



December 2023

CHINA REPORT

CONSTRUCTION PROCUREMENT AND
COST INTELLIGENCE

RLB
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Rider
Levett
Bucknall

OFFICES AROUND THE WORLD

AFRICA

Angola

Luanda

Botswana

Gaborone

Kenya

Nairobi

Mauritius

Quatre Bornes

Mozambique

Maputo

Namibia

Windhoek

Nigeria

Lagos

Seychelles

Victoria

South Africa

Cape Town

Durban

Pretoria

Stellenbosch

MIDDLE EAST

Qatar

Doha

Saudi Arabia

Riyadh

United Arab Emirates

Abu Dhabi

Dubai

ASIA

North Asia

Beijing

Chengdu

Chongqing

Guangzhou

Guiyang

Haikou

Hangzhou

Hong Kong

Macau

Nanjing

Nanning

Seoul

Shanghai

Shenyang

Shenzhen

Wuhan

Wuxi

Xian

Zhuhai

South Asia

Bacolod

Bohol

Cagayan de Oro

Cebu

Clark

Davao

Ho Chi Minh City

Iloilo

Jakarta

Kuala Lumpur

Laguna

Metro Manila

Phnom Penh

Singapore

Yangon

Maldives

Hulhumale

India Alliance

Bangalore

EUROPE

United Kingdom

Belfast

Birmingham

Bristol

Cambridge

Cardiff

Leeds

Liverpool

London

Manchester

Sheffield

Thames Valley

Warrington

Euro Alliance

Austria

Belgium

Bulgaria

Croatia

Czech Republic

Denmark

France

Germany

Greece

Hungary

Ireland

Italy

Luxembourg

Montenegro

Netherlands

Norway

Poland

Portugal

Romania

Serbia

Spain

Sweden

Turkey

OCEANIA

Australia

Adelaide

Brisbane

Cairns

Canberra

Coffs Harbour

Darwin

Gold Coast

Melbourne

Newcastle

Perth

Sunshine Coast

Sydney

Townsville

New Zealand

Auckland

Christchurch

Dunedin

Hamilton

Palmerston North

Queenstown

Tauranga

Wellington

AMERICAS

Caribbean

St. Lucia

North America

Boston

Calgary

Chicago

Denver

Hilo

Honolulu

Las Vegas

Los Angeles

Maui

New York

Phoenix

Portland

San Francisco

San Jose

Seattle

Toronto

Tucson

Waikoloa

Washington DC

America Alliance

Mexico City

ASSESSMENT METHOD OF PRELIMINARIES

Preliminaries (also known as Expenses of Preliminaries) refer to the expenses of temporary works incurred during the pre-construction, construction, and post-construction phases of permanent works. Generally, preliminaries encompass a range of expenses that cover various aspects such as environmental protection, HSE-compliant construction, temporary facilities, nighttime construction, secondary handling, mobilization & demobilization and dismantling of large-scale machinery and equipment, tools, scaffolding, insurance, and bonds.



Main Contents of Preliminaries

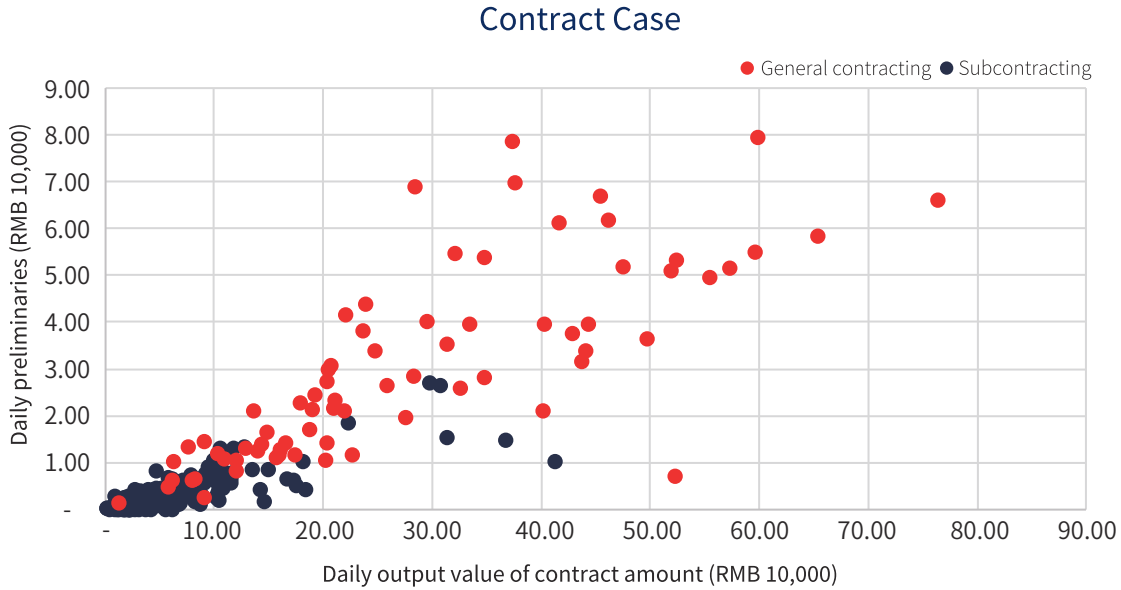
Preliminaries cover a wide range of contents, the main purpose of which is to ensure the smooth progress of the construction project, improve the project quality, and ensure work safety. The preliminaries primarily consist of something pertaining to the contract period, including aspects such as manpower, machinery and scaffolding, temporary facilities, temporary water and electricity supply, as well as insurance. Please refer to the table below for details:

S/N	Description	Content	Conventional pricing method of bidders
1	Manpower	Management personnel, engineering personnel, business personnel, administrative personnel, security personnel, etc.	Monthly * number of personnel subject to the construction organization design
2	Machinery and tools	Tower cranes, hoists, construction elevators, etc.	Day/month * number of units subject to the construction organization design
3	Scaffolding	Steel pipes, fastenings, springboards, safety nets, etc.	Day/month * quantity subject to the construction organization design
4	Temporary facilities	Management personnel dormitories, workers' canteens, offices, etc.	Monthly * unit price subject to the construction organization design
5	Temporary water and electricity supply	Supporting devices, erection, and connection of water and electricity supply	Estimated consumption * unit price + materials and installation costs required for connection subject to the construction organization design and subcontracts
6	Insurance and bonds	Performance bonds, engineering insurance, etc.	Determined subject to the project construction period and corresponding insurance companies

ASSESSMENT METHOD OF PRELIMINARIES

Data Statistics

The following chart presents the contract data of approximately 300 new projects in the past 5 years, in which the daily preliminaries and contract output value are averagely allocated according to the contract period. The price levels for all data have been updated to the third quarter of 2023.



Under normal circumstances, there is a relatively fixed percentage relationship between the average daily preliminaries incurred and the daily contract output achieved. However, with the detailed treatment of preliminaries content by different domestic project owners and the division based on different cost criteria, there can be significant fluctuations in the expenses of preliminaries, even in cases where the output value is the same. Therefore, the percent evaluation method commonly accepted by the industry in the past needs to be further refined ^(Note 1). The contract data in the chart provides another method for cost consultants to assess the preliminaries of different projects.

Conclusion

As different project owners require refining the Bill of Quantities, the contents of the preliminaries are also becoming more and more comprehensive. In assessing the target projects, the cost consultants need to fully consider the characteristics of the projects and make reference to the data and experience from similar past project cases to enhance the accuracy of cost evaluation, catering to market demands.

Note 1: For example, scaffolding may require the breakdown of pipe and coupling calculations. For instance, the quantity (linear meter) of $\phi 45 \times 3.5$ steel pipes can be calculated according to the construction plan, while the number of couplings should be calculated based on the specifications such as rotation, right angles, and butt joints. If the expenses cannot be estimated or calculated from the construction organization design, they should be estimated or calculated through benchmarking against some items, such as temporary inspection costs, cooperation costs with government and relevant departments, and material process testing and inspection costs. For preliminaries of some projects, each cost item is estimated based on the unit price per square meter of construction. This approach can apply to standardized-scale residential projects, but for complex commercial complexes, the data should be carefully analyzed and adjusted when used.

