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国立衛生研究所設立計画

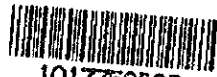
建設事情資料集

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1. 建設関連法規

建設関連法規には以下の様なものがある。無償資金協力による施設に対しては、タイ国の建築関連法規の適用はないが、関連法規に照してチェックすることが必要である。

(1) City Planning Act, 1979

都市計画法というよりは、むしろ土地収用法に近い。道路等の建設に際しての手続きを規定している。

(2) Building Control Act, 1979

建築許可申請に関する手続き、資格等について定めている。

(3) Bye-Laws of the Bangkok Metropolis

Re: Control of the Construction of Buildings, 1979

バンコック市の建築条例で、単体規定（一般制限、構造、材料等）及び壁面線、高さ制限等について規定してある。日本のような防火関係規定、建築設備規定はない。

(4) Prevention and Repression of Fire Risk Act, B.E. 2495

日本の消防法・施工令、建築基準法の防災関係規定に該当する。

(5) Factories Act, B.E. 2512

工場建設に関する規制で、排水、環境衛生、防災上のことについて定めている。

(6) Private, Commonly-Owned Housing Act, 1979

区分所有法。アパートの登記に関する手続、所有権等について定めたもの。

(7) Act on the Profession of Architecture, B.E. 2508

建築技術者についてその責務と資格について定めたもの。

(8) Act on the Engineering Profession, B.E. 2505

土木、機械、電気、鉱業等の技術者の資格等について定めたもの。

(9) Construction Profession Act, 1979

建設業法。請負業を営む者の資格、免許、団体について規定したもの。

(10) Construction Safety of Regulation, 1976

建設仮設工事安全規制、労働者の安全保護規制。

(11) Thai Industrial Standard (TIS)

タイ国工業規格、TIS制定委員会が各界の代表者で構成され、規格化している。主にドイツ、米、英の規格が基になっている。

(12) Government Building Standard, 1978

官庁施設の設計基準。官庁施設の面積基準、構造、材料等について規定しており、規模、建設費の標準化を目的としている。

上記関連法規のうち、(12) Government Building Standard (英訳版)を資料として添付する。

Government Building Standard

1978

Objective: To standardize government office building in terms of functional floor area and cost per squaremeter as stipulated by the Budget Bureau. The following guidelines for designing and specification writing are used for all building-those required piling or non piling.

Design: All designs are encouraged on applying modular coordination method according to standard of Institute of Applied Science Technology of Thailand.

Building: For purpose of estimating total floor area of a building, each functional area shall be estimated according to the following guidelines.

- Office of Minister, Under Secretary of State
(including toilet) = 40 M²/person
- Office of Deputy under secretary of state,
Director general, Deputy Director General = 30 m²/person
- Office of Director of Division/Chief of
Division = 16 M²/person
- Office of the officials whom position
higher than level 6 = 12 M²/person
- Working space for other officials
employees = 4.5 M²/person
- Working space for professionals = 6 M²/person
- Auditorium = 2 M²/person
- Waiting area = 1 M²/person
- W.C. = 0.5 M²/person
- Storage or other areas shall be considered according to
the needs of each government unit e.g., laboratory,
sitting room.
- Service area, circulation core shall be provided 1/3 of
total above areas.
- Building higher than 4 storeys shall have fire escape.

Remarks: Parking area shall follow the law. If there is a need to build a cars' park within the building it is required an approval from Budget Bureau as special case.

Structure: Floor and stairs shall be reinforced concrete or fire-proofed material; shall be economically designed. In the case that piling is required, the concrete pile or prestressed concrete pile shall be used.

- Roof truss shall be wood, steel or reinforced concrete according to suitability and economical considerations.
- Longitudinal span of building each bay shall not exceed 4.20 meters, cross span shall not exceed 8.40 meters.
- Height of building
 - Ground floor shall not higher than 4 M.
 - Other floor shall not higher than 3.60 M.
- False ceiling shall be provided where deemed necessary for example under the roof, under W.C. and the conference room.
- Corridor shall not exceed 2.70 meter wide except emergency exit could be wider.
- Roof and slab overhang shall not exceed 2.10 meters
- Sunscreen shall be provided where deemed necessary with economical design.

Building Materials: All materials quoted here if not indicated source of origin, shall be used domestic products.

Reinforced Concrete Structure:

- Cement shall be portland cement according to Industrial Standard Product.
- Sand aggregate or gravel shall be local material or of neighboring sources acceptable with the technical requirement.
- Reinforced steel shall meet Industrial Standard Product.

Wood Structure:

- shall be hard wood or chemical treated wood of similar strength.

Steel Roof:

- shall meet Industrial Standard Product.

Roof Truss and Roofing:

- Wood roof truss shall be hard wood or chemical treated wood of similar strength.
- Steel roof shall meet Industrial Standard Product.
- Reinforced concrete roof truss same as 3.1
- Roofing shall be asbestos cement shall meet Industrial Standard-Product.

