

L 2030 3000-17

Area Wage Survey

San Antonio, Texas, Metropolitan Area May 1980



U.S. Department of Labor
Bureau of Labor Statistics

Bulletin 3000-17



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Preface

This bulletin provides results of a May 1980 survey of occupational earnings and supplementary wage benefits in the San Antonio, Texas, Standard Metropolitan Statistical Area. The survey was made as part of the Bureau of Labor Statistics' annual area wage survey program. It was conducted by the Bureau's regional office in Dallas, Tex., under the general direction of Boyd B. O'Neal, Assistant Regional Commissioner for Operations. The survey could not have been accomplished without the cooperation of the many firms whose wage and salary data provided the basis for the statistical information in this bulletin. The Bureau wishes to express sincere appreciation for the cooperation received.

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Note:

A report on occupational earnings and supplementary wage benefits in the San Antonio area is available for the moving and storage industry (May 1980). Also available are listings of union wage rates for building trades, printing trades, local-transit operating employees, local truckdrivers and helpers, and grocery store employees. A report on occupational earnings and supplementary benefits for municipal workers in the city of San Antonio is also available. Free copies of these are available from the Bureau's regional offices. (See back cover for addresses.)

Area Wage Survey

San Antonio, Texas, Metropolitan Area May 1980



U.S. Department of Labor
Ray Marshall, Secretary

Bureau of Labor Statistics
Janet L. Norwood,
Commissioner

August 1980

Bulletin 3000-17

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Introduction

This area is 1 of 71 in which the U.S. Department of Labor's Bureau of Labor Statistics conducts surveys of occupational earnings and related benefits. (See list of areas on inside back cover.) In each area, earnings data for selected occupations (A-series tables) are collected annually. Information on establishment practices and supplementary wage benefits (B-series tables) is obtained every third year.

Each year after all individual area wage surveys have been completed, two summary bulletins are issued. The first brings together data for each metropolitan area surveyed; the second presents national and regional estimates, projected from individual metropolitan area data, for all Standard Metropolitan Statistical Areas in the United States, excluding Alaska and Hawaii.

A major consideration in the area wage survey program is the need to describe the level and movement of wages in a variety of labor markets, through the analysis of (1) the level and distribution of wages by occupation, and (2) the movement of wages by occupational category and skill level. The program develops information that may be used for many purposes, including wage and salary administration, collective bargaining, and assistance in determining plant location. Survey results also are used by the U.S. Department of Labor to make wage determinations under the Service Contract Act of 1965.

A-series tables

Tables A-1 through A-6 provide estimates of straight-time weekly or hourly earnings for workers in occupations common to a variety of manufacturing and nonmanufacturing industries. The occupations are defined in appendix B. For the 31 largest survey areas, tables A-12 through A-17 provide similar data for establishments employing 500 workers or more.

Table A-7 provides indexes and percent changes in average hourly earnings for office clerical workers, electronic data processing workers, industrial

nurses, skilled maintenance trades workers, and unskilled plant workers. Where possible, data are presented for all industries and for manufacturing and nonmanufacturing separately. Data are not presented for skilled maintenance workers in nonmanufacturing because the number of workers employed in this occupational group in nonmanufacturing is too small to warrant separate presentation. This table provides a measure of wage trends after elimination of changes in average earnings caused by employment shifts among establishments as well as turnover of establishments included in survey samples. For further details, see appendix A.

Tables A-8 through A-11 provide measures of average pay relationships within establishments. These measures may differ considerably from the pay relationships of overall area averages published in tables A-1 through A-6. See appendix A for details.

B-series tables

The B-series tables present information on minimum entrance salaries for inexperienced typists and clerks; late-shift pay provisions and practices for production and related workers in manufacturing; and data separately for production and related workers and office workers on scheduled weekly hours and days of first-shift workers; paid holidays; paid vacations; health, insurance, and pension plan provisions; and health plan participation.

Appendixes

Appendix A describes the methods and concepts used in the area wage survey program. It provides information on the scope of the area survey, the area's industrial composition in manufacturing, and labor-management agreement coverage.

Appendix B provides job descriptions used by Bureau field representatives to classify workers by occupation.

Table A-1. Weekly earnings of office workers in San Antonio, Tex., May 1980

Occupation and industry division	Number of workers	Average weekly hours ¹ (stand-ard)	Weekly earnings (in dollars) ¹				Number of workers receiving straight-time weekly earnings (in dollars) of —																			
			Mean ²	Median ²	Middle range ²	120 and under 130	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320 and over
							140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	
Secretaries.....	1,171	39.5	206.00	195.50	178.50- 228.00	1	3	16	59	116	133	176	130	122	76	55	60	65	33	19	31	20	28	4	6	18
Manufacturing.....	303	40.0	210.50	202.50	184.00- 235.00	-	-	1	6	24	31	34	42	33	22	16	31	16	15	5	14	3	5	3	2	-
Nonmanufacturing.....	868	39.0	204.00	194.00	174.00- 224.50	1	3	15	53	92	102	142	88	89	54	39	29	49	18	14	17	17	23	1	4	18
Public utilities.....	98	40.0	247.00	260.00	182.00- 289.50	-	-	-	12	4	8	8	1	5	2	-	-	4	3	9	12	6	12	-	1	11
Secretaries, class A.....	50	39.0	271.00	276.50	253.00- 290.00	-	-	-	-	-	-	-	-	-	4	-	2	5	6	3	8	8	11	1	1	1
Secretaries, class B.....	166	39.5	223.50	218.50	201.50- 240.00	-	-	-	-	18	2	3	10	23	29	14	15	28	3	6	-	4	4	1	2	4
Manufacturing.....	50	40.0	231.00	229.00	210.00- 246.50	-	-	-	-	1	1	1	4	5	10	3	6	8	2	4	-	1	4	-	-	-
Nonmanufacturing.....	116	39.5	220.50	218.50	200.00- 240.00	-	-	-	-	17	1	2	6	18	19	11	9	20	1	2	-	3	-	1	2	4
Secretaries, class C.....	277	39.5	223.50	207.00	192.00- 241.50	-	-	1	-	1	14	47	41	43	15	19	19	23	12	4	17	1	4	2	3	11
Manufacturing.....	56	40.0	237.50	236.00	212.00- 251.00	-	-	-	-	-	-	2	6	3	4	4	16	6	2	-	8	-	1	2	-	
Nonmanufacturing.....	221	39.0	220.00	201.50	190.00- 240.00	-	-	1	-	1	14	45	35	40	11	15	3	17	10	4	9	1	3	-	1	11
Public utilities.....	32	40.0	298.50	277.50	259.50- 323.50	-	-	-	-	1	-	1	1	1	-	-	-	3	3	3	6	1	3	-	1	9
Secretaries, class D.....	348	39.0	199.50	192.00	176.50- 215.50	-	-	8	28	28	42	55	47	47	15	16	15	9	10	6	6	5	9	-	-	2
Manufacturing.....	104	40.0	202.50	196.50	188.50- 216.00	-	-	-	-	3	12	15	26	19	8	6	3	2	10	-	-	-	-	-	-	-
Nonmanufacturing.....	244	38.5	198.00	186.50	170.50- 213.00	-	-	8	28	25	30	40	21	28	7	10	12	7	-	6	6	5	9	-	-	2
Secretaries, class E.....	309	39.5	176.50	173.00	163.50- 184.00	1	3	7	31	69	73	69	30	6	11	3	6	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	227	39.5	174.50	172.50	161.00- 184.00	1	3	6	25	49	55	53	24	-	11	-	-	-	-	-	-	-	-	-	-	-
Typists.....	199	39.0	159.50	157.50	146.00- 170.50	7	15	60	31	35	33	5	-	2	10	-	-	1	-	-	-	-	-	-	-	-
Nonmanufacturing.....	192	39.0	159.50	157.50	146.00- 170.50	7	14	59	30	33	32	4	-	2	10	-	-	1	-	-	-	-	-	-	-	-
Typists, class A.....	85	38.5	162.00	150.00	146.00- 177.00	6	3	29	8	12	15	1	-	1	10	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	81	38.5	162.00	150.00	146.00- 177.00	6	2	29	7	11	15	-	-	1	10	-	-	-	-	-	-	-	-	-	-	-
Typists, class B.....	114	39.5	157.50	157.50	146.50- 166.00	1	12	31	23	23	18	4	-	1	-	-	-	1	-	-	-	-	-	-	-	-
Nonmanufacturing.....	111	39.5	157.50	157.50	146.50- 166.00	1	12	30	23	22	17	4	-	1	-	-	-	1	-	-	-	-	-	-	-	-
File clerks.....	446	38.5	136.50	130.50	130.00- 142.00	86	222	90	28	9	-	1	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	443	38.5	136.50	130.50	130.00- 142.00	86	222	90	25	9	-	1	-	10	-	-	-	-	-	-	-	-	-	-	-	-
File clerks, class B.....	162	39.0	146.50	142.00	138.00- 150.00	11	36	68	27	9	-	1	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	159	38.5	146.50	142.00	138.00- 150.00	11	36	68	24	9	-	1	-	10	-	-	-	-	-	-	-	-	-	-	-	-
File clerks, class C.....	284	38.5	131.00	130.00	129.00- 131.00	75	186	22	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	284	38.5	131.00	130.00	129.00- 131.00	75	186	22	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Messengers.....	61	39.0	135.50	130.00	126.50- 142.00	20	21	11	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	61	39.0	135.50	130.00	126.50- 142.00	20	21	11	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Switchboard operators.....	152	39.5	153.50	144.50	138.00- 170.50	33	6	53	12	9	12	9	2	7	3	6	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	141	39.5	153.00	143.00	131.50- 164.00	33	5	52	9	8	10	7	1	7	3	6	-	-	-	-	-	-	-	-	-	-
Switchboard operator-receptionists.....	229	39.5	157.50	152.00	138.00- 172.50	36	32	30	32	28	28	16	13	4	5	-	3	-	-	1	-	1	-	-	-	-
Manufacturing.....	74	40.0	171.00	162.00	156.00- 180.00	-	1	9	13	20	10	8	2	4	4	-	3	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	155	39.5	151.50	144.00	130.00- 171.50	36	31	21	19	8	18	8	11	-	1	-	-	-	-	1	-	1	-	-	-	-
Order clerks.....	123	40.0	143.50	144.00	130.00- 150.00	21	32	32	16	7	9	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	111	40.0	140.50	140.00	130.00- 146.00	21	32	32	13	7	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Order clerks, class B.....	123	40.0	143.50	144.00	130.00- 150.00	21	32	32	16	7	9	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	111	40.0	140.50	140.00	130.00- 146.00	21	32	32	13	7	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

See footnotes at end of tables.

Table A-1. Weekly earnings of office workers in San Antonio, Tex., May 1980 —Continued

Occupation and industry division	Number of workers	Average weekly hours ¹ (standard)	Weekly earnings (in dollars) ²			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean ²	Median ²	Middle range ²	120 and under 130	130 — 140	140 — 150	150 — 160	160 — 170	170 — 180	180 — 190	190 — 200	200 — 210	210 — 220	220 — 230	230 — 240	240 — 250	250 — 260	260 — 270	270 — 280	280 — 290	290 — 300	300 — 310	310 — 320	320 and over
Accounting clerks.....	1,510	39.5	183.00	169.50	148.00- 201.50	30	164	195	185	185	125	94	124	82	67	13	43	20	20	8	5	139	1	-	9	1
Manufacturing.....	256	40.0	182.00	178.00	164.00- 200.00	-	18	16	18	25	56	24	32	21	27	4	6	1	4	2	1	1	-	-	-	-
Nonmanufacturing.....	1,254	39.5	183.00	163.50	146.00- 202.50	30	146	179	167	160	69	70	92	61	40	9	37	19	16	6	4	138	1	-	9	1
Accounting clerks, class A.....	78	39.0	230.50	230.00	218.50- 249.50	-	-	-	-	-	-	-	8	3	20	6	17	4	15	2	3	-	-	-	-	-
Nonmanufacturing.....	72	39.0	231.00	230.00	218.50- 248.50	-	-	-	-	-	-	-	8	1	18	6	17	4	13	2	3	-	-	-	-	-
Accounting clerks, class B.....	360	40.0	196.00	195.50	177.00- 206.00	-	-	9	31	26	33	56	61	70	31	5	12	5	5	3	1	1	1	-	9	1
Manufacturing.....	103	40.0	200.50	195.50	184.00- 212.00	-	-	-	2	3	14	17	19	15	18	2	6	1	2	2	1	1	-	-	-	-
Nonmanufacturing.....	257	40.0	194.00	192.00	170.00- 203.50	-	-	9	29	23	19	39	42	55	13	3	6	4	3	1	-	-	1	-	9	1
Public utilities.....	43	40.0	225.50	204.50	184.00- 247.00	-	-	3	-	-	4	6	6	4	4	-	3	3	-	-	-	-	-	-	9	1
Accounting clerks, class C.....	1,061	39.5	175.50	160.00	140.50- 185.50	30	163	182	154	158	87	38	55	9	16	2	14	11	-	3	1	138	-	-	-	-
Manufacturing.....	137	40.0	168.00	170.00	150.00- 178.00	-	17	13	16	21	37	7	13	4	7	2	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	924	39.5	176.50	157.50	140.50- 186.50	30	146	169	138	137	50	31	42	5	9	-	14	11	-	3	1	138	-	-	-	-
Payroll clerks.....	193	40.0	185.00	172.50	155.00- 214.00	-	5	30	27	28	17	13	18	4	12	9	7	-	6	14	1	1	1	-	-	-
Manufacturing.....	104	40.0	189.00	182.00	155.00- 216.00	-	4	10	27	5	3	9	10	2	12	3	2	-	2	14	1	-	-	-	-	-
Nonmanufacturing.....	89	39.5	180.00	170.00	160.00- 199.00	-	1	20	-	23	14	4	8	2	-	6	5	-	4	-	-	1	1	-	-	-
Key entry operators.....	470	39.5	173.00	161.00	146.00- 185.00	25	52	59	60	93	46	29	33	14	20	5	5	-	8	-	-	8	-	-	-	13
Manufacturing.....	130	40.0	183.50	174.50	160.50- 210.00	-	2	8	12	31	16	15	11	1	20	5	2	-	7	-	-	-	-	-	-	-
Nonmanufacturing.....	340	39.5	168.50	159.00	141.50- 174.00	25	50	51	48	62	30	14	22	13	-	-	3	-	1	-	-	8	-	-	-	13
Public utilities.....	47	40.0	253.50	236.00	188.00- 357.00	-	-	-	-	4	2	7	4	6	-	-	3	-	-	-	-	8	-	-	-	# 13
Key entry operators, class A.....	143	39.5	191.50	173.00	161.50- 196.00	1	7	4	16	35	25	12	10	11	2	1	5	-	1	-	-	-	-	-	-	13
Nonmanufacturing.....	120	39.5	192.50	170.00	161.50- 196.00	1	7	4	14	30	20	8	8	11	-	-	3	-	1	-	-	-	-	-	-	# # 13
Key entry operators, class B.....	327	39.5	164.50	157.50	144.00- 175.00	24	45	55	44	58	21	17	23	3	18	4	-	-	7	-	-	8	-	-	-	-
Manufacturing.....	107	40.0	183.50	170.00	160.00- 210.00	-	2	8	10	26	11	11	9	1	18	4	-	-	7	-	-	-	-	-	-	-
Nonmanufacturing.....	220	39.5	155.50	146.00	138.00- 161.00	24	43	47	34	32	10	6	14	2	-	-	-	-	-	-	-	8	-	-	-	-

* Workers were distributed as follows: 3 at \$320.00 to \$330.00; 1 at \$330.00 to \$340.00; 1 at \$350.00 to \$360.00; 1 at \$360.00 to \$370.00; 1 at \$370.00 to \$380.00; and 4 at \$380.00 and over.

** Workers were distributed as follows: 3 at \$320.00 to \$330.00; 1 at \$330.00 to \$340.00; 1 at \$350.00 to \$360.00; and 4 at \$380.00 and over.

All workers were at \$350.00 to \$360.00.

All workers were at \$350.00 to \$360.00.

See footnotes at end of tables.

