

**BASIC DESIGN STUDY REPORT
ON
THE PROJECT FOR IMPROVEMENT
OF EQUIPMENT FOR VOCATIONAL TRAINING
FOR THE PEOPLE WITH DISABILITIES
IN
THE SYRIAN ARAB REPUBLIC**

MARCH, 1998



**JAPAN INTERNATIONAL COOPERATION AGENCY
CHUO KAIHATSU CORPORATION**

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**MINISTRY OF SOCIAL AFFAIRS AND LABOUR
THE SYRIAN ARAB REPUBLIC**

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PREFACE

In response to a request from the Government of the Syrian Arab Republic the Government of Japan decided to conduct a basic design study on the Project for Improvement of Equipment for Vocational Training for the People with Disabilities and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Syrian Arab Republic a study team from November 18 to December 12, 1997

The team held discussions with the officials concerned of the Government of Syrian Arab Republic, and conducted a field study at the study area. After the team returned of Japan, further studies were made. Then, a mission was sent to Syrian Arab Republic 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 Syrian Arab Republic for their close cooperation extended to the teams.

March, 1998



Kimio Fujita

President

Japan International Cooperation Agency

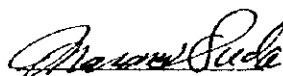
Letter of Transmittal

We are pleased to submit to you the basic study report on the Project for Improvement of Equipment for Vocational Training for the People with Disabilities in the Syrian Arab Republic.

This study was conducted by Chuo Kaihatsu Corporation, under a contract to JICA, during the period from November 4, 1997 to March 31, 1998. In conducting the study, we have examined the feasibility and rationale of the project with due consideration to the present situation of the Syrian Arab Republic 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,



Masami SUDA

Project Manager

Basic design study team on

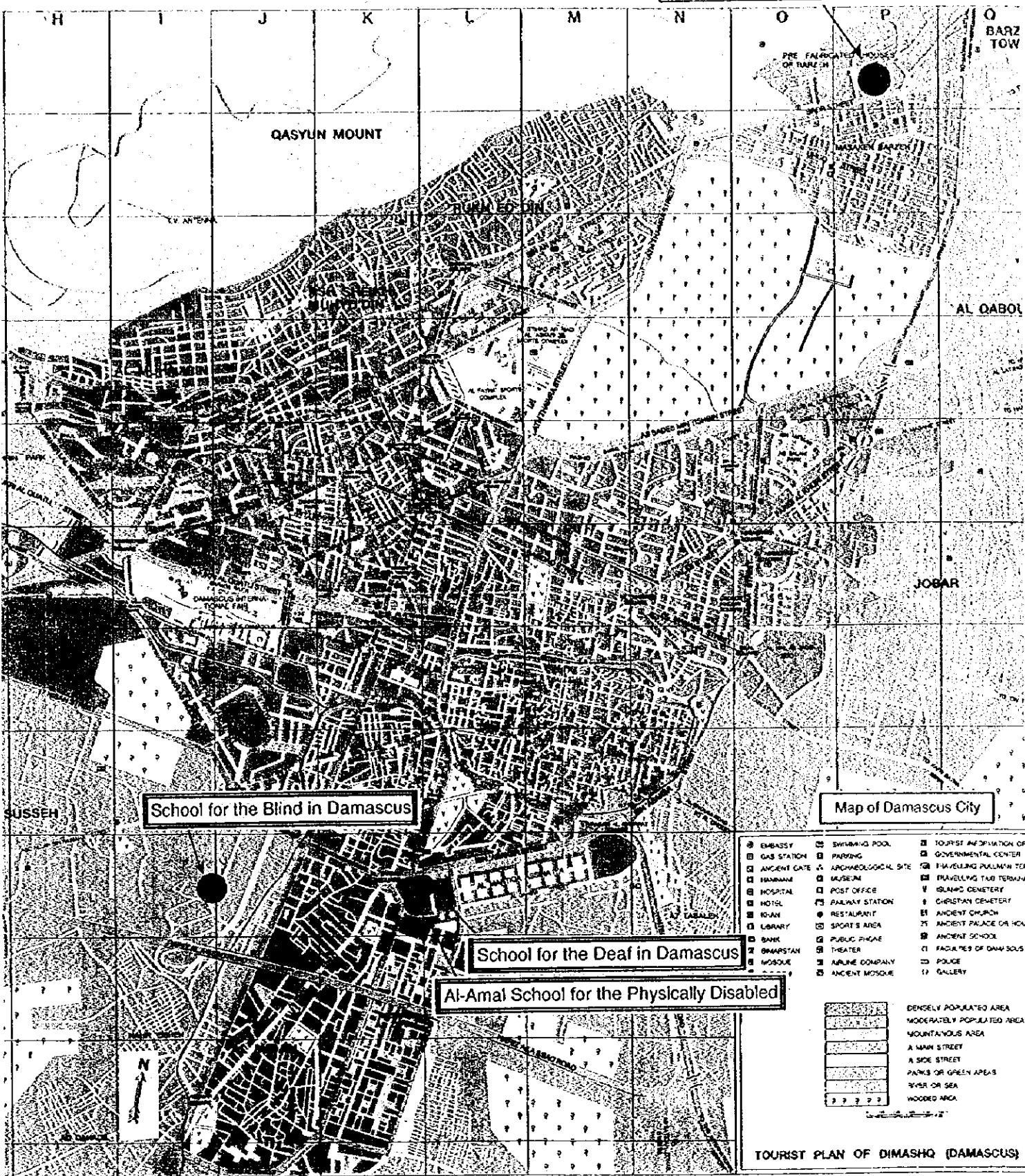
The Project for Improvement of

Equipment for Vocational Training for

the People with Disability

Chuo Kaihatsu Corporation

Vocational Rehabilitation Center



School for the Blind in Damascus

School for the Deaf in Damascus

Al-Amal School for the Physically Disabled

Map of Damascus City

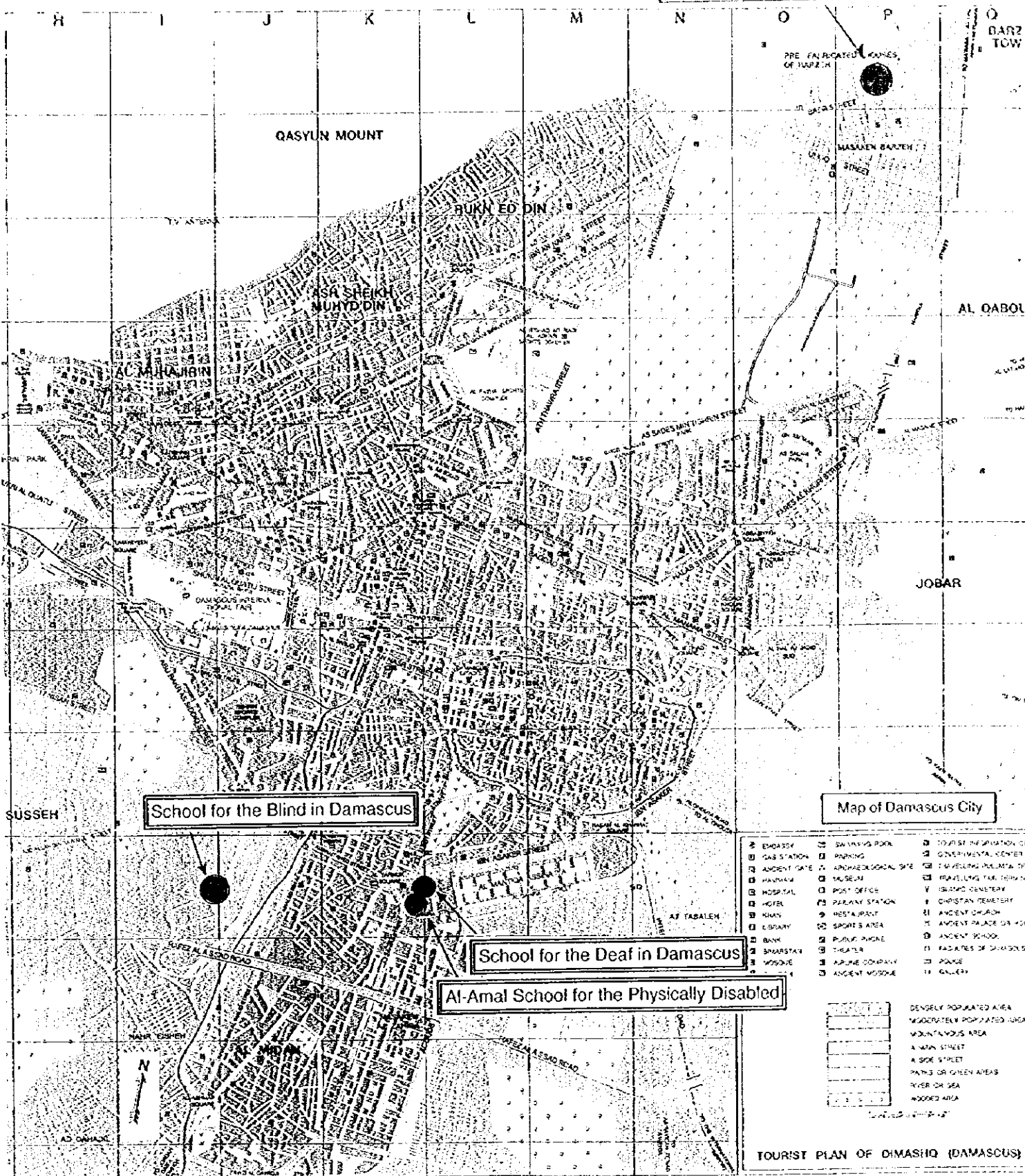
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| ● EMBASSY | □ SWIMMING POOL | □ TOURIST AND SPANISH OF |
| □ GAS STATION | □ PARKING | □ GOVERNMENTAL CENTER |
| □ ANCIENT GATE | □ ARCHAEOLOGICAL SITE | □ TRAVELLING PALM/WATER |
| □ HARBOR | □ MUSEUM | □ TRAVELLING TUB/TERRACE |
| □ HOSPITAL | □ POST OFFICE | □ ISLAMIC CEMETERY |
| □ HOTEL | □ RAILWAY STATION | □ CHRISTIAN CEMETERY |
| □ KUTUB | □ RESTAURANT | □ ANCIENT CHURCH |
| □ LIBRARY | □ SPORTS AREA | □ ANCIENT PALACE OR HOUSE |
| □ BANK | □ PUBLIC SQUARE | □ ANCIENT SCHOOL |
| □ BANASTAN | □ THEATER | □ FACILITIES OF DAMASCUS |
| □ MOSQUE | □ AIRLINE COMPANY | □ POLICE |
| | □ ANCIENT MOSQUE | □ GALLERY |