Floor Stairs and Finishing:

- Reinforced concrete floor same as 3.1 or prefabricated floor system of equal allowable strength according to the requirement of the work.
- Floor finish of general building and stairs, general floor shall be terrazzo, the aggregates shall not larger than No. 3; shall be either cast in place or prefabricated. Vinyl tile shall be at least 2mm thick.
- Toilet floor finish shall be of mosaic or ceramic with inexpensive price.

Wall:

- Exterior wall shall be of solid baked brick or hollowed baked brick or concrete baked brick veneer, non plastered or conglomerated wash. The end wall shall be reinforced concrete.
- Interior wall shall be suitable and inexpensive material.
- Toilet wall shall be the same material as exterior wall.
- The inside wall shall finished with 2 meter high white ceramic or equivalent product.

False Ceiling, Ceiling Stud:

- False ceiling shall be suitable and inexpensive material, wood ceiling stud shall hard wood or chemical treated wood.
- General ceiling shall be plastered or exposed concrete.

Door and Door Frame:

- General door shall be glass with teak frame, steel frame aluminum frame or ply wood door conforming to Industrial Standard Product.
- Frame shall be of hard wood/steel or aluminum.

Hardware:

- Hinges shall conform to Industrial Standard Product brass hinges shall be suitable to the weight of the door.
- Bolts, handles, door holders shall be anodized or chromium coated or aluminum alloy or brass.
- Lock shall be suitable for nature of work conforming to Japanese, European or American industrial standard.
- Other shall be provided as necessary.

Window and Window Frame:

- Window panel, general window shall be glass window with teak wood frame, aluminum frame, steel frame or teak wood panel or teak wood frame.
- Frame shall be of hardwood, steel or aluminum.

Hardware:

Hinges shall be galvanized iron, adjustable lock, handle and window holder shall be the same as door hardware size to be supplied according to size and weight of window. For glass window, steel or aluminum frame shall be used hardware as provided by the manufacturer's product.

Sanitary Fixtures:

shall be white porcelain, model and size shall not be expensive and meet the needs.

- Water closet shall be Western/Eastern type.
- Lavatory with wall hung shelf.
- Urinal shall be wall type
- Avatory accessories shall be provided according to need. Domestic product shall be prime consideration.

Sewage, Drainage and Vent Pipe:

- Water supply pipe shall be galvanized iron or hard type P.V.C.
- Drainage and vent pipe shall be galvanized iron or hard type P.V.C.
- Sewage shall be cast iron with asphalt coated or hard type P.V.C.

The underground sewage shall be cement or ceramic locally made.

- Galvanized iron pipe, P.V.C. pipe and cast iron pipe shall meet with Industrial Standard Product.

Electrical Equipment:

- All wiring could be exposed.
- The quality of wiring and electrical appliances shall meet with Industrial Standard Product.
- Lighting fixtures and accessories shall meet with Industrial Standard Product.

Finishing Material:

- primer
- dyer
- wood/brick preservatives
- oil paint, linseed, lacquer
- varnish,, shellac, epoxy
- plastic emulsion paint
- water plastic paint
- cement paint
- metal paint

shall be considered according to the surface of the object, necessity and economical view point. If there is a required standard of material, all material shall conform to the standard.

Other Component of the Building:

- Septic tank, underground drainage shall provide with size, quantity and design conforming to sanitary technology.
- Pavement shall be provided where necessary.
- Rain gutter shall be provided where necessary.

Other Conditions:

- For office buildings to be designed and specified as special case besides the said guidelines are required to negotiate with Budget Bureau for special conditions, for example
 - Thai style building
 - Building with concrete decking or prefaoricated material

- Building with high live load other than stipulated by law
 - Special types of building that require an excessive strength due to site
 - Building on stilt, reinforced concrete floor on girder shall estimate the cost, according to Budget Bureau, only the open part.
 - Lifts, air conditions, furniture and site development, electrical system, water supply system
- When requesting budgeted the size of building shall be estimate according to the area as mentioned earlier with the projection number of staff requirement within the period of 5 year. The total floor area shall multiply by cost/sq.meter.
 - Room layout of the building shall be according to the nature of work.
 - The estimation of floor area of a building shall be the multiplying of the length and width of the building at center of the column.
 - When the design has been finished, it is required that median cost estimate be worked out for evaluation of the bids. The median cost estimate shall not exceed the cost estimate when calculated by area/sq.m as previously mentioned.
 - If the design does not conform to the guideline, the building shall have cost per squaremeter with similar type of building.