Table A-2. Weekly earnings of professional and technical workers in San Antonio, Tex., May 1980

Occupation and industry division	Number of workers	Average weekly hours ¹ (standard)	Weekly earnings (in dollars) ¹			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean ²	Median ²	Middle range ²	130 and under 140	140-150	150-160	160-170	170-180	180-200	200-220	220-240	240-260	260-280	280-300	300-320	320-340	340-360	360-380	380-400	400-420	420-440	440-460	460-480	480 and over
Computer systems analysts (business).....	150	39.5	372.50	365.00	335.50- 399.50	-	-	-	-	-	-	2	-	1	2	5	14	24	21	23	20	9	8	4	7	10
Nonmanufacturing.....	114	39.0	366.00	356.00	335.00- 394.00	-	-	-	-	-	-	2	-	1	2	5	13	19	17	15	16	5	6	1	6	6
Computer systems analysts (business), class B.....	77	39.0	381.50	366.00	340.50- 412.00	-	-	-	-	-	-	-	-	-	2	-	17	12	12	9	8	6	3	5	3	
Nonmanufacturing.....	67	39.0	379.00	365.00	336.00- 412.00	-	-	-	-	-	-	-	-	-	2	-	17	11	10	8	5	5	1	5	3	
Computer systems analysts (business), class C.....	52	39.0	329.00	335.00	300.00- 365.00	-	-	-	-	-	2	-	1	2	3	14	7	9	8	6	-	-	-	-	-	
Computer programmers (business).....	231	39.0	287.00	284.00	250.00- 322.00	-	-	-	3	9	9	19	48	23	26	26	36	16	3	4	2	1	-	6	-	
Nonmanufacturing.....	195	39.0	286.00	280.00	247.50- 322.00	-	-	-	3	9	8	16	43	17	19	22	34	10	3	2	2	1	-	6	-	
Computer programmers (business), class B.....	143	39.0	292.50	292.00	259.00- 322.00	-	-	-	-	2	4	4	30	20	15	22	29	12	1	2	2	-	-	-	-	
Nonmanufacturing.....	119	38.5	291.00	292.00	252.00- 322.00	-	-	-	-	2	4	4	28	15	8	18	27	8	1	2	2	-	-	-	-	
Computer programmers (business), class C.....	66	39.0	245.50	247.50	221.50- 265.00	-	-	-	3	7	5	15	18	3	8	4	3	-	-	-	-	-	-	-	-	
Nonmanufacturing.....	58	39.0	246.50	247.50	222.00- 278.00	-	-	-	3	7	4	12	15	2	8	4	3	-	-	-	-	-	-	-	-	
Computer operators.....	331	39.5	187.50	180.00	163.00- 202.50	10	16	30	62	25	94	38	21	23	9	3	-	-	-	-	-	-	-	-	-	
Manufacturing.....	59	40.0	201.00	192.00	169.00- 225.50	-	-	4	12	4	11	6	13	6	3	-	-	-	-	-	-	-	-	-	-	
Nonmanufacturing.....	272	39.5	185.00	180.00	161.50- 196.50	10	16	26	50	21	83	32	8	17	6	3	-	-	-	-	-	-	-	-	-	
Computer operators, class A.....	48	39.5	227.00	225.50	191.50- 256.50	-	-	-	3	10	8	9	11	4	3	-	-	-	-	-	-	-	-	-	-	
Nonmanufacturing.....	35	39.0	224.00	211.50	190.00- 256.50	-	-	-	3	9	7	3	8	2	3	-	-	-	-	-	-	-	-	-	-	
Computer operators, class B.....	202	39.5	189.00	184.00	168.50- 202.00	-	2	11	46	20	66	28	12	12	5	-	-	-	-	-	-	-	-	-	-	
Manufacturing.....	33	40.0	195.50	180.00	167.50- 220.00	-	-	3	9	3	2	5	7	3	1	-	-	-	-	-	-	-	-	-	-	
Nonmanufacturing.....	169	39.5	188.00	184.00	169.00- 197.50	-	2	8	37	17	64	23	5	9	4	-	-	-	-	-	-	-	-	-	-	
Computer operators, class C.....	81	39.5	161.00	159.00	144.50- 175.00	10	14	19	16	2	18	2	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nonmanufacturing.....	68	39.5	157.50	156.00	144.00- 160.00	10	14	18	13	1	10	2	-	-	-	-	-	-	-	-	-	-	-	-	-	
Computer data librarians.....	25	39.5	183.50	188.00	153.00- 200.00	-	1	7	-	2	8	6	1	-	-	-	-	-	-	-	-	-	-	-	-	
Drafters.....	354	40.0	235.50	234.50	198.50- 277.00	2	10	12	22	4	39	52	46	45	39	32	24	16	3	8	-	-	-	-	-	
Manufacturing.....	277	40.0	236.50	229.00	194.00- 280.00	-	9	10	14	2	39	39	37	33	24	26	21	15	-	8	-	-	-	-	-	
Drafters, class A.....	48	40.0	313.00	316.00	294.00- 328.50	-	-	-	-	-	-	-	2	-	12	14	14	2	4	-	-	-	-	-	-	
Manufacturing.....	43	40.0	315.00	316.00	300.00- 328.00	-	-	-	-	-	-	-	-	-	11	14	14	-	4	-	-	-	-	-	-	
Drafters, class B.....	141	40.0	260.00	258.50	237.00- 284.00	-	-	-	-	-	8	28	35	34	19	10	2	1	4	-	-	-	-	-	-	
Manufacturing.....	106	40.0	259.00	258.00	230.50- 282.50	-	-	-	-	-	6	25	29	19	15	7	1	4	-	4	-	-	-	-	-	
Drafters, class C.....	107	40.0	205.50	200.00	180.00- 220.50	-	-	2	4	4	30	38	16	7	5	1	-	-	-	-	-	-	-	-	-	
Manufacturing.....	81	40.0	203.00	200.00	180.00- 210.00	-	-	-	4	2	30	27	10	3	5	-	-	-	-	-	-	-	-	-	-	
Drafters, class D.....	40	40.0	174.00	160.00	160.00- 183.00	2	4	-	17	-	8	6	2	1	-	-	-	-	-	-	-	-	-	-	-	
Electronics technicians.....	306	40.0	253.50	251.00	227.00- 294.00	-	-	4	3	3	24	32	48	62	38	32	46	12	2	-	-	-	-	-	-	
Nonmanufacturing.....	149	40.0	252.50	250.00	218.00- 300.00	-	-	4	3	3	15	18	14	29	12	12	27	10	2	-	-	-	-	-	-	
Electronics technicians, class B... Nonmanufacturing.....	161	40.0	253.00	249.50	231.50- 267.50	-	-	-	-	-	16	36	55	26	11	17	-	-	-	-	-	-	-	-	-	
Nonmanufacturing.....	89	40.0	260.00	256.00	239.00- 294.00	-	-	-	-	-	12	11	27	12	10	17	-	-	-	-	-	-	-	-	-	

See footnotes at end of tables.

Table A-3. Average weekly earnings of office, professional, and technical workers, by sex, in San Antonio, Tex., May 1980

Sex, ² occupation, and industry division	Number of workers	Average (mean ²)		Sex, ³ occupation, and industry division	Number of workers	Average (mean ²)		Sex, ³ occupation, and industry division	Number of workers	Average (mean ²)	
		Weekly hours ¹ (stand-ard)	Weekly earnings (in dollars) ¹			Weekly hours ¹ (stand-ard)	Weekly earnings (in dollars) ¹			Weekly hours ¹ (stand-ard)	Weekly earnings (in dollars) ¹
Office occupations - men				Switchboard operators.....	151	39.5	153.50	Computer programmers (business).....	189	39.0	293.00
				Nonmanufacturing.....	140	39.5	153.00	Manufacturing.....	32	40.0	297.00
Key entry operators.....	34	39.5	157.50	Switchboard operator-receptionists.....	229	39.5	157.50	Nonmanufacturing.....	157	39.0	292.50
Nonmanufacturing.....	32	39.5	157.50	Manufacturing.....	74	40.0	171.00	Computer programmers (business), class B.....	122	39.0	295.50
Key entry operators, class B.....	31	39.5	157.50	Nonmanufacturing.....	155	39.5	151.50	Nonmanufacturing.....	101	38.5	294.00
Nonmanufacturing.....	30	39.5	157.50					Computer programmers (business), class C.....	47	39.0	248.00
Office occupations - women				Order clerks.....	87	40.0	142.00	Nonmanufacturing.....	40	39.0	249.50
				Nonmanufacturing.....	78	40.0	139.00	Computer operators.....	245	39.5	191.50
Secretaries.....	1,152	39.5	205.50	Order clerks, class B.....	87	40.0	142.00	Nonmanufacturing.....	206	39.5	189.00
Manufacturing.....	303	40.0	210.50	Nonmanufacturing.....	78	40.0	139.00	Computer operators, class A.....	46	39.5	225.50
Nonmanufacturing.....	849	39.0	203.50	Accounting clerks.....	1,394	39.5	182.50	Nonmanufacturing.....	34	39.0	221.50
Public utilities.....	96	40.0	244.50	Manufacturing.....	243	40.0	179.50	Computer operators, class B.....	160	39.5	188.00
Secretaries, class A.....	50	39.0	271.00	Nonmanufacturing.....	1,151	39.5	183.00	Nonmanufacturing.....	137	39.0	187.00
Secretaries, class B.....	166	39.5	223.50	Accounting clerks, class A.....	76	39.0	230.50	Computer operators, class C.....	39	39.5	165.00
Manufacturing.....	50	40.0	231.00	Nonmanufacturing.....	71	39.0	231.50	Nonmanufacturing.....	35	39.5	163.50
Nonmanufacturing.....	116	39.5	220.50	Accounting clerks, class B.....	336	40.0	195.00	Drafters.....	336	40.0	235.50
Secretaries, class C.....	277	39.5	223.50	Manufacturing.....	93	40.0	196.50	Manufacturing.....	260	40.0	236.00
Manufacturing.....	56	40.0	237.50	Nonmanufacturing.....	243	40.0	195.00	Drafters, class A.....	48	40.0	313.00
Nonmanufacturing.....	221	39.0	220.00	Public utilities.....	42	40.0	223.50	Manufacturing.....	43	40.0	315.00
Public utilities.....	32	40.0	298.50	Accounting clerks, class C.....	972	39.5	174.50	Drafters, class B.....	131	40.0	259.50
Secretaries, class D.....	346	39.0	198.50	Manufacturing.....	135	40.0	167.50	Manufacturing.....	97	40.0	257.50
Manufacturing.....	104	40.0	202.50	Nonmanufacturing.....	837	39.5	175.50	Drafters, class C.....	99	40.0	206.50
Nonmanufacturing.....	242	38.5	197.00	Payroll clerks.....	183	40.0	185.50	Manufacturing.....	73	40.0	203.50
Secretaries, class E.....	309	39.5	176.50	Manufacturing.....	103	40.0	188.50	Drafters, class D.....	40	40.0	174.00
Nonmanufacturing.....	227	39.5	174.50	Nonmanufacturing.....	80	39.5	182.00	Electronics technicians.....	272	40.0	255.00
Stenographers:				Key entry operators.....	431	39.5	174.00	Nonmanufacturing.....	144	40.0	254.50
Stenographers, general.....	31	39.0	213.50	Manufacturing.....	128	40.0	184.00	Electronics technicians, class B.....	131	40.0	253.50
Typists.....	176	39.0	159.00	Nonmanufacturing.....	303	39.5	170.00	Nonmanufacturing.....	88	40.0	260.00
Nonmanufacturing.....	169	39.0	159.00	Public utilities.....	45	40.0	255.00	Professional and technical occupations - women			
Typists, class A.....	85	38.5	162.00	Key entry operators, class A.....	138	39.5	192.50	Computer programmers (business).....	42	39.0	260.50
Nonmanufacturing.....	81	38.5	162.00	Nonmanufacturing.....	116	39.5	194.00	Nonmanufacturing.....	38	39.0	260.00
Typists, class B.....	91	39.0	156.00	Key entry operators, class B.....	293	39.5	165.50	Computer operators.....	86	39.5	177.50
Nonmanufacturing.....	88	39.0	156.00	Manufacturing.....	106	40.0	184.00	Nonmanufacturing.....	66	39.5	172.50
File clerks.....	425	38.5	137.00	Nonmanufacturing.....	187	39.5	155.00	Computer operators, class B.....	42	39.5	194.00
Nonmanufacturing.....	422	38.5	137.00	Professional and technical occupations - men				Nonmanufacturing.....	32	39.5	191.00
File clerks, class B.....	160	39.0	146.50	Computer systems analysts (business).....	120	39.5	378.00	Computer operators, class C.....	42	40.0	157.00
Nonmanufacturing.....	157	38.5	146.50	Nonmanufacturing.....	89	39.0	373.00	Nonmanufacturing.....	33	39.5	151.00
File clerks, class C.....	265	38.5	131.00	Computer systems analysts (business), class B.....	65	39.5	380.00				
Nonmanufacturing.....	265	38.5	131.00	Nonmanufacturing.....	56	39.5	377.00				
Messengers.....	33	39.5	133.00								
Nonmanufacturing.....	33	39.5	133.00								

See footnotes at end of tables.

Table A-4. Hourly earnings of maintenance, toolroom, and powerplant workers in San Antonio, Tex., May 1980

Occupation and industry division	Number of workers	Hourly earnings (in dollars)*			Number of workers receiving straight-time hourly earnings (in dollars) of —																								
		Mean ²	Median ²	Middle range ²	3.60 and under 4.00	4.00 - 4.40	4.40 - 4.80	4.80 - 5.20	5.20 - 5.60	5.60 - 6.00	6.00 - 6.40	6.40 - 6.80	6.80 - 7.20	7.20 - 7.60	7.60 - 8.00	8.00 - 8.40	8.40 - 8.80	8.80 - 9.20	9.20 - 9.60	9.60 - 10.00	10.00 - 10.40	10.40 - 10.80	10.80 - 11.20	11.20 - 11.60	11.60 - 12.00	12.00 - 12.40	12.40 - 12.80		
Maintenance electricians.....	106	7.83	8.10	6.91- 8.60	-	-	-	-	-	1	15	10	4	8	14	2	43	6	3	-	-	-	-	-	-	-	-	-	-
Manufacturing.....	94	7.84	8.60	6.95- 8.60	-	-	-	-	-	1	13	8	4	6	12	2	43	5	-	-	-	-	-	-	-	-	-	-	
Maintenance mechanics (machinery).....	241	6.97	6.94	6.16- 7.87	-	-	17	4	24	4	43	20	27	18	24	1	55	1	2	1	-	-	-	-	-	-	-	-	
Manufacturing.....	232	6.91	6.94	6.16- 7.77	-	-	17	4	24	4	43	20	27	17	22	-	54	-	-	-	-	-	-	-	-	-	-		
Maintenance mechanics (motor vehicles).....	243	7.08	6.54	5.50- 8.40	-	7	17	18	29	11	27	19	26	11	4	7	22	9	-	1	3	10	-	19	3	-	-		
Manufacturing.....	69	6.07	5.95	5.18- 7.00	-	-	15	4	12	5	9	-	8	6	4	-	6	-	-	-	-	-	-	-	-	-	-		
Nonmanufacturing.....	174	7.48	6.98	5.99- 9.00	-	7	2	14	17	6	18	19	18	5	-	7	16	9	-	1	3	10	-	19	3	-	-		
Public utilities.....	78	8.63	7.75	6.56-11.50	-	-	-	4	2	-	8	8	13	4	-	4	-	-	-	-	3	10	-	19	3	-	-		
Maintenance trades helpers.....	27	5.13	4.15	4.00- 5.75	6	8	2	1	3	-	1	1	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-		
Stationary engineers.....	60	6.40	6.09	5.35- 7.16	-	-	13	-	5	5	14	3	6	-	-	-	9	5	-	-	-	-	-	-	-	-	-		
Manufacturing.....	44	6.51	6.08	4.67- 8.40	-	-	13	-	-	3	9	2	3	-	-	-	9	5	-	-	-	-	-	-	-	-	-		

See footnotes at end of tables.

Table A-6. Average hourly earnings of maintenance, toolroom, powerplant, material movement, and custodial workers, by sex, in San Antonio, Tex., May 1980

Sex, ³ occupation, and industry division	Number of workers	Average (mean ²) hourly earnings (in dollars) ⁴	Sex, ³ occupation, and industry division	Number of workers	Average (mean ²) hourly earnings (in dollars) ⁴	Sex, ³ occupation, and industry division	Number of workers	Average (mean ²) hourly earnings (in dollars) ⁴
Maintenance, toolroom, and powerplant occupations - men			Truckdrivers, heavy truck	179	4.63	Guards, class B	927	3.34
Maintenance electricians	106	7.83	Manufacturing	175	4.64	Manufacturing	61	4.25
Manufacturing	94	7.84	Truckdrivers, tractor-trailer	747	6.79	Nonmanufacturing	866	3.28
Maintenance mechanics (machinery)	241	6.97	Manufacturing	233	4.68			
Manufacturing	232	6.91	Nonmanufacturing	514	7.75			
Maintenance mechanics (motor vehicles)	242	7.08	Public utilities	253	8.90	Janitors, porters, and cleaners	1,716	3.51
Manufacturing	69	6.07	Shippers	54	5.09	Manufacturing	209	4.36
Nonmanufacturing	173	7.48	Receivers	120	4.91	Nonmanufacturing	1,507	3.39
Public utilities	78	8.63	Nonmanufacturing	100	4.96	Public utilities	37	4.64
Maintenance trades helpers	27	5.13	Shippers and receivers	87	4.59	Material movement and custodial occupations - women		
Stationary engineers	60	6.40	Manufacturing	63	4.38			
Manufacturing	44	6.51	Warehousemen	108	4.59			
Material movement and custodial occupations - men			Manufacturing	40	5.36	Order fillers	196	3.43
Truckdrivers	2,053	6.33	Order fillers	429	5.48			
Manufacturing	624	4.47	Nonmanufacturing	425	5.50	Guards	147	3.26
Nonmanufacturing	1,429	7.14	Shipping packers	72	4.07	Nonmanufacturing	147	3.26
Public utilities	721	9.35	Manufacturing	70	4.09			
Truckdrivers, light truck	232	3.57	Material handling laborers	715	4.31	Guards, class B	147	3.26
Manufacturing	25	3.85	Manufacturing	244	3.97	Nonmanufacturing	147	3.26
Nonmanufacturing	207	3.53	Nonmanufacturing	471	4.49			
Truckdrivers, medium truck	848	7.15	Forklift operators	463	5.07	Guards, class B	147	3.26
Manufacturing	157	4.22	Manufacturing	286	4.60	Nonmanufacturing	147	3.26
Nonmanufacturing	691	7.81	Nonmanufacturing	177	5.82			
Public utilities	466	9.62	Guards	927	3.34	Janitors, porters, and cleaners	1,248	3.22
			Manufacturing	61	4.25	Manufacturing	28	3.66
			Nonmanufacturing	866	3.28	Nonmanufacturing	1,220	3.21

See footnotes at end of tables.

