

STANDARD CONSTRUCTION MATERIAL SMART SERIES 2-2566

Section 1 Material-equipment for elder and health	
Elevator	By "ARTICO" model S15 for house model EA-234 and EA-235 only
Air ventilation system	PM 2.5 prevention and clean air ventilation equipment by PD Fresh Airflow model Fresh II , wall mounted in the bedrooms and bathrooms except maid room-maid bathroom (if any)
Elder room floor	Shock absorb Safety Floor – PVC type , by KRONOTEX with PVC floor skirt
Entrance ramp	As specified in drawing (if any)
Elder bathroom door	White Wood Plastic Composite (WPC) door, hanging sliding type, 1.00 meter wide. With groov pattern (MN80-P01G03 , MN80-P01G05 or MN80-P01G08 to be chose later) and sliding rail, equipment and white rail cover by MOHNE'
Elder Bathroom (if any)	"AMERICAN STANDARD" or COTTO" (White color) or equal (as specified by company)
Water closet	Model: COTTO For All SC5622 with white seat C9251 and equipment Cleaning spray model: A-4700A-WT with stop valve mode STD A-4401
Wash basin	Model: COTTO For All SC00537
Mirror	Model: MZ901#WH
Soap holder	Model: American Standard TF-9402
Tissue holder	Model: American Standard TF-9411
Towel bar	Model: American Standard TF-9485
Wall mounted faucet for shower	Model: American Standard NEO MODERN MONO A-0726-10-A with chromium shower set
Wash basin faucet	Model: American Standard STD NEO MODERN MONO A-0706-10
Wall mounted faucet	Model: American Standard STD WINSTON FFAST602-0T0500BT0
Bathroom floor drain	Model: CT699Z1 by COTTO (size 100 cm.)
Safety accessory for Elder bathroom	Handrail model: COTTO HANDICARE CT752#SA Foldable support arm model: COTTO CT0190
Section 2 Material-equipment for energy saving and heat insulation	
Solar water heater	Capacity 160 litres with hot water piping (Pimaflex) for 2 bathrooms upstairs for wash basin and shower, 2 for each bathroom.

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Heat prevention beneath the roof	3 inches thick insulator by “STAY COOL”: Premium placed on ceiling beneath upper and lower roof level (except garage, upper/ lower terrace and external ceiling). For the concrete roof or concrete floor (Concrete slab), 6 inches thick “STAY COOL”: Premium is used.
Sanitary ware (water saving)	“AMERICAN STANDARD” or COTTO” (White color) or equal (as specified by company)
Water closet for master bathroom	Model: TF-2019-WT9 , with electric bidet seat
Water closet for general bathroom	Model: STD MILANO TF-2327SC-WT-0 with accessories Cleaning spray model: A-4700A-WT with chromium stop valve model STD A-4401
Roof tile	In case of Insulated Roof, the Ceramic Metal Roof : Snaplock – premium color by PD INSULATED (choose the color later) will be used.
Wall material	General wall : 10 cm. thick Autoclave concrete with plastering and skim coat Decorated wall (if any) ; 7 cm. thick Autoclave concrete with plastering and skim coat
Section 3 Environment friendly material-equipment	
Flooring material	General first floor and upper floor - 12 mm. thick laminated floor by “KRONOTEX”: Robusto or “INOVAR”: Exquize Max Pro with PVC floor skirt.
Wooden Stair Set	A set of Engineered Wood by ACON color coated from the factory
Stair tread	Size 300x30 mm.
Riser	Size 200x20 mm.
Handrail	Size 100x50 mm.
Post	Size 125x125 mm.
Baluster	Size 50x50 mm.
Landing	30 mm. thick, 2 pieces (V groove connect)
Eave ceiling	Wood Plastic Composite (WPC) by PD WOOD by Maxis Wood model QB-003 Teak color or equal with Zinc galvanized studs#26.
Decorated wall (If any)	In case of fiber cement decorated wall, use “SCG” or “CONWOOD” or Wood Plastic Composite (WPC) - PD WOOD by Maxis Wood model QB-003 teak color or as drawing specified