2. 建設資材価格

建設資材価格として、タイ国 Department of Business Economic, Ministry of Commerce で公表している価格（1983年2月版を1983年11月時点で再チェック）を資料（英訳版）として添付する。ただし、一部の資材においては実際の店頭価格と多少の開きがある。

CONSTRUCTION MATERIAL PRICE LIST

ISSUED BY

PRICE INDEX DIVISION
DEPARTMENT OF BUSINESS ECONOMICS
MINISTRY OF COMMERCE

February 1983

(Price revised on November 1983)

Translated by

NIKKEN SEKKEI

Planners . Architects . Engineers

1. Cast-in-situ

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMA
1.1	Ready-mix concrete (Transportation within 5-10km.incl)			
.1	Portland cement, Elephant brand 250kg/m ³	c.m.	1,070	
.2	" " " " 300kg/m ³	"	1,155	
.3	Portland cement, Green serpent brand 250kg/m ³	"	1,070	
.4	" " " " " 300kg/m ³	"	1,155	
.5	Portland cement, Diamond brand 250kg/m ³	"	1,070	
.6	" " " " " 300kg/m ³	"	1,155	

2. MASONRY

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARKS
2.1	CPAC block size 90x190x390mm. (NO. C4-11) weight 10.3kg/pc	pc.	5.50	
2.2	CPAC block size 190x190x390mm. (NO. C8-11) weight 16.7kg/pc	"	8.50	
2.3	Concrete block size 70x190x390mm. (market in general)	"	2.60-2.90	
2.4	Concrete block " 90x190x390mm. "	"	3.25-3.50	
2.5	DETAC block size 70x190x390mm. (NO. D701) weight 7.0kg/pc		3.50	
2.6	DETAC block size 90x190x390mm. (No. D 910 weight 8.5kg/pc		3.80	
2.7	D.A. block - ventilation type size 90x190x390mm. (NO. DA 180)		7.50	
2.8	D.A. block size 90x190x190mm. (NO. DA 127)		4.25	
2.9	Ordinary brick (Horn brick) size 70x35x160mm.	1000	300	
2.10	Chonburi brick (with 2 holes) size 70x30x160mm.	"	500-550	
2.11	Hollow brick S.B.P. size 80x120x250 (No. W.4)	pc	3.45	
2.12	Hollow brick S.B.P size 80x125x250mm. (NO. W14) bearing type	"	4.80	
2.13	Hollow brick C.M. size 80x145x290mm. (NO. 10135) non-bearing type	"	4.15	
2.14	Hollow brick C.M. size 80x145x290mm. (NO. 21 B) decoration and bearing type		7.50	
2.15	Fire brick size 115x76x230mm. (NO. ST 76)		18.80	

3. Ready-made structural member

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARKS
3.1	R.C.PILE (Transportation within BKK incl.)			
.1	Hollow polygon (M.P) size 150x150mm.x4.00m.	pile	225	
.2	" " (A.R.E) size 150x150mmx4.00m.	"	220	
.3	" " (S.T) size 150x150mmx5.00m.	"	800	
.4	Centrifugal pile size ϕ 350mmx10.5mx2 (composite)		6,300	
3.2	Prestressed concrete pile (Transportation in BKK incl.)			
.1	CPAC size .18x.18x8.00m.	pile	800	
.2	Solid square (G.E.L.) size .18x.18x8.00m.		800	
.3	" " (MCON) size .18x.18x8.00m.		880	
.4	" " (SS) size .18x.18x8.00m.		880	
.5	" " (Super-P) size .18x.18x10.50m.		1,102.50	
.6	" " (T.P.C.) size .18x.18x21.00m.		2,700	
.7	" " (3P) size .18x.18x10.50m.		1,050	
.8	" " (MCON) size .20x.20x12.00m.		1,500	
.9	" " (TPC) size .20x.20x21.00m.		3,150	
.10	" " (CPAC) size .22x.22x12.00m.		1,680	
.11	" " (G.E.L.) size .22x.22x12.00m.		1,815	
.12	" " (MCON) size .22x.22x12.00m.		1,680	
.13	" " (SS) size .22x.22x10.00m.		1,430	
.14	" " (Super-P) size .22x.22x15.00m.		2,580	
.15	" " (TPC) size .22x.22x21.00m.		3,390	
.16	" " (3P) size .22x.22x21.00m.		3,240	
.17	" " (SS) size .25x.25x21.00m.		5,040	
.18	" " (TPC) size .25x.25x21.00m.		4,500	
.19	" " (Super-P) size .26x.26x21.00m.		5,160	
.20	" " (SS) size .30x.30x21.00m.		7,035	
.21	" " (TPC) size .30x.30x21.00m.		6,300	
.22	" " (CPAC) size 35x.35x21.00m.		7,400	
.23	" " (GEL) size .35x.35x24.00m.		10,500	
.24	" " (MCON) size .35x.35x21.00m.		9,800	
.25	" " (SS) size .35x.35x21.00m.		9,492	
.26	" " (Super-P) size .35x.35x21.00m.		8,232	
.27	" " (TPC) size .35x.35x21.00m.		9,500	
.28	" " (3P) size .35x.35x21.00m.		7,140	
.29	" " (GEL) size .40x.40x25.00m.		11,000	

