No.

BASIC DESIGN STUDY REPORT

ON

THE PROJECT

FOR

UPGRADING THE EMERGENCY MEDICAL SYSTEM IN TASHKENT CITY

IN

THE REPUBLIC OF UZBEKISTAN

JULY, 2001

JAPAN INTERNATIONAL COOPERATION AGENCY

INTERNATIONAL TECHNO CENTER CO., LTD.

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PREFACE

In response to a request from the Government of the Republic of Uzbekistan, the Government of Japan decided to conduct a basic design study on the Project for Upgrading the Emergency Medical System in Tashkent City and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Uzbekistan a study team from December 1 to December 30, 2000.

The team held discussions with the officials concerned of the Government of Uzbekistan, and conducted a field study at the study area. After the team returned to Japan, further studies were made. Then, a mission was sent to Uzbekistan in order to discuss a draft basic design, and as this result, 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 our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Republic of Uzbekistan for their close cooperation extended to the teams.

July, 2001

Kunihiko Saito
President
Japan International Cooperation Agency

July, 2001

Letter of Transmittal

We are pleased to submit to you the basic design study report on the Project for Upgrading the Emergency Medical System in Tashkent City in the Republic of Uzbekistan.

This study was conducted by International Techno Center Co., Ltd., under a contract to JICA, during the period from November 28, 2000 to July 31, 2001. In conducting the study, we have examined the feasibility and rationale of the project with due consideration to the present situation of Uzbekistan and formulated the most appropriate basic design for the project under Japan's grant aid scheme.

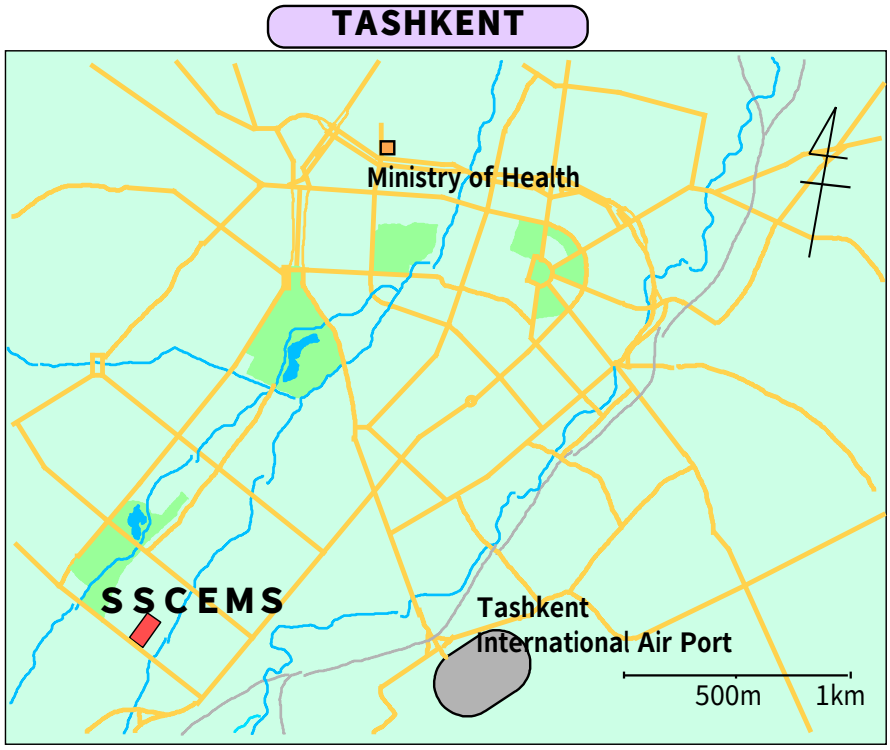
Finally, we hope that this report will contribute to further promotion of the project.

Very truly yours,

東條重孝

Shigetaka Tojo
Project manager,
Basic design study team on
the Project for Upgrading the Emergency Medical System in Tashkent City
International Techno Center Co., Ltd.

REPUBLIC OF UZBEKISTAN



Abbreviations

A/P	Authorization to Pay
B/A	Banking Arrangement
EMSD	Emergency Medical Services Department
E/N	Exchange of Notes
ER	Emergency Room
GDP	Gross Domestic Product
ICU	Intensive Care Unit
IMF	International Monetary Fund
JOCV	Japan Overseas Cooperation Volunteer
MRI	Magnetic Resonance Imaging
ODA	Official Development Assistance
O/M	Operation and Maintenance
PHC	Primary Health Care
RMP	Rural Medical Post
SSCEMS	State Scientific Center for Emergency Medical Services

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[Appendices]

Chapter 1 Background of the Project

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The Republic of Uzbekistan has a population of about 23.7 million, of which 61% lives in rural areas. More than 130 ethnic groups live in the country, including Uzbeks accounting for 71%, followed by Russians, Tajiks, Kazakhs, and Tartars. Uzbekistan is showing a high population growth rate reflecting a high birth rate (25.8/1,000 population) and a low death rate (5.8/1,000 population).

In the time of the former USSR, all health service was provided by the Central Government. In 1991, there were 1,355 hospitals, 3,093 policlinics, and 6,595 health posts. The country had 12.2 beds per 1,000 persons, 3.4 doctors per 1,000 persons, and 12 nurses per 1,000 persons. As the budgets for each hospital were allocated according to the number of beds, the hospitals came to have an incentive to increase the number of beds and it was increasing by 5 to 6 thousands every year. This has resulted in an inefficient and ponderous medical care system saddled with excessive medical facilities and workers.

After independence, the decline of economic situation affected adversely on the health sector. The share of health expenditures in the national budgets fell from 13.9% in 1991 to 9.5% in 1997 and 1998. As a result of it, medical service came to fall notably by lack of medical supplies and medical equipment and delayed payment of wages. The people have been expressing a demand for improvement of medical service.

To find a way out of this situation and improve medical care service, Uzbekistan adopted policies to reduce excessive medical facilities and workers, aiming at effective utilization of limited medical resources. In 1998, " State Health Care Reform Program" was announced as a Decree of President, proposing transition to "pay medical service and self-financing of hospitals." In this program, free provision of medical service should be limited to emergency medical care, maternal and child health care and the diseases related to social problems and the socially vulnerable groups, while other medical service should be made chargeable. Among governmental medical facilities, some were to be designated as facilities providing pay medical service, aiming at the goal of reducing excessive medical facilities and workers.

The implementation scenario is establishment of an efficient medical service system under (1) expansion and improvement of medical facilities providing emergency medical care and other free medical service; (2) stepwise conversion of specified hospitals to pay service; (3) reallocation of medical resources that have been given to these hospitals to the hospitals providing free medical service; (4) transition to a system of pay/free medical service system and optimization of medical resource allocation. Therefore, it will be important to conduct concurrently the reduction of excess medical facilities and workers and the expansion and improvement of free medical service.

On efforts toward the expansion and improvement of emergency medical service among the categories of free medical service currently, a plan for establishment of 12 emergency medical centers by the central government and provincial governments is ongoing under “Emergency Care System Reform Program” (approved by the Decree of President in 1998).

The target facility of this project, operated previously as Republican Hospital No. 1, is now undergoing reorganization to be operated as State Scientific Center of Emergency Medical Services (SSCEMS), and reform/construction works are conducted using the budgets of the Ministry of Health and Tashkent City. However, it is difficult for the country to purchase medical equipment in foreign currencies under the present economic conditions, and hence the country requested grant aid from Japan. In response, Japan sent a Preliminary Study Team in March 2000 to confirm the progress of facility renovation and the state of the emergency care system, followed by Basic Design Study Team in December 2000 and Explanation of Draft Final Report Team in April 2001.

This project is concerning the provision of equipment for SSCEMS, which bears a central role in the Emergency Care System Reform Program promoted by Uzbekistan.

Chapter 2 Contents of the Project

Chapter 2 Contents of the Project

2-1 Objectives of the Project

The State Scientific Center of Emergency Medical Services (SSCEMS) will play a central role in the "Emergency Care System Reform Program" promoted by Uzbekistan, and it will also serve as a facility to provide medical service to emergency patients from Tashkent City and all over the country. At present, buildings for the Center are being constructed and renovated. Considering the difficulty Uzbekistan faces in procuring medical equipment, this project seeks to facilitate the establishment of the SSCEMS through the procurement of medical equipment.

2-2 Basic Concept of the Project

This project provides medical equipment for SSCEMS.

Under current plans, the project will procure medical equipment for medical service to emergency patients. The project design should include equipment for emergency medical service and that can be maintained sufficiently by the Uzbekistan side. The items for research equipment and physiotherapy are not directly needed for emergency medical service. The existing pharmaceutical equipment still has enough capacity and condition for the pharmaceutical activities. Therefore these items will be excluded from this project.

In the SSCEMS prospectus, the annual number of patients visiting the Center was estimated to be about 36,000. However, the scale of this project was determined on the assumption that the annual number of patients will be about 34,800, based on the recorded number of ambulance trips in Tashkent City, the number of patients at the Center under current operation, and other information.

While the prospectus of SSCEMS envisioned that the Center would be equipped with several types of sophisticated and expensive equipment, this grant aid project will only cover the equipment that is suitable for the current practice of diagnosis and treatment, that can be supported sufficiently by the technical and maintenance ability of the SSCEMS, and that is essential for the provision of emergency medical service. To be

more specific, the most sophisticated equipment to be procured will be a CT scanner in the field of imaging diagnosis, and blood gas analyzers and electrolyte analyzers in laboratory tests. Level and contents of surgical equipment will be limited to cover the emergency treatment for the patients and the patients requiring special surgical treatment will be transferred to specialized hospitals after emergency care taken in SSCEMS.

As for the prospectus of SSCEMS, highly sophisticated and expensive equipment will be needed for this Center as an advanced medical care facility. Such equipment should be procured step-by-step on the Uzbekistan side, considering the actual condition of operation, the number of treated patients and the balance of SSCEMS management.

2-3 Basic Design

2-3-1 Design Concept

1) Considerations on Social Conditions

As a problem that seems to have been succeeded from the time of the USSR, the fields of medical practice are extremely over-specialized and a majority of physicians are specialists. Each clinical department is organized independently, accompanied by auxiliary departments. As a result, similar functions are performed at various clinical departments, causing redundancy of medical workers and equipment. The list of requested equipment also has redundancy, reflecting these traits in the culture of medical service. In line with the reformation program of Uzbekistan aiming at the effective utilization of limited health care budgets, redundancy of items should be avoided in our equipment plan.

2) Considerations on Construction and Renovation Works on the Uzbekistan Side

The target facility is under construction and renovation works conducted by the Uzbekistan side. In this project, the departments covered by the equipment plan are: Surgery Block, Adults; Toxicology/Burns Department; Operation Block, Adults; Emergency Medical Service Department; Diagnosis Department; Therapeutic Department; Pediatric Department; and Operation Department for Pediatric Surgery. The renovation of Surgery Block, Adults; Operation Block, Adults; and Diagnosis Department and the construction of Emergency Medical Service Department are planned to complete by fall of 2001. Renovation works such as repainting of walls

and alteration of ward partitions are planned in Therapeutic Department, Pediatric Department, and Operation Department for Pediatric Surgery and to be completed by 2002. It has been confirmed that these works will not affect the installation works in relevant rooms where the equipment will be placed under this project.

3) Consideration on the Use of Local Venders and Local Resources

There are no local manufacturers producing the medical equipment to be procured under this project. There are many agents of foreign medical equipment manufactures, including Japanese manufacturers. Considering the maintenance and servicing after procurement, the equipment planning of this project will give a higher priority to manufacturers that have local agents, because the use of local agents will be essential for the response to mechanical failures, supply of consumables, servicing, and repair.

4) Considerations on the Maintenance Ability of the Implementing Organization

Maintenance System

There is an acceptable system of maintenance-related firms. Maintenance service is conducted by UZMEDTECHNIKA, importation of consumables and spare parts by UZMEDEXPORT, and distribution by DARDARMON. However, the number of state-owned medical facilities is planned to reduce toward the goal of self-financing of medical facilities in 2005, and private medical facilities will come to play important roles. These private medical facilities have to procure equipment and consumable by themselves. In this situation, private firms acting as the agents for medical equipment manufacturers are going to increase, and the use of maintenance contracts and agency contracts will spread.

The Ministry of Health is also aware of this situation. We consider that a new system for maintenance and servicing will be established according to the policies of Uzbekistan in and after 2005.

Budgets for Maintenance

At present, the allocation of budgets to hospitals is made only in the domestic currency "Sum," and the Ministry of Health is responsible for all purchases in foreign currencies. After the transition to self-financing of medical facilities in 2005, competition will be

introduced also in the markets related to medical service, and the exchange between local and international currencies will be liberalized. This is expected to facilitate the purchase of servicing parts and consumables, and to accelerate the increase in the number of agents. However, based on our experience in past projects, we place a higher priority to the equipment models that require less maintenance costs and can be used with locally available consumables and reagents. It is prudent because the reformation is still in the transitional phase at present.

5) Considerations on the Scope and Grades of Equipment

The equipment plan will not be based on the quantities determined from the size of a building or the number of rooms, but be based on the quantities and scale needed for the commencement of emergency medical service, assuming that equipment will be shared among departments. The equipment to be procured should be the ones that can be maintained technically and financially.

The grade of equipment will be determined based on the purpose of use, expected number of diagnosed cases, the level of technical skills, and other factors, referring to the specifications of equipment procured under the four past grant aid projects for medical equipment improvement in Uzbekistan.

6) Considerations on the Time to Completion

After conclusion of the Exchange of Notes (E/N), the works related to consultant contracts and tendering is planned to complete in about 3 months. The period from the contracts between Ministry of Health of Uzbekistan and the procurement contractor to the actual procurement of equipment, installation, and commissioning will be about 9 months. The total period will be about 12 months, and should be completed by the end of the fiscal year. Since medical equipment is often manufactured to order, the time needed for production must be studied carefully so that this factor should not affect the time to project completion.

2-3-2 Basic Design

(1) Overall Plan

A higher priority should be given to the departments that are essential for an emergency medical facility, i.e., the departments that will function in the flow from the emergency

room to diagnosis, operation, and the intensive care unit (ICU). At present, renovation and construction of facilities are conducted at SSCEMS. Some facilities have been completed, some others are in the course of work, and still others are planned for minor renovation works in the future. Based on the research on the progress and nature of renovation and construction works, this project will be targeted at the departments and facilities where it has been confirmed that these works will not impede the implementation of this project.

The targeted departments and facilities are as follows:

① Emergency Medical Service Department (to be completed in September, 2001).

② Diagnosis Block (interior renovation works began in April, 2001, to be completed in October, 2001)

(Clinical laboratory, Biochemistry laboratory, Bacteriology Laboratory, Hormone Laboratory, Surgical Block Express laboratory, Therapeutic Block Express Laboratory, Pediatric Block Express Laboratory, Endoscopic Diagnosis Room, Functional Diagnosis Room, and Ultrasound Diagnosis Room)

③ Operation Block, Adults (completed in May, 2001)
(Urology Operation Room, Gynecology Operation Room, Thoracic Surgery Operation Room, Vascular Surgery Operation Room, Abdominal Operation Room, Hepatobiliary Operation Room, Traumatology/Neurology Operation Room, and Traumatology Operation Room)

④ Pediatric Operation Block (to be completed in December, 2001)
(Thoracic Surgery Operation Room, Urology Operation Room, Abdominal Operation Room, Hepatobiliary Operation Room, and Traumatology Operation Room)

⑤ Intensive Care Department (to be completed in December, 2001)
(Surgery Department – Adults, Therapeutic Department – Adults, Therapeutic Department – Children, and Surgery Department – Children)

⑥ Toxicology/Burns Department (completed in May, 2001)
(ICU for Toxicology and ICU for Burns)

(2) Equipment Plan

All existing equipment of the target departments currently in the course of renovation has been removed and is stored in unused rooms in the hospital. Most of the equipment was produced in the time of the former USSR, and only a small part of them is operational. Even in the departments that are operating at present, most of the equipment is also aged over 10 years after introduction and have been superannuated, and most of the existing equipment requires renewal. Many items are insufficient in quantities, and require replacement.