Table A-7. Indexes of earnings and percent increases for selected occupational groups, San Antonio, Tex., selected periods

Period ³	All industries					Manufacturing					Nonmanufacturing			
	Office clerical	Electronic data processing	Industrial nurses	Skilled maintenance	Unskilled plant	Office clerical	Electronic data processing	Industrial nurses	Skilled maintenance	Unskilled plant	Office clerical	Electronic data processing	Industrial nurses	Unskilled plant
Indexes (May 1977 = 100):														
May 1979	117.0	111.6	(*)	116.9	118.6	(*)	(*)	(*)	(*)	118.1	117.0	(*)	(*)	118.7
May 1980	129.9	123.4	(*)	(*)	128.7	(*)	(*)	(*)	(*)	129.1	130.1	(*)	(*)	128.6
Percent increases:														
May 1972 to May 1973	5.2	(*)	(*)	6.2	4.5	(*)	(*)	(*)	(*)	5.7	5.0	(*)	(*)	4.3
May 1973 to May 1974	9.9	(*)	(*)	9.1	10.9	(*)	(*)	(*)	(*)	8.8	10.5	(*)	(*)	11.8
May 1974 to May 1975	8.6	2.6	(*)	6.6	8.8	(*)	(*)	(*)	(*)	9.2	8.5	2.8	(*)	9.1
May 1975 to May 1976	8.3	3.0	(*)	8.3	9.2	(*)	(*)	(*)	(*)	10.4	8.5	2.4	(*)	8.9
May 1976 to May 1977	6.0	7.3	(*)	9.4	11.0	(*)	(*)	(*)	(*)	8.9	5.7	6.8	(*)	11.4
May 1977 to May 1978	7.8	6.9	(*)	6.5	9.9	(*)	(*)	(*)	(*)	9.0	7.9	6.6	(*)	10.0
May 1978 to May 1979	8.5	4.4	(*)	9.8	7.9	(*)	(*)	(*)	(*)	8.3	8.4	(*)	(*)	7.9
May 1979 to May 1980	11.0	10.6	(*)	(*)	8.5	(*)	(*)	(*)	(*)	9.3	11.2	(*)	(*)	8.3

NOTE: A revised description for computer operators, not equivalent to the previous description, is being introduced in this area in 1980. Therefore, the earnings of computer operators are not used in computing percent increases for the electronic

data processing group.

See footnotes at end of tables.

Table A-8. Average pay relationships within establishments for office clerical occupations, San Antonio, Tex., May 1980

Occupation which equals 100	Office clerical occupation being compared															
	Secretaries					Typists		File clerks		Messengers	Switch-board operators	Switch-board operator-receptionists	Order clerks	Payroll clerks	Key entry operators	
	Class A	Class B	Class C	Class D	Class E	Class A	Class B	Class B	Class C						Class B	Class B
Secretaries, class A.....	100															
Secretaries, class B.....	(*)	100														
Secretaries, class C.....	(*)	112	100													
Secretaries, class D.....	147	131	120	100												
Secretaries, class E.....	(*)	147	119	114	100											
Typists, class A.....	(*)	150	135	(*)	113	100										
Typists, class B.....	(*)	(*)	148	140	119	115	100									
File clerks, class B.....	(*)	(*)	146	(*)	122	108	100									
File clerks, class C.....	(*)	181	(*)	(*)	138	(*)	(*)	(*)	100							
Messengers.....	(*)	189	155	131	132	111	112	109	(*)	100						
Switchboard operators.....	152	161	123	107	110	90	92	78	79	79	100					
Switchboard operator-receptionists.....	158	140	135	120	100	(*)	(*)	(*)	78	98	(*)	100				
Order clerks, class B.....	(*)	161	(*)	156	(*)	(*)	(*)	(*)	(*)	(*)	(*)	93	100			
Payroll clerks.....	143	129	119	101	93	(*)	(*)	(*)	70	80	84	93	94	100		
Key entry operators, class A.....	(*)	148	132	110	107	(*)	86	(*)	(*)	(*)	108	91	(*)	115	100	
Key entry operators, class B.....	178	158	137	121	115	(*)	92	(*)	88	93	106	99	103	123	116	100

NOTE: This matrix table shows the average (mean) relationship of earnings within establishments between any two occupations compared. Earnings for an occupation in the column heading are expressed as a percent of the earnings for an occupation in the table stub at the point where the data lines for the two intersect. For example, a value of 122 indicates that earnings for the occupation directly above in the heading are 22 percent greater than earnings for the occupation directly to

the left in the stub. Similarly, a value of 85 indicates earnings for the occupation in the heading are 15 percent below earnings for the occupation in the stub.

See appendix A for method of computation.
See footnotes at end of tables.

Table A-9. Average pay relationships within establishments for professional and technical occupations, San Antonio, Tex., May 1980

Occupation which equals 100	Professional and technical occupation being compared												
	Computer systems analysts (business)		Computer programmers (business)		Computer operators			Computer data librarians	Drafters				Electronics technicians
	Class B	Class C	Class B	Class C	Class A	Class B	Class C		Class A	Class B	Class C	Class D	
Computer systems analysts (business), class B.....	100												
Computer systems analysts (business), class C.....	116	100											
Computer programmers (business), class B.....	136	116	100										
Computer programmers (business), class C.....	158	137	122	100									
Computer operators, class A.....	176	151	124	98	100								
Computer operators, class B.....	201	177	154	127	130	100							
Computer operators, class C.....	220	188	172	149	147	118	100						
Computer data librarians.....	201	169	152	141	128	106	95	100					
Drafters, class A.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100				
Drafters, class B.....	(*)	(*)	115	(*)	(*)	(*)	(*)	(*)	121	100			
Drafters, class C.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	149	124	100		
Drafters, class D.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	155	131	100	
Electronics technicians, class B.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100

See table A-8 for description of these pay relationships and appendix A for method of computation.
See footnotes at end of tables.

Table A-10. Average pay relationships within establishments for maintenance, toolroom, and powerplant occupations, San Antonio, Tex., May 1980

Occupation which equals 100	Maintenance, toolroom, and powerplant occupation being compared				
	Electricians	Mechanics		Trades helpers	Stationary engineers
		Machinery	Motor vehicles		
Maintenance electricians.....	100				
Maintenance mechanics (machinery).....	103	100			
Maintenance mechanics (motor vehicles).....	130	101	100		
Maintenance trades helpers.....	144	137	(*)	100	
Stationary engineers.....	102	101	100	87	100

See table A-8 for description of these pay relationships and appendix A for method of computation.
See footnotes at end of tables.

Table A-11. Average pay relationships within establishments for material movement and custodial occupations, San Antonio, Tex., May 1980

Occupation which equals 100	Material movement and custodial occupation being compared													
	Truckdrivers				Shippers	Receivers	Shippers and receivers	Warehousemen	Order fillers	Shipping packers	Material handling laborers	Forklift operators	Guards	Janitors, porters, and cleaners
	Light truck	Medium truck	Heavy truck	Tractor-trailer									Class B	
Truckdrivers, light truck.....	100													
Truckdrivers, medium truck.....	89	100												
Truckdrivers, heavy truck.....	(*)	(*)	100											
Truckdrivers, tractor-trailer.....	(*)	100	106	100										
Shippers.....	(*)	(*)	(*)	(*)	100									
Receivers.....	87	103	(*)	(*)	97	100								
Shippers and receivers.....	84	96	(*)	(*)	(*)	(*)	100							
Warehousemen.....	(*)	105	(*)	(*)	(*)	103	(*)	100						
Order fillers.....	(*)	105	(*)	110	113	114	(*)	(*)	100					
Shipping packers.....	(*)	118	(*)	(*)	(*)	(*)	(*)	(*)	(*)	100				
Material handling laborers.....	101	114	(*)	125	(*)	128	(*)	121	127	100	100			
Forklift operators.....	(*)	105	(*)	108	113	105	112	(*)	107	101	87	100		
Guards, class B.....	101	102	(*)	(*)	(*)	105	119	96	(*)	92	96	109	100	
Janitors, porters, and cleaners.....	120	132	107	138	133	129	136	(*)	118	103	107	122	112	100

See table A-8 for description of these pay relationships and appendix A for method of computation.
See footnotes at end of tables.

Table B-1. Minimum entrance salaries for inexperienced typists and clerks in San Antonio, Tex., May 1980

Minimum weekly straight-time salaries?	Inexperienced typists					Other inexperienced clerical workers*				
	All industries	Manufacturing		Nonmanufacturing		All industries	Manufacturing		Nonmanufacturing	
		All schedules	40.00-hour schedules	All schedules	40.00-hour schedules		All schedules	40.00-hour schedules	All schedules	40.00-hour schedules
Establishments studied.....	173	60	XXX	113	XXX	173	60	XXX	113	XXX
Establishments having a specified minimum	19	6	6	13	8	60	24	24	36	29
\$110.00 and under \$115.00	1	-	-	1	-	1	-	-	1	-
\$115.00 and under \$120.00	1	-	-	1	-	3	-	-	3	-
\$120.00 and under \$125.00	4	-	-	4	3	23	3	3	20	19
\$125.00 and under \$130.00	1	1	1	-	-	5	4	4	1	1
\$130.00 and under \$135.00	5	3	3	2	2	11	5	5	6	4
\$135.00 and under \$140.00	2	-	-	2	1	3	1	1	2	2
\$140.00 and under \$145.00	2	1	1	1	1	5	5	5	-	-
\$145.00 and under \$150.00	1	-	-	1	-	2	2	2	-	-
\$150.00 and under \$155.00	-	-	-	-	-	1	-	-	1	1
\$155.00 and under \$160.00	1	-	-	1	1	1	-	-	1	1
\$160.00 and under \$165.00	-	-	-	-	-	-	-	-	-	-
\$165.00 and under \$170.00	1	1	1	-	-	2	1	1	1	1
\$170.00 and under \$175.00	-	-	-	-	-	2	2	2	-	-
\$175.00 and over	-	-	-	-	-	1	1	1	-	-
Establishments having no specified minimum	30	11	XXX	19	XXX	53	19	XXX	34	XXX
Establishments which did not employ workers in this category	124	43	XXX	81	XXX	60	17	XXX	43	XXX

See footnotes at end of tables.

Table B-2. Late-shift pay provisions for full-time manufacturing production and related workers in San Antonio, Tex., May 1980
 (All full-time manufacturing production and related workers = 100 percent)

Item	All workers ^a		Workers on late shifts	
	Second shift	Third shift	Second shift	Third shift
Percent of workers				
In establishments with late-shift provisions.....	75.8	41.1	10.7	3.2
With no pay differential for late-shift work.....	15.3	6.9	3.4	.7
With pay differential for late-shift work.....	60.5	34.2	7.2	2.5
Uniform cents-per-hour differential.....	42.8	25.0	5.2	2.2
Uniform percentage differential.....	16.1	7.7	1.8	(¹⁰)
Other differential.....	1.5	1.5	.3	.3
Average pay differential				
Uniform cents-per-hour differential.....	16.2	15.6	15.6	13.2
Uniform percentage differential.....	9.3	13.6	9.2	5.0
Percent of workers by type and amount of pay differential				
Uniform cents-per-hour:				
5 cents.....	1.4	4.8	.1	.7
6 cents.....	.8	-	-	-
10 cents.....	16.2	.8	2.6	-
12 cents.....	.6	-	.2	-
14 and under 15 cents.....	.4	-	.2	-
15 cents.....	12.7	8.2	.3	.9
20 cents.....	2.5	9.2	.3	.5
25 cents.....	5.9	1.7	1.6	.1
28 cents.....	-	.4	-	(¹⁰)
50 cents.....	2.4	-	-	-
Uniform percentage:				
5 percent.....	1.1	1.1	.2	(¹⁰)
6 percent.....	2.6	-	.2	-
10 percent.....	11.5	-	1.3	-
15 percent.....	.9	6.6	.1	-

See footnotes at end of tables.

Table B-3. Scheduled weekly hours and days of full-time first-shift workers in San Antonio, Tex., May 1980

Item	Production and related workers				Office workers			
	All industries	Manu- facturing	Nonmanu- facturing	Public utilities	All industries	Manu- facturing	Nonmanu- facturing	Public utilities
Percent of workers by scheduled weekly hours and days								
All full-time workers.....	100	100	100	100	100	100	100	100
35 hours-5 days.....	5	-	8	-	2	-	2	-
36 hours-4 1/2 days.....	-	-	-	-	2	-	3	-
36 1/4 hours-5 days.....	-	-	-	-	2	-	2	-
37 1/2 hours-5 days.....	5	1	7	-	4	-	5	3
37 8/10 hours-5 days.....	-	-	-	-	(11)	-	1	-
38 hours.....	-	-	-	-	22	-	26	-
4 days.....	-	-	-	-	19	-	23	-
5 days.....	-	-	-	-	3	-	4	-
39 1/2 hours-5 1/2 days.....	1	-	1	-	(11)	-	(11)	-
40 hours.....	76	81	73	89	67	99	60	97
4 days.....	2	4	(11)	-	(11)	(11)	-	-
4 1/2 days.....	5	13	-	-	1	8	-	-
5 days.....	69	63	73	89	66	91	60	97
42 hours-5 days.....	(11)	-	(11)	3	-	-	-	-
42 1/2 hours.....	1	2	1	2	-	-	-	-
5 days.....	1	-	1	-	-	-	-	-
5 1/2 days.....	1	2	-	-	-	-	-	-
44 hours-5 1/2 days.....	2	3	1	-	-	-	-	-
45 hours.....	3	5	2	6	1	1	1	-
5 days.....	2	5	1	6	1	1	(11)	-
5 1/2 days.....	-	-	-	-	(11)	-	(11)	-
6 days.....	(11)	-	1	-	-	-	-	-
48 hours.....	4	6	3	-	-	-	-	-
4 days.....	1	2	-	-	-	-	-	-
6 days.....	3	3	3	-	-	-	-	-
50 hours-5 days.....	2	-	4	-	-	-	-	-
55 hours-5 1/2 days.....	(11)	1	-	-	-	-	-	-
56 hours-6 days.....	1	2	-	-	-	-	-	-
Average scheduled weekly hours								
All weekly work schedules.....	40.6	41.3	40.2	40.4	39.3	40.1	39.1	39.9

See footnotes at end of tables.

Table B-4. Annual paid holidays for full-time workers in San Antonio, Tex., May 1980

Item	Production and related workers				Office workers			
	All industries	Manu- facturing	Nonmanu- facturing	Public utilities	All industries	Manu- facturing	Nonmanu- facturing	Public utilities
Percent of workers								
All full-time workers.....	100	100	100	100	100	100	100	100
In establishments not providing paid holidays.....	8	-	14	-	19	-	23	-
In establishments providing paid holidays.....	92	100	86	100	81	100	77	100
Average number of paid holidays								
For workers in establishments providing holidays.....	7.1	7.5	6.7	8.9	8.3	8.0	8.4	9.3
Percent of workers by number of paid holidays provided								
6 half days.....	(11)	-	1	-	-	-	-	-
1 holiday.....	2	2	2	-	(11)	-	(11)	-
3 holidays.....	4	-	7	-	(11)	-	(11)	-
Plus 1 half day.....	-	-	-	-	(11)	-	(11)	-
4 holidays.....	1	-	2	-	(11)	-	(11)	-
5 holidays.....	15	18	13	6	7	15	5	4
Plus 1 half day.....	1	1	1	-	1	1	1	-
Plus 2 half days.....	1	1	1	-	1	1	(11)	-
Plus 3 half days.....	1	2	-	-	(11)	1	-	-
6 holidays.....	12	12	12	-	8	14	7	-
Plus 1 half day.....	1	1	(11)	2	1	1	1	1
Plus 2 half days.....	1	2	-	-	1	2	(11)	-
7 holidays.....	15	6	21	7	7	5	7	3
Plus 1 half day.....	3	6	1	5	2	5	1	1
Plus 2 half days.....	1	-	2	-	3	5	4	4
8 holidays.....	6	8	4	12	3	5	2	12
Plus 2 half days.....	1	-	1	-	1	-	1	-
9 holidays.....	15	28	5	8	18	20	17	8
Plus 1 half day.....	-	-	-	-	9	-	11	-
10 holidays.....	11	10	11	59	16	29	14	66
Plus 1 half day.....	-	-	-	-	2	-	3	-
11 holidays.....	2	2	1	-	1	(11)	1	2
12 holidays.....	1	2	-	-	(11)	1	-	-
Percent of workers by total paid holiday time provided ¹²								
1 day or more.....	92	100	86	100	81	100	77	100
3 days or more.....	90	98	84	100	81	100	77	100
3 1/2 days or more.....	86	98	77	100	81	100	76	100
4 days or more.....	86	98	77	100	80	100	76	100
5 days or more.....	85	98	75	100	80	100	76	100
5 1/2 days or more.....	70	80	63	94	73	85	71	96
6 days or more.....	69	79	62	94	72	84	70	96
6 1/2 days or more.....	55	66	48	94	64	70	62	96
7 days or more.....	54	63	47	92	63	68	62	95
7 1/2 days or more.....	38	56	26	84	55	61	54	92
8 days or more.....	35	50	25	79	54	55	53	92
9 days or more.....	28	42	18	67	48	51	47	76
9 1/2 days or more.....	13	14	12	59	30	31	29	68
10 days or more.....	13	14	12	59	20	31	18	68
10 1/2 days or more.....	2	4	1	-	4	1	4	2
11 days or more.....	2	4	1	-	1	1	1	2
12 days.....	1	2	-	-	(11)	1	-	-

See footnotes at end of tables.

