

L 203 3000-44

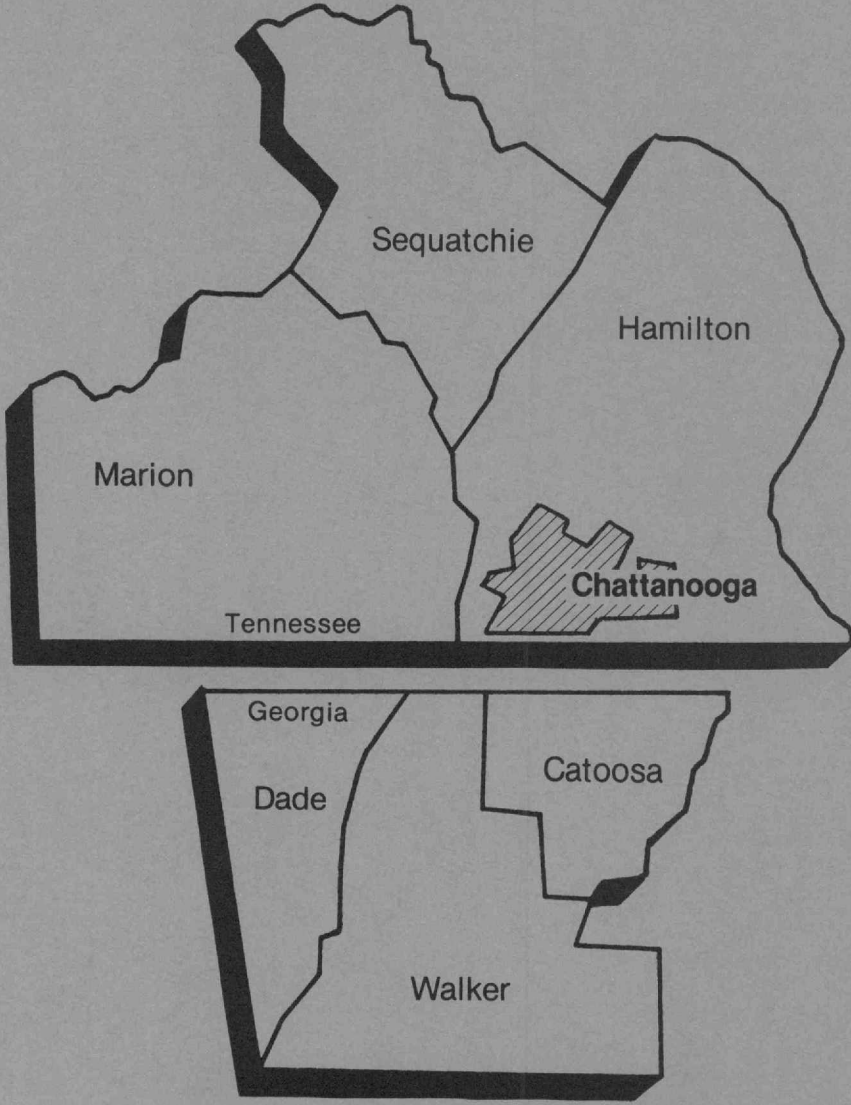
Area Wage Survey

Chattanooga, Tennessee-Georgia, Metropolitan Area September 1980



U.S. Department of Labor
Bureau of Labor Statistics

Bulletin 3000-44



SOUTHWEST MISSOURI STATE
UNIVERSITY LIBRARY
U.S. DEPOSITORY COPY

DEC 29 1980

Preface

This bulletin provides results of a September 1980 survey of occupational earnings in the Chattanooga, Tennessee-Georgia, 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 Atlanta, Georgia, under the general direction of Jerry G. Adams, 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.

Unless specifically identified as copyright, material in this publication is in the public domain and may, with appropriate credit, be reproduced without permission.

Note:

Also available for the Chattanooga area are listings of union wage rates for building trades, printing trades, local-transit operating employees, local truckdrivers and helpers, and grocery store employees. Free copies of these are available from the Bureau's regional offices. (See back cover for addresses.)