- | | |
|--------------------|---------------------------|
| [Dense Stippling] | DENSELY POPULATED AREA |
| [Medium Stippling] | MODERATELY POPULATED AREA |
| [Sparse Stippling] | MOUNTAINOUS AREA |
| [Thick Line] | A MAIN STREET |
| [Thin Line] | A SIDE STREET |
| [Wavy Line] | PARKS OR GREEN AREAS |
| [Wavy Line] | RIVER OR SEA |
| [Dotted Line] | WOODED AREA |

TOURIST PLAN OF DIMASHQ (DAMASCUS)

Location Map of Facilities

Vocational Rehabilitation Center



School for the Blind in Damascus

School for the Deaf in Damascus

Al-Amal School for the Physically Disabled

Map of Damascus City

- | | | |
|--------------|---------------------|----------------------------|
| EMBASSY | SWIMMING POOL | TOURIST INFORMATION CENTER |
| GAS STATION | PARKING | GOVERNMENTAL CENTER |
| ANCIENT GATE | ARCHAEOLOGICAL SITE | TRAVELING VOUCHER OFFICE |
| HANNAKA | MUSEUM | TRAVELING TOUR COMPANY |
| HOSPITAL | POST OFFICE | ISLAMIC CEMETERY |
| HOTEL | PARKWAY STATION | CHRISTIAN CEMETERY |
| KHANS | RESTAURANT | ANCIENT CHURCH |
| LIBRARY | SPORTS AREA | ANCIENT PALACE OR HOUSE |
| BANK | PUBLIC SQUARE | ANCIENT SCHOOL |
| BARBERSHOP | THEATER | FACADES OF DAMASCUS |
| MOSQUE | APRONE COMPANY | POSSIBLE |
| | ANCIENT MOSQUE | GALLERY |

- DENSELY POPULATED AREA
- MODERATELY POPULATED AREA
- MOUNTAINOUS AREA
- A MAIN STREET
- A SIDE STREET
- PARKS OR GREEN AREAS
- RIVER OR SEA
- WOODED AREA

TOURIST PLAN OF DIMASHQ (DAMASCUS)

Location Map of Facilities

**BASIC DESIGN STUDY ON THE PROJECT FOR IMPROVEMENT
OF EQUIPMENT FOR VOCATIONAL TRAINING
FOR THE PEOPLE WITH DISABILITIES
IN THE SYRIAN ARAB REPUBLIC**

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Chapter 1 Request Background

The disabled population rate in Syria is reported to be high in part due to lack of awareness concerning health, medical and sanitary issues before and after birth, and the practice within the Arab world of marriages between comparatively close blood relatives. Nevertheless, an accurate grasp of the true number of disabled in the country is hindered due to the tendency of the family not to actively reveal the presence of a handicapped family member. The World Health Organization estimates that 3~8% of the total national population suffers from some type of disability; and on the basis of this assumption it can be concluded that the disabled in Syria number somewhere around 500,000 to 1.3 million.

In the past, disabled persons in Syria have been generally isolated from society, with virtually no access to employment or other opportunities to participate in the social mainstream. Nevertheless, the First Labor Law promulgated in 1985 embodied a target of increased job opportunities for the disabled such that the proportion of the overall work force accounted for by the handicapped would be improved to 4%. At the same time in recent years, activities of local NGOs to promote the entry of the handicapped into the social mainstream have intensified. This has been paralleled by similar government efforts to provide functional recovery, basic education and vocational training to the disabled, including children, in order to foster their productive participation in society. However, a sufficient level of such education and training has been constrained by a lack of necessary equipment in this regard.

The Ministry of Social Affairs and Labour (MSAL), the executing agency for the Project, is pursuing two related objectives as set out in the 1998 annual development plan component of the 8th National Five Year Plan. Specifically, these are (i) support to rural citizenry and (ii) special programs for the physically disabled, the elderly and the mentally impaired, and are aimed at improving overall services to the disabled. However, the disabled actually availing of these public services number only some 3,000, which is estimated to be less than 1% of the total disabled population of the country.

In response to this background, the Syrian government requested the Japanese government for grant-aid cooperation in the procurement of basic educational and vocational training equipment and materials to be provided to schools for disabled children, as well as the Vocational Rehabilitation Centre in order to expand employment opportunities and foster productive participation in society for the disabled.

The target facilities under the Project, (i) Vocational Rehabilitation Centre in Damascus, (ii) School for the Blind in Damascus, (iii) School for the Deaf in Damascus and (iv) Al-Amal school for the Physically Disabled in Damascus are located in Damascus, and comprise the Vocational Rehabilitation Centre, and three front-line educational facilities for the disabled. However, the majority of the equipment at the facilities is now obsolete, a fact complicated by lack of agency budget to renovate and expand this equipment in order to carry out effective vocational rehabilitation and educational activities for the disabled.

CHAPTER 2 PROJECT COMPONENTS

2.1 Project Objectives

Syria is presently moving from a planned economy to a free market economy, and although it is taking great care to avoid the political and economic disturbance which accompanied the same process in the Soviet Union and Eastern Europe, the domestic economy remains under serious pressures including residual impact from the Gulf War. As a result, there are chronic shortages in budget allocation to government agencies.

The Ministry of Social Affairs and Labour (MSAL) is pursuing two objectives as set out in the 1998 annual development plan component of the 8th National Five Year Plan. Specifically, these are (i) support to rural citizenry and (ii) special programs for the physically disabled, the elderly and the mentally impaired, and are aimed at improving overall services to the disabled. The number of disabled in Syria is estimated at over 500,000; however, the number of such persons receiving government services in the form of education and vocational rehabilitation are 3,000, or only less than 1% of the total disabled in the country.

The four target facilities under the Project are located in Damascus, and comprise the Vocational Rehabilitation Centre, and three front-line educational facilities for the disabled. However, the majority of the equipment at the facilities is now obsolete, a fact complicated by lack of agency budget to renovate and expand this equipment in order to carry out effective vocational rehabilitation and educational activities for the disabled.

The Project accordingly aims to renovate and strengthen the equipment at the four target facilities by providing assistance to MSAL against a background of tight economic conditions prevailing in Syria. The Project will thus serve to upgrade the quality of vocational rehabilitation and education to the disabled in Syria, and extending direct benefit to 940 trainees and students at the 4 facilities. At the same time, it is hoped that the Project will provide a springboard to eventual expansion of vocational rehabilitation and educational opportunities to all of the approximately half a million disabled in the country.

2.2 Basic Project Concept

(1) Content of Request

The Project carried out basic design for the target four facilities (Table 2.1) in Damascus as requested by MSAL.

Table 2.1 Target 4 Facilities as Requested by MSAL.

Facility:	No. of children/students	No. of instructors
1. Vocational Rehabilitation Centre in Damascus	105	53
2. School for the Blind in Damascus	185	73
3. School for the Deaf in Damascus	500	67
4. Al-Amal School for the Physically Disabled in Damascus	150	44

(as of December 1997)

The request document indicates request by the Vocational Rehabilitation Center for equipment for (i) 10 existing courses, (ii) 5 new courses and (iii) sports was requested.

Wheelchairs, musical instruments, hearing test equipment, physical therapy equipment, sports equipment, etc. were requested by the School for the Blind in Damascus, School for the Deaf in Damascus, Al-Amal School for the Physically Disabled in Damascus

(2) Equipment Contained in Request at Time of Signing of Minutes of Meeting

In the course of field survey it was confirmed by the Study Team through facility inspection and discussions with concerned personnel of MSAL and the target facilities themselves that renovation and expansion of equipment at the facilities would indeed be essential to improved vocational rehabilitation and educational service to the disabled. However, it was also identified that areas of improvement would be necessary in the operational and functional status of the facilities as well. Accordingly, the content of the request courses was reviewed, a study of equipment carried out, and some modification made in a portion of the courses and equipment quantities. Major points of modification are as follows:

a. Vocational Rehabilitation Center

The requested courses were discussed and examined in close collaboration with concerned personnel of the Syrian side, and priority ranking for courses determined. The executing agency has adopted a method of course ranking whereby course priority is indicated by the number of course credits, with the higher number of credits indicating higher priority. As a result of study in this regard, it was determined to eliminate 5 courses from the request, comprising 1 existing course (watch repair) and 4 new courses (pipe fitting, teeth making, cholez making, and artificial organ making). At the same time, there were cases where two courses were consolidated into one. Total number of request courses thus became 8. Reasons for elimination of the 5 above courses are as follows:

- Watch repair course (existing course)

Requested equipment is inexpensive, and it was accordingly judged that item procurement for the entire course could be done by the Syrian side.

- Pipe fitting course (new course)

The skill content of this course is within the capability of only a very few, slightly disabled trainees.

- Teeth making course (new course)

The content of this course falls under the Ministry of Health, and is beyond the capability of MSAL.

- Cholez making course (new course)

The content of this course falls under the Ministry of Health, and is beyond the capability of MSAL.

- Artificial organ making course (new course)

Local experience in this regard is lacking, and it is deemed difficult to attain an adequate technical level for the course.

Also, there was a request from the Syrian side that capability development for the mentally impaired be established as an independent course (at present capability development for the mentally impaired is being pursued at the Center, but as yet has not achieved the status of an independent course.) In Syria, it is estimated that the mentally impaired comprise some 15% of the total number of disabled; however, despite this large number which is second only to the physically disabled the mentally impaired group does not have access to vocational capability development. Recognizing the need to upgrade services to the mentally impaired, MSAL included concern for the mentally impaired in the 2 major targets of its 1998 development plan as discussed at the beginning of this section, i.e. "special programs for the physically disabled, the elderly and the mentally impaired".

Against the above background, both the Study Team and the Syrian side confirmed the importance of capability development for the mentally impaired, and this was subsequently added as a request course raising the final number of request courses for the Vocational Rehabilitation Center to 9.

Of the requested course equipment itself, the equipment related to color film development under the photography course was eliminated due to potential adverse environmental effects, and the administrative computer equipment was eliminated due to no direct contribution to the training activities themselves. This elimination was done on the basis of discussions between the Study Team and the concerned personnel of MSAL. On the other hand, some items of equipment were added to

the request list due to their envisioned significant contribution to course development. Specifically, these included embroidery relating equipment for the sewing course, motor repair equipment for the electrical maintenance course, and copy machine with broad application to course administration.

Course-wise numbers of equipment types as confirmed at the time of signing of the minutes of meeting area as indicated below. Course number indicates its priority.