Table B-5. Paid vacation provisions for full-time workers in San Antonio, Tex., May 1980

Item	Production and related workers				Office workers			
	All industries	Manu- facturing	Nonmanu- facturing	Public utilities	All industries	Manu- facturing	Nonmanu- facturing	Public utilities
Percent of workers								
All full-time workers.....	100	100	100	100	100	100	100	100
In establishments not providing paid vacations.....	6	-	10	-	-	-	-	-
In establishments providing paid vacations.....	94	100	90	100	100	100	100	100
Length-of-time payment.....	93	96	90	100	99	98	100	100
Percentage payment.....	2	4	-	-	(11)	2	-	-
Amount of paid vacation after: ¹³								
6 months of service:								
Under 1 week.....	2	-	3	-	2	-	3	-
1 week.....	16	20	13	53	25	33	23	59
Over 1 and under 2 weeks.....	2	3	1	-	6	2	7	-
2 weeks.....	1	-	2	-	1	-	1	-
1 year of service:								
1 week.....	69	80	60	37	21	39	18	29
Over 1 and under 2 weeks.....	-	-	-	-	(11)	-	(11)	-
2 weeks.....	25	20	30	63	59	61	59	71
Over 2 and under 3 weeks.....	(11)	-	(11)	-	19	-	23	-
2 years of service:								
1 week.....	37	55	24	10	8	25	4	8
Over 1 and under 2 weeks.....	1	1	1	-	1	1	(11)	-
2 weeks.....	57	44	66	90	72	74	71	92
Over 2 and under 3 weeks.....	(11)	-	(11)	-	19	-	23	-
Over 4 and under 5 weeks.....	-	-	-	-	1	-	1	-
3 years of service:								
1 week.....	13	17	9	4	2	5	1	1
Over 1 and under 2 weeks.....	(11)	1	-	-	(11)	1	-	-
2 weeks.....	80	82	79	96	77	94	73	99
Over 2 and under 3 weeks.....	(11)	-	(11)	-	19	-	23	-
3 weeks.....	1	-	2	-	1	-	1	-
Over 4 and under 5 weeks.....	-	-	-	-	1	-	1	-
4 years of service:								
1 week.....	10	11	9	4	2	4	1	1
Over 1 and under 2 weeks.....	(11)	1	-	-	(11)	1	-	-
2 weeks.....	81	86	78	96	77	94	73	99
Over 2 and under 3 weeks.....	(11)	-	(11)	-	19	-	23	-
3 weeks.....	2	2	3	-	1	1	2	-
Over 4 and under 5 weeks.....	-	-	-	-	1	-	1	-
5 years of service:								
1 week.....	6	4	7	-	1	1	1	-
2 weeks.....	69	64	72	87	56	46	58	84
Over 2 and under 3 weeks.....	1	2	(11)	3	2	2	1	8
3 weeks.....	19	30	11	9	41	51	39	8
Over 3 and under 4 weeks.....	(11)	-	(11)	-	(11)	-	(11)	-
Over 4 and under 5 weeks.....	-	-	-	-	1	-	1	-

See footnotes at end of tables.

Table B-5. Paid vacation provisions for full-time workers in San Antonio, Tex., May 1980 —Continued

Item	Production and related workers				Office workers			
	All industries	Manu- facturing	Nonmanu- facturing	Public utilities	All industries	Manu- facturing	Nonmanu- facturing	Public utilities
10 years of service:								
1 week	5	4	5	-	1	1	1	-
2 weeks.....	38	39	37	14	16	28	13	7
Over 2 and under 3 weeks	2	2	2	3	7	2	8	8
3 weeks.....	44	45	44	83	43	36	45	83
Over 3 and under 4 weeks	(11)	-	(11)	-	19	-	23	-
4 weeks.....	6	10	2	-	13	32	9	3
6 weeks.....	-	-	-	-	1	-	1	-
12 years of service:								
1 week	5	4	5	-	1	1	1	-
2 weeks.....	37	37	37	14	16	28	13	7
Over 2 and under 3 weeks	2	2	2	3	7	2	8	8
3 weeks.....	45	47	44	81	43	34	45	82
Over 3 and under 4 weeks	(11)	-	(11)	-	19	-	23	-
4 weeks.....	6	11	2	2	14	34	9	3
6 weeks.....	-	-	-	-	1	-	1	-
15 years of service:								
1 week	5	4	5	-	1	1	1	-
2 weeks.....	27	24	29	14	13	21	11	7
Over 2 and under 3 weeks	1	2	(11)	3	1	2	1	8
3 weeks.....	37	49	28	17	36	26	38	12
Over 3 and under 4 weeks	(11)	-	(11)	-	1	-	1	-
4 weeks.....	24	19	27	66	48	48	47	73
5 weeks.....	1	2	-	-	(11)	1	-	-
6 weeks.....	-	-	-	-	1	-	1	-
20 years of service:								
1 week	5	4	5	-	1	1	1	-
2 weeks.....	26	21	29	14	13	20	11	7
3 weeks.....	25	34	18	5	19	22	19	9
Over 3 and under 4 weeks	-	-	-	-	(11)	-	(11)	-
4 weeks.....	36	36	36	74	46	54	44	82
Over 4 and under 5 weeks	(11)	-	(11)	-	19	-	23	-
5 weeks.....	2	4	1	7	1	3	1	3
6 weeks.....	1	2	-	-	1	1	1	-
25 years of service:								
1 week	5	4	5	-	1	1	1	-
2 weeks.....	25	21	28	14	11	20	9	7
3 weeks.....	23	32	17	5	20	19	20	9
Over 3 and under 4 weeks	-	-	-	-	(11)	-	(11)	-
4 weeks.....	29	32	27	14	36	51	33	10
Over 4 and under 5 weeks	(11)	-	(11)	-	(11)	-	(11)	-
5 weeks.....	11	9	12	65	31	8	35	75
6 weeks.....	1	3	(11)	2	1	1	1	(11)
30 years of service or more:								
1 week	5	4	5	-	1	1	1	-
2 weeks.....	25	21	28	14	11	20	9	7
3 weeks.....	23	32	17	5	20	19	20	9
Over 3 and under 4 weeks	-	-	-	-	(11)	-	(11)	-
4 weeks.....	28	30	26	13	36	49	33	10
Over 4 and under 5 weeks	(11)	-	(11)	-	(11)	-	(11)	-
5 weeks.....	12	11	12	65	31	11	35	75
6 weeks.....	1	3	(11)	3	1	1	1	(11)

See footnotes at end of tables.

Table B-6. Health, insurance, and pension plans for full-time workers in San Antonio, Tex., May 1980

Item	Production and related workers				Office workers			
	All industries	Manu- facturing	Nonmanu- facturing	Public utilities	All industries	Manu- facturing	Nonmanu- facturing	Public utilities
Percent of workers								
All full-time workers.....	100	100	100	100	100	100	100	100
In establishments providing at least one of the benefits shown below ¹⁸	93	100	88	100	99	100	99	100
Life insurance.....	87	97	80	98	97	99	96	99
Noncontributory plans.....	50	73	34	91	69	71	68	96
Accidental death and dismemberment insurance.....	69	76	64	87	86	85	86	84
Noncontributory plans.....	31	54	15	32	57	61	56	24
Sickness and accident insurance or sick leave or both ¹⁹	68	76	62	93	91	84	92	97
Sickness and accident insurance.....	33	50	21	29	16	28	14	19
Noncontributory plans.....	23	43	9	24	8	24	5	17
Sick leave (full pay and no waiting period).....	34	31	35	22	67	65	67	28
Sick leave (partial pay or waiting period).....	15	9	19	54	14	3	16	59
Long-term disability insurance.....	21	19	22	58	63	46	66	68
Noncontributory plans.....	12	16	10	56	46	37	48	67
In establishments providing at least one of the health insurance plans shown below ¹⁸	91	99	86	100	99	99	99	100
Noncontributory plans.....	47	74	28	92	36	72	28	96
Hospitalization insurance.....	91	99	86	100	99	99	99	100
Noncontributory plans.....	46	73	27	90	35	71	28	93
Surgical insurance.....	91	99	86	100	99	99	99	100
Noncontributory plans.....	46	73	27	90	35	71	28	93
Medical insurance.....	90	99	85	100	98	99	98	100
Noncontributory plans.....	46	73	27	90	35	71	28	93
Major medical insurance.....	90	97	86	100	99	98	99	100
Noncontributory plans.....	45	70	27	90	34	65	28	93
Dental insurance.....	27	24	29	73	36	44	34	77
Noncontributory plans.....	16	22	13	68	15	43	9	75
Health maintenance organization.....	10	7	12	4	21	15	23	3
Noncontributory plans.....	1	1	(11)	2	7	1	8	2
Retirement pension.....	49	59	43	85	81	69	83	89
Noncontributory plans.....	40	52	32	80	72	54	76	86

See footnotes at end of tables.

Table B-7. Health plan participation by full-time workers in San Antonio, Tex., May 1980

Item	Production and related workers				Office workers			
	All industries	Manu- facturing	Nonmanu- facturing	Public utilities	All industries	Manu- facturing	Nonmanu- facturing	Public utilities
Percent of workers								
All full-time workers.....	100	100	100	100	100	100	100	100
Hospitalization insurance.....	79	93	69	96	76	93	72	92
Noncontributory plans.....	45	72	27	89	34	70	26	88
Surgical insurance.....	79	93	69	96	76	93	72	92
Noncontributory plans.....	45	72	27	89	34	70	26	88
Medical insurance.....	78	93	67	96	75	93	71	92
Noncontributory plans.....	45	72	27	89	34	70	26	88
Major medical insurance.....	78	91	68	96	76	91	73	92
Noncontributory plans.....	44	70	27	89	33	65	26	88
Dental insurance.....	23	21	25	71	15	37	10	71
Noncontributory plans.....	15	19	12	67	14	37	9	70
Health maintenance organization.....	(11)	(11)	(11)	-	1	1	(11)	-
Noncontributory plans.....	-	-	-	-	-	-	-	-

See footnotes at end of tables.

Footnotes

Some of these standard footnotes may not apply to this bulletin.

¹ Standard hours reflect the workweek for which employees receive their regular straight-time salaries (exclusive of pay for overtime at regular and/or premium rates), and the earnings correspond to these weekly hours.

² The mean is computed for each job by totaling the earnings of all workers and dividing by the number of workers. The median designates position—half of the workers receive the same or more and half receive the same or less than the rate shown. The middle range is defined by two rates of pay; one-fourth of the workers earn the same or less than the lower of these rates and one-fourth earn the same or more than the higher rate.

³ Earnings data relate only to workers whose sex identification was provided by the establishment.

⁴ Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

⁵ Estimates for periods ending prior to 1976 relate to men only for skilled maintenance and unskilled plant workers. All other estimates relate to men and women.

⁶ Data do not meet publication criteria or data not available.

⁷ Formally established minimum regular straight-time hiring salaries that are paid for standard workweeks. Data are presented for all standard workweeks combined, and for the most common standard workweeks reported.

⁸ Excludes workers in subclerical jobs such as messenger.

⁹ Includes all production and related workers in establishments currently operating late shifts, and establishments whose formal provisions cover late shifts, even though the establishments were not currently operating late shifts.

¹⁰ Less than 0.05 percent.

¹¹ Less than 0.5 percent.

¹² All combinations of full and half days that add to the same amount; for example, the proportion of workers receiving a total of 10 days includes those with 10 full days and no half days, 9 full days and 2 half days, 8 full days and 4 half days, and so on. Proportions then were cumulated.

¹³ Includes payments other than 'length of time,' such as percentage of annual earnings or flat-sum payments, converted to an equivalent time basis; for example, 2 percent of annual earnings was considered as 1 week's pay. Periods of service are chosen arbitrarily and do not necessarily reflect individual provisions for progression; for example, changes in proportions at 10 years include changes between 5 and 10 years. Estimates are cumulative. Thus, the proportion eligible for at least 3 weeks' pay after 10 years includes those eligible for at least 3 weeks' pay after fewer years of service.

¹⁴ Estimates listed after type of benefit are for all plans for which at least a part of the cost is borne by the employer. 'Noncontributory plans' include only those financed entirely by the employer. Excluded are legally required plans, such as workers' disability compensation, social security, and railroad retirement.

¹⁵ Unduplicated total of workers receiving sick leave or sickness and accident insurance shown separately. Sick leave plans are limited to those which definitely establish at least the minimum number of days' pay that each employee can expect. Informal sick leave allowances determined on an individual basis are excluded.

¹⁶ Unduplicated total of workers eligible for coverage under an insurance plan providing hospitalization, surgical, medical, major medical, or dental benefits shown separately.

Appendix A.

Scope and Method of Survey

In each of the 71 areas¹ currently surveyed, the Bureau obtains wages and related benefits data from representative establishments within six broad industry divisions: Manufacturing; transportation, communication, and other public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services. Government operations and the construction and extractive industries are excluded. Establishments having fewer than a prescribed number of workers are also excluded because of insufficient employment in the occupations studied. Appendix table 1 shows the number of establishments and workers estimated to be within the scope of this survey, as well as the number actually studied.

Bureau field representatives obtain data by personal visits at 3-year intervals. In each of the two intervening years, information on employment and occupational earnings only is collected by a combination of personal visit, mail questionnaire, and telephone interview from establishments participating in the previous survey.

A sample of the establishments in the scope of the survey is selected for study prior to each personal visit survey. This sample, minus establishments which go out of business or are no longer within the industrial scope of the survey, is retained for the following two annual surveys. In most cases, establishments new to the area are not considered in the scope of the survey until the selection of a sample for a personal visit survey.

The sampling procedures involve detailed stratification of all establishments within the scope of an individual area survey by industry and number of employees. From this stratified universe a probability sample is selected, with each establishment having a predetermined chance of selection. To obtain optimum accuracy at minimum cost, a greater proportion of large than small establishments is selected. When data are combined, each establishment is weighted according to its probability of selection so that unbiased estimates are generated. For example, if one out of four establishments is selected, it is given a weight of 4 to represent itself plus three others. An alternate of the same original probability is chosen in the same industry-size classification if data are not available from the original sample member. If no suitable substitute is available, additional weight is assigned to a sample member that is similar to the missing unit.

Occupations and earnings

Occupations selected for study are common to a variety of manufacturing and nonmanufacturing industries, and are of the following types: (1) Office clerical; (2) professional and technical; (3) maintenance, toolroom, and powerplant; and (4) material

movement and custodial. Occupational classification is based on a uniform set of job descriptions designed to take account of interestablishment variation in duties within the same job. Occupations selected for study are listed and described in appendix B.

Unless otherwise indicated, the earnings data following the job titles are for all industries combined. Earnings data for some of the occupations listed and described, or for some industry divisions within the scope of the survey, are not presented in the A-series tables because either (1) data were insufficient to provide meaningful statistical results, or (2) there is possibility of disclosure of individual establishment data. Separate men's and women's earnings data are not presented when the number of workers not identified by sex is 20 percent or more of the men or women identified in an occupation. Earnings data not shown separately for industry divisions are included in data for all industries combined. Likewise, for occupations with more than one level, data are included in the overall classification when a subclassification is not shown or information to subclassify is not available.

Occupational employment and earnings data are shown for full-time workers, i.e., those hired to work a regular weekly schedule. Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Nonproduction bonuses are excluded, but cost-of-living allowances and incentive bonuses are included. Weekly hours for office clerical and professional and technical occupations refer to the standard workweek (rounded to the nearest half hour) for which employees receive regular straight-time salaries (exclusive of pay for overtime at regular and/or premium rates). Average weekly earnings for these occupations are rounded to the nearest half dollar. Vertical lines within the distribution of workers on some A-tables indicate a change in the size of the class intervals.

These surveys measure the level of occupational earnings in an area at a particular time. Changes in an occupational average over time reflect, in addition to earnings changes, factors such as changes in proportions of workers employed by high- or low-wage firms, or high-wage workers advancing to better jobs and being replaced by new workers at lower rates. Such shifts in employment could decrease an occupational average even though most establishments in an area increase wages during the year. Changes in earnings of occupational groups, shown in table A-7, are better indicators of wage trends than are earnings changes for individual jobs within the groups.

Average earnings reflect composite, areawide estimates. Industries and establishments differ in pay level and job staffing, and thus contribute differently to the estimates

for each job. Pay averages may fail to reflect accurately the wage differential among jobs in individual establishments.

Average pay levels for men and women in selected occupations should not be assumed to reflect differences in pay of the sexes within individual establishments. Factors which may contribute to differences include progression within established rate ranges (only the rates paid incumbents are collected) and performance of specific duties within the general survey job descriptions. Job descriptions used to classify employees in these surveys usually are more generalized than those used in individual establishments and allow for minor differences among establishments in specific duties performed.

Occupational employment estimates represent the total in all establishments within the scope of the study and not the number actually surveyed. Because occupational structures among establishments differ, estimates of occupational employment obtained from the sample of establishments studied serve only to indicate the relative importance of the jobs studied. These differences in occupational structure do not affect materially the accuracy of the earnings data.