The equipment plan has been formulated based on the following conditions:

- The items to be procured must be basic medical equipment that is necessary for the emergency medical service of the target facility.
- The quantities and sizes of items are determined not based on the number of rooms or the amount of medical practice in a given facility, but based on the minimum quantities and sizes that do not impede medical practice, avoiding redundancy of equipment and promoting sharing of equipment.
- The items must be the equipment that is useful for the diagnosis and treatment of emergency patients, can be utilized effectively, and can be maintained.
- The items must be the equipment that can be maintained with respect to technical and economical aspects.

The deletion and quantitative reduction from the list of the planned equipment were considered according to the following standards:

- Equipment that is not directly related to the diagnosis and treatment in the emergency medical service.
- Equipment that requires high management and maintenance costs, and thus is expected to have difficulty in stable operation.
- Equipment that is expected to bring little benefits in view of the frequency of use and the number of specimens.
- Equipment that cannot be installed because of the condition of facility.
- Equipment that can be procured by the funds of the Uzbekistan side.

After consultation and confirmation with the Uzbekistan side concerning the specifications for each equipment based on the list of requested equipment, we removed or consolidated the requests for some equipment that are redundant in terms of functions or specifications, as well as items that could not be identified clearly.

See additional information at the end of this chapter for the process of reviewing equipment selection (Table 2-3) and the list of planned equipment sorted by department (Table 2-4).

A list of major planned equipment is shown in Table 2-1.

Table 2-1 Major Planned Equipment

No.	Equipment	Q'ty	Contents, specifications
1	Anesthesia Apparatus	16	Anesthesia apparatus with ventilator, Gas supply: cylinder, Vaporizer: halothen, Flow meter: O2 and N2O
2	Autoclave, Large	2	Double door type, microcomputer control, steam generator
3	Autoclave, Small	1	Single door type, microcomputer control, steam generator
4	Automatic Biochemical Analyzer	1	Table top type, optical system; photo-metric, analysis method; end-point, kinetic, analysis item; ALB, ALT,ALP,CHO etc 20 items, sample; serum, plasma, urine, automatic diluter, automatic calibration
5	Automatic Blood Cell Counter	1	Table top type, Analysis item; WBC / RBC / HGB / HCT / MCV / MCH / MCHC / PLT, automatic diluter, printer, mixer
9	Bed for Burned Patient	1	Air fluidization bed, Built-in compressor
10	Blood Electrolyte Analyzer	1	Sample; whole blood, serum sample volume; 150 μ l , parameter ;Na, K, CL, printer
11	Blood Gas Analyzer	1	Table top type, parameter; pH/ pCO2 / pO2 etc., printer, calibration gas
12,13	Bronchoscope, Adult and child	1	Field of view; 120 ° , Bending; 180 ° ,130 ° , Distal end; 4.9~5.9mm
16	Choledochoscope	1	Field of view; 120 ° , Bending; 130 ° ,100 ° , Distal end; 6mm
18,19	Colonofiberscope, Adult	1	Field of view; 120 ° , Bending; 180 ° , Distal end; 14,11mm
20	CT Scanner	1	Scan type; continuance rotation, scan time; 1~3 sec. Viewing time; 600/sec. Tube voltage; 130kV, tube current; 200mA, heat capacity; 3500kHU, laser imager, 3D, lead glass
21,22,23	Cystourethroscope, adult and child	1	Telescope; 5 ° ,12 ° ,70 ° , Light source, Suction unit, Electrosurgical unit
24	Defibrillator	12	Out put; 0~300J, parameter; ECG, HR, monitor; 5inches, built-in printer, AC/DC
29	ECG	6	Lead; 12, display; LCD, Channel; 6, AC/DC

No.	Equipment	Q'ty	Contents, specifications
30	Electro encephalograph	1	Input channel; 20 or more, Display; LCD, GMRR; 100db or more, Paper feeding; 50mm/sec.
31	Electro surgical Unit	16	Out put; bipolar, mono-polar, cutting, coagulation ,mix
33	Encephalograph, Portable	1	Input channel; 16 or more, Display; LCD, lap-top type
35,36,37	Fiber gastroduodenoscope, adult and child	1	Field of view; 80 ° ,100 ° 120 ° , Bending; 210 ° ,90 ° , Distal end; 12,9,11mm
40	Hemodialysis Apparatus	4	Blood flow control; 15 ‒ 500ml/min., Dialyser; control 500ml/min., U/F: 0~4L/hr.
42	Hot Air Sterilizer	11	Capacity; 150L, Timer; 60min. Temp. control; 50~260, stainless steel
43	ICU Bed	78	Hi-low bed, 3 crank type
44	Immunofermental Analyzer	1	Wavelength; 400~630nm,micro plate leader
49,50,51	Laparoscope System, Adult, child, gynecology	1	Telescope; 0 ° ,30 ° , Light source, Suction unit, Electro surgical unit
55	Microscope for Operation	1	Plastic and orthopedics surgery, Intensity; 150,000lux, Eyepiece; 10x, Focus; electric
56	Uretero-renoscope	1	Outer diameter; 8-9Fr. Light source, biopsy forceps
57	Operating Lamp	15	Main and satellite, Intensity; 100,000lux
59	Operating Table	14	Oil hydraulic system by foot pedal, Radio translucent table top, Accessory for operation type
60	Surgery Trolley	2	Emergency surgery trolley, Hi-low type, back rise
61	Patient Monitor	32	Parameter; ECG, respiration, SpO2,temp, NIBP
62	Photoelectro colorimeter	5	Wavelength; 320~700nm,Digital display
64	Pulse Oximeter	13	Parameter; SpO2,pulse rate, Display ; LED or LCD
69	Spectrophotometer	1	Table top type, Wavelength; 190~1,100nm, Measuring methods; absorbance, kinetics
76	Surgical Instruments	2	Instruments for Abdomen, Ambulatory, Esophagus, Hepatobiliary, Nephrology, Neurosurgery, Osteosynthesis, Thorax, Traumatology, Urology
93	Syringe Pump	37	Syringe type; 20,50ml, flow rate;0.1~150ml, Alarm function, AC/DC
94,95	Thoracoscope System, Adult	1	Telescope; 0 ° ,30 ° , Light source, Suction unit, Electro surgical unit
99	Ultrasound Scanner	1	Scanning method; electronic convex, linear, sector, Doppler mode; PWD, CWD, Monitor; 12 inches, Display; B,B/B,B/M,M ,Printer
100	Ultrasound Scanner, Mobile	4	Scanning method; electronic convex, linear, sector, Endo-cavity, Monitor; 12 inches, Display; B,B / B,B / M,M, Printer
101	Ventilator	9	Ventilator control; press control or volume control, Mode; CMV, IMV, PEEP/CPAP, Trigger volume; 2500ml, Inspiratory range; 0.1~5 sec.
102	Ventilator, Infant	3	Ventilator control; press control or volume control, Mode; CMV, IMV, PEEP/CPAP, Trigger volume; 1000ml, Inspiratory range; 0.1~3 sec.
106	X-Ray Film Developer	3	Tabletop type, Processing capacity; 50films/hr.
107	X-Ray Unit, C-arm	2	Tube voltage; 110kv, I.I.; 9 inches, TV camera; CCD, Image memory; 8 frames
108	X-Ray Unit, Mobile	3	Tube voltage; 100kv, Tube current; 130mA, Inverter type,
109	X-Ray Unit	3	Fluoroscopy and radiography table, Bucky stand, Tube voltage; 150kv, Tube current; 600mA,

Procurement of Third Country Products

No manufacturers produce medical equipment in Uzbekistan. Except for a few products, Japanese products are not widely used. We foresee a difficulty in procuring equipment in Uzbekistan markets, as well as a difficulty in the availability of parts and consumables after introduction of equipment, because there are few local agents for Japanese manufacturers. For this reason, we consider that the following items may be procured from countries other than Japan and Uzbekistan (Table 2-2).

Table 2-2 Equipment that may be procured from a third country

No.	Equipment	Q'ty	No.	Equipment	Q'ty
1	Anesthesia Apparatus	16	49	Laparoscope System, Adult	1
2	Autoclave, Large	2	50	Laparoscope System, Child	1
3	Autoclave, Small	1	51	Laparoscope System, Gynecology	1
4	Automatic Biochemical Analyzer	1	54	Microscope	8
5	Automatic Blood Cell Counter	1	55	Microscope for Operation	1
6	Automatic Urine Analyzer	1	56	Uretero-renoscope	1
9	Bed for Burned Patient	1	57	Operating Lamp	15
10	Blood Electrolyte Analyzer	1	58	Operating Lamp, Mobile	2
11	Blood Gas Analyzer	1	60	Surgery Trolley	2
12	Bronchoscope, Adult	1	61	Patient Monitor	32
13	Bronchoscope, Child	1	62	Photo electrocolorimeter	5
16	Choledochoscope	1	64	Pulse Oximeter	13
17	Coagulometer	1	66	Refrigerator with Freezer	10
18	Colonofiberscope, Adult	1	67	Refrigerator	8
20	CT Scanner	1	69	Spectrophotometer	1
21	Cystourethroscope	1	82	Surgical Instruments for Microsurgery	1
22	Cystourethroscope, Child	1	83	Surgical Instruments for Nephrology	1
23	Cystourethroscope, Adult	1	84	Surgical Instruments for Neurosurgery	1
24	Defibrillator	12	85	Surgical Instruments for Osteosynthesis, Adult	1
26	Diagnostic Set for Gynecology	1	86	Surgical Instruments for Osteosynthesis, Child	1
29	ECG	6	93	Syringe Pump	37
30	Electroencephalograph	1	94	Thoracoscope System, Adult	1
31	Electrosurgical Unit	16	95	Thoracoscope System, Child	1
33	Encephalograph, Portable	1	99	Ultrasound Scanner	1
34	Examination Lamp, Mobile	4	100	Ultrasound Scanner, Mobile	1
35	Fiber gastroduodenoscope	1	101	Ventilator	9
36	Fiber gastroduodenoscope, Child	1	102	Ventilator, Infant	3
37	Fiber gastroscope	2	103	Water Distiller	9
38	Freezer	1	104	Water Purifier Unit	1
40	Hemodialysis Apparatus	4	106	X-Ray Film Developer	3
43	ICU Bed	78	107	X-Ray Unit, C-arm	2
44	Immunofermental Analyzer	1	108	X-Ray Unit, Mobile	3
46	Infusion Pump	33	109	X-Ray Unit	3

Table 2-3 Process of selection

Original request		Planned Equipment			
Equipment	Q'ty	Code No.	Equipment	Process of selection	Q'ty
Agregometer	1			⑨	
Air Cleaning Unit for Reduction of Air Microbe Dissemination	1			⑤	
Anesthesia Apparatus	14	001	Anesthesia Apparatus	⑥	16
Angiograph System	1			⑦	
Autoclave	3			⑤	
Autoclave Table Top	8			⑨	
Autoclave, Large Volume	3	002	Autoclave, Large	①	2
Autoclave, Small Volume	3	003	Autoclave, Small	①	1
Automatic Biochemical Analyzer	1	004	Automatic Biochemical Analyzer		1
Automatic Blood Cell Counter	1	005	Automatic Blood Cell Counter		1
Automatic Microbiological Analyzer	1			⑦	
Automatic Urine Strip Analyzer with Consumption Materials for 1 year	1	006	Automatic Urine Analyzer	①	1
Electronic Weighing Scale	4	007	Balance	①	4
Torsion Scale	3	008	Balance, Small capacity	①	1
Baby Scales	5			⑨	
Bed for Burned Patients	9	009	Bed for Burned Patient	⑨	1
Binocular Head Microscope (Loupe)	3			⑨	
Biochemical Hormone Analyzer	1			⑦	
Blood Electrolyte Analyzer	1	010	Blood Electrolyte Analyzer	⑥⑨	1
Blood Gas Analyzer	1	011	Blood Gas Analyzer		1
Bronchoscope for Adult	2	012	Bronchoscope, Adult	⑨	1
Bronchoscope for Children	1	013	Bronchoscope, Child		1
Bronchoscope Surgical for Adult	1			⑨	
Bronchoscope Surgical for Children	1			⑨	
Laboratory 4-Speed Centrifuge	2	014	Centrifuge	①②	3
Ultracentrifuge	1			②	
		015	Centrifuge Table Top	⑥	3
Caps Rolling Device Semi-Automatic	1			⑤	
Catheterization Kit of Great Vessels	6			⑪	
Choledochoscope	1	016	Choledochoscope		1
Coagulometer	1	017	Coagulometer		1
Colonofiberscope for Adults	1	018	Colonofiberscope, Adult		1
Colonofiberscope for Children	1	019	Colonofiberscope, Child		1
		020	CT Scanner	⑥	1
Cystourethroscope	1	021	Cystourethroscope		1
Cystourethroscope for Surgery	1	022	Cystourethroscope, Child	①	1
Cystoscope	1	023	Cystourethroscope, Adult	①	1
Defibrillator	10	024	Defibrillator	⑥⑨	12
Complete Set of Equipment for E.N.T Room	1	025	Diagnostic Set for E.N.T	①	1
Complete Set of Equipment Gynecologist's Room	2	026	Diagnostic Set for Gynecology	①	1
Complete Set for Ophthalmologist's Room	1	027	Diagnostic Set for Ophthalmology	①	1
Complete Set of Equipment Urologist's Room	1	028	Diagnostic Set for Urology	①	1
ECG, 3-Ch	11			②	
ECG, 6-Ch	4	029	ECG	②	6
Electrocardiostimulator	2			⑨	
Electric Drill and Set of Saws for Bones Treatment	4			⑨	
Electroencephalograph	1	030	Electroencephalograph		1
Electrosurgical Unit	16	031	Electrosurgical Unit		16
Emergency Cart	4	032	Emergency Cart	⑨	2
Encephalograph, Portable	2	033	Encephalograph, Portable	⑨	1
Examination Lamp, Mobile Type	5	034	Examination Lamp, Mobile	①	4
Fiber gastroduodenoscope, Incl. Side Optics	1	035	Fiber gastroduodenoscope	①	1
Gastroduodenoscope for Children	1	036	Fibergastroduodenoscope, Child	①	1
Fiber gastroscope	1	037	Fibergastroscope	②	2
Fiber duodenoscope	1			②	
		038	Freezer	⑥	1
Frequency Therapy Apparatus	2			④	
Heart Lung Machine	1			⑦	
Hematocrit Centrifuge	3	039	Hematocrit Centrifuge	⑨	1
Hemodialysis Apparatus	4	040	Hemodialysis Apparatus		4
Photoelectric Hemoglobin Meter	5	041	Hemoglobin Meter	①	5
Steam Sterilizer	12	042	Hot Air Sterilizer	①②	11
Dry Heat Cabinet for Instruments Sterilization	3			①②	
ICU Bed	80	043	ICU Bed	⑨	78
Immunofermental Analyzer	1	044	Immunofermental Analyzer		1
Dry Air Thermostat	2	045	Incubator	①	2
Infusion Pump	65	046	Infusion Pump	⑨	33
Instrument Cart	4	047	Instrument Cart		4
Intensive Patient Monitoring System for 6 Patients	1			⑦	
Intubation Kit	36	048	Intubation Kit	⑨	23
IV Stand	50				
Laparoscope Diagnostic for Adults	1	049	Laparoscope System, Adult	①	1
Laparoscope Diagnostic for Children	1	050	Laparoscope System, Child	①	1
Laparoscope for Operation with Video Monitor	1	051	Laparoscope System, Gynecology	①	1
Laparoscope for Operation with Video Monitor	1			⑨	
Surgical Laparoscope with Video Printing Device, with Abdominal Accessories	1			⑨	

