

Construction Management

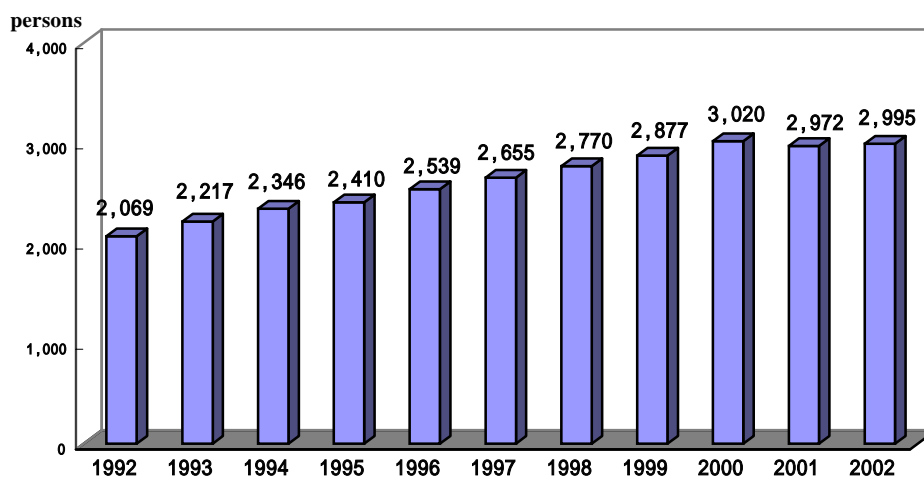
The purpose of construction management is to maintain the structure, equipment and management of the constructions, to keep public safety of constructions, and to better legal system for construction management. Construction management is about construction business, indoor decoration business, public safety inspection, elevator equipment and recreation facility as well as improving constructing management, elevating residence quality, enhancing green ecological constructions that may achieve the permanently manageable status.

I. Current number of Architects in practice

A. There are 2,995 architects currently practicing in Taiwan and Fujian Area. Among them, there are 2,955 architects of Grade A as well as 40 architects of Grade B who has obtained the license according to No. 53 of Construction Law.

B. Till the end of 2002, there were 2,995 architects in practice, an increase of 0.77% compared with the previous year. Among them 1,026 architects of Taipei City was the most, orderly following by 427 architects of Taipei County, 376 architects of Taichung City, 243 architects of Kaohsiung City, 136 architects of Tainan City, 128 architects of Taoyuan County. The architects from these 6 places shared 78.0% of all architects of the nation. It was evident that architects practiced in densely populated area because people gathered in urban areas, the demand of construction space was much higher and the convenience of information and transportation counted.

