THE FLEXIBILITY IN USE OF PPC 2000 FOR THE UNIVERSITY HOSPITAL PROJECT IN DUBAI

SUMMARY

We consider that this application deserves to win the "Practitioner" award for 2012 because of the flexibility of the PPC that it implemented following both its first time use in Dubai, where 99% of projects use FIDIC, and for four of the team members. The value of the PPC 2000 contract was $600M and the overall project costs of $1Bn included for the setting up of a business (University Hospital) which would employ 3000 medical staff.

As our submission shows:

1. **How we incorporated two main constructors to reduce costs but maintain control on any constructor problems.**
2. **The partnering timetable enabled the design teams in UK, USA, Australia and Dubai to clearly understand that the programme of works for the other partnering team members was just as important as their own and that each was inextricably linked.**
3. **The risk management for the design and construction element was similarly linked to that for the operational side of the overall project, which meant that it took into account the effects of one on the other.**
4. **When the worldwide credit crunch hit Dubai and 99% of projects were suspended indefinitely or terminated we managed to continue with the unanimous agreement of all parties for a further 18 months.**
5. **Whole project insurance included CAR and PI and this enabled all parties to discuss design and construction issues without worry and value engineering/management sessions were more constructive.**

We trust that this shows the unique use of PPC 2000 and its flexibility.

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CRITERIA SET BY CLIENT FOR UNIVERSITY HOSPITAL WHICH IS A TEACHING HOSPITAL

1. Pre-construction period set at 9 months and construction period of 36 months
2. Design to continue through pre-construction and first six months of construction period
3. The staff (3,000) for operating hospital would begin to be taken on during last 12 months of construction period. Therefore time was of the essence.
4. Form of Contract to be either FIDIC, NEC,PPC or JCT Management
5. Budget of $600M was fixed with further $400M for business set up costs
6. Inflation was 15% per annum on construction projects
7. Overheads and profit were 12% plus for constructors and specialists and healthy prelims in addition. Constructors were walking off projects that were difficult and on to other projects because there was so much work in the market place.
8. Advance and mobilisation payment of 20% backed by a bond.

HOW CRITERIA WAS ACHIEVED AND WHY

1. The pre-construction period needed to be focused on achieving:

a) A clear and unambiguous Brief that would be used by the designers, constructors, specialists, cost controllers and the PD and team." State of the Art" and "Best Practice" needed to be properly described.

b) A schedule of services for each consultant, constructor and client team with a responsibility matrix that covered all parties and their role.

c) An agreed timescale for design information with clarity as to the extent and amount of detail required by each date. This needed to show the input periods for each designer, constructor and specialist and with the approval periods for the Client and external parties.

d) An agreed programme for the project in sufficient detail to show when specialists would be taken on to contribute to the design process, including early value engineering/management involvement at the right time so that it could be effectively incorporated into the design process and not becoming a redesign process.

e) A progressively detailed Budget based on the extent of the design but indicating the limits of costs for those elements not designed so that the overall budget was not exceeded but could still be progressively monitored as the final design progressed. The constructor's supply chain is crucial to being involved at this time.

2. The construction period was progressively programmed based on the Brief and the extent of the design so that a more accurate period could be set and compared with the requirements. If it is longer than required then that is the time to either see if it can be properly reduced by an agreed course of action or the longer period agreed.
3. The University Hospital was the first major hospital to be planned for Dubai and the staff, including CEO,FD, Chairs in Cancer, Orthopaedic, etc, Clinical staff, Administration, Corporate Governance and the like, need to be taken on up to 12 months before opening. This would enable them to be committed to UH and training could begin. As a teaching hospital some of the staff needs to be engaged at the end of an academic year.

4. The form of contract was chosen as PPC 2000 after an extensive review of the pros and cons of all the forms originally selected. The PPC 2000 enabled us to have:
   a) One form for eight team members
   b) Only one signature from the Client, who in the UAE normally does not want to sign anything, even a cheque.
   c) The schedule of services for each are known to all
   d) The Partnering Timetable and Project Timetable require the agreement of the whole team and clearly sets out the periods required for each task of each member and their co-ordination between each.
   e) Collaborative working and on large projects is essential
   f) Risk Management, Value Engineering /Management, and Early Warning on potential delays all give the team a chance to contribute to an agreed course of action to minimise the problem.
5. The Budget was fixed and with inflation at 15% pa then we decided to introduce a pain/gain mechanism for the constructors and their specialist and several of the consultants agreed to be included. The overheads and profit were fixed, except for profit on specific Client Changes and not design development. The gain was an agreed percentage of the savings on the overall Budget (Constructors got an increasing % on the savings varying from 40% to 60%) and could lose up to 10% of their fixed profit level in the pain situation. The consultants had similar percentages.

FLEXIBILITY OF PPC 2000 USED ON THE PROJECT:

A) Integrated Collaborative Working: During the pre-construction period we arranged a number of workshops for all levels of staff and that dealt with the main parts of the PPC contract and led by David Mosey. It was adjusted to suit the level of the audience and an external company was used that dealt with partnering and what it really meant. This involved a number of mixed team events with all the eight Partnering Team including the Client and during this time it enabled us to weed out those people who did not really know what partnering meant and before we started the intensive construction period. Some of those who went were senior in some of the organisations and their replacements were thoroughly checked before joining us.

