



THE HONG KONG HOUSING AUTHORITY

Memorandum for the Building Committee

Cost Implications for Design Improvements to Standard New Cruciform Block Between September 1998 and September 1999 Drawing Editions

PURPOSE

This paper is to seek Members' approval on the cost implications arising from the implementation of design improvements to the standard New Cruciform Block (NCB) between September 1998 and September 1999 Editions of the standard drawings.

BACKGROUND

2. The projected cost implications of the design improvements to the standard NCBs of September 1998 Drawing Edition have been included in the June 1998 construction cost yardsticks and these were endorsed by the Building Committee on 21 May 1998 (Paper No. BC 55/98 refers).

3. The September 1998 Drawing Edition also form the basis for the June 1999 construction cost yardsticks which were endorsed by the Building Committee on 20 May 1999 (Paper No. BC 86/99 refers).

DESIGN IMPROVEMENTS

4. The major design improvements endorsed by the Building Committee and other minor improvements implemented under respective delegated authority for September 1999 Drawing Edition are listed in **Annex**.

COST IMPLICATIONS

5. The cost adjustments for the design improvements of the September 1999 Drawing Edition NCBs are included in **Annex**. None of these costs were incorporated into the June 1999 cost yardsticks. These improvements will be included into the forthcoming June 2000 cost yardsticks.

6. The total additional costs (superstructure including fluctuation) from the September 1998 to the September 1999 Drawing Editions all at June 1999 price levels are as follows -

Drawing Edition	Architectural	Building Services	Structural	Total		
	(\$/Block)	(\$/Block)	(\$/Block)	(\$/Block)	(\$/Flat)	(\$/m ² CFA)
September 1998	55,406,000	27,224,000	57,320,000	139,950,000	349.875	5,260
Additional	(+) 425,200	(+) 831,800	(-) 45,200	(+) 1,211,800	(+) 3,029.5	(+) 34
September 1999	55,831,200	28,055,800	57,274,800	141,161,800	352,904.5	5,294

Note : The total CFA of September 1998 Drawing Edition is 26,604m²
The total CFA of September 1999 Drawing Edition is 26,666m²

IMPLEMENTATION

7. The cost adjustments for the design improvements to the NCBs listed in **Annex** will be used by Project Managers and Contract Managers in preparing the Project Development Budgets for projects using the *September 1999 Drawing Edition* and due for or under tender.

RECOMMENDATION

8. Members are requested to approve the cost implications of the design improvements for the *September 1999 Drawing Edition* standard New Cruciform Block and the implementation at paragraphs 4, 5, 6 and 7 above.

PRESUMPTION

9. It is not thought that Members will object to the recommendation in paragraph 8 above. If no request for discussion is received by the Committees' Secretary **by noon on 18 May 2000**, Members' approval will be presumed.

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**Cost Implications on Major Design Changes to
Standard New Cruciform Block
Between September 1998 and September 1999 Drawing Editions
(All at June 1999 Price Level)**

Items	Description of Major Changes	Remark / Reference	Cost (HK\$) / Block
Architectural			
1.	Government Departments and Utilities Companies Requirements		
1.1	Relocation of staircase 3 to avoid interference with lift machine room door opening	BD's memo dated 20.5.99	9,000.00
1.2	Enclosing the landing of staircase 3 by wall at roof level	COP FRC 1996 para. 14.1	5,000.00
1.3	To revise the 4 pipe ducts inside lift machine room from 65mm thick to 225mm thick brick wall	COP FRC 1996 para. 14.1	1,000.00
1.4	To revise the height of railing from 900mm to 1,100mm and external diameter of handrail to 40mm for staircase 1, 2 & 3	B(C)R 8.(2) (a) B(P)R39(3)(3)(i)	18,000.00
1.5	To revise the trap door at lift machine room to 1 hour F.R.P.	COP FRC 1996 para. 14.1	-
1.6	To add fire damper at the louvres of lift shafts (on roof only)	COP FRC 1996 para. 11.1 & 18.1	5,000.00
1.7	The exit door of staircase 1, 2 & 3 changed to 1 hour FRP proprietary timber door (on roof only)	COP FRC 1996 para.18.1	3,000.00
1.8	To add the reinforcement for the walls of lift machine room to 1%	COP FRC 1996 para. 14.1	See structural cost - item 1.3
1.9	To add the reinforcement for the wall between mail room and switch room and walls of switch room, TBE room & transformer room at ground floor-to 1%	COP FRC 1996 para. 14.1	See structural cost - item 1.4
1.10	To add % of the reinforcement for staircase 1, 2 & 3 (on roof only) to 1%	COP FRC 1996 para. 14.1	See structural cost - item 1.5
1.11	To add % of the reinforcement for the emergency generator room at roof to 1%	COP FRC 1996 para. 14.1	See structural cost - item 1.6
1.12	To add % of the reinforcement for the cable route (on roof) to 1%	COP FRC 1996 para. 14.1	See structural cost - item 1.7