4. SECTIONAL MEMBER

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARKS
4.1	Structural steel (length 6.00m/pc)			
.1	Angle steel (equal leg) size 3.0x40x40mm.	pc	85	
.2	" " " " 4.0x40x40mm.	"	115	
.3	" " " " 4.0x50x50mm.	"	140	
.4	" " " " 6.0x50x50mm.	"	200	
.5	" " " " 6.0x65x65mm.	"	270	
.6	" " " " 8.0x65x65mm.	"	360	
.7	" " " " 6.0x75x75mm.	"	310	
.8	" " " " 9.0x75x75mm.	"	480	
.9	Light angle steel (equal leg) size 3.0x40x40mm.	"	-	
.10	" " " size 6.0x50x50mm.	"	-	
.11	Channel steel size 75x6.92kg/m.	"	320	
.12	" " " 100x9.36kg/m.	"	140	
.13	Light channel steel size 2.6x4.5x38mm.	"	100	
.14	" " " " 2.0x80x40mm.	"	100	
.15	Light lip channel steel size 2.3x100x50	"	207	
.16	" " " " 3.2x150x50	"	310	
4.2	Round bar SR .24 (length 10.00/bar)			
.1	Size ϕ 6mm.	1000kg	9,100	
.2	" ϕ 9mm.	"	8,570	
.3	" ϕ 12mm.	"	8,340	
.4	" ϕ 15mm.	"	8,340	
.5	" ϕ 19mm.	"	8,340	
.6	" ϕ 25mm.	"	8,340	

5. PIPING

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARKS
5.1	Asbestos cement drainage pipe, class A, single socket (length 3.00m/pipe)			
.1	Size ϕ 80mm.	pipe	66	
.2	" ϕ 100mm.	"	113	
.3	" ϕ 150mm.	"	165	
.4	" ϕ 200mm.	"	224	
.5	90° bend ϕ 80mm.	"	13	
.6	90° " ϕ 100mm.	"	14	
.7	90° " ϕ 150mm.	"	26	
.8	90° " ϕ 200mm.	"	37	
.9	90° Tee ϕ 80mm.	"	18	
.10	90° " ϕ 100mm.	"	23	
.11	90° " ϕ 150mm.	"	37	
.12	90° " ϕ 200mm.	"	58	
5.2	Concrete pipe (44mm. THK 1.00mm.)			
.1	Bell & Spigot type ϕ 300mm.	pipe	130	
.2	" " " ϕ 600mm.	"	-	
.3	Tongued & grooved type ϕ 300mm.	"	120	
.4	" " " ϕ 600mm.	"	250	
5.3	R.C. pipe (length 1.00)			
.1	Bell & Spogot type ϕ 300mm.	"	190	
.2	" " " ϕ 600mm.	"	-	
.3	Tongued & grooved type ϕ 400mm	"	225	
.4	" " " ϕ 600mm.	"	340	
5.4	Cast iron pipe - Asphalt coating for rust proofing (soil pipe) T.C.P.			
.1	ϕ 100m. length 1.80m. weight 16.50 kg	"	116	
.2	Elbow 90°	"	27	

6. WIRE MESH

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARKS
6.1	Wire mesh - Rhombus pattern			
.1	Mesh size 38mm. ϕ 3.0mm. (No.11)	Sq.m.	49	
.2	" " 50mm. ϕ 3.0mm. (No.11)	"	39	
.3	" " 38mm. ϕ 3.15mm. (No.10)	"	58	
.4	" " 50mm. ϕ 3.15mm. (No.10)	"	48	
6.2	Wire mesh - square pattern			
.1	Mesh size 38mm. ϕ 3.0mm. (No. 11)	"	55	
.2	" " 50mm. ϕ 3.0mm. "	"	45	
.3	" " 38mm. ϕ 3.15mm. (No.10)	"	65	
.4	" " 50mm. ϕ 3.15mm "	"	55	
6.3	Wire mesh - square pattern welded roll size 0.90x30.48m.			
.1	Mesh size 13mm.	m.	30	
.2	" " 19mm.	"	26	
.3	" " 25mm.	"	24	
.4	" " 31mm.	"	22	
6.4	Wire mesh - polygon pattern welded roll size 0.90x45.75m.			
.1	Mesh size 13mm.	"	15	
.2	" " 19mm.	"	13	
.3	" " 25mm.	"	11.50	
.4	" " 31mm.	"	9	
6.5	Stell mosquito net (in green) width 900mm.	"	22	
6.6	Aluminium mosquito net width 900mm.	"	38	
6.7	Aluminium mosquito net width 1,200mm.	"	50	

7. INSULATION

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARKS
7.1	Glass fibre			
.1	Glasswool w/alum. foil (Siam glasswool) THK 25mm. roll size 1.22x30.48m.	roll	1,650	
.2	Microfibre w/alum. foil (Siam glasswool) THK 50mm. roll size 1.22x15.25m.	"	1,450	
.3	Fibre glass grown w/resin bonded (Yip-in-soi) No.100 roll size 1.22x60.96	"	700	
7.2	Polyfoam (size 600x1200mm. THK 12.7x304.8mm.)			
.1	Size 600x1200mm. THK 25.4mm. Density 1.01bs/block	sheet	20	
.2	" " " THK 50.8mm. " " "	"	40	