Number of Architects in practice in recent years

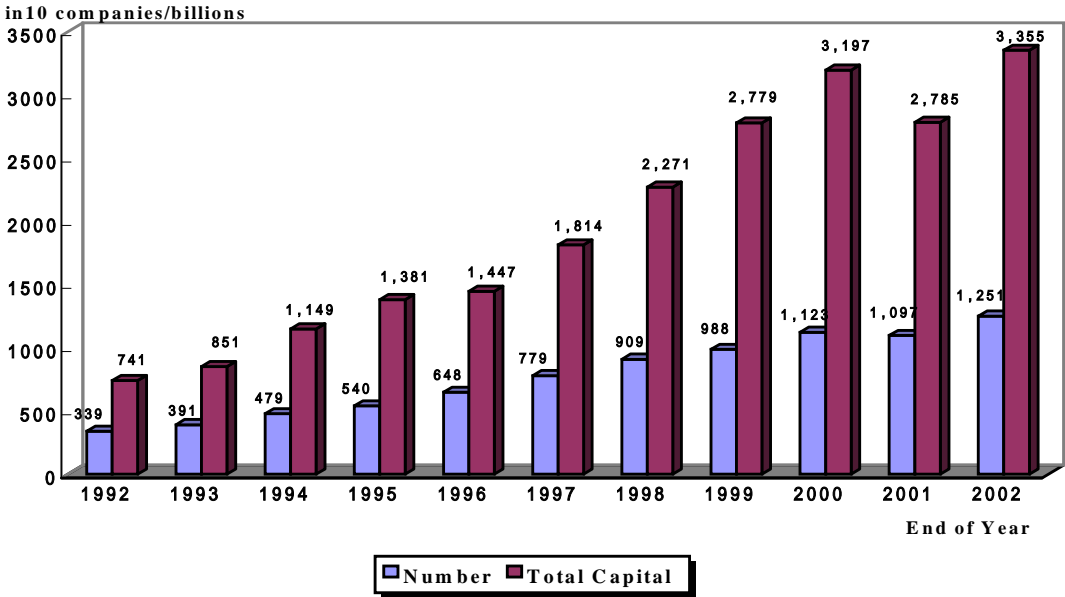


II. Supervision management of construction business

A. Number, capital and distribution of building companies

1. Till the end of 2002, there were 12,513 building companies in Taiwan and Fujian Area, 14.11% increase compared with the end of 2001. Among them there were 1,883 companies of Grade A, holding 15.05% of all building companies and 13.3% increase compared with the end of previous year. There were 1,530 companies of Grade B, holding 12.23% of all building companies and 11.84% increase compared with the end of previous year. And there were 9,100 companies of Grade C, holding 72.72% of all building companies and 14.67% increase compared with the end of previous year.
2. As for the average capital per company, it was NT\$26,810,000 dollars at the end of 2002, 5.55 % increase compared with the previous year of NT\$25,400,000 dollars. Comparing different jurisdiction, the average capital of NT\$108,960,000 dollars in Taipei City was the highest, NT\$41,060,000 dollars in Hsinchu County the second, NT\$36,840,000 dollars in Tainan City the third, NT\$27,240,000 dollars in Yilan County the fourth, and NT\$23,140,000 dollars in Hsinchu City the fifth.
3. Till the end of 2002, counties and cities that had more than one thousand building companies were: 1,574 companies in Taipei County with 12.58% of all companies, 1,199 companies in Taipei City with 9.58%, 1,071 companies in Kaohsiung City with 8.56%, and 1,048 companies in Taichung City with 8.38 %.

Number and Total Capital of Building Companies in Taiwan and Fuchien Area



III. Construction elevating equipment safety inspection

The 2002 construction elevating equipment safety inspection in Taiwan and Fujian Area is stated as follows:

- A. At the end of 2002 there were 5 elevating equipment safety inspection companies in Taiwan and Fujian Area, including 4 in Taipei City and 1 in Kaohsiung City. There were 284 specialized companies with 0.7% decrease compared with 286 of previous year of 2001. Among 284 companies, there were 79 in Taipei City, accounting 27.82% of all the most. There were 43 companies in Taipei County, accounting 15.14% the second. There were 37 companies in Kaohsiung City, accounting 13.03% the third. There were altogether 5,174 specialized technicians, decrease of 7.19% compared to the previous year. Among them, there were 3,547 persons in Taipei City, holding 68.55% the most. There were 380 persons in Taipei County, holding 7.34% the second. And there were 278 persons in Taichung City, holding 5.37% the third.
- B. In 2002 there were 104,286 elevator facilities been inspected, 7.35% increase compared with 97,146 of the year of 2001. Among them there were 104,245 qualified, which comprised of 99.96% of all. Among the qualified, there were 4,640 sets passing construction completion safety inspection, accounting 4.45%. And there were 99,605 sets passing annual safety inspection, accounting 5.55%. The counties and cities that had more than ten thousand inspections were sequenced as: (1) 20,871 sets in Taipei City with 20.01% of all inspections; (2) 20,863 sets in Taipei County with 20.0%; (3) 10,906 sets in Taichung City with 10.46%; (4) 10,695 sets in Kaohsiung City with 10.26%; (5) 10,229 sets in Taoyuan County with 9.81%. The elevator facilities in these five places had already accounted 70.54% of all elevator facilities in Taiwan and Fujian Area. That meant elevator facility inspections were concentrated in Taipei, Taichung, Kaohsiung Cities, Taoyuan and Taipei County.