Area Wage Survey

Chattanooga, Tennessee- Georgia, Metropolitan Area September 1980



U.S. Department of Labor
Ray Marshall, Secretary

Bureau of Labor Statistics
Janet L. Norwood,
Commissioner

December 1980

Bulletin 3000-44

Contents

Page

Introduction	2
Tables:	
Earnings, all establishments:	
A- 1. Weekly earnings of office workers	3
A- 2. Weekly earnings of professional and technical workers	5
A- 3. Average weekly earnings of office, professional, and technical workers, by sex	6
A- 4. Hourly earnings of maintenance, toolroom, and powerplant workers	7
A- 5. Hourly earnings of material movement and custodial workers	8
A- 6. Average hourly earnings of maintenance, toolroom, powerplant, material movement, and custodial workers, by sex	9
A- 7. Indexes of earnings and percent increases for selected occupational groups	9

Page

Tables—Continued

A- 8. Average pay relationships within establish- ments for office clerical occupations	10
A- 9. Average pay relationships within establish- ments for professional and technical occupations	10
A-10. Average pay relationships within establish- ments for maintenance, toolroom, and powerplant occupations	11
A-11. Average pay relationships within establish- ments for material movement and custodial occupations	11
Appendixes:	
A. Scope and method of survey	13
B. Occupational descriptions	16

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. This report has no B-series tables.

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.

Appendixes

Appendix A describes the methods and concepts used in the area wage survey program and provides information on the scope of the survey.

