

Final Report

Technical Advisor to the DEF/MOE

DAI/LCIP

November 30th, 2009

Introduction

Liberia's primary schools experienced extensive destruction during the recent civil war and as a result there has been no comprehensive primary school construction or renovation project since the early 1980s. Consequently there is a need to rehabilitate and construct a massive number of classrooms to meet the demand of skyrocketing school enrollment.

In carrying out its role of managing the education sector, the Ministry of Education (MOE), through the Division of Educational Facilities (DEF) sets standards for school facilities and compliance with the government's educational policies. The DEF monitors and supervises school construction, ensuring quality. The DEF was also tasked with the responsibility of monitoring the construction of forty (40) new primary schools. The DEF did not have the capacity or the experience in the management of or monitoring of construction to undertake the task. There was, therefore, an urgent need to place a technical consultant within the DEF to assist with the monitoring of construction and to provide any training of the DEF staff that could be administered while assisting the DEF.

The main responsibilities and deliverables of the consultant were as follows:

Responsibilities:

- On assigned priority basis by the MOE/DEF, advise on and review the architectural and engineering designs, implementation plans, and monitoring subcontractor reports on a variety of school design and construction projects.
- Work with the MOE/DEF engineering team to coordinate with implementing partners to leverage intense manual labor to the practical extent possible.
- With the MOE/DEF engineering team, review the technical specifications for goods and services; bills of quantities; contract drawing; pre-qualification forms and correspondence; and advise/recommend any necessary revisions and use this process to demonstrate the monitoring role of the DEF.
- Assist the MOE/DEF team to provide project progress information to the Deputy Ministry of Education and USAID.
- Advise in the design of school structures, work plans and MOE/DEF projects projections.
- Advise regarding pre-bid conferences, evaluation of bids and award of contract.

Deliverables:

- Guidelines for the use of DEF staff in monitoring the work of the contractors and supervisors involved in the 2008/2009 and the future 2009/2010 school construction program.
- A checklist of items to look for as the DEF monitors the school construction program.
- Research of construction industry Contract Management guidelines and checklists with the DEF Team.

- Research and recommendations on possible alternative construction technologies to maximize labor based methods, increase local materials and improve construction quality and time.
- Advise regarding the preparations and planning process for the 2009 construction season.
- Monthly debrief and written report with/for USAID, MOE and LCIP.
- Final Report on Ministry of Education with recommendations for resolution on claims, progress, and lessons learned, due before departure from Liberia.

Responsibilities

On assigned priority basis by the MOE/DEF, advise on and review the architectural and engineering designs, implementation plans, and monitoring subcontractor reports on a variety of school design and construction projects.

As of May 1st, 2009, the MOE/DEF had only limited ability in the forward planning of infrastructure implementation plans and no capacity to review subcontractor reports on school design and construction projects. The limited staffing and experience of the available staff meant that nearly all implementation plans, and the reviewing of reports, was handled directly by the Director of the DEF or the Deputy of Planning, Research and Development at the Ministry of Education.

As assigned by the Ministry of Education/DEF, the implementation plans for the MOE and implementing partners were reviewed to align to MOE standards; to coincide with the planning of multiple agencies; and technical advice in planning and in areas of implementation.

One of the initial implementation plans under review was the Liberian Primary Education and Recovery Program (LPERP) for the Education Sector Review (ESR). The ESR, held on June 23-24, was focused on the outputs achieved and recommendations for the future for many of the components within the Education Sector. The first, and most pertinent, component within the Education Sector was the review and assessment of the Education Infrastructure. For the ESR, not only were the outputs of infrastructure researched and assessed, but the entire report pertaining to infrastructure was written by the TA at the behest of the MOE (see Exhibit 1). The research, assessment and reporting of the Infrastructure for the ESR required a large portion of the available time during the initial months at the MOE.

Several other implementation plans were reviewed, assessed and in some instances written while at the MOE and including:

- The selection of school sites and review of the implementation plan for the \$300,000 donated by SIDA to UNDP for development of primary schools.
- Review and assessment of the ECSEL implementation plans for eighteen (18) primary schools and six (6) county education offices/learning resource centers. This included the review of consultant TORs, ITBs, specifications and pre-bid meetings.
- Review of school survey documents for school mapping funded and implemented by UNICEF and ECSEL.
- The programming and schematic design of a girls youth hostel for implementation by the MOE and the Ministry of Gender. The budget was assessed, and a set of appropriate plans were developed for

the hostel. The hostel will be used to house approximately one hundred (100) abused or neglected girls with all the facilities required for housing, feeding and sanitation for the girls and administration. The designs are currently awaiting approval.

