CHALLENGES ENCOUNTERED DURING THE COURSE OF THE PROJECT EXECUTION

Two (2) Main Categories Of Challenges;

CATEGORY A : CLIENT'S OBJECTIVE AND RELATIONS

CATEGORY B : TECHNICAL EXECUTION

CATEGORY A : CLIENT'S OBJECTIVE AND RELATIONS

- A written objective of Client should be conveyed clearly to the team of Consultants.
- On Quantity Surveyor aspects, the approach of cost planning and cost monitoring shall be based on "Design to Cost" method. The final design for the tender shall comply with budget cost of client at inception stage.
- Client may have certain budgetary cost commitment for the project, financing limit from the Bank and time period for opening the Hospital for operation.
- Failure to communicate the Client's Objective and desirable standard of Building shall lead to under utilisation of the Quantity Surveyor real function and capacity. QS will end up as "BQ production machine" rather than important role on "Cost Controller" of the project.

CATEGORY A : CLIENT'S OBJECTIVE AND RELATIONS (Cont'd)

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- This need to be communicated to the Consultant Quantity Surveyor in order;

i. The budget tracking to be executed at preliminary layout / schematic drawing production stage by Architect to Medical planner.

ii. Some client prefer to appoint / invite the QS to participate in procurement meeting only for Tender Document or BQ preparation stage and it does not fulfill the main QS role in project cost control function.

iii. The information also would assist QS in formulating the contract procurement approach to achieve those particular completion milestones.

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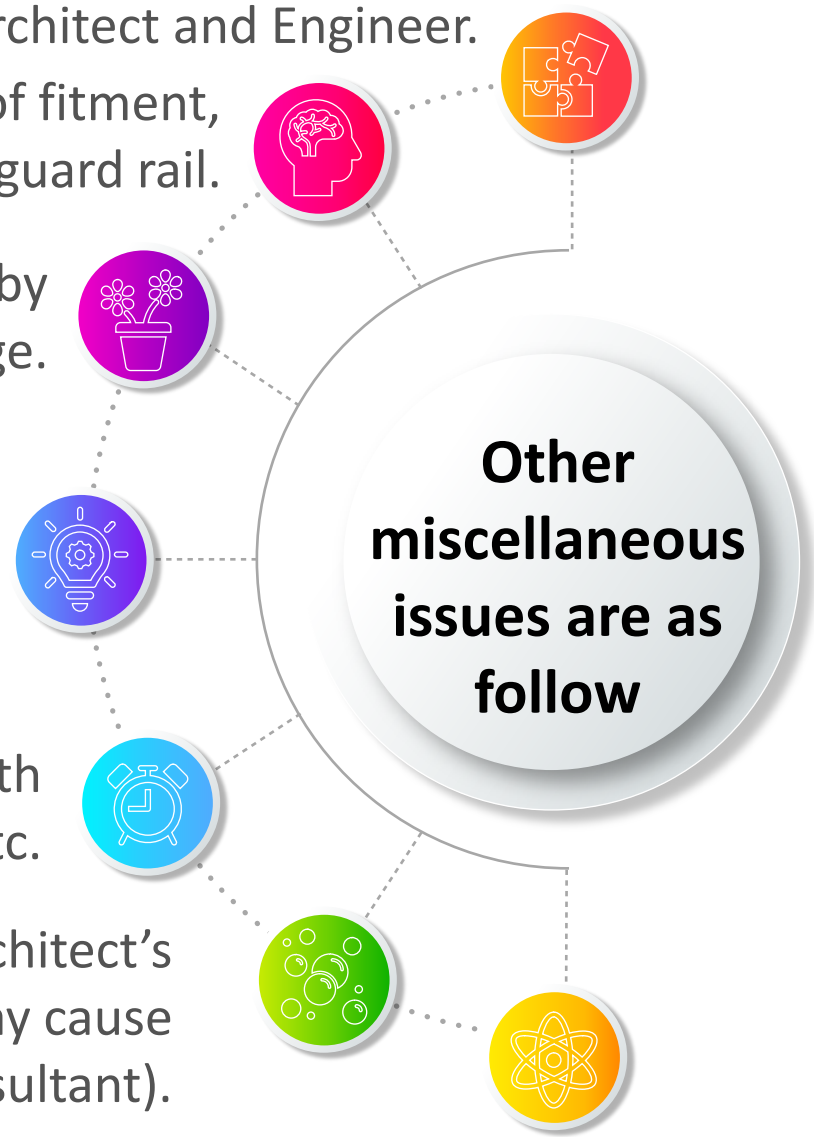
- Advice on selection of appropriate brand standard of finishing should be finalized at early stage of Contract procurement.