Safety Inspection for Construction Elevator Facilities

Unit: Set; %

Year of	Total	Qualified	Rate of qualification	Unqualified	Rate of Failure
1999	69,917	69,794	99.82	123	0.18
2000	91,767	91,732	99.96	35	0.04
2001	97,146	97,095	99.95	51	0.05
2002	104,286	104,245	99.96	41	0.04
2002/2001 (in %)	7.35	7.36	0.01	-19.61	-0.01

Source: Elevator facility inspection organization designated by governmental institute in charge

IV. Construction public safety inspection

A. Abiding by “The Application for Verification Regulation on Construction Public Safety Inspection”, the applying schedule for construction public safety inspection is set up in different periods according to different categories of construction. At the end of 2002, there were 65,429 units that should have applied for construction public safety inspection. However there were only 14,968 units that had done the applications, which is 22.88%. Among them, there were 12,853 units (85.87%) qualified, while there were 846 units not qualified (5.65%), and 1,269 units still under inspection (8.48%). On the other hand, there were 50,461 units that haven’t applied for the inspection, which accounts 77.12%. Among them, there were 9,287 units (97.67%) that have been notified, while there were 1,174 units (2.33%) that had already been fined. The information indicates that the ration of the application for inspection is phenomenally too low.

Construction Public Safety Inspection Status

Unit: case, unit

Year of	Violation cases administered							Unit randomly inspected or re-checked		
	Total	Improve- ment in due time	Fine	Demo- lition	Severing water & power	Inhibition to use	Legal action	Total	Qualified	Not improved or Not qualified
1999	21,435	7,089	7,712	362	476	5,619	177	16,879	6,556	10,323
2000	18,619	6,261	6,266	431	496	4,578	587	16,249	7,678	8,571
2001	10,025	4,379	3,053	174	139	2,117	161	11,323	4,983	6,340
2002	7,146	2,431	2,378	52	86	2,094	105	10,138	4,902	5,236
Taiwan	6,171	1,954	1,988	51	83	1,990	105	7,523	3,001	4,522
Taipei City	123	23	100	-	-	-	-	1,798	1,695	103
Kaohsiung City	799	454	237	1	3	104	-	764	200	564
Fujian Province	53	-	53	-	-	-	-	53	6	47
2002/2001 (in%)	-28.72	-44.49	-22.11	-70.11	-38.13	-1.09	-34.78	-10.47	-1.63	-17.41

Source: Public Works (Economic Affairs) Bureau of Municipalities, counties and cities

B. At the end of 2002, on application for verification for construction public safety inspection in Taiwan and Fujian Area, There were 11,765 units that their structures and facilities met regulations. There were 7,146 units that violates regulations, among which there were 2,431 cases (34.02% the most) required to improve in due time, 2,378 cases (33.28% the second) fined, 2,094 cases (29.30% the third) inhibited to use, 105 cases (1.47% the fourth) sued, 86 cases (1.20% the fifth) severed water and power, and 52 cases (0.73% the sixth) demolished. Grouped by counties and cities, in violation cases administered there were 1,863 cases (26.07% the most) in Taipei County, 799 cases (11.18% the second) in Kaohsiung City, 703 cases (9.84% the third) in Hsinchu City. Abiding by Article 77 of "Construction Act", there were 10,138 units that underwent random inspection or re-check, among which there were 4,902 units (48.35%) qualified, and 5,236 units (51.65%) not improved or not qualified, a decrease

of 4.34% compared with 55.99% at the end of 2001. It appeared that the status of construction public safety inspection was improving.

C. At the end of 2002, on construction public safety inspection in Taiwan and Fujian Area, there were 2,720 professional facility inspectors for prevention of fire and disaster, in which there were 1,663 architects the most, 741 other specialized inspectors the second, and 121 electric engineers the third. And there were 2,544 professional equipment safety inspectors, in which there were 1,661 architects the most, 567 other specialized inspectors the second, and 121 electric engineers the third. Compared with the previous year of 2001, the 15.0% increase of air condition technicians was the most, the 10.0% increase of mechanic technicians the second, and the 6.3% increase of civil engineers the third.

