PD-AAV-548
49838

AUDIT OF
SCHOOL CONSTRUCTION UNDER USAID/EGYPT
BASIC EDUCATION
PROJECT NO. 263-0139
Audit Report No. 6-263-87-5
April 27, 1987

UNITED STATES GOVERNMENT

memorandum

DATE: April 27, 1987

REPLY TO ATTN OF: Joseph R. Ferri, RIG/A/Cairo

SUBJECT: Audit Of School Construction Under USAID/Egypt Basic Education Project No. 263-0139

TO: Mr. Arthur M. Handly, Director USAID/Egypt (A)

This report presents the results of audit of School Construction Under USAID/Egypt Basic Education Project No. 263-0139. The objectives of this program results audit were to determine whether project resources were effectively managed and whether project objectives were being achieved.

The audit showed that the Government of Egypt effectively managed funds made available for school construction, and provided schools and classrooms for an expanding school population in grades 1 through 9.

The audit also showed that conditions existed which were negatively impacting on AID's $80-million investment for school construction. Schools buildings were not properly maintained, construction defects were present in completed schools, and construction delays were slowing accomplishment of project targets.

Three recommendations were made. We recommended setting maintenance standards and establishing a program of continuing maintenance and follow-up as a condition to using AID funds; establishing and applying construction standards in inspecting and accepting school construction; and closer USAID/Egypt monitoring, and reallocation of budgeted funds among governorates when not used effectively for school construction.

USAID/Egypt agreed with the intent of the three recommendation and initiated corrective actions. As a result, all recommendations were resolved, and one recommendation (No. 3) was closed upon issuance of this report.

OPTIONAL FORM NO. 10
(REV. 1-80)
GSA FPMR (41 CFR) 101-11.6
5010-114

★U.S. GOVERNMENT PRINTING OFFICE : 1982 O - 361-526 (7290)

Excerpts from the comments received from the Mission are included at the end of each findings section along with Office of Inspector General comments. The Mission said the objective of its comments, among other things, was to identify the cultural context in which construction and maintenance of public buildings are treated in Egypt as opposed to how they are considered in an American urban setting. The full text of the comments is included as Appendix 1 to this report. Please provide us within 30 days information on further actions taken to close the remaining two recommendations.

EXECUTIVE SUMMARY

The Basic Education project began in 1981 with a Grant Agreement to assist the Egyptian Ministry of Education to upgrade the quality and structure of basic education in Egypt. The project purpose was to increase school enrollments, especially for rural girls between the ages of 6 and 15, and to improve the efficiency of basic education in Egypt. The purpose would be accomplished mostly through constructing of new school buildings and classrooms. USAID/Egypt authorized $190 million for the project. Of that amount, $105 million was obligated as of September 1, 1986, including $80 million for school construction. Originally, the project was scheduled for completion on June 30, 1986, but the project was expanded from 5 to 10 governorates, and finally to 24 governorates, resulting in a latest completion date (PACD) of June 30, 1991.

The Office of the Regional Inspector General for Audit/Cairo made a program results audit of the Basic Education Project. Audit objectives were to determine whether project resources were effectively managed and whether project objectives were being achieved. This audit concentrated specifically on: (1) the use of funds made available for school construction; (2) maintenance of completed school buildings; (3) the quality of construction; and (4) progress in building schools. A separate audit was made of commodity procurement and management.

The project showed satisfactory progress in providing schools and classrooms for an expanding school population in grades 1 through 9. All of the schools visited were being fully used, and sometimes even overused. These schools contributed to reducing major constraints on enrollment, such as inaccessibility of facilities and overcrowding. Funds made available for school construction were effectively managed and properly accounted for by the Ministry of Education.

Conditions existed that negatively impacted on AID's $80-million investment for construction. The audit showed that: school buildings were not properly maintained; construction quality needed upgrading; and construction delays slowed accomplishment of project targets. These findings were based on an examination of 37 out of 213

completed schools visited in seven governorates. This coverage indicates that the findings regarding maintenance and construction are indicative of the project as a whole.

No maintenance program was being carried out in nearly all of the 37 schools visited. The Grant Agreement required the Ministry of Education to systematically maintain project-financed schools at an acceptable standard, but did not adequately define what constituted an acceptable standard. Moreover, maintenance standards were not established for the schools. We recommended that maintenance standards be set and that a program of continuing maintenance and follow-up be established as a condition to the use of AID funds. USAID/Egypt agreed that maintenance has been a problem, concurred with the recommendation, and initiated corrective actions.

Most of the schools in the seven governorates visited showed visible signs of construction defects. The National Investment Bank inspected schools during construction, and local committees in the educational zones issued acceptance certificates before schools were placed in service, but this system was ineffective in preventing construction defects in completed schools. We recommended that construction standards be established and applied in inspection and acceptance of school construction. USAID/Egypt agreed with the recommendation and initiated corrective actions.

Delays in school construction in Minya and Giza governorates slowed achievement of output targets. As of June 30, 1986, no school buildings had been completed and accepted for occupancy in these governorates. Delays were caused by problems in obtaining the use of agricultural land for school construction. Also, the National Investment Bank did not approve construction contracts where costs were considered excessive. Some progress was made recently in accelerating construction, but output targets still remained behind schedule and thus project benefits will not be realized as planned. We recommended close USAID/Egypt monitorship of construction progress, and reallocation of budgeted funds among governorates when not effectively used for school construction. The Mission agreed with the recommendation, and said there was a precedent for withholding funds from a governorate. The recommendation was closed upon issuance of this report.

Office of the Inspector General

AUDIT OF
SCHOOL CONSTRUCTION UNDER
USAID/EGYPT BASIC EDUCATION
PROJECT NO. 263-0139

TABLE OF CONTENTS

		Page
PART I	- INTRODUCTION	1
	A. Background	1
	B. Audit Objectives And Scope	2
PART II	- RESULTS OF AUDIT	4
	A. Findings And Recommendations	5
	1. School Buildings Were Not Properly Maintained	5
	2. Construction Quality Needs To Be Upgraded	8
	3. School Construction Delays Impede Project Achievements	11
	B. Compliance And Internal Control	14
PART III	- EXHIBITS AND APPENDICES	
	A. Exhibits	
	1. Financial Summary September 1, 1986	
	2. Defects In School Buildings Completed Under Basic Education Project	
	B. Appendices	
	1. Management Comments	
	2. List Of Recommendations	
	3. Report Distribution	

AUDIT OF
SCHOOL CONSTRUCTION UNDER
USAID/EGYPT BASIC EDUCATION
PROJECT NO. 263-0139

PART I - INTRODUCTION

A. Background

The Egyptian Ministry of Education (MOE) is engaged in an effort to upgrade the quality and structure of education. At the core of this effort is a desire to expand enrollments and provide the opportunity for an improved basic education program to all children between the ages of 6 and 15, particularly rural youth and girls.

AID agreed to assist the MOE in its effort through the Basic Education Project. Under a Grant Agreement, signed in August 1981, USAID/Egypt obligated $39 million for: construction of classrooms, purchase of classroom furniture, purchase of instruction materials and equipment, and technical assistance by U.S. contractors. The project purpose was to increase school enrollments and to improve the efficiency of basic education in Egypt.

