Ministry of Health
The Republic of Moldova

FINAL REPORT
ON
DETAILED DESIGN STUDY
ON
PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE
IN
THE REPUBLIC OF MOLDOVA

February, 2014

JAPAN INTERNATIONAL COOPERATION AGENCY

FUJITA PLANNING CO., LTD.

HM
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PREFACE

Japan International Cooperation Agency (JICA) decided to conduct the detail design study for Project for Improvement of Medical Care Service and entrusted the survey to Fujita Planning Co., Ltd.

The Survey team held a series of discussions with the officials concerned of the Government of the Republic of Moldova, and conducted field investigations from August 2013 to January 2014. As a result of the further studies in Japan, the present report was finalized.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between the two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of the Republic of Moldova for their close cooperation extended to the survey team.

February, 2014

Nobuko KAYASHIMA
Director General
Human Development Department
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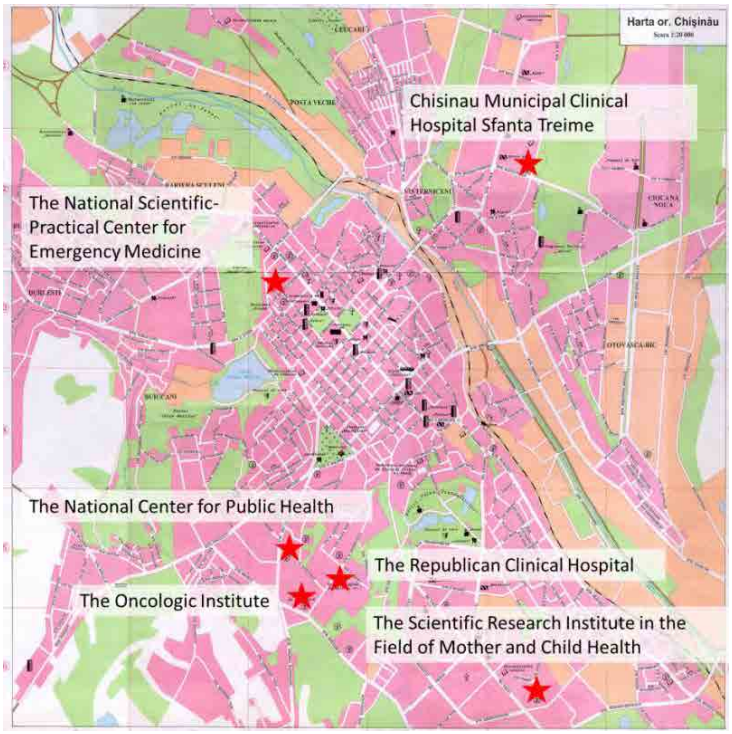

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Abbreviation

CT	Computed Tomography
EU	European Union
GDP	Gross Domestic Product
ICU	Intensive Care Unit
JICA	Japan International Cooperation Agency
MRI	Magnetic Resonance Imaging system
STEP	Special Terms for Economic Partnership
WB	World Bank
WHO	World Health Organization

Chapter 1 Contents of the Project

1-1 Background of the Project

In the Republic of Moldova, economic challenges in the early 90s and deep financial crisis in 1997-1998 undermined the activity of the health service which were provided free of charge by the government. These changes influenced by the independent from the former Soviet Union causes ①Ineffective investment for health system which causes drastic increase in the government financial resource ②increase in individual financial burden for health service.

In order to prevent deepening of the health system crisis further, the Government of Moldova (hereinafter referred to as "GOM") initiated a series of courageous reforms supported by World Bank, in particular the development of primary health care and integration of hospital function for secondary and tertiary hospital. The reform cut down number of hospitals into 80 percent of that of previous time and expenditure in health service into 40 percent of that of previous time. Established health insurance system enables health service for the poor segment for free and discounted charge for the insurance for those who engage in agriculture. The coverage of the public health insurance reaches 80 percent of the total population. The health insurance system contributes strengthening individual medical aids system.

The challenges GOM is facing currently are ①reform for the tertiary health service ② individual financial burden for health service which is considered still high. The medical/ health expenditure covers 12 percent of the total Gross Domestic Product (GDP) which is high as developed countries. Improvement of secondary and tertiary Health services at is especially an urgent issue to be address as the country's disease structure has changed more into Non Communicative Diseases (NCDs) and the aging population is expected to increase further. The GOM has been on the process of accomplishing the improvement of the medical personals, however, the improvement of equipment for the renewal and their upgrading are the areas that they need to work. Individual financial burden has been decreasing after the implementation of public health insurance scheme though more reform has been expected especially for reducing financial burden of GOM.

The tertiary hospitals such as the Republican Clinical Hospital (RCH) have not improved the function more than 20 years due to the lack of financial resource. They are however, one of the top

referral hospitals and play an important role in the Chisinau. In this regard, GOM officially requested the Government of Japan (hereinafter referred to as "GOJ") to provide a Japanese ODA Loan for financing of the Project for Improvement of Medical Care Service (hereinafter referred to as the "Project") in April 2012.

Even though a feasibility study for one of the proposed facilities exists, there is no comprehensive feasibility study for the Project. GOJ entrusted the study to examine the feasibility of the Project to the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency implementing Japanese Government's technical assistance and expediting proper execution of the Japan's Grant Aid and Soft Loans in April 2012.

With this background, JICA conducted a Data Collection Survey and Preparatory Survey until December 2012. The survey was for investigate the purpose, content, estimated cost, implementation system, operation and maintenance system in order to confirm the validity of the project. JICA signed a Japanese ODA loan agreement on 27th June, 2013 with the Government of the Republic of Moldova in the capital of Chisinau to provide a Japanese loan of up to 5.926 billion yen for the Project.

1-2 Purpose of the Detailed Design Study

The purpose of this study is to confirm the project scope which was proposed in Preparatory Survey and agreed between GOM and GOJ, to draft the Bidding Documents and to plan the project implementation schedule.

1-3 Schedule of the Detailed Design Study

The Detailed Design Study will be divided into five stages; i) preparation for the survey in Japan, ii) 1st field survey in Moldova, iii) Work in Japan, iv) 2nd Field Survey for Explanation of Draft Final Report in Moldova, and v) submission of a final report from consultant to JICA. The current schedule of the survey is as follows:

Step	Contents	2013-2014 Aug	Sep	Oct	Nov	Dec	Jan	Feb
i	Preparatory work in Japan							
ii	1st Field Survey in Moldova							
	Revision of Equipment List							
	Draft Bidding Documents							
	Technical Specifications							
	MRI Measurement							
	Operation Maintenance Plan							
	Survey of Local Agent							
iii	Work in Japan							
	Modification of Bidding Documents (Specifications)							
iv	2nd Field Survey Explanation of DFR in Moldova							
v	Submission of FR in Japan							

□Work in Japan ■Field Survey in Moldova

1-4 Contents of the Project

(1) Project Name

Project for Improvement of Medical Care Service

(2) Project Purpose

To improve and streamline the medical care and public health service by introducing new medical and laboratory equipment into tertiary and secondary hospitals and other facilities in Moldova, thereby contributing to the improvement of the health care service for the citizens in the Republic of Moldova.

(3) Overview of the Project

The Project aims to improve the medical and laboratory services of the four (4) National Hospitals, one (1) Municipal Hospital and the Center for Public Health (inclusive of 10 Regional Centers) through procurement of medical and laboratory equipment. Target facilities and major equipment are presented in table 1.

Table 1 Target Facilities and Major Equipment

Target Facility	Planned Equipment
The Republican Clinical Hospital	Anesthesia machine, Artificial Heart-Lung machine, C-arm, Cryosurgery system, ECG, EEG, Hematology Analyzer, Operation table, Operation Light, Ultrasound Apparatus, Equipment, Patient Monitor, Artificial Ventilator, Maintenance Tools, Furniture, Operation Theater facilities (panel, laminar flow unit and pendant), CSSD equipment etc.
The Scientific Research Institute in the Field of Mother and Child Health Protection	CT, Fluoroscope, X-ray, Ultrasound Apparatus, Endoscopes, Ventilator, EEG, EMG, Amino Acid Analyzers, PCR, Patient Monitor, Audiometer, etc.
The National Scientific-Practical Centre for Emergency Medicine	CT, MRI, Angiograph, Fluoroscope, X-ray, Ultrasound Apparatus, Endoscopies, CSSD equipment etc.
The Oncologic Institute	Ultrasound Apparatus, Mammography, Endoscopes, Patient Monitor, C-arm, CSSD equipment, etc.
Chisinau Municipal Clinical Hospital “Sfanta Treime”	CT, Angiograph, Fluoroscope, X-ray, Ultrasound Apparatus, Endoscopes, Uro-surgery equipment, etc.
National Center for Public Health/ Centers of Public Health	ELISA, DNA Sequencer, PCR, Culture preparation equipment, Colony Counter, Microscopes, Gas Chromatograph, Liquid Chromatography, Atomic Absorption Spectrophotometer, Amenity Meter, Bi-Distiller, Mercury Analyzer, Fluorometer, Selective Radiometer, Noise Meter, Sound Level Meter, Light Meter, Alpha-beta counting spectrometry System, Gamma Counting Spectrometer, X-ray impulse dose meter, Survey meter, etc.

(4) Project Target Site

Table 2 Project Target Site

Target Site	Name of Facility / Name of Target Area
Chisinau(7)	-The Republican Clinical Hospital -The Scientific Research Institute in the Field of Mother and Child Health Protection -The Oncologic Institute -The National Scientific-Practical Centre for Emergency Medicine, -Chisinau Municipal Clinical Hospital "Sf. Treime" -National Center for Public Health -Center of Public Health Chişinău Municipal
Other (9)	Centers of Public Health; Edineţ, Bălţi Municipal, Soroca, Ungheni, Orhei, Hînceşti, Căuşeni, Cahul, Comrat

Chapter 2 Contents of Modification on Equipment Plan from Preparatory Survey

Equipment list which has come into the agreement with GOM at the first dispatch of the Detailed Design Study is presented in attachment 6. There have been changes in the equipment list since the preparatory survey. Details of these changes are described in attachment 7.

Republican Clinical Hospital

1) Equipment for neurosurgery will be provided with a loan by Austria. Therefore, related equipment will be excluded.
2) Republican Clinical Hospital will start providing its partial service at the new surgical department. Equipment which is needed for the first opening of the department will be provided by Austria. The rest will be supported by this project.
3) Some equipment, such as Angiography, Vertical Laminar Flow Unit and Pendant, which is necessary for the first opening of the project has been transferred to the Austrian project.
4) Hospital furniture, electric appliances, personal computer etc. will be procured by hospitals
5) After discussion with the head of each department, equipment for surgical room and Intensive Care Unit (ICU) will be decided to be added.

Institute of Scientific Research in the Field of Mother and Child Protection

1) MRI, Neuroendoscope, Immuno Analyzer, Ambulance/Neonatal and Ambulance/Pediatric were deleted from the list
2) DNA Sequencer, Otoscopy with Monitor are added into the list
3) ICU Beds are added instead of Republican Clinical Hospital

National Scientific-Practical Center for Emergency Medicine

1) Equipment for the central supply room was reconsidered due to change of priority of higher level of sterilization
2) X-ray Apparatus Mobile and Neuronavigation were added into the list

Oncology Institute

1) CT, Anesthesia Apparatus and Electrosurgical unit for endoscope were deleted from the list
2) Equipment for the central supply room was reconsidered due to change of priority of higher level of sterilization
3) Operation Light and Operation Table were added into the list
4) Equipment for pathologic examination were added into the list
5) Equipment such as Colonoscope and Endoscope Washer were added into the list for the screening center.
6) PCR system was added into the list

Municipal Clinical Hospital "Sfanta Treime"

1) MRI, C-arm, Operation table for Urology and Lithotripsy Apparatus were deleted from the list
2) Equipment for the central supply room was reconsidered due to change of priority of higher level of sterilization..
3) Equipment for the surgical room, ICU, and laboratory room were added into the list.

National Center for Public Health

1) The tender for the equipment has conducted on September, 2013 supported by European Union. This EU's project has been planned since 2012 and initially it had a different equipment list. However, some equipment were overwrapped as EU's project has concluded to add new equipment due to the usage of surplus in the tender. Therefore, this project deleted overwrapped equipment from the list.

There are changes other than above regarding the equipment selection. The design was processed in the policy to select only the equipment which has obtained CE marks. There has been, however possibility to include equipment which does not have CE marks in this Project as a result of the discussion with JICA and GOM on October, 2013. Therefore, the Detail Design study has been done for its quotation and equipment specification considering both of the possibilities.

Chapter 3 Medical Waste Management

The National Regulation on Medical Waste Management plays a key role regarding to the medical waste management at all health facilities in Moldova. Medical Waste is defined as "waste resulted from medical activities" in Article II. It also defined Hazardous waste as "waste resulted from medical activities which show a real risk for human health". Medical waste which comes into contact with blood and other biological fluid is especially categorized as hazardous waste. Non-hazardous waste which does not contain any blood and other biological fluid, on the other hand, is treated as domestic waste. Article III articulates that the classification by categories, proper packaging, marking, collecting method as well as the final neutralization for hazardous waste. The following table is for the details of the classification of hazardous waste by categories.

Table 3 Hazardous Medical Waste

Hazardous Waste				
Anatomic-pathological Waste	Infectious Waste	Sharp Waste	Chemical and Pharmaceutical Waste	Radioactive Waste
Body parts, biopsy materials, fetus, placenta	Parasites, materials which came in contact with blood and biological fluid	Needles, Catheter, syringes, pipette	Expired Vaccines and chemotherapy residues	**This is managed by a responsible personnel under National Nuclear Security Rules*

Reference: The Regulation on Medical Waste Management

It also sets rules for all the health facilities to develop their internal plan for medical waste from waste segregation into the final neutralization in Article VIII. The target health facilities in this Project have developed their internal plan and segregate hazardous waste into three major categories. They put, for example, yellow color code for infectious waste and sharps and black color code for waste assailable with domestic waste so that the whole process from waste segregation into the final neutralization has managed in the planned manner. In the most of the project sites, they classify hazardous waste into following three categories and each waste has its specific instruction from the collection at a health facility to final neutralization.

Collected waste such as Gauze, batting and perfusion systems are disinfected and evacuated by Autosalubriate Ltd which is appointed by Ministry of Transportation. Injectable medication (syringes, needles) are collected at every hospital department, disinfected in 5 % chlorine solution and later evacuated by the Autosalubriate Ltd. Biological waste in contact with blood is collected weekly and evacuated at one registered place.

Staff education, training and upgrading are mentioned in Article VII. It requires in each region to develop capacity of responsible personnel which enables to allocate appropriate persons for

managing medical waste.

Target health facilities manage the medical waste properly followed by the Regulation. Equipment in the Project is planned considering current medical waste managing system such as the storage of the medical waste and the segregation

Chapter 4 Operation and Maintenance Plan

Operation and maintenance of equipment will be implemented by each target facility after introduction of medical equipment. Each facility shall allocate its necessary budget for the operation and maintenance of equipment.

The following is the necessary cost estimated in Japanese Yen for the operation and maintenance of equipment which are required to have them in the Project. The MoH is in plan of issuing a Ministry Order obliging to the target facilities of the Project to ensure the budget for operation and maintenance of the equipment at the stage of bidding announcement.

The exchange rate of EURO/JPY is an average of the TTS rate at the Bank of Tokyo Mitsubishi UFJ from 1st September, 2013 to 30th November, 2013.

Table 4 The Republican Clinical Hospital

Code No.	Equipment Name	QTY	Maintence Contract (JPY)	Spare Parts (JPY)	Consumables (JPY)	RH (Cost in JPY)		
		RH	Unit Price	Unit Price	1year	Maintence	Spare Parts	Consumables
Z-007	Anesthesia Apparatus A	5	75,650	121,516	1,030,926	378,252	607,579	5,154,629
Z-008	Anesthesia Apparatus B	11	75,650	111,681	1,030,926	832,154	1,228,495	11,340,184
Z-011	Artificial Heart-Lung Machine	2	2,983,059		23,754,901	5,966,118		47,509,802
Z-049	Counterpulsation (IABP) Equipment	1	498,583		11,304,818	498,583		11,304,818
Z-074	ENT Navigation System	1	817,985		7,718,610	817,985		7,718,610
Z-077	Equipment for Ecmo	1	347,031		14,619,333	347,031		14,619,333
Z-088	Hematology Analyzer A	2	94,563	143,776	2,296,218	189,126	287,552	4,592,436
Z-091	Hemodialysis Machine	1	166,477		8,547,144	166,477		8,547,144
Z-212	Ultrasound Apparatus E (Cardiology)	2	1,283,355		112,075	2,566,710		224,149
Z-217	Ultrasound Apparatus J (Urology)	1	1,080,720		112,075	1,080,720		112,075
Z-219	Urine Analyzer	2	94,563	136,291	14,781,548	189,126	272,582	29,563,096
Z-222	Ventilator for Adult A	32	54,036		676,800	1,729,152		21,657,600
Z-225	Ventilator for Pediatric A	1	54,036		676,800	54,036		676,800
Z-226	Ventilator for Pediatric B	1	54,036		676,800	54,036		676,800
					TOTAL	14,869,506	2,396,207	163,697,476

€1＝135.09JPY

Table 5 The Scientific Research Institute in the Field of Mother and Child Health Protection

Code No.	Equipment Name	QTY	Maintence Contract (JPY)	Spare Parts (JPY)	Consumables (JPY)	MH (Cost in JPY)		
		MH	Unit Price	Unit Price	1year	Maintence	Spare Parts	Consumables
Z-006	Amino Acid Analyzer	1	189,126			189,126		
Z-008	Anesthesia Apparatus B	11	75,650	111,681	1,030,926	832,154	1,228,495	11,340,184
Z-052	CT	1	1,621,080	8,510,670		1,621,080	8,510,670	
Z-056	DNA Sequencer	1	162,108		2,251,500	162,108		2,251,500
Z-089	Hematology Analyzer B	1	108,072		5,903,673	108,072		5,903,673
Z-213	Ultrasound Apparatus F (Neonatology)	1	878,085		112,075	878,085		112,075
Z-214	Ultrasound Apparatus G (Obstetrics)	1	878,085		112,075	878,085		112,075
Z-215	Ultrasound Apparatus H (Obstetrics)	4	878,085		112,075	3,512,340		448,299
Z-216	Ultrasound Apparatus I (Pediatrics)	3	999,666		112,075	2,998,998		336,224
Z-219	Urine Analyzer	1	94,563	136,291	14,781,548	94,563	136,291	14,781,548
Z-224	Ventilator for Neonate	2	54,036		676,800	108,072		1,353,600
Z-258	X-ray Fluoroscopy for Urology	1	1,080,720	4,998,330		1,080,720	4,998,330	
Z-260	X-ray General with Fluoroscopy B	1	945,630	4,457,970		945,630	4,457,970	
					TOTAL	13,409,033	19,331,756	36,639,177

€1＝135.09JPY

Table 6 The National Scientific-Practical Centre for Emergency Medicine

Code No.	Equipment Name	QTY	Maintence Contract (JPY)	Spare Parts (JPY)	Consumables (JPY)	EH (Cost in JPY)		
		EH	Unit Price	Unit Price	1year	Maintence	Spare Parts	Consumables
Z-009	Angiography	1	1,891,260	6,214,140	62,835,222	1,891,260	6,214,140	62,835,222
Z-052	CT	1	1,621,080	8,510,670		1,621,080	8,510,670	
Z-125	MRI	1	2,026,350	8,780,850		2,026,350	8,780,850	
Z-128	Neuronavigation System	1	3,636,055			3,636,055		
Z-222	Ventilator for Adult A	12	54,036		676,800	648,432		8,121,600
Z-223	Ventilator for Adult B	10	54,036		676,800	540,360		6,768,000
Z-259	X-ray General with Fluoroscopy A	1	945,630	4,457,970		945,630	4,457,970	
					TOTAL	11,309,167	27,963,630	77,724,822

€1＝135.09JPY

Table 7 The Oncologic Institute

Code No.	Equipment Name	QTY	Maintence Contract (JPY)	Spare Parts (JPY)	Consumables (JPY)	OI (Cost in JPY)		
		OI	Unit Price	Unit Price	1year	Maintence	Spare Parts	Consumables
Z-008	Anesthesia Apparatus B	19	75,650	111,681	1,030,926	1,437,358	2,121,947	19,587,591
Z-209	Ultrasound Apparatus B (General)	1	878,085		112,075	878,085		112,075
Z-210	Ultrasound Apparatus C (Biopsy/Elastograghy)	1	999,666		112,075	999,666		112,075
Z-222	Ventilator for Adult A	23	54,036		676,800	1,242,828		15,566,400
Z-226	Ventilator for Pediatric B	1	54,036		676,800	54,036		676,800
Z-260	X-ray General with Fluoroscopy B	1	945,630	4,457,970		945,630	4,457,970	
					TOTAL	5,557,603	6,579,917	36,054,940

€1＝135.09JPY

Table 8 Chisinau Municipal Clinical Hospital “Sfanta Treime”

Code No.	Equipment Name	QTY	Maintence Contract (JPY)	Spare Parts (JPY)	Consumables (JPY)	ST (Cost in JPY)		
		ST	Unit Price	Unit Price	1year	Maintence	Spare Parts	Consumables
Z-008	Anesthesia Apparatus B	10	75,650	111,681	1,030,926	756,504	1,116,814	10,309,258
Z-009	Angiography	1	1,891,260	6,214,140	62,835,222	1,891,260	6,214,140	62,835,222
Z-027	Biochemical Analyzer B	1	108,072		135,090	108,072		135,090
Z-031	Blood Gas Analyzer	2	108,072		10,494,992	216,144		20,989,984
Z-052	CT	1	1,621,080	8,510,670		1,621,080	8,510,670	
Z-089	Hematology Analyzer B	1	108,072		5,903,673	108,072		5,903,673
Z-208	Ultrasound Apparatus A (General)	1	1,080,720			1,080,720		
Z-211	Ultrasound Apparatus D (Cardiology)	1	1,283,355		105,070	1,283,355		105,070
Z-222	Ventilator for Adult A	16	54,036		676,800	864,576		10,828,800
Z-227	Ventilator Mobile	4	64,843		676,800	259,373		2,707,200
Z-259	X-ray General with Fluoroscopy A	1	945,630	4,457,970		945,630	4,457,970	
					TOTAL	9,134,786	20,299,594	113,814,298

€1＝135.09JPY

Table 9 National Center for Public Health

Code No.	Equipment Name	QTY	Maintence Contract (JPY)	Spare Parts (JPY)	Consumables (JPY)	IP (Cost in JPY)		
		IP	Unit Price	Unit Price	1year	Maintence	Spare Parts	Consumables
Z-034	Capillary Electrophoresis Apparatus	1	135,090			135,090		
Z-040	Chromatograph, Gas B	1	162,108			162,108		
Z-056	DNA Sequencer	1	162,108		2,251,500	162,108		2,251,500
Z-120	Mercury Analyzer	1	135,090			135,090		
					TOTAL	594,396		2,251,500

€1＝135.09JPY

Table 10 Centers of Public Health

Code No.	Equipment Name	QTY	Maintence Contract (JPY)	Spare Parts (JPY)	Consumables (JPY)	CSP (Cost in JPY)		
		CSP	Unit Price	Unit Price	1year	Maintence	Spare Parts	Consumables
Z-012	Atomic Absorption Sectrophotometer	3	189,126			567,378		
Z-038	Chromatograph Liquid	2	162,108			324,216		
Z-039	Chromatograph, Gas A	1	162,108			162,108		
Z-041	Chromatograph, Gas C	1	175,617			175,617		
Z-042	Chromatograph, Gas D	1	162,108			162,108		
Z-120	Mercury Analyzer	3	135,090			405,270		
					TOTAL	1,796,697		

€1＝135.09JPY

Considering the after-sales procurement channel of consumables, spare parts and availability of technical support, equipment shall be planned whose local agent is in Moldova and/or agent in neighboring countries such as Romania or Ukraine.

Chapter 5 Site Measurements and Planning Magnetic EMI Field Survey

5-1 Purpose of Environmental Measurement

The purpose of environmental measurement is to confirm that the value of magnetic fluctuation of the place to install the MRI device in is equal or lower than a preferred standard value. If the measured data exceed the standard value, it is necessary that the magnetic field intensities shall be changed to be equal or lower than the standard value by installing an electric wave shield or magnetic shield. Therefore, the feasibility of such installation shall be verified in addition.

5-2 General Outline of Operations

Firstly, we installed sensors in two places within two meters from the center of super-conducting magnet in the MRI device, then, measured the value of direct-current magnetic fluctuation and alternate-current magnetic fluctuation in X, Y and Z axis for a certain prescribed period using a magnetic field meter. The collected data results were analyzed by performing a frequency analysis and a Fast Fourier Transformation using exclusive software.

5-3 Measurement Results

The following are the peak value of direct-current magnetic field and alternate-current magnetic field in magnetic fluctuation measured at each installation location (the data on alternate-current magnetic field were obtained as a result of the above-mentioned analysis).

Table 11 the peak value of direct-current magnetic field and alternate-current magnetic field

Magnetic Fluctuation	Direct-Current Magnetic Field(nT)	Alternate-Current Magnetic Field(nT)
Measurement Location-1	up to 1150	up to 1200
Measurement Location-2	up to 370	up to 1200
Recommended Limit	less than 500	less than 1000

As shown, the value peaks of magnetic fluctuation are beyond the recommended limits. By performing frequency analyses, it was found that this is caused by the influence that the situations of main disturbance magnetic fields are as follows (for details, see graph charts of the attached report).

1) Target for Analysis

Disturbance magnetic fields in low-frequency bandwidth and 50Hz-frequency bandwidth

2) Disturbance Magnetic Field in Low-Frequency Bandwidth

The occurrence factor of disturbance magnetic fields in low-frequency bandwidth was the magnetic fields emitted by vehicles which ran car parking spaces adjacent to the MRI room. The intensity of magnetic fields increased as the distance from outer walls to vehicles decreased.

3) Disturbance Magnetic Field in 50Hz-Frequency Bandwidth

The occurrence factor of disturbance magnetic fields in 50Hz-frequency bandwidth was the magnetic fields emitted by electrical connections installed inside the wall. These were detected intermittently at any time of day or night, and specifically increased to the maximum value in Z-axis direction (the direction from the magnet center to the patient couch of the device).

5-4 Evaluation

As described above, disturbance magnetic fields out of acceptable level were detected in both low-frequency bandwidth and 50Hz-frequency bandwidth. To keep the values within acceptable level, it presumably is effective to take the following measures.

1) Countermeasure to Low-Frequency Bandwidth

Since the run of vehicles in the car parking spaces is the main cause, it would appear that the value of disturbance magnetic fields can be reduced by limiting the passage of vehicles. Specifically, as intensity of magnetic field is proportional to distance, it would be necessary to establish a buffer area within a radius of six meters from outer walls of the MRI room. With respect to this plan, approval of the hospital director has been already obtained.

2) Countermeasure to 50Hz-frequency bandwidth

However it is impossible to remove electrical connections installed inside the wall, it would be possible to reduce the value of disturbance magnetic fields by installing an electric wave shield in the room. Specifically, in consideration for the measured magnetic field intensity, it would be necessary to create the electric wave shield by covering all the sides of the room (floor, wall, and ceiling) by installing an electric wave shield which is made of aluminum material in thickness of three mm or more.

Accordingly, it was deemed to be at no issue to install MRI in the room proposed by the hospital side if the said measures would surely be taken.

5-5 Coming Action Plans

It is confirmed that the environment to set up MRI device could satisfy the recommended limits, but furthermore, the above described results still suggest that winning bidders or manufacturers would need to conduct detailed meetings with the hospital side in terms of installation of the device.

1) The recommended equipment configuration is shown on the accompanying drawing of the technical specification, but also it shall be necessary to confirm any details with the hospital side.
2) It shall be necessary to confirm the installation location for cooling devices installed outdoors and to settle the plumbing methods from the outside cooling devices to heat exchangers and main units installed in the machine room of MRI room.
3) It shall be necessary to confirm the installation locations of the heat exchangers and any peripheral devices which are installed in the machine room.
4) It shall be necessary to confirm the position of switchboards, the capacity of circuit breaker and the wiring methods from the switchboards to the main units and the machine room.
5) It shall be necessary to confirm the installation plan of quench plumbing and the arrangement plan of exhaust outlets.
6) It shall be necessary to confirm the carry-in route of equipment.
7) It shall be necessary to confirm the plans and time of preparatory work to be conducted by the hospital side
8) It shall be necessary to confirm the plans of interior finish work to be conducted after all the installations are completed. Additionally, it shall become essential to confirm that the hospital side covers such construction costs. Furthermore, in case of any unexpected matters, it is expected to make the necessary adjustments accordingly upon consultation with the hospital side.

Chapter 6 Survey of Local Agent in Romania

It is necessary for the sustainability of this project to select equipment which has consumable and its maintenance service available either in Moldova or its neighboring countries. Although many distributors which target equipment will be procured are present within Moldova, distributors for some equipment are in its neighboring European countries especially in Ukraine and Romania. Survey has conducted in order to examine the scale and function of those distributors in Bucharest. The survey helps further to utilize the procured equipment appropriately.

The following is the schedule of the survey.

Table 12 Schedule of Survey in Romania

Date	Place	Content of survey
10th November, 2013	Chisinau⇒Bucharest	・Travel day ・In house meeting with a local translator
11th November, 2013	Bucharest	Visit and survey at local distributors （GE Healthcare, Stryker ）
12th November, 2013	Bucharest	Visit and survey at local distributors （Spectromas, Rombiomedica ）
13th November, 2013	Bucharest	Visit and survey at medical facilities （ University Hospital Bucharest, Marie Curie Children's Hospital ）
14th November, 2013	Bucharest⇒Chisinau	・Travel day ・Data arrangement

The survey has conducted at GE Healthcare which is a manufacture for equipment of the medical image diagnosis, Stryker which is a distributor for endoscopes and surgical instrument and Spectromas for measuring instrument and Rombiomedica for equipment in surgical rooms and Intensive Care Units (ICUs). The additional survey at University Hospital Bucharest and Marie Cruie Children's Hospital has conducted for the purpose of the comparison for the level of equipment with the target hospitals in this Project.

Table 13 Content of Survey

	Dept /Staffing	Equipment	Remarks
GE Medical Systems Romania SRL	Imaging Diagnosis Lab Bio function	CT、MRI USG Lab equipment Monitor	It is an only company which provide training for Anesthesia apparatus in Moldova
Stryker Romania SRL	Endoscopy Surgical equipment Maintenance	Endoscopy Orthopedic equipment Surgical equipment	It works as a center for repairing endoscopy for the neighboring countries
Spectromas	Working environment	Equipment for working environment	Major distributor for the measuring instrument

	measuring Research Maintenance	measuring Measuring instrument	
ROMBIOMEDICA SRL	Imagining diagnosis Lab Surgical equipment	USG X-ray Surgical equipment ICU equipment	The largest distributor for equipment in surgical rooms and ICUs in Romania

1) Support system

Many companies except GE have no local distributors available or they only deal with the equipment. As it is, however, possible to travel from Bucharest to Moldova within one day, the availability for backup support service for emergency cases could not be difficult to be provided from Romania. The used language at the distributors is Romanian which enables to communicate with medical staff in Moldova without any problems.

2) Medical facilities in Romania

University Hospital Bucharest has approximately 1,200 beds in total and plays an important role in emergency medical services. The survey has conducted in surgical rooms at neurosurgical department and interviewed an Anesthetist in the hospital. It does not currently have academic/ technical cooperation in the medical field with Moldova although they have places to discuss matters in the academic society and scholarship available for medical students in Moldova.

Marie Curie Children's Hospital has been improved its medical service by the grass-roots grant aid scheme from the government of Japan. The provided equipment was anesthesia apparatus, operation tables and examination lights which were procured in Japan. Since the high reliability of Japanese equipment and availability of distributors for Japanese equipment, the distributing system for the necessary consumables has been already established.

These make it possible to have support for the technical service from Romania even for the equipment which does not have the distributors in Moldova as there are more facilities are present to provide support in Romania than Moldova. The procured Japanese equipment in this project could receive technical support from Romania as its high reliability and the established support system.

Chapter 7 Procurement Plan

7-1 Procurement Condition

1) Prime contract: Japan tied
2) Subcontract: General untied

7-2 Procurement Method

The Project will be implemented under the STEP conditions, in accordance to the Guidelines for Procurement under Japanese ODA Loans dated April 2012, and with the methods shown below.

1) Expected ratio of the goods to be procured from Japan;
   Not less than 50% in accordance with the request from Moldovan side.
2) Procurement method: International Competitive Bidding
   (Single-stage two-envelope bidding with qualification)
3) Number of packages: 2 packages
   Since the total amount of the loan agreement is officially published, in case of single package it might be possible to have estimated price from the total amount of the loan. Thus, it is preferable to choose multiple packages to make the bidders estimation difficult. These conditions mentioned above shall reduce the bidder's workload for the preparation of the bid per a bidding package. It will eventually contribute to shorten the whole process of the bid which will meet Moldovan's need. At the other hand, the number of biddings should be considered in the range of not having necessity to set different bidding schedules because speeding up the procurement process and early use of medical equipment is one of the top priorities for the MoH. The Project is planned to have TWO (2) packages considering all these factors.

7-3 Expected Schedule of Procurement:

May 2014 – January 2015: Bidding, Evaluation and Contract (including JICA concurrence)
February 2015 – October 2015: Production, Shipping/ Transportation and Installation

There is a strong request from MoH to complete the installation of medical equipment for the Republican Clinical Hospital and the National Scientific-Practical Center for Emergency Medicine by the end of October, 2014. The accelerate procedures for the process will be discussed between Japanese and Moldovan sides.

7-4 Estimated Project Cost

Estimated cost of the Project is presented in the Table 14 and Table 15.

Table 14 Estimated cost of the Project (Devices with CE Mark)

	Cost (JPN)
TOTAL Cost	5,410,594
Equipment Cost	5,336,759
Transportation Cost	73,835

1EURO＝135.09 JPN (Unit : Thousand JPN)

Table 15 Estimated cost of the Project (Devices with standards equivalent or higher than EU standard)

	Cost (JPN)
TOTAL Cost	5,376,404
Equipment Cost	5,291,177
Transportation Cost	85,227

1EURO＝135.09 JPN (Unit : Thousand JPN)

7-5 Measures against STEP

Expected ratio of the goods to be procured from Japan for the Project has been decided as not less than 50% following the request from the Moldovan side. There are items which goods from Japan do not exist among the goods requested by the target facilities of the Project, therefore, to achieve the said ratio, priorities have been given to the goods from Japan for items where do exist, to obtain quotations and draft technical specifications.

It is confirmed that the total cost of the goods to be procured from Japan is not less than fifty percent (50%) of the total amount of contracts to be financed under the Loan, either in the condition of devices with CE Marks or in the condition of devices with standards higher than EU standard.

Based on the Clause 6 (1)(d) of the "Operational Rules of Special Terms for

Economic Partnership (STEP) of Japanese ODA Loans" issued on 17th April, 2013, main items which should be included in the ratio have been discussed with MoH and agreed as presented in Appendix-8, after confirming that such action is not against the considerations of economy and non-discrimination among bidders eligible for procurement contracts, nor the Moldovan public procurement regulations.

Chapter 8 Installation Plan

In this project, variety of equipment will be delivered to 16 facilities in total. The equipment should be smoothly imported, installed and delivered to each facility. Installation plan should be planned based on number of equipment and facilities. Furthermore, the following issue should be considered for installation plan.

8-1. Rehabilitation of Installation Site

Equipment on Table 16 is required to rehabilitate installation room. Rehabilitation of each installation space is completed before contracted delivery schedule. Progress of rehabilitation work should be monitored and installation work should be planned based on the monitoring.

Table 16 Rehabilitation of Installation Room

Facility	Name of Room (Equipment)
Scientific-Practical Center for Emergency Medicine	Radiography room (Angiography, CT, MRI, General X-ray and Fluoroscopy) and Sterilization room (High Pressure Steam Sterilizer, Washer / Disinfector)
The Scientific Research Institute in the Field of Mother and Child Health Republican Clinical Hospital for Children, Em. Cotaga	Radiography room (CT, General X-ray and Fluoroscopy)
Oncologic Institute	Sterilization room (High Pressure Steam Sterilizer, Washer / Disinfector)
Chisinau Municipal Clinical Hospital "Sfanta Treime"	Radiography room (Angiography, CT, General X-ray and Fluoroscopy) and Sterilization room (High Pressure Steam Sterilizer, Washer / Disinfector)

8-2. Requirement of Installation Work

Most of the equipment can be delivered with simple set-up work. However, some equipment that mentioned on requires additional installation work. This equipment should be planned the installation periods.

Table 17 Installation Work

Facility	Equipment
Republican Clinical Hospital	Pendant, Operation Light, Bed Head Unit, High Pressure Steam Sterilizer, Plasma Sterilizer, Washer / Disinfector and Vertical Laminar Flow Unit
Scientific-Practical Center for Emergency Medicine	Angiography, CT, MRI, General X-ray, Fluoroscopy, High Pressure Steam Sterilizer and Washer / Disinfector
The Scientific Research Institute in the Field of Mother and Child Health Republican Clinical Hospital for Children, Em. Cotaga	CT, General X-ray and Fluoroscopy
Oncologic Institute	Digital Mammography, General X-ray, Fluoroscopy
Chisinau Municipal Clinical Hospital "Sfanta Treime"	Angiography, CT, Fluoroscopy, High Pressure Steam Sterilizer and Washer / Disinfector
National Center for Public Health(Center)	Laboratory Fume Hood

8-3. Procurement, Delivery and Installation Management

Procurement, delivery and installation management is executed by consultant team that made contract with MOH. This consultant team should implement this management considering above condition

Based on these parameters, installation schedule is designed as Table 18.

Table 18 Installation plan

Facility	Month				
	1	2	3	4	5
Republican Clinical Hospital					
Scientific-Practical Center for Emergency Medicine					
The Scientific Research Institute in the Field of Mother and Child Health and Republican Clinical Hospital for Children, Em. Cotaga					
Oncologic Institute					
Chisinau Municipal Clinical Hospital "Sfanta Treime"					
National Center for Public Health (Center for Public Health)					

Chapter 9 Clinical Application Training

Clinical application training is planned as Technical Assistance under the Project by allocating separate cost other than medical and laboratory devices in this project. The purpose of this application training is to improve medical doctors' capacity for diagnosis and treatment by utilizing medical and laboratory devices.

Clinical application training should be conducted in Moldova within 1- 2 (one to two) months after the installation of following medical equipment;

Table 19 Clinical Application Training in Moldova

No.	Equipment Name	Duration	No. of trainer	Trainee	Training Venue
	CT	1 week	1	Radiologist /Doctors from ・National Scientific-Practical Centre for Emergency Medicine ・Scientific Research Institute in the Field of Mother and Child Health Protection ・Chisinau Municipal Clinical Hospital "Sfanta Treime"	・National Scientific-Practical Centre for Emergency Medicine
	MRI	1 week	1	Radiologist /Doctors from ・National Scientific-Practical Centre for Emergency Medicine	・National Scientific-Practical Centre for Emergency Medicine
	Angiography	3 weeks	1	Radiologist /Doctors from ・National Scientific-Practical Centre for Emergency Medicine ・Chisinau Municipal Clinical Hospital "Sfanta Treime"	
	Pediatric laparoscopy	1 week	1	Doctors from ・Scientific Research Institute	Scientific Research Institute in the Field of Mother and Child

				in the Field of Mother and Child Health Protection	Health Protection
	Real Time PCR	5days	1	Doctors from ・National Center for Public Health	National Center for Public Health
	Gas Chromatograph and Liquid Chromatograph,	1week – 10 days	1	Doctors from ・National Center for Public Health ・ Center of Public Health Municipal	National Center for Public Health

Trainees will be collected at a hospital and receive group clinical application training. There will be one specialist present from abroad(such as Russian, Romanian, Ukrainian, etc.), who is a professional doctor/radiologist more than 10 years in the field of health care service and skilled doctor/radiologists regarding on manufacture's equipment model. The trainer shall be selected through manufactures' channel or academic channel after the decision of equipment model and manufacture.

Since the clinical application training will be closely related with the manufacture and equipment model, the selection of the duration and the trainers will play an important role. At the same time, the request from the Moldovan side and its MoH's policy should be into the consideration.

Detailed programme and topics of Moldovan request are as follows;

Table 20 Requested Topic for Application Training from Moldova

Device	Contents of Training
CT	- CT theory and practice - 2D head examination (1-2 persons) - multispiral head examination (2-3 persons) - consideration of the head images reconstruction - chest examination (2-3 persons) - consideration of the lung and chest images reconstruction - Cervical spine examination (1-2 persons) - lumbar spine examination (1-2 persons) - consideration of the spine images reconstruction - knee joint examination (1-2 persons) - shoulder joint examination (1-2 persons) - consideration of the joints images reconstruction - theoretic basics of work with injector - workshop with 3D work station -abdomen examination without contrast enhancement (CE) (1 persons)

	- abdomen and chest examination without CE (1-2 persons) - abdomen examination with CE (2 persons) - abdomen and chest examination with CE (2 persons) - CTA of abdomen vessels (2 persons) - CTA of head vessels (2 persons) - multiphasic liver examination with CE (1-2 persons) - adjustment study protocols regarding customer's specification - Hi Res lung examination - consideration of the Hi Res lung images reconstruction - multiphasic pancreas examination with CE (1-2 persons) - multiphasic kidneys examination with CE (1 persons)
MRI	- MRI theory and practice - brain examination (2-3 persons) - lumbar spine examination - cervical spine examination - knee joint examination - shoulder joint examination - ankle examination - thoracic spine examination - temporal-mandibular joint examination - female pelvis examination - male pelvis examination - hip joints examination - abdomen examination (2 persons) - kidney examination - orbits examination etc.
Angiography	-Introduction -Fluoroscopy/Radiography Program -Head and neck regions -Breast region -Abdomen -Extremities -Coronary Angiography / Angioplasty -Angiography / angioplasty of the lower limb -Angiography / Angioplasty of the epiaortic vessels -Angiography / Angioplasty of the kidney artery -Angiography / Angioplasty of the abdominal aorta -Angiography / Angioplasty of the brain artery -Angiography / Angioplasty of the lung vessels -Aortography -Graft implantation for aortic aneurysm
Pediatric Laparoscopy	-General presentation of Laparoscopy Equipment -Hand on pelvitrainers (instruments hands on, camera manipulation) -Suturing -Laparoscopic appendectomy -Laparoscopic cholecystectomy -Colon/intestinal biopsies -Varicocele -Inguinal Hernia -Diaphragmatic hernia -General topics for new born laparoscopic procedures
Real Time PCR	-Nucleic acid sequencing

Gas Chromatograph, free induction decay (FID) detector, thermal desorbe	-Determination of volatile substances in air by thermal desorption
Gas Chromatograph, free induction decay (FID) mass-selective detectors	-Determination of organic substances, multi residue determination of pesticides
Liquid Chromatograph, 3 detectors	-Determination of pesticides, polycyclic aromatic hydrocarbons, mycotoxins

MEMBER LIST OF THE DETAILED DESIGN SURVEY

Appendix 1

(1) 1st Field Survey

No	Position	Name	Organization
Official Member			
1	Leader	Mr. Yoshiharu Yoneyama	Deputy Director General and Group Director for Health Group 1 Human Development Department, JICA, HQs
2	Sectorial Officer	Ms. Yoko Kotoura	JICA, HQs
Consultant Member			
3	Consultant Leader / Medical Equipment 1	Mr. Yosuke Umemiya	Fujita Planning Co., Ltd.
4	Medical Equipment 2 / Maintenance Management 1	Mr. Masayuki Aoki	Fujita Planning Co., Ltd.
5	Medical Equipment 3/ Cost Planner1	Mr. Hiroshi Yoshino	Fujita Planning Co., Ltd.
6	Medical Equipment 4	Mr. Takashi Ogawa	LLC AMHN
7	Medical Equipment 5	Mr. Akio Kaneko	LLC AMHN
8	Infrastructure / Utilities Planner	Mr. Koichi Nakamura	Yokogawa Architects & Engineers, Inc.
9	Training/ Maintenance Management 2/ Cost Planner2	Ms. Kana Tatsuno	Fujita Planning Co., Ltd.

(2) 2nd Field Survey

No	Position	Name	Organization
Official Member			
1	Leader	Mr. Kaname Kanai	Executive Technical Advisor to the Director General Human Department, JICA, HQs
2	Sectorial Officer	Ms. Yoko Kotoura	JICA, HQs
Consultant Member			
3	Consultant Leader / Medical Equipment 1	Mr. Yosuke Umemiya	Fujita Planning Co., Ltd.
4	Medical Equipment 2 / Maintenance Management 1	Mr. Masayuki Aoki	Fujita Planning Co., Ltd.