Wage trends for selected occupational groups

Indexes in table A-7 measure wages at a given time, expressed as a percent of wages during the base period. Subtracting 100 from the index yields the percent change in wages from the base period to the date of the index. The percent increases in table A-7 relate to wage changes between the indicated dates. Annual rates of increase, where shown, reflect the amount of increase for 12 months when the time span between surveys was other than 12 months. These computations are based on the assumption that wages increased at a constant rate between surveys.

The indexes and percent increases are based on changes in average hourly earnings of men and women in establishments reporting the trend jobs in both the current and previous year (matched establishments). The data are adjusted to remove the effect on average earnings of employment shifts among establishments and turnover of establishments included in survey samples. The percent increases, however, are still affected by factors other than wage increases. Hirings, layoffs, and turnover may affect an establishment average for an occupation when workers are paid under plans providing a range of wage rates for individual jobs. In periods of increased hiring, for example, new employees may enter at the bottom of the range, depressing the average without a change in wage rates.

Occupations used to compute wage trends are:

Office clerical

Secretaries	Switchboard operators
Stenographers, senior	Order clerks, classes A and B
Stenographers, general	Accounting clerks ²
Typists, classes A and B	Payroll clerks
File clerks, classes A, B, and C	Key entry operators, classes A and B
Messengers	

Electronic data processing³

Computer systems analysts, classes A, B, and C	Computer programmers, classes A, B, and C
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Industrial nurses

Registered industrial nurses

Skilled maintenance

Carpenters	Mechanics (machinery)
Electricians	Mechanics (motor vehicle)
Painters	Pipefitters
Machinists	Tool and die makers

Unskilled plant

Janitors, porters, and cleaners	Material handling laborers
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Percent changes for individual areas in the program are computed as follows:

1. Average earnings are computed for each occupation for the 2 years being compared. The averages are derived from earnings in those establishments which are in the survey both years; it is assumed that employment remains unchanged.
2. Each occupation is assigned a weight based on its proportionate employment in the occupational group.
3. These weights are used to compute group averages. Each occupation's average earnings (computed in step 1) are multiplied by its weight. The products are totaled to obtain a group average.
4. The ratio of group averages for 2 consecutive years is computed by dividing the average for the current year by the average for the earlier year. The result—expressed as a percent—less 100 is the percent change.

The index is computed by adding 100 to the most recent percent increase, multiplying the total by the previous year's index number, and dividing the product by 100 to obtain the current index value.

For a more detailed description of the method used to compute these wage trends, see 'Improving Area Wage Survey Indexes,' *Monthly Labor Review*, January 1973, pp. 52-57.

Average pay relationships within establishments

Tables A-8 through A-11 present occupational pay relatives derived from comparisons of job averages within individual establishments. The method of computation is as follows:

1. A pay relative for any two occupations is computed for each establishment in which they are found by dividing the average earnings for one occupation by the average for the other and multiplying by 100 (e.g., \$5 divided by \$4 = 1.25 times 100 = 125).

2. Each pay relative is weighted by the number of workers in the two occupations compared and by the weight assigned to the establishment to represent establishments not included in the survey sample.
3. The weighted pay relatives for all establishments reporting the two occupations are summed and divided by the total of the weights to produce the average pay relatives shown in the tables.

Occupational pay relationships measured in this manner yield considerably different results than those produced by using overall survey averages such as those shown in tables A-1 through A-6. The former measure the average pay relationships found within establishments; the latter measure the relationships among job averages in an area. In addition, the mix of establishments used in the comparisons may differ between the two methods.

Establishment practices and supplementary wage provisions

The incidence of selected establishment practices and supplementary wage provisions is studied for full-time production and related workers and office workers. Production and related workers (referred to hereafter as production workers) include working supervisors and all nonsupervisory workers (including group leaders and trainees) engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance, repair, janitorial and guard services, product development, auxiliary production for plant's own use (e.g., power-plant), and recordkeeping and other services closely associated with the above production operations. (Cafeteria and route workers are excluded in manufacturing industries but included in nonmanufacturing industries.) In finance and insurance, no workers are considered to be production workers. Office workers include working supervisors and all nonsupervisory workers (including lead workers and trainees) performing clerical or related office functions in such departments as accounting, advertising, purchasing, collection, credit, finance, legal, payroll, personnel, sales, industrial relations, public relations, executive, or transportation. Administrative, executive, professional, and part-time employees as well as construction workers utilized as separate work forces are excluded from both the production and office worker categories.

Minimum entrance salaries (table B-1). Minimum entrance salaries for office workers relate only to the establishments visited. Because of the optimum sampling techniques used and the probability that large establishments are more likely than small establishments to have formal entrance rates above the subclerical level, the table is more representative of policies in medium and large establishments. (The 'X's' shown under specific weekly schedules indicate that no meaningful totals are applicable.)

Shift differentials—manufacturing (table B-2). Data were collected on policies of manufacturing establishments regarding pay differentials for production workers on late shifts. Establishments considered as having policies are those which (1) have provisions in writing covering the operation of late shifts, or (2) have operated late shifts at any time during the 12 months preceding a survey. When establishments have several differentials which vary by job, the differential applying to the majority of the production workers is recorded. When establishments have differentials which apply only to certain hours of work, the differential applying to the majority of the shift hours is recorded.

For purposes of this study, a late shift is either a second (evening) shift which ends at or near midnight or a third (night) shift which starts at or near midnight.

Differentials for second and third shifts are summarized separately for (1) establishment policies (an establishment's differentials are weighted by all production workers in the establishment at the time of the survey) and (2) effective practices (an establishment's differentials are weighted by production workers employed on the specified shift at the time of the survey).

Scheduled weekly hours; paid holidays; paid vacations; and health, insurance, and pension plans. Provisions which apply to a majority of the production or office workers in an establishment are considered to apply to all production or office workers in the establishment; a practice or provision is considered nonexistent when it applies to less than a majority. Holidays, vacations, and health and insurance plans are considered applicable to employees currently eligible for the benefits. Pension plans are considered applicable to employees currently eligible for participation and also to those who will eventually become eligible.

Scheduled weekly hours and days (table B-3). Scheduled weekly hours and days refer to the number of hours and days per week which full-time first (day) shift workers are expected to work, whether paid for at straight-time or overtime rates.

Paid holidays (table B-4). Holidays are included if workers who are not required to work are paid for the time off and those required to work receive premium pay or compensatory time off. They are included only if they are granted annually on a formal basis (provided for in written form or established by custom). Holidays are included even though in a particular year they fall on a nonworkday and employees are not granted another day off. Paid personal holiday plans, typically found in the automobile and related industries, are included as paid holidays.

Data are tabulated to show the percent of workers who (1) are granted specific numbers of whole and half holidays and (2) are granted specified amounts of total holiday time (whole and half holidays are aggregated).

Paid vacations (table B-5). Establishments report their method of calculating vacation pay (time basis, percent of annual earnings, flat-sum payment, etc.) and the amount of vacation pay granted. Only basic formal plans are reported. Vacation bonuses, vacation-savings plans, and 'extended' or 'sabbatical' benefits beyond basic plans are excluded.

For tabulating vacation pay granted, all provisions are expressed on a time basis. Vacation pay calculated on other than a time basis is converted to its equivalent time period. Two percent of annual earnings, for example, is tabulated as 1 week's vacation pay.

Also, provisions after each specified length of service are related to all production or office workers in an establishment regardless of length of service. Vacation plans commonly provide for a larger amount of vacation pay as service lengthens. Counts of production or office workers by length of service were not obtained. The tabulations of vacation pay granted present, therefore, statistical measures of these provisions rather than proportions of workers actually receiving specific benefits.

Health, insurance, and pension plans (table B-6). Health, insurance, and pension plans include plans for which the employer pays either all or part of the cost. The benefits

may be underwritten by an insurance company, paid directly by an employer or union, or provided by a health maintenance organization. This year, for the first time in this area, provisions for health maintenance organizations (HMO's) are treated separately from insurance provisions. Workers provided the option of an insurance plan or an HMO are reported under both types of plans. A plan is included even though a majority of the employees in an establishment do not choose to participate in it because they are required to bear part of its cost (provided the choice to participate is available or will eventually become available to a majority). Legally required plans such as social security, railroad retirement, workers' disability compensation, and temporary disability insurance⁴ are excluded.

Life insurance includes formal plans providing indemnity (usually through an insurance policy) in case of death of the covered worker.

Accidental death and dismemberment insurance is limited to plans which provide benefit payments in case of death or loss of limb or sight as a direct result of an accident.

Sickness and accident insurance includes only those plans which provide that predetermined cash payments be made directly to employees who lose time from work because of illness or injury, e.g., \$50 a week for up to 26 weeks of disability.

Sick leave plans are limited to formal plans⁵ which provide for continuing an employee's pay during absence from work because of illness. Data collected distinguish between (1) plans which provide full pay with no waiting period, and (2) plans which either provide partial pay or require a waiting period.

Long-term disability insurance plans provide payments to totally disabled employees upon the expiration of their paid sick leave and/or sickness and accident insurance, or after a predetermined period of disability (typically 6 months). Payments are made until the end of the disability, a maximum age, or eligibility for retirement benefits. Full or partial payments are almost always reduced by social security, workers' disability compensation, and private pension benefits payable to the disabled employee.

Hospitalization, surgical, and medical insurance plans reported in these surveys provide full or partial payment for basic services rendered. Hospitalization insurance covers hospital room and board and may cover other hospital expenses. Surgical insurance covers surgeons' fees. Medical insurance covers doctors' fees for home, office, or hospital calls. Plans restricted to post-operative medical care or a doctor's care for minor ailments at a worker's place of employment are not considered to be medical insurance.

Major medical insurance coverage applies to services which go beyond the basic services covered under hospitalization, surgical, and medical insurance. Major medical insurance typically (1) requires that a 'deductible' (e.g., \$100) be met before benefits begin, (2) has a coinsurance feature that requires the insured to pay a portion (e.g., 20 percent) of certain expenses, and (3) has a specified dollar maximum of benefits (e.g., \$10,000 a year).

Dental insurance plans provide normal dental service benefits, usually for fillings, extractions, and X-rays. Plans which provide benefits only for oral surgery or repairing

accident damage are not reported.

A health maintenance organization (HMO) provides a wide range of health care services to a specified group for fixed periodic payments. An HMO directly provides comprehensive health care services rather than indemnification or reimbursement for medical, surgical, and hospital expenses.

Retirement pension plans provide for regular payments to the retiree for life. Included are deferred profit-sharing plans which provide the option of purchasing a lifetime annuity.

Health plan participation (table B-7). Estimates are presented on the percents of production and office workers participating in selected health insurance and health maintenance organization plans.

¹ Includes 70 areas surveyed under the Bureau's regular program plus Poughkeepsie-Kingston-Newburgh, N.Y., which is surveyed under contract. In addition, the Bureau conducts more limited area studies in approximately 100 areas at the request of the Employment Standards Administration of the U.S. Department of Labor.

² A revised 4-level job description for accounting clerks, being introduced in this survey, is not comparable to the previous 2-level description. Earnings of workers that could be compared to the previous overall level were used in wage trend computations.

³ The earnings of computer operators are included in the wage trend computation for this group in the following areas only: Albany-Schenectady-Troy, N.Y.; Fresno, Calif.; Hartford, Conn.; Newark, N.J.; Paterson-Clifton-Passaic, N.J.; Poughkeepsie, N.Y.; Poughkeepsie-Kingston-Newburgh, N.Y., and Worcester, Mass. In other areas, a revised job description, which is not equivalent to the previous description, is being introduced.

⁴ Temporary disability insurance which provides benefits to covered workers disabled by injury or illness which is not work-connected is mandatory under State laws in California, New Jersey, New York, and Rhode Island. Establishment plans which meet only the legal requirements are excluded from these data, but those under which (1) employers contribute more than is legally required or (2) benefits exceed those specified in the State law are included. In Rhode Island, benefits are paid out of a State fund to which only employees contribute. In each of the other three States, benefits are paid either from a State fund or through a private plan.

State fund financing: In California, only employees contribute to the State fund; in New Jersey, employees and employers contribute; in New York, employees contribute up to a specified maximum and employers pay the difference between the employees' share and the total contribution required.

Private plan financing: In California and New Jersey, employees cannot be required to contribute more than they would if they were covered by the State fund; in New York, employees can agree to contribute more if the State rules that the additional contribution is commensurate with the benefit provided.

Federal legislation (Railroad Unemployment Insurance Act) provides temporary disability insurance benefits to railroad workers for illness or injury, whether work-connected or not. The legislation requires that employers bear the entire cost of the insurance.

⁵ An establishment is considered as having a formal plan if it specifies at least the minimum number of days of sick leave available to each employee. Such a plan need not be written, but informal sick leave allowances determined on an individual basis are excluded.

Appendix table 1. Establishments and workers within scope of survey and number studied in San Antonio, Tex.,¹ May 1980

Industry division ²	Minimum employment in establishments in scope of study	Number of establishments		Workers in establishments				
		Within scope of study ³	Studied	Within scope of study				Studied ⁴
				Total ⁴		Full-time production and related workers	Full-time office workers	
				Number	Percent			
All divisions	-	721	173	134,617	100	79,046	21,081	70,232
Manufacturing.....	50	186	60	42,344	31	32,437	3,716	23,779
Nonmanufacturing.....	-	535	113	92,273	69	46,609	17,365	46,453
Transportation, communication, and other public utilities ⁵	50	55	23	11,906	9	6,869	1,920	9,085
Wholesale trade.....	50	75	12	7,169	5	(*)	(*)	1,504
Retail trade.....	50	201	33	39,258	29	(*)	(*)	21,011
Finance, insurance, and real estate.....	50	93	17	16,689	12	(*)	(*)	8,623
Services ⁷	50	111	28	17,251	13	(*)	(*)	6,230

¹The San Antonio Standard Metropolitan Statistical Area, as defined by the Office of Management and Budget through February 1974, consists of Bexar, Comal, and Guadalupe Counties. The 'workers within scope of study' estimates provide a reasonably accurate description of the size and composition of the labor force included in the survey. Estimates are not intended, however, for comparison with other statistical series to measure employment trends or levels since (1) planning of wage surveys requires establishment data compiled considerably in advance of the payroll period studied, and (2) small establishments are excluded from the scope of the survey.

²The 1972 edition of the *Standard Industrial Classification Manual* was used to classify establishments by industry division. All government operations are excluded from the scope of the survey.

³Includes all establishments with total employment at or above the minimum limitation. All outlets (within the area) of nonmanufacturing companies are considered as one establishment when located within the same industry division.

⁴Includes executive, professional, part-time, seasonal, and other workers excluded from the separate production and office categories.

⁵Abbreviated to 'public utilities' in the A- and B-series tables. Taxicabs and services incidental to water transportation are excluded. San Antonio's electric, gas, and transit systems are municipally operated and are excluded by definition from the scope of the survey.

⁶Separate data for this division are not presented in the A- and B-series tables, but the division is represented in the 'all industries' and 'nonmanufacturing' estimates.

⁷Hotels and motels; laundries and other personal services; business services; automobile repair, rental, and parking; motion pictures; nonprofit membership organizations (excluding religious and charitable organizations); and engineering and architectural services.

Appendix table 2. Labor-management agreement coverage, San Antonio, Tex., May 1980

Percent of workers	Production and related workers	Office workers
All industries	21	7
Manufacturing.....	33	3
Nonmanufacturing.....	12	7
Public utilities.....	72	65

Note: An establishment is considered to have a contract covering all production or office workers if a majority of such workers is covered by a labor-management agreement. Therefore, all other production or office workers are employed in establishments that either do not have labor-management contracts in effect, or have contracts that apply to fewer than half of their production or office workers. Estimates are not necessarily representative of the extent to which all workers in the area may be covered by the provisions of labor-management agreements, because small establishments are excluded and the industrial scope of the survey is limited.

Appendix table 3. Industrial composition in manufacturing, San Antonio, Tex., May 1980

Percent of all manufacturing workers	
Food and kindred products	21
Meat products.....	7
Apparel and other textile products.....	16
Men's and boys' furnishings.....	5
Machinery, except electrical.....	16
Office and computing machines.....	8
Stone, clay, and glass products.....	8
Fabricated metal products.....	8
Printing and publishing.....	6
Electric and electronic equipment.....	5

Note: This information is based on estimates of total employment derived from universe materials compiled before actual survey. Proportions in various industry divisions may differ from proportions based on the results of the survey as shown in appendix table 1.

Appendix B. Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field representatives in classifying into appropriate occupations workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits grouping occupational wage rates representing comparable job content. Because of this emphasis on interestablishment and interarea comparability of occupational content, the Bureau's job descriptions may differ significantly from those in use in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field representatives are instructed to exclude working supervisors; apprentices; and part-time, temporary, and probationary workers. Handicapped workers whose earnings are reduced because of their handicap are also excluded. Learners, beginners, and trainees, unless specifically included in the job description, are excluded.

Listed below are several occupations for which revised descriptions or titles are being introduced in this survey:

Accounting clerk
Key entry operator
Computer operator

Drafter
Stationary engineer
Boiler tender

The Bureau has discontinued collecting data for tabulating-machine operator, bookkeeping-machine operator, and machine biller.