Table 2-3 Process of selection

Original request		Planned Equipment			
Equipment	Q'ty	Code No.	Equipment	Process of selection	Q'ty
Set of Instruments for Laparoscopic Operations	1			⑧	
Light Guide for Endoscope	5			⑧	
Video Recording Device for Endoscope	1			⑧	
Liquid Chromatograph	1			⑦	
Low Frequency Electromagnetic Therapy Apparatus	2			④	
Luminescent Microscope	1			⑨	
Magnet Mixer	2	052	Magnet Stirrer	③	1
		053	Mixer	③	1
Massage Table	10			④	
Microscope	2	054	Microscope	②	8
Biological Immersion Microscope	7			②	
Microscope for Operation	2	055	Microscope for Operation	⑩	1
Microwave Therapy Apparatus	2			④	
Multifunctional electrostimulator	2			④	
Nephroscope	1	056	Uretero-renoscope	②	1
Shadowless Operating Lamp	16	057	Operating Lamp	①⑨	15
Operating Lamp, Mobile Type	15	058	Operating Lamp, Mobile	①⑨	2
Operating Table	16	059	Operating Table	③	14
		060	Surgery Trolley	③	2
Osmometer	1			⑨	
Osteosynthesis Apparatus	4			⑨	
Patient Monitor for Bedside	50	061	Patient Monitor	①②⑨	32
Patient Monitor for Operation Room	15			②	
Cardiomonitor	10			②	
Patient Monitor with Thermodilution for Operation Room	1			⑦	
Photoelectrocoloimeter	5	062	Photoelectrocolorimeter		5
Plethysmograph	1	063	Plethysmograph		1
Polarimeter	3			⑨	
Pulse Oximeter	14	064	Pulse Oximeter	⑩	13
Refractometer	6	065	Refractometer	⑨	1
Refrigerator for Pharmacy	12	066	Refrigerator with Freezer	①②	10
		067	Refrigerator	③	8
Refrigerator for Blood	9			②	
Resuscitating Bag	20	068	Resuscitation Bag	⑨	12
Computer Rheograph	1			①	
Spectrophotometer	1	069	Spectrophotometer		1
Sphygmomanometer, Automatic	10	070	Sphygmomanometer	①⑥	10
Spirometer	1	071	Spirometer		1
Stretcher	20	072	Stretcher	⑨	8
Electric Suction Unit for Operation	22	073	Suction Unit	①	16
Electric Suction Unit for Wards	54	074	Suction Unit, Small	①⑨	35
Electric Suction Unit for Continues Low Negative Pressure	7	075	Suction Unit, Low pressure	①⑨	3
Suction Unit for Active Veins Active Aspiration	1			⑨	
Electric Suction Unit for Pharmacy	3			⑤	
Set of Laboratory Plates for Biochemical Laboratory	2			⑫	
Sugar Express-test	1			⑦	
Surgical Instruments for Abdominal Operations	4	076	Surgical Instruments for Abdomen, Adult	①③	2
		077	Surgical Instruments for Abdomen, Child	③	2
Surgical Instruments for Ambulatory Out-Patients Operations	5	078	Surgical Instruments for Ambulatory	①	5
Surgical Instruments for Operation on Esophagus	1	079	Surgical Instruments for Esophagus	①	1
		080	Surgical Instruments for Gynecology	⑥	1
Surgical Instruments for Hepatobiliary Operations	1	081	Surgical Instruments for Hepatobiliary	①	1
Surgical Instruments for Microsurgery	2	082	Surgical Instruments for Microsurgery	①⑨	1
Surgical Instruments for Nephrologic Surgery	1	083	Surgical Instruments for Nephrology	①	1
Surgical Instruments for Neuralgic Surgery	1	084	Surgical Instruments for Neurosurgery	①	1
Surgical Instruments for Intra and Extramodular Osteosynthesis System	1	085	Surgical Instruments for Osteosynthesis, Adult	①	1
		086	Surgical Instruments for Osteosynthesis, Child	③	1
Surgical Instruments for Thoracic Operations	4	087	Surgical Instruments for Thorax, Adult	①③	1
		088	Surgical Instruments for Thorax, Child	③	1
Surgical Instruments for Traumatological Operations	5	089	Surgical Instruments for Traumatology, Adult	①③	2
		090	Surgical Instruments for Traumatology, Child	③	1
		091	Surgical Instruments for Urology	⑥	1
Surgical Instruments for Vascular Surgery	2	092	Surgical Instruments for Vascular Surgery	①⑨	1
Surgical Instruments for Vascular Surgery, for Children	1			⑨	
Syringe Pump	65	093	Syringe Pump	⑨	37
Thoracoscope for Operation with Video Monitor and Light	2	094	Thoracoscope System, Adult	①③	1
		095	Thoracoscope System, Child	①③	1
Treatment Table	2	096	Treatment Table		2
Plasma Knife	1			⑨	
Ultrasonic Washer	1	097	Ultrasonic Washer		1
Ultrasound Nebulizer	13	098	Ultrasound Nebulizer	⑨	4
Ultrasound Scanner with Colour Doppler	3	099	Ultrasound Scanner	①⑩	1
Ultrasound Scanner, Mobile	6	100	Ultrasound Scanner, Mobile	⑩	4
Portable Ultrasound Apparatus	1			⑨	

Table 2-3 Process of selection

Original request		Planned Equipment			
Equipment	Q'ty	Code No.	Equipment	Process of selection	Q'ty
Ultraviolet Lamp (Floor and Ceiling Types)	3			④	
Ultraviolet High Frequency Therapy Apparatus	6			④	
Urethoroscope	1			②	
Urethoroscope for Children	1			②	
Veloergometer	1			⑨	
Ventilator for Adult with Compressor	26	101	Ventilator	①⑨	9
Ventilator for Infant with Compressor	2	102	Ventilator, Infant	①	3
Transportation Ventilator	2			⑨	
Water Electric Distilling Unit	10	103	Water Distiller	①⑤	9
Water Purifier for Dialysis	1	104	Water Purifier Unit		1
Weighing Scales for Adults	10			①⑨	
Wheel Chair	5	105	Wheel Chair		5
Wire-rod Apparatus for Extrafocal Osteosynthesis	2			②	
X-Ray Film Developer	4	106	X-Ray Film Developer	⑩	3
X-Ray Unit, C-arm	4	107	X-Ray Unit, C-arm	⑩	2
X-Ray Unit, Mobile Type	5	108	X-Ray Unit, Mobile	⑩	3
X-Ray with TV Unit	3	109	X-Ray Unit	①	3

Process of selection

①Change of title
②Item combined
③Item separated
④Deletion:Physiotherapy Dept.
⑤Deletion:Pharmacy Dept.
⑥Additional request
⑦ Deletion:Highly maintenance cost
⑧ Item combined:Accessory
⑨ Deletion:overlapping with existing equipment
⑩ Deletion/Reduction:to share with each Dept.
⑪ Deletion: Comsumable
⑫ Deletion: item to be procured by recipient side

Table 2-4 Planned Equipment

Code No.	Equipment	Emergency Medical Service Department	Urology Operation Room	Gynecology Operation Room	Thoracic Surgery Operation Room	Vascular Surgery Operation Room	Abdominal Operation Room	Hepatogenital Operation Room	Traumatology / Neurology Operation Room	Traumatology Operation Room	Central Sterilization Department	Intensive Therapy Department	ICU for Surgery Block, Adult	ICU for Therapeutic Block, Adult	ICU for Therapeutic, Pediatric Block	ICU for Surgery, Pediatric Block	Clinical Laboratory	Biochemistry Laboratory	Bacteriology Laboratory	Hormone Laboratory	Surgical Block Express Laboratory	Therapeutic Block Express Laboratory	Pediatric Block Express Laboratory	Pediatric Thoracovascular Operation Room	Pediatric Urological Operation Room	Pediatric Abdominal Operation Room	Pediatric Hepatobiliary Operation Room	Pediatric Traumatology Operation Room	Toxicology Department	ICU for Toxicology	Burns Department	ICU for Burns	Qty
		E	OA	OB	OC	OD	OE	OF	OG	OH	S	IA	IB	IC	ID	F	LA	LB	LC	LD	LE	LF	LG	PA	PB	PC	PD	PE	T	IE	B	IF	
001	Anesthesia Apparatus	1	1	1	1	1	2	1	1	1														1	1	1	1	1			1		16
002	Autoclave, Large										2																						2
003	Autoclave, Small										1																						1
004	Automatic Biochemical Analyzer																	1															1
005	Automatic Blood Cell Counter																1																1
006	Automatic Urine Analyzer																1																1
007	Balance																2	2															4
008	Balance, Small capacity																1																1
009	Bed for Burned Patient																															1	1
010	Blood Electrolyte Analyzer																				1												1
011	Blood Gas Analyzer																	1															1
012	Bronchoscope, Adult															1																	1
013	Bronchoscope, Child															1																	1
014	Centrifuge																1	2															3
015	Centrifuge Table Top																				1	1	1										3
016	Choledochoscope							1																									1
017	Coagulometer																	1															1
018	Colonofiberscope, Adult															1																	1
019	Colonofiberscope, Child															1																	1
020	CT Scanner															1																	1
021	Cystourethroscope															1																	1
022	Cystourethroscope, Child																								1								1
023	Cystourethroscope, Adult		1																														1
024	Defibrillator	1	1		1			1		1		1	1											1		1		1		1	1		12
025	Diagnostic Set for E.N.T															1																	1
026	Diagnostic Set for Gynecology															1																	1
027	Diagnostic Set for Ophthalmology															1																	1
028	Diagnostic Set for Urology															1																	1
029	ECG											1	1	1	1	2																	6
030	Electroencephalograph															1																	1
031	Electrosurgical Unit	1	1	1	1	1	2	1	1	1														1	1	1	1	1			1		16
032	Emergency Cart	2																															2
033	Encephalograph, Portable															1																	1
034	Examination Lamp, Mobile											2	2																				4
035	Fibergastroduodenoscope															1																	1
036	Fibergastroduodenoscope, Child															1																	1
037	Fibergastroscope						2																										2
038	Freezer																			1													1

Code No.	Equipment	Emergency Medical Service Department	Urology Operation Room	Gynecology Operation Room	Thoracic Surgery Operation Room	Vascular Surgery Operation Room	Abdominal Operation Room	Hepatobiliary Operation Room	Traumatology / Neurology Operation Room	Traumatology Operation Room	Central Sterilization Department	Intensive Therapy Department	ICU for Surgery Block, Adult	ICU for Therapeutic Block, Adult	ICU for Therapeutic, Pediatric Block	ICU for Surgery, Pediatric Block	Clinical Laboratory	Biochemistry Laboratory	Bacteriology Laboratory	Hormone Laboratory	Surgical Block Express Laboratory	Therapeutic Block Express Laboratory	Pediatric Block Express Laboratory	Pediatric Thoracovascular Operation Room	Pediatric Urological Operation Room	Pediatric Abdominal Operation Room	Pediatric Hepatobiliary Operation Room	Pediatric Traumatology Operation Room	Toxicology Department	ICU for Toxicology	Burns Department	ICU for Burns	Qty
		E	OA	OB	OC	OD	OE	OF	OG	OH	S	IA	IB	IC	ID	F	LA	LB	LC	LD	LE	LF	LG	PA	PB	PC	PD	PE	T	IE	B	IF	
039	Hematocrit Centrifuge																1																1
040	Hemodialysis Apparatus																												4				4
041	Hemoglobin Meter																2				1	1	1										5
042	Hot Air Sterilizer	1	1		1		1	1		1	1													1		1		1			1		11
043	ICU Bed											24	24	8	10															6		6	78
044	Immunofermental Analyzer																			1													1
045	Incubator																1		1														2
046	Infusion Pump	1	1	1	1	1	2	1	1	1		6	5	2	2									1	1	1	1	1		1	1	1	33
047	Instrument Cart																												3		1		4
048	Intubation Kit	1	1	1	1	1	2		1	1		2	2	1	1									1	1	1	1	1		1	1	1	23
049	Laparoscope System, Adult						1																										1
050	Laparoscope System, Child																									1							1
051	Laparoscope System, Gynecology			1																													1
052	Magnet Stirrer																1																1
053	Mixer																1																1
054	Microscope																4		1		1	1	1										8
055	Microscope for Operation				1																												1
056	Uretero-renoscope	1																															1
057	Operating Lamp	1	1	1	1	1	2	1	1															1	1	1	1	1			1		15
058	Operating Lamp, Mobile									1																			1				2
059	Operating Table		1	1	1	1	2	1	1															1	1	1	1	1			1		14
060	Surgery Trolley	1								1																							2
061	Patient Monitor	1	1	1	1	1	2	1	1	1		6	5	1	2									1	1	1	1	1		1	1	1	32
062	Photoelectrocolorimeter																1	1			1	1	1										5
063	Plethysmograph											1																					1
064	Pulse Oximeter	1	1		1		1	1				1	1	1	1									1		1		1			1		13
065	Refractometer																	1															1
066	Refrigerator with Freezer	1	1		1		1	1		1														1		1		1			1		10
067	Refrigerator											1	1	1	1		1	1												1		1	8
068	Resuscitation Bag	3											5	1	1															1		1	12
069	Spectrophotometer																			1													1
070	Sphygmomanometer											2	2	2	2															1		1	10
071	Spirometer															1																	1
072	Stretcher	8																															8
073	Suction Unit	1	1	1	1	1	2	1	1	1														1	1	1	1	1			1		16
074	Suction Unit, Small	1	1	1	1	1	2	1	1	1		6	6	2	2									1	1	1	1	1		1	1	1	34
075	Suction Unit, Low pressure											1	1		1																		3
076	Surgical Instruments for Abdomen, Adult						2																										2
077	Surgical Instruments for Abdomen, Child																									1	1						2
078	Surgical Instruments for Ambulatory	4																											1				5

Code No.	Equipment	Emergency Medical Service Department	Urology Operation Room	Gynecology Operation Room	Thoracic Surgery Operation Room	Vascular Surgery Operation Room	Abdominal Operation Room	Hepatogastral Operation Room	Traumatology / Neurology Operation Room	Traumatology Operation Room	Central Sterilization Department	Intensive Therapy Department	ICU for Surgery Block, Adult	ICU for Therapeutic Block, Adult	ICU for Therapeutic, Pediatric Block	ICU for Surgery, Pediatric Block	Clinical Laboratory	Biochemistry Laboratory	Bacteriology Laboratory	Hormone Laboratory	Surgical Block Express Laboratory	Therapeutic Block Express Laboratory	Pediatric Block Express Laboratory	Pediatric Thoracovascular Operation Room	Pediatric Urological Operation Room	Pediatric Abdominal Operation Room	Pediatric Hepatobiliary Operation Room	Pediatric Traumatology Operation Room	Toxicology Department	ICU for Toxicology	Burns Department	ICU for Burns	Qty
		E	OA	OB	OC	OD	OE	OF	OG	OH	S	IA	IB	IC	ID	F	LA	LB	LC	LD	LE	LF	LG	PA	PB	PC	PD	PE	T	IE	B	IF	
079	Surgical Instruments for Esophagus						1																										1
080	Surgical Instruments for Gynecology			1																													1
081	Surgical Instruments for Hepatobiliary							1																									1
082	Surgical Instruments for Microsurgery				1																												1
083	Surgical Instruments for Nephlogy																								1								1
084	Surgical Instruments for Neurosurgery								1																								1
085	Surgical Instruments for Osteosynthesis, Adult								1																								1
086	Surgical Instruments for Osteosynthesis, Child																											1					1
087	Surgical Instruments for Thorax, Adult				1																												1
088	Surgical Instruments for Thorax, Child																							1									1
089	Surgical Instruments for Traumatology, Adult								1	1																							2
090	Surgical Instruments for Traumatology, Child																											1					1
091	Surgical Instruments for Urology		1																														1
092	Surgical Instruments for Vascular Surgery				1																												1
093	Syringe Pump	1	1	1	1	1	2	1	1	1		5	5	4	5									1	1	1	1	1		1	1	1	37
094	Thoracoscope System, Adult				1																												1
095	Thoracoscope System, Child																							1									1
096	Treatment Table																												2				2
097	Ultrasonic Washer										1																						1
098	Ultrasound Nebulizer												2	1	1																		4
099	Ultrasound Scanner															1																	1
100	Ultrasound Scanner, Mobile						1					1				1								1									4
101	Ventilator	1										4	2																	1		1	9
102	Ventilator, Infant													1	2																		3
103	Water Distiller		1		1		1	1			1						1	1						1		1							9
104	Water Purifier Unit																												1				1
105	Wheel Chair	5																															5
106	X-Ray Film Developer									1						1												1					3
107	X-Ray Unit, C-arm							1																		1							2
108	X-Ray Unit, Mobile											1	1																1				3
109	X-Ray Unit									1						1												1					3

Chapter 3 Implementation Plan

Chapter 3 –Implementation Plan

3-1 Implementation Plan

3-1-1 Implementation Concept

The Project shall be implemented in accordance with the grant aid framework of the Japanese government, after approval of the Project by Japanese government and conclusion of Exchange of Notes (E/N) by both the governments of Japan and Uzbekistan.