Amendments to the Grant Agreement raised project obligations to a September 1, 1986 total of $105 million. The total life-of-project authorization is $190 million. Of the amount obligated, $80.3 million was for school construction and furniture while $20 million was for instructional materials and equipment. The Grantee agreed to contribute the equivalent of $98.6 million (Egyptian pounds 92.2 million at LE.83168 and LE1.35 = $1.00), of which more than 99 percent was for school construction and furniture. USAID/Egypt disbursements on September 1, 1986, for construction and furniture totaled $32.4 million (See Exhibit 1).

Project output targets called for 5,279 AID-financed classrooms and 6,838 Grantee-financed classrooms to be built in 10 governorates. Instructional materials and equipment were to be placed among 15,000 Ministry of Education schools.

The Ministry of Education was primarily responsible for project implementation while the Housing Departments and/or city councils of the participating governorates were responsible for construction oversight. The National Investment Bank, working with the participating Education

Zones in the governorates, exercised financial and price control on behalf of the Grantee. In addition, the Bank was responsible for inspecting school construction and monitoring maintenance of project-financed schools.

This project began in 1981. The Grant Agreement anticipates that all project-financed instructional materials and equipment will be in place in schools at the end of 1989, and all construction will be completed by June 30, 1991. Originally, the project was scheduled for completion by June 30, 1986, but was expanded from 5 to 10 governorates, and then to 24 governorates, resulting in a new Project Assistance Completion Date (PACD) of June 30, 1991. As of September 1, 1986, $85 million remained to be obligated under the amended Project Authorization of $190 million. That sum will be used for building an additional 5,574 classrooms, purchase of classroom furniture, procurement of $10 million of additional instructional materials and equipment, and for other project purposes (see Exhibit 1).

B. Audit Objectives And Scope

The Office of the Regional Inspector General for Audit/Cairo made a program results audit of the Basic Education Project No. 263-0139. The audit objectives were to determine whether project resources were effectively managed by the Government of Egypt and USAID/Egypt in accordance with AID regulations, policies, practices and project documents, and whether the project objectives were being achieved. Specifically, the audit focused on: (1) the use of funds made available for school construction; (2) maintenance of completed school buildings; (3) the quality of construction work; and (4) progress in building schools. A separate audit was made of commodity procurement and management.

This audit included a review of project documents, records and reports at USAID/Egypt, the Ministry of Education and National Investment Bank/Cairo, and local Ministry of Education offices in the governorates and their subdivisions. Visits were made to 37 of 213 completed schools in the governorates of Fayoum, Beheira, Qena, Minya, Giza, Sharkia, and Kafr El-Sheikh. Visits were also made to the Beheira warehouse, one of the two main Ministry of Education warehouses used in this project. The seven governorates visited had 64 percent of the total completed value of construction contracts as of June 30, 1986.

Audit work began in September 1986, and covered activities from inception of the project in August 1981 through

December 1986. USAID/Egypt disbursements of $32.4 million in 10 governorates for construction and school furniture were audited through September 1, 1986. No previous audits were made of this project. The audit was made in accordance with generally accepted government auditing standards.

AUDIT OF
SCHOOL CONSTRUCTION UNDER
USAID/EGYPT BASIC EDUCATION
PROJECT NO. 263-0139

PART II - RESULTS OF AUDIT

The project showed satisfactory progress in providing schools and classrooms for an expanding school population in grades 1 through 9. All of the schools visited were being fully used, and sometimes even overused. These schools contributed to reducing major constraints on enrollment, such as inaccessibility of facilities and overcrowding. Funds made available for school construction were properly accounted for and effectively managed.

Conditions existed that were negatively impacting on AID's $80-million investment for school construction. The audit showed that: school buildings were not properly maintained; construction quality needed upgrading; and construction delays were slowing accomplishment of project targets. These findings were based on an examination of 37 out of 213 completed schools visited in seven governorates. This coverage indicates that the findings regarding maintenance and construction are indicative of the project as a whole.

Three recommendations were made. We recommended setting maintenance standards and establishing a program of continuing maintenance and follow-up as a condition to using AID funds; establishing and applying construction standards in inspecting and accepting school construction; and closer USAID/Egypt monitoring, and reallocation of budgeted funds among governorates when not used effectively for school construction.

USAID/Egypt agreed with the intent of the three recommendation and initiated corrective actions. As a result, all recommendations were resolved, and one recommendation (No. 3) was closed upon issuance of this report.

A. Findings And Recommendations

1. School Buildings Were Not Properly Maintained

No maintenance programs were being carried out in nearly all of the 37 schools visited. The Grant Agreement required the MOE to systematically maintain project-financed schools at an acceptable standard, but did not adequately define what constituted an acceptable standard. Moreover, maintenance standards were not established for the schools.

Although the Ministry of Education had an annual maintenance budget, there was little evidence that funds from the budget were used for school maintenance. School officials claimed that maintenance funds were insufficient, but maintenance was not carried out even when limited funds were available. None of the schools visited had day-to-day maintenance programs. Without adequate maintenance, school buildings deteriorate and pose health and safety problems for the occupants. A maintenance program requirement was mentioned in the current Project Paper, but actual implementation of such a program was needed to protect AID's $80-million current ($138-million life-of-project) investment for school construction and furniture. A definition of the term "acceptable standard" for maintenance was needed, and the standard needed to be applied in each of the schools.

Recommendation No. 1

We recommend that USAID/Egypt issue a Project Implementation Letter which: (1) sets standards of maintenance to be followed by the Ministry of Education; (2) establishes a program for continuing maintenance and follow-up as expressed in the Grant Agreement; and (3) provides criteria for withholding additional funding for school construction when maintenance standards are not met.

Discussion

The Grant Agreement (Standard Provision B.2) required the MOE to operate and maintain the project in a manner that assured the continuing and successful achievement of project purposes. Nearly all the 37 schools that visited in seven governorates were not being maintained as intended by the Grant Agreement.

Some of the maintenance problems arose from defects in construction. For example, chunks of concrete had broken away from around door jambs because, according to the

Project Officer, the jambs were not set properly in the wall to sustain repeated door closings. Also, door handles had broken off because of poor quality of door hardware. Cracks in walls and ceilings were numerous. Flooding of structures or school grounds occurred because of poor drainage. Most of the problems reflected the failure to maintain the schools in a proper fashion.

Schools, in general, presented a shabby appearance due to peeling plaster, and surfaces in need of painting. Windows were broken, light fixtures were missing or broken, and electrical wiring was exposed. Erosion existed around building foundations, and floor tiles were broken or missing (see Exhibit 2 for pictures).

A provision of the Grant Agreement (second amendment) stated that in the event project-financed schools were systematically not maintained by the Grantee to an acceptable standard, AID may withhold additional funding of new school construction. The Grant Agreement did not adequately define what constituted an acceptable standard. Standards of maintenance described in the Project Paper required only that there be adequate interior and exterior painting, masonry intact, and an absence of broken windows and tiles. There was little evidence that the standard was conveyed to the schools, or adhered to; that a systematic program of maintenance was being followed; or that maintenance records existed to show that maintenance work was being carried out.

Local officials said that maintenance funds were available, but were insufficient. In one governorate (Minya), a total of 220,000 Egyptian pounds (about $163,000) was allocated for the 1,000 Ministry of Education schools in the governorate, equivalent to 220 Egyptian pounds (about $163) per school for the current school year.

In a different governorate (Qena), with 750 Ministry of Education schools, a maintenance fund of LE50 (about $37) was provided to individual schools. According to Qena officials, if more extensive maintenance was needed, engineers and technicians from the Educational Directorate would organize a committee to review the defect and estimate repairs. The Educational Directorate we visited in Qena had an allocation of LE15,000 (about $11,000) for maintenance, yet the schools had not requested maintenance work although they needed it. In Kafr El-Sheikh, there was a lack of initiative on the part of schools officials to get needed maintenance work done.