• Existing courses

1. Typing course	5 types
2. Wood working course	19 types
3. Sewing - tailor course	15 types
4. Knitting course	8 types
5. Electrical maintenance course	23 types
6. Leather working - shoe making course	16 types
7. Photography course	5 types
<hr/> Subtotal	91 types

• New courses

1. Hair styling and beautician course	1 set
2. Capability development for the mentally impaired	1 set
<hr/> Subtotal	2 sets

• Sports management equipment

1. Wheel chairs	2 types
2. Theater equipment	1 set
3. Copy machine	1 type
4. Commuter bus	1 type
<hr/> Subtotal	5 types

b. School for the Blind in Damascus, School for the Deaf in Damascus, Al-Amal School for the Physically Disabled in Damascus

In the case of the School for the Blind in Damascus, the number of requested equipment types ultimately increased due to new request for home economics related equipment absolutely essential for daily life training of blind students, and sports equipment and other educational equipment to be incorporated into the course framework. On the other hand, in the case of the School for the Deaf in Damascus and the Al-Amal School for the Physically Disabled in Damascus, the number of requested equipment types ultimately decreased due to consolidation of widely applicable types into single sets. Details of equipment were determined through field survey.

1. School for the Blind in Damascus	13 types
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2. School for the Deaf in Damascus	8 types
3. Al-Amal School for the Physically Disabled	9 types
Subtotal	30 types

(3) Basic Strategy in Equipment Selection

Field survey was subsequently carried out for the equipment preliminarily determined in the minutes of meeting. This survey comprised identification of necessary quantities, intended use and rough specifications for each equipment item. Confirmation of equipment types was done on the basis of the following selection strategy, which was discussed in detail with the Syrian side.

Basic selection strategy for equipment

- Targeted equipment is vocational rehabilitation and educational equipment for the disabled, and priority is to be given those items which although presently on hand at the facilities, require renovation and/or are lacking in quantity.
- Necessity for requested equipment items is to be examined in terms of those items of equipment which are already on hand at the facilities, as well as the present content, methodology and method of equipment use under the present rehabilitation course and educational activities. Quantity of equipment is to be kept to the minimum necessary.
- In the case of equipment to be incorporated under plans for the future, the said future planning is to be carefully examined for suitability and only that equipment deemed absolutely necessary is to be included under the Project.
- Equipment of low use rate, and equipment which is difficult to operate and maintain are to be eliminated from consideration.
- Priority is to be given to equipment which can be procured, operated and maintained locally.
- Priority is to be given to equipment with low running cost
- Equipment of excessive sophistication and cost is to be avoided.
- Equipment which would be susceptible to individual ownership is to be excluded from consideration
- Computer software is to be limited to generally available OS and basic application software.
- Audio-visual equipment is to be limited to that directly necessary for vocational rehabilitation /educational activities and facility operation.

- Audio-visual equipment specifications are to be limited to that which can be effectively operated and maintained locally.
- Vehicles are to be provided in the minimal necessary quantity, based on confirmation of the type, operational status, and frequency of use of present vehicles on hand.
- Quantities of wheel chair are to be kept to the minimum identified as necessary for the envisioned vocational rehabilitation and educational activities.
- Physical therapy equipment is to be limited to that absolutely necessary from the standpoint of facility operation, taking into consideration local engineering and O&M capabilities.
- Specifications for physical therapy equipment are to cover the minimal necessary functions.
- Physical therapy equipment is to be limited only to those items for which use under proper doctor supervision can be confirmed.
- Educational materials are to be the minimum necessary in line with standards for general schools as set by the Ministry of Education.
- Supplemental request is to be recognized for equipment items deemed absolutely necessary for effective vocational rehabilitation and educational activities, and facility operation.
- Equipment items are to be limited to those which can be used within the existing facilities.
- Equipment items requiring large scale renovation or modification of existing facilities are to be eliminated from consideration.
- Equipment items with adverse environmental impact are to be eliminated from consideration.
- Equipment which require new deployment of instructors, technicians and other operational staff are to be limited only to those for which such personnel are already available from the MSAL.
- Vocational rehabilitation is to be limited to those vocational categories which offer effective opportunity for employment (including self-employment) following graduation.

On the basis of the above, the basic Project strategy is to contribute to the upgrading the operations of the 4 target facilities through renovation and expansion of equipment which has direct benefit on vocational rehabilitation and educational activities undertaken at the said facilities.

Table 2.2 List of equipment requested

Item No.	Name of Equipment requested	Requested Quantity	
A. Vocational Rehabilitation Center in Damascus			
<i>a. 1</i>	<i>Typing course</i>	-	
a.1.1	Manual typewriter (Arabic)	5	
a.1.2	Manual typewriter (English)	5	
a.1.3	Electric typewriter (Arabic)	10	
a.1.4	Electric typewriter (English)	10	
a.1.5	Personal computer with word processing software	5	
<i>a. 2</i>	<i>Wood working course</i>	-	
a.2.1	Band saw	1	set
a.2.2	Wood working bench with vise	2	
a.2.3	Circular saw	1	
a.2.4	Planner	1	
a.2.5	Bench drilling machine	2	
a.2.6	Pedestal grinder	2	
a.2.7	Wood working press	1	
a.2.8	Router	1	
a.2.9	Electric hand drill	2	
a.2.10	Electric hand grinder	2	
a.2.11	Electric sander	2	
a.2.12	Electric hand planner	2	
a.2.13	Electric hand circular saw	2	
a.2.14	Electric jig saw	2	
a.2.15	Air compressor	2	
a.2.16	Dust collector	1	
a.2.17	Spray gun	1	
a.2.18	Tool wagon	4	
a.2.19	Wood working hand tool set	10	
a.2.20	Chisel	1	
a.2.21	Lathe	1	
<i>a. 3</i>	<i>Tailoring course</i>	-	
	<i>Sewing, dress making course</i>	-	
a.3.1	Sewing machine	10	
a.3.2	Industrial sewing machine	10	
a.3.3	Vacuum press	1	
a.3.4	Electric cutting machine	2	
a.3.5	Steam iron and iron table	5	
a.3.6	Drawing set	2	
a.3.7	Working bench	2	
a.3.8	Tool wagon	5	
a.3.9	Tool set for tailoring	10	
a.3.10	Lock machine	2	
a.3.11	Button holing machine	2	
a.3.12	Button sewing machine	2	
a.3.13	Embroidery	2	
a.3.14	Double stitch machine	2	
a.3.15	Zigzag machine	2	

Table 2.2 List of equipment requested

Item No.	Name of Equipment requested	Requested Quantity	
<i>a. 4</i>	<i>Knitting course</i>	-	
a.4.1	Knitting machine (electric)	5	
a.4.2	Tool wagon	2	
a.4.3	Tool set for knitting	10	
a.4.4	Manual knitting machine	15	
a.4.5	Collar fitting machine	1	
a.4.6	Binding machine	1	
a.4.7	Embroidery machine	2	
a.4.8	Embroidery set	5	
<i>a. 5</i>	<i>Electric maintenance course</i>	-	
a.5.1	Voltmeter	5	
a.5.2	Ammeter	5	
a.5.3	LCR meter	5	
a.5.4	Oscilloscope	5	
a.5.5	Digital multimeter	5	
a.5.6	Circuit tester	5	
a.5.7	Electric circuit training kit	5	
a.5.8	AM/FM signal generator	5	
a.5.9	Function generator	5	
a.5.10	AC/DC power supply	5	
a.5.11	Battery tester	5	
a.5.12	Watt meter	5	
a.5.13	Clamp meter	5	
a.5.14	Radio teaching kit	1	lot
a.5.15	TV teaching kit	1	lot
a.5.16	Lux meter	5	
a.5.17	Lighting stand	5	
a.5.18	Electric hand drill	2	
a.5.19	Electric hand grinder	2	
a.5.20	Tool wagon	5	
a.5.21	Working bench	2	
a.5.22	Soldering iron	10	
a.5.23	Electric motor repair set	1	lot
<i>a. 6</i>	<i>Leather working course & Shoe making course</i>	-	
a.6.1	Leather cutter	1	
a.6.2	Leather puncher	1	
a.6.3	Leather sewing machine	5	
a.6.4	Knife splitter	1	
a.6.5	Holding machine	1	
a.6.6	Napping machine	1	
a.6.7	Stitching machine	1	
a.6.8	Heel moulding machine	1	
a.6.9	Bind roll machine	1	
a.6.10	Dryer	1	

Table 2.2 List of equipment requested

Item No.	Name of Equipment requested	Requested Quantity	
a.6.11	Finishing machine	1	
a.6.12	Leather combing machine	1	
a.6.13	Working bench	2	
a.6.14	Tool wagon	4	
a.6.15	Tool set for leather work	10	
a.6.16	Tool set for shoe making	10	
a. 7	<i>Photography course</i>	-	
a.7.1	Camera set with triangle	5	
a.7.2	Luxmeter	5	
a.7.3	Screen	2	
a.7.4	Lighting set	2	
a.7.5	DPE set for black & white	1	lot
a. 8	<i>Wheel chairs</i>	-	
a.8.1	Wheel chairs	13	
a.8.2	Electric wheel chairs	10	
a. 9	Auditorium equipment	1	lot
a. 10	Copy machine	1	
a. 11	Transportation busses (large)	2	
a. 12	Sports instruments	1	lot
a. 13	Hair dressing equipment for man and woman	1	lot
a. 14	Training instrument for Mental Development	1	lot

Table 2.2 List of equipment requested

Item No.	Name of Equipment requested	Requested Quantity
B. School for the Blind in Damascus		
b.1	Printing machine for braille	1
b.2	Tape recorder with headphone	100
b.3	Braille typewriter	100
b.4	Music instruments	1 lot
b.5	Audio library set	1 lot
b.6	Cooking instruments	1 lot
b.7	Washing machine	2
b.8	Drying machine	2
b.9	Transportation busses	2
b.10	Computer with voice instruction	10
b.11	Braille board	70
b.12	Sports instrument	1 lot
b.13	Education kit for the blind	1 lot
C. School for the Deaf in Damascus		
c.1	Hearing measuring and training instrument	1 lot
c.2	Speech correction instrument	1 lot
c.3	Personal computer set for teaching	1 lot
c.4	Musical instrument for rhythm education	1 lot
c.5	Education kit for deaf	1 lot
c.6	Sports instrument	1 lot
c.7	Studio equipment for video editing	2
c.8	Transportation busses	2
D. Al-Amal School for the Physically Handicapped in Damascus		
d.1	Wheel chairs	50
d.2	Mobile wheel chairs	5
d.3	Physical therapy instrument	1 lot
-	Shortwave therapy apparatus	1
-	Frequency stimulator	2
-	Rizer unit	1
-	Infrared ultraviolet lamp	2 lot
-	Goniometer kit	2
-	Hydrotherapy set	1 lot
-	Rotary exerciser	2
-	Overhead suspension exerciser	1
-	Tilting table	2
d.4	Transportation busses	2
d.5	Personal computer set for teaching	2
d.6	Educational kit for physically disabled	1 lot
d.7	TV and video camera set	1
d.8	Music instruments	1 lot
d.9	Sports instruments	1 lot

Of the 4 target facilities under the Project, the Vocational Rehabilitation Centre is not sufficiently prepared at this point to effectively fulfill its objectives under the Project. This situation is described in more detail in sections 2.4.3 and 2.5. Accordingly, it is essential that the executing capability of the Centre be upgraded by the Syrian side simultaneous to the equipment supply under the Project.

