

Value of Construction Put in Place

October

1999

Issued December 1999

C30/99-10

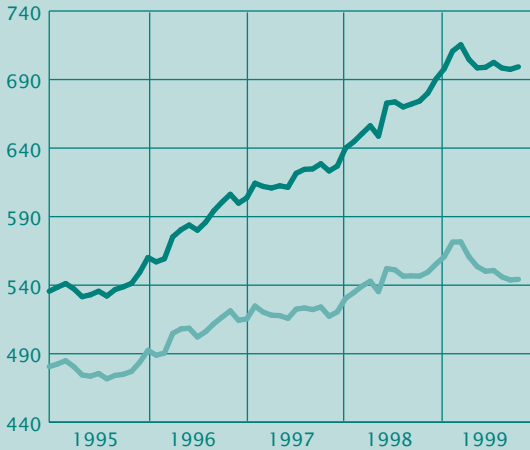
Current Construction Reports

Monthly Value of Construction Put in Place

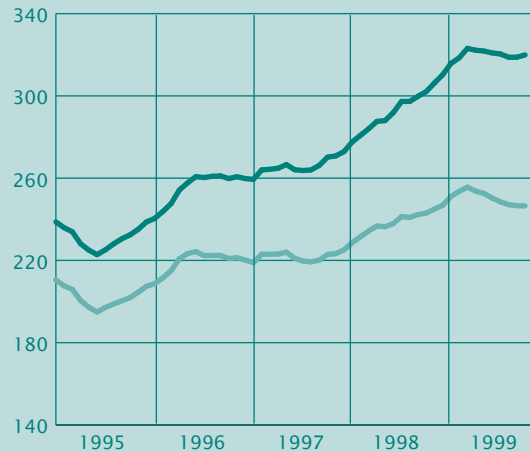
Seasonally adjusted annual rate in billions of dollars

— Current dollars
— 1992 dollars

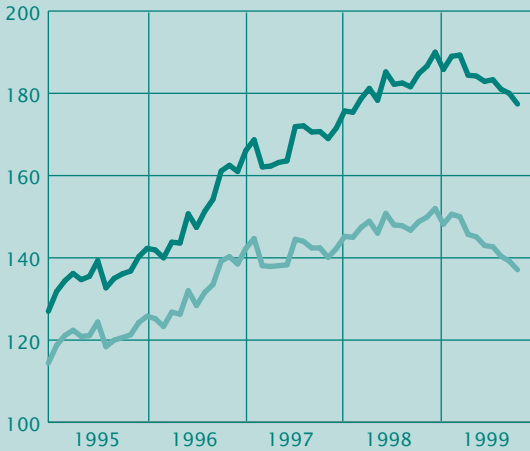
Total Construction



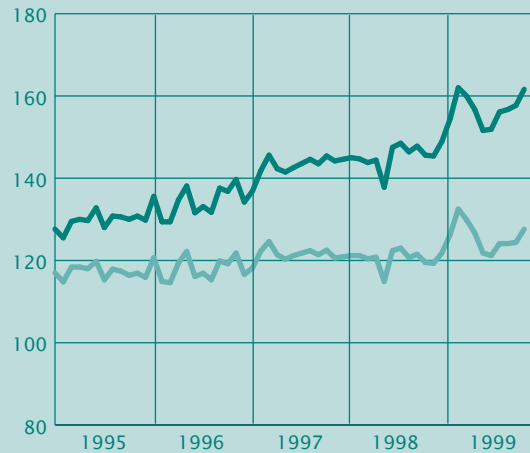
Private Residential Construction



Private Nonresidential Construction



Public Construction



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

Questions regarding these data may be directed to **George A. Roff**, Construction Expenditures Branch, Manufacturing and Construction Division, telephone: 301-457-1605.

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VALUE OF CONSTRUCTION PUT IN PLACE

Construction put in place during October 1999 was estimated at a seasonally adjusted annual rate of \$699.3 billion, nearly the same (± 5 percent) as the revised September estimate of \$697.4 billion. The October figure represents a 4 (± 5) percent increase over October 1998.

During the first 10 months of this year \$588.3 billion of construction was put in place, 6 percent above the \$554.6 billion for the same period in 1998.

In constant (1992) dollars, the October annual rate was \$544.3 billion, nearly the same (± 5 percent) as the revised estimate of \$543.8 billion for September.

Spending on new residential housing units was at a seasonally adjusted annual rate of \$237.6 billion in October, nearly the same (± 2 percent) as the revised September estimate of \$238.0 billion. Nonresidential building construction was at a rate of \$177.4 billion, 1 (± 3) percent below the revised September estimate of \$180.0 billion.

In October, the estimated seasonally adjusted annual rate of public construction put in place was \$161.6 billion, 3 (± 5) percent above the revised September estimate of \$157.7 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 1999*, C30/99-5, U.S. Department of Commerce, U.S. Census Bureau, Washington, DC, 1999; contains annual data for 1994 to 1998 and monthly data for 1996 to 1998.
- Current Construction Reports, *Value of Construction Put in Place: June 1999*, C30/99-6, U.S. Department of Commerce, U.S. Census Bureau, Washington, DC, 1999; contains annual value of construction put in place for private nonresidential buildings by geographic area and detailed types of construction for 1994 to 1998.
- Current Construction Reports, *Value of New Construction Put in Place: October 1992*, C30/92-10, U.S. Department of Commerce, U.S. Census Bureau, 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, U.S. Census Bureau, 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, U.S. Census Bureau, Washington, DC, 1994.

Table 1. Annual Value of Construction Put in Place: 1994-1998

[Millions of dollars]

Type of construction	Current dollars					Constant (1992) dollars				
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998
Total construction	519,539	537,409	583,445	618,225	665,446	480,620	477,386	506,485	520,123	544,729
Private construction	399,346	407,477	448,969	475,123	520,073	367,247	360,040	388,324	398,699	424,345
Residential buildings	238,874	230,688	256,460	265,863	294,326	218,005	201,677	220,017	221,756	239,201
New housing units	167,919	162,898	179,448	187,328	213,909	153,250	142,413	153,966	156,248	173,828
1 unit	153,838	145,009	159,124	164,444	189,453	140,416	126,773	136,516	137,156	153,937
2 units or more	14,081	17,889	20,324	22,883	24,457	12,833	15,640	17,450	19,092	19,891
Improvements	70,955	67,790	77,012	78,535	80,417	64,755	59,264	66,052	65,509	65,372
Nonresidential buildings	120,285	135,022	150,350	167,610	181,915	111,416	120,627	131,188	141,129	148,017
Industrial	28,947	32,505	32,657	31,359	32,270	26,803	29,043	28,503	26,405	26,269
Office	22,178	25,613	27,886	34,305	41,541	20,553	22,891	24,329	28,876	33,803
Hotels, motels	4,648	7,112	10,912	12,898	14,904	4,308	6,351	9,521	10,864	12,121
Other commercial	37,551	42,654	48,188	51,809	53,783	34,756	38,098	42,042	43,628	43,749
Religious	3,869	4,326	4,534	5,777	6,729	3,584	3,864	3,955	4,861	5,472
Educational	4,822	5,493	6,742	8,693	9,629	4,471	4,908	5,880	7,316	7,840
Hospital and institutional	12,268	11,248	11,780	13,546	13,663	11,377	10,051	10,280	11,413	11,121
Miscellaneous ¹	6,002	6,071	7,650	9,223	9,395	5,565	5,421	6,677	7,767	7,643
Farm nonresidential	3,226	3,014	3,658	3,815	3,891	2,990	2,692	3,192	3,210	3,165
Public utilities	34,071	35,859	36,070	35,544	37,267	32,074	32,401	31,771	30,644	31,705
Telecommunications	10,121	11,093	11,772	11,698	12,441	9,785	10,073	10,245	9,985	10,612
Other public utilities	23,950	24,766	24,298	23,846	24,826	22,289	22,328	21,525	20,659	21,093
Railroads	3,340	3,509	4,398	4,922	5,320	3,186	3,201	3,894	4,204	4,489
Electric light and power	14,918	14,049	11,211	11,260	11,574	13,877	12,656	9,914	9,783	9,827
Gas	4,694	6,279	7,674	6,695	6,667	4,308	5,637	6,814	5,828	5,697
Petroleum pipelines	998	929	1,015	969	1,265	918	834	903	843	1,080
All other private ²	2,890	2,893	2,431	2,292	2,674	2,763	2,643	2,156	1,960	2,256
Public construction	120,193	129,933	134,476	143,102	145,373	113,373	117,346	118,161	121,424	120,384
Buildings	49,446	57,754	60,047	63,489	66,137	45,728	51,506	52,348	53,424	53,810
Housing and redevelopment ..	3,835	4,698	4,113	3,795	4,047	3,495	4,108	3,532	3,165	3,291
Industrial	1,465	1,508	1,389	999	1,012	1,358	1,348	1,214	843	824
Educational	20,361	25,783	27,148	28,915	29,916	18,838	23,027	23,693	24,340	24,336
Hospital	3,951	4,236	4,472	4,934	3,978	3,663	3,785	3,905	4,157	3,239
Other ³	19,834	21,528	22,924	24,846	27,183	18,373	19,238	20,004	20,919	22,119
Highways and streets	37,419	37,616	39,860	44,292	44,792	36,219	34,501	35,258	37,833	37,525
Military facilities	2,318	3,011	2,591	2,556	2,578	2,196	2,728	2,280	2,169	2,131
Conservation and development ..	6,363	6,308	5,910	5,612	5,511	5,996	5,724	5,245	4,801	4,681
Sewer systems	8,700	8,420	9,142	9,166	8,707	8,199	7,640	8,110	7,842	7,398
Water supply facilities	4,647	4,709	5,234	5,662	5,871	4,237	4,186	4,550	4,817	4,903
Miscellaneous public ⁴	11,301	12,116	11,691	12,325	11,777	10,799	11,060	10,370	10,537	9,936