To better aid the MOE/DEF in the review of implementation plans after November 30th, a new engineer/office manager was hired for the DEF. The office manager has received training on integrating into and the managing of the DEF staff and in the review and creation of implementation strategies for the DEF. It is anticipated that the new office manager will initially assist the director of the DEF. Once office manager has attained a good level of construction experience and should only require a short learning curve to review and assess the implementation plans within the DEF.

Work with the MOE/DEF engineering team to coordinate with implementing partners to leverage intense manual labor to the practical extent possible.

Between May 1st and November 30th, the engineering team at the MOE/DEF has coordinated with many implementing partners for the development of education infrastructure in Liberia. The implementing partners generally come to the MOE with an implementation plan and designated site location in hand. Coordinating with the MOE, DEF and the implementing parties to make certain that the greatest feasible amount of educational resources have been given to MOE has been a top priority.

- During the review and assessment of school plans submitted by UNDP for development, leverage was applied to not only have UNDP follow the new MOE primary school standards, but also to include the addition of teacher housing.
- The World Bank and the Catalytic Fund have, over the past several months, been assessing the MOE for the approval for the Education for All – Fast Track Initiative (EFA-FTI). To better aid the MOE, coordinating meetings have been held with World Bank representatives both to analysis feasible planning initiatives and facilitate any needs of the World Bank, so as to guarantee the best possible outcome for the EFA-FTI.
- During the design stage of the ECSEL County Education Offices/Learning Resources Centers, the resources of the DEF staff were invested to enable the completion of the drawings, specifications and bills of quantities according to the timeline stipulated by ECSEL.

With the MOE/DEF engineering team, review the technical specifications for goods and services; bills of quantities; contract drawings; pre-qualification forms and correspondence; and advise/recommend any necessary revisions and use this process to demonstrate the monitoring role of the DEF.

Prior to May 1st, 2009, the DEF did not have a proper set of technical specifications; had illegible handwritten bills of quantities; had no standard construction contract; and had no standard documentation for monitoring construction, payment applications, instructions to contractors or addenda. In the course of the past several months, the DEF has been given solid set of technical specification written for the ECSEL schools /LRCs (Exhibit 2); spreadsheet templates and training for writing bills of quantities for the ECSEL schools and 2009/2010 MOE schools; a standard, thorough construction contract written for the 2008/2009 MOE primary schools(Exhibit 3);

templates for payment applications(Exhibit 4); and an outline Addenda all written for the monitoring of the 2008/2009 MOE primary schools.

The documentation and templates provided to the MOE/DEF have, in each instance, been prepared for specific projects and then modified at a later time, so as to fit multiple projects with little need for revision. As the documents were written for and used in real situations by the MOE/DEF and implementing partners, the effectiveness of the documents is ensured.

Assist the MOE/DEF team to provide project progress information to the Deputy Ministry of Education and USAID.

To assist the MOE/DEF in providing project progress information to the Deputy Minister of Education and USAID two separate reporting methodologies were used to keep all parties up to date and knowledgeable of the ongoing work in the DEF

- To keep the Deputy Minister of Education up to date on the progress of projects, meetings were scheduled every other week. Unfortunately, due to the intensive schedule of the Deputy Minister of Education, few of these scheduled meetings were actually held. After some assistance from USAID to bring the Deputy Minister to the table, a meeting was setup for all of the divisions under the Deputy Minister to report on the current progress. At this meeting, scheduled every other week, the separate divisions complained that additional reporting twice a month would hamper the ability of the divisions to perform their current duties. The Deputy Minister of Education disagreed with the division representatives and requested that the meetings continue. However, the Deputy Minister was unable to attend the next meeting because of scheduling conflicts and the meetings were never held again. From that point forward, reports were given to the Deputy Minister of Education on a less regular basis, by email when appropriate and verbally, if immediate responses were required.
- To keep USAID up to date, regular reports were written and submitted twice per month. No report was submitted to USAID during November as the Final Report was intended to cover all the work up to and including the final month at the MOE.

