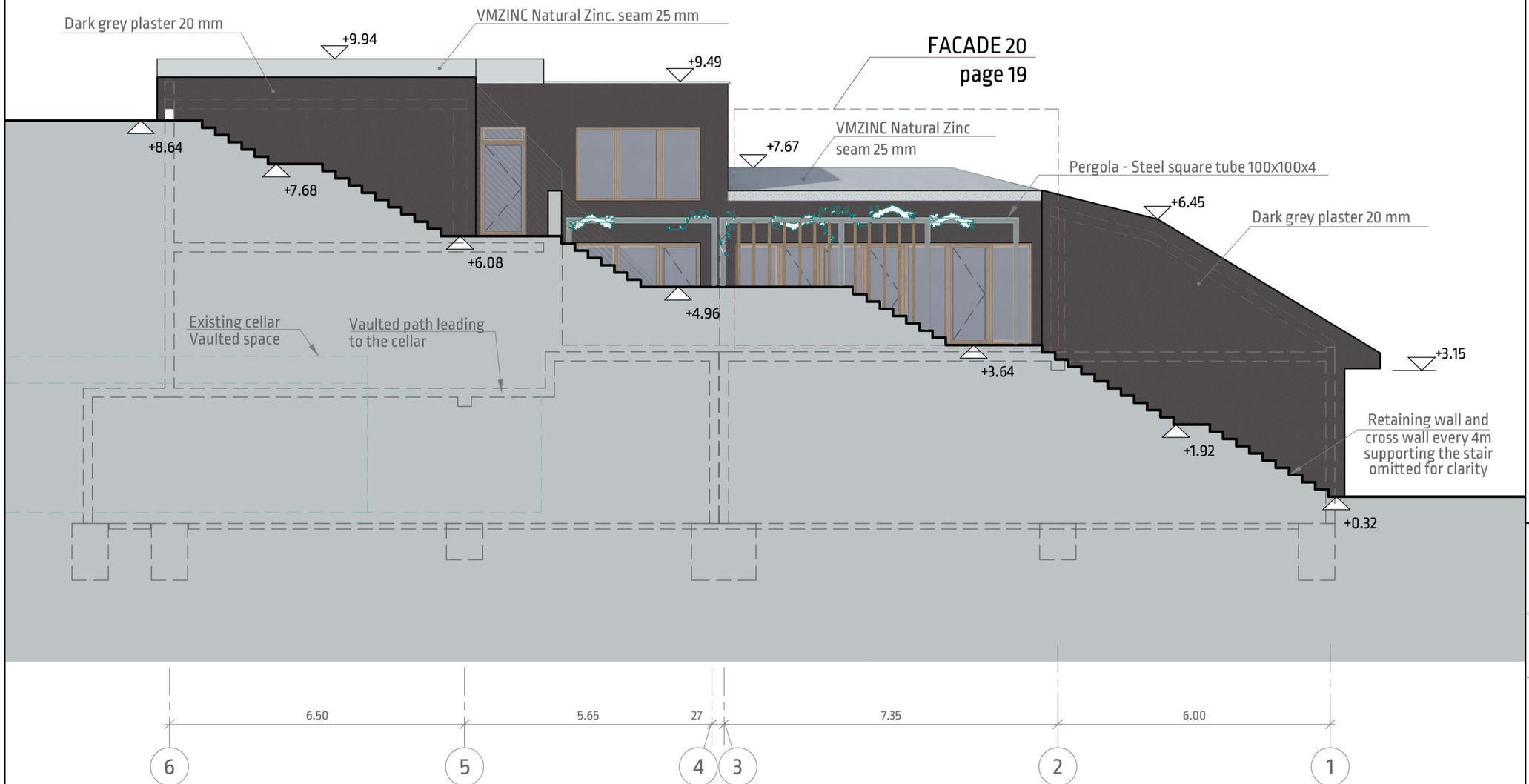
Drawing SECTION 04

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



1:100

16

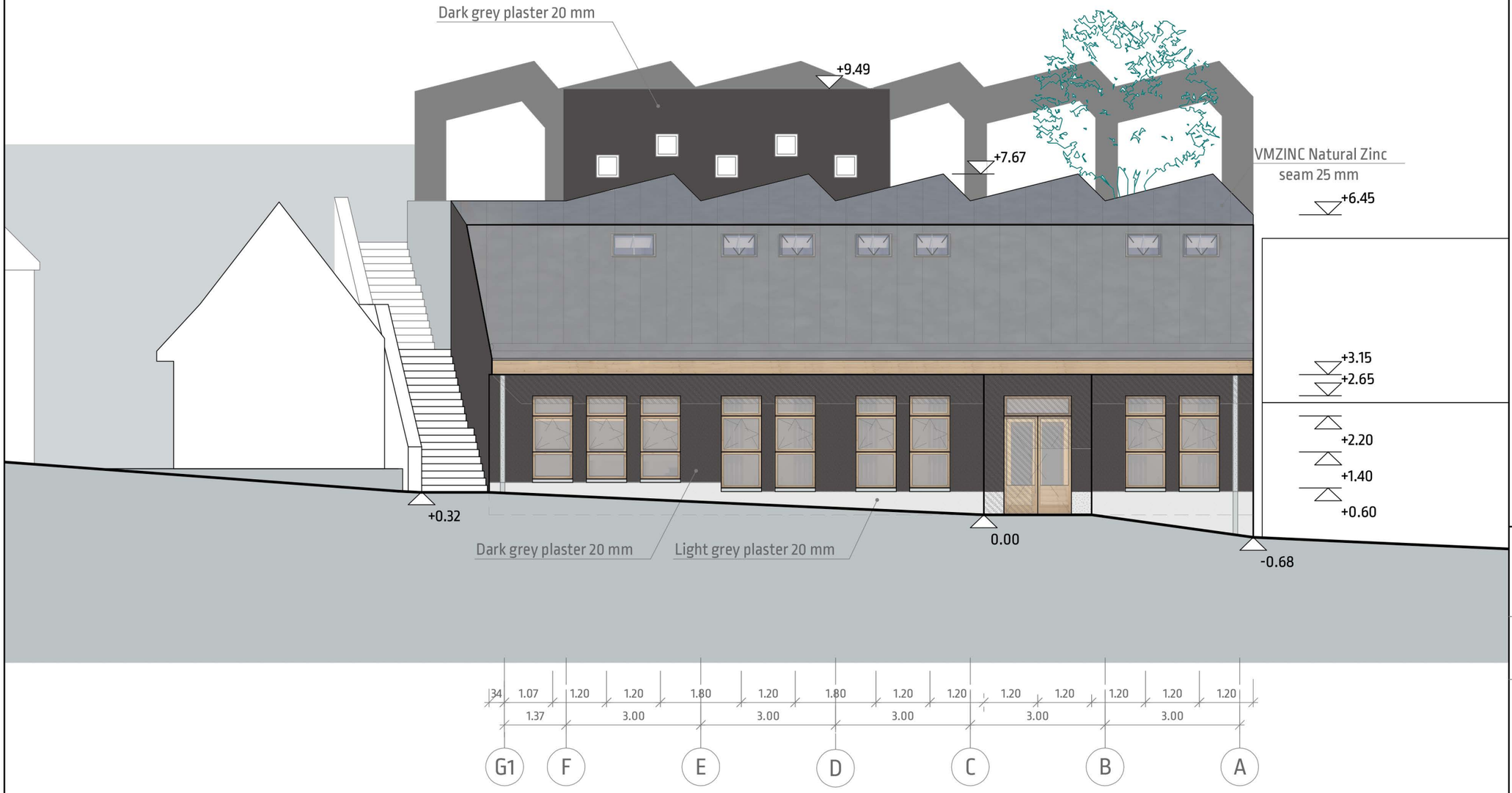
Drawing FACADE 6-1

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



1:100

17

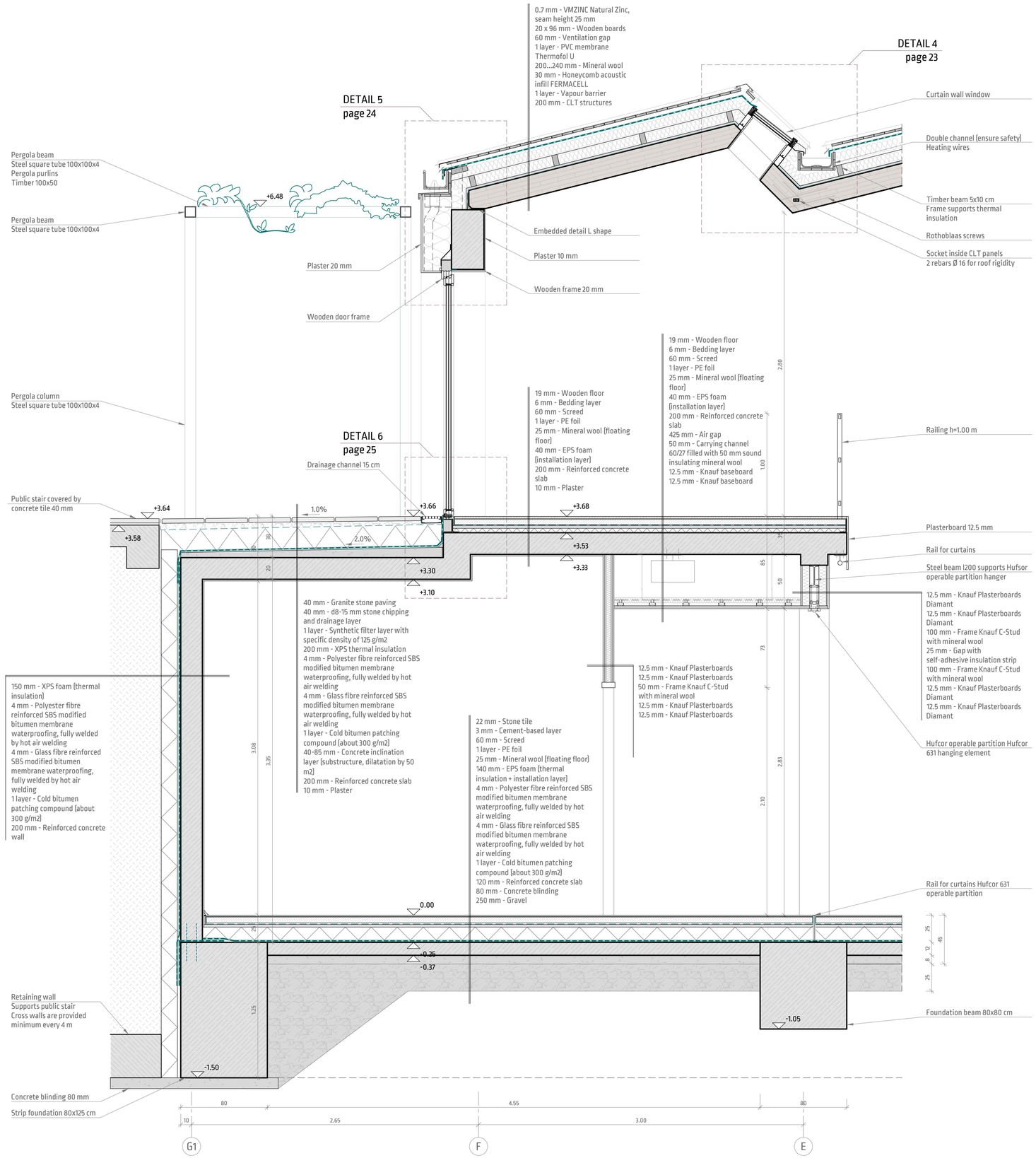
Drawing FACADE G1-A

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