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

Table A-1. Weekly earnings of office workers in Chattanooga, Tenn.-Ga., September 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	110 and under 120	120-130	130-140	140-150	150-160	160-170	170-180	180-190	190-200	200-210	210-220	220-230	230-240	240-260	260-280	280-300	300-320	320-340	340-360	360-380	380 and over
Secretaries.....	416	39.0	224.50	215.00	192.00- 247.50	-	2	1	9	8	20	29	29	39	52	28	44	27	57	21	17	5	11	6	3	8
Manufacturing.....	256	39.5	230.50	221.00	194.00- 249.50	-	-	-	-	5	5	19	20	22	41	14	32	11	36	12	13	3	10	6	3	4
Nonmanufacturing.....	160	38.0	214.50	210.50	180.00- 241.50	-	2	1	9	3	15	10	9	17	11	14	12	16	21	9	4	2	1	-	-	4
Secretaries, class A.....	41	39.0	236.00	236.00	224.00- 247.50	-	2	-	-	-	-	-	1	1	-	4	12	5	9	-	5	1	1	-	-	-
Secretaries, class B.....	89	39.0	246.00	224.50	205.00- 276.00	-	-	-	1	-	-	2	4	8	18	3	12	5	10	4	6	-	7	5	1	3
Manufacturing.....	63	40.0	250.00	224.50	204.50- 292.50	-	-	-	-	-	-	2	4	6	14	1	11	2	6	1	3	-	7	5	1	2
Nonmanufacturing.....	26	37.5	235.50	230.00	205.50- 263.00	-	-	-	1	-	-	2	-	2	4	2	1	3	4	3	3	-	-	-	-	1
Secretaries, class C.....	78	39.0	243.50	233.00	208.00- 271.00	-	-	-	2	-	1	1	3	5	15	7	4	4	10	11	4	4	2	1	2	2
Manufacturing.....	60	39.0	255.00	248.50	208.00- 277.50	-	-	-	-	-	-	-	1	3	13	4	1	4	10	10	4	3	2	1	2	2
Secretaries, class D.....	131	38.5	210.00	207.00	176.50- 237.50	-	-	1	1	2	12	23	11	11	17	10	6	6	22	3	2	-	1	-	-	3
Manufacturing.....	72	40.0	209.00	209.00	178.00- 231.50	-	-	-	-	-	2	18	9	3	13	4	4	3	12	1	2	-	1	-	-	-
Secretaries, class E.....	73	39.5	196.50	194.00	172.50- 221.00	-	-	-	5	6	7	3	10	13	2	4	10	5	6	2	-	-	-	-	-	-
Manufacturing.....	40	39.5	199.50	194.00	183.50- 225.50	-	-	-	5	3	1	6	9	1	7	2	7	5	-	-	-	-	-	-	-	-
Nonmanufacturing.....	33	39.5	193.00	194.50	161.00- 220.00	-	-	-	5	1	4	2	4	4	1	3	3	3	1	2	-	-	-	-	-	-
Stenographers.....	99	38.0	218.50	198.00	171.00- 247.50	-	-	-	-	4	20	14	7	6	8	7	5	2	3	4	5	6	1	3	4	-
Manufacturing.....	34	39.5	227.00	223.00	169.00- 259.00	-	-	-	-	-	10	1	1	2	1	2	4	1	3	2	1	4	1	1	-	-
Stenographers, senior.....	77	38.0	203.50	182.00	169.00- 226.00	-	-	-	-	4	19	14	7	5	5	3	5	1	3	2	1	6	1	1	-	-
Manufacturing.....	30	39.5	229.00	226.00	169.00- 273.50	-	-	-	-	-	9	1	1	2	1	-	4	-	3	2	1	4	1	1	-	-
Transcribing-machine typists.....	40	38.0	169.50	152.50	132.50- 206.00	1	1	13	3	5	1	2	3	-	1	-	4	4	2	-	-	-	-	-	-	-
Typists.....	98	38.5	164.50	154.00	138.50- 190.00	1	16	9	7	21	4	11	3	14	3	4	-	1	3	-	-	-	-	-	1	-
Typists, class A.....	30	38.5	177.50	176.00	150.50- 198.50	-	-	-	5	8	1	2	2	5	2	4	-	1	-	-	-	-	-	-	-	-
Typists, class B.....	68	38.5	159.00	150.00	130.50- 175.00	1	16	9	2	13	3	9	1	9	1	-	-	-	3	-	-	-	-	-	1	-
File clerks.....	186	37.5	137.50	132.00	125.50- 146.00	27	61	37	33	10	6	9	-	1	-	-	2	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	170	37.5	135.50	129.00	125.50- 140.00	27	61	37	23	6	5	9	-	1	-	-	1	-	-	-	-	-	-	-	-	-
File clerks, class C.....	50	39.5	148.00	148.00	138.00- 151.50	-	10	6	21	5	1	5	-	-	-	-	2	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	35	39.5	145.00	140.00	129.00- 149.00	-	10	6	11	1	1	5	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Messengers.....	44	38.0	145.00	125.00	115.00- 146.00	16	7	8	2	3	3	-	-	1	-	1	-	-	-	-	1	1	1	-	-	-
Nonmanufacturing.....	40	38.0	136.50	124.50	115.00- 137.50	16	7	8	2	2	2	-	-	1	-	1	-	-	-	-	-	-	1	-	-	-
Switchboard operators.....	26	38.5	171.00	158.00	143.50- 182.50	-	1	-	11	2	-	4	2	-	2	1	1	1	-	-	1	-	-	-	-	-
Switchboard operator-receptionists.....	127	39.5	172.50	170.00	149.50- 191.50	-	16	8	9	10	17	28	6	6	2	16	4	1	3	-	-	1	-	-	-	-
Manufacturing.....	82	39.5	181.00	177.00	158.00- 209.50	-	1	5	9	7	10	22	4	1	2	13	3	1	3	-	-	1	-	-	-	-
Nonmanufacturing.....	45	40.0	157.50	161.00	126.00- 170.00	-	15	3	-	3	7	6	2	5	-	3	1	-	-	-	-	-	-	-	-	-
Order clerks.....	116	40.0	192.00	197.00	156.00- 212.50	-	-	10	15	5	-	17	2	9	3	40	3	4	2	4	-	-	2	-	-	-
Manufacturing.....	44	40.0	212.50	210.50	180.00- 230.50	-	-	-	-	-	-	12	2	4	3	8	3	4	2	4	-	-	2	-	-	-
Order clerks, class B.....	108	40.0	189.00	190.50	156.00- 212.50	-	-	10	15	5	-	17	2	7	1	40	3	4	2	-	-	-	2	-	-	-
Manufacturing.....	36	40.0	208.50	210.50	178.00- 229.00	-	-	-	-	-	-	12	2	2	1	8	3	4	2	-	-	-	2	-	-	-

See footnotes at end of tables.