IMPACT OF ASSESSMENT STANDARD FOR GREEN BUILDING ON CONSTRUCTION COST

To achieve the goals of CO₂ emissions peak before 2023 and carbon neutrality before 2060, the Chinese government's requirements for environmental protection and sustainable development are increasing. More and more property developers are also intensifying their efforts to promote green buildings and sustainable development. As a result, both the traditional business models of real estate companies and the construction project costs are being influenced to varying degrees.

Local governments have issued various incentives and subsidy policies to implement green buildings and sustainable development in the real estate industry. Refer to the following for details:

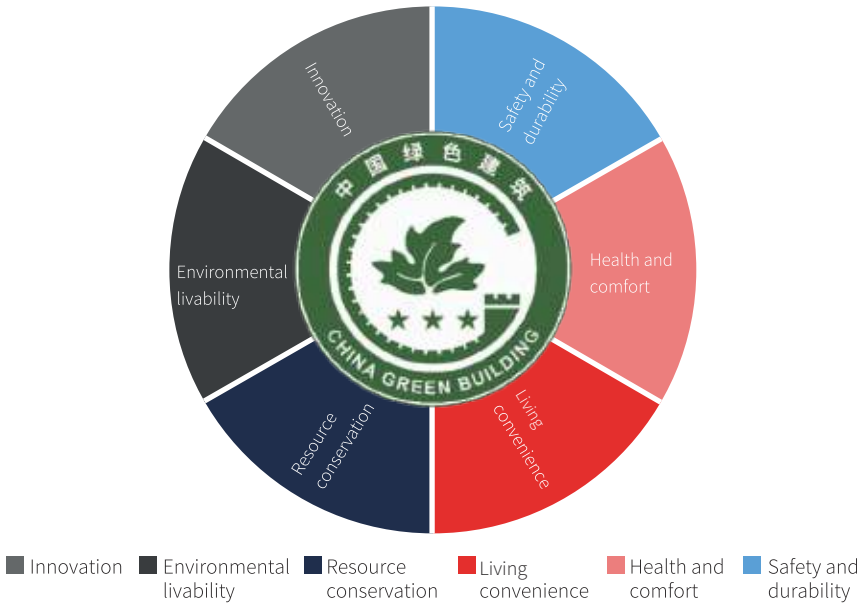
S/N	Province/City	Policy Document	Incentives and Subsidies
1	Beijing	Interim Measures of Beijing Municipality for the Management of Municipal Incentive Funds for Prefabricated Buildings, Green Buildings, and Green Eco-Demonstration Zone Projects	<ul style="list-style-type: none"> · Reward of RMB 50/m² for projects with 2-star green building label · Reward of RMB 80/m² for projects with 3-star green building label · Maximum reward for a single project not exceeding RMB 8 million.
2	Shanghai	Special Support Measures of Shanghai Municipality for Building Energy Conservation and Green Building Demonstration Projects	<ul style="list-style-type: none"> · Reward of RMB 50/m² for projects with 2-star green building label · Reward of RMB 100/m² for projects with 3-star green building label · Reward of RMB 60/m² for AA-grade prefabricated building demonstration projects · Reward of RMB 100/m² for AAA-grade prefabricated building demonstration projects
3	Guangdong	The 14 th Five-Year Plan for Building Energy Conservation and Green Building Development in Guangdong Province	<ul style="list-style-type: none"> · Increased floor area resulting from adopting green buildings and prefabricated technical measures as required is not included in the calculation of the plot ratio. · For purchases of owner-occupied residential houses with a star-level green building label using housing accumulation fund loans, the loan amount can be increased by up to a maximum of 20% in proportion.
4	Zhejiang	Zhejiang Green Building Regulations and Implementation Opinions on the Green Building Development and Building Industrialization (issued by ZZBF)	<ul style="list-style-type: none"> · R&D expenses for the green building development are eligible for pre-tax weighted deduction and other preferential policies. · For purchases of houses with a 2-star green building label using housing accumulation fund loans, the loan amount can be increased by up to a maximum of 20%.
5	Hubei	Several Opinions on Promoting the Stable and Healthy Development of Hubei's Real Estate Market	<ul style="list-style-type: none"> · Buildings with 1-star, 2-star, or 3-star green building labels will be granted floor area ratio rewards according to 0.5%, 1%, and 1.5% of the total area.
6	Hunan	Regulations of Hunan Province on the Green Building Development	<ul style="list-style-type: none"> · Appropriate financial rewards to buildings with 2-star green building label · For purchases of commercial houses with a 2-star or above green building label using housing accumulation fund loans, the loan amount will rise by a certain proportion.
7	Liaoning	Liaoning Green Building Regulations	<ul style="list-style-type: none"> · Increased floor area resulting from adopting wall insulation technology is not included in the calculation of the plot ratio. · For green buildings using clean energy utilization technologies such as ground source heat pump technology for heating and cooling purposes, the electricity consumption of the heating and cooling system can be calculated based on the residential electricity price as a reference.
8	Heilongjiang	Notice of the General Office of Heilongjiang Provincial People's Government on Forwarding the Implementation Plan for Green Building Action in Heilongjiang Province by the Department of Housing and Urban-Rural Development of Heilongjiang Province and Heilongjiang Development and Reform Commission	<ul style="list-style-type: none"> · Relevant enterprises that have acquired projects with green building labels will receive priority or bonus points in credit evaluations and qualifications upgrading. · Supporting financial institutions to give consumers buying green residences appropriate preferential interest rates on house purchase loans

The above content is extracted from relevant government websites such as provincial/municipal housing and urban-rural development commissions/construction departments/construction bureaus

IMPACT OF ASSESSMENT STANDARD FOR GREEN BUILDING ON CONSTRUCTION COST

In the above policy documents, most measures take the Assessment Standard for Green Building as the evaluation criterion of projects. The Assessment Standard for Green Building clarifies the evaluation requirements for construction projects under various control indicators. The Standard ^(Note 1) is used to calculate the overall score of each project. The project is then classified into three-star, two-star, or one-star criteria based on the final total score, with the highest standard being three-star and the lowest being one-star.

Assessment Standard for Green Building



Impact of Different Evaluation Levels on Construction Cost

The assessment standard for green building for construction projects can be improved by adjusting the design proposal during the early design stage. In day-to-day work, the most frequently asked question is the impact on construction costs when upgrading a project to a three-star standard. To accurately assess this, it is essential to first understand the scoring status of each project during the initial design phase. Through collaborative efforts among various consultants, the optimal solutions can be selected and matched based on the project's actual needs and cost-effectiveness.

Note 1: The Assessment Standard for Green Building mainly assesses 6 aspects of construction projects: innovation, safety and durability, health and comfort, living convenience, resource conservation, and environmental livability. If a project's total score reaches 60, 70 and 85 points, it will be rated as one-star, two-star and three-star levels respectively. For the specific scoring calculation method, please refer to Article 3.2 - Assessment and Grading of the Assessment Standard for Green Building.