After conclusion of the E/N by both governments, a Japanese consultant firm recommended by the Japan International Cooperation Agency (JICA) shall conclude a consultant agreement with the Ministry of Health of Uzbekistan according to the procedure of Japanese grant aid. This agreement shall come into effect on verification by the Japanese government, and based on this the consultant shall carry out the work relating the tender and supervision.

A supplier, which is the Japanese trading company selected by tender, shall undertake the procurement of equipment after concluding a contract with the Ministry of Health of Uzbekistan. This contract shall also come into effect on verification by the Japanese government. The supplier shall procure, deliver, and set-up the equipment and provide basic instruction in the operation and maintenance of the equipment, as well as prepare the technical data necessary for the maintenance of the equipment, such as manuals, and a list of manufacturers and local agents.

The responsible ministry of the Project is the Ministry of Health and the implementing agency is the target institution, State Scientific Center for Emergency Medical Services (SSCEMS).

3-1-2 Implementation Conditions

Since Surgery Department, Toxicology/Burns Department, Emergenc

Service Department, and Functional Diagnosis Department were under construction and renovation in the period of Basic Design Study, it is necessary for implementation of the

Project to obtain the completion drawings and confirm the actual condition during Detail Design Study. Since the installation work for Pediatric Department may require temporary suspension of its daily operations, a well thought-out schedule needs to be worked out through consultation with the hospital staff to ensure that the work will be completed safely within a specified time period without interrupting the hospital's medical activities.

3-1-3 Scope of Works

(1) The grant aid from the Japanese government shall cover:

① Costs related to the procurement of planned equipment.
② Costs related to the marine and inland transportation to the SSCEMS.
③ Costs related to the installation of equipment.
④ Costs related to the set-up, test operations, inspection, and technical instruction in operation and maintenance of procured equipment.

(2) The Uzbekistan government shall be responsible for:

① Completion of the construction and renovation work in target facilities.
② Provision of information and data necessary for installation of equipment.
③ Dismantling of exiting equipment and preparation of the rooms where the new equipment will be placed.
④ Securing of a place to unload the procured equipment.
⑤ Provision of a place to store the equipment before set-up.
⑥ Securing of delivery routes for the procured equipment.

3-1-4 Consultant Supervision

After the tender for the selection of the equipment supplier, the consultant shall supervise project implementation conducted by the supplier with respect to the procurement of equipment and installation works.

Particular attention needs to be paid to the following points in the supervision of implementation:

①Before shipment: The consultant shall confirm that the equipment procured by the supplier conforms to the contract document, shall conduct pre-shipment inspection by an independent organization.

②Marine and inland transportation: The consultant shall pay attention to the number of days needed for packing, transporting, and clearing customs with regard to marine and inland transportation. The consultant shall instruct and supervise the supplier to ensure on-time delivery of equipment.

③Installation work: The consultant shall endeavor to have a constant grasp of the progress of work and continuously give guidance and advice to the Ministry of Health of Uzbekistan, the SSCEMS, and the supplier regarding delivery, test runs, and inspection.

④The consultant shall report on the state of progress to the related agencies of both countries.

3-1-5 Procurement Plan

(1) Local procurement

None of the medical equipment to be procured in the Project is manufactured in Uzbekistan and therefore will not be procured locally.

(2) Possibility of procurement from a third country

Judging from the result of survey concerning the availability of local agents for manufacturers, it is considered that procurement from third countries may facilitate the maintenance of the equipment to be procured, as well as the supply of necessary consumables and reagents. With respect to the procurement of equipment from third countries, the Uzbekistan government shall submit an application for procurement at the

time of detailed design, and this application needs to be approved by the Japanese government.

(2) Time for transportation

Depending on the country of origin of the procured equipment and the route of shipment, the time for transportation shall be specified as follows, generally within a period of about 50 days.

Shipment from Japan
Route: Japan - Russia (Nakhodka) - Kazakhstan - Uzbekistan
Time: 40-45 days

Shipment from Europe
Route 1: Germany – Belarus – Russia – Kazakhstan – Uzbekistan
Route 2: Germany – Romania – Moldova – Ukraine – Russia – Kazakhstan – Uzbekistan
Time: 20-30 days

Shipment from North America
Route: USA (Los Angeles/San Francisco) – Russia (Nakhodka) – Kazakhstan – Uzbekistan
Time: 45-50 days

3-1-6 Implementation Schedule

(1) Tender

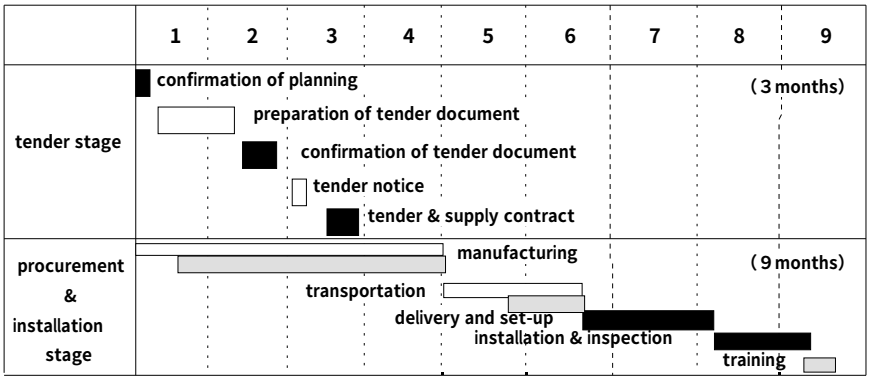
The tender process consists of the final confirmation of specifications of equipment, preparation of tender documents, tender notice, distribution of tender documents, tendering, evaluation of the tender result, and negotiation and signing on the equipment procurement contract. This process will require a period of about three months.

(2) Equipment procurement and installation

The process to be conducted by the supplier of equipment will begin after the Japanese government verifies the equipment procurement contract between the Uzbekistan government and the supplier. The period required for the process from procurement to the completion of installation and handing over of equipment will be nine months.

The implementation schedule from the conclusion of E/N to the completion of implementation process is as shown in Figure 3-1.

Figure 3-1: Implementation Schedule



3-1-7 Obligation of recipient country

The Uzbekistan side shall be responsible for performing the following matters:

1) Disclosure of necessary information and documents.
2) Procedures and arrangements to ensure smooth customs clearance of the procured equipment.
3) Exemption from customs duties and taxation for those persons involved in the supply of equipment and the provision of service.
4) Provision of necessary facilities and assurance of safety for Japanese nationals delivering the equipment or providing service related to the implementation of this project.
5) Bearing the expenses for procedures for Banking Arrangements (B/A) and irrevocable Authorization to Pay (A/P).
6) Deployment of necessary personnel and budget to assure effective implementation of the project (including O/M costs for the equipment being procured through Japanese grant aid cooperation).

7) Appropriate and effective maintenance and management of the equipment procured in this project, and bearing its expenses.
8) Issuance of permits, licenses and other authorizations needed for the implementation of this project.
9) Bearing the expenses for tax exemption procedures.
10) Bearing any expenses required for the implementation of this project other than those listed above.

3-2 Operation and Maintenance Plan

Table 3-1 shows the estimated annual costs for consumables and spare parts of the major equipment to be procured through this project.

The annual maintenance cost associated with this project is estimated to be about 50.4 million yen, consisting of about 46.53 million yen for consumables and 3.87 million yen for spare parts that are expected to be needed within one to two years after the implementation of the project.

Once the SSCEMS starts its operation, irrespective of whether this project will be implemented or not, the Center must perform a certain number of tests and treatment of patients estimated, either employing the test methods currently in use or introducing other methods of tests and diagnosis. Among those there are some tests and treatments not to be varied in number by the implementation of this project. Of the above-mentioned total maintenance costs, about 24.36 million yen is associated with the costs for reagents and recording paper for such tests and treatments. The remaining 26.04 million yen should be considered as the maintenance cost incurred by the introduction of equipment to be procured in this project.

The provision of medical service at the SSCEMS in a sustainable manner would be difficult without sufficient funds to cover the maintenance costs, and this factor should be given a decisive importance in considering the feasibility of this project. We, therefore, strongly request that the Uzbekistan government should allocate a budget of about 50.4million yen every year to cover the maintenance costs for medical equipment.

As for the sources of the required funds, the following possibilities may be considered:

1) According to the Uzbekistan Health Care Reform Program, about 80% of the medical

facilities will be privatized or become self-financing by 2005, and the Ministry of Health will appropriate the saved portion of its budget for the emergency and maternal-and-child health care sector. This reform is expected to generate considerable improvement from the current allocation of budget.

2) The Ministry of Health plans to introduce a medical insurance system in 2005 and to secure financial resources to support the health system.

3) The Uzbekistan government has established the Governmental Investment Program, and several projects have already been commenced. Projects qualified under this program will be given incentives such as tax reduction, preferential budget allocation, and foreign exchange quotas. The Governmental Investment Program will cover this project.

The State Health Care Reform Program is still in a transitional period and it needs a little more time to see the tangible effect of the reform. Thus, it is unlikely that the supply of maintenance costs, as well as the procurement of reagents and consumables, will be improved greatly in a short time. In the medium to long term, however, the country's ability to support maintenance of facilities is expected to show considerable improvement, provided that the liberalization of foreign exchange and the health care reform program are promoted successfully.

Table 3-1: Estimated Annual Maintenance Cost

1) Additional cost incurred by the introduction of equipment

Code	Description	Q'ty	Description	Unit price (¥)	Total (¥)	Calculation Base
12	Blood gas Analyzer	1	Reagent Kit	70	511,000	(Number of surgical ICU patients) x 365
			Electrode Set	536,000	536,000	
			Capillary	30	219,000	
			Recording Paper	10	73,000	
					1,339,000	
21	CT	1	Film	800	1,460,000	5 cases/day
			X-ray Tube	4,000,000	1,200,000	
					2,660,000	
30	ECG	6	Recording Paper	15	337,500	Inpatients A x 50 (1 time/week)
			ECG Paste	5	112,500	
			Patient Cable	18,200	18,200	
			Electrode Lead 4sets	4,700	4,700	
			Capillary	2,500	2,500	
					475,400	
31	EEG	1	Recording Paper	1	1,095	3 cases/day
			EEG paste	10	10,950	
			EEG electrode	16,000	16,000	
					28,045	

Code	Description	Q'ty	Description	Unit price （¥）	Total （¥）	Calculation Base
34	EEG（Portable）	1	Recording Paper	1	1,825	5 cases/day
			EEG paste	10	18,250	
			EEG electrode	16,000	16,000	
					36,075	
41	Hemodialysis apparatus	4	Tubing set	2,000	2,929,999	
			Dialyzer liquid	100	146,000	
					3,066,000	
62	Patient Monitor	32	Recording Paper	8	292,000	（Number of operations + Number of ICU patients x Recording paper 50cm）
			Disposal electrode	90	3,285,000	
			Patient cable	5,000	5,000	
			Thermo sensor	15,000	15,000	
			NIBP cuff	4,000	8,000	
					3,605,000	
73	Spirometer	1	Recording Paper	30	240,900	Number of operations x 5%, Number of inpatients / day + Recording paper 50cm
					240,900	
95	Syringe Pomp	37	Tubing Set	150	675,250	0.3 cases/day
			Syringe	50	225,083	
					900,333	
102	Ultrasound Diagnostic Apparatus	1	Gel	15	21,900	Number of patients
			Recording Paper	80	116,800	
					138,700	
103	Ultrasound Diagnostic Apparatus Mobile	4	Gel	15	101,250	Inpatients A x 30% X 50 （1 time/week）
			Recording Paper	60	405,000	
					506,250	
109	Water Treatment system	1	Iron Filter	50,000	100,000	
			Charcoal Filter	23,000	69,000	
			Pre-Filter	300	3,600	
			Salt	32,000	32,000	
					204,600	
112	X ray unit（C-arm）	2	X-ray Tube	1,400,000	420,000	Replace X-ray tube 1 time/3 years
					420,000	
113	X ray unit（Mobile）	3	Film	200	4,500,000	Film x Inpatients A、Replace X-ray tube 1 time/3 years
			X-ray Tube	500,000	150,000	
					4,650,000	
114	X ray unit	3	Film	200	6,570,000	Film x number of patient、Replace X-ray tube 1 time/3 years x2 units
			X-ray Tube	4,000,000	1,200,000	
					7,770,000	
			Cost which needs for Operation of Equipment		26,040,303	

2) Cost incurred regardless of the introduction of equipment

Code	Description	Q'ty	Description	Unit price （¥）	Total （¥）	Calculation Base
5	Bio Chemical Analyzer	1	Reagent Set	70	1,575,000	Inpatients A x 50 （1 time/week）
			Control Reagents	115,000	115,000	
			Recording Paper	1	22,500	
					1,712,500	
6	Blood Cell Counter	1	Reagents pack	45	3,199,500	（Number of emergency patients + number of ICU patients） x 365, Inpatients B x 50 （1 time/week）
			Rinse	3	213,300	
			Recording Paper	2	142,200	
					3,555,000	
7	Urine Analyzer	1	Strip	40	2,114,000	（Number of emergency patients） x 365, Inpatients B x 50（1time /week）
			Recording Paper	8	422,800	
					2,536,800	
11	Electrolyte Analyzer	1	Reagents pack	50	3,555,000	（Number of emergency patients + number of ICU patients）×365 Inpatients B x 50 （1 time/week）
			Pomp tube set	62,000	62,000	
			Recording Paper	6	426,600	
			Na Electrode	72,000	72,000	
			K Electrode	44,000	44,000	
			Ca Electrode	44,000	44,000	
			Reference Electrode	94,000	94,000	
					4,297,600	
18	Coagulator	1	Reagent pack	250	4,562,500	Number of operations （Year）
			Recording paper	2	36,500	
			Reaction tube	30	547,500	
					5,146,500	
45	Immuno Analyzer	1	Reagents pack	1,652,700	1,652,700	Number of emergency patients （Internal）
			Pipettes Tip	15,000	15,000	
					1,667,700	
47	Infusion Pomp	33	Infusion Set	200	2,409,000	1 case／day
					2,409,000	
63	Colorimeter	5	Cuvette	60	1,971,000	Number of emergency patients
					1,971,000	
71	Spectrophotometer	1	Cell	12	394,200	Number of emergency patients
111	Film Developer	3	Developer	17,000	425,000	Replace Fixer and Developer
			Fixer	10,000	250,000	1 time / 2 weeks
					675,000	

Yearly Cost Total	50,405,603
Yearly Consumable Cost	46,530,903
Yearly Spare Parts Cost	3,874,700

Cost which needs for Diagnostic	24,365,300
Cost which needs for Operation of Equipment	26,040,303

*Each cost has been estimated based on the annual number of patients calculated in Chapter 2. To determine the breakdown of the quantities of expendables consumed for each type of equipment, the number of patients at each department has been assumed as shown in the table below.

