

Value of Construction Put in Place

JULY 1998



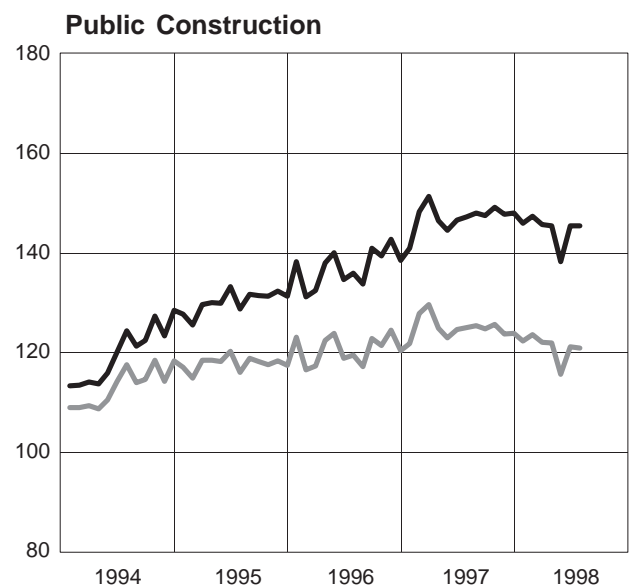
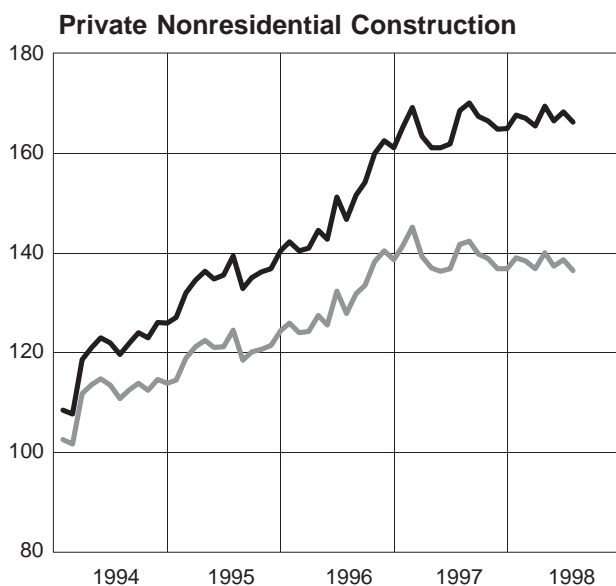
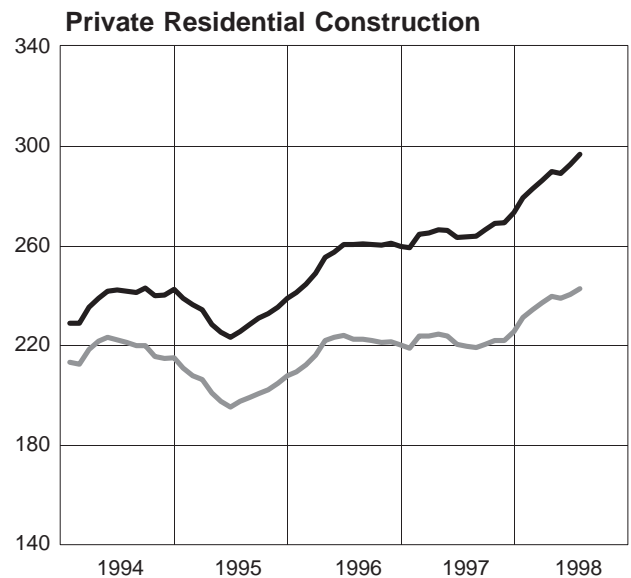
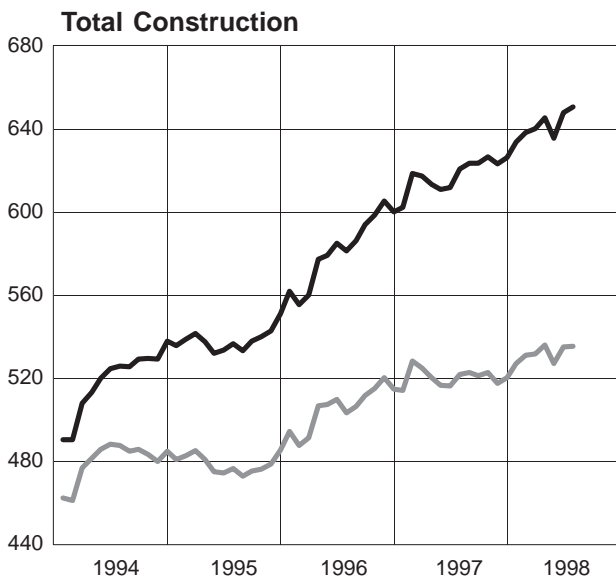
U.S. Department of Commerce
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BUREAU OF THE CENSUS

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This issue includes a special supplement on the annual value of privately owned nonresidential building construction put in place by geographic area and detailed types of construction: 1993 to 1997.

Monthly Value of Construction Put in Place (Seasonally adjusted annual rate in billions of dollars)

— Current dollars
— 1992 dollars



Source: U.S. Bureau of the Census, Value of Construction Put in Place.

VALUE OF CONSTRUCTION PUT IN PLACE

Construction put in place during July 1998 was estimated at a seasonally adjusted annual rate of \$650.4 billion, nearly the same (± 5 percent) as the revised June estimate of \$647.8 billion. The July figure represents a 5(± 5) percent increase over July 1997.

During the first 7 months of this year \$355.6 billion of construction was put in place, 5 percent above the \$339.4 billion for the same period in 1997.

In constant (1992) dollars, the July annual rate was \$535.1 billion, nearly the same (± 5 percent) as the revised estimate of \$535.0 billion for June.

Spending on new residential housing units was at a seasonally adjusted annual rate of \$211.2 billion in July, 1(± 2) percent above the revised June estimate of \$208.3 billion. Nonresidential building construction was at a rate of \$166.2 billion, 1(± 3) percent below the revised June estimate of \$168.2 billion.

In July, the estimated seasonally adjusted annual rate of public construction put in place was \$145.4 billion, nearly the same (± 5 percent) as the revised June estimate of \$145.3 billion.

The "value of construction put in place" is a measure of the value of construction installed or erected at the site during a given period. For an individual project, this includes—

1. Cost of materials installed or erected.
2. Cost of labor (both by contractors and force account) and a proportionate share of the cost of construction equipment rental.
3. Contractor's profit.
4. Project owner's overhead and office costs.
5. Cost of architectural and engineering work.
6. Miscellaneous costs chargeable to the project on the owner's books.
7. Interest and taxes paid during construction.

The total value-in-place for a given period is the sum of the value of work done on all projects underway during this period, regardless of when work on each individual project was started or when payment was made to the contractors. For some categories, estimates are derived by distributing the total construction cost of the project by means of historic construction progress patterns.

ADDITIONAL DATA

Additional data related to the value of construction put in place can be found in the following publications:

- Current Construction Reports, *Value of Construction Put in Place: May 1998*, C30/98-5, U.S. Department of Commerce, Bureau of the Census, Washington, DC, 1998; contains annual data for 1993 to 1997 and monthly data for 1995 to 1997.
- Current Construction Reports, *Value of New Construction Put in Place: October 1992*, C30/92-10, U.S. Department of Commerce, Bureau of the Census, Washington, DC, 1992; contains total time and monthly progress from start to completion for private nonresidential buildings and for state and local construction.
- Current Construction Reports, *Value of New Construction Put in Place in the United States, 1964 to 1980*, C30-80 supplement, U.S. Department of Commerce, Bureau of the Census, Washington, DC, 1981; contains annual data for 1915 to 1963.
- Current Construction Reports Special Study, *Expenditures for Nonresidential Improvements and Repairs: 1992*, U.S. Department of Commerce, Bureau of the Census, Washington, DC, 1994.

Table 1. Annual Value of Construction Put in Place: 1993-1997

[Millions of dollars]

Type of construction	Current dollars					Constant (1992) dollars				
	1993	1994	1995	1996	1997	1993	1994	1995	1996	1997
Total construction	478,648	519,539	538,134	583,638	618,217	461,078	480,620	478,069	506,655	520,117
Private construction	362,688	399,346	407,477	446,306	471,159	347,851	367,247	360,040	385,967	395,321
Residential buildings	210,455	238,874	230,688	256,460	265,610	200,502	218,005	201,677	220,017	221,546
New housing units	144,071	167,919	162,898	179,448	187,075	137,243	153,250	142,413	153,966	156,038
1 unit	133,282	153,838	145,009	159,124	164,444	126,960	140,416	126,773	136,516	137,156
2 or more units	10,788	14,081	17,889	20,324	22,631	10,283	12,833	15,640	17,450	18,882
Improvements	66,384	70,955	67,790	77,012	78,535	63,259	64,755	59,264	66,052	65,508
Nonresidential buildings	110,635	120,285	135,022	150,350	165,146	106,729	111,416	120,627	131,188	139,067
Industrial	26,482	28,947	32,505	32,657	31,394	25,554	26,803	29,043	28,503	26,440
Office	20,920	22,178	25,613	27,886	32,816	20,197	20,553	22,891	24,329	27,631
Hotels, motels	4,565	4,648	7,112	10,912	12,752	4,405	4,308	6,351	9,521	10,741
Other commercial	32,453	37,551	42,654	48,188	50,763	31,292	34,756	38,098	42,042	42,748
Religious	3,887	3,869	4,326	4,534	5,885	3,748	3,584	3,864	3,955	4,951
Educational	4,649	4,822	5,493	6,742	8,437	4,484	4,471	4,908	5,880	7,101
Hospital and institutional	12,492	12,268	11,248	11,780	13,741	12,050	11,377	10,051	10,280	11,576
Miscellaneous ¹	5,188	6,002	6,071	7,650	9,358	5,000	5,565	5,421	6,677	7,880
Farm nonresidential	3,392	3,226	3,014	3,804	3,956	3,271	2,990	2,692	3,319	3,329
Public utilities	34,925	34,071	35,859	33,261	34,188	34,120	32,074	32,401	29,286	29,448
Telecommunications	9,619	10,121	11,093	11,772	11,626	9,468	9,785	10,073	10,245	9,918
Other public utilities	25,306	23,950	24,766	21,489	22,562	24,652	22,289	22,328	19,041	19,529
Railroads	3,108	3,340	3,509	4,398	5,059	3,056	3,186	3,201	3,894	4,321
Electric light and power	15,567	14,918	14,049	11,211	12,144	15,096	13,877	12,656	9,914	10,545
Gas	5,645	4,694	6,279	4,865	4,390	5,536	4,308	5,637	4,330	3,820
Petroleum pipelines	986	998	929	1,015	969	965	918	834	903	843
All other private ²	3,281	2,890	2,893	2,431	2,258	3,229	2,763	2,643	2,156	1,931
Public construction	115,960	120,193	130,657	137,333	147,058	113,227	113,373	118,029	120,688	124,796
Buildings	48,559	49,446	55,700	58,659	63,603	46,813	45,728	49,683	51,119	53,515
Housing and redevelopment ..	4,011	3,835	4,491	4,614	4,861	3,833	3,495	3,928	3,958	4,055
Industrial	1,718	1,465	1,508	1,389	998	1,658	1,358	1,348	1,214	842
Educational	19,129	20,361	23,278	24,112	27,065	18,465	18,838	20,800	21,035	22,786
Hospital	3,710	3,951	4,332	4,638	5,042	3,579	3,663	3,871	4,050	4,247
Other ³	19,991	19,834	22,089	23,907	25,637	19,279	18,373	19,737	20,863	21,585
Highways and streets	34,299	37,419	38,498	41,243	45,197	34,164	36,219	35,303	36,483	38,605
Military facilities	2,453	2,318	3,011	2,634	2,620	2,405	2,196	2,728	2,317	2,223
Conservation and development ..	5,937	6,363	6,368	6,011	5,658	5,771	5,996	5,779	5,335	4,841
Sewer systems	8,863	8,700	9,435	10,433	10,463	8,622	8,199	8,557	9,260	8,951
Water supply facilities	5,085	4,647	5,283	5,964	6,339	4,868	4,237	4,695	5,187	5,393
Miscellaneous public ⁴	10,765	11,301	12,362	12,388	13,177	10,583	10,799	11,284	10,987	11,267

¹Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc.

²Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc.

³Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc.

⁴Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.

Table 2. Annual Value of Public Construction Put in Place: 1993-1997

[Millions of dollars]

Type of construction	Current dollars					Constant (1992) dollars				
	1993	1994	1995	1996	1997	1993	1994	1995	1996	1997
Total public construction	115,960	120,193	130,657	137,333	147,058	113,227	113,373	118,029	120,688	124,796
State and local construction	101,535	105,753	114,906	121,965	132,777	99,200	99,804	103,816	107,169	112,687
Total buildings	42,865	44,303	49,657	52,429	57,497	41,323	40,972	44,294	45,689	48,379
Housing and redevelopment	3,775	3,389	3,915	3,933	4,185	3,608	3,089	3,424	3,374	3,490
Educational	19,108	20,335	23,252	24,099	27,046	18,445	18,814	20,776	21,024	22,770
Hospital	2,804	3,099	3,291	3,478	3,791	2,703	2,875	2,940	3,036	3,193
Other ¹	17,177	17,480	19,199	20,919	22,476	16,567	16,195	17,153	18,255	18,926
Highways and streets	33,961	36,991	38,190	40,875	44,817	33,827	35,805	35,020	36,157	38,281
Conservation and development	1,719	1,988	2,201	2,167	2,296	1,670	1,872	1,997	1,922	1,964
Sewer systems	8,863	8,700	9,435	10,433	10,463	8,622	8,199	8,557	9,260	8,951
Water supply facilities	5,085	4,647	5,283	5,964	6,339	4,868	4,237	4,695	5,187	5,393
Miscellaneous nonbuilding ²	9,043	9,125	10,140	10,097	11,364	8,890	8,719	9,252	8,954	9,719
Federal construction	14,424	14,440	15,751	15,368	14,281	14,027	13,569	14,214	13,519	12,109
Total buildings	5,695	5,142	6,043	6,230	6,106	5,490	4,755	5,390	5,430	5,136
Housing	236	446	576	681	677	225	406	503	585	565
Industrial	1,718	1,465	1,508	1,389	998	1,658	1,358	1,348	1,214	842
Educational	21	26	27	12	19	20	24	24	11	16
Hospital	906	851	1,041	1,159	1,251	875	789	931	1,013	1,053
Other ³	2,814	2,354	2,891	2,989	3,161	2,713	2,178	2,584	2,608	2,659
Highways and streets	338	428	308	368	380	336	414	283	325	325
Military facilities	2,453	2,318	3,011	2,634	2,620	2,405	2,196	2,728	2,317	2,223
Conservation and development	4,217	4,376	4,167	3,845	3,362	4,102	4,124	3,781	3,412	2,877
Miscellaneous public ⁴	1,722	2,176	2,223	2,291	1,812	1,693	2,080	2,032	2,034	1,548

NA Not available, but estimates are included in totals.

¹Includes general administrative buildings, prisons, police and fire stations, courthouses, passenger terminals, civic centers, etc.²Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.³Includes federal office buildings, prisons, courthouses, space facilities, postal facilities, etc.⁴Includes federal airport facilities, fish and wildlife preservation facilities, VA cemeteries, etc.

Table 3. Monthly Value of Construction Put in Place—Not Seasonally Adjusted in Current Dollars

[Millions of dollars]

Period	Total construction	Private construction																All other private ⁵	
		Total ¹	Residential buildings					Nonresidential buildings									Public utilities ⁴		
			Total ²	New housing units			Total	Industrial	Office	Hotels, motels	Other commercial	Religious	Educational	Hospital and institutional	Miscellaneous ³	Total	Telecommunications		
				Total	1 unit	2 units or more													
YEAR TO DATE																			
July 1997	339,448	260,648	146,695	102,726	90,035	12,690	92,411	17,649	18,123	7,354	28,537	3,053	4,620	7,797	5,277	(NA)	6,404	1,206	
July 1998	355,588	277,602	160,357	113,890	100,183	13,707	94,235	17,049	21,038	7,453	27,381	3,361	5,296	7,577	5,081	(NA)	(NA)	1,279	
Percent change	5	7	9	11	11	8	2	-3	16	1	-4	10	15	-3	-4	(NA)	(NA)	6	
MONTHLY DATA																			
1996: July	54,170	40,860	24,713	16,896	15,184	1,712	12,704	2,601	2,441	866	4,147	360	677	962	651	(NA)	932	201	
August	56,370	42,620	25,292	17,289	15,536	1,752	13,521	2,632	2,498	1,001	4,590	411	721	1,039	631	(NA)	1,065	247	
September	56,513	41,913	24,445	17,074	15,381	1,693	13,908	2,914	2,594	994	4,644	425	650	1,045	643	(NA)	949	199	
October	55,820	42,209	24,092	16,694	14,961	1,733	14,408	3,219	2,589	1,000	4,748	439	634	1,068	711	(NA)	1,110	223	
November	52,175	40,092	22,695	15,955	14,217	1,738	13,927	2,993	2,614	1,002	4,433	452	617	1,100	716	(NA)	1,113	187	
December	45,436	35,480	19,093	13,406	11,826	1,581	13,114	2,823	2,507	1,050	3,962	430	560	1,104	678	(NA)	1,251	176	
1997: January	40,440	31,726	16,992	12,255	10,781	1,474	12,164	2,436	2,440	938	3,734	367	528	1,067	655	(NA)	795	152	
February	39,927	31,068	16,412	11,986	10,286	1,700	12,385	2,464	2,580	972	3,715	379	531	1,086	659	(NA)	771	141	
March	44,448	34,546	19,268	13,987	12,239	1,747	12,584	2,329	2,468	1,014	3,850	439	544	1,169	769	(NA)	854	164	
April	48,594	37,593	21,225	14,800	12,979	1,822	13,112	2,482	2,469	1,040	4,009	461	663	1,190	797	(NA)	975	179	
May	52,329	40,089	23,253	15,900	13,819	2,081	13,556	2,522	2,556	1,140	4,228	485	703	1,112	810	(NA)	946	179	
June	55,788	42,172	24,501	16,589	14,594	1,995	14,009	2,632	2,728	1,130	4,394	445	803	1,098	780	(NA)	994	192	
July	57,921	43,454	25,044	17,209	15,337	1,872	14,601	2,784	2,881	1,120	4,607	478	848	1,075	808	(NA)	1,070	199	
August	59,902	44,679	25,596	17,648	15,646	2,002	15,105	2,881	2,984	1,110	4,759	498	847	1,195	831	(NA)	995	225	
September	59,480	44,176	24,987	17,739	15,762	1,977	15,160	2,894	2,978	1,077	4,737	572	806	1,247	849	(NA)	1,087	209	
October	58,365	43,856	24,847	17,641	15,506	2,136	14,968	2,789	3,073	1,109	4,607	604	767	1,192	827	(NA)	1,120	244	
November	53,508	41,047	23,395	16,823	14,889	1,934	14,040	2,566	2,908	1,052	4,224	591	718	1,190	791	(NA)	965	214	
December	47,514	36,751	20,089	14,497	12,606	1,891	13,462	2,614	2,751	1,049	3,899	567	679	1,120	782	(NA)	1,056	159	
1998: January	42,419	33,440	18,345	13,464	11,644	1,819	12,316	2,306	2,801	994	3,406	482	647	1,049	632	(NA)	795	181	
February	41,199	32,338	17,568	12,974	11,111	1,864	12,244	2,297	2,657	987	3,409	484	673	1,081	657	(NA)	874	160	
March	46,531	36,887	20,909	15,408	13,442	1,966	12,910	2,489	2,764	1,015	3,662	476	733	1,079	692	(NA)	1,074	177	
April	51,242	40,274	23,165	16,460	14,417	2,043	13,755	2,511	3,027	1,106	3,894	476	791	1,147	803	(NA)	982	176	
May ^f	54,239	42,606	25,162	17,346	15,329	2,017	13,959	2,478	3,198	1,072	4,086	447	820	1,114	745	(NA)	1,020	199	
June ^f	59,308	45,629	27,090	18,618	16,586	2,032	14,640	2,567	3,433	1,170	4,277	491	835	1,070	796	(NA)	1,069	207	
July ^p	60,649	46,428	28,118	19,620	17,654	1,966	14,412	2,401	3,157	1,108	4,646	507	798	1,038	756	(NA)	(NA)	179	
PERCENT CHANGE																			
June 1998-																			
July 1998	2	2	4	5	6	-3	-2	-6	-8	-5	9	3	-4	-3	-5	(NA)	(NA)	-14	

See footnotes at end of table.

Table 3. Monthly Value of Construction Put in Place—Not Seasonally Adjusted in Current Dollars—Con.

[Millions of dollars]

Period	Public construction												
	Total	Buildings						Highways and streets	Military facilities	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous public ⁷
		Total	Housing and redevelopment	Industrial	Educational	Hospital	Other public buildings ⁶						
YEAR TO DATE													
July 1997.....	78,799	35,463	2,655	629	15,157	2,866	14,156	22,551	1,446	3,062	5,845	3,511	6,923
July 1998.....	77,987	35,730	2,744	573	15,025	2,200	15,189	22,232	1,556	3,030	5,465	3,541	6,433
Percent change.....	-1	1	3	-9	-1	-23	7	-1	8	-1	-7	1	-7
MONTHLY DATA													
1996: July.....	13,310	5,315	406	129	2,392	376	2,013	4,679	200	520	865	519	1,211
August.....	13,749	5,503	381	132	2,597	331	2,062	4,737	202	579	1,042	520	1,167
September.....	14,601	5,729	478	184	2,350	459	2,258	4,906	284	884	975	552	1,271
October.....	13,612	5,266	443	60	2,207	386	2,171	4,939	179	433	1,107	685	1,003
November.....	12,084	5,296	443	91	2,161	351	2,251	3,570	207	494	948	559	1,009
December.....	9,956	4,813	371	88	1,893	418	2,043	2,595	204	401	762	474	708
1997: January.....	8,714	4,475	340	89	1,796	396	1,854	1,821	202	418	680	426	692
February.....	8,859	4,474	344	79	1,809	388	1,854	1,877	173	390	687	442	816
March.....	9,902	4,803	351	88	1,979	390	1,996	2,218	195	459	783	519	925
April.....	11,001	5,035	381	112	2,070	428	2,044	3,084	190	430	828	494	940
May.....	12,240	5,116	421	74	2,181	379	2,061	3,868	220	452	934	520	1,130
June.....	13,616	5,682	399	95	2,585	437	2,166	4,600	227	444	978	533	1,151
July.....	14,467	5,877	420	92	2,736	449	2,180	5,082	239	469	955	577	1,270
August.....	15,222	5,984	409	80	2,858	410	2,228	5,500	248	521	963	556	1,451
September.....	15,304	6,065	469	98	2,517	525	2,456	5,206	279	764	1,031	587	1,372
October.....	14,510	5,874	528	56	2,428	467	2,396	5,044	205	405	992	616	1,374
November.....	12,460	5,253	430	65	2,069	411	2,277	4,030	242	417	882	579	1,057
December.....	10,763	4,965	371	70	2,036	362	2,125	2,866	201	490	751	491	1,000
1998: January.....	8,980	4,581	361	75	1,839	328	1,979	1,943	198	352	689	426	791
February.....	8,861	4,559	357	78	1,807	302	2,014	1,864	197	428	656	447	711
March.....	9,644	4,746	381	94	1,850	367	2,053	2,225	244	412	741	467	809
April.....	10,968	5,095	391	84	2,096	294	2,230	3,067	203	393	778	533	900
May ^f	11,633	5,132	364	80	2,191	291	2,207	3,597	199	436	770	538	961
June ^f	13,679	5,724	414	77	2,576	306	2,351	4,632	225	515	892	518	1,172
July ^p	14,221	5,892	474	85	2,667	312	2,354	4,905	290	494	939	611	1,089
PERCENT CHANGE													
June 1998-													
July 1998.....	4	3	14	10	4	2	(Z)	6	29	-4	5	18	-7

NA Not available, but estimates are included in totals. ^pPreliminary. ^fRevised. ^Z Less than 0.5 percent.