Schedule of 1 st Site Survey

			Official Member		Consultant Member																			
			Leader	Sectoral Officer	Consultant Leader / Medical Equipment 1		Medical Equipment 2/ Maintenance Management 1		Medical Equipment 3/ Cost Planner1		Medical Equipment 4		Medical Equipment 5		Infrastructure / Utilities Planner		Training / Maintenance Management 2/ Cost Planner 2					
	Date /Month		Mr. Yoshiharu Yoneyama	Ms. Yoko Kotoura	Mr. Yosuke Umemiya		Mr. Masayuki Aoki		Mr. Hiroshi Yoshino		Mr. Takashi Ogawa		Mr. Akio Kaneko		Mr. Koichi Nakamura		Ms. Kana Tatsuno					
1	2013/8/28	Wed	NRT/VIE	NRT/VIE	1	NRT/VIE	1	NRT/VIE																
2	2013/8/29	Thu	VIE/KIV, MoH	VIE/KIV, MoH	2	VIE/KIV, MoH, SCRC Em. Coţaga	2	VIE/KIV, MoH																
3	2013/8/30	Fri	Meeting with MoH, PMT	Meeting with MoH, PMT	3	MoH, SCR, OI	3	Same as Mr. Umemiya																
4	2013/8/31	Sat	KIV/VIE	KIV/VIE	4	In-house Meeting, ME Agency	4	In-house Meeting, ME Agency																
5	2013/9/1	Sun	NRT	NRT	5	In-house Meeting, ME Agency	5	In-house Meeting, ME Agency																
6	2013/9/2	Mon			6	ICSDOSM, CNSP Sf. Treime Hn. MoH	6	Same as Mr. Umemiya																
7	2013/9/3	Tue			7	CNSPMU, MoH	7	Same as Mr. Umemiya																
8	2013/9/4	Wed			8	CNSPMU	8	SCR																
9	2013/9/5	Thu			9	CNSP, MoH	9	SCR																
10	2013/9/6	Fri			10	CNSP, Company for EMI Fieald Survey	10	SCR, Company for EMI Fieald Survey																
11	2013/9/7	Sat			11	In-house Meetine, ME Aeencv	11	In-house Meetine, ME Aeencv																
12	2013/9/8	Sun			12	In-house Meeting, ME Agency	12	In-house Meeting, ME Agency																
13	2013/9/9	Mon			13	OI, ICSDOSM,	13	SCR																
14	2013/9/10	Tue			14	Sf. Treime Hp, CNSP, MoH	14	ME Agency, MoH																
15	2013/9/11	Wed			15	CNSPMU	15	SCR																
16	2013/9/12	Thu			16	CNSP	16	SCR																
17	2013/9/13	Fri			17	CNSP	17	SCR	1	NRT/VIE														
18	2013/9/14	Sat			18	In-house Meetine, ME Aeencv	18	In-house Meetine, ME Aeencv	2	VIE/KIV														
19	2013/9/15	Sun			19	In-house Meeting, ME Agency	19	In-house Meeting, ME Agency	3	In-house Meeting,														
20	2013/9/16	Mon			20	Site Survey (CNSP)	20	Site Survey (RCH)	4	MoH, ICSDOSM														
21	2013/9/17	Tue			21	Site Survey (CNSP)	21	Site Survey (RCH)	5	Sf. Treime Hp														
22	2013/9/18	Wed			22	Site Survey (CNSP)	22	Site Survey (RCH)	6	Sf. Treime Hp														
23	2013/9/19	Thu			23	Site Survey (RCH)	23	Site Survey (RCH)	7	OI														
24	2013/9/20	Fri			24	Site Survey (RCH)	24	Site Survey (RCH)	8	ICSDOSM														
25	2013/9/21	Sat			25	In-house Meetine	25	In-house Meetine	9	In-house Meeting														
26	2013/9/22	Sun			26	Documentation Work	26	Documentation Work	10	Documentation Work														
27	2013/9/23	Mon			27	Site Survey (RCH)	27	Site Survey (OI)	11	Site Survey (OI)														
28	2013/9/24	Tue			28	Site Survey (OI)	28	Site Survey (ST)	12	Site Survey (OI)														
29	2013/9/25	Wed			29	Site Survey (OI)	29	Site Survey (ST)	13	Site Survey (OI)														
30	2013/9/26	Thu			30	MoH, In-house meetime	30	MoH, In-house Meeting	14	Site Survey (OI)														
31	2013/9/27	Fri			31	MoH, In-house meeting	31	MoH, In-house Meeting	15	Site Survey (ST)														
32	2013/9/28	Sat			32	In-house Meeting	32	In-house Meeting	16	In-house Meeting														
33	2013/9/29	Sun			33	Documentation Work	33	Documentation Work	17	Documentation Work														
34	2013/9/30	Mon			34	Site Survey (OI)	34	Site Survey (EH)	18	Site Survey (ST)														
35	2013/10/1	Tue			35	Site Survey (ST)	35	Site Survey (EH)	19	Site Survey (ST)														
36	2013/10/2	Wed			36	Site Survey (ST)	36	Site Survey (EH)	20	Site Survey (ST)														
37	2013/10/3	Thu			37	Site Survey (ST)	37	Site Survey (RCH)	21	Site Survey (EH)														
38	2013/10/4	Fri			38	Site Survey (EH)	38	MoH, In-house Meeting	22	Site Survey (EH)														
39	2013/10/5	Sat			23	In-house Meeting	39	KIV/VIE	23	In-house Meeting														
40	2013/10/6	Sun			24	Documentation Work	40	NRT	24	Documentation Work														
41	2013/10/7	Mon			41	Site Survey (MCH)			25	Site Survey (EH)														
42	2013/10/8	Tue			42	Site Survey (CNSP/MOH)			26	Site Survey (EH)														
43	2013/10/9	Wed			43	Site Survey (CNSP/MOH)			27	Site Survey (MCH)														
44	2013/10/10	Thu			44	KIV/VIE			28	Site Survey (MCH)														
45	2013/10/11	Fri			45	NRT			29	Site Survey (MCH)														
46	2013/10/12	Sat							30	In-house Meeting														
47	2013/10/13	Sun							31	Documentation Work														
48	2013/10/14	Mon							32	VIE/OTV(Romania)														
49	2013/10/15	Tue							33	ME Agency														
50	2013/10/16	Wed							34	ME Agency														
51	2013/10/17	Thu							35	Documentation Work														
52	2013/10/18	Fri							36	OTV/VIE (Romania)														
53	2013/10/19	Sat							37	In-house Meeting					1	NRT/VIE								
54	2013/10/20	Sun							38	Documentation Work					2	VIE/KIV								
55	2013/10/21	Mon					1	NRT/VIE	39	Site Survey (OI)					3	Site Survey								
56	2013/10/22	Tue					2	VIE/KIV	40	Site Survey (OI)					4	Site Survey								
57	2013/10/23	Wed					3	Site Survey (RCH)	41	Site Survey (OI)					5	Site Survey								
58	2013/10/24	Thu					4	Site Survey (RCH)	42	Site Survey (ST)					6	Site Survey								
59	2013/10/25	Fri					5	Site Survey (RCH)	43	Site Survey (ST)					7	Site Survey								
60	2013/10/26	Sat					6	In-house Meetine	44	In-house Meeting					8	In-house Meetine								
61	2013/10/27	Sun					7	Documentation Work	45	Documentation Work					9	Documentation Work								
62	2013/10/28	Mon					8	Site Survey (RCH)	46	Site Survey (ST)					10	Site Survey								
63	2013/10/29	Tue			1	NRT/VIE/KIV	9	Site Survey (RCH)	47	Site Survey (EH)					11	Site Survey								
64	2013/10/30	Wed			2	MoH	10	Site Survey (RCH)	48	Site Survey (EH)					12	Site Survey								
65	2013/10/31	Thu			6	MoH	11	Site Survey (RCH)	49	Site Survey (EH)					13	Site Survey								
66	2013/11/1	Fri			7	MoH	12	Site Survey (RCH)	50	Site Survey (MCH)					14	Site Survey								
67	2013/11/2	Sat			8	In-house Meeting	13	In-house Meeting	51	In-house Meeting					15	In-house Meeting								
68	2013/11/3	Sun			9	Documentation Work	14	Documentation Work	52	Documentation Work					16	Documentation Work								
69	2013/11/4	Mon			10	Site Survey (CNSP)	15	Site Survey (OI)	53	Site Survey (MCH)					17	KIV/VIE								
70	2013/11/5	Tue			11	Site Survey (CNSP)	16	Site Survey (OI)	54	Site Survey (MCH)					18	NRT								
71	2013/11/6	Wed			12	Site Survey (CNSP)	17	Site Survey (OI)	55	Site Survey (MCH)														
72	2013/11/7	Thu			13	Site Survey (RCH)	18	Site Survey (OI)	56	Site Survey (MCH)	1	NRT/IST												
73	2013/11/8	Fri			14	Site Survey (RCH)	19	Site Survey (OI)	57	Site Survey (MCH)	2	IST/KIV												
74	2013/11/9	Sat			15	In-house Meeting	20	In-house Meeting	58	In-house Meeting	3	In-house Meeting							15	NRT/IST				
75	2013/11/10	Sun			16	Documentation Work	21	Documentation Work	59	Documentation Work	4	Documentation Work							16	IST/KIV				
76	2013/11/11	Mon			17	Site Survey (RCH)	22	Site Survey (ST)	60	Site Survey (OI)	5	Site Survey (CNSP)							17	Site Survey				
77	2013/11/12	Tue			18	Site Survey (OI)	23	Site Survey (ST)	61	Site Survey (OI)	6	Site Survey (CNSP)							18	Site Survey				
78	2013/11/13	Wed			19	Site Survey (OI)	24	Site Survey (ST)	62	Site Survey (OI)	7	Site Survey (CNSP)							19	Site Survey				
79	2013/11/14	Thu			20	Site Survey (OI)	25	Site Survey (ST)	63	Site Survey (OI)	8	Site Survey (CNSP)							20	Site Survey				
80	2013/11/15	Fri			21	Site Survey	26	Site Survey (ST)	64	Site Survey (OI)	9	Site Survey (CNSP)							21	Site Survey				
81	2013/11/16	Sat			22	In-house Meeting	27	In-house Meeting	65	In-house Meeting	10	In-house Meeting							22	In-house Meeting				
82	2013/11/17	Sun			23	Documentation Work	28	Documentation Work	66	Documentation Work	11	Documentation Work							23	Documentation Work				
83	2013/11/18	Mon			24	Site Survey (ST)	29	Site Survey (EH)	67	Site Survey (ST)	12	Site Survey (CNSP)							24	Site Survey				
84	2013/11/19	Tue			25	Site Survey (ST)	30	Site Survey (EH)	68	Site Survey (ST)	13	Site Survey (CNSP)							25	Site Survey				
85	2013/11/20	Wed			26	Site Survey (ST)	31	Site Survey (EH)	69	Site Survey (ST)	14	Site Survey (CNSP)							26	Site Survey				
86	2013/11/21	Thu			27	Site Survey (EH)	32	Site Survey (EH)	70	Site Survey (ST)	15	Site Survey (CNSP)							27	Site Survey				
87	2013/11/22	Fri			28	Site Survey (EH)	33	Site Survey (EH)	71	Site Survey (ST)	16	Site Survey (CNSP)							28	Site Survey				
88	2013/11/23	Sat			29	In-house Meeting	34	In-house Meeting	72	In-house Meeting	17	In-house Meeting							29	In-house Meeting				
89	2013/11/24	Sun			30	MoH, In-house Meetine	35	MoH, In-house Meeting	73	Documentation Work	18	Documentation Work							30	Documentation Work				
90	2013/11/25	Mon			31	Site Survey (EH)	36	Site Survey (RCH)	74	Site Survey (EH)	19	Site Survey (CNSP)							31	Site Survey				
91	2013/11/26	Tue			32	Site Survey (MCH)	37	Site Survey (RCH)	75	Site Survey (EH)	20	Site Survey (CNSP)							32	Site Survey				
92	2013/11/27	Wed			33	Site Survey (MCH)	38	Site Survey (RCH)	76	Site Survey (EH)	21	Site Survey (CNSP)							33	Site Survey				
93	2013/11/28	Thu			34	Site Survey (CNSP/MOH)	39	Site Survey (RCH)	77	Site Survey (EH)	22	Site Survey (CNSP)							34	Site Survey				
94	2013/11/29	Fri			35	Site Survey (CNSP/MOH)	40	Site Survey (RCH)	78	Site Survey (EH)	23	Site Survey (CNSP)							35	Site Survey				
95	2013/11/30	Sat			36	In-house Meeting	41	In-house Meeting	79	In-house Meeting	24	In-house Meeting							36	In-house Meeting				
96	2013/12/1	Sun			37	KIV/VIE	42	Documentation Work	80	Documentation Work	25	Documentation Work							37	KIV/IST				
97	2013/12/2	Mon			38	NRT	43	Site Survey (OI)	81	Site Survey (MCH)	26	Site Survey (CNSP)							38	IST/NRT				
98	2013/12/3	Tue					44	Site Survey (OI)	82	Site Survey (MCH)	27	Site Survey (CNSP)												
99	2013/12/4	Wed					45	Site Survey (OI)	83	Site Survey (MCH)	28	Site Survey (CNSP)												
100	2013/12/5	Thu					46	Site Survey (OI)	84	Site Survey (MCH)	29	Site Survey (CNSP)	1	NRT/IST										
101	2013/12/6	Fri					47	Site Survey (OI)	85	Site Survey (MCH)	30	Site Survey (CNSP)	2	IST/KIV										
102	2013/12/7	Sat					48	In-house Meeting	86	In-house Meeting	31	In-house Meeting	3	In-house Meeting										
103	2013/12/8	Sun					49	Documentation Work	87	Documentation Work	32	Documentation Work	4	Documentation Work										
104	2013/12/9	Mon					50	Site Survey (ST)	88	Site Survey (MCH)	33	Site Survey (CNSP)	5	Site Survey (CNSP)										
105	2013/12/10	Tue					51	Site Survey (ST)	89	Site Survey (MCH)	34	Site Survey (CNSP)	6	Site Survey (CNSP)										
106	2013/12/11	Wed					52	Site Survey (ST)	90	KIV/VIE	35	Site Survey (CNSP)	7	Site Survey (CNSP)										
107	2013/12/12	Thu					53	Site Survey (ST)	91	VIE	36	Site Survey (CNSP)	8	Site Survey (MCH)										
108	2013/12/13	Fri					54	Site Survey (ST)	92	NRT	37	Site Survey (CNSP)	9	Site Survey (MCH)										
109	2013/12/14	Sat					55	In-house Meeting			38	In-house Meeting	10	In-house Meeting										
110	2013/12/15	Sun					56	Documentation Work			39	Documentation Work	11	Documentation Work										
111	2013/12/16	Mon					57	Site Survey (RCH)			40	Site Survey (CNSP)	12	Site Survey (EH)										
112	2013/12/17	Tue					58	Site Survey (RCH)			41	Site Survey (CNSP)	13	Site Survey (EH)										
113	2013/12/18	Wed					59	KIV/VIE			42	Site Survey (CNSP)	14	Site Survey (EH)										
114	2013/12/19	Thu					60	VIE/			43	Site Survey (CNSP)	15	Site Survey (MCH)										
115	2013/12/20	Fri					61	NRT			44	KIV/IST	16	In-house Meeting										
116	2013/12/21	Sat									45	IST/KIV	17	Documentation Work										
117	2013/12/22	Sun											18	Site Survey (MCH)										
118	2013/12/23	Mon											19	Site Survey (MCH)										
119	2013/12/24	Tue											20	Site Survey (ST)										
120	2013/12/25	Wed											21	Site Survey (ST)										
121	2013/12/26	Thu											22	Site Survey (ST)										
122	2013/12/27	Fri											23	KIV/IST										
123	2013/12/28	Sat											24	IST/NRT										

Legend:

SCR	Republican Clinical Hospital/ IMSP Spitalul Clinic Republican		
ICSDOSM	Scientific Research Institute in the Field of Mother and Child Health Protection/ IMSP ICŞDOSMamei şi	CNSPMU	National Scientific-Practical Centre for Emergency Medicine/ IMSP Centrul Naţional Ştiinţifico-Practic de Medicină Urgentă
SCRC Em. Coţaga	Republican Clinical Hospital for Children "Em. Coţaga"/ IMSP Spitalul Clinic Republican pentru Copii „Em. Cot	Sf. Treime Hp	Municipal Clinical Hospital "Sf. Treime"/ Spitalul Clinic Municipal "Sfânta Treime"
OI	Oncologic Institute/ IMSP Institutul Oncologic	CNSP	National Center for Public Health / Centrul Naţional de Sănătate Publică

Schedule of 2nd Site Survey

			Leader	Sectoral Officer	Consultant Leader / Medical Equipment		Medical Equipment 2/ Maintenance	
	Date /Month		Mr. Kaname Kanai	Ms. Yoko Kotoura	Mr. Yosuke Umemiya		Mr. Masayuki Aoki	
1	2014/1/21	Tue			1	NRT/IST	1	NRT/IST
2	2014/1/22	Wed			2	SIT/KIV, MoH	2	SIT/KIV, MoH
3	2014/1/23	Thu			3	MoH	3	Same as the consultant leader
4	2014/1/24	Fri			4	In-house Meeting	4	In-house Meeting
5	2014/1/25	Sat			5	Documentation Work	5	Documentation Work
6	2014/1/26	Sun			6	CNSP	6	RCH
7	2014/1/27	Mon	NRT/MUN	NRT/MUN	7	RCH	7	RCH
8	2014/1/28	Tue	MUN/KIV, MoH	MUN/KIV, MoH	8	OI, ST	8	ST
9	2014/1/29	Wed	MCH, RCH, EH	CNSP, RCH, EH	9	EH,MCH	9	OI
10	2014/1/30	Thu	ST, OI, CNSP	ST, OI, MCH	10	MoH	10	Same as the consultant leader
11	2014/1/31	Fri	NRT/MUN	NRT/MUN	11	KIV/IST	11	KIV/IST
12	2014/2/1	Sat	NRT	NRT	12	IST/NRT	12	IST/NRT

Ministry of Health

	Name	Position/ Title	Office
1－1	Andrei Usatii	Minister	
1－2	Svetlana Cotelea	Duputy Minister	Public Health Department
1－3	Adrian Vartic	Duputy Minister	
1－4	Andrei Matei	Head	Department of Health Insurance, Budgeting and Finance
1－5	Oleg Barba	General Director,	National Center for Health Management
1－6	Andrei Romanjenco	Head	Divison of Human Resource Services
1－7	Alexandru Holostenco		Division of Human Resource Services

Agency of Medication and Medical Equipment

	Name	Position/ Title	Office
2－1	Alexandru Coman	Director	Agency of Medication and Medical Equipment

Republican Clinical Hospital

	Name	Position/ Title	Office
3－1	Sergiu Popa	General Director	Republican Clinical Hospital
3－2	Sergiu Ungureanu	Head of Surgery, Deputy Director	Republican Clinical Hospital

Institute of Scientific Research in the Field of Mother and Child Protection

	Name	Position/ Title	Office
4－1	Gatcan Stefan	General Manager	Institute of Scientific Research in the Field of Mother and Child Protection
4－2	Petru Stratulat	Duputy Director	Institute of Scientific Research in the Field of Mother and Child Protection
4－3	Valeriu Palii	Chief, BME	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－4	Victoria Sacara	Lab chief	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－5	Vitalie Cotorcea	Chief	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－6	Liliana Fuior		BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－7	Elena Gladun	Ob/Gyn	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－8	Sergiu Bejenaru	Chief	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－9	Ludmila Tiron	Deputy Chief	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－10	Victor Ciobanu	Doctor	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－11	Vitalie Cotorcea	Chief	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－12	Nicolae Doni	Chief	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－13	Valentina Rosca	Chief	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－14	Viorica Cravcescu	Chief	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－15	Alexandra Guscova	Chief	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－16	Ana Ceban	Bacteriology coordinator	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－17	Vilor Vulpe		BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－18	Victoria Vornic	Doctor	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－19	Vitalie Litovcenco	Chief	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－20	Grigore Covalciuc	Chief	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection
4－21	Adelina	Chief nurse	BME Dept, Institute of Scientific Research in the Field of Mother and Child Protection

Republican Clinical Hospital for Children "Em. Coţaga"

	Name	Position/ Title	Office
5－1	Tatiana Raba	Director	Republican Clinical Hospital for Children "Em. Coţaga"
5－2	Jon Cowazvitch	BME	Republican Clinical Hospital for Children "Em. Coţaga"
5－3	Grigore Vicol	Chief of department	Republican Clinical Hospital for Children "Em. Coţaga"
5－4	Ion Carasic	Chief of department	Republican Clinical Hospital for Children "Em. Coţaga"
5－5	Viorica Ambroci	Chief of department	Republican Clinical Hospital for Children "Em. Coţaga"
5－6	Angelina Chiaburu	Head of Center	Republican Clinical Hospital for Children "Em. Coţaga"
5－7	Octavian Lesnic	Director Cotaga	Republican Clinical Hospital for Children "Em. Coţaga"
5－8	Mihail Maniuc	Chief of ENT	Republican Clinical Hospital for Children "Em. Coţaga"

Oncology Institute

	Name	Position/ Title	Office
6－1	Victor Cernat	Director	Oncology Institute
6－2	Seghei Stepa	Vice Director, Surgery	Oncology Institute
6－3	Igor Gavrilasenco	Doctor	Oncology Institute
6－4	Sergiu Mura	Department Chief	Oncology Institute
6－5	Vitalie Godoroja	Doctor	Oncology Institute
6－6	Serghei Doruc	Doctor	Oncology Institute
6－7	Anatolie Buzu	Department Chief	Oncology Institute
6－8	Nicolae Piterschii	Deputy Chief	Oncology Institute
6－9	Iurie Chelea	Chief ICU	Oncology Institute
6－10	Vitalie Tirbu	Department Head	Oncology Institute
6－11	Anatol Mustea	Department Head	Oncology Institute
6－12	Valentin Tatian	Cordinator	Oncology Institute
6－13	Valeriu Stratila	Doctor	Oncology Institute

National Scientific-Practical Center for Emergency Medicine

	Name	Position/ Title	Office
7－1	Gheorghe Ciobanu	Director	National Scientific-Practical Center for Emergency Medicine
7－2	Liviu VOVC	Prim-Vice director	National Scientific-Practical Center for Emergency Medicine
7－3	Leontii	Deputy director	National Scientific-Practical Center for Emergency Medicine
7－4	Gheorghe Gorceag	Chief , BME	National Scientific-Practical Center for Emergency Medicine
7－5	Ion Chesov	Professor Assistant	National Scientific-Practical Center for Emergency Medicine
7－6	Sergiu Sandu	Professor Assistant	National Scientific-Practical Center for Emergency Medicine
7－7	Sergiu Cobiletchi	Anaesthesia ICU, Head	National Scientific-Practical Center for Emergency Medicine
7－8	Maria Brinza	Department head	National Scientific-Practical Center for Emergency Medicine
7－9	Elvira Crocos	Technician	National Scientific-Practical Center for Emergency Medicine
7－10	Diana Zagadailov	Doctor	National Scientific-Practical Center for Emergency Medicine
7－11	Vladimir Jilin	Doctor	National Scientific-Practical Center for Emergency Medicine
7－12	Virgiliu Vovc	Doctor	National Scientific-Practical Center for Emergency Medicine
7－13	Sergiu Zaharia	Head of OR	National Scientific-Practical Center for Emergency Medicine
7－14	Andrei Dolghii	Head	National Scientific-Practical Center for Emergency Medicine
7－15	Anatolie Ghereg	Doctor	National Scientific-Practical Center for Emergency Medicine
7－16	Gheorghe Gorceag	Bio engineer	National Scientific-Practical Center for Emergency Medicine

Municipal Clinical Hospital “Sfanta Treime”

	Name	Position/ Title	Office
8－1	Terente Simion	Director	Municipal Clinical Hospital “Sfanta Treime”
8－2	Gheorghe Strajescu	Vice Director, Surgical	Municipal Clinical Hospital “Sfanta Treime”
8－3	Galina Zavatin	Deputy Director	Municipal Clinical Hospital “Sfanta Treime”
8－4	Tatiana Tanasov	Nurse	Municipal Clinical Hospital “Sfanta Treime”
8－5	Zinaida Berectari	Chief Nurse	Municipal Clinical Hospital “Sfanta Treime”
8－6	Lilia Tiganciuc	Head	Municipal Clinical Hospital “Sfanta Treime”
8－7	Victor Munteanu	Head	Municipal Clinical Hospital “Sfanta Treime”
8－8	Cornelia Gutu-Bahov	Head	Municipal Clinical Hospital “Sfanta Treime”
8－9	Stanislav Dimitrisin	Head	Municipal Clinical Hospital “Sfanta Treime”
8－10	V. Sirbu	Head	Municipal Clinical Hospital “Sfanta Treime”
8－11	Constantin Ieseanu	Head	Municipal Clinical Hospital “Sfanta Treime”

National Center for Public Health

	Name	Position/ Title	Office
9－1	Shalaru Ion	Director General	National Center for Public Health
9－2	Valeriu Pantea	Head	Science Department, National Center for Public Health
9－3	Raisa	Head	Sanitary Hygenic Lab, National Center for Public Health

National Health Insurance Company

	Name	Position/ Title	Office
10－1	Mircea Buga	Director General	National Health Insurance Company

World Health Organization (WHO)

	Name	Position/ Title	Office
11－1	Silviu Domente	Health System Officer	World Health Organization (WHO)

World Bank (WB)

	Name	Position/ Title	Office
12－1	James A. Cercone	Consultant	World Bank (WB)

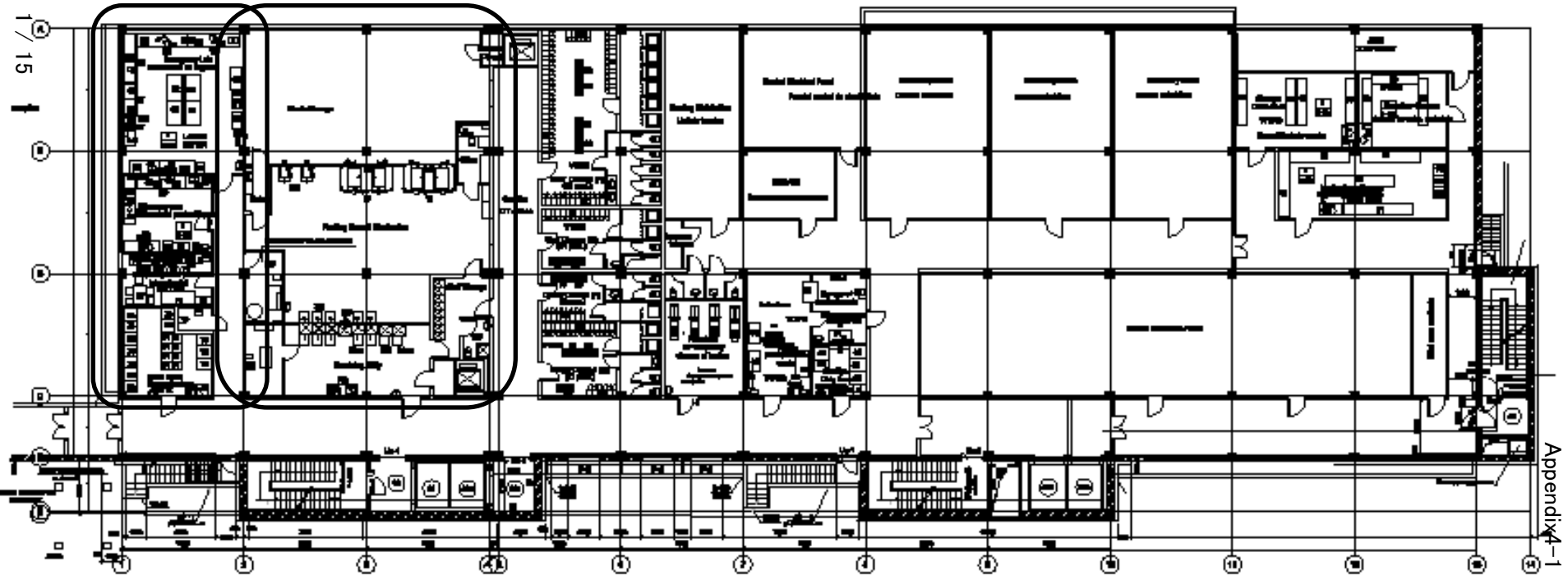
European Union(EU)

	Name	Position/ Title	Office
13－1	Viorica Cretu	Deputy Country Director	European Union(EU)

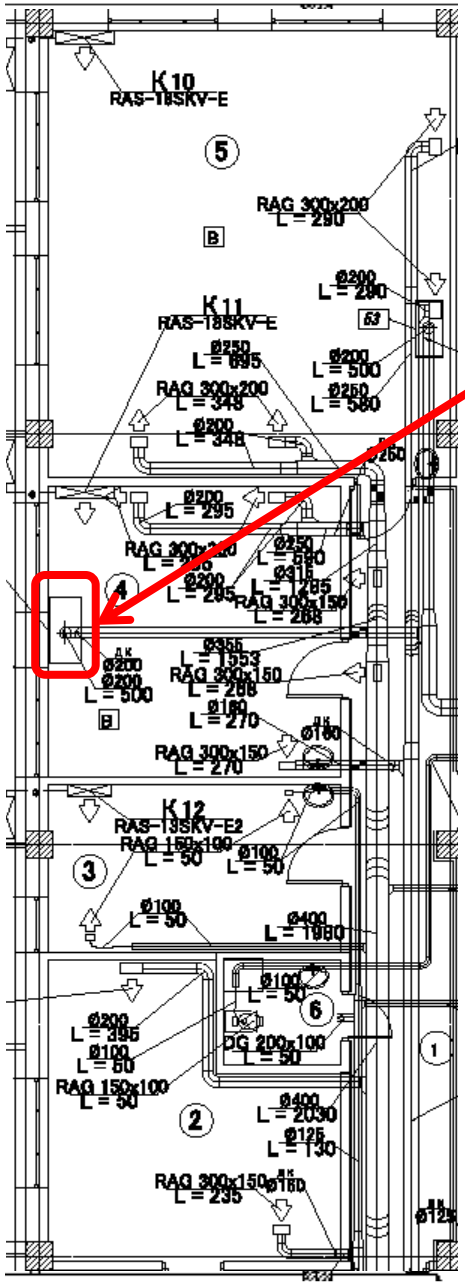
Republican Clinical Hospital, Surgical Block, BF
Location of Laboratory Equipment and CSSD Equipment

Laboratory	Code No. 042	(RH-60)	Clean Bench	---	1 unit
CSSD	Code No. 072	(RH-69)	Endoscope Washer / Disinfector A	---	1 unit
CSSD	Code No. 100	(RH-62)	High Pressure Steam Sterilizer A	---	2 units
CSSD	Code No. 180	(RH-63)	Plasma sterilizer	---	1 unit
CSSD	Code No. 265	(RH-64)	Washer / Disinfector A	---	2 units

Laboratory **CSSD**



Laboratory

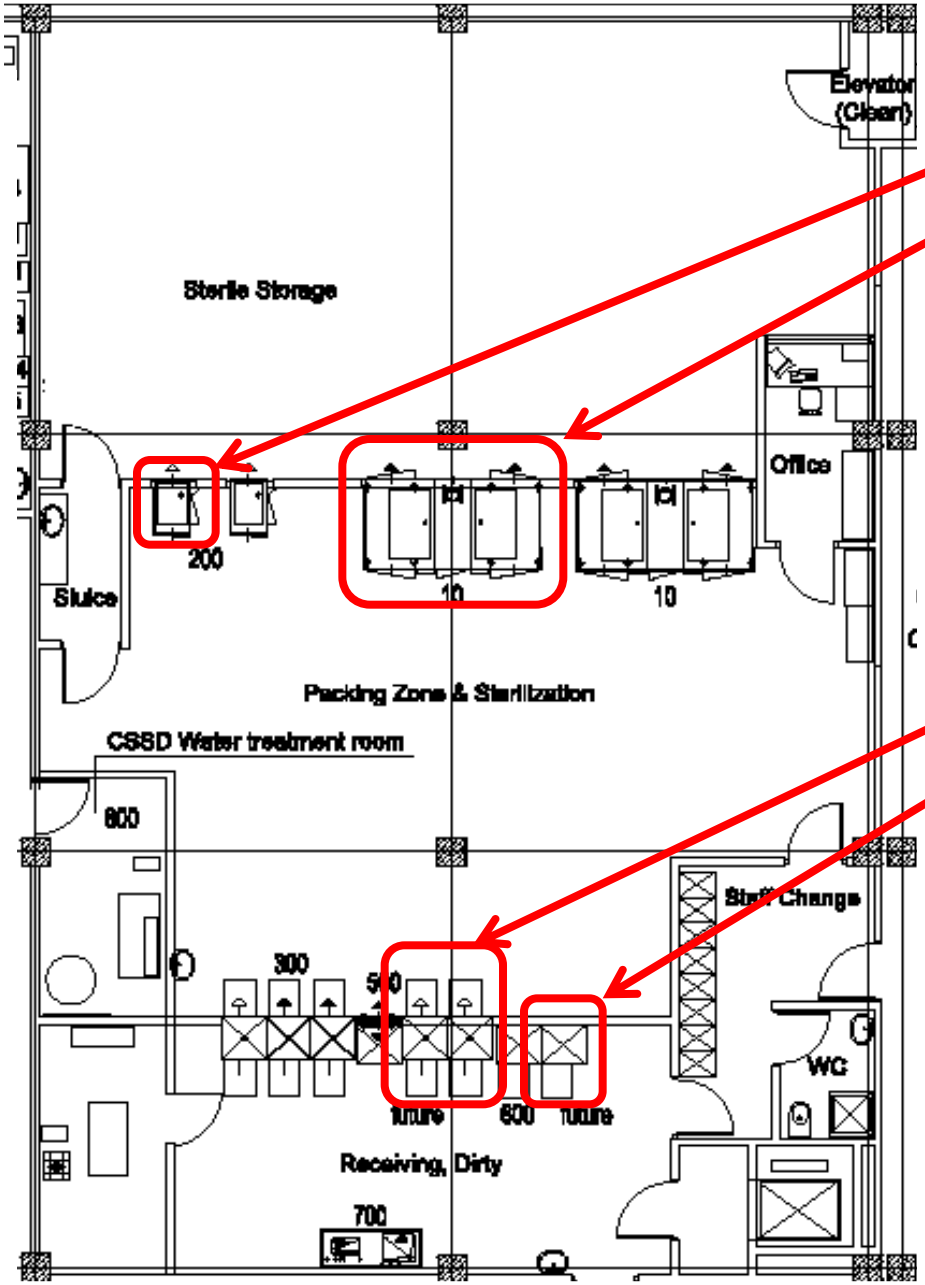


Clean Bench

Remarks

* Supplier shall connect the flexible tube from Clean Bench to ceiling suction piping (diameter 200 mm) provided by the constructor.
* Supplier shall connect the power supply from the distribution box.

CSSD



Plasma Sterilizer

High Pressure Steam Sterilizer

Washer / Disinfector A

Endoscope Washer Disinfector

Remarks

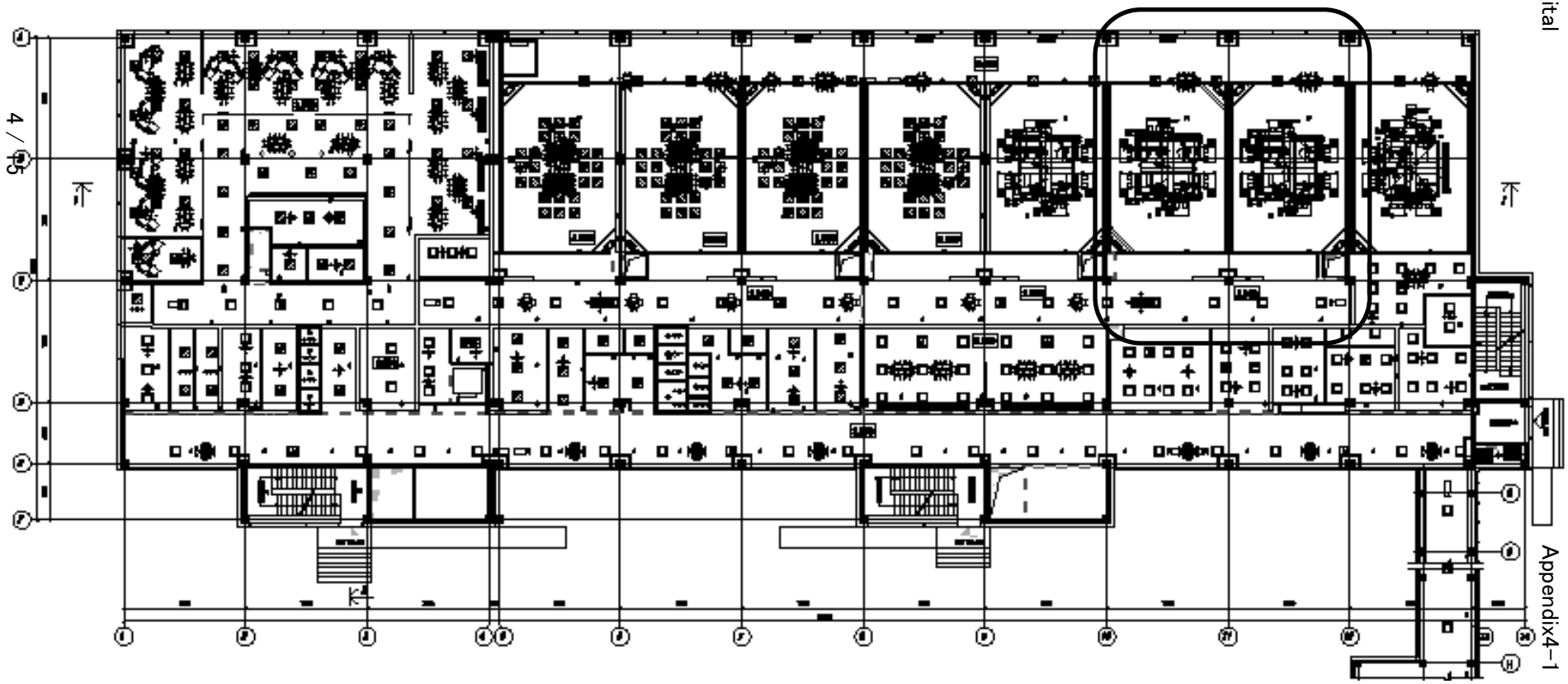
* Supplier shall remove the temporary partition wall between each area . After finish installation of CSSD equipment., mount the panel and seal.
* Supplier shall connect the power supply from the distribution box. Distance from the distribution box to each equipment will be informed after as-built drawing has published.
* Supplier shall connect the water supply and drain piping from stop valve.

Republican Clinical Hospital, Surgical Block, 1F

Location of Pendant & Vertical laminar flow unit -

Operation Theatre	Code No. 146 (RH-32) Operation Light, Ceiling A	---	2 units
Operation Theatre	Code No. 174 (RH-58) Pendant for Anesthesia	---	2 units
Operation Theatre	Code No. 175 (RH-59) Pendant for Surgical	---	2 units
Operation Theatre	Code No. 244 (RH-61) Vertical Laminar Flow Unit	---	2 units

Operation Theatre No. 6 & No.7



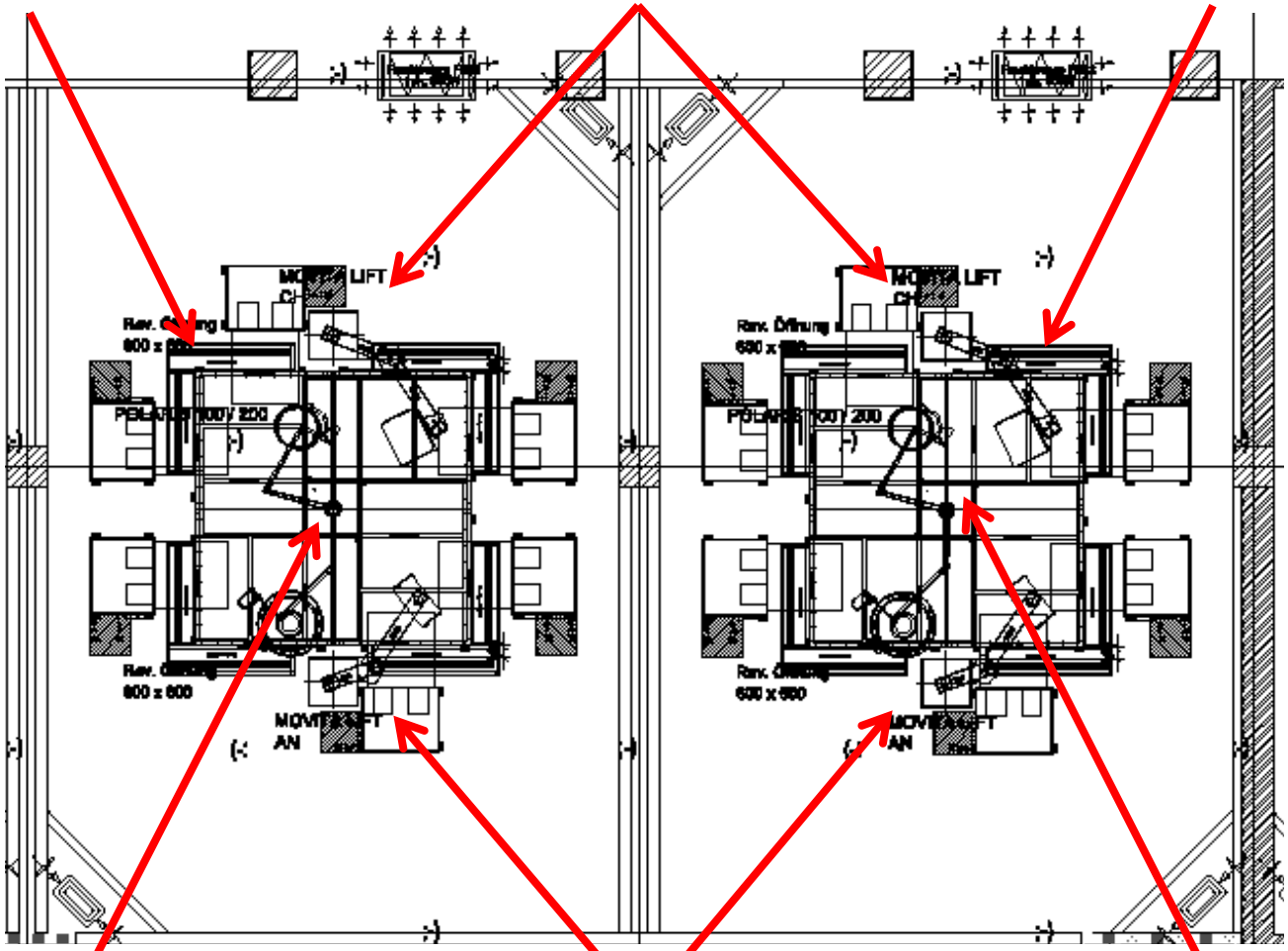
Operation Theatre No. 6

Operation Theatre No. 7

Vertical Laminar Flow Unit

Pendant for Surgical

Vertical Laminar Flow Unit

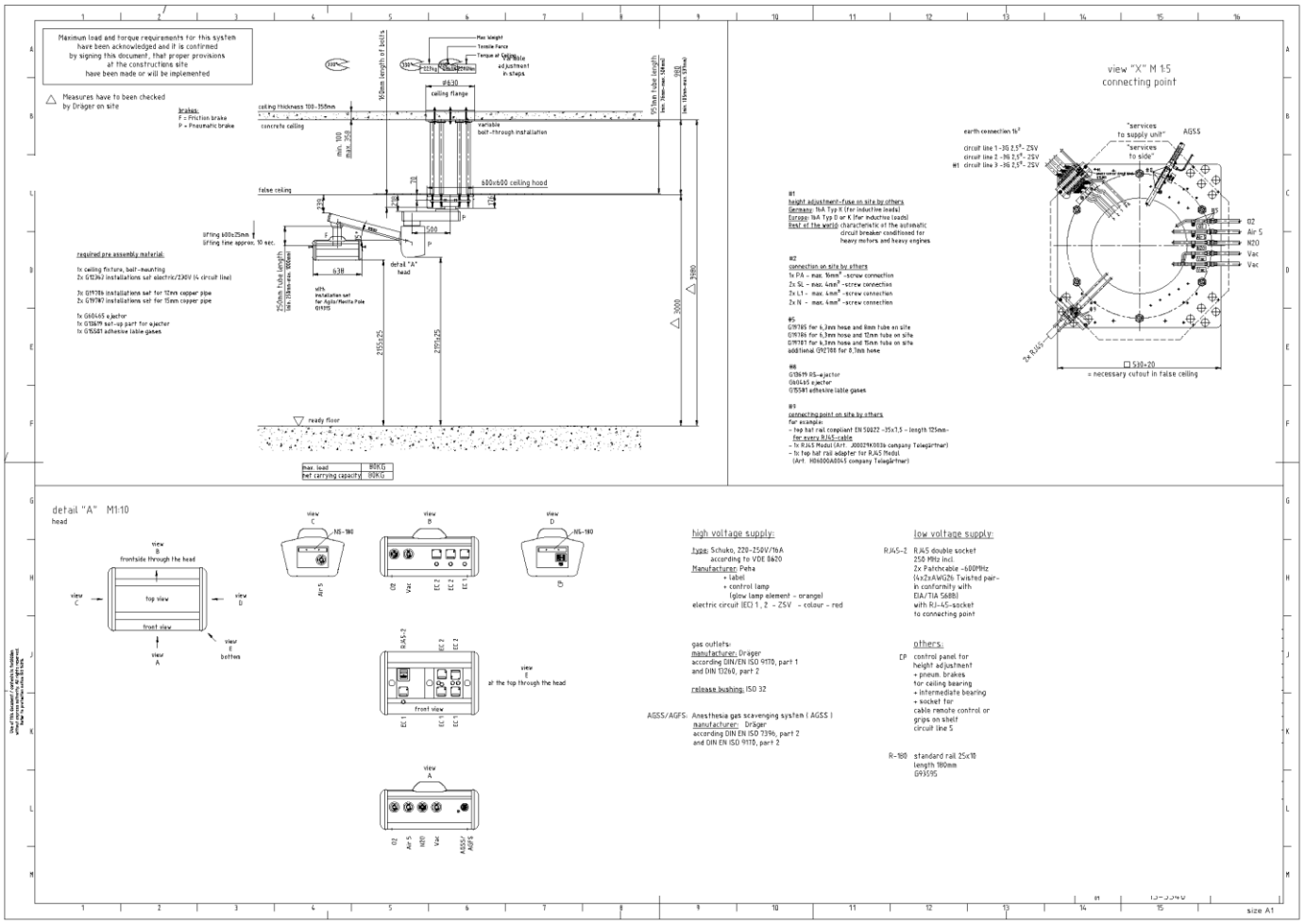


Operation Light, Ceiling A

Pendant for Anesthesia

Operation Light, Ceiling A

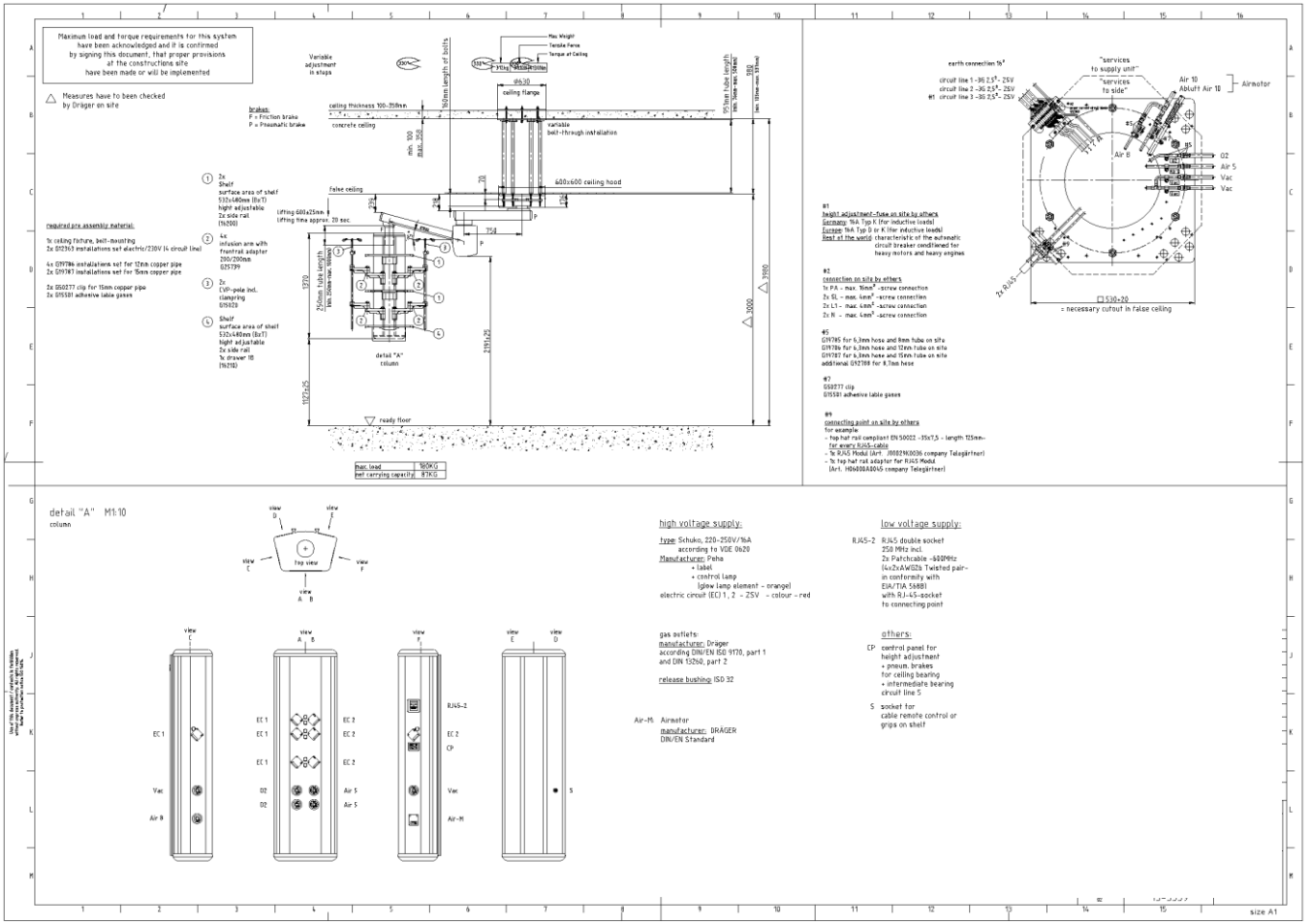
Reference drawing of Code No. 174 (RH-58) Pendant for Anesthesia --- 10 units



Remarks

* Reference drawing was prepared by Austrian Project and only for the reference.
*.Supplier shall fabricate the bracket between the concrete ceiling and suspended ceiling.
* Supplier shall connect medical gas piping which is prepared near the expected location.