As discussed below, the equipment supply plan is targeted at only those courses at the Centre which are deemed most effective in preparing the disabled for employment (a plan for revamping the target courses to further increase their effectivity is also included under this Basic Design). Proposed course improvement includes a draft curriculum as well. The basic concept for the equipment supply plan is thus to select equipment most suited to the renovated target courses. In addition, necessary cooperation in the area of "soft" aspects under the Project is included to assist the Syrian side in its improvement plan for the Centre operation and training system.

In the case of the other 3 facilities, i.e. the School for the Blind, the School for the Deaf and the Al-Almal School for the Physically Disabled, it is judged that the executing structure for achievement of Project objectives is sufficient at present, and the equipment to be supplied under the Project will be suitable for the existing operational structure at the facilities.

Strategy for the target courses at the Vocational Rehabilitation Centre is as follows:

a. Vocational rehabilitation course for the disabled

The purpose for establishing the Vocational Rehabilitation Centre is as set out in Article 2 of Governmental Decree No. 54 and dated January 26, 1970, i.e. "to provide vocational rehabilitation to the disabled such that they may achieve stable employment by effectively recovering the capacity to perform either their previous vocation or find suitable other work." Also, Article 4 of the same decree indicates objectives of the Center "to provide comprehensive service to the disabled including necessary physical and vocational rehabilitation service, instruction to achieve independence in social and everyday life activities, rehabilitation related education, vocational training, etc."

Accordingly, the Center is intended to provide an integrated range of services covering medical rehabilitation, vocational skills training, training in everyday life activities, instruction to achieve social independence, etc.

On the other hand, however, there has been a decline in the functional and operational level of the Centre. In order for the Centre to fulfill the objectives for which it was originally founded, the following are necessary.

- 1) Responsiveness to the changing needs of the present.
- 2) To rebuild outdated services provided by the Centre

- 3) Improvement of facility to realize the social participation and equality of the disabled

In order to achieve the above, courses to be subject to the equipment plan for the Centre are with regard to the following criteria:

- (1) Maximum responsiveness to all types and degree of disability, particularly severely disabled persons.
- (2) Priority to vocational types with offer the best potential for employment, including self employment.
- (3) Promotion of knitting, embroidery and other handicrafts/industrial arts based on 1998 annual plan of MSAL which stipulates "encouragement of handicrafts and other industrial arts; promotion of women's employment".
- (4) Modernization and upgrading of education / training in line with the government' National Plan

On the basis of the above, description of target courses (business course, woodworking course, sewing course, knitting course, electric maintenance course, capability development course for the mentally impaired) under the Project is as follows:

- 1) Business Course

The existing typing course is to be reorganized as a business course and equipped under the Project. The advantages of the business component are as follows:

- (1) Training and employment are possible even in the case of severely disabled persons (for example, spinal cord disabilities, etc.).
- (2) Employment opportunities are possible over a wide range including government offices and private businesses.

The subject business component will comprise training in computer use for accounting, data processing and other standard office duties. As this training provides good potential for employment after graduation, it is anticipated that applicants for enrollment will be numerous. Course duration would be two years given the need for instruction in computer use starting from the basics.

On the basis of the above, the said course would comprise 10 students per course year, or a total of 20 persons enrolled in the course. Two instructors will be necessary, one for each course year. As the present typing instructor is not capable of teaching computer operation, it will be necessary to hire 2 new instructors for the course.

2) Woodworking Course

High quality wooden furniture, etc. has good marketability in Syria. However, most furniture is generally fabricated by the flash method, under conditions of quantity production and division of labor. However, as furniture fabrication requires many instances where the worker must be standing, this component would be limited to the deaf, or persons with only slight physical disability. The furniture fabricating component would be aimed primarily at training the individual for employment in a quantity production workshop; however, where warranted by the individual's capability level it would be possible for the trainee to shift to training under the wood handicraft component.

The wood handicraft component would encompass inlay crafting involving fine parquetry and cut-in works. As this work can be done while seated, responsiveness to the more severely disabled would be possible, with persons with lower body disability being capable of employment at work stations where tabletop wood working is performed. Moreover, blind persons also can work using proper assistant tools. Since training content comprises a broad range, course length is to be the same as the present 2 years. In light of the fact that almost all wood working equipment with the exception of some special tools, are applicable to both the furniture fabrication and wood handicraft components, the two components will be integrated into a single class. At present, the students of the wood working course are only those with hearing disability; however, it will possible to accommodate students with lower body disability following supply of the envisioned equipment. As a result, it is assumed that the number of enrolled students will increase to a total of 10 students (five per course year). In the interest of safety in machine operation, one instructor will be assigned for each course year. This will necessitate hiring 1 new instructor.

3) Sewing course

The new sewing course would amalgamate the previous tailor course for men's dress clothing and ladies dress making, and the sewing course and would comprise a single component. In the case of government-run and private garment enterprises, work is mainly performed on a division of labor and quantity production basis. These employers are also making efforts to meet the employment quota for disabled stipulated by law of 4% in the public sector and 2% in the private sector, and facilities and work conditions for the disabled are good. As a result, this sector of employment is considered to have high potential for the disabled.

Since work in the garment industry is essentially by division of labor, training objectives and methodology at the Center would be responsive to this fact by placing the greater emphasis on sewing skills. However, given the fact that simple orders for new garments or corrections in existing garments can be handled on a self-employment basis, the course curriculum would comprehensively cover simple sewing skills. Also, embroidery training would be included in the course, a skill considered applicable to self employment.

Given the broad ranging content of the course, course length would be 2 years as is the case with the present course. The sewing related courses at present are the most popular at the Centre. Since it is anticipated that students enrolled in the sewing course will increase following equipment supply, number of trainees per class is to be 20 persons per course year, or a total of 40 trainees for the entire course. One instructor versed in sewing machine use and adjustment will be assigned to each course year. This will necessitate the hiring of 2 new instructors.

4) Knitting course

This constitutes a highly popular course. Although work placement with an employer is considered difficult in the case of this particular skill, modest wage self employment is considered possible. Knitting is a task which can be performed by individuals with lower body disability, and in some cases even by individuals with only a single arm. At present, even the most severely disabled are receiving knitting training at the Center. By incorporating handicraft skills such as embroidery into the training curriculum, it would be possible to further enhance the potential for self employment.

Given the broad ranging content of the course, course length would be 2 years as is the case with the present course. Number of trainees per class is to be 10 persons per course year, or a total of 20 trainees for the entire course. This is essentially the same as the present number of 17 trainees. Number of students have been kept relatively small given the fact that the subject skill leads more in the direction of self-employment rather than placement with an employer.

One instructor will be assigned to each course year, for a total of 2 instructors for the course. This will necessitate the hiring of 1 new instructor.

5) Electric maintenance course

The original content of this course was repair of radios and TVs. However, it is judged that marketability of this skill is steadily declining and that employment opportunities will be less in the future. Accordingly, course content is to be modified to repair of small electrical devices, with attention to responsiveness to the various types and degrees of disability. Specifically, this would focus on suitability for the individuals with hearing or lower body disabilities. Repair of small electrical devices would be aimed at small motor or spinning components (of washing machines, fans, sewing machines, automobile starters and dynamos, etc.), electrical heaters, light fixtures, etc. Particularly in Damascus, there are repair shops engaged mainly in the fixing of electric motors, coolers, fans, sewing machines, etc. and it is anticipated that employment opportunities for course graduates would exist at such establishments. Given the wide range of course content from basic electro-magnetic theory to acquisition of practical skills, course length is to be 2 years. Number of students will remain about the same as the present, with 5 trainees per course year for a total of 10 trainees in

the course. One instructor will be assigned to each course year, for a total of 2 instructors for the course. This will necessitate the hiring of 1 new instructor.

6) Capability development course for the mentally impaired

Capability development for the mentally impaired is to be by either actual OJT or by re-creation of the work place, with the aim to imbue the trainee with a worker mentality good work habits. Preparation for employment would thus be accomplished by strengthening the required personality traits required by an effective worker such as patience, cooperative spirit, punctuality, interactive skills, understanding of work place manners, self-confidence, etc.

Instructional method would be by assembly line works and group works to achieve the foregoing, with specifics of instructional methodology and content planned on a learning target wise basis. Specific work practice would comprise simple inspection tasks using balances, gauges, colored samples, etc., assembly and disassembly tasks using simple electrical components, mechanical components, pens, toys, etc. and simple weaving works. In addition, sports and music therapy aimed at physical strength building and emotional control skill would be incorporated.

Training/instructional period would be the same as the current 2 years. Number of course trainees would likewise be roughly the present situation with 10 persons per 1 year class for a total of 20 persons in the 2 year course. Student-teacher ratio would be 5 : 1, with a total of 4 instructors necessary. To meet this requirement, it will be necessary to additionally employ 1 new instructor.

Also, the following courses have been eliminated from targeting under the equipment supply plan for the reasons stated.

1) Leather working course

Due to facility renovation works, it was not possible during field survey to fully identify the actual status with regards to this course. According to the briefing received from the course instructor, the present leather working course comprises mainly training in briefcase/satchel fabrication. However, no specifics could be given by the instructor as to relevant labor market conditions and employment potential for persons with this skill, and the field survey by the Study Team as well in Damascus did not confirm the presence of a labor market in this regard. Employment status of course graduates also remains unclear. The executing agency as well places a low priority on this course, and it was subsequently eliminated from consideration under the Project.

2) Shoe making course

Shoe fabrication in Syria is mainly done by government-run enterprises. Fabrication is by division of labor, involving some 300 different processes. In

almost all cases, these processes do not require a long period of time for skill acquisition. Also, the different types of fabrication machinery used in shoe manufacture are too numerous to be realistically incorporated into a singly training course. Finally, the executing agency as well places a low priority on this course, and it was subsequently eliminated from consideration under the Project.

3) Watch repair course

At present, most watches are generally inexpensive quartz types for which there is little demand for repair. Although numerous watch shops were seen in Damascus during field survey, these mostly engage in watch sales with repair works being limited to only battery and band replacement.

From the standpoint of skill marketability and vocational self-independence of the targeted disabled, this course is judged to be of low suitability. Finally, the executing agency as well places a relatively low priority on this course, and it was subsequently eliminated from consideration under the Project.

4) Photography course

At present, film and print development is almost entirely performed by automatic equipment, with manual development essentially a thing of the past. Particularly with regard to color film, automatic development equipment is high quality, inexpensive and requires virtually no special training in operation. Special photography development skills are limited to mono-color DPE and negative touchup. Accordingly, the course content is judged to be of low value in terms of skill marketability. Finally, the executing agency as well places a relatively low priority on this course, and it was subsequently eliminated from consideration under the Project.