1:20

18

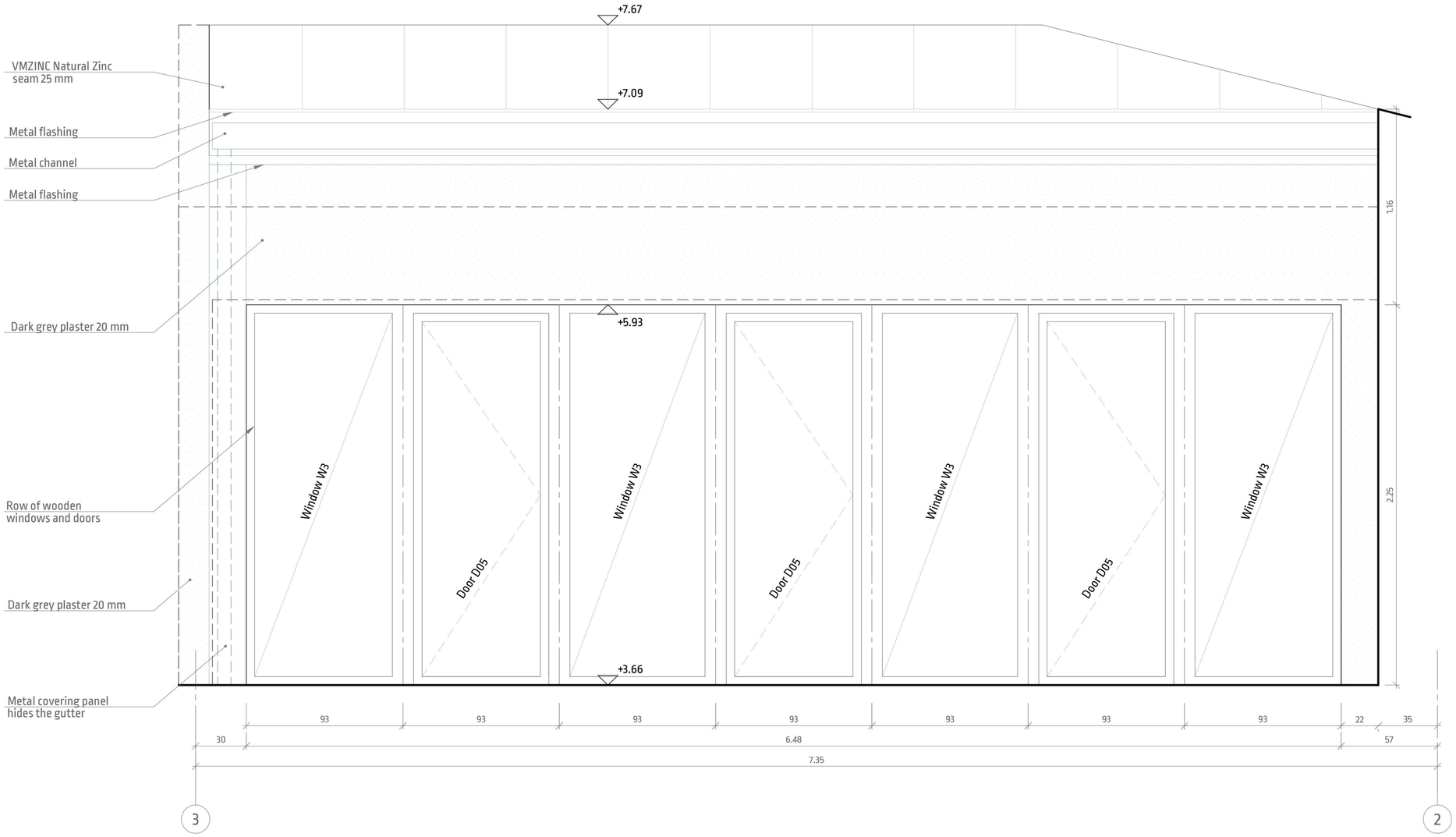
Drawing SECTION 20

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



1:20

19

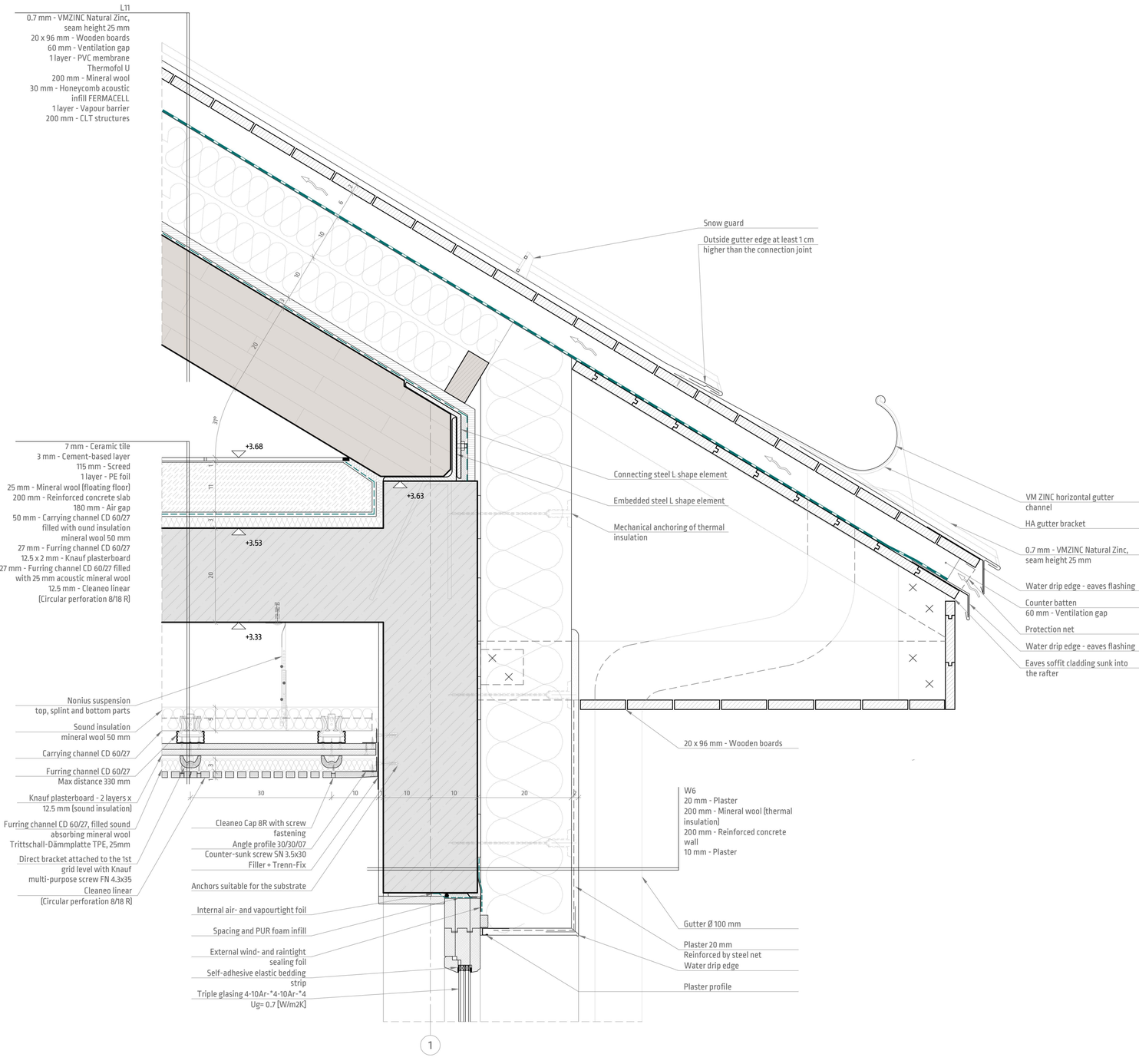
Drawing FACADE 20

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



1:5

20

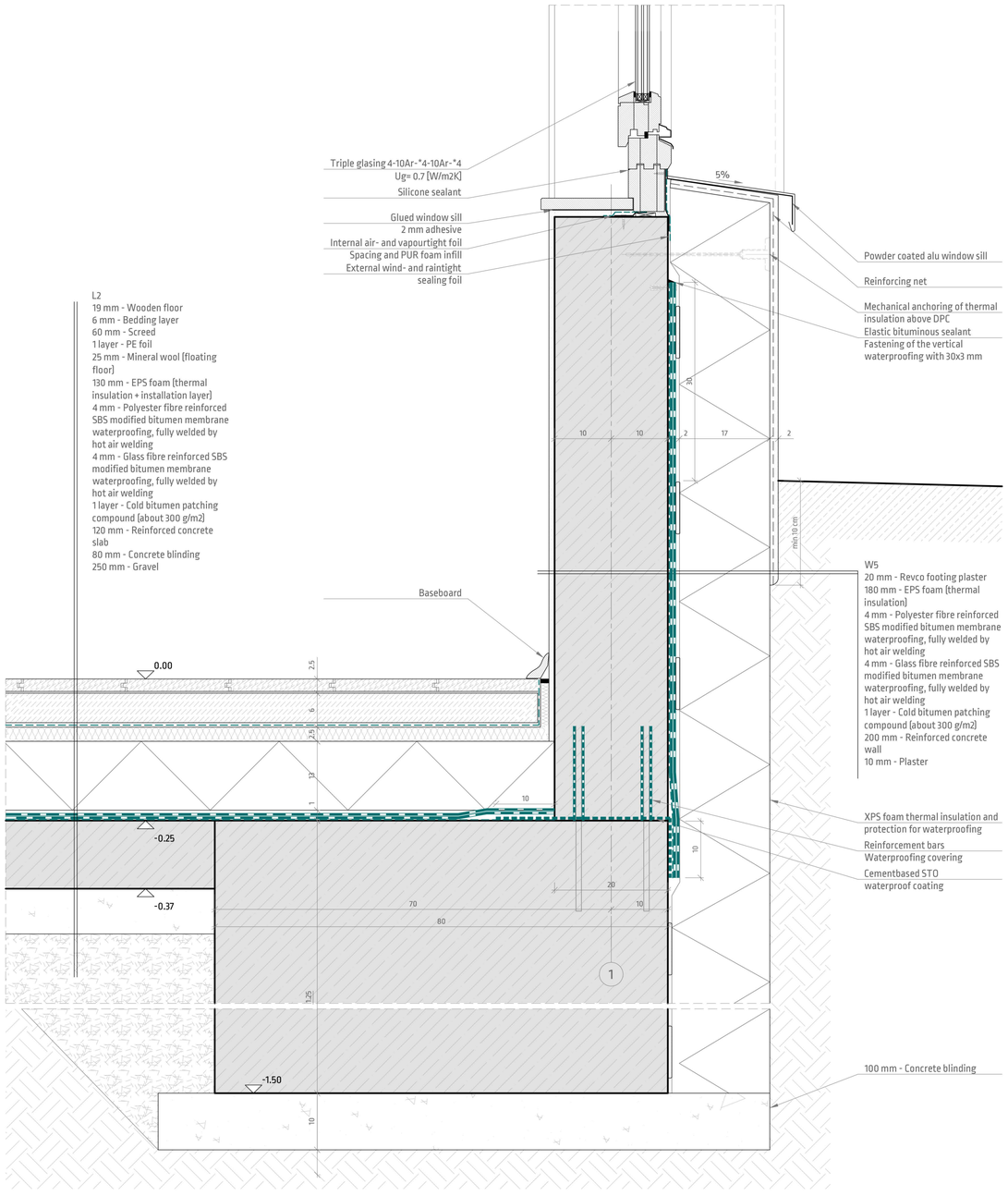
Drawing DETAIL D1

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



L2
19 mm - Wooden floor
6 mm - Bedding layer
60 mm - Screed
1 layer - PE foil
25 mm - Mineral wool (floating floor)
130 mm - EPS foam (thermal insulation + installation layer)
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
1 layer - Cold bitumen patching compound (about 300 g/m2)
120 mm - Reinforced concrete slab
80 mm - Concrete blinding
250 mm - Gravel

W5
20 mm - Revco footing plaster
180 mm - EPS foam (thermal insulation)
4 mm - Polyester fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
4 mm - Glass fibre reinforced SBS modified bitumen membrane waterproofing, fully welded by hot air welding
1 layer - Cold bitumen patching compound (about 300 g/m2)
200 mm - Reinforced concrete wall
10 mm - Plaster

