CZECH TECHNICAL UNIVERSITY IN PRAGUE
Faculty of Civil Engineering

UNIVERSIDAD POLITÉCNICA DE VALENCIA
Escuela Técnica Superior de Ingeniería de Edificación

DIPLOMA THESIS

Construction technology project:
NEW TOWN HALL FOR PRAGUE 7

Bc. Michal Bartoš
2018

Supervisors: CTU - Ing. Karel Polák, Ph.D.
UPV - Milagro Iborra Lucas

I hereby declare that the work presented in this thesis is my own. All the sources of literature I used to use are listed in references. I do agree with public disclosure of this diploma thesis.

In Valencia at: …...............

…..
name and surname of declarer

Thanks to:

I would like to express many thanks to Ing. Karel Polák Ph.D. and Mrs. Milagro Iborra Lucas for valuable advices factual remarks and helpfulness during consulting my diploma thesis. I am also grateful to company Contractis s.r.o. for the help with choosing the project.

Title: Construction technology project – NEW TOWN HALL FOR PRAGUE 7
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Abstract: This diploma thesis is dealing with the implementation of the project NEW TOWN HALL FOR PRAGUE 7. The aim of the project is complex reconstruction of administrative building with estimated costs of 150 million CZK. Main documents of the thesis show instructions for the implementation in the form of construction technology project (CTP).

In the CTP is the construction divided in to a space structure, a technological structure and a time structure. This partition is than used to create a time space diagrams and a time schedules of the construction. Another important part of the CTP is to create global solution of site facilities and health and safety plan.

Keywords: construction technology project, time space diagram, time schedule, health and safety plan, construction planning, construction site, dimensioning of site facilities, lifting device, technological scheme, technological analysis sheet

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CONCLUCION
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INTRODUCTION

This diploma thesis is dealing with the project of the District of Prague 7 which is named New town hall for Prague 7. As the title says, the aim of the project was to find a new headquarters for the town hall of this metropolitan area. For this purpose, was chosen the office building at the address: 1338/38 U Průhonu, Prague 7 – Holešovice. The building was purchased with the intention of a complex reconstruction with estimated costs of 150 million CZK.

The architectural competition, announced in 2016, won Atelier BOD with a technologically simple but clear design dominated by a ceramic cladding facade.

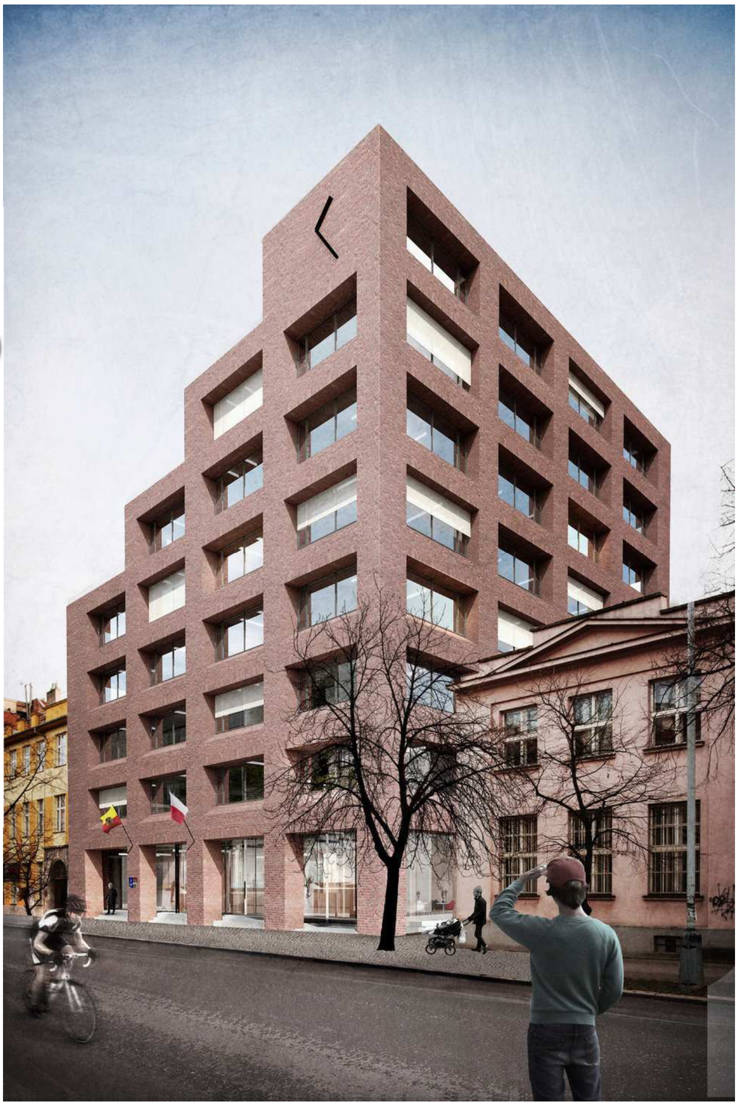
The project documentation for the reconstruction was prepared by the company DELTAPLAN in the following year and the building permit was granted. This all, under the project management of the company CONTRACTIS, is leading to the implementation of project in September 2017.

This diploma thesis originates during the preparation phase and in the first months of its implementation. The main topic of the thesis is the construction technology project and the health and safety plan. These documents are indispensable for successful completion of every construction project. It shows planning and implementation to the schedules and charts of each construction process. This will be described in detail in following chapters.

The aim of this thesis is to create the document, according to which, the wider public community can also look into the problems of preparation and implementation of such as important construction project like this one. The thesis will be completed before the project completion itself, so it can also serve as an instruction or inspiration for the preparation and management teams involved to this construction.

Existing building

New design



CONSTRUCTION TECHNOLOGY PROJECT (CTP)

A construction technology project is being created during a preparatory phase of each construction project. It uses a project documentation and usually a list of measurement (bill of quantities) for performing documents which will serve as a manual for implementation of a construction project. It shows a global look at a construction and construction site and consider every aspect and situation which can happen during an implementation phase.

The CTP divides the construction into time structure, space structure and technological structure. These structures are strongly connected and engineers have to consider each of them, during implementing of the construction project. There are main documents for each structure, which are describing the construction process in every particular detail. Time structure: Construction schedule, Time-space graph, Deployment chart of workers requirements, material and machinery requirements; Space structure: Technological scheme - dividing of the construction to space sections and the construction process to stage processes, Lifting device proposal; Technological structure: List of processes, Technological analysis sheet, Health and safety plan.

Another important part of the CTP in proposal and assessment of construction site. It contains technical report and drawings for different phases of construction. It comments proposal and placement of each element of a construction site and its dimensions such as construction facilities, sanitary facilities, machines, storage areas, fencing, etc..

1 TENDER (PROJECT) DOCUMENTATION

The author of this thesis obtained the tender documentation thanks to the cooperation with a company Contractis s.r.o.. The company represented the investor of the project and provided the entire project management. The project documentation was available at the level of documentation for building permits and documentation for the real implementation of the construction. In this work, the author mentions only the most important drawings and documents, which he used during creating the construction technology project. Individual drawings and documents are attached below.

1.1 List of the submitted documentation

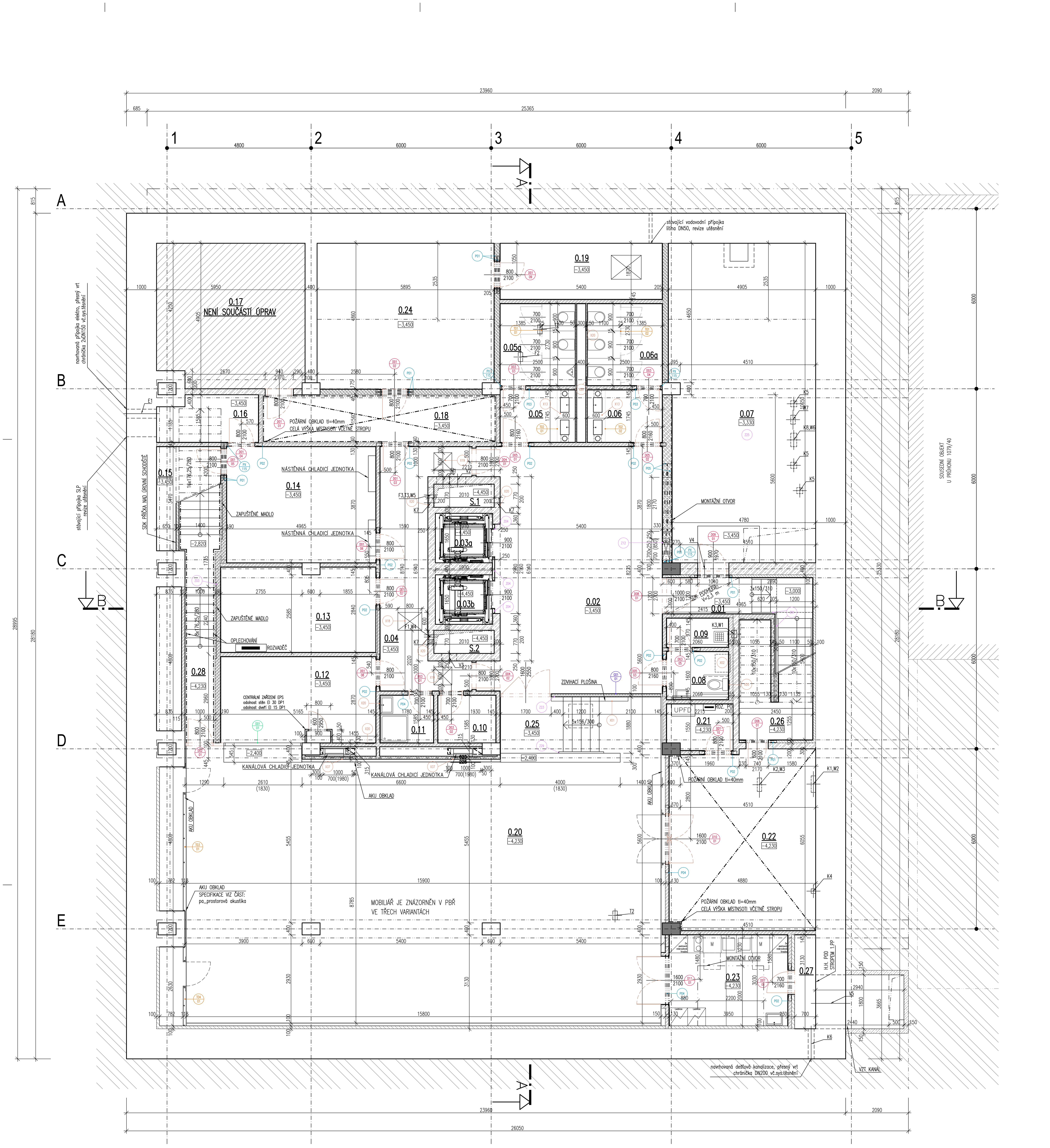
1.1 – Floor plan 1.UG

1.2 – Floor plan GF (Ground floor)

1.3 – Floor plan 3.AG (typical floor)

1.4 – Section A-A´

2.1 – Blind bill of quantities – *not attached, can be available on request in Czech language* (Contains bill of quantities of the main reconstructed building CO110, there is possible to find measurements of architectural-constructioning part and all professions. Then the measurements of building objects CO310 and CO340 are enclosed.)



LEGENDA ZNAČENÍ DRÁŽEK A PROSTUPŮ

A – TECHNOLOGIE
F – CHLAZENÍ
G – PLYN
K – KANALIZACE
T – VYTÁPĚNÍ
V – VZDUCHOTECHNIKA
W – VODOVOD
E – ELEKTRO

LEGENDA ZNAČENÍ VÝROBKŮ

KOx OZN. KLEMPÍŘSKÝCH VÝROBKŮ
OOx/Oy OZN. OKEN
DOx/Oy OZN. DVEŘÍ
ZOx OZN. ZÁMEČNICKÝCH VÝROBKŮ
XOx OZN. OSTATNÍCH VÝROBKŮ
GOx/Oy OZN. PROSKLENÝCH PLOCH
TOx/Oy OZN. TRUHLÁŘSKÝCH VÝROBKŮ
Px OZN. PŘEKLADŮ

VÝPIS DRÁŽEK A PROSTUPŮ

OZN.	DRUH	KS	ROZMĚR_mm (š/h_š/v_š/v/h)	VÝŠKA OD PODLAHY
V1	PROSTUP STĚNOU	1	420/300	s.h.2750
V2	PROSTUP STĚNOU	1	550/500	s.h.2550
V3	PROSTUP STĚNOU	1	500/350	s.h.2700
V4	PROSTUP STĚNOU	1	1620/450	s.h.2400
V5	PROSTUP STĚNOU	1	1800/550	s.h.3190
K1,W2	PROSTUP STROPEM	1	550/150	
K2,W3	PROSTUP STROPEM	1	450/150	
K3,W1	DRÁŽKA VE STĚNĚ	1	250/170	
K4	PROSTUP STROPEM	1	150/150	
K5	PROSTUP STROPEM	4	200/200	
K6	PROSTUP STĚNOU	1	ø200	s.h.2680
K7	PROSTUP STĚNOU	3	300/300	s.h.850
K8,W6	PROSTUP STROPEM	1	200/450	
F1,W4	PROSTUP STĚNOU	1	450/100	s.h.2320
F3,T3,W5	PROSTUP STĚNOU	1	520/100	s.h.2320
W7	PROSTUP STROPEM	1	150/300	
F2	PROSTUP STROPEM	1	300/150	
T1	PROSTUP STĚNOU	1	250/100	s.h.2320
T2	PROSTUP STROPEM	2	300/150	
E1	PROSTUP STĚNOU	1	2xø150	s.h.1800

VÝPIS PŘEKLADŮ

OZNAČENÍ	TYP	DÉLKA	VÝŠKA	KS
P01	CIHLENÝ PŘEKLAD ŠÍŘE 70mm	1250	240	8
P02	CIHLENÝ PLOCHÝ PŘEKLAD ŠÍŘE 115mm	1250	70	11
P03	CIHLENÝ PLOCHÝ PŘEKLAD ŠÍŘE 115mm	1000	70	4
P04	CIHLENÝ PLOCHÝ PŘEKLAD ŠÍŘE 115mm	2250	70	3
P05	CIHLENÝ PLOCHÝ PŘEKLAD ŠÍŘE 145mm	2250	70	2
PX 115	podpůrný L profil 120/120/5mm, dl. 115mm	115		5

ZNAČKA	MATERIÁL
	STÁVAJÍCÍ NOSNÉ KONSTRUKCE
	ŽELEZOBETONOVÉ SLOUPY C25/30 XC1
	KCE ZE ZTRACENÉHO BEDNĚNÍ SE ZÁLIVKOU Z BETONU C25/30 XC1 A VLOŽENOU VÝZTUŽÍ B 500B
	CIHLY BROUŠENÉ KERAMICKÉ tl. 80mm
	CIHLY BROUŠENÉ KERAMICKÉ tl. 115mm
	CIHLY BROUŠENÉ KERAMICKÉ tl. 140mm
	CIHLY BROUŠENÉ KERAMICKÉ tl. 175mm
	CIHLY BROUŠENÉ KERAMICKÉ tl. 300mm AKUSTICKÉ
	KONSTRUKCE Z SDK tl. 50, 100, 150, 200mm (dvojité opláštění, CW 50)
	PROSKLENÁ SYSTÉMOVÁ PŘÍČKA tl. 100mm SE ZVÝŠENOU NEPRŮZVUČNOSTÍ (R'w=45dB)
	TEPELNĚ IZOLAČNÍ MINERÁLNÍ DESKY tl. 100 mm

TABULKA MÍSTNOSTÍ

MÍSTNOST		ROZMĚRY			PODLAHA		STĚNY	STROP	
ČÍSLO	NÁZEV	PLOCHA [m2]	SV [m]	OBJEM [m3]	SKLADBA	NÁŠLAPNÁ VRSTVA	POVRCH	SKLADBA	POVRCH
0.01	SCHODIŠTĚ	5,83	2,30	13,41	S 14a,b	BETON	CEMENTOVÁ STĚRKA	S 56	POHLEDOVÝ BETON/SDK
0.02	FOYER	46,06	2,55	117,45	S 02	DŘEVO	SKLO/CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
0.03a	VÝTAHOVÁ ŠACHTA	3,15			S 13	EPOXIDOVÁ STĚRKA			
0.03b	VÝTAHOVÁ ŠACHTA	3,15			S 13	EPOXIDOVÁ STĚRKA			
0.04	CHODBA	15,87	3,03	48,09	S 01	PUR STĚRKA	OMÍTKA	S 52	PROTIPOŽÁRNÍ OBKLAD, ČERNÝ NÁTĚR
0.05	HYGIENICKÉ ZÁZEMÍ MUŽI	4,36	2,30	10,03	S 01	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
0.05a	HYGIENICKÉ ZÁZEMÍ MUŽI	6,82	2,30	15,69	S 01	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
0.06	HYGIENICKÉ ZÁZEMÍ ŽENY	4,36	2,30	10,03	S 01	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
0.06a	HYGIENICKÉ ZÁZEMÍ ŽENY	6,82	2,30	15,69	S 01	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
0.07	STROJOVNA VZT	51,38	2,91	149,52	S 07	POROROŠT	OMÍTKA	S 51, S 52	PROTIPOŽÁRNÍ OBKLAD, ČERNÝ NÁTĚR/TI OMÍTKA
0.08	WC KABINA PRO OOSPO	3,32	2,40	7,97	S 01	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
0.09	ÚKLIDOVÁ KOMORA	1,99	2,40	4,78	S 01	PUR STĚRKA	OMYVATELNÝ NÁTĚR	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
0.10	ŠATNA	3,05	2,40	7,32	S 01	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
0.11	SPRCHA	2,82	2,40	6,77	S 01	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED - PROTIKOROZNÍ NÁTĚR
0.12	VIZUALIZACE TECHNOLOGIÍ, IT OBSLUHA SÁLU	14,82	3,03	44,90	S 01	PUR STĚRKA	OMÍTKA	S 52	PROTIPOŽÁRNÍ OBKLAD, ČERNÝ NÁTĚR
0.13	ROZVODNA NN	14,52	3,03	44,00	S 03a	EPOXIDOVÝ NÁTĚR (+gumový koberec)	OMÍTKA	S 52	PROTIPOŽÁRNÍ OBKLAD, ČERNÝ NÁTĚR
0.14	ROZVODNA IT	19,21	3,03	58,21	S 03a	EPOXIDOVÝ NÁTĚR	OMÍTKA	S 52	PROTIPOŽÁRNÍ OBKLAD, ČERNÝ NÁTĚR
0.15	ROZVODNA SLP ZABEZPEČENÍ	8,66		0,00	S 03a	EPOXIDOVÝ NÁTĚR	OMÍTKA	S 52	PROTIPOŽÁRNÍ OBKLAD, ČERNÝ NÁTĚR
0.16	OPERÁTOR	5,00	3,03	15,15	S 03a	EPOXIDOVÝ NÁTĚR	OMÍTKA	S 52	PROTIPOŽÁRNÍ OBKLAD, ČERNÝ NÁTĚR
0.17	VÝMĚNÍKOVÁ STANICE	23,41							
0.18	SKLAD	12,30	3,01	37,02	S 03b	EPOXIDOVÝ NÁTĚR	OMÍTKA	S 53	PROTIPOŽÁRNÍ OBKLAD, ČERNÝ NÁTĚR
0.19	TECHNICKÁ MÍSTNOST VaK	10,09	2,94	29,66	S 03b	EPOXIDOVÝ NÁTĚR	OMÍTKA	S 51, S 52	PROTIPOŽÁRNÍ OBKLAD, ČERNÝ NÁTĚR/TI OMÍTKA
0.20	ZASTUPITELSKÝ SÁL	147,86	3,64	538,21	S 05	DŘEVO	DŘEVO/OMÍTKA/ AKUSTICKÝ OBKLAD	S 54, S 55	PNUTÁ STROPNÍ FÓLIE/DŘEVO
0.21	NÁHRADNÍ ZDROJ	3,31	3,81	12,61	S 04	PUR STĚRKA	OMÍTKA	S 53	PROTIPOŽÁRNÍ OBKLAD, ČERNÝ NÁTĚR
0.22	SKLAD NÁBYTKU	28,90	3,79	109,53	S 04	PUR STĚRKA	OMÍTKA	S 53	PROTIPOŽÁRNÍ OBKLAD, ČERNÝ NÁTĚR
0.23	KUCHYŇKA	11,92	3,64	43,39	S 04	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
0.24	VZT/CHLAZENÍ	28,46	2,94	83,67	S 03b	EPOXIDOVÝ NÁTĚR	OMÍTKA	S 51, S 52	PROTIPOŽÁRNÍ OBKLAD, ČERNÝ NÁTĚR/TI OMÍTKA
0.25	SCHODIŠTĚ	10,15	2,55	25,88	S 02, S 05	DŘEVO	OMÍTKA	S 60	MDF PODHLED
0.26	TECHNICKÝ PROSTOR	9,13	3,81	34,79	S 06	BETON	OMÍTKA		POHLEDOVÝ BETON
0.27	PŘÍRUČNÍ SKLAD	2,19	3,74	8,19	S 06	BETON	OMÍTKA	S 52	PROTIPOŽÁRNÍ OBKLAD, ČERNÝ NÁTĚR
0.28	SCHODIŠTĚ	5,20			S 06	BETON	POHLEDOVÝ PLECH		POHLEDOVÝ BETON
S.1	INSTALAČNÍ ŠACHTA	1,54			S 13	EPOXIDOVÁ STĚRKA			
S.2	INSTALAČNÍ ŠACHTA	1,54			S 13	EPOXIDOVÁ STĚRKA			
	CELKOVÁ PLOCHA	517,19							

HYDROIZOLACE

Řešení hydroizolací spodní stavby podle návrhu AWAL bude upřesněno při realizaci po odtěžení zásypu a konstrukcí nad základovou vanou.

POZNÁMKY

1) Nedílnou součástí výkresové dokumentace jsou technické zprávy. Součásti dodávky jsou i jednotlivé výrobky nebo části díla, které nejsou z výkresové dokumentace zcela zřejmé, nebo nejsou na výkresech uvedeny, ale jsou popsány v technické zprávě, nebo je jejich nezbytnost z celkového kontextu zcela zřejmá.

2) Interiér je řešen v samostatné příloze A2 SO 110 a je nadřazen tomuto výkresu.

3) Přesné umístění koncových prvků na stropech, stěnách a podlahách bude provedeno podle výkresů půdorysů, podhledů a pohledů na vybrané stěny obsažených v částech A1 a A2 SO 110. Výkresy A2 jsou nadřazeny výkresům A1. Poté následují dílčí části technického řešení bez rozdílu významnosti (ZTI, VZT, ...) vyjma SKŘ. Pokud dojde k tvarovému rozporu mezi částí ASŘ a SKŘ, je nezbytné informovat architekta – autora návrhu, který písemně odsouhlasí řešení.

4) Pokud dojde k rozporům v dokumentaci v části A, platí následující princip:
Výkresy detailů mají přednost, před výkresy celků. Tvarové řešení viditelných částí v části A2 má přednost před částí A1. Technické řešení výkresů detailů (návaznosti skladeb apod.) má přednost před řešením v části A2.

5) Dílenská (výrobní) dokumentace je součástí dodávky dodavatele a jde k tíži dodavatele. Tuto dílenskou (výrobní dokumentaci) je povinen dodavatel předložit GP a investorovi k odsouhlasení.

6) Detaily ve stavební části upřesňují principy řešení z návrhu řešení izolací, část A4 Izolace (zpracovatel AWAL) pro konkrétní situaci. V místech, pro které nejsou stavební detaily zpracovány, je zhotovitel povinen se řídit principy z části A4 Izolace (zpracovatel AWAL) a případné nejasnosti nebo úpravy vzniklé při zpracování realizační dokumentace projednat s GP.

7) Zhotovitel je povinen provést dilatace jednotlivých celků dle technologických předpisů dodavatelů jednotlivých materiálů. Předmětem dodávky jsou rovněž všechny dilatační, přechodové a ukončující lišty. Konkrétní typ přechodových lišt schválí architekt.

8) Přesné specifikace úprav povrchů, zařizovacích předmětů, doplňků a estetického ztvárnění, pokud nejsou vyspecifikovány v části interiér, určí architekt během autorského dozoru. Architekt, projektant a investor budou požadovat před zahájením dodávky odsouhlasit dílenskou dokumentaci dodavatele včetně veškerých fyzických vzorků použitých materiálů a barev.

9) Předmětem dodávky fasády je výrobní dokumentace, která bude brát zvláštní zřetel na počty a umístění kotev, na rozmístění větracích otvorů a na případnou úpravu detailů ve vztahu na dodávku keramických výrobků. Jedná se o certifikovaný systém.

10) Spojovací, vyrovnávací, kotvící a pomocné montážní konstrukce, včetně montáže, jsou součástí dodávky. Před zadáním do výroby si dodavatel stavby ověří rozměry otvorů na místě vč. připojovacích bodů a stavební připravenosti navazujících profesí. Součástí dodávky je detailní realizační a dílenská dokumentace, která bude před zadáním do výroby předložena projektantovi a autorovi architektonického návrhu k písemnému odsouhlasení. Dodavatel předloží fyzické vzorky a prototypy všech použitých materiálů, povrchových úprav a ostatních dodávek, které musí být písemně schváleny autorem architektonického návrhu. Součástí dodávky jsou veškeré ochranné a vykrývací prostředky a opatření potřebné k provedení funkční dodávky a ochraně povrchů a dokončených konstrukcí. Ostatní požadavky na výrobky, dodávku a montáž – viz specifikace ve výkazech výměr. Požární odolnost dle PBŘ.

11) Jednotlivé výrobky jsou uvedeny v tabulkách výrobků.

12) Protiskluznost podlah: požadavky na protiskluznost všech podlah v objektu dle vyhl. 268/2009 Sb., ČSN 73 4130.

13) Světlá výška místnosti v tabulce místností je vzdálenost od čisté podlahy po spodní hranu podhledu. Objem místnosti je počítán rovněž po podhledovou konstrukci.

14) Požární utěsnění prostupů je součástí projektové dokumentace jednotlivých profesí a řídí se principem uvedeným v části PBŘ.

15) Výkres pororoštů včetně podkladní konstrukce bude vypracován v rámci výrobní dokumentace.

16)Základy pod technologickými zařízeními nejsou součástí této dokumentace a budou řešeny na základě výrobní dokumentace dodané technologie.

17) Součástí dodávky zhotovitele je koordinace všech rozvodů a instalací ve 3D modelu, která bude podkladem pro výrobní dokumentaci každé profese.

STAVBA:
NOVÁ RADNICE PRO PRAHU 7
U Průhonu 1338/38, Praha 7 - 170 00

±0,000=189,05 m n.m. B.p.v., JTSK
AUTORIZAČNÍ RAZÍTKO:

STAVEBNÍK: MĚSTSKÁ ČÁST PRAHA 7
nábřeží kapitána Jaroše 1000/7, Praha 7 - 170 00

AUTOR NÁVRHU: ATELIER BOD ARCHITEKTI s.r.o.
Osadní 799/26, Praha 7 - 170 00
Ing.arch.Vojtěch Sosna, Ing.arch.Jáchym Svoboda, Ing.arch.Jakub Straka

PROJEKTANT A KOORDINACE: DELTAPLAN spol. s r.o.
Jankovcova 53, Praha 7 - 170 00

ZPRACOVATEL ČÁSTI: APS PROJEKT PRAHA s r.o.
Mezilesní 10516/16, Praha 4 - 142 00

HLAVNÍ PROJEKTANT: ING. ARCH. LUDĚK PŘENOSIL

ODPOVĚDNÝ PROJEKTANT ČÁSTI: ING. PETR DRAŽAN

VYPRACOVAL: ING. VERONIKA KLIMEŠOVÁ

STUPEŇ: DOKUMENTACE PRO PROVEDENÍ STAVBY

STAVEBNÍ OBJEKT: SO 110

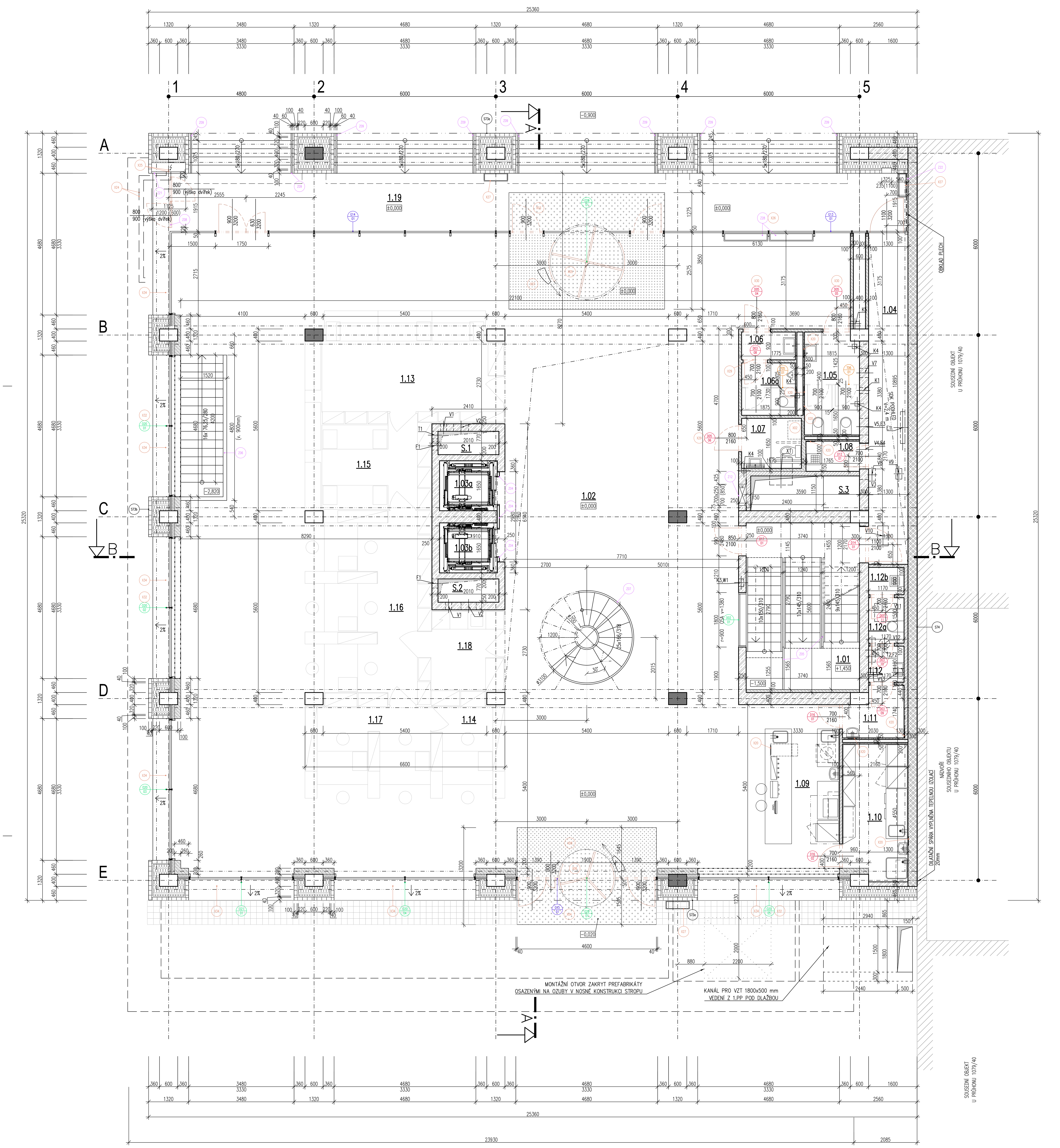
PROFESE: ARCHITEKTONICKO STAVEBNÍ ŘEŠENÍ

NÁZEV VÝKRESU: PŮDORYS 1.PP

DATUM: 03/2017
MEŘÍTKO: 1:50

REVIZE: 00
ČÍSLO PARÉ:

PROJEKT	FÁZE	ČÍSLO OBJEKTU	ČÁST	ČÍSLO VÝKRESU
NRP	3	110	A1	02



LEGENDA ZNAČENÍ VÝROBKŮ

- KOx OZN. KLEMPÍŘSKÝCH VÝROBKŮ
- OOx/Oy OZN. OKEN
- DOx/Oy OZN. DVEŘÍ
- ZOx OZN. ZÁMEČNICKÝCH VÝROBKŮ
- XOx OZN. OSTATNÍCH VÝROBKŮ
- GOx/Oy OZN. PROSKLENÝCH PLOCH
- TOx/Oy OZN. TRUHLÁŘSKÝCH VÝROBKŮ

VÝPIS DRÁŽEK A PROSTUPŮ

OZN.	DRUH	KS	ROZMĚR_mm (š/h_š/v_š/v/h)	VÝŠKA OD PODLAHY
V1	PROSTUP STĚNOU	2	200/200	s.h.3600
V2	PROSTUP STĚNOU	2	500/200	s.h.3600
V3	PROSTUP STĚNOU	1	1000/460	s.h.2780
V4,E4	PROSTUP STĚNOU	1	460/500	s.h.2780
V5,E3	PROSTUP STĚNOU	1	550/650	s.h.2970
V8	PROSTUP STROPEM	1	420/230	
V9	PROSTUP STROPEM	1	350/200	
V10	PROSTUP STROPEM	1	660/350	
V11	PROSTUP STROPEM	1	730/600	
V12	PROSTUP STROPEM	1	ø350	
V13	PROSTUP STROPEM	2	300250	
K1	PROSTUP STĚNOU	1	200/200	s.h.3400
K3,W1	DRÁŽKA VE STĚNĚ	1	250/170	
K4	PROSTUP STROPEM	4	150/150	
K5	PROSTUP STROPEM	1	300/150	
F1	PROSTUP STĚNOU	2	300/100	s.h.3700
T1	PROSTUP STĚNOU	1	250/100	s.h.–150
T2,F2	PROSTUP STROPEM	1	800/220	
E1	PROSTUP STROPEM	1	1050/150	
X1	PROSTUP STROPEM	1	750/900	

LEGENDA ZNAČENÍ DRÁŽEK A PROSTUPŮ

K3

A –TECHNOLOGIE	T –VYTÁPĚNÍ
F –CHLAZENÍ	V –VZDUCHOTECHNIKA
G –PLYN	W –VODOVOD
K –KANALIZACE	E –ELEKTRO

ZNAČKA	MATERIÁL
	STÁVAJÍCÍ NOSNÉ KONSTRUKCE
	ŽELEZOBETONOVÉ SLOUPY C25/30 XC1
	KCE ZE ZTRACENÉHO BEDNĚNÍ SE ZÁLIVKOU Z BETONU C25/30 XC1 A VLOŽENOU VÝZTUŽÍ B 500B
	CIHLY BROUŠENÉ KERAMICKÉ tl. 140mm
	CIHLY BROUŠENÉ KERAMICKÉ tl. 300mm
	KONSTRUKCE Z SDK tl. 50, 100, 150, 200mm (dvojité opláštění, CW 50)
	TEPELNÁ IZOLACE (minerál)
	LÍCOVÉ FASÁDNÍ CIHLY

TABULKA MÍSTNOSTÍ

MÍSTNOST		ROZMĚRY			PODLAHA		STĚNY	STROP	
ČÍSLO	NÁZEV	PLOCHA [m2]	SV [m]	OBJEM [m3]	SKLADBA	NÁŠLAPNÁ VRSTVA	POVRCH	SKLADBA	POVRCH
1.01	SCHODIŠTĚ	20,62			S 14a,b	PUR STĚRKA/BETON	CEMENTOVÁ STĚRKA		POHLEDOVÝ BETON
1.02	VSTUPNÍ DVORANA	298,23	3,50	1043,81	S09	BROUŠENÝ BETON	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.03a	VÝTAHOVÁ ŠACHTA	3,15							
1.03b	VÝTAHOVÁ ŠACHTA	3,15							
1.04	ÚNIKOVÝ KORIDOR	14,23	2,40	34,15	S11	BROUŠENÝ BETON	OMÍTKA	S 56	SDK (protipožární podhled)
1.05	HYGIENICKÉ ZÁZEMÍ ŽENY	6,16	2,40	14,78	S10	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.06	HYGIENICKÉ ZÁZEMÍ MUŽI	1,70	2,40	4,08	S10	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.06a	HYGIENICKÉ ZÁZEMÍ MUŽI	3,24	2,40	7,78	S10	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.07	WC KABINA PRO OOSPO	3,33	2,40	7,99	S10	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.08	ÚKLIDOVÁ KOMORA	1,93	2,40	4,63	S10	PUR STĚRKA	OMYVATELNÝ NÁTĚR	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.09	KAVÁRNA-BAR	13,75	3,50	48,13	S09	BROUŠENÝ BETON	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.10	KAVÁRNA-PŘÍPRAVNA	9,51	2,40	22,82	S11	PUR STĚRKA	OMYVATELNÝ NÁTĚR	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.11	ŠATNA KAVÁRNA	3,05	2,40	7,32	S11	PUR STĚRKA	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.12	HYGIENICKÉ ZÁZEMÍ KAVÁRNY	1,46	2,40	3,50	S11	PUR STĚRKA	OMYVATELNÝ NÁTĚR	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.12a	HYGIENICKÉ ZÁZEMÍ KAVÁRNY	1,83	2,40	4,39	S11	PUR STĚRKA	OMYVATELNÝ NÁTĚR	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.12b	HYGIENICKÉ ZÁZEMÍ KAVÁRNY	1,12	2,40	2,69	S11	PUR STĚRKA	OMYVATELNÝ NÁTĚR	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.13	PODATELNA, RECEPCE	17,94	3,50	62,79	S09	BROUŠENÝ BETON	PŘEKLIŽKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.14	POKLADNA	6,29	3,50	22,02	S09	BROUŠENÝ BETON	PŘEKLIŽKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.15	PRACOVIŠTĚ PODATELNY	10,49	3,50	36,72	S09	BROUŠENÝ BETON	PŘEKLIŽKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.16	PŘEPÁŽKOVÉ PRACOVIŠTĚ	23,99	3,50	83,97	S09	BROUŠENÝ BETON	PŘEKLIŽKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.17	PŘEPÁŽKOVÉ PRACOVIŠTĚ	11,19	3,50	39,17	S09	BROUŠENÝ BETON	PŘEKLIŽKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.18	DENNÍ MÍSTNOST	7,38	3,50	25,83	S09	BROUŠENÝ BETON	PŘEKLIŽKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
1.19	ZÁVĚTŘÍ	46,60	3,33	155,18	S08	BROUŠENÝ BETON	PLECH, LÍCOVÉ FAS. CIHLY	S 57	POHLEDOVÝ PLECH
S.1	INSTALAČNÍ ŠACHTA	1,54							
S.2	INSTALAČNÍ ŠACHTA	1,54							
S.3	INSTALAČNÍ ŠACHTA	4,13							
	CELKOVÁ PLOCHA	517,55							

POZNÁMKY

1) Nedílnou součástí výkresové dokumentace jsou technické zprávy. Součásti dodávky jsou i jednotlivé výrobky nebo části díla, které nejsou z výkresové dokumentace zcela zřejmé, nebo nejsou na výkresech uvedeny, ale jsou popsány v technické zprávě, nebo je jejich nezbytnost z celkového kontextu zcela zřejmá.