Image/ Irrelevant to the following case study

IMPACT OF ASSESSMENT STANDARD FOR GREEN BUILDING ON CONSTRUCTION COST

The following is a case study of an office building project. The original project received a two-star standard in terms of the initial design scores. To enhance the environmental image of the landmark building and set a benchmark for the company, the owner wishes to upgrade the project to a three-star standard. Through the joint efforts of all parties, the incremental construction cost of the final scheme is as follows:

Evaluation index	Target score (Three-star)	Points to be increased based on the original design	Estimated additional cost (RMB 10,000)	Cost-effectiveness	Conditions to be met
Safety and durability	81	10	20	High	Improve the quality of hardware, valves and taps, such as changing material brands
Health and comfort	71	9	20	High	The concentration of pollutants such as ammonia, formaldehyde, benzene, total volatile organic compounds, and hydrogen shall be lower than 20% of the limit specified in the current national standard - Indoor Air Quality Standards (GB/T18883); The annual average indoor PM2.5 concentration shall be not higher than 25µg/m ³ , and the annual average indoor PM10 concentration not higher than 50µg/m ³ .
Living convenience	62	7	30	High	Construct fitness tracks and add fitness equipment and fitness space
		2	40	Medium	Add water quality monitoring systems
Resource conservation	134	5	300	Medium	The thermal performance of the building envelope shall be improved by 15% compared with that specified in the current relevant national design standards for energy efficiency of buildings or the heating and air conditioning load of buildings shall be reduced by 15% (to be realized through the insulation performance of exterior walls or curtain wall ratio).
		3	60	Medium	The electricity consumption to transferred heat quantity ratio of the hot water circulating pump in the central heating system and electricity consumption to transferred cooling (heat) quantity ratio of the circulating water pump in the air conditioning cold and hot water system are 20% lower than those specified in the current national standard - Design Code for Heating Ventilation and Air Conditioning of Civil Buildings (GB50736).
		6	8	High	Water-saving irrigation system is adopted, based on which a soil moisture sensor is arranged. Water-saving control measures are implemented such as the automatic shutdown of devices on rainy days, or planting plants that do not need permanent irrigation
Innovation	34	10	120	High	Building Information Modeling (BIM) technology is applied.

Conclusion

Different points-increasing projects have varying impacts on project costs. Owners should screen and select projects with higher cost-effectiveness and relatively easy implementation based on information provided by consultants to achieve the points-increasing goal. With the rapid development of green buildings in China, new green and energy-saving materials, equipment and technologies have also been widely applied, leading to a decreasing trend in project costs. As national and local governments give financial subsidies for green buildings, part of the incremental costs can be offset. Cost consultants undoubtedly play an important role in assessing the relationship between green building standards and project costs. Cost consultants need to provide owners with cost-effective and high-pass-rate reasonable suggestions at different stages for their reference.

AVERAGE WHOLESALE PRICES OF SELECTED BUILDING MATERIALS IN SELECTED CITIES OF CHINA (RMB)

(All rates described are at 3rd Quarter 2023 Prices)

Building materials		Beijing	Chengdu	Chongqing	Guangzhou	Hangzhou	Nanjing	Shanghai	Shenyang	Shenzhen	Tianjin	Wuhan	Xian	
1	Reinforcement bar HPB300 10mm	¥/t	4,984	4,067	4,063	4,638	4,334	4,149	4,398	4,252	4,297	4,168	4,063	4,133
2	Reinforcement bar HRB400E 10mm	¥/t	4,731	4,058	4,060	4,651	4,219	4,347	4,192	4,091	4,299	4,041	3,954	3,990 HRB400
3	Reinforcement bar HRB400E 25mm	¥/t	4,337	3,855	3,853	4,534	4,064	4,197	4,052	3,936	4,110	3,856	3,852	3,990 HRB400
4	Reinforced concrete Grade C30 5-25mm aggregates P8 waterproofing (exclude pumping fee)	¥/m³	460	518 include pumping fee	340 include pumping fee, non-waterproof	588	488 include pumping fee	477	638	304 non-waterproof	589	466	465	595 include pumping fee
5	Timber Formwork local commonly used materials	¥/m³	2,305	3,303	1,870	1,523	1,780	1,862	-	2,008	2,614	2,112	2,203	2,182
6	Portland cement Grade 42.5(bulk)	¥/t	425	440	390 bagged	479	363	433	433	315	442	498	347	517
7	Sand Rough/mixed	¥/t	101	141	200 extra fine sand	193	150 Gross sand	219 Coarse sand	187	66	152	94	148	172
8	Hot rolled equal -leg angle steel 45-50x3-6mm	¥/t	4,597 Q235B 50	4,257 Q235 L50x50x5	4,323 Q235B 4-8mm	4,558	4,348 Q235B	4,364 Equal-leg angle steel	4,168 Equal-leg angle steel 36-40 x 3-5mm	3,899	4,592 Angle steel	3,818	4,075 Equal-leg angle steel 45-50 x 3-5mm	4,387
9	Galvanized steel sheet 1.0mm	¥/t	5,918	6,554 0.5 - 1.2mm	5,237 Galvanized coil, 1.0x1250xC	5,243	5,417	4,911 Hot dip galvanized steel sheet Q235B	4,062 Hot rolled steel sheet Q235 δ≥2.0	5,149 Continuously hot-dip zinc- coated steel sheet 1.00-2.5 Z275 (two-sided)	5,627	5,003	4,775 Hot rolled steel sheet Q235 δ≥1.0	5,413
10	Seamless steel pipe 108x3.5-4mm	¥/t	5,559 108 x 6mm	7,044	5,033 108 x 4.5mm	5,163	5,967 108x4-8mm	5,102	5,756 108x3-4.5mm #20	4,983 68-159	5,530 Seamless steel pipe	4,885	4,845 108x4.5-5mm	5,340
11	Galvanized welded steel pipe 20mm 26.75x2.75mm	¥/t	6,187	6,658	5,400 Hot dip galvanized steel pipe Q235/Q195 DN15-20	6,875 Galvanized water, gas transportation pipe	5,652 20*2.8mm	5,646 Hot dip galvanized steel pipe DN15~DN32	4,839 Φ20 mm	5,330 DN25~DN32	5,810 Hot dip galvanized steel pipe	5,280	5,702 20x2.75mm	5,203
12	Hot-rolled steel channel Grade a steel #16-18mm	¥/t	4,656	4,197 Q235 #16mm	4,343 Q235B 16-22#	4,650	4,317 Q235	4,136 Steel channel	4,323 Q235 16#	3,970 5~30#	4,659 Steel channel	3,838	4,126	4,247
13	Glass FG	¥/t							1,839					
14	Aluminium al	¥/t							18,785					
15	Copper cu	¥/t							69,187					
16	Dry-mixed plastering mortar DPM10	¥/t	308	435	290	499	343	419	406	376	-	339	317	392
17	Prefabricated laminated slab 150kg/m³	¥/m³	3,387 140kg/m³	2,267 This information price is according to concrete 350 yuan /m³, reinforcement 3 yuan /kg	2,700 140kg/m³	3,335 130-160kg/m³	2,591	3,042	3,421	-	-	3,803 140kg/m³	3,003	4,083
18	APP Modified Bitumen Waterproofing membrane 3mm PY	¥/m²	39 SBS II PY PE PE3	54 APP-I-PY-PE-PE4.0	27 PY-I-PE/D-3.0mm	34	29 PY-I-D-3mm	38	29 APP-I-PY-PE	36 SBS 3mm-25°C	34 SBS 3mm	37 SBS 3mm	27	-
19	JS Cementitious Waterproofing Coatings Type I two-component	¥/kg	15	18 JS-II	9 JS-II (two-component)	14	8	8	-	9	12	14	21 Noncurable rubber modified asphalt waterproofing coating	-

Notes:

- The above prices (except items 13, 14, 15) are based on either guiding price from websites or periodicals published by local construction cost management office ;
- Items 13 in the above table are based on closing price by the 10th trading day of month published by Zhengzhou Commodity Exchange (www.czce.com.cn/cn/index.htm), as a general reference price for all areas;
- Items 14 & 15 in the above table are based on closing price by end of month published by Shanghai Futures Exchange (www.shfe.com.cn), as a general reference price for all areas;
- "-" means local price is not available;
- The unit price in the above table is VAT.