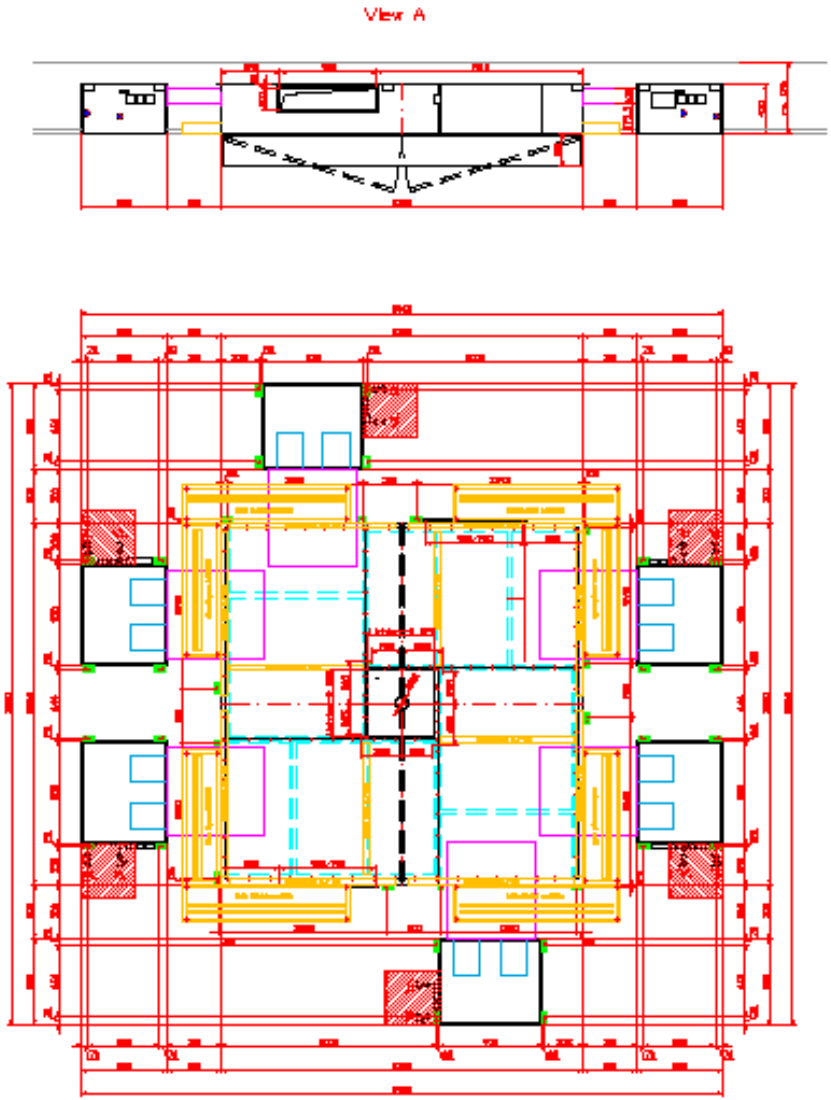
Reference drawing of Code No. 175 (RH-59) Pendant for Surgical --- 10 units



Remarks

* Reference drawing was prepared by Austrian Project and only for the reference.
*.Supplier shall fabricate the bracket between the concrete ceiling and suspended ceiling.
* Supplier shall connect medical gas piping which is prepared near the expected location.

Reference drawing of Code No. 244 (RH-61) Vertical Laminar Flow Unit --- 2 units

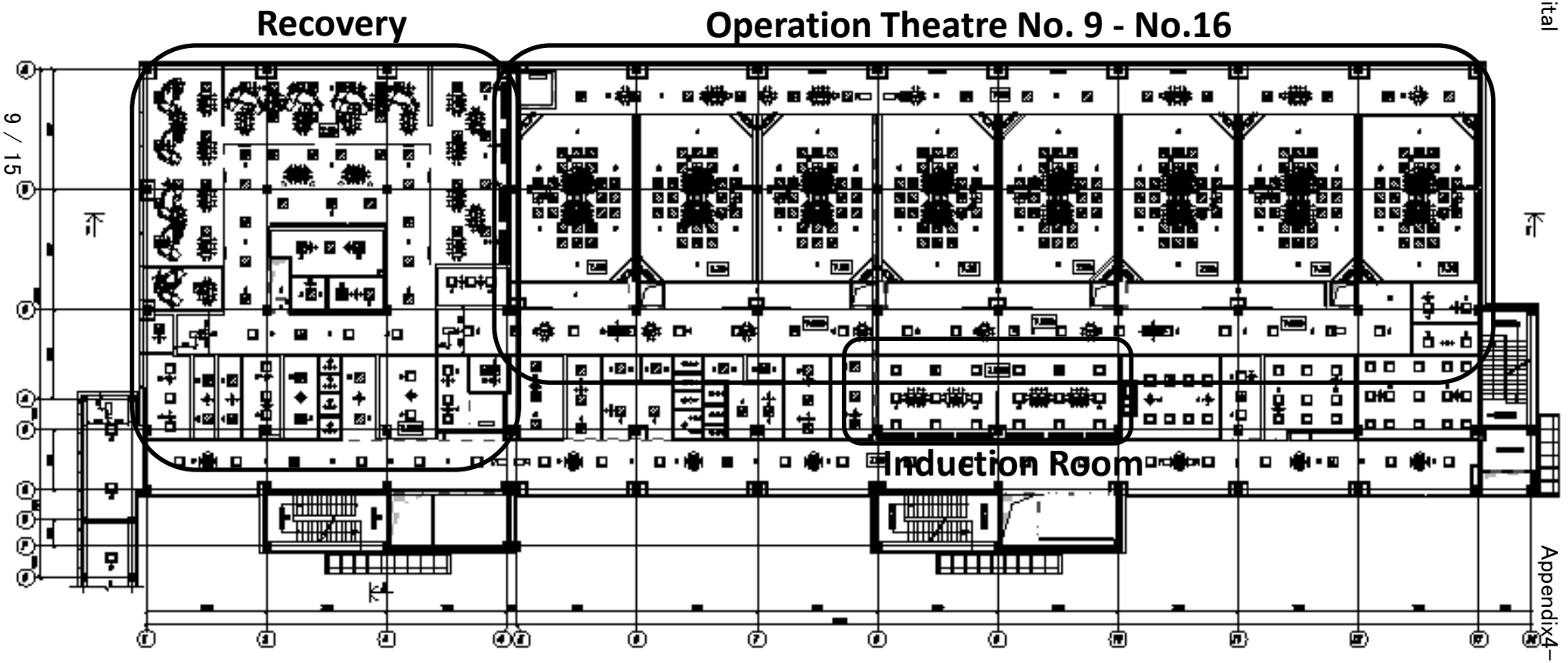


Remarks

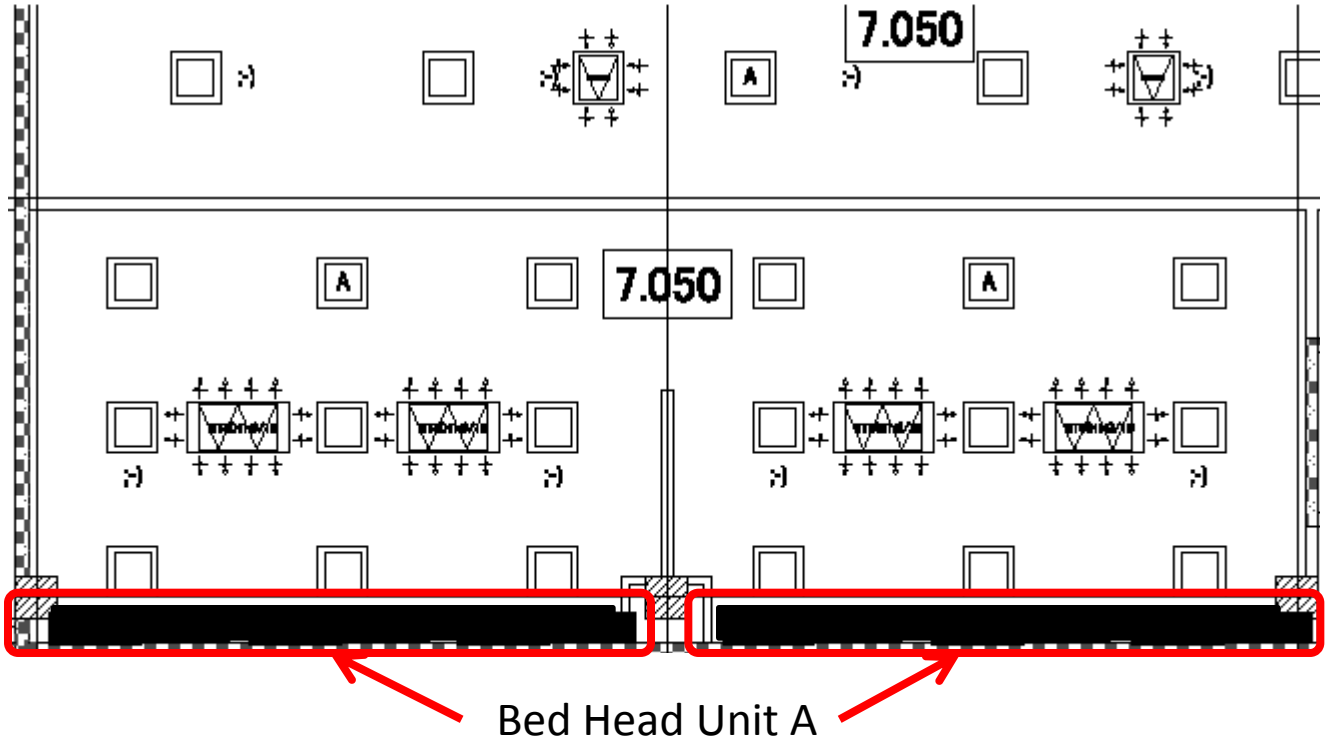
* Reference drawing was prepared by Austrian Project and only for the reference.
*.Supplier shall fabricate the bracket between the concrete ceiling and suspended ceiling.
* Supplier shall connect air supply ducting which is prepared near the expected location.
* Supplier shall coordinate the installation work with Ceiling Operation Light and Pendants.
* Supplier shall install the suspended ceiling at the end.

Location of Pendant & Bed Head Unit - Republican Clinical Hospital, Surgical Block, 2F

Induction Room	Code NO. 112(RH-55) ICU Bed Head Unit A	--- 2 units
Operation Theatre	Code No. 146 (RH-32) Operation Light, Ceiling A	--- 8 units
Operation Theatre	Code No. 174 (RH-58) Pendant for Anesthesia	--- 8 units
Operation Theatre	Code No. 175 (RH-59) Pendant for Surgical	--- 8 units
Recovery	Code No. 176 (RH-57) Pendants for ICU	--- 9 units

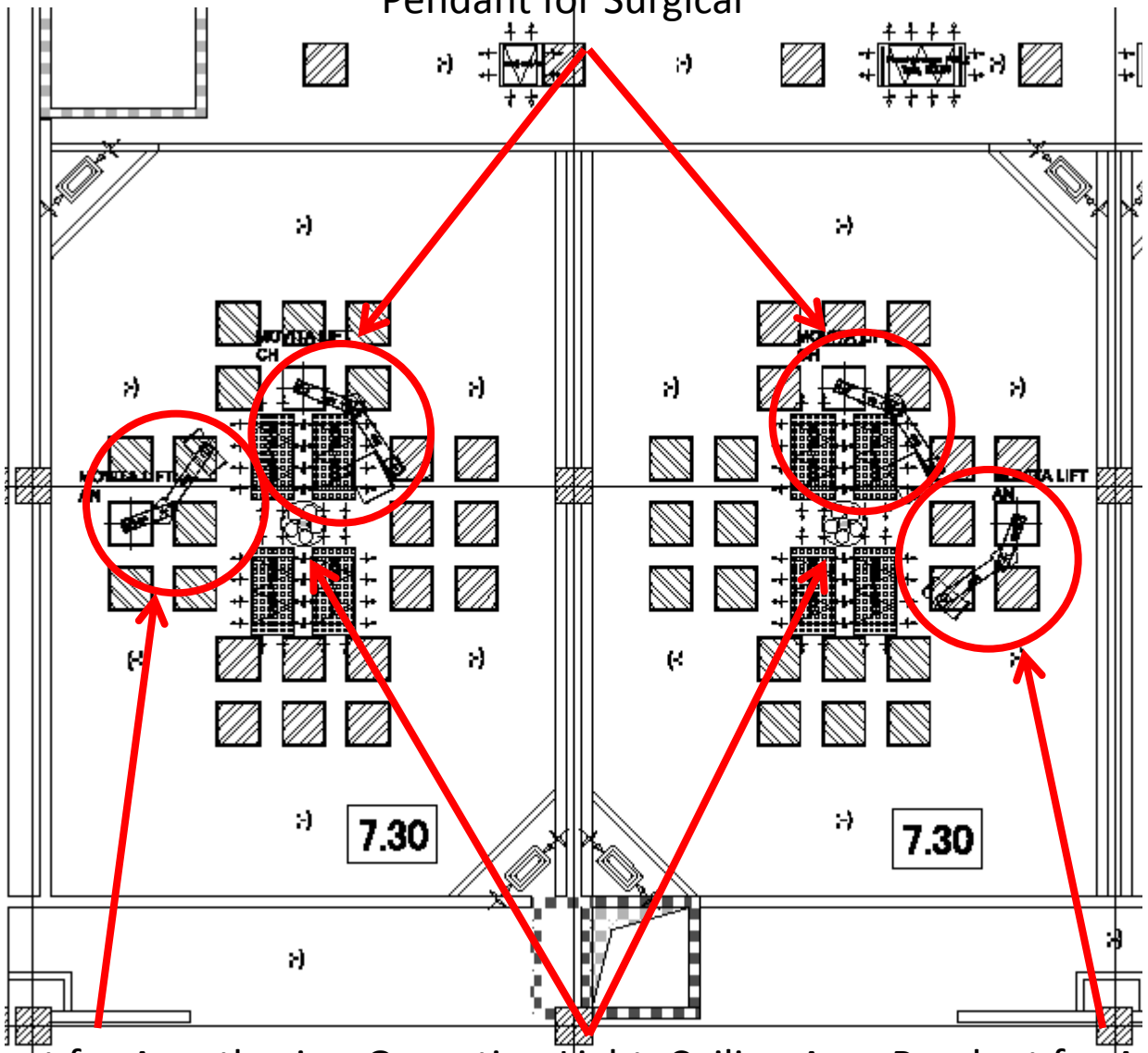


Induction Room



Remarks
* Supplier shall connect the medical gas piping, electricity and other utilities mentioned on the specification.

Operation Theatre No. 9 Operation Theatre No. 10

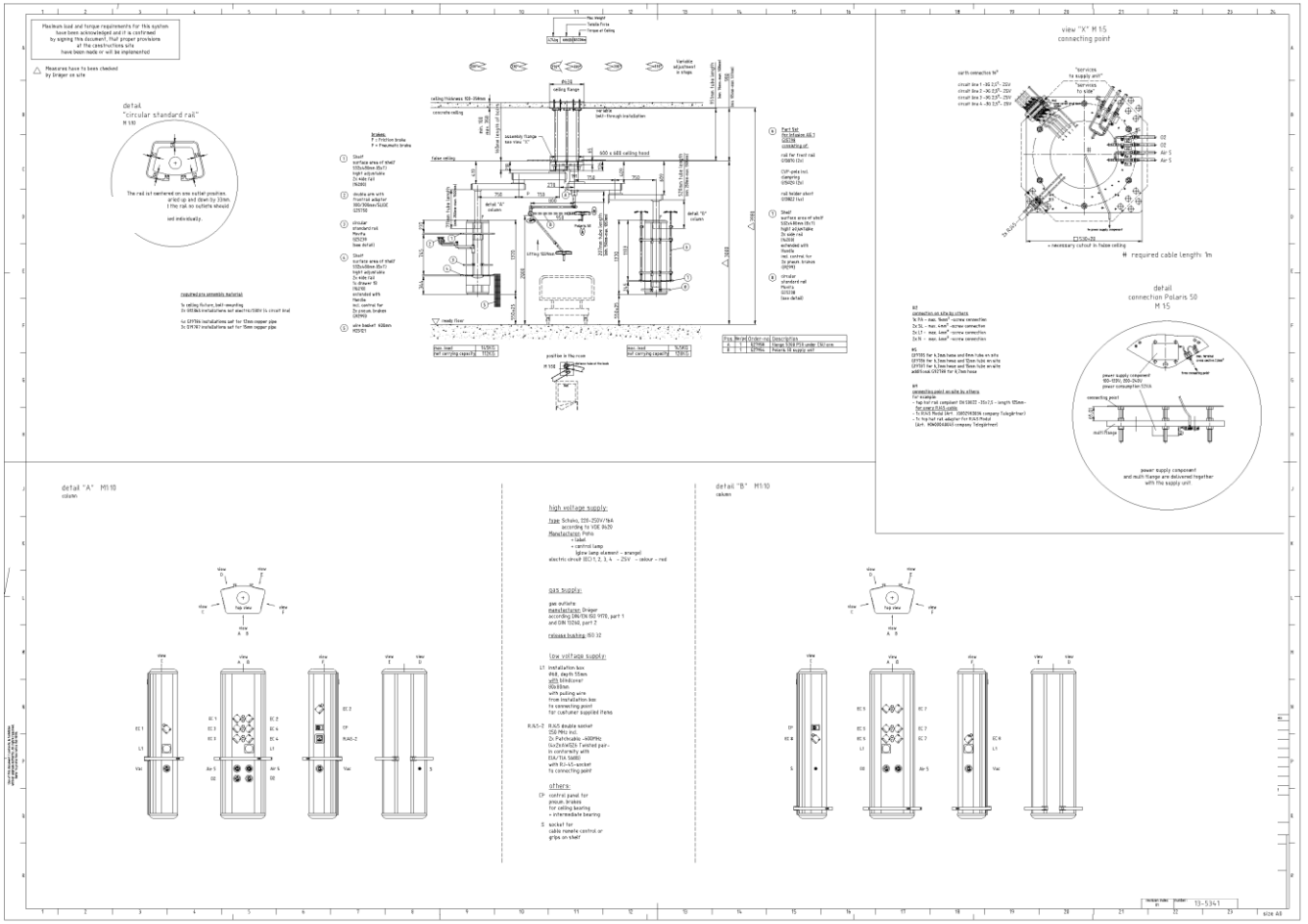


Remarks
* Operation Theatre No. 11 to No. 16 are the same combination as bilateral symmetry design.
* Supplier shall connect the medical gas piping, electricity and other utilities mentioned on the specification.

Recovery Room

Remarks
* Supplier shall connect the medical gas piping, electricity and other utilities mentioned on the specification.

Reference drawing of Code No. 176 (RH-57) Pendants for ICU --- 9 units

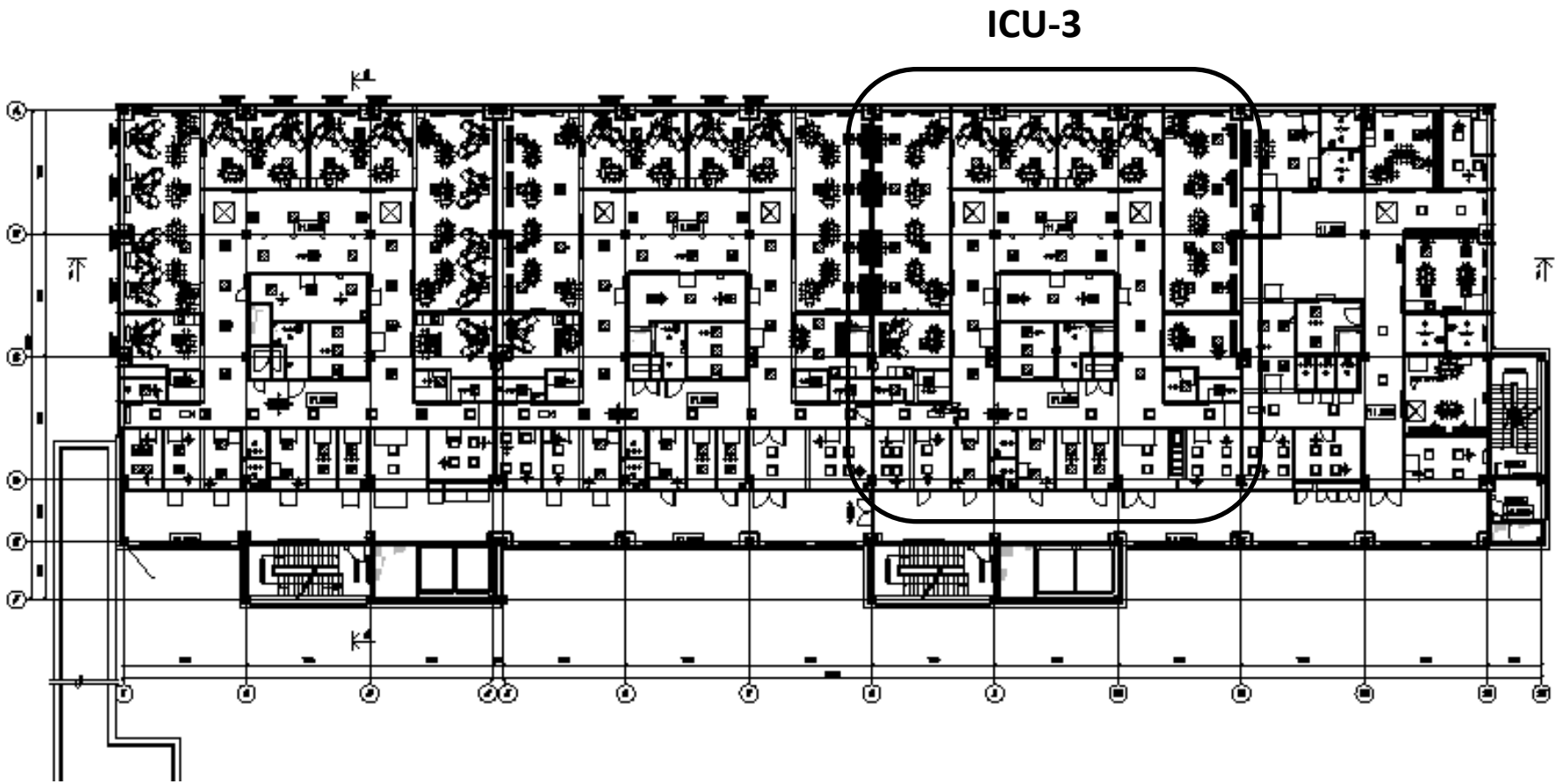


Remarks

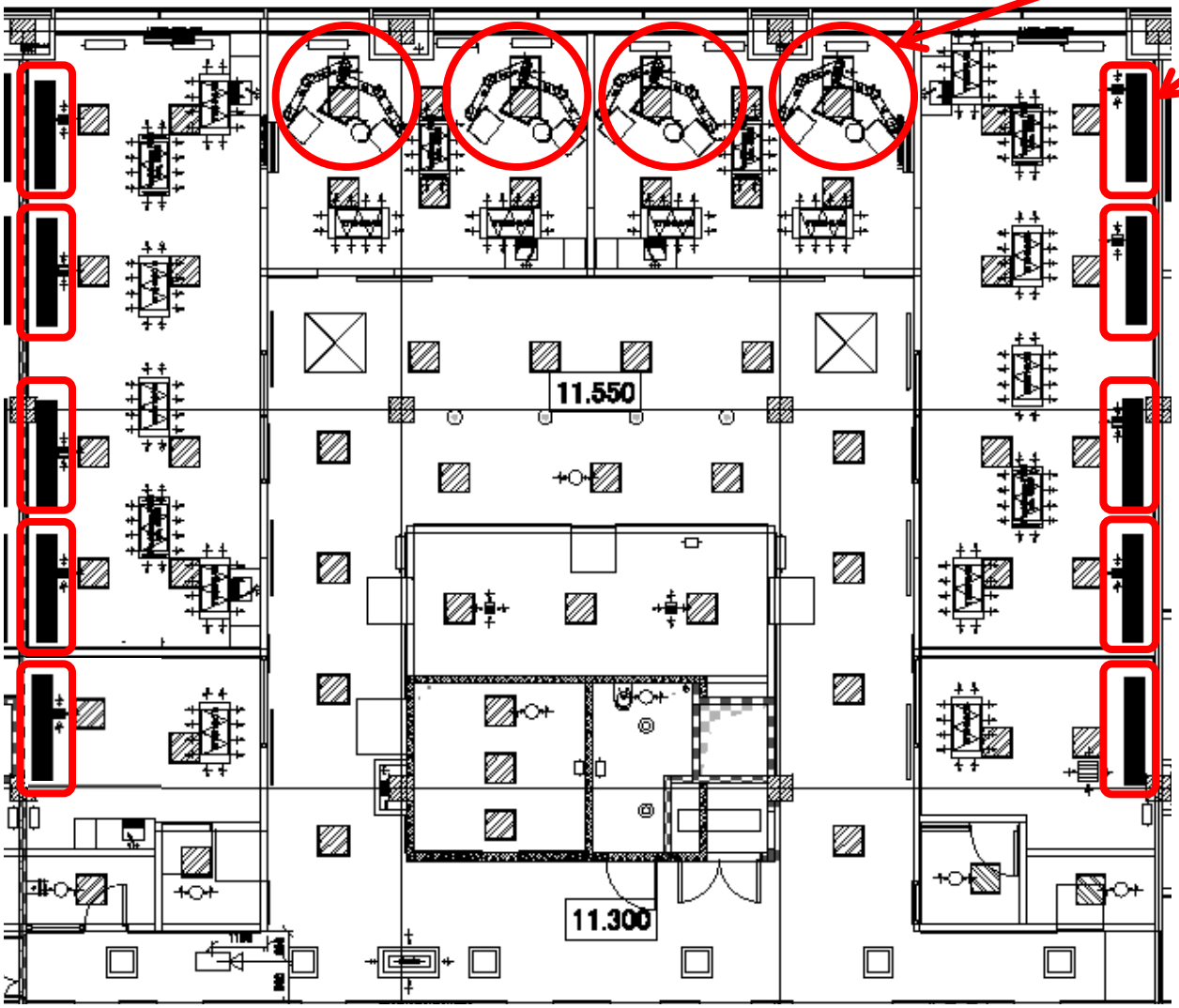
* Reference drawing was prepared by Austrian Project and only for the reference.
*.Supplier shall fabricate the bracket between the concrete ceiling and suspended ceiling.
* Supplier shall connect medical gas piping which is prepared near the expected location.

Location of Bed Head Unit and Pendant - Republican Clinical Hospital, Surgical Block, 3F

ICU - 3 Code No. 113 (RH-56) Bed Head Unit B --- 10 units
ICU - 3 Code No. 176 (RH-57) Pendants for ICU --- 4 units



ICU - 3



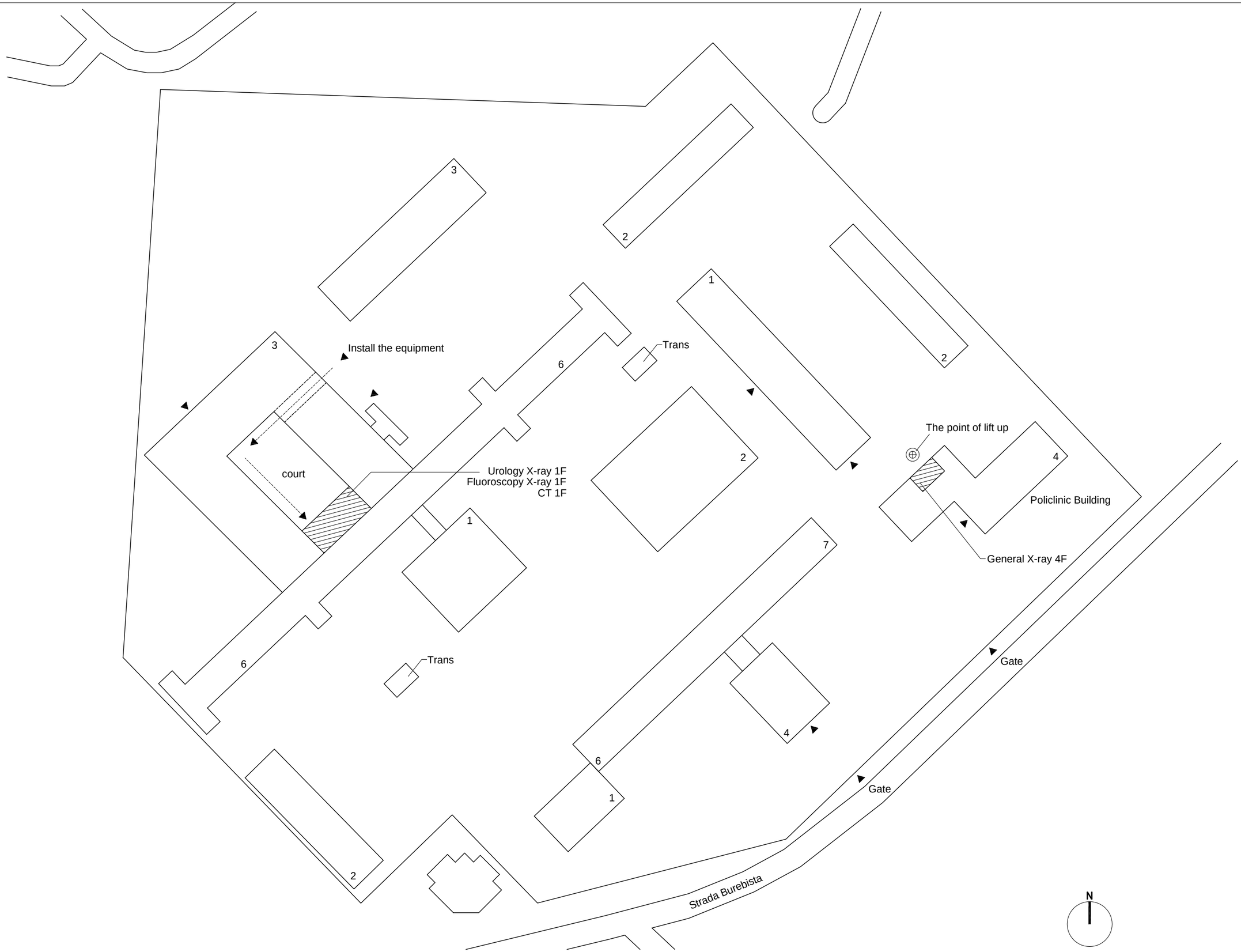
Pendants for ICU

Bed Head Unit B

Remarks

* Supplier shall connect the medical gas piping, electricity and other utilities mentioned on the specification.

The Scientific Research Institute in the Field of Mother and Child Health Protection

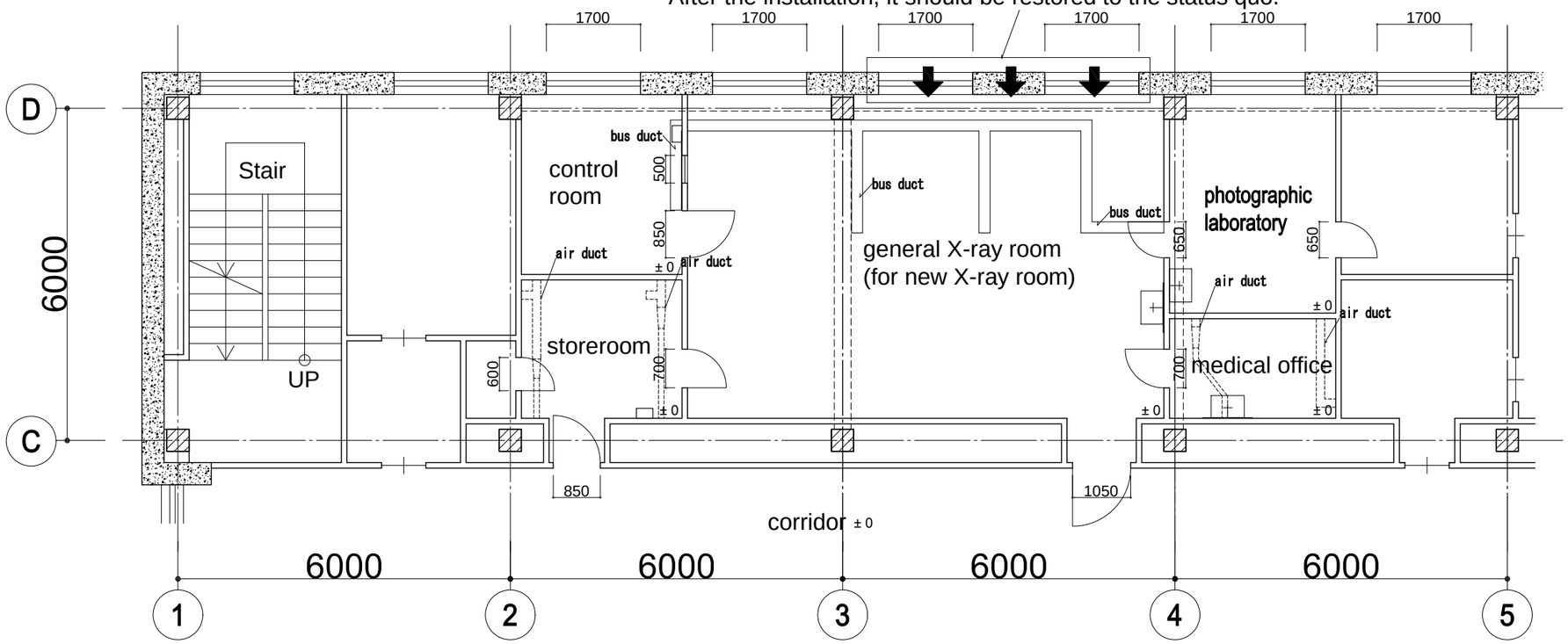


Appendix4-2

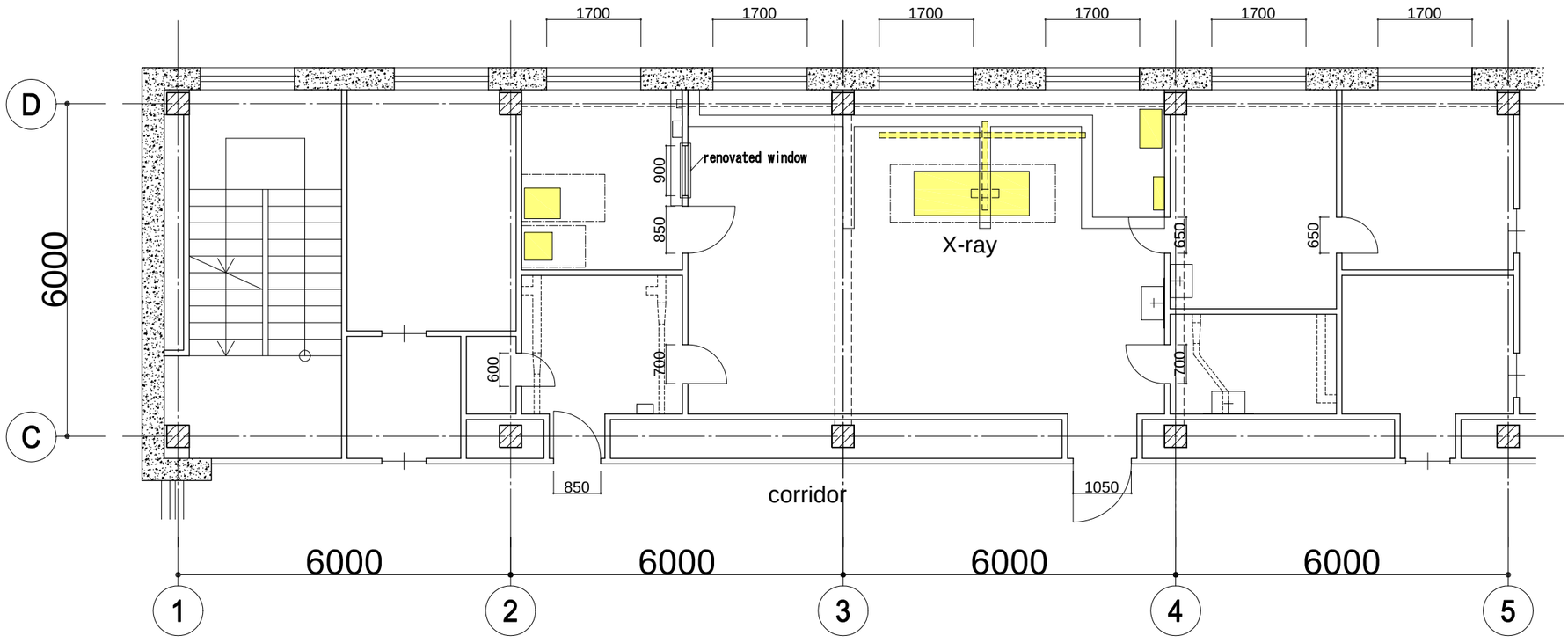
2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE The Scientific Research Institute in the Field of Mother and Child Health SITE PLAN	Number of Drawing M-00 Scale A3 1: 100

When you install the large medical equipment, it requires removing of these walls and windows.
After the installation, it should be restored to the status quo.



current plan



Mother & Child Hospital 4F General X-ray Room Plan

The Scientific Research Institute in the Field of Mother and Child Health Protection

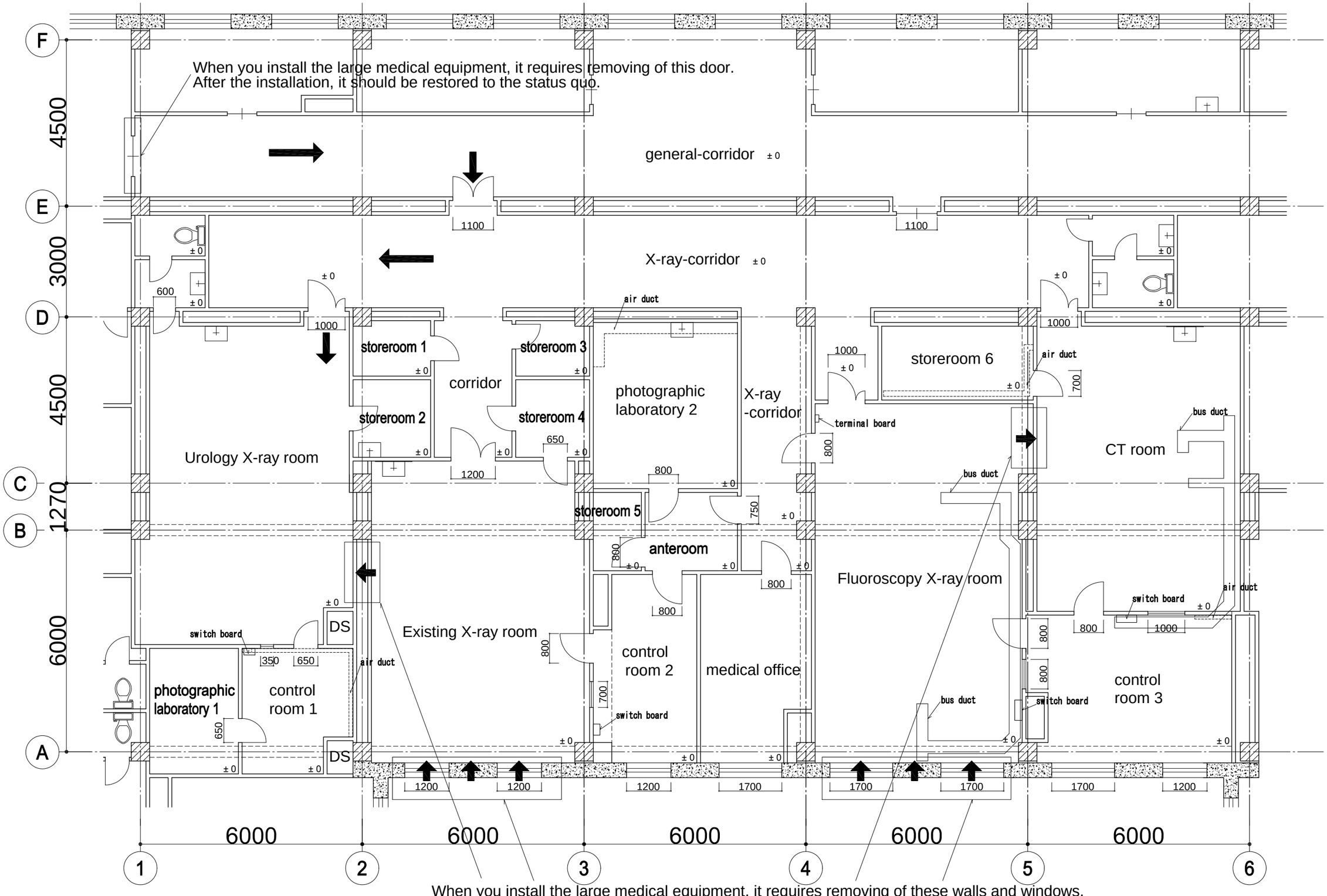
Appendix4-2

2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE The Scientific Research Institute in the Field of Mother and Child Health Policlinic Building 4F General X-ray Room PLAN