¹Includes farm nonresidential and other private categories, not shown separately. ²Includes residential improvements, not shown separately. ³Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc. ⁴Includes gas, electric, railroad, and petroleum pipelines, not shown separately. ⁵Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc. ⁶Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc. ⁷Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.

Table 4. Monthly Value of Construction Put in Place—Seasonally Adjusted Annual Rate in Current Dollars

[Millions of dollars]

Period		Total construction	Private construction															All other private ⁵	
			Total ¹	Residential buildings					Nonresidential buildings								Public utilities ⁴		
				Total ²	New housing units			Total	Industrial	Office	Hotels, motels	Other commercial	Religious	Educational	Hospital and institutional	Miscellaneous ³	Total		Telecommunications
					Total	1 unit	2 units or more												
1996:	July	581,004	445,138	260,173	181,807	162,108	19,699	146,740	30,631	28,635	10,383	46,549	4,331	6,685	11,824	7,702	(NA)	10,719	2,213
	August	586,042	452,361	260,517	181,605	162,401	19,203	151,499	30,838	28,659	11,669	49,218	4,596	7,121	12,066	7,331	(NA)	11,703	2,701
	September	593,691	452,940	260,283	180,668	161,338	19,330	154,087	33,108	29,558	11,735	48,502	4,553	7,188	12,134	7,309	(NA)	11,363	2,169
	October	598,301	459,013	259,797	180,249	160,440	19,809	159,899	35,275	30,168	11,794	50,596	4,468	7,447	12,234	7,919	(NA)	11,799	2,318
	November	605,105	462,431	260,599	180,599	159,890	20,709	162,412	34,729	30,725	12,224	50,954	5,019	7,960	12,652	8,149	(NA)	12,783	2,104
	December	599,884	461,449	259,498	179,773	159,805	19,968	161,077	32,329	31,014	12,740	50,366	5,018	7,829	13,337	8,444	(NA)	14,272	2,213
1997:	January	602,124	461,235	259,048	179,657	159,322	20,335	165,061	32,618	31,522	12,693	53,149	4,964	7,615	13,523	8,977	(NA)	11,194	2,046
	February	618,393	470,198	264,424	185,506	162,199	23,307	169,227	33,182	33,541	12,636	54,042	5,251	7,754	13,828	8,992	(NA)	11,114	2,071
	March	617,245	465,958	264,871	185,656	163,372	22,284	163,376	30,215	31,477	12,209	52,505	5,816	7,404	14,480	9,269	(NA)	11,096	2,204
	April	613,239	466,886	266,145	186,987	164,635	22,352	161,135	30,207	29,691	12,072	51,128	5,844	8,496	14,439	9,258	(NA)	11,766	2,285
	May	610,761	466,260	265,791	187,009	163,543	23,465	161,046	30,572	29,868	12,740	50,679	6,034	8,252	13,144	9,757	(NA)	11,337	2,228
	June	611,646	465,174	262,893	184,492	162,301	22,191	161,757	31,122	31,903	12,840	49,930	5,629	8,182	13,016	9,136	(NA)	11,622	2,254
	July	620,506	473,292	263,156	184,675	163,163	21,513	168,474	32,726	33,895	13,327	51,816	5,690	8,249	13,220	9,550	(NA)	12,112	2,223
	August	623,429	475,498	263,496	185,126	163,122	22,004	170,033	33,403	34,106	13,425	51,351	5,707	8,492	13,873	9,676	(NA)	11,432	2,442
	September	623,305	475,885	266,077	187,791	165,194	22,597	167,326	32,220	34,000	12,551	49,473	6,005	8,936	14,491	9,651	(NA)	12,322	2,286
	October	626,608	477,539	268,623	190,861	166,432	24,429	166,404	30,870	35,215	13,325	48,623	6,368	9,135	13,660	9,209	(NA)	11,975	2,509
	November	623,068	475,340	268,893	190,810	167,761	23,049	164,810	30,075	34,443	12,793	49,158	6,441	9,176	13,691	9,033	(NA)	11,624	2,396
	December	626,290	478,363	273,020	194,627	170,739	23,889	164,948	29,794	33,857	12,665	49,357	6,552	9,440	13,550	9,733	(NA)	11,702	2,003
1998:	January	633,714	487,807	278,956	197,151	172,085	25,066	167,636	31,055	36,853	13,082	48,954	6,399	9,325	13,294	8,676	(NA)	11,604	2,446
	February	638,180	490,896	282,496	200,582	175,198	25,384	166,962	30,936	34,624	12,723	49,528	6,661	9,846	13,709	8,935	(NA)	12,614	2,351
	March	639,913	494,333	286,045	203,633	178,825	24,808	165,449	31,474	34,661	12,182	49,320	6,145	9,900	13,401	8,366	(NA)	13,234	2,382
	April	645,349	499,946	289,587	207,064	182,300	24,764	169,354	31,391	36,655	12,664	49,551	6,066	9,878	13,827	9,320	(NA)	11,939	2,253
	May ^f	635,428	497,269	288,808	205,140	182,130	23,010	166,383	29,583	37,144	12,658	49,425	5,769	9,662	13,170	8,971	(NA)	12,725	2,383
	June ^f	647,839	502,540	292,251	208,300	185,488	22,812	168,249	29,680	39,768	13,133	49,025	6,025	8,544	12,799	9,276	(NA)	11,895	2,360
	July ^p	650,365	505,009	296,279	211,228	188,477	22,751	166,228	28,499	36,642	13,449	51,719	6,227	7,943	12,807	8,943	(NA)	(NA)	2,054
PERCENT CHANGE																			
	June 1998- July 1998	(Z)	(Z)	1	1	2	(Z)	-1	-4	-8	2	5	3	-7	(Z)	-4	(NA)	(NA)	-13

See footnotes at end of table.

Table 4. Monthly Value of Construction Put in Place—Seasonally Adjusted Annual Rate in Current Dollars—Con.

[Millions of dollars]

Period	Public construction												
	Total	Buildings						Highways and streets	Military facilities	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous public ⁷
		Total	Housing and redevelopment	Industrial	Educational	Hospital	Other public buildings ⁶						
1996: July	135,866	58,036	4,804	1,531	23,739	4,278	23,683	41,106	2,396	5,916	9,687	5,686	13,039
August	133,681	57,799	4,602	1,623	24,176	4,137	23,260	39,314	2,321	6,146	10,803	5,679	11,620
September	140,751	60,972	4,940	1,661	24,911	4,786	24,674	41,814	2,761	7,008	10,033	6,092	12,071
October	139,288	59,847	4,825	864	25,493	4,373	24,292	41,799	2,576	5,776	11,293	6,918	11,079
November	142,673	63,422	5,123	1,092	27,118	4,249	25,841	42,374	2,296	6,025	10,648	6,129	11,779
December	138,435	62,647	4,637	1,068	26,287	5,006	25,649	42,593	2,360	5,270	10,103	5,965	9,499
1997: January	140,889	61,889	4,386	1,112	26,096	5,118	25,177	43,023	2,486	6,105	9,954	6,358	11,074
February	148,195	63,515	4,773	1,071	26,831	5,185	25,654	46,066	2,552	5,785	10,761	6,616	12,899
March	151,288	64,603	4,572	1,059	27,476	4,923	26,573	46,287	2,364	6,169	10,923	7,344	13,598
April	146,354	63,548	4,814	1,405	27,148	5,046	25,135	46,379	2,431	5,358	10,632	6,281	11,726
May	144,500	60,852	4,821	839	26,764	4,790	23,639	45,068	2,580	5,328	11,167	6,096	13,410
June	146,472	63,285	4,794	1,100	27,751	5,068	24,571	45,287	2,729	5,195	11,062	6,031	12,884
July	147,213	63,810	4,957	1,136	27,184	5,147	25,386	44,738	2,880	5,299	10,589	6,324	13,574
August	147,931	63,209	4,927	992	26,714	5,061	25,515	45,930	2,812	5,479	10,099	6,090	14,312
September	147,421	64,017	4,807	876	26,579	5,259	26,496	44,309	2,630	6,180	10,484	6,458	13,343
October	149,069	66,570	5,717	775	27,962	5,487	26,628	43,144	2,806	5,148	10,141	6,194	15,067
November	147,728	63,586	4,968	834	25,864	5,087	26,833	47,416	2,889	5,068	10,005	6,342	12,423
December	147,927	64,511	4,610	819	28,242	4,251	26,590	45,306	2,342	6,422	9,740	6,211	13,395
1998: January	145,907	63,283	4,642	949	26,647	4,362	26,683	46,067	2,474	5,281	10,060	6,301	12,440
February	147,284	64,520	4,963	1,042	26,765	4,033	27,717	45,561	2,916	6,305	10,150	6,665	11,167
March	145,580	62,930	4,931	1,189	25,759	4,518	26,534	45,559	2,818	5,488	10,388	6,612	11,785
April	145,404	63,804	4,893	998	27,134	3,604	27,175	46,060	2,686	4,980	9,843	6,740	11,292
May ^f	138,159	61,687	4,327	968	26,878	3,602	25,912	41,989	2,281	5,129	9,391	6,319	11,363
June ^e	145,298	63,202	5,045	898	27,407	3,435	26,417	44,608	2,651	5,950	10,027	5,896	12,963
July ^p	145,357	63,761	5,420	988	26,558	3,652	27,143	43,960	3,329	5,595	10,348	6,713	11,651
PERCENT CHANGE													
June 1998-													
July 1998	(Z)	1	7	10	-3	6	3	-1	26	-6	3	14	-10

NA Not available, but estimates are included in totals. ^pPreliminary. ^rRevised. Z Less than 0.5 percent.

¹Includes farm nonresidential and other private categories, not shown separately. ²Includes residential improvements, not shown separately. ³Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc. ⁴Includes gas, electric, railroad, and petroleum pipelines, not shown separately. ⁵Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc. ⁶Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc. ⁷Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.