Table A-1. Weekly earnings of office workers in Chattanooga, Tenn.-Ga., September 1980 —Continued

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	110 and under 120	120-130	130-140	140-150	150-160	160-170	170-180	180-190	190-200	200-210	210-220	220-230	230-240	240-260	260-280	280-300	300-320	320-340	340-360	360-380	380 and over
Accounting clerks.....	479	39.5	191.00	180.00	155.00- 221.00	2	37	31	35	30	36	68	34	38	27	19	29	16	48	8	6	3	1	2	-	9
Manufacturing.....	256	39.5	211.50	193.00	175.00- 240.00	-	-	-	15	8	19	49	20	24	10	9	21	12	45	5	5	3	1	2	-	8
Nonmanufacturing.....	223	39.5	167.50	156.00	136.00- 192.00	2	37	31	20	22	17	19	14	14	17	10	8	4	3	3	1	-	-	-	-	1
Accounting clerks, class A.....	172	39.0	227.50	226.50	190.00- 253.50	-	-	1	10	5	9	10	3	19	11	12	11	12	44	8	5	1	1	1	-	9
Manufacturing.....	122	39.5	235.50	240.00	191.00- 253.50	-	-	-	6	4	6	5	2	13	6	6	4	8	42	5	4	1	1	1	-	8
Nonmanufacturing.....	50	39.0	207.50	207.00	174.00- 228.00	-	-	1	4	1	3	5	1	6	5	6	7	4	2	3	1	-	-	-	-	1
Accounting clerks, class B.....	307	39.5	170.50	170.00	145.50- 188.00	2	37	30	25	25	27	58	31	19	16	7	18	4	4	-	1	2	-	1	-	-
Manufacturing.....	134	40.0	189.50	178.50	171.50- 202.50	-	-	-	9	4	13	44	18	11	4	3	17	4	3	-	1	2	-	1	-	-
Nonmanufacturing.....	173	39.5	155.50	150.00	134.00- 172.00	2	37	30	16	21	14	14	13	8	12	4	1	-	1	-	-	-	-	-	-	-
Payroll clerks.....	104	39.5	210.00	200.00	185.00- 222.00	-	-	-	1	2	9	4	16	8	22	6	20	2	7	1	2	-	-	2	1	1
Manufacturing.....	66	39.5	221.50	220.00	200.00- 229.00	-	-	-	1	-	3	3	6	1	15	3	19	2	7	1	1	-	-	2	1	1
Nonmanufacturing.....	38	39.5	190.50	187.50	181.00- 205.50	-	-	-	-	2	6	1	10	7	7	3	1	-	-	-	1	-	-	-	-	-
Key entry operators.....	416	39.0	174.00	164.00	146.50- 195.00	2	19	33	78	33	65	40	25	23	31	25	10	11	9	-	5	6	-	-	1	-
Manufacturing.....	142	40.0	196.00	180.00	161.00- 220.50	-	-	1	8	9	33	19	14	5	7	10	5	10	9	-	5	6	-	-	1	-
Nonmanufacturing.....	274	39.0	162.50	154.00	140.00- 181.50	2	19	32	70	24	32	21	11	18	24	15	5	1	-	-	-	-	-	-	-	-
Key entry operators, class A.....	93	38.5	186.50	180.00	169.00- 202.50	-	-	3	-	3	18	14	13	15	13	4	7	3	-	-	-	-	-	-	-	-
Nonmanufacturing.....	70	38.5	184.50	180.50	168.00- 200.00	-	-	3	-	3	14	11	8	13	10	3	4	1	-	-	-	-	-	-	-	-
Key entry operators, class B.....	323	39.5	170.50	160.00	140.50- 189.50	2	19	30	78	30	47	26	12	8	18	21	3	8	9	-	5	6	-	-	1	-
Manufacturing.....	119	40.0	196.50	179.00	161.00- 221.00	-	-	1	8	9	29	16	9	3	4	9	2	8	9	-	5	6	-	-	1	-
Nonmanufacturing.....	204	39.0	155.50	148.00	140.00- 164.00	2	19	29	70	21	18	10	3	5	14	12	1	-	-	-	-	-	-	-	-	-