1:5

21

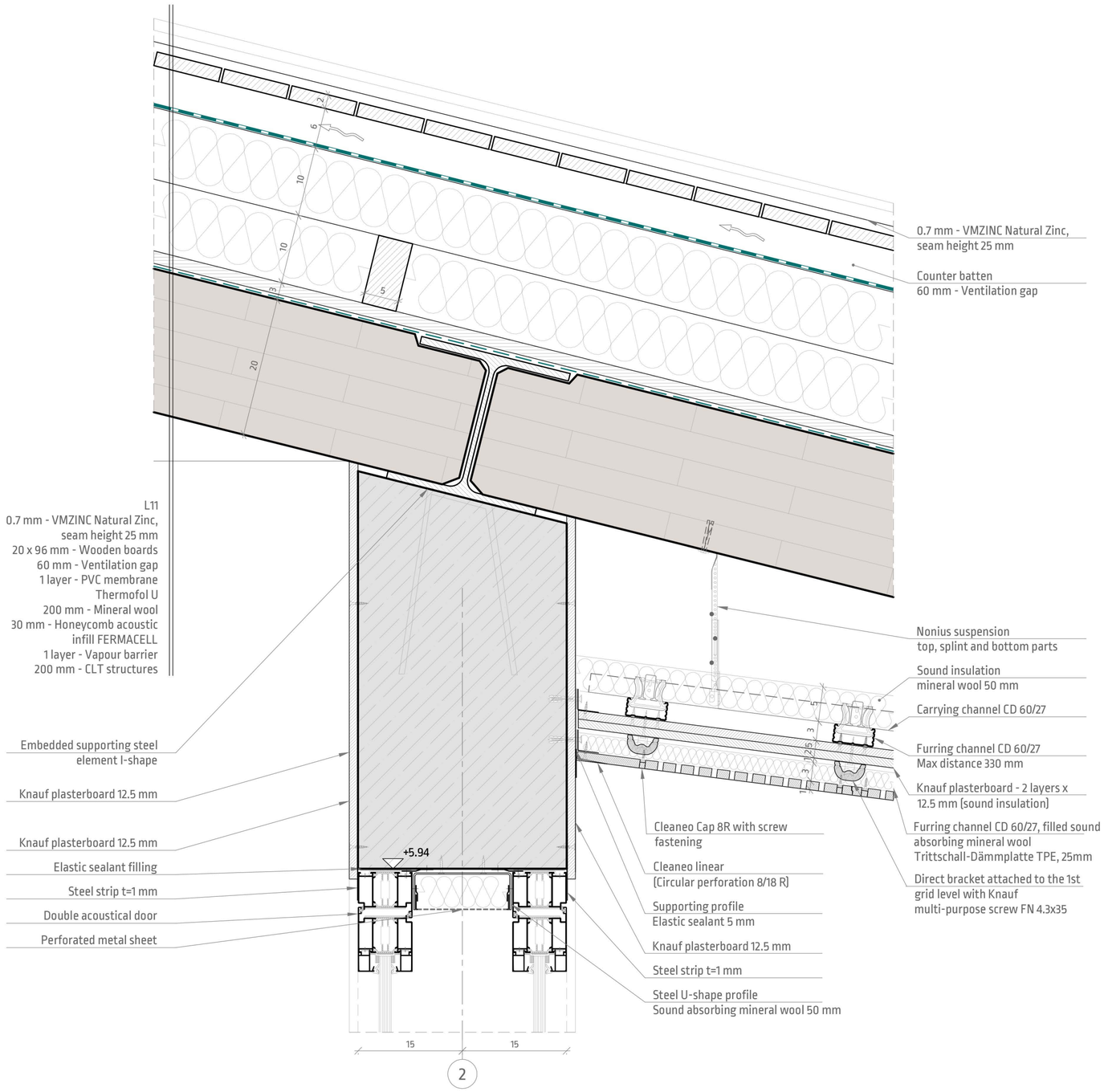
Drawing DETAIL D2

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



1:5

22

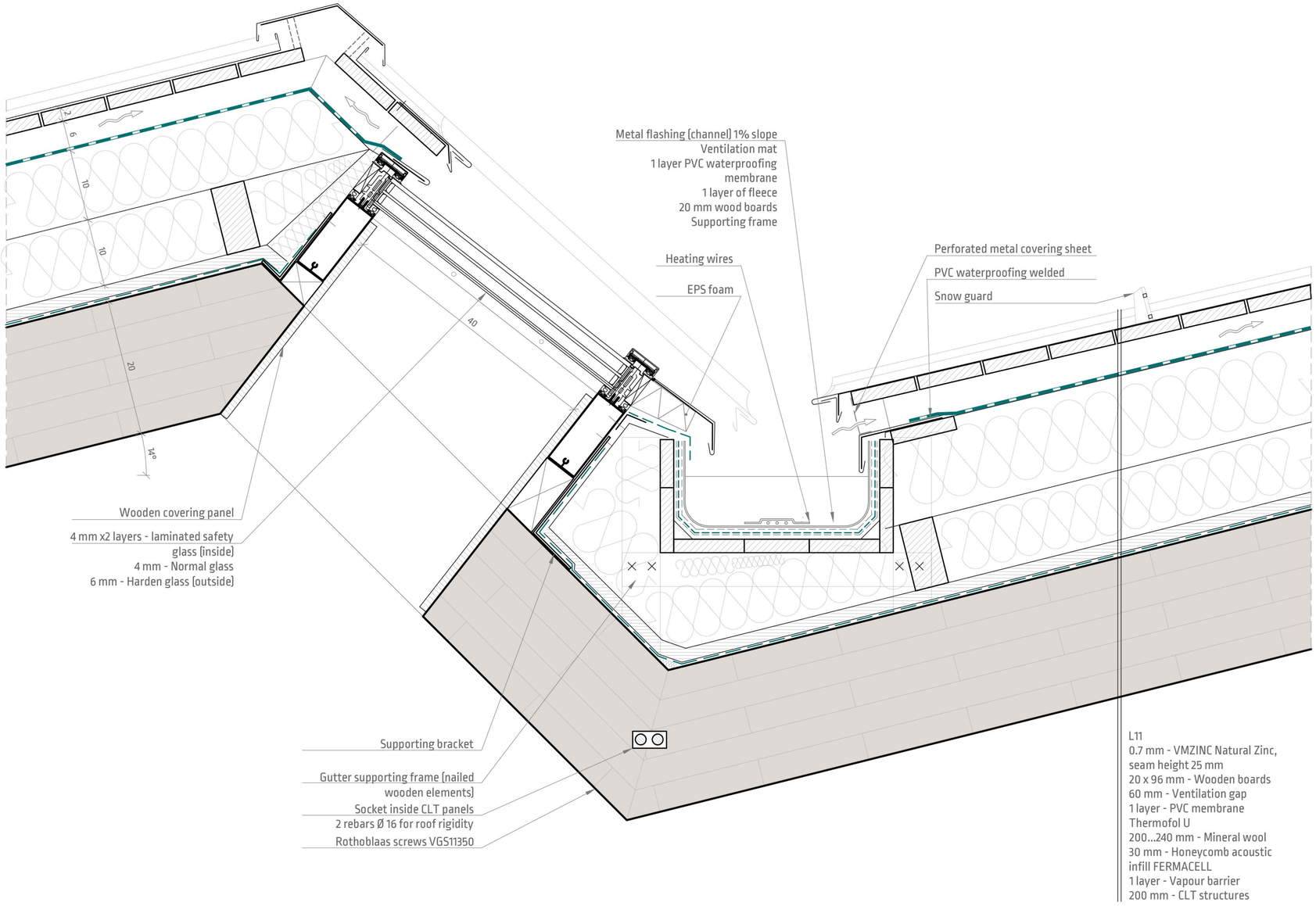
Drawing DETAIL D3

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE
SCHOOL
OF MUSIC

Student: Karina Kasatkina



1:5

23

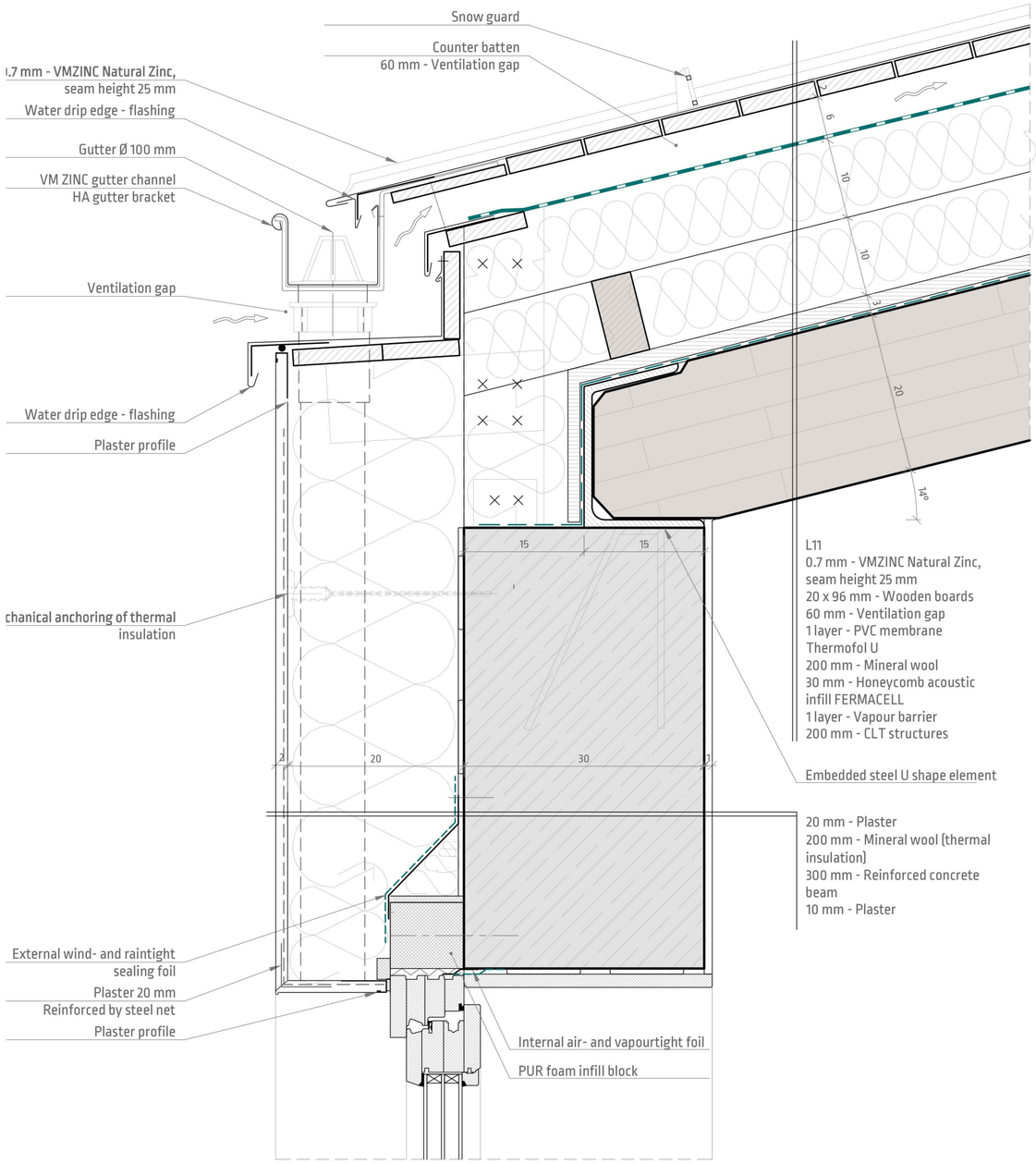
Drawing DETAIL D4

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



1:5

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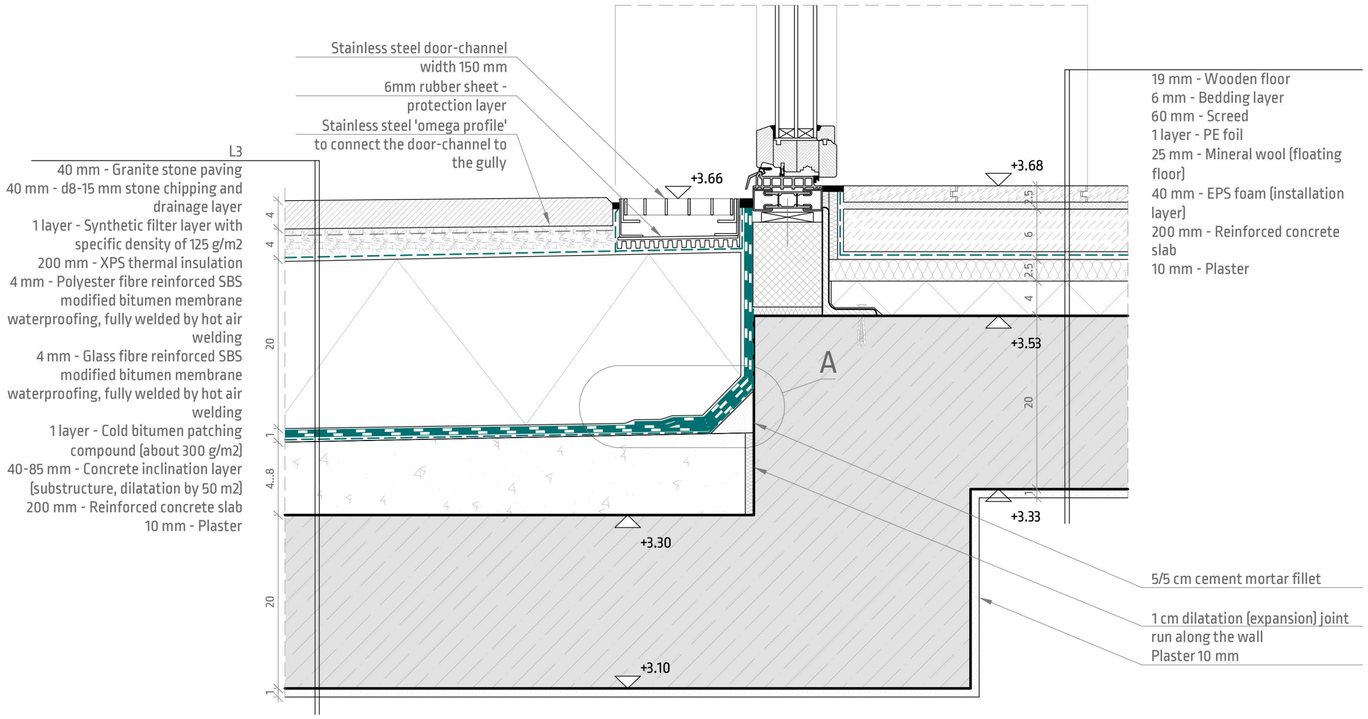
Drawing DETAIL D5