Table 5. Monthly Value of Construction Put in Place—Seasonally Adjusted Annual Rate in 1992 Dollars

[Millions of dollars]

Period		Total construction	Private construction																	
			Total ¹	Residential buildings						Nonresidential buildings								Public utilities ⁴		All other private ⁵
				Total ²	New housing units			Total	Industrial	Office	Hotels, motels	Other commercial	Religious	Educational	Hospital and institutional	Miscellaneous ³	Total	Telecommunications		
					Total	1 unit	2 units or more													
1996:	July	503,016	383,664	222,180	155,258	138,435	16,823	127,822	26,682	24,943	9,044	40,548	3,773	5,824	10,300	6,709	(NA)	9,338	1,962	
	August	506,290	389,196	222,094	154,821	138,450	16,371	131,738	26,816	24,921	10,147	42,798	3,997	6,192	10,492	6,375	(NA)	10,150	2,384	
	September	511,402	388,735	221,706	153,891	137,426	16,465	133,408	28,665	25,591	10,161	41,993	3,942	6,223	10,505	6,328	(NA)	9,796	1,904	
	October	514,694	393,365	220,916	153,273	136,428	16,845	138,201	30,488	26,074	10,193	43,730	3,862	6,436	10,574	6,845	(NA)	10,163	2,037	
	November	520,216	395,849	221,221	153,310	135,730	17,579	140,253	29,991	26,533	10,556	44,002	4,334	6,874	10,926	7,037	(NA)	11,029	1,852	
	December	514,435	394,097	219,913	152,350	135,428	16,922	138,620	27,822	26,691	10,964	43,344	4,318	6,738	11,477	7,266	(NA)	12,293	1,945	
1997:	January	513,991	392,318	218,606	151,610	134,449	17,160	141,440	27,951	27,011	10,876	45,543	4,253	6,526	11,588	7,693	(NA)	9,642	1,781	
	February	528,124	400,280	223,331	156,677	136,992	19,685	145,134	28,458	28,766	10,837	46,348	4,503	6,650	11,859	7,712	(NA)	9,598	1,795	
	March	524,731	395,280	223,520	156,672	137,867	18,805	139,162	25,737	26,812	10,400	44,724	4,954	6,307	12,334	7,895	(NA)	9,525	1,892	
	April	520,008	395,188	224,216	157,529	138,698	18,831	136,903	25,664	25,226	10,257	43,439	4,965	7,218	12,267	7,866	(NA)	10,048	1,955	
	May	516,277	393,421	223,354	157,150	137,431	19,719	136,249	25,865	25,269	10,778	42,876	5,105	6,981	11,121	8,254	(NA)	9,649	1,903	
	June	516,020	391,518	219,994	154,387	135,817	18,569	136,735	26,308	26,968	10,854	42,206	4,758	6,916	11,003	7,723	(NA)	9,900	1,927	
	July	521,567	396,673	219,297	153,896	135,969	17,927	141,574	27,500	28,483	11,199	43,543	4,782	6,932	11,109	8,025	(NA)	10,335	1,901	
	August	522,516	397,214	218,850	153,759	135,483	18,276	142,287	27,952	28,541	11,234	42,971	4,776	7,106	11,609	8,097	(NA)	9,763	2,089	
	September	521,015	396,281	220,080	155,328	136,637	18,690	139,671	26,895	28,380	10,477	41,296	5,013	7,459	12,096	8,056	(NA)	10,531	1,956	
	October	522,495	396,848	221,636	157,476	137,320	20,156	138,785	25,747	29,370	11,113	40,553	5,311	7,618	11,392	7,681	(NA)	10,201	2,137	
	November	517,415	393,757	221,676	157,304	138,303	19,002	136,659	24,938	28,560	10,608	40,761	5,341	7,608	11,353	7,490	(NA)	9,826	2,027	
	December	520,118	396,351	225,264	160,584	140,873	19,710	136,773	24,705	28,074	10,502	40,926	5,433	7,828	11,235	8,071	(NA)	9,867	1,695	
1998:	January	526,820	404,647	230,923	163,205	142,454	20,750	138,886	25,729	30,532	10,838	40,559	5,301	7,725	11,014	7,188	(NA)	9,719	2,071	
	February	530,916	407,376	234,048	166,183	145,152	21,031	138,328	25,631	28,686	10,541	41,034	5,519	8,157	11,358	7,402	(NA)	10,547	1,998	
	March	531,649	409,635	236,792	168,570	148,034	20,536	136,735	26,012	28,645	10,068	40,760	5,078	8,182	11,075	6,914	(NA)	11,038	2,024	
	April	535,724	413,884	239,328	171,127	150,661	20,466	139,962	25,943	30,293	10,466	40,951	5,013	8,164	11,427	7,703	(NA)	9,966	1,914	
	May ^f	526,737	411,184	238,487	169,397	150,397	19,001	137,280	24,409	30,647	10,444	40,780	4,760	7,972	10,867	7,401	(NA)	10,595	2,021	
	June ^f	534,971	413,864	240,140	171,159	152,414	18,745	138,477	24,428	32,731	10,809	40,349	4,958	7,032	10,534	7,635	(NA)	9,863	1,993	
	July ^p	535,097	414,268	242,454	172,855	154,236	18,618	136,252	23,359	30,034	11,024	42,393	5,104	6,511	10,497	7,330	(NA)	(NA)	1,731	
PERCENT CHANGE																				
	June 1998- July 1998	(Z)	(Z)	1	1	1	-1	-2	-4	-8	2	5	3	-7	(Z)	-4	(NA)	(NA)	-13	

See footnotes at end of table.

Table 5. Monthly Value of Construction Put in Place—Seasonally Adjusted Annual Rate in 1992 Dollars—Con.

[Millions of dollars]

Period	Public construction												
	Total	Buildings						Highways and streets	Military facilities	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous public ⁷
		Total	Housing and redevelopment	Industrial	Educational	Hospital	Other public buildings ⁶						
1996: July	119,352	50,472	4,103	1,334	20,679	3,727	20,630	36,409	2,106	5,249	8,596	4,961	11,559
August	117,094	50,181	3,923	1,412	21,023	3,597	20,226	34,729	2,034	5,425	9,535	4,934	10,256
September	122,667	52,721	4,208	1,438	21,568	4,143	21,363	36,744	2,409	6,142	8,793	5,260	10,598
October	121,329	51,659	4,103	747	22,034	3,780	20,996	36,763	2,246	5,067	9,906	5,954	9,735
November	124,367	54,694	4,349	943	23,418	3,669	22,315	37,367	2,003	5,299	9,365	5,270	10,369
December	120,338	53,852	3,930	919	22,622	4,308	22,073	37,493	2,054	4,623	8,862	5,107	8,347
1997: January	121,673	52,975	3,701	953	22,361	4,385	21,574	37,542	2,151	5,295	8,633	5,439	9,638
February	127,845	54,410	4,032	919	23,011	4,447	22,002	40,092	2,206	4,996	9,293	5,670	11,178
March	129,451	54,992	3,859	902	23,404	4,193	22,635	39,902	2,025	5,272	9,336	6,251	11,672
April	124,820	53,957	4,055	1,194	23,066	4,287	21,355	39,776	2,074	4,575	9,079	5,327	10,030
May	122,855	51,455	4,051	710	22,643	4,052	19,999	38,519	2,194	4,546	9,528	5,162	11,451
June	124,502	53,454	4,012	930	23,458	4,284	20,770	38,707	2,318	4,441	9,455	5,115	11,012
July	124,894	53,587	4,131	954	22,844	4,326	21,333	38,303	2,442	4,525	9,043	5,382	11,611
August	125,302	52,864	4,092	830	22,355	4,235	21,351	39,324	2,381	4,679	8,625	5,187	12,243
September	124,734	53,400	3,976	732	22,186	4,390	22,117	37,968	2,223	5,273	8,945	5,510	11,414
October	125,647	55,470	4,717	646	23,321	4,577	22,209	36,624	2,360	4,403	8,675	5,281	12,834
November	123,658	52,701	4,096	691	21,446	4,218	22,250	39,812	2,412	4,320	8,529	5,374	10,510
December	123,767	53,473	3,804	679	23,418	3,525	22,048	37,945	1,952	5,484	8,318	5,264	11,332
1998: January	122,173	52,427	3,843	786	22,077	3,614	22,107	38,744	2,065	4,506	8,583	5,313	10,534
February	123,540	53,455	4,112	863	22,175	3,341	22,964	38,480	2,438	5,389	8,675	5,615	9,488
March	122,014	52,015	4,082	982	21,289	3,734	21,929	38,511	2,356	4,686	8,871	5,561	10,012
April	121,840	52,730	4,044	825	22,425	2,979	22,458	38,935	2,244	4,256	8,413	5,668	9,594
May ^f	115,553	50,900	3,573	799	22,177	2,972	21,379	35,434	1,902	4,372	8,006	5,301	9,638
June ^f	121,107	52,012	4,145	739	22,557	2,828	21,742	37,454	2,204	5,051	8,512	4,926	10,948
July ^p	120,829	52,256	4,435	810	21,769	2,993	22,248	36,879	2,761	4,741	8,770	5,598	9,824
PERCENT CHANGE													
June 1998-													
July 1998	(Z)	(Z)	7	10	-3	6	2	-2	25	-6	3	14	-10

NA Not available, but estimates are included in totals. ^pPreliminary. ^rRevised. Z Less than 0.5 percent.

¹Includes farm nonresidential and other private categories, not shown separately. ²Includes residential improvements, not shown separately. ³Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc. ⁴Includes gas, electric, railroad, and petroleum pipelines, not shown separately. ⁵Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc. ⁶Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc. ⁷Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.

Table 6. Monthly Value of Construction Put in Place—Not Seasonally Adjusted in 1992 Dollars

[Millions of dollars]