8. THIN SHEET

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARKS
8.1	Aluminium foil (Sisalation) No. 902 roll size 1.35x60.0m.	roll	1,050	
8.2	Harvi-foil (Harvi-foil) No. 425 roll size 1.35x60.0m.	"	1,800	
8.3	Damp-proof sheet (Sisalathene) No. 353 roll size 1.80x50.0m:	"	3,700	

9.OVERLAPPING SHEET

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARKS
9.1	CPAC Monier			
.1	Size 330x420mm. - various colour	tile	8.50	
.2	" 255x425mm. - various colour	"	15	
9.2	Vibulsri tile			
.1	Corrugated 240x390mm. (in red)	"	5.50	
.2	Ridge (3pieces per metre) in red	"	12	
.3	Shingle tile size 200x320mm.	"	1.50	
9.3	Carpet unit size 980x5,000mm. THK *MM. cement colour	"	4.90	
9.4	Glazed burnt clay, shingle tile (in dark blue) male size 140x186mm. female size 143x270mm.	"	3.50	
9.5	Roman tile - asbestos cement			
.1	Size 500x1200mm cement colour, weight 6.2kg/sheet	"	33	
.2	" " " in red green, weight 6.2kg/sheet	"	46	
.3	Ridge 500x450mm., cement colour weight 2.0kg/sheet	"	20.25	
.4	" " " red, weight 2.0kg/sheet	"	27.75	
9.6	Corrugated asbestos cement sheet			
.1	Large size 1020x1500mm. cement colour, weight 15.7kg/s	"	100	
.2	" " 1020x1500mm, " " " 19.7 "	"	126	
.3	Ridge for large size 1020x450mm, cement colour weight 4.5kg/sheet	"	46	
.4	small size 540x1200mm., cement colour, weight 5.3kg/s	"	30	
.5	" " " " , red,green " " "	"	40	
.6	" " 540x1500mm, cement colour, weight 6.6kg/sheet	"	37.25	
.7	" " " " , red,green " " "	"	50.75	
.8	" " 540x500mm., cement colour, weight 2.0kg/sheet	"	20.25	
.9	" " " " , red,green " " "	"	27.75	

10. THICK COATING

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARK
	(10.1 - 10.3 labour incl. but scaffolding excl.)			
10.1	Cem Wash sprayed type (area over 300m ²)	Sq.m.	36	
10.2	Sand-tex sprayed type " "	"	81	
10.3	ARCO TEXTURE coating sprayed type (area over 300m ²)	"	60-105	
10.4	Terrazzo w/brass diving strip stone No.3(labour incl.)	"	250-290	
10.5	Gravel Wash diving strip, stone No. 3 (labour incl.)	"	120-150	

11. HARD BOARD

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARKS
11.1	Asbestos cement flat sheet size 1200x2400mm			
.1	THK 4mm.	sheet	109	
.2	" 6mm.	"	158.50	
.3	" 8mm.	"	205	
11.2	Gypsum board			
.1	Ordinary type size 1200x2400mm, THK 9mm.	"	138	
.2	" " " " " " 12mm.	"	158	
.3	W/alumi. foil " " " " 9mm.	"	180	
.4	" " " " " " 12mm.	"	198	
.5	Texture board " 600x600mm, " 9mm.	"	44	
11.3	Galvanized steel sheet			
.1	Size 910x1825mm THK 0.20mm. (No. 35)	"	66	
.2	" 910x2435mm " 0.25mm. (No. 32)	"	71	
.3	" 910x2435mm " 0.30mm. (No. 30)	"	85	
.4	" 910x2435mm. " 0.40mm. (No. 28)	"	95.50	
.5	" 910x2435mm. " 0.50mm. (No. 26)	"	122	
11.4	Black sheet plate size 1215x2435mm.			
.1	THK 1.6mm. weight 37.5kg	"	350	
.2	" 3mm. " 70 "	"	560	
.3	" 6mm. " 140 "	"	1,120	
11.5	Stainless steel plate size 1215x2435mm.			
.1	THK 2mm. (No.14)	"	2,400	
11.6	Aluminium plate size 1000x2000mm.			
.1	Weight 1.7kg (No.30)	"	119	
.2	" 2.2kg (No.28)	"	147.50	
.3	" 2.5kg (No.26)	"	165.50	