AVERAGE DAILY WAGES OF WORKERS FOR CONSTRUCTION INDUSTRY IN SELECTED CITIES OF CHINA (RMB)

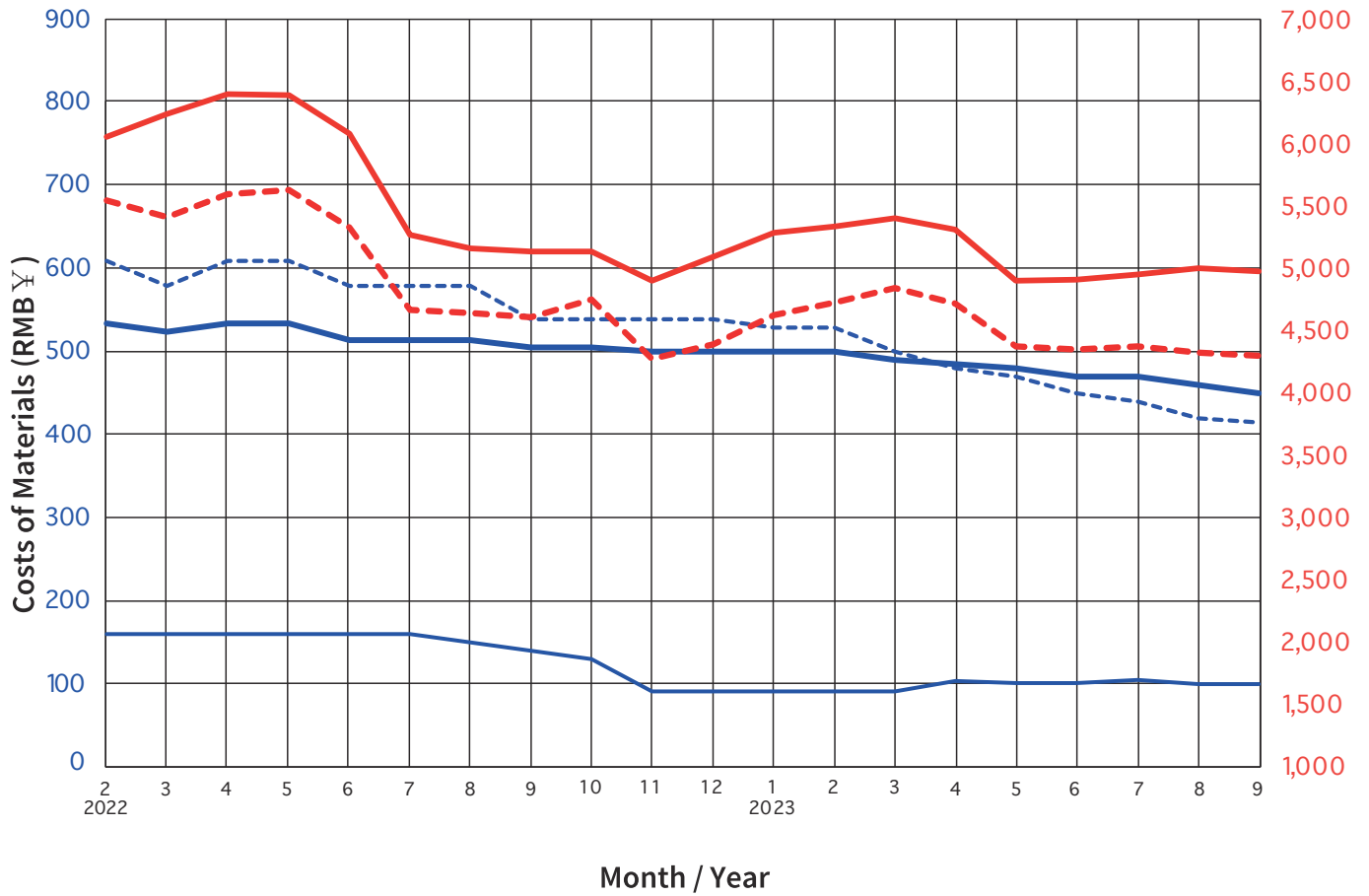
(All rates described are at 3rd Quarter 2023 Prices)

Selected Trades (according to the general public standards)		Beijing	Chengdu	Chongqing	Guangzhou	Hangzhou	Nanjing	Shanghai	Shenyang	Shenzhen	Tianjin	Wuhan	Xian
1	Joiner (construction)	392	351	278	310	307	302	360	281	401 Decoration Joiner	349	284	350
2	Painter	356	257	247	292	276	275	390	265	351	306	225	350
3	Formwork erector	394	326	294	313	316	304	370	269	401	320	284	380
4	Plasterer (normal)	359	277	238	292	267	250	385	281	350	321	194	300
5	Bar Bender	373	307	277	313	307	294	370	235	371	318	264	320
6	Bricklayer (masonry)	365	281	239	299	316	267	365	276	357	318	250	280
7	E&M worker	341	252	237	292	263 Metal worker	256 Metal worker	380	260	357 Average plumber/ electrician	293	233	300
8	Concretor	320	273	244	292	260	264	365	187	348	293	236	280
9	Waterproofing worker	375	239	232	284	278	272	360	264	329	320	214	300
10	Plasterer (Surface)	439	286	264	306	282	275	420	309	401	342	233	350
11	Scaffolder	395	312	284	313	328	278	420	289	400	327	269	350
12	Welder	378	311	242	299	309	270	400	267	363	312	233	280
13	Rigger	314	252	201	288	271	260	350	279	335	274	211	270
14	Glazier	359	252	222	295	261	253	360	233	350	278	194	380
Average daily wage (1-14)		369	284	250	299	289	273	378	264	365	312	238	321

Notes:

1. Various types of daily wage are based on construction market price, which are updated in real time. The data covers commercial, residential and industrial development project; the rate is based on the weighted daily rates received from 2-4 contractors;
2. Labour costs include: basic wage, allowances, benefits, etc. i.e. all expense payable to workers;
3. Daily rate is based on 8 hours per day, excluding overtime allowance;
4. All trades are based on general labour.

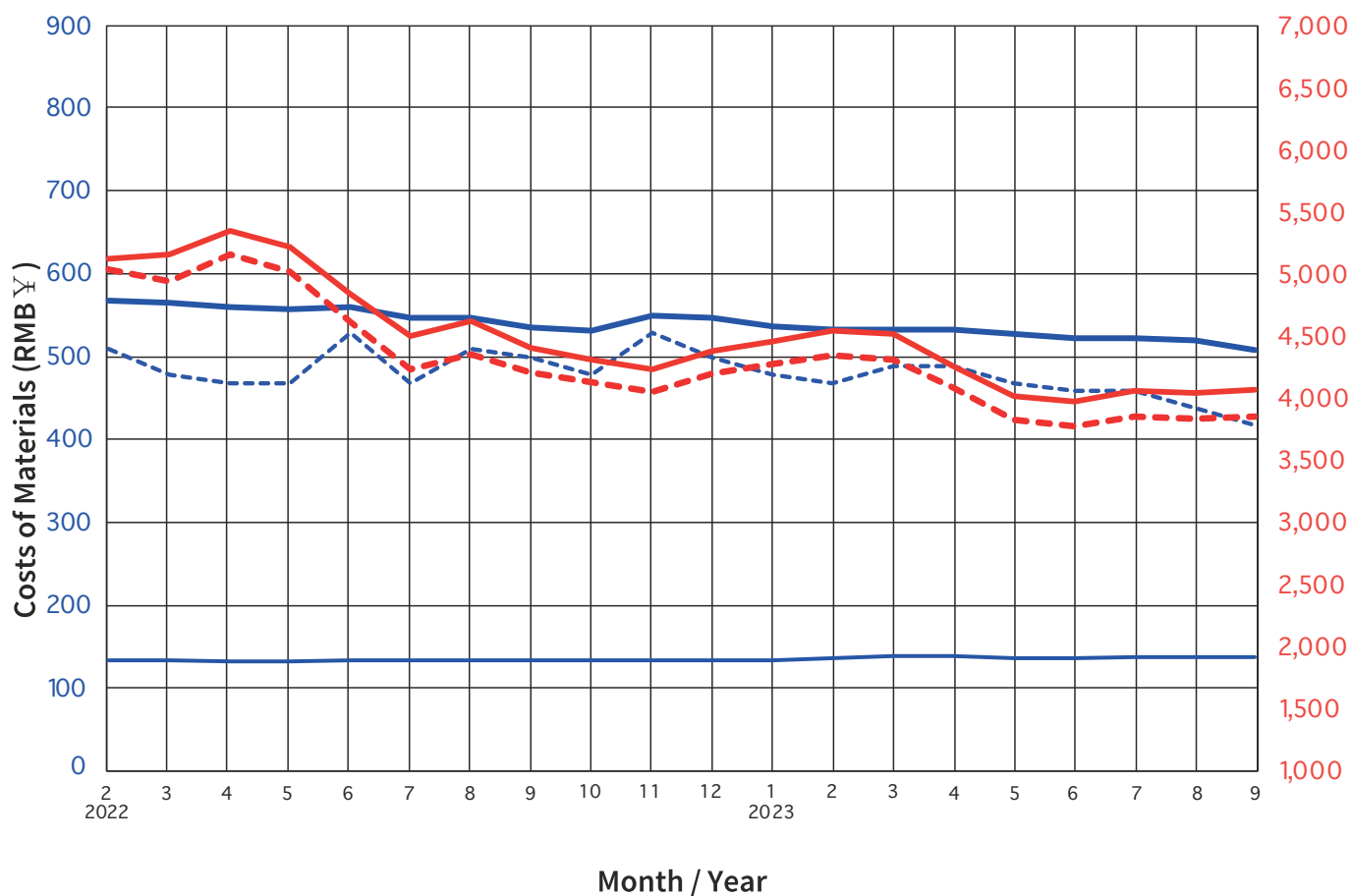
Wholesale Prices of Selected Building Materials in Beijing