5) Hairdressing and beautician course

The hairdressing and beautician course was considered as a new course for targeting under the Project at the time of signing of the minutes of meeting; however, upon study after the Team return to Japan the said course was eliminated from consideration under the Project for the following reasons.

Hairdressing and beautician works require day-long standing which limits applicability to those with hearing disability or only minor physical disability. Furthermore, this type of work requires close communication between the customer and the hairdresser/beautician which further precludes applicability to the deaf who in most cases have difficulty communicating verbally. As a result, this course was eliminated from consideration under the Project.

Table 2.3 indicates the process of narrowing down the courses to be considered under the Project, moving from the original request stage to field survey stage

and finally the home office study stage. Number of students and required instructors per course are shown in Table 2.4.

Table 2.3 Course Selection Process for the Vocational Rehabilitation Center

Requested courses	Status	Courses at the time of field survey	Status	Courses under the Project	Status
1 Wood working course	existing	1 Typing course	existing	1 Business course	existing
2 Electric maintenance course	existing	2 Wood working course	existing	2 Wood working course	existing
3 Pipe fitting course	new	3 Tailor / sewing course	new	3 Tailor / sewing course	new
4 Leather working course	existing	4 Knitting course	existing	4 Knitting course	existing
5 Shoe making course	existing	5 Electric maintenance course	existing	5 Electric maintenance course	existing
6 Watch repair course	existing	6 Leather working / shoe making course	existing		
7 Mens dress tailor course	existing	7 Photography course	existing		
8 Sewing course	existing	(only 1 new course)			
9 Knitting course	existing	8 Hairdressing / beautician course	new		
10 Photography course	existing	(other supplemented course)			
11 Hairdressing course (men and women)	new	9 Capability development for mentally impaired	existing	6 Capability development for mentally impaired	existing
12 Typing course	existing				
13 Dental technician course	new				
14 Cochlea fabrication course	new				
15 Prosthetic limb fabrication course	new				

Courses eliminated from the original request as a result of field survey:	
Watch repair course	existing
Pipe fitting course	existing
Dental technician course	new
Cochlea fabrication course	existing
Prosthetic limb fabrication course	existing

Courses subsequently eliminated from consideration under the Project:	
Leather working / shoe making course	existing
Photography course	existing
Hairdressing / beautician course	new

The results of field survey indicated that training based on a set curriculum content is essentially not being carried out at the Center. Accordingly, a curriculum framework appropriate to local conditions was formulated by the Japanese side. The draft curricula for each course are as indicated in Table 2.5.

Also, the standard weekly schedule based on the said curricula is shown in Table 2.6.

Table 2.4 Training Course Improvement Plan for the Vocational Rehabilitation Center

Course	Component	Period (years)		Student per course			No. of students per course year	No. of instructors		Remarks
		Present	Syrian side plan	Project proposal	Present	Syrian side plan		Project proposal		
Business	Business	1	2	2	7	10	20	1	2	New component, instructor increase from 1 to 2 (1 new instructor necessary in the first year)
Woodworking	Woodworking	2	2	2	4	5	10	1	2	Increase in students from 4 to 10; increase in instructors from 1 to 2 (1 new instructor necessary in the second year)
Sewing	Sewing	2	2	2	26	20	40	2	4	Increase in students from 26 to 40; increase in instructors from 2 to 3 (new instructor necessary in the first year to teach sewing machine operation and adjustment)
Knitting	Knitting / handicraft	1	2	2	17	10	20	1	2	Increase in students from 17 to 20; increase in course period from 1 year to 2 years (new instructor necessary in the first year to teach embroidery)
Electric maintenance	Electric maintenance	2	2	2	11	5	10	1	2	Decrease in students from 11 to 10; increase in instructors from 1 to 2 (1 new instructor necessary in the second year)
Capability development for the mentally impaired	Vocational aptitude	2	2	2	15	10	20	3	5	Increase in students from 15 to 20; increase in instructors from 3 to 4 (1 new instructor necessary in the second year)
Target courses under the Project: 6					80	60	120	9	17	3 new instructors necessary in the first year, 3 new instructors necessary in the second year)

Training courses outside the Project scope (not subject to equipment supply under the Project, however, continuation of the said courses is at the discretion of the Syrian side)

Leather working and shoe making	Satchels, bags	2	2	-	6	10	10	1	1	-	Excluded from consideration under the Project
	Shoe repair	2	2	-	9	10	10	1	1	-	Excluded from consideration under the Project
Photography	DPE correction	1	1	-	5	10	10	1	1	-	Excluded from consideration under the Project
Watch repair		1	-	-	4	-	-	1	-	-	Excluded from consideration under the Project
Total of 3 courses	4 components				24		30	4	3		

Other rehabilitation

Sports therapy	-						120	-	-	1	Almost no sports equipment on hand; however facility does have a gymnasium
PT (Physical Therapy)	-						120	2	2	2	Existing facilities on hand; present staff includes physical therapist.

Table 2.5 (1) Draft Curriculum

Course name: Business		Business		Duration: 2 years		
Component: Instructional objectives:		Requirement of word processing, data processing and general administrative operations utilizing the PC in preparation for employment in government office / private company or self employment. The trainee is also instructed in self health management and imbued with skills enabling independent daily life within general society.				
No.	Instructional category	Instructional item	Content of instruction	Standard hours	Main equipment/material used	Remarks
1	General education	Independent daily life in society	Skills for independent daily life in general society, normalization, etc.	48	mainly lecture	Combined instruction: 1h/w
2		Religion / morality	Religion, social norms, legal structure, etc.	48	mainly lecture	Combined instruction: 1h/w
3	Body functions	Sports therapy	Fostering of body strength, ability to get along with other, sense of responsibility, etc.	96	General sports equipment, sports equipment specifically for the disabled	2 h/w
4	Development training	Function training	Function recovery and maintenance training, self training program	48	PT equipment	PT, 2 h/w
5	Standard subjects	Mathematics	Mathematical skills necessary for office data processing including addition, subtraction, multiplication, division; fractions, proportions, etc.	48	Text	2 h/w for 1 year
6		National language	Language skills necessary for word processing	48	Text	2 h/w for 1 year
7	Specialized subjects	Safety and health	Safe work methods, healthy work practices, potential work hazards, etc.	48	Text	1 h/w
8		Basic personal computer skills	Basic knowledge necessary for PC operation: hard components, OS, software, memory, etc.	36	Text	
9		Peripheral devices	Basic knowledge necessary for operation of printer, scanner and other peripherals	12	Text	
10		Accounting principles	Basic accounting knowledge	60	Text	
11		Administrative processing methodology	Administrative structure, work flow, company organization, etc.	36	Text	
12		English	Basic English sentence structure, technical English vocabulary necessary for PC operation	48	Text	
13	Basic skills	PC operation	Basic PC, CD and FD operation	36	PC and printer etc.	PC including peripherals
14		Simple sentence formulation	Input, formatting, correction of single words and short sentences using word processing application	72	PC and printer etc.	
15		Simple table formulation	Table formulation using word processing application, including line drawing, etc.	60	PC and printer etc.	
16		Word processing	Input, layout and correction methods for various types of document	60	PC and printer etc.	
17		Basic data base formulation	Basics, types, design and processing for data bases	90	PC and printer etc.	
18		Spreadsheets	Basics, types of function, data processing, and graph evolution for spreadsheets	102	PC and printer etc.	
19		Data management	Management and sharing of data types	72	PC and printer etc.	
20		Basics of data exchange	Data exchange, LAN principles, PC communications	36	PC and printer etc.	
21		Basics of accounting data processing	Accounting data processing by PC	112	PC and printer etc.	
22		English text formulation	English text formulation by PC	72	PC and printer etc.	
23		PC maintenance	Simple troubleshooting, software installation, management software use	48	PC and printer etc.	
24		Dealing with visitors and talking on the telephone	Protocol for dealing with visitors and talking on the telephone	36	PC and printer etc.	
25		Macro processing	Data processing by macro function	60	PC and printer etc.	
26		Safe operation	Safe operation methods, health in the work place, potential work hazards, etc.	48	PC and printer etc.	
27		Special applications	Integrated data processing, graphics, etc.	120	PC and printer etc.	
Total				1,600		

Note: In formulating individual curricula, instructional item, and hours of instruction are subject to modification depending on the capability of the trainee.

Table 2.5 (2) Draft Curriculum

No.	Instructional category	Instructional item	Content of instruction	Standard hours	Main equipment/material used	Remarks
Duration: 2 years						
Course name: Wood Working						
Component: Wood Working						
Instructional objectives: Acquisition of basic fabrication skills for wood furniture in preparation for work shop or private employment in furniture manufacture and repair. The trainee is also instructed in self health management and imbued with skills enabling independent daily life within general society.						
1	General education	Independent daily life in society	Skills for independent daily life in general society, normalization, etc.	48	mainly lecture	Combined instruction: 1 h/w
2		Religion / morality	Religion, social norms, legal structure, etc.	48	mainly lecture	Combined instruction: 1 h/w
3	Body functions	Sports therapy	Fostering of body strength, ability to get along with other, sense of responsibility, etc.	96	General sports equipment, sports equipment specifically for the disabled	2 h/w
4	Development training	Function training	Function recovery and maintenance training, self training program	48	PT equipment	PT, 2 h/w
5	Standard subjects	Mathematics	Mathematical skills necessary for furniture fabrication including addition, subtraction, multiplication, division; fractions; proportions, etc.	48	Text	2 h/w for 1 year
6		National language	Language skills necessary for specification interpretation and simple business text formulation	48	Text	2 h/w for 1 year
7	Specialized subjects	Safety and health	Safe work methods, healthy work practices, potential work hazards, etc.	48	Text	1 h/w
8		Wood working machinery	Basic knowledge on the workings of the various wood working tools and machinery for furniture fabrication.	36	Text	
9		Wood working methods	Basic training in wood working techniques for furniture fabrication.	36	Text	
10		Design drawing interpretation	Basics of interpretation of design and machine drawings, reading of drawing symbols	36	Text, drawing tools	
11	Basic skills	Hand tool care	Sharpening, adjustment and care of saw, plane, chisel, etc.	60	Wood working hand tools	
12		Basic hand tooling	Basic wood working using each type of tool	120	Wood working hand tools	
13		Joining	Fabrication by joining	90	Wood working hand tools	
14		Basic machine use	Use, adjustment and basic techniques using wood working machinery	120	Inclined lathe, band saw, hand plane, press, electric plane, etc.	
15		Trimming	Trimming in accordance with design drawings	48	Drawing tools	
16		Parts fabrication	Parts fabrication techniques	144	Hand tools, electric machinery, press, electric tools	
17		Assembly works	Furniture assembly techniques	90	Wood working hand tools	
18		Finishing works	Veneering, finishing and paint prepping	72	Plane, chisel, sander, press, rasp, etc.	
19		Painting works	Wood painting including brush painting, spray painting and special painting	72	Air compressor, spray gun, polisher, etc.	
20		Safe operation	Safe techniques for wood working machinery operation, painting, bonding works, etc.	48	Wood working machinery, hand tools	
21		Metal fixture works	Techniques for attachment of metal fixtures	48	Wood working hand tools	
22		Furniture design	Basics of furniture and interior design	48	Drawing tools	
23	Applied techniques	Integrated works (OJT, etc.)	Integrated works, commissioned works	148	Wood working hand tools, electric machinery, electric tools, painting equipment	
Total				1,600		

Note: In formulating individual curricula, instructional category, instructional item, and hours of instruction are subject to modification depending on the capability of the trainee.