Period	Total construction	Private construction																All other private ⁵
		Total ¹	Residential buildings					Nonresidential buildings								Public utilities ⁴		
			Total ²	New housing units			Total	Industrial	Office	Hotels, motels	Other commercial	Religious	Educational	Hospital and institutional	Miscellaneous ³	Total	Telecommunications	
				Total	1 unit	2 units or more												
YEAR TO DATE																		
July 1997	287,565	220,313	123,255	86,321	75,655	10,667	78,485	14,992	15,394	6,247	24,234	2,591	3,922	6,625	4,482	(NA)	5,479	1,035
July 1998	294,522	229,367	132,243	93,931	82,619	11,310	77,764	14,070	17,360	6,151	22,590	2,774	4,370	6,254	4,194	(NA)	(NA)	1,083
Percent change	2	4	7	9	9	6	-1	-6	13	-2	-7	7	11	-6	-6	(NA)	(NA)	5
MONTHLY DATA																		
1996: July	46,902	35,203	21,104	14,429	12,967	1,462	11,066	2,266	2,126	754	3,612	313	590	838	567	(NA)	812	178
August	48,709	36,657	21,562	14,739	13,245	1,494	11,757	2,288	2,172	870	3,991	357	627	903	548	(NA)	924	218
September	48,701	35,968	20,822	14,543	13,101	1,442	12,041	2,523	2,246	860	4,021	368	563	904	557	(NA)	818	175
October	48,037	36,170	20,487	14,196	12,722	1,474	12,453	2,782	2,238	864	4,103	379	548	923	615	(NA)	956	196
November	44,852	34,318	19,265	13,544	12,069	1,475	12,027	2,584	2,258	866	3,828	390	533	950	619	(NA)	960	165
December	38,959	30,312	16,181	11,361	10,022	1,340	11,286	2,430	2,157	904	3,410	370	482	950	583	(NA)	1,078	155
1997: January	34,509	26,996	14,339	10,342	9,098	1,244	10,424	2,087	2,091	804	3,199	314	452	914	561	(NA)	685	132
February	34,091	26,459	13,861	10,123	8,688	1,435	10,622	2,113	2,213	834	3,186	325	455	931	566	(NA)	665	122
March	37,773	29,308	16,260	11,803	10,329	1,475	10,719	1,984	2,102	864	3,280	374	464	996	655	(NA)	733	141
April	41,202	31,823	17,882	12,469	10,934	1,535	11,140	2,109	2,098	884	3,406	391	564	1,011	677	(NA)	832	153
May	44,229	33,823	19,540	13,361	11,613	1,748	11,468	2,134	2,163	965	3,577	410	595	941	685	(NA)	805	153
June	47,066	35,490	20,503	13,882	12,212	1,670	11,842	2,225	2,306	955	3,714	376	679	928	659	(NA)	846	164
July	48,695	36,414	20,870	14,341	12,781	1,560	12,270	2,340	2,421	941	3,872	401	713	904	679	(NA)	913	170
August	50,226	37,321	21,260	14,658	12,995	1,663	12,640	2,411	2,497	929	3,982	417	709	1,000	695	(NA)	849	193
September	49,750	36,788	20,668	14,673	13,037	1,635	12,655	2,416	2,486	899	3,954	477	673	1,041	709	(NA)	929	179
October	48,684	36,445	20,501	14,556	12,794	1,762	12,484	2,326	2,563	925	3,842	504	640	994	690	(NA)	954	208
November	44,432	34,000	19,287	13,869	12,274	1,595	11,642	2,128	2,411	872	3,502	490	595	987	656	(NA)	816	181
December	39,457	30,453	16,575	11,962	10,401	1,560	11,162	2,168	2,281	870	3,233	470	563	929	648	(NA)	890	135
1998: January	35,250	27,738	15,186	11,146	9,639	1,506	10,204	1,910	2,320	824	2,822	399	536	869	524	(NA)	666	153
February	34,253	26,830	14,555	10,749	9,205	1,544	10,144	1,903	2,202	818	2,825	401	557	895	544	(NA)	730	136
March	38,634	30,562	17,309	12,755	11,127	1,627	10,669	2,057	2,284	839	3,026	393	606	892	572	(NA)	896	150
April	42,528	33,343	19,145	13,603	11,915	1,688	11,368	2,075	2,502	914	3,218	393	654	948	664	(NA)	820	149
May ^f	44,960	35,229	20,778	14,324	12,658	1,666	11,517	2,044	2,638	884	3,371	369	676	919	615	(NA)	849	169
June ^f	48,984	37,579	22,260	15,298	13,628	1,670	12,049	2,113	2,826	963	3,520	404	687	880	655	(NA)	886	175
July ^p	49,913	38,086	23,010	16,056	14,447	1,609	11,813	1,968	2,588	909	3,808	415	654	851	620	(NA)	(NA)	151
PERCENT CHANGE																		
June 1998-																		
July 1998	2	1	3	5	6	-4	-2	-7	-8	-6	8	3	-5	-3	-5	(NA)	(NA)	-14

See footnotes at end of table.

Table 6. Monthly Value of Construction Put in Place—Not Seasonally Adjusted in 1992 Dollars—Con.

[Millions of dollars]

Period	Public construction												
	Total	Buildings						Highways and streets	Military facilities	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous public ⁷
		Total	Housing and redevelopment	Industrial	Educational	Hospital	Other public buildings ⁶						
YEAR TO DATE													
July 1997.....	67,254	30,088	2,231	533	12,864	2,434	12,022	19,369	1,236	2,624	5,007	2,987	5,942
July 1998.....	65,156	29,481	2,264	473	12,394	1,815	12,533	18,721	1,297	2,582	4,657	2,972	5,449
Percent change.....	-3	-2	1	-11	-4	-25	4	-3	5	-2	-7	-1	-8
MONTHLY DATA													
1996: July.....	11,699	4,623	346	112	2,083	328	1,754	4,145	176	462	767	453	1,074
August.....	12,052	4,779	324	115	2,258	288	1,793	4,185	177	511	919	451	1,030
September.....	12,734	4,953	407	160	2,035	398	1,955	4,311	248	775	854	477	1,116
October.....	11,867	4,546	377	52	1,907	334	1,877	4,344	156	380	971	589	881
November.....	10,534	4,567	376	78	1,866	303	1,944	3,148	181	435	834	481	888
December.....	8,647	4,137	315	75	1,629	360	1,759	2,284	178	352	668	406	622
1997: January.....	7,513	3,830	287	76	1,539	339	1,588	1,589	175	363	590	364	602
February.....	7,631	3,833	290	68	1,551	333	1,590	1,634	149	336	593	379	707
March.....	8,465	4,089	296	75	1,686	332	1,700	1,912	167	392	669	442	794
April.....	9,379	4,275	321	95	1,759	363	1,737	2,645	162	367	707	419	804
May.....	10,407	4,326	354	62	1,845	321	1,744	3,306	187	385	797	440	965
June.....	11,577	4,800	333	80	2,185	369	1,831	3,932	193	380	836	452	984
July.....	12,282	4,935	350	77	2,299	377	1,832	4,351	203	401	815	491	1,086
August.....	12,905	5,005	339	67	2,391	343	1,864	4,709	210	445	822	474	1,241
September.....	12,962	5,059	388	82	2,101	438	2,050	4,461	236	652	880	501	1,174
October.....	12,239	4,895	435	46	2,025	390	1,998	4,282	172	346	849	525	1,170
November.....	10,432	4,353	355	54	1,716	341	1,888	3,384	202	356	752	491	894
December.....	9,004	4,116	306	58	1,688	300	1,762	2,400	168	418	641	416	846
1998: January.....	7,512	3,795	299	62	1,523	271	1,639	1,634	165	300	588	360	670
February.....	7,423	3,777	296	65	1,497	250	1,669	1,574	165	366	560	377	604
March.....	8,072	3,923	316	78	1,529	303	1,697	1,881	204	352	633	393	687
April.....	9,186	4,211	323	69	1,732	243	1,843	2,592	169	336	665	448	764
May ^f	9,731	4,235	301	66	1,807	240	1,821	3,036	166	372	657	451	815
June.....	11,405	4,711	341	63	2,120	252	1,935	3,889	187	438	758	433	990
July ^p	11,827	4,829	388	70	2,186	256	1,929	4,115	241	418	796	510	919
PERCENT CHANGE													
June 1998- July 1998.....	4	3	14	11	3	2	(Z)	6	29	-5	5	18	-7

NA Not available, but estimates are included in totals. ^pPreliminary. ^rRevised. Z Less than 0.5 percent.

¹Includes farm nonresidential and other private categories, not shown separately. ²Includes residential improvements, not shown separately. ³Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc. ⁴Includes gas, electric, railroad, and petroleum pipelines, not shown separately. ⁵Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc. ⁶Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc. ⁷Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.

Table 7. Monthly Value of Public Construction Put in Place—Not Seasonally Adjusted in Current Dollars

[Millions of dollars]

Period	State and locally owned public construction										
	Total state and local	Buildings					Highways and streets	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous construction ²
		Total	Housing and redevelopment	Educational	Hospital	Other buildings ¹					
1996: July	12,026	4,777	341	2,391	279	1,766	4,638	199	865	519	1,028
August	12,484	5,021	324	2,596	258	1,843	4,690	213	1,042	520	999
September	12,591	5,016	410	2,349	338	1,920	4,862	209	975	552	977
October	12,684	4,895	397	2,205	329	1,965	4,894	234	1,107	685	869
November	10,889	4,784	382	2,158	277	1,966	3,537	219	948	559	843
December	8,887	4,300	320	1,892	311	1,776	2,572	158	762	474	622
1997: January	7,662	3,990	269	1,796	283	1,643	1,805	146	680	426	613
February	7,847	3,992	285	1,807	268	1,632	1,862	141	687	442	723
March	8,797	4,346	298	1,975	307	1,766	2,200	183	783	519	766
April	9,926	4,563	331	2,069	355	1,808	3,059	204	828	494	779
May	11,089	4,662	372	2,181	296	1,814	3,835	162	934	520	974
June	12,453	5,170	340	2,583	328	1,919	4,562	187	978	533	1,024
July	13,288	5,401	365	2,735	378	1,923	5,040	198	955	577	1,119
August	14,023	5,506	351	2,856	330	1,970	5,453	225	963	556	1,320
September	13,525	5,355	414	2,514	351	2,077	5,161	218	1,031	587	1,173
October	13,468	5,412	457	2,428	352	2,176	4,999	249	992	616	1,199
November	11,212	4,686	371	2,069	282	1,965	3,998	204	882	579	862
December	9,487	4,412	332	2,033	261	1,785	2,842	178	751	491	814
1998: January	7,989	4,152	322	1,839	256	1,736	1,927	161	689	426	634
February	7,783	4,097	293	1,806	237	1,762	1,848	148	656	447	587
March	8,458	4,230	336	1,850	262	1,781	2,206	154	741	467	661
April	9,893	4,598	342	2,095	232	1,929	3,041	147	778	533	797
May ^r	10,588	4,689	317	2,189	245	1,938	3,563	173	770	538	855
June ^f	12,521	5,272	366	2,574	263	2,069	4,592	206	892	518	1,041
July ^p	12,896	5,340	411	2,665	239	2,025	4,861	170	939	611	974
Period	Federally owned public construction										
	Total federal	Buildings					Highways and streets	Military facilities	Conservation and development	Miscellaneous construction ⁴	
		Total	Housing	Industrial	Educational	Hospital					Other buildings ³
1996: July	1,284	538	64	129	1	98	247	(NA)	200	321	183
August	1,265	482	57	132	1	73	219	(NA)	202	366	168
September	2,010	713	68	184	1	121	338	(NA)	284	675	295
October	928	371	46	60	2	57	207	(NA)	179	199	133
November	1,195	513	61	91	2	74	285	(NA)	207	276	166
December	1,070	513	51	88	-	107	267	(NA)	204	244	86
1997: January	1,053	484	71	89	-	113	211	(NA)	202	272	79
February	1,011	482	58	79	2	120	223	(NA)	173	249	93
March	1,105	457	52	88	4	83	230	(NA)	195	276	159
April	1,075	473	50	112	1	73	236	(NA)	190	226	162
May	1,151	454	49	74	1	84	247	(NA)	220	290	155
June	1,163	512	59	95	2	109	248	(NA)	227	258	128
July	1,179	476	55	92	1	70	257	(NA)	239	272	151
August	1,199	478	58	80	2	80	258	(NA)	248	296	131
September	1,779	709	55	98	3	174	379	(NA)	279	546	200
October	1,042	462	71	56	-	116	220	(NA)	205	155	175
November	1,248	567	60	65	1	129	312	(NA)	242	213	195
December	1,276	553	39	70	3	101	340	(NA)	201	312	186
1998: January	990	429	40	75	-	71	243	(NA)	198	191	157
February	1,078	461	64	78	1	66	253	(NA)	197	280	124
March	1,186	516	45	94	-	105	272	(NA)	244	258	148
April	1,075	498	49	84	1	63	301	(NA)	203	246	103
May ^r	1,045	443	47	80	1	46	269	(NA)	199	263	106
June ^f	1,158	453	48	77	2	43	283	(NA)	225	310	131
July ^p	1,325	552	63	85	2	73	329	(NA)	290	324	115

- Less than \$0.5 million. NA Not available, but estimates are included in totals. ^rPreliminary. ^fRevised.