Note : NFE - No financial effect

Items	Description of Major Changes	Remark / Reference	Cost (HK\$) / Block
Architectural			
2.	<u>DCMB Instruction</u>		
2.1	Revised bonding details for metallic fittings inside bathroom	DCMBI No. P19/98	See building services cost - item 2.8
2.2	Automated Refuse Collection System (ARCS) installation in HA Development Projects	DCMBI No. D05/99	*
2.3	Modifications to Refuse Rooms in Standard Blocks, Self Disposal of Refuse by Residents	DCMBI No. D09/99	87,000.00
2.4	Waterproofing materials for roofs and external tanking of lift pits	DCMBI No. D10/99	**62,000.00
2.5	Booster pump room provision on roof to upgrade water pressure	DCMBI No. D14/99	See building services cost - item 2.3
2.6	Improvement to avoid communal flushing water pipes traversing domestic flats	DCMBI No.D20/99	See building services cost - item 2.10
3.	<u>Feedback (F.B.) Proposals</u>		
3.1	Revision of detail of letter boxes for Owners' Corporation office and return mail	F.B. 913 & 1047	1,000.00
3.2	Addition of CCTV for roof gates	F.B. 1108 & 1212	See building services cost - item 3.1
3.3	Addition of Sealant around H.R. and F.S.I door frame	F.B. 1166	3,600.00
3.4	Provision of U-trap for residents' washing machine	F.B. 1259	28,000.00
3.5	List of approved proprietary names and suppliers - Selection of alternative suppliers	F.B. 1336	NFE
3.6	Labelling of precast concrete facade	F.B. 1451	NFE
3.7	Addition of equivalent approved brands for supply of ironmongery - locksets	F.B. 1345	NFE

Note : * The estimated cost is \$690,000.00 excluding refuse conveyance, outdoor disposal inlet and the central plant. This is **NOT** included in the cost estimate of the standard NCB because this system is to be implemented on project basis.

** Cost of lift pit work excluded.

NFE - No financial effect

Items	Description of Major Changes	Remark / Reference	Cost (HK\$) / Block
Architectural			
3.	<u>Feedback (F.B.) Proposals (cont'd)</u>		
3.8	Clarification of dimension of metal doors to the switch room	F.B. 1352	NFE
3.9	Clarification of dimension of flat type 'A' entrance	F.B. 1353	NFE
3.10	Clarify the discrepancy with structural drawings on the size of the ground beam	F.B. 1354	NFE
3.11	Clarification of setting blocks for the openable windows	F.B. 1454	NFE
3.12	Deletion of painting on the flange at G/F water tank.	F.B. 1458	NFE
3.13	Architraves of door revise for a better junction detail	TAU's comment dated 6.7.98	NFE
4.	<u>Design / Technical Review</u>		
4.1	Change bathtub to shower area	Paper No. BC 189/99	less 496,000.00
4.2	Clarify the window sizes of domestic flats		NFE
4.3	Addition of an emergency access door on ground floor		2,500.00
4.4	Addition of non-toxic smooth finish (e.g. ceramic tiles) for the soffit of potable water tank		6,000.00
4.5	Add metal gate near staircase 3 and lift shaft no. 2		3,000.00
4.6	Addition of tactile warning strips at ground floor entrance and amended detail at staircase landing		65,000.00
4.7	The door of electrical meter room change to 1/2 hour component door		less 1,900.00
4.8	Change of bathroom louvres to windows in flat types "A" & "B"		less 23,000.00
4.9	New Signage drawings		207,000.00*

Note : *This signage cost has been included in individual project budget previously. This cost is included in Standard Block due to availability of standard signage drawings.