Advise in the design of school structures, work plans and MOE/DEF project projections.

The standard design of the primary schools for the MOE/DEF used for construction in 2008/2009 had many technical issues. The designs were originally drafted by a World Bank architect, last spring, and subsequently modified by the DEF. The DEF made several modifications that actually decreased the structural integrity, potentially decreased the life of the buildings, created unreadable or incongruent drawings and increased the project costs all without the prior approval of the MOE. The justification by the DEF for the changes to the drawings was that there were errors or that "that this is just not how it is done in Liberia". To correct the modifications made by the DEF, several steps were taken. First, to correct the addition made by the DEF, of an old site plan into the standard primary school design, an addendum was written and delivered to LACE and UNOPS for distribution to the contractors that were bidding or constructing primary schools. Next, a "red-line" set of drawings, marking up the additional inconsistencies to be corrected, were given to the DEF so that they, themselves could update the drawings. The DEF staff, of which only a few were regularly in attendance, did not

progress with the work, without reprimand, and then only for short durations. Without proper motivation or a strict deadline, the staff were unwilling to comply. In the end, a set of drawings was put together, by the technical advisor, updating the construction of the primary schools, and including an additional room for pre-primary, at the request of the Minister of Education (Exhibit 5). The drawings were drawn on the computer and can be modified or updated in the future by the MOE, should the need arise.

To facilitate the work plans of the MOE/DEF, the DEF was given spreadsheet tools and EXCEL training for schedules regarding current projects (Exhibit 6). The schedules for future projects were given for the purpose of project planning and delivery, taking into account the responsibilities at each project stage and the critical path of the projects. The spreadsheet tool for current projects was given both to the Director of the DEF and the contracts/finance manager at the MOE. The current projects tool creates a simple spreadsheet where most of the pertinent facts of the project can be viewed and assessed easily.

Advise regarding pre-bid conferences, evaluation of bids and award of contracts.

UNICEF and the Netherlands, hoping to create a funding source for the MOE in 2008, created the Pooled Fund. The Pooled Fund was to be used by the MOE for support of many areas of education, with the greater percentage of funding going to the development of infrastructure primary schools specifically. Through planning with the donors, and direction from the MOE, a plan was developed to construct forty (40) schools throughout the country. At some point during the planning stage and prior to May of 2009, it was decided that the DEF would be unable to provide the necessary supervision for the construction of the forty (40) primary schools. UNOPS and LACE were approached to supervise the construction of twenty (20) schools each, with monitoring and oversight by the DEF.

In the supervision contracts between the MOE and the supervision consultants (LACE and UNOPS), the responsibility of the bidding process was given to the consultants. During the bidding process by LACE and UNOPS, the DEF with the aid of the TA, monitored the progress and process. For both LACE and UNOPS, the DEF provided the plans and bills of quantities and the consultants prepared the Instructions to Bidders (ITB). The guidelines of the MOE for bidding are written in the Public Procurement Commission Committee Act (PPCC). The Act stipulates there be a short-listing or Expressions of Interests stage to qualify acceptable bidders. At the time, it was nearing the rainy season and the MOE decided to let LACE and UNOPS provide a pre-approved list. The PPCC allowed for a pre-approved short-list, but as the MOE had no history with many of the contractors it was very important that there be a transparent bidding process and that there be no collusion between the contractors and the supervision consultants who nominated them.

Oversight was provided at the LACE bid opening, but throughout most of the Bidding Process LACE was unwilling to work with the DEF. LACE, despite requests, would not provide copies of the ITB to the DEF and held the bid evaluation behind closed doors. When asked about the bid evaluations, LACE was non-committal to a date, but then later turned in the final evaluation, with no oversight. It was extremely difficult to determine the criteria for the evaluation and selection of bidders, as requests for further information were ignored. The DEF did not see the problem with not being included or being excluded from the bid evaluation, which was very frustrating. As the pre-approved short-listing, or qualifying, of the contractors was a completely opaque process, it was unsettling that the bidding process was not transparent either. This type of bidding must be avoided in the future. Concerns were addressed to the DEF and the MOE. None of the concerns voiced to the MOE or DEF were met with action.