Building Materials			Wholesale Prices of Selected Building Materials in Beijing																			
			2022												2023							
			Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Reinforcement bar HPB300 10mm	¥/t	—	6,066	6,246	6,406	6,403	6,093	5,273	5,166	5,140	5,143	4,910	5,096	5,290	5,346	5,413	5,320	4,910	4,913	4,960	5,010	4,983
Reinforcement bar HRB400E 25mm	¥/t	---	5,552	5,422	5,602	5,636	5,332	4,669	4,649	4,612	4,756	4,279	4,396	4,632	4,729	4,849	4,726	4,376	4,356	4,382	4,326	4,302
Portland cement Grade 42.5 (bulk)	¥/t	610	580	610	610	580	580	580	540	540	540	540	530	530	500	480	470	450	440	420	415
Reinforced concrete Grade C30 5-25mm aggregates P8 waterproofing (exclude pumping fee)	¥/m ³	—	535	525	535	535	515	515	515	505	505	500	500	500	500	490	485	480	470	470	460	450
Sand (rough/mixed)	¥/t	—	160	160	160	160	160	160	150	140	130	90	90	90	90	90	103	101	100	104	99	99

(Source: www.bjzj.net)

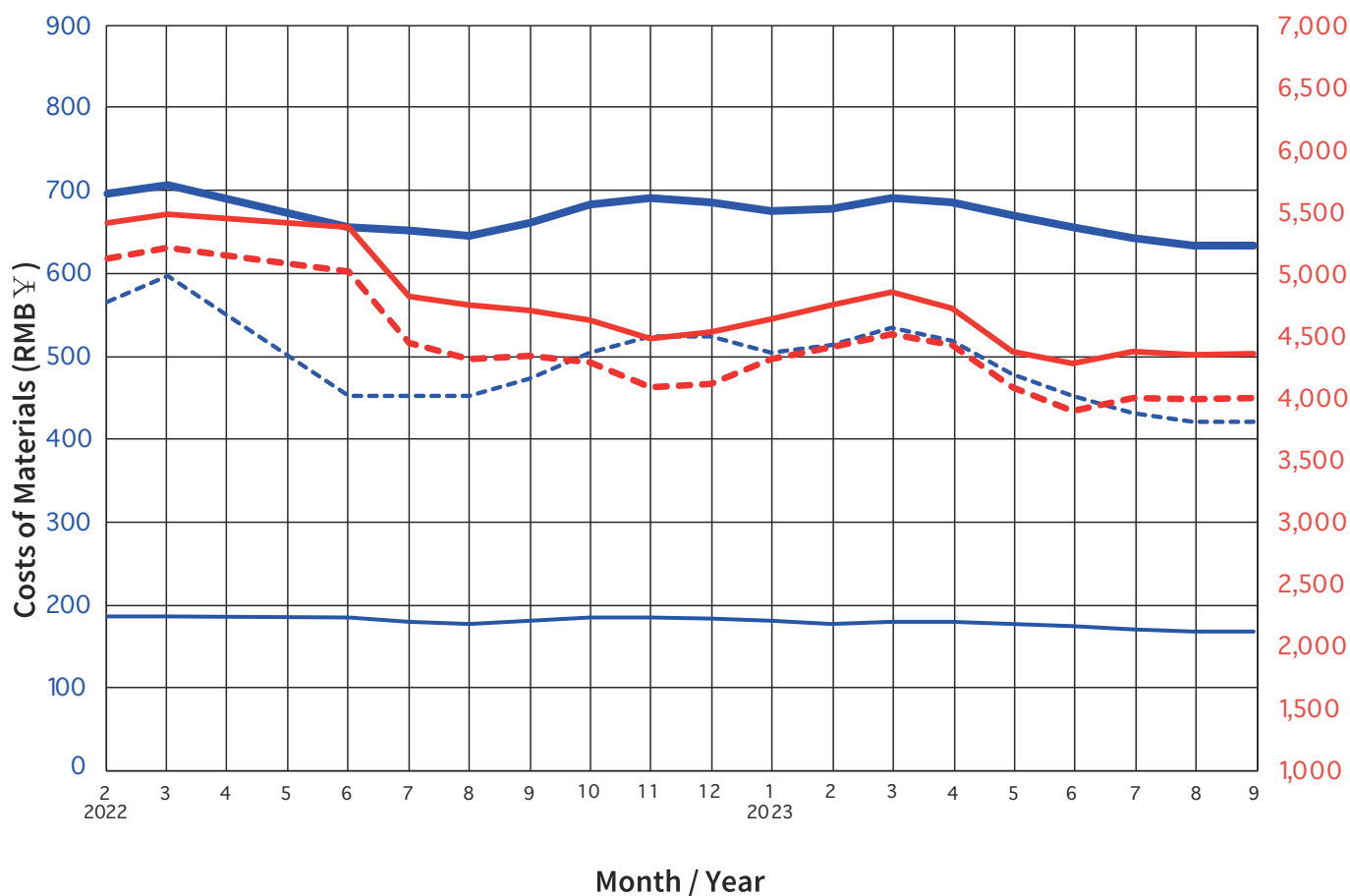
Wholesale Prices of Selected Building Materials in Chengdu



Building Materials		Wholesale Prices of Selected Building Materials in Chengdu																				
		2022												2023								
		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Reinforcement bar HPB300 10mm	¥/t	—	5,124	5,160	5,350	5,218	4,840	4,511	4,623	4,416	4,322	4,238	4,390	4,465	4,554	4,527	4,270	4,031	3,982	4,071	4,053	4,077
Reinforcement bar HRB400E 25mm	¥/t	⋯	5,039	4,940	5,156	5,019	4,618	4,240	4,363	4,217	4,142	4,061	4,207	4,287	4,355	4,319	4,100	3,841	3,788	3,861	3,843	3,862
Portland cement Grade 42.5 (bulk)	¥/t	⋯	510	480	470	470	530	470	510	500	480	530	500	480	470	490	490	470	460	460	440	420
Reinforced concrete Grade C30 5-25mm aggregates P8 waterproofing (exclude pumping fee)	¥/m ³	—	569	566	561	558	561	548	548	536	533	550	547	537	534	534	534	529	524	524	521	510
Sand (rough/mixed)	¥/t	—	138	138	137	137	138	138	138	138	138	138	138	138	138	140	143	143	140	140	141	141

(Source: www.sceci.net)