2) Interiér je řešen v samostatné příloze A2 SO 110 a je nadřazen tomuto výkresu.

3) Přesné umístění koncových prvků na stropech, stěnách a podlahách bude provedeno podle výkresů půdorysů, podhledů a pohledů na vybrané stěny obsažených v částech A1 a A2 SO 110. Výkresy A2 jsou nadřazeny výkresům A1. Poté následují dílčí části technického řešení bez rozdílu významnosti (ZTI, VZT, ...) vyjma SKŘ. Pokud dojde k tvarovému rozporu mezi částí ASŘ a SKŘ, je nezbytné informovat architekta – autora návrhu, který písemně odsouhlasí řešení.

4) Pokud dojde k rozporům v dokumentaci v části A, platí následující princip:
Výkresy detailů mají přednost, před výkresy celků. Tvarové řešení viditelných částí v části A2 má přednost před částí A1. Technické řešení výkresů detailů (návaznosti skladeb apod.) má přednost před řešením v části A2.

5) Dílenská (výrobní) dokumentace je součástí dodávky dodavatele a jde k tíži dodavatele. Tuto dílenskou (výrobní dokumentaci) je povinen dodavatel předložit GP a investorovi k odsouhlasení.

6) Detaily ve stavební části upřesňují principy řešení z návrhu řešení izolací, část A4 Izolace (zpracovatel AWAL) pro konkrétní situaci. V místech, pro které nejsou stavební detaily zpracovány, je zhotovitel povinen se řídit principy z části A4 Izolace (zpracovatel AWAL) a případné nejasnosti nebo úpravy vzniklé při zpracování realizační dokumentace projednat s GP.

7) Zhotovitel je povinen provést dilatace jednotlivých celků dle technologických předpisů dodavatelů jednotlivých materiálů. Předmětem dodávky jsou rovněž všechny dilatační, přechodové a ukončující lišty. Konkrétní typ přechodových lišt schválí architekt.

8) Přesné specifikace úprav povrchů, zařizovacích předmětů, doplňků a estetického ztvárnění, pokud nejsou vyspecifikovány v části interiér, určí architekt během autorského dozoru. Architekt, projektant a investor budou požadovat před zahájením dodávky odsouhlasit dílenskou dokumentaci dodavatele včetně veškerých fyzických vzorků použitých materiálů a barev.

9) Předmětem dodávky fasády je výrobní dokumentace, která bude brát zvláštní zřetel na počty a umístění kotev, na rozmístění větracích otvorů a na případnou úpravu detailů ve vztahu na dodávku keramických výrobků. Jedná se o certifikovaný systém.

10) Spojovací, vyrovnávací, kotvící a pomocné montážní konstrukce, včetně montáže, jsou součástí dodávky. Před zadáním do výroby si dodavatel stavby ověří rozměry otvorů na místě vč. připojovacích bodů a stavební připravenosti navazujících profesí. Součástí dodávky je detailní realizační a dílenská dokumentace, která bude před zadáním do výroby předložena projektantovi a autorovi architektonického návrhu k písemnému odsouhlasení. Dodavatel předloží fyzické vzorky a prototypy všech použitých materiálů, povrchových úprav a ostatních dodávek, které musí být písemně schváleny autorem architektonického návrhu. Součástí dodávky jsou veškeré ochranné a vykrývací prostředky a opatření potřebné k provedení funkční dodávky a ochraně povrchů a dokončených konstrukcí. Ostatní požadavky na výrobky, dodávku a montáž – viz specifikace ve výkazech výměr. Požární odolnost dle PBŘ.

11) Jednotlivé výrobky jsou uvedeny v tabulkách výrobků.

12) Protiskluznost podlah: požadavky na protiskluznost všech podlah v objektu dle vyhl. 268/2009 Sb., ČSN 73 4130.

13) Světlá výška místnosti v tabulce místností je vzdálenost od čisté podlahy po spodní hranu podhledu. Objem místnosti je počítán rovněž po podhledovou konstrukci.

14) Požární utěsnění prostupů je součástí projektové dokumentace jednotlivých profesí a řídí se principem uvedeným v části PBŘ.

15) Výkres pororoštů včetně podkladní konstrukce bude vypracován v rámci výrobní dokumentace.

16) Součástí dodávky zhotovitele je koordinace všech rozvodů a instalací ve 3D modelu, která bude podkladem pro výrobní dokumentaci každé profese.

STAVBA:

NOVÁ RADNICE PRO PRAHU 7

U Průhonu 1338/38, Praha 7 - 170 00

±0,000=189,05 m n.m. B.p.v., JTSK

AUTORIZAČNÍ RAZÍTKO:

STAVEBNÍK: MĚSTSKÁ ČÁST PRAHA 7
nábřeží kapitána Jaroše 1000/7, Praha 7 - 170 00

AUTOR NÁVRHU: ATELIER BOD ARCHITEKTI s.r.o.
Osadní 799/26, Praha 7 - 170 00
Ing.arch.Vojtěch Sosna, Ing.arch.Jáchym Svoboda, Ing.arch.Jakub Straka

PROJEKTANT A KOORDINACE: DELTAPLAN spol. s r.o.
Jankovcova 53, Praha 7 - 170 00

ZPRACOVATEL ČÁSTI: APS PROJEKT PRAHA s r.o.
Mezilesní 10516/16, Praha 4 - 142 00

HLAVNÍ PROJEKTANT: ING. ARCH. LUDĚK PŘENOSIL

ODPOVĚDNÝ PROJEKTANT ČÁSTI: ING. PETR DRAŽAN

VYPRACOVAL: ING. VERONIKA KLIMEŠOVÁ, ING. ARCH. PAVEL DRAŽAN

STUPEŇ: DOKUMENTACE PRO PROVEDENÍ STAVBY

STAVEBNÍ OBJEKT: SO 110

PROFESE: ARCHITEKTONICKO STAVEBNÍ ŘEŠENÍ

NÁZEV VÝKRESU: PŮDORYS 1.NP

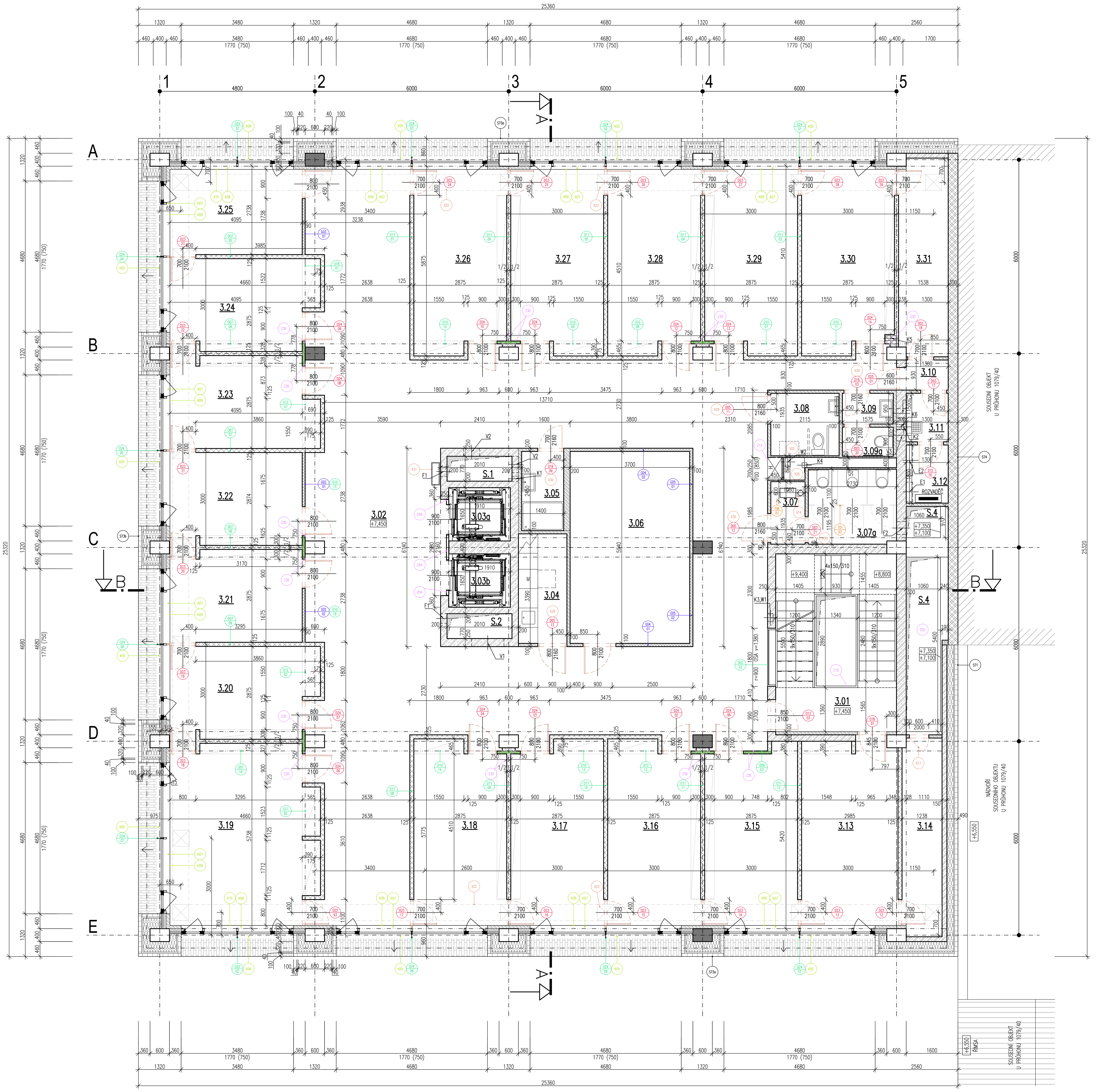
DATUM: 03/2017

MEŘÍTKO: 1:50

REVIZE: 00

ČÍSLO PARÉ:

NRP	3	110	A1	04
PROJEKT	FÁZE	ČÍSLO OBJEKTU	ČÁST	ČÍSLO VÝKRESU



VÝPIS DRÁŽEK A PROSTUPŮ

OZN.	DRUH	KS	ROZMĚR_mm (š/h_š/v_š/vh)	VÝŠKA OD PODLAHY
V1	PROSTUP STĚNOU	1	1000/200	s.h.2750
V2	PROSTUP STĚNOU	2	500/200	s.h.2750
V3	PROSTUP STĚNOU	1	350/200	s.h.2550
K1	PROSTUP STĚNOU	1	150/150	s.h.-100
K2	DRÁŽKA VE STĚNĚ	1	150/150	
K3,W1	DRÁŽKA VE STĚNĚ	1	250/170	
K4	PROSTUP STROPEM	1	150/150	
K5	PROSTUP STROPEM	1	350/150	
K6	PROSTUP STĚNOU	1	150/150	s.h.150
W2	PROSTUP STROPEM	1	300/150	
F1	PROSTUP STĚNOU	2	300/100	s.h.2800
F2	PROSTUP STĚNOU	1	400/100	s.h.2500
F3	PROSTUP STĚNOU	1	300/100	s.h.2500
E1	PROSTUP STROPEM	1	600/200	
E2	PROSTUP STROPEM	1	950/200	

LEGENDA ZNAČENÍ DRÁŽEK A PROSTUPŮ

- A – TECHNOLOGIE
- F – CHLAZENÍ
- G – PLYN
- K – KANALIZACE
- T – VYTÁPĚNÍ
- V – VZDUCHOTECHNIKA
- W – VODOVOD
- E – ELEKTRO

LEGENDA ZNAČENÍ VÝROBKŮ

- OZN. KLEMPÍŘSKÝCH VÝROBKŮ
- OZN. OKEN
- OZN. DVEŘÍ
- OZN. ZÁMEČNICKÝCH VÝROBKŮ
- OZN. OSTATNÍCH VÝROBKŮ
- OZN. PROSKLENÝCH PLOCH
- OZN. TRUHLÁŘSKÝCH VÝROBKŮ

ZNAČKA	MATERIÁL
	STÁVAJÍCÍ NOSNÉ KONSTRUKCE
	ŽELEZOBETONOVÉ SLOUPY C25/30 XC1
	KCE ZE ZTRACENÉHO BEDNĚNÍ ZE ZÁLIVKOU Z BETONU C25/30 XC1 A VLOŽENOU VÝZTUŽÍ B 500B
	CIHLY BROUŠENÉ KERAMICKÉ tl. 300mm
	KONSTRUKCE Z SDK tl. 50, 100, 150, 200mm (dvojité opláštění, CW 50)
	KONSTRUKCE Z SDK tl. 125 mm (dvojité opláštění, CW 75, R'w=45dB)
	KONSTRUKCE Z SDK tl. 90 mm (R'w=45dB) (2xSDK 12,5mm + CW 50 + 1xSDK AKU 15mm)
	PROSKLENÁ SYSTÉMOVÁ PŘÍČKA tl. 90 a 100mm SE ZVÝŠENOU NEPRŮZVUČNOSTÍ (R'w=45dB)
	TEPELNÁ IZOLACE (minerál)
	LÍCOVÉ FASÁDNÍ CIHLY

TABULKA MÍSTNOSTÍ

MÍSTNOST		ROZMĚRY			PODLAHA		STĚNY	STROP	
ČÍSLO	NÁZEV	PLOCHA [m2]	SV [m]	OBJEM [m3]	SKLADBA	NÁŠLAPNÁ VRSTVA	POVRCH	SKLADBA	POVRCH
3.01	SCHODIŠTĚ	20,57			S 14a,b	PUR STĚRKA/BETON	CEMENTOVÁ STĚRKA		POHLEDOVÝ BETON
3.02	CHODBA/ČEKACÍ PROSTOR	158,54	2,70	428,06	S 17	PUR STĚRKA	SKLO/SDK/CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.03a	VÝTAHOVÁ ŠACHTA	3,15							
3.03b	VÝTAHOVÁ ŠACHTA	3,15							
3.04	KUCHYŇKA	5,09	2,70	13,74	S 17	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.05	SPRCHA	3,19	2,40	7,66	S 17	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED - PROTIKOROZNÍ NÁTĚR
3.06	ZASEDACÍ MÍSTNOST	21,97	2,70	59,32	S 17	PUR STĚRKA	SKLO/CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.07	HYG. ZÁZEMÍ ŽENY	2,05	2,40	4,92	S 17	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.07a	HYG. ZÁZEMÍ ŽENY	6,30	2,40	15,12	S 17	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.08	HYG. ZÁZEMÍ OOSPO	4,11	2,40	9,86	S 17	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.09	HYG. ZÁZEMÍ MUŽI	1,50	2,40	3,60	S 17	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.09a	HYG. ZÁZEMÍ MUŽI	1,42	2,40	3,41	S 17	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.10	PŘEDSÍŇ	1,35	2,70	3,65	S 17	PUR STĚRKA	CEMENTOVÁ STĚRKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.11	ÚKLIDOVÁ KOMORA	1,95	2,40	4,68	S 17	PUR STĚRKA	OMYVATELNÝ NÁTĚR	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.12	ELEKTROROZVODNA	2,34	2,70	6,32	S 17	PUR STĚRKA	SDK/OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.13	KANCELÁŘ	17,09	2,70	46,14	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.14	ARCHIV	7,53	2,70	20,33	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.15	KANCELÁŘ	15,62	2,70	42,17	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.16	KANCELÁŘ	16,01	2,70	43,23	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.17	KANCELÁŘ	16,01	2,70	43,23	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.18	KANCELÁŘ	16,01	2,70	43,23	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.19	KANCELÁŘ	24,57	2,70	66,34	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.20	KANCELÁŘ	12,88	2,70	34,78	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.21	DĚTSKÝ KOUTEK	11,40	2,70	30,78	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.22	HOVORNA	11,95	2,70	32,27	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.23	KANCELÁŘ	12,88	2,70	34,78	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.24	KANCELÁŘ	12,33	2,70	33,29	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.25	HOVORNA	10,70	2,70	28,89	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.26	KANCELÁŘ	16,13	2,70	43,55	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.27	KANCELÁŘ	16,13	2,70	43,55	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.28	KANCELÁŘ	16,13	2,70	43,55	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.29	KANCELÁŘ	16,16	2,70	43,63	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.30	KANCELÁŘ	16,08	2,70	43,42	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
3.31	ARCHIV	9,30	2,70	25,11	S 16	DŘEVO	OMÍTKA	S 58	HLINÍKOVÝ MŘÍŽKOVÝ PODHLED
S.1	INSTALAČNÍ ŠACHTA	1,54							
S.2	INSTALAČNÍ ŠACHTA	1,54							
S.4	INSTALAČNÍ ŠACHTA	7,39							
	CELKOVÁ PLOCHA	522,06							

POZNÁMKY

1) Nedílnou součástí výkresové dokumentace jsou technické zprávy. Součástí dodávky jsou i jednotlivé výrobky nebo části díla, které nejsou z výkresové dokumentace zcela zřejmé, nebo nejsou na výkresech uvedeny, ale jsou popsány v technické zprávě, nebo je jejich nezbytnost z celkového kontextu zcela zřejmá.

2) Interiér je řešen v samostatné příloze A2 SO 110 a je nadřazen tomuto výkresu.

3) Přesné umístění koncových prvků na stropech, stěnách a podlahách bude provedeno podle výkresů půdorysů, podhledů a pohledů na vybrané stěny obsažených v částech A1 a A2 SO 110. Výkresy A2 jsou nadřazeny výkresům A1. Poté následují dílčí části technického řešení bez rozdílu významnosti (ZTI, VZT, ...) vyjma SKŘ. Pokud dojde k tvarovému rozporu mezi částí ASŘ a SKŘ, je nezbytné informovat architekta – autora návrhu, který případně odsouhlasí řešení.

4) Pokud dojde k rozporům v dokumentaci v části A, platí následující princip:
Výkresy detailů mají přednost, před výkresy celků. Tvarové řešení viditelných částí v části A2 má přednost před částí A1. Technické řešení výkresů detailů (návaznosti skladeb apod.) má přednost před řešením v části A2.

5) Dílenská (výrobní) dokumentace je součástí dodávky dodavatele a jde k tíži dodavatele. Tuto dílenskou (výrobní dokumentaci) je povinen dodavatel předložit GP a investorovi k odsouhlasení.

6) Detaily ve stavební části upřesňují principy řešení z návrhu řešení izolací, část A4 Izolace (zpracovatel AWAL) pro konkrétní situaci. V místech, pro které nejsou stavební detaily zpracovány, je zhotovitel povinen se řídit principy z části A4 Izolace (zpracovatel AWAL) a případné nejasnosti nebo úpravy vzniklé při zpracování realizační dokumentace projednat s GP.

7) Zhotovitel je povinen provést dilatace jednotlivých celků dle technologických předpisů dodavatelů jednotlivých materiálů. Předmětem dodávky jsou rovněž všechny dilatační, přechodové a ukončující lišty. Konkrétní typ přechodových lišt schválí architekt.

8) Přesné specifikace úprav povrchů, zařizovacích předmětů, doplňků a estetického ztvárnění, pokud nejsou vyspecifikovány v části interiér, určí architekt během autorského dozoru. Architekt, projektant a investor budou požadovat před zahájením dodávky odsouhlasit dílenskou dokumentaci dodavatele včetně veškerých fyzických vzorků použitých materiálů a barev.

9) Předmětem dodávky fasády je výrobní dokumentace, která bude brát zvláštní zřetel na počty a umístění kotev, na rozmístění větracích otvorů a na případnou úpravu detailů ve vztahu na dodávku keramických výrobků. Jedná se o certifikovaný systém.

10) Spojovací, vyrovnávací, kotvící a pomocné montážní konstrukce, včetně montáže, jsou součástí dodávky. Před zadáním do výroby si dodavatel stavby ověří rozměry otvorů na místě vč. připojovacích bodů a stavební připravenosti navazujících profesí. Součástí dodávky je detailní realizační a dílenská dokumentace, která bude před zadáním do výroby předložena projektantovi a autorovi architektonického návrhu k písemnému odsouhlasení. Dodavatel předloží fyzické vzorky a prototypy všech použitých materiálů, povrchových úprav a ostatních doplňků, které musí být písemně schváleny autorem architektonického návrhu. Součástí dodávky jsou veškeré ochranné a vykrývací prostředky a opatření potřebné k provedení funkční dodávky a ochraně povrchů a dokončených konstrukcí. Ostatní požadavky na výrobky, dodávku a montáž – viz specifikace ve výkazech výměr. Požární odolnost dle PBŘ.

11) Jednotlivé výrobky jsou uvedeny v tabulkách výrobků.

12) Protiskluznost podlah: požadavky na protiskluznost všech podlah v objektu dle vyhl. 268/2009 Sb., ČSN 73 4130.

13) Světlá výška místností v tabulce místností je vzdálenost od čisté podlahy po spodní hranu podhledu. Objem místností je počítán rovněž po podhledovou konstrukci.

14) Požární utěsnění prostupů je součástí projektové dokumentace jednotlivých profesí a řídí se principem uvedeným v části PBŘ.

15) Výkres pororoštů včetně podkladní konstrukce bude vypracován v rámci výrobní dokumentace.

16) Prostor pod revizními poklopy elektroinstalace X23 bude vyplněn beze zbytku minerální vlnou

17) Součástí dodávky zhotovitele je koordinace všech rozvodů a instalací ve 3D modelu, který bude podkladem pro výrobní dokumentaci každé profese.

STAVBA:

NOVÁ RADNICE PRO PRAHU 7

U Průhonu 1338/38, Praha 7 - 170 00

±0,000=189,05 m n.m. B.p.v., JTSK

AUTORIZAČNÍ RAZÍTKO:

STAVEBNÍK: MĚSTSKÁ ČÁST PRAHA 7, nábřeží kapitána Jaroše 1000/7, Praha 7 - 170 00

AUTOR NÁVRHU: ATELIER BOD ARCHITEKTI s.r.o., Osadní 799/26, Praha 7 - 170 00, Ing.arch.Vojtěch Sosna, Ing.arch.Jáchym Svoboda, Ing.arch.Jakub Straka

PROJEKTANT A KOORDINACE: DELTAPLAN spol. s r.o., Jankovcova 53, Praha 7 - 170 00

ZPRACOVATEL ČÁSTI: APS PROJEKT PRAHA s r.o., Mezilesní 10516/16, Praha 4 - 142 00

HLAVNÍ PROJEKTANT: ING. ARCH. LUDĚK PŘENOSIL

ODPOVĚDNÝ PROJEKTANT ČÁSTI: ING. PETR DRAŽAN

VYPRACOVAL: ING. VERONIKA KLIMEŠOVÁ, ING. ARCH. PAVEL DRAŽAN

STUPEŇ: DOKUMENTACE PRO PROVEDENÍ STAVBY

STAVEBNÍ OBJEKT: SO 110

PROFESE: ARCHITEKTONICKO STAVEBNÍ ŘEŠENÍ

NÁZEV VÝKRESU: PŮDORYS 3.NP

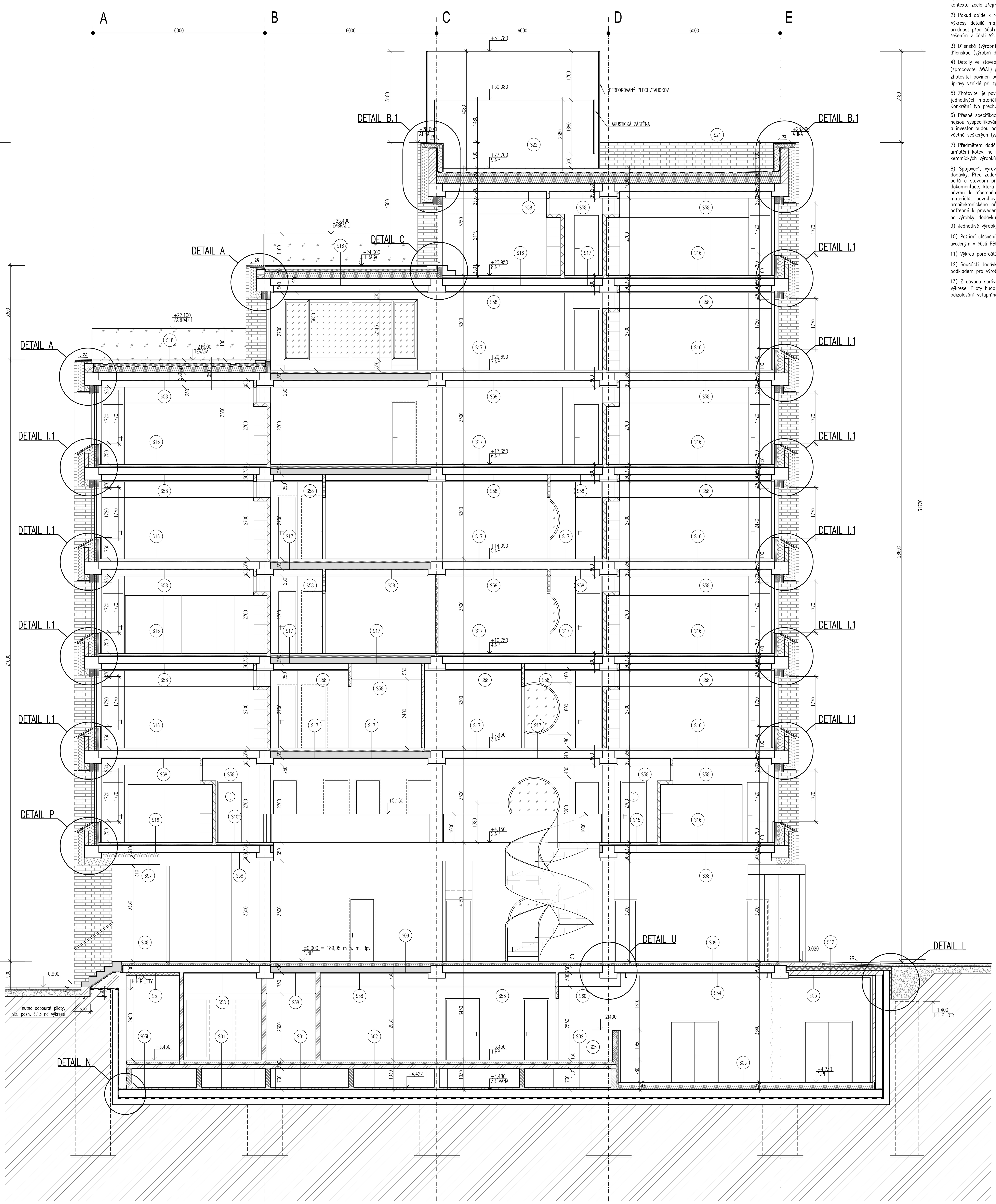
DATUM: 03/2017

MEŘÍTKO: 1:50

REVIZE: 00

ČÍSLO PARÉ:

PROJEKT	FÁZE	ČÍSLO OBJEKTU	ČÁST	ČÍSLO VÝKRESU
NRP	3	110	A1	06



POZNÁMKY

1) Nedílnou součástí výkresové dokumentace jsou technické zprávy. Součásti dodávky jsou i jednotlivé výrobky nebo části díla, které nejsou z výkresové dokumentace zcela zřejmé, nebo nejsou na výkresech uvedeny, ale jsou popsány v technické zprávě, nebo je jejich nezbytnost z celkového kontextu zcela zřejmá.

2) Pokud dojde k rozporům v dokumentaci v části A, platí následující princip:
Výkresy detailů mají přednost, před výkresy celků. Tvarové řešení viditelných částí v části A2 má přednost před částí A1. Technické řešení výkresů detailů (návaznosti skladeb apod.) má přednost před řešením v části A2.

3) Dílenská (výrobní) dokumentace je součástí dodávky dodavatele a jde k tíži dodavatele. Tuto dílenskou (výrobní dokumentaci) je povinen dodavatel předložit GP a investorovi k odsouhlasení.

4) Detaily ve stavební části upřesňují principy řešení z návrhu řešení izolací, část A4 Izolace (zpracovatel AWAL) pro konkrétní situaci. V místech, pro které nejsou stavební detaily zpracovány, je zhotovitel povinen se řídit principy z části A4 Izolace (zpracovatel AWAL) a případné nejasnosti nebo úpravy vzniklé při zpracování realizační dokumentace projednat s GP.

5) Zhotovitel je povinen provést dilatace jednotlivých celků dle technologických předpisů dodavatelů jednotlivých materiálů. Předmětem dodávky jsou rovněž všechny dilatační, přechodové a ukončující lišty. Konkrétní typ přechodových lišt schválí architekt.

6) Přesné specifikace úprav povrchů, zařizovacích předmětů, doplňků a estetického ztvárnění, pokud nejsou vyspecifikovány v části interiér, určí architekt během autorského dozoru. Architekt, projektant a investor budou požadovat před zahájením dodávky odsouhlasit dílenskou dokumentaci dodavatele včetně veškerých fyzických vzorků použitých materiálů a barev.

7) Předmětem dodávky fasády je výrobní dokumentace, která bude brát zvláštní zřetel na počty a umístění kotev, na rozmístění větracích otvorů a na případnou úpravu detailů ve vztahu na dodávku keramických výrobků. Jedná se o certifikovaný systém.

8) Spojovací, vyrovnávací, kotvící a pomocné montážní konstrukce, včetně montáže, jsou součástí dodávky. Před zadáním do výroby si dodavatel stavby ověří rozměry otvorů na místě vč. připojovacích bodů a stavební připravenosti navazujících profesí. Součástí dodávky je detailní realizační a dílenská dokumentace, která bude před zadáním do výroby předložena projektantovi a autorovi architektonického návrhu k písemnému odsouhlasení. Dodavatel předloží fyzické vzorky a prototypy všech použitých materiálů, povrchových úprav a ostatních dodávek, které musí být písemně schváleny autorem architektonického návrhu. Součástí dodávky jsou veškeré ochranné a vykrývací prostředky a opatření potřebné k provedení funkční dodávky a ochraně povrchů a dokončených konstrukcí. Ostatní požadavky na výrobky, dodávku a montáž – viz specifikace ve výkazech výměr. Požární odolnost dle PBŘ.

9) Jednotlivé výrobky jsou uvedeny v tabulkách výrobků.

10) Požární utěsnění prostupů je součástí projektové dokumentace jednotlivých profesí a řídí se principem uvedeným v části PBŘ.

11) Výkres pororoštů včetně podkladní konstrukce bude vypracován v rámci výrobní dokumentace.

12) Součástí dodávky zhotovitele je koordinace všech rozvodů a instalací ve 3D modelu, která bude podkladem pro výrobní dokumentaci každé profese.

13) Z důvodu správného odizolování stavby je nutné odbourat piloty v rozsahu znázorněném na výkrese. Piloty budou odbourány pod všemi schodišťovými rameny na severní straně objektu. Detail odizolování vstupního schodiště na severní straně řeší podrobně část A4 D01 – Det. č.8.

ZNAČKA	MATERIÁL
	STÁVAJÍCÍ KONSTRUKCE
	NOVÉ ŽELEZOBETONOVÉ MONOLITICKÉ KONSTRUKCE
	KONSTRUKCE Z TVÁRNIC ZB SE ZÁLIVKOU Z BETONU A VLOŽENOU BETONÁŘSKOU VÝZTUŽÍ
	BETON PROSTÝ C12/15 S KARI SÍTÍ 150/150/5 mm
	CIHLY BROUŠENÉ KERAMICKÉ tl. 8mm
	CIHLY BROUŠENÉ KERAMICKÉ tl. 115mm
	CIHLY BROUŠENÉ KERAMICKÉ tl. 175mm
	CIHLY BROUŠENÉ KERAMICKÉ tl. 300mm
	KONSTRUKCE Z SDK tl. 50, 100, 150, 200mm (dvojité opláštění, CW 50)
	KONSTRUKCE Z SDK tl. 125 mm (dvojité opláštění, CW 75, R'w=45dB)
	KONSTRUKCE ZE SKLA
	PROSKLENÁ SYSTÉMOVÁ PŘÍČKA tl. 100mm SE ZVÝŠENOU NEPRŮZVUČNOSTÍ (R'w=45dB)
	TEPELNĚ IZOLAČNÍ DESKY tl. 100 mm
	TEPELNÁ IZOLACE (minerál)
	TEPELNÁ IZOLACE (polystyren)
	KROČEJOVÁ IZOLACE (minerál)
	PROTIPOŽÁRNÍ (AKUSTICKÝ) OBKLAD (minerál)
	SENDVIČOVÁ KONSTRUKCE Z PIR DESEK
	LÍCOVÉ FASÁDNÍ CIHLY
	PŮVODNÍ ZEMINA

STAVBA:

NOVÁ RADNICE PRO PRAHU 7

U Průhonu 1338/38, Praha 7 - 170 00

±0,000=189,05 m n.m. B.p.v., JTSK

AUTORIZAČNÍ RAZÍTKO:

STAVEBNÍK: MĚSTSKÁ ČÁST PRAHA 7
nábřeží kapitána Jaroše 1000/7, Praha 7 - 170 00

AUTOR NÁVRHU: ATELIER BOD ARCHITEKTI s.r.o.
Osadní 799/26, Praha 7 - 170 00
Ing.arch.Vojtěch Sosna, Ing.arch.Jáchym Svoboda, Ing.arch.Jakub Straka

PROJEKTANT A KOORDINACE: DELTAPLAN spol. s r.o.
Jankovcova 53, Praha 7 - 170 00

ZPRACOVATEL ČÁSTI: APS PROJEKT PRAHA s r.o.
Mezilesní 10516/16, Praha 4 - 142 00

HLAVNÍ PROJEKTANT: ING. ARCH. LUDĚK PŘENOSIL

ODPOVĚDNÝ PROJEKTANT ČÁSTI: ING. PETR DRAŽAN

VYPRACOVAL: ING. VERONIKA KLIMEŠOVÁ, ING. ARCH. PAVEL DRAŽAN

STUPEŇ: DOKUMENTACE PRO PROVEDENÍ STAVBY

STAVEBNÍ OBJEKT: SO 110

PROFESE: ARCHITEKTONICKO STAVEBNÍ ŘEŠENÍ

NÁZEV VÝKRESU: ŘEZ A-A

DATUM: 03/2017
MEŘÍTKO: 1:50

REVIZE: 00
ČÍSLO PARÉ:

PROJEKT	FÁZE	ČÍSLO OBJEKTU	ČÁST	ČÍSLO VÝKRESU
NRP	3	110	A1	24

2 ASSESMENT OF THE PROJECT DOCUMENTATION

The range and content of project documentation necessary for building permission application is specified in annex 5 of decree no. 499/2006 Co. (Part of law in Czech Republic)

Project documentation must contains following parts:

A. Accompanying technical report

B. Summary technical report

C. Location drawings

D. Documentation of the constructed objects and technical and technological equipment

E. Documents part

Project documentation must contains parts A to E. Range and content of each part can be adapted to type and significance of the construction, its placement, structure, design, usage, environmental impact and duration of the construction.

2.1 Assessment of completeness and accuracy of the project documentation

The project documentation, which was used as a basis for the elaboration of this diploma thesis, was also a tender documentation to public contract for the selection of the main contractor of works. The documentation was downloaded from the official website of the investor, which is the Municipal District of Prague 7. The author of the diploma thesis reviewed all the documents that were available. The completeness of the project documentation was founded sufficient and the documentation fully complies with the requirements of Government regulation No. 499/2006 Coll. About building documentation.

In the project documentation were available following documents:

A Accompanying technical report

B Summary technical report

C Location drawings

- Coordinating location drawing
- Cadastral map

D Documentation of the constructed objects and technical and technological equipment

CO110 – Main building

- Architectural and construction solutions
- Architectural details
- Perimeter shell (Facade)
- Isolation
- Construction solutions
- Sanitary installations
- Heating, cooling
- Air-conditioning technology
- High voltage systems
- Low voltage systems
- FAS (Fire alarm system)
- MaR
- Gastronomic equipment
- Audio-video equipment
- Space acoustics

SO320 – Reconstruction of paved areas

SO340 – Outdoor landscaping

E Documents pats

- Bill of quantities (List of measurements)

F Reviews and studies

2.2 Proposal of correction of the project documentation

The project documentation has been reviewed. During this activity the author focused on possible mistakes and deficiencies in the design or inappropriate solution of the individual technological parts of the project.