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: 1994-1998

[Millions of dollars]

Type of construction	Current dollars					Constant (1992) dollars				
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998
Total public construction	120,193	129,933	134,476	143,102	145,373	113,373	117,346	118,161	121,424	120,384
State and local construction	105,753	114,181	119,151	129,009	130,950	99,804	103,132	104,680	109,475	108,422
Total buildings	44,303	51,711	53,817	57,382	60,109	40,972	46,117	46,917	48,287	48,904
Housing and redevelopment	3,389	4,122	3,432	3,118	3,504	3,089	3,605	2,947	2,600	2,849
Educational	20,335	25,757	27,135	28,895	29,901	18,814	23,003	23,683	24,324	24,324
Hospital	3,099	3,195	3,313	3,683	2,968	2,875	2,854	2,892	3,103	2,417
Other ¹	17,480	18,638	19,936	21,685	23,736	16,195	16,654	17,395	18,260	19,313
Highways and streets	36,991	37,308	39,492	44,031	44,440	35,805	34,218	34,933	37,610	37,230
Conservation and development ..	1,988	2,140	2,066	2,244	1,939	1,872	1,943	1,833	1,919	1,648
Sewer systems	8,700	8,420	9,142	9,166	8,707	8,199	7,640	8,110	7,842	7,398
Water supply facilities	4,647	4,709	5,234	5,662	5,871	4,237	4,186	4,550	4,817	4,903
Miscellaneous nonbuilding ²	9,125	9,893	9,401	10,525	9,884	8,719	9,029	8,336	8,999	8,339
Federal construction	14,440	15,751	15,325	14,093	14,423	13,569	14,214	13,482	11,949	11,962
Total buildings	5,142	6,043	6,230	6,107	6,028	4,755	5,390	5,430	5,137	4,906
Housing	446	576	681	677	543	406	503	585	565	442
Industrial	1,465	1,508	1,389	999	1,012	1,358	1,348	1,214	843	824
Educational	26	27	12	19	15	24	24	11	16	12
Hospital	851	1,041	1,159	1,251	1,010	789	931	1,013	1,053	823
Other ³	2,354	2,891	2,989	3,161	3,448	2,178	2,584	2,608	2,659	2,806
Highways and streets	428	308	368	261	352	414	283	326	223	295
Military facilities	2,318	3,011	2,591	2,556	2,578	2,196	2,728	2,280	2,169	2,131
Conservation and development ..	4,376	4,167	3,845	3,368	3,572	4,124	3,781	3,412	2,882	3,034
Miscellaneous public ⁴	2,176	2,223	2,291	1,800	1,893	2,080	2,032	2,034	1,538	1,596

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																			
October 1998.	554,553	432,224	244,871	176,805	156,382	20,424	150,341	26,951	34,137	12,215	44,435	5,406	8,148	11,316	7,733	(NA)	10,310	2,193	
October 1999.	588,297	456,587	269,018	200,133	176,915	23,218	152,804	21,669	39,644	13,079	46,147	5,889	7,762	10,255	8,360	(NA)	(NA)	2,502	
Percent change	6	6	10	13	13	14	2	-20	16	7	4	9	-5	-9	8	(NA)	(NA)	14	
MONTHLY DATA																			
1997: October.	58,238	44,217	24,925	17,678	15,506	2,173	15,217	2,843	3,254	1,115	4,675	583	789	1,164	794	(NA)	1,128	256	
November.	53,292	41,187	23,506	16,857	14,889	1,968	14,456	2,664	3,171	1,050	4,321	574	748	1,153	775	(NA)	967	222	
December.	47,493	36,966	20,070	14,533	12,606	1,926	13,983	2,782	3,098	1,062	3,965	537	694	1,073	772	(NA)	1,060	170	
1998: January.	42,730	33,872	18,300	13,531	11,694	1,838	12,944	2,404	3,109	1,002	3,572	485	679	1,040	653	(NA)	804	183	
February.	41,735	32,988	17,496	13,037	11,188	1,848	12,988	2,425	3,053	989	3,587	491	726	1,059	658	(NA)	889	173	
March.	47,319	37,790	20,886	15,521	13,553	1,968	14,042	2,806	3,147	1,073	3,959	489	783	1,108	678	(NA)	1,105	192	
April.	52,069	41,205	23,129	16,629	14,573	2,056	14,780	2,691	3,374	1,158	4,211	497	848	1,177	824	(NA)	1,001	195	
May.	55,171	43,601	25,110	17,564	15,513	2,051	14,857	2,651	3,481	1,105	4,392	466	876	1,135	751	(NA)	1,031	210	
June.	61,912	48,111	27,123	18,965	16,864	2,101	16,074	2,792	3,704	1,336	4,841	525	908	1,147	821	(NA)	1,100	276	
July.	63,150	48,683	28,197	20,126	17,965	2,162	15,692	2,630	3,498	1,299	4,915	546	857	1,116	830	(NA)	1,050	227	
August.	64,367	49,363	28,703	20,449	18,376	2,073	16,232	2,881	3,455	1,371	4,976	615	903	1,188	844	(NA)	1,059	246	
September.	63,973	48,479	28,062	20,575	18,443	2,132	16,291	2,907	3,555	1,416	4,950	633	822	1,186	822	(NA)	1,085	246	
October.	62,127	48,132	27,865	20,408	18,213	2,196	16,441	2,766	3,761	1,466	5,034	659	745	1,159	852	(NA)	1,186	246	
November.	58,458	46,219	26,609	19,855	17,784	2,071	16,070	2,666	3,746	1,362	4,886	678	741	1,163	829	(NA)	1,046	252	
December.	52,435	41,630	22,846	17,249	15,287	1,962	15,504	2,654	3,658	1,328	4,463	645	740	1,184	833	(NA)	1,085	229	
1999: January.	46,432	37,053	20,871	16,050	14,125	1,925	13,643	2,242	3,489	1,238	3,802	560	592	952	768	(NA)	877	178	
February.	46,034	36,329	19,899	15,447	13,391	2,056	14,069	2,199	3,638	1,307	3,916	537	632	1,045	796	(NA)	873	182	
March.	52,392	41,734	23,941	18,480	16,161	2,319	14,950	2,281	3,772	1,426	4,297	553	684	1,055	882	(NA)	1,187	231	
April.	55,951	44,125	25,875	19,306	16,945	2,361	15,080	2,130	3,840	1,409	4,442	575	772	1,023	890	(NA)	1,104	263	
May.	59,622	46,873	28,114	20,430	18,034	2,396	15,461	2,069	3,964	1,383	4,797	573	770	1,037	868	(NA)	973	271	
June.	64,500	50,119	29,867	21,514	19,097	2,417	15,847	2,179	4,017	1,239	5,058	610	910	1,018	815	(NA)	1,108	277	
July.	65,628	50,574	30,367	22,200	19,805	2,395	15,774	2,196	3,979	1,282	4,989	580	923	987	838	(NA)	1,154	270	
August ^f	67,362	51,190	30,756	22,499	20,014	2,485	16,194	2,236	4,279	1,287	4,976	652	922	1,015	827	(NA)	1,238	290	
September ^f	66,258	49,860	29,813	22,322	19,874	2,448	16,164	2,138	4,443	1,296	4,971	607	817	1,054	839	(NA)	1,122	279	
October ^p	64,117	48,729	29,514	21,885	19,469	2,416	15,622	1,999	4,223	1,212	4,898	641	742	1,070	838	(NA)	(NA)	259	
PERCENT CHANGE																			
September 1999- October 1999.	-3	-2	-1	-2	-2	-1	-3	-7	-5	-6	-1	6	-9	2	(Z)	(NA)	(NA)	-7	

