

# BUILDING VALUATION DATA

The International Code Council® is pleased to provide the following Building Valuation Data (BVD) for its members. As indicated in the May 2003 issue of the *Building Safety Journal*™, ICC will now publish one data sheet in an effort to move toward complete consolidation and provide the most efficient set of information for jurisdictions to use. ICC strongly recommends that all jurisdictions and other interested parties actively evaluate and assess the impact of the new BVD table before utilizing it in their current code enforcement activities.

The BVD table provides two main functions. In addition to providing the “average” construction costs per square foot, the data can be used in determining permit fees for a jurisdiction as well as calculating the anticipated plan review fees charged by the ICC plan review service. Permit fee schedules are addressed in Section 108.2 of the *2003 International Building Code*® (IBC®) and Section 108.3 addresses building permit valuations. The permit fees can be established by using the BVD table and a Permit Fee Multiplier, which is based on the total construction value within the jurisdiction for the past year. The Square Foot Construction Cost table presents factors that reflect relative value of one construction classification/occupancy group to another so that more expensive construction is assessed higher permit fees than less expensive construction.

The resulting BVD table was compiled by ICC using the Marshall Valuation Service, as published by the Marshall and Swift Publication Company, Los Angeles, California. ICC has developed these data to aid jurisdictions in determining permit fees. It is important to note that while this BVD table does determine an estimated value of a building (i.e., gross area x square foot construction cost), the data are only intended to be used for determining permit fees for a jurisdiction. This data table is not intended to be used as an estimating guide because the data only reflect average costs and are not representative of specific construction.

The degree of precision is sufficient for the intended purpose, which is to establish permit fees so as to fund code compliance activities. The BVD table provides jurisdictions with a simplified way for determining the estimated value of a building that does not rely on the permit applicant to determine the cost of construction. Therefore, the bidding process for a particular job and other associated factors do not affect the value of a building for determining the permit fee. Whether a specific project is bid at a cost above or below the computed value of construction does not affect the permit fee because the cost of related code enforcement activities is not directly affected by the bid process and results.

## BUILDING VALUATION

The building valuation data in Table 1 represent average valuations for most buildings. In conjunction with IBC Section 108.3, these data are offered as an aid for the building official for determining if the permit valuation is underestimated. Again it should be noted when using these data that these are “average” costs based on typical construction methods for each occupancy group and type of construction. The average costs include structural, electrical, plumbing, mechanical, interior finish, normal site preparation, architectural and design fees, overhead, and profit. The data represent a national average and must be modified using the appropriate regional cost modifier from Table 2.

### Permit Fee Multiplier

Determine the Permit Fee Multiplier:

1. Based on historical records, determine the total annual construction value which has occurred within the jurisdiction in the previous year.
2. Determine the percentage (%) of the building department budget expected to be provided by building permit revenue.

$$\text{Permit Fee Multiplier} = \frac{\text{Bldg. Dept. Budget} \times (\%)}{\text{Total Annual Construction Value}}$$

### Example

The building department operates on a \$300,000 budget, and it expects to cover 75 percent of that with building permit fees. The total annual construction value which occurred within the jurisdiction in the previous year was \$30,000,000.

$$\text{Permit Fee Multiplier} = \frac{\$300,000 \times 75\%}{\$30,000,000} = 0.0075$$

### Permit Fee

The permit fee is determined using the building gross area, the Square Foot Construction Cost, the Regional Cost Modifier and the Permit Fee Multiplier.

$$\text{Permit Fee} = \text{Gross Area} \times \text{Square Foot Construction Cost} \times \text{Regional Cost Modifier} \times \text{Permit Fee Multiplier}$$

### Example

Type of Construction: IIB

Group: B

Height: 2 stories

Area: 1st story = 8,000 sq. ft., 2nd story = 8,000 sq. ft.