Office

SECRETARY

Assigned as a personal secretary, normally to one individual. Maintains a close and highly responsive relationship to the day-to-day activities of the supervisor. Works fairly independently receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties requiring a knowledge of office routine and understanding of the organization, programs, and procedures related to the work of the supervisor.

Exclusions. Not all positions that are titled 'secretary' possess the above characteristics. Examples of positions which are excluded from the definition are as follows:

- a. Positions which do not meet the 'personal' secretary concept described above;
- b. Stenographers not fully trained in secretarial-type duties;
- c. Stenographers serving as office assistants to a group of professional, technical, or managerial persons;
- d. Assistant-type positions which entail more difficult or more responsible technical, administrative, or supervisory duties which are not typical of secretarial work, e.g., Administrative Assistant, or Executive Assistant;
- e. Positions which do not fit any of the situations listed in the sections below titled 'Level of Supervisor,' e.g., secretary to the president of a company that employs, in all, over 5,000 persons;
- f. Trainees.

Classification by Level. Secretary jobs which meet the required characteristics are matched at one of five levels according to (a) the level of the secretary's supervisor within the company's organizational structure and, (b) the level of the secretary's responsibility. The tabulation following the explanations of these two factors indicates the level of the secretary for each combination of the factors.

Level of Secretary's Supervisor (LS)

LS-1

- a. Secretary to the supervisor or head of a small organizational unit (e.g., fewer than about 25 or 30 persons); or
- b. Secretary to a nonsupervisory staff specialist, professional employee, administrative officer or assistant, skilled technician or expert. (NOTE: Many companies assign stenographers, rather than secretaries as described above, to this level of supervisory or nonsupervisory worker.)

LS-2

- a. Secretary to an executive or managerial person whose responsibility is not equivalent to one of the specific level situations in the definition for LS-3, but whose organizational unit normally numbers at least several dozen employees and is usually divided into organizational segments which are often, in turn, further subdivided. In some companies, this level includes a wide range of organizational echelons; in others, only one or two; or
- b. Secretary to the head of an individual plant, factory, etc., (or other equivalent level of official) that employs, in all, fewer than 5,000 persons.

LS-3

- a. Secretary to the chairman of the board or president of a company that employs, in all, fewer than 100 persons; or
- b. Secretary to a corporate officer (other than chairman of the board or president) of a company that employs, in all, over 100 but fewer than 5,000 persons; or
- c. Secretary to the head (immediately below the officer level) over either a major corporatewide functional activity (e.g., marketing, research, operations, industrial relations, etc.) or a major geographic or organizational segment (e.g., a regional headquarters; a major division) of a company that employs, in all, over 5,000 but fewer than 25,000 employees; or
- d. Secretary to the head of an individual plant, factory, etc., (or other equivalent level of official) that employs, in all, over 5,000 persons; or
- e. Secretary to the head of a large and important organizational segment (e.g., a middle management supervisor of an organizational segment often involving as many as several hundred persons) of a company that employs, in all, over 25,000 persons.

LS-4

- a. Secretary to the chairman of the board or president of a company that employs, in all, over 100 but fewer than 5,000 persons; or
- b. Secretary to a corporate officer (other than the chairman of the board or president) of a company that employs, in all, over 5,000 but fewer than 25,000 persons; or
- c. Secretary to the head, immediately below the corporate officer level, of a major segment or subsidiary of a company that employs, in all, over 25,000 persons.

NOTE: The term 'corporate officer' used in the above LS definition refers to those officials who have a significant corporatewide policymaking role with regard to major company activities. The title 'vice president,' though normally indicative of this role, does not in all cases identify such positions. Vice presidents whose primary responsibility is to act personally on individual cases or transactions (e.g., approve or deny individual loan or credit actions; administer individual trust accounts; directly supervise a clerical staff) are not considered to be 'corporate officers' for purposes of applying the definition.

Level of Secretary's Responsibility (LR)

This factor evaluates the nature of the work relationship between the secretary and the supervisor, and the extent to which the secretary is expected to exercise initiative and judgment. Secretaries should be matched at LR-1 or LR-2 described below according to their level of responsibility.

LR-1

Performs varied secretarial duties including or comparable to most of the following:

- a. Answers telephones, greets personal callers, and opens incoming mail.
- b. Answers telephone requests which have standard answers. May reply to requests by sending a form letter.
- c. Reviews correspondence, memoranda, and reports prepared by others for the supervisor's signature to ensure procedural and typographical accuracy.
- d. Maintains supervisor's calendar and makes appointments as instructed.
- e. Types, takes and transcribes dictation, and files.

LR-2

Performs duties described under LR-1 and, *in addition* performs tasks requiring greater judgment, initiative, and knowledge of office functions including or comparable to most of the following:

- a. Screens telephone and personal callers, determining which can be handled by the supervisor's subordinates or other offices.
- b. Answers requests which require a detailed knowledge of office procedures or collection of information from files or other offices. *May* sign routine correspondence in own or supervisor's name.
- c. Compiles or assists in compiling periodic reports on the basis of general instructions.
- d. Schedules tentative appointments without prior clearance. Assembles necessary background material for scheduled meetings. Makes arrangements for meetings and conferences.
- e. Explains supervisor's requirements to other employees in supervisor's unit. (Also types, takes dictation, and files.)

The following tabulation shows the level of the secretary for each LS and LR combination:

	LR-1	LR-2
LS-1.....	Class E	Class D
LS-2.....	Class D	Class C
LS-3.....	Class C	Class B
LS-4.....	Class B	Class A

STENOGRAPHER

Primary duty is to take dictation using shorthand, and to transcribe the dictation. May also type from written copy. May operate from a stenographic pool. May occasionally transcribe from voice recordings (if primary duty is transcribing from recordings, see Transcribing-Machine Typist).

NOTE: This job is distinguished from that of a secretary in that a secretary normally works in a confidential relationship with only one manager or executive and performs more responsible and discretionary tasks as described in the secretary job definition.

Stenographer, Senior. Dictation involves a varied technical or specialized vocabulary such as in legal briefs or reports on scientific research. May also set up and maintain files, keep records, etc., *OR*

Performs stenographic duties requiring significantly greater independence and responsibility than stenographer, general, as evidenced by the following: Work requires a high degree of stenographic speed and accuracy; a thorough working knowledge of general business and office procedures and of the specific business operations, organization, policies, procedures, files, workflow, etc. Uses this knowledge in performing stenographic duties and responsible clerical tasks such as maintaining follow-up files; assembling material for reports, memoranda, and letters; composing simple letters from general instructions; reading and routing incoming mail; and answering routine questions, etc.

Stenographer, General. Dictation involves a normal routine vocabulary. May maintain files, keep simple records, or perform other relatively routine clerical tasks.

TRANSCRIBING-MACHINE TYPIST

Primary duty is to type copy of voice recorded dictation which does *not* involve varied technical or specialized vocabulary such as that used in legal briefs or reports on scientific research. May also type from written copy. May maintain files, keep simple records, or perform other relatively routine clerical tasks. (See Stenographer definition for workers involved with shorthand dictation.)

TYPIST

Uses a typewriter to make copies of various materials or to make out bills after calculations have been made by another person. May include typing of stencils, mats, or similar materials for use in duplicating processes. May do clerical work involving little special training, such as keeping simple records, filing records and reports, or sorting and distributing incoming mail.

Class A. Performs *one or more of the following*: Typing material in final form when it involves combining material from several sources; or responsibility for correct spelling, syllabication, punctuation, etc., of technical or unusual words or foreign language material; or planning layout and typing of complicated statistical tables to maintain uniformity and balance in spacing. May type routine form letters, varying details to suit circumstances.

Class B. Performs *one or more of the following*: Copy typing from rough or clear drafts; or routine typing of forms, insurance policies, etc.; or setting up simple standard tabulations; or copying more complex tables already set up and spaced properly.

FILE CLERK

Files, classifies, and retrieves material in an established filing system. May perform clerical and manual tasks required to maintain files. Positions are classified into levels on the basis of the following definitions.

Class A. Classifies and indexes file material such as correspondence, reports, technical documents, etc., in an established filing system containing a number of varied subject matter files. May also file this material. May keep records of various types in conjunction with the files. May lead a small group of lower level file clerks.

Class B. Sorts, codes, and files unclassified material by simple (subject matter) headings or partly classified material by finer subheadings. Prepares simple related index and cross-reference aids. As requested, locates clearly identified material in files and forwards material. May perform related clerical tasks required to maintain and service files.

Class C. Performs routine filing of material that has already been classified or which is easily classified in a simple serial classification system (e.g., alphabetical, chronological, or numerical). As requested, locates readily available material in files and forwards material; and may fill out withdrawal charge. May perform simple clerical and manual tasks required to maintain and service files.

MESSENGER

Performs various routine duties such as running errands, operating minor office machines such as sealers or mailers, opening and distributing mail, and other minor clerical work. Exclude positions that require operation of a motor vehicle as a significant duty.

SWITCHBOARD OPERATOR

Operates a telephone switchboard or console used with a private branch exchange (PBX) system to relay incoming, outgoing, and intrasystem calls. May provide information to callers, record and transmit messages, keep record of calls placed and toll charges. Besides operating a telephone switchboard or console, *may* also type or perform routine clerical work (typing or routine clerical work may occupy the major portion of the worker's time, and is usually performed while at the switchboard or console). Chief or lead operators in establishments employing more than one operator are excluded. For an operator who also acts as a receptionist, see Switchboard Operator-Receptionist.

SWITCHBOARD OPERATOR-RECEPTIONIST

At a single-position telephone switchboard or console, acts both as an operator—see Switchboard Operator—and as a receptionist. Receptionist's work involves such duties as greeting visitors; determining nature of visitor's business and providing appropriate information; referring visitor to appropriate person in the organization or contacting that person by telephone and arranging an appointment; keeping a log of visitors.

ORDER CLERK

Receives written or verbal customers' purchase orders for material or merchandise from customers or sales people. Work typically involves some combination of the following duties: Quoting prices; determining availability of ordered items and

suggesting substitutes when necessary; advising expected delivery date and method of delivery; recording order and customer information on order sheets; checking order sheets for accuracy and adequacy of information recorded; ascertaining credit rating of customer; furnishing customer with acknowledgement of receipt of order; following up to see that order is delivered by the specified date or to let customer know of a delay in delivery; maintaining order file; checking shipping invoice against original order. *Exclude workers paid on a commission basis or whose duties include any of the following:* Receiving orders for services rather than for material or merchandise; providing customers with consultative advice using knowledge gained from engineering or extensive technical training; emphasizing selling skills; handling material or merchandise as an integral part of the job.

Positions are classified into levels according to the following definitions:

Class A. Handles orders that involve making judgments such as choosing which specific product or material from the establishment's product lines will satisfy the customer's needs, or determining the price to be quoted when pricing involves more than merely referring to a price list or making some simple mathematical calculations.

Class B. Handles orders involving items which have readily identified uses and applications. May refer to a catalog, manufacturer's manual, or similar document to insure that proper item is supplied or to verify price of ordered item.

ACCOUNTING CLERK

Performs one or more accounting clerical tasks such as posting to registers and ledgers; reconciling bank accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and verifying the clerical accuracy of various types of reports, lists, calculations, postings, etc.; preparing journal vouchers; or making entries or adjustments to accounts.

Levels C and D require a basic knowledge of routine clerical methods and office practices and procedures as they relate to the clerical processing and recording of transactions and accounting information. Levels A and B *require* a knowledge and understanding of the established and standardized bookkeeping and accounting procedures and techniques used in an accounting system, or a segment of an accounting system, where there are few variations in the types of transactions handled. In addition, some jobs at each level may require a basic knowledge and understanding of the terminology, codes, and processes used in an automated accounting system.

Class A. Maintains journals or subsidiary ledgers of an accounting system and balances and reconciles accounts. Typical duties include one or both of the following: Reviews invoices and statements (verifying information, ensuring sufficient funds have been obligated, and if questionable, resolving with the submitting unit, determining accounts involved, coding transactions, and processing material through data processing for application in the accounting system); *and/or* analyzes and reconciles computer printouts with operating unit reports (contacting units and researching causes of discrepancies, and taking action to ensure that accounts balance). Employee resolves problems in recurring assignments in accordance with previous training and experience. Supervisor provides suggestions for handling unusual or on-recurring transactions. Conformance with requirements and technical soundness of completed work are

reviewed by the supervisor or are controlled by mechanisms built into the accounting system. NOTE: Excluded from class A are positions responsible for maintaining either a general ledger or a general ledger in combination with subsidiary accounts.

Class B. Uses a knowledge of double entry bookkeeping in performing one or more of the following: Posts actions to journals, identifying subsidiary accounts affected and debit and credit entries to be made and assigning proper codes; reviews computer printouts against manually maintained journals, detecting and correcting erroneous postings, and preparing documents to adjust accounting classifications and other data; or reviews lists of transactions rejected by an automated system, determining reasons for rejections, and preparing necessary correcting material. On routine assignments, employee selects and applies established procedures and techniques. Detailed instructions are provided for difficult or unusual assignments. Completed work and methods used are reviewed for technical accuracy.

Class C. Performs one or more routine accounting clerical operations such as: Examining, verifying, and correcting accounting transactions to ensure completeness and accuracy of data and proper identification of accounts, and checking that expenditures will not exceed obligations in specified accounts; totaling; balancing, and reconciling collection vouchers; posting data to transaction sheets where employee identifies proper accounts and items to be posted; and coding documents in accordance with a chart (listing) of accounts. Employee follows specific and detailed accounting procedures. Completed work is reviewed for accuracy and compliance with procedures.

Class D. Performs very simple and routine accounting clerical operations, for example, recognizing and comparing easily identified numbers and codes on similar and repetitive accounting documents, verifying mathematical accuracy, and identifying discrepancies and bringing them to the supervisor's attention. Supervisor gives clear and detailed instructions for specific assignments. Employee refers to supervisor all matters not covered by instructions. Work is closely controlled and reviewed in detail for accuracy, adequacy, and adherence to instructions.

PAYROLL CLERK

Performs the clerical tasks necessary to process payrolls and to maintain payroll records. Work involves *most of the following:* Processing workers' time or production records; adjusting workers' records for changes in wage rates, supplementary benefits, or tax deductions; editing payroll listings against source records; tracing and correcting errors in listings; and assisting in preparation of periodic summary payroll reports. In a nonautomated payroll system, computes wages. Work may require a practical knowledge of governmental regulations, company payroll policy, or the computer system for processing payrolls.

KEY ENTRY OPERATOR

Operates keyboard-controlled data entry device such as keypunch machine or key-operated magnetic tape or disk encoder to transcribe data into a form suitable for computer processing. Work requires skill in operating an alphanumeric keyboard and an understanding of transcribing procedures and relevant data entry equipment.

Positions are classified into levels on the basis of the following definitions:

Class A. Work requires the application of experience and judgment in selecting procedures to be followed and in searching for, interpreting, selecting, or coding items to be entered from a variety of source documents. On occasion may also perform routine work as described for class B.

NOTE: Excluded are operators above class A using the key entry controls to access, read, and evaluate the substance of specific records to take substantive actions, or to make entries requiring a similar level of knowledge.

Class B. Work is routine and repetitive. Under close supervision or following specific procedures or detailed instructions, works from various standardized source documents which have been coded and require little or no selecting, coding, or interpreting of data to be entered. Refers to supervisor problems arising from erroneous items, codes, or missing information.

Professional and Technical

COMPUTER SYSTEMS ANALYST, BUSINESS

Analyzes business problems to formulate procedures for solving them by use of electronic data processing equipment. Develops a complete description of all specifications needed to enable programmers to prepare required digital computer programs. Work involves *most of the following*: Analyzes subject-matter operations to be automated and identifies conditions and criteria required to achieve satisfactory results; specifies number and types of records, files, and documents to be used; outlines actions to be performed by personnel and computers in sufficient detail for presentation to management and for programming (typically this involves preparation of work and data flow charts); coordinates the development of test problems and participates in trial runs of new and revised systems; and recommends equipment changes to obtain more effective overall operations. (NOTE: Workers performing both systems analysis and programming should be classified as systems analysts if this is the skill used to determine their pay.)

Does not include employees primarily responsible for the management or supervision of other electronic data processing employees, or systems analysts primarily concerned with scientific or engineering problems.

For wage study purposes, systems analysts are classified as follows:

Class A. Works independently or under only general direction on complex problems involving all phases of systems analysis. Problems are complex because of diverse sources of input data and multiple-use requirements of output data. (For example, develops an integrated production scheduling, inventory control, cost analysis, and sales analysis record in which every item of each type is automatically processed through the full system of records and appropriate follow-up actions are initiated by the computer.) Confers with persons concerned to determine the data processing problems and advises subject-matter personnel on the implications of new or revised systems of data processing operations. Makes recommendations, if needed, for approval of major systems installations or changes and for obtaining equipment.

May provide functional direction to lower level systems analysts who are assigned to assist.

Class B. Works independently or under only general direction on problems that are relatively uncomplicated to analyze, plan, program, and operate. Problems are of limited complexity because sources of input data are homogeneous and the output data are closely related. (For example, develops systems for maintaining depositor accounts in a bank, maintaining accounts receivable in a retail establishment, or maintaining inventory accounts in a manufacturing or wholesale establishment.) Confers with persons concerned to determine the data processing problems and advises subject-matter personnel on the implications of the data processing systems to be applied. *OR*

Works on a segment of a complex data processing scheme or system, as described for class A. Works independently on routine assignments and receives instruction and guidance on complex assignments. Work is reviewed for accuracy of judgment, compliance with instructions, and to insure proper alignment with the overall system.