Number of Drawing: Mx-01

Scale: A3 1: 100

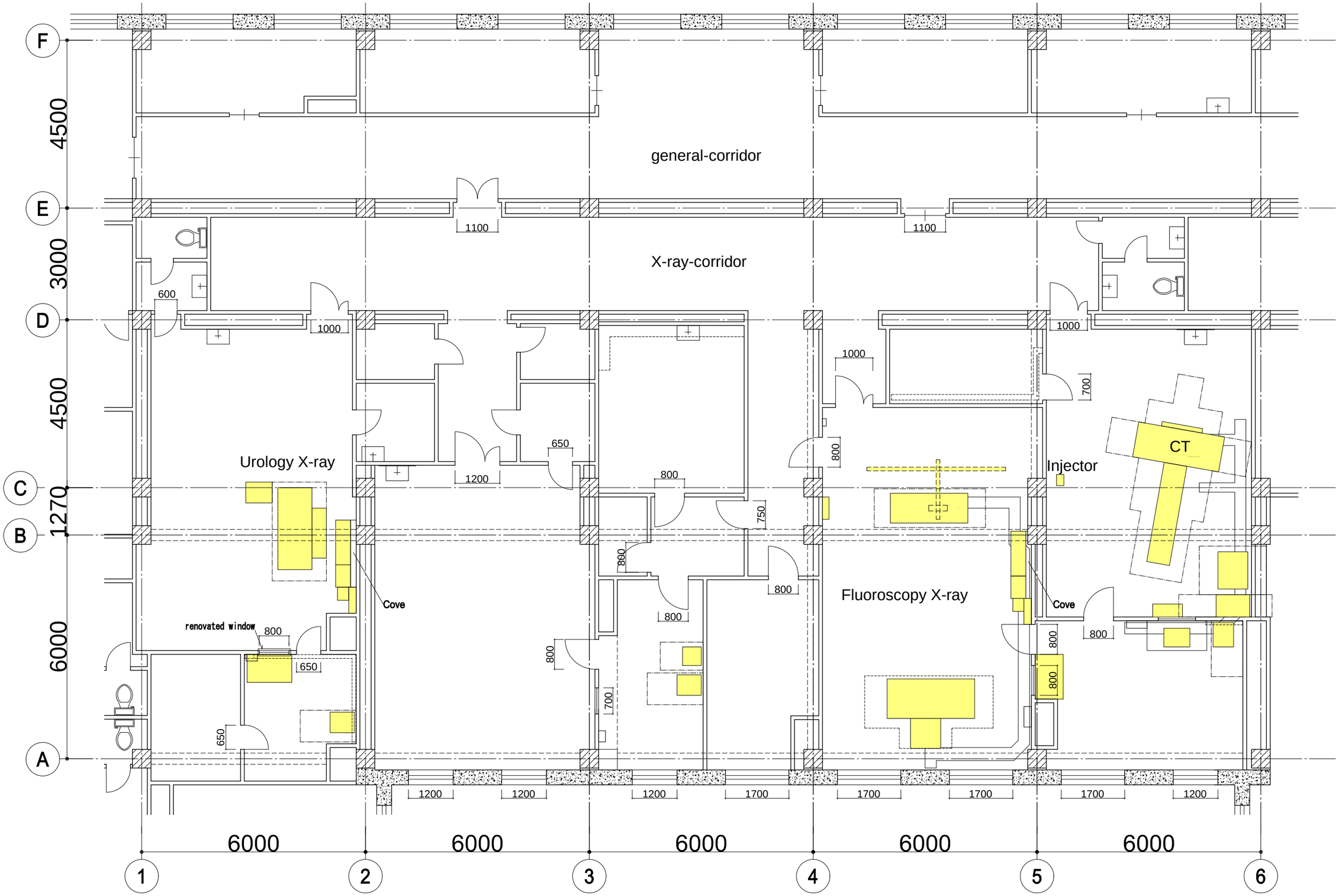


current plan

Appendix4-2

2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE The Scientific Research Institute in the Field of Mother and Child Health 1F X-ray, CT Current PLAN	Number of Drawing Mxc-01
				Scale A3 1: 100



Mother & Child Hospital 1F X-ray, CT Plan

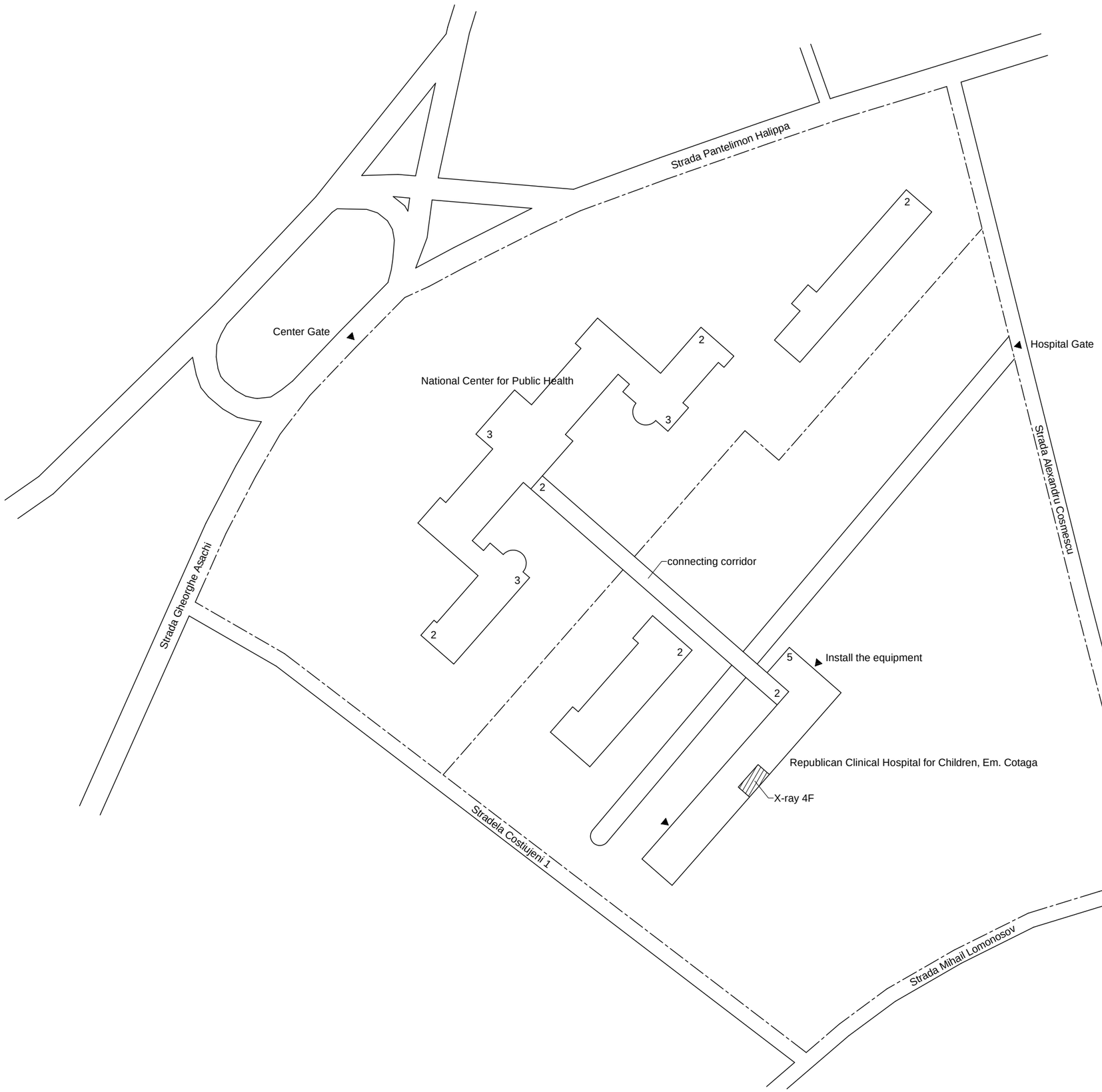
The Scientific Research Institute in the Field of Mother and Child Health Protection

Appendix4-2

4 / 6

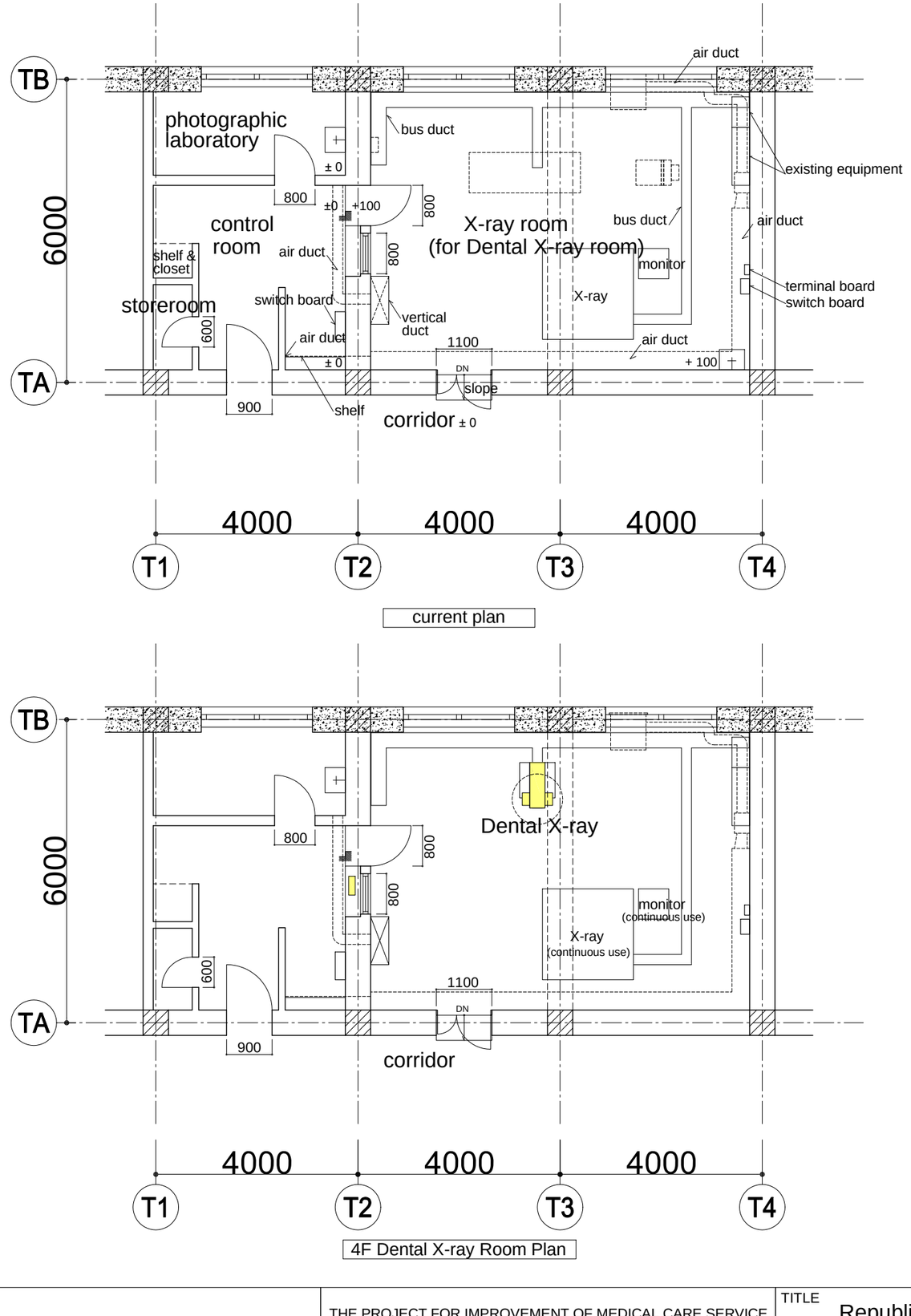
2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE The Scientific Research Institute in the Field of Mother and Child Health 1F X-ray, CT PLAN	Number of Drawing Mxc-02 Scale A3 1: 100



2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE Republican Clinical Hospital for Children, Em. Cotaga SITE PLAN	Number of Drawing C-00 Scale A3 -

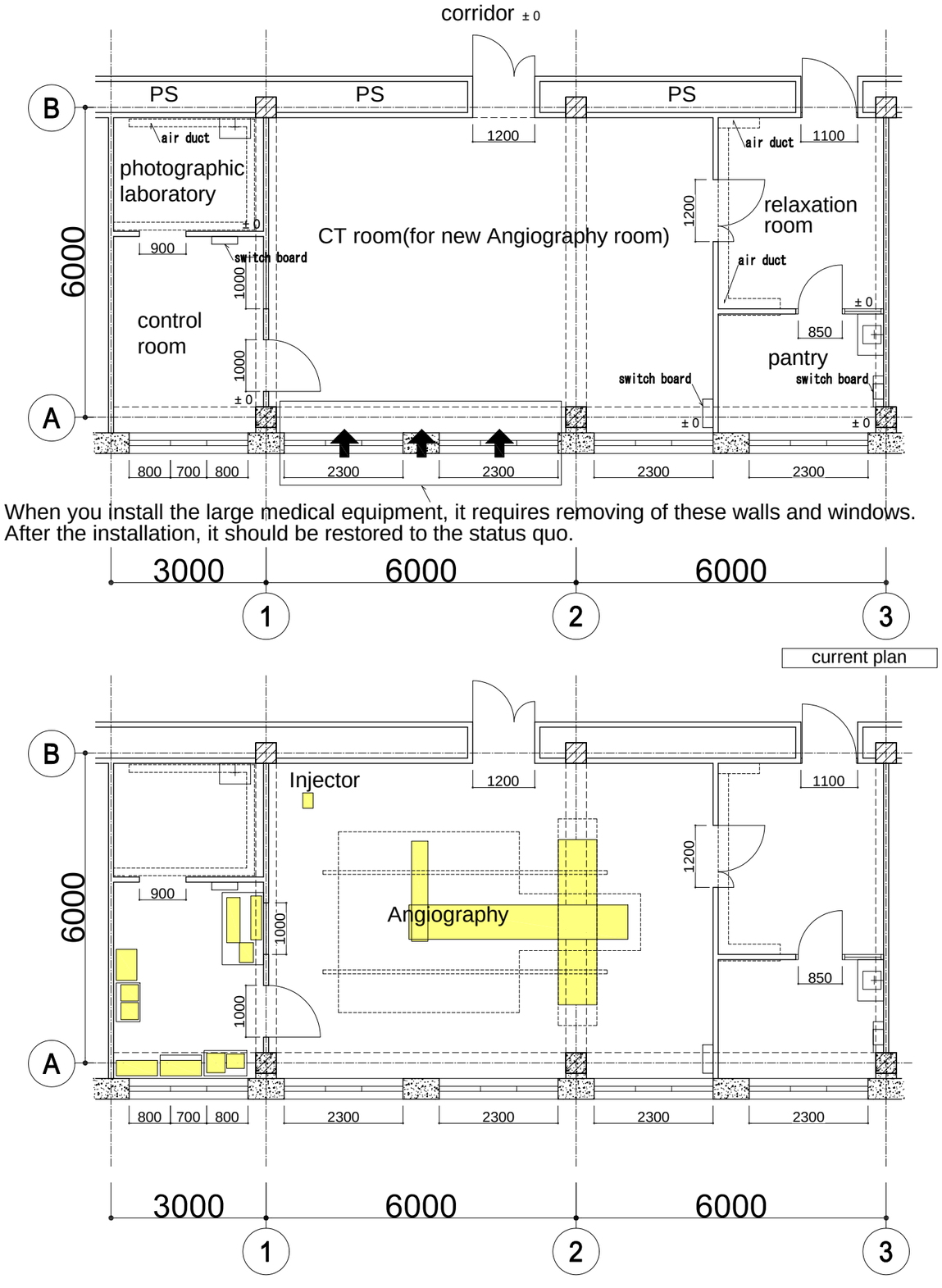


The Scientific Research Institute in the Field of Mother and Child Health Protection

Appendix4-2

2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE Republican Clinical Hospital for Children, Em. Cotaga 4F Dental X-ray Room PLAN	Number of Drawing Cx-01
				Scale A3 1: 100



Emergency Center 3F Angiography Room Plan

2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE: Scientific-Practical Center for Emergency Medicine 3F Angiography Room PLAN	Number of Drawing: Ea-01 / Scale: A3 1: 100

This stainless wall is covering (1) area : Hospitals work

Cable Area for Electricity and Water supply & Drainage & Ducting.....(1)
: Construction work

Supporting by the block wall : Construction work

The National Scientific-Practical Centre for Emergency Medicine

Corridor

UP

Stair

D ZONE

C ZONE

WD 500L Propose

Heat Sealer Propose

Work table Local Purchase

Sterilizer 500L Propose

OT Instrument

Maintenance Door

OT Instrument Linen

Shelf Local Purchase

PS

Corridor

D ZONE

OT Linen

C ZONE

Dead Space for above EV

Stair

UP

Lift for CSSD

DPT Linen

DPT Instrument

WD 500L Propose

Supporting by the block wall
: Construction work

Cable Area for Electricity and Water supply & Drainage & Ducting .....(1)
: Construction work

This stainless wall is covering (1) area : Hospitals work

Remarks :

JICA Equipment

Local Purchase Equipment

1270 6000 6000 6000 6000 6000 6000

23 1 2 3 4 5 6 7

Emergency Center 1F CSSD Plan

Appendix4-3

2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE Scientific-Practical Center for Emergency Medicine 1F CSSD Room PLAN	Number of Drawing Ecs-01
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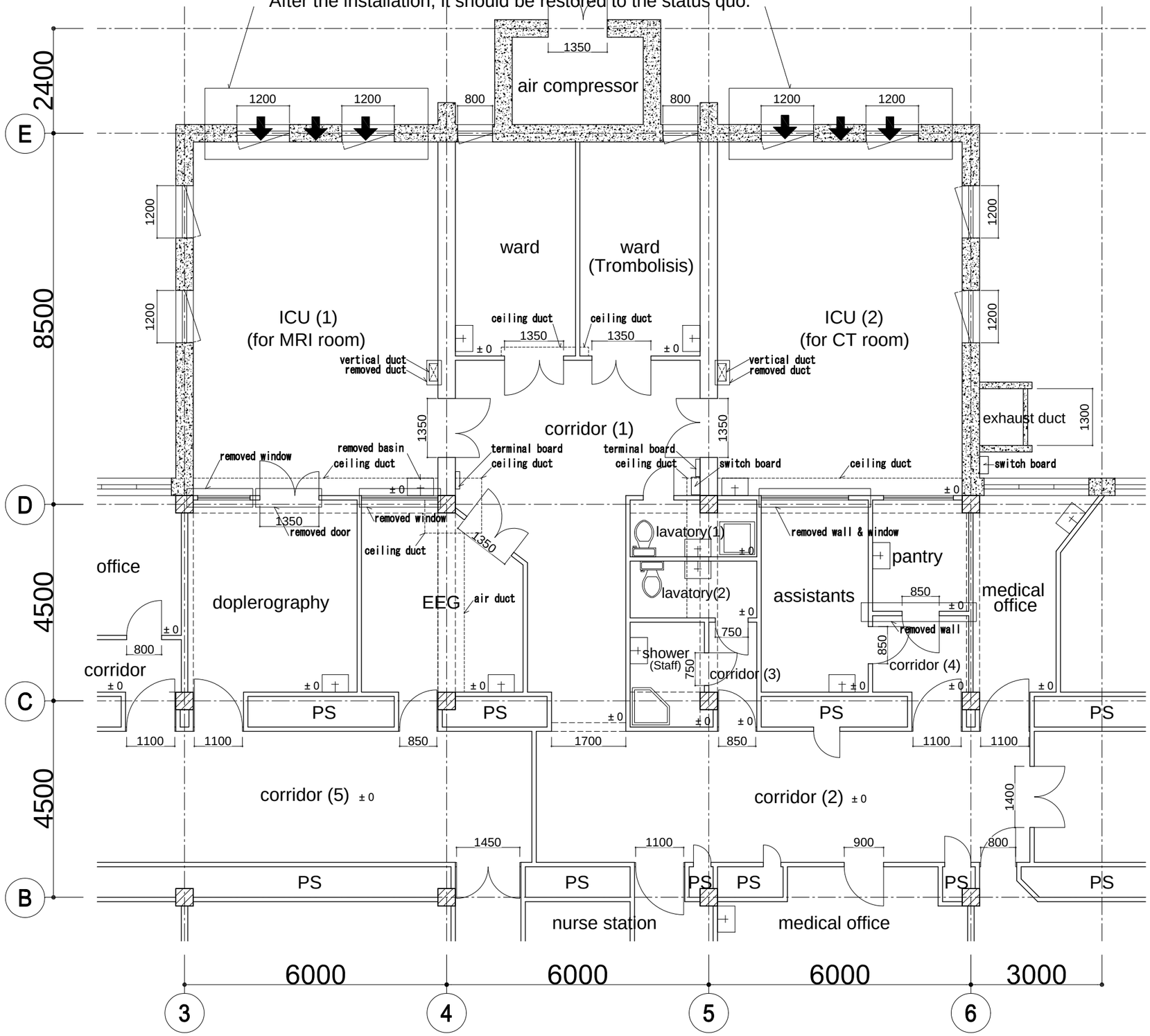
When you install the large medical equipment, it requires removing of these walls and windows.
After the installation, it should be restored to the status quo.

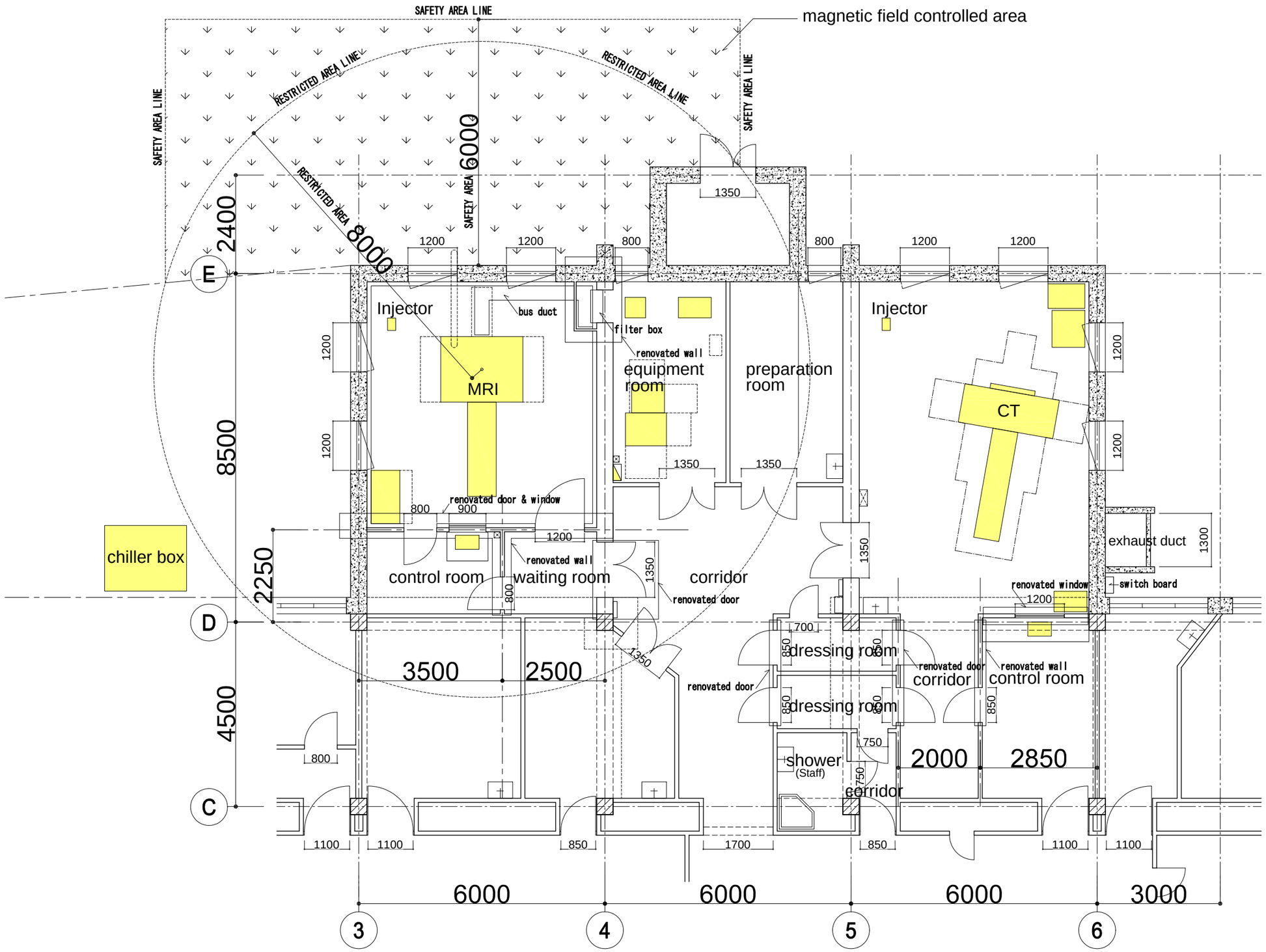


current plan

Appendix4-3

2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE: Scientific-Practical Center for Emergency Medicine 1F MRI Room & CT Room Current PLAN 1	Number of Drawing: Emc-0: Scale: A3 1: 100



Emergency Center 1F MRI Room & CT Room PLAN

The National Scientific-Practical Centre for Emergency Medicine

Appendix4-3

4 / 6

2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE Scientific-Practical Center for Emergency Medicine 1F MRI Room & CT Room PLAN 2	Number of Drawing Emc-02
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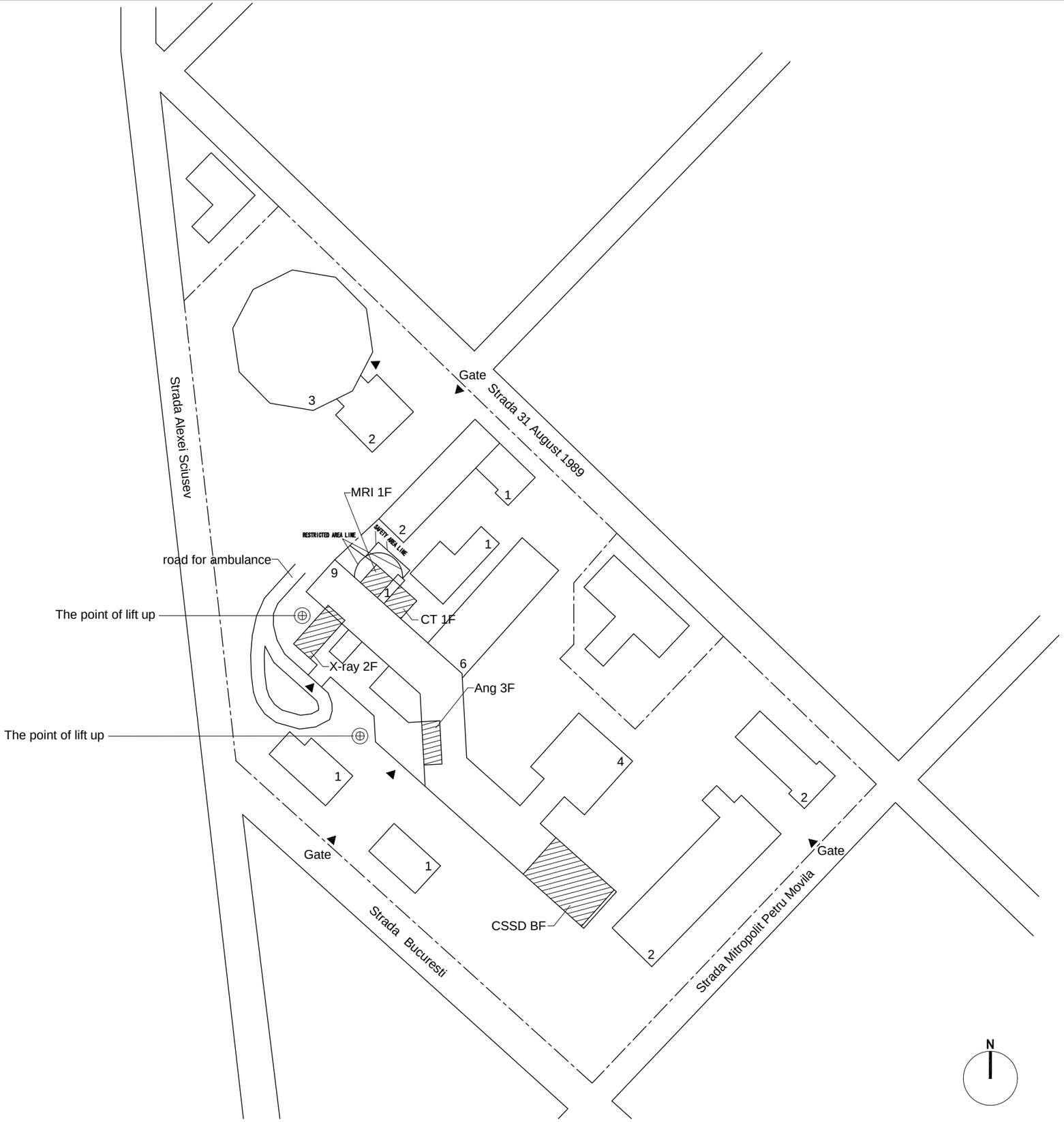
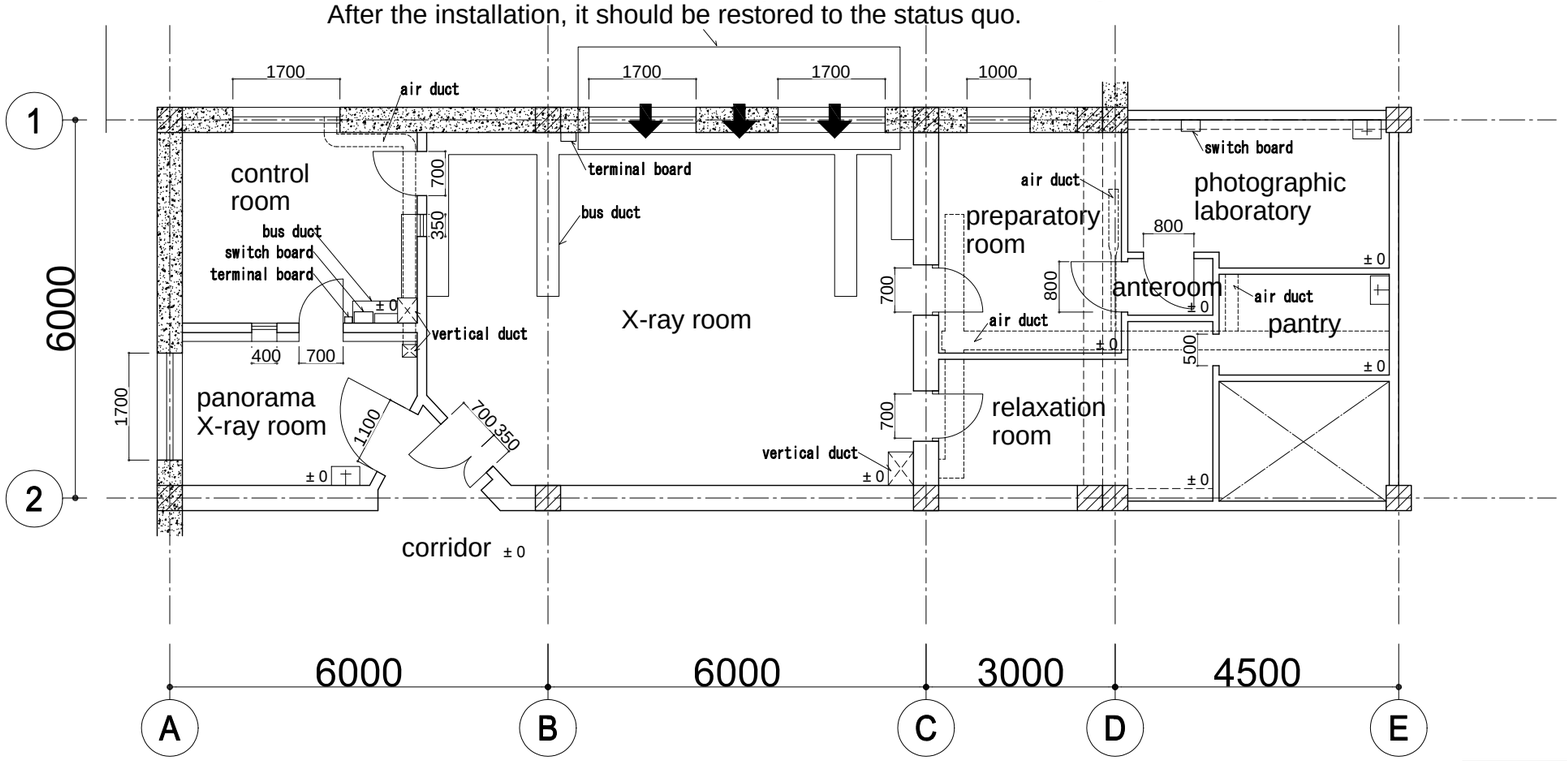


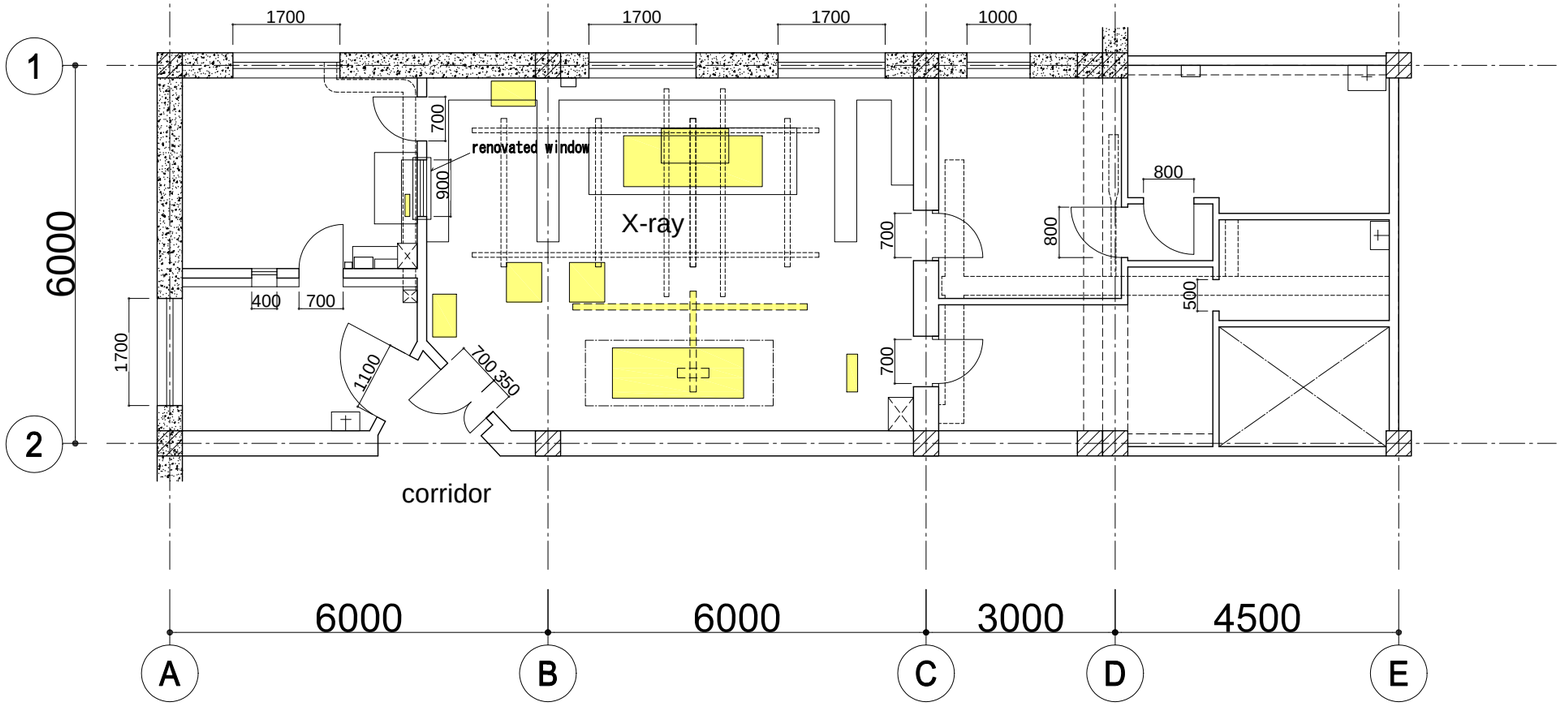
2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE Scientific-Practical Center for Emergency Medicine SITE PLAN	Number of Drawing E-00 Scale A3 -

When you install the large medical equipment, it requires removing of these walls and windows.
After the installation, it should be restored to the status quo.



current plan



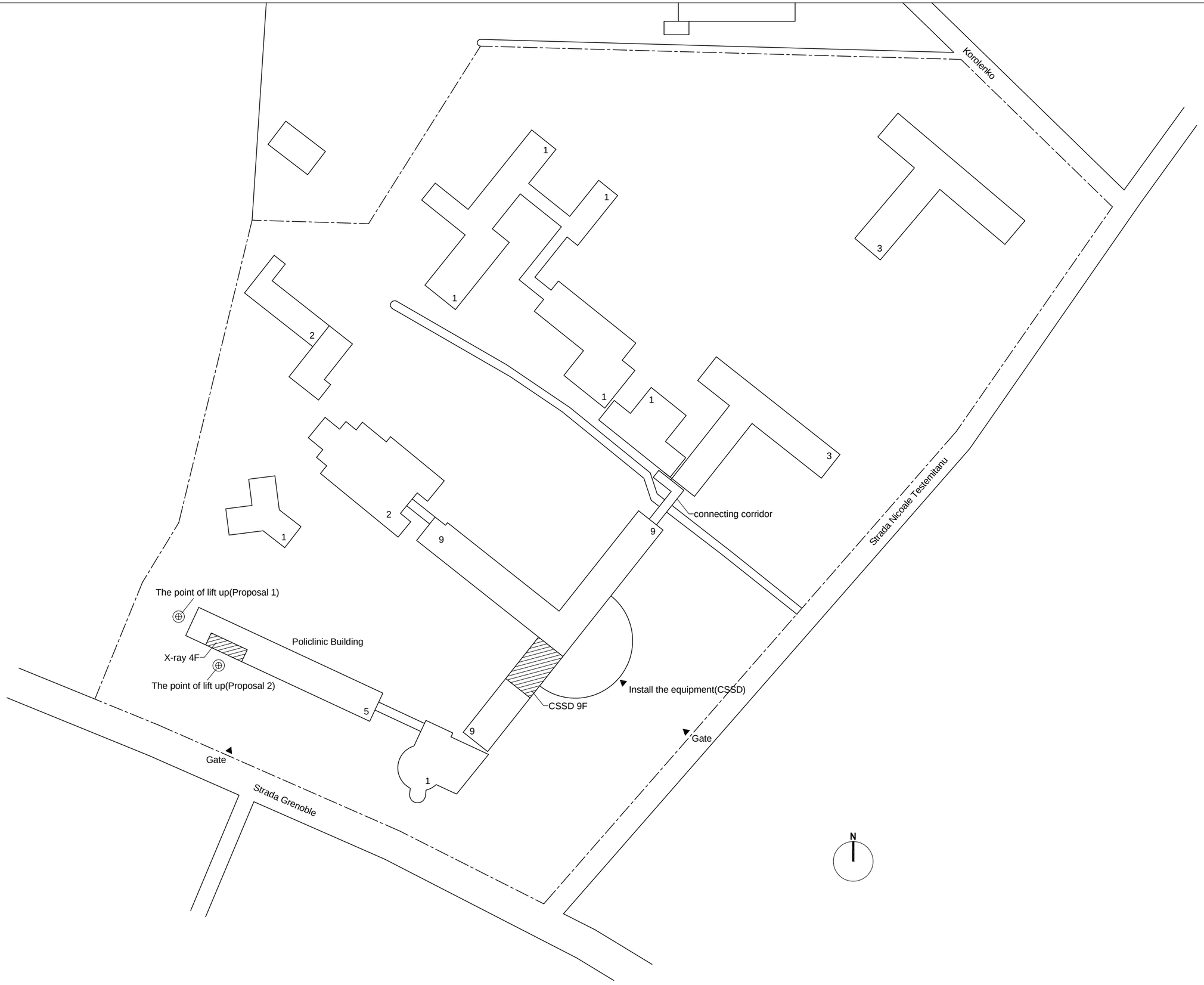
Emergency Center 2F X-ray Room Plan

The National Scientific-Practical Centre for Emergency Medicine

Appendix4-3

2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE Scientific-Practical Center for Emergency Medicine 2F X-ray Room PLAN	Number of Drawing Ex-01
				Scale A3 1: 100



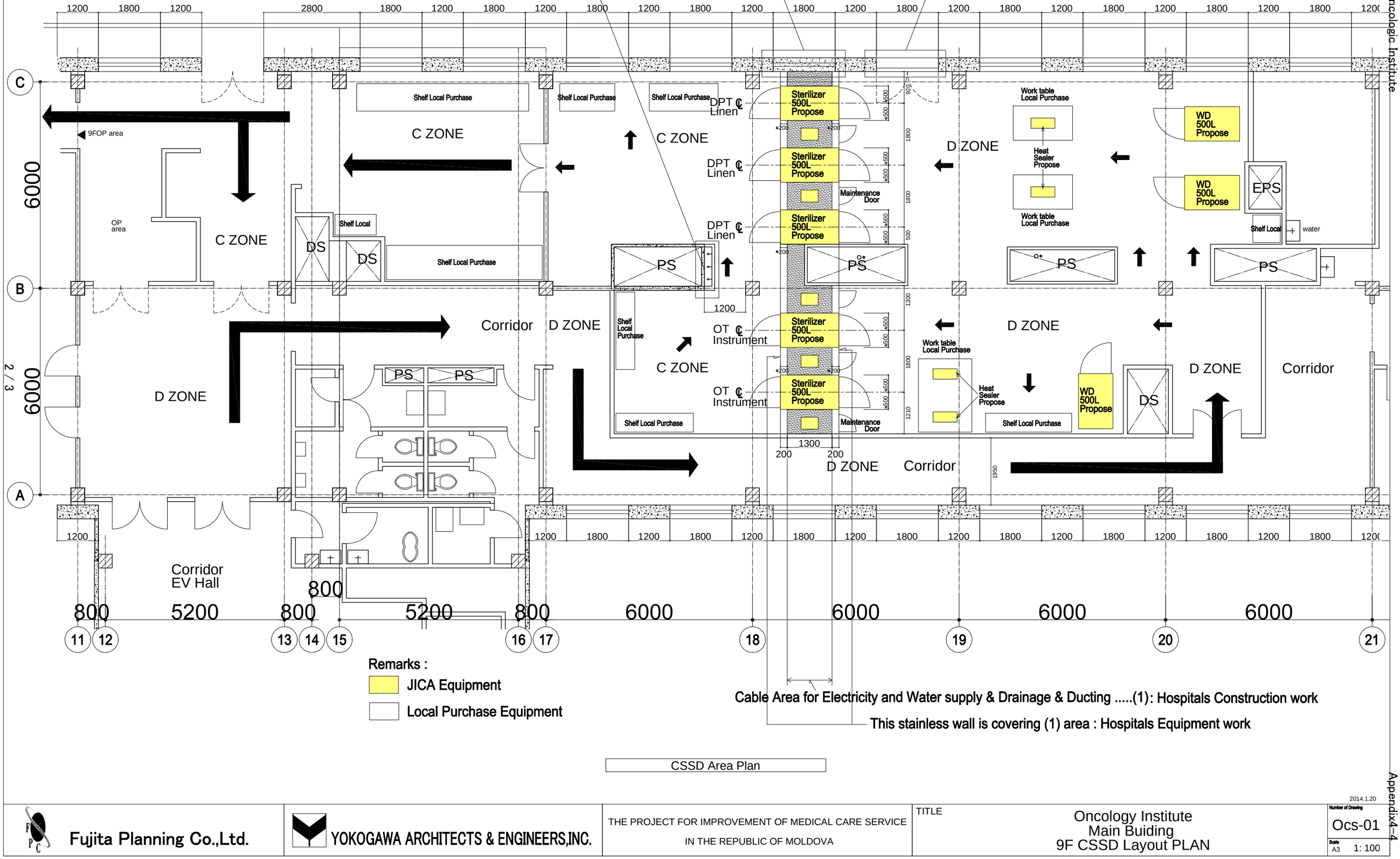
2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE Oncology Institute SITE PLAN	Number of Drawing O-00 Scale A3 -

We want more wide width for cart passage.