Regional Cost Modifier (New York) = 1.03

Permit Fee Multiplier = 0.0075

1. Gross area: Business = 2 stories  $\times$  8,000 sq. ft. = 16,000 sq. ft.
2. Square Foot Construction Cost (see Table 1): B/IIB = \$106.56/ft<sup>2</sup>
3. Permit Fee: Business = 16,000 ft<sup>2</sup>  $\times$  \$106.56/ft<sup>2</sup>  $\times$  1.03  $\times$  0.0075 = \$13,171

### Important Points

- Tables 1 and 2 do not, in most cases, apply to additions, alterations or repairs to existing buildings. Because the scope of alterations or repairs to an existing building can vary so greatly, the Square Foot Construction Cost does not reflect accurate values for that purpose. However, the Square Foot Construction Cost can be used to determine the cost of an addition that is basically a stand-alone building which happens to be attached to an existing building. In the case of such additions, the only alterations to the existing building would involve the attachment of the addition to the existing building and the openings between the addition and the existing building.
- For purposes of establishing the Permit Fee Multiplier, the estimated total construction value for a given time period (1 year) is the sum of each building's value (gross area  $\times$  Square Foot Construction Cost  $\times$  Regional Cost Modifier) for that time period (e.g., 1 year).
- The Square Foot Construction Cost takes into account everything from site and foundation work to the roof structure and coverings, but does not include the price of the land on which the building is constructed. The price of the land does not affect the cost of related code-enforcement activities.

### ICC PLAN REVIEW FEE SCHEDULE

The plan review fee is based on the estimated construction value calculated in accordance with the Square Foot Construction Costs in Table 1 (gross area  $\times$  Square Foot Construction Cost). The Regional Cost Modifiers in Table 2 are not used when computing the estimated construction value for the purpose of determining plan review fees. For buildings with an estimated construction value up to \$3,000,000, the building plan review fee is 0.0013 of the estimated value (\$250 minimum). For buildings with an estimated construction value over \$3,000,000 up to \$6,000,000, the fee is \$3,900 plus 0.0005 of the estimated value over \$3,000,000. For buildings over \$6,000,000, the fee is \$5,400 plus 0.0004 of the valuation over \$6,000,000.

# BUILDING VALUATION DATA *(continued)*

Special consideration may be given in computing plan review fees for buildings such as large warehouses or indoor recreational facilities because of their plan review simplicity. Such considerations may also be given to buildings with repetitive floor plans such as high-rise buildings.

Structural reviews in areas of high seismic or wind risk will have an additional surcharge. Please contact your local ICC district office for more details.

The plan review fee for mechanical, plumbing and electrical reviews is computed at 25 percent of the building plan review fee for each discipline (\$250 minimum).

The plan review fee for accessibility and energy reviews is also computed at 25 percent of the building plan review fee for each discipline (\$250 minimum).

The sprinkler review fee is based on the number of sprinkler heads: 1–100, \$275; 101–200, \$325; 201–300, \$350; 301–400, \$375; 401–500, \$425; over 500, \$500 plus \$0.33 per sprinkler over 500. For hydraulically designed systems, multiply the fee by 2.

## Sample Plan Review Calculation

Type of Construction: IIIB	Group : B
Height: 3 stories, 35 feet	Area/Floor: 15,000 sq. ft.
Solution:	
1. Gross square footage: 3 stories × 15,000 square feet	= 45,000 sq. ft.
2. Compute estimated construction value:	
Square Foot Construction Costs	= \$94.65/sq. ft.
Estimated Construction Value :	
45,000 sq. ft. × \$94.65/ft <sup>2</sup>	= \$4,259,250
3. Compute Plan Review fee:	
Building: \$3,000,000 × 0.0013	= \$3,900
\$4,259,250 - \$3,000,000 = \$1,259,250	
\$1,259,250 × 0.0005	= <u>\$630</u>
Total Building Review Fee	= \$4,530
Mechanical, Plumbing, Electrical: (0.25)(\$4,530)	= \$1,132 each
Accessibility and Energy: (0.25)(\$4,530)	= \$1,132 each

Questions concerning the service should be directed to Christopher R. Reeves, P.E., Manager, Plan Review Services, (708) 799-2300 x309.