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Interior Door	
General interior door/ Bedroom/ Storage room (If any)	Laminated Wood Plastic Composite (WPC) door and white wood pattern film coated Wood Plastic Composite (WPC) door frame by “PD WOOD” : L-WPC-004-006 (choose color later)
Bathroom door	White Wood Plastic Composite (WPC) door and white wood pattern film coated Wood Plastic Composite (WPC) door frame by “PD WOOD” model C-WPC-001-003
Maid bathroom door	White Wood Plastic Composite (WPC) door and white wood pattern film coated Wood Plastic Composite (WPC) door frame by “PD WOOD” model C-WPC-001-003
Door for storage room under stair (if any) / Door for electric control unit panel	White PVC door panel with louver
Door for kitchen/ garage (open to exterior)	White Wood Plastic Composite (WPC) door and white wood pattern film coated Wood Plastic Composite (WPC) door frame with steel structure by “PD WOOD” model C1-WPC-008, 011, 012
Facia	Synthetic wood “ Eave Plus ” or equal
Treatment Tank	Fiberglass tank by “DOS”: ST-21/GY or “PP”: Ecotank or equal (underground type).
Grease trap Tank	Fiberglass tank by “DOS”: GT-09/BK-40 or “PP”: GT-30UG (underground type).
Section 4 Innovation and technology material-equipment	
Concrete structure	
Footing/Column /Beam /Staircase/ bathroom tray/ Parking floor	Prefabrication structure with Multi Joint Lock System. Some parts of structure are cast-in-place as engineer specified.
General concrete floor	Prestressed concrete plank by D-CON or PCM or equal Some parts of structure are cast-in-place as engineer specified.
Exterior doors/windows	by TOSTEM
Door to Terrace / Balcony/ main entrance	Anodized color aluminum by “ TOSTEM ” : ATIS or as manufacturer specific or equal with 4.5 mm. thick clear green glass..
General Window	Anodized color aluminum by “ TOSTEM ” : ATIS or as manufacturer specific or equal with 4.5 mm. thick clear green glass.

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Bathroom window	Anodized color aluminum by “ TOSTEM ” : ATIS or as manufacturer specific or equal with 4.5 mm. thick frosted glass.
Adjustable Louver (if any)	Anodized color aluminum by “ TOSTEM ” : ATIS or as manufacturer specific or equal with 4.5 mm. thick clear green glass.
Plastering material	Mortar cement by “ SCG ”, “ INSEE ”, “ TPI ”, “ SINGHA MORTAR ” or equal with skim coat. For exterior, wall protective formula mortar “ PD Mortar Plus ” and fiberglass mesh with skim coat is used.
Roof Truss	Alu-zinc (AZ-150) or SuperDyma coated high strength steel structure with screw and nut system as engineer specified.
Interior clear water pipe	Pimaflex Mutipipe by PIMATEC
Interior clear water pipe	25x2.5 mm. (internal dia. 20 mm.) for main pipe 20x2.25 mm. (internal dia. 15.5 mm.) for branch pipe 16x2.0 mm. (internal dia 12 mm.) for hot water pipe
Section 5 General material – equipment	
Piling	<u>Bangkok area and surrounding area</u> One storey house pre-stressed concrete pile I-22 not exceed 12.00 m. long (2 piles welded connection) Two storey house pre-stressed concrete pile I-22 not exceed 18.00 m. long (2 piles welded connection). Three storey house pre-stressed concrete pile I-22 not exceed 21.00 m. long (02 piles welded connection) In case driven pile cannot be used, drilled pile as engineer specified is used (extra cost) <u>Provincial area (stiff soil),</u> One storey house pre-stressed concrete solid square pile 22 X 22 cm., length not exceed 10.00 m. is used. Two -3 storey house pre-stressed concrete solid square pile 22x22 cm. length not exceed 10.00 m. is used. In the area where pile cannot be driven, soil bearing foundation as engineer specified is used.
Floor of washing area	Reinforced concrete slab on ground as engineer specified.
Entrance pavement	N/A
Concrete	Ready mixed concrete by SCG, INSEE, TPI
Floor Level	