There is window at this position, you should replace it the wall for installing the sterilizer.
: Hospitals Construction work

There is door at this position.



Remarks :

- JICA Equipment
- Local Purchase Equipment

Cable Area for Electricity and Water supply & Drainage & Ducting .....(1): Hospitals Construction work

This stainless wall is covering (1) area : Hospitals Equipment work

CSSD Area Plan

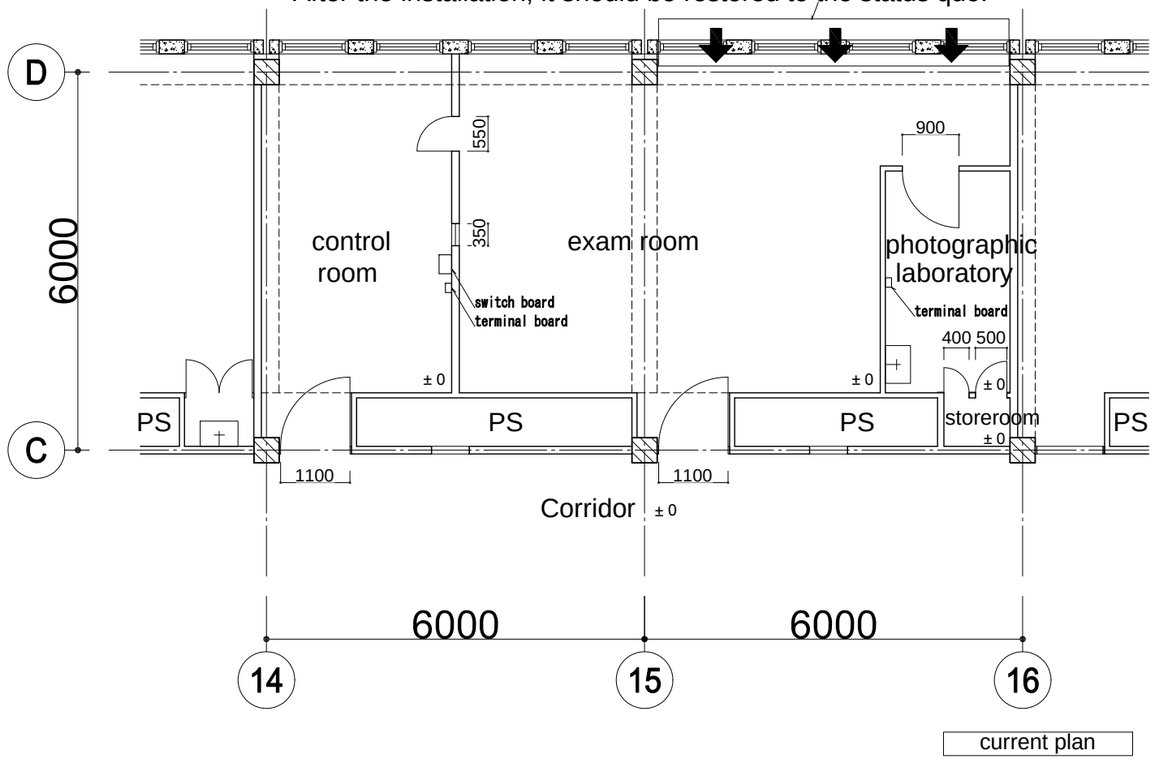
2 / 3

The Oncologic Institute

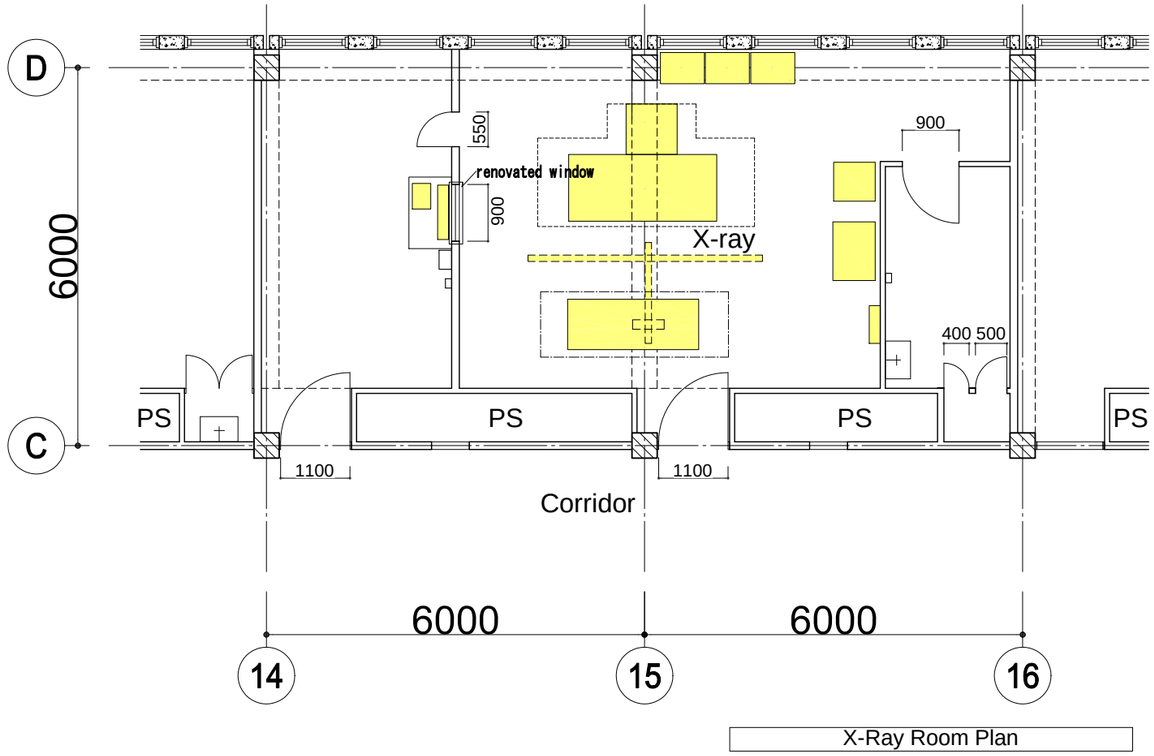
Appendix4-4

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE: Oncology Institute Main Buiding 9F CSSD Layout PLAN	2014.1.20 Number of Drawing: Ocs-01 Scale: A3 1: 100

When you install the large medical equipment, it requires removing of these walls and windows.
After the installation, it should be restored to the status quo.



current plan



X-Ray Room Plan

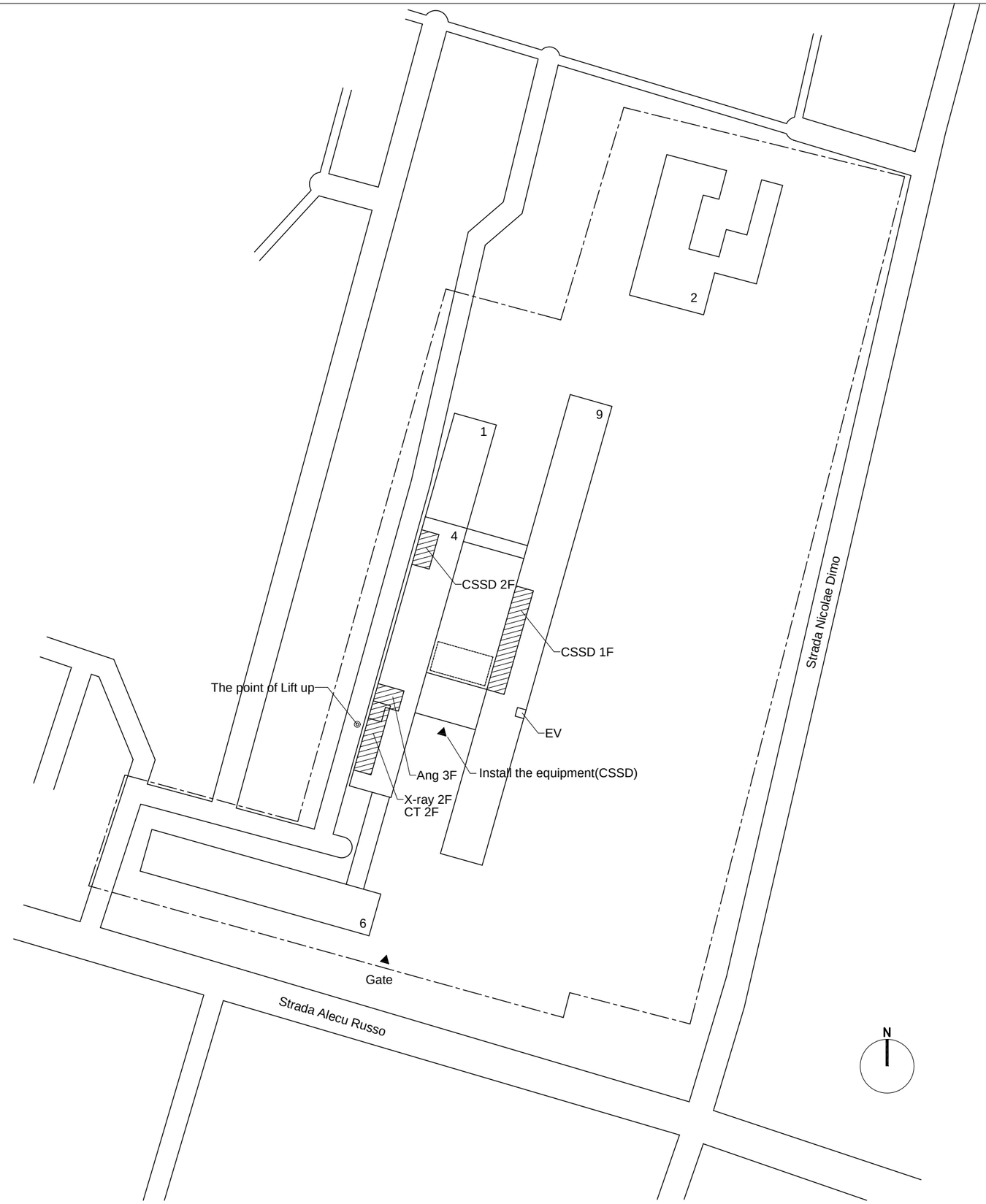
The Oncologic Institute

Appendix4-4

2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE: Oncology Institute Policlinic Buiding 4F X-Ray Room PLAN	Number of Drawing: Ox-01 / Scale: A3 1: 100

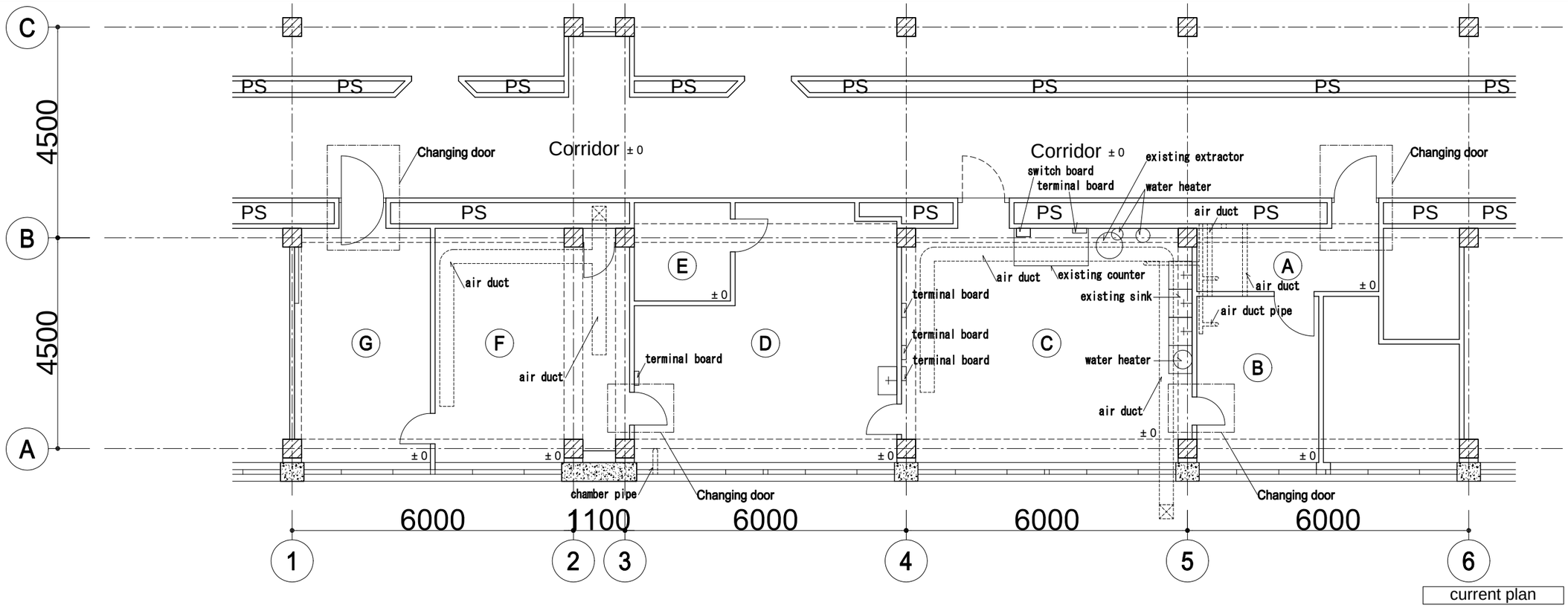
Chisinau Municipal Clinical Hospital "Sfanta Treime"



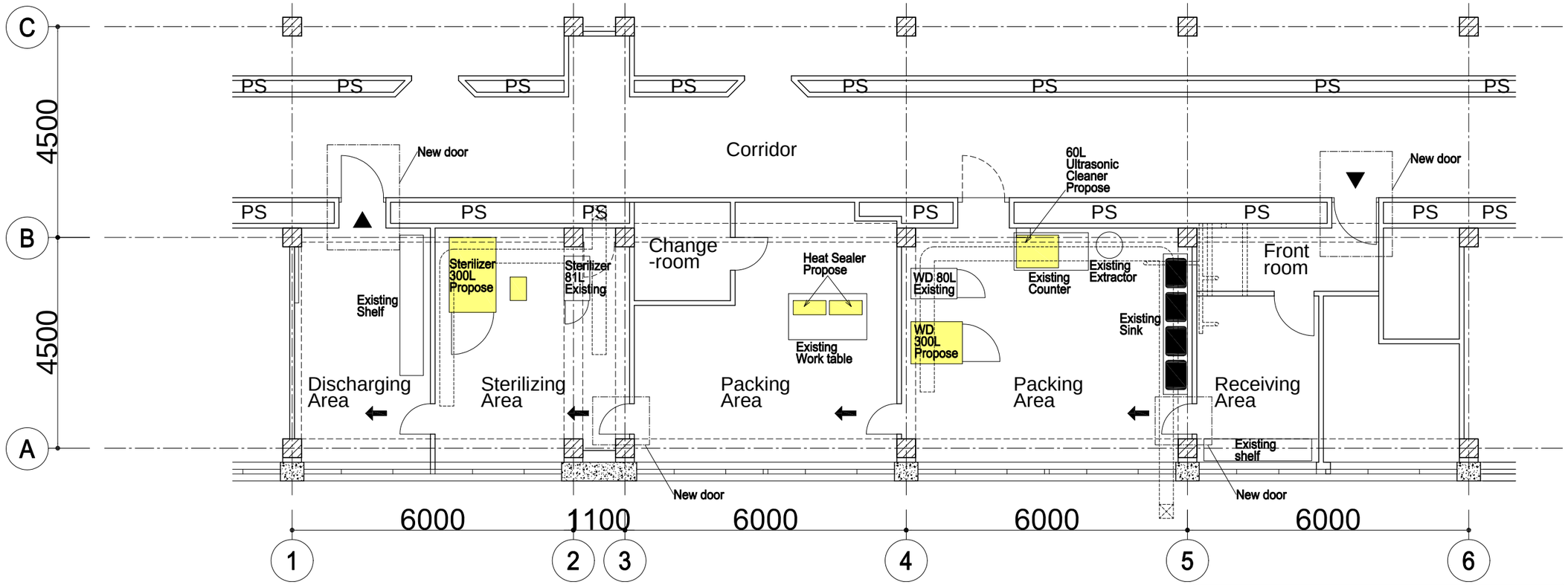
Appendix4-5

2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE Chisinau Municipal Clinical Hospital "Sfanta Treime" SITE PLAN	Number of Drawing S-00
				Scale A3 1: 100



current plan



Sfanta Treime Hospital 1F CSSD PLAN

Chisinau Municipal Clinical Hospital "Sfanta Treime"

Appendix4-5

2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE Chisinau Municipal Clinical Hospital "Sfanta Treime" 1F CSSD PLAN	Number of Drawing Scs-01
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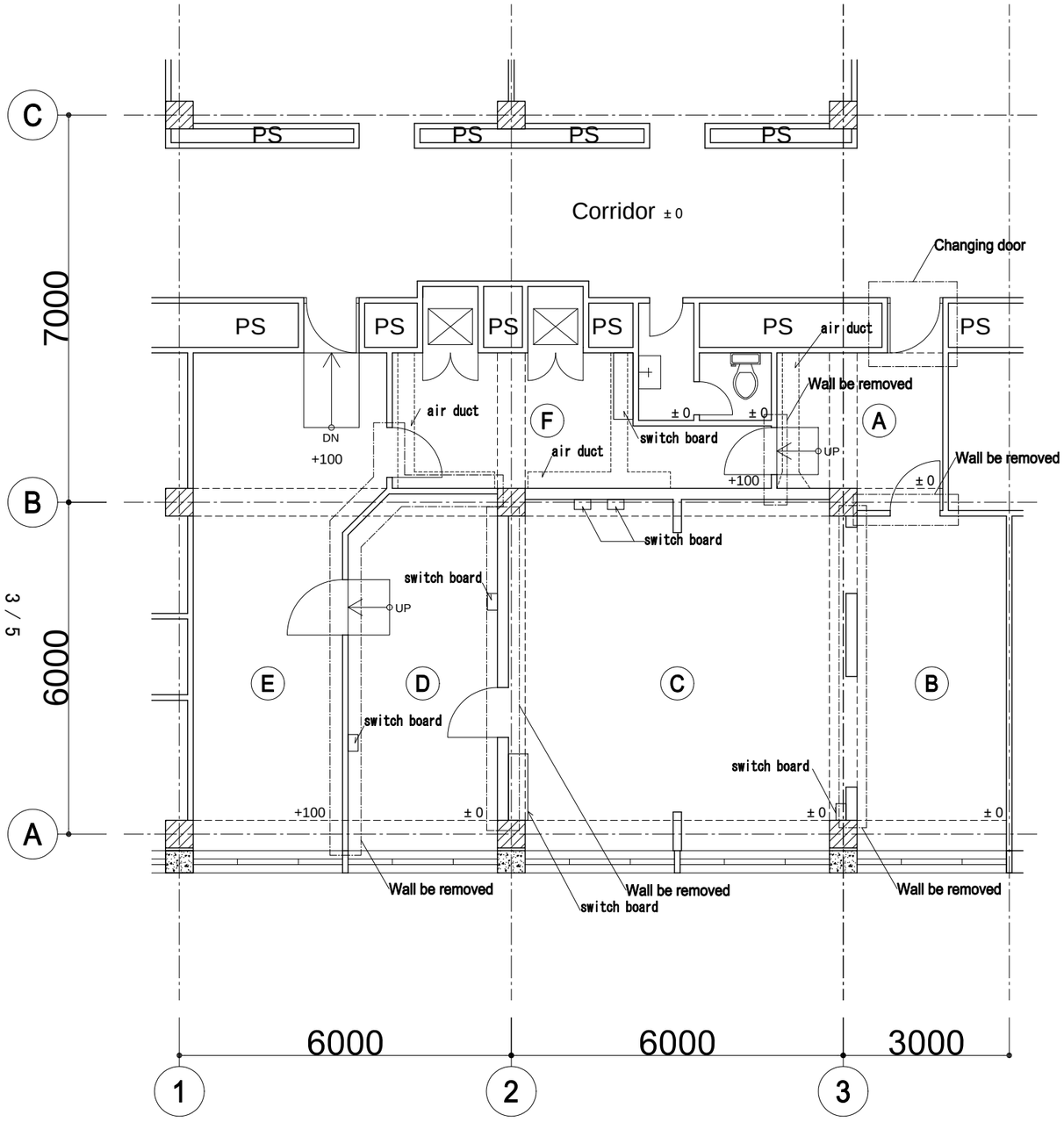
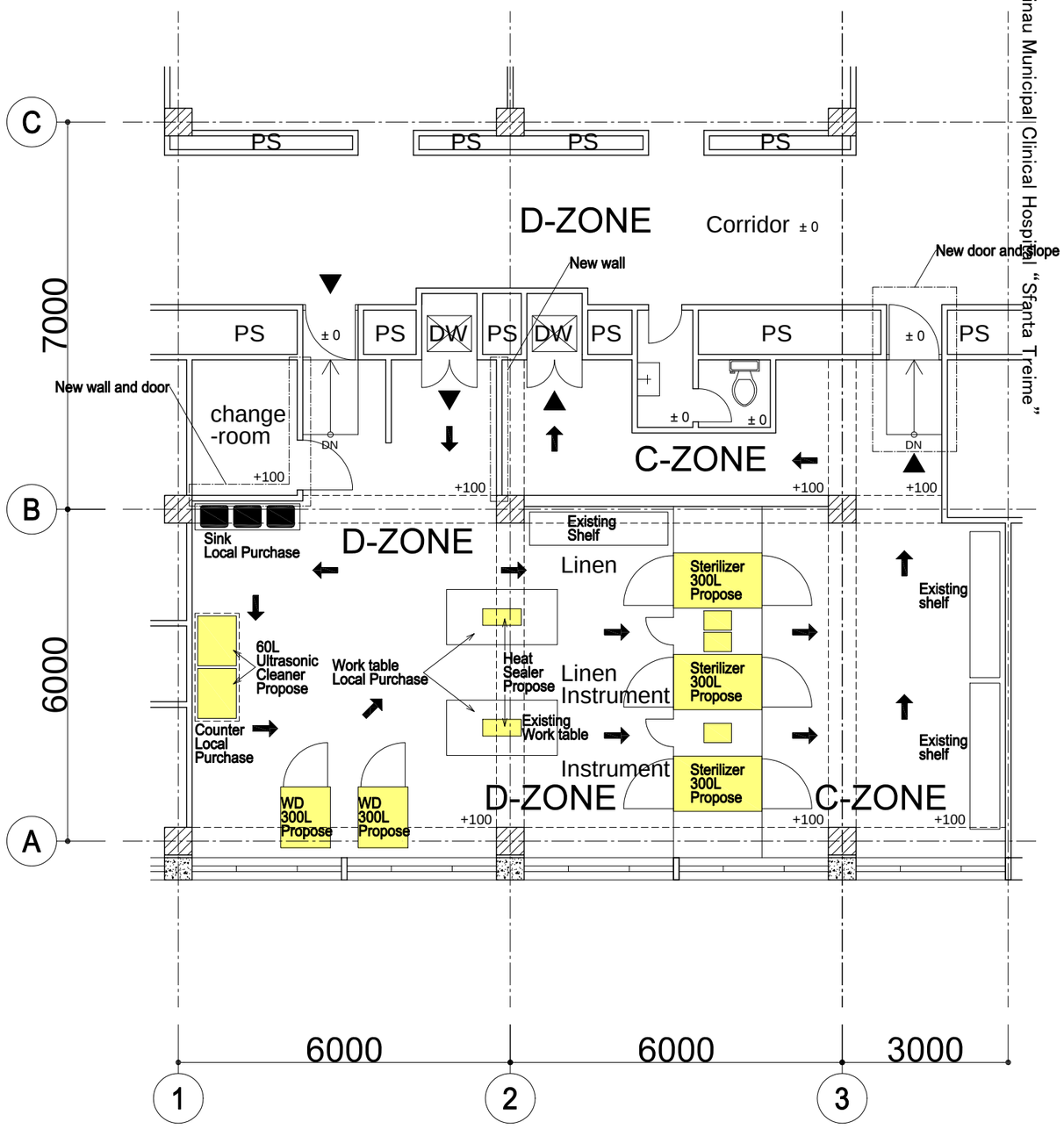


current plan



Sfanta Treime Hospital 2F CSSD OP PLAN

Chisinau Municipal Clinical Hospital “Sfanta Treime”

3 / 5

Appendix4–5

2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE Chisinau Municipal Clinical Hospital "Sfanta Treime" 2F CSSD OP PLAN	Number of Drawing Scs-04
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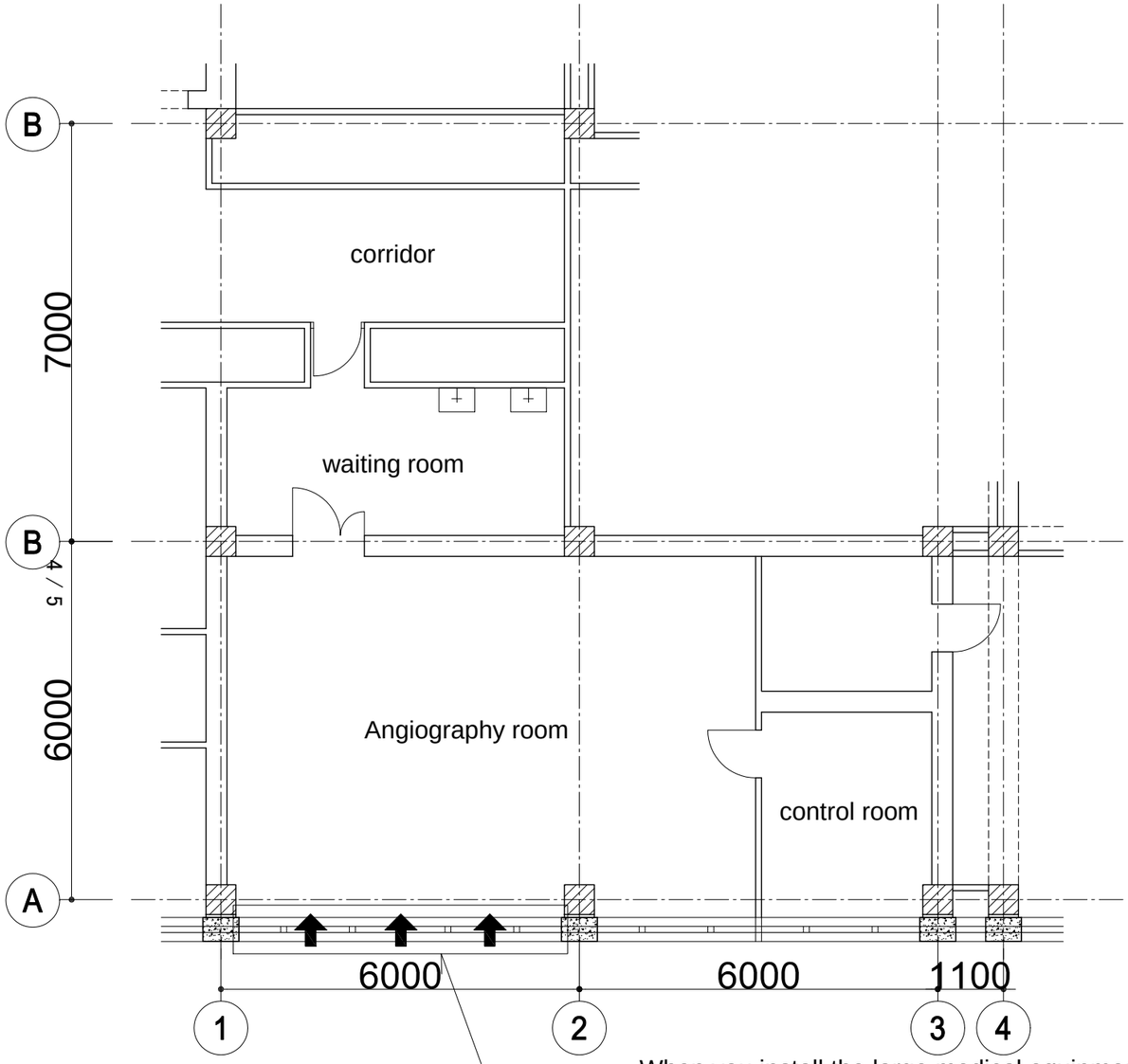


When you install the large medical equipment, it requires removing of these walls and windows.
After the installation, it should be restored to the status quo.

current plan

Sfanta Treime Hospital 3F Angiography PLAN

2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE Chisinau Municipal Clinical Hospital "Sfanta Treime" 3F Angiography PLAN	Number of Drawing Sa-01
				Scale A3 1: 100

Chisinau Municipal Clinical Hospital "Sfanta Treime"

5 / 5

corridor ±0

PS

control room 1

control room 2

switch board

bus duct

wall be removed

Existing X-ray room

medical office 1

CT room

X-ray room

medical office 2

terminal board

store

800

300

200

4000

6000

±0

B

A

6000 1100 6000 6000 6000 6000

5400

5400

1 2 3 4 5 6 7

When you install the large medical equipment, it requires removing of these walls and windows.
After the installation, it should be restored to the status quo.

current plan

renovated window

new wall & door

1950

1000

2500

CT

injector

X-ray

Cove

Appendix4-5

Sfanta Treime Hospital 2F CT, X-ray PLAN

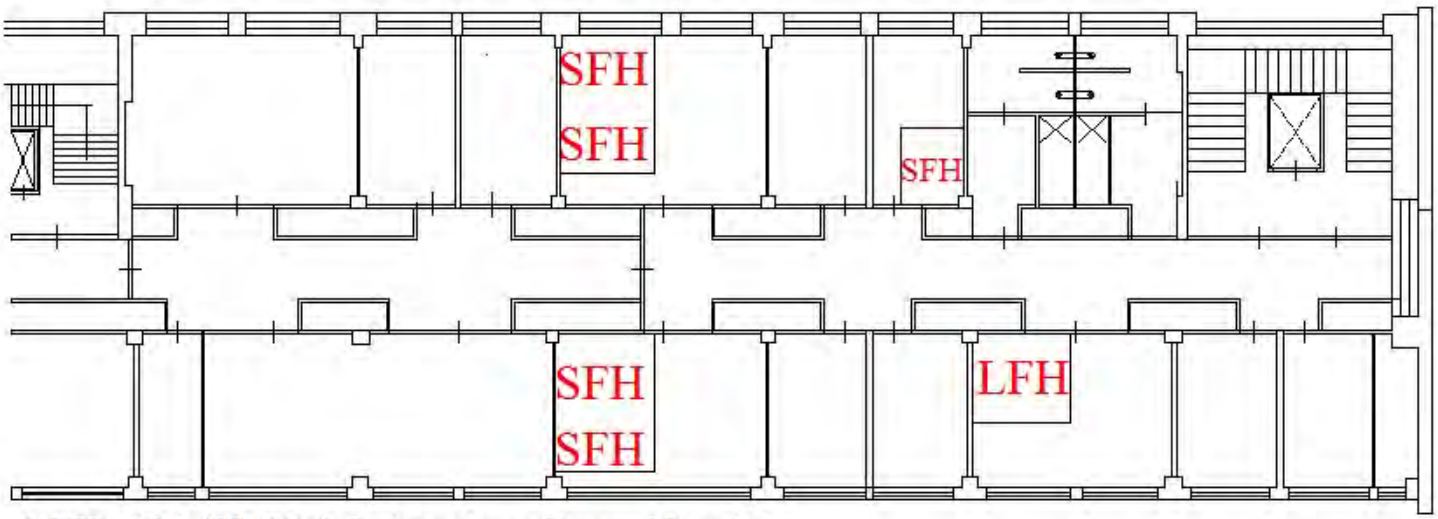
2014.1.20

Fujita Planning Co.,Ltd.	YOKOGAWA ARCHITECTS & ENGINEERS,INC.	THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE IN THE REPUBLIC OF MOLDOVA	TITLE Chisinau Municipal Clinical Hospital "Sfanta Treime" 2F CT, X-ray PLAN

Number of Drawing: Scx-01

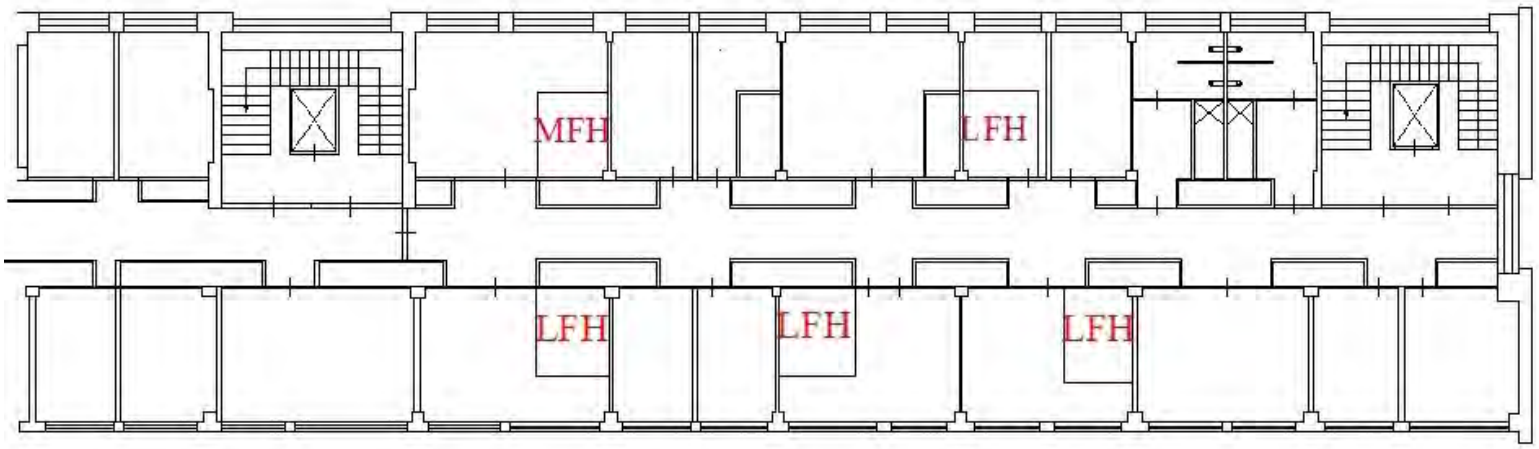
Scale: A3 1: 100

2nd floor



SFH: 121 (IP-62a) Laboratory Fume Hood A
MFH:122 (IP-62b) Laboratory Fume Hood B
LFH: 123 (IP-62c) Laboratory Fume Hood C

3rd floor



SFH: 121 (IP-62a) Laboratory Fume Hood A
MFH:122 (IP-62b) Laboratory Fume Hood B
LFH: 123 (IP-62c) Laboratory Fume Hood C

Measuring Protocol

Magnetic field measurement		
date of measurement: **measuring engineer:**		**2013, November, 14 to 15** **Dmitry Butenko / IPSMED**
subject of measurement:		**Preliminary magnetic field measurement at the installation place of MRI system**
Project:	**Name**	**Emergency Hospital**
	City **Country**	**Kishinev** **Moldavia**
Project Name		**The Project for improvement of Medical Care Service in the Republic of Moldova**
Measuring procedure:		**Measuring description** **page 2**

Measuring Protocol about magnetic survey at the installation place

1. Magnetic survey

1.1 Measuring procedure magnetic survey

The strength and the fluctuation of the earth magnetic field and the magnetic influence of the associated area at the installation place of MRI system are measured by using a magnetic field meter type FM GEO.

By means of this kind of magnetic field meter it is possible to measure the current value of a magnetic field in each direction (Z, X or Y), offsetting the local earth magnetic field. Thereby the field fluctuation can be evaluated with a very high accuracy. By means of an A/D-transformer, the continuous analogue output voltage corresponding to the field strength measured by the FM GEO, can be recorded and analyzed in real time by computer.

The software also allows different calculations and FFT-analyze of the recorder field, both in real time and later on using the saved measuring results.

The use of two magnetic field meter type FM GEO allowed combining simultaneous magnetic field measurements in two directions or at different locations in real time.

Due to the possibility to measure simultaneously two directions in one point or at different places, we can locate the interference source of different field fluctuation in real time modus.

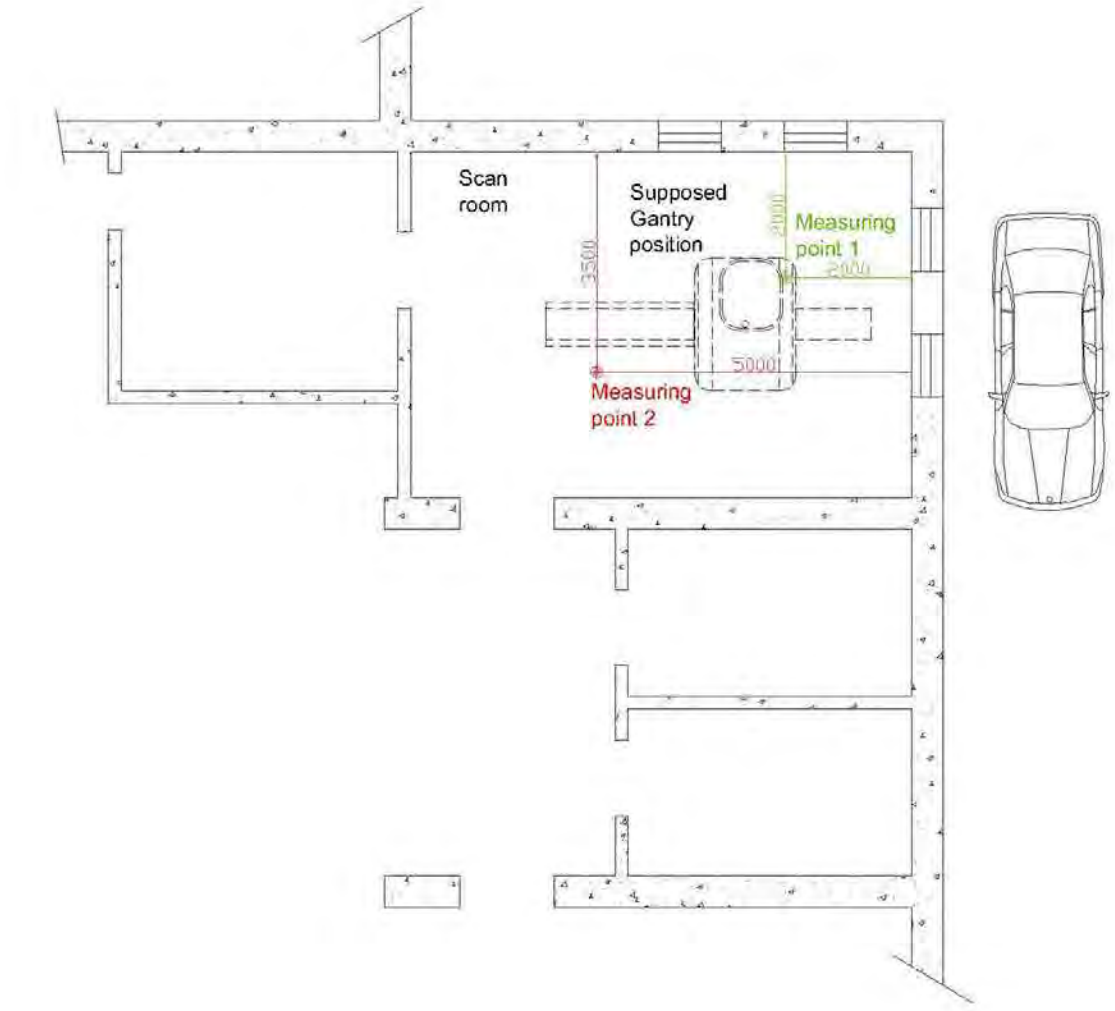
Measurements were main in the direction of Magnet Z axis direction (Main field), also in X and Y axes direction for checking.

1.2 Measuring equipment

Pos.	Description	Type	Manufacturer
01	Magnetic Field Meter	FM GEO-X	Projekt Electronik
02	Magnetic Field Meter	FM GEO-X	Projekt Electronik
03	A/D-transformer		BMC-System
04	Laptop		Toshiba

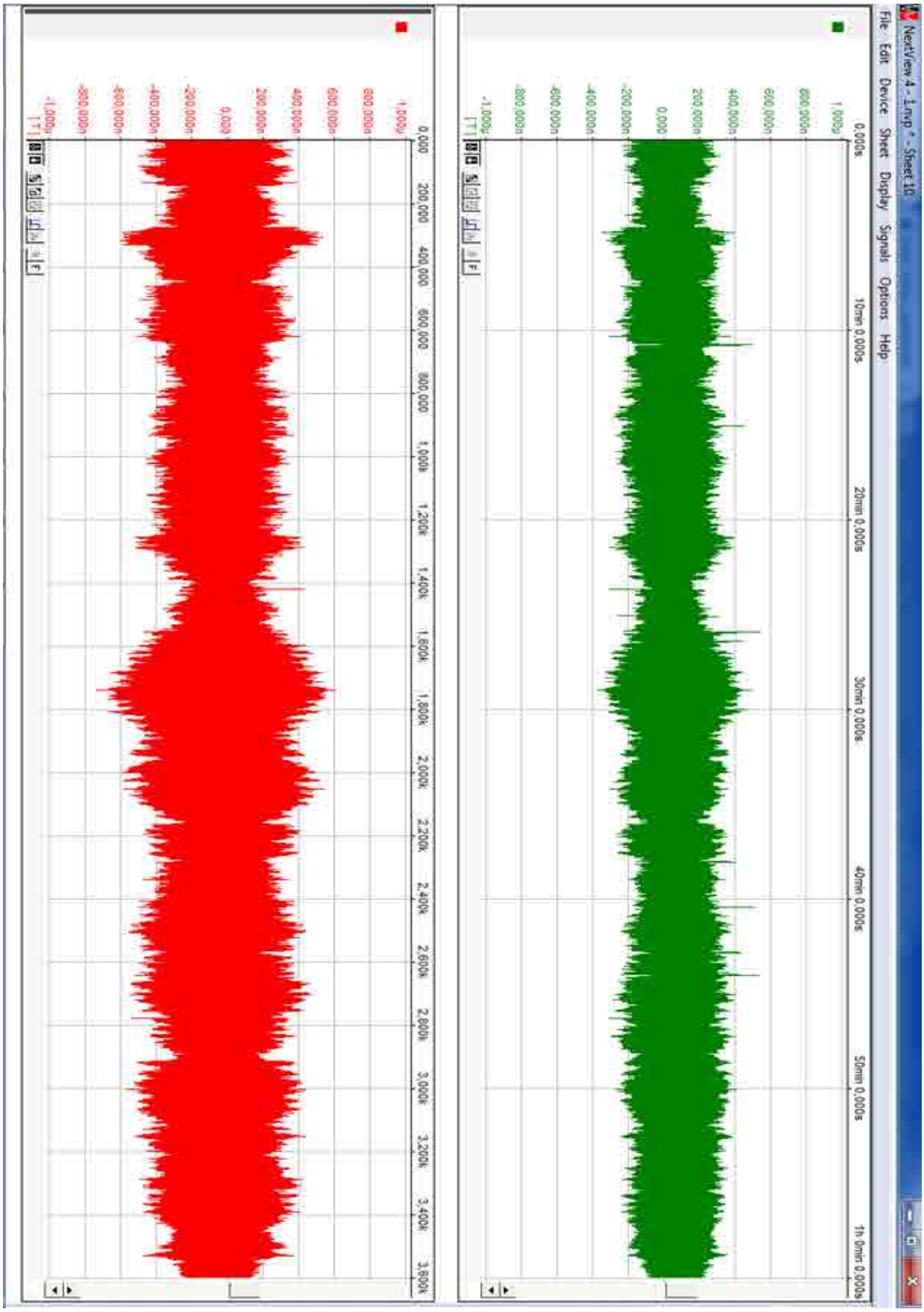
2. Layout and measuring points

Measurements were made in planned MRI Scan room located in main building annex. The probes positions were across supposed Gantry position. Measuring Point 1 was from the direction of external wall. Measuring point 2 was from the direction of inner room/main building. There were no rooms above the Scan room. There is storage room under the scan room. Outside of external wall is hospital courtyard with cars movement and parking.