AID's Project Paper (second amendment) addressed the matter of maintenance of AID-financed schools. It provided for a Project Implementation Letter (PIL) to add "inspections for school maintenance" to duties performed by the National Investment Bank. The first inspection would assess the quality of maintenance and include a conclusion on action required. A second inspection would be made to see whether recommended maintenance had been carried out, but overall responsibility for maintenance would remain with the Ministry of Education. If a governorate exhibited poor maintenance, AID would have the right under the Grant Agreement to withhold further funding for school construction.

USAID/Egypt's approach to the problem of poor maintenance is appropriate, but it should go further. Maintenance is a continuing process as expressed in the Grant Agreement (Standard Provision), which requires the Grantee to "cause the project to be operated and maintained in such manner as to assure the continuing and successful achievement of the purposes of the project." In order for the schools to be maintained properly, the PIL should set standards for maintenance, define those standards, and require a program for continuing maintenance to protect USAID/Egypt's $80-million current ($138 million life-of-project) investment for school construction and furniture.

Management Comments

USAID/Egypt commented extensively on the reasons why schools were being maintained in the fashion found during the audit. Many of the comments referred to the different perceptions of Americans and Egyptians about such standards. Nevertheless, USAID/Egypt advised the GOE by letter of the maintenance problem and of the resources needed to deal with it. Specific standards for maintenance will be developed and issued through a Project Implementation Letter (PIL), and NIB engineers will visit each completed school at least once a year to uphold the standards. Funds will be withheld from governorates if standards are not met (see Appendix 1, pages 3, 6 and 7 for specific Mission comments on maintenance matters).

Office Of Inspector General Comments

The recommendation is resolved and will be closed when the proper PIL is issued.

2. Construction Quality Needs To Be Upgraded

Most of the schools in the seven governorates visited showed visible signs of construction defects. The National Investment Bank inspected schools during construction, and local committees in the educational zones issued acceptance certificates before schools were placed in service, but this system was ineffective in preventing construction defects in completed schools. The major factor in this condition was that acceptances were essentially subjective judgments made without reference to specific acceptance standards. These defects have led to a deterioration of some structures, with attendant maintenance problems; have raised the probability of injury and health problems for the occupants; and have detracted from a favorable image of U.S. assistance to the Ministry of Education.

Recommendation No. 2

We recommend that USAID/Egypt, in coordination with the Ministry of Education and the National Investment Bank: (1) establish construction standards for AID-financed schools; (2) ensure those standards are applied in inspection and acceptance of school construction; (3) review technical specifications for items causing common and hazardous defects; and (4) provide for withholding AID funds in governorates not meeting construction standards.

Discussion

School construction was carried out at the local level by contractors selected by the benefiting school zones. Project officials told us that schools were to conform to a design model approved by USAID/Egypt at the outset of the project, and that technical specifications and standards were established at the local level in construction contracts between the governorates and their contractors. Project documents between USAID/Egypt and the GOE did not define what constituted satisfactory completion of the schools before being placed in service.

Construction oversight was the responsibility of the Housing Department in individual governorates. In addition, the National Investment Bank was responsible under PIL No. 10 to inspect each construction site five times prior to acceptance by the GOE. Actual acceptance of a school building was by a committee of GOE officials in each

governorate. Despite this oversight, school buildings having material defects were placed in service without being subject to meeting specific standards for acceptance.

We inspected construction work in seven governorates. In the governorate of Kafr El-Sheikh, for example, we visited six completed schools and observed the following defects:

- broken concrete around door jambs
- broken door handles
- broken toilets
- broken electrical fixtures and light switches
- broken floor tiles
- exposed electrical wires
- lavatory flooded, poor drainage
- leaking water pipes
- school grounds flooded, poor drainage system
- erosion around building foundation
- plaster peeling from walls
- unpainted walls
- holes in walls where electrical outlets belong
- cracks in structure and corridor walls
- rain-soaked ceiling from leaking roof
- space under door because of wrong door size
- no water because of low water pressure

In a separate governorate (Sharkia), essentially the same types of defects existed in the six schools we visited. At a particular school (El-Nakaria), there was no electricity or water, concrete had broken off around door jambs, cracks had appeared, door handles were missing, walls were unpainted, and toilets were plugged. Yet, the committee consisting of

engineers from the governorate Housing Department and officials from the Ministry of Education signed the certificate of acceptance for the school without reference to any construction standards.

At another school (El-Gebeile) in Qena governorate, accepted in February 1984, the committee of engineers and technicians found construction work satisfactory and complete even though we observed the same types of defects found in other schools. Some of the above defects in schools visited were hazardous in nature, others lead to a premature deterioration of school buildings, and all detract from a favorable image of U.S. assistance.

The Grantee's system of inspection and certification has not prevented school buildings from being constructed without material defects. USAID/Egypt should, in coordination with the National Investment Bank and Ministry of Education, review the system being used to construct and accept schools to determine how such defects can be prevented. Hazardous defects, such as broken or missing floor tiles and exposed electrical wiring, and common defects, such as concrete breaking up around door jambs and broken door hardware, should be subjected to engineering review so that proper technical specifications can be drawn up to correct the problems. Construction standards should be set, and then applied, to provide a basis for accepting schools and for upgrading construction work.

Management Comments

USAID/Egypt provided additional commentary on the quality of construction. It said the problem was more accurately described as "the quality of finishing" and indicated the capability of local contractors many times was questionable. But it will issue a PIL to establish construction standards, and NIB engineers will make sure those standards are applied. Specifications for some items like door handles and door jambs have been changed. Funds will be withheld from governorates not meeting construction standards (see Appendix 1, pages 3, 4, and 5-9 for Mission comments on construction).

Office Of Inspector General Comments

The recommendation is resolved and will be closed when the proper PIL is issued.

3. School Construction Delays Impede Project Achievements

Delays in school construction in Minya and Giza governorates slowed achievement of output targets. As of June 30, 1986, no school buildings had been completed and accepted for occupancy. Delays were caused by problems in obtaining the use of agricultural land for school construction, and by the National Investment Bank not accepting construction contracts where bids were considered too high. Some progress was made recently in accelerating construction, but output targets still remained behind schedule and project benefits will not be realized as planned. Funds totaling $8 million (Egyptian pounds 10.8 million) were approved for the two governorates but only $0.8 million (Egyptian pounds 1.1 million) had been spent through June 30, 1986. 1/

Recommendation No. 3

We recommend that USAID/Egypt closely monitor progress of school construction against target levels, particularly in Giza and Minya governorates, and reallocate approved construction funds as appropriate among other governorates.

Discussion

USAID/Egypt committed a total of $60.3 million through September 1986 for construction of 5,279 classrooms, and school furniture. At June 30, 1986, a total of 3,839 classrooms had been contracted for construction, and 2,448 of these had been completed and accepted by the Ministry of Education. Planned completion was 2,810 classrooms.