B) Risk Management: On this project it was necessary to have three levels of Risk Management that covered the design and construction, the operation side of running the hospital and the business that controlled and funded the hospital including corporate and clinical governance. These were all linked so that changes in any one of them could be examined to see if it affected any of the others so that the agreed course of action to overcome the problem could be reviewed to ensure that it did not cause a problem elsewhere.
Each risk needed to be accurately described and a positive but achievable course of action planned, implemented and progressively checked. It should also be given an anticipated value and chance of occurring so that they can all be put into a Monte Carlo simulation to see the overall effect. That final value was included in the Budget and if reduced then the constructors and consultants in the pain/gain scheme benefited and if it was greater, then it was their pain to be offset, hopefully, by other gains. The risk log was reviewed monthly and formed part of the Core Group report.

C) Whole Project Insurance: It was decided during the pre-construction period to have a Whole Project Insurance as we wanted the designers and constructors to have integrated collaborative working without anyone being held back by their PI insurers. We therefore had insurance for Contractors All Risk which was managed by the Main Constructor who was responsible for the site, access, health and safety, security, fire cover, etc, and PI Insurance that was divided into three elements.

The three elements were:

(i) The Project insurance covered the first level of $10M for each and every with $30M in the aggregate with an option that we took of a reinstatement of the aggregate when we reached it of a further $30M

(ii) The next level when the first had been used was the insurance of each party to their normal limits

(iii) The Client took the risk above all of these levels under their Group (Dubai Holding) insurance

We had an excess of $100,000 for each claim on CAR and PI; a waiver of non vitiation clause; a retroactive date for any design, site supervision, construction supervision or project management carried out prior to the placing of the insurance; cover for infringement of any trademark or patent with its own limit of $5M; and cover for failure of computer software/hardware with its limit of $5M.

We did try to get insurance for delays on the project due to delays by external authorities in giving approval that was required before we could proceed with specific works or delays by the designers in issuing information later than the agreed date, but the insurers would not cover either of these. We believe that the pain/gain process that we put in place gave the Client a degree of cover for these costs or they would be paid by the defaulting party. If no default then the Client paid. The early warning process and its agreed actions should also minimise the cost effect of these.

D) Two Constructors: The value of the M&E specialist was some $150M and with a Main Constructor mark up of 12% plus the staff costs, etc that were included in the MC's preliminaries for almost man marking the M&E specialist, it made it worthwhile to consider having two constructors. However we did not want to lose the MC being responsible for site security, co-ordination, HSE, etc and we did not want the client being responsible for resolving everyday problems and contra charges. With some new clauses in the contract, the MC retained his responsibilities and the two constructor were responsible for resolving their differences, and if necessary up to an award in arbitration. If at that stage the defaulting party refused to pay up then the client would pay and recover monies from the defaulter.

GENERALLY:

We found that having worked with FIDIC, NEC and the JCT Management Contract, the PPC 2000 seemed to give us all of our Client's requirements without too many additional clauses and when the credit crunch first hit Dubai the other 89 projects being undertaken for Dubai Holding were immediately suspended or terminated. We kept going for a further 18 months since we had a 20% Advance Payment, as did a number of the other projects, but we got all the Partnering Team members together and agreed a plan of action to use the unamortised Advance Payments to continue the project and pay ALL parties from those funds. The other 89 projects were mainly under FIDIC and each of their other consultants was under their separate contracts with no link.

The key to any successful project is to have:

1. A clear and full Brief that deals with the current, short and long term requirements of the Client
2. A realistic Budget that matches the Brief for its intended whole life costs
3. A properly considered pre-construction period and construction period that enables all parties to consider that they can complete on time
4. A team that can collaborate on ALL aspects of the project
5. A team that involves their supply chain whether constructors, specialists or consultants
6. A proactive attitude to risk management, value engineering/management, whole project insurance
7. A team that listens to their Clients requirements for now and the future

And most importantly of all a form of contract that is easy to understand for multi-culture teams from multi countries where they are involved and which sets out clearly the responsibilities of each party and which can be seen be each party in ONE document.

PPC 2000 International with limited clauses added to meet our requirements has proved to be a success to all parties involved with the project.

Unfortunately the extended period of the credit crunch and its effects on Dubai meant that eventually the client was unable to find funds to keep the project going. However the project was brought to an amicable termination with the agreement of all parties and there are sufficient funds to pay all parties the monies that they are owed.

The project has been 30% completed and is currently undergoing a government audit, as are all government projects, and final payment will be made when this has been completed.

TEAM FOR THE PROJECT:

Client: University Hospital FZ represented by CEO James Kingsbury from USA, Project Director Kathleen Gilroy of Gilroy Healthcare Consultants Inc based in Philadelphia and Assistant Project Director Roger Bridgeman of Bridgeman Consulting Associates Limited based in Bath.

Main Constructor: Al Naboodah Laing O'Rourke from Dubai/UK
M&E Constructor: BK Gulf
Lead Designer: Ellerbe Becket Inc from Minneapolis
Structural Sub-Consultant: GHD from Sidney
M&E Sub-Consultant: SKM from Sidney
Client Representative: Heery International from UK
Cost Consultant: Davis Langdon LLP from UK
Partnering Adviser: David Mosey of Trowers and Hamlins from UK