V. Construction affiliated parking space

Till December of 2002, there were 1,671,804 parking blocks in construction parking space, among which there were 29,641 parking blocks (1.77%) for big cars, 1,522,056 parking blocks (91.04%) for small cars, and 120,107 parking blocks (7.18%) for motorcycles. There were 1,493,210 parking blocks (89.32%) located in urban planning areas and 178,594 parking blocks (10.68%) outside of urban planning areas. There were 1,084,538 parking blocks Taiwan Province (64.87%), 43,571 parking blocks in Taipei City (25.75%), and 155,595 parking blocks in Kaohsiung City (9.31%). In Taiwan Province, there were 204,408 parking blocks in Taoyuan County (18.85%) the most, 202,836 parking blocks in Taipei County (18.70%) the second and 115,472 parking blocks in Taichung City (10.65%) the third.

VI. Issuance status of various Construction Permits

A. Issuance of Construction Build Permits

The issued total of Build Permits is observed as the leading indicator for housing construction activities. Its fluctuation sufficiently reflects the ongoing trend of future economical boom and bust in domestic construction industry.

As we review the fluctuating trend in recent years, the issued total of Constructions Build Permits and the total floorage registered in 2002 are 25,282 cases and 23,080,000 square meters. Compared with those in 2001, there are growths of 14.01% and 6.70% respectively.

As we observe Counties and Cities on the total floorage of Build Permits issued in 2002, Taoyuan County took the leading place with 3,173,000 square meters (i.e. 13.8%), Taipei City the second place with 2,803,000 square meters (i.e. 12.2%). And Taichung County the third place with 1,861,000 square meters (i.e. 8.1%). There are ten Counties and Cities that broke lowest records in last ten years on issued totals of Build Permits: Yilan County, Changhwa County, Nantou County, Chiayi County, Kaohsiung County, Taitung County, Hwalien County, Penghu County, Keelung City and Hsinchu City.

As we analyze category of utilization, the different percentages of the total floorage of Build Permits issued in 2002 vary as follows: residential floorage the first 7,067,000 square meters (i.e. 30.6%), factory floorage the second 3,230,000 square meters (i.e. 14.0%) and store floorage the third (including residential store) 2,467,000 square meters (i.e. 10.7%). Compared with previous year of 2001, sequenced by percentage, the increased are residences (45.6%), offices (44.0%), hospitals (41.2%), schools (13.3%) and stores (0.8%, including residential stores); on the other hand, the decreased are warehouses (-23.0%), farmhouses (-21.3%) and factories (-11.7%).

B. Issuance Status of Construction Use Permits

The issued total of Construction Use Permits is observed as the feasible figure for completed constructions, which reflects the real demand and supply in housing market.

As we review the fluctuating trend in recent years, the issued total of Construction Use Permits are 22,786 cases in 2002, 20.07% less than that in 2001; and the whole floorage is 24,385,000 square meters, 21.76% less than that in 2001. Both broke lowest records in recent years.

As we analyzed Counties and cities on the total floorage of Construction Use Permits issued in 2002, Taoyuan County took the leading place with 3,662,000 square meters (i.e. 15.0%), Taipei County the second place with 3,181,000 square meters (i.e. 13.0%), and Taipei City the third place with 3,015,000 square meters (i.e. 12.4%). There are thirteen counties and cities that broke lowest records in last ten years on issued totals of Construction Use Permits: Taipei County, Yilan County, Hsinchu County, Miaoli County, Taichung County, Changhwa County, Chiayi County, Kaohsiung County, Pingtung County, Taitung County, Hwalien County, Taichung City and Chiayi City.

As we analyzed category of utilization, the different percentage of total floorage of the Construction Use Permits issued in 2002 vary as follows: residential floorage 7,918,000 square meters (i.e. 32.5%), factory floorage 3,306,000 square meters (i.e. 13.6%), store floorage (including residential store) 3,197,000 square meters (i.e. 13.2%). Compared with previous year of 2001, sequenced by percentage, the increased are recreation grounds (102.1%), schools (11.7%), and hospitals (6.1%). On the other hand, sequenced by percentage, the decreased are factories (-45.9%), warehouses (-39.7%), farmhouses (-34.3%), offices (-27.1%), store floorage (-26.9%, including residential stores), hotels (-7.8%) and residences (-3.4%).

Recent Issuance Fluctuation of Construction Use Permits in Taiwan and Fuchien Areas