See footnotes at end of tables.

Table A-2. Weekly earnings of professional and technical workers in Chattanooga, Tenn.-Ga., September 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	120 and under 140	140-160	160-180	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	480-500	500-540	540 and over
Computer systems analysts (business).....	90	38.5	436.50	448.50	392.50- 482.00	-	-	-	-	-	-	1	-	4	1	1	7	5	6	7	9	12	12	13	8	4
Manufacturing.....	35	40.0	415.00	433.00	342.00- 465.50	-	-	-	-	-	-	-	-	3	1	1	7	1	2	-	4	5	6	3	-	2
Computer systems analysts (business), class A.....	26	38.5	487.50	481.00	451.00- 522.50	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	5	4	4	5	* 4
Computer systems analysts (business), class B.....	61	38.0	421.50	431.50	379.50- 471.50	-	-	-	-	-	-	-	-	3	1	1	6	5	5	6	7	7	8	9	3	-
Manufacturing.....	27	40.0	399.00	430.00	342.00- 458.00	-	-	-	-	-	-	-	-	3	1	1	6	1	1	-	2	5	4	3	-	-
Computer programmers (business).....	104	38.5	308.50	308.50	269.00- 343.50	-	-	-	2	5	10	19	11	11	17	13	8	3	1	4	-	-	-	-	-	-
Manufacturing.....	41	40.0	292.00	285.50	253.00- 328.00	-	-	-	1	5	5	8	5	3	7	4	1	1	-	1	-	-	-	-	-	-
Nonmanufacturing.....	63	37.5	319.00	321.00	279.00- 355.50	-	-	-	1	-	5	11	6	8	10	9	7	2	1	3	-	-	-	-	-	-
Computer programmers (business), class A.....	37	37.5	344.00	355.00	323.00- 374.00	-	-	-	-	-	1	3	5	-	6	8	7	2	1	4	-	-	-	-	-	-
Nonmanufacturing.....	30	37.5	347.50	355.50	325.00- 377.00	-	-	-	-	-	1	3	2	-	4	8	6	2	1	3	-	-	-	-	-	-
Computer programmers (business), class B.....	36	39.0	310.00	318.50	296.00- 336.00	-	-	-	-	2	4	2	2	9	10	5	1	1	-	-	-	-	-	-	-	-
Computer programmers (business), class C.....	31	38.0	264.50	268.50	250.00- 278.50	-	-	-	2	3	5	14	4	2	1	-	-	-	-	-	-	-	-	-	-	-
Computer operators.....	174	39.0	221.00	206.50	183.00- 236.50	5	6	26	30	36	30	8	15	3	6	-	-	-	2	3	1	2	1	-	-	-
Manufacturing.....	65	40.0	247.50	216.50	201.50- 272.00	-	2	5	8	18	7	5	5	3	3	-	-	-	2	3	1	2	1	-	-	-
Nonmanufacturing.....	109	38.5	205.00	201.50	179.50- 225.50	5	4	21	22	18	23	3	10	-	3	-	-	-	-	-	-	-	-	-	-	-
Computer operators, class A.....	40	39.0	281.50	242.50	225.00- 309.50	-	-	-	8	10	5	4	-	4	-	-	-	2	3	1	2	1	-	-	-	-
Computer operators, class B.....	77	39.0	214.50	201.50	188.50- 237.00	-	1	12	16	21	10	3	11	3	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing.....	38	40.0	223.00	215.00	201.50- 240.50	-	-	1	5	17	5	2	5	3	-	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	39	38.5	205.50	190.00	179.50- 224.50	-	1	11	11	4	5	1	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Computer operators, class C.....	57	38.5	187.50	183.00	167.00- 207.00	5	5	14	14	7	10	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing.....	47	38.0	191.00	185.00	169.50- 217.00	5	3	10	11	6	10	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Drafters.....	194	39.5	256.50	255.00	224.50- 297.00	1	2	23	2	19	28	24	22	28	25	9	7	1	1	2	-	-	-	-	-	-
Manufacturing.....	167	39.5	257.00	255.00	224.50- 299.50	-	-	20	2	18	28	20	19	19	23	8	6	1	1	2	-	-	-	-	-	-
Drafters, class B.....	47	39.5	279.00	263.50	255.00- 280.50	-	-	-	-	1	-	14	20	2	4	-	3	-	1	2	-	-	-	-	-	-
Manufacturing.....	44	39.5	279.50	263.50	255.00- 279.50	-	-	-	-	-	-	14	19	2	4	-	2	-	1	2	-	-	-	-	-	-
Drafters, class C.....	75	39.5	213.00	208.00	193.00- 232.50	-	2	16	2	18	28	6	-	2	1	-	-	-	-	-	-	-	-	-	-	-
Manufacturing.....	70	39.5	216.50	224.50	201.50- 232.50	-	-	13	2	18	28	6	-	2	1	-	-	-	-	-	-	-	-	-	-	-
Electronics technicians.....	61	40.0	340.50	390.50	293.00- 423.50	-	-	2	1	3	3	2	4	12	1	-	-	-	15	-	18	-	-	-	-	-
Electronics technicians, class B.....	30	40.0	367.00	423.50	293.00- 423.50	-	-	-	-	-	-	1	4	6	1	-	-	-	-	-	18	-	-	-	-	-
Registered industrial nurses.....	27	40.0	307.50	294.50	271.00- 346.50	-	-	-	-	1	2	3	3	6	2	2	2	2	2	2	-	-	-	-	-	-
Manufacturing.....	26	40.0	308.50	294.50	270.50- 348.50	-	-	-	-	1	2	3	3	5	2	2	2	2	2	2	-	-	-	-	-	-