The DEF was given a much greater level of transparency of the bidding process and evaluation provided by UNOPS. UNOPS provided the DEF with a copy of the Instructions to Bidders, specifications and schedule of meetings. The day after the Bid Opening, the DEF was invited to the UNOPS offices for two days of bid evaluation meetings. The criteria for selection, dismissal and award were reviewed with UNOPS. Thereafter, the DEF proceeded to evaluate every contract along with UNOPS, until selections were agreed upon.

After the bidding, LACE and UNOPS informed the winning contractors of the date and time selected by the MOE, for the signing of the contracts. The DEF, LACE and UNOPS each had separate agreements which they had planned on using for the final contract, but none of the contracts covered all of the issues that a proper construction contract must cover. A contract template was written for the MOE (Exhibit 3). Before the awarding of the contracts several meetings were held with the contractors, under both UNOPS and LACE, to explain the letter of the agreement and to address any concerns.

Deliverables

Guidelines for the use of DEF staff in monitoring the work of the contractors and supervisors involved in the 2008/2009 and the future 2009/2010 school construction program.

Over the past twenty-five years, the DEF has had very little experience in construction and the supervision of construction, in part, because of the conflict. Within the past few years, funding from donors has begun making its way to the Ministry of Education, and thereby to the DEF, for the development of infrastructure. The DEF has not performed well in the delivery of the few projects that it has been given the responsibility of managing. Of the five primary school construction projects undertaken by the DEF in 2008, two have yet to be completed and the quality of the other schools have not been built to standards. The DEF did not have the vehicles to visit the sites; the per diems for staff in the field; the experience in handling contractors and construction; and the knowledge of the typical methods used to supervise construction.

To better aid the DEF in the monitoring of construction, a step-by-step set of guidelines or checklist was prepared to walk the DEF through the monitoring and supervision of construction (Exhibit 10). The guidelines describe not just the explicit supervision of construction, but also include the preliminary works and documents prepared months before a single block is laid. The DEF, or anyone, would have a very difficult time monitoring construction if there were glaring issues with the drawings, specifications, the bidding process or the owner-contractor agreement. Each of these preliminary steps have a dramatic affect on the outcome of construction and can be detrimental if not taken into account beforehand. The focus of the guidelines therefore has been to tie the entire process together and describe the essential steps. The guidelines are not intended to be authoritative for every project, but will be useful in general construction projects.

The checklist consists of two sections one section is an abbreviated that can be easily posted and read when needed. The second section contains the same points, but also provides a short narrative for each phase, to better explain the purpose and methodology of the stages.

The guideline checklist and narrative were submitted to the DEF. The checklist was posted on the wall, and copies of the narrative distributed to the staff. If the guidelines are put on a shelf, and no one at the DEF enforces them, they are highly unlikely to encourage any change in behavior or better supervision. If, on the other hand, someone

at the DEF can someday be the champion of the simple guidelines, they will help to address many issues that arise in the supervision of construction.

A checklist of items to look for as the DEF monitors the school construction program.

As stated above, the DEF has had very little experience in the monitoring and supervision of construction. The DEF has had difficulty in the past with, not only the broadly defined stages of supervision, but also the intricate details.

To outline the details of construction supervision, two checklists were put together. The first checklist was prepared for the supervision consultants: LACE and UNOPS (Exhibit 11). The site reports submitted to the DEF by the consultants contained little of the information needed to know whether construction had progressed correctly and/or on schedule. Many meetings and conversations were held with the consultants for the inclusion of additional information. Eventually the project reached a crisis point when some of the sites were visited. It was apparent from the visits (Exhibit 12, 13 & 14) that the consultants were not providing supervision and were omitting any defects in the construction from their reporting. To combat the lack of accurate reporting the consultant checklist was written. The checklist for the supervision consultants was a simple one page document where a percentage of completion and adherence to the contract could be circled or "checked-off" for each project stage. The checklist could then be submitted directly to the DEF as part of the monthly report. The consultant checklist in and of itself cannot guarantee that the reporting in the future will be accurate, but the other intention, beyond reporting, of the checklist is to have the consultant approve of every individual aspect of construction in writing. If in the future there are any defects in construction, the consultant will be then accountable for approval at each stage.

Another checklist was created for the DEF to monitor construction (Exhibit 15). This document and its application have yet to be proven. The DEF has not been present on most site visits and so there has not been the opportunity to train the staff in the proper use of a construction site report. The training of the DEF staff has been one of the most arduous and difficult aspects of working at the MOE. The veteran staff show little inclination to hear new information, believing they have nothing to learn, and the younger staff are not in the office enough or do not attend training sessions.