The reviewing of the documentation did not reveal any fundamental errors or deficiencies that would make the construction impossible to implement.

The proposed construction fulfills the basic requirements for buildings according to National Regulation No. 268/2009 Coll. About technical requirements for buildings, such as: Mechanical resistance and stability, fire safety, protection of human and animal health, healthy living conditions and the environment, noise protection, safety in use, energy saving and thermal protection. Due to this fact, there was no need to change the technical solution of the construction.

The graphic form of the documentation and the accuracy of the text parts has been revised especially with the emphasis on checking the clarity and meaningfulness. The author also focused on whether the information in the individual documents are not contradictioned. No serious mistakes were found in this section either.

Regarding to the project documentation we can say that the project can be implemented without any major problems.

3 SOLUTION OF THE SPACE STRUCTURE

The spatial structure consists of the placement of production (work) spaces for construction processes. It is a group of dump areas, transport routes, machines, equipment and distribution to them, as well as working space for workers. It includes the spatial conditions for the production processes to be implemented safely, in a high quality, economic, and efficiently. The spatial structure is changing during the construction process from one work activity to another. The spatial structure is necessarily solved and exists in accordance with the technological and time structure. Part of the STP reconstruction of the administrative building called New Town Hall for Prague 7 is a complex solution of the spatial structure.

3.1 Technological scheme

When solving the spatial structure, it is necessary to create the technological scheme. This shows the division of the object into the space sections and the stage processes that are carried out at each section. From the drawing are also visible directions of stage processes.

Partition of the object on a space sections:

SS 0 – Around the building
SS 1 – Substructure (1 UG)
SS 2 – Ground floor (GF)
SS 3 – First floor (1 AG)
SS 4 – Second floor (2 AG)
SS 5 – Third floor (3 AG)
SS 6 – Fourth floor (4 AG)
SS 7 – Fifth floor (5 AG)
SS 8 – Sixth floor (6 AG)
SS 9 – Seventh floor (7 AG)
SS 10 – Eighth floor (8 AG)
SS 11 - Roof
SS 12 - Facade

Partition of the object on a stage processes:

0 – Construction site and preparatory demolition works

1 – Demolition of load-bearing structures (Two parts)

2 – Load-bearing constructions (Two parts)

3 – Earthworks (Only a manhole placement)

4 – Roofing and terraces

5 – Internal partitions and installation wiring

6 – Completion of rough floors and internal surfaces and technologies

7 – Completion of technical equipment, completion works and final surfaces

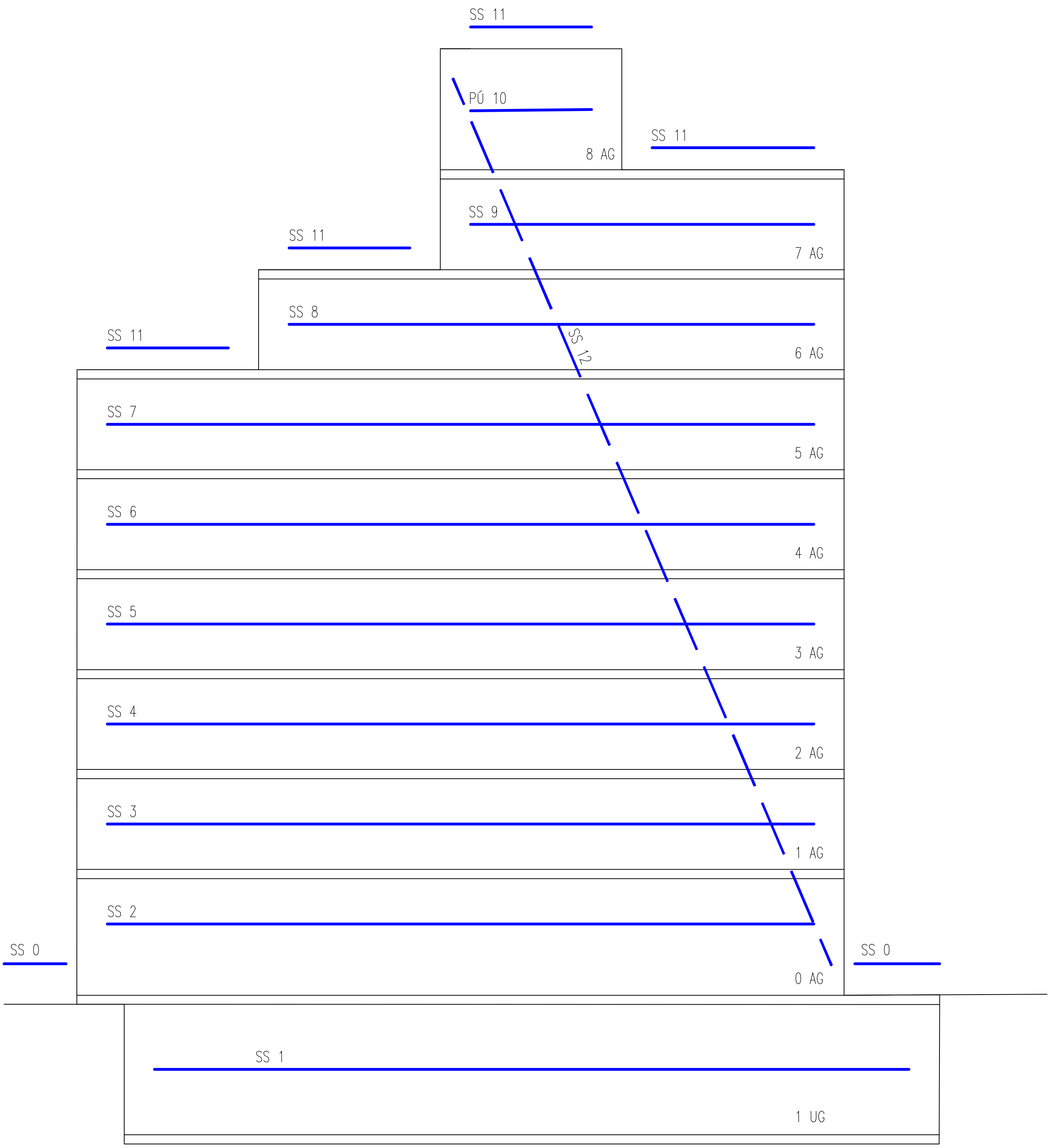
8 – Completion of technical equipment, completion works and final surfaces

9 – Building envelope (Facade)

10 – Acceptance of construction – Building approval

TECHNOLOGICAL SCHEME (S.S. FOR C001)

PARTITION OF THE BUILDING TO SPACE SECTIONS



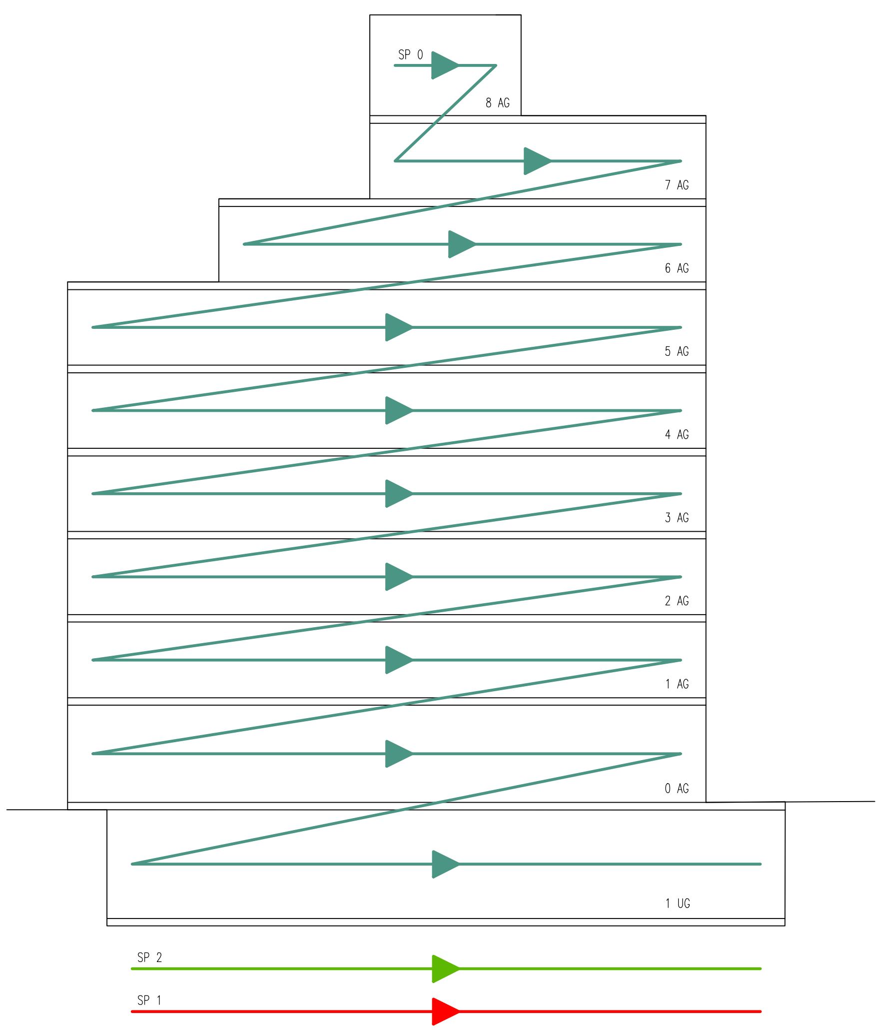
SPACE SECTIONS:	ALLOCATION OF THE STAGE PROCESSES:
SS 0 – AROUND THE BUILDING	0,3 (+ construction objects C0310, C0340)
SS 1 – SUBSTRUCTURE (1 UG)	0,1,2,5,6,7,8
SS 2 – GROUND FLOOR (0 AG)	0,1,2,5,6,7,8
SS 3 – FIRST FLOOR (1 AG)	0,1,2,5,6,7,8
SS 4 – SECOND FLOOR (2 AG)	0,1,2,5,6,7,8
SS 5 – THIRD FLOOR (3 AG)	0,1,2,5,6,7,8
SS 6 – FOURTH FLOOR (4 AG)	0,1,2,5,6,7,8
SS 7 – FIFTH FLOOR (5 AG)	0,1,2,5,6,7,8
SS 8 – SIXTH FLOOR (6 AG)	0,1,2,5,6,7,8
SS 9 – SEVENTH FLOOR (7 AG)	0,1,2,5,6,7,8
SS 10 – EIGHTH FLOOR (8 AG)	0,1,2,5,6,7,8
SS 11 – ROOF	4
SS 12 – FACADE	9

	AUTHOR : Bc. MICHAL BARTOŠ				A.Y. : 2017/2018
	SUPERVISOR : Ing. KAREL POLÁK Ph.D.				N.D.: X.X
	CONSTRUCTION : NEW TOWN HALL FOR PRAGUE 7				SCALE : 1:200
FSV / ETSIE	CONTENT : TECHNOLOGICAL SCHEME - SPACE SECTIONS				
CTU / UPV	DATE : X.X.2017	FORMAT : A4	SUBJECT : DT		DEPARTMENT : K122

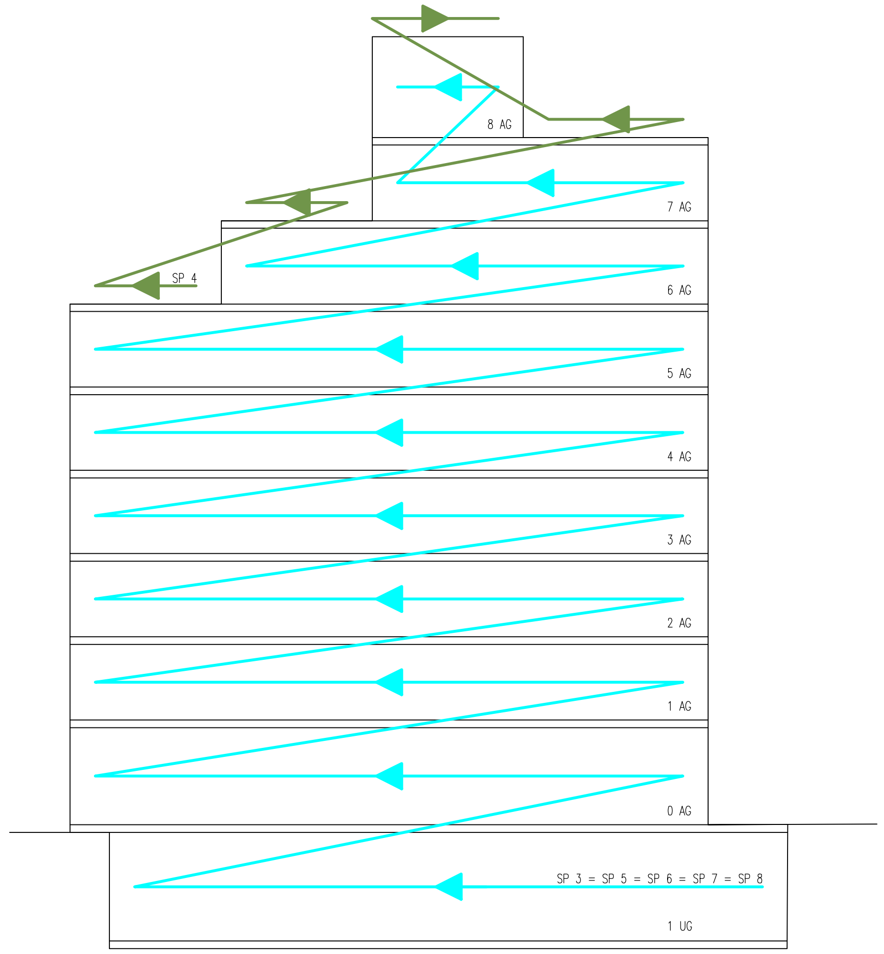
TECHNOLOGICAL SCHEME (FOR MAIN CONSTRUCTED OBJECT: CO01)

DIRECTIONS OF THE STAGE PROCESSES

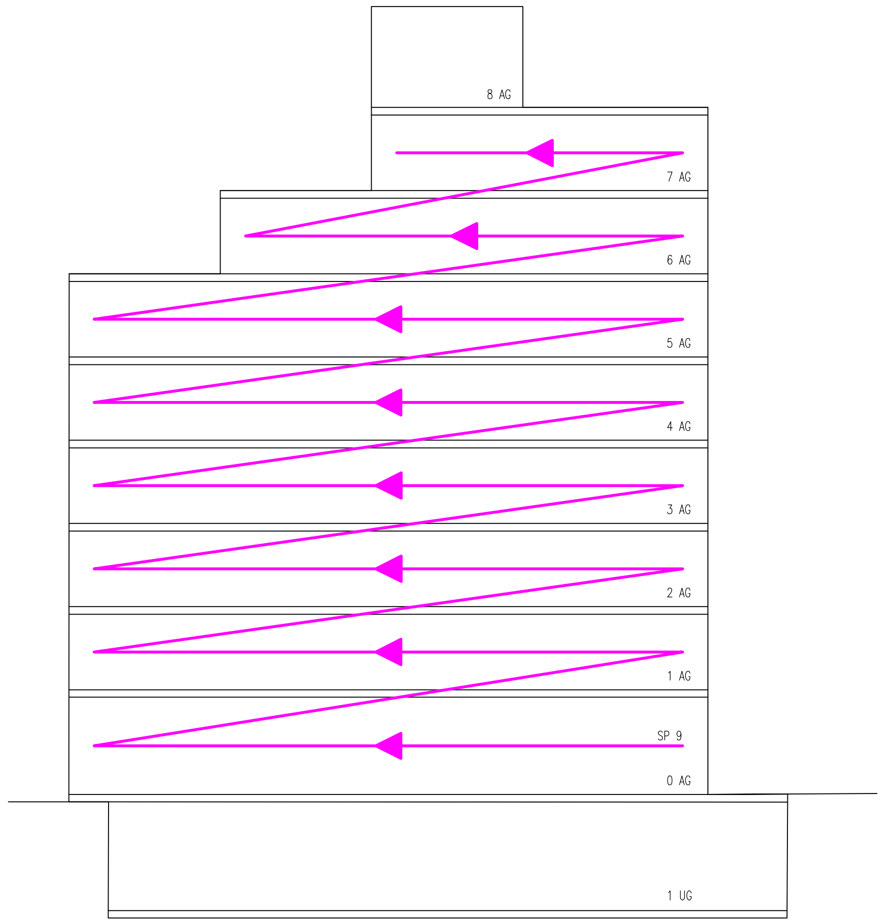
STAGE PROCESSES: SP0, SP1, SP2



STAGE PROCESSES: SP3, SP4, SP5, SP6, SP7, SP8



STAGE PROCESS: SP9



STAGE PROCESSES:	DIRECTIONS OF THE STAGE PROCESSES:
0 – CONSTRUCTION SITE AND PREPARATORY DEMOLITION WORKS	HORIZONTAL / HORIZONTALY DESCENDING
1 – DEMOLITION OF LOAD-BEARING STRUCTURES (TWO PARTS)	HORIZONTALY DESCENDING
2 – LOAD-BEARING CONSTRUCTIONS (TWO PARTS)	HORIZONTALY ASCENDING
3 – EARTHWORKS (Only for a manhole placement)	HORIZONTAL
4 – ROOFING AND TERRACES	HORIZONTAL
5 – INTERNAL PARTIONS AND INSTALATION WIRING	HORIZONTALY ASCENDING
6 – INTERNAL PLASTERING AND BASE LAYERS OF THE FLOOR COMPOSITION	HORIZONTALY ASCENDING
7 – COMPLETION OF ROUGH FLOORS AND INTERNAL SURFACES AND TECHNOLOGIES	HORIZONTALY ASCENDING
8 – COMPLETION OF TECHNICAL EQUIPMENT, COMPLETION WORKS AND FINAL SURFACES	HORIZONTALY ASCENDING
9 – BUILDING ENVELOPE (FACADE)	HORIZONTALY ASCENDING
10 – ACCEPTANCE OF CONSTRUCTION – BUILDING APPROVAL	

	AUTHOR : Bc. MICHAL BARTOŠ			A.Y. : 2017/2018	
	SUPERVISOR : Ing. KAREL POLÁK Ph.D.			N.D. : X.X	
	CONSTRUCTION : NEW TOWN HALL FOR PRAGUE 7			SCALE : 1:300	
FSV / ETSIE	CONTENT : TECHNOLOGICAL SCHEME - STAGE PROCESSES				
CTU / UPV	DATE : X.X.2017	FORMAT : A3	SUBJECT : DT	DEPARTMENT : K122	

3.2 List of the main constructions

- Main load-bearing structures

The main load-bearing structure consists of a combination of reinforced concrete monolithic skeleton structure and prefabricated panels. The skeleton structure is stiffened by vertical monolithic plates. Prefabricated panels are used in the horizontal direction as a ceiling slabs of individual floors. During the reconstruction, a part of the main supporting structure will be demolished. Speaking about vertical structures, it is the elevator shaft, the staircase, and the stiffing walls. Demolition of horizontal load-bearing structures contains removing of prefabricated panels up to 30 percent of the total floor area.

In the demolished area will be performed a new lift shaft, built of permanent formwork concrete blocks and a new staircase. In the rest of the openings in the ceiling structure, there will be performed a new monolithic reinforced concrete slab. Removed stiffening walls will be compensated by reinforcement of existing skeleton columns.

- Internal partitions – non-load-bearing walls

Most partitions are made of plasterboard structures with a thickness of 50 - 200 mm, most of these walls are double-cladded. The other major part of the internal partitions is made up of glass dividing walls. The masonry walls are predominantly in the 1.UG, in the upper floors are not the masonry walls so often.

- Roofing

The roof of the building is classified as flat roof. Most of the roof area is a walkable surface adapted for approach of persons. The roof is located at five stages of the building. In the sixth, seventh and eighth floors is the roof classified as a terrace, that is accessible to employees working in the building. Roofs of the eighth and ninth stages are accessible primarily for the maintaining of the building. The roofing composites can be read from the project documentation.

The dates for the implementation of the roofing can be seen in the time-space graph and the construction schedule.

- Perimeter shell - Facade

The facade of the building is the dominant element. The existing perimeter shell consists of a heavy ceramic tiles on a metallic grate. Shell will be dismantled after finishing the demolition works and the construction works of the new load-bearing structure. This will be done primarily to prevent the spread of noise and solid particles in the air (dust, concrete, ...) to neighboring objects and public spaces.

The new facade is designed as a heavy ventilated shell. The dominant element are a ceramic brick tiles supported by a load-bearing aluminum grate structure. The shell is insulated with thermal insulation. Window frames are made up of panels. Panels are also parts of parapet wall. Part of the composition is a supporting parapet, which is made of blocks of permanent formwork. The interior surface of the parapet wall is made of a plasterboard.

- Internal plastering

Internal plasters are made by machine-sprayed lime-cement. Due to the small number of brick and concrete structures inside the building, this is not a major construction process. Ceiling surface is not plastered – ceiling construction is designed.

- Rough floors

Rough floors are made up as a standard composition. First acoustic insulation, then bearing layer from concrete screed. This layer has a thickness of 50 mm and is reinforced with wire mesh. The heating distribution pipes leads in the floor and is necessary to adapt the process. There is also distribution tube for electrical wires. Because of the large area where the flooring will be realized, it is a major construction process. The dates for the implementation of the seventh stage process can be seen in the time-space graph and the construction schedule.

3.3 Determining the main coefficients of work queue

Work queue – Coefficient, which is the basic indicator that characterizes the minimum amount of space required for a particular process and is a spatial aspect of the two processes' relationship.

For the above-mentioned stage processes, the major coefficients of the work queue were calculated. This coefficient is calculated from the following formula,

$$f_{ij} = (M/C) * 100 \quad [\%]$$

where M is the minimum working queue for the process, expressed in the number of floors, and C is the total working space of the building expressed in the total number of floors (where the process is performed).

F1 is the coefficients of the work queue for 0.,1.,2.,5.,6.,7.,8.S.P.

F2 = (1/10)*100 = 10 %

F2 is the coefficients of the work queue for 3.E.P. – Earthworks

F2 = (1/1)*100 = 100 %

F3 is the coefficients of the work queue for 9.E.P. – Facade

F2 = (1/8)*100 = 12,5 %

F4 is the coefficients of the work queue for 4.E.P. - Roofing

F3 = (1/5)*100 = 20 %

3.4 Lifting device proposal

There are two variants which can be considered during proposing of the lifting device. First variant is a placement of stationary tower crane, second variant is using of mobile car crane.

According to size of the construction site, difficulty of the project and volume of workload when the lifting device is needed, the only adequate solution is proposing of a stationary tower crane.

Proposal of tower crane:

1. Minimal height of the crane:
(from ground level to lower edge of jib-crane)
formula: $\mathbf{H_{min}}$=Hb+Hbu+Hh+Ht+Hm

Hb.....height of the building	Hb= 31,4 m
Hbu.....height of the burden	Hbu= 4 m
Hh.....height of the hang	Hh= 3 m
Ht.....height of the trolley	Ht= 0,5 m
Hm.....height for manipulation	Hm= 1,5 m

$\mathbf{H_{min}}$=31,4+4+3+0,5+1,5
$\mathbf{H_{min} = 40,4\ m}$

2. Minimal range of the crane:
formula: $\mathbf{L_{min}}$=Lm+Lf

Lm..... length for manipulation Lm= 2 m

Lf..... length to the furthest point of construction, from the location of the crane

Lb= 40 m

$\mathbf{L_{min}}$=2+40
$\mathbf{L_{min} = 42\ m}$

3. Maximum weight of the burden:
mb.....maximal estimated weight of the burden
$\mathbf{m_b = 3\ t}$

Machine proposal:

To the calculated crane parameter requirements corresponds:
Liebherr 130 EC-B6 – 185HC
Technical parameters of the machine:
Height:

formula: **H**=Hz+H1+n*Hn

Hba.....height of the ballast	Hba= 4,85 m
H1.....height of the first part	H1= 8,85 m
Hn..... height of the middle part	Hn= 4,14 m

H =4,85+8,85+9*4,14

H = 50,96 m > H_{min}

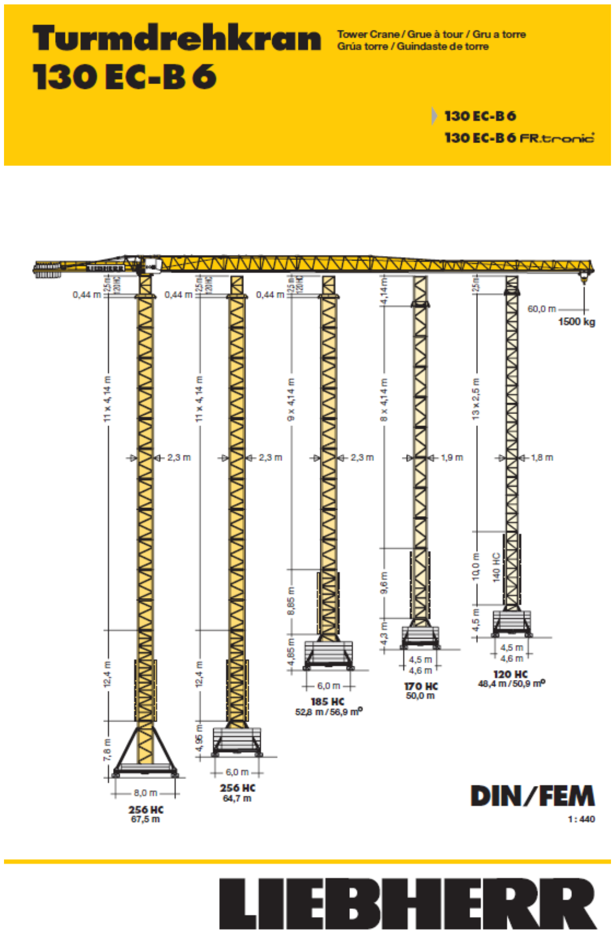
Maximal range when carrying the maximum burden:

$L_{(3t)}$ = 42,5 m > L_{min}

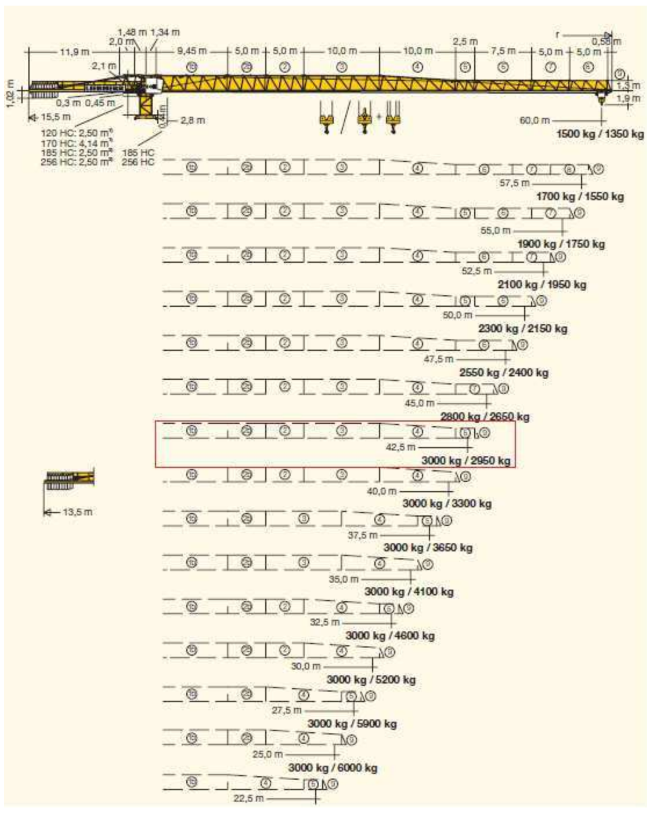
→ **Proposed crane has sufficient paramaters.**

On the construction site will be one tower crane of this type in disposal. Exact dates of the deployment and usage are visible in time-space chart and graph of machine usage of the construction site.. Exact position of the tower crane is visible in drawings of construction sites.

On the construction site will be placed also construction lift GEDA ERA 1200 Z/ZP. This lift can transport persons and small amount of material or tools. Exact position of the lift is visible in drawings of construction sites.



Pic. 1: Tower crane Liebherr 130 EC-B6 – 185HC



Pic. 2: Range of the tower crane Liebherr 130 EC-B6 – 185HC

4 SOLUTION OF THE TECHNOLOGICAL STRUCTURE

The technological structure of the construction process exists in time and space, therefore it must be solved in accordance with the time and spatial structure of the main construction process.

The main documents of the technological structure of the construction process are: List of processes, Technological analysis sheet and Health and safety plan.

4.1 List of processes

The List of processes is a document showing the most detailed technological structure of the object construction in the structure of individual building activities. The document reflects continuity of each process and it is the first technological document, which shows characteristics of the individual constructional processes and evaluates them by total measurements, individual workload expressed by hours of work and assignes them to the main stage processes.

The List of processes of this CTP contains 1190 items.

The complete List of processes is not attached. It is available on request in Czech language. There is attached only first page with translated template. The items were not translated (22 pages and 1190 items). The continuity of construction process is obvious from the technological analysis sheet.

Construction: NEW TOWN HALL Prague 7				Bc. Michal Bartoš		2017/2018	
Document: LIST OF PROCESSES				Diploma thesis		K122	
Number (No.)	Continuity of partial construction processes	Masur. units	Total measurement	Difficulty (per hour.)	Total difficulty	Machines	Merged to
CO110	**MAIN BUILDING CONSTRUCTION WORKS**						
SP0	**CONSTRUCTION SITE AND PREPARATORY DEMOLITION WORKS**						
	CONSTRUCTION SITE FACILITIES						
1	Geodetické zaměření a vytyčení hranic staveniště a VYTYČOVACÍCH OS (x,y)	m^2	800.00	0.00	1.60	-	1
2	Demontáž vrat	ks	1.00	2.00	2.00	-	2
3	Demontáž závory včetně ovládacího sloupku	ks	1.00	2.00	2.00	-	2
4	Zřízení zařízení staveniště ze stavebních buněk	ks	9.00	0.50	4.50	auto s hr. rukou	2
	patrech v rozsahu: 2x kancelář, 2x šatna, 1x mobilní WC,				0.00		2
	1x umývárny, 3x skladový kontejner				0.00		2
5	Umístění staveništního hlavního rozvaděče	ks	1.00	3.27	3.27	-	2
6	Položení staveništního rozvodu siloproudu	bm	40.00	0.05	2.00	-	2
7	Položení staveništního rozvodu vody a kanalizace	bm	60.00	0.84	50.40	-	2
8	Napojení na vodu, kanalizaci a odvodnění staveniště	ks	8.00	1.20	9.60	-	2
9	Připojení staveniště na silnoproud	ks	15.00	0.31	4.65	-	2
10	Vybourání otvorů v obvodovém plášti v každém patře pro vstupy z výtahu	m2	60.00	0.57	34.20	-	2
11	Staveništní výtah sloupový - 1 kpl	ks	1.00	20.00	20.00	autojeřáb	3
12	Jeřáb věžový Liebherr 130 EC-B6 - 1 kpl	ks	1.00	16.00	16.00	autojeřáb	4
13	Staveništní ohrada (zábory) bude zhotovena ze stavební překližky černé foliované a konstruována směrem do ulice jako hladká stěna.	bm	30.00	0.08	2.40	-	2
14	Součástí dodávky bude informační galerie na překližkové ohradě s grafickým znázorněním budoucí podoby stavby a informacemi o stavbě. Tyto informace budou vyhotoveny na panelech pro výstavní použití v exteriéru a barevným UV stálým tiskem pro exteriér v počtu 5Ks a rozměru 1500x1500mm a jeden panel 2000x3000mm. Grafické řešení panelů a celkové grafiky bude dodáno grafikem a písemně chváleno autory návrhu	kpl	6.00	1.00	6.00	-	2
15	Součástí dodávky stavby je i kompletní celoplošné zakrytí čelní a západní fasády stavby plachtou s vyobrazení budoucí podoby objektu. Plachta bude zhotovena z PVC banneru s barevným UV stálým potiskem vhodným do exteriéru. Grafické řešení plachet bude dodáno grafikem a odsouhlaseno autorem návrhu stavby. Tato plachta nenahrazuje ochranu všech fasád proti prachu a pádu předmětů	m2	375.00	0.25	93.75	-	2
	FINAL CLEANING AND REMOVAL OF THE CONSTRUCTION SITE						
16	Demontáž jeřábu	ks	1.00	8.00	8.00	autojeřáb	5
17	Demontáž výtahu	ks	1.00	16.00	16.00	autojeřáb	6
18	Vyklizení staveniště	m2	800.00	0.03	24.80	-	7
19	Závěrečný úklid vnitřní	m2	4635.00	0.27	1251.45	-	8
20	Závěrečný úklid venkovní	m2	800.00	0.27	216.00	-	8
21	Demontáž staveništních rozvodů (silnoproud)	m	40.00	0.05	2.00	-	7
22	Demontáž staveništního rozvaděče	ks	1.00	3.27	3.27	-	7
23	Demontáž staveništních rozvodů (voda, kanalizace)	m	60.00	0.42	25.20	-	7
24	Odvežení zařízení staveniště (buňkoviště)	ks	9.00	0.40	3.60	auto s hr. rukou	7
25	Rozebrání oplocení	m	30.00	0.06	1.80	-	7
	PREPARATORY DEMOLITION WORKS						
26	Odpojení objektu od rozvodu vody	ks	1.00	5.00	5.00	-	9
27	Odpojení objektu od rozvodu elektriky	ks	1.00	5.00	5.00	-	9
28	Odpojení objektu od rozvodu plynu	ks	1.00	5.00	5.00	-	9
29	Vypuštění rozvodů vody a topení	m	900.00	0.01	4.50	-	9
30	Vyvěšení nebo zavěšení kovových křídel dveří pl do 2 m2	kus	224.00	0.10	22.40	-	10
31	Vyvěšení nebo zavěšení kovových křídel dveří pl přes 2 m2	kus	37.00	0.15	5.55	-	10
32	Demontáž zařizovacích předmětů	kus	90.00	1.04	93.60	-	10
33	Demontáž koncových prvků elektra (zásuvky, světla, vypíneče,….)	ks	180.00	0.21	37.80	-	10
34	Demontáž koncových prvků vzt	ks	225.00	0.21	47.25	-	10
35	Demontáž všech prvků elektrorozvodny	kpl	1.00	24.00	24.00	-	10
36	Demontáž otopných těles	ks	200.00	0.33	66.00	-	10
37	Vybourání prosklené stěny ve 2.NP	ks	1.00	15.00	15.00	-	10
38	Demontáž SDK podhledu s dvouvrstvou nosnou kcí z ocelových profilů opláštění jednoduché	m2	2505.64	0.14	350.79	-	11
39	Demontáž podhledu lamel	m2	190.20	0.14	26.63	-	11
40	Demontáž roštu podhledu	m2	190.20	0.15	28.53	-	11
41	Demontáž kabelových rozvodů elektra vedoucích pod stropem	m	4500.00	0.01	45.00	-	11
42	Demontáž vzt potrubí vedoucího pod stropem	m	500.00	0.54	270.00	-	11
43	Demontáž potrubí rozvodů vody a kanalizace vedoucího pod stropem	m	123.00	0.45	55.35	-	11
44	Odsekání a odebrání obkladů stěn z vnitřních obkládaček pl přes 1 m2	m2	911.71	0.39	355.57	-	12
45	Otlučení vnitřních omítek MV nebo MVC stropů o rozsahu do 100 %	m2	1616.14	0.42	678.78	-	12
46	Demontáž SDK příčky s jednoduchou ocelovou nosnou konstrukcí opláštění dvojité	m2	304.67	0.14	42.65	-	12

4.2 Technological analysis sheet

In the Technological analysis sheet are merged individual items from the list of processes to wider groups according to the technological demands and similarities of the professions. The Technological analysis sheet shows continuity of construction processes in larger scale than the List of processes and evaluates them by total workload expressed by hours of work. Another information visible in Technological analysis sheet are: Number of workers needed for each process, duration of each process, technological pauses and need of machines.

The Technological analysis sheet of this CTP contains 343 items.