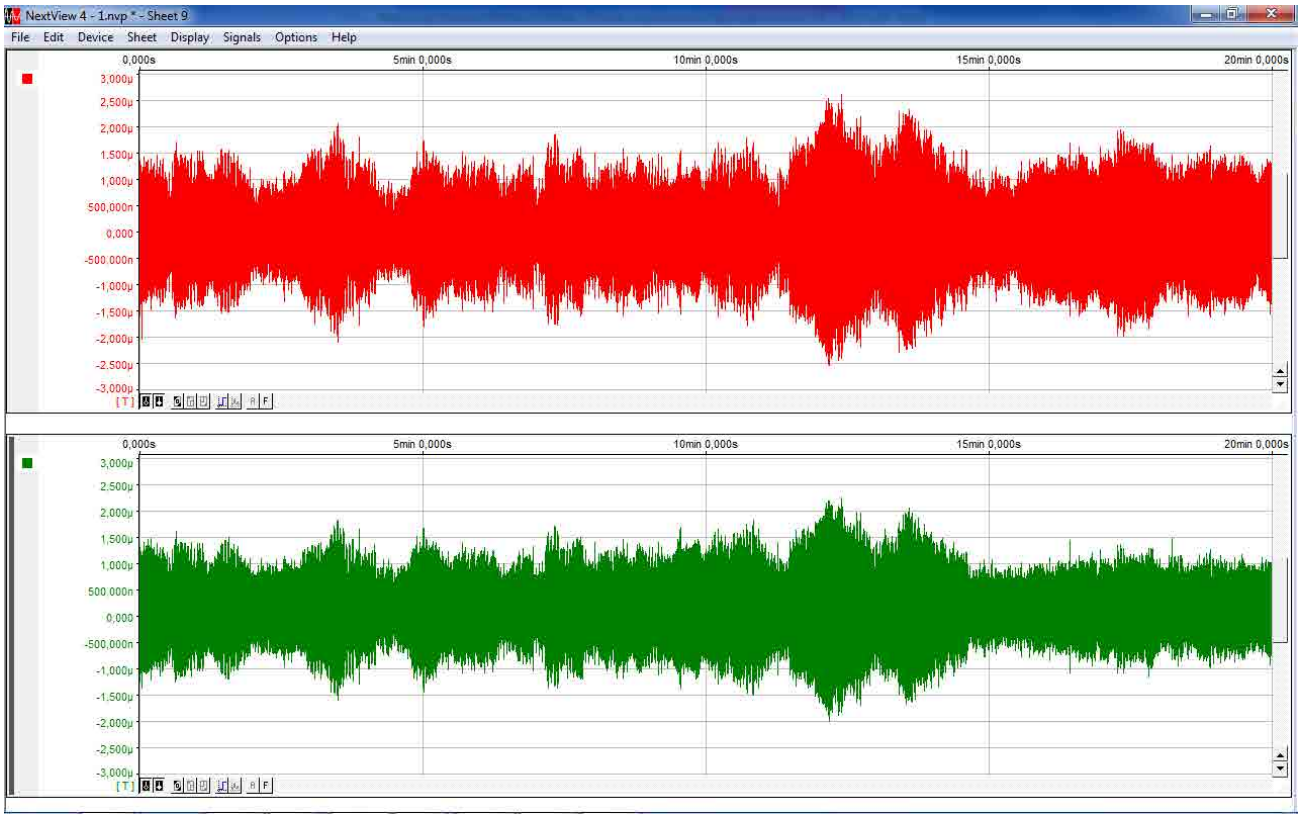
3. Measurement Results

3.1 Measurements in Z axis (main field) in 9.30 – 10.30 time interval.



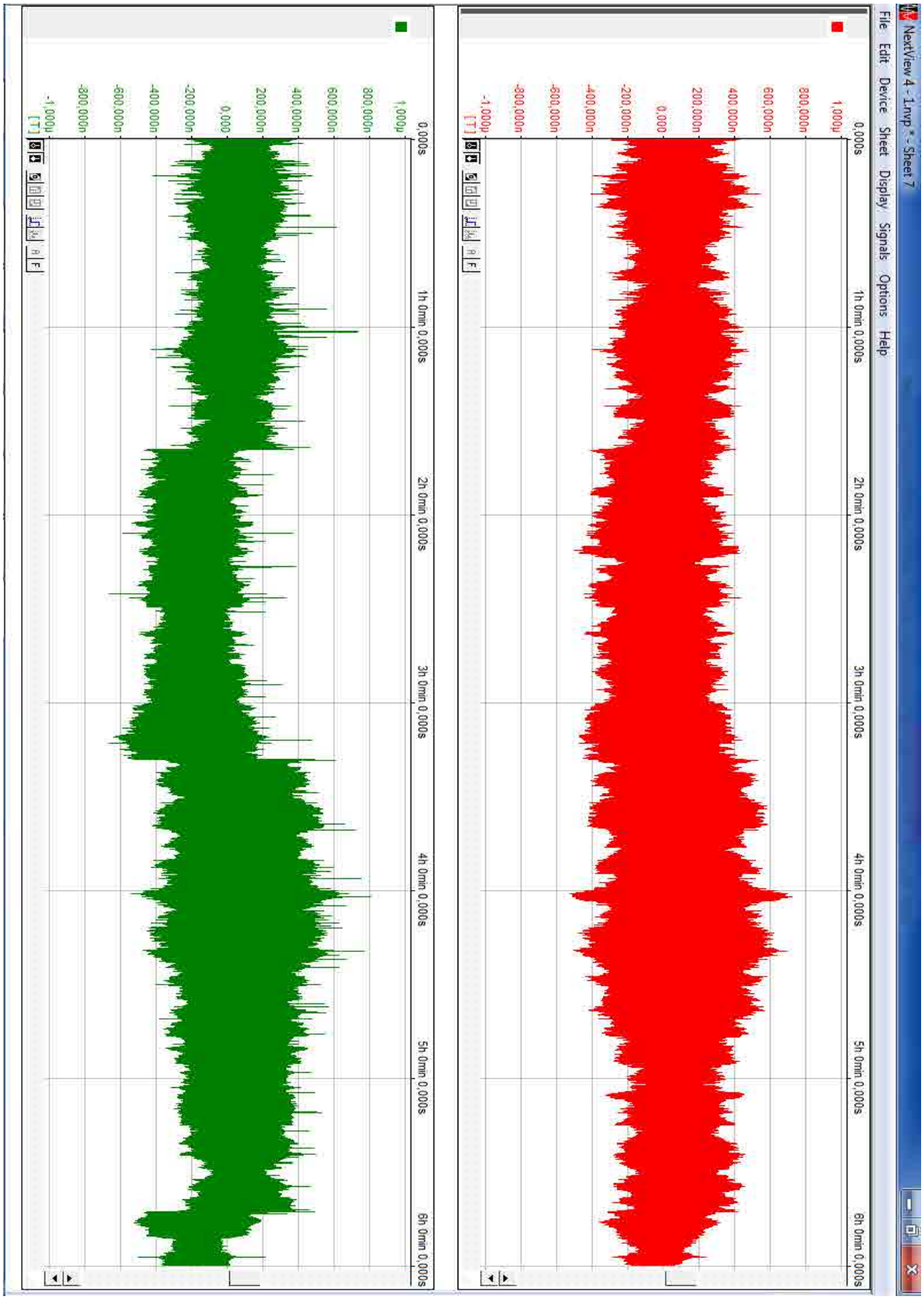
3.2 Measurements in Y,X axes in 11.00 – 12.00 time interval

Y

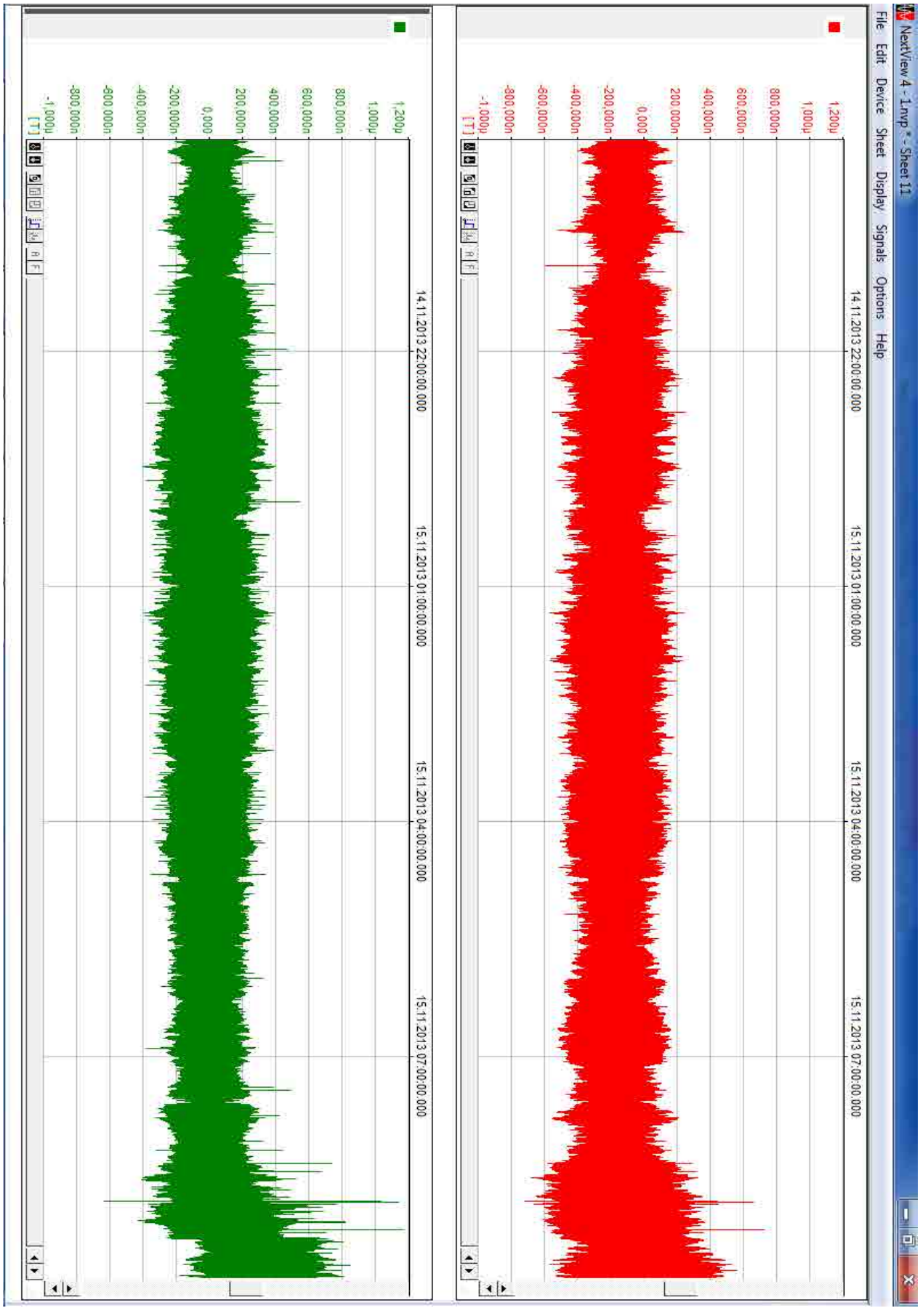


X

3.3 Mesurements result in Z axis in 12.00 – 18.00 time interval

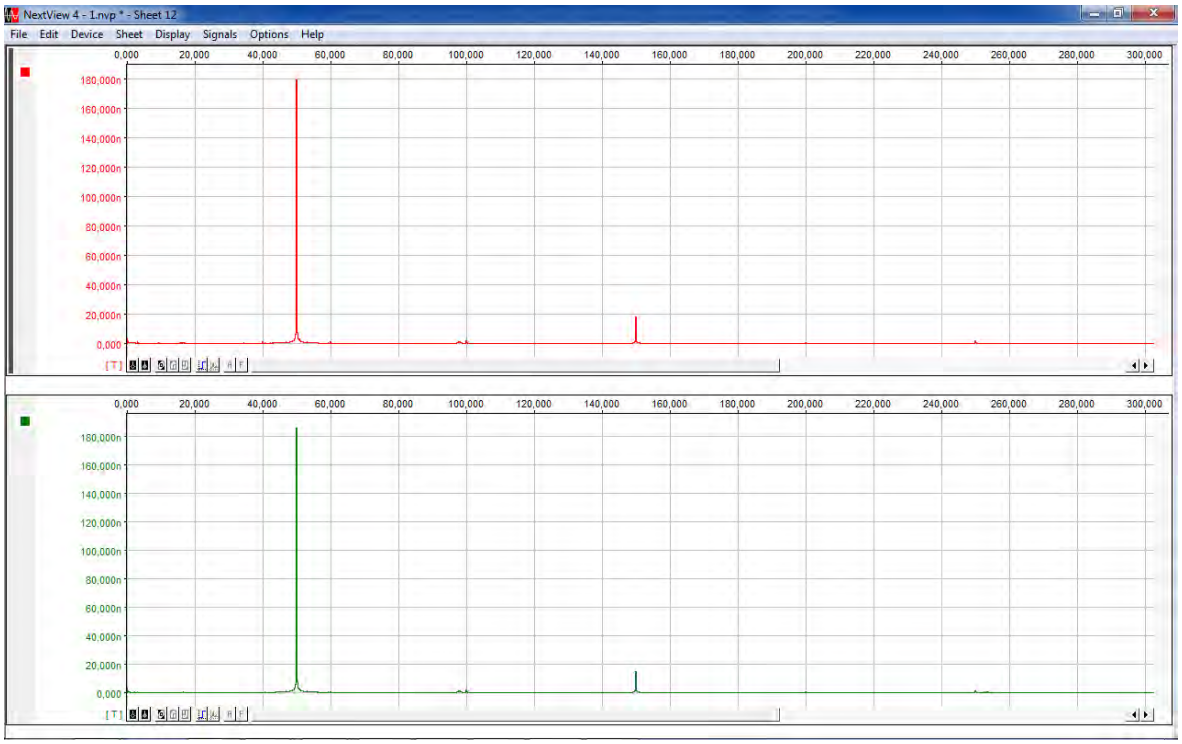


3.4 Measurements result in Z axis in 18.19 – 9.49 time interval.



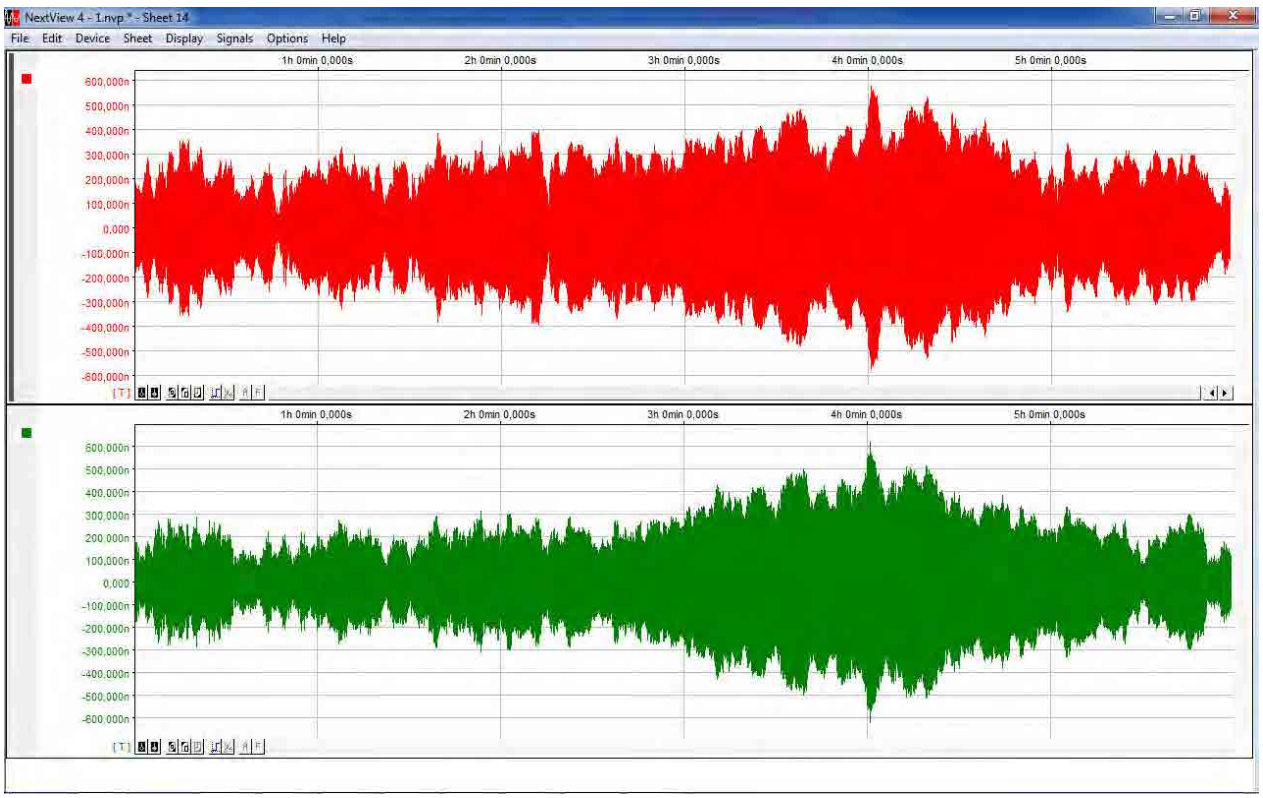
4. Measurement analysis and discussion

4.1 Frequency analysis using FFT function

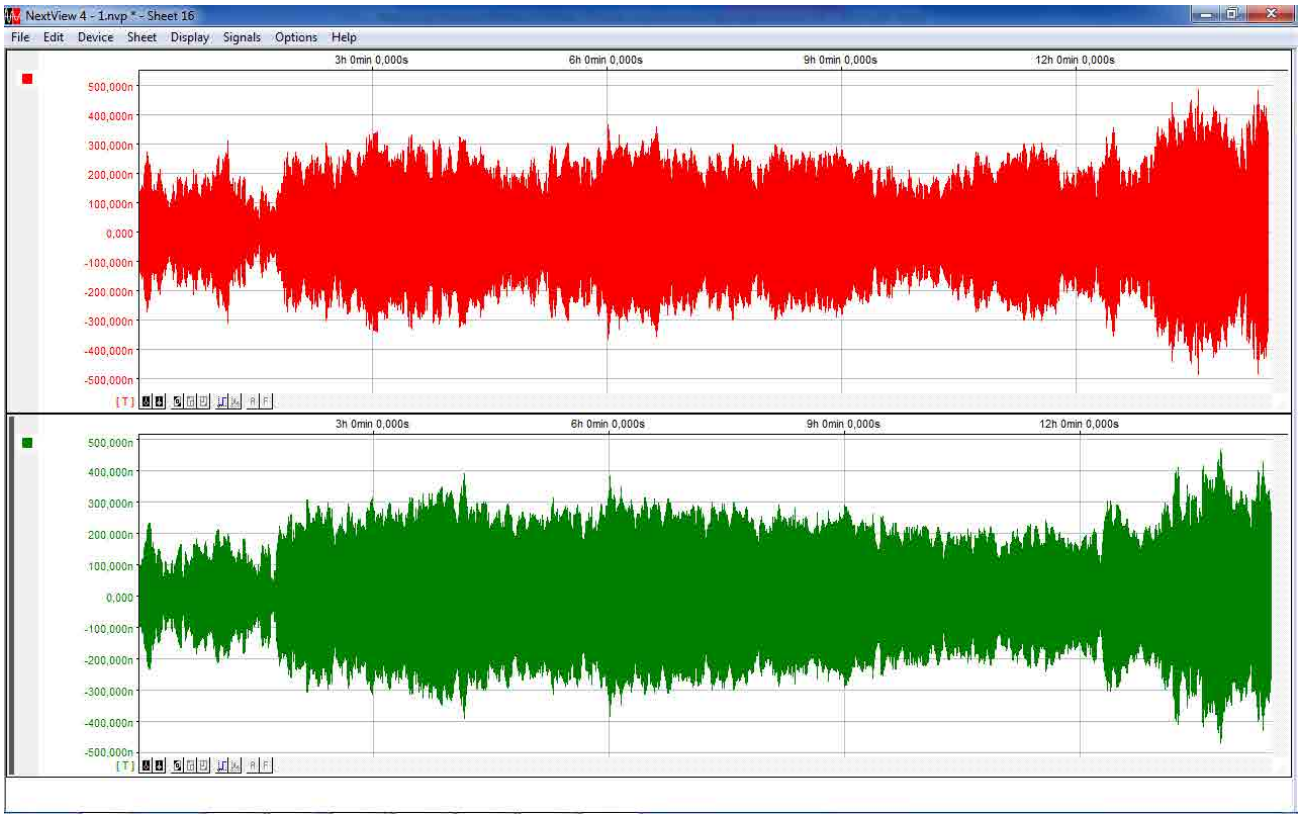


4.2 Magnetic field results 50 Hz

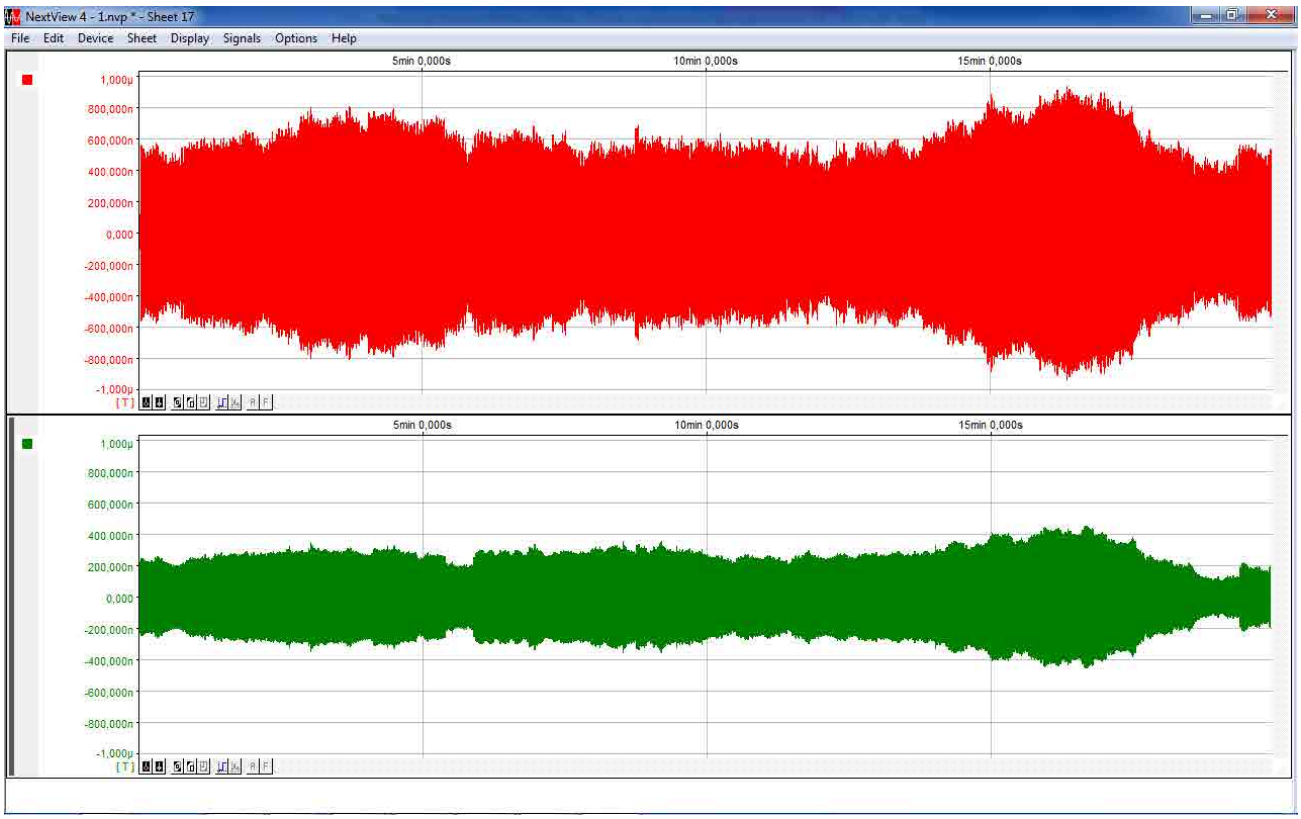
4.2.1 50 Hz disturbances in Z axis in day time



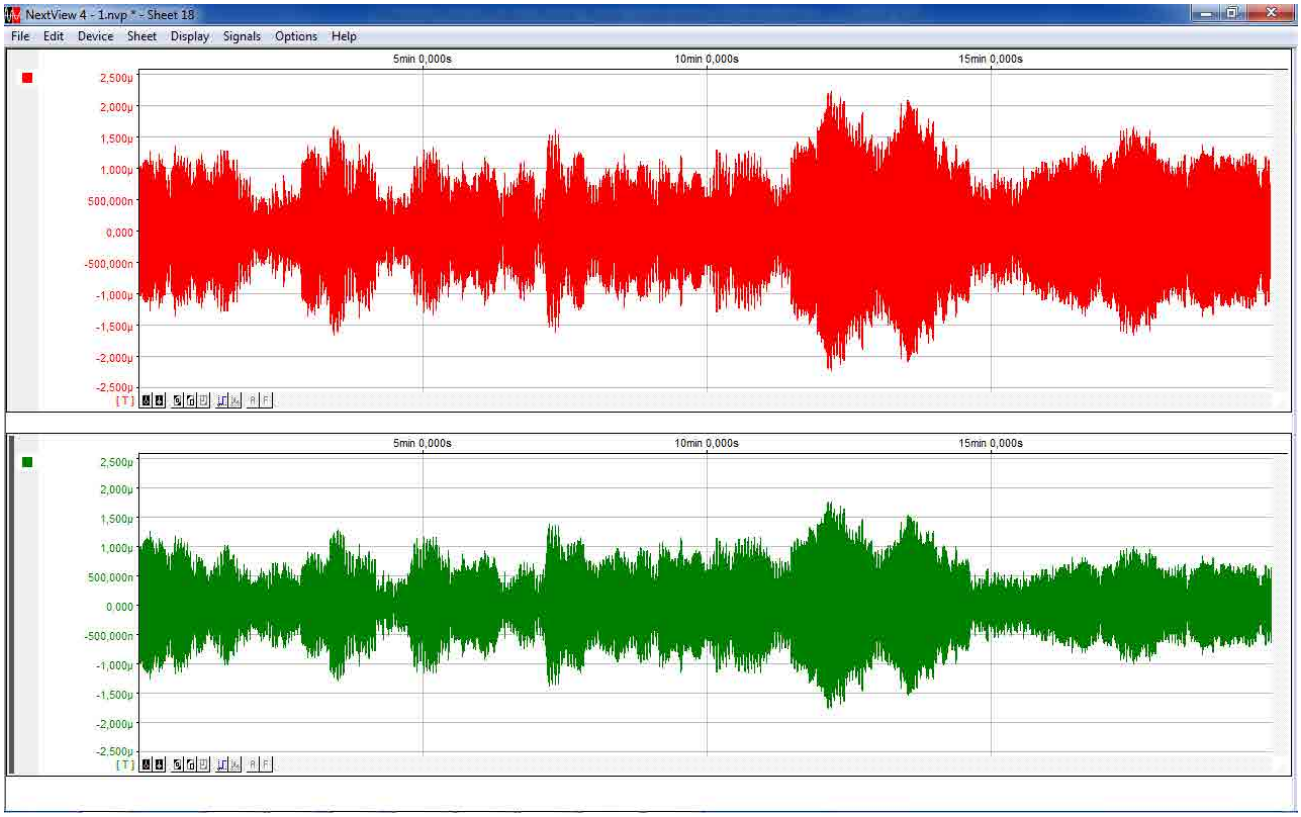
4.2.2 50 Hz disturbances in evening-night-morning time



4.2.3 50 Hz disturbances in X axis



4.2.4 50 Hz disturbances in Y axis



4.3 Low frequency disturbances

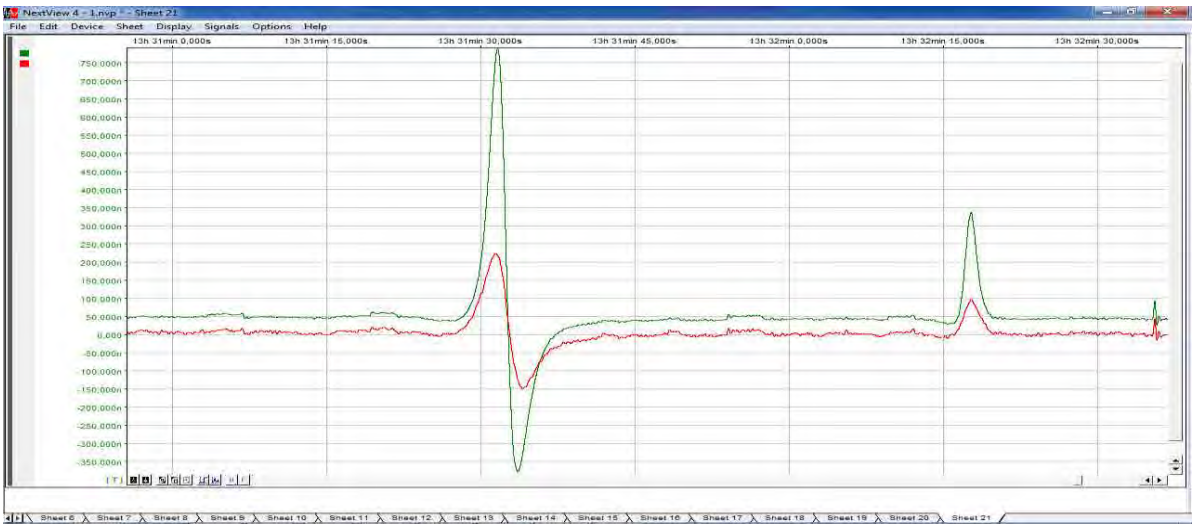
4.3.1 Low frequency disturbances during day time

4.3.2 Low frequency disturbances during evening - morning time

4.3 Summary

4.3.1 Main magnetic field disturbances were found at low frequency and 50 Hz.

4.3.2 The source of low frequency disturbance was cars movements and parking in the hospital courtyard along external wall of the scan room. Magnitude of the low frequency pulses depended of distance to the moving car and it's speed. Maximum fixed pulse was 1150 nT at MP1 and 370 nT at MP2. Intensity of the low disturbance goes down greatly with the distance.



4.3.3 The source of 50 Hz disturbances were power lines of the Hospital main building, light and wall sockets power lines. In night time some reduction of 50 Hz disturbances was observed. Peak value was fixed at 1200 nT in Z axis direction. But in secondary axes 50 Hz was fixed in higher level up to 4500 nT (Y axis).

5. Conclusions and recommendations

5.1. In the Measuring points disturbances of low frequency (DC) and 50 Hz frequency (AC) were detected.

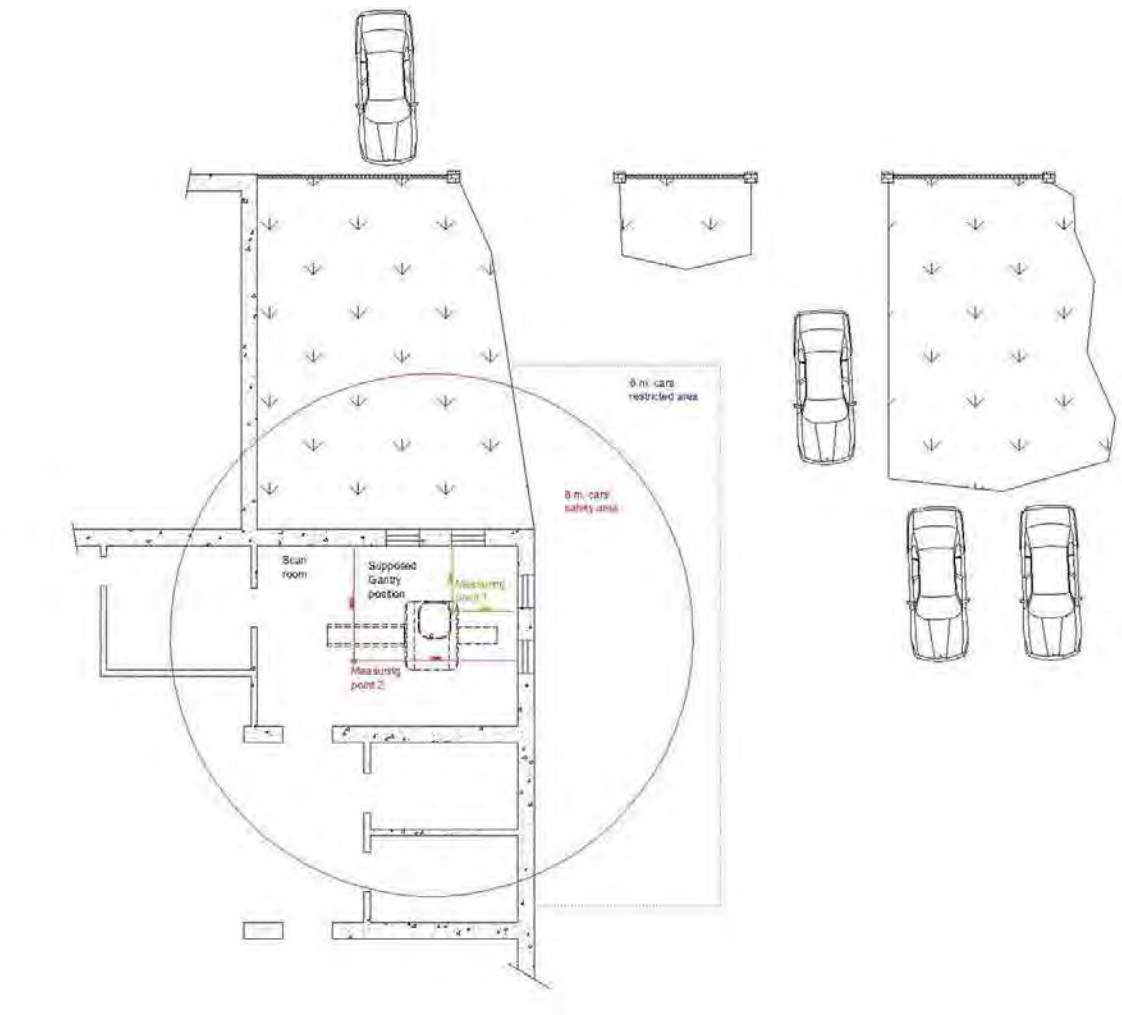
Disturbance	DC, nT	AC, nT
MP1	up to 1150	up to 1200
MP2	up to 370	up to 1200
Specification	less 500	less 1000

5.2. Magnetic field disturbances were out of specs, so some actions is necessary to prevent external affect to MRI system.

5.3. To compensate AC disturbance of max measured value 1200 nT and taking in consideration higher disturbances level in secondary axes the RF cage with AC attenuation not less than 10 is recommended (equal 3 mm aluminum structure).

5.4. To eliminate cars movement's influence to the installing MRI system it is recommended to restrict cars entry in the area within range 6 meters or more from external wall of MRI room (see next picture). Also the magnetic shielding can be used for this purpose or combination of two methods.
Next, the rooms under the MRI room should be free of all equipment and metal items and should be used as control access area.

5.5. Installation and normal operation of the 1.5T semi-conductive MRI system is possible after meeting conditions of pp. 5.3, 5.4.


8 m. cans
restricted area
8 m. cans
safety area
Scan
room
Supposed
Gantry
postion
Measuring
point 1
Measuring
point 2

RH: Republican Clinical Hospital
MH: Scientific Research Institute in the Field of Mother and Child Health Protection
EH: National Scientific-Practical Centre for Emergency Medicine
OI: Oncologic Institute
ST: Chisinau Municipal Clinical Hospital “Sfanta Treime”
IP: National Center for Public Health

Code	Equipment Name	Quantity						
		RH	MH	EH	OI	ST	IP	Total
Z-001	Activated Coagulation Timer	2						2
Z-002	Air Sampling Pump A						2	2
Z-003	Air Sampling Pump B						13	13
Z-004	Alpha, Beta and Gamma Counting Spectrometry System						1	1
Z-005	Amenity Meter						1	1
Z-006	Amino Acid Analyzer		1					1
Z-007	Anesthesia Apparatus A	5						5
Z-008	Anesthesia Apparatus B	11	11		19	10		51
Z-009	Angiography			1		1		2
Z-010	Argon Plasma Coagulator	1						1
Z-011	Artificial Heart-Lung Machine	2						2
Z-012	Atomic Absorption Spectrophotometer						3	3
Z-013	Audiometer		2					2
Z-014	Autoclave, Vertical	3					2	5
Z-015	Automated Culture Media Preparator						1	1
Z-016	Automated Nucleic Acids Extraction System				1			1
Z-017	Automatic Colony Counter						1	1
Z-018	Automatic Immunohistochemistry Station				1			1
Z-019	Automatic Slide Stainer machine				4			4
Z-020	Automatic Titrator with Recorder						1	1
Z-021	Autotransfusion System	5						5
Z-022	Bidistillator						1	1
Z-023	Binocular Microscope	2	1					3
Z-024	Binocular Microscope with Camera	1						1
Z-025	Binocular Microscope, Fluorescence		5		4			9
Z-026	Biochemical Analyzer A		1					1
Z-027	Biochemical Analyzer B					1		1
Z-028	Biosafety Cabinet				1			1
Z-029	Blender Peristaltic Type						11	11
Z-030	Blood Bank Refrigerator	12						12
Z-031	Blood Gas Analyzer					2		2
Z-032	Blood Warmer	10						10
Z-033	Body Warmer	16						16
Z-034	Capillary Electrophoresis Apparatus						1	1
Z-035	Cardiotocograph		10					10
Z-036	Central Monitoring System		1					1
Z-037	Centrifuge	2						2
Z-038	Chromatograph Liquid						2	2
Z-039	Chromatograph, Gas A						1	1
Z-040	Chromatograph, Gas B						1	1
Z-041	Chromatograph, Gas C						1	1
Z-042	Chromatograph, Gas D						1	1
Z-043	Cleanbench	1						1
Z-044	CO2 Laser	1						1
Z-045	Coagulation Analyzer	1	1					2
Z-046	Colony Counter						10	10
Z-047	Conductometer						6	6
Z-048	Cooled Ultracentrifuge for Microtubes				1			1

Code	Equipment Name	Quantity						
		RH	MH	EH	OI	ST	IP	Total
Z-049	Counterpulsation (IABP) Equipment	1						1
Z-050	CPAP		2					2
Z-051	Cryotome	1			1			2
Z-052	CT		1	1		1		3
Z-053	Defibrillator	6	7					13
Z-054	Defibrillator with Internal Pad	2						2
Z-055	Defibrillator with Pacing					4		4
Z-056	DNA Sequencer		1				1	2
Z-057	DNA Sequencing System				1			1
Z-058	Drying Oven				5		1	6
Z-059	Dust Meter						5	5
Z-060	ECG, 12-channel	2						2
Z-061	EEG	2	2					4
Z-062	Electric Coagulator, RF		1					1
Z-063	Electrodermatome		1					1
Z-064	Electrophoresis Protein Analyzer					1		1
Z-065	Electrophoresis System				2			2
Z-066	Electrosafety Analyzer	1						1
Z-067	Electrosurgical Unit A	2						2
Z-068	Electrosurgical Unit B	7				10		17
Z-069	ELISA System						1	1
Z-070	EMG		1					1
Z-071	Endoscope Washer / Disinfector A	1	3	1	14			19
Z-072	Endoscope Washer / Disinfector B				2			2
Z-073	ENT Examination Unit with Chair		2					2
Z-074	ENT Navigation System	1						1
Z-075	ENT Surgery Laser					1		1
Z-076	ENT Surgical Micromotor	1						1
Z-077	Equipment for Ecmo	1						1
Z-078	ESR Analyzer	2						2
Z-079	Examination Light	6						6
Z-080	Extracorporeal Life Support	1						1
Z-081	Feeding Pump	1						1
Z-082	Fluid Pump, Suction						4	4
Z-083	Fluorometer				2		1	3
Z-084	Gamma Counting Spectrometry System						2	2
Z-085	Gel Photo Documentation System				1			1
Z-086	Glass Coverslipping Device				3			3
Z-087	Headlight System	4						4
Z-088	Hematology Analyzer A	2						2
Z-089	Hematology Analyzer B		1			1		2
Z-090	Hematology Analyzer C		1					1
Z-091	Hemodialysis Machine	1						1
Z-092	High Pressure Steam Sterilizer A	2						2
Z-093	High Pressure Steam Sterilizer B			5	5			10
Z-094	High Pressure Steam Sterilizer C					1		1
Z-095	High Pressure Steam Sterilizer D					3		3
Z-096	High Speed Micromotor	1						1
Z-097	Histoprocesor				3			3
Z-098	Homogenizer						3	3
Z-099	Hot Plate		1		10			11
Z-100	Hybridizator (FISH/CISH)				1			1
Z-101	Hyper/Hypothermia System	2						2
Z-102	Ice Maker						2	2

Code	Equipment Name	Quantity						
		RH	MH	EH	OI	ST	IP	Total
Z-103	ICU Bed		40					40
Z-104	ICU Bed Head Unit Single	10						10
Z-105	ICU Bed Head Unit Triple	2						2
Z-106	ICU Central Monitor	3						3
Z-107	Impedance Audiometer		2					2
Z-108	Infant Transport Incubator	1	4					5
Z-109	Infusion Pump A	54						54
Z-110	Infusion Pump B					34		34
Z-111	Laboratory Freezer				1		12	13
Z-112	Laboratory Freezer, ultra low						4	4
Z-113	Laboratory Fume Hood A						5	5
Z-114	Laboratory Fume Hood B						1	1
Z-115	Laboratory Fume Hood C						4	4
Z-116	Laboratory Incubator A		1				2	3
Z-117	Laboratory Incubator B						1	1
Z-118	Laboratory Washing, Drying and Disinfecting Machine						4	4
Z-119	Light Meter						4	4
Z-120	Mercury Analyzer						4	4
Z-121	Micro Centrifuge						6	6
Z-122	Microdebrider		1					1
Z-123	Micropipette Set				3		16	19
Z-124	Microwave Mineralizer						1	1
Z-125	MRI			1				1
Z-126	Multi Vortex				1			1
Z-127	Near Infrared Oxygenation Monitor	1						1
Z-128	Neuronavigation System			1				1
Z-129	OAE Screener		12					12
Z-130	Operation Light, Ceiling				16	10		26
Z-131	Operation Light, Ceiling with Camera	10						10
Z-132	Operation Microscope	1						1
Z-133	Operation Table	10		16	16	9		51
Z-134	Osmometer	1						1
Z-135	Otoscope with Monitor		2					2
Z-136	Panorama X-ray Apparatus		1					1
Z-137	Paraffin Embedding Machine				10			10
Z-138	Patient Monitor A	34						34
Z-139	Patient Monitor B	2						2
Z-140	Patient Monitor C	14	11		19	10		54
Z-141	Patient Monitor D		35		43	18		96
Z-142	Patient Monitor E		15					15
Z-143	Patient Monitor F					4		4
Z-144	Patient Monitor G					3		3
Z-145	Patient Trolley	4						4
Z-146	PCR Box				1			1
Z-147	PCR Thermal Cycler				2			2
Z-148	Pendant for Anesthesia	10						10
Z-149	Pendant for ICU	13						13
Z-150	Pendant for Surgical	10						10
Z-151	Perspiration Analyzer		1					1
Z-152	Phacoemulsification Machine	1						1
Z-153	pH-Meter						6	6
Z-154	Plasma Sterilizer	1						1
Z-155	Plasmapheresis Machine A	1						1
Z-156	Plasmapheresis Machine B				1			1

Code	Equipment Name	Quantity						
		RH	MH	EH	OI	ST	IP	Total
Z-157	Polysomnograph		1					1
Z-158	Pulse Oximeter, Hand-held	14						14
Z-159	Real Time PCR		1				3	4
Z-160	Real Time PCR system				1			1
Z-161	Refrigerator				1			1
Z-162	Retriever for Antigen Unmasking				1			1
Z-163	Rhino Manometer	1						1
Z-164	Rigid Arthroscope Set			1				1
Z-165	Rigid Bronchoscope, Pediatric		1					1
Z-166	Rigid Cystoscope Set		1					1
Z-167	Rigid Laparoscope Set A			1	2			3
Z-168	Rigid Laparoscope Set B					1		1
Z-169	Rigid Laparoscope Set C		1			1		2
Z-170	Rigid Laparoscope Set D					1		1
Z-171	Rigid Laparoscope Set E		1					1
Z-172	Rigid Laparoscope Set F					1		1
Z-173	Rigid Laparoscope Set G				1			1
Z-174	Rigid ORL Surgery Endoscope Set					1		1
Z-175	Rigid Thoracoscope Set A	1						1
Z-176	Rigid Thoracoscope Set B				1	1		2
Z-177	Rigid TUR Set with HF Unit				2			2
Z-178	Rigid Urology TUR Set	1						1
Z-179	Rotary Evaporator with Vacuum Pump						1	1
Z-180	Rotary Microtome				13			13
Z-181	Rotary Sealer			4	4	4		12
Z-182	Selective Radiation Meter						1	1
Z-183	Set of Multi-Channel Micropipette				1		17	18
Z-184	Shaker, Reciprocating						2	2
Z-185	Simulator, Multiparameter	1						1
Z-186	Skin Grafts Perforator		1					1
Z-187	Slave Monitor	5						5
Z-188	Slit Lamp, OCT					1		1
Z-189	Solid Phase Extraction						1	1
Z-190	Sound Calibrator						4	4
Z-191	Sound Level Meter						5	5
Z-192	Spectrophotometer UV-VIS						2	2
Z-193	Stem cell Freezing System				1			1
Z-194	Stereo Microscope with TV Monitor						1	1
Z-195	Suction Unit	19				34		53
Z-196	Superimposed High Frequency Jet Ventilation	1						1
Z-197	Surgical Ablation System	1						1
Z-198	Surgical Retractors	2						2
Z-199	Survey Meter A						1	1
Z-200	Survey Meter B						3	3
Z-201	Syringe Pump A	58						58
Z-202	Syringe Pump B		15			34		49
Z-203	Thermoblock, PCR Sample				1		4	5
Z-204	TLC Densitometer						1	1
Z-205	Ultra Water Purifier						1	1
Z-206	Ultracentrifuge for Microtubes				2			2
Z-207	Ultrasonic Cleaner					3		3
Z-208	Ultrasound Apparatus A (General)					1		1
Z-209	Ultrasound Apparatus B (General)				1			1
Z-210	Ultrasound Apparatus C (Biopsy/Elastograghy)				1			1