Research of construction industry Contract Management guidelines and checklists with the DEF Team.

Please see the section referring to the guidelines and checklist for construction above.

The research of Contract Management guidelines describing were integrated into the guidelines prepared for use by the DEF in monitoring school construction in 2008/2009 and 2009/2010. As stated previously, the guidelines detail not only construction supervision, but the many of the prior contractual steps leading up to construction. Synthesizing the separate aspects of construction and contracts and the relationship between the two give one a better understanding of the application and repercussions of both.

Research and recommendations on possible alternative construction technologies to maximize labor based methods, increase local materials and improve construction quality and time.

The DEF has had very little experience over the past twenty-five years in construction. Included in this lack of experience has been very little understanding of new construction techniques or the theories that govern construction and that should be integral to the design process. Almost every aspect of construction used by the DEF, and even LACE and UNOPS engineers, stem not from modern construction techniques, but from an attitude of “this is just how it is done in Liberia”. There have been many conversations trying to teach theories regarding materials, sun angles, natural ventilation, statics and structure. Most of the senior staff have been unable to defend their methods, but unwilling to agree the existing methods are incorrect.

Prior to May 1st, a World Bank architect drafted a set of primary school plans, to be used by the DEF. After the architect left the country, the DEF modified the drawings adding an old site layout and inserting a grid of concrete columns. The concrete columns were not needed for a single story building; cost upwards of an additional \$2000 per school; were not integrated as a structural system, but as individual columns; and were integrated into the drawings in a manner that created confusion and illegibility in the drawings. In-country engineers feel that concrete is stronger and, if done properly, is but the casting of concrete in Liberia is extremely poor and the way it is tied into the structure does not provide benefit equal to cost. This is just one of the types of dependence on archaic practices rather than experience and training that has hamstrung the construction industry in Liberia.

A new set of primary school drawings has been produced for the Ministry of Education (Exhibit 6). The new drawings include an additional classroom; enhanced details to better explain the desired construction and output; and new construction methods and usage of materials. The additional classroom was included so that primary schools would have a space for pre-primary school students. Not every agency will support the addition of a pre-primary school classroom, but the policy decision was made by Dr. Joseph Korto, the Minister of Education. The enhanced details will allow the DEF, contractors and supervision consultants to have a more thorough and complete understanding of construction. This understanding should, in turn, give a greater potential for accurate pricing, proper construction and easier documentation to review when supervising construction. The construction itself does not change in relative appearance, but contains many minute modifications that help to create a stronger, easily constructed and more affordable structure.

The drawings were produced on the computer and easily be reproduced or modified in the future to better fit a specific construction site or to increase/decrease the number of classrooms.

Advise regarding the preparations and planning process for the 2009/10 construction season.

In May of 2009, the MOE was just beginning the bidding process for construction of the forty (40) primary schools under the Pooled Fund. The timing could not have been much worse, the rainy season had already begun. The Ministry of Education was not able to follow through with planning or the selection of schools and the school sites in time to complete or even begin construction of the schools in the dry season.

The MOE and the partners had intended to commence with the planning process in the rainy season this year, to avoid the many problems associate that the rains bring to the roads and construction. To push the planning process forward, a package of documents, responsibilities and schedules was submitted to the Deputy for Planning, Research and Development, James Roberts, first in July and then revised and resubmitted in October.

The compilation of the planning package submitted to the Deputy Minister included the following:

- **Priorities Document** (Exhibit 15) – In this short narrative all of the steps necessary to bring the projects through contractor and supervisor selection and the bidding process were outlined. In July, the MOE was unsure of funds available in the Pooled Fund. To accommodate for this, the Priorities Document, submitted in July, noted which activities could be completed without the need for money from the Pooled Fund.
- **Phasing/Responsibility Schedule** (Exhibit 16) – Containing many of the steps in the Priorities Document, the Schedule outlines the critical path and notes who is responsible for each step.
- **Cost Analysis Worksheet** (Exhibit 17) - The initial cost breakdown, in July, differs dramatically from the cost breakdown in October. The initial breakdown, assumed that the MOE would be using the LPERP plan and constructed sixty (60) primary schools. Later it was discovered that the Pooled Fund was not being adequately replenished and the funds were lagging behind the goals. The cost breakdown worksheet in October using the cost of the remaining \$3.9 million in the Pooled Fund as a ceiling. Under that ceiling several cost breakdowns were tested to find an acceptable number of new schools versus renovations that the MOE could undertake. Using costing data from the 2008/2009 construction process, it was determined that the MOE could build ten (10) 7-classroom primary schools, eighteen (18) 3-classroom primary schools and renovate twenty-two (22) primary schools (at an avg. cost of approx. \$20,000).
- **School Selection Document** (Exhibit 19)- Last year and this year, the policy for the selection of primary schools has been that existing schools with large enrollment and which are either damaged or destroyed will receive a new primary school. Selecting existing schools aids the MOE by avoiding two issues: the procurement of land and the hiring of new teachers. Presumably, an existing school site will already have teachers and land available.
 Additionally, the policy used in previous years has focused attention of school construction on depressed districts within each county. Depression is evaluated based upon the number of students compared to the number of usable classrooms. In many situations, some schools have students beyond primary school, and so the total number of students at the school would need to be used as all students were sharing the same classrooms.
 The School Selection report selects ten (10) existing primary schools per county. The first three (3) were selected from the district with the most severe depression and that was not part of the 2008/2009 construction. The next seven (7) were selected from any district within the county whereby the greatest number of students to usable classrooms was found.
 The data used to select the school site was taken from school census reporting from the records department of the MOE and in some instances information from the Ministry of Planning and Economic Affairs. The spreadsheets and documentation were integrated into the same spreadsheet. Adjustments and formulas were then written to aid in the evaluation and filter of the school. Once complete, there was a large amount of information that could be used to select schools based on need (Exhibit 20 –electronic only). The Director of the DEF has been a copy of the spreadsheet and trained on several occasions on the use of Excel and the navigation of the school selection tool.
- **Supervision Consultant Terms of Reference** (Exhibit 21) – Terms of Reference were written for the MOE to advertise for a supervision consultant, similar to the role that UNOPS and LACE have played in the 2008/2009 construction. By taking into account many of the issues that have
- **Request for Expressions of Interest** (Exhibit 22) – The PPCC stipulates that contractors should be short-listed and pre-qualified for bidding unless there are extraordinary circumstances. The Request for Expression of Interest (REOI), is the advertisement placed into the newspaper or through other

distribution services that initiates the short-listing process. Each contractor expressing interest, is requested to submit enough information to assess whether they have the experience, equipment and financial capacity to perform the work.

Monthly debrief and written report with/for USAID, MOE and LCIP.

Each month, one or more written reports have been submitted to USAID, the MOE and LCIP pertaining to the work and/or construction at the MOE. The reports have received little commentary from either USAID or LCIP and have been assumed to be addressing any questions or concerns that either party may have. Copies of the reports have not been included in this report, but are available upon request.

Additional informal meetings and reporting have occurred as requested at the MOE. These meetings most often pertain to additional responsibilities or work requested.

Final Report on Ministry of Education with recommendations for resolution on claims, progress and lessons learned due before departure from Liberia.

Herein attached.

Difficulties

There have been several difficulties working in the DEF at the MOE. Pertaining to the work over the past few months, the difficulties fall into three broad categories:

- **MOE Management** - The MOE does not have the systems in place to manage the staff, finances or equipment. The lack of management has led to a situation where in the MOE is constantly in a “crisis mode”. The long term vision and strategies of the MOE are either non-existent or not followed. Instead of being proactive, the MOE has been reacting to the immediate needs of partners and political pressures. The MOE has thus been put a mode of operation whereby reacting has become typical and the partners are depended on for planning.
- **DEF Management** - The DEF within the MOE has very little experience in the past twenty-five (25) years and has not been provided with a director capable of managing or staff motivated to work. It is well noted that the staff do not receive a salary capable to motivate them, and many staff do not attend work and when they do only work on side projects. In trying to aid the director with the management of his staff, the staff were all surveyed to assess their capabilities. Next a project worksheet/schedule was developed, with the director, to place qualified staff on projects as needed. Lastly a document was produced to record staff absenteeism and the reason for any absence. In every instance, the director was grateful, but despite cajoling did not feel the need to follow through and use the tools he was given. It was extremely difficult to abstain from stepping in to manage the staff directly. While it may have provided short-term benefits, it would only last until as long as the pressure was there.