Construction: NEW TOWN HALL Prague 7				Bc. Michal Bartoš				2017/2018	
Document: TECHNOLOGICAL ANALYSIS SHEET				Diploma thesis				K122	
Number (No.)	Continuity of construction processes (Merged partial processes according to type of work (same workers) and space (where on the construction)	Total workload	No. workers/ teams	Time fund per shift	Duration	Modified duration	Techn. pause No. days/Conection	Machines	Profession
SO110	MAIN BUILDING CONSTRUCTION WORKS								
0.S.P.	CONSTRUCTION SITE AND PREPARATORY DEMOLITION WORKS								
	CONSTRUCTION SITE			8					
1	Geodetic works	1.60	1	8	1.60	1.0	-	-	G
2	Site facilities	214.77	5	8	42.95	6.0	-	truck with hydr. arm	OS/D
3	Construction lift	20.00	1	8	20.00	3.0	-	mobile crane	OS/D
4	Tower crane Liebherr 130 EC-B6	16.00	1	8	16.00	2.0	-	mobile crane	OS
	FINAL CLEANING AND REMOVAL OF THE CONSTRUCTION SITE								
5	Disassembling the crane	8.00	1	8	8.00	1.0	-	mobile crane	OS
6	Disassembling the construction lift	16.00	1	8	16.00	2.0	-	mobile crane	OS/D
7	Disassembling of the site facilities	60.67	5	8	12.13	2.0	-	truck with hydr. arm	OS/D
8	Final cleaning	1467.45	18	8	81.53	11.0	-	-	D
	PREPARATORY DEMOLITION WORKS								
9	Disconnecting the object (water, gas,…)	19.50	3	8	6.50	1.0	-	-	D
10	Dmtl. of the ends of pipe elements, sanitary equipment., doors and glass elements	311.60	20	8	15.58	2.0	-	-	OS/D
11	Disassembling of ceilings and distribution pipes (wiring)	776.30	30	8	25.88	4.0	-	-	OS/D
12	Dmtl. of tiles, plasters, plasterboard walls and distribution pipes (wiring)	1391.40	30	8	46.38	6.0	-	-	OS/D
13	Disassembling floor layers and distribution pipes (wiring)	4974.98	40	8	124.37	16.0	-	-	OS/D
14	Demolition of internal partitions and dooframes	2372.03	40	8	59.30	8.0	-	-	OS/D
15	Disassembling of vertical distribution pipes (wiring)	437.90	20	8	21.90	3.0	-	-	OS/D
1.S.P.	DEMOLITIONS OF LOAD-BEARING STRUCTURES (FIRST PART)								
	8.AG - DEMOLITION WORKS								
16	8.AG - Demolitions of floor structures	429.11	25	8	17.16	3.0	-	-	D
17	8.AG - Demolitions of vertical load bearing structures	409.37	25	8	16.37	3.0	-	-	D
	7.AG - DEMOLITION WORKS								
18	7.AG - Demolitions of floor structures	487.97	25	8	19.52	3.0	-	-	D
19	7.AG - Demolitions of vertical load bearing structures	87.13	25	8	3.49	1.0	-	-	D
	6.AG - DEMOLITION WORKS								
20	6.AG - Demolitions of floor structures	640.14	25	8	25.61	4.0	-	-	D
21	6.AG - Demolitions of vertical load bearing structures	87.13	25	8	3.49	1.0	-	-	D
	5.AG - DEMOLITION WORKS								
22	5.AG - Demolitions of floor structures	792.32	25	8	31.69	4.0	-	-	D
23	5.AG - Demolitions of vertical load bearing structures	87.13	25	8	3.49	1.0	-	-	D
	4.AG - DEMOLITION WORKS								
24	4.AG - Demolitions of floor structures	868.41	25	8	34.74	5.0	-	-	D
25	4.AG - Demolitions of vertical load bearing structures	87.13	25	8	3.49	1.0	-	-	D
	3.AG - DEMOLITION WORKS								
26	3.AG - Demolitions of floor structures	868.41	25	8	34.74	5.0	-	-	D
27	3.AG - Demolitions of vertical load bearing structures	87.13	25	8	3.49	1.0	-	-	D
	2.AG - DEMOLITION WORKS								
28	2.AG - Demolitions of floor structures	868.41	25	8	34.74	5.0	-	-	D
29	2.AG - Demolitions of vertical load bearing structures	130.69	25	8	5.23	1.0	-	-	D
	1.AG - DEMOLITION WORKS								
30	1.AG - Demolitions of floor structures	792.32	25	8	31.69	4.0	-	-	D
31	1.AG - Demolitions of vertical load bearing structures	174.25	25	8	6.97	1.0	-	-	D
	GF - DEMOLITION WORKS								
32	GF - Demolitions of floor structures	944.50	25	8	37.78	5.0	-	-	D
33	GF - Demolitions of vertical load bearing structures	174.25	25	8	6.97	1.0	-	-	D
	1.UG - DEMOLITION WORKS								
34	1.UG - Demolitions of floor structures	1066.51	25	8	42.66	6.0	-	-	D
35	1.UG - Demolitions of vertical load bearing structures	762.10	25	8	30.48	4.0	-	-	D
36	1.UG - Demolitions of foudations	992.89	25	8	39.72	5.0	-	mini-excavator	D, OS
37	Cleaning after the first part of demolition works	662.25	10	8	66.23	9.0	-	-	D
	DISASSEMBLING OF BUILDING ENVELOPE								
38	Disassembling of building envelope	4957.52	29	8	170.95	22.0	-	-	D
39	Scaffolding	1079.90	10	8	107.99	14.0	-	-	L
40	Disassembling of scaffolding	605.87	10	8	60.59	8.0	-	-	L
2.S.P.	LOAD-BEARING CONSTRUCTION (FIRST PART)								
41	Mircopiled foundations	865.60	10.00	8	86.56	11.0	-	micropiles machine	D,OS
42	Grouting and insulation of the basement	829.80	10.00	8	82.98	11.0	-	micropiles machine	D, OS
43	Foundations	128.11	10.00	8	12.81	2.0	20/46	automix, crane+bucket	T,V,B,D
	1.UG - LOAD-BEARING STRUCTURES								
44	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete; clay masonry)	274.33	15.00	8	18.29	3.0	-	automix, pump	Z
	GF - LOAD-BEARING STRUCTURES								
45	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	494.49	15.00	8	32.97	5.0	-	automix, pump	Z
	1.AG - LOAD-BEARING STRUCTURES								
46	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	234.55	15.00	8	15.64	2.0	-	automix, pump	Z
	2.AG - LOAD-BEARING STRUCTURES								

47	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	234.55	15.00	8	15.64	2.0	-	automix, pump	Z
	3.AG - LOAD-BEARING STRUCTURES								
48	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	234.55	15.00	8	15.64	2.0	-	automix, pump	Z
	4.AG - LOAD-BEARING STRUCTURES								
49	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	234.55	15.00	8	15.64	2.0	-	automix, pump	Z
	5.AG - LOAD-BEARING STRUCTURES								
50	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	239.58	15.00	8	15.97	2.0	-	automix, pump	Z
	6.AG - LOAD-BEARING STRUCTURES								
51	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	201.38	15.00	8	13.43	2.0	-	automix, pump	Z
	7.AG - LOAD-BEARING STRUCTURES								
52	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	201.38	15.00	8	13.43	2.0	-	automix, pump	Z
	8.AG - LOAD-BEARING STRUCTURES								
53	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	185.76	15.00	8	12.38	2.0	-	automix, pump	Z
54	8.AG - Horizontal structures - formwork	14.42	2.00	8	7.21	1.0	-	-	T
55	8.AG - Horizontal structures - reinforcing	14.61	2.00	8	7.31	1.0	-	-	V
56	8.AG - Horizontal structures - concreting	5.65	1.00	8	5.65	1.0	7/57;28/237	automix, crane+bucket	B
57	8.AG - Horizontal structures - formwork removal	15.38	2.00	8	7.69	1.0	-	-	T
1.S.P.	**DEMOLITIONS OF LOAD-BEARING STRUCTURES (SECOND PART)**								
58	Disassembling of the staircase barrier	42.94	6	8	7.16	1.0	-	-	D
	7.AG - DEMOLITION WORKS								
59	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	434.23	25	8	17.37	3.0	-	-	D
	6.AG - DEMOLITION WORKS								
60	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	547.62	25	8	21.90	3.0	-	-	D
61	Demolitions of staircase	240.23	25	8	9.61	2.0	-	-	D
	5.AG - DEMOLITION WORKS								
62	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	599.83	25	8	23.99	3.0	-	-	D
63	Demolitions of staircase	240.23	25	8	9.61	2.0	-	-	D
	4.AG - DEMOLITION WORKS								
64	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	652.04	25	8	26.08	4.0	-	-	D
65	Demolitions of staircase	240.23	25	8	9.61	2.0	-	-	D
	3.AG - DEMOLITION WORKS								
66	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	652.04	25	8	26.08	4.0	-	-	D
67	Demolitions of staircase	240.23	25	8	9.61	2.0	-	-	D
	2.AG - DEMOLITION WORKS								
68	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	547.62	25	8	21.90	3.0	-	-	D
69	Demolitions of staircase	240.23	25	8	9.61	2.0	-	-	D
	1.AG - DEMOLITION WORKS								
70	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	538.80	25	8	21.55	3.0	-	-	D
71	Demolitions of staircase	249.06	25	8	9.96	2.0	-	-	D
	GF - DEMOLITION WORKS								
72	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	220.56	25	8	8.82	2.0	-	-	D
73	Demolitions of staircase	249.06	25	8	9.96	3.0	-	-	D
74	Demolitions of external staircase	20.31	6	8	3.39	1.0	-	-	D
	1.UG - DEMOLITION WORKS								
75	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	120.68	25	8	4.83	2.0	-	-	D
76	Demolitions of staircase	249.06	25	8	9.96	2.0	-	-	D
77	Cleaning after the second part of demolition works	662.25	10	8	66.23	9.0	-	-	D
2.S.P.	**LOAD-BEARING CONSTRUCTION (SECOND PART)**								
	1.UG - LOAD-BEARING STRUCTURES								
78	Columns - reinforcing of existing structures	1.68	2	8	0.84	1.0	-	-	V
79	Columns - formwork	4.58	2	8	2.29	1.0	-	-	T
80	Columns - concreting	0.12	1	8	0.12	1.0	1/81	automix, crane+bucket	B
81	Columns - formwork removal	2.57	2	8	1.29	1.0	-	-	T
82	Waterproof layers under load-bearing walls	177.61	15	8	11.84	2.0	-	-	D
83	Load-bearing masonry under the doubled floor	390.94	17	8	23.00	3.0	-	-	D
84	Floor compositon under doubled floor (insulations, foils, screed)	342.68	15	8	22.85	3.0	-	-	D
85	Doubled slab - formwork (permanent trapezoidal sheet)	125.90	8	8	15.74	2.0	-	-	V,D
86	Doubled slab - reinforcing (wire meshes)	51.10	8	8	6.39	1.0	-	-	V
87	Doubled slab - concreting	33.73	2	8	15.87	2.0	-	2x automix, crane+bucket, pump	B
88	Assembly of other steel load-bearing elements	2.06	2	8	1.03	1.0	-	-	V
89	Internal straight staircase - formwork	10.98	4	8	2.75	1.0	-	-	T
90	Internal straight staircase - reinforcing	7.74	4	8	1.94	1.0	-	-	V
91	Internal straight staircase - concrete	4.27	1	8	4.27	1.0	7/92;28/219	automix, crane+bucket	B
92	Internal straight staircase - formwork removal	5.33	2	8	2.67	1.0	-	-	T
93	Staircase landing - formwork	5.54	2	8	2.77	1.0	-	-	T
94	Staircase landing - reinforcing	10.15	2	8	5.08	1.0	-	-	V
95	Staircase landing - concrete	4.80	1	8	4.80	1.0	7/96;28/219	automix, crane+bucket	B
96	Staircase landing - formwork removal	2.77	2	8	1.38	1.0	-	-	T
97	Horizontal construction (slab) - formwork	85.63	12	8	7.14	1.0	-	-	T

98	Horizontal construction (slab) - reinforcing	174.69	12	8	14.56	2.0	-	-	V
99	Horizontal construction (slab) - concrete	48.10	2	8	24.05	4.0	7/100;28/219	2x automix, crane+bucket, pump	B
100	Horizontal construction (slab) - formwork removal	91.33	12	8	7.61	1.0	-	-	T
101	Placement of prefabricated staircase	12.30	4	8	3.08	1.0	-	-	D
	GF - LOAD-BEARING STRUCTURES								
102	Columns - reinforcing of existing structures	1.68	2	8	0.84	1.0	-	-	V
103	Columns - formwork	6.13	2	8	3.07	1.0	-	-	T
104	Columns - concreting	0.16	1	8	0.16	1.0	1/105	automix, crane+bucket	B
105	Columns - formwork removal	3.45	2	8	1.73	1.0	-	-	T
106	Assembly of other steel load-bearing elements	2.06	2	8	1.03	1.0	-	-	V
107	External staircase - formwork	30.04	4	8	7.51	1.0	-	-	T
108	External staircase - reinforcing	11.90	4	8	2.97	1.0	-	-	V
109	External staircase - concrete	7.60	1	8	7.60	1.0	1/110	automix, crane+bucket	B
110	External staircase - formwork removal	17.17	4	8	4.29	1.0	-	-	T
111	Staircase landing - formwork	5.54	2	8	2.77	1.0	-	-	T
112	Staircase landing - reinforcing	10.15	2	8	5.08	1.0	-	-	V
113	Staircase landing - concrete	4.80	1	8	4.80	1.0	7/114;28/221	automix, crane+bucket	B
114	Staircase landing - formwork removal	5.90	2	8	2.95	1.0	-	-	T
115	Horizontal construction (slab) - formwork	63.43	8	8	7.93	1.0	-	-	T
116	Horizontal construction (slab) - reinforcing	82.44	6	8	13.74	2.0	-	-	V
117	Horizontal construction (slab) - concrete	35.09	2	8	17.54	3.0	7/118;28/221	2x automix, crane+bucket, pump	B
118	Horizontal construction (slab) - formwork removal	62.35	8	8	7.79	1.0	-	-	T
119	Placement of prefabricated staircase	7.80	4	8	1.95	1.0	-	-	D
	1.AG - LOAD-BEARING STRUCTURES								
120	Columns - reinforcing of existing structures	8.19	2	8	4.10	1.0	-	-	V
121	Columns - formwork	6.13	2	8	3.07	1.0	-	-	T
122	Columns - concreting	3.63	1	8	3.63	1.0	1/123	automix, crane+bucket	B
123	Columns - formwork removal	3.45	2	8	1.73	1.0	-	-	T
124	Assembly of other steel load-bearing elements	2.06	2	8	1.03	1.0	-	-	V
125	Staircase landing - formwork	5.54	2	8	2.77	1.0	-	-	T
126	Staircase landing - reinforcing	10.15	2	8	5.08	1.0	-	-	V
127	Staircase landing - concrete	4.80	1	8	4.80	1.0	7/128;28/223	automix, crane+bucket	B
128	Staircase landing - formwork removal	5.90	2	8	2.95	1.0	-	-	T
129	Horizontal construction (slab) - formwork	67.63	8	8	8.45	2.0	-	-	T
130	Horizontal construction (slab) - reinforcing	212.44	10	8	21.24	3.0	-	-	V
131	Horizontal construction (slab) - concrete	43.47	2	8	21.73	3.0	7/132;28/223	2x automix, crane+bucket, pump	B
132	Horizontal construction (slab) - formwork removal	72.13	8	8	9.02	2.0	-	-	T
133	Placement of prefabricated staircase	7.80	4	8	1.95	1.0	-	-	D
	2.AG - LOAD-BEARING STRUCTURES								
134	Columns - reinforcing of existing structures	1.68	2	8	0.84	1.0	-	-	V
135	Columns - formwork	7.67	2	8	3.84	1.0	-	-	T
136	Columns - concreting	1.48	1	8	1.48	1.0	1/137	automix, crane+bucket	B
137	Columns - formwork removal	4.31	2	8	2.16	1.0	-	-	T
138	Assembly of other steel load-bearing elements	2.06	2	8	1.03	1.0	-	-	V
139	Staircase landing - formwork	5.54	2	8	2.77	1.0	-	-	T
140	Staircase landing - reinforcing	10.15	2	8	5.08	1.0	-	-	V
141	Staircase landing - concrete	4.80	1	8	4.80	1.0	7/142;28/225	automix, crane+bucket	B
142	Staircase landing - formwork removal	5.90	2	8	2.95	1.0	-	-	T
143	Horizontal construction (slab) - formwork	64.32	10	8	6.43	1.0	-	-	T
144	Horizontal construction (slab) - reinforcing	205.65	10	8	20.57	3.0	-	-	V
145	Horizontal construction (slab) - concrete	42.36	2	8	21.18	3.0	7/146;28/225	2x automix, crane+bucket, pump	B
146	Horizontal construction (slab) - formwork removal	68.60	10	8	6.86	1.0	-	-	T
147	Placement of prefabricated staircase	7.80	4	8	1.95	1.0	-	-	D
	3.AG - LOAD-BEARING STRUCTURES								
148	Columns - reinforcing of existing structures	1.68	2	8	0.84	1.0	-	-	V
149	Columns - formwork	7.67	2	8	3.84	1.0	-	-	T
150	Columns - concreting	1.48	1	8	1.48	1.0	1/151	automix, crane+bucket	B
151	Columns - formwork removal	4.31	2	8	2.16	1.0	-	-	T
152	Assembly of other steel load-bearing elements	2.06	2	8	1.03	1.0	-	-	V
153	Staircase landing - formwork	5.54	2	8	2.77	1.0	-	-	T
154	Staircase landing - reinforcing	10.15	2	8	5.08	1.0	-	-	V
155	Staircase landing - concrete	4.80	1	8	4.80	1.0	7/156;28/227	automix, crane+bucket	B
156	Staircase landing - formwork removal	5.90	2	8	2.95	1.0	-	-	T
157	Horizontal construction (slab) - formwork	64.32	10	8	6.43	1.0	-	-	T
158	Horizontal construction (slab) - reinforcing	117.52	8	8	14.69	2.0	-	-	V
159	Horizontal construction (slab) - concrete	42.36	2	8	21.18	3.0	7/160;28/227	2x automix, crane+bucket, pump	B
160	Horizontal construction (slab) - formwork removal	68.60	10	8	6.86	1.0	-	-	T
161	Placement of prefabricated staircase	7.80	4	8	1.95	1.0	-	-	D
	4.AG - LOAD-BEARING STRUCTURES								
162	Columns - reinforcing of existing structures	1.68	2	8	0.84	1.0	-	-	V
163	Columns - formwork	7.67	2	8	3.84	1.0	-	-	T
164	Columns - concreting	1.48	1	8	1.48	1.0	1/165	automix, crane+bucket	B
165	Columns - formwork removal	4.31	2	8	2.16	1.0	-	-	T
166	Assembly of other steel load-bearing elements	2.06	2	8	1.03	1.0	-	-	V
167	Staircase landing - formwork	5.54	2	8	2.77	1.0	-	-	T
168	Staircase landing - reinforcing	10.15	2	8	5.08	1.0	-	-	V

169	Staircase landing - concrete	4.80	1	8	4.80	1.0	7/170;28/229	automix, crane+bucket	B
170	Staircase landing - formwork removal	5.90	2	8	2.95	1.0	-	-	T
171	Horizontal construction (slab) - formwork	64.32	10	8	6.43	1.0	-	-	T
172	Horizontal construction (slab) - reinforcing	205.65	10	8	20.57	3.0	-	-	V
173	Horizontal construction (slab) - concrete	42.36	2	8	21.18	3.0	7/174;28/229	2x automix, crane+bucket, pump	B
174	Horizontal construction (slab) - formwork removal	68.60	10	8	6.86	1.0	-	-	T
175	Placement of prefabricated staircase	7.80	4	8	1.95	1.0	-	-	D
	5.AG - LOAD-BEARING STRUCTURES								
176	Columns - reinforcing of existing structures	1.68	2	8	0.84	1.0	-	-	V
177	Columns - formwork	7.67	2	8	3.84	1.0	-	-	T
178	Columns - concreting	1.48	1	8	1.48	1.0	1/179	automix, crane+bucket	B
179	Columns - formwork removal	4.31	2	8	2.16	1.0	-	-	T
180	Assembly of other steel load-bearing elements	2.06	2	8	1.03	1.0	-	-	V
181	Staircase landing - formwork	5.54	2	8	2.77	1.0	-	-	T
182	Staircase landing - reinforcing	10.15	2	8	5.08	1.0	-	-	V
183	Staircase landing - concrete	4.80	1	8	4.80	1.0	7/184;28/231	automix, crane+bucket	B
184	Staircase landing - formwork removal	5.90	2	8	2.95	1.0	-	-	T
185	Horizontal construction (slab) - formwork	62.44	10	8	6.24	1.0	-	-	T
186	Horizontal construction (slab) - reinforcing	205.65	10	8	20.57	3.0	-	-	V
187	Horizontal construction (slab) - concrete	40.89	2	8	20.44	3.0	7/187;28/231	2x automix, crane+bucket, pump	B
188	Horizontal construction (slab) - formwork removal	66.61	10	8	6.66	1.0	-	-	T
189	Placement of prefabricated staircase	7.80	4	8	1.95	1.0	-	-	D
	6.AG - LOAD-BEARING STRUCTURES								
190	Columns - reinforcing of existing structures	1.68	2	8	0.84	1.0	-	-	V
191	Columns - formwork	7.67	2	8	3.84	1.0	-	-	T
192	Columns - concreting	1.29	1	8	1.29	1.0	1/193	automix, crane+bucket	B
193	Columns - formwork removal	0.18	2	8	0.09	1.0	-	-	T
194	Assembly of other steel load-bearing elements	2.06	2	8	1.03	1.0	-	-	V
195	Staircase landing - formwork	5.54	2	8	2.77	1.0	-	-	T
196	Staircase landing - reinforcing	10.15	2	8	5.08	1.0	-	-	V
197	Staircase landing - concrete	4.80	1	8	4.80	1.0	7/198;28/233	automix, crane+bucket	B
198	Staircase landing - formwork removal	5.90	2	8	2.95	1.0	-	-	T
199	Horizontal construction (slab) - formwork	49.78	8	8	6.22	1.0	-	-	T
200	Horizontal construction (slab) - reinforcing	181.00	10	8	18.10	3.0	-	-	V
201	Horizontal construction (slab) - concrete	32.39	2	8	16.00	2.0	7/202;28/233	2x automix, crane+bucket, pump	B
202	Horizontal construction (slab) - formwork removal	53.10	8	8	6.64	1.0	-	-	T
203	Placement of prefabricated staircase	7.80	4	8	1.95	1.0	-	-	D
	7.AG - LOAD-BEARING STRUCTURES								
204	Columns - reinforcing of existing structures	1.68	2	8	0.84	1.0	-	-	V
205	Columns - formwork	3.06	2	8	1.53	1.0	-	-	T
206	Columns - concreting	0.59	1	8	0.59	1.0	1/206	automix, crane+bucket	B
207	Columns - formwork removal	1.72	2	8	0.86	1.0	-	-	T
208	Assembly of other steel load-bearing elements	2.06	2	8	1.03	1.0	-	-	V
209	Staircase landing - formwork	5.54	2	8	2.77	1.0	-	-	T
210	Staircase landing - reinforcing	10.15	2	8	5.08	1.0	-	-	V
211	Staircase landing - concrete	4.80	1	8	4.80	1.0	7/212;28/235	automix, crane+bucket	B
212	Staircase landing - formwork removal	5.90	2	8	2.95	1.0	-	-	T
213	Horizontal construction (slab) - formwork	28.18	6	8	4.70	1.0	-	-	T
214	Horizontal construction (slab) - reinforcing	131.71	10	8	13.17	2.0	-	-	V
215	Horizontal construction (slab) - concrete	18.36	2	8	9.18	2.0	7/216;28/235	2x automix, crane+bucket, pump	B
216	Horizontal construction (slab) - formwork removal	25.56	6	8	4.26	1.0	-	-	T
217	Placement of prefabricated staircase	12.60	4	8	3.15	1.0	-	-	D
	DISPLACEMENT OF TEMPORARY SUPPORTING BEAMS								
218	50% removal 1.UG	47.55	6	8	7.93	1.0	-	-	D
219	Complete removal - 1.UG	47.55	6	8	7.93	1.0	-	-	D
220	50% removal - GF	28.95	4	8	7.24	1.0	-	-	D
221	Complete removal - GF	28.95	4	8	7.24	1.0	-	-	D
222	50% removal 1.AG	33.75	5	8	6.75	1.0	-	-	D
223	Complete removal - 1.AG	33.75	5	8	6.75	1.0	-	-	D
224	50% removal 2.AG	32.10	5	8	6.42	1.0	-	-	D
225	Complete removal - 2.AG	32.10	5	8	6.42	1.0	-	-	D
226	50% removal 3.AG	32.10	5	8	6.42	1.0	-	-	D
227	Complete removal - 3.AG	32.10	5	8	6.42	1.0	-	-	D
228	50% removal 4.AG	32.10	5	8	6.42	1.0	-	-	D
229	Complete removal - 4.AG	32.10	5	8	6.42	1.0	-	-	D
230	50% removal 5.AG	31.20	4	8	7.80	1.0	-	-	D
231	Complete removal - 5.AG	31.20	4	8	7.80	1.0	-	-	D
232	50% removal 6.AG	24.90	4	8	6.23	1.0	-	-	D
233	Complete removal - 6.AG	24.90	4	8	6.23	1.0	-	-	D
234	50% removal 7.AG	14.10	2	8	7.05	1.0	-	-	D
235	Complete removal - 7.AG	14.10	2	8	7.05	1.0	-	-	D
236	50% removal 8.AG	7.20	2	8	3.60	1.0	-	-	D
237	Complete removal - 8.AG	7.20	2	8	3.60	1.0	-	-	D
3.S.P.	**EARTH WORKS (Only for manhole placement)**								
238	Geodetic works	1.60	2	8	0.80	1.0	-	-	G
239	Demolition of existing road structure and excavation	339.86	10	8	33.99	5.0	-	excavator, truck	D, OS
240	Instalation of the manhole and pipelines	98.26	5	8	19.65	3.0	-	excavator	D, OS

241	Backfill of the excavation and new layers of road structure	330.11	10	8	33.01	5.0	-	excavator	D, OS
4.S.P.	**ROOFING AND TERRACES**								
242	Temporary waterproof foil and roof drainage	118.40	8	8	14.80	2.0	-	-	D
243	Waterproof layers (8.AG)	16.40	3	8	5.47	1.0	-	-	D
244	Composition of the roof layers (8.AG)	64.00	3	8	21.33	3.0	-	-	D
245	Waterproof layers (7.AG)	122.70	3	8	40.90	6.0	-	-	D
246	Composition of the roof layers (7.AG)	806.89	8	8	100.86	13.0	-	-	D
251	Roofing for shaft (8.AG)	16.41	2	8	8.20	2.0	-	-	D
252	Waterproof layers - terraces (5.-6.AG)	179.78	8	8	22.47	3.0	-	-	D
253	Composition of the roof layers (5.AG - 7.AG)	600.45	8	8	75.06	10.0	-	-	D
254	Steel supporting construction for ventilation units	129.20	5	8	25.84	4.0	-	-	D
255	Montage of external ventilation unit	45.28	4	8	11.32	2.0	-	-	D
256	Lightning conductor	404.51	10	8	40.45	6.0	-	-	H
257	Metal roofing elements	119.83	6	8	19.97	3.0	-	-	K
258	Parapet wall - facade joining	179.66	6	8	29.94	4.0	-	-	D
259	Parapet wall (8.AG)	94.19	4	8	23.55	3.0	-	-	D
5.S.P.	**INTERNAL PARTIONS AND INSTALATION WIRING**								
260	Water and sewer systel - piping	1615.37	10	8	161.54	21.0	-	-	IN
261	Ventilation - piping (GF - 7.UG)	1344.16	10	8	134.42	17.0	-	-	VZ
262	Ventilation - piping (1.UG)	1392.10	10	8	139.21	18.0	-	-	VZ
263	Internal partitions (Masonry walls)	364.94	6	8	60.82	9.0	-	-	Z
264	MAR - wiring	899.28	10	8	89.93	12.0	-	-	EL
265	Electrical wiring (High voltage)	1659.15	10	8	165.92	21.0	-	-	EL
266	Fire alarm system	325.08	5	8	65.02	10.0	-	-	EL
267	Electrical wiring (Low voltage)	3334.60	20	8	166.73	21.0	-	-	EL
268	AVT - wiring	47.96	6	8	7.99	1.0	-	-	EL
269	Permanent sprinkler system - piping, wiring	173.50	3	8	57.83	10.0	-	-	EL
270	Ground parapet wall	74.63	4	8	18.66	3.0	-	-	Z
6.S.P.	**INTERNAL PLASTERING AND BASE LAYERS OF THE FLOOR COMPOSITIONS**								
271	Door frames	276.15	4	8	69.04	10.0	-	-	D
272	Rehabilitation, reparations and screeding of surfaces	86.20	4	8	21.55	3.0	-	-	O
273	Concrete wall screeds	247.93	10	8	24.79	9.0	20/322,278,307,293	-	O
274	Internal plasters	540.46	4	8	135.11	20.0	20/322,278,307,293	platering machine set	O, OS
275b	Piping and wiring in floors	2667.08	17	8	156.89	20.0	-	-	EL, TO, IN
7.S.P.	**COMPLETION OF ROUGH FLOORS AND INTERNAL SURFACES AND TECHNOLOGIES**								
276	Concrete floor srceeds	388.43	2	8	194.22	24.0	2/278;20/322,293	automix, pump	D, OS
277	Montage of lifts	529.98	4	8	132.50	20.0	-	-	VY
278	Plasterboard walls	4192.34	21	8	199.64	26.0	-	-	SDK
279	Plasterboard parapet walls	1154.72	11	8	104.97	14.0	-	-	SDK
275a	Piping and wiring in ceilings	742.11	11	8	67.46	9.0	-	-	EL, VZ, IN
280	Sanitary instalations in walls	1075.16	7	8	153.59	20.0	-	-	IN, SDK
281	Heating facility	297.19	5	8	59.44	9.0	-	-	TO
282	Door frames to plasterboard walls	756.63	11	8	68.78	9.0	-	-	SDK
283	Fanlights and internal windows	121.60	2	8	60.80	9.0	-	-	D
284	Ventilation elements (1.UG)	648.66	10	8	64.87	9.0	-	-	VZ
285	Ventilation elements (GF - 7.AG))	1525.91	11	8	138.72	18.0	-	-	VZ
286	Plasterboard ceilings	396.49	5	8	79.30	10.0	-	-	SDK
287	Aluminium grid ceiling	3104.28	20	8	155.21	18.0	-	-	D
288	Wooden ceilings (1.UG)	128.64	4	8	32.16	5.0	-	-	TR
289	Others (fire rollers, intenal canopies)	112.61	2	8	56.30	9.0	-	-	D
290	Opening covers	101.76	2	8	50.88	9.0	-	-	D
8.S.P.	**COMPLETION OF TECHNICAL EQUIPMENT, COMPLETION WORKS AND FINAL SURFACES**								
291	Self-leveling floor screeding	1050.63	7	8	150.09	21.0	2/292	-	P
292	Epoxy floor (walking surface)	1334.88	8	8	166.86	19.0	2/293,294,295	-	P
293	Internal thermo-insulation system	412.17	10	8	41.22	6.0	-	-	IZ
294	Fire safety cladding	1028.64	15	8	68.58	9.0	-	-	IZ
295	MAR - completion (1.UG)	59.57	4	8	14.89	2.0	-	-	EL
296	MAR - completion (GF - 7.AG)	370.53	6	8	61.76	8.0	-	-	EL
297	Electrical wiring (High voltage) - completion	2242.10	14	8	160.15	21.0	-	-	EL
298	Fire alarm system - comletion	148.50	6	8	24.75	4.0	-	-	EL
299	Electrical wiring (Low voltage) - completion	579.81	8	8	72.48	9.0	-	-	EL
300	AVT - completion	49.83	7	8	7.12	1.0	-	-	EL
301	Permanent sprinkler system - completion	21.45	3	8	7.15	1.0	-	-	EL
302	Wooden floors (walking surface)	1639.36	12	8	136.61	18.0	-	-	TR
303	Acoustic surfaces (tiling)	1059.51	15	8	70.63	9.0	-	-	IZ
304	-	-	-	-	-	-	-	-	TR
305	Acoustic measurement	20.00	4	8	5.00	1.0	-	-	-
305	Wall painting (washable)	125.65	4	8	31.41	4.0	-	-	N
306	Locksmith (steel) items	869.31	12	8	72.44	10.0	-	-	MO
307	Wall painting (common)	450.67	6	8	75.11	10.0	-	-	N
308	Resrtrooms - equipment	269.83	10	8	26.98	4.0	-	-	MO
309	Internal wooden walls	53.31	8	8	6.66	1.0	-	-	TR
310	Internal glazed walls	236.26	8	8	29.53	4.0	-	-	MO
311	Carpet zones	36.30	5	8	7.26	1.0	-	-	D
312	Placement of doors and gates	121.60	8	8	15.20	2.0	-	-	D
313	Carousels and accessories	44.39	4	8	11.10	2.0	-	-	MO
314	Gastronomic equipment	29.00	4	8	7.25	1.0	-	-	MO
9.S.P.	**BUILDING ENVELOPE (FACADE)**								

315	Erecting of masonry perapet wall	104.19	6	8	17.37	3.0	-	-	D
316	Placement of facade panels (windows)	54.40	1	8	54.40	7.0	-	-	J/S
317	Glazing - flush facade (GF)	219.93	6	8	36.65	5.0	-	-	S
318	Glazing - flush facade (8.AG)	41.97	4	8	10.49	2.0	-	-	S
319	Facade metal sheet tiling (8.AG)	102.00	4	8	25.50	4.0	-	-	D
320	Montage of louvres	147.05	4	8	36.76	5.0	-	-	D
321	Montage of steel facade supporting grid	2001.00	20	8	100.05	13.0	-	-	D
322	Thermal insulation and waterproof layer of parapet walls	1373.73	20	8	68.69	9.0	-	-	D
323	Masonry venner wall (ventilated facade)	1769.00	20	8	88.45	12.0	-	-	D
324	Metal facade elements	427.62	10	8	42.76	6.0	-	-	K
325	Facade clocks	16.00	2	8	8.00	1.0	-	-	D
10.S.P.	**ACCEPTANCE OF CONSTRUCTION - BUILDING APPROVAL**								
326	Building approval	8.00	1	8	8.00	1.0	-	-	-
327	Acceptance of construction - handover	8.00	1	8	8.00	1.0	-	-	-

4.3 Health and safety plan

The plan is prepared in accordance with Act No. 309/2006 Coll. And Government Regulation No. 591/2006 Coll. H&S plan draws attention to the specific health and safety requirements for the particular construction site.

The H&S plan is in accordance with Czech law and contains 31 pages. Due to this fact the whole H&S plan has not been translated. Translated has been the content and the most important parts. The document below contains enough to explain requirements on H&S in Czech Republic and it describes measures necessary to decrease the risks on the construction site.

TECHNICAL REPORT

Health and safety plan

NOVÁ RADNICE PRO PRAHU 7

U PRŮHONU 1338/38, PRAHA 7

FSV – ČV□T

ETSIE – □PV

Bc. Michal Bartoš

Diploma thesis

2017/2018

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1 Identification data

Investor:
District of Prague 7
IČO: 045 98 261
Osadní 799/26, 170 00 Praha 7
Name of the Construction:
Change of existing building:
New Town Hall for Prague 7
U Průhonu 1338/38, 170 00 Praha 7

H &S coordinator in the preparation phase:
CONTRACTIS, s.r.o.
IČO: 257 27 737
Moulíkova 3286/1b, 150 00 Praha 5
Ing. Stanislav Sobola

Project documentation:
Documentation for realization of the construction
03/2017
Deltaplan spol. s r.o.,
Jankovcova 1522/53, 170 00 Praha 7
Ing. Pavel Štěpán 603 442 609
Ing.arch.Luděk Přenosil - ČKA 00364 602 210 212

General contractor:
Not known yet – after tender

Person providing professional management of the building:
Not known yet – after tender

Project manager:
CONTRACTIS, a.s.
IČO: 257 27 737
Moulíkova 3286/1b, 150 00 Praha 5
Ing. Tomáš Mrkvan
tomas.mrkvan@contractis.cz
724 891 470

2 Schedule

Stage	Issue	Date (month/year)
1.	Site preparation	9/2017
2.	Internal demolitions, modification of supporting structure, rough internal building and assembly work	9/2017-10/2018
3.	Dismantling of the façade, installing a new façade, roofing, yard reconstruction	8/2018-1/2019
4.	Completion, assembly, internal works	10/2018-1/2019

3 Contac details

Profession	Company	Name	Phone number	E-mail
Investor	Městská část Praha 7	Pavel Zelenka	602 435 888	
Investor				
Project manager	CONTRACTIS s.r.o.	Ing. Tomáš Mrkvan	724 891 470	tomas.mrkvan@contractis.cz
Designer	Deltaplan spol. s r.o.	Ing. Pavel Štěpán	603 442 609	
Designer	Deltaplan spol. s r.o.	Ing.arch.Luděk Přenosil	602 210 212	
General contractor				
H &S coordinator	CONTRACTIS s.r.o.	Ing. Stanislav Sobola	732807763	stanislav.sobola@contractis.cz

3.1 Important telephone numbers

Emergency service	Telephone number:
Fire brigade	150
Ambulance	155
Police	158
Integrated rescue system	112
Regional Labour Inspectorate	950 179 333
Sanitary station	235 365 828

4 General information

The plan is prepared in accordance with Act No. 309/2006 Coll. And Government Regulation No. 591/2006 Coll. The plan is prepared for the construction **New Town Hall for Prague 7**.
H&S plan draws attention to the specific health and safety requirements for the particular construction site.
Respecting the H&S plan (hereinafter referred to as the "Plan") is mandatory for each contractor and generally everybody occurring on the construction site. The plan sets out the basic conditions to ensure occupational safety and health at work. The plan must be adapted to the actual phase of the construction and changes during the construction. With each change, the persons involved in the construction will be provably acquainted without undue delay.
The planned volume of work and activities on the construction site during the realization of the project exceeds 500 working days per person. Total estimated number of working days, in which more than 20 people occurre on the construction site, is longer than 30 days. According to § 15 of Act No. 309/2006 Coll. the contracting authority is obliged to deliver a notification of the start of work to the Regional Labor Inspectorate at least 8 days before the site is handed over to the contractor.

4.1 Proposal of H &S plan according to law

Works and activities that expose a worker to an increased threat to life or health damage will be **performed** on the site:

Legislation	Risk work	Concern
point 1	Works exposing workers to the risk of damage to health or death by landslide of released soil in a trench depth of more than 5 m	no
point 2	Works containing the use of hazardous highly toxic chemicals and of biological mixtures according to special regulations	no
point 3	Works with sources of ionizing radiation	no

point 4	Works above or near water associated with the immediate danger of drowning	no
point 5	**Works in which is a risk of falling from a height or free depth of more than 10 m**	**yes**
point 6	**Works performed in protection zones of power lines, technical equipment**	**yes**
point 7	Well-drilling, earthworks or micro-tunneling from underground work, tunneling work	no
point 8	Diving works	no
point 9	Works performed in increased air pressure (keson)	no
point 10	Works containing the use of explosives	no
point 11	Works connected with assembly and disassembly of heavy structural components of metal, concrete and wood intended for permanent installation in buildings	no

On the construction site will be performed works and activities that expose a worker to an increased threat to life or damage to health, which are contained in Annex 5 to Government regulation No. 591/2006 Coll. **Regarding to this fact a creating of the plan is mandatory!**

Workers on the construction site will be introduced to the plan on arrival at the workplace…. They will get explanation about the assessment of the risks to the potential safety and health hazards. The site manager is supposed to explain the instructions.