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													
October 1998.	122,329	55,465	3,365	840	25,252	3,356	22,651	38,312	2,185	4,611	7,114	4,795	9,847
October 1999.	131,710	58,808	3,158	764	28,663	3,309	22,914	41,541	1,771	5,059	7,925	5,541	11,065
Percent change	8	6	-6	-9	14	-1	1	8	-19	10	11	16	12
MONTHLY DATA													
1997: October.	14,021	5,880	417	56	2,642	458	2,308	4,876	196	400	843	546	1,279
November.	12,105	5,288	344	66	2,264	408	2,206	3,910	230	414	741	505	1,017
December.	10,528	5,011	304	71	2,213	354	2,069	2,809	191	477	636	429	974
1998: January.	8,858	4,646	292	76	2,009	326	1,943	1,943	188	345	567	376	793
February.	8,747	4,617	293	79	1,970	306	1,969	1,904	196	419	541	384	685
March.	9,529	4,813	314	95	2,000	372	2,033	2,317	237	411	603	392	756
April.	10,864	5,175	338	84	2,255	299	2,199	3,113	216	387	640	464	867
May.	11,570	5,327	324	81	2,384	337	2,201	3,549	215	421	647	488	922
June.	13,801	6,067	368	78	2,910	338	2,374	4,633	225	498	759	476	1,143
July.	14,467	6,390	406	93	3,130	322	2,439	4,872	279	478	790	529	1,130
August.	15,004	6,386	341	88	3,161	312	2,484	5,342	241	501	819	523	1,192
September.	15,494	6,323	350	108	2,886	400	2,579	5,411	225	771	859	562	1,342
October.	13,995	5,721	338	58	2,548	345	2,433	5,228	162	379	889	600	1,017
November.	12,239	5,426	346	92	2,325	310	2,353	3,734	194	467	847	565	1,006
December.	10,805	5,246	336	80	2,339	312	2,179	2,746	199	433	746	512	923
1999: January.	9,379	4,751	278	64	2,162	310	1,936	2,161	147	400	652	431	839
February.	9,705	4,889	273	70	2,166	363	2,018	2,282	182	436	607	447	862
March.	10,658	5,185	286	85	2,299	327	2,187	2,735	187	472	723	475	882
April.	11,826	5,432	327	76	2,548	290	2,192	3,453	181	475	732	510	1,044
May.	12,749	5,511	328	83	2,616	316	2,168	4,167	181	419	812	542	1,117
June.	14,381	6,248	320	72	3,266	336	2,254	4,791	188	511	890	579	1,175
July.	15,053	6,486	307	89	3,343	346	2,401	5,081	199	507	940	624	1,216
August ^f	16,172	6,815	338	70	3,598	323	2,487	5,782	145	616	867	640	1,306
September ^f	16,397	6,840	348	112	3,389	382	2,609	5,845	207	801	857	618	1,229
October ^p	15,388	6,651	353	42	3,277	316	2,662	5,246	153	423	844	675	1,396
PERCENT CHANGE													
September 1999- October 1999.	-6	-3	1	-63	-3	-17	2	-10	-26	-47	-2	9	14

NA Not available, but estimates are included in totals. ^pPreliminary. ^rRevised. ^zLess 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
			Residential buildings						Nonresidential buildings								Public utilities ⁴		
			Total ¹	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												
1997:	October	628,610	483,233	270,199	192,135	167,330	24,805	170,729	31,827	37,440	13,398	50,088	6,231	9,537	13,323	8,885	(NA)	11,986	2,629
	November	623,266	479,115	270,817	191,897	168,394	23,503	168,967	30,888	37,676	12,807	49,667	6,265	9,422	13,303	8,938	(NA)	11,683	2,541
	December	626,907	482,318	272,869	194,330	169,971	24,359	171,616	31,708	38,084	12,676	50,622	6,257	9,709	13,001	9,558	(NA)	11,828	2,080
1998:	January	639,962	494,992	277,551	197,735	172,389	25,346	175,724	32,302	40,909	13,032	51,027	6,430	9,879	13,246	8,899	(NA)	11,680	2,561
	February	644,643	499,944	280,843	200,621	175,503	25,118	175,430	32,260	39,387	12,712	51,489	6,826	10,365	13,477	8,913	(NA)	12,819	2,584
	March	650,509	506,741	284,013	203,838	179,113	24,725	178,700	35,976	38,688	12,429	53,016	6,371	10,368	13,511	8,342	(NA)	13,670	2,559
	April	656,271	511,838	287,556	207,391	182,540	24,851	181,214	33,182	40,370	13,294	53,639	6,229	10,748	14,196	9,555	(NA)	12,185	2,510
	May	648,673	510,851	287,972	207,482	184,134	23,348	178,315	31,967	40,955	13,669	52,860	5,971	10,317	13,540	9,036	(NA)	12,780	2,614
	June	672,757	525,287	291,887	211,247	187,730	23,518	185,215	32,814	43,366	14,980	55,014	6,492	9,326	13,673	9,550	(NA)	12,201	3,298
	July	673,703	525,240	297,318	216,810	191,965	24,845	182,172	31,495	40,835	15,764	55,275	6,774	8,567	13,746	9,717	(NA)	12,000	2,506
	August	670,007	523,652	297,314	216,194	193,095	23,099	182,487	33,177	40,450	16,219	53,315	6,809	8,979	13,764	9,774	(NA)	12,334	2,568
	September	672,053	524,270	299,752	218,957	194,476	24,481	181,554	32,423	41,138	16,827	52,148	6,749	9,131	13,755	9,382	(NA)	12,252	2,677
	October	674,253	528,694	302,056	221,585	196,539	25,046	184,778	30,928	43,775	17,396	53,930	6,977	9,005	13,247	9,520	(NA)	12,928	2,509
	November	680,117	534,743	306,299	226,053	201,327	24,726	186,605	30,845	43,730	16,185	56,101	7,364	9,333	13,440	9,607	(NA)	12,327	2,877
	December	690,462	541,591	310,261	230,494	205,655	24,839	190,044	30,327	44,697	15,758	56,908	7,357	10,345	14,353	10,299	(NA)	12,090	2,786
1999:	January	697,858	543,471	315,828	235,142	208,739	26,403	185,816	29,895	45,658	16,923	54,506	7,702	8,538	12,131	10,462	(NA)	13,326	2,509
	February	710,657	548,682	318,483	238,146	210,328	27,818	189,040	28,967	46,788	16,822	56,014	7,466	8,962	13,307	10,714	(NA)	12,539	2,727
	March	715,396	555,362	323,133	241,524	212,412	29,113	189,297	29,052	46,430	16,422	57,553	7,210	8,985	12,835	10,810	(NA)	14,158	3,073
	April	704,582	547,885	322,213	241,193	212,924	28,269	184,411	26,217	45,890	16,277	56,290	7,374	9,766	12,356	10,241	(NA)	13,105	3,376
	May	698,461	546,880	321,803	239,910	212,582	27,329	184,245	24,975	46,912	16,259	57,222	7,092	9,031	12,369	10,384	(NA)	12,371	3,307
	June	698,852	546,931	320,913	238,490	211,410	27,080	182,945	25,465	47,304	14,430	57,153	7,575	9,309	12,182	9,526	(NA)	12,393	3,280
	July	702,517	546,375	320,352	238,886	211,253	27,632	183,346	26,246	47,704	15,293	55,737	7,106	9,248	12,181	9,830	(NA)	13,489	2,996
	August ^f	698,381	541,690	318,816	237,725	209,933	27,792	180,983	25,679	49,139	15,071	53,359	7,170	9,157	11,801	9,607	(NA)	13,642	3,029
	September ^f	697,450	539,767	318,838	237,996	209,937	28,060	180,007	23,772	51,221	14,991	52,699	6,439	9,055	12,199	9,630	(NA)	12,871	3,034
	October ^p	699,268	537,633	319,906	237,578	210,095	27,483	177,379	22,416	49,485	15,100	52,718	7,042	8,968	12,226	9,423	(NA)	(NA)	2,735
PERCENT CHANGE																			
	September 1999- October 1999	(Z)	(Z)	(Z)	(Z)	(Z)	-2	-1	-6	-3	1	(Z)	9	-1	(Z)	-2	(NA)	(NA)	-10