¹Includes general administrative buildings, prisons, police and fire stations, courthouses, passenger terminals, civic centers, etc. ²Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc. ³Includes federal office buildings, prisons, courthouses, space facilities, postal facilities, etc. ⁴Includes federal airport facilities, fish and wildlife preservation facilities, VA cemeteries, etc.

Table 8. Monthly Value of Public Construction Put in Place—Seasonally Adjusted Annual Rate in Current Dollars

[Millions of dollars]

Period		State and locally owned public construction										
		Total state and local	Buildings					Highways and streets	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous construction ²
			Total	Housing and redevelopment	Educational	Hospital	Other buildings ¹					
1996:	July	120,713	51,621	4,037	23,731	3,114	20,739	40,746	2,106	9,687	5,686	10,868
	August	119,126	51,887	3,905	24,167	3,244	20,572	38,924	2,079	10,803	5,679	9,754
	September	124,183	54,553	4,328	24,901	3,693	21,632	41,439	2,125	10,033	6,092	9,940
	October	125,259	54,465	4,159	25,467	3,543	21,296	41,419	2,368	11,293	6,918	8,797
	November	128,166	57,243	4,387	27,089	3,360	22,407	41,982	2,507	10,648	6,129	9,657
	December	125,184	56,390	4,014	26,283	3,704	22,389	42,215	2,125	10,103	5,965	8,387
1997:	January	127,151	55,811	3,492	26,092	3,698	22,528	42,645	2,387	9,954	6,358	9,996
	February	133,901	56,988	3,982	26,808	3,561	22,636	45,698	2,259	10,761	6,616	11,579
	March	137,718	59,105	3,944	27,428	3,923	23,810	45,911	2,789	10,923	7,344	11,646
	April	132,813	57,642	4,186	27,138	4,134	22,184	46,003	2,545	10,632	6,281	9,711
	May	131,155	55,694	4,267	26,755	3,838	20,835	44,683	1,927	11,167	6,096	11,589
	June	132,756	57,352	4,112	27,729	3,810	21,701	44,913	2,068	11,062	6,031	11,330
	July	133,083	57,931	4,280	27,168	4,279	22,205	44,368	2,083	10,589	6,324	11,787
	August	134,033	57,259	4,204	26,692	4,066	22,297	45,537	2,191	10,099	6,090	12,857
	September	132,669	57,693	4,317	26,551	3,708	23,117	43,926	2,215	10,484	6,458	11,893
	October	133,846	60,132	4,732	27,959	3,878	23,564	42,759	2,517	10,141	6,194	12,103
	November	132,042	56,354	4,209	25,858	3,438	22,850	47,040	2,358	10,005	6,342	9,944
	December	132,343	58,060	4,156	28,209	3,075	22,620	44,926	2,403	9,740	6,211	11,003
1998:	January	132,738	57,863	4,141	26,645	3,460	23,618	45,688	2,598	10,060	6,301	10,227
	February	132,178	58,381	4,110	26,754	3,162	24,355	45,170	2,382	10,150	6,665	9,430
	March	130,884	56,430	4,364	25,755	3,201	23,110	45,170	2,314	10,388	6,612	9,969
	April	131,935	57,857	4,310	27,117	2,855	23,576	45,669	1,845	9,843	6,740	9,981
	May ^f	125,776	56,306	3,754	26,861	3,045	22,646	41,593	2,045	9,391	6,319	10,122
	June ^e	131,707	57,910	4,482	27,386	2,930	23,112	44,223	2,250	10,027	5,896	11,401
	July ^p	130,067	57,348	4,686	26,539	2,801	23,322	43,566	1,794	10,348	6,713	10,299
Period		Federally owned public construction										
		Total federal	Buildings					Highways and streets	Military facilities	Conservation and development	Miscellaneous construction ⁴	
			Total	Housing	Industrial	Educational	Hospital					Other buildings ³
1996:	July	15,152	6,415	767	1,531	8	1,164	2,943	(NA)	2,396	3,810	2,171
	August	14,556	5,912	697	1,623	10	893	2,688	(NA)	2,321	4,067	1,866
	September	16,568	6,419	613	1,661	10	1,093	3,042	(NA)	2,761	4,882	2,131
	October	14,029	5,383	667	864	26	830	2,996	(NA)	2,576	3,408	2,282
	November	14,507	6,180	736	1,092	29	889	3,434	(NA)	2,296	3,518	2,122
	December	13,252	6,257	623	1,068	4	1,302	3,260	(NA)	2,360	3,145	1,112
1997:	January	13,738	6,078	894	1,112	4	1,420	2,649	(NA)	2,486	3,718	1,078
	February	14,294	6,527	791	1,071	23	1,624	3,018	(NA)	2,552	3,526	1,321
	March	13,570	5,499	629	1,059	48	999	2,763	(NA)	2,364	3,379	1,953
	April	13,540	5,906	628	1,405	10	913	2,951	(NA)	2,431	2,813	2,015
	May	13,345	5,158	555	839	9	952	2,803	(NA)	2,580	3,402	1,821
	June	13,717	5,933	682	1,100	22	1,258	2,870	(NA)	2,729	3,128	1,553
	July	14,131	5,879	677	1,136	16	869	3,181	(NA)	2,880	3,216	1,786
	August	13,898	5,950	723	992	22	996	3,217	(NA)	2,812	3,289	1,454
	September	14,751	6,325	490	876	28	1,551	3,379	(NA)	2,630	3,965	1,449
	October	15,223	6,438	985	775	3	1,610	3,065	(NA)	2,806	2,631	2,964
	November	15,686	7,232	760	834	6	1,649	3,983	(NA)	2,889	2,709	2,479
	December	15,584	6,451	455	819	33	1,176	3,970	(NA)	2,342	4,019	2,392
1998:	January	13,169	5,420	501	949	3	902	3,066	(NA)	2,474	2,683	2,213
	February	15,106	6,138	853	1,042	11	871	3,362	(NA)	2,916	3,923	1,738
	March	14,696	6,500	567	1,189	4	1,317	3,424	(NA)	2,818	3,174	1,815
	April	13,469	5,946	583	998	17	749	3,599	(NA)	2,686	3,135	1,311
	May ^f	12,383	5,381	573	968	17	556	3,266	(NA)	2,281	3,084	1,241
	June ^e	13,591	5,292	563	898	21	505	3,305	(NA)	2,651	3,700	1,562
	July ^p	15,289	6,413	734	988	19	851	3,821	(NA)	3,329	3,801	1,352

NA Not available, but estimates are included in totals. ^pPreliminary. ^fRevised.

¹Includes general administrative buildings, prisons, police and fire stations, courthouses, passenger terminals, civic centers, etc. ²Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc. ³Includes federal office buildings, prisons, courthouses, space facilities, postal facilities, etc. ⁴Includes federal airport facilities, fish and wildlife preservation facilities, VA cemeteries, etc.

Table 9. Monthly Value of Public Construction Put in Place—Seasonally Adjusted Annual Rate in 1992 Dollars

[Millions of dollars]

Period		State and locally owned public construction										
		Total state and local	Buildings					Highways and streets	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous construction ²
			Total	Housing and redevelopment	Educational	Hospital	Other buildings ¹					
1996:	July	106,047	44,897	3,447	20,672	2,713	18,066	36,090	1,869	8,596	4,961	9,634
	August	104,350	45,053	3,329	21,014	2,820	17,889	34,385	1,835	9,535	4,934	8,609
	September	108,229	47,172	3,686	21,559	3,197	18,729	36,414	1,863	8,793	5,260	8,727
	October	109,110	47,016	3,536	22,011	3,062	18,407	36,428	2,077	9,906	5,954	7,730
	November	111,731	49,368	3,724	23,393	2,902	19,350	37,021	2,205	9,365	5,270	8,501
	December	108,839	48,476	3,402	22,619	3,187	19,268	37,161	1,864	8,862	5,107	7,370
1997:	January	109,833	47,779	2,947	22,358	3,169	19,305	37,212	2,070	8,633	5,439	8,700
	February	115,541	48,823	3,363	22,991	3,054	19,414	39,772	1,951	9,293	5,670	10,033
	March	117,858	50,313	3,328	23,363	3,342	20,281	39,578	2,384	9,336	6,251	9,996
	April	113,284	48,944	3,527	23,057	3,512	18,848	39,454	2,173	9,079	5,327	8,307
	May	111,515	47,094	3,585	22,635	3,247	17,627	38,191	1,644	9,528	5,162	9,896
	June	112,854	48,445	3,441	23,439	3,221	18,344	38,387	1,767	9,455	5,115	9,684
	July	112,925	48,652	3,566	22,830	3,595	18,660	37,987	1,779	9,043	5,382	10,083
	August	113,557	47,889	3,492	22,336	3,402	18,659	38,987	1,871	8,625	5,187	10,998
	September	112,285	48,125	3,571	22,163	3,095	19,297	37,640	1,890	8,945	5,510	10,174
	October	112,825	50,110	3,904	23,319	3,234	19,653	36,298	2,153	8,675	5,281	10,309
	November	110,531	46,708	3,470	21,441	2,850	18,947	39,496	2,011	8,529	5,374	8,413
	December	110,694	48,126	3,429	23,391	2,550	18,756	37,627	2,052	8,318	5,264	9,309
1998:	January	111,136	47,937	3,428	22,075	2,866	19,567	38,425	2,217	8,583	5,313	8,660
	February	110,857	48,369	3,405	22,166	2,619	20,178	38,150	2,036	8,675	5,615	8,012
	March	109,703	46,643	3,613	21,285	2,645	19,099	38,183	1,976	8,871	5,561	8,470
	April	110,559	47,816	3,562	22,411	2,359	19,484	38,604	1,577	8,413	5,668	8,480
	May ^r	105,195	46,460	3,100	22,163	2,513	18,685	35,099	1,743	8,006	5,301	8,585
	June ^r	109,765	47,657	3,683	22,540	2,412	19,022	37,131	1,910	8,512	4,926	9,629
	July ^p	108,121	47,000	3,835	21,754	2,296	19,116	36,548	1,520	8,770	5,598	8,684
		Federally owned public construction										
		Total federal	Buildings					Highways and streets	Military facilities	Conservation and development	Miscellaneous construction ⁴	
			Total	Housing	Industrial	Educational	Hospital					Other buildings ³
1996:	July	13,305	5,575	655	1,334	7	1,014	2,564	(NA)	2,106	3,381	1,925
	August	12,744	5,129	594	1,412	9	777	2,338	(NA)	2,034	3,590	1,647
	September	14,438	5,549	522	1,438	9	946	2,634	(NA)	2,409	4,279	1,871
	October	12,218	4,643	567	747	23	718	2,589	(NA)	2,246	2,990	2,005
	November	12,636	5,326	625	943	25	768	2,965	(NA)	2,003	3,094	1,868
	December	11,499	5,377	528	919	3	1,121	2,805	(NA)	2,054	2,759	977
1997:	January	11,840	5,196	754	953	3	1,217	2,270	(NA)	2,151	3,224	938
	February	12,303	5,587	668	919	20	1,393	2,588	(NA)	2,206	3,045	1,144
	March	11,592	4,679	531	902	41	851	2,354	(NA)	2,025	2,888	1,676
	April	11,535	5,014	529	1,194	8	775	2,507	(NA)	2,074	2,402	1,723
	May	11,340	4,361	466	710	8	806	2,372	(NA)	2,194	2,902	1,555
	June	11,648	5,009	571	930	19	1,063	2,426	(NA)	2,318	2,673	1,328
	July	11,969	4,935	564	954	14	730	2,673	(NA)	2,442	2,747	1,528
	August	11,745	4,975	600	830	19	833	2,692	(NA)	2,381	2,809	1,244
	September	12,449	5,276	406	732	23	1,295	2,820	(NA)	2,223	3,383	1,240
	October	12,822	5,360	813	646	2	1,343	2,556	(NA)	2,360	2,250	2,525
	November	13,128	5,993	626	691	5	1,368	3,303	(NA)	2,412	2,310	2,097
	December	13,073	5,347	375	679	27	975	3,292	(NA)	1,952	3,432	2,024
1998:	January	11,037	4,490	415	786	2	747	2,540	(NA)	2,065	2,289	1,874
	February	12,683	5,086	707	863	9	722	2,785	(NA)	2,438	3,353	1,476
	March	12,310	5,373	469	982	3	1,089	2,830	(NA)	2,356	2,710	1,542
	April	11,281	4,914	482	825	14	619	2,974	(NA)	2,244	2,679	1,114
	May ^r	10,358	4,440	473	799	14	459	2,695	(NA)	1,902	2,629	1,053
	June ^r	11,343	4,355	462	739	17	416	2,720	(NA)	2,204	3,141	1,319
	July ^p	12,708	5,255	600	810	15	698	3,132	(NA)	2,761	3,221	1,140

NA Not available, but estimates are included in totals. ^rPreliminary. ^rRevised.