Leading person of each subcontractor is responsible for his employees and their respecting the plan.

4.2 Nomination of H&S coordinator according to law

There will be more than one contractor on the construction site. Due to this fact is there an obligation to determine the required number of health and safety coordinators. This is all in accordance with Law No. 309/2006 Coll. §14. The representative authority of investor is obliged to contractually commit all concerned contractors to cooperate with the H&S coordinator. Respect his suggestions, proposals and removals of the identified defects and deficiencies.

5 Construction description

The building after reconstruction will serve as an administrative building. Building will be used as headquarter building of District of Prague 7. The main constructions are described in the third chapter of this diploma thesis.

The construction consists of the following objects:

CO 110 – Main building reconstruction

CO 320 – Reconstruction of paved areas

CO 340 – Outdoor landscaping

6 Construction site data

Title: New town hall for Prague 7
Type of construction: Reconstruction of administrative building
Address: U Průhonu 1338/38, 170 00 Praha 7

Built-up area: 653 m^2

6.1 Number of floors: 9 above ground + 1 underground Protective zones

On the land of construction site:
…list of protective zones…

Near the land of construction site:
…list of protective zones…

6.1.1 Electricity Act No.458/2000 Coll.

…regulations for activities in the protective zones of electricity…

6.1.2 Gas Industry Act No.458/2000 Coll.

The protective zone is area near gas industry objects. The measures are:

Protective zones:

a)	gas pipelines in the buil-up area	1 m
b)	other gas pipelines	4 m
c)	technological objects	4 m

6.1.3 Water supply, Sewerage Act No.274/2001 Coll.

The protective zone includes a space on both sides of the pipeline. The boundaries of the zone are defined by the outer edge of the pipeline:

a)	water distribution		
		up to diameter 500 mm	1,5 m
		above diameter 500 mm	2,5 m
b)	sewerage	up to diameter 500 mm	1,50 m
		above diameter 500 mm	2,50 m

6.1.4 Ground communications Act No.13/1997 Coll.

The construction site can not occupy public roads and affets public transport without permission. There are no special protective zones of ground communication.

6.2 Construction site

The construction site is located in the courtyard behind the building. It is accessible from the street U Průhonu in Prague 7 Holešovice. Land no.881 (c.o. Praha-Holešovice) with an area of 1452 m^2 is on a flat land. Area of 653 m^2 is built-up by the existing building and remaining 799 m^2 exists as courtyard and access road to the courtyard. The construction site will be fenced (required height of the fence ia 1,8m) and equipped with warning and information signs such as "no entry", "no entry to the site" or "entry disabled" to prevent unauthorized access to the site.

Construction site is equipped by first aid kid and fire protection equipment - fire extinguishers.

An announcement of the permission for the works and the sign "building allowed" will be visibly located at the construction site.

Smoking drinking alcohol and taking drugs is not allowed in the construction site. There will be one smoking area marked by appropriate sings "Smoking permitted".

All persons occurring in the construction site have to respect all the warning sings in the area.

A first-aid kit will always be available on the construction site. The contents of the first aid kit are determined by a competent person in the risk prevention.

Another important information about the construction site are available in the document “Technical report: Proposal of the construction site”.

6.3 Transport solution

The building is reachable from U Průhonu Street, Praha 7. There is also the road to courtyard where the site is located.

Estimated traffic routes: Entrance: st. Argentinská – st. U Průhonu
Exit: st. U Průhonu - st. Argentinská

6.4 Protection against noise and vibration

Noisy and demolition works will be performed only on working days from 7 am to 21 pm and on weekends from 8 am to 4 pm.

Contractors are obligated to use appropriate methods and machines to eliminate disturbing of surroundings of construction site.

6.5 Protection against air pollution by exhaust gases and dust

Excessive increase of dust in the construction site and its surroundings affected by the construction will be eliminated by the following measures:

- Contractors are obligated to use appropriate methods and machines to eliminate disturbing of surroundings of construction site.
- Bulk material will be cover during transport and storage.
- Demolition works causing excessive increase of dust will be performed with appropriate attention to eliminate the risk and methods. (showering, covering, …)

6.6 Waste management

Waste has to be ecologicaly treated and spared according to § 79 of Law No. 185/2001 Sb., about waste, and another laws and regulations.

6.7 Temporary structures

Temporary construction is for example, scaffolding, supporting and support structures.

All the temporary constructions must meet all the conditions given by the National regulation No. 362/2005 Coll., Annex, Part VII:

…list of rules…

7 Workflow

Before the reconstruction starts, all engineering and technological networks will be identified and marked. The construction will be performed in accordance with created Construction schedule and Time-space graph.

7.1 Building dismantling

Major part of whole building will be dismantled. From the existing structures will be preserved the main load-bearing structure and foundations.
The main constructions are described in the third chapter of this diploma thesis.

7.2 Reconstruction

The main constructions are described in the third chapter of this diploma thesis.

8 List of technologies, crafts and activities and risk identification on site, recommended measures

8.1 Moving around the site

There are general risks arising from moving around the construction site. The risk is especially the conflict of people with constructing mechanization. The main measure is to use reflective vests (reflective jackets), limit the speed of traffic in and around the construction site. All workers will be equipped with work shoes to prevent foot injuries. These risks apply to all persons on the site.

Other hazards include sprains, slipping, stumbling, falling. Measures are: use of protective working footwear with anti-slip soles, maintenance and cleaning of the site, removing of obstacles.

There are also hazards which are dependent on weather conditions.

8.2 Site security, approaches

Site security, including site equipment, will be checked daily by the contractor. The construction site will be secured against unauthorized entry.

8.3 Devices for power distribution

Temporary electrical equipment on the site must meet standard requirements and must be cheked in periodic inspections and revisions at specified intervals. <u>The main switch of the electrical equipment must be located so that it is easily accessible and must be marked and secured.</u>

8.4 Engineering networks

Before the reconstruction starts, all engineering and technological networks will be identified, marked, and relevant contractor employees will be familiarized with their location.

8.5 Storage area

The storage areas must be straight, drained and reinforced,…..

8.6 Demolition works

The demolition works may only be performed according to the technological procedure available in the demolition documentation. The dismantling works will be done manually and there will be no mechanization to avoid collision. Structures will be demolished by mechanization, there will be no persons in the operating area of the mechanization.

Before the demolition work starts, the endangered area will be identified and secured against unauthorized entry. The building will be disconnected from all technical networks (gas, electricity, water supply).

8.7 Concrete works

The concrete works may only be performed according to the technological procedure available in the implementing documentation. The safety requirements available in the implementing documentation must be respected during the work.

8.8 Transport and installation of heavy structural components

During the realization of the construction work will be used the lifting equipment (crane) for transportation and installation of heavy structural components.

The works with heavy structural components may only be performed according to the technological procedure available in the implementing documentation. The safety requirements available in the implementing documentation must be respected during the work.

8.9 Work related to the assembly and disassembly of heavy structural components

During the realization of the construction work will be used the lifting equipment (crane) for transportation, assembly and disassembly of heavy structural components.

The works with heavy structural componenents may only be performed according to the technological procedure available in the implementing documentation. The safety requirements available in the implementing documentation must be respected during the work.

8.10 Bricklaying

The bricklaying can be performed by using scaffolding. The bricklaying works may only be performed according to the technological procedure available in the implementing documentation. The safety requirements available in the implementing documentation must be respected during the work.

8.11 Work on ladder

Only short-term, physically easy works with hand tools can be done on the ladder. The works on ladder may only be performed according to the technological procedure available in the implementing documentation. The safety requirements available in the implementing documentation must be respected during the work.

8.12 Work on scaffolding

Assembly and disassembly of the scaffolding must be performed according to the instructions and only under the supervision of a person professionally qualified for this activity. The works on scaffolding may only be performed according to the technological procedure available in the implementing documentation. The safety requirements available in the implementing documentation must be respected during the work.

8.13 Work at heights and above free depth

Works at workplaces where the worker is at a height of 1.5 m above the ground (stage) level. Workers working at heights must wear appropriate PPE. The works at heights and above free depth may only be performed according to the technological procedure available in the implementing documentation. The safety requirements available in the implementing documentation must be respected during the work.

8.14 Welding, cutting and grinding

Welding, cutting and grinding works may only be performed according to the technological procedure available in the implementing documentation. The safety requirements available in the implementing documentation must be respected during the work.

8.15 Construction works and vehicle movement

There are risks of pushing and trapping of worker when collision with the machine, loss of machine stability and overturning, machine overload, failure.

8.16 Work with hand tools and small machines

Risks include hurting some parts of a body by parts of tools, especially by a rotating tool. In particular, there can happen injuries such as cutting, stabbing, crushing, bruising. Other dangers are dustiness and excessive noise and vibrations.

Risks can be limited by appropriate selection of tools, by proper use according to the instructions. Before using the machine, the contractor will familiarize the workers with a working conditions that have an impact on safety.

Risks will be eliminated by the usage of appropriate PPEs, especially working shoes, work gloves, safety glasses, and hearing protection.

To eliminate all risks will be used primarily collective protection. If it is not possible, it will be necessary to use peronal PPE.

Employer's obligation is to identify and minimize risks during working at the construction site.

9 Coordination of activities – for the construction phase

There will be more than one contractor on the construction site. Due to this fact is there an obligation to determine the required number of health and safety coordinators. For this construction is enough to nominate just one H&S coordinator.
The coordinator shall update the plan in the preparation phase and during the implementation phase of the construction. The update will be based on the timetable of the general contractor, contractor´s risks and their technological procedures.
All changes, like changes in time schedule or technological procedures is necessary to consult with the coordinator.

The coordinator will monitor work on the site with a focus on identifying whether the health and safety requirements at work are being followed. He will highlight the contractor's identified mistakes. The coordinator will make an inventory of the deficiencies identified in safety and health at work.

9.1 Coordination of work procedures

Coordination of influencing work will be performed on the construction site by their departments, especially regarding to space and time requirement, to avoid any risk to workers in the performed activities. The contractor, in coordination with the coordinator, will take the necessary measures in connection with the construction schedule to perform work and activities so that work is coordinated with regard to safety and health at work without risk of danger to one another, or take other necessary measures.

9.2 Obligation of contractors to reduce security risks

The contractor is obliged to cooperate with the H&S coordinator during the whole construction process and also when updating the plan.

10 PPE

All persons occurring at the construction site are required to use at least the minimum personal protective equipment - a reflective vest (reflective jacket), work shoes with antiskid sole, protective helmet.

The required personal protective equipment for individual activities and construction processes is specified in the list of risks and technological procedures of individual construction processes.

For example the following: working clothes, reflective jacket (reflective vest), work shoes with S3 anti-slip sole, working gloves (suitable for carrying out activities), protective helmets, hearing aids (earphones, earplugs), eye protection (spectacles, respirators, personal protective equipment against falling, etc.

Persons working without PPE are unwanted on the construction site.

Pic. 1: PPE1

Pic. 2: PPE2

11 Related legislation

<u>During the performing of the construction, it is also necessary to ensure compliance with the mandatory safety regulations in the building industry and the regulation, in particular:</u>

Law No. 262/2006 Coll., Labour code

…another 35 laws and national regulations…

12 Annexes

Part of the plan for the realization phase of the construction will be annexes. For example Drawings of the construction site, Time schedule of the construction, Time-space graph and other documents

13 List of contractors and subcontractors of the construction works

By signing, I confirm that I have met this plan and all its annexes. As a representative of the company, I confirm the familiarization with the H&S plan and the training of all employees of the company.

	Date	Company	Resp. person	Signature
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5 SOLUTION OF THE TIME STRUCTURE

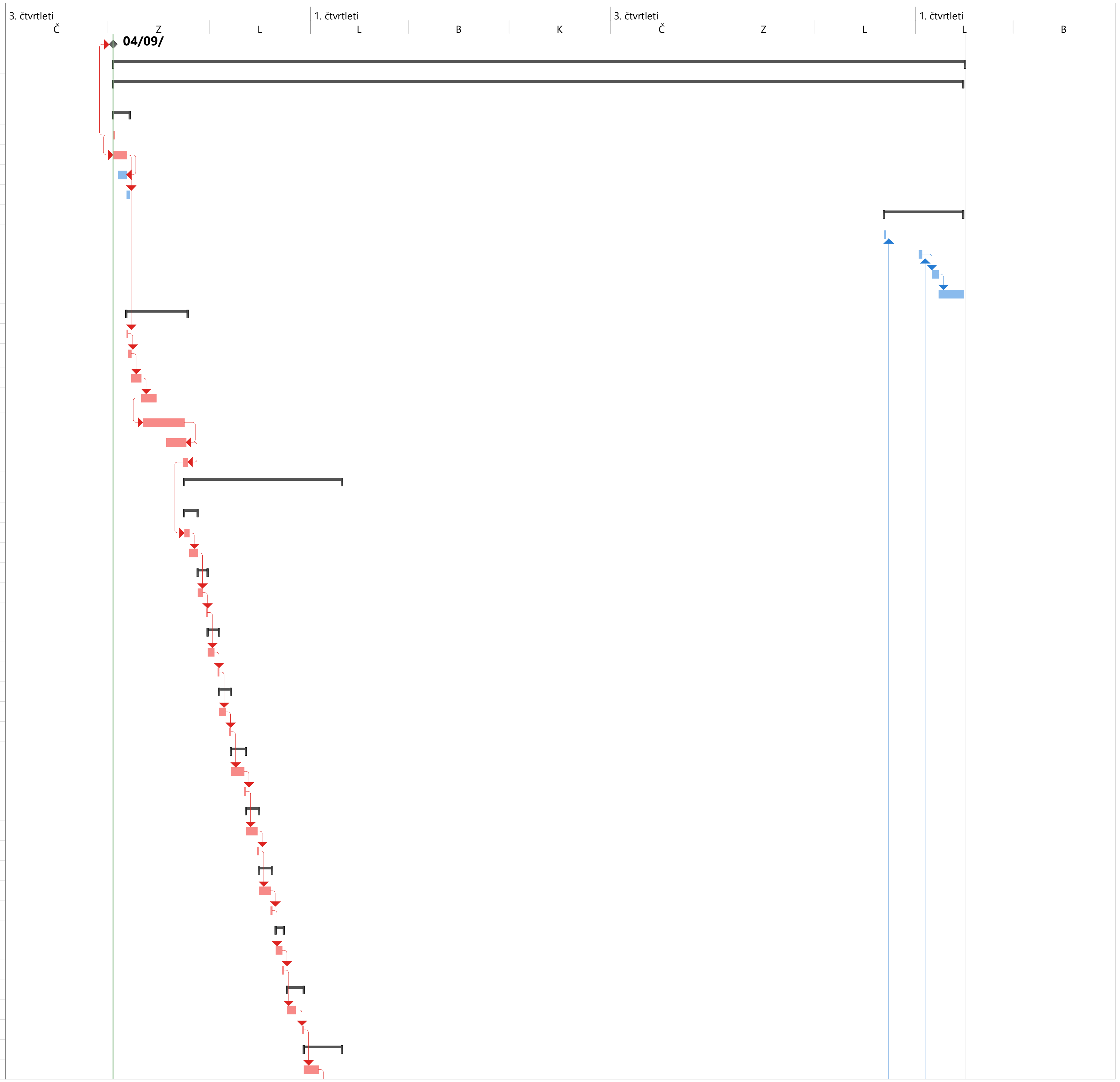
The time structure of the construction process results from a functional connection with the spatial and technological structure of the construction process. The main documents illustrating the course and the result of the time structure are: Time schedule, Operational time-space graph, Complex time-graph graph, Deployment chart of workers requirements, Material requirements and Machinery requirements.

5.1 Time schedule of the construction

The time schedule is prepared in MS Project, fully corresponds to the time-space graph and shows a critical way.

Generally the time schedule shows duration of each process and continuity of construction processes regarding to exact dates of implementation.

ID	Name of process	Duration (days)	Start	End
1	START OF THE PROJECT	0 dny	04/09/ 2017 09:00	04/09/ 2017 09:00
2	**MAIN BUILDING CONSTRUCTION WORKS - CO01**	**353 dny**	**04/09/ 2017 09:00**	**30/01/ 2019 18:00**
3	**CONSTRUCTION SITE AND PREPARATORY DEMOLITION WORKS**	**352 dny**	**04/09/ 2017 09:00**	**29/01/ 2019 18:00**
4	CONSTRUCTION SITE	**8 dny**	**04/09/ 2017 09:00**	**13/09/ 2017 18:00**
5	Geodetic works	1 den	04/09/ 2017 09:00	04/09/ 2017 18:00
6	Site facilities	6 dny	04/09/ 2017 09:00	11/09/ 2017 18:00
7	Construction lift	3 dny	07/09/ 2017 09:00	11/09/ 2017 18:00
8	Tower crane Liebherr 130 EC-B6	2 dny	12/09/ 2017 09:00	13/09/ 2017 18:00
9	FINAL CLEANING AND REMOVAL OF THE CONSTRUCTION SIT	**30 dny**	**13/12/ 2018 09:00**	**29/01/ 2019 18:00**
10	Disassembling the crane	1 den	13/12/ 2018 09:00	13/12/ 2018 18:00
11	Disassembling the construction lift	2 dny	03/01/ 2019 09:00	04/01/ 2019 18:00
12	Disassembling of the site facilities	2 dny	11/01/ 2019 09:00	14/01/ 2019 18:00
13	Final cleaning	11 dny	15/01/ 2019 09:00	29/01/ 2019 18:00
14	PREPARATORY DEMOLITION WORKS	**26 dny**	**12/09/ 2017 09:00**	**18/10/ 2017 18:00**
15	Disconnecting the object (water, gas,...)	1 den	12/09/ 2017 09:00	12/09/ 2017 18:00
16	Dmtl. of the ends of pipe elements, sanitary equipment., doors and glass elements	2 dny	13/09/ 2017 09:00	14/09/ 2017 18:00
17	Disassembling of ceilings and distribution pipes (wiring)	4 dny	15/09/ 2017 09:00	20/09/ 2017 18:00
18	Dmtl. of tiles, plasters, plasterboard walls and distribution pipes (wiring)	6 dny	21/09/ 2017 09:00	29/09/ 2017 18:00
19	Disassembling floor layers and distribution pipes (wiring)	16 dny	22/09/ 2017 09:00	16/10/ 2017 18:00
20	Demolition of internal partitions and doorframes	8 dny	06/10/ 2017 09:00	17/10/ 2017 18:00
21	Disassembling of vertical distribution pipes (wiring)	3 dny	16/10/ 2017 09:00	18/10/ 2017 18:00
22	**DEMOLITIONS OF LOAD-BEARING STRUCTURES (FIRST PART)**	**65 dny**	**17/10/ 2017 09:00**	**19/01/ 2018 18:00**
23	8.AG - DEMOLITION WORKS	**6 dny**	**17/10/ 2017 09:00**	**24/10/ 2017 18:00**
24	8.AG - Demolitions of floor structures	3 dny	17/10/ 2017 09:00	19/10/ 2017 18:00
25	8.AG - Demolitions of vertical load bearing structures	3 dny	20/10/ 2017 09:00	24/10/ 2017 18:00
26	7.AG - DEMOLITION WORKS	**4 dny**	**25/10/ 2017 09:00**	**30/10/ 2017 18:00**
27	7.AG - Demolitions of floor structures	3 dny	25/10/ 2017 09:00	27/10/ 2017 18:00
28	7.AG - Demolitions of vertical load bearing structures	1 den	30/10/ 2017 09:00	30/10/ 2017 18:00
29	6.AG - DEMOLITION WORKS	**5 dny**	**31/10/ 2017 09:00**	**06/11/ 2017 18:00**
30	6.AG - Demolitions of floor structures	4 dny	31/10/ 2017 09:00	03/11/ 2017 18:00
31	6.AG - Demolitions of vertical load bearing structures	1 den	06/11/ 2017 09:00	06/11/ 2017 18:00
32	5.AG - DEMOLITION WORKS	**5 dny**	**07/11/ 2017 09:00**	**13/11/ 2017 18:00**
33	5.AG - Demolitions of floor structures	4 dny	07/11/ 2017 09:00	10/11/ 2017 18:00
34	5.AG - Demolitions of vertical load bearing structures	1 den	13/11/ 2017 09:00	13/11/ 2017 18:00
35	4.AG - DEMOLITION WORKS	**6 dny**	**14/11/ 2017 09:00**	**22/11/ 2017 18:00**
36	4.AG - Demolitions of floor structures	5 dny	14/11/ 2017 09:00	21/11/ 2017 18:00
37	4.AG - Demolitions of vertical load bearing structures	1 den	22/11/ 2017 09:00	22/11/ 2017 18:00
38	3.AG - DEMOLITION WORKS	**6 dny**	**23/11/ 2017 09:00**	**30/11/ 2017 18:00**
39	3.AG - Demolitions of floor structures	5 dny	23/11/ 2017 09:00	29/11/ 2017 18:00
40	3.AG - Demolitions of vertical load bearing structures	1 den	30/11/ 2017 09:00	30/11/ 2017 18:00
41	2.AG - DEMOLITION WORKS	**6 dny**	**01/12/ 2017 09:00**	**08/12/ 2017 18:00**
42	2.AG - Demolitions of floor structures	5 dny	01/12/ 2017 09:00	07/12/ 2017 18:00
43	2.AG - Demolitions of vertical load bearing structures	1 den	08/12/ 2017 09:00	08/12/ 2017 18:00
44	1.AG - DEMOLITION WORKS	**5 dny**	**11/12/ 2017 09:00**	**15/12/ 2017 18:00**
45	1.AG - Demolitions of floor structures	4 dny	11/12/ 2017 09:00	14/12/ 2017 18:00
46	1.AG - Demolitions of vertical load bearing structures	1 den	15/12/ 2017 09:00	15/12/ 2017 18:00
47	GF - DEMOLITION WORKS	**6 dny**	**18/12/ 2017 09:00**	**27/12/ 2017 18:00**
48	GF - Demolitions of floor structures	5 dny	18/12/ 2017 09:00	22/12/ 2017 18:00
49	GF - Demolitions of vertical load bearing structures	1 den	27/12/ 2017 09:00	27/12/ 2017 18:00
50	1.UG - DEMOLITION WORKS	**16 dny**	**28/12/ 2017 09:00**	**19/01/ 2018 18:00**
51	1.UG - Demolitions of floor structures	6 dny	28/12/ 2017 09:00	05/01/ 2018 18:00



Projekt: DT-Gant
Datum: 02/11/ 2017 17:20

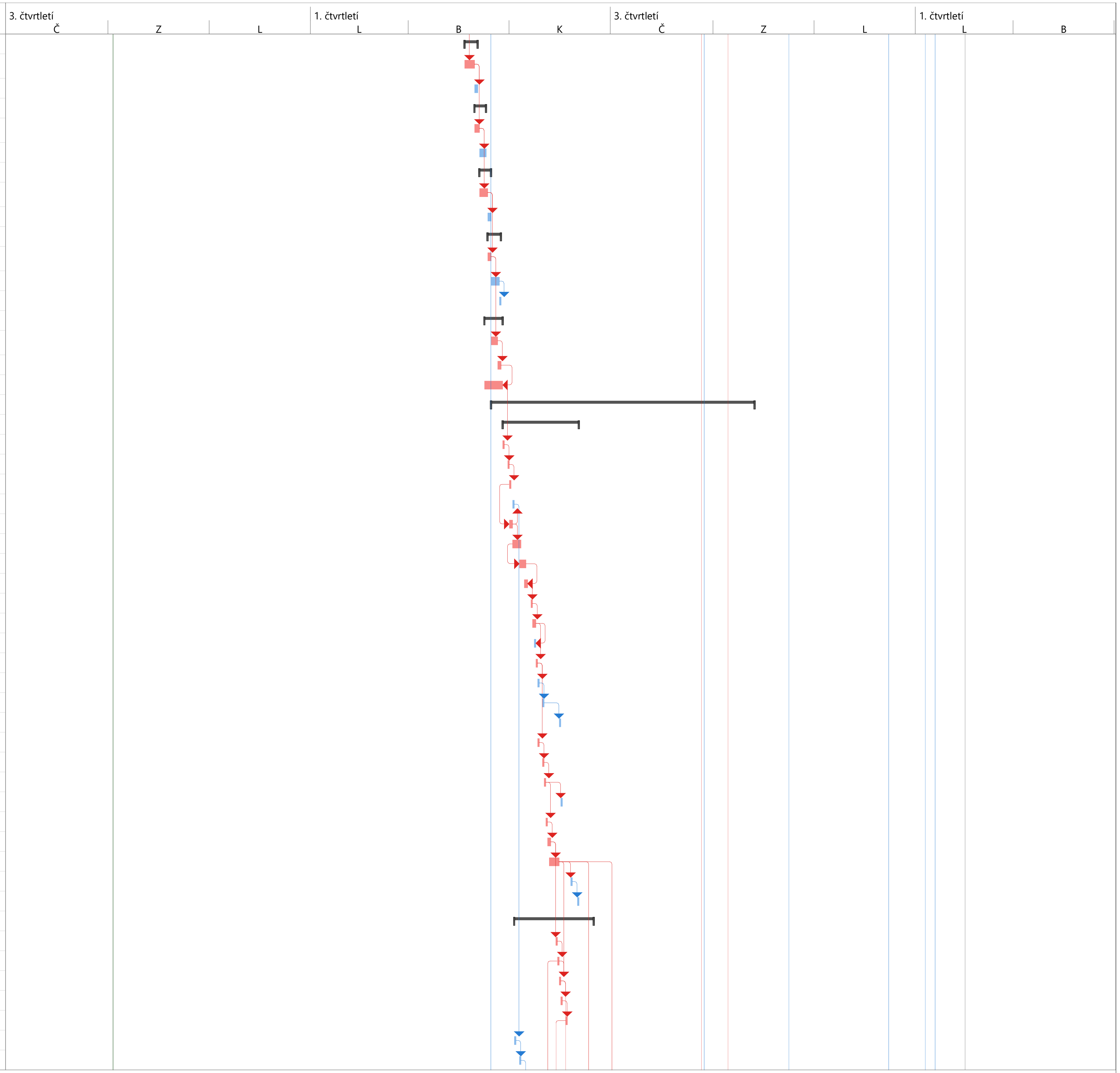
Úkol	Neaktivní úkol	Ruční úkoly zahrnuté v souhrnném úkolu	Vnější milník	Průběh ručně zadaného úkolu	
Rozdělení	Neaktivní milník	Ruční souhrn	Konečný termín		
Milník	Neaktivní souhrn	Pouze zahájení	Kritický		
Souhrnný	Ruční úkol	Pouze s datem dokončení	Kritické rozdělení		
Souhrn projektu	Pouze s dobou trvání	Vnější úkoly	Průběh		

ID	Name of process	Duration (days)	Start	End
52	1.UG - Demolitions of vertical load bearing structures	4 dny	08/01/ 2018 09:00	11/01/ 2018 18:00
53	1.UG - Demolitions of foudations	5 dny	12/01/ 2018 09:00	18/01/ 2018 18:00
54	Cleaning after the first part of demolition works	9 dny	09/01/ 2018 09:00	19/01/ 2018 18:00
55	DISASSEMBLING OF BUILDING ENVELOPE	**103 dny**	**21/08/ 2018 09:00**	**17/01/ 2019 18:00**
56	Disassembling of building envelope	22 dny	10/09/ 2018 09:00	10/10/ 2018 18:00
57	Scaffolding	14 dny	21/08/ 2018 09:00	07/09/ 2018 18:00
58	Disassembling of scaffolding	8 dny	08/01/ 2019 09:00	17/01/ 2019 18:00
59	**LOAD-BEARING CONSTRUCTION (FIRST PART)**	**46 dny**	**22/01/ 2018 09:00**	**26/03/ 2018 18:00**
60	Foundations	**13 dny**	**22/01/ 2018 09:00**	**07/02/ 2018 18:00**
61	Mircopiled foundations	11 dny	22/01/ 2018 09:00	05/02/ 2018 18:00
62	Grouting and insulation of the basement	11 dny	24/01/ 2018 09:00	07/02/ 2018 18:00
63	Foundations	2 dny	06/02/ 2018 09:00	07/02/ 2018 18:00
64	1.UG - LOAD-BEARING STRUCTURES	**3 dny**	**08/02/ 2018 09:00**	**12/02/ 2018 18:00**
65	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete; clay masonry)	3 dny	08/02/ 2018 09:00	12/02/ 2018 18:00
66	GF - LOAD-BEARING STRUCTURES	**5 dny**	**13/02/ 2018 09:00**	**19/02/ 2018 18:00**
67	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	5 dny	13/02/ 2018 09:00	19/02/ 2018 18:00
68	1.AG - LOAD-BEARING STRUCTURES	**2 dny**	**20/02/ 2018 09:00**	**21/02/ 2018 18:00**
69	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	2 dny	20/02/ 2018 09:00	21/02/ 2018 18:00
70	2.AG - LOAD-BEARING STRUCTURES	**2 dny**	**22/02/ 2018 09:00**	**23/02/ 2018 18:00**
71	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	2 dny	22/02/ 2018 09:00	23/02/ 2018 18:00
72	3.AG - LOAD-BEARING STRUCTURES	**2 dny**	**26/02/ 2018 09:00**	**27/02/ 2018 18:00**
73	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	2 dny	26/02/ 2018 09:00	27/02/ 2018 18:00
74	4.AG - LOAD-BEARING STRUCTURES	**2 dny**	**28/02/ 2018 09:00**	**01/03/ 2018 18:00**
75	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	2 dny	28/02/ 2018 09:00	01/03/ 2018 18:00
76	5.AG - LOAD-BEARING STRUCTURES	**2 dny**	**02/03/ 2018 09:00**	**05/03/ 2018 18:00**
77	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	2 dny	02/03/ 2018 09:00	05/03/ 2018 18:00
78	6.AG - LOAD-BEARING STRUCTURES	**2 dny**	**06/03/ 2018 09:00**	**07/03/ 2018 18:00**
79	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	2 dny	06/03/ 2018 09:00	07/03/ 2018 18:00
80	7.AG - LOAD-BEARING STRUCTURES	**2 dny**	**08/03/ 2018 09:00**	**09/03/ 2018 18:00**
81	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	2 dny	08/03/ 2018 09:00	09/03/ 2018 18:00
82	8.AG - LOAD-BEARING STRUCTURES	**11 dny**	**12/03/ 2018 09:00**	**26/03/ 2018 18:00**
83	Vertical load-bearing structures (Hollow concrete blocks - reinforced and filled by concrete)	2 dny	12/03/ 2018 09:00	13/03/ 2018 18:00
84	8.AG - Horizontal structures - formwork	1 den	14/03/ 2018 09:00	14/03/ 2018 18:00
85	8.AG - Horizontal structures - reinforcing	1 den	15/03/ 2018 09:00	15/03/ 2018 18:00
86	8.AG - Horizontal structures - concreting	1 den	16/03/ 2018 09:00	16/03/ 2018 18:00
87	8.AG - Horizontal structures - formwork removal	1 den	26/03/ 2018 09:00	26/03/ 2018 18:00
88	**DEMOLITIONS OF LOAD-BEARING STRUCTURES (SECOND PART)**	**30 dny**	**14/03/ 2018 09:00**	**26/04/ 2018 18:00**
89	Disassembling of the staircase barrier	1 den	14/03/ 2018 09:00	14/03/ 2018 18:00
90	7.AG - DEMOLITION WORKS	**3 dny**	**14/03/ 2018 09:00**	**16/03/ 2018 18:00**
91	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	3 dny	14/03/ 2018 09:00	16/03/ 2018 18:00
92	6.AG - DEMOLITION WORKS	**5 dny**	**19/03/ 2018 09:00**	**23/03/ 2018 18:00**
93	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	3 dny	19/03/ 2018 09:00	21/03/ 2018 18:00
94	Demolitions of staircase	2 dny	22/03/ 2018 09:00	23/03/ 2018 18:00
95	5.AG - DEMOLITION WORKS	**5 dny**	**22/03/ 2018 09:00**	**28/03/ 2018 18:00**
96	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	3 dny	22/03/ 2018 09:00	26/03/ 2018 18:00
97	Demolitions of staircase	2 dny	27/03/ 2018 09:00	28/03/ 2018 18:00
98	4.AG - DEMOLITION WORKS	**6 dny**	**27/03/ 2018 09:00**	**05/04/ 2018 18:00**
99	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	4 dny	27/03/ 2018 09:00	03/04/ 2018 18:00
100	Demolitions of staircase	2 dny	04/04/ 2018 09:00	05/04/ 2018 18:00

Projekt: DT-Gant
Datum: 02/11/ 2017 17:20

Úkol
Rozdělení
Milník
Souhrnný
Souhrn projektu
Neaktivní úkol
Neaktivní milník
Neaktivní souhrn
Ruční úkol
Pouze s dobou trvání
Ruční úkoly zahrnuté v souhrnném úkolu
Ruční souhrn
Pouze zahájení
Pouze s datem dokončení
Vnější úkoly
Vnější milník
Konečný termín
Kritický
Kritické rozdělení
Průběh
Průběh ručně zadaného úkolu