Wholesale Prices of Selected Building Materials in Shanghai



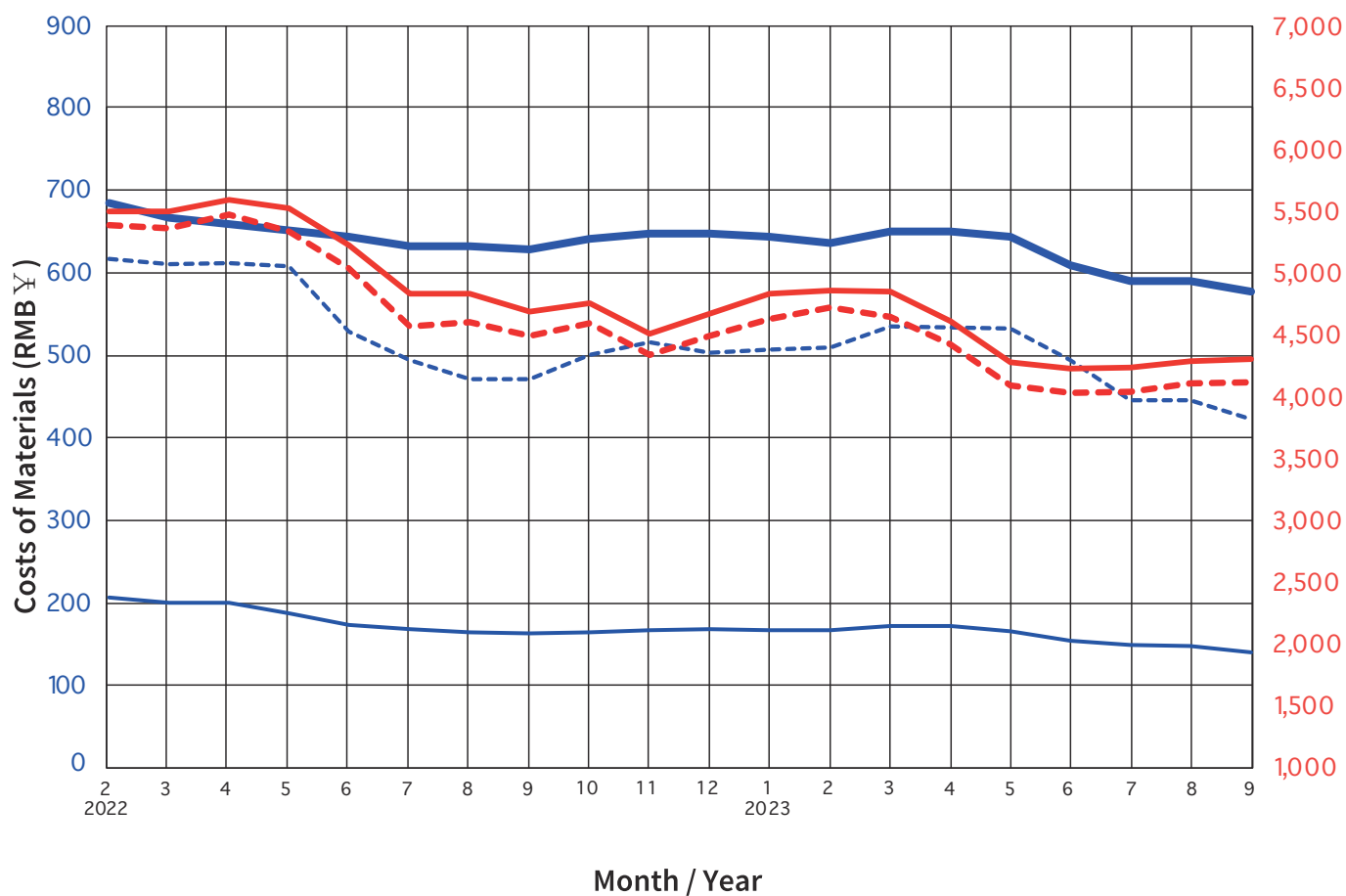
Building Materials		Wholesale Prices of Selected Building Materials in Shanghai																			
		2022										2023									
		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Reinforcement bar HPB300 10mm	¥/t	5,410	5,480	Not Issued	Not Issued	5,380	4,840	4,775	4,730	4,655	4,515	4,560	4,660	4,770	4,875	4,750	4,410	4,320	4,415	4,385	4,395
Reinforcement bar HRB400E 25mm	¥/t	5,130	5,220	Not Issued	Not Issued	5,030	4,480	4,350	4,375	4,330	4,135	4,165	4,350	4,450	4,545	4,460	4,140	3,955	4,055	4,045	4,055
Portland cement Grade 42.5 (bulk)	¥/t	570	600	Not Issued	Not Issued	460	460	460	480	510	530	530	510	520	540	525	485	460	440	430	430
Reinforced concrete Grade C30 5-25mm aggregates P8 waterproofing (exclude pumping fee)	¥/m ³	696	706	Not Issued	Not Issued	656	653	647	662	683	690	686	675	678	690	685	670	657	644	635	635
Sand (rough/mixed)	¥/t	204	204	Not Issued	Not Issued	202	198	195	199	203	203	201	199	195	198	198	195	192	189	186	186

Note: The price was not issued for April and May 2022, Since March 2022, Covid 19 Omicron variant has created pandemic in Shanghai.

On 1st April, local government adopted lockdown policy which has been in effect through the end of May.

(Source: <https://ciac.zjw.sh.gov.cn/>)

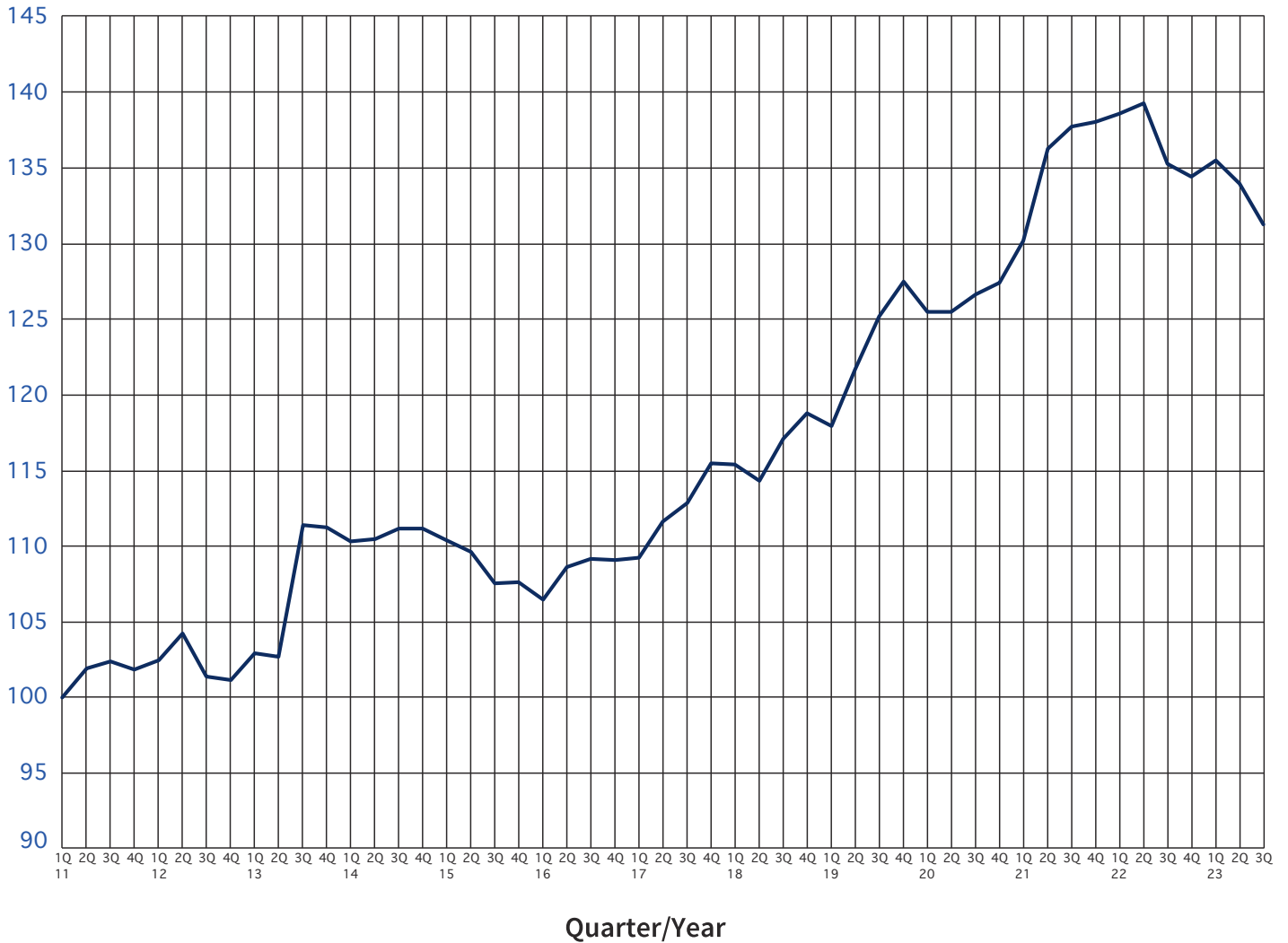
Wholesale Prices of Selected Building Materials in Shenzhen