Type of Patient	No.	
Inpatients A	450	Inpatients (80) x 7 days x 80%
Inpatients B	400	Number of inpatients A – Number of ICU inpatients
Emergency patients/day	90	Total Number of patients/day – non-emergency patients/day
ICU inpatients/day	50	ICU (78 beds) x 80%
Cardiovascular patients/day	4	Estimated : based on the number of emergency cardiovascular patients

Chapter 4 Project Evaluation and Recommendations

Chapter 4 Project Evaluation and Recommendation

4-1 Project Effect

(1) Direct Effect

This project will have the following direct effects:

1. The SSCEMS will be enabled to commence appropriate emergency medical service.

At present, the existing medical equipment in the SSCEMS succeeded from the predecessor hospital has been aged significantly, and the Center does not have enough medical equipment to provide service as a tertiary emergency medical facility. When the equipment for examination, diagnosis, and treatment is provided under this project, the Center will be able to commence appropriate emergency medical service with sufficient capabilities for speedy and accurate examination, diagnosis, and treatment.

2. Effective allocation of health care resources will be made possible.

The introduction of examination, diagnostic, and treatment equipment under this project will improve the functions of the SSCEMS as a high-level emergency care facility, at which provides medical care through a consistent flow of procedures from the emergency care to examination/diagnosis, surgical operation, and inpatient care of emergency patients. This will provide the hospital with the capacities for speedy examination and accurate diagnosis and treatment, and enable the hospital to accept most of the emergency patients requiring hospitalization, who are currently transported to various specialized hospitals in the city. By treating most of emergency patients centrally at the SSCEMS, the Ministry of Health will be enabled to conduct effective reallocation of medical resources, including closing or downsizing of emergency departments in other hospitals, which are currently receiving emergency patients.

(2) Indirect Effect

1) The SSCEMS will be the keystone of the emergency medical care system in Uzbekistan.

The SSCEMS will not only receive serious cases from the emergency medical centers in various provinces, but also dispatch physicians of emergency medical to provincial branches and conduct retraining of personnel related to emergency medical service

across the country. The SSCEMS will contribute to the qualitative improvement of emergency hospitals across the country through these interchanges of personnel, information exchange, and skill training.

2) Promotion of the State Health Care Reform Program

The functional improvement of the SSCEMS will facilitate the reconstruction of the national emergency medical system and promote the Uzbekistan's State Health Care Reform Program. By the expansion of free medical service, people will be able to receive free diagnosis and treatment of initial stage at least. On the other hand, long-term medical care and the treatment of chronic diseases will be made chargeable, and people will become more aware of the cost of medical service. Thus, we expect an indirect effect that people will refrain from requesting unreasonably excessive medical service, and the Ministry of Health will be enabled to reduce the superfluous medical facilities and personnel currently imposing a heavy burden on the government. In this manner, the project will contribute to the promotion of the health care reform program.

4-2 Technical Assistance and Relation with Other Donors

1) Technical Assistance

With respect to this Center, the Uzbekistan side has also requested the dispatch of ICU nurses from Japan Overseas Cooperation Volunteers (JOCV). Ministry of Health also wishes to request the dispatch of physicians.

2) Relation with Other Donors

To secure funds in foreign currencies to purchase equipment, Uzbekistan is planning to obtain commercial loans from Spain, the USA, Finland, Israel, etc. With respect to this Center, the loan from Spain will be used for the procurement of items that are not included in the request for this project, such as patient beds.

4-3 Recommendation

The purpose of this project is to support the establishment of the SSCEMS through provision of basic equipment related to emergency medical service.

In the higher-level program, it is planned to separate pay medical service from free medical service. Medical facilities provide pay medical service will be selected and gradually made self-financing by 2005, so that these facilities will not be supported by the national budgets of Uzbekistan. On the other hand, free medical service will be limited to the medical facilities dealing with emergency medical service, maternal and child health care, and socially important diseases, and these facilities will be operated by the state budgets.

The SSCEMS is the facility positioned at the core of the Uzbekistan's Emergency Medical Service System. This hospital is staffed with physicians having sufficiently high technical skill, and thus it is believed that the equipment procured under this project will be utilized effectively. It has been confirmed through this study that the Uzbekistan government is prepared for the implementation of this project with respect to maintenance costs and personnel plans.

Uzbekistan is diligently making efforts toward the establishment and improvement of emergency medical centers across the country. In parallel to this, it is necessary to promote the system of pay medical service and to raise the collection rate of medical fees at relevant medical facilities, as well as to reduce the number of excessive medical facilities and personnel currently imposing a heavy burden on the government. The plan for the reduction of medical expenditures through introduction of pay medical care and the compression of excessive medical facilities and personnel cannot be considered separately from the plan to improve appropriate initial diagnosis and treatment through free provision of primary care and emergency care. Therefore, it is important to promote these two plans simultaneously and promptly. A failure to develop pay medical service would cause difficulty in the reallocation of budgets to free medical service and also undermine the future concept proposed in the higher-level program. These failures would possibly resulting in retardation of not only the improvement plan of emergency medical system but also the state health care reform program itself. Therefore it is essential to establish the system of pay and free medical service.

As a general rule, emergency medical service are to be provided at no cost to the patients, and these services include from the service of ambulance car to the treatment at the hospitals. However, there is a fact that some patients are actually using ambulance car as a substitute for doctor's visit. And also there will be the problem of free riders

(non-emergency patients pretending to be emergency patients) because of the free treatment without waiting time. At present, the government of Uzbekistan is leaving this problem to the conscience of the citizens and has taken no counter measures. In the United States, for example, this free rider problem is considered as an important cause of overcrowding at Emergency Room. In view of the nature of the problem related to medical care, in particular emergency medical care, it is practically very difficult to eliminate free riders that complain bad conditions or sudden illness. Although there is an option of introducing a system of punitive charges but there will be difficulties in operation of such system, we have to understand that the only effective solution is to leave the problem to the conscience of citizens.

Once the renovation works are completed, the modern medical equipment is installed through this project, and the SSCEMS begins operation as the first tertiary-level emergency medical facility in Uzbekistan, then local mass media will give prominent coverage to this facility, and it will be known to citizens. On this occasion, if the SSCEMS as a tertiary-level medical facility appeals to the public only in an aspect of "with renewed facilities and equipment," citizens could mistakenly recognize it as an advanced medical facility that provides free medical service. This could cause an increase in the number of free riders and result in overcrowding and long waiting time of medical service. In the worst possibility, a situation is conceivable in which the SSCEMS could function only as a safety-net medical service, rather than a true emergency medical service.

Therefore, it is advised to the Uzbekistan side that it should not overly concentrate on the institutional aspect of constructing the emergency medical system, but they should also take some measures to improve the citizens' recognition and awareness concerning the purpose of the emergency medical system and free medical service.

[Appendices]

1. Member List of the Survey Team

（1）Basic Design Study

Hiroshi NINO	Leader	Director, JICA Uzbekistan Office Japan International Cooperation Agency
Masayuki SUZUKAWA	Technical Adviser	Professor & Chairman Department of Emergency & Critical Care Medicine JICHI Medical School Emergency
Chiharu MORITA	Coordinator	Second Project Management Division Grant Aid Management Department Japan International Cooperation Agency
Shigetaka TOJO	Project Manager	International Techno Center Co., Ltd.
Hiroshi TASEI	Equipment Planner I	International Techno Center Co., Ltd.
Toshihiko MATSUKI	Equipment Planner II	International Techno Center Co., Ltd.
Yumi ISHIKAWA	Cost and Procurement Planner	International Techno Center Co., Ltd.
Masayo MURAKAMI	Interpreter	Translation Center Pioneer Co., Ltd.

(2) Explanation of Draft Final Report

Toshiyuki IWAMA	Team Leader	Second Project Management Division Grant Aid Management Department Japan International Cooperation Agency
Toru YOSHIDA	Grant Aid	Ministry of Foreign Affairs
Masaya KATO	Technical Adviser	Department Of Emergency & Critical Care Medicine JICHI Medical School Emergency
Shigetaka TOJO	Project Manager	International Techno Center Co., Ltd.
Hiroshi TASEI	Equipment Planner I	International Techno Center Co., Ltd.

Toshihiko MATSUKI	Equipment Planner II	International Techno Center Co., Ltd.
Masayo MURAKAMI	Interpreter	Translation Center Pioneer Co., Ltd.

2. Survey Schedule

(1) Basic Design Study

Date			Leader, Coodinator	Project Manager(PM)	Equipment Planner 1	Equipment Planner 2	Facility Planner	Procurement and Cost	Interpreter
1	1 Dec.	Fri		Narita OZ101 13:30→ Transit at Soul → Tashkent 21:20					
2	2 Dec.	Sat		Team Meeting					
3	3 Dec.	Sun		Team Meeting					
4	4 Dec.	Mon		Courtesy call Ministry of Health (MOH), Embassy of Japan, JICA					
5	5 Dec.	Tue		Discussion with SSCEMS, Site Survey					
6	6 Dec.	Wed		Discussion with SSCEMS	Survey on SSCEMS		Discussion with SSCEMS	Discussion with MOH	Same as PM
7	7 Dec.	Thu		Discussion with MOH	Survey on SSCEMS		Survey on SSCEMS	Discussion with MOH	〃
8	8 Dec.	Fri		Discussion with MOH	Survey on SSCEMS		Survey on SSCEMS	Agency survey	〃
9	9 Dec.	Sat		Team Meeting					
10	10 Dec.	Sun	Narita →	Team Meeting					
11	11 Dec.	Mon	Arrive Tashkent	Discussion with MOH	Survey on SSCEMS		Survey on SSCEMS	Agency survey	Same as PM
12	12 Dec.	Tue	Courtesy call Ministry of Health (MOH), Embassy of Japan, JICA		Survey on SSCEMS		Survey on SSCEMS	Agency survey	〃
13	13 Dec.	Wed	Discussion with MOH	Discussion with MOH	Survey on SSCEMS		Survey on SSCEMS	〃	〃
14	14 Dec.	Thu	Discussion with MOH	Discussion with MOH	Survey on SSCEMS		Survey on SSCEMS	〃	〃
15	15 Dec.	Fri	Visit to another hospital			Discussion with SSCEMS	Survey on SSCEMS	〃	〃
16	16 Dec.	Sat	Team Meeting						
17	17 Dec.	Sun	Team Meeting						
18	18 Dec.	Mon	Discussion on Minutes		Discussion on Equipment		Discussion with SSCEMS	Agency survey	Same as PM
19	19 Dec.	Tue	〃		Discussion on Equipment		Discussion with SSCEMS	〃	〃
20	20 Dec.	Wed	Sign of Minutes		Discussion on Equipment		Discussion with SSCEMS	〃	〃
21	21 Dec.	Thu	Report Ministry of Health (MOH), Embassy of Japan, JICA / Leave Tashkent	Report Ministry of Health (MOH), Embassy of Japan, JICA	Discussion on Equipment (in detail)		Discussion with SSCEMS	〃	〃
22	22 Dec.	Fri		Discussion with MOH	Discussion on Equipment (in detail)		Leave Tashkent OZ574 22:50 →		〃
23	23 Dec.	Sat		Team Meeting			→ 12:10 Arrive Narita		〃
24	24 Dec.	Sun		Team Meeting					〃
25	25 Dec.	Mon		Discussion with MOH	Discussion on Equipment (in detail)				〃
26	26 Dec.	Tue		Discussion with MOH	Discussion on Equipment (in detail)				〃
27	27 Dec.	Wed		Discussion with SSCEMS	Discussion on Equipment (in detail)				〃
28	28 Dec.	Thu		Discussion with SSCEMS	Discussion on Equipment (in detail)				〃
29	29 Dec.	Fri		Report Ministry of Health (MOH), Embassy of Japan, JICA / Leave Tashkent OZ574 22:50 →					〃
30	30 Dec.	Sat		→ 12:10 Arrive Narita					〃

(2) Explanation of Draft Final Report

NO.	DATE	DAY	Leader, Coordinator	Project Manager	Equipment Planner 1	Equipment Planner 2	Interpreter
1	2-Apr	Mon.		KE 002 15:55 Narita →18:25 Seoul			
2	3-Apr	Tue.		HY 512 10:15 Seoul →13:41 Tashkent / EOJ,JICA			
3	4-Apr	Wed		MOH, SSCEMS			
4	5-Apr	Thu		SSCEMS			
5	6-Apr	Fri		SSCEMS			
6	7-Apr	Sat		SSCEMS			
7	8-Apr	Sun	NH20913:30-FRA18:30				
8	9-Apr	Mon	LH622 14:15-23:10	MOH	SSCEMS		with project manager
9	10-Apr	Tue	Discussion				〃
10	11-Apr	Wed	Discussion				〃
11	12-Apr	Thu	Discussion				〃
12	13-Apr	Fri	Signing of Minutes of Discussion		Discussion of planned equipment		〃
13	14-Apr	Sat	LH625 2:20-5:45				
14	15-Apr	Sun					
15	16-Apr	Mon		Survey of SSCEMS	Discussion of planned equipment		with project manager
16	17-Apr	Tue		〃	Discussion of planned equipment		〃
17	18-Apr	Wed		〃	Discussion of planned equipment		〃
18	19-Apr	Thu		〃	Discussion of planned equipment		〃
19	20-Apr	Fri		Baseline survey	Discussion of planned equipment		〃
20	21-Apr	Sat					
21	22-Apr	Sun					
22	23-Apr	Mon		Baseline survey	Discussion of planned equipment		with project manager
23	24-Apr	Tue		Courtesy call (MOH, EOJ, JICA)			
24	25-Apr	Wed		OZ 580 09:55 Tashkent → 20:20 Seoul			
25	26-Apr	Thu		KE 001 10:20 Seoul → 12:35 Narita			

3. List of Party concerned in the Recipient Country

Ministry of Health	
Nazirov Feruz Gafurovich	Minister
Sidikov Abdunumon Ergashevich	External Economic Activities Dept.
Dadajanov Alijon	External Economic Activities Dept.
Ashurova Saodat Abdumumiovna	
National Center of Emergency Medicine	
Khadjibaev Abdukhakim Muminovich	Director
Asamov Ravshan	Deputy Director
Elena Michilovuna	Deputy Director
Akhmedova Dilorom Ilikhamovna	Peadiatirc Dept.
Sadirkhanov Ozodkhon Sadirkhanovich	Peadiatirc Dept.
Sadriddinov Kiyametdin Kutpitdinovich	Pharmacy Dept.
Akhmedov Rustam	Vascular surgery Dept.
Zunnunov Sergei	Hepatobiliary surgery Dept
Zyamaldynova Rimma	Diagnostic Dept.
Kim Dariya	Laboratory Dept.
Shelaev Oleg	Endoscopic Diagnosis Dept.
Gulyamov Bakhodir	Scientific Dept.
Gaibullaev	Urology Dept.
Acilbek Asadovich	Gynecology Dept.
Usmanov Alisher	Intensive Therapy Dept.
Naderkhanov Orivkhon	Intensive Therapy Dept.
Kozym Mohkomar	Neurosurgery Traumatology Dept.
Abbos Marupov	Toxicology Dept.
Nemat Nshbaev	Toxicology Dept.
Baratova Vinerd	Epidemiology Dept.
Yadgadova Rnaktuba	Nurse
Sirinyagina Zoya	Physiotherapy Dept.
Teshabaeva Indusha	Physiotherapy Dept.
Faiziev Shukhrat	Burn Dept.
Lee Elena	Statistics
Shakirov Eduard	Radiology Dept
Abdullaev Akhmadjon	Economical activities.
The Clinic of Tashkent Pediatric Medical Institute	
Talat Sa. Agzamkhozyaev	Director
Khamid Nurmukhamedov	Deputy Director
Rano Malabaevna	Laboratory Dept.
Scientific Research Institute Pediatrics	
Dilbar I. Maxmudova	Director
Shuhrat B.Tursunov	Chief Doctor
Abdumalik N. Aripov	Biochemical Dept.
Tashkent Dispatch Center	
Agzamkhozyaev Saidazim Saidumagrufovich	Director
V.Vahidov Scientific Centre of Surgery	
Zakirov Kadyr Nasyrovich	Director
Akirov Khabibulla Ataullaevich	Deputy Director
Jizzak Emergency Center	
Eshbekov Mukhtor	Director
Samarkand Regional Pedeatric Hospital	
Djalilov Bakhrom	Director
Samarkand Regional Center of Urgent Medical Aid	
Rafikov Abdumanon Gafarovich	Director

4. Minutes of Discussion

(1) Basic Design Study

MINUTES OF DISCUSSIONS
ON THE BASIC DESIGN STUDY ON THE PROJECT
FOR
UPGRADING THE EMERGENCY MEDICAL SYSTEM IN TASHKENT CITY
IN THE REPUBLIC OF UZBEKISTAN

Based on the results of the Preparatory Study, the Government of Japan decided to conduct a Basic Design Study on the project for Upgrading the Emergency Medical System in Tashkent City (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA") .