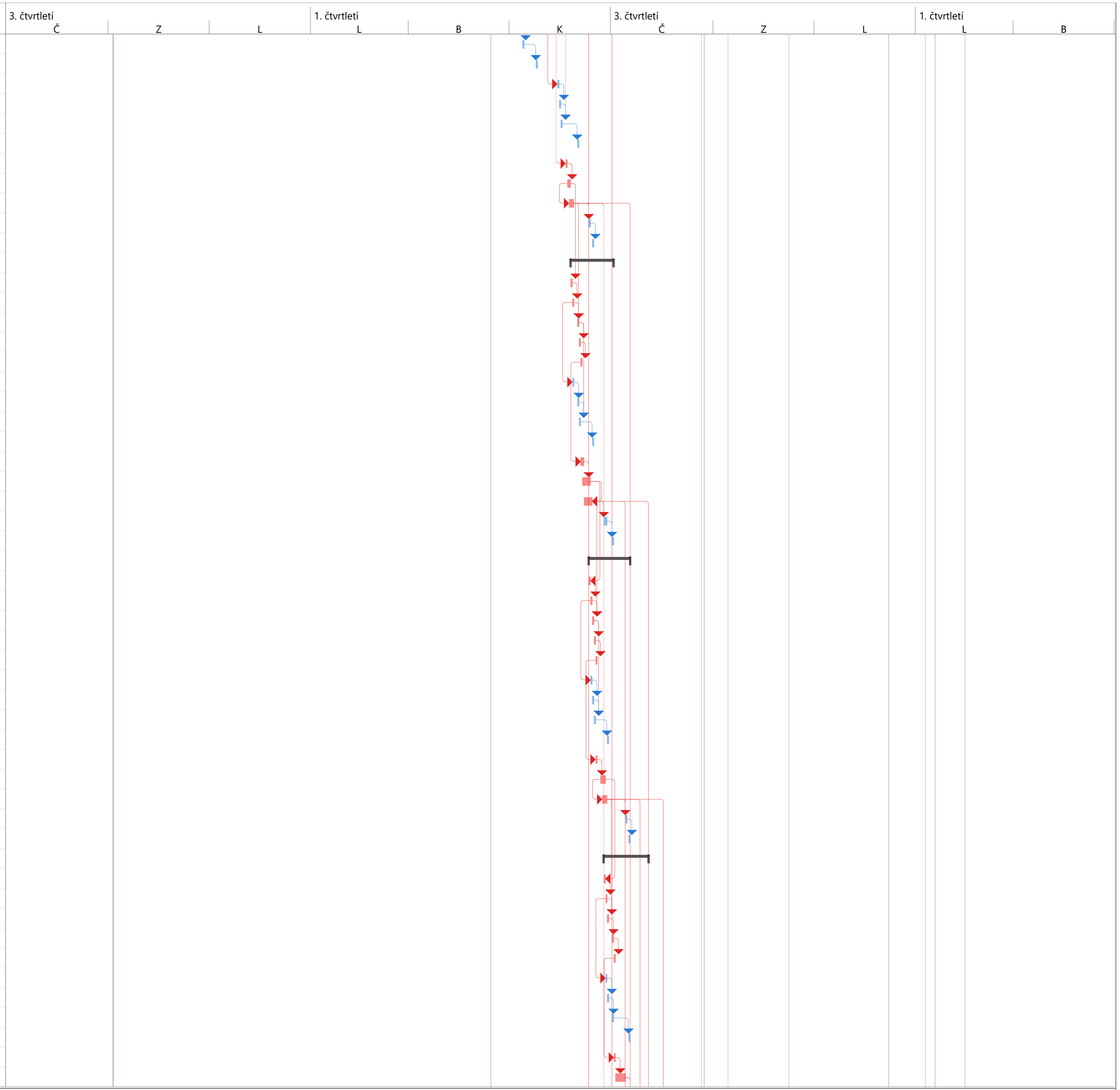
ID	Name of process	Duration (days)	Start	End
101	3.AG - DEMOLITION WORKS	**6 dny**	**04/04/ 2018 09:00**	**11/04/ 2018 18:00**
102	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	4 dny	04/04/ 2018 09:00	09/04/ 2018 18:00
103	Demolitions of staircase	2 dny	10/04/ 2018 09:00	11/04/ 2018 18:00
104	2.AG - DEMOLITION WORKS	**5 dny**	**10/04/ 2018 09:00**	**16/04/ 2018 18:00**
105	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	3 dny	10/04/ 2018 09:00	12/04/ 2018 18:00
106	Demolitions of staircase	2 dny	13/04/ 2018 09:00	16/04/ 2018 18:00
107	1.AG - DEMOLITION WORKS	**5 dny**	**13/04/ 2018 09:00**	**19/04/ 2018 18:00**
108	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	3 dny	13/04/ 2018 09:00	17/04/ 2018 18:00
109	Demolitions of staircase	2 dny	18/04/ 2018 09:00	19/04/ 2018 18:00
110	GF - DEMOLITION WORKS	**6 dny**	**18/04/ 2018 09:00**	**25/04/ 2018 18:00**
111	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	2 dny	18/04/ 2018 09:00	19/04/ 2018 18:00
112	Demolitions of staircase	3 dny	20/04/ 2018 09:00	24/04/ 2018 18:00
113	Demolitions of external staircase	1 den	25/04/ 2018 09:00	25/04/ 2018 18:00
114	1.UG - DEMOLITION WORKS	**9 dny**	**16/04/ 2018 09:00**	**26/04/ 2018 18:00**
115	Demolitions of shear walls, opening in walls, cutting of reinforced concrete	2 dny	20/04/ 2018 09:00	23/04/ 2018 18:00
116	Demolitions of staircase	2 dny	24/04/ 2018 09:00	25/04/ 2018 18:00
117	Cleaning after the second part of demolition works	9 dny	16/04/ 2018 09:00	26/04/ 2018 18:00
118	**LOAD-BEARING CONSTRUCTION (SECOND PART)**	**110 dny**	**20/04/ 2018 09:00**	**25/09/ 2018 18:00**
119	1.UG - LOAD-BEARING STRUCTURES	**31 dny**	**27/04/ 2018 09:00**	**11/06/ 2018 18:00**
120	Columns - reinforcing of existing structures	1 den	27/04/ 2018 09:00	27/04/ 2018 18:00
121	Columns - formwork	1 den	30/04/ 2018 09:00	30/04/ 2018 18:00
122	Columns - concreting	1 den	01/05/ 2018 09:00	01/05/ 2018 18:00
123	Columns - formwork removal	1 den	03/05/ 2018 09:00	03/05/ 2018 18:00
124	Waterproof layers under load-bearing walls	2 dny	01/05/ 2018 09:00	02/05/ 2018 18:00
125	Load-bearing masonry under the doubled floor	3 dny	03/05/ 2018 09:00	07/05/ 2018 18:00
126	Floor compositon under doubled floor (insulations, foils, screed)	3 dny	07/05/ 2018 09:00	10/05/ 2018 18:00
127	Doubled slab - formwork (permanent trapezoidal sheet)	2 dny	10/05/ 2018 09:00	11/05/ 2018 18:00
128	Doubled slab - reinforcing (wire meshes)	1 den	14/05/ 2018 09:00	14/05/ 2018 18:00
129	Doubled slab - concreting	2 dny	15/05/ 2018 09:00	16/05/ 2018 18:00
130	Assembly of other steel load-bearing elements	1 den	16/05/ 2018 09:00	16/05/ 2018 18:00
131	Internal straight staircase - formwork	1 den	17/05/ 2018 09:00	17/05/ 2018 18:00
132	Internal straight staircase - reinforcing	1 den	18/05/ 2018 09:00	18/05/ 2018 18:00
133	Internal straight staircase - concrete	1 den	21/05/ 2018 09:00	21/05/ 2018 18:00
134	Internal straight staircase - formwork removal	1 den	31/05/ 2018 09:00	31/05/ 2018 18:00
135	Staircase landing - formwork	1 den	18/05/ 2018 09:00	18/05/ 2018 18:00
136	Staircase landing - reinforcing	1 den	21/05/ 2018 09:00	21/05/ 2018 18:00
137	Staircase landing - concrete	1 den	22/05/ 2018 09:00	22/05/ 2018 18:00
138	Staircase landing - formwork removal	1 den	01/06/ 2018 09:00	01/06/ 2018 18:00
139	Horizontal construction (slab) - formwork	1 den	23/05/ 2018 09:00	23/05/ 2018 18:00
140	Horizontal construction (slab) - reinforcing	2 dny	24/05/ 2018 09:00	25/05/ 2018 18:00
141	Horizontal construction (slab) - concrete	4 dny	25/05/ 2018 09:00	30/05/ 2018 18:00
142	Horizontal construction (slab) - formwork removal	1 den	07/06/ 2018 09:00	07/06/ 2018 18:00
143	Placement of prefabricated staircase	1 den	11/06/ 2018 09:00	11/06/ 2018 18:00
144	GF - LOAD-BEARING STRUCTURES	**33 dny**	**04/05/ 2018 09:00**	**20/06/ 2018 18:00**
145	Columns - reinforcing of existing structures	1 den	29/05/ 2018 09:00	29/05/ 2018 18:00
146	Columns - formwork	1 den	30/05/ 2018 09:00	30/05/ 2018 18:00
147	Columns - concreting	1 den	31/05/ 2018 09:00	31/05/ 2018 18:00
148	Columns - formwork removal	1 den	01/06/ 2018 09:00	01/06/ 2018 18:00
149	Assembly of other steel load-bearing elements	1 den	04/06/ 2018 09:00	04/06/ 2018 18:00
150	External staircase - formwork	1 den	04/05/ 2018 09:00	04/05/ 2018 18:00
151	External staircase - reinforcing	1 den	07/05/ 2018 09:00	07/05/ 2018 18:00



Projekt: DT-Gant
Datum: 02/11/ 2017 17:20

Úkol	Neaktivní úkol	Ruční úkoly zahrnuté v souhrnném úkolu	Vnější milník	Průběh ručně zadaného úkolu
Rozdělení	Neaktivní milník	Ruční souhrn	Konečný termín	
Milník	Neaktivní souhrn	Pouze zahájení	Kritický	
Souhrnný	Ruční úkol	Pouze s datem dokončení	Kritické rozdělení	
Souhrn projektu	Pouze s dobou trvání	Vnější úkoly	Průběh	

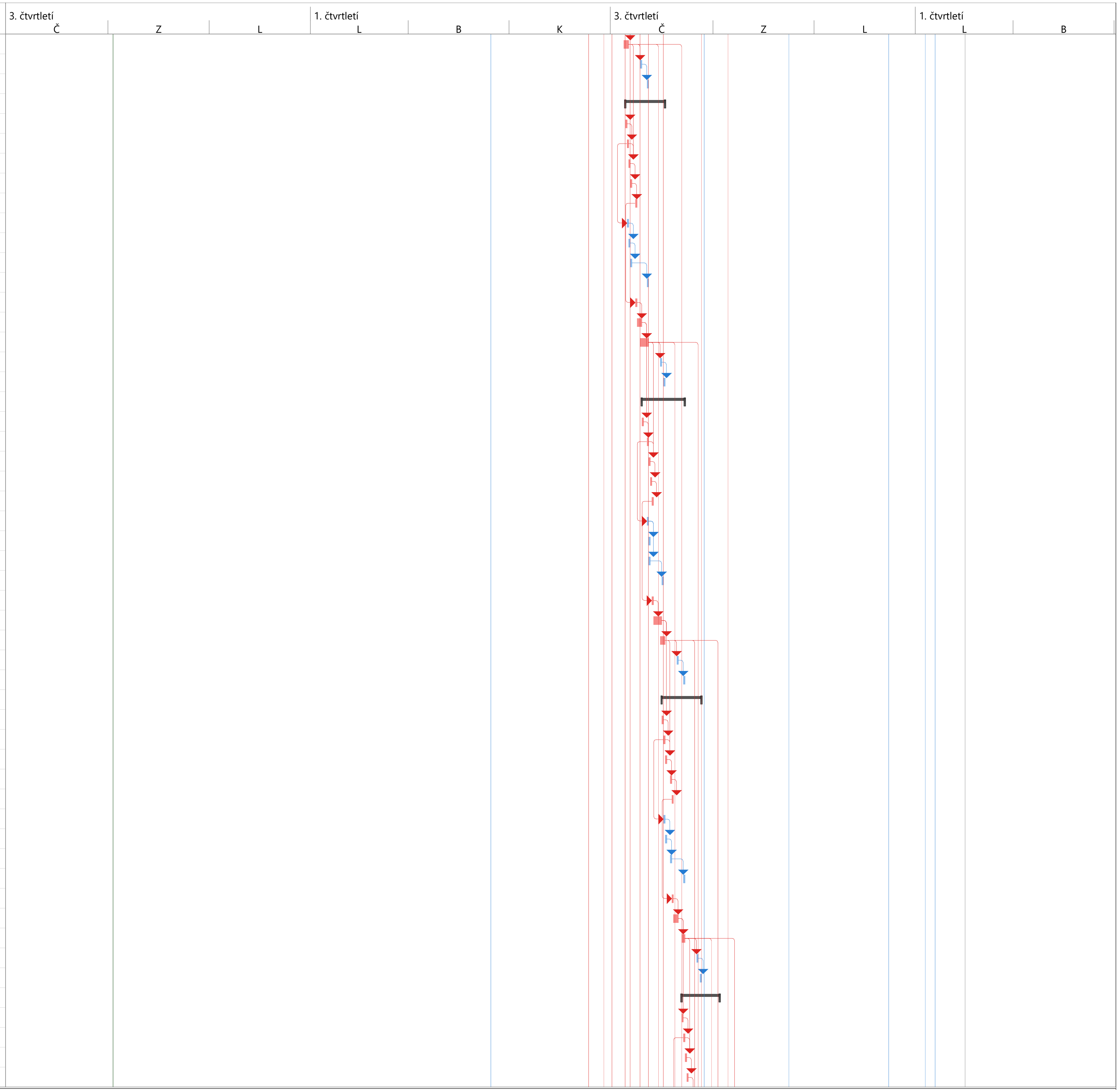
ID	Name of process	Duration (days)	Start	End
152	External staircase - concrete	1 den	09/05/ 2018 09:00	09/05/ 2018 18:00
153	External staircase - formwork removal	1 den	17/05/ 2018 09:00	17/05/ 2018 18:00
154	Staircase landing - formwork	1 den	30/05/ 2018 09:00	30/05/ 2018 18:00
155	Staircase landing - reinforcing	1 den	31/05/ 2018 09:00	31/05/ 2018 18:00
156	Staircase landing - concrete	1 den	01/06/ 2018 09:00	01/06/ 2018 18:00
157	Staircase landing - formwork removal	1 den	11/06/ 2018 09:00	11/06/ 2018 18:00
158	Horizontal construction (slab) - formwork	1 den	04/06/ 2018 09:00	04/06/ 2018 18:00
159	Horizontal construction (slab) - reinforcing	2 dny	05/06/ 2018 09:00	06/06/ 2018 18:00
160	Horizontal construction (slab) - concrete	3 dny	06/06/ 2018 09:00	08/06/ 2018 18:00
161	Horizontal construction (slab) - formwork removal	1 den	18/06/ 2018 09:00	18/06/ 2018 18:00
162	Placement of prefabricated staircase	1 den	20/06/ 2018 09:00	20/06/ 2018 18:00
163	**1.AG - LOAD-BEARING STRUCTURES**	**18 dny**	**07/06/ 2018 09:00**	**02/07/ 2018 18:00**
164	Columns - reinforcing of existing structures	1 den	07/06/ 2018 09:00	07/06/ 2018 18:00
165	Columns - formwork	1 den	08/06/ 2018 09:00	08/06/ 2018 18:00
166	Columns - concreting	1 den	11/06/ 2018 09:00	11/06/ 2018 18:00
167	Columns - formwork removal	1 den	12/06/ 2018 09:00	12/06/ 2018 18:00
168	Assembly of other steel load-bearing elements	1 den	13/06/ 2018 09:00	13/06/ 2018 18:00
169	Staircase landing - formwork	1 den	08/06/ 2018 09:00	08/06/ 2018 18:00
170	Staircase landing - reinforcing	1 den	11/06/ 2018 09:00	11/06/ 2018 18:00
171	Staircase landing - concrete	1 den	12/06/ 2018 09:00	12/06/ 2018 18:00
172	Staircase landing - formwork removal	1 den	20/06/ 2018 09:00	20/06/ 2018 18:00
173	Horizontal construction (slab) - formwork	2 dny	13/06/ 2018 09:00	14/06/ 2018 18:00
174	Horizontal construction (slab) - reinforcing	3 dny	14/06/ 2018 09:00	18/06/ 2018 18:00
175	Horizontal construction (slab) - concrete	3 dny	15/06/ 2018 09:00	19/06/ 2018 18:00
176	Horizontal construction (slab) - formwork removal	2 dny	27/06/ 2018 09:00	28/06/ 2018 18:00
177	Placement of prefabricated staircase	1 den	02/07/ 2018 09:00	02/07/ 2018 18:00
178	**2.AG - LOAD-BEARING STRUCTURES**	**17 dny**	**18/06/ 2018 09:00**	**12/07/ 2018 18:00**
179	Columns - reinforcing of existing structures	1 den	18/06/ 2018 09:00	18/06/ 2018 18:00
180	Columns - formwork	1 den	19/06/ 2018 09:00	19/06/ 2018 18:00
181	Columns - concreting	1 den	20/06/ 2018 09:00	20/06/ 2018 18:00
182	Columns - formwork removal	1 den	21/06/ 2018 09:00	21/06/ 2018 18:00
183	Assembly of other steel load-bearing elements	1 den	22/06/ 2018 09:00	22/06/ 2018 18:00
184	Staircase landing - formwork	1 den	19/06/ 2018 09:00	19/06/ 2018 18:00
185	Staircase landing - reinforcing	1 den	20/06/ 2018 09:00	20/06/ 2018 18:00
186	Staircase landing - concrete	1 den	21/06/ 2018 09:00	21/06/ 2018 18:00
187	Staircase landing - formwork removal	1 den	29/06/ 2018 09:00	29/06/ 2018 18:00
188	Horizontal construction (slab) - formwork	1 den	22/06/ 2018 09:00	22/06/ 2018 18:00
189	Horizontal construction (slab) - reinforcing	3 dny	25/06/ 2018 09:00	27/06/ 2018 18:00
190	Horizontal construction (slab) - concrete	3 dny	26/06/ 2018 09:00	28/06/ 2018 18:00
191	Horizontal construction (slab) - formwork removal	1 den	10/07/ 2018 09:00	10/07/ 2018 18:00
192	Placement of prefabricated staircase	1 den	12/07/ 2018 09:00	12/07/ 2018 18:00
193	**3.AG - LOAD-BEARING STRUCTURES**	**17 dny**	**27/06/ 2018 09:00**	**23/07/ 2018 18:00**
194	Columns - reinforcing of existing structures	1 den	27/06/ 2018 09:00	27/06/ 2018 18:00
195	Columns - formwork	1 den	28/06/ 2018 09:00	28/06/ 2018 18:00
196	Columns - concreting	1 den	29/06/ 2018 09:00	29/06/ 2018 18:00
197	Columns - formwork removal	1 den	02/07/ 2018 09:00	02/07/ 2018 18:00
198	Assembly of other steel load-bearing elements	1 den	03/07/ 2018 09:00	03/07/ 2018 18:00
199	Staircase landing - formwork	1 den	28/06/ 2018 09:00	28/06/ 2018 18:00
200	Staircase landing - reinforcing	1 den	29/06/ 2018 09:00	29/06/ 2018 18:00
201	Staircase landing - concrete	1 den	02/07/ 2018 09:00	02/07/ 2018 18:00
202	Staircase landing - formwork removal	1 den	12/07/ 2018 09:00	12/07/ 2018 18:00
203	Horizontal construction (slab) - formwork	1 den	03/07/ 2018 09:00	03/07/ 2018 18:00
204	Horizontal construction (slab) - reinforcing	2 dny	04/07/ 2018 09:00	09/07/ 2018 18:00



Projekt: DT-Gant
Datum: 02/11/ 2017 17:20

Úkol	Neaktivní úkol	Ruční úkoly zahrnuté v souhrnném úkolu	Vnější milník	Průběh ručně zadaného úkolu
Rozdělení	Neaktivní milník	Ruční souhrn	Konečný termín	
Milník	Neaktivní souhrn	Pouze zahájení	Kritický	
Souhrnný	Ruční úkol	Pouze s datem dokončení	Kritické rozdělení	
Souhrn projektu	Pouze s dobou trvání	Vnější úkoly	Průběh	

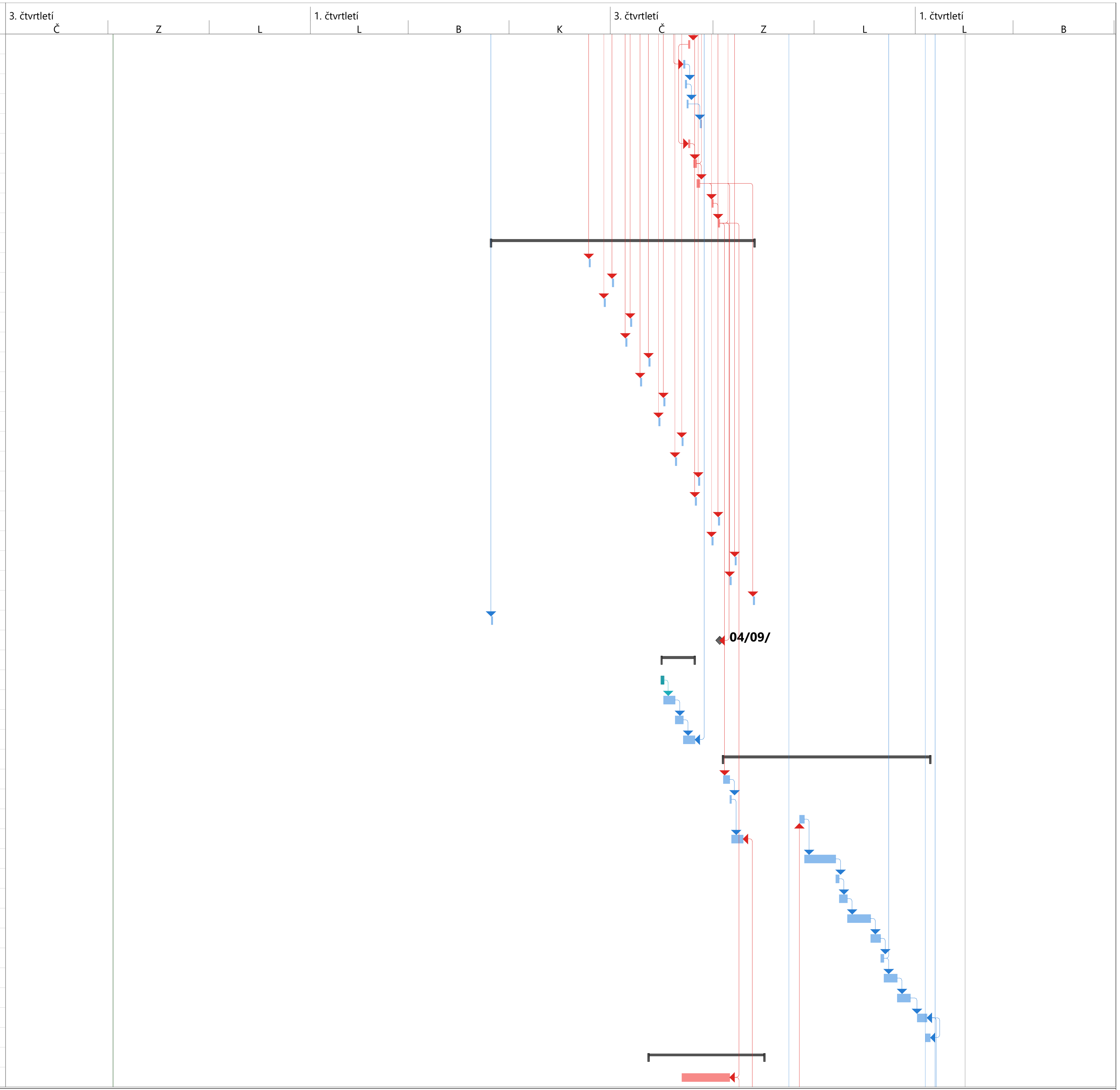
ID	Name of process	Duration (days)	Start	End
205	Horizontal construction (slab) - concrete	3 dny	09/07/ 2018 09:00	11/07/ 2018 18:00
206	Horizontal construction (slab) - formwork removal	1 den	19/07/ 2018 09:00	19/07/ 2018 18:00
207	Placement of prefabricated staircase	1 den	23/07/ 2018 09:00	23/07/ 2018 18:00
208	**4.AG - LOAD-BEARING STRUCTURES**	**18 dny**	**10/07/ 2018 09:00**	**02/08/ 2018 18:00**
209	Columns - reinforcing of existing structures	1 den	10/07/ 2018 09:00	10/07/ 2018 18:00
210	Columns - formwork	1 den	11/07/ 2018 09:00	11/07/ 2018 18:00
211	Columns - concreting	1 den	12/07/ 2018 09:00	12/07/ 2018 18:00
212	Columns - formwork removal	1 den	13/07/ 2018 09:00	13/07/ 2018 18:00
213	Assembly of other steel load-bearing elements	1 den	16/07/ 2018 09:00	16/07/ 2018 18:00
214	Staircase landing - formwork	1 den	11/07/ 2018 09:00	11/07/ 2018 18:00
215	Staircase landing - reinforcing	1 den	12/07/ 2018 09:00	12/07/ 2018 18:00
216	Staircase landing - concrete	1 den	13/07/ 2018 09:00	13/07/ 2018 18:00
217	Staircase landing - formwork removal	1 den	23/07/ 2018 09:00	23/07/ 2018 18:00
218	Horizontal construction (slab) - formwork	1 den	16/07/ 2018 09:00	16/07/ 2018 18:00
219	Horizontal construction (slab) - reinforcing	3 dny	17/07/ 2018 09:00	19/07/ 2018 18:00
220	Horizontal construction (slab) - concrete	3 dny	19/07/ 2018 09:00	23/07/ 2018 18:00
221	Horizontal construction (slab) - formwork removal	1 den	31/07/ 2018 09:00	31/07/ 2018 18:00
222	Placement of prefabricated staircase	1 den	02/08/ 2018 09:00	02/08/ 2018 18:00
223	**5.AG - LOAD-BEARING STRUCTURES**	**18 dny**	**20/07/ 2018 09:00**	**14/08/ 2018 18:00**
224	Columns - reinforcing of existing structures	1 den	20/07/ 2018 09:00	20/07/ 2018 18:00
225	Columns - formwork	1 den	23/07/ 2018 09:00	23/07/ 2018 18:00
226	Columns - concreting	1 den	24/07/ 2018 09:00	24/07/ 2018 18:00
227	Columns - formwork removal	1 den	25/07/ 2018 09:00	25/07/ 2018 18:00
228	Assembly of other steel load-bearing elements	1 den	26/07/ 2018 09:00	26/07/ 2018 18:00
229	Staircase landing - formwork	1 den	23/07/ 2018 09:00	23/07/ 2018 18:00
230	Staircase landing - reinforcing	1 den	24/07/ 2018 09:00	24/07/ 2018 18:00
231	Staircase landing - concrete	1 den	24/07/ 2018 09:00	24/07/ 2018 18:00
232	Staircase landing - formwork removal	1 den	01/08/ 2018 09:00	01/08/ 2018 18:00
233	Horizontal construction (slab) - formwork	1 den	26/07/ 2018 09:00	26/07/ 2018 18:00
234	Horizontal construction (slab) - reinforcing	3 dny	27/07/ 2018 09:00	31/07/ 2018 18:00
235	Horizontal construction (slab) - concrete	3 dny	31/07/ 2018 09:00	02/08/ 2018 18:00
236	Horizontal construction (slab) - formwork removal	1 den	10/08/ 2018 09:00	10/08/ 2018 18:00
237	Placement of prefabricated staircase	1 den	14/08/ 2018 09:00	14/08/ 2018 18:00
238	**6.AG - LOAD-BEARING STRUCTURES**	**18 dny**	**01/08/ 2018 09:00**	**24/08/ 2018 18:00**
239	Columns - reinforcing of existing structures	1 den	01/08/ 2018 09:00	01/08/ 2018 18:00
240	Columns - formwork	1 den	02/08/ 2018 09:00	02/08/ 2018 18:00
241	Columns - concreting	1 den	03/08/ 2018 09:00	03/08/ 2018 18:00
242	Columns - formwork removal	1 den	06/08/ 2018 09:00	06/08/ 2018 18:00
243	Assembly of other steel load-bearing elements	1 den	07/08/ 2018 09:00	07/08/ 2018 18:00
244	Staircase landing - formwork	1 den	02/08/ 2018 09:00	02/08/ 2018 18:00
245	Staircase landing - reinforcing	1 den	03/08/ 2018 09:00	03/08/ 2018 18:00
246	Staircase landing - concrete	1 den	06/08/ 2018 09:00	06/08/ 2018 18:00
247	Staircase landing - formwork removal	1 den	14/08/ 2018 09:00	14/08/ 2018 18:00
248	Horizontal construction (slab) - formwork	1 den	07/08/ 2018 09:00	07/08/ 2018 18:00
249	Horizontal construction (slab) - reinforcing	3 dny	08/08/ 2018 09:00	10/08/ 2018 18:00
250	Horizontal construction (slab) - concrete	2 dny	13/08/ 2018 09:00	14/08/ 2018 18:00
251	Horizontal construction (slab) - formwork removal	1 den	22/08/ 2018 09:00	22/08/ 2018 18:00
252	Placement of prefabricated staircase	1 den	24/08/ 2018 09:00	24/08/ 2018 18:00
253	**7.AG - LOAD-BEARING STRUCTURES**	**17 dny**	**13/08/ 2018 09:00**	**04/09/ 2018 18:00**
254	Columns - reinforcing of existing structures	1 den	13/08/ 2018 09:00	13/08/ 2018 18:00
255	Columns - formwork	1 den	14/08/ 2018 09:00	14/08/ 2018 18:00
256	Columns - concreting	1 den	15/08/ 2018 09:00	15/08/ 2018 18:00
257	Columns - formwork removal	1 den	16/08/ 2018 09:00	16/08/ 2018 18:00



Projekt: DT-Gant
Datum: 02/11/ 2017 17:20

Úkol
Rozdělení
Milník
Souhrnný
Souhrn projektu
Neaktivní úkol
Neaktivní milník
Neaktivní souhrn
Ruční úkol
Pouze s dobou trvání
Ruční úkoly zahrnuté v souhrnném úkolu
Ruční souhrn
Pouze zahájení
Pouze s datem dokončení
Vnější úkoly
Vnější milník
Konečný termín
Kritický
Kritické rozdělení
Průběh
Průběh ručně zadaného úkolu

ID	Name of process	Duration (days)	Start	End
258	Assembly of other steel load-bearing elements	1 den	17/08/ 2018 09:00	17/08/ 2018 18:00
259	Staircase landing - formwork	1 den	14/08/ 2018 09:00	14/08/ 2018 18:00
260	Staircase landing - reinforcing	1 den	15/08/ 2018 09:00	15/08/ 2018 18:00
261	Staircase landing - concrete	1 den	16/08/ 2018 09:00	16/08/ 2018 18:00
262	Staircase landing - formwork removal	1 den	24/08/ 2018 09:00	24/08/ 2018 18:00
263	Horizontal construction (slab) - formwork	1 den	17/08/ 2018 09:00	17/08/ 2018 18:00
264	Horizontal construction (slab) - reinforcing	2 dny	20/08/ 2018 09:00	21/08/ 2018 18:00
265	Horizontal construction (slab) - concrete	2 dny	22/08/ 2018 09:00	23/08/ 2018 18:00
266	Horizontal construction (slab) - formwork removal	1 den	31/08/ 2018 09:00	31/08/ 2018 18:00
267	Placement of prefabricated staircase	1 den	04/09/ 2018 09:00	04/09/ 2018 18:00
268	DISPLACEMENT OF TEMPORARY SUPPORTING BEAMS	**110 dny**	**20/04/ 2018 09:00**	**25/09/ 2018 18:00**
269	50% removal 1.UG	1 den	18/06/ 2018 09:00	18/06/ 2018 18:00
270	Complete removal - 1.UG	1 den	02/07/ 2018 09:00	02/07/ 2018 18:00
271	50% removal - GF	1 den	27/06/ 2018 09:00	27/06/ 2018 18:00
272	Complete removal - GF	1 den	13/07/ 2018 09:00	13/07/ 2018 18:00
273	50% removal 1.AG	1 den	10/07/ 2018 09:00	10/07/ 2018 18:00
274	Complete removal - 1.AG	1 den	24/07/ 2018 09:00	24/07/ 2018 18:00
275	50% removal 2.AG	1 den	19/07/ 2018 09:00	19/07/ 2018 18:00
276	Complete removal - 2.AG	1 den	02/08/ 2018 09:00	02/08/ 2018 18:00
277	50% removal 3.AG	1 den	30/07/ 2018 09:00	30/07/ 2018 18:00
278	Complete removal - 3.AG	1 den	13/08/ 2018 09:00	13/08/ 2018 18:00
279	50% removal 4.AG	1 den	09/08/ 2018 09:00	09/08/ 2018 18:00
280	Complete removal - 4.AG	1 den	23/08/ 2018 09:00	23/08/ 2018 18:00
281	50% removal 5.AG	1 den	21/08/ 2018 09:00	21/08/ 2018 18:00
282	Complete removal - 5.AG	1 den	04/09/ 2018 09:00	04/09/ 2018 18:00
283	50% removal 6.AG	1 den	31/08/ 2018 09:00	31/08/ 2018 18:00
284	Complete removal - 6.AG	1 den	14/09/ 2018 09:00	14/09/ 2018 18:00
285	50% removal 7.AG	1 den	11/09/ 2018 09:00	11/09/ 2018 18:00
286	Complete removal - 7.AG	1 den	25/09/ 2018 09:00	25/09/ 2018 18:00
287	Complete removal - 8.AG	1 den	20/04/ 2018 09:00	20/04/ 2018 18:00
288	COMPLETION OF LOAD-BEARING STRUCTURES	0 dny	04/09/ 2018 18:00	04/09/ 2018 18:00
289	**EARTH WORKS (Only for manhole placement)**	**14 dny**	**01/08/ 2018 09:00**	**20/08/ 2018 18:00**
290	Geodetic works	1 den	01/08/ 2018 09:00	01/08/ 2018 18:00
291	Demolition of existing road structure and excavation	5 dny	02/08/ 2018 09:00	08/08/ 2018 18:00
292	Instalation of the manhole and pipelines	3 dny	09/08/ 2018 09:00	13/08/ 2018 18:00
293	Backfill of the excavation and new layers of road structure	5 dny	14/08/ 2018 09:00	20/08/ 2018 18:00
294	**ROOFING AND TERRACES**	**84 dny**	**07/09/ 2018 09:00**	**09/01/ 2019 18:00**
295	Temporary waterproof foil and roof drainage	2 dny	07/09/ 2018 09:00	10/09/ 2018 18:00
296	Waterproof layers (8.AG)	1 den	11/09/ 2018 09:00	11/09/ 2018 18:00
297	Composition of the roof layers (8.AG)	3 dny	23/10/ 2018 09:00	25/10/ 2018 18:00
298	Waterproof layers (7.AG)	5 dny	12/09/ 2018 09:00	18/09/ 2018 18:00
299	Composition of the roof layers (7.AG)	13 dny	26/10/ 2018 09:00	13/11/ 2018 18:00
300	Roofing for shaft (8.AG)	2 dny	14/11/ 2018 09:00	15/11/ 2018 18:00
301	Waterproof layers - terraces (5.-6.AG)	3 dny	16/11/ 2018 09:00	20/11/ 2018 18:00
302	Composition of the roof layers (5.AG - 7.AG)	10 dny	21/11/ 2018 09:00	04/12/ 2018 18:00
303	Steel supporting construction for ventilation units	4 dny	05/12/ 2018 09:00	10/12/ 2018 18:00
304	Montage of external ventilation unit	2 dny	11/12/ 2018 09:00	12/12/ 2018 18:00
305	Lightning conductor	6 dny	13/12/ 2018 09:00	20/12/ 2018 18:00
306	Metal roofing elements	3 dny	21/12/ 2018 09:00	28/12/ 2018 18:00
307	Parapet wall - facade joining	4 dny	02/01/ 2019 09:00	07/01/ 2019 18:00
308	Parapet wall (8.AG)	3 dny	07/01/ 2019 09:00	09/01/ 2019 18:00
309	**INTERNAL PARTIONS AND INSTALATION WIRING**	**49 dny**	**24/07/ 2018 09:00**	**01/10/ 2018 18:00**
310	Water and sewer systel - piping	21 dny	13/08/ 2018 09:00	10/09/ 2018 18:00



Projekt: DT-Gant
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Úkol
Rozdělení
Milník
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Pouze s dobou trvání
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Pouze s datem dokončení
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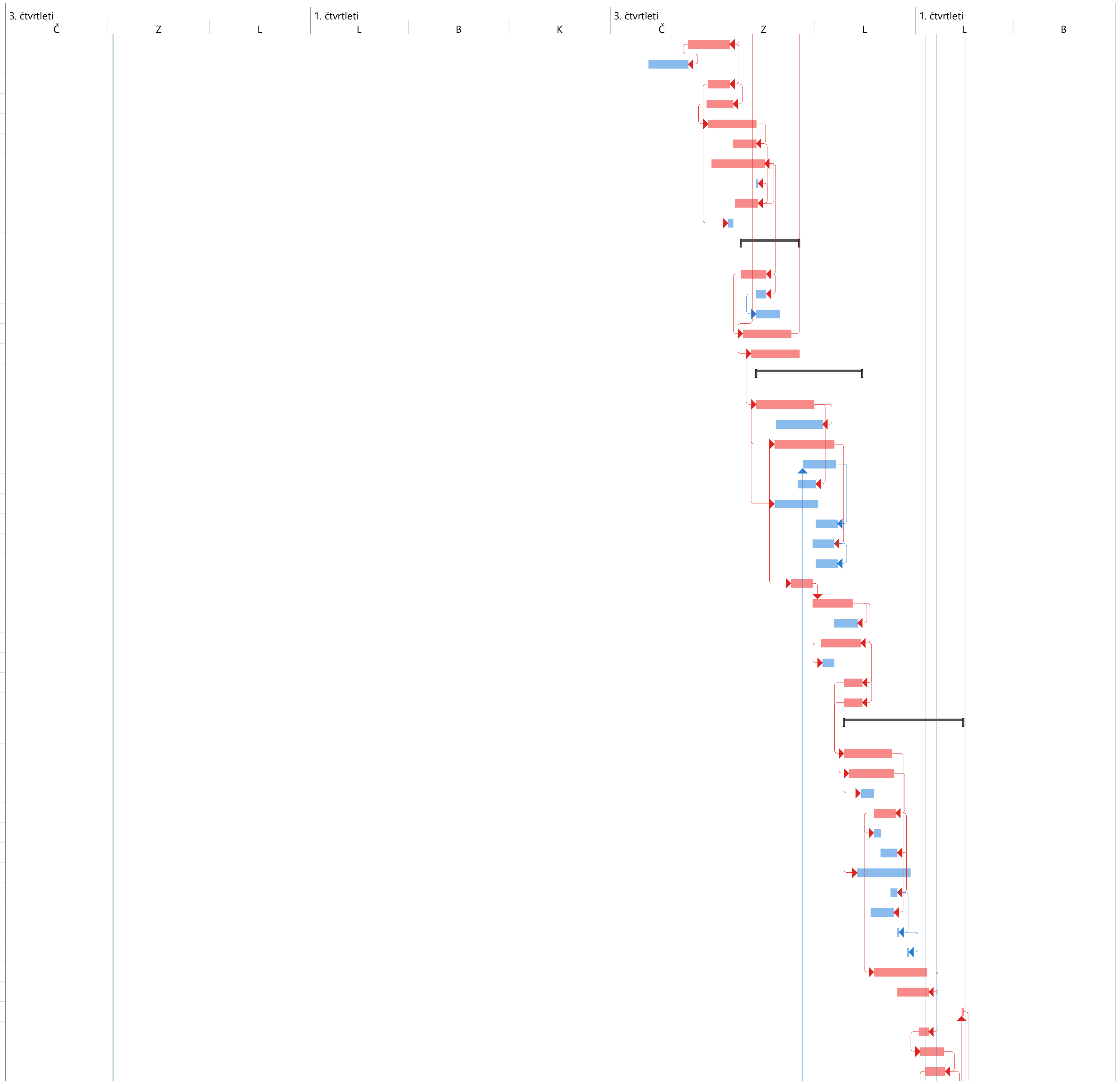
Vnější milník
Konečný termín
Kritický
Kritické rozdělení
Průběh
Průběh ručně zadaného úkolu