NFE - No financial effect

Items	Description of Major Changes	Remark / Reference	Cost (HK\$) / Block
Architectural			
4.	<u>Design / Technical Review (cont'd)</u>		
4.10	Builder's work drawings for openings		NFE
4.11	To produce standard handed drawings		NFE
4.12	To adopt Concord List of Approved Proprietary Names of W.C. Suite for NCB		440,000.00*
Total			425,200.00

Note : * This is to unify the standard of W.C. Suite with Concord Block.

NFE - No financial effect

**Cost Implications on Major Design Changes to
Standard New Cruciform Block
Between September 1998 and September 1999 Drawing Editions
(All at June 1999 Price Level)**

Items	Description of Major Changes	Remark	Cost (HK\$) / Block
Building Services			
1.	<u>Government Departments and Utilities Companies Requirements</u>		
1.1	Addition of working platform inside blind hoistway, insulation rubber mat, lift failure alarm and lift identification plate at highest landing entrance	DCMBI No. T04/99, COP for safety at work, lift & escalator	61,000.00
1.2	Note for calculation of maximum available area for lift car	EMSD circular No. 12/98	NFE
1.3	Wall opening for transit block in transformer room II of HEC version	HEC requirement	See structural cost - item 1.1
1.4	Security installation for additional emergency access door on G/F	BD requirement	5,000.00
2.	<u>DCMB Instruction</u>		
2.1	System design for ARCS	DCMBI No. D05/99 dated 2.3.99	See architectural cost - item 2.2
2.2	Power supply for automatic refuse collection system	DCMBI No. D05/99 dated 2.3.99	See architectural cost - item 2.2
2.3	Upgrading of fresh water supply pressure for top floors	DCMBI No. D14/99 dated 26.4.99	334,000.00
2.4	Power supply for roof booster pump system	DCMBI No. D14/99 dated 26.4.99	See building services cost - item 2.3
2.5	Plug & socket connection for doorphone handsets	DCMBI No. P14/98 dated 24.8.98	54,800.00
2.6	FSI in roof booster pump room	DCMBI No. D14/99 dated 26.4.99	See building services cost - item 2.3
2.7	System design revision C/W piping schematic diagram to meet with roof booster pump installation	DCMBI No. D14/99 dated 26.4.99	See building services cost - item 2.3

Note : NFE - No financial effect

Items	Description of Major Changes	Remark	Cost (HK\$) / Block
Building Services			
2.	<u>DCMB Instruction</u> (Cont'd)		
2.8	Revised bonding details for metallic fittings inside bathroom	DCMBI No. P19/98 dated 4.12.98	7,000.00
2.9	Separate circuit for kitchen	DCMBI No. P19/98 dated 4.12.98	24,000.00
2.10	System design revision to avoid communal flush water pipe traversing domestic flats	DCMBI No. D20/99 dated 2.6.99	188,000.00
3.	<u>Feedback (F.B.) Proposals</u>		
3.1	Addition of CCTV for roof gates	F.B. 1108 & 1212	40,000.00
4.	<u>Design / Technical Review</u>		
4.1	Amendment to the water service layout to meet with the 9/99 Edition building plans		118,000.00
4.2	Changing bathtub to shower area	Paper No. BC 189/99	See architectural cost - item 4.1
4.3	To produce handed drawings		NFE
4.4	Amendment to the Electrical Installation layout to meet with the 9/99 Edition building plans	To update in accordance with latest architectural design	NFE
4.5	Addition of lift alarm indication lights at guard counter	Design / Technical Review	59,000.00
4.6	Amendment to the lift service layout to meet with the 9/99 Edition building plans	To update in accordance with latest architectural design	NFE
4.7	Amendments to the Fire Service layout to meet with the 9/99 Edition building plans	To update in accordance with latest architectural design	NFE
4.8	Amendment to the Water Pump Installation Service layout to meet with the 9/99 Edition building plans	To update in accordance with latest architectural design	NFE
4.9	Amendments to the Towngas Installation Service layout to meet with the 9/99 Edition building plans	To update in accordance with latest architectural design	NFE
Total			831,800.00