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						
1997:	October	145,377	67,031	4,694	740	30,483	5,295	25,819	42,126	2,915	5,197	8,664	5,435	14,008
	November	144,151	64,394	4,080	814	28,957	4,983	25,559	46,044	2,737	5,015	8,337	5,587	12,036
	December	144,589	64,650	3,705	808	30,236	4,149	25,752	45,066	2,209	5,955	8,253	5,439	13,017
1998:	January	144,971	64,799	3,763	1,001	29,403	4,262	26,371	46,084	2,423	5,234	8,391	5,579	12,460
	February	144,699	64,777	3,906	1,033	29,152	4,020	26,665	46,162	2,845	6,121	8,264	5,770	10,759
	March	143,768	63,841	4,027	1,170	27,740	4,540	26,363	46,497	2,820	5,640	8,241	5,583	11,145
	April	144,433	65,250	4,094	1,042	29,480	3,628	27,006	46,527	2,725	4,898	8,277	5,834	10,922
	May	137,822	64,081	3,864	1,007	29,310	4,177	25,723	41,588	2,530	5,129	7,820	5,711	10,962
	June	147,470	67,247	4,197	899	31,038	3,891	27,221	45,346	2,610	5,710	8,505	5,448	12,603
	July	148,463	69,109	4,778	1,104	30,913	3,812	28,501	44,026	3,231	5,358	8,932	5,809	12,000
	August	146,355	67,191	4,203	1,106	29,760	3,886	28,236	44,700	2,760	5,470	8,623	5,732	11,880
	September	147,783	67,080	3,784	947	30,342	4,051	27,957	45,057	2,103	5,920	8,822	6,158	12,643
	October	145,559	65,405	3,802	799	29,366	4,029	27,409	46,301	2,407	5,321	9,121	5,989	11,015
	November	145,374	65,831	4,034	1,114	29,650	3,763	27,271	43,929	2,296	5,639	9,537	6,236	11,905
	December	148,871	67,875	4,093	920	32,002	3,674	27,185	44,583	2,306	5,406	9,770	6,532	12,398
1999:	January	154,387	66,634	3,666	886	31,445	4,099	26,539	50,538	1,881	6,018	9,658	6,465	13,192
	February	161,975	68,570	3,650	919	32,001	4,772	27,227	54,880	2,636	6,271	9,394	6,739	13,486
	March	160,033	68,786	3,623	1,012	32,080	3,982	28,089	53,099	2,223	6,194	10,017	6,767	12,947
	April	156,697	68,268	3,935	920	33,016	3,625	26,773	50,897	2,268	6,016	9,553	6,453	13,242
	May	151,581	66,449	3,910	1,042	32,266	3,895	25,335	48,542	2,128	5,101	9,775	6,379	13,207
	June	151,921	68,932	3,709	821	34,588	3,868	25,946	45,518	2,137	5,845	9,921	6,649	12,919
	July	156,142	70,072	3,683	1,065	33,237	4,139	27,948	47,747	2,305	5,810	10,443	6,820	12,944
	August ^f	156,691	71,166	4,060	859	34,194	3,918	28,136	48,148	1,679	6,581	9,165	6,953	12,998
	September ^f	157,682	72,799	3,814	990	35,675	3,967	28,351	49,087	1,941	6,277	8,862	6,715	12,003
	October ^p	161,635	75,814	3,993	591	37,457	3,618	30,155	46,766	2,264	6,174	8,719	6,713	15,185
PERCENT CHANGE														
	September 1999- October 1999	3	4	5	-40	5	-9	6	-5	17	-2	-2	(Z)	27

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															All other private ⁵	
			Residential buildings						Nonresidential buildings								Public utilities ⁴		
			Total ¹	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												
1997:	October	524,084	401,585	222,937	158,527	138,061	20,466	142,393	26,545	31,226	11,174	41,775	5,197	7,954	11,111	7,410	(NA)	10,218	2,239
	November	517,441	396,820	223,262	158,200	138,824	19,376	140,105	25,612	31,241	10,620	41,183	5,195	7,813	11,030	7,411	(NA)	9,893	2,149
	December	520,524	399,593	225,140	160,339	140,240	20,098	142,302	26,292	31,579	10,511	41,975	5,189	8,051	10,780	7,925	(NA)	10,007	1,760
1998:	January	530,358	409,157	228,625	162,879	142,001	20,878	145,226	26,696	33,809	10,770	42,171	5,314	8,165	10,947	7,354	(NA)	9,824	2,169
	February	534,648	413,458	231,528	165,393	144,685	20,708	144,984	26,661	32,551	10,506	42,553	5,641	8,566	11,138	7,366	(NA)	10,763	2,195
	March	539,315	418,962	234,334	168,183	147,783	20,400	147,442	29,683	31,921	10,255	43,742	5,257	8,555	11,148	6,883	(NA)	11,459	2,174
	April	542,912	422,142	236,671	170,692	150,239	20,453	148,902	27,265	33,172	10,924	44,075	5,119	8,832	11,665	7,851	(NA)	10,335	2,134
	May	535,326	420,387	236,431	170,346	151,177	19,169	146,040	26,181	33,542	11,195	43,293	4,890	8,450	11,089	7,400	(NA)	10,923	2,219
	June	552,098	429,648	237,886	172,166	152,999	19,167	150,826	26,721	35,315	12,199	44,799	5,287	7,594	11,134	7,777	(NA)	10,473	2,787
	July	551,246	428,270	241,330	175,982	155,816	20,166	147,987	25,585	33,172	12,806	44,903	5,502	6,959	11,166	7,894	(NA)	10,345	2,116
	August	546,564	425,881	240,935	175,197	156,479	18,718	147,763	26,864	32,753	13,133	43,170	5,513	7,270	11,145	7,914	(NA)	10,615	2,158
	September	546,822	425,302	242,322	177,007	157,216	19,791	146,651	26,190	33,229	13,592	42,123	5,451	7,376	11,111	7,578	(NA)	10,526	2,242
	October	546,608	427,133	243,006	178,266	158,117	20,150	148,775	24,902	35,246	14,006	43,422	5,617	7,251	10,666	7,665	(NA)	11,078	2,103
	November	549,530	430,245	245,039	180,843	161,062	19,781	149,884	24,775	35,124	13,000	45,061	5,915	7,496	10,796	7,716	(NA)	10,563	2,418
	December	555,484	433,652	246,827	183,368	163,608	19,761	152,035	24,261	35,758	12,606	45,526	5,886	8,276	11,482	8,240	(NA)	10,334	2,341
1999:	January	560,780	434,508	251,056	186,917	165,930	20,988	148,178	23,839	36,410	13,495	43,466	6,142	6,809	9,674	8,343	(NA)	11,400	2,108
	February	571,380	438,922	253,569	189,607	167,459	22,148	150,629	23,082	37,282	13,404	44,633	5,949	7,141	10,603	8,537	(NA)	10,735	2,292
	March	571,609	441,683	255,643	191,079	168,047	23,032	149,998	23,021	36,790	13,013	45,605	5,713	7,120	10,170	8,566	(NA)	12,070	2,555
	April	560,726	434,006	253,711	189,916	167,657	22,259	145,664	20,708	36,248	12,857	44,463	5,825	7,714	9,760	8,089	(NA)	11,191	2,794
	May	553,552	431,734	252,593	188,312	166,861	21,451	145,075	19,666	36,939	12,803	45,057	5,585	7,111	9,739	8,176	(NA)	10,511	2,715
	June	550,207	429,039	250,323	186,030	164,907	21,123	143,037	19,910	36,985	11,282	44,685	5,922	7,279	9,525	7,448	(NA)	10,476	2,673
	July	550,665	426,536	248,528	185,326	163,889	21,437	142,682	20,425	37,124	11,902	43,375	5,530	7,197	9,480	7,650	(NA)	11,373	2,435
	August ^f	546,144	422,076	247,144	184,283	162,739	21,544	140,406	19,922	38,122	11,692	41,395	5,563	7,104	9,155	7,453	(NA)	11,454	2,453
	September ^f	543,850	419,412	246,587	184,065	162,364	21,701	139,217	18,385	39,614	11,594	40,757	4,980	7,003	9,435	7,448	(NA)	10,780	2,449
	October ^p	544,286	416,724	246,461	183,034	161,861	21,173	137,078	17,323	38,242	11,669	40,740	5,442	6,930	9,448	7,282	(NA)	(NA)	2,211
PERCENT CHANGE																			
	September 1999- October 1999	(Z)	-1	(Z)	-1	(Z)	-2	-2	-6	-3	1	(Z)	9	-1	(Z)	-2	(NA)	(NA)	-10

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						
1997:	October	122,499	55,864	3,873	618	25,423	4,416	21,534	35,761	2,452	4,446	7,411	4,634	11,932
	November	120,621	53,375	3,363	675	24,011	4,132	21,194	38,660	2,285	4,276	7,107	4,735	10,183
	December	120,932	53,592	3,057	670	25,071	3,440	21,353	37,744	1,841	5,086	7,048	4,609	11,012
1998:	January	121,201	53,543	3,099	827	24,300	3,522	21,794	38,758	2,019	4,466	7,160	4,704	10,551
	February	121,189	53,527	3,220	854	24,093	3,323	22,037	38,989	2,377	5,232	7,063	4,861	9,141
	March	120,354	52,674	3,323	966	22,887	3,746	21,752	39,304	2,356	4,817	7,038	4,695	9,469
	April	120,769	53,621	3,370	856	24,224	2,981	22,191	39,429	2,275	4,179	7,062	4,915	9,288
	May	114,939	52,490	3,172	825	24,005	3,421	21,067	35,214	2,107	4,362	6,650	4,811	9,306
	June	122,450	54,764	3,420	732	25,276	3,169	22,167	38,267	2,164	4,831	7,196	4,574	10,654
	July	122,977	56,137	3,879	897	25,112	3,097	23,153	37,028	2,670	4,548	7,582	4,877	10,135
	August	120,682	54,408	3,406	896	24,097	3,146	22,863	37,312	2,268	4,627	7,295	4,788	9,983
	September	121,520	54,187	3,059	765	24,509	3,272	22,582	37,454	1,722	4,996	7,445	5,127	10,589
	October	119,475	52,659	3,059	643	23,644	3,244	22,068	38,424	1,967	4,509	7,729	4,954	9,233
	November	119,285	52,863	3,227	895	23,815	3,022	21,904	36,486	1,874	4,799	8,117	5,141	10,004
	December	121,832	54,282	3,256	736	25,602	2,939	21,748	36,968	1,878	4,605	8,322	5,359	10,418
1999:	January	126,272	53,128	2,914	707	25,076	3,268	21,163	41,871	1,528	5,131	8,233	5,295	11,086
	February	132,457	54,635	2,906	732	25,499	3,803	21,695	45,468	2,141	5,351	8,015	5,514	11,332
	March	129,926	54,501	2,866	802	25,420	3,155	22,258	43,775	1,796	5,187	8,390	5,515	10,762
	April	126,720	53,915	3,099	726	26,079	2,863	21,148	41,719	1,825	5,035	7,994	5,272	10,962
	May	121,818	52,312	3,069	821	25,406	3,067	19,949	39,401	1,701	4,241	8,125	5,195	10,843
	June	121,168	53,888	2,893	642	27,043	3,024	20,286	36,649	1,694	4,827	8,192	5,388	10,529
	July	124,129	54,522	2,857	829	25,866	3,221	21,750	38,351	1,822	4,785	8,602	5,523	10,523
	August ^f	124,067	55,208	3,147	666	26,528	3,039	21,828	38,488	1,322	5,398	7,519	5,607	10,525
	September ^f	124,437	56,302	2,950	766	27,591	3,068	21,927	39,144	1,523	5,133	7,246	5,402	9,687
	October ^p	127,562	58,579	3,076	457	28,947	2,796	23,304	37,323	1,777	5,056	7,141	5,409	12,275
PERCENT CHANGE														
	September 1999- October 1999	3	4	4	-40	5	-9	6	-5	17	-2	-1	(Z)	27