JICA sent to Republic of Uzbekistan (hereinafter referred to as "the Uzbekistan")the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Hiroshi Nino, Resident Representative ,JICA Uzbekistan office, and is scheduled to stay in the country from December 1 to December 29, 2000.

The Team held discussions with the Uzbekistani officials concerned and conducted a field survey at the study area.

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

Tashkent, December 20 , 2000

Hiroshi NINO
Leader
Basic Design Study Team
Japan International Cooperation Agency

Feruz NAZIROV
Minister of Health
Republic of Uzbekistan

ATTACHMENT

1.Objective of the Project

The objective of the Project is to improve and strengthen emergency medical system ,through the procurement of medical equipment to the State Scientific Center of Emergency Medical Service (hereinafter referred to as "SSCEMS").

2.Project sites

The Project site is the SSCEMS in Tashkent.

3.Responsible and Implementing Agency

3-1.The Responsible Agency : Ministry of Health

3-2.The Implementing Agency : SSCEMS

4.Items requested by the Government of Uzbekistan

After discussions with the Team, the items described in Annex-1 were finally requested from the Uzbekistan side .The final items (amount and specification) of the Project will be decided after further studies.

JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

5.Japan's Grant Aid Scheme

5-1.The Uzbekistan side understands the Japan's Grant Aid Scheme explained by the Team , as described in ANNEX 2 .

5-2.The Uzbekistan side will take the necessary measures, as described in Annex-3, for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented.

6.Schedule of the Study

6-1. The consultants will proceed to further studies in Uzbekistan until December 29 , 2000.

6-2. JICA will prepare the draft report in English (and the summary report in Russian) and dispatch a mission in order to explain its contents in April, 2001.

6-3. In case that the contents of the report is accepted in principle by the Government of Uzbekistan, JICA will complete the final report and send it to the Government of Uzbekistan around July, 2001.

7.Other relevant issues

7-1 The Uzbekistan side will inform the result of budget allocation for rest of the reconstruction of

SSCEMS (Pediatric Block ,Surgery Block and Therapeutic Block) to JICA, around February,2001.

7-2 The Uzbekistan side understands the necessity to allocate a certain amount of budget to maintain all the equipment which will be procured by Japan.

7-3 The Uzbekistan side will present all the data and document which is necessary for further works, by 27th Dec,2000.

Annex 1

The Requested Equipment

		Equipment Name	Q'ty	
E		**Emergency Medical Service Department**		
E	1	Anesthesia Apparatus	1	
E	2	Defibrillator	1	
E	3	Electrosurgical Unit	1	
E	4	Emergency Cart	2	
E	5	Hot Air Sterilizer	1	
E	6	Infusion Pump	1	*
E	7	Intubation Kit	1	
E	8	Operating Table	1	
E	9	Patient Monitor	1	
E	10	Pulse Oximeter	1	
E	11	Refrigerator	1	
E	12	Resuscitation Bag	3	
E	13	Operating Lamp	1	
E	14	Stretcher	8	
E	15	Suction Unit A	1	
E	16	Suction Unit B	1	*
E	17	Surgical Instruments for Ambulatory	4	
E	18	Syringe Pump	1	
E	19	Ventilator	1	
E	20	Weighing Scale	1	
E	21	Wheel Chair	5	
O		**Surgery Department**		
OA		**Urology Operation Room**		*
OA	1	Anesthesia Apparatus	1	
OA	2	Cystscope	1	
OA	3	Suction Unit A	1	
OA	4	Suction Unit B	1	*
OA	5	Electrosurgical Unit	1	
OA	6	Infusion Pump	1	*
OA	7	Intubation Kit	1	
OA	8	Nephroscope	1	
OA	9	Operating Table	1	
OA	10	Patient Monitor	1	
OA	11	Operating Lamp	1	
OA	12	Surgical Instruments for Urology	1	
OA	13	Syringe Pump	1	
OA	14	Uretheroscope	1	
OAB	1	Pulse Oximeter	1	
OAB	2	Defibrillator	1	
OAB	3	Refrigerator	1	
OAB	4	Hot Air Sterilizer	1	
OAB	5	Water Distiller	1	
OB		**Gynecology Operation Room**		*
OB	1	Anesthesia Apparatus	1	
OB	2	Suction Unit A	1	
OB	3	Suction Unit B	1	*
OB	4	Electrosurgical Unit	1	
OB	5	Infusion Pump	1	*

* Items to be confirmed further study

		Equipment Name	Q'ty	
OB	6	Intubation Kit	1	
OB	7	Operating Table	1	
OB	8	Patient Monitor	1	
OB	9	Operating Lamp	1	
OB	10	Surgical Instruments for Gynecology	1	
OB	11	Laparoscope System C	1	
OB	12	Syringe Pump	1	
OC		**Thoracic Surgery Operation Room**		
OC	1	Anesthesia Apparatus	1	
OC	2	Electrosurgical Unit	1	
OC	3	Infusion Pump	1	*
OC	4	Intubation Kit	1	
OC	5	Operating Table	1	
OC	6	Patient Monitor	1	
OC	7	Operating Lamp	1	
OC	8	Suction Unit A	1	
OC	9	Suction Unit B	1	*
OC	10	Syringe Pump	1	
OC	11	Thoracoscope System A	1	
OCD	1	Defibrillator	1	
OCD	2	Hot Air Sterilizer	1	
OCD	3	Microscope for Operation	1	
OCD	4	Pulse Oximeter	1	
OCD	5	Refrigerator	1	
OCD	6	Surgical Instruments for Microsurgery	1	
OCD	7	Surgical Instruments for Thorax	1	
OCD	8	Surgical Instruments for Vascular Surgery	1	
OCD	9	Water Distiller	1	
OD		**Vascular Surgery Operation Room**		
OD	1	Anesthesia Apparatus	1	
OD	2	Electrosurgical Unit	1	
OD	3	Infusion Pump	1	*
OD	4	Intubation Kit	1	
OD	5	Operating Table	1	
OD	6	Patient Monitor	1	
OD	7	Operating Lamp	1	
OD	8	Suction Unit A	1	
OD	9	Suction Unit B	1	*
OD	10	Syringe Pump	1	
OE		**Abdominal Operation Room**		
OE	1	Anesthesia Apparatus	2	
OE	2	Electrosurgical Unit	2	
OE	3	Infusion Pump	2	*
OE	4	Intubation Kit	2	
OE	5	Operating Table	2	
OE	6	Patient Monitor	2	
OE	7	Operating Lamp	2	
OE	8	Suction Unit A	2	
OE	9	Suction Unit B	2	*
OE	10	Syringe Pump	2	
OEE	1	Fibergastroscope	1	
OEE	2	Hot Air Sterilizer	1	

※ Items to be confirmed further study

		Equipment Name	Q'ty	
OEE	3	Laparoscope System A	1	
OEE	4	Pulse Oximeter	1	
OEE	5	Refrigerator	1	
OEE	6	Surgical Instruments for Abdomen A	2	
OEE	7	Surgical Instruments for Esophagus	1	
OEE	8	Ultrasound Scanner, Mobile	1	
OEE	9	Water Distiller	1	
OF		**Hepatobiliariary Operation Room**		
OF	1	Anesthesia Apparatus	1	
OF	2	Choledochoscope	1	
OF	3	Electrosurgical Unit	1	
OF	4	Infusion Pump	1	*
OF	5	Operating Table	1	
OF	6	Patient Monitor	1	
OF	7	Operating Lamp	1	
OF	8	Suction Unit A	1	
OF	9	Suction Unit B	1	*
OF	10	Surgical Instruments for Hepatobiliary	1	
OF	11	Syringe Pump	1	
OF	12	Ultrasonic Surgical Unit	1	
OF	13	X-Ray Unit, C-arm	1	
OFG	1	Defibrillator	1	
OFG	2	Hot Air Stenlizer	1	
OFG	3	Pulse Oximeter	1	
OFG	4	Refrigerator	1	
OFG	5	Water Distiller	1	
OG		**Traumatology / Neurology Operation Room**		
OG	1	Anesthesia Apparatus	1	
OG	2	Electric Drill and Set of Saws for Bones Treatment	1	
OG	3	Electrosurgical Unit	1	
OG	4	Infusion Pump	1	*
OG	5	Surgical Instruments for Neurosurgery	1	
OG	6	Intubation Kit	1	
OG	7	Operating Table	1	
OG	8	Osteosynthesis Apparatus	1	
OG	9	Patient Monitor	1	
OG	10	Operating Lamp	1	
OG	11	Suction Unit A	1	
OG	12	Suction Unit B	1	*
OG	13	Surgical Instruments for Traumatology A	1	
OG	14	Syringe Pump	1	
OG	15	Wire-rod Apparatus for Extrafocal Osteosynthesis	1	
OH		**Traumatology Operation Room**		
OH	1	Anesthesia Apparatus	1	
OH	2	Defibrillator	1	
OH	3	Electric Drill and Set of Saws for Bones Treatment	1	
OH	4	Electrosurgical Unit	1	
OH	5	Hot Air Stenlizer	1	
OH	6	Infusion Pump	1	*
OH	7	Intubation Kit	1	
OH	8	Operating Lamp, Mobile	1	
OH	9	Operating Table	1	

* Items to be confirmed further study

		Equipment Name	Q'ty	
OH	10	Patient Monitor	1	
OH	11	Refrigerator	1	
OH	12	Suction Unit A	1	
OH	13	Suction Unit B	1	*
OH	14	Surgical Instruments for Traumatology A	1	
OH	15	Syringe Pump	1	
OH	16	X-Ray Film Developer	1	
OH	17	X-Ray with TV Unit	1	
S		**Central Sterilization**		
S	1	Autoclave, Large	2	
S	2	Autoclave, Small	1	
S	3	Hot Air Sterilizer	1	
S	4	Ultrasonic Washer	1	
S	5	Water Distiller	1	
I		**Intensive Therapy Department**		
IA		**ICU for Surgery Block, Adult**		
IA	1	Defibrillator	1	
IA	2	ECG, 6-Ch	1	
IA	3	Suction Unit C	1	
IA	4	Examination Lamp, Mobile	2	
IA	5	ICU Bed	24	
IA	6	Infusion Pump	6	*
IA	7	Intubation Kit	2	
IA	8	Patient Monitor	6	
IA	9	Plethysmograph	1	*
IA	10	Pulse Oximeter	1	
IA	11	Sphygmomanometer	2	
IA	12	Suction Unit A	6	
IA	13	Syringe Pump	5	
IA	14	Ultrasound Scanner, Mobile	1	
IA	15	Ventilator	2	*
IA	16	X-Ray Unit, Mobile	1	
IB		**ICU for Theraputic Block, Adult**		
IB	1	Defibrillator	1	
IB	2	ECG, 6-Ch	1	
IB	3	Examination Lamp, Mobile	2	
IB	4	ICU Bed	24	
IB	5	Infusion Pump	5	*
IB	6	Intubation Kit	2	
IB	7	Patient Monitor	5	
IB	8	Pulse Oximeter	1	
IB	9	Refrigerator	2	
IB	10	Resuscitation Bag	5	
IB	11	Suction Unit B	6	
IB	12	Suction Unit C	1	
IB	13	Syringe Pump	5	
IB	14	Ultrasound Nebulizer	2	
IB	15	Ventilator	2	
IB	16	X-Ray Unit, Mobile	1	
IC		**ICU for Theraputic, Pediatric Block**		
IC	1	ECG, 6-Ch	1	
IC	2	ICU Bed	8	

* Items to be confirmed further study

		Equipment Name	Q'ty	
IC	3	Infusion Pump	2	*
IC	4	Intubation Kit	1	
IC	5	Patient Monitor	1	
IC	6	Pulse Oximeter	1	
IC	7	Resuscitation Bag	1	
IC	8	Suction Unit B	2	
IC	9	Syringe Pump	4	
IC	10	Ultrasound Nebulizer	1	
IC	11	Ventilator for Infant	1	
ID		**ICU for Surgery, Pediatric Block**		
ID	1	ECG, 6-Ch	1	
ID	2	Suction Unit C	1	
ID	3	Suction Unit B	2	
ID	4	ICU Bed	10	
ID	5	Infusion Pump	2	
ID	6	Intubation Kit	1	
ID	7	Patient Monitor	2	
ID	8	Pulse Oximeter	1	
ID	9	Resuscitation Bag	1	
ID	10	Syringe Pump	5	
ID	11	Ultrasound Nebulizer	1	
ID	12	Ventilator for Infant	2	
F		**Functional Diagnosis Block**		
F	1	Bronchoscope for Adult	1	
F	2	Bronchoscope for Children	1	
F	3	Colonofiberscope for Adults	1	
F	4	Colonofiberscope for Children	1	
F	5	Diagnostic Set for Ophthalmology	1	
F	6	Diagnostic Set for E.N.T	1	
F	7	Diagnostic Set for Gynecology	1	
F	8	Diagnostic Set of Urology	1	
F	9	Rheoencephalograph	1	*
F	10	Cystourethroscope	1	
F	11	ECG, 6-Ch	2	
F	12	Electroencephalograph	1	
F	13	Encephalograph, Portable	2	
F	14	Fibergastroduodenoscope	1	
F	15	Fibergastroduodenoscope for Children	1	
F	16	Spirometer	1	
F	17	Ultrasound Scanner, Color Doppler	1	
F	18	Ultrasound Scanner, Mobile	1	
F	19	Veloergometer	1	
F	20	X-Ray Film Developer	1	
F	21	X-Ray with TV Unit	1	
F	22	CT Scanner	1	*
L		**Laboratory**		
LA		**Clinical Laboratory**		
LA	1	Agregometer	1	*
LA	2	Automatic Blood Cell Counter	1	
LA	3	Automatic Urine Analyzer	1	
LA	4	Balance A	2	
LA	5	Microscope	4	

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* Items to be confirmed further study