The project paper planned for 775 classrooms to be constructed in Minya governorate and 256 classrooms in Giza governorate. Minya had 13 schools (117 classrooms) under contract for construction at June 30, 1986, and Giza had 7 schools (63 classrooms) at the same date, but no school buildings had yet been completed and accepted for occupancy. Planned completions were 80 and 27 classrooms, respectively. Minya had a budget of LE8,096,951 (about $6 million), but only LE805,608 had been spent (10 percent). Giza's budget was LE2,674,200 (about $2 million) but it had spent only LE295,273 (11 percent). Thus, funds totaling LE9,670,270 (about $7.2 million) were approved but not used. As a

---

1/ Exchange rate LE1.35 = $1.00.

comparison, disbursements in other governorates ranged from 28.2 percent to 94.2 percent of budget, and averaged 55 percent for all 10 governorates.

One problem with delays in constructing school buildings has been obtaining the use of agricultural land. Before any construction activity takes place on agricultural land, the Minister of Agriculture's approval must be obtained under Egyptian Law 116/1983. The Minister of Agriculture informed the Ministry of Education in 1985 that schools were being built on agricultural lands in violation of the Law, and any further building would require the Minister's (Agriculture) approval. Minya reported that this requirement forced it to cancel contracts for school construction.

One further problem in Minya was inertia caused by an initial lack of understanding between personnel in the governorate Educational Zone's departments. Personnel changes were made, and Minya officials believed that the problem had been corrected. Achievements after June 30, 1986, bear this out. Five schools having 41 classrooms were completed when we visited there in November 1986. Schools under construction contracts increased from 13 to 49, while the value of the construction contracts increased from LE984 thousand ($729 thousand) to LE3.8 million ($2.8 million). Minya was still behind, though, because 160 classrooms were planned for completion by September 30, 1986.

Progress in Giza since June 30, 1986, did not parallel that in Minya. Planned completions at September 30, 1986, were 54 classrooms, but no schools were completed and accepted at that date, even though the value of contract work completed did increase from LE350 thousand ($259 thousand) to LE377 thousand ($279 thousand). Delays were caused by the same problems with agricultural land. Governorate officials said the Ministry of Agriculture was not responsive to requests for approval to build on agriculture land. During the audit, two school construction contracts were being held up awaiting such approval.

Delays in Giza were also caused by high construction bids. The National Investment Bank did not approve contracts where it considered bids too high. Contractors in Giza had to bid higher than those in rural areas and villages because the cost of labor was much higher in Giza. Also, unsuitable soil conditions increased construction costs and even forced cancellation of contracts negotiated.

The key output indicator remains schools accepted for occupancy. By that measure, both Minya and Giza were behind in providing project benefits called for in project documents. The intended beneficiaries of the school construction that is lagging are unschooled rural Egyptians who will be able to go to school for the first time, children who live far away from school, and children attending vastly overcrowded schools. All would benefit from completed schools in their respective governorates.

USAID/Egypt's project paper provides for reallocating funds among governorates when not effectively used in school construction. Progress in the governorates, especially Minya and Giza, should be monitored closely to determine if approved funds are being used as intended. If not, funds should be reallocated as appropriate.

Management Comments

USAID/Egypt commented that the delays mentioned in the report represented only about 10 percent of the project target of school completion in all governorates. This low percentage was considered a real achievement in Egypt. It further commented that a precedent for withholding construction funds did exist where progress was slow. Funds were withheld from Sohag governorate in 1985. Progress in all governorates is being monitored, and funds not used effectively in school construction will be reallocated among other governorates as appropriate (see Appendix 1, pages 4 and 5 for other comments on construction delays).

Office Of Inspector General Comments

The recommendation is resolved and closed upon issuance of this report.

B. Compliance And Internal Control

Compliance

This project was authorized to implement a Basic Education program in Egypt. The project operated within that authorization. Overall, it operated within AID Handbook provisions and within agreements between USAID/Egypt and the Government of Egypt. Nothing significant came to our attention as a result of procedures examined that would cause us to believe that untested items were not in compliance with applicable laws and regulations. But we found that closer adherence to the Grant Agreement requirement for the Grantee to systematically maintain AID-financed schools was needed (page 5).

Internal Control

Internal controls over AID-provided funds to the Grantee for school construction were reviewed and tested and found satisfactory. We found that internal controls were sufficient to protect AID resources from possible unauthorized use.