12. TILE

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARKS
12.1	Marble size 20x300x300mm.			
.1	Marble (Thai) in white and grey (Marbel Co. ltd.)	Sq.m.	850	
.2	" " in pink and black " " "	"	1,050	
.3	" " in light grey (Sukothai Marble)	sheet	92	
.4	Marble (imported) Thai Visawakij Ltd.	Sq.m.	-	
12.2	Split block size 25x80x320mm.	"	380	
12.3	Rex stone " 25x320x320mm.	"	380	
12.4	Burnt clay tile (local made)			
.1	Non-glazed, size 4" x 4" (red, brown)	"	1.85	
.2	" " " 4" x 8" (red, brown)	"	3.70	
.3	" " polygon type size 6 $\frac{1}{2}$ "	"	3.50	
.4	Glazed size 4" x 8" various colours	"	7.50	
.5	Dan Kwian, polygon type (160 sheets/m ²)	Sq.m.	100	
12.5	Imitation marble, marbles size 3000mm. THK 25mm (no. 106)	sheet	100	
12.6	Mosaic tile (Matt surface) size 305x305mm. (local made)	tile	24	
12.7	Mosaic tile (shiny surface) " 305x305mm. " "	"	26	
12.8	Glazed wall tile, size 108x108mm. (local made)			
.1	White	"	1.45	
.2	Colour	"	1.60	
.3	Pattern 1 colour	"	2.10	
.4	Pattern 2 colours	"	2.40	
12.9	Wood parquet (installation+brushing incl.)			
.1	Teak THK 19mm.	Sq.m.	430	

13. BENDABLE SHEET

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARK.
	Installation & supporting Viny excl. 1 sq.m = 1,19599 sq.y.			
13.1	Machine tufted carpet 100% virginwool	Sq.m.	626-853	
13.2	Machine tufted carpet 100% acrylic	"	486-594	

14. DECORATIVE SHEET

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARK
	Installation excl., imported.			
14.1	Wall paper, ordinary type (Vinyl coated paper)	Sq.m.	80	
14.2	Wall paper, Vinyl type	"	180	

15. THIN COATING

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARK
	(Can 3.785 litres)			
15.1	Soubnum (light brown, inter,-dark)	can	320	
.2	Silicone (R.221)	"	275	
.3	Varnish, Sigmawa (Glass type) T.38	"	319	
.4	Varnish, Sigmawa (Matt type)	"	350	
.5	Lacquer - Camel brand (No.6022)	"	354	
.6	Shellec Yellow	kg	29	
.7	" White	"	41	
.8	Indotane (half semi glass type)	can	660	
	Oil paint (company's quoted price)			
	Can cap., 3.785 litres (1 gallon)			
.9	Alfa	can	320	
.10	Sigma	"	460	
.11	ICI	"	460	
.12	THAI KANSAI PAINT CO.LTD.	"	290	
.13	Pammastic	"	502.50	
.14	Delta	"	350	
.15	Sinclair	"	405	
.16	Joton	"	420	
.17	JBP	"	300	
.18	TOA	"	245-250	
.19	Captain	"	360	

16. READY-MADE FITTING

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARK.
16.1	Window-door steel (installation incl.)			
.1	Steel folded shutter (local steel) w/screen Size 2.70hx3.50w	set	4,550	
.2	Steel solid type rolling shutter, steel galvanized slat THK 0.7mm. (No.22)width not more than 5.00m. (Thai Rolling Products)	"	850	
.3	Steel rolling grille, steel gal, slatwidth notmore than 6.50m.	"	950	
.4	Steel-window frame & panel frame Size 600x600mm. (Projected window top hinge)	"	540	
.5	Steel-window frame & panel frame Size 980x1200m.	"	1,764	
16.2	Aluminium window-door (installation incl.)			
.1	Alumi. window frame & panel frame Size 600x600mm. top hinge incl.	"	1,100	
.2	Alumi. window frame & double panel frame 980x1200mm. (installation incl.)	"	2,500	
.3	Alumi. sliding door size 1200x2000mm.(w/fixe d part same size)	"	2,600	
16.3	Aluminium louvre, Aluminium mosquito net window			
.1	Alumi. louvre, slat size 4.5" 6-slat type (good)	"	121	
.2	" " " " " 13-slat type (good)	"	219	
.3	Alumi. mosquito net window panel size 800x1200mm.	panel	130-145	
.4	" " " door " " 800x2000mm.	"	385-405	
16.4	Wooden window & door panel			
.1	Plywood flush door, Yang/yang size 800x2000mm.	"	335	

17. PRODUCTION

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARK
17.1	White cement (8kg/bag)	bag	7	
17.2	Cement Retail price from general shop transportation is excluded.			
.1	Tiger brand	1000kg	1,253	
.2	Cobra brand	"	1,253	
.3	Eagle brand	"	1,253	
.4	Elephant brand	"	1,565	
.5	Green serpent brand	"	1,565	
.6	Diamond brand	"	1,565	
.7	White cement, White elephant brand weight 40kg/bag	bag	180-210	
.8	White cement Kilane brand weight 40kg/bag	"	190-210	
17.3	Sand, Soil, stone (delivery charge incl.)			
.1	Coarse sand, retail sale	cu.m.	175-185	
.2	" " whole truck sale		150	
.3	Fine sand	"	180-190	
.4	" " whole truck sale		175	
.5	Embarment sand, whole truck sale		100	
.6	Aggregate NO. 1	"	180-190	
.7	" NO. 2	"	180-190	