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																		
October 1998.	455,324	353,820	199,736	144,223	127,548	16,674	122,709	22,006	27,869	9,964	36,255	4,412	6,653	9,238	6,311	(NA)	8,786	1,852
October 1999.	464,402	359,026	210,310	156,484	138,319	18,165	119,825	17,005	31,082	10,263	36,171	4,617	6,081	8,044	6,560	(NA)	(NA)	2,052
Percent change	2	1	5	9	8	9	-2	-23	12	3	(Z)	5	-9	-13	4	(NA)	(NA)	11
MONTHLY DATA																		
1997: October.	48,572	36,749	20,566	14,586	12,794	1,792	12,692	2,371	2,714	930	3,899	486	658	970	662	(NA)	961	218
November.	44,237	34,105	19,379	13,897	12,274	1,623	11,987	2,209	2,629	871	3,583	476	620	956	642	(NA)	819	188
December.	39,430	30,626	16,559	11,991	10,401	1,589	11,594	2,307	2,568	880	3,288	445	576	889	640	(NA)	896	144
1998: January.	35,390	27,994	15,074	11,146	9,632	1,514	10,698	1,987	2,570	828	2,952	401	561	859	540	(NA)	676	155
February.	34,587	27,273	14,423	10,747	9,224	1,524	10,734	2,004	2,523	818	2,965	406	600	875	544	(NA)	746	147
March.	39,198	31,232	17,232	12,806	11,182	1,624	11,586	2,315	2,596	885	3,266	403	646	914	559	(NA)	926	163
April.	43,056	33,979	19,036	13,687	11,994	1,693	12,145	2,211	2,773	951	3,460	409	697	967	677	(NA)	849	165
May.	45,526	35,876	20,616	14,420	12,737	1,684	12,168	2,171	2,851	905	3,597	382	718	930	615	(NA)	881	178
June.	50,840	39,373	22,105	15,457	13,744	1,712	13,090	2,274	3,016	1,088	3,942	427	739	934	669	(NA)	944	233
July.	51,711	39,718	22,887	16,336	14,582	1,754	12,747	2,136	2,842	1,055	3,993	444	697	906	674	(NA)	905	192
August.	52,541	40,157	23,260	16,572	14,892	1,680	13,144	2,333	2,798	1,110	4,029	498	731	962	683	(NA)	911	207
September.	52,091	39,333	22,685	16,633	14,909	1,723	13,159	2,348	2,872	1,144	3,998	511	664	958	664	(NA)	932	206
October.	50,384	38,885	22,418	16,419	14,652	1,766	13,238	2,227	3,028	1,180	4,053	531	600	933	686	(NA)	1,016	206
November.	47,229	37,182	21,287	15,884	14,227	1,657	12,908	2,141	3,009	1,094	3,924	545	595	934	666	(NA)	896	212
December.	42,177	33,343	18,175	13,723	12,161	1,561	12,403	2,123	2,926	1,062	3,570	516	592	947	667	(NA)	927	192
1999: January.	37,261	29,610	16,591	12,758	11,228	1,530	10,880	1,788	2,782	987	3,032	446	472	759	613	(NA)	750	149
February.	36,959	29,046	15,843	12,299	10,662	1,637	11,210	1,752	2,899	1,041	3,121	428	503	832	634	(NA)	747	153
March.	41,809	33,174	18,941	14,620	12,786	1,835	11,846	1,807	2,989	1,130	3,405	439	542	836	699	(NA)	1,012	192
April.	44,503	34,947	20,374	15,201	13,343	1,859	11,912	1,683	3,033	1,113	3,509	454	609	808	703	(NA)	943	218
May.	47,239	36,992	22,068	16,036	14,155	1,881	12,174	1,629	3,121	1,089	3,777	451	606	816	683	(NA)	827	223
June.	50,815	39,341	23,297	16,782	14,897	1,885	12,390	1,704	3,141	968	3,955	477	711	796	637	(NA)	937	226
July.	51,477	39,506	23,558	17,222	15,365	1,858	12,276	1,709	3,097	998	3,882	452	719	768	652	(NA)	973	220
August ^f	52,714	39,900	23,842	17,441	15,514	1,926	12,563	1,735	3,320	999	3,860	506	715	787	642	(NA)	1,039	235
September ^f	51,706	38,747	23,058	17,264	15,370	1,893	12,501	1,653	3,437	1,002	3,845	469	631	815	649	(NA)	940	226
October ^p	49,919	37,763	22,738	16,861	14,999	1,861	12,073	1,545	3,263	936	3,785	495	573	827	648	(NA)	(NA)	210
PERCENT CHANGE																		
September 1999- October 1999.	-3	-3	-1	-2	-2	-2	-3	-7	-5	-7	-2	6	-9	1	(Z)	(NA)	(NA)	-7

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													
October 1998.	101,504	45,258	2,747	685	20,596	2,741	18,484	32,148	1,810	3,915	6,041	4,017	8,314
October 1999.	105,376	46,068	2,471	599	22,442	2,595	17,957	33,554	1,410	4,201	6,579	4,495	9,067
Percent change	4	2	-10	-13	9	-5	-3	4	-22	7	9	12	9
MONTHLY DATA													
1997: October.	11,823	4,901	344	47	2,203	382	1,925	4,139	165	342	721	465	1,089
November.	10,131	4,383	284	54	1,877	338	1,830	3,283	192	353	632	428	861
December.	8,804	4,154	251	59	1,835	294	1,716	2,353	159	407	543	364	824
1998: January.	7,396	3,839	241	62	1,660	270	1,605	1,634	157	294	484	317	671
February.	7,314	3,815	242	65	1,628	253	1,627	1,608	164	358	463	324	582
March.	7,966	3,971	259	78	1,650	307	1,677	1,959	198	351	515	330	642
April.	9,077	4,253	279	69	1,853	246	1,806	2,638	181	330	546	391	737
May.	9,650	4,364	266	66	1,952	276	1,802	3,005	179	358	550	411	783
June.	11,467	4,941	300	64	2,369	275	1,933	3,910	187	422	642	399	966
July.	11,993	5,190	329	76	2,542	261	1,981	4,098	230	406	670	444	955
August.	12,383	5,171	276	71	2,560	252	2,011	4,459	198	424	693	437	1,002
September.	12,758	5,108	283	87	2,331	323	2,083	4,498	184	651	725	468	1,124
October.	11,500	4,606	272	47	2,051	278	1,959	4,339	132	321	753	496	852
November.	10,047	4,357	277	74	1,868	249	1,890	3,101	158	398	721	466	846
December.	8,834	4,196	268	64	1,871	250	1,743	2,277	162	369	635	420	776
1999: January.	7,651	3,788	221	51	1,724	247	1,544	1,790	119	341	556	353	705
February.	7,914	3,896	218	56	1,725	289	1,608	1,891	148	372	518	366	724
March.	8,634	4,108	227	68	1,822	259	1,733	2,254	151	395	605	387	733
April.	9,556	4,290	257	60	2,012	229	1,731	2,830	145	397	613	417	864
May.	10,247	4,339	257	66	2,060	249	1,707	3,382	145	348	675	441	917
June.	11,474	4,884	250	56	2,553	263	1,762	3,857	149	422	735	469	957
July.	11,971	5,047	238	69	2,601	269	1,868	4,081	157	418	774	505	989
August ^f	12,814	5,287	262	54	2,791	251	1,929	4,622	114	506	711	516	1,058
September ^f	12,959	5,290	269	86	2,621	295	2,018	4,661	162	655	701	497	992
October ^p	12,156	5,139	272	33	2,533	244	2,057	4,186	120	347	691	544	1,128
PERCENT CHANGE													
September 1999- October 1999.	-6	-3	1	-62	-3	-17	2	-10	-26	-47	-1	9	14