Building Materials		Wholesale Prices of Selected Building Materials in Shenzhen																				
		2022												2023								
		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Reinforcement bar HPB300 10mm	¥/t	—	5,507	5,502	5,601	5,533	5,232	4,845	4,845	4,700	4,770	4,523	4,685	4,851	4,873	4,864	4,624	4,302	4,247	4,255	4,311	4,326
Reinforcement bar HRB400E 25mm	¥/t	---	5,392	5,369	5,480	5,348	5,053	4,587	4,620	4,506	4,609	4,354	4,511	4,647	4,739	4,664	4,439	4,116	4,057	4,059	4,133	4,139
Portland cement Grade 42.5 (bulk)	¥/t	619	613	614	610	531	497	475	475	504	519	506	510	513	538	536	535	497	449	449	427
Reinforced concrete Grade C30 5-25mm aggregates P8 waterproofing (exclude pumping fee)	¥/m ³	—	686	668	661	653	645	634	634	630	643	650	650	645	638	652	652	645	612	593	593	580
Sand (rough/mixed)	¥/t	—	212	206	206	193	179	174	171	170	171	174	174	173	173	178	178	172	161	155	154	147

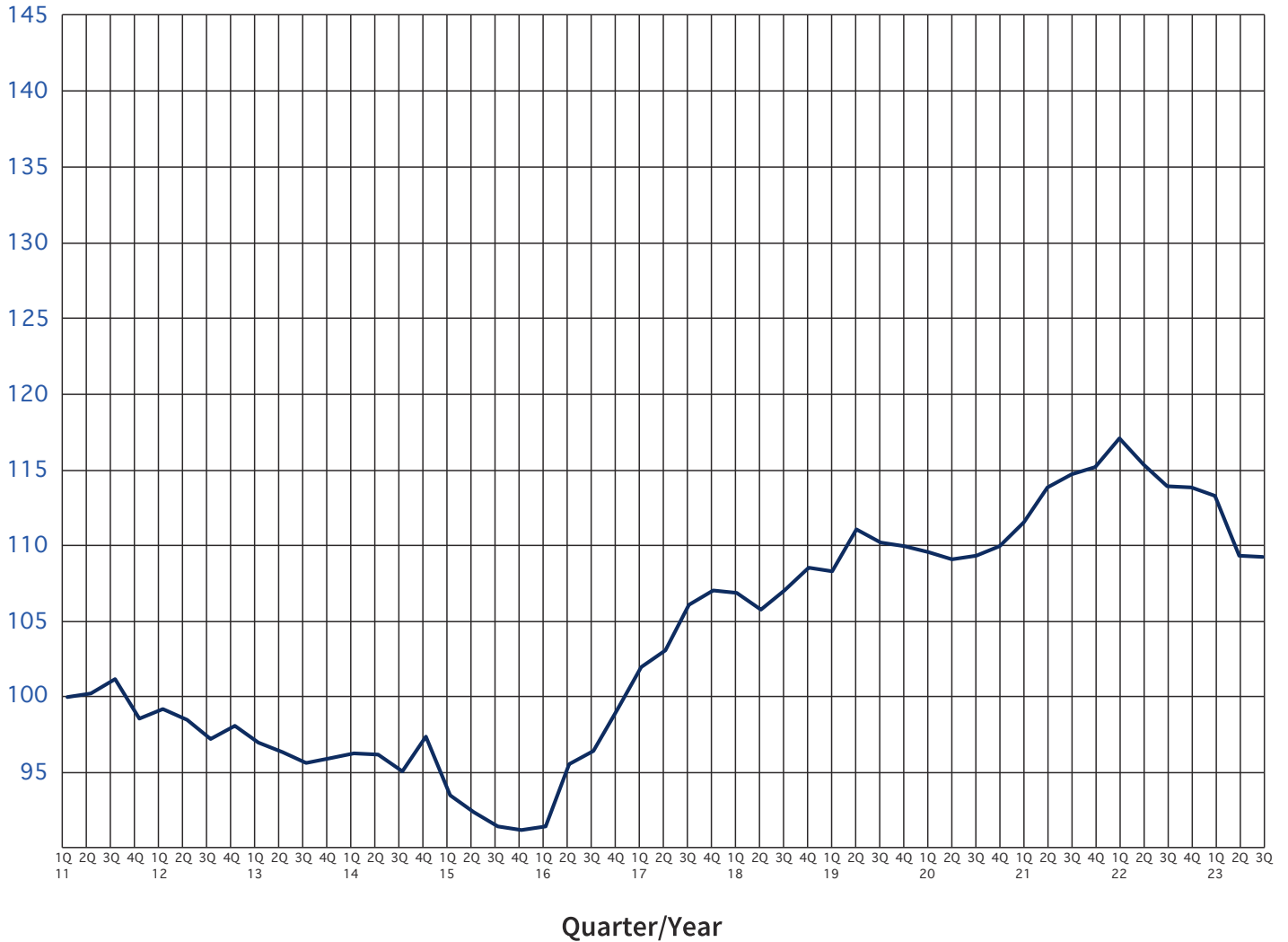
(Source: www.szcost.cn)