18. MATERIAL & EQUIPMENT for PLUMBING, ELECTRICAL,
SANITATION, AIR-CONDITIONING & VENTILATION.

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARK
18.1	Plumbing equipment			
.1	Meter (Japanese made) nominal size 18mm.	pc	525	
.2	" " " " 20mm.	"	680	
.3	" " " " 25mm.	"	1,060	
.4	Brass valve (Japanese made) nominal size 18mm.	"	105	
.5	" " " " 20mm.	"	140	
.6	" " " " 25mm.	"	185	
.7	Cast iron valve (local made) nominal size 100mm (gate valve 150lbs)	"	1,800	
.8	Cast iron valve (local made) nominal size 150mm gate valve 150lbs	"	2,500	
.9	Cast iron valve (local made) nominal size 200mm. gate valve 150lbs	"	4,500	
.10	Brass foucet (local made) nominal size 15mm (Hong kong type)	"	25	
.11	" " 20mm " "	"	35	
.12	Brass chromium plated system brand name Bright nominal size 15mm (wall type)	"	78	
.13	Brass chromium plated foucet brand name Bright nominal size 20mm. Lav. type	"	85	
18.2	Sewage aeration treatment system w/fitting (installation excl.)			
.1	SATS , model GK. 100 w/fitting for 10: persons	set	14,440	
.2	SATS, model MA.575 w/fitting for 50: persons	"	50,540	
18.3	Cement pipe			
.1	Ready-made cement pipe hollw height 350mm ϕ 800	pc	43	
.2	" " " " " 400mm ϕ 1000	"	65	

19. MATERIAL & EQUIPMENT for ELECTRICAL WORK

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARK
19.1	Electrical wire (round copper) covered with insulator & outer skin-PNC (100m/roll)			
.1	PVC 60 ⁰ 250 volt, double core size 2x4.0sq.m.	roll	857	
.2	PVC " " " " " 2x2.5 "	"	548	
.3	" " " " " 2x1.5 "	"	359	
.4	" " " " " 2x1.0 "	"	258	
.5	" 750 volt single core size 1x4.0sq.m.	"	507	
.6	" " " " " 1x1.25 "	"	339	
19.2	Electrical fitting & lighting fixture			
.1	Switch (single) 3way flush type (VETO)	pc	27	
.2	" " " " " (TICHINO)	set	80	
.3	" " " " " (EUROPA)	set	75	
.4	Plug (single) flush type (VETO)	pc	22	
.5	" " " " " (TICHINO)	set	83	
.6	" " " " " (EUROPA)	pc	78	
.7	Egg shape switch (VETO)	pc	16	
.8	Short cut switch size 25 ampers (TICHINO)	"	245	
.9	Circuit breaker 1p size 10-25 ampers	"	75	
.10	Switch panel 12 parts	panel	630	
.11	Ballst 40 watts (Phillips)	pc	55	
.12	Starter 40 watts "	"	7.50	
.13	Fluorescent lamp 40 watts (Phillips)	"	43	
.14	Steel fixture w/extensioning for fluorescent lamp (2x40 watts)	set	120	

20. EQUIPMENT & FACILITIES

CODE	NAME of MATERIAL	UNIT	UNIT PRICE BAHT	REMARKS
20.1	Toilet fixture water closet			
.1	W.C. eastern style, pail-flush type white vitreous China (No. TF-100)	pc	220	
.2	" " " " (SQUAT 2)	"	210	
.3	" " " " (No. TF-101P)	"	640	
.4	W.C. eastern style, pail-flush with pedestal white vitreous china (SQUAT 2)	"	570	
.5	" " "(No. TF-100F)	"	400	
.6	" " "(SQUAT 2 F"S")	"	360	
.7	" " "(No. TF-100F)	"	825	
.8	" " "(SQUAT 1 F)	"	750	
.9	W.C. western style w/tank white vitreous china (No. TF-2106)	set	1,925	
.10	" " " " (No. C76)	"	1,750	
.11	W.C. western style w/tank coloured vitreous china (No. TF-2106)	"	2,520	
.12	W.C. western style w/tank coloured vitreous china (No. C76)	"	2,200	
.13	W.C. eastern style, pail flush type w/pedestal- terrazzo		-	
20.2	Toilet fixture urinal, bidet (fitting excl.)			
.1	Urinal, wall type, white vitreous china (No. TF 412)	"	475	
.2	" " " " (No. U 2987)	"	430	