		Equipment Name	Q'ty	
LA	6	Centrifuge	1	
LA	7	Balance B	1	
LA	8	Hematocrit Centrifuge	1	
LA	9	Hemoglobin Meter	2	
LA	10	Incubator	1	
LA	11	Magnet Mixer A	1	
LA	12	Magnet Mixer B	1	
LA	13	Photoelectrocolorimeter	1	
LA	14	Refrigerator	1	
LA	15	Water Distiller	1	
LB		**Biochemistry Laboratory**		
LB	1	Automatic Biochemical Analyzer	1	
LB	2	Balance A	2	
LB	3	Blood Electrolyte Analyzer	1	
LB	4	Blood Gas Analyzer	1	
LB	5	Centrifuge	2	
LB	6	Coagulometer	1	
LB	7	Photoelectrocolorimeter	1	
LB	8	Refractometer	1	
LB	9	Refrigerator	1	
LB	10	Water Distiller	1	
LC		**Bacteriology Laboratory**		
LC	1	Incubator	1	
LC	2	Microscope	1	
LD		**Hormone Laboratory**		
LD	1	Spectrophotometer	1	
LD	2	Immunofermental Analyzer	1	*
LD	3	Freezer	1	
LE		**Surgical Block Express Laboratory**		
LE	1	Microscope	1	
LE	2	Centrifuge Table Top	1	
LE	3	Hemoglobin Meter	1	
LE	4	Blood Electrolyte Analyzer	1	*
LE	5	Photoelectrocolorimeter	1	
LF		**Therapeutic Block Express Laboratory**		
LF	1	Microscope	1	
LF	2	Centrifuge Table Top	1	
LF	3	Hemoglobin Meter	1	
LF	4	Photoelectrocolorimeter	1	
LG		**Pediatric Block Express Laboratory**		
LG	1	Microscope	1	
LG	2	Centrifuge Table Top	1	
LG	3	Hemoglobin Meter	1	
LG	4	Photoelectrocolorimeter	1	
P		**Pediatric Suegery Department**		
PA		**Pediatric Thoracovasucular Operation Room**		
PA	1	Anesthesia Apparatus	1	
PA	2	Electrosurgical Unit	1	
PA	3	Infusion Pump	1	*
PA	4	Intubation Kit	1	
PA	5	Operating Table	1	
PA	6	Patient Monitor	1	

* Items to be confirmed further study

		Equipment Name	Qty	
PA	7	Operating Lamp	1	
PA	8	Suction Unit A	1	
PA	9	Suction Unit B	1	*
PA	10	Surgical Instruments for Thorax A	1	
PA	11	Synnge Pump	1	
PA	12	Thoracoscope System B	1	
PAB	1	Defibrillator	1	
PAB	2	Hot Air Stenlizer	1	
PAB	3	Pulse Oximeter	1	
PAB	4	Refrigerator	1	
PAB	5	Ultrasound Scanner, Mobile	1	
PAB	6	Water Distiller	1	
PB		**Pediatric Urology Operation Room**		
PB	1	Anesthesia Apparatus	1	
PB	2	Cystourethroscope for Surgery	1	
PB	3	Electrosurgical Unit	1	
PB	4	Infusion Pump	1	*
PB	5	Intubation Kit	1	
PB	6	Operating Table	1	
PB	7	Patient Monitor	1	
PB	8	Operating Lamp	1	
PB	9	Suction Unit A	1	
PB	10	Suction Unit B	2	*
PB	11	Surgical Instruments for Nephlogy	1	
PB	12	Syringe Pump	1	
PC		**Pediatric Abdominal Operation Room**		
PC	1	Anesthesia Apparatus	1	
PC	2	Electrosurgical Unit	1	
PC	3	Infusion Pump	1	*
PC	4	Intubation Kit	1	
PC	5	Operating Table	1	
PC	6	Patient Monitor	1	
PC	7	Operating Lamp	1	
PC	8	Suction Unit A	1	
PC	9	Suction Unit B	1	*
PC	10	Surgical Instruments for Abdomen B	1	
PC	11	Syringe Pump	1	
PCD	1	Defibrillator	1	
PCD	2	Hot Air Stenlizer	1	
PCD	3	Laparoscope System B	1	
PCD	4	Pulse Oximeter	1	
PCD	5	Refrigerator	1	
PCD	6	Water Distiller	1	
PCD	7	X-Ray Unit, C-arm	1	
PD		**Pediatric Hepatobilirial Operation Room**		
PD	1	Anesthesia Apparatus	1	
PD	2	Electrosurgical Unit	1	
PD	3	Infusion Pump	1	*
PD	4	Intubation Kit	1	
PD	5	Operating Table	1	
PD	6	Patient Monitor	1	
PD	7	Operating Lamp	1	

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※ Items to be confirmed further study

		Equipment Name	Q'ty	
PD	8	Suction Unit A	1	
PD	9	Suction Unit B	1	*
PD	10	Surgical Instruments for Abdomen B	1	
PD	11	Syringe Pump	1	
PE		**Pediatric Traumatology Operation Room**		
PE	1	Anesthesia Apparatus	1	
PE	2	Defibrillator	1	
PE	3	Electric Drill and Set of Saws for Bones Treatment	1	
PE	4	Electrosurgical Unit	1	
PE	5	Hot Air Sterilizer	1	
PE	6	Infusion Pump	1	*
PE	7	Intubation Kit	1	
PE	8	Operating Table	1	
PE	9	Patient Monitor	1	
PE	10	Pulse Oximeter	1	
PE	11	Refrigerator	1	
PE	12	Operating Lamp	1	
PE	13	Suction Unit A	1	
PE	14	Suction Unit B	1	*
PE	15	Surgical Instruments for Traumatology B	1	
PE	16	Surgical Instruments for Osteosynthesis	1	
PE	17	Syringe Pump	1	
PE	18	Wire-rod Apparatus for Extrafocal Osteosynthesis	1	
PE	19	X-Ray Film Developer	1	
PE	20	X-Ray with TV Unit	1	
		Toxicology/Burns Department		
T		**Toxicology Block**		
T	1	Hemodialysis Apparatus	4	*
T	2	Instrument Cart	3	
T	3	Operating Lamp, Mobile	1	
T	4	Surgical Instruments for Ambulatory	1	
T	5	Treatment Table	2	
T	6	Water Purifier Unit	1	
TB	1	X-Ray Unit, Mobile	1	
IE		**ICU for Toxicology Block**		
IE	1	ICU Bed	6	
IE	2	Infusion Pump	1	*
IE	3	Intubation Kit	1	
IE	4	Patient Monitor	1	
IE	5	Refrigerator	1	
IE	6	Resuscitation Bag	1	
IE	7	Suction Unit B	1	
IE	8	Syringe Pump	1	
IE	9	Ventilator	1	
IEF	1	Defibrillator	1	
B		**Burns Block**		
B	1	Anesthesia Apparatus	1	
B	2	Defibrillator	1	
B	3	Electrosurgical Unit	1	
B	4	Hot Air Sterilizer	1	
B	5	Infusion Pump	1	*
B	6	Instrument Cart	1	

* Items to be confirmed further study

		Equipment Name	Q'ty	
B	7	Intubation kit	1	
B	8	Operating Table	1	
B	9	Patient Monitor	1	
B	10	Pulse Oximeter	1	
B	11	Refrigerator	1	
B	12	Operating Lamp	1	
B	13	Suction Unit A	1	
B	14	Suction Unit B	1	
B	15	Syringe Pump	1	
IF		**ICU for Burns Block**	1	
IF	1	Bed for Burned Patient	1	
IF	2	ICU Bed	6	
IF	3	Infusion Pump	1	*
IF	4	Intubation Kit	1	
IF	5	Patient Monitor	1	
IF	6	Refrigerator	1	
IF	7	Resuscitation Bag	1	
IF	8	Suction Unit B	1	
IF	9	Syringe Pump	1	
IF	10	Ventilator	1	

* Items to be confirmed further study

Japan's Grant Aid Scheme

1. Grant Aid Procedures

1) Japan's Grant Aid Program is executed through the following procedures.

Application	(Request made by a recipient country)
Study	(Basic Design Study conducted by JICA)
Appraisal & Approval	(Appraisal by the Government of Japan and Approval by Cabinet)
Determination of Implementation	(The Notes exchanged between the Governments of Japan and the recipient country)

2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study), using (a) Japanese consulting firm(s).

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Basic Design Study

1) Contents of the Study

The aim of the Basic Design Study (hereafter referred to as "the Study"), conducted by JICA on a requested project (hereafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Japanese Government. The contents of the Study are as follows:

a) Confirmation of the background, objectives, and benefits of the requested Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation.
b) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic point of view.
c) Confirmation of items agreed on by both parties concerning the basic concept of the Project.
d) Preparation of a basic design of the Project
e) Estimation of the costs of the Project

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid Project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations in the recipient country through the Minutes of Discussions.

2) Selection of Consultants

For the smooth implementation of the Study, JICA uses (a) registered consultant firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms. The firm(s) selected carry (ies) out the Basic Design Study and write(s) a report, based upon terms of reference set by JICA. The consulting firm(s) used for the Study which is (are) recommended by JICA to the recipient country also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

3. Japan's Grant Aid Scheme

1) What is Grant Aid ?

The Grant Aid Program provides a recipient country with non-reimbursable funds needed to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under the principals in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

3) "The period of the Grant Aid" means the one fiscal year in which the Cabinet approves the Project for. Within the fiscal year, all procedure such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed. However in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

4) Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When both Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of the third country.

However the prime contractors, namely, consulting contracting and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

5) Necessity of "Verification"

The Government of recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

6) Undertakings required of the Government of recipient country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as the following:
a) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction.
b) To provide facilities of the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
c) To secure buildings prior to the procurement in case the installation of the equipment.
d) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.
e) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.
f) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

7) "Proper Use"

The recipient country is required to maintain and use the facilities constructed and the equipment purchased under the Grant Aid properly and effectively and to assign the necessary staff for operation and maintenance of them as well as to bear all the expenses other than those covered by the Grant Aid.

8) "Re-export"

The products purchased under the Grant Aid shall not be re-exported from the recipient country.

9) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.
b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the Government of the recipient country or its designated authority.

ANNEX- 3

Major Undertakings to be taken by Each Government

NO	Items	To be covered by Grant Aid	To be covered by Recipient side
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
2	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine(Air) transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	●	
3	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
4	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract		●
5	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		●
6	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for the transportation and installation of the equipment		●

(2) Explanation of Draft Final Report

MINUTES OF DISCUSSIONS
ON THE BASIC DESIGN STUDY ON THE PROJECT
FOR
UPGRADING THE EMERGENCY MEDICAL SYSTEM IN TASHKENT CITY
IN THE REPUBLIC OF UZBEKISTAN
(EXPLANATION ON DRAFT REPORT)

In December 2000, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Basic Design Study Team on the Project for Upgrading the Emergency Medical System in Tashkent City (hereinafter referred to as "the Project") to Uzbekistan, and through discussion, field survey, and technical examination of the results in Japan, JICA prepared a draft report of the study.

In order to explain and to consult the Uzbekistan on the components of the draft report, JICA sent to Uzbekistan the Draft Report Explanation Team (hereinafter referred to as " the Team "), which is headed by Mr.Toshiyuki IWAMA, Deputy Director of Second Management Division, Grant Aid Management Department, Japan International Cooperation Agency, from April 2 to April 26, 2001.

As a result of discussions, both parties confirmed the main items described on the attached sheets.

Tashkent, April 13, 2001

Toshiyuki IWAMA
Leader
Basic Design Study Team
Japan International Cooperation Agency

Feruz NAZIROV
Minister of Health
Republic of Uzbekistan

ATTACHMENT

1. Components of the Draft Report

The Government of Uzbekistan agreed and accepted in principle the components of the draft report explained by the Team. The agreed list of equipment is in Annex 1.

2. Japan's Grant Aid scheme

The Uzbekistani side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Uzbekistan as explained by the Team and described in Annex-3 and Annex-4 of the Minutes of Discussions signed by both parties on December 20, 2000.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the Government of Uzbekistan around August 2001.

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4. Other relevant issues

4-1 The Team visited the buildings under construction and renovation. The surgery, toxic and burns, OR block buildings are almost ready; the ER and diagnostic department buildings will be completed by September 2001. Regular meetings are held by the Ministry of Health and the City of Tashkent to supervise and monitor the civil works. The Team asked the Uzbekistani side to send a monthly progress report to the JICA office in Uzbekistan.

4-2 The Uzbekistani side agrees to secure and allocate the enough budget to operate and maintain the medical equipment provided by the Grant Aid properly and effectively. They will start the procurement of consumables immediately after handing over of equipment; however, the procurement process will take about six months. Therefore, the Team agreed to include consumables for six months to the project.

4-3 Both sides agreed that all contents of this draft report is confidential and should not be duplicated or released to any other parties.

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The list of equipment

E		Emergency Medical Service Department	
		Equipment	Q'ty
E	01	Anesthesia Apparatus	1
E	02	Defibrillator	1
E	03	Electrosurgical Unit	1
E	04	Emergency Cart	2
E	05	Hot Air Sterilizer	1
E	06	Infusion Pump	1
E	07	Intubation Kit	1
E	08	Uretero-renoscope	1
E	09	Operating Lamp	1
E	10	Surgery Trolley	1
E	11	Patient Monitor	1
E	12	Pulse Oximeter	1
E	13	Refrigerator with Freezer	1
E	14	Resuscitation Bag	3
E	15	Stretcher	8
E	16	Suction Unit	1
E	17	Suction Unit, Small	1
E	18	Surgical Instruments for Ambulatory	4
E	19	Syringe Pump	1
E	20	Ventilator	1
E	21	Wheel Chair	5
O		**Surgery Department**	
OA		**Urology Operation Room**	
		Equipment	Q'ty
OA	01	Anesthesia Apparatus	1
OA	02	Cystourethroscope, Adult	1
OA	03	Defibrillator	1
OA	04	Electrosurgical Unit	1
OA	05	Infusion Pump	1
OA	06	Intubation Kit	1
OA	07	Operating Lamp	1
OA	08	Operating Table	1
OA	09	Patient Monitor	1
OA	10	Suction Unit	1
OA	11	Suction Unit, Small	1
OA	12	Surgical Instruments for Urology	1
OA	13	Syringe Pump	1
OA	14	Pulse Oximeter	1
OA	15	Defibrillator	1
OA	16	Refrigerator with Freezer	1
OA	17	Hot Air Sterilizer	1
OA	18	Water Distiller	1
OB		**Gynecology Operation Room**	
		Equipment	Q'ty
OB	01	Anesthesia Apparatus	1
OB	02	Electrosurgical Unit	1
OB	03	Infusion Pump	1
OB	04	Intubation Kit	1
OB	05	Laparoscope System, Gynecology	1
OB	06	Operating Lamp	1
OB	07	Operating Table	1

OB	08	Patient Monitor	1
OB	09	Suction Unit	1
OB	10	Suction Unit, Small	1
OB	11	Surgical Instruments for Gynecology	1
OB	12	Syringe Pump	1
OC		**Thoracic Surgery Operation Room**	
		Equipment	Q'ty
OC	01	Anesthesia Apparatus	1
OC	02	Electrosurgical Unit	1
OC	03	Infusion Pump	1
OC	04	Intubation Kit	1
OC	05	Operating Lamp	1
OC	06	Operating Table	1
OC	07	Patient Monitor	1
OC	08	Suction Unit	1
OC	09	Suction Unit, Small	1
OC	10	Syringe Pump	1
OC	11	Thoracoscope System, Adult	1
OC	12	Defibrillator	1
OC	13	Hot Air Sterilizer	1
OC	14	Microscope for Operation	1
OC	15	Pulse Oximeter	1
OC	16	Refrigerator with Freezer	1
OC	17	Surgical Instruments for Microsurgery	1
OC	18	Surgical Instruments for Thorax, Adult	1
OC	19	Water Distiller	1
OD		**Vascular Surgery Operation Room**	
		Equipment	Q'ty
OD	01	Anesthesia Apparatus	1
OD	02	Electrosurgical Unit	1
OD	03	Infusion Pump	1
OD	04	Intubation Kit	1
OD	05	Operating Lamp	1
OD	06	Operating Table	1
OD	07	Patient Monitor	1
OD	08	Suction Unit	1
OD	09	Suction Unit, Small	1
OD	10	Surgical Instruments for Vascular Surgery	1
OD	11	Syringe Pump	1
OE		**Abdominal Operation Room**	
		Equipment	Q'ty
OE	01	Anesthesia Apparatus	2
OE	02	Electrosurgical Unit	2
OE	03	Infusion Pump	2
OE	04	Intubation Kit	2
OE	05	Operating Lamp	2
OE	06	Operating Table	2
OE	07	Patient Monitor	2
OE	08	Suction Unit	2
OE	09	Suction Unit, Small	2
OE	10	Syringe Pump	2
OE	11	Fibergastroscope	2
OE	12	Hot Air Sterilizer	1
OE	13	Laparoscope System, Adult	1
OE	14	Pulse Oximeter	1