AUDIT OF
SCHOOL CONSTRUCTION UNDER
USAID/EGYPT BASIC EDUCATION
PROJECT NO. 263-0139

PART III - EXHIBITS AND APPENDICES

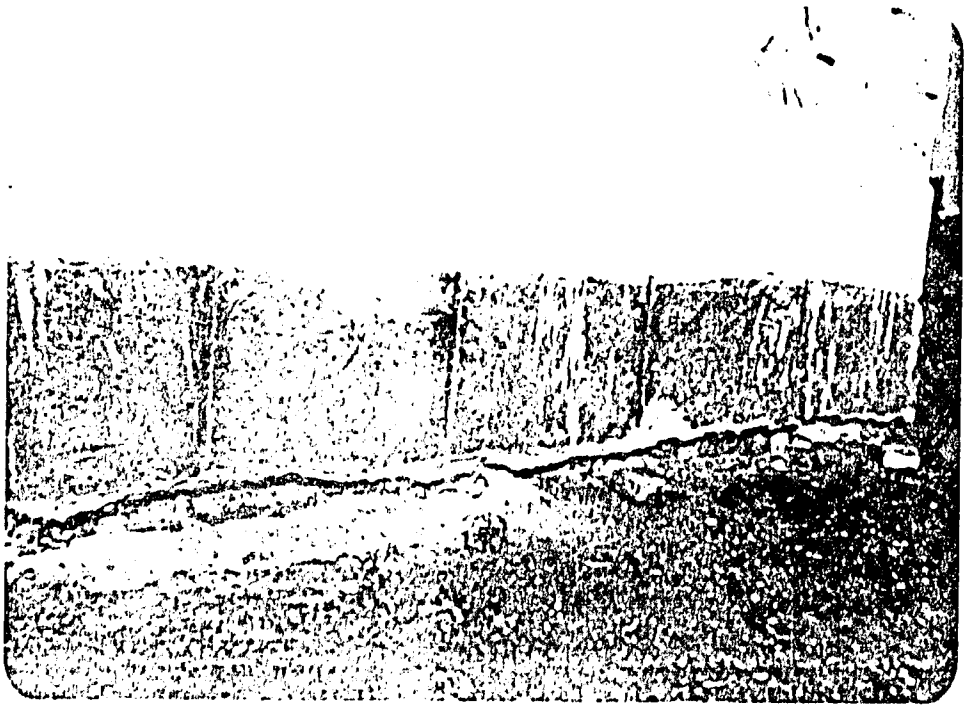
15

EXHIBIT 1

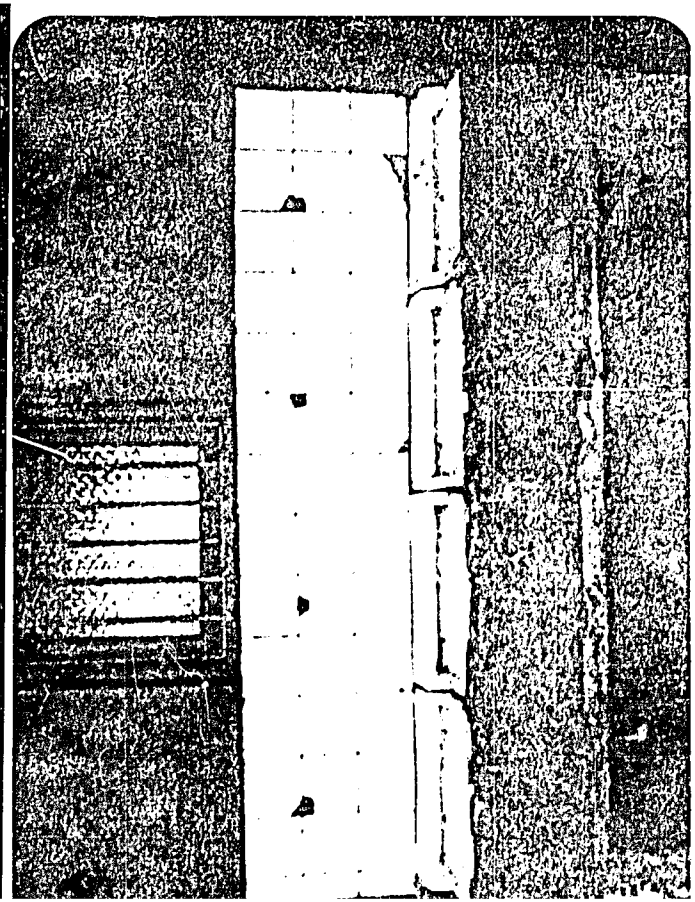
Financial Summary As Of September 1, 1986

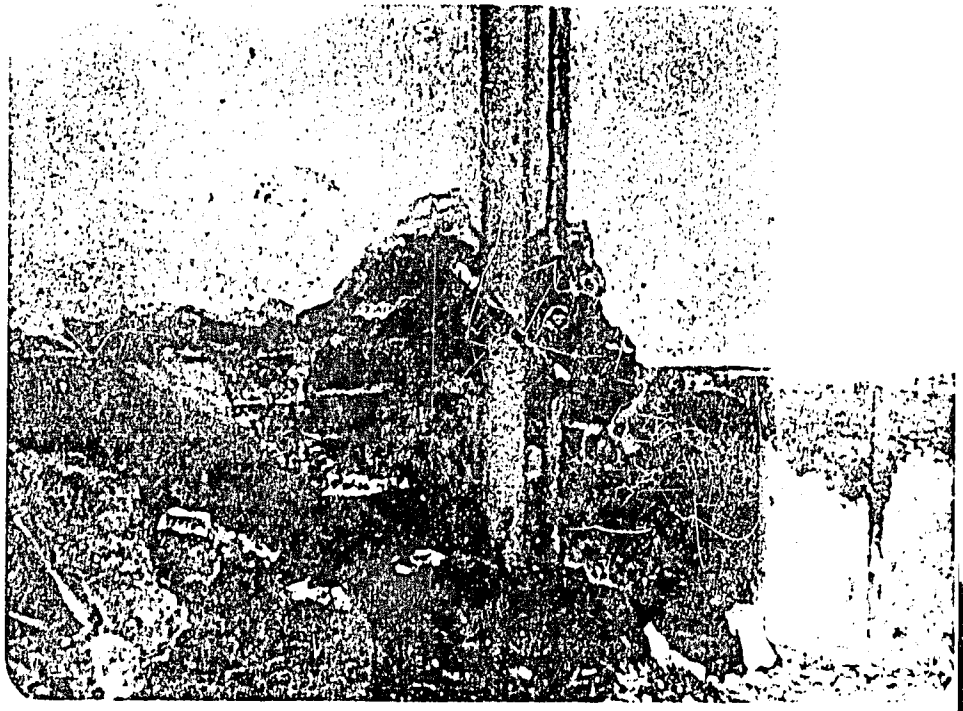
Project Element	Authorized Life-Of-Project	Obligated FY 81-86	Committed	Disbursed
Construction and Furniture	$138,150,000	$ 80,290,000	$60,300,000	$32,408,463
Materials and Equipment	30,000,000	20,000,000	19,766,159	19,561,691
Technical Cooperation	5,300,000	2,600,000	2,134,549	674,933
Evaluation	1,900,000	1,600,000	1,190,404	1,046,238
National Investment Bank Support	500,000	500,000	221,239	129,147
Ministry of Education Support	150,000	10,000	-0-	-0-
Special Education	4,000,000	-0-	-0-	-0-
Teacher Education	4,000,000	-0-	-0-	-0-
Curriculum Printing	2,000,000	-0-	-0-	-0-
Miscellaneous	200,000	-0-	-0-	-0-
Contingency	3,800,000	-0-	-0-	-0-
	$190,000,000	$105,000,000	$83,612,351	$53,820,472

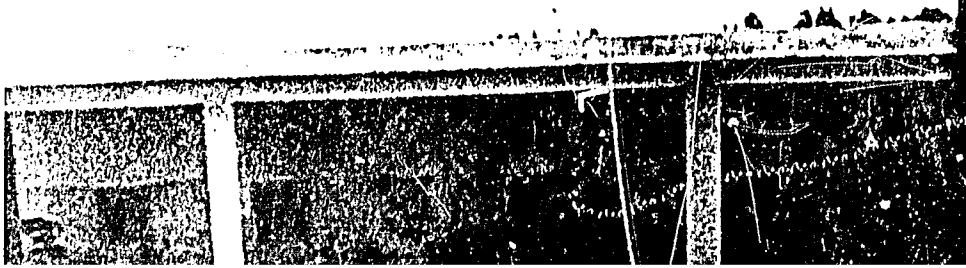
Kafr El-Sheikh Governorate
Defects In School Buildings Completed Under
Basic Education Project



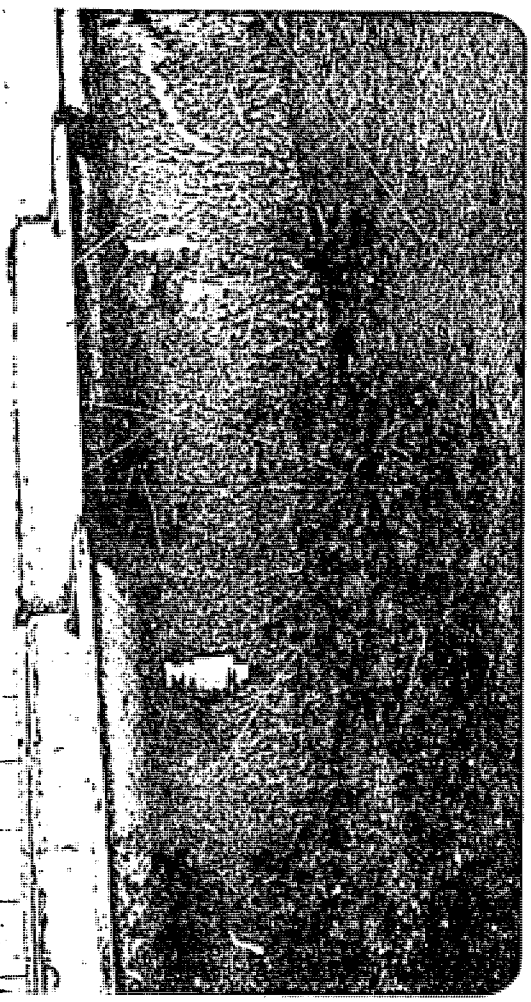
Kafr El-Sheikh Governorate
Defects In School Buildings Completed Under
Basic Education Project