- **DEF Staff** - Staffing meetings, training workshops and even attendance sheets have all been tested. Unfortunately, something as simple as making the members of the staff sign in or report a reason for absence will not happen in the current environment. The Director, Hedd Williams, was unwilling to enforce any type of attendance protocol with the staff. Knowing full well that forcing the DEF to keep records will not last one week without enforcement, it became a moot point.
- **Supervision Consultants** – LACE and UNOPS were awarded an agreement with the MOE that appeared to have not been reviewed by a construction specialist or engineer. The agreement was ambiguous on many of the outputs to the MOE that would validate the work provided. Also, in the agreement, neither LACE nor UNOPS were liable for any defects or for inadequate supervision. Partly due to letter of the agreement, but due more to quality engineers and supervision, both UNOPS and LACE have not provided an adequate level of supervision on the sites. In addition to the supervision, the reporting from both agencies has not met up to acceptable standards.

All three of these areas have combined to hamper the monitoring of the primary schools. The supervisors were not submitting accurate or detailed reports and so the DEF has not been able to verify the level and quality of work performed. The DEF was given the responsibility to visit the construction sites, but without a vehicle, fuel or per diem from the MOE, the DEF did not have the ability to visit the sites. Then when LACE and UNOPS offered to carry the DEF out to the sites, the DEF was unable to send qualified staff out and even refused to leave for even a day trip without per diem. In the end, the construction sites were visited without representatives of the DEF. The DEF did manage to visit some site but very few.

Recommendations

There are many possibilities and ideas for strengthening the DEF in particular: a new director, better or additional training of the staff, resources and materials, better pay, a standard filing system, *et cetera*. All of these ideas can provide a temporary band-aid to the DEF, but none of them will “fix” it. They will all fail in the end because the management at the higher levels in the MOE are dysfunctional. To clean up the DEF a method must first be found to strengthen the ability of the Minister and Deputy Ministers to manage.

During the past few months, it has become very clear that the Ministers at the MOE need assistance in the management of their staff. The ministers have very little communication with the divisions beneath them until a crisis or one of the partners require something of them and then the ministers then become overly involved and tend to micro-manage. The divisions within the ministry need a Secretariat to provide assistance to the Ministers in the management of projects and departments. The Secretariat would be charged with many functions, but would be focused on the following:

- Work directly with the Minister/Deputy Ministers. Ideally each Deputy Minister would be assigned a Secretariat.
- Take the vision of the Ministers and disseminate it to the divisions/departments.
- From that vision, establish goals, delegate work to the departments, set timelines and goals.
- Hold regular meetings with each department to assess ALL work that has been given them and to determine what is needed to increase productivity.
- Making recommendations on the restructuring and streamlining of departments that are underperforming.

- The hope would be that this would be a high level civil servant, not a political appointee. If/when a new administration is voted into power and new ministers replace the existing, there will be an institutional memory. The Secretariat would be able to transition the ongoing work with the partners and to introduce the new administration to the internal workings of the ministry and ongoing projects. Ideally, the secretariat would be capable managing the workings of the MOE, but would defer to the politicians for direction and policy.

After proper management is established at the upper levels of the MOE, attention could then be focused, through the Secretariat position, to individual departments, such as the DEF. The DEF must, in the future, reorganize itself from an architectural/engineering department to a contract/services management department with engineer specialists. The vast amount of work needed by Liberia in the area of educational infrastructure is completely beyond the capability of the DEF to manage or even supervise. The DEF must become a true facilities department, whereby the DEF hires engineers as consultants to provide drawings; manages the bidding process and awarding of contracts; and lastly reviews the reporting of contracting agencies and contractors with interspersed site visits. In becoming a management division, the goals and focus of the department must change. The DEF must be given training and experienced staff accustomed both with the construction industry, but with the writing of and familiarity with contracts and contracting consults.

A dramatic shift of focus to the DEF may not occur overnight, but can, if properly staffed perform the responsibilities required of the DEF, and with fewer staff. Inasmuch as the DEF becomes accustomed to requesting the timely reporting and documentation from consultants, the department must become efficient at reporting and documenting their own work back to the MOE.