NA Not available, but estimates are included in totals. ^pPreliminary. ^rRevised. ^zLess 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					
1997:	October	13,041	5,418	346	2,642	342	2,088	4,846	245	843	546	1,143
	November	10,860	4,721	285	2,263	278	1,894	3,888	200	741	505	805
	December	9,241	4,457	265	2,210	254	1,729	2,791	165	636	429	763
1998:	January	7,849	4,216	253	2,009	255	1,700	1,930	154	567	376	605
	February	7,699	4,169	244	1,970	240	1,716	1,891	139	541	384	574
	March	8,391	4,309	282	1,999	267	1,761	2,301	152	603	392	634
	April	9,777	4,687	300	2,254	236	1,897	3,091	141	640	464	752
	May	10,463	4,844	282	2,383	248	1,932	3,520	165	647	488	799
	June	12,598	5,579	324	2,908	256	2,091	4,597	202	759	476	985
	July	13,107	5,810	345	3,128	226	2,111	4,833	163	790	529	983
	August	13,755	5,880	284	3,159	225	2,213	5,298	182	819	523	1,053
	September	13,655	5,633	294	2,883	253	2,204	5,367	177	859	562	1,057
	October	13,068	5,288	304	2,547	257	2,180	5,186	183	889	600	923
	November	11,012	4,948	298	2,325	247	2,078	3,703	148	847	565	801
	December	9,577	4,745	296	2,338	258	1,854	2,723	134	746	512	718
1999:	January	8,394	4,345	252	2,159	223	1,712	2,145	150	652	431	672
	February	8,577	4,419	247	2,165	236	1,770	2,266	136	607	447	703
	March	9,519	4,716	249	2,298	242	1,927	2,716	134	723	475	755
	April	10,696	5,004	284	2,547	230	1,943	3,427	178	732	510	846
	May	11,715	5,091	295	2,616	248	1,932	4,134	143	812	542	994
	June	13,203	5,795	281	3,265	266	1,984	4,751	168	890	579	1,020
	July	13,837	6,002	269	3,340	255	2,138	5,038	169	940	624	1,065
	August ^f	15,005	6,399	304	3,594	277	2,224	5,736	212	867	640	1,151
	September ^f	14,814	6,243	302	3,388	304	2,249	5,800	211	857	618	1,084
	October ^p	14,364	6,209	317	3,277	268	2,346	5,202	184	844	675	1,250
		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
1997:	October	980	462	71	56	-	116	220	(NA)	196	155	136
	November	1,246	567	60	66	1	129	312	(NA)	230	214	213
	December	1,286	554	39	71	3	101	340	(NA)	191	312	212
1998:	January	1,009	429	40	76	-	71	243	(NA)	188	191	188
	February	1,047	447	50	79	1	66	253	(NA)	196	280	111
	March	1,138	504	32	95	-	105	272	(NA)	237	259	122
	April	1,087	488	39	84	1	63	301	(NA)	216	246	115
	May	1,107	483	42	81	1	90	269	(NA)	215	256	123
	June	1,204	488	44	78	2	82	283	(NA)	225	297	158
	July	1,360	580	61	93	2	95	329	(NA)	279	315	148
	August	1,249	506	57	88	3	87	271	(NA)	241	319	139
	September	1,839	690	57	108	3	148	375	(NA)	225	595	285
	October	927	433	34	58	-	88	253	(NA)	162	196	94
	November	1,228	478	48	92	1	63	275	(NA)	194	320	206
	December	1,228	501	41	80	1	55	325	(NA)	199	299	205
1999:	January	985	406	27	64	3	87	225	(NA)	147	249	167
	February	1,127	471	26	70	1	127	247	(NA)	182	300	159
	March	1,140	468	37	85	1	85	260	(NA)	187	338	127
	April	1,130	428	42	76	1	60	249	(NA)	181	297	198
	May	1,034	420	32	83	1	67	237	(NA)	181	277	123
	June	1,178	453	39	72	1	71	270	(NA)	188	343	155
	July	1,216	484	39	89	3	91	263	(NA)	199	338	151
	August ^f	1,167	416	34	70	4	46	263	(NA)	145	404	155
	September ^f	1,583	596	46	112	1	78	360	(NA)	207	591	145
	October ^p	1,024	442	36	42	-	48	316	(NA)	153	239	146

- 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 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					
1997:	October	131,009	60,909	3,757	30,480	3,765	22,906	41,867	2,495	8,664	5,435	11,639
	November	128,771	57,366	3,342	28,951	3,381	21,692	45,785	2,331	8,337	5,587	9,365
	December	129,580	58,322	3,259	30,204	2,997	21,862	44,777	2,270	8,253	5,439	10,519
1998:	January	131,093	59,104	3,236	29,400	3,315	23,153	45,775	2,489	8,391	5,579	9,755
	February	130,245	58,904	3,255	29,142	3,161	23,347	45,847	2,239	8,264	5,770	9,219
	March	129,501	57,635	3,630	27,736	3,253	23,017	46,176	2,297	8,241	5,583	9,568
	April	130,760	59,213	3,617	29,463	2,853	23,281	46,198	1,775	8,277	5,834	9,463
	May	124,220	58,066	3,337	29,293	3,060	22,376	41,248	1,942	7,820	5,711	9,432
	June	133,510	61,629	3,693	31,018	2,952	23,967	44,994	2,197	8,505	5,448	10,736
	July	132,659	62,246	4,056	30,894	2,683	24,612	43,673	1,709	8,932	5,809	10,290
	August	131,590	60,855	3,488	29,729	2,800	24,839	44,331	1,775	8,623	5,732	10,274
	September	133,139	61,029	3,288	30,317	2,758	24,667	44,691	1,781	8,822	6,158	10,659
	October	131,696	59,449	3,337	29,364	2,820	23,929	45,929	1,852	9,121	5,989	9,357
	November	130,493	60,031	3,453	29,643	3,000	23,936	43,565	1,734	9,537	6,236	9,390
	December	134,430	62,101	3,623	31,988	3,046	23,444	44,210	1,853	9,770	6,532	9,963
1999:	January	140,524	61,050	3,301	31,405	2,896	23,448	50,164	2,410	9,658	6,465	10,778
	February	146,523	62,381	3,304	31,992	3,107	23,977	54,495	2,187	9,394	6,739	11,327
	March	146,132	63,221	3,180	32,071	2,972	24,999	52,730	2,020	10,017	6,767	11,376
	April	142,595	63,093	3,424	33,003	2,896	23,770	50,514	2,252	9,553	6,453	10,732
	May	138,863	61,191	3,505	32,257	3,053	22,376	48,157	1,676	9,775	6,379	11,685
	June	138,416	63,772	3,261	34,575	3,065	22,870	45,138	1,826	9,921	6,649	11,110
	July	141,797	64,293	3,224	33,206	3,050	24,814	47,343	1,764	10,443	6,820	11,132
	August ^f	143,265	66,038	3,646	34,147	3,351	24,894	47,765	2,076	9,165	6,953	11,267
	September ^f	144,909	67,502	3,410	35,667	3,274	25,151	48,709	2,133	8,862	6,715	10,989
	October ^p	145,818	69,629	3,490	37,456	2,950	25,733	46,374	1,846	8,719	6,713	12,537
		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
1997:	October	14,368	6,122	936	740	3	1,530	2,913	(NA)	2,915	2,703	2,369
	November	15,380	7,028	738	814	6	1,602	3,868	(NA)	2,737	2,684	2,671
	December	15,009	6,328	446	808	32	1,152	3,890	(NA)	2,209	3,685	2,498
1998:	January	13,878	5,695	526	1,001	3	947	3,218	(NA)	2,423	2,746	2,705
	February	14,454	5,873	651	1,033	11	860	3,318	(NA)	2,845	3,882	1,540
	March	14,267	6,206	398	1,170	4	1,287	3,346	(NA)	2,820	3,343	1,577
	April	13,673	6,037	478	1,042	17	776	3,725	(NA)	2,725	3,123	1,459
	May	13,602	6,015	527	1,007	17	1,117	3,347	(NA)	2,530	3,187	1,530
	June	13,960	5,618	503	899	21	940	3,255	(NA)	2,610	3,512	1,867
	July	15,804	6,863	722	1,104	19	1,129	3,889	(NA)	3,231	3,649	1,710
	August	14,765	6,336	715	1,106	31	1,086	3,397	(NA)	2,760	3,695	1,606
	September	14,644	6,051	496	947	25	1,293	3,290	(NA)	2,103	4,139	1,984
	October	13,863	5,956	465	799	3	1,210	3,480	(NA)	2,407	3,469	1,658
	November	14,880	5,800	581	1,114	7	763	3,335	(NA)	2,296	3,905	2,515
	December	14,441	5,774	470	920	14	629	3,742	(NA)	2,306	3,553	2,434
1999:	January	13,863	5,584	365	886	40	1,203	3,091	(NA)	1,881	3,609	2,414
	February	15,452	6,189	346	919	9	1,665	3,250	(NA)	2,636	4,084	2,159
	March	13,901	5,565	443	1,012	10	1,010	3,090	(NA)	2,223	4,173	1,571
	April	14,102	5,176	511	920	13	729	3,003	(NA)	2,268	3,765	2,510
	May	12,718	5,258	405	1,042	9	842	2,959	(NA)	2,128	3,425	1,522
	June	13,505	5,160	448	821	13	803	3,076	(NA)	2,137	4,019	1,809
	July	14,345	5,779	459	1,065	31	1,089	3,135	(NA)	2,305	4,045	1,811
	August ^f	13,426	5,128	414	859	47	567	3,241	(NA)	1,679	4,505	1,731
	September ^f	12,773	5,297	404	990	8	694	3,200	(NA)	1,941	4,144	1,014
	October ^p	15,817	6,185	503	591	1	668	4,422	(NA)	2,264	4,328	2,648