¹Includes general administrative buildings, prisons, police and fire stations, courthouses, passenger terminals, civic centers, etc. ²Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc. ³Includes federal office buildings, prisons, courthouses, space facilities, postal facilities, etc. ⁴Includes federal airport facilities, fish and wildlife preservation facilities, VA cemeteries, etc.

Table 10. Monthly Value of Public Construction Put in Place—Not Seasonally Adjusted in 1992 Dollars

[Millions of dollars]

Period		State and locally owned public construction										
		Total state and local	Buildings					Highways and streets	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous construction ²
			Total	Housing and redevelopment	Educational	Hospital	Other buildings ¹					
1996:	July	10,572	4,155	291	2,083	243	1,539	4,108	177	767	453	911
	August	10,944	4,361	276	2,257	225	1,603	4,143	188	919	451	882
	September	10,981	4,337	349	2,034	293	1,662	4,273	183	854	477	857
	October	11,059	4,225	337	1,906	284	1,698	4,305	205	971	589	764
	November	9,493	4,125	324	1,864	239	1,698	3,119	192	834	481	742
	December	7,719	3,696	271	1,629	268	1,529	2,264	138	668	406	547
1997:	January	6,606	3,416	227	1,539	242	1,408	1,575	127	590	364	534
	February	6,761	3,420	241	1,550	230	1,399	1,621	122	593	379	626
	March	7,521	3,700	252	1,682	261	1,504	1,896	157	669	442	657
	April	8,464	3,874	279	1,758	301	1,536	2,624	174	707	419	666
	May	9,428	3,942	313	1,845	250	1,535	3,278	138	797	440	832
	June	10,589	4,367	284	2,184	278	1,622	3,899	160	836	452	875
	July	11,283	4,536	304	2,298	318	1,616	4,315	169	815	491	957
	August	11,892	4,606	291	2,390	276	1,648	4,669	192	822	474	1,129
	September	11,459	4,467	342	2,098	293	1,733	4,423	186	880	501	1,003
	October	11,362	4,510	377	2,025	293	1,815	4,244	213	849	525	1,021
	November	9,387	3,884	306	1,715	233	1,629	3,357	174	752	491	729
	December	7,935	3,657	274	1,686	217	1,480	2,380	152	641	416	689
1998:	January	6,682	3,440	266	1,523	212	1,438	1,620	137	588	360	537
	February	6,518	3,395	243	1,496	196	1,460	1,561	127	560	377	499
	March	7,079	3,496	278	1,529	217	1,472	1,865	131	633	393	562
	April	8,286	3,800	283	1,731	191	1,594	2,570	126	665	448	677
	May ^f	8,856	3,869	262	1,806	202	1,599	3,007	147	657	451	725
	June ^f	10,438	4,338	301	2,119	216	1,702	3,855	174	758	433	879
	July ^p	10,726	4,377	336	2,184	196	1,660	4,078	144	796	510	821
		Federally owned public construction										
		Total federal	Buildings					Highways and streets	Military facilities	Conservation and development	Miscellaneous construction ⁴	
			Total	Housing	Industrial	Educational	Hospital					Other buildings ³
1996:	July	1,127	468	55	112	1	85	215	(NA)	176	285	162
	August	1,108	418	48	115	1	63	191	(NA)	177	323	148
	September	1,752	616	58	160	1	105	292	(NA)	248	592	259
	October	808	320	39	52	2	50	179	(NA)	156	175	117
	November	1,041	442	52	78	2	64	246	(NA)	181	242	146
	December	928	441	43	75	-	92	230	(NA)	178	214	76
1997:	January	907	414	60	76	-	97	181	(NA)	175	236	69
	February	870	413	49	68	1	103	191	(NA)	149	215	81
	March	944	389	44	75	3	71	196	(NA)	167	236	137
	April	916	401	42	95	1	62	201	(NA)	162	193	138
	May	978	384	41	62	1	71	209	(NA)	187	247	132
	June	988	432	49	80	2	92	209	(NA)	193	220	109
	July	999	399	46	77	1	59	216	(NA)	203	232	129
	August	1,014	399	48	67	2	67	216	(NA)	210	253	112
	September	1,502	592	45	82	3	145	316	(NA)	236	466	171
	October	877	385	58	46	-	96	183	(NA)	172	133	149
	November	1,045	469	49	54	-	107	259	(NA)	202	182	165
	December	1,070	459	32	58	2	84	282	(NA)	168	266	157
1998:	January	830	355	33	62	-	59	201	(NA)	165	163	133
	February	905	382	53	65	1	54	209	(NA)	165	239	105
	March	993	427	37	78	-	86	225	(NA)	204	221	126
	April	900	411	40	69	1	52	249	(NA)	169	210	87
	May ^f	874	366	39	66	1	38	222	(NA)	166	225	90
	June ^f	966	372	40	63	1	36	233	(NA)	187	263	110
	July ^p	1,101	452	52	70	1	60	269	(NA)	241	275	97

- Less than \$0.5 million. NA Not available, but estimates are included in totals. ^pPreliminary. ^fRevised.

¹Includes general administrative buildings, prisons, police and fire stations, courthouses, passenger terminals, civic centers, etc. ²Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc. ³Includes federal office buildings, prisons, courthouses, space facilities, postal facilities, etc. ⁴Includes federal airport facilities, fish and wildlife preservation facilities, VA cemeteries, etc.

Table 11. Indexes Used in Deriving Estimates of the Value of Construction Put in Place in Constant Dollars

[1992 = 100]

Period	Bureau of the Census		Engineering News-Record		Bureau of the Census houses under construction		Federal Highway Administration composite	Bureau of Reclamation	Turner Construction Company	Handy-Whitman public utility				C.A. Turner telephone plant
	Composite fixed-weighted	Implicit price deflator	Buildings	Construction	Fixed-weighted	Price deflator				Buildings	Electric	Gas	Water	
	Annual indexes													
1993.....	103.7	103.8	105.7	104.5	104.9	104.8	103.0	103	102	105	103	103	104	102
1994.....	108.0	108.1	109.8	108.5	109.7	109.5	109.5	106	105	112	107	109	109	103
1995.....	112.5	112.6	109.8	109.8	114.4	114.3	115.9	110	109	115	111	111	112	110
1996.....	115.0	115.2	113.0	112.8	116.4	116.5	116.1	112	112	118	112	112	115	115
1997.....	118.7	118.9	118.7	116.9	119.9	119.9	124.7	116	117	122	115	115	118	117
	Monthly indexes						Quarterly indexes			Semiannual indexes				
1997: January.....	117.1	117.2	117.6	115.6	118.6	118.5								
February.....	117.0	117.1	117.6	115.7	118.5	118.4	127.1	114	114					
March.....	117.6	117.7	117.3	115.5	118.6	118.5				121	114	114	117	116
April.....	117.8	117.9	118.7	116.3	118.7	118.7								
May.....	118.1	118.3	119.2	117.1	118.8	119.0	124.1	116	116					
June.....	118.3	118.5	119.9	117.6	119.2	119.5								
July.....	118.6	118.9	119.7	117.6	119.6	120.0								
August.....	118.9	119.3	119.5	117.4	120.0	120.4	116.4	118	118					
September.....	119.5	119.6	119.2	117.4	120.9	120.9				122	114	115	118	117
October.....	119.9	119.9	119.0	117.3	121.5	121.2								
November.....	120.6	120.4	118.2	117.1	121.9	121.3	131.5	118	119					
December.....	120.7	120.4	118.9	117.5	122.0	121.2								
1998: January.....	120.6	120.3	118.7	117.4	121.6	120.8								
February.....	120.3	120.3	119.0	117.8	121.1	120.7	113.8	118	120					
March.....	120.3	120.4	118.9	117.9	121.0	120.8				122	116	116	118	119
April.....	120.3	120.5	119.1	118.0	121.0	121.0								
May.....	^r 120.5	^r 120.6	119.1	118.0	^r 121.2	^r 121.1	(NA)	118	121					
June.....	^r 121.3	^r 121.1	119.2	118.3	^r 122.3	^r 121.7								
July.....	^p 121.9	^p 121.5	119.4	118.8	^p 123.2	^p 122.2								
August.....			119.7	118.9			(NA)	(NA)	(NA)					

NA Not available. ^pPreliminary. ^rRevised.

Table 12. Factors Used to Seasonally Adjust Estimates of the Value of Construction Put in Place

[Percent]