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First floor level	0.80 meter high from the ground or as specified in the drawing (In case of multilevel floor).
Flooring Material	
Master bathroom floor	Ceramic tile "A" grade (price not exceed 600 baht/sq.m.).
General bathroom floor	Ceramic tile "A" grade (price not exceed 350 baht/sq.m.).
Main entrance terrace	Ceramic tile "A" grade (price not exceed 550 baht/sq.m.)
Kitchen floor	Ceramic tile "A" grade (price not exceed 350 baht/sq.m.) with PVC floor skirt.
Terrace /Balcony floor	Ceramic tile "A" grade (price not exceed 350 baht/sq.m.).
Waterproofing system for terrace/balcony/toilet floor	the paint type waterproofing system, TOA Cement Waterproof with fiberglass mesh or equal will be applied.
Maid Room floor	Ceramic tile "A" grade (price not exceed 200 baht/sq.m.).
Maid bathroom floor	Ceramic tile "A" grade (price not exceed 200 baht/sq.m.).
Storage room floor	Ceramic tile "A" grade (price not exceed 200 baht/sq.m.).
Laundry floor (If any)	Ceramic tile "A" grade (price not exceed 200 baht/sq.m.).
Parking floor	Ceramic tile "A" grade (price not exceed 200 baht/sq.m.).
Washing area	Ceramic tile "A" grade (price not exceed 200 baht/sq.m.).
Footpath (If any)	Coarse polished cement.
Wall Finishing	
Master bathroom wall	Ceramic tile "A" grade (price not exceed 600 baht/sq.m.) height not exceed 2.40 m.
General bathroom wall	Ceramic tile "A" grade (price not exceed 300 baht/sq.m.) height not exceed 2.40 m.
Maid bathroom wall	Ceramic tile "A" grade (price not exceed 200 baht/sq. m) height not exceed 2.40 m.
Decorated wall (If any)	Natural color granite "BEZEN" 2"x9" (price not exceed 800 baht/sq.m.) or equal, spaced grooves
Ceiling	
General interior ceiling	Beveled edge gypsum board 9 mm. thick by "SCG" or "GYPMANTECH" with galvanized metal studs#26. 1 set of 60x60 cm. instant service access on the second-floor ceiling.

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Exterior ceiling (Balcony/Garage)	Beveled edge moisture resistant gypsum 9 mm. thick by “SCG” or “GYPMANTECH”. with galvanized metal studs#26
Ceiling for bathroom	Beveled edge moisture resistant gypsum board 9 mm. thick by “SCG” or “GYPMANTECH” with galvanized metal studs #26
Roof tile	Concrete roof tile model Adamas Tile , chalet shake or smooth tile model with Platinum color coated (Sunny red, Brightly brown) with “ Dry ridge system ”, stainless #24 for valley rafter. In case of Metal sheet roof, 0.47 mm. thick metal sheet, Alu-zinc color, with 5 mm. PE Foam insulation will be applied. In case of polished concrete roof, the paint type waterproofing system, TOA PU Waterproof with fiberglass mesh or equal will be applied. In case of Shingle Roof , use the Double layer type (the color chosen later) with equipment from manufacturer
Facia	In case of Metal Sheet roof, the flashing is the same color as the roof.
Railing	Vinyl railing by “ WINDSOR ” as specified drawing (steel/ stainless).
Door and Window Accessories	
Handle / Lock set for general doors	Stainless steel mortise lock set by “ MATURE ” model Premium MSL-018 (silver hairline) or equal with stainless steel door stopper
Hinge for general doors / bathroom doors	Stainless steel butterfly hinge” by “ MATURE ”: MH-S4325 HS2BB or equal, 4 pieces/door
Lock set for bathroom	Stainless steel knob by “ MATURE ”: MK-001-BK-SS or equal with stainless steel door stopper
Lock set for maid bathroom	Stainless steel knob by “ MATURE ”: MK-001-BK-SS or equal with stainless steel door stopper
Adjustable louver (If any)	By “ TOSTEM ” or equal
Hung type sliding door	By “ HAFELE ” or equal
Sanitary ware	“ AMERICAN STANDARD ” or COTTO ” (White color) or equal (as specified by company)
Water closet for maid bathroom	Model: STD WINSTON II TF-2695SCW-WT-0 with accessories Cleaning spray model STD AS BASIC F75006-WTADY with chromium stop valve model STD A-4401
Wash basin	General bathroom model: WP-F507-WT , under the counter type Maid bathroom model: STD WINSTON II TF-0979-WT-O , wall hung type