NA Not available, but estimates are included in totals. ^fPreliminary. ^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 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					
1997:	October	110,400	50,766	3,100	25,421	3,140	19,105	35,541	2,134	7,411	4,634	9,914
	November	107,746	47,551	2,755	24,006	2,804	17,986	38,442	1,987	7,107	4,735	7,923
	December	108,343	48,346	2,689	25,044	2,485	18,127	37,502	1,939	7,048	4,609	8,899
1998:	January	109,583	48,837	2,666	24,298	2,740	19,135	38,499	2,123	7,160	4,704	8,260
	February	109,068	48,675	2,684	24,084	2,612	19,295	38,722	1,914	7,063	4,861	7,833
	March	108,412	47,554	2,995	22,884	2,684	18,991	39,033	1,962	7,038	4,695	8,129
	April	109,349	48,660	2,977	24,209	2,344	19,130	39,151	1,514	7,062	4,915	8,047
	May	103,609	47,563	2,740	23,991	2,506	18,326	34,926	1,652	6,650	4,811	8,007
	June	110,863	50,189	3,010	25,259	2,404	19,517	37,970	1,859	7,196	4,574	9,075
	July	109,895	50,563	3,293	25,097	2,180	19,994	36,731	1,451	7,582	4,877	8,691
	August	108,501	49,278	2,827	24,072	2,267	20,112	37,004	1,501	7,295	4,788	8,634
	September	109,450	49,299	2,658	24,488	2,228	19,925	37,149	1,503	7,445	5,127	8,927
	October	108,074	47,864	2,685	23,642	2,270	19,266	38,115	1,569	7,729	4,954	7,843
	November	107,014	48,207	2,762	23,810	2,410	19,225	36,183	1,476	8,117	5,141	7,891
	December	109,955	49,664	2,882	25,591	2,436	18,755	36,658	1,579	8,322	5,359	8,373
1999:	January	114,876	48,676	2,624	25,044	2,309	18,699	41,561	2,054	8,233	5,295	9,057
	February	119,767	49,704	2,631	25,492	2,476	19,105	45,149	1,866	8,015	5,514	9,518
	March	118,616	50,092	2,516	25,413	2,355	19,809	43,471	1,692	8,390	5,515	9,456
	April	115,266	49,828	2,696	26,068	2,287	18,776	41,405	1,884	7,994	5,272	8,884
	May	111,569	48,173	2,751	25,399	2,404	17,619	39,089	1,393	8,125	5,195	9,594
	June	110,341	49,854	2,544	27,033	2,396	17,881	36,343	1,508	8,192	5,388	9,055
	July	112,682	50,026	2,501	25,841	2,373	19,310	38,027	1,453	8,602	5,523	9,051
	August ^f	113,364	51,230	2,826	26,491	2,600	19,313	38,182	1,703	7,519	5,607	9,123
	September ^f	114,310	52,206	2,638	27,585	2,532	19,452	38,843	1,744	7,246	5,402	8,869
	October ^p	115,008	53,801	2,689	28,946	2,280	19,886	37,010	1,512	7,141	5,409	10,135
		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
1997:	October	12,099	5,097	773	618	2	1,276	2,429	(NA)	2,452	2,312	2,018
	November	12,874	5,824	608	675	5	1,328	3,207	(NA)	2,285	2,288	2,260
	December	12,589	5,245	368	670	27	955	3,226	(NA)	1,841	3,147	2,113
1998:	January	11,617	4,705	434	827	2	782	2,660	(NA)	2,019	2,343	2,291
	February	12,121	4,852	537	854	9	711	2,742	(NA)	2,377	3,318	1,308
	March	11,942	5,120	328	966	3	1,062	2,761	(NA)	2,356	2,855	1,340
	April	11,420	4,961	393	856	14	637	3,061	(NA)	2,275	2,665	1,241
	May	11,331	4,927	432	825	14	914	2,741	(NA)	2,107	2,710	1,298
	June	11,587	4,575	410	732	17	765	2,650	(NA)	2,164	2,972	1,579
	July	13,082	5,574	586	897	15	917	3,159	(NA)	2,670	3,097	1,444
	August	12,181	5,131	580	896	25	879	2,751	(NA)	2,268	3,126	1,350
	September	12,070	4,888	401	765	21	1,044	2,657	(NA)	1,722	3,493	1,662
	October	11,401	4,795	374	643	2	974	2,802	(NA)	1,967	2,940	1,390
	November	12,271	4,656	464	895	6	613	2,679	(NA)	1,874	3,324	2,113
	December	11,877	4,617	374	736	11	503	2,993	(NA)	1,878	3,026	2,046
1999:	January	11,396	4,452	290	707	32	959	2,465	(NA)	1,528	3,076	2,029
	February	12,690	4,931	275	732	7	1,327	2,590	(NA)	2,141	3,484	1,814
	March	11,310	4,409	351	802	8	800	2,449	(NA)	1,796	3,495	1,306
	April	11,454	4,087	403	726	11	576	2,372	(NA)	1,825	3,150	2,078
	May	10,249	4,139	318	821	7	663	2,330	(NA)	1,701	2,847	1,250
	June	10,827	4,034	349	642	10	628	2,405	(NA)	1,694	3,319	1,474
	July	11,448	4,496	356	829	24	848	2,440	(NA)	1,822	3,332	1,473
	August ^f	10,704	3,978	321	666	36	440	2,515	(NA)	1,322	3,695	1,402
	September ^f	10,128	4,096	313	766	6	537	2,475	(NA)	1,523	3,388	818
	October ^p	12,554	4,778	387	457	1	516	3,417	(NA)	1,777	3,544	2,141

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 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					
1997:	October	10,999	4,516	286	2,203	285	1,742	4,114	209	721	465	973
	November	9,089	3,913	235	1,876	231	1,571	3,264	171	632	428	681
	December	7,725	3,695	219	1,832	210	1,434	2,338	141	543	364	645
1998:	January	6,552	3,484	208	1,660	210	1,405	1,623	132	484	317	512
	February	6,436	3,445	201	1,628	199	1,418	1,597	119	463	324	488
	March	7,014	3,555	232	1,650	220	1,453	1,945	130	515	330	539
	April	8,169	3,852	247	1,852	194	1,559	2,620	120	546	391	640
	May	8,728	3,968	232	1,951	203	1,582	2,980	140	550	411	679
	June	10,468	4,544	264	2,368	209	1,703	3,879	171	642	399	833
	July	10,867	4,719	280	2,541	184	1,714	4,065	139	670	444	830
	August	11,352	4,762	230	2,558	182	1,792	4,422	154	693	437	885
	September	11,239	4,550	237	2,328	204	1,780	4,461	149	725	468	885
	October	10,739	4,257	244	2,051	207	1,755	4,304	155	753	496	774
	November	9,034	3,974	239	1,867	198	1,669	3,076	126	721	466	673
	December	7,825	3,795	235	1,870	206	1,483	2,258	114	635	420	604
1999:	January	6,842	3,464	200	1,722	177	1,365	1,777	128	556	353	565
	February	6,988	3,521	197	1,725	188	1,411	1,877	116	518	366	591
	March	7,708	3,737	197	1,821	192	1,527	2,239	112	605	387	627
	April	8,639	3,952	224	2,012	181	1,535	2,809	149	613	417	700
	May	9,414	4,008	232	2,059	196	1,521	3,355	119	675	441	816
	June	10,530	4,530	219	2,552	208	1,551	3,825	138	735	469	832
	July	11,001	4,670	209	2,599	198	1,664	4,047	139	774	505	866
	August ^f	11,882	4,964	236	2,788	215	1,725	4,585	174	711	516	932
	September ^f	11,700	4,829	234	2,621	235	1,739	4,626	172	701	497	875
	October ^p	11,345	4,797	244	2,533	207	1,813	4,151	151	691	544	1,010
		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
1997:	October	824	385	58	47	-	96	183	(NA)	165	133	116
	November	1,043	470	49	54	-	107	259	(NA)	192	182	180
	December	1,079	459	32	59	2	84	282	(NA)	159	266	179
1998:	January	844	355	33	62	-	59	201	(NA)	157	163	159
	February	878	370	41	65	1	54	209	(NA)	164	239	94
	March	952	416	27	78	-	86	224	(NA)	198	221	104
	April	908	401	32	69	1	52	247	(NA)	181	210	98
	May	922	396	35	66	1	73	220	(NA)	179	218	104
	June	999	397	36	64	1	66	230	(NA)	187	251	133
	July	1,126	471	50	76	1	77	267	(NA)	230	267	125
	August	1,031	410	46	71	2	70	220	(NA)	198	270	117
	September	1,519	558	46	87	2	119	303	(NA)	184	502	239
	October	761	349	27	47	-	71	204	(NA)	132	166	79
	November	1,012	383	38	74	-	50	221	(NA)	158	272	173
	December	1,009	401	32	64	1	44	260	(NA)	162	255	172
1999:	January	809	324	21	51	2	70	179	(NA)	119	213	140
	February	926	375	21	56	1	101	197	(NA)	148	256	133
	March	927	371	30	68	1	67	206	(NA)	151	283	106
	April	917	338	33	60	1	48	196	(NA)	145	249	164
	May	833	331	25	66	1	53	186	(NA)	145	230	101
	June	944	354	31	56	1	55	211	(NA)	149	283	126
	July	971	377	30	69	2	71	205	(NA)	157	279	123
	August ^f	931	323	26	54	3	36	204	(NA)	114	332	126
	September ^f	1,259	461	35	86	1	60	279	(NA)	162	483	117
	October ^p	811	341	28	33	-	37	244	(NA)	120	196	118