Class C. Works under immediate supervision, carrying out analyses as assigned, usually of a single activity. Assignments are designed to develop and expand practical experience in the application of procedures and skills required for systems analysis work. For example, may assist a higher level systems analyst by preparing the detailed specifications required by programmers from information developed by the higher level analyst.

COMPUTER PROGRAMMER, BUSINESS

Converts statements of business problems, typically prepared by a systems analyst, into a sequence of detailed instructions which are required to solve the problems by automatic data processing equipment. Working from charts or diagrams, the programmer develops the precise instructions which, when entered into the computer system in coded language, cause the manipulation of data to achieve desired results. Work involves *most of the following*: Applies knowledge of computer capabilities, mathematics, logic employed by computers, and particular subject matter involved to analyze charts and diagrams of the problem to be programmed; develops sequence of program steps; writes detailed flow charts to show order in which data will be processed; converts these charts to coded instructions for machine to follow; tests and corrects programs; prepares instructions for operating personnel during production run; analyzes, reviews, and alters programs to increase operating efficiency or adapt to new requirements; maintains records of program development and revisions. (NOTE: Workers performing both systems analysis and programming should be classified as systems analysts if this is the skill used to determine their pay.)

Does not include employees primarily responsible for the management or supervision of other electronic data processing employees, or programmers primarily concerned with scientific and/or engineering problems.

For wage study purposes, programmers are classified as follows:

Class A. Works independently or under only general direction on complex problems which require competence in all phases of programming concepts and practices. Working from diagrams and charts which identify the nature of desired results, major processing steps to be accomplished, and the relationships between various steps of the problem solving routine; plans the full range of programming actions needed to efficiently utilize the computer system in achieving desired end products.

At this level, programming is difficult because computer equipment must be organized to produce several interrelated but diverse products from numerous and

diverse data elements. A wide variety and extensive number of internal processing actions must occur. This requires such actions as development of common operations which can be reused, establishment of linkage points between operations, adjustments to data when program requirements exceed computer storage capacity, and substantial manipulation and resequencing of data elements to form a highly integrated program.

May provide functional direction to lower level programmers who are assigned to assist.

Class B. Works independently or under only general direction on relatively simple programs, or on simple segments of complex programs. Programs (or segments) usually process information to produce data in two or three varied sequences or formats. Reports and listings are produced by refining, adapting, arraying, or making minor additions to or deletions from input data which are readily available. While numerous records may be processed, the data have been refined in prior actions so that the accuracy and sequencing of data can be tested by using a few routine checks. Typically, the program deals with routine recordkeeping operations. *OR*

Works on complex programs (as described for class A) under close direction of a higher level programmer or supervisor. May assist higher level programmer by independently performing less difficult tasks assigned, and performing more difficult tasks under fairly close direction.

May guide or instruct lower level programmers.

Class C. Makes practical applications of programming practices and concepts usually learned in formal training courses. Assignments are designed to develop competence in the application of standard procedures to routine problems. Receives close supervision on new aspects of assignments; and work is reviewed to verify its accuracy and conformance with required procedures.

COMPUTER OPERATOR

In accordance with operating instructions, monitors and operates the control console of a digital computer to process data. Executes runs by either serial processing (processes one program at a time) or multiprocessing (processes two or more programs simultaneously). The following duties characterize the work of a computer operator:

- Studies operating instructions to determine equipment setup needed.
- Loads equipment with required items (tapes, cards, disks, paper, etc.).
- Switches necessary auxiliary equipment into system.
- Starts and operates computer.
- Responds to operating and computer output instructions.
- Reviews error messages and makes corrections during operation *or* refers problems.
- Maintains operating record.

May test-run new or modified programs. May assist in modifying systems or programs. The scope of this definition includes trainees working to become fully qualified computer operators, fully qualified computer operator, and lead operators providing technical assistance to lower level operators. It excludes workers who monitor and operate remote terminals.

Class A. In addition to work assignments described for a class B operator (see below) the work of a class A operator involves at least one of the following:

- Deviates from standard procedures to avoid the loss of information or to conserve computer time even though the procedures applied materially alter the computer unit's production plans.
- Tests new programs, applications, and procedures.
- Advises programmers and subject-matter experts on setup techniques.
- Assists in (1) maintaining, modifying, and developing operating systems or programs; (2) developing operating instructions and techniques to cover problem situations; and/or (3) switching to emergency backup procedures (such assistance requires a working knowledge of program language, computer features, and software systems).

An operator at this level typically guides lower level operators.

Class B. In addition to established production runs, work assignments include runs involving new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems). At this level, the operator has the training and experience to work fairly independently in carrying out most assignments. Assignments may require the operator to select from a variety of standard setup and operating procedures. In responding to computer output instructions or error conditions, applies standard operating or corrective procedures, but may deviate from standard procedures when standard procedures fail if deviation does not materially alter the computer unit's production plans. Refers the problem or aborts the program when procedures applied do not provide a solution. May guide lower level operators.

Class C. Work assignments are limited to established production runs (i.e., programs which present few operating problems). Assignments may consist primarily of on-the-job training (sometimes augmented by classroom instruction). When learning to run programs, the supervisor or a higher level operator provides detailed written or oral guidance to the operator before and during the run. After the operator has gained experience with a program, however, the operator works fairly independently in applying standard operating or corrective procedures in responding to computer output instructions or error conditions, but refers problems to a higher level operator or the supervisor when standard procedures fail.

PERIPHERAL EQUIPMENT OPERATOR

Operates peripheral equipment which directly supports digital computer operations. Such equipment is uniquely and specifically designed for computer applications, but need not be physically or electronically connected to a computer. Printers, plotters, card read/punches, tape readers, tape units or drives, disk units or drives, and data display units are examples of such equipment.

The following duties characterize the work of a peripheral equipment operator:

- Loading printers and plotters with correct paper; adjusting controls for forms, thickness, tension, printing density, and location; and unloading hard copy.
- Labelling tape reels, disks, or card decks.

- Checking labels and mounting and dismounting designated tape reels or disks on specified units or drives.
- Setting controls which regulate operation of the equipment.
- Observing panel lights for warnings and error indications and taking appropriate action.
- Examining tapes, cards, or other material for creases, tears, or other defects which could cause processing problems.

This classification excludes workers (1) who monitor and operate a control console (see computer operator) or a remote terminal, or (2) whose duties are limited to operating decollaters, bursters, separators, or similar equipment.

COMPUTER DATA LIBRARIAN

Maintains library of mediä (tapes, disks, cards, cassettes) used for automatic data processing applications. The following or similar duties characterize the work of a computer data librarian: Classifying, cataloging, and storing media in accordance with a standardized system; upon proper requests, releasing media for processing; maintaining records of releases and returns; inspecting returned media for damage or excessive wear to determine whether or not they need replacing. May perform minor repairs to damaged tapes.

DRAFTER

Performs drafting work requiring knowledge and skill in drafting methods, procedures, and techniques. Prepares drawings of structures, mechanical and electrical equipment, piping and duct systems and other similar equipment, systems, and assemblies. Uses recognized systems of symbols, legends, shadings, and lines having specific meanings in drawings. Drawings are used to communicate engineering ideas, designs, and information in support of engineering functions.

The following are excluded when they constitute the primary purpose of the job:

- Design work requiring the technical knowledge, skill, and ability to conceive or originate designs;
- Illustrating work requiring artistic ability;
- Work involving the preparation of charts, diagrams, room arrangements, floor plans, etc.;
- Cartographic work involving the preparation of maps or plats and related materials, and drawings of geological structures; and
- Supervisory work involving the management of a drafting program or the supervision of drafters.

Positions are classified into levels on the basis of the following definitions.

Class A. Works closely with design originators, preparing drawings of unusual, complex or original designs which require a high degree of precision. Performs unusually difficult assignments requiring considerable initiative, resourcefulness, and drafting expertise. Assures that anticipated problems in manufacture, assembly, installation, and operation are resolved by the drawings produced. Exercises independent judgment in

selecting and interpreting data based on a knowledge of the design intent. Although working primarily as a drafter, may occasionally perform engineering design work in interpreting general designs prepared by others or in completing missing design details. May provide advice and guidance to lower level drafters or serve as coordinator and planner for large and complex drafting projects.

Class B. Prepares complete sets of complex drawings which include multiple views, detail drawings, and assembly drawings. Drawings include complex design features that require considerable drafting skill to visualize and portray. Assignments regularly require the use of mathematical formulas to compute weights, load capacities, dimensions, quantities of materials, etc. Working from sketches and verbal information supplied by an engineer or designer, determines the most appropriate views, detail drawings, and supplementary information needed to complete assignments. Selects required information from precedents, manufacturers' catalogs, and technical guides. Independently resolves most of the problems encountered. Supervisor or designer may suggest methods of approach or provide advice on unusually difficult problems.

NOTE: Exclude drafters performing work of similar difficulty to that described at this level but who provide support for a variety of organizations which have widely differing functions or requirements.

Class C. Prepares various drawings of parts and assemblies, including sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Work requires use of most of the conventional drafting techniques and a working knowledge of the terms and procedures of the industry. Familiar or recurring work is assigned in general terms; unfamiliar assignments include information on methods, procedures, sources of information, and precedents to be followed. Simple revisions to existing drawings may be assigned with a verbal explanation of the desired results; more complex revisions are produced from sketches which clearly depict the desired product.

Class D. Prepares drawings of simple, easily visualized parts of equipment from sketches or marked-up prints. Selects appropriate templates and other equipment needed to complete assignments. Drawings fit familiar patterns and present few technical problems. Supervisor provides detailed instructions on new assignments, gives guidance when questions arise, and reviews completed work for accuracy.

Class E. Working under close supervision, traces or copies finished drawings, making clearly indicated revisions. Uses appropriate templates to draw curved lines. Assignments are designed to develop increasing skill in various drafting techniques. Work is spot-checked during progress and reviewed upon completion.

NOTE: Exclude drafters performing elementary tasks while receiving training in the most basic drafting methods.

ELECTRONICS TECHNICIAN

Works on various types of electronic equipment and related devices by performing one or a combination of the following: Installing, maintaining, repairing, overhauling, troubleshooting, modifying, constructing, and testing. Work requires practical application of technical knowledge of electronics principles, ability to determine malfunctions, and skill to put equipment in required operating condition.

The equipment—consisting of either many different kinds of circuits or multiple repetition of the same kind of circuit—includes, but is not limited to, the following: (a) Electronic transmitting and receiving equipment (e.g., radar, radio, television, telephone, sonar, navigational aids), (b) digital and analog computers, and (c) industrial and medical measuring and controlling equipment.

This classification excludes repairers of such standard electronic equipment as common office machines and household radio and television sets; production assemblers and testers; workers whose primary duty is servicing electronic test instruments; technicians who have administrative or supervisory responsibility; and drafters, designers, and professional engineers.

Positions are classified into levels on the basis of the following definitions:

Class A. Applies advanced technical knowledge to solve unusually complex problems (i.e., those that typically *cannot* be solved solely by reference to manufacturers' manuals or similar documents) in working on electronic equipment. Examples of such problems include location and density of circuitry, electromagnetic radiation, isolating malfunctions, and frequent engineering changes. Work involves: A detailed understanding of the interrelationships of circuits; exercising independent judgment in performing such tasks as making circuit analyses, calculating wave forms, tracing relationships in signal flow; and regularly using complex test instruments (e.g., dual trace oscilloscopes, Q-meters, deviation meters, pulse generators).

Work may be reviewed by supervisor (frequently an engineer or designer) for general compliance with accepted practices. May provide technical guidance to lower level technicians.

Class B. Applies comprehensive technical knowledge to solve complex problems (i.e., those that typically *can* be solved solely by properly interpreting manufacturers' manuals or similar documents) in working on electronic equipment. Work involves: A familiarity with the interrelationships of circuits; and judgment in determining work sequence and in selecting tools and testing instruments, usually less complex than those used by the class A technician.

Receives technical guidance, as required, from supervisor or higher level technician, and work is reviewed for specific compliance with accepted practices and work assignments. May provide technical guidance to lower level technicians.

Class C. Applies working technical knowledge to perform simple or routine tasks in working on electronic equipment, following detailed instructions which cover virtually all procedures. Work typically involves such tasks as: Assisting higher level technicians by performing such activities as replacing components, wiring circuits, and taking test readings; repairing simple electronic equipment; and using tools and common test instruments (e.g., multimeters, audio signal generators, tube testers, oscilloscopes). Is not required to be familiar with the interrelationships of circuits. This knowledge, however, may be acquired through assignments designed to increase competence (including classroom training) so that worker can advance to higher level technician.

Receives technical guidance, as required, from supervisor or higher level technician. Work is typically spot-checked, but is given detailed review when new or advanced assignments are involved.

REGISTERED INDUSTRIAL NURSE

A registered nurse gives nursing service under general medical direction to ill or injured employees or other persons who become ill or suffer an accident on the premises of a factory or other establishment. Duties involve *a combination of the following*: Giving first aid to the ill or injured; attending to subsequent dressing of employees' injuries; keeping records of patients treated; preparing accident reports for compensation or other purposes; assisting in physical examinations and health evaluations of applicants and employees; and planning and carrying out programs involving health education, accident prevention, evaluation of plant environment, or other activities affecting the health, welfare, and safety of all personnel. Nursing supervisors or head nurses in establishments employing more than one nurse are excluded.

Maintenance, Toolroom, and Powerplant

MAINTENANCE CARPENTER

Performs the carpentry duties necessary to construct and maintain in good repair building woodwork and equipment such as bins, cribs, counters, benches, partitions, doors, floors, stairs, casings, and trim made of wood in an establishment. Work involves *most of the following*: Planning and laying out of work from blueprints, drawings, models, or verbal instructions; using a variety of carpenter's handtools, portable power tools, and standard measuring instruments; making standard shop computations relating to dimensions of work; and selecting materials necessary for the work. In general, the work of the maintenance carpenter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE ELECTRICIAN

Performs a variety of electrical trade functions such as the installation, maintenance, or repair of equipment for the generation, distribution, or utilization of electric energy in an establishment. Work involves *most of the following*: Installing or repairing any of a variety of electrical equipment such as generators, transformers, switchboards, controllers, circuit breakers, motors, heating units, conduit systems, or other transmission equipment; working from blueprints, drawings, layouts, or other specifications; locating and diagnosing trouble in the electrical system or equipment; working standard computations relating to load requirements of wiring or electrical equipment; and using a variety of electrician's handtools and measuring and testing instruments. In general, the work of the maintenance electrician requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE PAINTER

Paints and redecorates walls, woodwork, and fixtures of an establishment. Work *involves the following*: Knowledge of surface peculiarities and types of paint required for different applications; preparing surface for painting by removing old finish or by placing putty or filler in nail holes and interstices; and applying paint with spray gun or brush. May mix colors, oils, white lead, and other paint ingredients to obtain proper color or consistency. In general, the work of the maintenance painter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE MACHINIST

Produces replacement parts and new parts in making repairs of metal parts of mechanical equipment operated in an establishment. Work involves *most of the following*: Interpreting written instructions and specifications; planning and laying out of work; using a variety of machinist's handtools and precision measuring instruments; setting up and operating standard machine tools; shaping of metal parts to close tolerances; making standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining; knowledge of the working properties of the common metals; selecting standard materials, parts, and equipment required for this work; and fitting and assembling parts into mechanical equipment. In general, the machinist's work normally requires a rounded training in machine-shop practice usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE MECHANIC (MACHINERY)

Repairs machinery or mechanical equipment of an establishment. Work involves *most of the following*: Examining machines and mechanical equipment to diagnose source of trouble; dismantling or partly dismantling machines and performing repairs that mainly involve the use of handtools in scraping and fitting parts; replacing broken or defective parts with items obtained from stock; ordering the production of a replacement part by a machine shop or sending the machine to a machine shop for major repairs; preparing written specifications for major repairs or for the production of parts ordered from machine shops; reassembling machines; and making all necessary adjustments for operation. In general, the work of a machinery maintenance mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. Excluded from this classification are workers whose *primary duties* involve setting up or adjusting machines.

MAINTENANCE MECHANIC (MOTOR VEHICLE)

Repairs automobiles, buses, motortrucks, and tractors of an establishment. Work involves *most of the following*: Examining automotive equipment to diagnose source of trouble; disassembling equipment and performing repairs that involve the use of such handtools as wrenches, gauges, drills, or specialized equipment in disassembling or fitting parts; replacing broken or defective parts from stock; grinding and adjusting valves; reassembling and installing the various assemblies in the vehicle and making necessary adjustments; and aligning wheels, adjusting brakes and lights, or tightening body bolts. In general, the work of the motor vehicle maintenance mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

This classification does not include mechanics who repair customers' vehicles in automobile repair shops.