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina



1:5

25

Drawing DETAIL D6

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

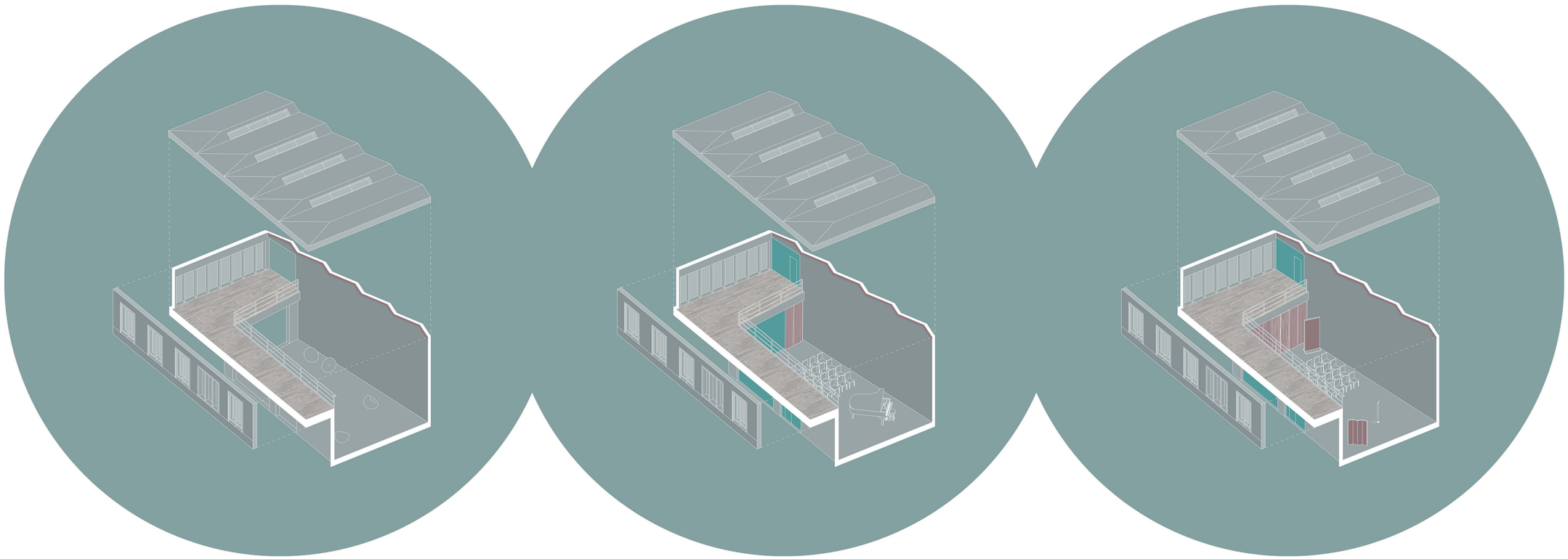
Student: Karina Kasatkina

MULTIFUNCTIONAL HALL

WELCOMING SPACE

MUSIC EVENT

SPEECH EVENT



T60 NOT SPECIFIED

OPEN SPACE

FLEXIBLE FURNITURE ARRANGEMENT
VISUAL CONNECTION TO THE ENTRANCE
VISUAL CONNECTION TO THE TERRACE

T60=1.32 s

SOUND INSULATING WALLS
SOUND INSILATION OF ROOF STRUCTURES
OPERABLE PARTITIONS (FULL SEPARATION)

NON PARALLEL WALLS
FOLDED STRUCTURES
TILE AND PARQUET COVERING
CURTAINS

T60=0.80 s

SOUND INSULATING WALLS
SOUND INSILATION OF ROOF STRUCTURES
OPERABLE PARTITIONS (FULL SEPARATION)

NON PARALLEL WALLS
FOLDED STRUCTURES
TILE AND PARQUET COVERING
CURTAINS
MOVABLE ABSORBERS

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Drawing ACOUSTICS - EVENT HALL

Budapest University of Technology and Economics
Department of Urban Planning and Design

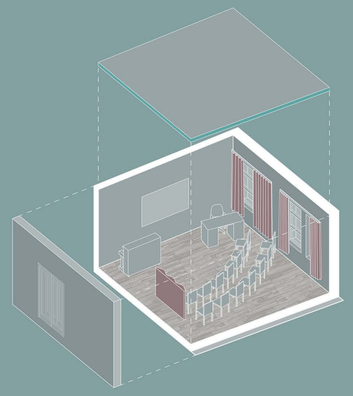
Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina

CLASSROOM

LEARNING THE THEORY

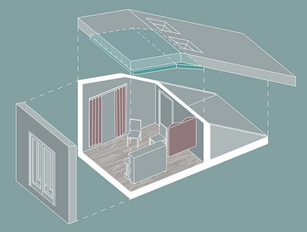


T60=0.70 s

SOUND INSULATING WALLS
SOUND INSILATING SUSPENDED CEILING
DOUBLE DOORS

NON PARALLEL WALLS
SOUND ABSORBING SUSPENDED CEILING
PARQUET COVERING
DIFFUSERS
CURTAINS

INDIVIDUAL PRACTICE



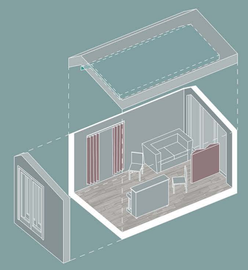
T60=0.40 s

SOUND INSULATING WALLS
SOUND INSILATING SUSPENDED CEILING
DOUBLE DOORS

FOLDED ROOF STRUCTURES
SOUND ABSORBING SUSPENDED CEILING
PARQUET COVERING
DIFFUSERS
CURTAINS

TWO SMALL EXTRA UNITS
FOR PRACTICE WITHOUT SUPERVISION

SMALL GROUP PRACTICE



T60=0.40 s

SOUND INSULATING WALLS
SOUND INSILATING SUSPENDED CEILING

FOLDED ROOF STRUCTURES
SOUND ABSORBING SUSPENDED CEILING
PARQUET COVERING
DIFFUSERS
CURTAINS

ONE DRUM ROOM WITH EXTRA MEASURES
(RESILIENT PADS)

27

Drawing ACOUSTICS - CLASSROOMS

Budapest University of Technology and Economics
Department of Urban Planning and Design
Diploma Project

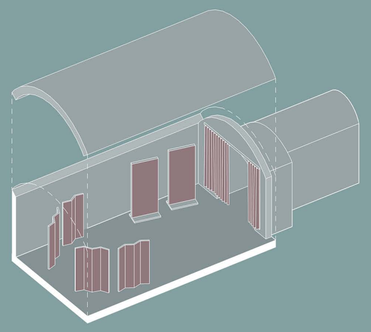
ELEVATE SCHOOL OF MUSIC

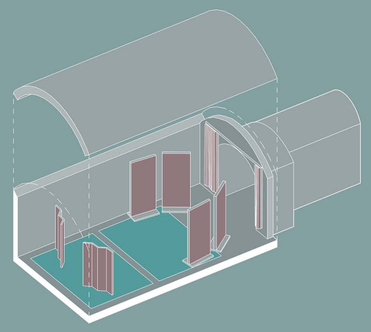
Student: Karina Kasatkina

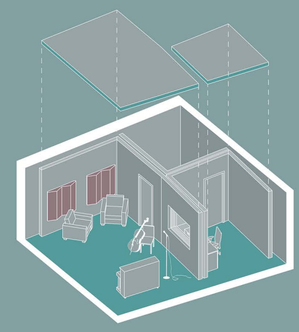
EXISTING CELLARS

SOUND LABORATORY
SPECIAL SMALL EVENTS

RECORDING STUDIO







T60=0.3...2.5 s

MOVABLE ABSORBING PANELS
MOVABLE DIFFUSORS
CHANGEABLE FLOOR COVERING
(STONE TILE, CARPET, WOODEN BOARDS)
CURTAINS

T60=0.20...0.30 s

SOUND INSULATING WALLS
SOUND INSILATING SUSPENDED CEILING

SOUND ABSORBING SUSPENDED CEILING
CARPET COVERING
DIFFUSERS

28

Drawing ACOUSTICS - CELLAR, STUDIO

Budapest University of Technology and Economics
Department of Urban Planning and Design

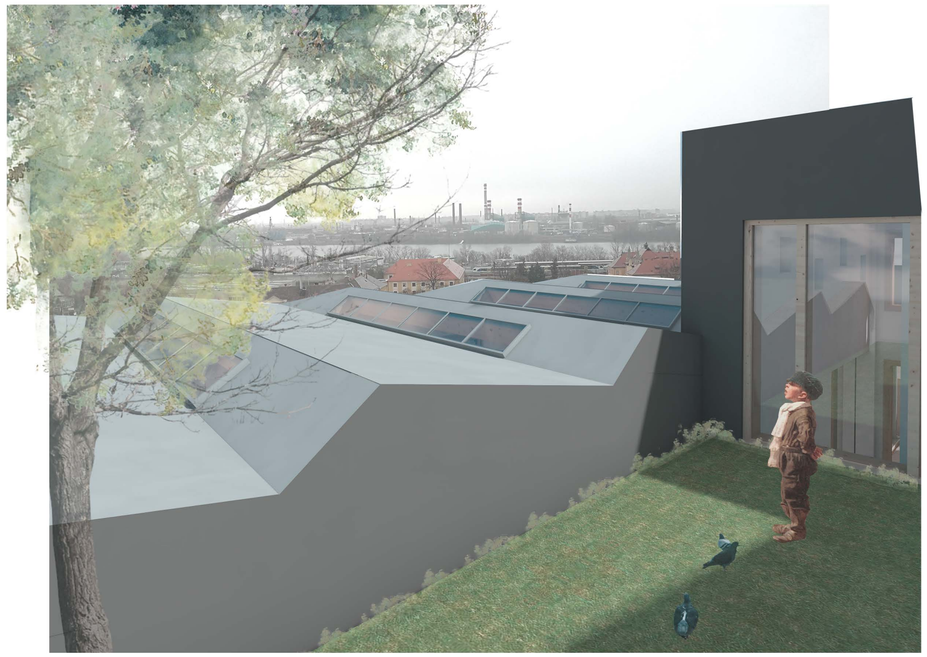
Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina

PRIVATE COURTYARD

PRIVATE COURTYARD



PUBLIC STAIR, TERRACE

PUBLIC STAIR, TERRACE

29

Drawing EXTERIOR

Budapest University of Technology and Economics
Department of Urban Planning and Design

Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina

CLASSROOM

MULTIFUNCTIONAL HALL

MULTIFUNCTIONAL HALL

30

Drawing INTERIOR

Budapest University of Technology and Economics
Department of Urban Planning and Design
Diploma Project

ELEVATE SCHOOL OF MUSIC

Student: Karina Kasatkina