Table 2.5 (3) Draft Curriculum

Course name: Sewing
Component: Sewing
Instructional objectives: Acquisition of clothing sewing skills, in preparation for employment or employment in garment factory or self-employment. The trainee is also instructed in self health management and imbued with skills enabling independent daily life within general society.

No.	Instructional category	Instructional item	Content of instruction	Standard hours	Main equipment/material used	Remarks
1	General education	Independent daily life in society	Skills for independent daily life in general society, normalization, etc.	48	mainly lecture	Combined instruction; 1 h/w
2		Religion / morality	Religion, social norms, legal structure, etc.	48	mainly lecture	Combined instruction; 1 h/w
3	Body functions	Sports therapy	Fostering of body strength, ability to get along with other, sense of responsibility, etc.	96	General sports equipment, sports equipment specifically for the disabled	2 h/w
4	Development training	Function training	Function recovery and maintenance training, self training program	48	PT equipment	PT, 2 h/w
5	Standard subjects	Mathematics	Mathematical skills necessary for sewing works including addition, subtraction, multiplication, division; fractions; proportions, etc.	48	Text	2 h/w for 1 year
6		National language	Language skills necessary for understanding sewing instruction manuals, etc.	48	Text	2 h/w for 1 year
7	Specialized subjects	Safety and health	Safe work methods, healthy work practices, potential work hazards, etc.	48	Text	1 h/w
8		Sewing equipment and tools	Basic knowledge regarding types and use of sewing machines and hand sewing tools	36	Text, examples, teaching materials	
9		Sewing materials	Types, characteristics and handling of textiles, thread and fabric	36	Text, examples, teaching materials	
10		Clothing fabrication process	Fabrication method for skirts, blouses, one pieces, pants, jackets, etc.	36	Text, examples, teaching materials	
11	Basic skills	Basic sewing machine operation	Basic sewing operations utilizing industrial use sewing machine and ironing equipment	172	Industrial use sewing machine, iron, iron stand	
12		Basic hand sewing techniques	Handling of needle, thread and fabric; hand sewing techniques; finished product foldings, etc.	84	Hand sewing tools, iron, iron stand	
13		Basic lock machine operation	Basic operation of lock and ladle type sewing machinery	72	Lock sewing machine	
14		Special machine operation	Basic operation of cycle machine for button holing and button attachment	72	Buttoning machine, button holing machine, ladle sewing machine	
15		Basic techniques for component sewing	Sewing techniques for collar, pockets, sleeves, padding, lining, etc.	176	Final sewing machine, lock machine, iron, iron stand	
16		Embroidery and handcraft	Name and other embroidery, handicrafting, etc.	240	Embroidering tools, embroidering machine, iron, etc.	
17		Finishing and inspection	Finishing and inspection works	72	Needle check machine, hand sewing tools, etc.	
18		Maintenance of sewing equipment	Inspection and maintenance of sewing equipment and hand tools	24	Each type of sewing machine, iron, hand sewing tools, etc.	
19		Safe operation	Safe operation methods, maintenance of safe work environment	36	Each type of sewing machine, iron, hand sewing tools, etc.	
20	Integrated skills	Women's wear fabrication	Fabrication of women's blouses, skirts and pants	200	Each type of sewing machine, iron, hand sewing tools, etc.	Selection to be made as to whether training is to be for men's or women's clothing
21		Men's wear fabrication	Fabrication of men's jackets, vests and pants	(200)	Each type of sewing machine, iron, hand sewing tools, etc.	
Total				1,600		

Note: In formulating individual curricula, instructional category, instructional item, and hours of instruction are subject to modification depending on the capability of the trainees.

Table 2.5 (4) Draft Curriculum

Course name: Knitting		Component: Knitting		Instructional objectives: Acquisition of skills for knitting, embroidery and related handiwork, in preparation for employment in workplace or self-employment. The trainee is also instructed in self health management and imbued with skills enabling independent daily life within general society.		Duration: 2 years	
No.	Instructional category	Instructional item	Content of instruction	Standard hours	Main equipment/ material used	Remarks	
1	General education	Independent daily life in society	Skills for independent daily life in general society, normalization, etc.	48	Audio-visual equipment (mainly lecture)	Combined instruction: 1 h/w	
2		Religion / morality	Religion, social norms, legal structure, etc.	48	Audio-visual equipment (mainly lecture)	Combined instruction: 1 h/w	
3	Body functions	Sports therapy	Posing of body strength, ability to get along with other, sense of responsibility, etc.	96	General sports equipment, sports equipment specifically for the disabled	2 h/w	
4	Development	Function training	Function recovery and maintenance training, self training program	48	PT equipment	PT, 2 h/w	
5	Standard subjects	Mathematics	Mathematical skills necessary for knitting works including addition, subtraction, multiplication, division; fractions; proportions, etc.	48	Text	2 h/w for 1 year	
6		National language	Language skills necessary for understanding knitting instruction manuals, etc.	48	Text	2 h/w for 1 year	
7	Specialized subjects	Safety and health	Safe work methods, healthy work practices, potential work hazards, etc.	48	Text, examples, teaching materials	1 h/w	
8		Clothing and knitted items	Basic knowledge regarding kinds and characteristics of knitted items, and types of knitting	12	Text, examples, teaching materials		
9		Knitting materials	Types, characteristics and handling of yarn, etc.	12	Text, examples, teaching materials		
10		Knitting machines	Types of hand machines for knitting, and accessories	12	Text, knitting machine and attachment		
11		Patterns and drawings	Designs, patterns, drawings	12	Text, examples, teaching materials		
12	Basic skills	Basic knitting machine operation	Handling of various types of hand machine for knitting, and purpose of various attachments	36	Knitting machine and attachments		
13		Basic skills for					
14		Garter knitting	Basic skills for garter knitting	48	Knitting machine and attachments		
15		Elastic knitting	Basic skills for elastic knitting	48	Knitting machine and attachments		
16		Design	Design and pattern fabrication	60	Knitting machine and attachments		
17		Pattern knitting	Cord molding, dapple, checkerwork, openwork, etc.	48	Drawing tools		
18		Parts knitting	Front-side, back-side, pockets, sleeves, collars, etc.	72	Knitting machine and attachments		
19		Embroidery and lace	Handicraft knitting of embroidery and lace	112	Knitting machine and attachments		
20		Closing and finishing	Closing and finishing knitted items	120	Embroidery tools, crochet needles for lacework, embroidery machine		
21		Sweater knitting	Women's sweater, men's sweater	72	Electric closing machine, manual closing machine		
22		Cardigan knitting	Women's cardigan, men's cardigan	112	Knitting machine and attachments, yarn needle, crochet needle, etc.		
23		Special items	Muffler, gloves, socks, hats	72	Knitting machine and attachments, yarn needle, crochet needle, etc.		
24		Hand knitting	Using crochet lozenges, using straight knitting needles	96	Knitting machine and attachments, hand knitting tools		
25		Safe operation	Safe operation methods, maintenance of safe work environment	72	Straight needles, crochet needles		
26	Integrated skills	Applied fabrication	Integrated applied fabrication	48	Knitting machine and various knitting tools		
				152	Knitting machine, attachments, hand knitting tools, iron		
Total				1,600			

Note: In formulating individual curricula, instructional items, and hours of instruction are subject to modification depending on the capability of the trainee.

Table 2.5 (5) Draft Curriculum

Course name: Electric Maintenance
Component: Electric Maintenance
Instructional objectives: Acquisition of skills for repair of household appliances which incorporates small spinning parts, motors, electrical heating elements, etc., in preparation for employment in workplace or self-employment. The trainee is also instructed in self health management and imbued with skills enabling independent daily life within general society.

No.	Instructional category	Instructional item	Content of instruction	Standard hours	Main equipment/ material used	Remarks
1	General education	Independent daily life in society	Skills for independent daily life in general society, normalization, etc.	48	mainly lecture	Combined instruction: 1h/w
2		Religion / morality	Religion, social norms, legal structure, etc.	48	mainly lecture	Combined instruction: 1h/w
3	Body functions	Sports therapy	Fostering of body strength, ability to get along with other, sense of responsibility, etc.	48	General sports equipment, sports equipment specifically for the disabled	2 h/w
4	Development training	Function training	Function recovery and maintenance training, self training program	48	PT equipment	PT, 2 h/w
5	Standard subjects	Mathematics	Mathematical skills necessary for electrical device repair works including addition, subtraction, multiplication, division; Fractions; proportions, etc.	36	Text	2 h/w for 1 year
6		National language	Language skills necessary for understanding specifications, instruction manuals, simple business communications, etc.	36	Text	2 h/w for 1 year
7	Specialized subjects	Safety and health	Safe work methods, healthy work practices, potential work hazards, etc.	48	Text	1 h/w
8		Electrical theory	Basic direct current and alternating current theory	60	Text, teaching materials	
9		Household electrical appliances	Basic types, principle and structure of household appliances including electrical heating elements, light fixtures, etc.	60	Text, teaching materials	
10		Appliances incorporating spinning components	Small electrical motor/generator components in fans, mixers, statos, etc.	60	Text, teaching materials	
11		Inspection and gauging	Inspection and gauging methods for electrical devices	48	Text, teaching materials	
12	Basic skills	Device breakdown and assembly	Fans, irons, heaters, ovens, radio-cassette players, TV's, etc.	60	Hand tools (spanners, drivers, pliers, etc.), tester	Repair instructional materials
13		Lighting fixture repair	Repair of flashlights, lamps, fluorescent lights, light stands, etc.	72	Hand tools (spanners, drivers, pliers, etc.), tester	
14		Repair of electrical heating devices	Irons, heaters, ovens, driers	72	Hand tools (spanners, drivers, pliers, etc.), tester	
15		Repair of spinning devices	Breakdown and assembly of fans, mixers, mincers, vacuum cleaners, washing machines, etc.	72	Hand tools (spanners, drivers, pliers, etc.), tester	
16		Small motor repair	Repair of cooling and other parts of small alternating and direct current motors	180	Hand tools (spanners, drivers, pliers, etc.), tester	
17		Small generator repair	Repair of cooling and other parts of small direct current generators	180	Hand tools (spanners, drivers, pliers, etc.), tester	
18		Other electrical devices	Repair of air-conditioners, refrigerators, etc.	96	Hand tools (spanners, drivers, pliers, etc.), tester	
19		Maintenance of electrical devices	Inspection and maintenance of various household electrical devices	48	Hand tools (spanners, drivers, pliers, etc.), tester	
20		Basics of electrical gauging	Basic gauging methods for electrical circuits and electrical devices	60	Meters, resistance gauges, power source, tester, etc.	
21		Testing methods for electrical devices	Load testing, insulation testing, grounding testing, etc.	48	Meters, load tester, starter, controller	
22		Safe operation	Safe operation methods, maintenance of safe work environment	48	Drawings, models, simulations, etc.	
23	Applied skills	Applied fabrication (OJT)	Integrated applied fabrication, commissioned work	124	Tools indicated above	
Total				1,600		

Note: In formulating individual curricula, instructional category, instructional item, and hours of instruction are subject to modification depending on the capability of the trainees.