ID	Name of process	Duration (days)	Start	End
311	Ventilation - piping (GF - 7.UG)	17 dny	17/08/ 2018 09:00	10/09/ 2018 18:00
312	Ventilation - piping (1.UG)	18 dny	24/07/ 2018 09:00	17/08/ 2018 09:00
313	Internal partitions (Masonry walls)	9 dny	29/08/ 2018 09:00	10/09/ 2018 18:00
314	MAR - wiring	12 dny	28/08/ 2018 09:00	12/09/ 2018 18:00
315	Electrical wiring (High voltage)	21 dny	29/08/ 2018 09:00	26/09/ 2018 18:00
316	Fire alarm system	10 dny	13/09/ 2018 09:00	26/09/ 2018 18:00
317	Electrical wiring (Low voltage)	21 dny	31/08/ 2018 09:00	01/10/ 2018 18:00
318	AVT - wiring	1 den	27/09/ 2018 09:00	27/09/ 2018 18:00
319	Permanent sprinkler system - piping, wiring	10 dny	14/09/ 2018 09:00	27/09/ 2018 18:00
320	Ground parapet wall	3 dny	10/09/ 2018 09:00	12/09/ 2018 18:00
321	**INTERNAL PLASTERING AND BASE LAYERS OF THE FLOOR COMPOSITIONS**	**24 dny**	**18/09/ 2018 09:00**	**22/10/ 2018 18:00**
322	Door frames	10 dny	18/09/ 2018 09:00	02/10/ 2018 18:00
323	Rehabilitation, reparations and screeding of surfaces	3 dny	27/09/ 2018 09:00	02/10/ 2018 18:00
324	Concrete wall screeds	9 dny	27/09/ 2018 09:00	10/10/ 2018 18:00
325	Internal plasters	20 dny	19/09/ 2018 09:00	17/10/ 2018 18:00
326	Piping and wiring in floors	20 dny	24/09/ 2018 09:00	22/10/ 2018 18:00
327	**COMPLETION OF ROUGH FLOORS AND INTERNAL SURFACES AND TECHNOLOGIES**	**45 dny**	**27/09/ 2018 09:00**	**29/11/ 2018 18:00**
328	Concrete floor srceeds	24 dny	27/09/ 2018 09:00	31/10/ 2018 18:00
329	Montage of lifts	20 dny	09/10/ 2018 09:00	05/11/ 2018 18:00
330	Plasterboard walls	26 dny	08/10/ 2018 09:00	12/11/ 2018 18:00
331	Plasterboard parapet walls	14 dny	25/10/ 2018 09:00	13/11/ 2018 18:00
332	Piping and wiring in ceilings	9 dny	22/10/ 2018 09:00	01/11/ 2018 18:00
333	Sanitary instalations in walls	20 dny	08/10/ 2018 09:00	02/11/ 2018 18:00
334	Heating facility	9 dny	02/11/ 2018 09:00	14/11/ 2018 18:00
335	Door frames to plasterboard walls	9 dny	31/10/ 2018 09:00	12/11/ 2018 18:00
336	Fanlights and internal windows	9 dny	02/11/ 2018 09:00	14/11/ 2018 18:00
337	Ventilation elements (1.UG)	9 dny	18/10/ 2018 09:00	30/10/ 2018 18:00
338	Ventilation elements (GF - 7.AG))	18 dny	31/10/ 2018 09:00	23/11/ 2018 18:00
339	Plasterboard ceilings	10 dny	13/11/ 2018 09:00	26/11/ 2018 18:00
340	Aluminium grid ceiling	18 dny	05/11/ 2018 09:00	28/11/ 2018 18:00
341	Wooden ceilings (1.UG)	5 dny	06/11/ 2018 09:00	12/11/ 2018 18:00
342	Others (fire rollers, intenal canopies)	9 dny	19/11/ 2018 09:00	29/11/ 2018 18:00
343	Opening covers	9 dny	19/11/ 2018 09:00	29/11/ 2018 18:00
344	**COMPLETION OF TECHNICAL EQUIPMENT, COMPLETION WORKS AND FINAL SURFACES**	**48 dny**	**19/11/ 2018 09:00**	**29/01/ 2019 18:00**
345	Self-leveling floor screeding	21 dny	19/11/ 2018 09:00	17/12/ 2018 18:00
346	Epoxy floor (walking surface)	19 dny	22/11/ 2018 09:00	18/12/ 2018 18:00
347	Internal thermo-insulation system	6 dny	29/11/ 2018 09:00	06/12/ 2018 18:00
348	Fire safety cladding	9 dny	07/12/ 2018 09:00	19/12/ 2018 18:00
349	MAR - completion (1.UG)	2 dny	07/12/ 2018 09:00	10/12/ 2018 18:00
350	MAR - completion (GF - 7.AG)	8 dny	11/12/ 2018 09:00	20/12/ 2018 18:00
351	Electrical wiring (High voltage) - completion	21 dny	27/11/ 2018 09:00	28/12/ 2018 18:00
352	Fire alarm system - comletion	4 dny	17/12/ 2018 09:00	20/12/ 2018 18:00
353	Electrical wiring (Low voltage) - completion	10 dny	05/12/ 2018 09:00	18/12/ 2018 18:00
354	AVT - completion	1 den	21/12/ 2018 09:00	21/12/ 2018 18:00
355	Permanent sprinkler system - completion	1 den	27/12/ 2018 09:00	27/12/ 2018 18:00
356	Wooden floors (walking surface)	18 dny	07/12/ 2018 09:00	07/01/ 2019 18:00
357	Acoustic surfaces (tiling)	9 dny	21/12/ 2018 09:00	08/01/ 2019 18:00
358	Acoustic measurement	1 den	29/01/ 2019 09:00	29/01/ 2019 18:00
359	Wall painting (washable)	4 dny	03/01/ 2019 09:00	08/01/ 2019 18:00
360	Locksmith (steel) items	10 dny	04/01/ 2019 09:00	17/01/ 2019 18:00
361	Wall painting (common)	10 dny	07/01/ 2019 09:00	18/01/ 2019 18:00



Projekt: DT-Gant
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Úkol
Rozdělení
Milník
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Ruční úkoly zahrnuté v souhrnném úkolu
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Pouze s datem dokončení
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Vnější milník
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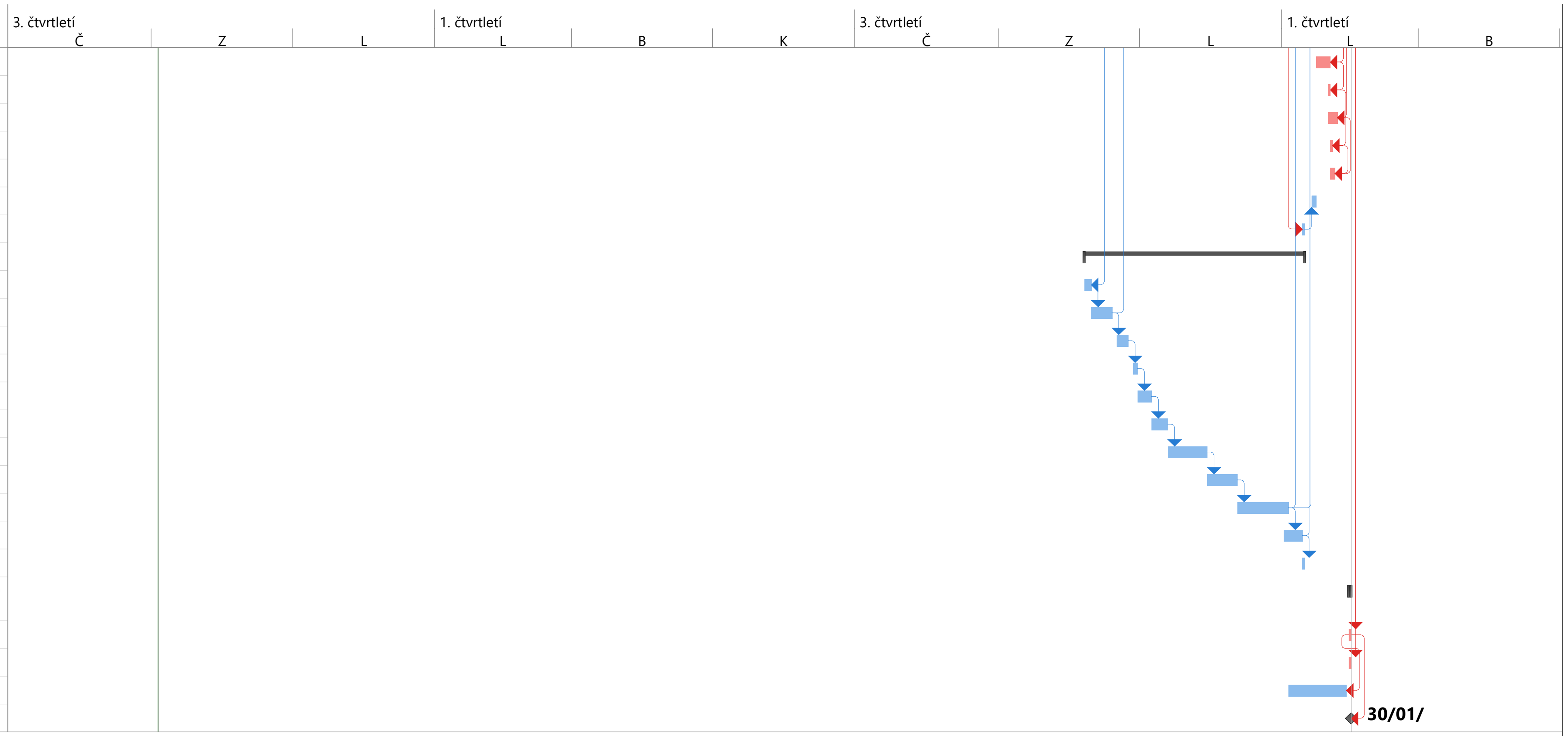
Kritický
Kritické rozdělení
Průběh
Průběh ručně zadaného úkolu

ID	Name of process	Duration (days)	Start	End
362	Resrtrooms - equipment	4 dny	16/01/ 2019 09:00	21/01/ 2019 18:00
363	Internal wooden walls	1 den	21/01/ 2019 09:00	21/01/ 2019 18:00
364	Internal glazed walls	4 dny	21/01/ 2019 09:00	24/01/ 2019 18:00
365	Carpet zones	1 den	22/01/ 2019 09:00	22/01/ 2019 18:00
366	Placement of doors and gates	2 dny	22/01/ 2019 09:00	23/01/ 2019 18:00
367	Carousels and accessories	2 dny	14/01/ 2019 09:00	15/01/ 2019 18:00
368	Gastronomic equipment	1 den	10/01/ 2019 09:00	10/01/ 2019 18:00
369	**BUILDING ENVELOPE (FACADE)**	**65 dny**	**08/10/ 2018 09:00**	**10/01/ 2019 18:00**
370	Erecting of masonry perapet wall	3 dny	08/10/ 2018 09:00	10/10/ 2018 18:00
371	Placement of facade panels (windows)	7 dny	11/10/ 2018 09:00	19/10/ 2018 18:00
372	Glazing - flush facade (GF)	5 dny	22/10/ 2018 09:00	26/10/ 2018 18:00
373	Glazing - flush facade (8.AG)	2 dny	29/10/ 2018 09:00	30/10/ 2018 18:00
374	Facade metal sheet tiling (8.AG)	4 dny	31/10/ 2018 09:00	05/11/ 2018 18:00
375	Montage of louvres	5 dny	06/11/ 2018 09:00	12/11/ 2018 18:00
376	Montage of steel facade supporting grid	13 dny	13/11/ 2018 09:00	29/11/ 2018 18:00
377	Thermal insulation and waterproof layer of parapet walls	9 dny	30/11/ 2018 09:00	12/12/ 2018 18:00
378	Masonry venner wall (ventilated facade)	12 dny	13/12/ 2018 09:00	03/01/ 2019 18:00
379	Metal facade elements	6 dny	02/01/ 2019 09:00	09/01/ 2019 18:00
380	Facade clocks	1 den	10/01/ 2019 09:00	10/01/ 2019 18:00
381	**ACCEPTANCE OF CONSTRUCTION - BUILDING APPROVAL**	**1 den**	**30/01/ 2019 09:00**	**30/01/ 2019 18:00**
382	Building approval	1 den	30/01/ 2019 09:00	30/01/ 2019 18:00
383	Acceptance of construction - handover	1 den	30/01/ 2019 09:00	30/01/ 2019 18:00
384	**CO320 + CO340**	17 dny	04/01/ 2019 09:00	29/01/ 2019 09:00
385	END OF THE PROJECT	0 dny	30/01/ 2019 18:00	30/01/ 2019 18:00



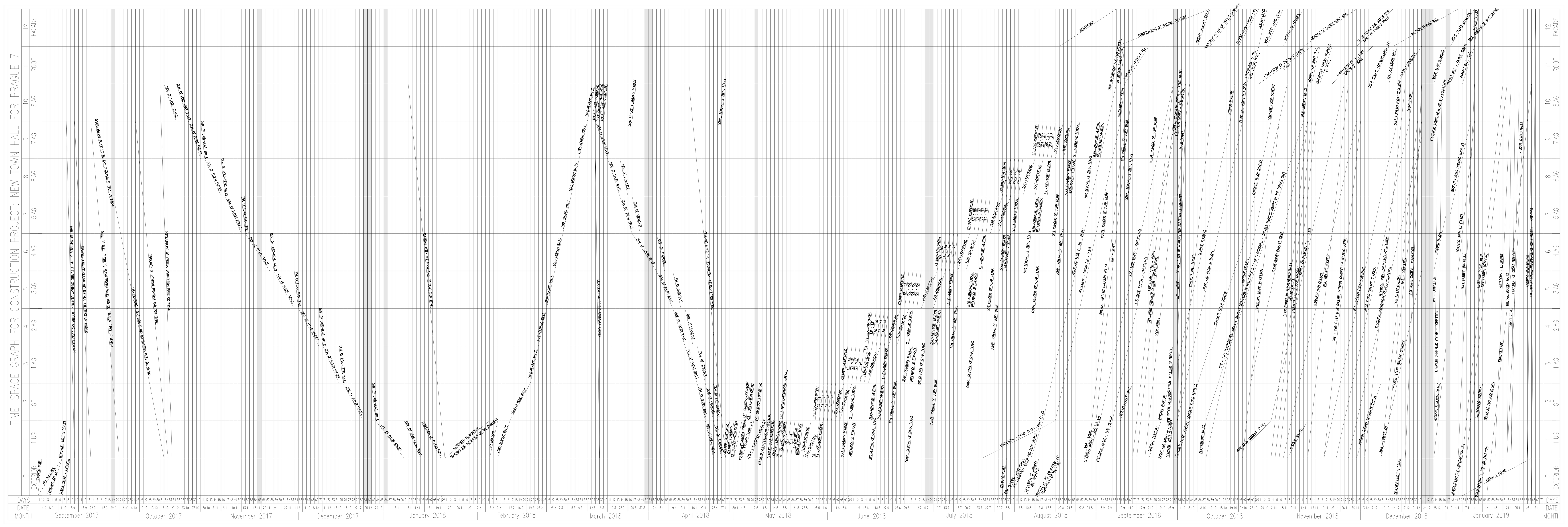
Projekt: DT-Gant
Datum: 02/11/ 2017 17:20

Úkol	Neaktivní úkol	Ruční úkoly zahrnuté v souhrnném úkolu	Vnější milník	Průběh ručně zadaného úkolu
Rozdělení	Neaktivní milník	Ruční souhrn	Konečný termín	
Milník	Neaktivní souhrn	Pouze zahájení	Kritický	
Souhrnný	Ruční úkol	Pouze s datem dokončení	Kritické rozdělení	
Souhrn projektu	Pouze s dobou trvání	Vnější úkoly	Průběh	

5.2 Time-space graph

The time-space graph is created in two levels. The first one is a complex time-space graph in the structure of stage processes and the second is created as an operational (detailed) time-space graph in the structure of partial construction processes.

Generally the time-space graph shows continuity of construction processes regarding to exact dates of implementation and space possibilities.



LEGEND:
(OVERLAPING AND UNREADABLE NAMES OF PRECESSES HAVE BEEN SUBSTITUTED BY THEIR SERIAL NUMBERS FROM THE TECHNOLOGICAL NORM)

1.PP
82 – WATERPROOF LAYERS UNDER LOAD–BEARING WALLS
88 – ASSEMBLY OF STEEL LOAD–BEARING ELEMENTS
90 – INT. STAIRCASE – REINFORCING
93 – STAIRCASE LANDING – FORMWORK
91 – INT. STAIRCASE – CONCRETING
94 – STAIRCASE LANDING – REINFORCING
96 – STAIRCASE LANDING – FORMWORK REMOVAL

1.NP
111 – STAIRCASE LANDING – FORMWORK
103 – COLUMNS – FORMWORK
112 – STAIRCASE LANDING – REINFORCING
104 – COLUMNS – CONCRETING
113 – STAIRCASE LANDING – CONCRETING
105 – COLUMNS – FORMWORK REMOVAL
106 – ASSEMBLY OF STEEL LOAD–BEARING ELEMENTS
115 – SLAB – FORMWORK

2.NP
125 – STAIRCASE LANDING – FORMWORK
121 – COLUMNS – FORMWORK
126 – STAIRCASE LANDING – REINFORCING
122 – COLUMNS – CONCRETING
127 – STAIRCASE LANDING – CONCRETING
123 – COLUMNS – FORMWORK REMOVAL
124 – ASSEMBLY OF STEEL LOAD–BEARING ELEMENTS
129 – SLAB – FORMWORK

139 – STAIRCASE LANDING – FORMWORK
135 – COLUMNS – FORMWORK
140 – STAIRCASE LANDING – REINFORCING
136 – COLUMNS – CONCRETING
141 – STAIRCASE LANDING – CONCRETING
137 – COLUMNS – FORMWORK REMOVAL
138 – ASSEMBLY OF STEEL LOAD–BEARING ELEMENTS
143 – SLAB – FORMWORK

4.NP
153 – STAIRCASE LANDING – FORMWORK
149 – COLUMNS – FORMWORK
154 – STAIRCASE LANDING – REINFORCING
150 – COLUMNS – CONCRETING
155 – STAIRCASE LANDING – CONCRETING
151 – COLUMNS – FORMWORK REMOVAL
152 – ASSEMBLY OF STEEL LOAD–BEARING ELEMENTS
157 – SLAB – FORMWORK

5.NP
167 – STAIRCASE LANDING – FORMWORK
163 – COLUMNS – FORMWORK
168 – STAIRCASE LANDING – REINFORCING
164 – COLUMNS – CONCRETING
169 – STAIRCASE LANDING – CONCRETING
165 – COLUMNS – FORMWORK REMOVAL
166 – ASSEMBLY OF STEEL LOAD–BEARING ELEMENTS
171 – SLAB – FORMWORK

6.NP
181 – STAIRCASE LANDING – FORMWORK
177 – COLUMNS – FORMWORK
182 – STAIRCASE LANDING – REINFORCING
178 – COLUMNS – CONCRETING
113 – STAIRCASE LANDING – CONCRETING
179 – COLUMNS – FORMWORK REMOVAL
180 – ASSEMBLY OF STEEL LOAD–BEARING ELEMENTS
185 – SLAB – FORMWORK

7.NP
195 – STAIRCASE LANDING – FORMWORK
191 – COLUMNS – FORMWORK
196 – STAIRCASE LANDING – REINFORCING
192 – COLUMNS – CONCRETING
197 – STAIRCASE LANDING – CONCRETING
193 – COLUMNS – FORMWORK REMOVAL
194 – ASSEMBLY OF STEEL LOAD–BEARING ELEMENTS
199 – SLAB – FORMWORK

8.NP
209 – STAIRCASE LANDING – FORMWORK
205 – COLUMNS – FORMWORK
210 – STAIRCASE LANDING – REINFORCING
206 – COLUMNS – CONCRETING
211 – STAIRCASE LANDING – CONCRETING
207 – COLUMNS – FORMWORK REMOVAL
208 – ASSEMBLY OF STEEL LOAD–BEARING ELEMENTS
213 – SLAB – FORMWORK

LIST OF ABBREVIATIONS:

DMTL.	– DISMANTLING
STRUCT.	– STRUCTURE(S)
LOAD–BEAR.	– LOAD–BEARING
DEM.	– DEMOLITION
EXT.	– EXTERNAL
INT.	– INTERNAL
COMPL.	– COMPLETE
SUPP.	– SUPPORTING
EXIST.	– EXISTING
TEMP.	– TEMPORARY
T.I.	– THERMAL INSULATION
S.L.	– STAIRCASE LANDING
D.S.	– DOUBLED SLAB

GRAPHIC MARKS ON THE TIME AXIS:

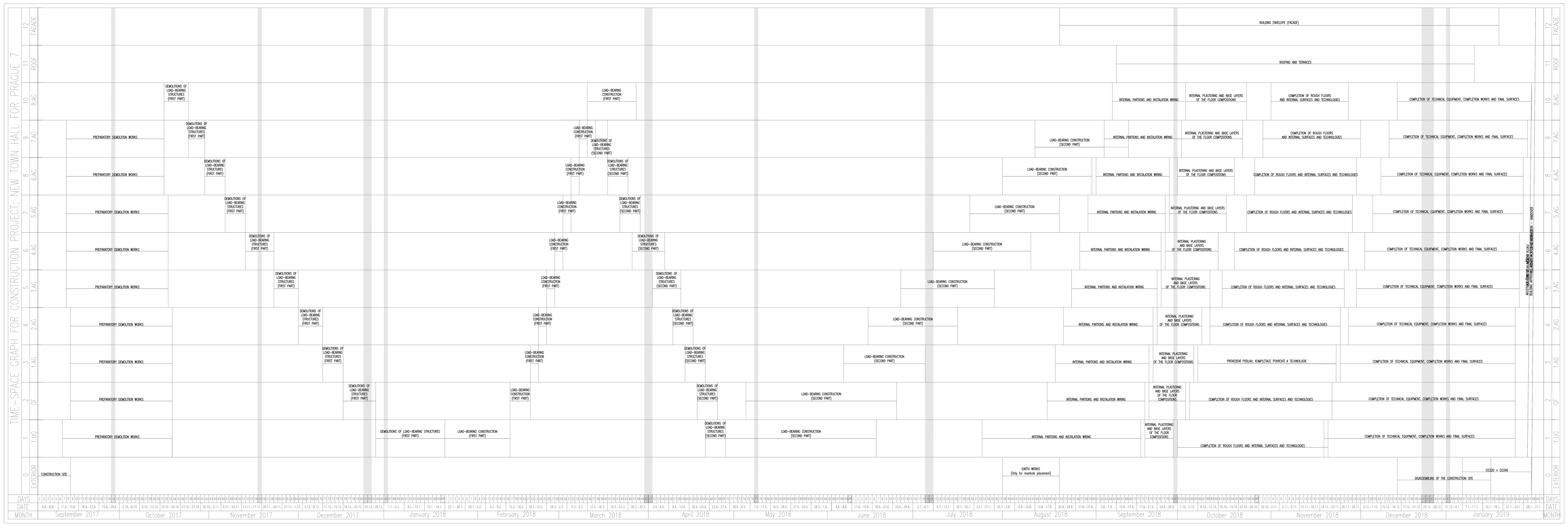
HOLIDAY – BUILDING PROCESSES ARE STOPPED – PROCESSES WHICH RUNS ONLY IN ONE TECHNOLOGICAL STAGE AND SIMULTANEOUSLY CROSSING THE HOLIDAY IN TIME–SPACE CHART ARE EXTENDED APPROPRIATE AMOUNT OF DAYS
– LINES OF THE PRECESSES WHICH RUNS IN MORE THAN ONE TECHNOLOGICAL STAGE ARE IN THE DAY OF HOLIDAY INTERRUPTED

SERIAL NUMBER OF THE DAY, WHICH IS MULTIPLIED BY HUNDRED – JUST FOR BETTER ORIENTATION IN THE TIME AXIS

STAGE PROCESSES:	DIRECTIONS OF THE STAGE PROCESSES:
0 – CONSTRUCTION SITE AND PREPARATORY DEMOLITIONS WORKS	HORIZONTALY DESCENDING
1 – DEMOLITIONS OF LOAD–BEARING STRUCTURES (TWO PARTS)	HORIZONTALY DESCENDING
2 – LOAD–BEARING CONSTRUCTIONS (TWO PARTS)	HORIZONTALY ASCENDING
3 – EARTHWORKS (Only for a manhole placement)	HORIZONTAL
4 – ROOFING AND TERRACES	HORIZONTAL
5 – INTERNAL PARTIONS AND INSTALATION WIRING	HORIZONTALY ASCENDING
6 – INTERNAL PLASTERING AND BASE LAYERS OF THE FLOOR COMPOSITION	HORIZONTALY ASCENDING
7 – COMPLETION OF ROUGH FLOORS AND INTERNAL SURFACES AND TECHNOLOGIES	HORIZONTALY ASCENDING
8 – COMPLETION OF TECHNICAL EQUIPMENT, COMPLETION WORKS AND FINAL SURFACES	HORIZONTALY ASCENDING
9 – BUILDING ENVELOPE (FACADE)	HORIZONTALY ASCENDING
10 – ACCEPTANCE OF CONSTRUCTION – BUILDING APPROVAL	

SPACE SECTIONS:	ALLOCATION OF THE STAGE PROCESSES:
SS 0 – AROUND THE BUILDING	0,3 (+ building objects SO310, SO340)
SS 1 – SUBSTRUCTURE (1 UG)	2,5,6,7,8
SS 2 – GROUND FLOOR (0 AG)	2,5,6,7,8
SS 3 – FIRST FLOOR (1 AG)	2,5,6,7,8
SS 4 – SECOND FLOOR (2 AG)	2,5,6,7,8
SS 5 – THIRD FLOOR (3 AG)	2,5,6,7,8
SS 6 – FOURTH FLOOR (4 AG)	2,5,6,7,8
SS 7 – FIFTH FLOOR (5 AG)	2,5,6,7,8
SS 8 – SIXTH FLOOR (6 AG)	2,5,6,7,8
SS 9 – SEVENTH FLOOR (7 AG)	2,5,6,7,8
SS 10 – EIGHTH FLOOR (8 AG)	2,5,6,7,8
SS 11 – ROOF	4
SS 12 – FACADE	9

AUTHOR : Bc. MICHAL BARTOŠ			A.Y. : 2017/2018
SUPERVISOR : Ing. KAREL POLÁK Ph.D.			N.D.: X.X
PROJECT : NEW TOWN HALL FOR PRAGUE 7			SCALE: -
FSV / ETSIE	CONTENT : COMPLEX TIME - SPACE GRAPH		
CTU / UPV	DATE : X.X.2017	FORMAT : XX	SUBJECT : DT · DEPARTMENT : K122



STAGE PROCESSES:	DIRECTIONS OF STAGE PROCESSES:
0 – CONSTRUCTION SITE AND PREPARATORY DEMOLITIONS WORKS	HORIZONTALY DESCENDING
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2 – LOAD–BEARING CONSTRUCTIONS (TWO PARTS)	HORIZONTALY ASCENDING
3 – EARTHWORKS (Only for a manhole placement)	HORIZONTAL
4 – ROOFING AND TERRACES	HORIZONTAL
5 – INTERNAL PARTIONS AND INSTALATION WIRING	HORIZONTALY ASCENDING
6 – INTERNAL PLASTERING AND BASE LAYERS OF THE FLOOR COMPOSITION	HORIZONTALY ASCENDING
7 – COMPLETION OF ROUGH FLOORS AND INTERNAL SURFACES AND TECHNOLOGIES	HORIZONTALY ASCENDING
8 – COMPLETION OF TECHNICAL EQUIPMENT, COMPLETION WORKS AND FINAL SURFACES	HORIZONTALY ASCENDING
9 – BUILDING ENVELOPE (FACADE)	HORIZONTALY ASCENDING
10 – ACCEPTANCE OF CONSTRUCTION – BUILDING APPROVAL	

SPACE SECTIONS:	ALLOCATION OF STAGE PROCESSES:
SS 0 – AROUND THE BUILDING	0,3 (+ building objects SO310, SO340)
SS 1 – SUBSTRUCTURE (1 UG)	2,5,6,7,8
SS 2 – GROUND FLOOR (0 AG)	2,5,6,7,8
SS 3 – FIRST FLOOR (1 AG)	2,5,6,7,8
SS 4 – SECOND FLOOR (2 AG)	2,5,6,7,8
SS 5 – THIRD FLOOR (3 AG)	2,5,6,7,8
SS 6 – FOURTH FLOOR (4 AG)	2,5,6,7,8
SS 7 – FIFTH FLOOR (5 AG)	2,5,6,7,8
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SS 10 – EIGHTH FLOOR (8 AG)	2,5,6,7,8
SS 11 – ROOF	4
SS 12 – FACADE	9

GRAPHIC MARKS ON THE TIME AXIS:

HOLIDAY – BUILDING PROCESSES ARE STOPPED

SERIAL NUMBER OF THE DAY, WHICH IS MULTIPLIED BY HUNDRED – JUST FOR BETTER ORIENTATION IN THE TIME AXIS

AUTHOR : Bc. MICHAL BARTOŠ			A.Y. : 2017/2018
SUPERVISOR : Ing. KAREL POLÁK Ph.D.			N.D.: X.X
PROJECT : NEW TOWN HALL FOR PRAGUE 7			SCALE: -
FSV / ETSIE	CONTENT : DETAILED TIME - SPACE GRAPH		
CTU / UPV	DATE : X.X.2017	FORMAT : XX	SUBJECT : DT · DEPARTMENT : K122

5.3 Deployment chart of workers requirements, Material requirements and Machinery requirements

The Employee Deployment Chart shows the number of workers on individual days of construction and includes labouring and management workers.

The chart of machines shows the need for the most important machines in individual days of construction.

A graph of material needs shows when critical materials are needed. It acts as an indicator for ordering materials and supplying them to the construction.

GRAPHIC MARKS ON THE TIME AXIS:

- HOLIDAY – BUILDING PROCESSES ARE STOPPED
- SERIAL NUMBER OF THE DAY, WHICH IS MULTIPLIED BY HUNDRED – JUST FOR BETTER ORIENTATION IN THE TIME AXIS

MAXIMUM AMOUNT OF WORKERS ON THE CONSTRUCTION SITE IS 129 ON 1.10.2018
CONSTRUCTION MANAGEMENT TEAM IS NOT INCLUDED IN THE GRAPH – ESTIMATED AMOUNT OF MEMBERS IS 8

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SUPERVISOR :	Ing. KAREL POLÁK Ph.D.	N.D.:	X.X
PROJECT :	NEW TOWN HALL FOR PRAGUE 7	SCALE:	-
FSV / ETSIE	CONTENT : DEPLOYMENT GRAPH OF WORKERS		
CTU / UPV	DATE : X.X.2017	FORMAT : XX · SUBJECT : DT	DEPARTMENT : K122

GRAPH OF MACHINES USAGE ON THE CONSTRUCTION SITE

GRAPHIC MARKS ON THE TIME AXIS:

- HOLIDAY – BUILDING PROCESSES ARE STOPPED
- SERIAL NUMBER OF THE DAY, WHICH IS MULTIPLIED BY HUNDRED – JUST FOR BETTER ORIENTATION IN THE TIME AXIS

AUTHOR :	Bc. MICHAL BARTOŠ	A.Y. :	2017/2018
SUPERVISOR :	Ing. KAREL POLÁK Ph.D.	N.D.:	X.X
PROJECT :	NEW TOWN HALL FOR PRAGUE 7	SCALE:	-
FSV / ETSIE	CONTENT : GRAPH OF MACHINES USAGE		
CTU / UPV	DATE : X.X.2017	FORMAT : XX · SUBJECT : DT	DEPARTMENT : K122

GRAPH OF NEEDS OF THE DETERMINATIVE MATERIALS

GRAPHIC MARKS ON THE TIME AXIS:

- HOLIDAY – BUILDING PROCESSES ARE STOPPED
- SERIAL NUMBER OF THE DAY, WHICH IS MULTIPLIED BY HUNDRED – JUST FOR BETTER ORIENTATION IN THE TIME AXIS

LEGEND OF MATERIALS:

CONCRETE C20/25 – VERTICAL LOAD-BEARING STRUCTURES – FILLING OF PERMANENT FORMWORK MASONRY

CONCRETE C25/30 – HORIZONTAL LOAD-BEARING STRUCTURES – MONOLIT FLOOR STRUCTURES

AUTHOR :	Bc. MICHAL BARTOŠ	A.Y. :	2017/2018
SUPERVISOR :	Ing. KAREL POLÁK Ph.D.	N.D.:	X.X
PROJECT :	NEW TOWN HALL FOR PRAGUE 7	SCALE:	-
FSV / ETSIE	CONTENT : GRAPH OF NEEDS OF DETERMINATIVE MATERIALS		
CTU / UPV	DATE : X.X.2017	FORMAT : XX · SUBJECT : DT	DEPARTMENT : K122

6 CONSTRUCTION SITE

6.1 Technical report with dimensions of construction site facilities

The technical report is created according to the National regulation. No. 499/2006 Coll. The social (sanitary) and technical parts of the site are assessed and dimensioned.

TECHNICAL REPORT

Construction site

NOVÁ RADNICE PRO PRAHU 7
U PRŮHONU 1338/38, PRAHA 7

FSV – ČVUT

ETSIE – UPV

Bc. Michal Bartoš

Diploma thesis

2017/2018

1) Identification data about the construction site, its size, expected modifications, fencing, permanent and temporary soil dump and accessibility

- **Identification data**

Title: New town hall for Prague 7
Type of construction: Reconstruction of administrative building
Address: U Průhonu 1338/38, 170 00 Praha 7
Built-up area: 653 m^2
Number of floors: 9 above ground + 1 underground

- **Construction site size information**

The construction site is located in the courtyard behind the building. It is accessible from the street U Průhonu in Prague 7 Holešovice. Land no.881 (c.o. Praha-Holešovice) with an area of 1452 m^2 is on a flat land. Area of 653 m^2 is built-up by the existing building and remaining 799 m^2 exists as courtyard and access road to the courtyard.

- **Expected modifications of the construction site and its fencing**

Surface of the area of the courtyard and the access road is made of interlocking concrete pavers, which is in sufficient condition and has required bearing capacity for construction site facilities including a crane. Special preparations or changes of the surface are not necessary.

The yard space where the construction site is located is surrounded by neighborig buildings. Fencing and security of the site against the entry of unauthorized persons will be needed from the northern side of the area. Fencing will correspond with the edge of the existing building. Entrance for pedestrians will be set up through the existing building There will be gatehouse with a terminal.

An entry gate for vehicles will be set up on the line of the fencing.

During implementation of 2.S.P. (load-bearing constructions), 7.S.P. (rough internal floors) and 9.S.P. (facade works) will be he area of construction site enlarged by shifting the fencing approximately 5 meters away from the edge of the building. This area will serve first as operating place for automix and concrete pump then position for the pole scaffolding (1,5 m wide) and at the end for operating place for automix and stationary concrete pump. These machines will provide a transport of concrete mixture for load-bearing constructions and rough internal floors.

This occupation of the public space affects pedestrian traffic by closing the walkway and public vehicle traffic by limitation of maximum driving speed. Speed will be limited on 30 km/h. When the construction finishes the fencing will be removed. Just before finishing the construction the construction site facilities will be dismantled and all surfaces in the courtyard will be reconstructed. (See CO320 and CO340)

- **Permanent and temporary soil dump**

Due to minimal scope of earthworks the soil dump will not be necessary. Excavation works will be carried out during the 3.S.P. only for placement of the manhole (sewerage system).

- **Accessibility of the construction site**

For access to the building will be necessary to pass through the gatehouse, which will be located inside the building. There will be placed the entrance terminal. Each entry to the building and exit from the building will be recorded. Entry for the vehicles will be set up through two-wing gate of the width 4,0 m. The gate will be serviced on a request to the security staff. There is a limited speed of 10 per hour at the site. Traffic will be managed by the security staff. Entry will be allowed only to the suppliers of the construction and to the construction management team. Due to the small area of the construction site, large traffic is not possible.

2) Significant technical infrastructure networks

Near the area of the construction site are located infrastructure networks that fall under the administration of Prague 7. However, there will be no need to reconnect them within the building. (Exception is the installation of a new sewerage manhole.) Existing distribution of water and electrical energy (connections) will be used for the construction site and for the reconstructed building. (their condition is assessed in the building documentation) Infrastructure networks are located at the street U Průhonu, under a road surface.

3) Source of water supply and electricity for construction site, site drainage and sewerage system

All the necessary sources of energy for the construction will be provided by connecting the construction site to the existing connection of the building. Electricity will be secured by setting up a site switchboard, electricity consumption will be measured. Water consumption will be measured. The drainage of the site will be carried out by the existing gravity drainage system. The waste water and sewage from the site will be made by the existing sewerage system into the public sewer at U Průhonu Street.

- **Electrical energy connection**

The proposal counts with the period with the maximum amount of electric devices occurring on the construction.

Device	**Power**	**Amount**	**Total power**	**Device type**
Lighting of the containers	36 W	36	1,3 kW	P1
External lighting of the site	1000 W	5	5 kW	P3
Internal lighting of the site	200 W	30	6 kW	P2
Crane Liebherr 200 EC - Litronic	58 kW	1	58 kW	P1
Concrete vibrator	3,5 kW	2	7 kW	P1
Minor construction equipment	2 kW	20	40 kW	P1

Construction lift	5,5 kW	1	5,5 kW	P1
Total power:			122,8 kW	

Sheet. 1. Sheet of device total power

On the construction site will be placed electric transformer with a power 150 kW. Transformer will serve as the main switch for the construction site.

Electrical wires will lead on the ground level. They will be protected by covering. The covering can bear passing trucks.

- **Water supply system**

Water supply distribution will be provided by the existing building´s water service pipe. Dimension of the distribution is counted to appropriate consumption of social and hygienic facilities and construction processes.

- **Sewerage system**

Construction sewerage system will be connected with the existing building´s sewer service pipe. It will serve for sewage and rain water outfall.

4) Precautions regarding to Health and safety requirements, third persons safety and modifications for persons with reduced mobility.

During the construction will be this issue supervised by responsible person. (H&S coordinator) This person will be elected by the investor or his representative person.

The requirements for construction works in the field of health and safety protection are based on the law no. 309/2006 Sb. And the government regulation no. 591/2006 Sb.. Specific requirements and solutions are given in The Health and safety plan itself.