Code	Equipment Name	Quantity						
		RH	MH	EH	OI	ST	IP	Total
Z-211	Ultrasound Apparatus D (Cardiology)					1		1
Z-212	Ultrasound Apparatus E (Cardiology)	2						2
Z-213	Ultrasound Apparatus F (Neonatology)		1					1
Z-214	Ultrasound Apparatus G (Obstetrics)		1					1
Z-215	Ultrasound Apparatus H (Obstetrics)		4					4
Z-216	Ultrasound Apparatus I (Pediatrics)		3					3
Z-217	Ultrasound Apparatus J (Urology)	1						1
Z-218	Ultrasound Microphone						1	1
Z-219	Urine Analyzer	2	1					3
Z-220	UV Handwasher	10						10
Z-221	Vacuum Therapy Unit	1						1
Z-222	Ventilator for Adult A	32		12	23	16		83
Z-223	Ventilator for Adult B			10				10
Z-224	Ventilator for Neonate		2					2
Z-225	Ventilator for Pediatric A	1						1
Z-226	Ventilator for Pediatric B	1			1			2
Z-227	Ventilator Mobile					4		4
Z-228	Vertical Laminar Flow Unit	2						2
Z-229	Vibration Meter						5	5
Z-230	Video Bronchoscope A		1					1
Z-231	Video Bronchoscope B				3			3
Z-232	Video Colonoscope			2	16			18
Z-233	Video Cystoscope	1						1
Z-234	Video Duodenoscope			1				1
Z-235	Video Endoscope System		2	4	12	1		19
Z-236	Video Esophagoscope					1		1
Z-237	Video Gastroscope A		2					2
Z-238	Video Gastroscope B		2					2
Z-239	Video Gastroscope C		2					2
Z-240	Video Gastroscope D			2				2
Z-241	Video Gastroscope E			2	3			5
Z-242	Video Laryngoscope A	2						2
Z-243	Video Laryngoscope B				1			1
Z-244	Vitreotome		1					1
Z-245	Vortex Mixer				2		29	31
Z-246	Washer / Disinfector A	2						2
Z-247	Washer / Disinfector B			3	3			6
Z-248	Washer / Disinfector C					3		3
Z-249	Water Bath		1		10		11	22
Z-250	Water Distiller	1						1
Z-251	X-ray Apparatus General		1					1
Z-252	X-ray Apparatus Mobile		1	5	2	2		10
Z-253	X-ray C-arm			4	1			5
Z-254	X-ray C-arm with DSA	2						2
Z-255	X-ray CR System			3	1	2		6
Z-256	X-ray Digital Mammography				2			2
Z-257	X-ray Dry Imager					1		1
Z-258	X-ray Fluoroscopy for Urology		1					1
Z-259	X-ray General with Fluoroscopy A			1		1		2
Z-260	X-ray General with Fluoroscopy B		1		1			2
Z-261	X-Ray Impulse Dosimeter						2	2
Z-262	Yag Laser	1						1

Equipment Change Comparison Table
(Republican Clinical Hospital)

Item No.	Original Equipment Name	Previous Q'ty	Changes	Current Q'ty	Equip. No.	Code No.	Final Equipment Name
E-01	Anesthesia machine	14	Change in number change in content	5	RH-01	Z-007	Anesthesia Apparatus A
				11	RH-02	Z-008	Anesthesia Apparatus B
E-02	Angiography	1	Deleted（Procured by Austria）	0			
E-03	Artificial hear-lung machine	2	No change	2	RH-03	Z-011	Artificial Heart-Lung Machine
			Change in contents	2	RH-04	Z-001	Activated Coagulation Timer
E-04	Autoclave, vertical	6	Change in number	3	RH-06	Z-014	Autoclave, Vertical
E-05	Autotransfusion system	7	Change in number	5	RH-07	Z-021	Autotransfusion System
E-06	Bilirubin analyzer	1	Deleted （Procured by Austria）	0			
E-07	Blood bank refrigerator	12	No change	12	RH-08	Z-030	Blood Bank Refrigerator
E-08	Blood gas analyzer	1	Deleted （Procured by Austria）	0			
E-09	Blood warmer	11	Change in number	10	RH-09	Z-032	Blood Warmer
E-10	Body warmer	3	Change in number	16	RH-10	Z-033	Body Warmer
E-11	C-arm unit	1	Deleted （Change in contents）	0			
E-12	C-arm, mobile	2	No change	2	RH-11	Z-254	X-ray C-arm with DSA
E-13	Centrifuge	1	Change in number	2	RH-12	Z-037	Centrifuge
E-14	CO2 incubator	1	Deleted （Change in contents）	0			
E-15	Coagulation analyzer	1	No change	1	RH-13	Z-045	Coagulation Analyzer
E-16	Computer desk, mobile	20	Deleted （Procured by hospital）	0			
E-17	Computer set	84	Deleted （Procured by hospital）	0			
E-18	Cryosrugical unit	2	Deleted （Change in contents）	0			
E-19	Defibrilator	8	Change in numberor change in content	2	RH-15	Z-054	Defibrillator with Internal Pad
E-20	Defibrilator with emergency cart	18	Change in number	6	RH-16	Z-053	Defibrillator
E-21	Washing basin	20	Deleted （Procured by hospital）	0			
E-22	ECG	17	Change in number	2	RH-17	Z-060	ECG, 12-channel
E-23	Ultrasonic diagnostic apparatus, obstetric A	2	Change in numberor change in content	1	RH-18	Z-217	Ultrasound Apparatus J (Urology)
				2	RH-19	Z-212	Ultrasound Apparatus E (Cardiology)
E-24	EEG	3	Change in number	2	RH-20	Z-061	EEG
E-25	Electrical Safety Analyser	1	No change	1	RH-21	Z-066	Electrosafety Analyzer
E-26	Electrosurgical unit	10	Change in contents	1	RH-14	Z-010	Argon Plasma Coagulator
				2	RH-22	Z-067	Electrosurgical Unit A
				7	RH-23	Z-068	Electrosurgical Unit B
E-27	Examination light	4	Change in number	6	RH-24	Z-079	Examination Light
E-28	Glucose analyzer	3	Deleted （Procured by Austria）	0			
E-29	Hematology analyzer	1	Change in number	2	RH-25	Z-088	Hematology Analyzer A
E-30	Hyper/Hypothermia System	8	Change in number	2	RH-26	Z-101	Hyper/Hypothermia System
E-31	Ice maker	1	Deleted （Procured by hospital）	0			
E-32	ICU bed	35	Change in number⇒into MCH	40			
E-33	Infusion pump, volumetric	70	Change in number	54	RH-28	Z-109	Infusion Pump A
E-34	Infusion stand	45	Change into Infusion pump	54	RH-28	Z-109	Infusion Pump A
E-35	Kick bucket	11	Deleted （Procured by hospital）	0			
E-36	Laboratory refrigerator	2	Deleted （Procured by hospital）	0			
E-37	Mayo table	11	Change in number Combained with Operation table	2	RH-34	Z-133	Operation Table
				5	RH-35		
				1	RH-36		
				1	RH-37		
				1	RH-38		
E-38	Microscope A	2	No change	2	RH-30	Z-023	Binocular Microscope
E-39	Microscope B	2	Change in number	1	RH-31	Z-024	Binocular Microscope with Camera
E-40	Multimeter	2	Deleted （Procured by hospital）	0			
E-41	Operation light	11	Change in number	10	RH-32	Z-131	Operation Light, Ceiling with Camera
E-42	Operation microscope A	2	Change in number	1	RH-33	Z-132	Operation Microscope
E-43	Operation table A	9	Change in numberor change in content	2	RH-34	Z-133	Operation Table
				5	RH-35		
				1	RH-36		
E-44	Operation table B	1		1	RH-37		
E-45	Operation table C	1		1	RH-38		
E-46	Osmometer	1	No change	1	RH-39	Z-134	Osmometer
E-47	Oxygen inhalation set	36	Change in number Change into Anesthesia machine	5	RH-01	Z-007	Anesthesia Apparatus A
				11	RH-02	Z-008	Anesthesia Apparatus B
E-48	Patient monitor A	29	Change in numberor change in content	3	RH-40	Z-106	ICU Central Monitor
				34	RH-41	Z-138	Patient Monitor A
E-49	Patient monitor B	30	Change in numberor change in content	2	RH-42	Z-139	Patient Monitor B
				14	RH-43	Z-140	Patient Monitor C
E-50	Patient trolley	24	Change in number	13	RH-44	Z-145	Patient Trolley
E-51	Pulse oximeter	25	Change in number	14	RH-45	Z-158	Pulse Oximeter, Hand-held

Equipment Change Comparison Table
(Republican Clinical Hospital)

Item No.	Original Equipment Name	Previous Q'ty	Changes	Current Q'ty	Equip. No.	Code No.	Final Equipment Name
E-52	Refrigerator A	25	Deleted（Procured by hospital）	0			
E-53	Refrigerator B	10	Deleted（Procured by hospital）	0			
E-54	Refrigerator C	1	Deleted（Procured by hospital）	0			
E-55	Shelves for sterilised box	1	Deleted（Procured by hospital）	0			
E-56	Simulator, multiparameter (ECG, Defibrillator)	1	No change	1	RH-46	Z-185	Simulator, Multiparameter
E-57	Slave monitor	13	Change in number	5	RH-47	Z-187	Slave Monitor
E-58	Stool A	33	Deleted（Procured by hospital）	0			
E-59	Storage unit C	1	Deleted（Procured by hospital）	0			
E-60	Suction unit	60	Change in number	19	RH-48	Z-195	Suction Unit
E-61	Syringe pump	66	Change in numberor change in con	58	RH-49	Z-201	Syringe Pump A
E-62	Tool Box	3	Deleted（Procured by hospital）	0			
E-63	Trolley B	14	Deleted（Procured by hospital）	0			
E-64	Trolley C	1	Deleted（Procured by hospital）	0			
E-65	Ultrasonic coagulation device	1	Change in contents	1	RH-50	Z-044	CO2 Laser
E-66	Ventilator A	49	Change in number	32	RH-51	Z-222	Ventilator for Adult A
E-67	Ventilator B	3	Change in numberor change in content	1	RH-52	Z-225	Ventilator for Pediatric A
				1	RH-53	Z-226	Ventilator for Pediatric B
E-68	Water distiller	1	No change	1	RH-54	Z-250	Water Distiller
E-69	X-ray film viewer	6	Deleted（Procured by hospital）	0			
F-01	Cabinet A	15	Deleted（Procured by hospital）	0			
F-02	Cabinet B	96	Deleted（Procured by hospital）	0			
F-03	Chair	6	Deleted（Procured by hospital）	0			
F-04	Cleaning equipment	2	Deleted（Procured by hospital）	0			
F-05	Collection Bin	6	Deleted（Procured by hospital）	0			
F-06	Counter	1	Deleted（Procured by hospital）	0			
F-07	Cupboard A	7	Deleted（Procured by hospital）	0			
F-08	Cupboard B	6	Deleted（Procured by hospital）	0			
F-09	Cupboard C	6	Deleted（Procured by hospital）	0			
F-10	Cupboard D	1	Deleted（Procured by hospital）	0			
F-11	Desk A	25	Deleted（Procured by hospital）	0			
F-12	Dispensing counter	2	Deleted（Procured by hospital）	0			
F-13	Disposal unit	4	Deleted（Procured by hospital）	0			
F-14	Foot stool	20	Deleted（Procured by hospital）	0			
F-15	HOLDER, sack, large	23	Deleted（Procured by hospital）	0			
F-16	HOLDER, sack, medium	27	Deleted（Procured by hospital）	0			
F-17	Laboratory table A	4	Deleted（Procured by hospital）	0			
F-18	Laboratory table B	5	Deleted（Procured by hospital）	0			
F-19	Laboratory table C	1	Deleted（Procured by hospital）	0			
F-20	Locker A	161	Deleted（Procured by hospital）	0			
F-21	Medicine cabinet	25	Deleted（Procured by hospital）	0			
F-22	Microwave oven	5	Deleted（Procured by hospital）	0			
F-23	Nurse base	9	Deleted（Procured by hospital）	0			
F-24	Screen	2	Deleted（Procured by hospital）	0			
F-25	Shelf A	13	Deleted（Procured by hospital）	0			
F-26	Shelf B	67	Deleted（Procured by hospital）	0			
F-27	Shelf C	1	Deleted（Procured by hospital）	0			
F-28	Shelf D	11	Deleted（Procured by hospital）	0			
F-29	Shelf E	3	Deleted（Procured by hospital）	0			
F-30	Sink A	8	Deleted（Procured by hospital）	0			
F-31	Soap dispenser	20	Deleted（Procured by hospital）	0			
F-32	Sofa bed	5	Deleted（Procured by hospital）	0			
F-33	Stainless steel table A	5	Deleted（Procured by hospital）	0			
F-34	Stool B	6	Deleted（Procured by hospital）	0			
F-35	Storage unit A	1	Deleted（Procured by hospital）	0			
F-36	Storage unit B	1	Deleted（Procured by hospital）	0			
F-37	Table A	4	Deleted（Procured by hospital）	0			
F-38	Table B with 5 chairs	6	Deleted（Procured by hospital）	0			
F-39	Table C	18	Deleted（Procured by hospital）	0			
F-40	Table D	7	Deleted（Procured by hospital）	0			
F-41	Table E	7	Deleted（Procured by hospital）	0			
F-42	Table F	3	Deleted（Procured by hospital）	0			
F-43	Table G	7	Deleted（Procured by hospital）	0			
F-44	Table, stainess steel	1	Deleted（Procured by hospital）	0			
F-45	Trolley A	86	Deleted（Procured by hospital）	0			
F-46	Warming cabinet	11	Deleted（Procured by hospital）	0			

Equipment Change Comparison Table
(Republican Clinical Hospital)

Item No.	Original Equipment Name	Previous Q'ty	Changes	Current Q'ty	Equip. No.	Code No.	Final Equipment Name
F-47	Washing basin with stand	11	Deleted（Procured by hospital）	0			
F-48	Waste collecting cart	3	Deleted（Procured by hospital）	0			
F-49	Water boiler, wall mounted	6	Deleted（Procured by hospital）	0			
F-50	White board	29	Deleted（Procured by hospital）	0			
I-01	Bed head unit A	20	Change in numberor change in content	2	RH-55	Z-105	ICU Bed Head Unit Triple
I-02	Bed head unit B	20	Change in number	10	RH-56	Z-104	ICU Bed Head Unit Single
I-03	Bed head unit C	35	Change in numberor change in content	13	RH-57	Z-149	Pendant for ICU
I-04	Electrical panel	1	Deleted（Procured by hospital）	0			
I-05	Gas cylinder rack	1	Deleted（Procured by hospital）	0			
I-06	Panel operating theatre	11	Deleted（Procured by hospital）	0			
I-07	Pendant A	11	Change in number	10	RH-58	Z-148	Pendant for Anesthesia
I-08	Pendant B	11	Change in number	10	RH-59	Z-150	Pendant for Surgical
I-09	Socket	1	Deleted（Procured by hospital）	0			
I-10	Sterilization lamp	125	Deleted（Procured by hospital）	0			
I-11	Table Exhaust Device with laminar airflow	1	No change	1	RH-60	Z-043	Cleanbench
I-12	Vertical laminar flow unit	4	Change in number	2	RH-61	Z-228	Vertical Laminar Flow Unit
Revived-1	High pressure steam sterilizer		Reconsidered	2	RH-62	Z-092	High Pressure Steam Sterilizer A
Revived-2	Plasma sterilizer (Low Temprature Sterilizer)		Reconsidered	1	RH-63	Z-154	Plasma Sterilizer
Revived-3	Washer disinfector		Reconsidered	2	RH-64	Z-246	Washer / Disinfector A
Revived-4	Yag Laser		Reconsidered	1	RH-65	Z-262	Yag Laser
ADD-2	Counterpulsation(IABP) equipment		added	1	RH-66	Z-049	Counterpulsation (IABP) Equipment
ADD-3	Cryostat		added	1	RH-67	Z-051	Cryotome
ADD-4	Endoscope, Narrow Band Imaging		added	1	RH-68	Z-233	Video Cystoscope
ADD-5	Endoscope Wahser / Disinfector / Dryer		added	1	RH-69	Z-071	Endoscope Washer / Disinfector A
ADD-6	ENT surgical micromotor		added	1	RH-70	Z-076	ENT Surgical Micromotor
ADD-7	Equipment for Ecmo		added	1	RH-71	Z-077	Equipment for Ecmo
ADD-8	ESR Analyzer		added	2	RH-72	Z-078	ESR Analyzer
ADD-9	Extracorporeal Life Support		added	1	RH-73	Z-080	Extracorporeal Life Support
ADD-10	Feeding Pump		added	1	RH-74	Z-081	Feeding Pump
ADD-11	Headlight system		added	4	RH-75	Z-087	Headlight System
ADD-12	Hemodialysis		added	1	RH-76	Z-091	Hemodialysis Machine
ADD-13	High Speed Micromotor		added	1	RH-77	Z-096	High Speed Micromotor
ADD-14	Infant Transport Incubator		added	1	RH-78	Z-108	Infant Transport Incubator
ADD-23	Navigation System		added	1	RH-86	Z-074	ENT Navigation System
ADD-24	Plasmaferesis		added	1	RH-87	Z-155	Plasmapheresis Machine A
ADD-25	Superimposed High Frequency Jet Ventilation		added	1	RH-88	Z-196	Superimposed High Frequency Jet Ventilation
ADD-26	Surgical retractors		added	2	RH-89	Z-198	Surgical Retractors
ADD-27	TUR / TURis Plasma vaporisation set		added	1	RH-90	Z-178	Rigid Urology TUR Set
ADD-30	Urine Analyzer		added	2	RH-91	Z-219	Urine Analyzer
ADD-31	UV Handwasher		added	10	RH-92	Z-220	UV Handwasher
ADD-32	Video Laryngoscope set		added	2	RH-93	Z-242	Video Laryngoscope A
ADD-33	Video-asisted thoracoscopic system		added	1	RH-94	Z-175	Rigid Thoracoscope Set A
ADD-34	Rhino Manomater		added	1	RH-95	Z-163	Rhino Manometer
ADD-35	Phacoemulsification Machine		added	1	RH-96	Z-152	Phacoemulsification Machine
ADD-36	Surgical ablation system		added	1	RH-97	Z-197	Surgical Ablation System
ADD-37	Near Infrared Oxygenation Monitor		added	1	RH-98	Z-127	Near Infrared Oxygenation Monitor
ADD-38	Vacuum assisted closure for treatment of infected tissue		added	1	RH-99	Z-221	Vacuum Therapy Unit

Equipment Change Comparison Table
(Scientific Research Institute in the Field of Mother and Child Health)

Item No.	Original Equipment Name	Previous Q'ty	Changes	Current Q'ty	Equip. No.	Code No.	Final Equipment Name
MC-01	CT	1	No Change	1	MC-01	Z-052	CT
MC-02	MRI, 1.5T	1	Deleted	0			
MC-03	Tomosynthesis	1	No Change	1	MC-03	Z-260	X-ray General with Fluoroscopy B
MC-04	General X-ray, General	1	No Change	1	MC-04	Z-251	X-ray Apparatus General
MC-05	General X-ray, urology	1	No Change	1	MC-05	Z-258	X-ray Fluoroscopy for Urology
MC-06	Mobile X-ray	1	No Change	1	MC-06	Z-252	X-ray Apparatus Mobile
MC-07	Ultrasonic diagnostic apparatus, obstetric A	4	No Change	4	MC-07	Z-215	Ultrasound Apparatus H (Obstetrics)
MC-08	Ultrasonic diagnostic apparatus, pediatric	3	No Change	3	MC-08	Z-216	Ultrasound Apparatus I (Pediatrics)
MC-09	Ultrasonic diagnostic apparatus, neonate	1	No Change	1	MC-09	Z-213	Ultrasound Apparatus F (Neonatology)
MC-10	Video gastroscope A	2	No Change	2	MC-10	Z-237	Video Gastroscope A
MC-11	Video gastroscope B	2	No Change	2	MC-11	Z-238	Video Gastroscope B
MC-12	Video gastroscope C	2	No Change	2	MC-12	Z-239	Video Gastroscope C
MC-13	Video endoscope system	1	Change in content and combined with other equipment	2	MC-13	Z-235	Video Endoscope System
MC-15	Video endoscope system	1					
MC-19	Endoscope mobile trolley	3					
MC-14	Video bronchoscope	1	No Change	1	MC-14	Z-230	Video Bronchoscope A
MC-16	Bronchoscope, pediatric, rigid	1	No Change	1	MC-16	Z-165	Rigid Bronchoscope, Pediatric
MC-17	Cystoscopy Set + HF, pediatric, rigid	1	No Change	1	MC-17	Z-166	Rigid Cystoscope Set
MC-18	Endoscope washer disinfector	3	No Change	3	MC-18	Z-071	Endoscope Washer / Disinfector A
MC-20-1	Laparoscope set with video system	1	No Change	1	MC-20-1	Z-169	Rigid Laparoscope Set C
MC-20-2	Laparoscope set with video system	1	No Change	1	MC-20-2	Z-171	Rigid Laparoscope Set E
MC-21	Neuroendoscope set with video system	1	Deleted	0			
MC-22	Anesthesia apparatus	8	Change in number and content	5	MC-22	Z-008	Anesthesia Apparatus B
				5	MC-23b	Z-140	Patient Monitor C
MC-23	Anesthesia apparatus	6	Change in number and content	4	MC-23a	Z-008	Anesthesia Apparatus B
				4	MC-23b	Z-140	Patient Monitor C
MC-24	Ventilator, HFO	2	No Change	2	MC-24	Z-224	Ventilator for Neonate
MC-25	CPAP	2	No Change	2	MC-25	Z-050	CPAP
MC-26	Patient monitor	10	No Change	10	MC-26	Z-141	Patient Monitor D
MC-27	Patient monitor	25	No Change	25	MC-27	Z-141	Patient Monitor D
MC-28	Patient monitor	15	No Change	15	MC-28	Z-142	Patient Monitor E
MC-29	Cardiotocograph	10	No Change	10	MC-29	Z-035	Cardiotocograph
MC-30	Hematology analyzer	1	Change in content	1	MC-30-1	Z-089	Hematology Analyzer B
				1	MC-30-2	Z-090	Hematology Analyzer C
MC-31	Binocular microscope	1	No Change	1	MC-31	Z-023	Binocular Microscope
MC-32	Immunology analyzer	1	Deleted	0			
MC-33	Biochemical analyzer	1	No Change	1	MC-33	Z-026	Biochemical Analyzer A
MC-34	Coagulometer	1	No Change	1	MC-34	Z-045	Coagulation Analyzer
MC-35	Urinealizer	1	No Change	1	MC-35	Z-219	Urine Analyzer
MC-36	EEG	2	No Change	2	MC-36	Z-061	EEG
MC-37	EMG	1	No Change	1	MC-37	Z-070	EMG
MC-38	Polysomnograph	1	No Change	1	MC-38	Z-157	Polysomnograph
MC-39	Ambulance, type C, neonate	1	Deleted	0			
MC-40	Ambulance, type C, pediatric	1	Deleted	0			
MC-41	Mobile aseptyser	4	No Change	4	MC-41	Z-108	Infant Transport Incubator
MC-42	Aminoacid analyzer	1	No Change	1	MC-42	Z-006	Amino Acid Analyzer
MC-43	Fluorescent microscope with TV	1	No Change	1	MC-43	Z-025	Binocular Microscope, Fluorescence
MC-44	Hot plate	1	No Change	1	MC-44	Z-099	Hot Plate
MC-45	Incubator	1	No Change	1	MC-45	Z-116	Laboratory Incubator A
MC-46	Water bath	1	No Change	1	MC-46	Z-249	Water Bath
MC-47	Real time polymerase chain reaction (QF-PCR) apparatus	1	No Change	1	MC-47	Z-159	Real Time PCR
MC-48	Ultrasonic diagnostic apparatus, obstetric B	1	No Change	1	MC-48	Z-214	Ultrasound Apparatus G (Obstetrics)
MC-49	Microscope with Video for cytogenetical investigation	3	Change in number	4	MC-49	Z-025	Binocular Microscope, Fluorescence with TV
MC-50	Persipiration analyser (mucoviscidosis diagnosis)	1	No Change	1	MC-50	Z-151	Perspiration Analyzer
MC-101	Defibrillator for pediatric	5	No Change	5	MC-101	Z-053	Defibrillator
MC-102	Defibrillator for pediatric	1	No Change	1	MC-102	Z-053	Defibrillator
MC-103	Defibrillator for pediatric	1	No Change	1	MC-103	Z-053	Defibrillator
MC-104	Syringe pump	5	No Change	5	MC-104	Z-202	Syringe Pump B
MC-105	Syringe pump	5	No Change	5	MC-105	Z-202	Syringe Pump B
MC-106	Syringe pump	5	No Change	5	MC-106	Z-202	Syringe Pump B
MC-107	Anesthesia apparatus	5	Change in number and content	2	MC-107	Z-008	Anesthesia Apparatus B
				2	MC-107	Z-140	Patient Monitor C
MC-108	Electrodermatome	1	No Change	1	MC-108	Z-063	Electrodermatome

Equipment Change Comparison Table
(Scientific Research Institute in the Field of Mother and Child Health)

Item No.	Original Equipment Name	Previous Q'ty	Changes	Current Q'ty	Equip. No.	Code No.	Final Equipment Name
MC-109	Skin grafts perforator	1	No Change	1	MC-109	Z-186	Skin Grafts Perforator
MC-110	Central monitoring system	1	No Change	1	MC-110	Z-036	Central Monitoring System
MC-111	Patient monitor	5	No Change	5	MC-111	Z-141	Patient Monitor D
MC-112	Patient monitor	5	No Change	5	MC-112	Z-141	Patient Monitor D
MC-113	ENT examination unit with chair	1	No Change	2	MC-113	Z-073	ENT Examination Unit with Chair
MC-114	Electric coagulator, high frequency, bipolar	1	No Change	1	MC-114	Z-062	Electric Coagulator, RF
MC-115	Microdebrider	1	No Change	1	MC-115	Z-122	Microdebrider
MC-116	System for recording PRB-screening (acoustic emissions)	2	Change in number	12	MC-116	Z-129	OAE Screener
MC-117	Impedance audiometer	2	No Change	2	MC-117	Z-107	Impedance Audiometer
MC-118	Audiometer	2	No Change	2	MC-118	Z-013	Audiometer
MC-119	Panorama X-ray apparatus	1	No Change	1	MC-119	Z-136	Panorama X-ray Apparatus
MC-120	Dental X-ray	1	No Change	1	MC-120	Z-244	Vitreotome
Add-01	Genetic analzyer with soft/sequencing		Added	1	MC-Add-01	Z-056	DNA Sequencer
Add-04	Otoscope with monitor		Added	2	MC-Add-04	Z-135	Otoscope with Monitor
Add-05	ICU Bed		Change from RH	40	MC-Add-05	Z-103	ICU Bed

Equipment Change Comparison Table
(National Scientific-Practical Centre for Emergency Medicine)

Item No.	Original Equipment Name	Previous Q'ty	Changes	Current Q'ty	Equip. No.	Code No.	Final Equipment Name
EH-01	Angiography	1	No Change	1	EH-01	Z-009	Angiography
EH-02	CT	1	No Change	1	EH-02	Z-052	CT
EH-03	MRI 1.5T	1	No Change	1	EH-03	Z-125	MRI
EH-04	X-ray, Fluoroscopy with general (Radiology unit AXIOM I conos R-200)	1	No Change	1	EH-04	Z-259	X-ray General with Fluoroscopy A
EH-05-1	Mobile X-ray (X-ray machine with TV mobile)	2	Combined	4	EH-05	Z-253	X-ray C-arm
EH-05-2	Mobile X-ray (X-ray machine with TV mobile)	2					
EH-06	Operation table, general	9	Change in content	5	EH-06-1	Z-133	Operation Table
				1	EH-06-2		
				1	EH-06-3		
				1	EH-06-4		
EH-07	Operation table, orthopedic	5		5	EH-07		
EH-08	Operation table, neurosurgery	2		3	EH-08		
EH-09	Ventilator	22	Change in content	12	EH-09a	Z-222	Ventilator for Adult A
				10	EH-09b	Z-223	Ventilator for Adult B
EH-10	Video gastroscope, Therapeutic	2	No Change	2	EH-10	Z-240	Video Gastroscope D
EH-11	Video gastroscope, Diagnostic	2	No Change	2	EH-11	Z-241	Video Gastroscope E
EH-12	Video duodenoscope, ERCP	1	No Change	1	EH-12	Z-234	Video Duodenoscope
EH-13	Video colonoscope	1	Change in number	2	EH-13	Z-232	Video Colonoscope
EH-14-1	Video endoscope system	2	Change in content	4	EH-14	Z-235	Video Endoscope System
EH-14-2	Video endoscope system	2					
EH-15	Endoscope washer disinfector	1	No Change	1	EH-15	Z-071	Endoscope Washer / Disinfector A
EH-16	Laparoscope set	1	No Change	1	EH-16	Z-167	Rigid Laparoscope Set A
EH-17	Artroscope	1	No Change	1	EH-17	Z-164	Rigid Arthroscope Set
EH-18	Mobile X-ray Digital		Change in content	5	EH-18	Z-252	X-ray Apparatus Mobile
				3	EH-18-3	Z-255	X-ray CR System
ADD-01	Sterilization complete of instruments including packaging line		Added	5	EH-ADD-01-1	Z-093	High Pressure Steam Sterilizer B
				3	EH-ADD-01-2	Z-247	Washer / Disinfector B
				4	EH-ADD-01-3	Z-181	Rotary Sealer
ADD-02	Neuronavigation		Added	1	EH-ADD-02	Z-128	Neuronavigation System

Equipment Change Comparison Table
(Oncologic Institute)

Item No.	Original Equipment Name	Previous Q'ty	Changes	Current Q'ty	Equip. No.	Code No.	Final Equipment Name
OI-01	CT	1	Deleted	0			
OI-02	Ultrasonic diagnostic apparatus, general A	1	No Change	1	OI-02	Z-209	Ultrasound Apparatus B (General)
OI-03	Ultrasonic diagnostic apparatus for biopsy and elastogranhv	1	No Change	1	OI-03	Z-210	Ultrasound Apparatus C (Biopsy/Elastograghy)
OI-04	Digital mammography with laser imager	2	No Change	2	OI-04	Z-256	X-ray Digital Mammography
OI-05	Video laryngoscope	1	No Change	1	OI-05	Z-243	Video Laryngoscope B
OI-06	Video bronchoscope	2	Change in content and combined	2	OI-06	Z-231	Video Bronchoscope B
OI-20	Video bronchoscope	1		1	OI-20		
OI-07	Video gastroscope	2	No Change	2	OI-07	Z-241	Video Gastroscope E
OI-08	Video colonoscope	2	No Change	2	OI-08	Z-232	Video Colonoscope
OI-09	Video endoscope system	4	No Change	4	OI-09	Z-235	Video Endoscope System
OI-10	Endoscope washer disinfector	4	No Change	4	OI-10	Z-071	Endoscope Washer / Disinfector A
OI-11	Ventilator	23	No Change	23	OI-11	Z-222	Ventilator for Adult A
OI-12	Ventilator neonate	1	No Change	1	OI-12	Z-226	Ventilator for Pediatric B
OI-13	Patient monitor	24	No Change	24	OI-13	Z-141	Patient Monitor D
OI-14	Mobile X-ray	2	Change in content	2	OI-14-1	Z-252	X-ray Apparatus Mobile
				1	OI-14-2	Z-255	X-ray CR System
OI-15	Anesthesia machine	19	Change in content	19	OI-15	Z-008	Anesthesia Apparatus B
				19	OI-15	Z-140	Patient Monitor C
OI-16	Anesthesia machine	1	Deleted	0			
OI-17	Patient monitor	19	No Change	19	OI-17	Z-141	Patient Monitor D
OI-18	Video gastroscope	1	No Change	1	OI-18	Z-241	Video Gastroscope E
OI-19	Video colonoscope	1	Added and Change in content	1	OI-19	Z-232	Video Colonoscope
ADD-22	Videocolonoscop perfomance			1	OI-ADD-22		
ADD-23	Videocolonoscop for screening			12	OI-ADD-23		
OI-21	Vidoendoscope system	1	No Change	1	OI-21	Z-235	Video Endoscope System
OI-22	Electrosurgical unit for endoscopy	1	Deleted	0			
OI-23	Endoscope washer disinfector	1	No Change	1	OI-23	Z-071	Endoscope Washer / Disinfector A
OI-24-1	Urological Laparoscopy Set	1	No Change	1	OI-24-1	Z-173	Rigid Laparoscope Set G
OI-24-2	Abdominal Laparoscopy set '	2	No Change	2	OI-24-2	Z-167	Rigid Laparoscope Set A
OI-25	Toracoscopy set	1	No Change	1	OI-25	Z-176	Rigid Thoracoscope Set B
OI-26	C-arm, mobile with monitor	1	No Change	1	OI-26	Z-253	X-ray C-arm
OI-27	X-Ray (Tomosynthesis)	1	No Change	1	OI-27	Z-260	X-ray General with Fluoroscopy B
ADD-01	Operation Table		Change in content and added	2	OI-ADD-01-1	Z-133	Operation Table
				2	OI-ADD-01-2		
				2	OI-ADD-01-3		
				2	OI-ADD-01-4		
				2	OI-ADD-01-5		
				3	OI-ADD-01-6		
				3	OI-ADD-01-7		
ADD-02	Operation Light		Added	16	OI-ADD-02	Z-130	Operation Light, Ceiling
ADD-03	Endoscopic TUR Set + HF unit		Added	2	OI-ADD-03	Z-177	Rigid TUR Set with HF Unit
ADD-05	Blood cell separator(stem cell)		Added	1	OI-ADD-05	Z-156	Plasmapheresis Machine B
ADD-06	Stem cell freezing system		Added	1	OI-ADD-06	Z-193	Stem cell Freezing System
ADD-07	Sterilization Room for leukenia 5 rooms 12m2 x 5 (60 m2 total)		Added	5	OI-ADD-27	Z-093	High Pressure Steam Sterilizer B
				3	OI-ADD-28	Z-247	Washer / Disinfector B
				4	OI-ADD-29	Z-181	Rotary Sealer
ADD-08	Morphopathologic Microscope system with 7 types of Florescence		Added	4	OI-ADD-08	Z-025	Binocular Microscope, Fluorescence
ADD-09	Histoprocesor (Tissue Processor) (Max capacity: 300 casette)		Added	3	OI-ADD-09	Z-097	Histoprocesor
ADD-10	Incuvator		Added	5	OI-ADD-10	Z-058	Drying Oven
ADD-11	Paraffin Embedding Unit		Added	10	OI-ADD-11	Z-137	Paraffin Embedding Machine
ADD-12	Semiautomatic Rotative Microtome		Added	13	OI-ADD-12	Z-180	Rotary Microtome
ADD-13	Water bath		Added	10	OI-ADD-13	Z-249	Water Bath
ADD-14	Hot plate		Added	10	OI-ADD-14	Z-099	Hot Plate
ADD-15	Cryostat Microtome		Added	1	OI-ADD-15	Z-051	Cryotome
ADD-16	Automatic Slide Stainer machine		Added	4	OI-ADD-16	Z-019	Automatic Slide Stainer machine
ADD-17	Glass Coverslipper		Added	3	OI-ADD-17	Z-086	Glass Coverslipping Device
ADD-18	Biosafety Cabinet		Added	1	OI-ADD-18	Z-028	Biosafety Cabinet
ADD-19	Retriever for Antigen Unmasking		Added	1	OI-ADD-19	Z-162	Retriever for Antigen Unmasking
ADD-20	Automatic immunohistochemistry station		Added	1	OI-ADD-20	Z-018	Automatic Immunohistochemistry Station
ADD-21	Hybridizator (FISH/CISH)		Added	1	OI-ADD-21	Z-100	Hybridizator (FISH/CISH)
ADD-24	Videosystem		Added	6	OI-ADD-24	Z-235	Video Endoscope System

Equipment Change Comparison Table
(Oncologic Institute)

Item No.	Original Equipment Name	Previous Q'ty	Changes	Current Q'ty	Equip. No.	Code No.	Final Equipment Name
ADD-25	Sterilisation system ReProx len		Added	2	OI-ADD-25	Z-072	Endoscope Washer / Disinfector B
ADD-26	Sterilisation system ReProx 2en		Added	9	OI-ADD-26	Z-071	Endoscope Washer / Disinfector A
ADD-04	PCR Analyzer		Added⇒Change into each equipment	1	OI-ADD-04		
Add-04-01	Automated Nucleic Acids Extraction System		Added	1	OI-add-04-01	Z-016	Automated Nucleic Acids Extraction System
Add-04-02	Multi Vortex		Added	1	OI-add-04-02	Z-126	Multi Vortex
Add-04-03	Vortex		Addedor combined	2	OI-add-04-03	Z-245	Vortex Mixer
Add-04-16	Vortex				OI-add-04-16		
Add-04-04	Ultracentrifuge for Microtubes		Addedor combined	2	OI-add-04-04	Z-206	Ultracentrifuge for Microtubes
Add-04-15	Ultracentrifuge for Microtubes				OI-add-04-15		
Add-04-06	Thermal Block		Added	1	OI-add-04-06	Z-203	Thermoblock, PCR Sample
Add-04-07	Fluorometer		Addedor combined	2	OI-add-04-07	Z-083	Fluorometer
Add-04-25	Fluorometer				OI-add-04-25		
Add-04-08	Electrophoresis System		Addedor combined	2	OI-add-04-08	Z-065	Electrophoresis System
Add-04-17	Electrophoresis System				OI-add-04-17		
Add-04-09	Set of Pipettes		Addedor combined	3	OI-add-04-09	Z-123	Micropipette Set
Add-04-19	Set of Pipettes				OI-add-04-19		
Add-04-27	Set of Pipettes				OI-add-04-27		
Add-04-10	Multi channel Pipette		Added	1	OI-add-04-10	Z-183	Set of Multi-Channel Micropipette
Add-04-11	Refrigerator		Added	1	OI-add-04-11	Z-161	Refrigerator
Add-04-12	PCR Thermal Cycler		Addedor combined	2	OI-add-04-12	Z-147	PCR Thermal Cycler
Add-04-26	PCR Thermal Cycler				OI-add-04-26		
Add-04-13	Real Time PCR system		Added	1	OI-add-04-13	Z-160	Real Time PCR system
Add-04-14	PCR Box		Added	1	OI-add-04-14	Z-146	PCR Box
Add-04-18	Gel Photo Documentation System		Added	1	OI-add-04-18	Z-085	Gel Photo Documentation System
Add-04-20	Freezer		Added	1	OI-add-04-20	Z-111	Laboratory Freezer
Add-04-21	Sequencer		Addedor combined	1	OI-add-04-21	Z-057	DNA Sequencing System
Add-04-22	Templates Preparator				OI-add-04-22		
Add-04-23	Water Preparation System				OI-add-04-23		
Add-04-24	Collection and Separation DNA Fragments System				OI-add-04-24		

Equipment Change Comparison Table
(Chisinau Municipal Clinical Hospital "Sfanta Treime")

Item No.	Original Equipment Name	Previous Q'ty	Changes	Current Q'ty	Equip. No.	Code No.	Final Equipment Name
ST-01	Angiography, biplane, Multipurpose Angiography System	1	No Change	1	ST-01	Z-009	Angiography
ST-02	CT with angiograph system	1	No Change	1	ST-02	Z-052	CT
ST-03	MRI 1.5T	1	Deleted	0			
ST-04	X-ray apparatus, stationary, digital, with 3 working positions	1	No Change	1	ST-04	Z-259	X-ray General with Fluoroscopy A
ST-05	Stationary universal ultrasound, 4D general B	1	No Change	1	ST-05	Z-208	Ultrasound Apparatus A (General)
ST-06	Stationary universal ultrasound, 4D cardiac	1	No Change	1	ST-06	Z-211	Ultrasound Apparatus D (Cardiology)
ST-07	Ventilator, servo	16	No Change	16	ST-07	Z-222	Ventilator for Adult A
ST-08	Analyzer for determination of acid base balance	1	Change in number	2	ST-08	Z-031	Blood Gas Analyzer
ST-09	Anesthesia machine	10	Change in content	10	ST-09	Z-008	Anesthesia Apparatus B
				10	ST-09	Z-140	Patient Monitor C
ST-10	Laparoscope set, abdomen, Basic Set for Laparoscopic Surgery and basic set for adults (Hernia Repair. Cholecystectomy)	1	No Change	1	ST-10	Z-170	Rigid Laparoscope Set D
ST-11	Laparoscope set, gynecology, Basic Set for Laparoscopic Gynecological Surgery	1	No Change	1	ST-11	Z-169	Rigid Laparoscope Set C
ST-12	Basic Set for Thoracoscopic Surgery	1	No Change	1	ST-12	Z-176	Rigid Thoracoscope Set B
ST-13	Uretheroscope set	1	Combined and Change in content	1	ST-13	Z-172	Rigid Laparoscope Set F
ST-14	Nephroscope set	1		1	ST-14		
ST-15	Lithotriptomy set, pneumatic + ultrasound	1		1	ST-15		
ST-16	TUR set	1		1	ST-16		
ST-17	TV set for urology endoscopy	1		1	ST-17		
ST-18	C-arm	1	Deleted	0			
ST-19	Operation table	1	Deleted	0			
ST-20	ESWL	1	Deleted	0			
ST-21	Video esophagas scope with TV system	1	Change into each equipment	1	ST-21	Z-235	Video Endoscope System
				1	ST-21	Z-236	Video Esophagasscope
ST-22	Slit lamp, OCT (Optical coherence tomography)	1	No Change	1	ST-22	Z-188	Slit Lamp, OCT
Add-01	Automatic complex for sterilizer, for washing, disinfection end packagiug		Added	1	ST-Add-01-1	Z-094	High Pressure Steam Sterilizer C
				3	ST-Add-01-2	Z-095	High Pressure Steam Sterilizer D
				3	ST-Add-01-3	Z-248	Washer / Disinfector C
				3	ST-Add-01-4	Z-207	Ultrasonic Cleaner
				4	ST-Add-01-5	Z-181	Rotary Sealer
Add-02	Digital mobile X-ray System		Added	2	ST-Add-02-1	Z-252	X-ray Apparatus Mobile
				2	ST-Add-02-2	Z-255	X-ray CR System
				1	ST-Add-02-3	Z-257	X-ray Dry Imager
Add-04	Analyzer for proteins electrophoresis		Added	1	ST-Add-04	Z-064	Electrophoresis Protein Analyzer
Add-05	Blood biochimical Analyzer		Added	1	ST-Add-05	Z-027	Biochemical Analyzer B
Add-06	Blood hematologic Analyzer		Added	1	ST-Add-06	Z-089	Hematology Analyzer B
Add-08	Basic Set for Laparoscopic Colorectal Surgery		Added	1	ST-Add-08	Z-168	Rigid Laparoscope Set B
Add-09	Set for Endoscopic ORL Surgery with TV control		Added	1	ST-Add-09	Z-174	Rigid ORL Surgery Endoscope Set
Add-10	Set for Lazer ENT Surgery		Added	1	ST-Add-10	Z-075	ENT Surgery Laser
Add-11	Defibrilator		Added	4	ST-Add-11	Z-055	Defibrillator with Pacing
Add-12	Patient monitor for non invazive hemodinamic		Added	18	ST-Add-12	Z-141	Patient Monitor D
Add-13	Patient monitoring for of invazive hemodinamic		Added	4	ST-Add-13	Z-143	Patient Monitor F
Add-14	Patient monitoring and monitoring Electroencefalography		Added	3	ST-Add-14	Z-144	Patient Monitor G
Add-15	Infusion pump		Added	34	ST-Add-15	Z-110	Infusion Pump B
Add-16	Syringe pump		Added	34	ST-Add-16	Z-202	Syringe Pump B
Add-17	Suction unit		Added	34	ST-Add-17	Z-195	Suction Unit
Add-18	Servoventilater mobile (mobile)		Added	4	ST-Add-18	Z-227	Ventilator Mobile
Add-19	Operation table		Addedand change in content	3	ST-Add-19-1	Z-133	Operation Table
				6	ST-Add-19-2		
Add-20	Operation light		Added	10	ST-Add-20	Z-130	Operation Light, Ceiling
Add-21	Electrosurgical units		Added	10	ST-Add-21	Z-068	Electrosurgical Unit B

Equipment Change Comparison Table
(National Center for Public Health)