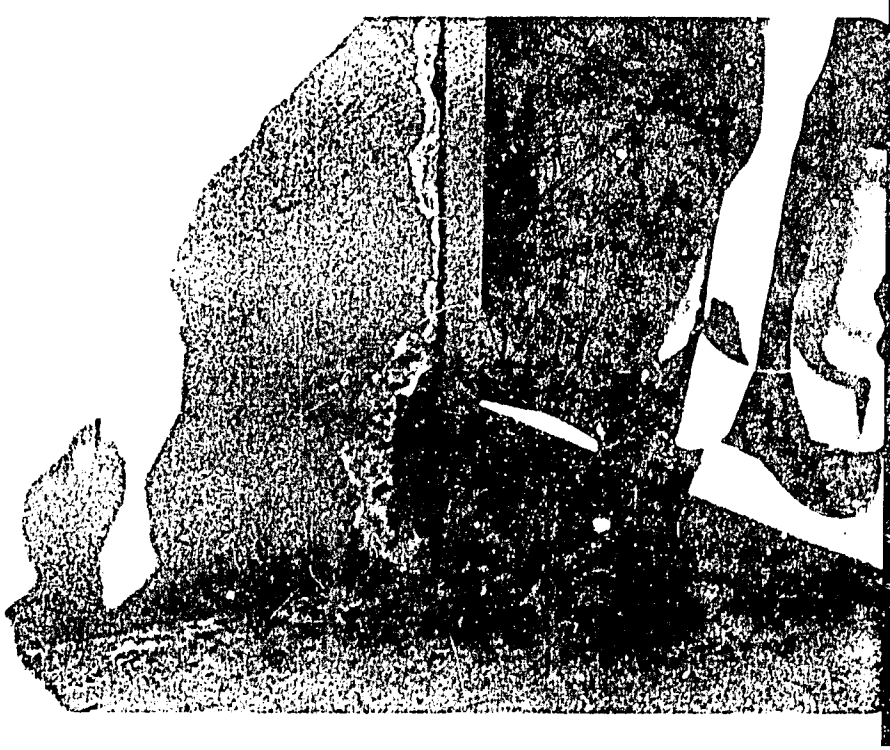






Sharkiya Governorate
Defects In School Buildings Completed Under
Basic Education Project





Management Comments

UNITED STATES GOVERNMENT

memorandum

DATE: March 16, 1987

APPENDIX 1

Page 1 of 11

REPLY TO ATTN OF: HRDC/E, Stephen H. Grant/Mahmoud Gamal El Din
Project Officers, HRDC/E

SUBJECT: Response to Draft Audit Report on "School Construction under USAID/Egypt Basic Education Project 263-0139" of March, 1987

TO: RIG/A/Cairo, Joseph Ferri

THRU: FM/FA, Thomas Johnstone

INTRODUCTION

The heart of the audit report consists of three recommendations:

(1) Setting maintenance standards;
Establishing a program of continuing maintenance and follow-up;

(2) Establishing and applying construction standards;

(3) Closer USAID/Egypt monitoring and reallocation of budgeted funds when not used effectively.

The Education Office agrees with the intent and thrust of all three recommendations. We are convinced that some progress is possible on each of the above points. Our Office is grateful for the audit report which will be evoked seriously and frequently in our discussions with the Ministry, National Investment Bank (NIB), and Housing Department engineers.

While we manifest general agreement with the recommendations and earnestness in complying with them, as far as is feasible, we would like to comment on several specific points made in the report.

BACKGROUND

Before we go through the report, however, let us note three basic facts about the project:

- The project's main goal was to expand enrollments, especially in areas deprived of educational services.

- It was decided to use GOE procedures, specifications, and standards for contracting.

OPTIONAL FORM NO. 10
(REV. 1-80)
GSA FPMR (41 CFR) 101-11.6
5010-114

*U.S. GOVERNMENT PRINTING OFFICE : 1982 O - 381-526 (1290)

- A conscious decision was made to keep the construction costs down: to build a solid, safe building, but with no "frills." For cost reasons, for example, it was decided not to build fences around schools.

These facts helped determine what the project set out to do, how, and in which spirit.

GENERAL COMMENTS ON FOUR CENTRAL THEMES

The Audit Report concentrated specifically on:

(1) The use of funds made available for school construction;

(2) Maintenance of completed school buildings;

(3) The quality of construction; and

(4) Progress in building schools.

1. The use of funds made available for school construction:

The audit report states that:

- "The Project showed satisfactory progress in providing schools and classrooms for an expanding school population in grades 1 through 9."

- "Project resources for school construction were properly used".

- "All of the schools visited were being fully used, and sometimes even overused. These schools contributed to reducing major constraints on enrollment such as inaccessibility of facilities and overcrowding. Funds made available for school construction were effectively managed and properly accounted for." (page 5)

- "Overall, it operated within AID Handbook provisions and within agreements between USAID/Egypt and the Government of Egypt."

- "Internal controls over AID-provided funds to the Grantee for Construction were reviewed and tested and found satisfactory. We found that internal controls were sufficient to protect AID resources from possible unauthorized use." (page 19)

These statements show that the Project has in fact reached its goal (even exceeded it):

(1) by succeeding in expanding enrollments in the governorates;

(2) by effective management and proper use and accounting for AID project funds.

In sum, the report says that the project is successful.

2. Maintenance of completed school buildings.

We would like to point out the following:

- Funds made for maintenance are insufficient to cover all the needs of all schools (project and non-project schools);

- Project schools are considered to be new: they are a few months to 4.5 years old in comparison to other existing school buildings which are more than 50 years in some cases. This is why no maintenance funds have been given yet to any of the project schools;

- The GOE prefers to build new buildings (3rd chapter, investment budget) rather than maintain old ones (2nd chapter of the budget), given limited resources.

3. The quality of construction

We would like to clarify the following:

- It would be more accurate to call the problem, "The quality of finishing." It has become a tradition that buildings in Egypt are delivered and accepted even if the finishing does not meet the specifications especially in sanitary, painting and plastering.

- The great need for buildings in the different sectors mean that contractors get away, in many instances, with poor finishing quality. For example, education zones sometimes refuse to accept a school building for poor painting. The contractor repaints the bad parts once more, but still the quality is poor. The education zone then accepts the school (as the school year begins) to enroll children, but at the same time a certain amount is deducted from the contractor for poor workmanship.

- This project is implemented in most cases by small business, private sector contractors that do not have mechnical equipmnt for mixing concrete and the quality of their construction finishing is usually not up to standard. We could as an alternative, shortlist the number of contractors in each governorate and limit it to highly qualified contractors that are using modern mechanical equipment from both private and public sectors. In this case, the

cost of construction would go up as they have a higher overhead rate. It would also mean that implementation would be slower, as the available number of contractors will be fewer.

4. Progress in building schools

According to the report, Minya and Giza governorates had no school buildings completed as of June 30, 1986. As of March 10, however, 12 schools had been completed in Minya, plus 3 in Giza.

Minya Governorate has made impressive progress in contracting and actual implementation during the last 9 months. More than 50 contracts have been let. Disbursement in January 1987 exceeded L.E. 600,000 in Minya only. Giza has finished the selection of all 28 sites. Seventeen contracts have been let.

The project officer and MOE officials closely monitor progress of school construction against target levels. About 3 years ago the Ministry of Education threatened Assiut Governorate to reallocate the construction budget to governorates that are making more progress. Similar actions were taken by the Ministry against Minya and Giza Governorates.

The delays mentioned in the report represent only about 10 percent of the project target of school completions in all governorates. In the construction sector in Egypt, this low percentage is considered a real achievement!