- 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	U.S. Census Bureau		Engineering News-Record		U.S. Census Bureau 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													
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
1998.....	122.0	122.2	119.7	118.8	123.3	123.0	122.2	118	122	123	117	117	120	117
	Monthly indexes						Quarterly indexes			Semiannual indexes				
1998: January.....	120.9	120.7	118.7	117.4	122.0	121.4								
February.....	120.5	120.7	119.0	117.8	121.5	121.3	113.8	118	120					
March.....	120.5	120.7	118.9	117.9	121.3	121.2				122	116	116	118	118
April.....	120.9	120.9	119.1	118.0	121.9	121.5								
May.....	121.1	121.2	119.1	118.0	122.0	121.8	119.5	118	121					
June.....	121.8	121.8	119.2	118.3	123.0	122.7								
July.....	122.2	122.1	119.4	118.8	123.7	123.2								
August.....	122.6	122.5	119.7	118.9	123.9	123.4	130.2	118	123					
September.....	122.8	122.8	120.5	119.6	124.0	123.7				124	117	117	119	117
October.....	123.1	123.3	120.8	120.1	124.3	124.3								
November.....	123.4	123.8	120.8	120.3	125.0	125.0	125.0	119	124					
December.....	124.1	124.3	120.7	120.2	126.0	125.7								
1999: January.....	124.5	124.6	120.9	120.4	126.4	125.8								
February.....	124.8	124.6	120.6	120.2	126.8	125.6	124.4	118	125					
March.....	125.7	125.3	120.4	120.1	127.8	126.4				125	118	118	122	117
April.....	125.6	125.7	120.7	120.5	127.6	127.0								
May.....	125.9	126.2	120.8	120.5	127.6	127.4	136.4	119	126					
June.....	126.9	126.9	121.1	121.2	128.6	128.2								
July.....	127.6	127.5	122.1	121.9	129.6	128.9								
August.....	^r 127.8	^r 127.8	122.6	122.2	^r 129.5	^r 129.0	(NA)	121	127					
September.....	^r 128.3	^r 128.1	123.3	122.7	^r 130.0	^r 129.3				126	119	120	123	118
October.....	^p 128.3	^p 128.4	123.7	123.1	^p 130.2	^p 129.8								
November.....			123.5	122.9			(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	Oct. 1999 ^P	Sep. 1999 ^f	Aug. 1999 ^f	July 1999	June 1999	May 1999	Apr. 1999	Mar. 1999	Feb. 1999	Jan. 1999	Dec. 1998	Oct. 1998
PRIVATE CONSTRUCTION												
Residential buildings:												
New housing units:												
1 unit	111.2	113.6	114.4	112.5	108.4	101.8	95.5	91.3	76.4	81.2	89.2	111.2
2 units or more	105.5	104.7	107.3	104.0	107.1	105.2	100.2	95.6	88.7	87.5	94.8	105.2
Nonresidential buildings:												
Industrial	107.0	107.9	104.5	100.4	102.7	99.4	97.5	94.2	91.1	90.0	105.0	107.3
Office	102.4	104.1	104.5	100.1	101.9	101.4	100.4	97.5	93.3	91.7	98.2	103.1
Hotels, motels	96.3	103.7	102.5	100.6	103.0	102.1	103.9	104.2	93.2	87.8	101.1	101.1
Other commercial	111.5	113.2	111.9	107.4	106.2	100.6	94.7	89.6	83.9	83.7	94.1	112.0
Religious	109.2	113.1	109.1	98.0	96.7	97.0	93.6	92.1	86.3	87.2	105.2	113.4
Educational	99.3	108.2	120.8	119.8	117.3	102.3	94.8	91.3	84.6	83.2	85.8	99.3
Hospital and institutional	105.0	103.7	103.2	97.2	100.3	100.6	99.3	98.6	94.2	94.2	99.0	105.0
Miscellaneous nonresidential	106.7	104.5	103.3	102.3	102.7	100.3	104.3	97.9	89.1	88.1	97.1	107.4
Telecommunications	106.1	104.6	108.9	102.7	107.3	94.4	101.1	100.6	83.5	79.0	107.7	110.1
All other private	113.8	110.5	115.0	108.2	101.5	98.4	93.6	90.2	80.0	85.1	98.6	117.5
PUBLIC CONSTRUCTION												
State and Local												
Buildings:												
Housing and redevelopment	109.1	106.3	100.1	100.1	103.4	101.1	99.6	94.0	89.7	91.5	97.9	109.2
Educational	105.0	114.0	126.3	120.7	113.3	97.3	92.6	86.0	81.2	82.5	87.7	104.1
Hospital	109.1	111.4	99.3	100.3	104.0	97.6	95.1	97.6	91.3	92.2	101.5	109.5
Other buildings	109.4	107.3	107.2	103.4	104.1	103.6	98.1	92.5	88.6	87.6	94.9	109.3
Highways and streets	134.6	142.9	144.1	127.7	126.3	103.0	81.4	61.8	49.9	51.3	73.9	135.5
Conservation and development	119.6	118.4	122.6	114.8	110.2	102.1	94.6	79.6	74.5	74.8	86.5	118.4
Sewer systems	116.2	116.1	113.5	108.0	107.7	99.7	92.0	86.6	77.5	81.0	91.6	116.9
Water supply facilities	120.7	110.5	110.4	109.7	104.5	101.9	94.9	84.3	79.6	80.0	94.0	120.2
Miscellaneous construction	119.6	118.4	122.6	114.8	110.2	102.1	94.6	79.6	74.5	74.8	86.5	118.4
Federal												
Buildings:												
Housing and redevelopment	85.7	135.1	97.4	100.6	105.3	95.9	99.3	101.0	91.3	87.2	104.2	87.3
Industrial	85.7	135.1	97.4	100.6	105.3	95.9	99.3	101.0	91.3	87.2	104.2	87.3
Educational	85.7	135.1	97.4	100.6	105.3	95.9	99.3	101.0	91.3	87.2	104.2	87.3
Hospital	85.7	135.1	97.4	100.6	105.3	95.9	99.3	101.0	91.3	87.2	104.2	87.3
Other buildings	85.7	135.1	97.4	100.6	105.3	95.9	99.3	101.0	91.3	87.2	104.2	87.3
Military	81.2	128.0	103.7	103.7	105.3	102.3	95.6	101.1	83.0	93.7	103.6	80.7
Conservation and development	66.3	171.0	107.7	100.3	102.5	96.9	94.7	97.1	88.1	82.9	101.1	67.8
Miscellaneous construction	66.3	171.0	107.7	100.3	102.5	96.9	94.7	97.1	88.1	82.9	101.1	67.8

^PPreliminary. ^fRevised.

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 71 percent of total construction in 1998 (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 55 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 0.02, 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 (k1 or k2) for the change and apply the following formula:

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

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. Nonsampling 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, 41 percent; state and locally owned public construction, 31 percent; private residential construction of 2 units or more, 42 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 1996. (Outlays are included if a government agency's fiscal year ending date falls within July 1995 to June 1996 inclusive, and for three state agencies with fiscal years ending in August or September 1996.) As a result, the adjustment to the construction outlay levels of this survey must be projected ahead for 4 years from 1996 through April 2000. 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 -1.3 percent to 1.6 percent with a median of 0.5 percent. The range of the difference between first revision and second revision was from -0.8 to 1.0 percent, with a median of 0.3 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	.01
Private construction	3	1	1	.04	.02
Residential buildings	5	2	2	.06	.03
New housing units	2	1	1	.01	.01
1 unit	2	2	2	.01	.01
2 units or more	4	3	3	.03	.03
Nonresidential buildings	2	1	1	.02	.01
Industrial	3	2	2	.04	.03
Office	4	2	2	.05	.03
Hotels, motels	7	5	5	.09	.07
Other commercial	5	3	2	.06	.04
Religious	9	6	5	.12	.09
Educational	7	5	5	.10	.07
Hospital and institutional	6	5	5	.07	.07
Miscellaneous buildings	7	4	4	.09	.06
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	4	4	.08	.06
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	4	4	.11	.06
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	5	5	.11	.07
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 1998 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.