Table 2.5 (6) Draft Curriculum

Course name: Capability Development for the Mentally Impaired

Component: Vocational aptitude

To update attributes necessary as a worker, and prepare the individual for gainful employment. The trainee is also imbued with skills enabling independent daily life within general society.

Instructional objectives:

No.	Instructional category	Instructional item	Content of instruction	Standard hours	Main equipment/ material used	Remarks
1	General education	Independent daily life in society	Inculcating of motivation and sense of meaning for independent daily life in general society	48	mainly lecture	Combined instruction: 1 h/w
2		Religion / morality	Religion, social norms and cooperation among members of society, social roles for cooperation	48	mainly lecture	Combined instruction: 1 h/w
3	Body functions	Sports therapy	Fostering of body strength, ability to get along with others, sense of responsibility, etc.	120	General sports equipment, sports equipment specifically for the disabled	2 h/w
4	Development training	Music therapy	Improvement of social interaction skills, emotional control, emotional pain alleviation skills, working capability	96	Music equipment and materials (for mentally impaired)	1 h/w
5	Standard subjects	Mathematics	Necessary computing skills for daily social and working activities	60	Text	2 h/w for 1 year
6		National language	Necessary language skills daily social and working activities	60	Text	2 h/w for 1 year
7	Basic skills	Breakdown and assembly works	Breakdown and assembly works in small groups (toys, pens, mechanical pensils, etc.)	120	Hand tools (pliers, drivers, spanners, etc.), evaluating equipment	
8		Line works	Breakdown and assembly works by conveyor belt, etc. (electrical equipment parts, etc.)	120	Conveyor, hand tools	
9		Separating works	Separation and categorizing works, grouping of parts from disassembled items	120	Conveyor, hand tools, colored boxes, evaluating equipment	
10		Boxing works	Boxing of items according to predetermined quantity or weight, bagging works	120	Conveyor, weighing scale, evaluating equipment	
11		Packing works	Packing and carrying works	72		
12		Inspection works	Product inspection works using jigs, aids, etc.	120	Jigs	
13		Weaving works	Small hand loom works (raw fabric weaving, table mat fabrication, muffler fabrication, etc.)	156	Weaving loom	
14		Cleaning works	Floor cleaning/polishing, car washing, etc.	156		
15		Safety and health	Basic knowledge on safe work methods, health in the work place	48		
16	Practical work operations	Practical work experience (OJT, etc.)		136	Hand tools (spanners, drivers, pliers, etc.), taster	
Total				1,600		

Note: In formulating individual curricula, instructional category, instructional item, and hours of instruction are subject to modification depending on the capability of the trainee.

TABLE 2.6 VOCATIONAL REHABILITATION CENTER WEEKLY TIME SCHEDULE

Course name: _____ Student name: _____

Time slot	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Remarks
8:30	Training / instruction	Training / instruction	Training / instruction	Training / instruction	Training / instruction	Training / instruction	Holiday	
1-2	- do-	- do-	- do-	- do-	- do-	Maintenance, etc.		
10:00	- do-	- do-	- do-	- do-	- do-	Thursday is up to the 4th period only		
10:15	- do-	- do-	- do-	- do-	- do-			
3-4	- do-	- do-	- do-	- do-	- do-			
11:45	- do-	- do-	- do-	- do-	- do-			
12:00	- do-	- do-	- do-	- do-	- do-			
5-6	- do-	- do-	- do-	- do-	- do-			
13:30	- do-	- do-	- do-	- do-	- do-			
Remarks								

Note: 1: One period is 45 minutes, with two periods continuing back to back. Recess is from 10:00 to 10:15 and from 11:45 to 12:00. However, training and instruction on Thursday (including maintenance) is only up to 11:45.

Note: 2: Physical function training (PT, etc.) is planned on an individual student basis. Accordingly, it is recommended to prepare weekly schedules on an individual student basis.

Note: 3: In the case of sports training, a common weekly schedule for 2-3 courses is planned taking into consideration gymnasium size, type of disability, quantities and types of sports equipment, etc.

Note: 4: Group training (general education: independence in daily social life, religion, social norms, vocational preparation, etc.) would be carried out for example during the first period each Saturday.

Note: 5: Number of periods per year is: 26 weeks x 32 periods (1 week) = 832 periods. For the purposes of the project, annual number of periods is planned at 800, or a total of 1,600 over two years.

2.3 Basic Design

2.3.1 Design Strategy

(1) Strategy with Regard to Natural Conditions

Climatically, the capital city of Damascus wherein the Project sites are located experience continuous days in summer (July~August) where daily temperatures exceed 30 °C, and conversely periods in the winter (January~February) where temperatures drop below 10 °C (temperature-wise, this is very similar to Tokyo). Rainfall is a low 180 mm per year. As a result, no special considerations are necessary from the standpoint of humidity and temperature with regard to the selection, transportation and installation of equipment. However, in order to protect against dust, it necessary that precision instruments such as computers, etc. be equipped with covers.

(2) Strategy with Regard to Social Conditions

Due to a long period of diplomatic policy which has limited exchange with the non-Moslem world, the degree of English and other foreign languages spoken in the country is considerably lower than that of neighboring countries in the region. As such, it must be assumed that personnel at the 4 target facilities will be capable of understanding Arabic only. Accordingly, it will be necessary that operation and maintenance manuals for equipment be in Arabic, as well as indication on the equipment itself, in order to prevent equipment mis-operation and/or breakdown. This is extremely important in cases where improper equipment operation may pose a hazard to the user.

Also, public facilities in the Islamic world are normally equipped with prayer chapels and hand lavatories for body purification. As these facilities are provided under the responsibility of the recipient government, no special considerations from a religious standpoint are required under the Project.

(3) Strategy for Equipment Procurement

In the case of mechanical devices and equipment, locally produced items are lacking in strength and are not fabricated with the disabled in mind. In light of the fact that such items under the Project are intended strictly for use by the disabled with safety being the overriding concern, it would be appropriate that these be of Japanese or OECD manufacture. (Special consideration is to be given the procurement of European manufactured items where use of such is more familiar to the disabled in Syria.) However, in the case of general education related equipment, there are cases where local products are of ample quality for the envisioned purpose and in such instances it would be desirable that these items be procured locally from the standpoint of cost-effectiveness.

In the case of equipment which requires special care in use (computer, copy machine, physiotherapeutic equipment, etc.) and equipment for which supply of consumables

and spare parts is extremely important, it is recommended, despite the fact that these will be imported items, that they be supplied by manufactures which have an effective after sales service operation in the country. In this regard as well, local procurement of imported items via the manufacturer's agent in Syria should be considered.

In light of the intended use by disabled persons, equipment wiring and piping should accord special consideration to safety.

(4) Strategy for Utilization of Local Products

As described above, local products will be procured to the extent possible where problems do not occur in terms of quality, performance and particularly safety. However, field survey indicated problems with the following items with regard to the foregoing, and have accordingly been eliminated from consideration for local procurement.

a. Locally assembled computers

Performance is unreliable, and pirated software is in many cases used.

b. Locally produce wheel chairs

These lack in strength as confirmed by the Study Team upon inspection of wheel chairs at the Al-Amal School for the Physically Disabled and at manufacturer outlets.

c. Ping-pong table

Metal trim along the table edge of locally made product is hazardous to the disabled. Table is also lacking in strength and not suited to a player in a wheel chair.

(5) Strategy for Responding to O&M Capability Level

The O&M capability of the executing agency is not high either in terms of budget or technical level. Accordingly, equipment featuring easy maintenance will be selected to the extent possible, and priority for imported equipment will be given to manufacturer's with local agents capable of ready replacement parts and consumable supply, and effective after-sales service.

(6) Strategy for Determining Equipment Specifications and Grade

Equipment is to be compatible with curriculum objectives for vocational rehabilitation. Equipment which is outdated in terms of present societal requirements are to be avoided. At the same time, equipment selected is to be capable of imparting basic knowledge and skills to the user while being of a specification level and grade which enables ease of O&M. Where no problem in terms of quality, performance or safety does not exist, local products are to be given priority.

With regard to imported items, products of Japanese or OECD manufacture are to be selected from the standpoint of quality and safety, and equipment specification level is to be such as to allow for easy after-sales service by the manufacturer's agent in Syria.

(7) Strategy regarding Implementation Period

As none of the envisioned equipment for supply under the Project requires a lengthy manufacture and delivery period, the Project implementation period can be contained within a single fiscal year.

With regard to building structure modification (level differential, inclines, etc.), wiring, piping, etc. which are the responsibility of the recipient government, it is necessary that these works be embarked upon as early as possible. Also, consideration must be given to the drop in work efficiency rate which will occur during Ramadan scheduled for around January.

2.3.2 Basic Plan

(1) Overall Plan

All equipment to be procured under the Project will be installed the 4 target facilities, i.e. the Vocational Rehabilitation Centre, the School for the Blind, the School for the Deaf-mute, and the Al-Amal School for the Physically Disabled. Space is available at each facility to house the envisioned equipment. Also, it will be possible to utilize existing electrical and water supply systems at the facilities. No other utility service will be required by the requested equipment.

Access to all 4 facilities is good for equipment delivery. Off-loading of imported equipment is planned for the ports of Lattaquié and Tartus, which are connected to Damascus by 4 lane highway in good condition. Ample space is also available at each facility for unloading shipped equipment.

Maps of the 4 project site areas are given in Figure 2.1 to 2.3.