SPECIFIC COMMENTS AND SUGGESTED CHANGES IN LANGUAGE

Page i, 1st para: "Originally, the project was scheduled for completion on June 30, 1986, but this date was extended to June 30, 1991." This sentence is important because some readers may not read more than the executive summary, perhaps and not more than the first paragraph. The way the statement is expressed, the implication is that a delay occurred, that the schedule was not respected. Anyone familiar with the project knows, however, that the pilot phase, reached 5 governorates by 1986, 10 by 1988, and was further expanded to cover 24 governorates by 1991. This expansion was approved by both the Ministry and USAID/Egypt due to the success and popularity of the project in its initial phase. The opening paragraph, however, contributes to establishing a negative mind set concerning the project by implying the lack of justification for an extension.

> We suggest that page i and pages 2-3 read instead, "The project was originally scheduled for completion on June 30, 1986. In 1983 the project was expanded from 5 to 10 governorates resulting in a new PACD of June 30, 1988. In 1986, the project was expanded from 10 to 24 governorates resulting in a new PACD of June 30, 1991."

Why, moreover, does the report state that "only $105 million had been obligated" in the previous line? Why "only?" "Only" implies that a higher obligation figure would have been better.

We suggest the sentence read: "AID authorized $190 million for the project. $105 million had been obligated as of September 1, 1986."

If the report has criticisms to make, they should be clear, and not rely on implied meanings.

Page ii, 1st para points to "construction delays" that "slowed achievement of output targets." Further, one reads that delays were caused in part by "the National Investment Bank's rejection of construction contracts where costs were considered excessive." Delays there were, agreed. But delays could emanate from negative causes: lack of conscientiousness, incompetence, inactivity. In this case, however, NIB was performing its job conscientiously and with tangible results. USAID/Egypt has contracted with NIB to assure the price reasonableness of construction contracts. Savings due to negotiations with construction contractors have been substantial. Concerning the governorate of El-Minya -- cited in the report for slow implementation -- our Office in a November 18, 1986 memo estimated a saving of L.E. 600,000 because 30 contractors' prices were reduced through negotiation. In noting that the project experienced delays, one must weigh the consequences of staying on schedule. Accepting a contractor's first price to stay on schedule may imply an abnegation of responsibility and a substantial unnecessary cost to the USG.

We suggest that where delays are reported as being due to excessive costs (p iii) or to high bids (p 17), a qualifier be added: "while the National Investment Bank is mandated by USAID/Cairo to assure price reasonableness, and while the substantial savings recorded due to such price negotiations are clearly in the USG's interest, the project officer should, nevertheless, try to accelerate the price negotiation phase so as not to fall behind schedule."

Page 5, 1st para: "Project resources for school construction were properly used, but the quality was less than adequate because of construction defects." The expression "less than adequate" leads one to ask what does "adequate" mean and "less than adequate?" The dictionary meaning of "adequate" is "equal to the requirement," but the "requirements" are not specified.

One can infer from the report three levels of quality:

more than adequate
adequate
less than adequate.

The school construction would belong to the lowest level, according to the report.

First, the type of construction requirements the report refers to (applying to "broken toilets," "peeling plaster" and the like) does not form the object of a written code. The only written code used, "General Conditions and Specification for Public Construction Work," referred to below, does not discuss such conditions. Second, the term "less than adequate," used in the

24

report to designate Basic Education school construction, is a subjective term. And how can one judge it to be "less than adequate" if there is no established "construction standards for AID-financed schools" (recommendation No. 2)?

The Education Office has spoken informally to many MOE officials regarding construction standards and maintenance in recent visits to rural zones. Typical reactions have been:

- "Americans may find schools shabby, but inhabitants consider them the most beautiful buildings in the village!";

- "Yes, some tiles or windows may be broken. But when the student goes home he finds no tiles, no windows, no toilets, no taps at all!"

To an American observer it may be a shabby building. To an Egyptian inhabitant it can constitute the pride of the village! Everything is relative.

Rooms with broken light switches, lavatories with poor drainage, cracks in walls are not special properties of AID-financed school buildings in Egypt. Ministry buildings, GOE-financed schools, public and private buildings in Egypt all exhibit the same properties. Concerning broken tile floors one has only to examine sidewalks in and around Cairo to determine that, aside from the sidewalk in front of the U.S. Embassy in Cairo, there is hardly another one intact. Standard operating procedure in Egypt is NOT to repair.

This is to say that there exist widely different de facto, and no de jure, standards concerning the importance of keeping premises not only neat and attractive, but also completely functional, or maintained. Once one understands the deep cultural obstacles one faces in demanding a higher standard of maintenance than is customarily practiced, one approaches the problem with fewer illusions.

Another point concerns school children who may damage school property. This happens, not so much from intentional vandalism as from a sense of curiosity, of desire to treat door handles and toilets as toys to be manipulated over and over again, or walls to be scratched or marred. Respect for public property is not an innate principle: an education program has to gradually instill it into the school population. Unfortunately, this education does not take place.

The above cultural situation, which reveals the huge difference in perceptions between American and Egyptian peoples, does much to explain the behavior reproved in the report:

- "Maintenance was not carried out even when funds were available" page 7

- "Failure to maintain the schools in a proper fashion" page 8

- "Lack of initiative on the part of school officials to get needed maintenance work done." page 10

In sum, the cultural environment of American development officers (some of whom come from Chevy Chase, Md. and McLean, Virginia) is radically different from that of Egyptian villagers or civil servants residing near Damanhour or Sohag. The issue of construction and maintenance standards has raised the awareness of this attitudinal disparity. The lack of any construction or maintenance standards means that one's opinion on the quality of construction is largely subjective.

We suggest that the expression "less than adequate" be changed to "less than perfect" or "left something to be desired."

Page 7 2nd para: "but maintenance was not carried out even when funds were available."

This sentence gives the impression that funds are first, available; second, adequate, but still are not used. Funds of maintenance are inadequate. They cannot cover all the needs, but they are used for buildings that are in the worst condition.

We suggest the sentence read: "but maintenance was not carried out, as available funds were used in maintaining older buildings in a much worse condition."

Page 13 2nd para: "In a separate Governorate (Sharkia), essentially the same defects existed in the six schools we visited. At a representative school (El Nakaria), there was no electricity or water, concrete had broken off around door jambs, cracks had appeared, door handles were missing, walls were unpainted, and toilets were plugged."

This sentence gives the impression that all schools suffer from all defects, and not from only some defects.

It seems to imply, for example, that no schools have water or electricity. This is not true!

We suggest the sentence omit the word "representative".

N.B.: Sometimes in new schools in some areas it takes some time before schools obtain a water connection. This delay is usually due to slow administrative procedures.

26

Page 13 last para: "At another representative school (El-Gebeile) in Qena governorate, the committee of engineers and technicians found construction work satisfactory and complete even though we observed the same type of defects found in other schools."

This sentence gives the impression that the auditors visited the school right after acceptance. In fact, it was approximately 3 years after the completion of the school building!

We suggest the sentence read: "At another school, El Gebeile, in Qena governorate, we observed the same type of defects found in other schools."

Page 14 2nd para refers to construction standards set in 1965 in a GOE document. This 238-page document, entitled, "General Conditions and Specifications for Public Construction Work,"

- Identifies the relationship between the contractor and the contracting agency.

- States the specifications of the materials used and in many locations it mentions "The specifications of the Egyptian Agency for standardization will be considered unless listed in the tender."

