

Comment to Acceleration Proposal

Wan Hoi Street, Hung Hom

Acceleration Plan

6.0 Financial Considerations

Contractor submission
for acceleration cost.

Proposal
to Employer

(MC \Rightarrow E)

6.1 Additional Cost for Acceleration Measures

6.1.1. Given the Employer's desire to attain early BD inspection for Occupation Permit (OP) targeted at the end of November 2001, PYITC and the NSCs will have to incur additional acceleration costs which they are under no obligation to spend under the contract.

6.1.2. We estimated that the total additional costs for acceleration is in the order of HK\$21,525,000 comprising HK\$ 15,625,000 (Builder's work) and HK\$5,900,000 (NSC works but subject to final confirmation with NSCs). Any commitment to proceed is condition on the Employer agreeing to reimburse all the acceleration costs in relation thereto.

6.1.3. The acceleration costs are calculated as follows: -

6.1.3.1. Overtime (extra cost for work carried out at night).

The present labour force will be required to work over extended hours and during the evening. The production rates, however, will fall off seriously if a considerable amount of overtime is executed and will result in loss of productivity.

Remaining Period to target OP Date

- | | |
|--|----------|
| (a) Remaining Original Unextended Period to obtain OP (Master Programme Rev. 2)
(From 1/6/2001 to 14/7/2001) | 44 days |
| (b) Extended remaining working period to obtain OP based on entitlement programme and without acceleration (From 1/6/2001 to 2/4/2002) | 306 days |

1.) Extra Overtime for Labours \Rightarrow \uparrow no. of working, \downarrow overtime but loss of efficiency (\therefore not optimum)

2.) Loss of Efficiency

3.) Additional Site Management & Supervision Cost

- additional staff

- Extra overtime for site staff \Rightarrow 20% OT \Rightarrow payment 1.5 times

- Misc. Expense (e.g. travelling, catering)

4.) Incentive payment to DSC

5.) Additional Plants & Temp. Works

6.) Payment for NSC

(c) Accelerating Period to obtain OP (From 1/6/2001 to 30/11/2001)	183 days
(d) Days accelerated (From 1/12/2001 to 2/4/2002)	123 days
(e) Hours for acceleration (based on 9 working hours per day), 123 days x 9 hrs/day	1107 hours
(f) Equivalent additional working hours required per day (1107 hrs / 183 days)	6.05 hours

At end May 2001, the estimated remaining total of labour cost for the Main

Contract works to completion is calculated as below: -

Items	HK\$	HK\$
(a) Labour Content in Preliminaries (see Annex)		14,236,089.64
(b) Labour content in work items		
(i) Contract Sum (total)	800,000,000.00	
(ii) Less PC Sum	(336,031,000.00)	
Less Preliminaries	(115,957,606.92)	
	348,011,393.08	
Less Gross Valuation of total Work Done to end May 2001	(292,000,000.00)	
	56,011,393.08	
Less 15% profit and attendance	(7,305,833.87)	
	48,705,559.21	
Labour content say 40%		19,482,223.68
(c) Labour content in variations, 10,000,000.00 x 40% (profit and overhead?)		4,000,000.00
Total remaining labour cost to completion as of 1 June 2001		37,718,313.32

Less
Labour value of work saved with by increasing number of workers

Value subject to overtime payment calculation

75% of the scope of work can be accelerated by increasing the no. of workers. We need to consider 25% of the scope of work will involve overtime. By increasing the total no. of workers on site we can reduce the total cost of overtime work. The amount of labour content subject to overtime could be reduced by 75% i.e. HK\$37,718,313.32 x 25% = HK\$9,429,578.33.

However, additional overtime cannot be avoided and as a result of committing to overtime working for some of the labours the extra overtime payment (on double time) will be: -

Should be 1? extension it will be 3 times the original cost. (2 additional + 1 already)

$$\$9,429,578.33 \times \frac{123}{306} \times 2 = \$7,580,641.40$$

Say HK\$7,580,000.00

6.1.3.2. Loss of efficiency ① overworking due to increase in no. of workers. ② decrease in efficiency when working overtime.

With additional labour force on site, the total number of workers will be above optimal level, the overall performance and efficiency will be reduced. The efficiency of labours working within overtime hours will also run short of the optimal. There will be additional costs incurred due to loss in efficiency in the order of at least 10%:

$$\$7,580,641.40 \times 10\% = \$758,064.14$$

Say HK\$758,000.00

6.1.3.3. Additional Site Management and Supervision Cost

The site management staff will have to work overtime in order to cope with the accelerated programme and extra staff will also be required.