- Direct Contractor (medical equipment) late information and coordination with Architect and Engineer.
- Drywall design should include strengthening for loading of fitment, medical Gas, sanitary fitting and guard rail.
- Equipment loading and sizing to be promptly given by medical planner during design stage.
- Selection of OT system, modular system or other conventional system so that it was properly addressed in Bill of Quantity (BQ) for internal finishes and provisional of necessary opening etc.
- Built in fitments design to be harmony with electrical socket, medical Gas panels and etc.
- Medical related Built in fitments best to be parked under Architect's scope of work (Medical related Under ID Consultant may cause miscoordination and delayed decision by ID Consultant).
- Provision of mock up unit for single bedded, double, specialist clinic in Bill No. 1: Preliminaries to be constructed in advance so that provide bench mark of quality.



CATEGORY B : TECHNICAL EXECUTION

1. PRE CONTRACT STAGE
2. POST CONTRACT STAGE

PRE CONTRACT STAGE

CATEGORY B : TECHNICAL EXECUTION

- **Architect and Engineer reluctant to provide written / performance specification in the tender documents and insist QS to provide them.**
- Ambush of Design Drawing to QS office at the last days of tender calling date, resulting delay in tender calling date / QS unable to capture those loaded details at the last minutes.

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- **Method of selecting qualified tenderer for Hospital construction and Pre-Qualification exercise, two (2) stage bid system (Technical bid and financial bid system).**
- **Clear definition of Contractor's deliverables (i.e. clear definition what to deliver for As Built Drawing, O&M and warranties, etc.)**
- Sufficiency and details of BQ / Tender drawings produce by Design Consultant (i.e. level of deliverables by each Design Consultant for BQ preparation).
- Framework for Tender Documentation.
- Suitable tender procurement method

POST CONTRACT STAGE

- Changes imposed by Authority during the execution of construction (e.g. BOMBA requirement for smoke detection at open area / hazard area) which cause abortive and modification work which lead time and cost claim.

- Complying Majlis Perbandaran Klang (MPK)'s requirement on External Work Outside Lot Boundary, tree cutting which may delay the overall Issuance of CCC by Architect.

- 50-55 % of construction cost attributes for Specialist M&E works and Architectural NSC's;

- Cost control during Construction:-
  1. Effective system of variation work initiation of change order and approval of variation order (VO) by client prior to issuance of A.I / E.I by design consultant
  2. Financial statement on half yearly basis in order to provide the Client with informed status of Construction Financial Status.

- Harmony management of Contract which involve various M&E trade (NSC), specialist work

- Delay in permanent power supply from TNB and consequences delay in testing and commissioning of mechanical plants and equipment.

Other miscellaneous issues are as follows;

Challenges

- As built drawing and Clear definition on deliverable from Main Contractor's and NSC's prior to CPC and completion of work.
- Scope of Profit & Attendance for Main Contractor and their list of responsibility (e.g. Testing of NSC work in lieu of permanent power supply).
- Opening and seal off for service pipe, penetration, lift jamb and whose responsibilities?

Solution

- ✓ To be specified clearly in Bill No.1: Preliminaries.
- ✓ A set of rules and matrix of responsibilities shall be embedded in Contract Document
- ✓ Discuss and locked in Letter of Award.

Other miscellaneous issues are as follows;

Challenges

- Superimposed of various services drawing and coordination of Main Contractor with NSC.
- Back charge by Main Contractor to NSC (to be clearly highlight in LA to Main Contractor and NSC) and clarified in Tender Interview.
- Tender / Contract document for NSC prepared by M&E Consultant not in harmony of Main Contractor's term and condition.

Solution

- ✓ Emphasize on competent M&E coordinator and his C.V to be vet thro prior to award.
- ✓ To be discussed and specified in Letter of Award.
- ✓ Issuance of letter of Nominations and terms and conditions in Letter of Acceptance from Main Contractor to NSC shall be issued by Architect in consultation with Mechanical Engineer for some specific term on technical matter.

Other miscellaneous issues are as follows;

Challenges

- Contractor's refusals to execute the variation work instructed and insist for price / new rate agreement prior to undertake to proceed with variation work. .
- A.I / E.I issued to rectify any errors in tender drawing design resulting Extension of Time (EOT) and abortive cost.
- Late information on the medical equipment and size from Employer to Direct Contractor may results Extension of Time (EOT) and abortive cost to Main Contractor

Solution

- ✓ To be specified expressly in Letter of Award
- ✓ Design Drawing review to be conducted during BQ preparation stage and clear milestone to be stated in Architect's Implementation Program.
- ✓ Coordination to be done at initial stage.


Thank you