**Table 1. Square Foot Construction Costs<sup>a, b, c</sup>**

Group	(2003 International Building Code)	Type of Construction								
		IA	IB	IIA	IIB	IIIA	IIIB	IV	VA	VB
A-1	Assembly, theaters, with stage	160.69	153.29	149.76	143.55	133.59	132.90	138.98	123.75	119.25
	Assembly, theaters, without stage	148.41	141.02	137.48	131.28	121.31	120.63	126.71	111.47	106.98
A-2	Assembly, nightclubs	118.34	115.03	112.14	107.94	100.98	99.75	104.00	91.98	88.94
A-2	Assembly, restaurants, bars, banquet halls	117.34	114.03	110.14	106.94	98.98	98.75	103.00	89.98	87.94
A-3	Assembly, churches	149.66	142.27	138.73	132.52	122.51	121.82	127.96	112.67	108.17
A-3	Assembly, general, community halls, libraries, museums	119.71	111.78	107.24	102.03	91.08	91.39	97.46	81.24	77.74
A-4	Assembly, arenas	117.34	114.03	110.14	106.94	98.98	98.75	103.00	89.98	87.94
B	Business	119.85	115.54	111.79	106.56	95.15	94.65	102.31	84.79	81.61
E	Educational	128.37	124.05	120.50	115.17	106.24	103.73	111.36	94.92	91.38
F-1	Factory and industrial, moderate hazard	74.13	70.68	66.42	64.36	55.62	56.61	61.75	47.42	45.06
F-2	Factory and industrial, low hazard	73.13	69.68	66.42	63.36	55.62	55.61	60.75	47.42	44.06
H-1	High Hazard, explosives	69.75	66.29	63.04	59.97	52.43	52.42	57.36	44.23	N.P.
H234	High Hazard	69.75	66.29	63.04	59.97	52.43	52.42	57.36	44.23	40.88
H-5	HPM	119.85	115.54	111.79	106.56	95.15	94.65	102.31	84.79	81.61
I-1	Institutional, supervised environment	119.19	115.10	112.01	107.47	98.61	98.56	104.22	90.64	87.06
I-2	Institutional, incapacitated	200.36	196.04	192.30	187.07	175.32	N.P.	182.81	164.96	N.P.
I-3	Institutional, restrained	137.99	133.67	129.93	124.70	114.47	112.98	120.44	104.12	98.94
I-4	Institutional, day care facilities	119.19	115.10	112.01	107.47	98.61	98.56	104.22	90.64	87.06
M	Mercantile	88.15	84.83	80.95	77.74	70.26	70.02	73.81	61.26	59.22
R-1	Residential, hotels	120.33	116.24	113.15	108.61	99.80	99.75	105.41	91.83	88.25
R-2	Residential, multiple family	100.33	96.24	93.15	88.61	79.95	79.90	85.56	71.98	68.40
R-3	Residential, one- and two-family	96.19	93.52	91.22	88.71	84.51	84.30	87.22	80.46	74.68
R-4	Residential, care/assisted living facilities	119.19	115.10	112.01	107.47	98.61	98.56	104.22	90.64	87.06
S-1	Storage, moderate hazard	68.75	65.29	61.04	58.97	50.43	51.42	56.36	42.23	39.88
S-2	Storage, low hazard	67.75	64.29	61.04	57.97	50.43	50.42	55.36	42.23	38.88
U	Utility, miscellaneous	52.28	49.43	46.49	44.17	38.31	38.31	41.69	31.50	29.99

a. Private Garages use Utility, miscellaneous  
 b. Unfinished basements (all use group) = \$15.00 per sq. ft.  
 c. N.P. = not permitted

**Table 2. Regional Cost Modifiers**

State	Cost Modifier	State	Cost Modifier	State	Cost Modifier	State	Cost Modifier	State	Cost Modifier
Alabama	0.86	Hawaii	1.41	Massachusetts	1.11	New Mexico	0.90	South Dakota	0.94
Alaska	1.39	Idaho	0.97	Michigan	1.01	New York	1.03	Tennessee	0.88
Arizona	0.97	Illinois	1.05	Minnesota	1.06	North Carolina	0.87	Texas	0.85
Arkansas	0.84	Indiana	0.99	Mississippi	0.84	North Dakota	0.97	Utah	0.93
California	1.12	Iowa	1.01	Missouri	0.95	Ohio	0.99	Vermont	1.01
Colorado	0.99	Kansas	0.92	Montana	0.94	Oklahoma	0.86	Virginia	0.89
Connecticut	1.10	Kentucky	0.95	Nebraska	0.94	Oregon	1.06	Washington	1.09
Delaware	1.07	Louisiana	0.87	Nevada	1.05	Pennsylvania	1.01	West Virginia	1.02
Dist. of Columbia	1.06	Maine	0.98	New Hampshire	0.98	Rhode Island	1.10	Wisconsin	1.05
Florida	0.91	Maryland	0.97	New Jersey	1.13	South Carolina	0.85	Wyoming	0.96