Note : NFE - No financial effect

**Cost Implications on Major Design Changes to
Standard New Cruciform Block
Between September 1998 and September 1999 Drawing Editions**

(All at June 1999 Price Level)

Items	Description of Major Changes	Remark / Reference	Cost (HK\$) / Block
Structural			
1.	<u>Government Departments and Utilities Companies Requirements</u>		
1.1	Provision of 0.9m (w) x 0.225 m (h) wall opening on G/F for the installation of transit block in Transformer Room II	HEC's Requirements	less 500.00
1.2	Reduction of length of walls WA5a & WA5b from G/F to 1/F by 250mm for the revision of MCT holes and additional of 1 no. of 200 mm dia. MCT hole.	CLP's Requirements	1,500.00
1.3	To add the reinforcement for the walls of lift machine room to 1%	COP FRC 1996 para. 14.1	500.00
1.4	To add the reinforcement for the wall between mail room and switch room and walls of switch room, TBE room & transformer room at ground floor to 1%	COP FRC 1996 para. 14.1	2,000.00
1.5	To add % of the reinforcement for staircase 1, 2 & 3 (on roof only) to 1%	COP FRC 1996 para. 14.1	1,000.00
1.6	To add % of the reinforcement for the emergency generator room at roof to 1%	COP FRC 1996 para. 14.1	1,000.00
1.7	To add % of the reinforcement for the cable route (on roof) to 1%	COP FRC 1996 para. 14.1	1,000.00
2.	<u>DCMB Instruction</u>		
2.1	Provision of 1m(w) x 2.12 m (h) wall opening on 1/F for the installation of ARCS	DCMBI No. D05/99	See architectural cost - item 2.2
2.2	Booster pump room provision on upper roof to upgrade water pressure	DCMBI No. D14/99	See architectural cost - item 2.5
2.3	Semi-precast slab standard details for off-site production	DCMBI No. D27/99	NFE
2.4	Re-design of cantilevered projecting structures in accordance with Engineering Design and Drawing Control Manual DEDD-708	DCMBI No. P17/99	2,000.00
2.5	Refinement of existing wind cases by introducing two new wind exposure conditions i.e. Mild and High wind cases	DCMB meeting dated 20.3.99, DEDD 709 Engineering Design and Drawing Control Manual - Issue No. 1	-

Note : NFE - No financial effect

Items	Description of Major Changes	Remark / Reference	Cost (HK\$) / Block
Structural			
3.	<u>Feedback Proposal</u>		
3.1	Modification to Staircase No. 3 from Main Roof to Booster Pump Room level to suit BD's requirement		See architectural cost - item 1.1
3.2	Re-labeling of Precast Concrete Facade	Feedback No. 1451	See architectural cost - item 3.6
3.3	Clarification on the setting out dimension of walls WC6b & WA6b	Feedback No. 1452	NFE
3.4	Adjustment of anchor bars of PCF types 3, 3R, A1 and 1AR to avoid clashing of reinforcement	Feedback No. 1453	less 2,700.00
4.	<u>Design / Technical Review</u>		
4.1	Provision of rear entrance on ground floor	-	3,000.00
4.2	Adjustment of the height of flush water tank on Ground Floor	-	1,000.00
4.3	Adjustment of Precast Staircase reinforcement to avoid clashing with the box-out for anchor bars		1,000.00
4.4	Adjustment to window head, jamb and sill at end gable walls		2,000.00
4.5	Minor adjustment of dimensions of door openings		less 21,000.00
4.6	Hoisting beam 2.1m above working platform in liftshaft at 25/F.		10,000.00
4.7	Non-shrink grout to the void between landings of precast staircase at typical floor.		1,000.00
4.8	Re-arrangement of beams and walls reinforcement in wings B & D at typical floors to enhance the buildability.		less 48,000.00
Total:			less 45,200.00

Note : NFE - No financial effect