3. 建設労務費

職種別の労務費（1983年11月調査）を以下に示す。

職 種	円/日	職 種	円/日
1. 土工（男）	70 - 95	14. 建具工（木製）	105 - 160
"（女）	65 - 80	"（金属製）	105 - 160
2. 杭打工	85 - 160	15. ガラス工	85 - 105
3. コンクリート工	65 - 95	16. 塗装工	85 - 160
4. 型枠大工	85 - 140	17. 内装工	95 - 160
5. 鉄筋工	85 - 140	18. 電 工	105 - 315
6. 鉄骨工	105 - 160	19. 配 工	105 - 315
7. 溶接工	125 - 160	20. 設備雑工	85 - 125
8. 雑鉄工	105 - 160	21. 運転手（クレーン）	105 - 160
9. レンガ・ブロック工	95 - 160	"（一 般）	105 - 160
10. 石 工	190 - 210	22. 雑 役	65 - 85
11. 研出し工（テラゾー ブロック）	75 - 125	23. 世 話 役	105 - 315
12. 佐 官	105 - 160		
13. タイル工	140 - 160		

注) 上記労務費は8時間/日で残業は含まない。

未熟練工、熟練工により差があるが、上記は熟練工（中程度）によっている。

4. 最低賃金

最低賃金は、Ministry of Interior により毎年定められている。

地域 実施 年月	バンコク首都圏及 び周辺 5 県 (サムット・ プラカン, ノンタブ リ, バトゥム・タニ, サミエット・サコン, ナコン・パトム)	中央部・南部		北部・東北部	
		① パンガー, ブーケット, チョンブリ, サラブリ	② ①以外	① チェンマイ, ナコンラチャ シマ	② ①以外
'73年 4月	12	—	—	—	—
'74年 1月	16	—	—	—	—
'74年 6月	20	—	—	—	—
'74年 10月	20	18	18	18	16
'75年 1月	25	18	18	18	16
'77年 10月	28	21	21	21	19
'78年 10月	35	28	28	28	25
'79年 10月	45	38	38	38	35
'80年 10月	54	47	47	47	44
'81年 10月	61	61	61	52	52
'82年 10月	64	64	64	52	52
'83年 10月	66	66	66	56	56

5. 建設物価と消費者物価

主要建設資材費の推移と、消費者物価指数及び建設物価指数の推移を Ministry of Commerce 公表の数値で以下に示す。

	主要建設資材費			物価指数 (1968=100)	
	セメントB/t	鉄筋B/t	ディーゼル油 B/l	消費者 物価指数	建設資材 物価指数
1974	548	6,277	233	178	163
1975	600	6,500	233	183	168
1976	685	6,400	233	190	181
1977	710	6,600	234	208	193
1978	811	6,600	264	222	205
1979	1,068	7,896	488	251	260
1980	1,068	8,150	654	297	277
1981	1,350	8,333	739	332	301
1982	1,463	8,408	739	344	306
1983	1,438	8,233	699	361	309

表 主要建設資材費と物価指数の推移

表 主要建設資材費と物価指数の推移

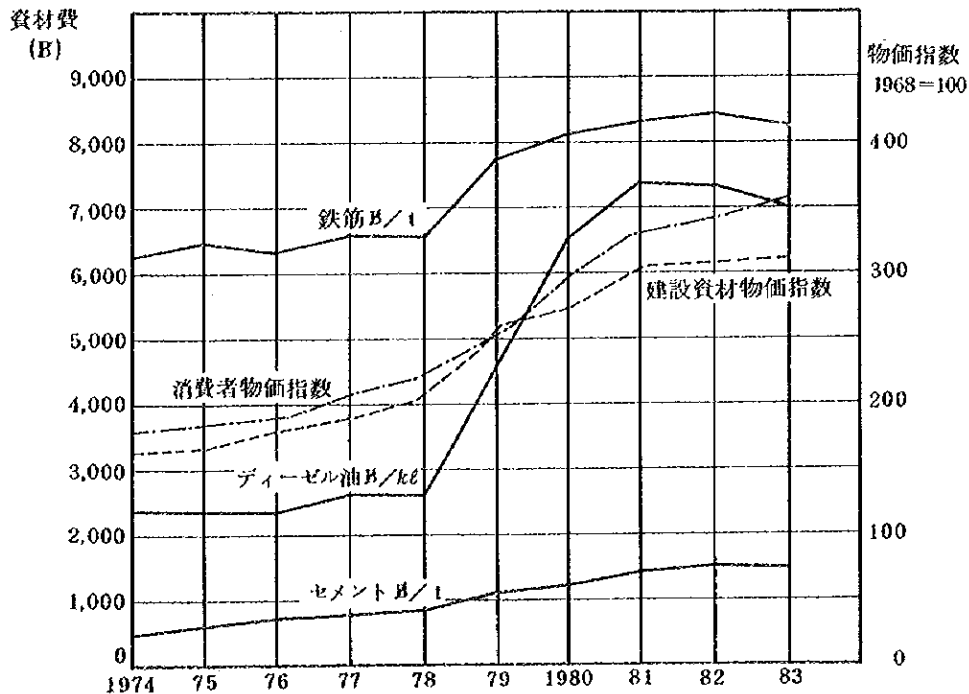


図 主要建設資材費と物価指数の推移

JICA