MAINTENANCE PIPEFITTER

Installs or repairs water, steam, gas, or other types of pipe and pipefittings in an establishment. Work involves *most of the following*: Laying out work and measuring to locate position of pipe from drawings or other written specifications; cutting various sizes of pipe to correct lengths with chisel and hammer or oxyacetylene torch or pipe-cutting machines; threading pipe with stocks and dies; bending pipe by hand-driven or power-driven machines; assembling pipe with couplings and fastening pipe to hangers; making standard shop computations relating to pressures, flow, and size of pipe

required; and making standard tests to determine whether finished pipes meet specifications. In general, the work of the maintenance pipefitter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. *Workers primarily engaged in installing and repairing building sanitation or heating systems are excluded.*

MAINTENANCE SHEET-METAL WORKER

Fabricates, installs, and maintains in good repair the sheet-metal equipment and fixtures (such as machine guards, grease pans, shelves, lockers, tanks, ventilators, chutes, ducts, metal roofing) of an establishment. Work involves most of the following: Planning and laying out all types of sheet-metal maintenance work from blueprints, models, or other specifications; setting up and operating all available types of sheet-metal working machines; using a variety of handtools in cutting, bending, forming, shaping, fitting, and assembling; and installing sheet-metal articles as required. In general, the work of the maintenance sheet-metal worker requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MILLWRIGHT

Installs new machines or heavy equipment, and dismantles and installs machines or heavy equipment when changes in the plant layout are required. Work involves *most of the following*: Planning and laying out work; interpreting blueprints or other specifications; using a variety of handtools and rigging; making standard shop computations relating to stresses, strength of materials, and centers of gravity; aligning and balancing equipment; selecting standard tools, equipment, and parts to be used; and installing and maintaining in good order power transmission equipment such as drives and speed reducers. In general, the millwright's work normally requires a rounded training and experience in the trade acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE TRADES HELPER

Assists one or more workers in the skilled maintenance trades, by performing specific or general duties of lesser skill, such as keeping a worker supplied with materials and tools; cleaning working area, machine, and equipment; assisting journeyman by holding materials or tools; and performing other unskilled tasks as directed by journeyman. The kind of work the helper is permitted to perform varies from trade to trade: In some trades the helper is confined to supplying, lifting, and holding materials and tools, and cleaning working areas; and in others he is permitted to perform specialized machine operations, or parts of a trade that are also performed by workers on a full-time basis.

MACHINE-TOOL OPERATOR (TOOLROOM)

Specializes in operating one or more than one type of machine tool (e.g., jig borer, grinding machine, engine lathe, milling machine) to machine metal for use in making or maintaining jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or nonmetallic material (e.g., plastic, plaster, rubber, glass). *Work typically involves*: Planning and performing difficult machining operations which require complicated setups or a high degree of accuracy; setting up machine tool or tools (e.g., install cutting tools and adjust guides, stops, working tables, and other controls to handle the size of stock to be machined; determine proper feeds, speeds, tooling, and

operation sequence or select those prescribed in drawings, blueprints, or layouts); using a variety of precision measuring instruments; making necessary adjustments during machining operation to achieve requisite dimensions to very close tolerances. May be required to select proper coolants and cutting and lubricating oils, to recognize when tools need dressing, and to dress tools. In general, the work of a machine-tool operator (toolroom) at the skill level called for in this classification requires extensive knowledge of machine-shop and toolroom practice usually acquired through considerable on-the-job training and experience.

For cross-industry wage study purposes, this classification does not include machine-tool operators (toolroom) employed in tool and die jobbing shops.

TOOL AND DIE MAKER

Constructs and repairs jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or nonmetallic material (e.g., plastic, plaster, rubber, glass). *Work typically involves:* Planning and laying out work according to models, blueprints, drawings, or other written or oral specifications; understanding the working properties of common metals and alloys; selecting appropriate materials, tools, and processes required to complete task; making necessary shop computations; setting up and operating various machine tools and related equipment; using various tool and die maker's handtools and precision measuring instruments; working to very close tolerances; heat-treating metal parts and finished tools and dies to achieve required qualities; fitting and assembling parts to prescribed tolerances and allowances. In general, the tool and die maker's work requires rounded training in machine-shop and toolroom practice usually acquired through formal apprenticeship or equivalent training and experience.

For cross-industry wage study purposes, this classification does *not* include tool and die makers who (1) are employed in tool and die jobbing shops or (2) produce forging dies (die sinks).

STATIONARY ENGINEER

Operates and maintains one or more systems which provide an establishment with such services as heat, air-conditioning (cool, humidify, dehumidify, filter, and circulate air), refrigeration, steam or high-temperature water, or electricity. Duties involve: Observing and interpreting readings on gauges, meters, and charts which register various aspects of the system's operation; adjusting controls to insure safe and efficient operation of the system and to meet demands for the service provided; recording in logs various aspects of the system's operation; keeping the engines, machinery, and equipment of the system in good working order. May direct and coordinate activities of other workers (not stationary engineers) in performing tasks directly related to operating and maintaining the system or systems.

The classification excludes head or chief engineers in establishments employing more than one engineer; workers required to be skilled in the repair of electronic control equipment; and workers in establishments producing electricity, steam, or heated or cooled air primarily for sale.

BOILER TENDER

Tends one or more boilers to produce steam or high-temperature water for use in an establishment. Fires boiler. Observes and interprets readings on gauges, meters, and charts which register various aspects of boiler operation. Adjusts controls to insure safe

and efficient boiler operation and to meet demands for steam or high-temperature water. May also do one or more of the following: Maintain a log in which various aspects of boiler operation are recorded; clean, oil, make minor repairs or assist in repairs to boilerroom equipment; and, following prescribed methods, treat boiler water with chemicals and analyze boiler water for such things as acidity, causticity, and alkalinity.

The classification excludes workers in establishments producing electricity, steam, or heated or cooled air primarily for sale.

Material Movement and Custodial

TRUCKDRIVER

Drives a truck within a city or industrial area to transport materials, merchandise, equipment, or workers between various types of establishments such as: Manufacturing plants, freight depots, warehouses, wholesale and retail establishments, or between retail establishments and customers' houses or places of business. May also load or unload truck with or without helpers, make minor mechanical repairs, and keep truck in good working order. *Salesroute and over-the-road drivers are excluded.*

For wage study purposes, truckdrivers are classified by type and rated capacity of truck, as follows:

Truckdriver, light truck

(straight truck, under 1 1/2 tons, usually 4 wheels)

Truckdriver, medium truck

(straight truck, 1 1/2 to 4 tons inclusive, usually 6 wheels)

Truckdriver, heavy truck

(straight truck, over 4 tons, usually 10 wheels)

Truckdriver, tractor-trailer

SHIPPER AND RECEIVER

Performs *clerical and physical* tasks in connection with shipping goods of the establishment in which employed and receiving incoming shipments. In performing day-to-day, routine tasks, follows established guidelines. In handling unusual nonroutine problems, receives specific guidance from supervisor or other officials. May direct and coordinate the activities of other workers engaged in handling goods to be shipped or being received.

Shippers typically are responsible for most of the following: Verifying that orders are accurately filled by comparing items and quantities of goods gathered for shipment against documents; insuring that shipments are properly packaged, identified with shipping information, and loaded into transporting vehicles; preparing and keeping records of goods shipped, e.g., manifests, bills of lading.

Receivers typically are responsible for most of the following: Verifying the correctness of incoming shipments by comparing items and quantities unloaded against bills of lading, invoices, manifests, storage receipts, or other records; checking for damaged goods; insuring that goods are appropriately identified for routing to departments within the establishment; preparing and keeping records of goods received.

For wage study purposes, workers are classified as follows:

Shipper

Receiver
Shipper and receiver

WAREHOUSEMAN

As directed, performs a *variety* of *warehousing* duties which require an *understanding of the establishment's storage plan*. Work involves *most of the following*: Verifying materials (or merchandise) against receiving documents, noting and reporting discrepancies and obvious damages; routing materials to prescribed storage locations; storing, stacking, or palletizing materials in accordance with prescribed storage methods; rearranging and taking inventory of stored materials; examining stored materials and reporting deterioration and damage; removing material from storage and preparing it for shipment. May operate hand or power trucks in performing warehousing duties.

Exclude workers whose *primary* duties involve shipping and receiving work (see Shipper and Receiver and Shipping Packer), order filling (see Order Filler), or operating power trucks (see Power-Truck Operator).

ORDER FILLER

Fills shipping or transfer orders for finished goods from stored merchandise in accordance with specifications on sales slips, customers' orders, or other instructions. May, in addition to filling orders and indicating items filled or omitted, keep records of outgoing orders, requisition additional stock or report short supplies to supervisor, and perform other related duties.

SHIPPING PACKER

Prepares finished products for shipment or storage by placing them in shipping containers, the specific operations performed being dependent upon the type, size, and number of units to be packed, the type of container employed, and method of shipment. Work requires the placing of items in shipping containers and *may involve one or more of the following*: Knowledge of various items of stock in order to verify content; selection of appropriate type and size of container; inserting enclosures in container; using excelsior or other material to prevent breakage or damage; closing and sealing container; and applying labels or entering identifying data on container. *Packers who also make wooden boxes or crates are excluded.*

MATERIAL HANDLING LABORER

A worker employed in a warehouse, manufacturing plant, store, or other establishment whose duties involve *one or more of the following*: Loading and unloading various materials and merchandise on or from freight cars, trucks, or other transporting devices; unpacking, shelving, or placing materials or merchandise in proper storage location; and transporting materials or merchandise by handtruck, car, or wheelbarrow. *Longshore workers, who load and unload ships, are excluded.*

POWER-TRUCK OPERATOR

Operates a manually controlled gasoline- or electric-powered truck or tractor to transport goods and materials of all kinds about a warehouse, manufacturing plant, or other establishment.

For wage study purposes, workers are classified by type of powertruck, as follows:

Forklift operator
Power-truck operator (other than forklift)

GUARD

Protects property from theft or damage, or persons from hazards or interference. Duties involve serving at a fixed post, making rounds on foot or by motor vehicle, or escorting persons or property. May be deputized to make arrests. May also help visitors and customers by answering questions and giving directions.

Guards employed by establishments which provide protective services on a contract basis are included in this occupation.

For wage study purposes, guards are classified as follows:

Class A. Enforces regulations designed to prevent breaches of security. Exercises judgment and uses discretion in dealing with emergencies and security violations encountered. Determines whether first response should be to intervene directly (asking for assistance when deemed necessary and time allows), to keep situation under surveillance, or to report situation so that it can be handled by appropriate authority. Duties require specialized training in methods and techniques of protecting security areas. Commonly, the guard is required to demonstrate continuing physical fitness and proficiency with firearms or other special weapons.

Class B. Carries out instructions primarily oriented toward insuring that emergencies and security violations are readily discovered and reported to appropriate authority. Intervenes directly only in situations which require minimal action to safeguard property or persons. Duties require minimal training. Commonly, the guard is not required to demonstrate physical fitness. May be armed, but generally is not required to demonstrate proficiency in the use of firearms or special weapons.

JANITOR, PORTER, OR CLEANER

Cleans and keeps in an orderly condition factory working areas and washrooms, or premises of an office, apartment house, or commercial or other establishment. Duties involve *a combination of the following*: Sweeping, mopping or scrubbing, and polishing floors; removing chips, trash, and other refuse; dusting equipment, furniture, or fixtures; polishing metal fixtures or trimmings; providing supplies and minor maintenance services; and cleaning lavatories, showers, and restrooms. *Workers who specialize in window washing are excluded.*

Area Wage Surveys

A list of the latest bulletins available is presented below. Bulletins may be purchased from any of the BLS regional offices shown on the back cover, or from the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402. Make checks payable to Superintendent of Documents. A directory of occupational wage surveys, covering the years 1970 through 1977, is available on request.

Area	Bulletin number and price*	
Akron, Ohio, Dec. 1978	2025-63	\$1.00
Albany-Schenectady-Troy, N.Y., Sept. 1979	2050-46	\$1.50
Anaheim-Santa Ana-Garden Grove, Calif., Oct. 1979	2050-48	\$1.50
Atlanta, Ga., May 1979	2050-20	\$1.30
Baltimore, Md., Aug. 1979	2050-42	\$1.75
Billings, Mont., July 1979	2050-43	\$1.50
Birmingham, Ala., Mar. 1978	2025-15	\$0.80
Boston, Mass., Aug. 1979	2050-50	\$1.75
Buffalo, N.Y., Oct. 1979	2050-65	\$2.25
Canton, Ohio, May 1978	2025-22	\$0.70
Chattanooga, Tenn.—Ga., Sept. 1979	2050-39	\$1.50
Chicago, Ill., May 1979	2050-21	\$1.75
Cincinnati, Ohio—Ky.—Ind., July 1979 ¹	2050-28	\$2.00
Cleveland, Ohio, Sept. 1979	2050-47	\$1.75
Columbus, Ohio, Oct. 1979	2050-61	\$2.25
Corpus Christi, Tex., July 1979 ¹	2050-33	\$1.75
Dallas—Fort Worth, Tex., Dec. 1979	2050-67	\$2.25
Davenport—Rock Island—Moline, Iowa—Ill., Feb. 1980 ¹	3000- 5	\$2.25
Dayton, Ohio, Dec. 1979	2050-64	\$2.00
Daytona Beach, Fla., Aug. 1979 ¹	2050-41	\$1.50
Denver—Boulder, Colo., Dec. 1979	2050-72	\$2.25
Detroit, Mich., Mar. 1980	3000- 7	\$2.25
Fresno, Calif., June 1979	2050-25	\$1.50
Gainesville, Fla., Sept. 1979	2050-45	\$1.50
Gary—Hammond—East Chicago, Ind., Oct. 1979 ¹	2050-60	\$2.25
Green Bay, Wis., July 1979	2050-31	\$1.50
Greensboro—Winston-Salem—High Point, N.C., Aug. 1979	2050-49	\$1.50
Greenville—Spartanburg, S.C., June 1980	3000-16	\$1.75
Hartford, Conn., Mar. 1979	2050-12	\$1.10
Houston, Tex., Apr. 1979	2050-15	\$1.30
Huntsville, Ala., Feb. 1980 ¹	3000-14	\$2.25
Indianapolis, Ind., Oct. 1979	2050-54	\$2.25
Jackson, Miss., Jan. 1980	3000- 2	\$1.75
Jacksonville, Fla., Dec. 1979 ¹	2050-69	\$2.25
Kansas City, Mo.—Kans., Sept. 1979 ¹	2050-58	\$2.75
Los Angeles—Long Beach, Calif., Oct. 1979	2050-59	\$2.25
Louisville, Ky.—Ind., Nov. 1979	2050-66	\$2.00

Area	Bulletin number and price*	
Memphis, Tenn.—Ark.—Miss., Nov. 1979 ¹	2050-56	\$2.25
Miami, Fla., Oct. 1979	2050-55	\$2.25
Milwaukee, Wis., Apr. 1980	3000-10	\$2.25
Minneapolis—St. Paul, Minn.—Wis., Jan. 1980	3000- 1	\$2.25
Nassau—Suffolk, N.Y., June 1979	2050-36	\$1.75
Newark, N.J., Jan. 1980 ¹	3000- 8	\$3.25
New Orleans, La., Oct. 1979	2050-53	\$2.25
New York, N.Y.—N.J., May 1979	2050-30	\$1.75
Norfolk—Virginia Beach—Portsmouth, Va.—N.C., May 1979 ¹	2050-22	\$1.75
Norfolk—Virginia Beach—Portsmouth and Newport News— Hampton, Va.—N.C., May 1978	2025-21	\$0.80
Northeast Pennsylvania, Aug. 1979 ¹	2050-32	\$1.75
Oklahoma City, Okla., Aug. 1979	2050-37	\$1.50
Omaha, Nebr.—Iowa, Oct. 1979	2050-51	\$1.50
Paterson—Clifton—Passaic, N.J., June 1979	2050-26	\$1.50
Philadelphia, Pa.—N.J., Nov. 1979 ¹	2050-57	\$3.00
Pittsburgh, Pa., Jan. 1980	3000- 3	\$2.25
Portland, Maine, Dec. 1979	2050-63	\$1.75
Portland, Oreg.—Wash., May 1979	2050-27	\$1.75
Poughkeepsie, N.Y., June 1979	2050-34	\$1.50
Poughkeepsie—Kingston—Newburgh, N.Y., June 1979	2050-35	\$1.50
Providence—Warwick—Pawtucket, R.I.—Mass., June 1979 ¹	2050-38	\$1.75
Richmond, Va., June 1979	2050-24	\$1.50
St. Louis, Mo.—Ill., Mar. 1980	3000-12	\$2.25
Sacramento, Calif., Dec. 1979	2050-71	\$1.75
Saginaw, Mich., Nov. 1979 ¹	2050-52	\$1.75
Salt Lake City—Ogden, Utah, Nov. 1979	2050-62	\$2.00
San Antonio, Tex., May 1980 ¹	3000-17	\$2.00
San Diego, Calif., Nov. 1979	2050-70	\$2.00
San Francisco—Oakland, Calif., Mar. 1980	3000- 9	\$2.25
San Jose, Calif., Mar. 1980	3000- 6	\$2.00
Seattle—Everett, Wash., Dec. 1979 ¹	2050-68	\$2.25
South Bend, Ind., Aug. 1979 ¹	2050-44	\$1.75
Toledo, Ohio—Mich., May 1980	3000-13	\$1.75
Trenton, N.J., Sept. 1979	2050-40	\$1.50
Utica—Rome, N.Y., July 1978	2025-34	\$1.00
Washington, D.C.—Md.—Va., Mar. 1980	3000- 4	\$2.25
Wichita, Kans., Apr. 1980 ¹	3000-15	\$2.25
Worcester, Mass., Apr. 1979	2050-23	\$1.50
York, Pa., Feb. 1980	3000-11	\$1.75

* Prices are determined by the Government Printing Office and are subject to change.

¹ Data on establishment practices and supplementary wage provisions are also presented.

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Washington, D.C. 20212

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Kansas City, Mo. 64106
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X

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