- **Traffic limitations on public roads**

Construction will not affect public transport by enclosing the street U Průhonu most of the time. Only during the 3.S.P. (Placement of the sewerage manhole) will by closed one line of the road. Exact term of implementation of 3.S.P. will be specified according to the construction development. Estimated dates are visible in Time schedule of the construction and Time space graph. During the implementation of 2.S.P., 7.S.P. and 9.S.P. will be enclosed the pedestrian walkway and traffic speed will be limited on 30 km per hour.

- **Modifications for persons with reduced mobility**

Working of the persons with the reduced mobility is not presumed.

5) Site layout and safety in terms of protection of public interests

- **Protective zones in terms of nature conservation**

In the area of the construction site, there are no protective zones or nature conservations. Otherwise there are requirements of Czech law.

- **Protection of cultural monuments**

In the area of the construction site, there is no need of protection of cultural monuments. Otherwise there are requirements of Czech law.

6) Proposal of usage of new of existing object or buildings for the construction site

- **Occupation of a land for the construction site and occupied plots and public areas**

The construction site´s space corresponds to the boundaries of the plot, where is the building located. The plot is owned by the investor of the project. Another plots will not be occupied. Public areas (St. u Průhonu) will be occupied during the 2.S.P., 3.S.P., 7.S.P. and 9.S.P.. Before the situation happens, asking for permission will be needed. Permission will be issued by the city council of Prague 7. Estimated dates are visible in Time schedule of the construction and Time space graph.

- **Size of the construction site**

The construction site´s space corresponds to the boundaries of the plot, where is the building located.

Partition of the construction on separate sites

- Construction will be realized on one compact construction site.

Determination of area sizes and it´s way of using

- The area of the construction site is located on the plot of the investor and integrated to one main site. In this area will be placed storage areas, construction containers (offices, sanitary facilities, ….) and machines. On the construction site will not be preparer a concrete mixture.

- **Soil and material management**

Topsoil management

- Construction does not interfere with areas with topsoil.

Soil management

- Excavated soil by volume of 161 m^3 will be partly moved out from the site and partly kept for backfilling of the excavated pit. (Only for 3.S.P. Manhole placement.)

Materials got by demolition works

- In the construction site, there will be placed waste containers. Materials got by demolition works will be sorted on the construction site. There will be containers for rubble (bricks, concrete, ceramic tiles, …), metal, glass and community waste.

- It is not allowed to burn the waste in the site!

Infrastructure networks for the construction site

- All the necessary sources of energy for the construction will be provided by connecting the construction site to the existing connection of the building.

Supplying of the site

- The material will be loaded directly onto the site and then transported on its place of usage.

- **Expected number of workers during the construction works and social and sanitary background**

The estimated maximum number of workers, will be 129 workers in one day. The number can be changed according to the deployment of professions. Offices and social and sanitary facilities will be designed as container site. There will be no central catering system. Catering will be set individually.

<u>Construction site proposal</u>

Content:

1 Construction site dimensions

1.1 Dimensions of sanitary facilities

1.2 Required sanitary area and number of sanitary equipment

1.3 Proposal of construction site containers

1.4 Total area of site containers and its placement

1.5 Storage of material

Drawings of construction site are part of construction site proposal. Three drawings for different stage processes were created.

Construction site was designed according to these principles:

1. Determination of the primary direction of the construction process
2. Determination of existing buildings or objects, which are possible to use as a part of construction site facilities
3. Placement of primary machines (excavators, cranes, lifts, …)
4. Placement of secondary machines, warehouses, dumps for maximum effectivity of usage primary machines.
5. Solution of a traffic in the construction site, including proposal of internal temporary or permanent roads. 6. Proposal of offices, social background and sanitary facilities.
7. Determination of necessary energy sources and proposal of MEP systems and utility networks (Electric distribution, water distribution, sewerage system) or using existing ones.
8. Determination of security precautions. Fire protection and anti-theft protection.

1 Construction site dimensions

Maximal theoretic number of workers on the construction is 129 (regarding to Deployment chart of workers). This situation most likely will not occur, so the construction site is dimensioned on ¾ of maximum number of workers, i.e. 97 workers.

Container site will be designed for the management team in form of office. Estimated number of persons in management team is 8.

1x Site manager
4x Construction foreman
1x Assistant of site manager
1x Construction supervisor of the investor
1x Coordinator H&S

1.1 Dimensions of sanitary facilities

Room type	Area per one person
Changing room	1,25 m^2
Washroom	0,25 m^2
Dining room	0,5 m^2
Office	5,0 m^2

Sheet. 2. Dimensions of rooms

Number of workers	Number of sanitary equipment
up to 50 men	2 toilets + 2 urinals
up to 100 men	3 toilets + 3 urinals
up to 200 men	6 toilets l + 6 urinals
each 15 workers	1 washbasin
each 20 workers	1 shower cabin

Sheet. 3. Dimensions of sanitary equipment

1.2 Required sanitary area and number of sanitary equipment

Minimal area of the changing room for 97 workers: 97x1,25=121,25 m^2

Minimal area of the dining room for 97 workers: 97x0,5=48,5 m^2

Minimal area of the office for 8 persons: 8x5=40 m^2

Minimal area of the washroom for 105 persons: 105x0,25=26,25 m^2

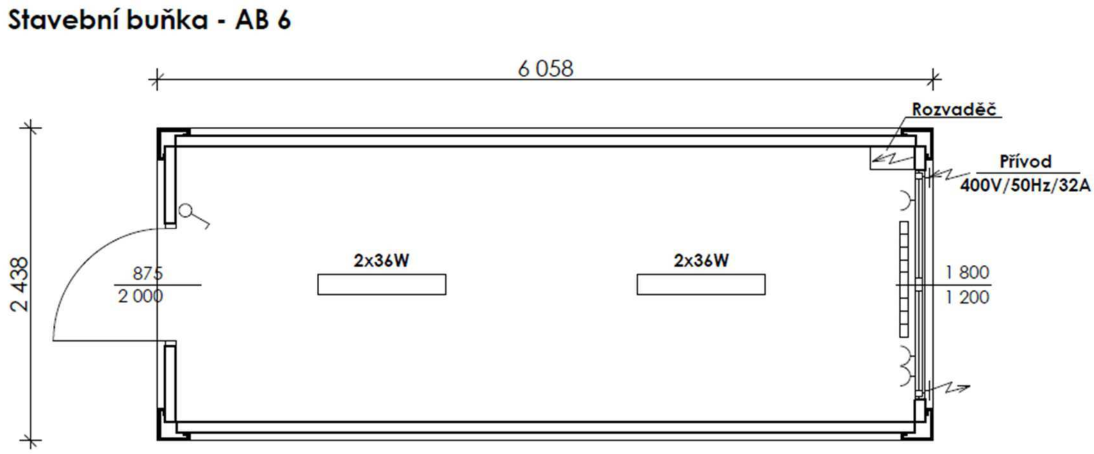
For 105 persons is required: at least 3 - 4 WC toilets
at least 3 - 4 urinals
at least 7 washbasins
at least 5 shower cabins

1.3 Proposal of construction site containers

All the containers and facilities will be rented from company AB-Cont s.r.o..

Changing rooms:

For the changing rooms will be used six containers AB6. Net floor area of the container is 14 m^2. Every container is equipped with 4 lights, each with power 36W.



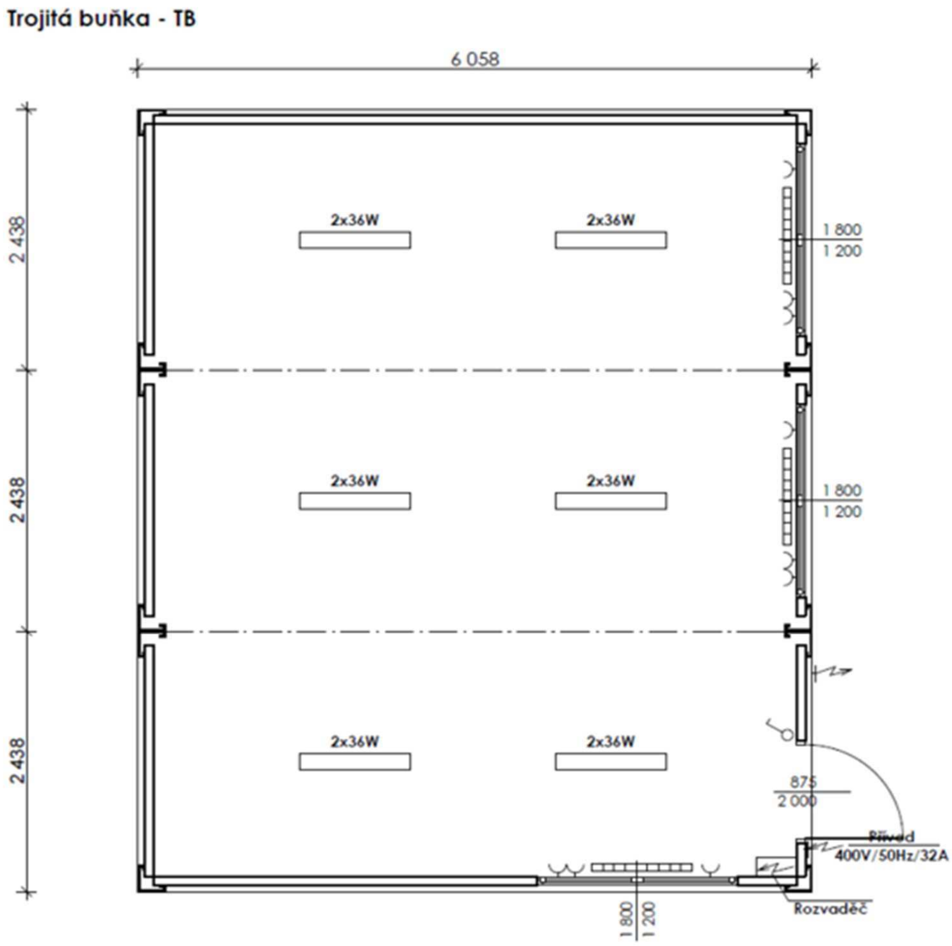
Pic. 1: Container AB6

Dining rooms:

For the dining room will be used triple container TB. Net floor area of the container is 43 m^2.

Office for site management team:

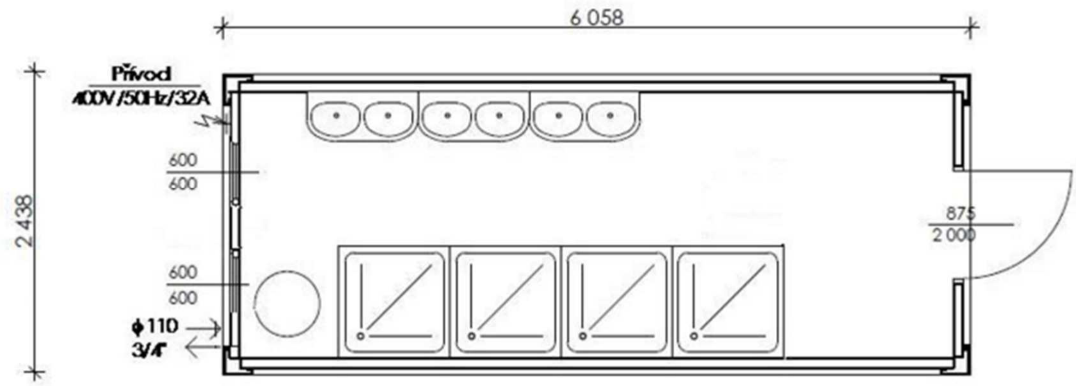
For the office will be used triple container TB. Net floor area of the container is 43 m^2.



Pic. 2: Container TB

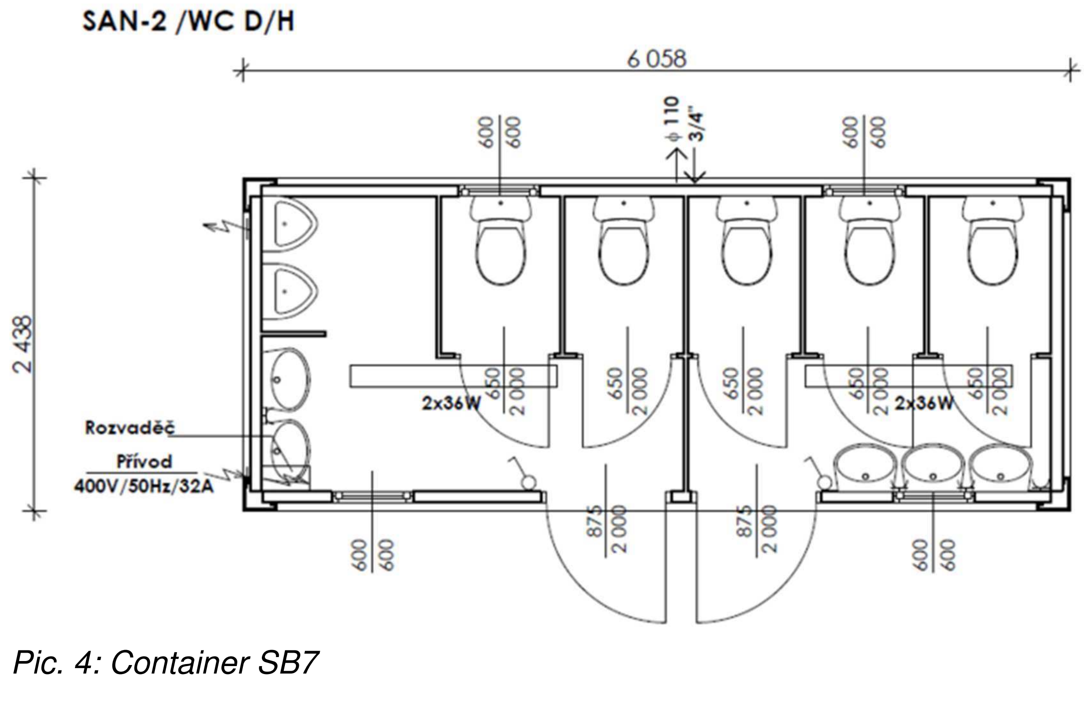
Sanitary facilities:

For the washroom will be used sanitary container SB5, which contains 4x shower cabin, 6x washbasin and 1x boiler. Net floor area of the container is 14 m^2.

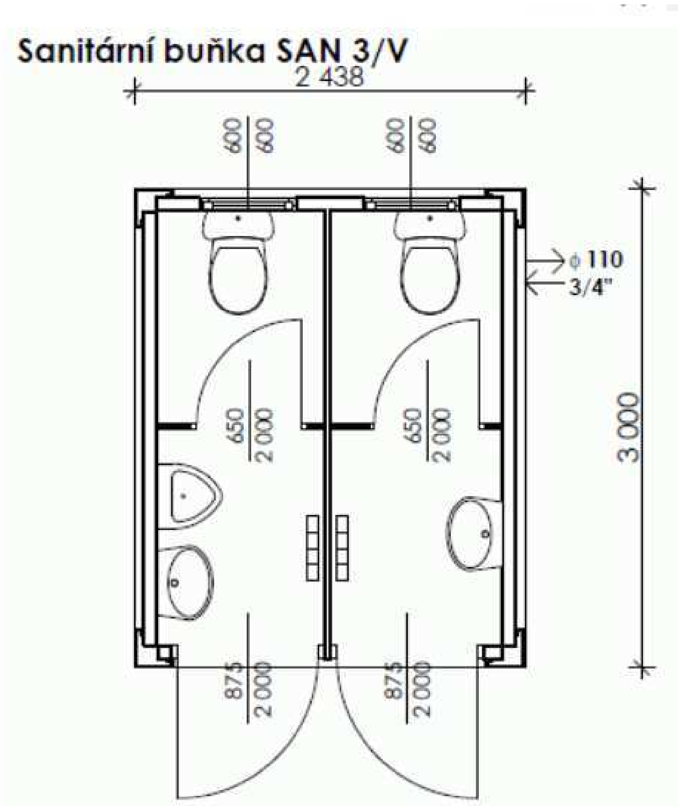


Pic. 3: Container SB5

For the restroom will be used sanitary container SB7, which contains 5x WC toilet, 2x urinal a 5x washbasin. Second type of sanitary container is TK3 and contains 2x WC toilet, 1x urinal a 2x washbasin. Net floor area of the container is 7 m^2.



Pic. 4: Container SB7



Pic. 5: Container TK3

1.4 Total area of site containers and its placement

Changing rooms:	6x container AB6 = 84 m^2
Dining room:	1x triple container TB = 43 m^2
Office:	1x triple container TB = 43 m^2
Sanitary facilities:	1x sanitary container SB5
	1x sanitary container SB7
	1x sanitary container TK3
	=35 m^2

All the containers are compatible and is possible to assemble container site as needed. The location of the container site is evident from construction site drawings. Regarding to small area of the courtyard where the construction site is located is not possible to provide sufficient area of the changing rooms. Another area for the changing rooms will be established inside of the reconstructed building, if necessary.

1.5 Storage of the material

The material storage proposal is designed to ensure a continuity of construction production and minimize transport and storage costs. This proposal presumes supplying of the construction with material for three days in advance. The pallets with material will always be stored at a maximum of 2 in one column.

The material susceptible to moisture disturbance and generally outdoor conditions will be stored in covered warehouses or in the premises of the first floor of the reconstructed building. The material which can be stored without special protection requirements, will be stored outside on reserved space in construction site. (formwork, reinforcing steel, …) (See site construction drawings.)

7) Determination of the conditions for the construction from the point of view of safety and health safety protection and health and safety plan

The requirements for construction works in the field of health and safety protection are based on the law no. 309/2006 Sb. And the government regulation no. 591/2006 Sb.. Specific requirements and solutions are given in The Health and safety plan itself.

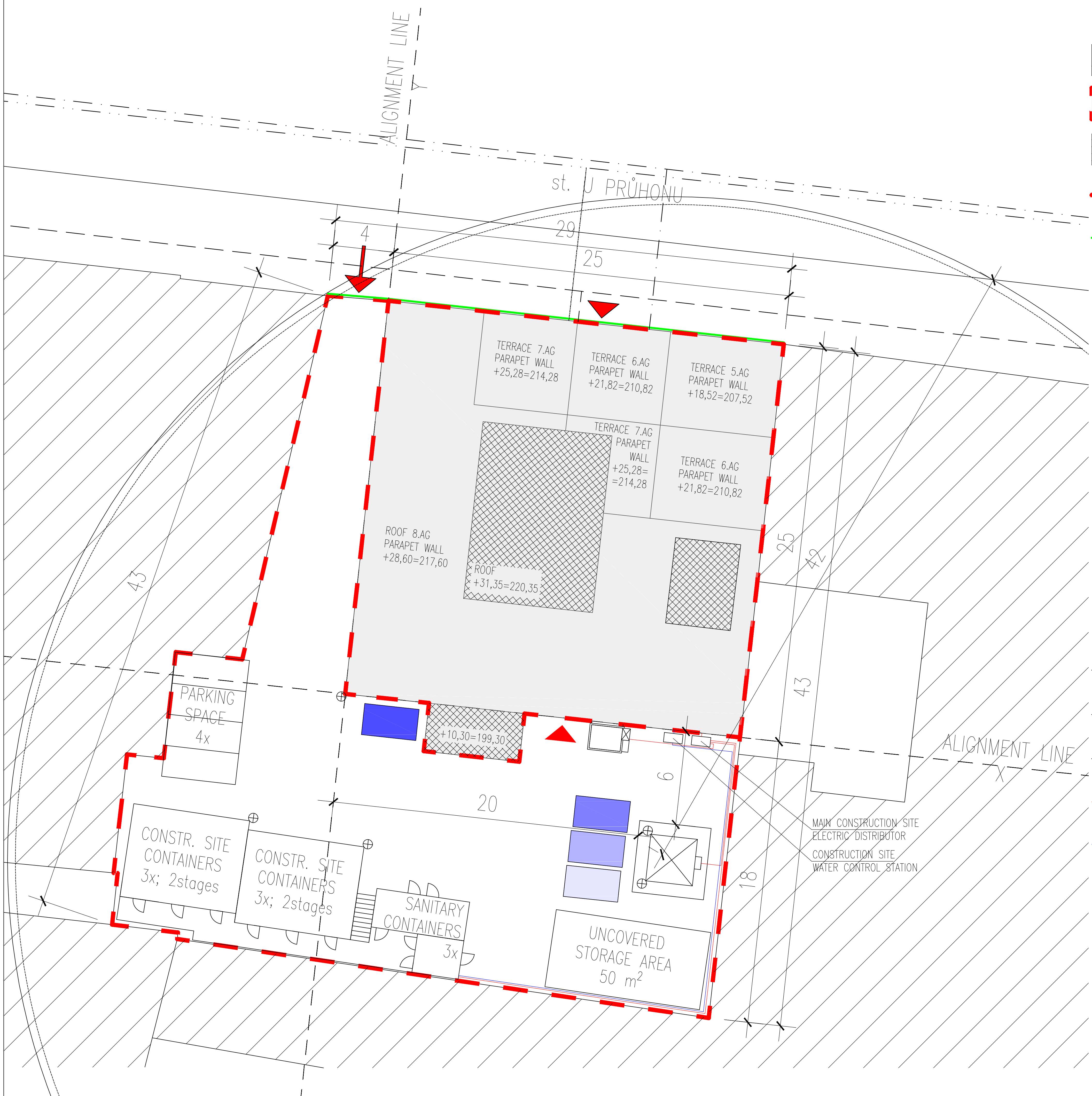
8) Environmental conditions during construction

All the construction processes will respect the environment and will be processed in maximum effort of environmental protection. They will comply with the relevant law regulations. In particular:

- Law no. 17/1992 Sb., The Environment (in general)
- Law no. 86/2002 Sb., Protection of the air
- Law no. 114/1992 Sb., Nature and landscape protection
- Government Regulation no. 9/2002 Sb., Technical requirements for products and processes in terms of noise emission
- Waste management will be executed in accordance with Law no. 185/2001 Sb.

6.2 Site drawings (3x)

Three drawings for different stage processes were created. First drawing is created for 0.S.P. - Construction site and preparatory demolition works and 1.S.P. – Demolition of load-bearing structures, second for 2.S.P. – Load-bearing constructions and third for 6.S.P., 7.S.P. and 9.S.P..



LEGEND:

NEIGHBORING BUILDINGS (max. H=+11,000)

BUILDING UNDER RECONSTRUCTION

AREAS OF DEMOLITION WORKS (LOAD-BEARING ELEMENTS)

AREA OF THE RECONSTRUCTED BUILDING

FENCING OF THE CONSTRUCTION SITE

MAIN ENTRANCE FOR VEHICLES

MAIN ENTRANCE FOR PEDESTRIANS

ENTRANCE TO THE BUILDING FROM CONSTRUCTION SITE

WASTE CONTAINER – RUBBLE (BRICKS, CONCRETE, CER. TILES

WASTE CONTAINER – METAL MATERIALS

WASTE CONTAINER – GLASS MATERIALS

WASTE CONTAINER – COMMUNITY WASTE

LIGHTING

CONSTRUCTION LIFT – GEDA ERA 1200 Z/ZP

PUBLIC SEWERAGE SYSTEM

PUBLIC WATER SUPPLY SYSTEM

PUBLIC ELECTRIC WIRING – HIGH VOLTAGE

CONSTRUCTION SITE ELECTRIC WIRING – HIGH VOLTAGE

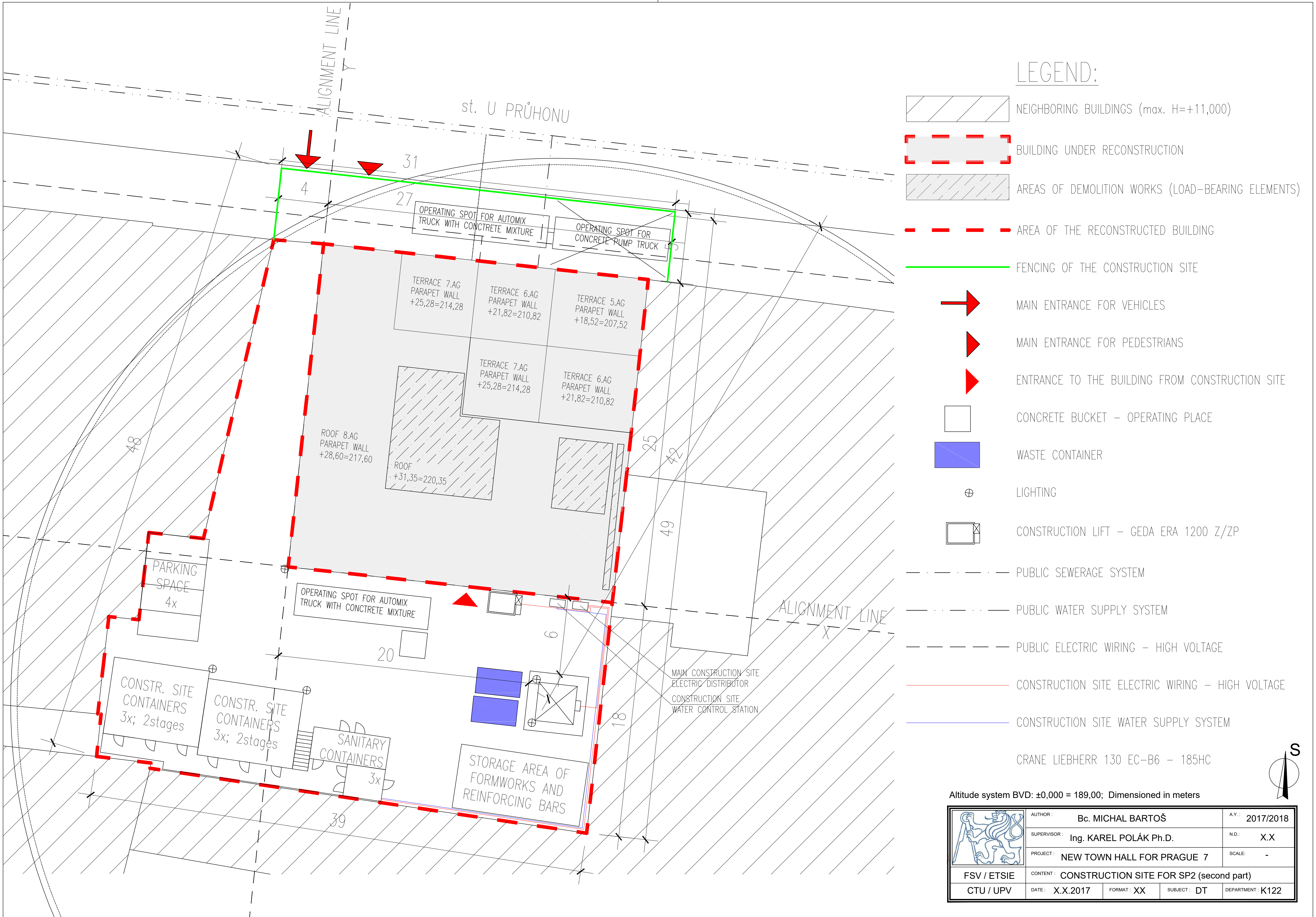
CONSTRUCTION SITE WATER SUPPLY SYSTEM

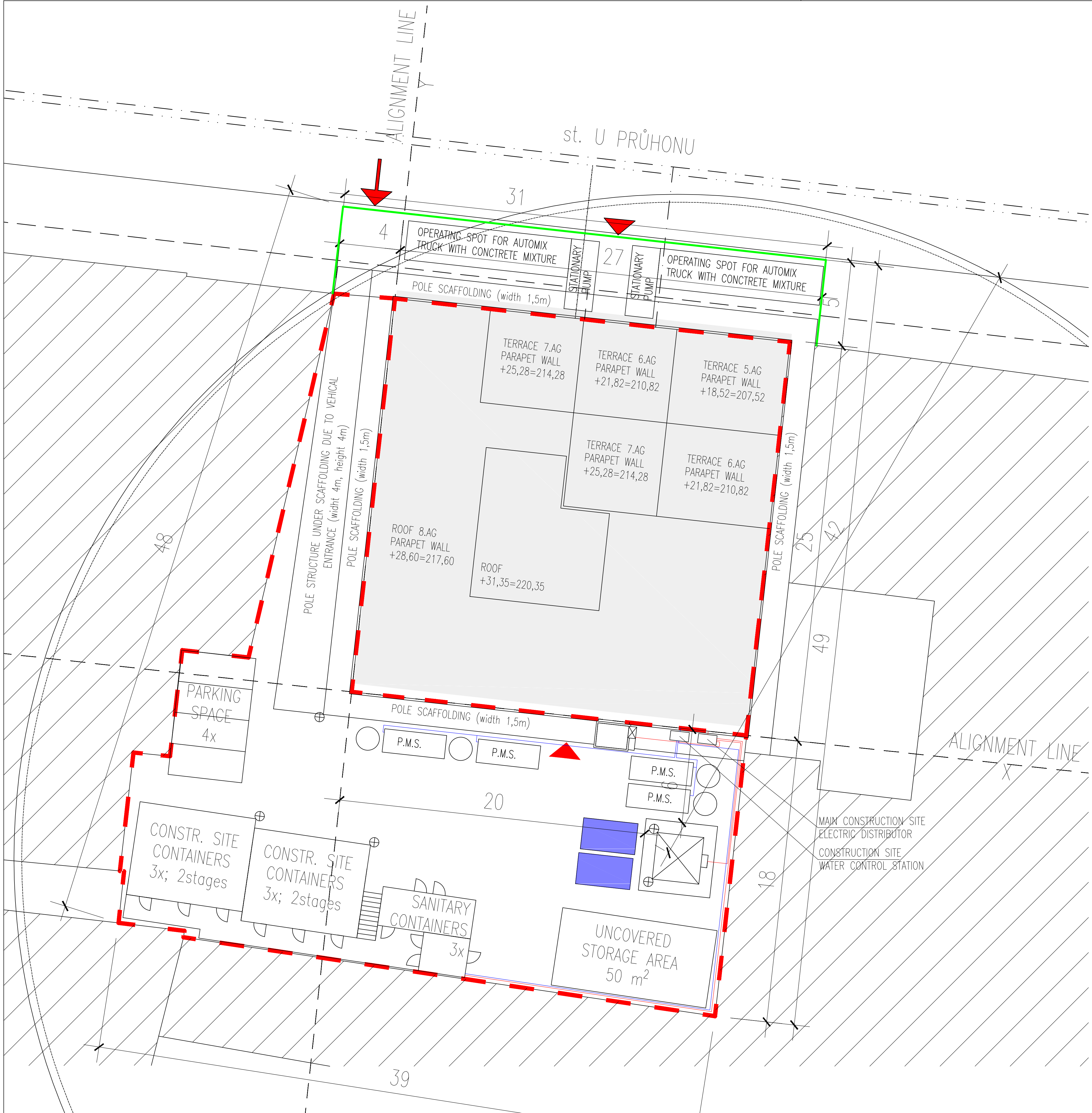
CRANE LIEBHERR 130 EC-B6 – 185HC

S

Altitude system BVD: ±0,000 = 189,00; Dimensioned in meters

AUTHOR: Bc. MICHAL BARTOŠ		A.Y.: 2017/2018
SUPERVISOR: Ing. KAREL POLÁK Ph.D.		N.D.: X.X
PROJECT: NEW TOWN HALL FOR PRAGUE 7		SCALE: -
FSV / ETSIE	CONTENT: CONSTRUCTION SITE FOR SP0 AND SP1	
CTU / UPV	DATE: X.X.2017 · FORMAT: XX · SUBJECT: DT	DEPARTMENT: K122


ALIGNMENT LINE
Y
st. U PRŮHONU
31
4
27
OPERATING SPOT FOR AUTOMIX TRUCK WITH CONCRETE MIXTURE
OPERATING SPOT FOR CONCRETE PUMP TRUCK
TERRACE 7.AG PARAPET WALL +25,28=214,28
TERRACE 6.AG PARAPET WALL +21,82=210,82
TERRACE 5.AG PARAPET WALL +18,52=207,52
TERRACE 7.AG PARAPET WALL +25,28=214,28
TERRACE 6.AG PARAPET WALL +21,82=210,82
ROOF 8.AG PARAPET WALL +28,60=217,60
ROOF +31,35=220,35
48
25
42
49
PARKING SPACE 4x
OPERATING SPOT FOR AUTOMIX TRUCK WITH CONCRETE MIXTURE
20
6
ALIGNMENT LINE
X
MAIN CONSTRUCTION SITE ELECTRIC DISTRIBUTOR
CONSTRUCTION SITE WATER CONTROL STATION
18
CONSTR. SITE CONTAINERS 3x; 2stages
CONSTR. SITE CONTAINERS 3x; 2stages
SANITARY CONTAINERS 3x
STORAGE AREA OF FORMWORKS AND REINFORCING BARS
39
LEGEND:
NEIGHBORING BUILDINGS (max. H=+11,000)
BUILDING UNDER RECONSTRUCTION
AREAS OF DEMOLITION WORKS (LOAD-BEARING ELEMENTS)
AREA OF THE RECONSTRUCTED BUILDING
FENCING OF THE CONSTRUCTION SITE
MAIN ENTRANCE FOR VEHICLES
MAIN ENTRANCE FOR PEDESTRIANS
ENTRANCE TO THE BUILDING FROM CONSTRUCTION SITE
CONCRETE BUCKET – OPERATING PLACE
WASTE CONTAINER
LIGHTING
CONSTRUCTION LIFT – GEDA ERA 1200 Z/ZP
PUBLIC SEWERAGE SYSTEM
PUBLIC WATER SUPPLY SYSTEM
PUBLIC ELECTRIC WIRING – HIGH VOLTAGE
CONSTRUCTION SITE ELECTRIC WIRING – HIGH VOLTAGE
CONSTRUCTION SITE WATER SUPPLY SYSTEM
CRANE LIEBHERR 130 EC-B6 – 185HC
S
Altitude system BVD: ±0,000 = 189,00; Dimensioned in meters
AUTHOR: Bc. MICHAL BARTOŠ
A.Y.: 2017/2018
SUPERVISOR: Ing. KAREL POLÁK Ph.D.
N.D.: X.X
PROJECT: NEW TOWN HALL FOR PRAGUE 7
SCALE: -
FSV / ETSIE
CONTENT: CONSTRUCTION SITE FOR SP2 (second part)
CTU / UPV
DATE: X.X.2017
FORMAT: XX
SUBJECT: DT
DEPARTMENT: K122



LEGEND:

- NEIGHBORING BUILDINGS (max. H=+11,000)
- BUILDING UNDER RECONSTRUCTION
- AREA OF THE RECONSTRUCTED BUILDING
- FENCING OF THE CONSTRUCTION SITE
- MAIN ENTRANCE FOR VEHICLES
- MAIN ENTRANCE FOR PEDESTRIANS
- ENTRANCE TO THE BUILDING FROM CONSTRUCTION SITE
- P.M.S. PLASTERING MACHINE SET – MIXTURE SILO + PUMP + PLASTERING MACHINE
- WASTE CONTAINER
- LIGHTING
- CONSTRUCTION LIFT – GEDA ERA 1200 Z/ZP
- PUBLIC SEWERAGE SYSTEM
- PUBLIC WATER SUPPLY SYSTEM
- PUBLIC ELECTRIC WIRING – HIGH VOLTAGE
- CONSTRUCTION SITE ELECTRIC WIRING – HIGH VOLTAGE
- CONSTRUCTION SITE WATER SUPPLY SYSTEM
- CRANE LIEBHERR 130 EC-B6 – 185HC

S

Altitude system BVD: ±0,000 = 189,00; Dimensioned in meters

	AUTHOR: Bc. MICHAL BARTOŠ	A.Y.: 2017/2018
	SUPERVISOR: Ing. KAREL POLÁK Ph.D.	N.D.: X.X
	PROJECT: NEW TOWN HALL FOR PRAGUE 7	SCALE: -
FSV / ETSIE	CONTENT: CONSTRUCTION SITE FOR SP6, SP7 AND SP9	
CTU / UPV	DATE: X.X.2017 · FORMAT: XX · SUBJECT: DT	DEPARTMENT: K122

6.3 Wide location drawing with assessment of transport routes

The wide location drawing shows neighboring lands with building objects.

Pic. 3: Wide location drawing

CONCLUSION

The construction technology project was created for the project called New Town Hall for Prague 7. The project is dealing with the reconstruction of the administrative building. The main construction process will start on 4.9.2017. The expected completion date of the reconstruction process and the approval date of the building is scheduled on 29.1.2019. The reconstruction process of the building should therefore last 19 months. These data are based on the created time-space charts and the time schedule of the construction works.

The construction and technology project solves the spatial, technological and time structure of the entire construction. The social, sanitary and technical equipment of the construction site, and the proposal and assessment of the lifting device have been designed and dimensioned. The problematic of the construction site is described in the technical report of the construction site. Another technical report shows a description of the health and safety issues on the constructions site. There are shown the general important information about the health and safety and the main risks influencing the construction.

The author of this thesis shows his knowledge of planning and organising of a construction projects, his ability to understand to the continuity of a construction processes and appropriate knowledge of the involved legislation. The whole solution respects a real requirements and a real conditions for an implementation of every construction projects.

SOURCES

Prof. Ing. Čeněk Jarský, DrSc.
Multimediální učebnice Příprava a realizace objektů a staveb

http://www.contec.cz/

http://www.asb-portal.cz/stavebnictvi/stavebni-technika/bezpecne-strojni-omitani

http://www.mineralniizolace.cz/media/zpracovani-projektove-dokumentace-stavebni-zakon.pdf

http://www.mukolin.cz/prilohy/TiskopisyPokyny/131/3priloha_c._5_vyhlasky_c._499_2006_sb._pd_ohlaseni_stavby_uvedene_v_104_odst._1_pism._a_az_e_sz_nebo_pro_vydani_stavebniho_povoleni.pdf

http://www.mapy.cz

http://www.katastr2.cz

http://www.fsv.cvut.cz

http://www.technologie.fsv.cvut.cz

https://dictionary.cambridge.org/