Type of construction	July 1998 ^p	June 1998 ^r	May 1998 ^r	Apr. 1998	Mar. 1998	Feb. 1998	Jan. 1998	Dec. 1997	Nov. 1997	Oct. 1997	Sep. 1997	July 1997
PRIVATE CONSTRUCTION												
Residential buildings:												
New housing units:												
1 unit	112.4	107.3	101.0	94.9	90.2	76.1	81.2	88.6	106.5	111.8	114.5	112.8
2 units or more	103.7	106.9	105.2	99.0	95.1	88.1	87.1	95.0	100.7	104.9	105.0	104.4
Nonresidential buildings:												
Industrial	101.1	103.8	100.5	96.0	94.9	89.1	89.1	105.3	102.4	108.4	107.8	102.1
Office	103.4	103.6	103.3	99.1	95.7	92.1	91.2	97.5	101.3	104.7	105.1	102.0
Hotels, motels	98.9	106.9	101.6	104.8	100.0	93.1	91.2	99.4	98.7	99.9	103.0	100.8
Other commercial	107.8	104.7	99.2	94.3	89.1	82.6	83.5	94.8	103.1	113.7	114.9	106.7
Religious	97.6	97.7	93.0	94.1	92.9	87.1	90.3	103.9	110.1	113.9	114.2	100.7
Educational	120.5	117.3	101.8	96.1	88.9	82.0	83.2	86.3	93.9	100.8	108.2	123.4
Hospital and institutional	97.3	100.3	101.5	99.5	96.6	94.6	94.7	99.2	104.3	104.7	103.3	97.6
Miscellaneous nonresidential	101.5	103.0	99.7	103.4	99.2	88.2	87.4	96.4	105.1	107.8	105.6	101.5
Telecommunications	104.9	107.8	96.2	98.7	97.4	83.1	82.2	108.3	99.6	112.2	105.9	106.0
All other private	104.6	105.3	100.4	93.6	89.1	81.6	88.6	95.3	107.1	116.9	109.8	107.5
PUBLIC CONSTRUCTION												
State and local												
Buildings:												
Housing and redevelopment	105.3	98.1	101.4	95.2	92.5	85.6	93.2	95.9	105.7	115.9	115.0	102.4
Educational	120.5	112.8	97.8	92.7	86.2	81.0	82.8	86.5	96.0	104.2	113.6	120.8
Hospital	102.4	107.5	96.5	97.4	98.3	89.8	88.9	102.0	98.3	108.9	113.7	106.1
Other buildings	104.2	107.4	102.7	98.2	92.5	86.8	88.2	94.7	103.2	110.8	107.8	103.9
Highways and streets	133.9	124.6	102.8	79.9	58.6	49.1	50.6	75.9	102.0	140.3	141.0	136.3
Conservation and development	113.5	109.6	101.4	95.8	79.6	74.7	74.4	88.8	104.0	118.9	118.3	113.9
Sewer systems	108.9	106.8	98.4	94.8	85.6	77.5	82.2	92.5	105.8	117.4	118.0	108.2
Water supply facilities	109.3	105.5	102.1	94.9	84.7	80.5	81.2	94.8	109.6	119.3	109.0	109.4
Miscellaneous construction	113.5	109.6	101.4	95.8	79.6	74.7	74.4	88.8	104.0	118.9	118.3	113.9
Federal												
Buildings:												
Housing and redevelopment	103.2	102.6	98.8	100.4	95.3	90.2	95.0	102.9	94.0	86.1	134.6	97.1
Industrial	103.2	102.6	98.8	100.4	95.3	90.2	95.0	102.9	94.0	86.1	134.6	97.1
Educational	103.2	102.6	98.8	100.4	95.3	90.2	95.0	102.9	94.0	86.1	134.6	97.1
Hospital	103.2	102.6	98.8	100.4	95.3	90.2	95.0	102.9	94.0	86.1	134.6	97.1
Other buildings	103.2	102.6	98.8	100.4	95.3	90.2	95.0	102.9	94.0	86.1	134.6	97.1
Military	104.6	101.8	104.6	90.5	104.0	81.1	95.9	103.1	100.6	87.5	127.3	99.6
Conservation and development	102.3	100.5	102.5	94.1	97.7	85.5	85.2	93.1	94.3	70.8	165.2	101.3
Miscellaneous construction	102.3	100.5	102.5	94.1	97.7	85.5	85.2	93.1	94.3	70.8	165.2	101.3

^pPreliminary. ^rRevised.

Appendix.

Reliability of the Estimates

The statistics on the value of construction put in place result from direct measurement and indirect estimation. A series results from direct measurement when it is based on reports of the actual value of construction progress or construction expenditures obtained from a complete census or sample survey. All other series are developed by indirect estimation using related construction statistics.

On an annual basis, the estimates for series directly measured monthly, quarterly, or annually accounted for about 73 percent of total construction in 1997 (private multifamily residential, private residential improvements, private nonresidential buildings, farm nonresidential construction, public utility construction, all other private construction, and virtually all of public construction). On a monthly basis, directly measured data are available for about 56 percent of the value-in-place estimates.

Some of the directly measured monthly construction value-in-place estimates are based on samples. Estimates from these samples may differ from statistics which would have been obtained from a complete census using the same schedules and procedures. An estimate based on a sample survey is subject to both sampling error and nonsampling error. The accuracy of a survey result is determined by the joint effects of these errors.

MEASURE OF SAMPLING ERRORS

Sampling error reflects the fact that only a particular sample was surveyed rather than the entire population. Each sample selected for the monthly value-in-place survey is one of a large number of similar probability samples that, by chance, might have been selected under the same specifications. Estimates derived from the different samples would differ from one another. The standard error, or sampling error, of a survey estimate is a measure of the variation among the estimates from all possible samples and, thus, is a measure of the precision with which an estimate from a particular sample approximates the average from all possible samples.

Estimates of the standard errors for the monthly, year-to-date and annual estimates were computed from the sample data for selected statistics in this report. They are presented in the form of relative standard errors in the following table. The relative standard error equals the standard error divided by the estimated value to which it refers.

The sample estimate and an estimate of its standard error allow us to construct interval estimates with prescribed confidence that the interval includes the average result of all possible samples with the same size and design. A 90-percent confidence interval is defined to be from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate. If all possible samples were selected and surveyed under essentially the same conditions and all the respective 90-percent confidence intervals were generated, then approximately nine-tenths of the intervals would include the average value of all sample estimates and approximately one-tenth would not include this estimate. For example, suppose Table 3 of this report showed that the monthly VIP estimate for "total private nonresidential buildings" was \$10.0 billion in a particular month. According to the following table, the relative standard error of this estimate is 2 percent. Multiplying \$10.0 billion by .02, we obtain \$200 million as the standard error. To obtain a 90-percent confidence interval, multiply \$200 million by 1.6 and add and subtract the result from \$10.0 billion, yielding limits of \$9.68 billion and \$10.32 billion. The average value of the monthly VIP estimate for "total private nonresidential buildings" may or may not be contained in this computed interval, but one can say that the average is included in the constructed interval with a specified confidence of 90 percent.

The following table also presents coefficients necessary to compute standard errors for the month-to-month and year-to-date changes. To derive a specific standard error of a change, look up an appropriate coefficient (k_1 or k_2) for the change and apply the following formula:

$$\text{Standard error of a change} = k (100 + (\% \text{ change shown in Tables 3 thru 6}))$$

Once the standard error is available, one can construct a 90-percent confidence interval of the change by multiplying the standard error by 1.6.

No standard errors are shown for farm nonresidential or public utilities because the estimates are based on a complete enumeration.

NONSAMPLING ERRORS

As calculated for this report, the coefficient of variation estimates sampling variation but does not measure all nonsampling error in the data. Nonsampling error consists of both a variance component and a bias

component. Bias is the difference, averaged over all possible samples of the same size and design, between the estimate and the true value being estimated. Non-sampling errors are usually attributed to many possible sources: (1) coverage error—failure to accurately represent all population units in the sample, (2) inability to obtain information about all sample cases, (3) response errors, possibly due to definitional difficulties or misreporting, (4) mistakes in recording or coding the data obtained, and (5) other errors of coverage, collection and nonresponse, response, processing, or imputing for missing or inconsistent data. These nonsampling errors also occur in complete censuses. Although no direct measures of these errors have been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data to minimize their influence.

A major source of nonsampling error in the published estimates is due to the need to impute data for nonrespondents and for late and inconsistent reports. For preliminary value-in-place estimates, the average imputation rates for major components are as follows: private nonresidential construction, 45 percent; state and locally owned public construction, 33 percent; private residential construction of 2 units or more, 47 percent; and private residential improvements, 13 percent. Each of these imputation rates is not an explicit indication of the potential error in statistics, but the degree of uncertainty regarding the accuracy of the statistics increases as the percentage of imputation increases.

Other potential sources of bias are the upward adjustment of 28 percent made to the private nonresidential construction and the adjustment of the state and local owned public construction to the construction outlays from the Annual Survey of Government Finances in order to account for construction projects not included in their respective sampling frames. The adjustment for the nonresidential construction results from a coverage evaluation sample; hence, the estimated percentage adjustment is subject to sampling error and nonsampling errors associated with the evaluation study. In addition, the percentage was estimated from data collected during a limited time period; therefore, these adjustments do not reflect any recent changes in the proportion of projects not included in the frame.

For state and locally owned construction, construction outlays from the Survey of Government Finances are available only through Fiscal Year 1995. (Outlays are included if a government agency's fiscal year ending date falls within July 1994 to June 1995 inclusive, and

for three state agencies with fiscal years ending in August or September 1995.) As a result, the adjustment to the construction outlay levels of this survey must be projected ahead for 4 years from 1995 through April 1999. The relationship between the state and locally owned value-in-place and the capital outlays estimate changes from year to year so that revisions of 4 to 5 percent are expected in state and local construction and substantially larger revisions can be expected in the individual types of construction. In addition, because of the definition of fiscal year for the Survey of Government Finances, the reported capital outlays do not correspond to any 12 month period but result from capital outlays made over a 26 month period. There are also definitional and timing differences between the concepts of capital outlays and value put in place.

Consequently, even though the private nonresidential and state and local owned construction adjustments are designed to reduce the bias due to the failure to include projects in the sampling frames, for the above stated reasons, these adjustment procedures, themselves, may introduce a bias in the current estimates of value-in-place.

Furthermore, additional nonsampling errors may be introduced into the estimates because the procedures such as phasing, extrapolating, and forecasting used to develop the indirectly measured series are subject to the validity of the underlying assumptions made and mathematical models used. No explicit measures of the effect of these procedures are available.

MONTHLY REVISIONS TO ESTIMATES

Statistics for the current month are preliminary estimates. These estimates are released to provide government and private data users with early measures of construction activity. A necessary part of the process of issuing these early data involves the issuance of subsequent revisions. The revisions to monthly construction put in place estimates are primarily the result of the replacement of imputed data with data which are reported in subsequent months.

For total construction, the range of the difference between the last 12 preliminary and second revision estimates for the same months was from 0.1 percent to 1.7 percent with a median of 0.5 percent. The range of the difference between first revision and second revision was from -0.4 to 0.5 percent, with a median of 0.0 percent.

Relative Standard Errors and Coefficients for Standard Errors of Changes

Type of construction	Relative standard error (percent)			Coefficient for changes	
	Monthly estimate	Year-to-date estimate	Annual estimate	Month-to-month change (k1)	Year-to-date change (k2)
Total construction	2	1	1	.03	.02
Private construction	3	2	1	.04	.02
Residential buildings	5	3	2	.06	.04
New housing units	2	2	1	.01	.02
1 unit structures	2	2	2	.01	.01
2 units or more	4	4	3	.03	.04
Nonresidential buildings	2	1	1	.02	.01
Industrial	3	2	2	.04	.03
Office	4	2	2	.05	.03
Hotels, motels	7	6	5	.09	.08
Other commercial	5	3	2	.06	.04
Religious	9	7	5	.12	.10
Educational	7	5	5	.10	.07
Hospital and institutional	6	5	5	.07	.07
Miscellaneous buildings	7	5	4	.09	.07
Public construction	2	1	1	.03	.01
Housing and redevelopment	8	5	4	.11	.07
Industrial	(NA)	(NA)	(NA)	(NA)	(NA)
Educational	3	2	2	.04	.03
Hospital	6	5	4	.08	.07
Other public buildings	3	2	2	.04	.03
Highways and streets	4	2	2	.05	.03
Military facilities	(NA)	(NA)	(NA)	(NA)	(NA)
Conservation and development	4	2	2	.06	.03
Sewer systems	6	3	3	.08	.04
Water supply facilities	8	4	3	.11	.06
Miscellaneous public	8	5	4	.11	.07
State and local construction	2	1	1	.03	.01
Housing and redevelopment	8	5	5	.11	.07
Educational	3	2	2	.04	.03
Hospital	8	6	5	.11	.09
Other public buildings	4	3	2	.05	.04
Highways and streets	4	2	2	.05	.03
Conservation and development	16	9	9	.23	.13
Sewer systems	6	3	3	.08	.04
Water supply facilities	8	4	3	.11	.06
Miscellaneous public	9	5	4	.12	.07
Federal construction	(NA)	(NA)	(NA)	(NA)	(NA)

NA Not available.

Note: All statistics are based upon 1997 data. The coefficient (k1) for the month-to-month change is applicable to change from the previous month and change from the same month a year ago.