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Bathroom counter	General bathroom counter topped with granite stone (Engineer grey, Chinese pink, white tone or equal), counter edge topped with ceramic tile "A" grade same as the wall.
Bathtub (only 1 master bathroom)	Model: TF-8151 with wall mounted type mix faucet and shower set model: NEO MODERN A-0711-200 with hot water pipe.
Urinal	Model: WP-6747 NEO MODERN with automatic electronic flush valve accessories model: A-8014AC-WT (in 1 bathroom downstairs)
Mirror	Model: LV02 / model GH-805 for maid bathroom)
Soap holder	Model: TF-9402 /model TF-9000 for maid bathroom
Tissue holder	Model: TF-9411 /model TF-9011 for maid bathroom
Towel bar	Model: TF-9485 /model TF-9085 for maid bathroom
Wall mounted faucet for shower	General bathroom model: NEO MODERN MONO A-0726-10-A with chromium shower set Bathroom with hot water piping model: NEO MODERN A-0712-300 with chromium shower set Maid bathroom model: F46103-CHADYHS with stop valve model AS BASIC F21033-CHADY
Wash basin faucet	Master bathroom, bathroom with hot water piping model: STD NEO MODERN A-0701-100 (2 points in total) General bathroom model: STD NEO MODERN MONO A-0706-10 Maid bathroom model: STD WINSTON FFAST 601-1T1500BT0
Wall mounted faucet	General bathroom and maid bathroom model: STD WINSTON FFAST602-0T0500BT0 (one in each bathroom)
Shelf	Model: TF-9075 for maid bathroom
Bathroom floor drain	2" diameter odor trap floor drain (square type) model: STD A-8200-N chromium color, 2 for each bathroom.
Water	Comply with Standard of Metropolitan Water Authority or Provincial Water Work Authority. PVC pipes by SCG or THAI PIPE
Clear water pipe	$\frac{3}{4}$ " dia. PVC pipe (class 13.5) for main pipe from building to meter, length not exceed 30.00 m. with ball valve, metal hand, separating for each floor.
Waste water/ Drain	4" dia. PVC pipe (class 8.5) for sewage pipe. 2" dia. PVC (class 8.5) for drainage pipe and 3" dia. For main pipe (class 8.5)
Ventilation pipe	1" dia. PVC pipe (class 5.0)

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Rain water drainage	2" dia. PVC pipe for branch rain water pipe and 3" dia. for main water pipe (class 8.5). Skull shape stainless steel floor drain for balcony or concrete slap roof.
Sanitary System	
Drainage pipe	Asbestos cement pipe dia. 8" to public drain (Not exceed 20.00 m. long from the house).
Manhole	30x40 cm. precast manhole every 6.00 m. interval and every bends or corners.
Electrical System	Comply with Standard of Metropolitan Electricity or Provincial Electricity Authority
Main income wiring	Single copper wiring PVC insulated (KV-CV#35 sq.mm.) The length from wall to meter not exceed 30.00 m (put in PE conduit dia. 2" underground).
Main income telephone wiring	Four cores wiring not exceed 30.00 m. from meter to the house put in PE conduit ½" underground.
Internal wiring	Single copper wiring with PVC insulated with yellow PVC conduit in wall or on ceiling.
Air condition wiring	1 point at Master Bedroom
Control panel	15 Amps. 19 circuit breaker by "HACO": HD-S119 or equal with Residual Current Device (RCD).
Lighting switch	Wall mounted lighting switch by "HACO": Primo PR-F001-3 / PR-FS111/L (2 way type switch only at stair hall) 1 for each room and 2 for Master Bedroom.
Receptacle	Wall mounted receptacle by "HACO": Primo PR-E233 , 2 for each room and 3 for reception room (except storage/bathroom).
TV / Telephone outlet	Wall mounted TV/Telephone outlet by "HACO": Primo PR-T075 (TV) / PR-R024 (telephone) 3 for each.
Emergency light	1 set of twin LED lamp head emergency light
Luminaire	Provided by the owner
Electricity and Water Meter	
Permanent electric meter	15 Amps, Fee covered by company. (Exclude the service area extension fee)
Permanent water meter	3/4" Diameter, Fee covered by company. (Exclude the service area extension fee)
Painting	By TOA
External wall	External acrylic paint "TOA": Supershield or equal, 1 primer and 2 final coated

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Internal wall	Internal acrylic paint " TOA ": Supershield Duraclean or equal, 1 primer and 2 final coated
Steel surface	Emulsion paint " TOA ": Glipton or equal 1 primer and 2 final coated
Facia/Fiber Cement Board	External acrylic paint " TOA ": Supershield or equal, 1 primer and 2 final coated
Others	
Termite protection system	½" PVC Piping (class 13.5) by SCG or Thai Pipe with springer system, for termite chemical treatment, are provided by company. The owner responds for termite service provider.
Tile adhesive	Glue cement by Singha, Crocodile, Tiger or Waber
Section 6 Warranty and maintenance	
Structure	20 years warranty for the structure
General work	2 years warranty for general work Exclude natural depreciation of materials due to long used and misused.

Remarks: The company reserves the right to change the list if needed but the price of the materials is not less than that stated above. The cost of the construction does not include:

- Old building demolition
- Interior decoration and garden
- Air conditioner system.
- Water drainage outside the construction site.
- Mosquito net, door and window steel bars, rain gutter