OE	15	Refrigerator with Freezer	1
OE	16	Surgical Instruments for Abdomen, Adult	2
OE	17	Surgical Instruments for Esophagus	1
OE	18	Ultrasound Scanner, Mobile	1
OE	19	Water Distiller	1
OF		**Hepatobiliary Operation Room**	
		Equipment	**Q'ty**
OF	01	Anesthesia Apparatus	1
OF	02	Choledochoscope	1
OF	03	Electrosurgical Unit	1
OF	04	Infusion Pump	1
OF	05	Operating Lamp	1
OF	06	Operating Table	1
OF	07	Patient Monitor	1
OF	08	Suction Unit	1
OF	09	Suction Unit, Small	1
OF	10	Surgical Instruments for Hepatobiliary	1
OF	11	Syringe Pump	1
OF	12	X-Ray Unit, C-arm	1
OF	13	Defibrillator	1
OF	14	Hot Air Sterilizer	1
OF	15	Pulse Oximeter	1
OF	16	Refrigerator with Freezer	1
OF	17	Water Distiller	1
OG		**Traoumatology/Neurology Operation Room**	
		Equipment	**Q'ty**
OG	01	Anesthesia Apparatus	1
OG	02	Electrosurgical Unit	1
OG	03	Infusion Pump	1
OG	04	Intubation Kit	1
OG	05	Operating Lamp	1
OG	06	Operating Table	1
OG	07	Patient Monitor	1
OG	08	Suction Unit	1
OG	09	Suction Unit, Small	1
OG	10	Surgical Instruments for Neurosurgery	1
OG	11	Surgical Instruments for Osteosynthesis, Adult	1
OG	12	Surgical Instruments for Traumatology, Adult	1
OG	13	Syringe Pump	1
OH		**Traumatology Operation Room**	
		Equipment	**Q'ty**
OH	01	Anesthesia Apparatus	1
OH	02	Defibrillator	1
OH	03	Electrosurgical Unit	1
OH	04	Hot Air Sterilizer	1
OH	05	Infusion Pump	1
OH	06	Intubation Kit	1
OH	07	Operating Lamp, Mobile	1
OH	08	Surgery Trolley	1
OH	09	Patient Monitor	1
OH	10	Refrigerator with Freezer	1
OH	11	Suction Unit	1
OH	12	Suction Unit, Small	1
OH	13	Surgical Instruments for Traumatology, Adult	1
OH	14	Syringe Pump	1

OH	15	X-Ray Film Developer	1
OH	16	X-Ray Unit	1
S		**C central Sterilization Department**	
		Equipment	**Q'ty**
S	01	Autoclave, Large	2
S	02	Autoclave, Small	1
S	03	Hot Air Sterilizer	1
S	04	Ultrasonic Washer	1
S	05	Water Distiller	1
I		**Intesive Therapy Department**	
IA		**ICU for Surgery Block, Adult**	
		Equipment	**Q'ty**
IA	01	Defibrillator	1
IA	02	ECG	1
IA	03	Examination Lamp, Mobile	2
IA	04	ICU Bed	24
IA	05	Infusion Pump	6
IA	06	Intubation Kit	2
IA	07	Patient Monitor	6
IA	08	Plethysmograph	1
IA	09	Pulse Oximeter	1
IA	10	Refrigerator	1
IA	11	Sphygmomanometer	2
IA	12	Suction Unit, Small	6
IA	13	Suction Unit, Low pressure	1
IA	14	Synnge Pump	5
IA	15	Ultrasound Scanner, Mobile	1
IA	16	Ventilator	4
IA	17	X-Ray Unit, Mobile	1
IB		**ICU for Theraputic Block, Adult**	
		Equipment	**Q'ty**
IB	01	Defibrillator	1
IB	02	ECG	1
IB	03	Examination Lamp, Mobile	2
IB	04	ICU Bed	24
IB	05	Infusion Pump	5
IB	06	Intubation Kit	2
IB	07	Patient Monitor	5
IB	08	Pulse Oximeter	1
IB	09	Refrigerator	1
IB	10	Resuscitation Bag	5
IB	11	Sphygmomanometer	2
IB	12	Suction Unit, Small	6
IB	13	Suction Unit, Low pressure	1
IB	14	Synnge Pump	5
IB	15	Ultrasound Nebulizer	2
IB	16	Ventilator	2
IB	17	X-Ray Unit, Mobile	1
IC		**ICU for Theraputic Block, Pediatric**	
		Equipment	**Q'ty**
IC	01	ECG	1
IC	02	ICU Bed	8
IC	03	Infusion Pump	2
IC	04	Intubation Kit	1
IC	05	Patient Monitor	1

IC	06	Pulse Oximeter	1
IC	07	Refrigerator	1
IC	08	Resuscitation Bag	1
IC	09	Sphygmomanometer	2
IC	10	Suction Unit, Small	2
IC	11	Syringe Pump	4
IC	12	Ultrasound Nebulizer	1
IC	13	Ventilator, Infant	1
ID		**ICU for Surgery Block, Pediatric**	
		Equipment	**Q'ty**
ID	01	ECG	1
ID	02	ICU Bed	10
ID	03	Infusion Pump	2
ID	04	Intubation Kit	1
ID	05	Patient Monitor	2
ID	06	Pulse Oximeter	1
ID	07	Refrigerator	1
ID	08	Resuscitation Bag	1
ID	09	Sphygmomanometer	2
ID	10	Suction Unit, Small	2
ID	11	Suction Unit, Low pressure	1
ID	12	Syringe Pump	5
ID	13	Ultrasound Nebulizer	1
ID	14	Ventilator, Infant	2
F		**Functional Diagnosis Department**	
		Equipment	**Q'ty**
F	01	Bronchoscope, Adult	1
F	02	Bronchoscope, Child	1
F	03	Colonotiberscope, Adult	1
F	04	Colonofiberscope, Child	1
F	05	ICT Scanner	1
F	06	Cystourethroscope	1
F	07	Diagnostic Set for E.N.T	1
F	08	Diagnostic Set for Gynecology	1
F	09	Diagnostic Set for Ophthalmology	1
F	10	Diagnostic Set for Urology	1
F	11	ECG	2
F	12	Electroencephalograph	1
F	13	Encephalograph, Portable	1
F	14	Fibergastroduodenoscope	1
F	15	Fibergastroduodenoscope, Child	1
F	16	Spirometer	1
F	17	Ultrasound Scanner	1
F	18	Ultrasound Scanner, Mobile	1
F	19	X-Ray Film Developer	1
F	20	X-Ray Unit	1
L		**Laboratory**	
LA		**Clinical Laboratory**	
		Equipment	**Q'ty**
LA	01	Automatic Blood Cell Counter	1
LA	02	Automatic Urine Analyzer	1
LA	03	Balance	2
LA	04	Balance, Small capacity	1
LA	05	Centrifuge	1
LA	06	Hematocrit Centrifuge	1

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LA	07	Hemoglobin Meter	2
LA	08	Incubator	1
LA	09	Magnet Mixer	1
LA	10	Magnet Mixer, Test tube	1
LA	11	Microscope	4
LA	12	Photoelectrocolorimeter	1
LA	13	Refrigerator	1
LA	14	Water Distiller	1
LB		**Biochemistry Laboratory**	
		Equipment	**Q'ty**
LB	01	Automatic Biochemical Analyzer	1
LB	02	Balance	2
LB	03	Blood Gas Analyzer	1
LB	04	Centrifuge	2
LB	05	Coagulometer	1
LB	06	Photoelectrocolorimeter	1
LB	07	Refractometer	1
LB	08	Refrigerator	1
LB	09	Water Distiller	1
LC		**Bacteriology Laboratory**	
		Equipment	**Q'ty**
LC	01	Incubator	1
LC	02	Microscope	1
LD		**Holmone Laboratory**	
		Equipment	**Q'ty**
LD	01	Freezer	1
LD	02	Immunofermental Analyzer	1
LD	03	Spectrophotometer	1
LE		**Surgical Block Express Laboratory**	
		Equipment	**Q'ty**
LE	01	Blood Electrolyte Analyzer	1
LE	02	Centrifuge Table Top	1
LE	03	Hemoglobin Meter	1
LE	04	Microscope	1
LE	05	Photoelectrocolorimeter	1
LF		**Therapeutic Block Express Laboratory**	
		Equipment	**Q'ty**
LF	01	Centrifuge Table Top	1
LF	02	Hemoglobin Meter	1
LF	03	Microscope	1
LF	04	Photoelectrocolorimeter	1
LG		**Pediatric Block Express Laboratory**	
		Equipment	**Q'ty**
LG	01	Centrifuge Table Top	1
LG	02	Hemoglobin Meter	1
LG	03	Microscope	1
LG	04	Photoelectrocolorimeter	1
P		**Pediatric Surgery Department**	
PA		**Pediatric Thoracovasucular Operation Room**	
		Equipment	**Q'ty**
PA	01	Anesthesia Apparatus	1
PA	02	Electrosurgical Unit	1
PA	03	Infusion Pump	1
PA	04	Intubation Kit	1
PA	05	Operating Lamp	1

PA	06	Operating Table	1
PA	07	Patient Monitor	1
PA	08	Suction Unit	1
PA	09	Suction Unit, Small	1
PA	10	Surgical Instruments for Thorax, Children	1
PA	11	Syringe Pump	1
PA	12	Thoracoscope System, Child	1
PA	13	Defibrillator	1
PA	14	Hot Air Sterilizer	1
PA	15	Pulse Oximeter	1
PA	16	Refrigerator with Freezer	1
PA	17	Ultrasound Scanner, Mobile	1
PA	18	Water Distiller	1
PB		**Pediatric Ulorogy Operation Room**	
		Equipment	Q'ty
PB	01	Anesthesia Apparatus	1
PB	02	Cystourethroscope, Child	1
PB	03	Electrosurgical Unit	1
PB	04	Infusion Pump	1
PB	05	Intubation Kit	1
PB	06	Operating Lamp	1
PB	07	Operating Table	1
PB	08	Patient Monitor	1
PB	09	Suction Unit	1
PB	10	Suction Unit, Small	1
PB	11	Surgical Instruments for Nephlogy	1
PB	12	Syringe Pump	1
PC		**Pediatric Abdominal Operation Room**	
		Equipment	Q'ty
PC	01	Anesthesia Apparatus	1
PC	02	Electrosurgical Unit	1
PC	03	Infusion Pump	1
PC	04	Intubation Kit	1
PC	05	Operating Lamp	1
PC	06	Operating Table	1
PC	07	Patient Monitor	1
PC	08	Suction Unit	1
PC	09	Suction Unit, Small	1
PC	10	Surgical Instruments for Abdomen, Child	1
PC	11	Syringe Pump	1
PC	12	Defibrillator	1
PC	13	Hot Air Sterilizer	1
PC	14	Laparoscope System, Child	1
PC	15	Pulse Oximeter	1
PC	16	Refrigerator with Freezer	1
PC	17	Water Distiller	1
PC	18	X-Ray Unit, C-arm	1
PD		**Pediatric Hepetobiliary Operation Room**	
		Equipment	Q'ty
PD	01	Anesthesia Apparatus	1
PD	02	Electrosurgical Unit	1
PD	03	Infusion Pump	1
PD	04	Intubation Kit	1
PD	05	Operating Lamp	1
PD	06	Operating Table	1

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PD	07	Patient Monitor	1
PD	08	Suction Unit	1
PD	09	Suction Unit, Small	1
PD	10	Surgical Instruments for Abdomen, Child	1
PD	11	Syringe Pump	1
PE		**Pediatric Traumatology Operation Room**	
		Equipment	Q'ty
PE	01	Anesthesia Apparatus	1
PE	02	Defibrillator	1
PE	03	Electrosurgical Unit	1
PE	04	Hot Air Sterilizer	1
PE	05	Infusion Pump	1
PE	06	Intubation Kit	1
PE	07	Operating Lamp	1
PE	08	Operating Table	1
PE	09	Patient Monitor	1
PE	10	Pulse Oximeter	1
PE	11	Refrigerator with Freezer	1
PE	12	Suction Unit	1
PE	13	Suction Unit, Small	1
PE	14	Surgical Instruments for Osteosynthesis, Child	1
PE	15	Surgical Instruments for Traumatology, Child	1
PE	16	Syringe Pump	1
PE	17	X-Ray Film Developer	1
PE	18	X-Ray Unit	1
T		**Toxicology/Burns Department**	
T		**Toxicology block**	
		Equipment	Q'ty
T	01	Hemodialysis Apparatus	4
T	02	Instrument Cart	3
T	03	Operating Lamp, Mobile	1
T	04	Surgical Instruments for Ambulatory	1
T	05	Treatment Table	2
T	06	Water Purifier Unit	1
T	07	X-Ray Unit, Mobile	1
IE		**ICU for Toxicology**	
		Equipment	Q'ty
IE	01	Defibrillator	1
IE	02	ICU Bed	6
IE	03	Infusion Pump	1
IE	04	Intubation Kit	1
IE	05	Patient Monitor	1
IE	06	Refrigerator	1
IE	07	Resuscitation Bag	1
IE	08	Sphygmomanometer	1
IE	09	Suction Unit, Small	1
IE	10	Syringe Pump	1
IE	11	Ventilator	1
B		**Burns Department**	
		Equipment	Q'ty
B	01	Anesthesia Apparatus	1
B	02	Defibrillator	1
B	03	Electrosurgical Unit	1
B	04	Hot Air Sterilizer	1
B	05	Infusion Pump	1

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B	06	Instrument Cart	1
B	07	Intubation Kit	1
B	08	Operating Lamp	1
B	09	Operating Table	1
B	10	Patient Monitor	1
B	11	Pulse Oximeter	1
B	12	Refrigerator with Freezer	1
B	13	Suction Unit	1
B	14	Suction Unit, Small	1
B	15	Syringe Pump	1
IF		**ICU for Burns**	
		Equipment	Q'ty
IF	01	Bed for Burned Patient	1
IF	02	ICU Bed	6
IF	03	Infusion Pump	1
IF	04	Intubation Kit	1
IF	05	Patient Monitor	1
IF	06	Refrigerator	1
IF	07	Resuscitation Bag	1
IF	08	Sphygmomanometer	1
IF	09	Suction Unit, Small	1
IF	10	Syringe Pump	1
IF	11	Ventilator	1

5. Reference

	Title	Source	Year
1	Questionnaire and Answer	Ministry of Health, Republic of Uzbekistan	2000
2	Income, Inequality, and Poverty during the Transition from Planned to Market Economy	World Bank	1998
3	European Health Care Reform	WHO	1997
4	Highlights on Health in Uzbekistan	WHO	1999
5	Decree of President of Republic of Uzbekistan No. YII-2107 of 10 Nov.1998	Republic of Uzbekistan	1998
6	Construction, Reconstruction and Medical Equipment Procurement for Republican Center for Emergency Medical Aid	Ministry of Health, Republic of Uzbekistan	1999
7	Health Insurance of Uzbekistan(draft)	Ministry of Health, Republic of Uzbekistan	2000