Item No.	Original Equipment Name	Previous Q'ty		Changes	Current Q'ty		Equip. No.	Code No.	Final Equipment Name
		Central	Regional		Central	Regional			
IP-01	ELISA System	3	0	Change in number	1	0	IP-01	Z-069	ELISA System
IP-02	Automated DNA sequencer	1	0	No Change	1	0	IP-02	Z-056	DNA Sequencer
IP-03	Real Time PCR set	0	3	No Change	0	3	IP-03	Z-158	Real Time PCR
IP-04	Ice maker	1	1	No Change	1	1	IP-04	Z-102	Ice Maker
IP-05	Biological safety cabinets, Class II	3	0	Deleted（Procured by EU）	0	0			
IP-06	Autoclave, vertical	5	0	Change in number	2	0	IP-06	Z-014	Autoclave, Vertical
IP-07	Drying oven	4	0	Change in number	1	0	IP-07	Z-058	Drying Oven
IP-08	Automated Culture Media Preparator	1	0	No Change	1	0	IP-08	Z-015	Automated Culture Media Preparator
IP-09	Automatic colony counter	1	0	No Change	1	0	IP-09	Z-017	Automatic Colony Counter
IP-10	Colony counter with reader	0	10	No Change	0	10	IP-10	Z-046	Colony Counter
IP-11	Binocular microscope, dark field, phasse contrast, and fluorescent with TV monitor	2	0	Deleted（Procured by EU）	0	0			
IP-12	Stereo microscope with TV monitor	1	0	No Change	1	0	IP-12	Z-194	Stereo Microscope with TV Monitor
IP-13	Incubator, cooling	4	0	Deleted（Procured by EU）	0	0			
IP-14	Thermoblock, PCR sample	1	3	No Change	1	3	IP-14	Z-203	Thermoblock, PCR Sample
IP-15	Micro centrifuge, 1.5ml tube	0	6	No Change	0	6	IP-15	Z-121	Micro Centrifuge
IP-16	Centrifuge, cooling	0	6	Deleted（Procured by EU）	0	0			
IP-17	Fluid pump, suction	1	3	No Change	1	3	IP-17	Z-082	Fluid Pump, Suction
IP-18	Incubator, natural convection	8	0	Change in number	2	0	IP-18	Z-116	Laboratory Incubator A
IP-19	CO2 Incubator	2	0	Deleted（Procured by EU）	0	0			
IP-20	Laboratory Freezer	2	10	No Change	2	10	IP-20	Z-111	Laboratory Freezer
IP-21	Laboratory Freezer, ultra low	1	3	No Change	1	3	IP-21	Z-112	Laboratory Freezer, ultra low
IP-22	Electrical balance A	1	0	Deleted（Procured by EU）	0	0			
IP-23	Blender	1	0	Deleted（Procured by EU）	0	0			
IP-23b	Blender peristaltic tipe 400-500 ml			Added	1	10	IP-23b	Z-029	Blender Peristaltic Type
IP-24	Air Sampler for airborne bacteria	1	0	Deleted（Procured by EU）	0	0			
IP-25	Ultrasonic Bath	1	0	Deleted（Procured by EU）	0	0			
IP-26	Vortex	6	23	No Change	6	23	IP-26	Z-245	Vortex Mixer
IP-27	Timer	17	56	Deleted（Procured by EU）	0	0			
IP-28	Thermometer, digital	30	100	Deleted（Procured by EU）	0	0			
IP-29	Thermostatic bath	1	10	No Change	1	10	IP-29	Z-249	Water Bath
IP-30	Liquid filterling set with vacuum pump, 3 slots	1	0	Deleted（Procured by EU）	0	0			
IP-31	Set of adjustable digital dispensers	5	11	No Change	5	11	IP-31	Z-123	Micropipette Set
IP-32	Set of Multi-Channel Micropipette	2	15	No Change	2	15	IP-32	Z-183	Set of Multi-Channel Micropipette
IP-33	Gas Chromatograph, ECD/NPD detector	1	2	Change in number	0	1	IP-33	Z-039	Chromatograph, Gas A
IP-34	Gas Chromatograph, FID mass-selective detectors	0	1	No Change	0	1	IP-34	Z-042	Chromatograph, Gas D
IP-35	Liquid Chromatograph, 3 detectors	1	1	Distributed to other place	0	2	IP-35	Z-038	Chromatograph Liquid
IP-36	Gas Chromatograph, FID detector, automatic headspase sampler	0	1	Distributed to other place	1	0	IP-36	Z-040	Chromatograph, Gas B
IP-37	Gas Chromatograph, FID detector, thermal desorbe	0	1	No Change	0	1	IP-37	Z-041	Chromatograph, Gas C
IP-38	Ultra water purifier	0	1	No Change	0	1	IP-38	Z-205	Ultra Water Purifier
IP-39	Microwave mineralizer	0	1	No Change	0	1	IP-39	Z-124	Microwave Mineralizer
IP-40	Atomic absorption spectrophotometer	1	2	Distributed to other place	0	3	IP-40	Z-012	Atomic Absorption Sectrophotometer
IP-41	Solid phase extraction	1	0	No Change	1	0	IP-41	Z-189	Solid Phase Extraction
IP-42	Rotary evapolator with vacuum pump	1	0	No Change	1	0	IP-42	Z-179	Rotary Evaporator with Vacuum Pump
IP-43	Environmental monitor, portable	1	3	Deleted（Procured by EU）	0	0			
IP-44	Aerosol monitor	1	3	Deleted（Procured by EU）	0	0			
IP-45	Fluorometer	1	0	No Change	1	0	IP-45	Z-083	Fluorometer
IP-46	Capillary electrophoresis apparatus	1	0	No Change	1	0	IP-46	Z-034	Capillary Electrophoresis Apparatus
IP-47	Shaker, reciprocating	2	0	No Change	2	0	IP-47	Z-184	Shaker, Reciprocating
IP-48	Homogenizer	3	0	No Change	3	0	IP-48	Z-098	Homogenizer
IP-49	TLC densitometer	2	0	Change in number	1	0	IP-49	Z-204	TLC Densitometer
IP-50	Conductometer	2	5	Change in number and Distributed to other place	1	5	IP-50	Z-047	Conductometer
IP-51	Digital Muffle furnace	1	0	Deleted（Procured by EU）	0	0			
IP-52	Distilator	2	0	Deleted（Procured by EU）	0	0			
IP-53	Bidistillator	1	0	No Change	1	0	IP-53	Z-022	Bidistillator
IP-54	Spectrophotometer UV-VIS	4	0	Change in number	2	0	IP-54	Z-192	Spectrophotometer UV-VIS
IP-55	Photoelectric colorimeter	4	0	Deleted（Procured by EU）	0	0			
IP-56	Incubator	1	0	No Change	1	0	IP-56	Z-117	Laboratory Incubator B
IP-57	Automatic titrator with recorder	1	6	Change in number	1	0	IP-57	Z-020	Automatic Titrator with Recorder
IP-58	Air sampling pump for thermodesorber GC (Determine organic compounds in the air)	1	1	No Change	1	1	IP-58	Z-002	Air Sampling Pump A
IP-59	Laboratory washing, drying and disinfecting machine	4	0	No Change	4	0	IP-59	Z-118	Laboratory Washing, Drying and Disinfecting Machine
IP-60	pH-meter	1	5	No Change	1	5	IP-60	Z-153	pH-Meter
IP-61	Mercury Analyzer	1	3	No Change	1	3	IP-61	Z-120	Mercury Analyzer
IP-62	Laboratory Fume Hoods with external exhaust system	10	0	Change in content	5	0	IP-62	Z-113	Laboratory Fume Hood A
					1	0	IP-62	Z-114	Laboratory Fume Hood B
					4	0	IP-62	Z-115	Laboratory Fume Hood C

Equipment Change Comparison Table
(National Center for Public Health)

Item No.	Original Equipment Name	Previous Q'ty		Changes	Current Q'ty		Equip. No.	Code No.	Final Equipment Name
		Central	Regional		Central	Regional			
IP-63	Air sampling pump with 4 outlets (Detects toxic chemicals)	3	10	No Change	3	10	IP-63	Z-003	Air Sampling Pump B
IP-64	Selective Radiation Meter	1	0	No Change	1	0	IP-64	Z-182	Selective Radiation Meter
IP-65	UV radiation meter	1	0	Deleted（Not required）	0	0			
IP-66	Sound level meter	1	0	Change in number	2	3	IP-66	Z-191	Sound Level Meter
IP-67	Ultrasound microphone	1	0	No Change	1	0	IP-67	Z-218	Ultrasound Microphone
IP-68	Sound calibrator	1	3	No Change	1	3	IP-68	Z-190	Sound Calibrator
IP-69	Vibration meter	2	3	No Change	2	3	IP-69	Z-229	Vibration Meter
IP-70	Amenity meter	2	3	Change in number	1	0	IP-70	Z-005	Amenity Meter
IP-71	Light Meter	1	3	No Change	1	3	IP-71	Z-119	Light Meter
IP-72	Dust meter	2	3	No Change	2	3	IP-72	Z-059	Dust Meter
IP-73	Alpha and beta counting spectrometry system	1	1	Change in number	1	0	IP-73	Z-004	Alpha and Beta Counting Spectrometry System
IP-74	Gamma counting spectrometry system	0	3	Change in number	0	2	IP-74	Z-084	Gamma Counting Spectrometry System
IP-75	X-Ray impulse dosemeter	1	3	Change in number and distributed to other place	2	0	IP-75	Z-261	X-Ray Impulse Dosimeter
IP-76	Survey meter A	1	3	Change in number	1	0	IP-76	Z-199	Survey Meter A
IP-77	Survey meter B	1	3	Change in number	0	3	IP-77	Z-200	Survey Meter B

Code	Equipment Name
Z-006	Amino Acid Analyzer
Z-009	Angiography
Z-012	Atomic Absorption Spectrophotometer
Z-014	Autoclave, Vertical
Z-023	Binocular Microscope
Z-024	Binocular Microscope with Camera
Z-025	Binocular Microscope, Fluorescence
Z-030	Blood Bank Refrigerator
Z-035	Cardiotocograph
Z-036	Central Monitoring System
Z-037	Centrifuge
Z-038	Chromatograph Liquid
Z-039	Chromatograph, Gas A
Z-040	Chromatograph, Gas B
Z-041	Chromatograph, Gas C
Z-042	Chromatograph, Gas D
Z-045	Coagulation Analyzer
Z-052	CT
Z-053	Defibrillator
Z-054	Defibrillator with Internal Pad
Z-055	Defibrillator with Pacing
Z-058	Drying Oven
Z-060	ECG, 12-channel
Z-061	EEG
Z-070	EMG
Z-071	Endoscope Washer / Disinfector A
Z-072	Endoscope Washer / Disinfector B
Z-083	Fluorometer
Z-088	Hematology Analyzer A
Z-089	Hematology Analyzer B
Z-090	Hematology Analyzer C
Z-103	ICU Bed
Z-106	ICU Central Monitor
Z-108	Infant Transport Incubator
Z-109	Infusion Pump A
Z-110	Infusion Pump B
Z-111	Laboratory Freezer
Z-112	Laboratory Freezer, ultra low
Z-113	Laboratory Fume Hood A
Z-114	Laboratory Fume Hood B
Z-115	Laboratory Fume Hood C
Z-116	Laboratory Incubator A
Z-117	Laboratory Incubator B
Z-125	MRI
Z-133	Operation Table
Z-136	Panorama X-ray Apparatus
Z-138	Patient Monitor A
Z-139	Patient Monitor B
Z-140	Patient Monitor C
Z-141	Patient Monitor D

Code	Equipment Name
Z-142	Patient Monitor E
Z-143	Patient Monitor F
Z-144	Patient Monitor G
Z-145	Patient Trolley
Z-152	Phacoemulsification Machine
Z-157	Polysomnograph
Z-161	Refrigerator
Z-175	Rigid Thoracoscope Set A
Z-178	Rigid Urology TUR Set
Z-188	Slit Lamp, OCT
Z-192	Spectrophotometer UV-VIS
Z-194	Stereo Microscope with TV Monitor
Z-201	Syringe Pump A
Z-202	Syringe Pump B
Z-208	Ultrasound Apparatus A (General)
Z-209	Ultrasound Apparatus B (General)
Z-210	Ultrasound Apparatus C (Biopsy/Elastograghy)
Z-211	Ultrasound Apparatus D (Cardiology)
Z-212	Ultrasound Apparatus E (Cardiology)
Z-213	Ultrasound Apparatus F (Neonatology)
Z-214	Ultrasound Apparatus G (Obstetrics)
Z-215	Ultrasound Apparatus H (Obstetrics)
Z-216	Ultrasound Apparatus I (Pediatrics)
Z-217	Ultrasound Apparatus J (Urology)
Z-219	Urine Analyzer
Z-229	Vibration Meter
Z-230	Video Bronchoscope A
Z-231	Video Bronchoscope B
Z-232	Video Colonoscope
Z-233	Video Cystoscope
Z-234	Video Duodenoscope
Z-235	Video Endoscope System
Z-236	Video Esophagoscope
Z-237	Video Gastroscope A
Z-238	Video Gastroscope B
Z-239	Video Gastroscope C
Z-240	Video Gastroscope D
Z-241	Video Gastroscope E
Z-242	Video Laryngoscope A
Z-243	Video Laryngoscope B
Z-251	X-ray Apparatus General
Z-252	X-ray Apparatus Mobile
Z-253	X-ray C-arm
Z-254	X-ray C-arm with DSA
Z-255	X-ray CR System
Z-256	X-ray Digital Mammography
Z-257	X-ray Dry Imager
Z-258	X-ray Fluoroscopy for Urology
Z-259	X-ray General with Fluoroscopy A
Z-260	X-ray General with Fluoroscopy B

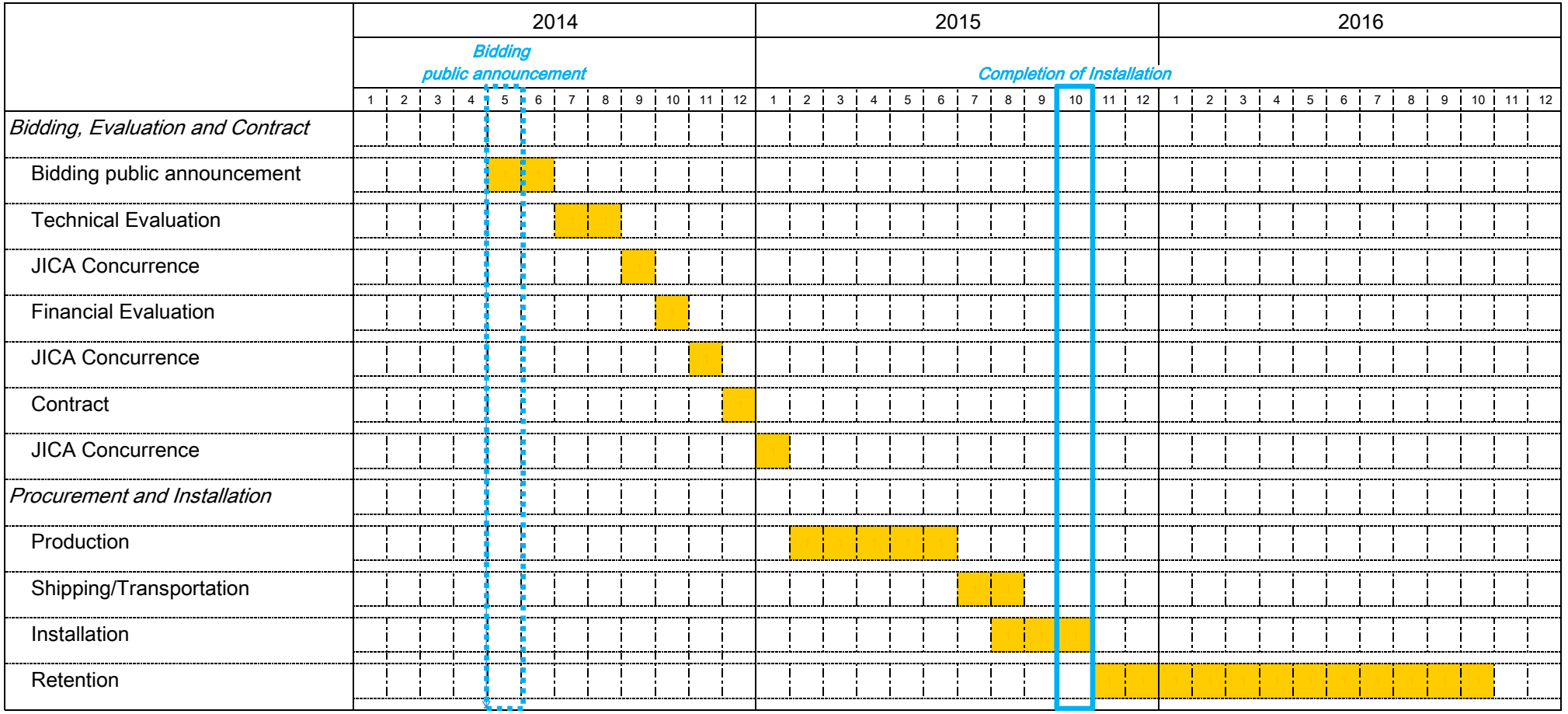
Medical and Laboratory Devices LOT-1		
Code	Equipment Name	Total
Z-001	Activated Coagulation Timer	2
Z-006	Amino Acid Analyzer	1
Z-007	Anesthesia Apparatus A	5
Z-008	Anesthesia Apparatus B	51
Z-010	Argon Plasma Coagulator	1
Z-011	Artificial Heart-Lung Machine	2
Z-014	Autoclave, Vertical	5
Z-018	Automatic Immunohistochemistry Station	1
Z-019	Automatic Slide Stainer machine	4
Z-021	Autotransfusion System	5
Z-023	Binocular Microscope	3
Z-024	Binocular Microscope with Camera	1
Z-025	Binocular Microscope, Fluorescence	9
Z-026	Biochemical Analyzer A	1
Z-027	Biochemical Analyzer B	1
Z-028	Biosafety Cabinet	1
Z-030	Blood Bank Refrigerator	12
Z-031	Blood Gas Analyzer	2
Z-032	Blood Warmer	10
Z-033	Body Warmer	16
Z-037	Centrifuge	2
Z-043	Cleanbench	1
Z-044	CO2 Laser	1
Z-045	Coagulation Analyzer	2
Z-049	Counterpulsation (IABP) Equipment	1
Z-050	CPAP	2
Z-051	Cryotome	2
Z-052	CT	3
Z-056	DNA Sequencer	2
Z-058	Drying Oven	6
Z-062	Electric Coagulator, RF	1
Z-063	Electrodermatome	1
Z-064	Electrophoresis Protein Analyzer	1
Z-067	Electrosurgical Unit A	2
Z-068	Electrosurgical Unit B	17
Z-071	Endoscope Washer / Disinfector A	19
Z-072	Endoscope Washer / Disinfector B	2
Z-077	Equipment for Ecmo	1
Z-078	ESR Analyzer	2
Z-079	Examination Light	6
Z-080	Extracorporeal Life Support	1
Z-081	Feeding Pump	1
Z-086	Glass Coverslipping Device	3
Z-087	Headlight System	4
Z-088	Hematology Analyzer A	2
Z-089	Hematology Analyzer B	2
Z-090	Hematology Analyzer C	1
Z-091	Hemodialysis Machine	1
Z-096	High Speed Micromotor	1
Z-097	Histoprocesor	3
Z-099	Hot Plate	11
Z-100	Hybridizator (FISH/CISH)	1
Z-101	Hyper/Hypothermia System	2
Z-103	ICU Bed	40
Z-104	ICU Bed Head Unit Single	10
Z-105	ICU Bed Head Unit Triple	2
Z-108	Infant Transport Incubator	5
Z-109	Infusion Pump A	54
Z-110	Infusion Pump B	34

Medical and Laboratory Devices LOT-1		
Code	Equipment Name	Total
Z-116	Laboratory Incubator A	3
Z-117	Laboratory Incubator B	1
Z-122	Microdebrider	1
Z-125	MRI	1
Z-127	Near Infrared Oxygenation Monitor	1
Z-128	Neuronavigation System	1
Z-130	Operation Light, Ceiling	26
Z-131	Operation Light, Ceiling with Camera	10
Z-132	Operation Microscope	1
Z-133	Operation Table	51
Z-134	Osmometer	1
Z-136	Panorama X-ray Apparatus	1
Z-137	Paraffin Embedding Machine	10
Z-145	Patient Trolley	4
Z-148	Pendant for Anesthesia	10
Z-149	Pendant for ICU	13
Z-150	Pendant for Surgical	10
Z-151	Perspiration Analyzer	1
Z-152	Phacoemulsification Machine	1
Z-155	Plasmapheresis Machine A	1
Z-156	Plasmapheresis Machine B	1
Z-158	Pulse Oximeter, Hand-held	14
Z-159	Real Time PCR	4
Z-162	Retriever for Antigen Unmasking	1
Z-163	Rhino Manometer	1
Z-164	Rigid Arthroscope Set	1
Z-165	Rigid Bronchoscope, Pediatric	1
Z-166	Rigid Cystoscope Set	1
Z-167	Rigid Laparoscope Set A	3
Z-168	Rigid Laparoscope Set B	1
Z-169	Rigid Laparoscope Set C	2
Z-170	Rigid Laparoscope Set D	1
Z-171	Rigid Laparoscope Set E	1
Z-172	Rigid Laparoscope Set F	1
Z-173	Rigid Laparoscope Set G	1
Z-174	Rigid ORL Surgery Endoscope Set	1
Z-175	Rigid Thoracoscope Set A	1
Z-176	Rigid Thoracoscope Set B	2
Z-177	Rigid TUR Set with HF Unit	2
Z-178	Rigid Urology TUR Set	1
Z-180	Rotary Microtome	13
Z-186	Skin Grafts Perforator	1
Z-188	Slit Lamp, OCT	1
Z-193	Stem cell Freezing System	1
Z-195	Suction Unit	53
Z-196	Superimposed High Frequency Jet Ventilation	1
Z-197	Surgical Ablation System	1
Z-198	Surgical Retractors	2
Z-201	Syringe Pump A	58
Z-202	Syringe Pump B	49
Z-204	TLC Densitometer	1
Z-207	Ultrasonic Cleaner	3
Z-208	Ultrasound Apparatus A (General)	1
Z-209	Ultrasound Apparatus B (General)	1
Z-210	Ultrasound Apparatus C (Biopsy/Elastograghy)	1
Z-211	Ultrasound Apparatus D (Cardiology)	1
Z-212	Ultrasound Apparatus E (Cardiology)	2
Z-213	Ultrasound Apparatus F (Neonatology)	1
Z-214	Ultrasound Apparatus G (Obstetrics)	1

Medical and Laboratory Devices LOT-1		
Code	Equipment Name	Total
Z-215	Ultrasound Apparatus H (Obstetrics)	4
Z-216	Ultrasound Apparatus I (Pediatrics)	3
Z-217	Ultrasound Apparatus J (Urology)	1
Z-218	Ultrasound Microphone	1
Z-219	Urine Analyzer	3
Z-220	UV Handwasher	10
Z-221	Vacuum Therapy Unit	1
Z-224	Ventilator for Neonate	2
Z-225	Ventilator for Pediatric A	1
Z-226	Ventilator for Pediatric B	2
Z-227	Ventilator Mobile	4
Z-228	Vertical Laminar Flow Unit	2
Z-229	Vibration Meter	5
Z-230	Video Bronchoscope A	1
Z-231	Video Bronchoscope B	3
Z-232	Video Colonoscope	18
Z-233	Video Cystoscope	1
Z-234	Video Duodenoscope	1
Z-235	Video Endoscope System	19
Z-236	Video Esophagoscope	1
Z-237	Video Gastroscope A	2
Z-238	Video Gastroscope B	2
Z-239	Video Gastroscope C	2
Z-240	Video Gastroscope D	2
Z-241	Video Gastroscope E	5
Z-242	Video Laryngoscope A	2
Z-243	Video Laryngoscope B	1
Z-244	Vitreotome	1
Z-246	Washer / Disinfector A	2
Z-247	Washer / Disinfector B	6
Z-248	Washer / Disinfector C	3
Z-252	X-ray Apparatus Mobile	10
Z-253	X-ray C-arm	5
Z-254	X-ray C-arm with DSA	2
Z-255	X-ray CR System	6
Z-256	X-ray Digital Mammography	2
Z-257	X-ray Dry Imager	1
Z-262	Yag Laser	1

Medical and Laboratory Devices LOT-2		
Code	Equipment Name	Total
Z-002	Air Sampling Pump A	2
Z-003	Air Sampling Pump B	13
Z-004	Alpha, Beta and Gamma Counting Spectrometry System	1
Z-005	Amenity Meter	1
Z-009	Angiography	2
Z-012	Atomic Absorption Spectrophotometer	3
Z-013	Audiometer	2
Z-015	Automated Culture Media Preparator	1
Z-016	Automated Nucleic Acids Extraction System	1
Z-017	Automatic Colony Counter	1
Z-020	Automatic Titrator with Recorder	1
Z-022	Bidistillator	1
Z-029	Blender Peristaltic Type	11
Z-034	Capillary Electrophoresis Apparatus	1
Z-035	Cardiotocograph	10
Z-036	Central Monitoring System	1
Z-038	Chromatograph Liquid	2
Z-039	Chromatograph, Gas A	1
Z-040	Chromatograph, Gas B	1
Z-041	Chromatograph, Gas C	1
Z-042	Chromatograph, Gas D	1
Z-046	Colony Counter	10
Z-047	Conductometer	6
Z-048	Cooled Ultracentrifuge for Microtubes	1
Z-053	Defibrillator	13
Z-054	Defibrillator with Internal Pad	2
Z-055	Defibrillator with Pacing	4
Z-057	DNA Sequencing System	1
Z-059	Dust Meter	5
Z-060	ECG, 12-channel	2
Z-061	EEG	4
Z-065	Electrophoresis System	2
Z-066	Electrosafety Analyzer	1
Z-069	ELISA System	1
Z-070	EMG	1
Z-073	ENT Examination Unit with Chair	2
Z-074	ENT Navigation System	1
Z-075	ENT Surgery Laser	1
Z-076	ENT Surgical Micromotor	1
Z-082	Fluid Pump, Suction	4
Z-083	Fluorometer	3
Z-084	Gamma Counting Spectrometry System	2
Z-085	Gel Photo Documentation System	1
Z-092	High Pressure Steam Sterilizer A	2
Z-093	High Pressure Steam Sterilizer B	10
Z-094	High Pressure Steam Sterilizer C	1
Z-095	High Pressure Steam Sterilizer D	3
Z-098	Homogenizer	3
Z-102	Ice Maker	2
Z-106	ICU Central Monitor	3
Z-107	Impedance Audiometer	2
Z-111	Laboratory Freezer	13
Z-112	Laboratory Freezer, ultra low	4
Z-113	Laboratory Fume Hood A	5
Z-114	Laboratory Fume Hood B	1
Z-115	Laboratory Fume Hood C	4
Z-118	Laboratory Washing, Drying and Disinfecting Machine	4
Z-119	Light Meter	4
Z-120	Mercury Analyzer	4

Medical and Laboratory Devices LOT-2		
Code	Equipment Name	Total
Z-121	Micro Centrifuge	6
Z-123	Micropipette Set	19
Z-124	Microwave Mineralizer	1
Z-126	Multi Vortex	1
Z-129	OAE Screener	12
Z-135	Otoscope with Monitor	2
Z-138	Patient Monitor A	34
Z-139	Patient Monitor B	2
Z-140	Patient Monitor C	54
Z-141	Patient Monitor D	96
Z-142	Patient Monitor E	15
Z-143	Patient Monitor F	4
Z-144	Patient Monitor G	3
Z-146	PCR Box	1
Z-147	PCR Thermal Cycler	2
Z-153	pH-Meter	6
Z-154	Plasma Sterilizer	1
Z-157	Polysomnograph	1
Z-160	Real Time PCR system	1
Z-161	Refrigerator	1
Z-179	Rotary Evaporator with Vacuum Pump	1
Z-181	Rotary Sealer	12
Z-182	Selective Radiation Meter	1
Z-183	Set of Multi-Channel Micropipette	18
Z-184	Shaker, Reciprocating	2
Z-185	Simulator, Multiparameter	1
Z-187	Slave Monitor	5
Z-189	Solid Phase Extraction	1
Z-190	Sound Calibrator	4
Z-191	Sound Level Meter	5
Z-192	Spectrophotometer UV-VIS	2
Z-194	Stereo Microscope with TV Monitor	1
Z-199	Survey Meter A	1
Z-200	Survey Meter B	3
Z-203	Thermoblock, PCR Sample	5
Z-205	Ultra Water Purifier	1
Z-206	Ultracentrifuge for Microtubes	2
Z-222	Ventilator for Adult A	83
Z-223	Ventilator for Adult B	10
Z-245	Vortex Mixer	31
Z-249	Water Bath	22
Z-250	Water Distiller	1
Z-251	X-ray Apparatus General	1
Z-258	X-ray Fluoroscopy for Urology	1
Z-259	X-ray General with Fluoroscopy A	2
Z-260	X-ray General with Fluoroscopy B	2
Z-261	X-Ray Impulse Dosimeter	2


2014
2015
2016
Bidding
public announcement
Completion of Installation
1 2 3 4 5 6 7 8 9 10 11 12
1 2 3 4 5 6 7 8 9 10 11 12
1 2 3 4 5 6 7 8 9 10 11 12
Bidding, Evaluation and Contract
Bidding public announcement
Technical Evaluation
JICA Concurrence
Financial Evaluation
JICA Concurrence
Contract
JICA Concurrence
Procurement and Installation
Production
Shipping/Transportation
Installation
Retention

MINUTES OF DISCUSSIONS
ON THE DETAILED DESIGN SURVEY
FOR
THE PROJECT FOR IMPROVEMENT OF MEDICAL CARE SERVICE
IN
REPUBLIC OF MOLDOVA
(EXPLANATION OF DRAFT REPORT)

Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Detailed Design Survey Team on the Project for Improvement of Medical Care Service (hereinafter referred to as "the Project") to the Republic of Moldova (hereinafter referred to as "Moldova") from August 2013 to January 2014. After the discussions, field surveys and technical examinations of the survey results in Japan, JICA dispatched a Draft Report Explanation Team (hereinafter referred to as "the Team") , which is headed by Dr. Kaname KANAI, Executive Technical Advisor to the Director General, Human Development Department, JICA, from 28th to 30th January, 2014.

In the course of discussions, both parties confirmed the main items described in the attached sheets.

Chisinau, January 30th, 2014

Dr. Andrei USATII
Minister
Ministry of Health

Dr. Kaname KANAI, M.D., Ph.D.
Executive Technical Advisor to the Director General,
Human Development Department
Japan International Cooperation Agency

ATTACHMENT

1. Product of Detailed Design Survey

Both sides confirmed and approved the contents of the Detailed Design Survey Product (Bidding Documents and Draft Final Report). As it was written in the Record of Discussion signed by both side on February 13th, 2013, JICA, which retains the copyright and other intellectual property rights of the Design Documents made by the Detailed Design Survey, shall give Ministry of Health (MoH) a non-terminable transferable and non-exclusive royalty-free license to copy, use and communicate the Design Documents, including making and using modifications of them for the purpose to complete the Yen Loan Project.

Moldova side confirmed that the Bidding Documents will be approved and endorsed officially by MoH in the stage of the procurement. Moldova side also confirmed that, in principal, no further modification will be made on the equipment list as attached.

2. Operation and Maintenance Cost

Regarding operational and maintenance budget for the hospitals and Centers for Public Health(including National Center of Public Health), MoH took the commitment in the appraisal mission conducted in December 2012, that an order will be issued to make sure that each facility involved in the Project for improvement of MedicalCare Service (MDAP1 project) will secure the annual budget necessary for operation and maintenance for the purchased equipment. Though the order has not been issued yet, MoH reconfirmed the engagement in providing the above mentioned document once the bidding is announced.

Annex-1 List of Equipment

RH: Republican Clinical Hospital
MH: Scientific Research Institute in the Field of Mother and Child Health Protection
EH: National Scientific-Practical Centre for Emergency Medicine
OI: Oncologic Institute
ST: Chisinau Municipal Clinical Hospital "Sfanta Treime"
IP: National Center for Public Health

Code	Equipment Name	Quantity						
		RH	MH	EH	OI	ST	IP	Total
Z-001	Activated Coagulation Timer	2						2
Z-002	Air Sampling Pump A						2	2
Z-003	Air Sampling Pump B						13	13
Z-004	Alpha and Beta Counting Spectrometry System						1	1
Z-005	Amenity Meter						1	1
Z-006	Amino Acid Analyzer		1					1
Z-007	Anesthesia Apparatus A	5						5
Z-008	Anesthesia Apparatus B	11	11		19	10		51
Z-009	Angiography			1		1		2
Z-010	Argon Plasma Coagulator	1						1
Z-011	Artificial Heart-Lung Machine	2						2
Z-012	Atomic Absorption Spectrophotometer						3	3
Z-013	Audiometer		2					2
Z-014	Autoclave, Vertical	3					2	5
Z-015	Automated Culture Media Preparator						1	1
Z-016	Automated Nucleic Acids Extraction System				1			1
Z-017	Automatic Colony Counter						1	1
Z-018	Automatic Immunohistochemistry Station				1			1
Z-019	Automatic Slide Stainer machine				4			4
Z-020	Automatic Titrator with Recorder						1	1
Z-021	Autotransfusion System	5						5
Z-022	Bidistillator						1	1
Z-023	Binocular Microscope	2	1					3
Z-024	Binocular Microscope with Camera	1						1
Z-025	Binocular Microscope, Fluorescence		5		4			9
Z-026	Biochemical Analyzer A		1					1
Z-027	Biochemical Analyzer B					1		1
Z-028	Biosafety Cabinet				1			1
Z-029	Blender Peristaltic Type						11	11
Z-030	Blood Bank Refrigerator	12						12
Z-031	Blood Gas Analyzer					2		2
Z-032	Blood Warmer	10						10
Z-033	Body Warmer	16						16
Z-034	Capillary Electrophoresis Apparatus						1	1
Z-035	Cardiotocograph		10					10
Z-036	Central Monitoring System		1					1
Z-037	Centrifuge	2						2
Z-038	Chromatograph Liquid						2	2
Z-039	Chromatograph, Gas A						1	1
Z-040	Chromatograph, Gas B						1	1
Z-041	Chromatograph, Gas C						1	1
Z-042	Chromatograph, Gas D						1	1
Z-043	Cleanbench	1						1
Z-044	CO2 Laser	1						1
Z-045	Coagulation Analyzer	1	1					2
Z-046	Colony Counter						10	10
Z-047	Conductometer						6	6

Code	Equipment Name	Quantity						
		RH	MH	EH	OI	ST	IP	Total
Z-048	Cooled Ultracentrifuge for Microtubes				1			1
Z-049	Counterpulsation (IABP) Equipment	1						1
Z-050	CPAP		2					2
Z-051	Cryotome	1			1			2
Z-052	CT		1	1		1		3
Z-053	Defibrillator	6	7					13
Z-054	Defibrillator with Internal Pad	2						2
Z-055	Defibrillator with Pacing					4		4
Z-056	DNA Sequencer		1				1	2
Z-057	DNA Sequencing System				1			1
Z-058	Drying Oven				5		1	6
Z-059	Dust Meter						5	5
Z-060	ECG, 12-channel	2						2
Z-061	EEG	2	2					4
Z-062	Electric Coagulator, RF		1					1
Z-063	Electrodermatome		1					1
Z-064	Electrophoresis Protein Analyzer					1		1
Z-065	Electrophoresis System				2			2
Z-066	Electrosafety Analyzer	1						1
Z-067	Electrosurgical Unit A	2						2
Z-068	Electrosurgical Unit B	7				10		17
Z-069	ELISA System						1	1
Z-070	EMG		1					1
Z-071	Endoscope Washer / Disinfector A	1	3	1	14			19
Z-072	Endoscope Washer / Disinfector B				2			2
Z-073	ENT Examination Unit with Chair		2					2
Z-074	ENT Navigation System	1						1
Z-075	ENT Surgery Laser					1		1
Z-076	ENT Surgical Micromotor	1						1
Z-077	Equipment for Ecmo	1						1
Z-078	ESR Analyzer	2						2
Z-079	Examination Light	6						6
Z-080	Extracorporeal Life Support	1						1
Z-081	Feeding Pump	1						1
Z-082	Fluid Pump, Suction						4	4
Z-083	Fluorometer				2		1	3
Z-084	Gamma Counting Spectrometry System						2	2
Z-085	Gel Photo Documentation System				1			1
Z-086	Glass Coverslipping Device				3			3
Z-087	Headlight System	4						4
Z-088	Hematology Analyzer A	2						2
Z-089	Hematology Analyzer B		1			1		2
Z-090	Hematology Analyzer C		1					1
Z-091	Hemodialysis Machine	1						1
Z-092	High Pressure Steam Sterilizer A	2						2
Z-093	High Pressure Steam Sterilizer B			5	5			10
Z-094	High Pressure Steam Sterilizer C					1		1
Z-095	High Pressure Steam Sterilizer D					3		3
Z-096	High Speed Micromotor	1						1
Z-097	Histoprocesor				3			3
Z-098	Homogenizer						3	3
Z-099	Hot Plate		1		10			11
Z-100	Hybridizator (FISH/CISH)				1			1

Code	Equipment Name	Quantity						
		RH	MH	EH	OI	ST	IP	Total
Z-101	Hyper/Hypothermia System	2						2
Z-102	Ice Maker						2	2
Z-103	ICU Bed		40					40
Z-104	ICU Bed Head Unit Single	10						10
Z-105	ICU Bed Head Unit Triple	2						2
Z-106	ICU Central Monitor	3						3
Z-107	Impedance Audiometer		2					2
Z-108	Infant Transport Incubator	1	4					5
Z-109	Infusion Pump A	54						54
Z-110	Infusion Pump B					34		34
Z-111	Laboratory Freezer				1		12	13
Z-112	Laboratory Freezer, ultra low						4	4
Z-113	Laboratory Fume Hood A						5	5
Z-114	Laboratory Fume Hood B						1	1
Z-115	Laboratory Fume Hood C						4	4
Z-116	Laboratory Incubator A		1				2	3
Z-117	Laboratory Incubator B						1	1
Z-118	Laboratory Washing, Drying and Disinfecting Machine						4	4
Z-119	Light Meter						4	4
Z-120	Mercury Analyzer						4	4
Z-121	Micro Centrifuge						6	6
Z-122	Microdebrider		1					1
Z-123	Micropipette Set				3		16	19
Z-124	Microwave Mineralizer						1	1
Z-125	MRI			1				1
Z-126	Multi Vortex				1			1
Z-127	Near Infrared Oxygenation Monitor	1						1
Z-128	Neuronavigation System			1				1
Z-129	OAE Screener		12					12
Z-130	Operation Light, Ceiling				16	10		26
Z-131	Operation Light, Ceiling with Camera	10						10
Z-132	Operation Microscope	1						1
Z-133	Operation Table	10		16	16	9		51
Z-134	Osmometer	1						1
Z-135	Otoscope with Monitor		2					2
Z-136	Panorama X-ray Apparatus		1					1
Z-137	Paraffin Embedding Machine				10			10
Z-138	Patient Monitor A	34						34
Z-139	Patient Monitor B	2						2
Z-140	Patient Monitor C	14	11		19	10		54
Z-141	Patient Monitor D		35		43	18		96
Z-142	Patient Monitor E		15					15
Z-143	Patient Monitor F					4		4
Z-144	Patient Monitor G					3		3
Z-145	Patient Trolley	4						4
Z-146	PCR Box				1			1
Z-147	PCR Thermal Cycler				2			2
Z-148	Pendant for Anesthesia	10						10
Z-149	Pendant for ICU	13						13
Z-150	Pendant for Surgical	10						10
Z-151	Perspiration Analyzer		1					1
Z-152	Phacoemulsification Machine	1						1
Z-153	pH-Meter						6	6

Code	Equipment Name	Quantity						
		RH	MH	EH	OI	ST	IP	Total
Z-154	Plasma Sterilizer	1						1
Z-155	Plasmapheresis Machine A	1						1
Z-156	Plasmapheresis Machine B				1			1
Z-157	Polysomnograph		1					1
Z-158	Pulse Oximeter, Hand-held	14						14
Z-159	Real Time PCR		1				3	4
Z-160	Real Time PCR system				1			1
Z-161	Refrigerator				1			1
Z-162	Retriever for Antigen Unmasking				1			1
Z-163	Rhino Manometer	1						1
Z-164	Rigid Arthroscope Set			1				1
Z-165	Rigid Bronchoscope, Pediatric		1					1
Z-166	Rigid Cystoscope Set		1					1
Z-167	Rigid Laparoscope Set A			1	2			3
Z-168	Rigid Laparoscope Set B					1		1
Z-169	Rigid Laparoscope Set C		1			1		2
Z-170	Rigid Laparoscope Set D					1		1
Z-171	Rigid Laparoscope Set E		1					1
Z-172	Rigid Laparoscope Set F					1		1
Z-173	Rigid Laparoscope Set G				1			1
Z-174	Rigid ORL Surgery Endoscope Set					1		1
Z-175	Rigid Thoracoscope Set A	1						1
Z-176	Rigid Thoracoscope Set B				1	1		2
Z-177	Rigid TUR Set with HF Unit				2			2
Z-178	Rigid Urology TUR Set	1						1
Z-179	Rotary Evaporator with Vacuum Pump						1	1
Z-180	Rotary Microtome				13			13
Z-181	Rotary Sealer			4	4	4		12
Z-182	Selective Radiation Meter						1	1
Z-183	Set of Multi-Channel Micropipette				1		17	18
Z-184	Shaker, Reciprocating						2	2
Z-185	Simulator, Multiparameter	1						1
Z-186	Skin Grafts Perforator		1					1
Z-187	Slave Monitor	5						5
Z-188	Slit Lamp, OCT					1		1
Z-189	Solid Phase Extraction						1	1
Z-190	Sound Calibrator						4	4
Z-191	Sound Level Meter						5	5
Z-192	Spectrophotometer UV-VIS						2	2
Z-193	Stem cell Freezing System				1			1
Z-194	Stereo Microscope with TV Monitor						1	1
Z-195	Suction Unit	19				34		53
Z-196	Superimposed High Frequency Jet Ventilation	1						1
Z-197	Surgical Ablation System	1						1
Z-198	Surgical Retractors	2						2
Z-199	Survey Meter A						1	1
Z-200	Survey Meter B						3	3
Z-201	Syringe Pump A	58						58
Z-202	Syringe Pump B		15			34		49
Z-203	Thermoblock, PCR Sample				1		4	5
Z-204	TLC Densitometer						1	1
Z-205	Ultra Water Purifier						1	1
Z-206	Ultracentrifuge for Microtubes				2			2

Code	Equipment Name	Quantity						
		RH	MH	EH	OI	ST	IP	Total
Z-207	Ultrasonic Cleaner					3		3
Z-208	Ultrasound Apparatus A (General)					1		1
Z-209	Ultrasound Apparatus B (General)				1			1
Z-210	Ultrasound Apparatus C (Biopsy/Elastograghy)				1			1
Z-211	Ultrasound Apparatus D (Cardiology)					1		1
Z-212	Ultrasound Apparatus E (Cardiology)	2						2
Z-213	Ultrasound Apparatus F (Neonatology)		1					1
Z-214	Ultrasound Apparatus G (Obstetrics)		1					1
Z-215	Ultrasound Apparatus H (Obstetrics)		4					4
Z-216	Ultrasound Apparatus I (Pediatrics)		3					3
Z-217	Ultrasound Apparatus J (Urology)	1						1
Z-218	Ultrasound Microphone						1	1
Z-219	Urine Analyzer	2	1					3
Z-220	UV Handwasher	10						10
Z-221	Vacuum Therapy Unit	1						1
Z-222	Ventilator for Adult A	32		12	23	16		83
Z-223	Ventilator for Adult B			10				10
Z-224	Ventilator for Neonate		2					2
Z-225	Ventilator for Pediatric A	1						1
Z-226	Ventilator for Pediatric B	1			1			2
Z-227	Ventilator Mobile					4		4
Z-228	Vertical Laminar Flow Unit	2						2
Z-229	Vibration Meter						5	5
Z-230	Video Bronchoscope A		1					1
Z-231	Video Bronchoscope B				3			3
Z-232	Video Colonoscope			2	16			18
Z-233	Video Cystoscope	1						1
Z-234	Video Duodenoscope			1				1
Z-235	Video Endoscope System		2	4	12	1		19
Z-236	Video Esophagoscope					1		1
Z-237	Video Gastroscope A		2					2
Z-238	Video Gastroscope B		2					2
Z-239	Video Gastroscope C		2					2
Z-240	Video Gastroscope D			2				2
Z-241	Video Gastroscope E			2	3			5
Z-242	Video Laryngoscope A	2						2
Z-243	Video Laryngoscope B				1			1
Z-244	Vitreotome		1					1
Z-245	Vortex Mixer				2		29	31
Z-246	Washer / Disinfector A	2						2
Z-247	Washer / Disinfector B			3	3			6
Z-248	Washer / Disinfector C					3		3
Z-249	Water Bath		1		10		11	22
Z-250	Water Distiller	1						1
Z-251	X-ray Apparatus General		1					1
Z-252	X-ray Apparatus Mobile		1	5	2	2		10
Z-253	X-ray C-arm			4	1			5
Z-254	X-ray C-arm with DSA	2						2
Z-255	X-ray CR System			3	1	2		6
Z-256	X-ray Digital Mammography				2			2
Z-257	X-ray Dry Imager					1		1
Z-258	X-ray Fluoroscopy for Urology		1					1
Z-259	X-ray General with Fluoroscopy A			1		1		2

Code	Equipment Name	Quantity						
		RH	MH	EH	OI	ST	IP	Total
Z-260	X-ray General with Fluoroscopy B		1		1			2
Z-261	X-Ray Impulse Dosimeter						2	2
Z-262	Yag Laser	1						1