For example:

Sand should be of the natural 36 aggregate from the desert and should be clean from any strange substances such as silt, salts and alkaline or organic substances, etc. Quality should be between fine and medium. For tiles and plastering, the size should not exceed 3 mms diameter. For concrete works, no more than 4 mms.

Water should be free from any alkaline, acidic, or organic substances and should be potable.

Red Bricks

- Should be of the following dimensions:

  25 x 12 x 6 cms or
  23 x 11 x 5.5 cms

- Can bear a crushing load of either 60 kg/cm^2 or 35 kg/cm^2 according to the required level.

It also covers wood, cement, nails, load, brass, bronze, iron, steel, asphalt, betomine, lime.

- Painting materials are mentioned with their specifications

- Foundations (different types): piles

- Concrete: must be watered for 15 days after pouring

If the specifications were enforced, some of the defects would disappear; there would be less need for maintenance. But the question of the mentality and "trade practice" in Egypt regarding construction arises.

The Education Office recognizes the up-hill nature of any attempt to change attitudes and practice in the Egyptian cultural context. However, it is willing to try to improve the construction and maintenance records in the USAID-financed schools in a realistic manner. For this project, the Education Office envisages an acceptable construction and maintenance program designed to safeguard the safety and health of pupils plus prevent unauthorized intrusion into the school building. Esthetic consideration in school construction or maintenance would be a secondary concern. Following these general principles, the Education Office proposes to specify with the Ministry, NIB and Housing Departments over the next few weeks, appropriate construction and maintenance standards.

ACTIONS TAKEN

After signing the Project Second Amendment, the project officer brought up the construction and maintenance issues with Ministry, NIB, regional and local officials. In particular, the following actions have been taken:

1. NIB engineers have visited more than 50 schools, and written reports on the construction status including finishing and maintenance. Actions required to be taken will need additional funds in order to be implemented. (Recommendation # 1)

2. USAID sent to Mr. Ahmed Abdel Salam Zaki a letter to inform him of the maintenance problem and of the resources required to cover it. The letter also suggests that in FY 87 USAID negotiate with the Ministry of Finance and MPIC to include the education sector in the maintenance plan to be financed by GOE. (Recommendation # 1)

3. We have changed some minor specifications like door handles from aluminum to brass and also changed the door jambs dimensions in an attempt to eliminate cracks around them. These changes are minor and easy to apply, but if we would like to have a building without a scratch, this will cost us a lot of money and it will still be scratched because in this case we will be trying to change the behavior of children, teachers and maybe the whole society! Any school even in Garden City or Bab El-Louk, right in the heart of Cairo, has broken windows, peeling plaster, flooded lavatories.

28

4. Governorates are being informed that ten percent of the value of construction of preparatory and replacement schools will be collected from communities and will be used mainly for maintenance purposes. We shall try to enforce maintenance through our follow-up program that will be implemented by NIB, but we have to take into consideration that the system itself will not change unless adequate funds for maintenance are made available to all governorates to cover schools that are in need of them and unless the headmaster, teachers and employees' standard of living is changed for the better. The school will hopefully contribute to this in the long run, but definitely it cannot in the short run.

ACTIONS TO BE TAKEN

The following future actions are envisaged:

1. Specific standards for maintenance will be developed and issued through a PIL to NIB and MOE. They, in turn, will transfer this information to all 24 governorates.

2. Negotiations will be pursued with MPIC and the Ministry of Finance in order to provide annual additional funding for maintenance that is equal to 5 percent of the capital investment of completed schools. As soon as this agreement is in place, the necessary maintenance actions will be taken within a specific time frame.

3. The Education Office will issue a PIL naming the NIB as primarily responsible for the maintenance follow-up program. NIB engineers will visit each completed school at least once every year to make sure that proper maintenance actions are taken. More visits will be made to schools that have maintenance problems. (Recommendation # 1)

4. The Education Office will issue a PIL (same PIL as in point # 1) to establish construction standards to be applied in acceptance of school buildings. NIB engineers will make sure that these standards are applied and will report to NIB on this point. NIB, in turn, will report to USAID. (Recommendation # 2)

5. Funds will be withheld from any governorate that does not keep maintenance or construction standards. Construction funds will be reallocated as appropriate. (Recommendation # 1, 2 and 3) There is a precedent: funds were withheld from Sohag governorate for more than 2 months in 1985.

CONCLUSION

The Education Office has agreed with the intent and thrust of all three report recommendations. We are convinced that some progress is possible on each point. We will invoke the report in many visits we make to schools, regional education zones, and Ministry offices. We have taken and will continue to take feasible actions to respond to the audit.

As we read and re-read the draft audit report, we have included in our response a number of comments with the following objectives:

1. Add some project background information which we feel was not properly understood;

2. Put into its proper balance the fact that the project is a success, based on its own planned objectives;

3. Point out instances where the report language used was, in our opinion, unjustifiably deprecatory or misleading in its implications;

4. Identify the cultural context in which construction and maintenance of public buildings are treated in Egypt as a whole, and in an Egyptian village in particular, as opposed to how they are considered in an American urban setting.

Clearance: OD/HRDC/E:WCharleson,
A/AD/HRDC:LErvin, AD/HRDC

Prepared by Stephen Grant/Mahmoud Gamal El Din, HRDC/E, 3/14/87
0002E:ak

APPENDIX 2

List Of Recommendations

	Page
Recommendation No. 1	5
We recommend that USAID/Egypt issue a Project Implementation Letter which: (1) sets standards of maintenance to be followed by the Ministry of Education; (2) establishes a program for continuing maintenance and follow-up as expressed in the Grant Agreement; and (3) provides the criteria for withholding additional funding for school construction when maintenance standards are not met.	
Recommendation No. 2	8
We recommend that USAID/Egypt, in coordination with the Ministry of Education and the National Investment Bank: (1) establish construction standards for AID-financed schools; (2) ensure those standards are applied in inspection and acceptance of school construction; (3) review technical specifications for items causing common and hazardous defects; and (4) provide for withholding AID funds in governorates not meeting construction standards.	
Recommendation No. 3	11
We recommend that USAID/Egypt closely monitor progress of school construction against target levels, particularly in Giza and Minya governorates, and reallocate approved construction funds as appropriate among other governorates.	

APPENDIX 3

Report Distribution

Mission Director, USAID/Egypt	10
Assistant Administrator, Bureau For Asia And Near East (ANE)	5
Office Of Egypt Affairs (ANE/E)	1
Audit Liaison Office (ANE/DP)	1
Assistant Administrator, Bureau For External Affairs (XA)	2
Office Of Press Relations (XA/PR)	1
Office Of Legislative Affairs (LEG)	1
Office Of The General Counsel (GC)	1
Assistant To The Administrator For Management (AA/M)	2
Office Of Financial Management (M/FM/ASD)	2
Senior Assistant Administrator For Bureau For Science And Technology (SAA/S&T)	1
Center For Development Information And Evaluation (PPC/CDIE)	3
Inspector General	1
Deputy Inspector General	1
Office Of Policy, Plans And Oversight (IG/PPO)	2
Office Of Programs And Systems Audit (IG/PSA)	1
Office Of Legal Counsel (IG/LC)	1
Executive Management Staff (IG/EMS)	12
Assistant Inspector General For Investigations (IG/I)	1
Regional Inspector General For Investigations (RIG/I/C)	1
RIG/A/Dakar	1
RIG/A/Manila	1
RIG/A/Nairobi	1
RIG/A/Singapore	1
RIG/A/Tegucigalpa	1
RIG/A/Washington	1