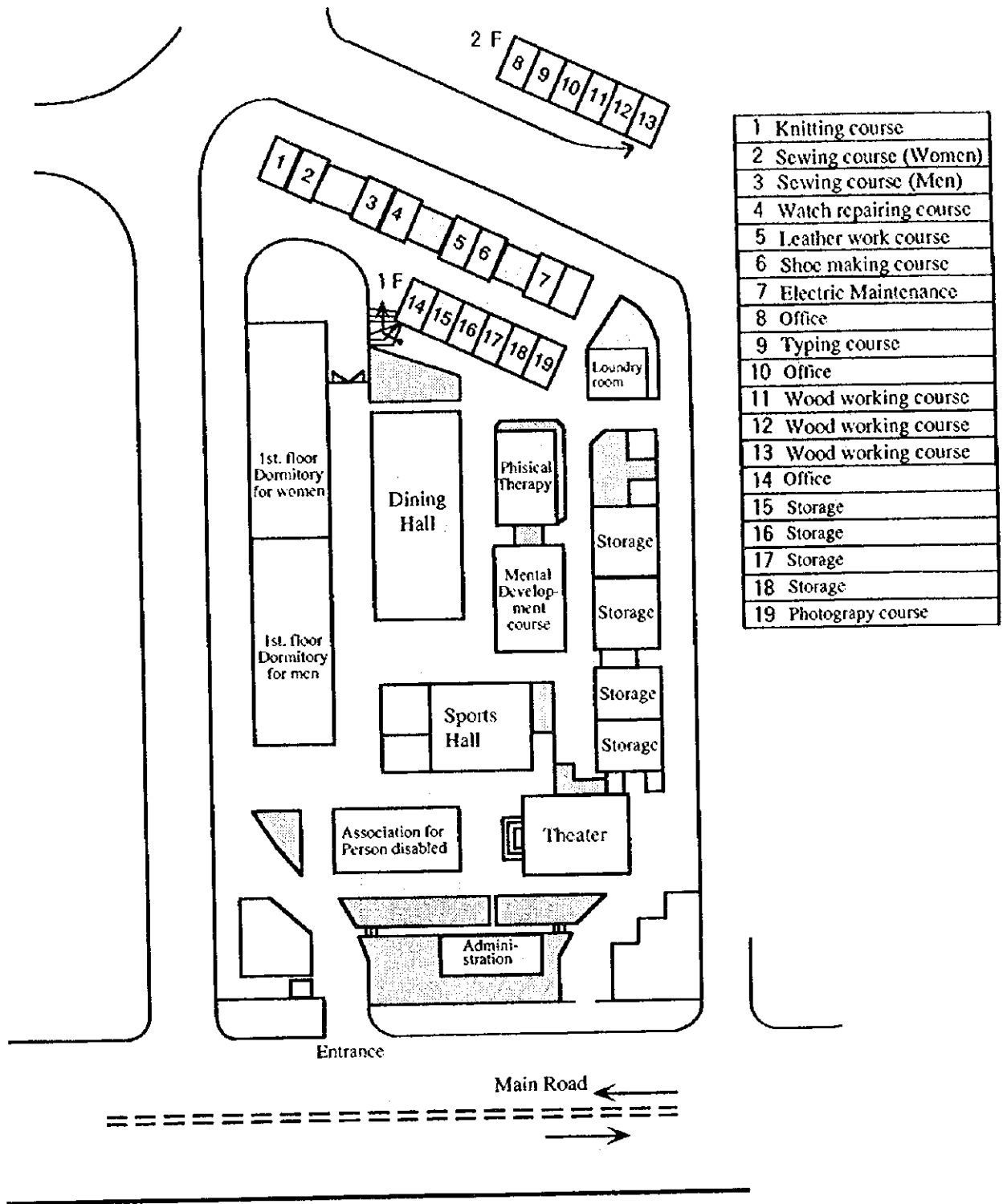


Fig. 2.1 Plan of the Vocational Rehabilitation Center

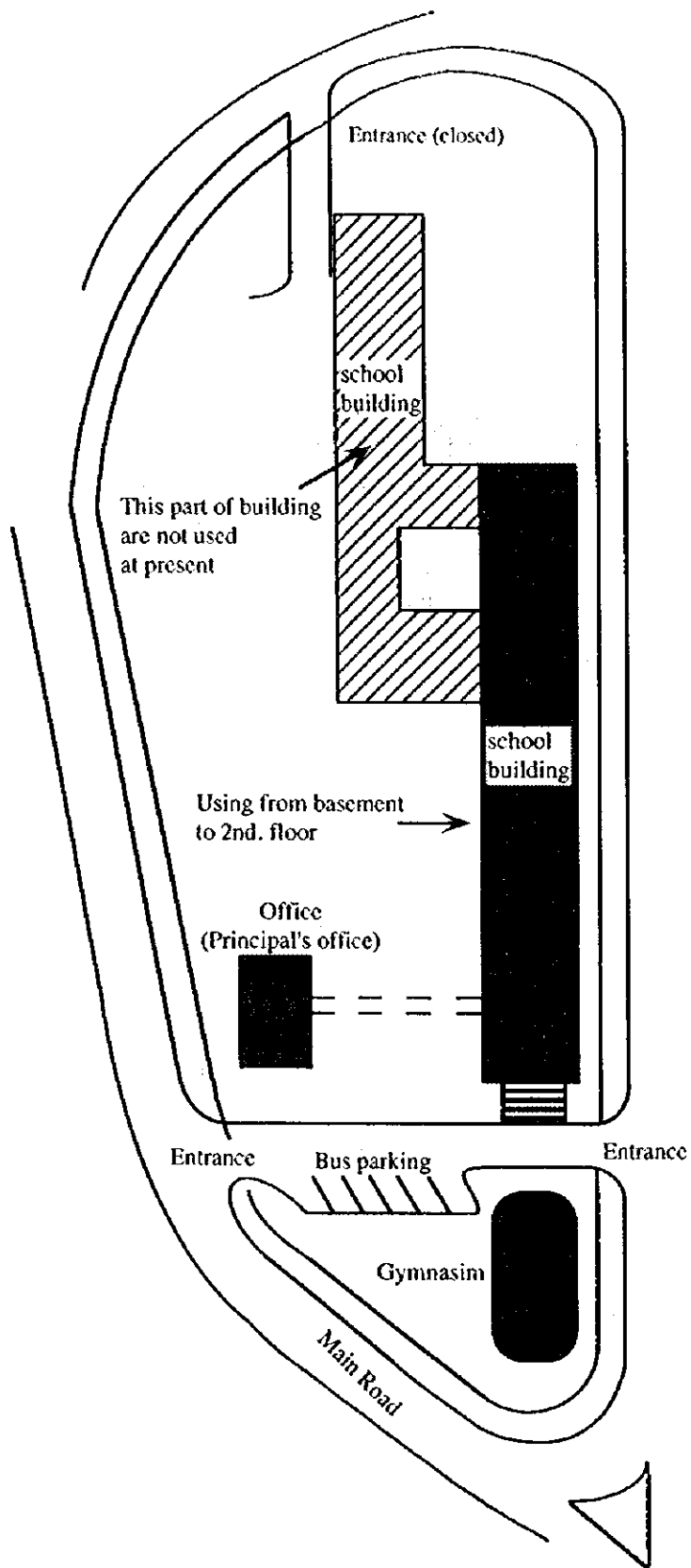


Fig. 2.2 Plan of the School for the Blind in Damascus

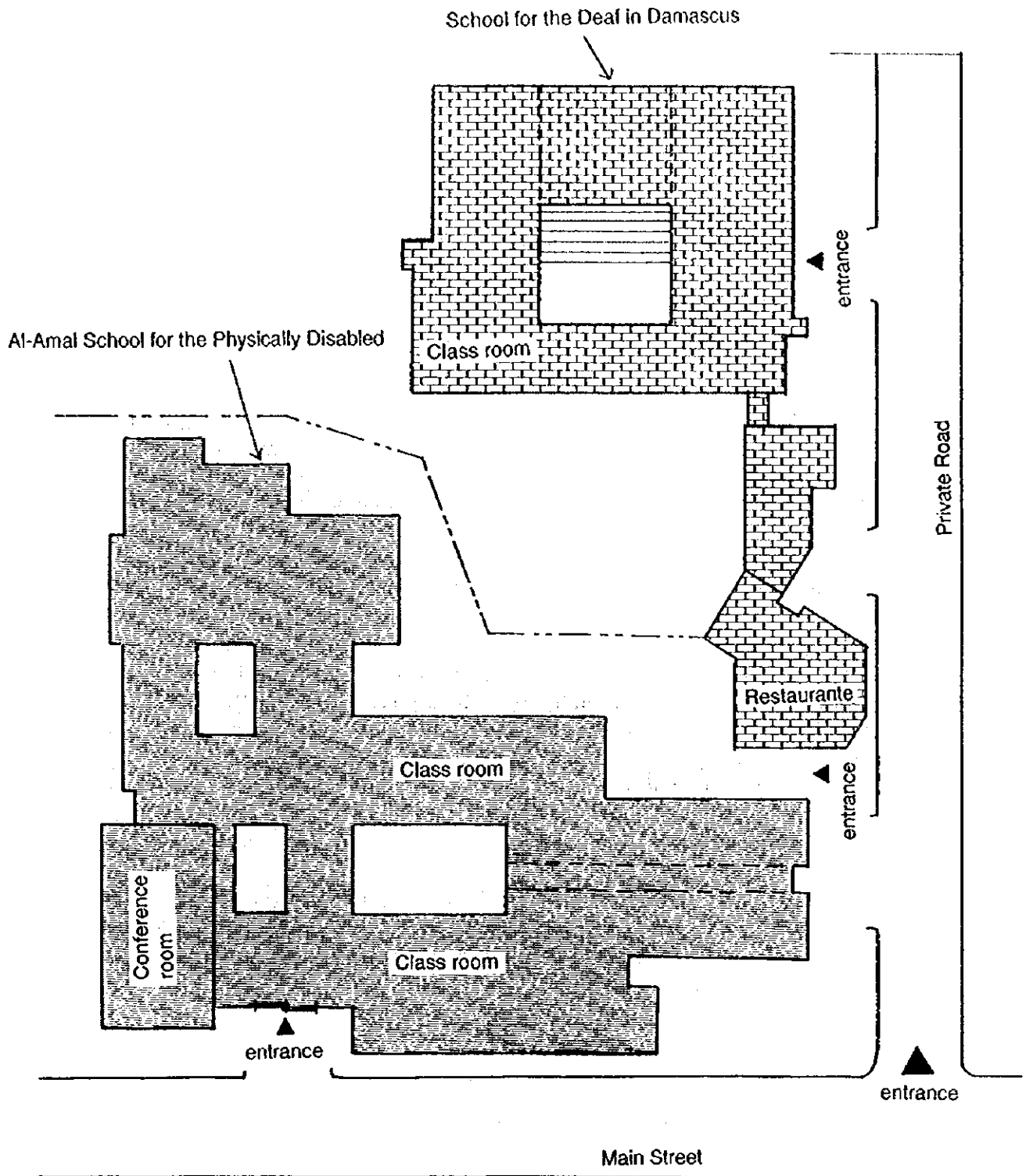


Fig. 2.3 Plan of the School for the Deaf & Al-Amal School for the Physically Disabled