Construction Cost indices in Beijing



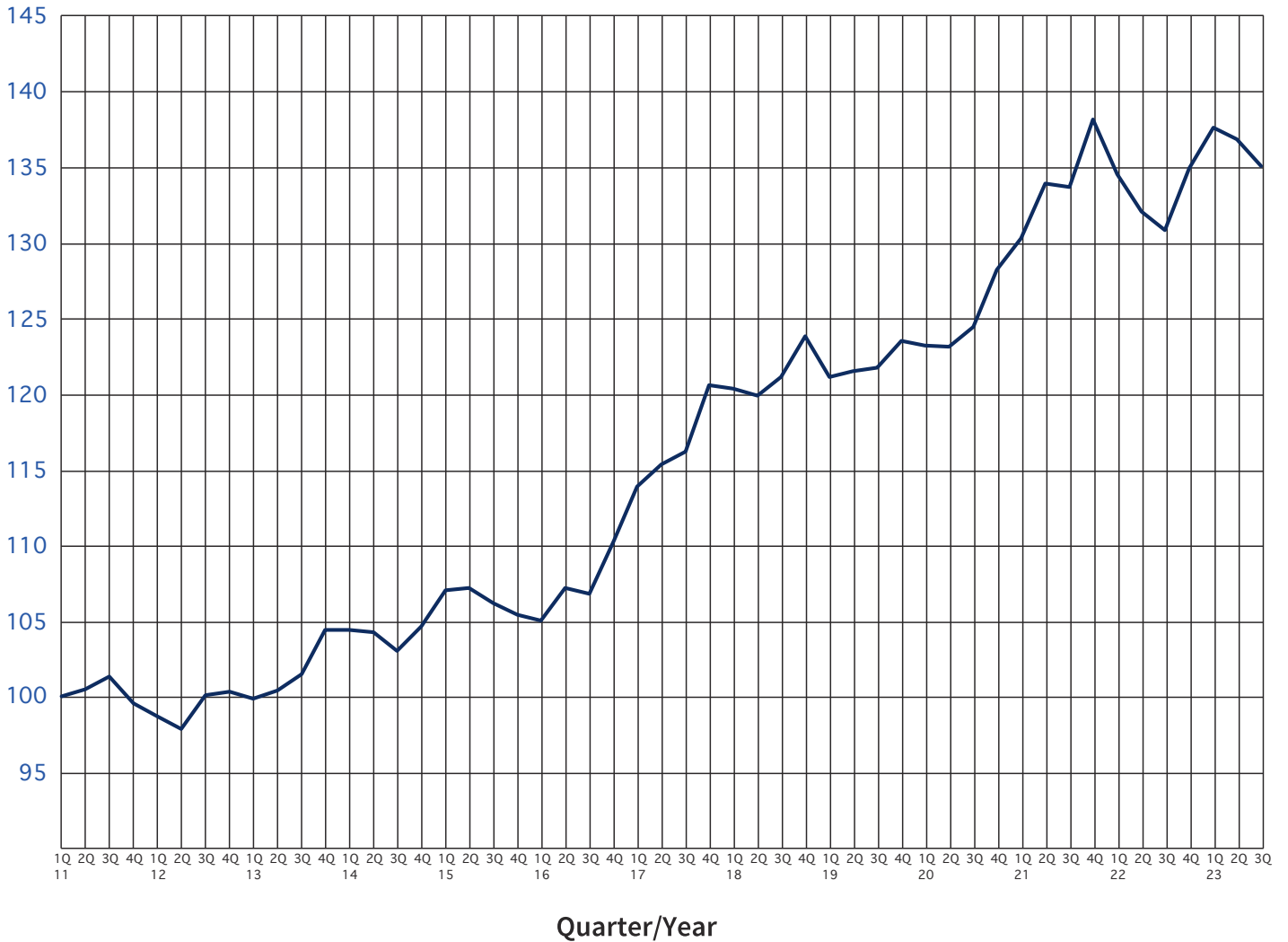
Quarter	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
1	100.00	102.41	102.86	110.31	110.35	106.41	109.21	115.32	117.90	125.38	130.11	138.45	135.37
2	101.88	104.19	102.64	110.43	109.61	108.56	111.55	114.29	121.61	125.42	136.13	139.18	133.88
3	102.38	101.37	111.35	111.10	107.50	109.13	112.84	117.03	125.13	126.58	137.63	135.18	131.14
4	101.81	101.13	111.19	111.12	107.57	109.03	115.45	118.74	127.44	127.33	137.92	134.34	

Construction Cost indices in Chengdu



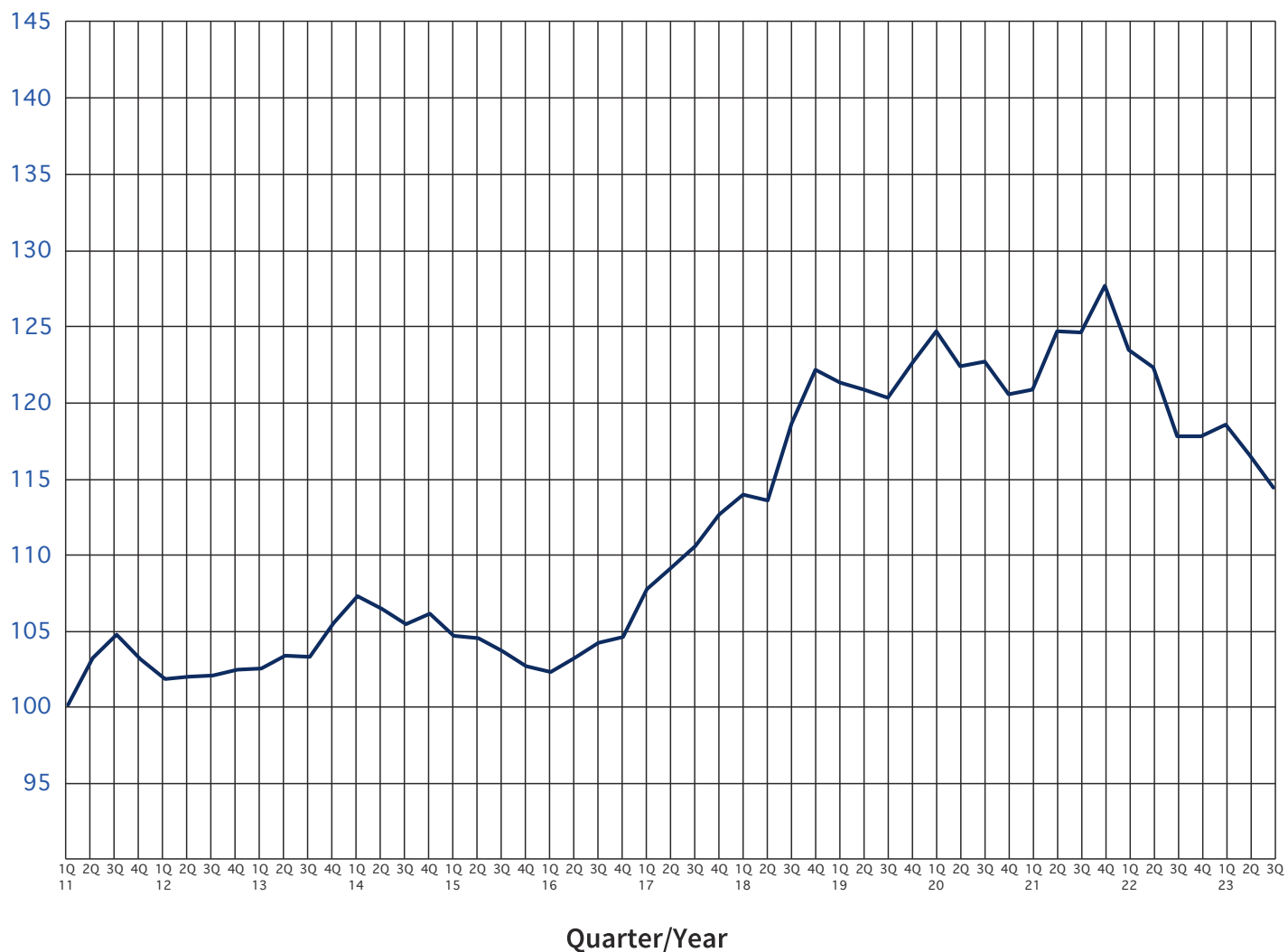
Quarter	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
1	100.00	99.25	97.12	96.41	93.77	91.77	101.95	106.69	108.01	109.28	111.16	116.52	112.87
2	100.21	98.55	96.48	96.34	92.69	95.71	103.00	105.56	110.75	108.77	113.36	114.83	109.04
3	101.19	97.34	95.77	95.28	91.74	96.56	105.90	106.80	109.84	109.03	114.27	113.45	108.96
4	98.63	98.19	96.11	97.50	91.49	99.21	106.84	108.29	109.67	109.66	114.70	113.43	

Construction Cost Indices in Shanghai



Quarter	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
1	100.00	98.73	99.87	104.44	107.03	105.02	113.90	120.43	121.23	123.28	130.41	134.66	137.77
2	100.45	97.84	100.40	104.24	107.20	107.24	115.43	119.96	121.55	123.22	134.02	132.21	136.94
3	101.30	100.10	101.46	103.01	106.16	106.82	116.24	121.23	121.84	124.50	133.81	130.97	135.17
4	99.52	100.31	104.44	104.64	105.42	110.29	120.63	123.87	123.59	128.32	138.30	135.04	

Construction Cost Indices in Shenzhen



Quarter	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
1	100.00	101.66	102.34	107.10	104.50	102.13	107.57	113.79	121.17	124.54	120.73	123.35	118.39
2	103.05	101.84	103.24	106.27	104.35	103.06	108.98	113.43	120.70	122.22	124.55	122.16	116.40
3	104.58	101.87	103.16	105.29	103.50	104.06	110.39	118.53	120.16	122.59	124.48	117.67	114.25
4	103.01	102.30	105.32	105.94	102.55	104.47	112.49	122.00	122.50	120.39	127.55	117.62	

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