The cost of extra staff to cope with acceleration is calculated below:-

Additional Staff		Remaining period after acceleration implemented	HK\$
additional cost per month			
(a)	Site Management, $\$100,000 \times 183/30$ mths		610,000.00
(b)	Foreman-in-Charge (2 nos), $\$25,000 \times 183/30$ mths x 2		305,000.00
(c)	M & E Co-ordinator, $\$30,000 \times 183/30$ mths		183,000.00
			<u>1,098,000.00</u>

Extra overtime for site staff

contract allowance - payment certified.

The balance of total staff cost allowed in Contract as of 1 June 2001 comprises (see Annex):- Originally included in preliminaries.

BQ Ref.	BQ Items	HK\$
S1/4/A	Site Management	2,383,910.85
S1/7/A	GCC Clause 8 Foreman-in-Charge	1,556,257.88
S1/17/O	SP clause 11.7 Appointment of M & E Co-ordinator	853,974.59
Total remaining site management and supervision staff cost to completion as of 1 June 2001		<u>4,794,143.32</u>

The amount of site management and supervision cost subject to overtime is say 20%

i.e. $\text{HK\$}4,794,143.32 \times 20\% = \text{HK\$}958,828.66$

These additional overtime for site management staff cannot be avoided and as a result of committing to acceleration, the additional overtime payment for the them (at time and a half) will be:-

$$\$958,828.66 \times \frac{123}{306} \times 1.5 = \$578,117.28$$

total 2.5 (1+1.5)

Say HK\$578,000.00

Therefore, the total additional Site Management and supervision cost is:-

	HK\$
(a) Additional Staff	1,098,000.00
(b) Extra Overtime for site staff	578,000.00
(c) Miscellaneous allowance for overtime (travelling and catering expenses), \$1,000 x 183 days	183,000.00
	<u>1,859,000.00</u>

6.1.3.4. Incentive payment to the domestic sub-contractors

Incentive payment will have to be made to our domestic subcontractors to ensure that they retain a pool of suitable tradesmen on the project as well as to provide motivation and attract additional workers.

Items	HK\$
(a) Total remaining labour content for builder's works	37,718,313.32
Domestic S/C portion (say 60 %)	22,630,987.99
(b) Incentive payment to domestic sub-contractors, say 10%	say <u>\$2,263,000.00</u>

6.1.3.5. Additional Plants and Temporary Works

As mentioned in Section 4, extra plants and additional temporary works are required in order to achieve the Employer's expected BD inspection date for Occupation Permit.

The total cost summary for additional plants and temporary works is \$3,165,000. Detail of the calculation is given in the attached Annex.

6.1.3.6. Acceleration costs for Nominated Sub-Contractors

→ excluded in previous calculation

All the Nominated Sub-contractors have not confirmed their respective acceleration costs. At this juncture, we proposed the following sums be included for budgeting purposes: -

<u>Nominated Sub-Contractors</u>	<u>HK\$</u>
(a) Schindler (Lift)	1,000,000
(b) Sundart (Interior Fit-out)	1,500,000
(c) Young's (MVAC)	900,000
(d) Newland (Electrical)	1,000,000
(e) Far East (Curtain Wall)	1,000,000
(f) Alpha (Split A/C)	500,000
	<u>5,900,000</u>

Negotiation with the NSC must start as soon as possible to enable finalisation of budget and agreement of acceleration arrangement.

6.1.3.7. Summary of additional cost for acceleration measures

HK\$

For Builder's Only

(a) Extra Overtime for Labours	7,580,000
(b) Loss of Efficiency	758,000
(c) Additional Site Management and Supervision Cost	1,859,000
(d) Incentive payment to domestic sub-contractors	2,263,000
(e) Additional Plants and Temporary Works	3,165,000

INFORMATION/DETAILS NEEDED FOR CALCULATING PAYMENT 5,625,000

For NSC subject to confirmation

- (A) Architect to inform BSE and QS :
- (f) Acceleration costs for Nominated Sub-contractors 5,900,000
- Scope of Acceleration
- ECI Assessment (2) his assessment of any claims for extension of time that may be valid up to the time when the acceleration commences
- (3) the acceleration period
- (B) Building Services Engineers to provide to Q.S. the estimated final contract sums for M & E installations 21,525,000
- (A1) above including variations issued to date
- (Note : separate contracts dealt with separately by BSE)
- (C) Chief Quantity Surveyor (or L E & S) to provide to Q.S. the graph showing Government Wage Index for adjustment of fluctuations in wages