* Workers were distributed as follows: 2 at \$540.00 to \$580.00; and 2 at \$580.00 to \$620.00. See footnotes at end of tables.

Table A-3. Average weekly earnings of office, professional, and technical workers, by sex, in Chattanooga, Tenn.-Ga., September 1980

Sex, ³ 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 (standard)	Weekly earnings (in dollars) ¹			Weekly hours ¹ (standard)	Weekly earnings (in dollars) ¹			Weekly hours ¹ (standard)	Weekly earnings (in dollars) ¹
Office occupations - women				Switchboard operator-receptionists.....	127	39.5	172.50	Computer programmers (business).....	65	38.5	313.00
Secretaries.....	412	39.0	224.50	Manufacturing.....	82	39.5	181.00	Manufacturing.....	35	40.0	299.50
Manufacturing.....	256	39.5	230.50	Nonmanufacturing.....	45	40.0	157.50	Nonmanufacturing.....	30	37.5	329.00
Nonmanufacturing.....	156	38.0	214.00	Order clerks.....	101	40.0	189.50	Computer programmers (business), class B.....	28	39.5	312.50
Secretaries, class A.....	41	39.0	236.00	Manufacturing.....	34	39.5	202.50	Computer operators.....	95	38.5	229.50
Secretaries, class B.....	89	39.0	246.00	Order clerks, class B.....	93	40.0	186.00	Manufacturing.....	33	40.0	271.00
Manufacturing.....	63	40.0	250.00	Manufacturing.....	26	40.0	194.00	Nonmanufacturing.....	62	37.5	207.50
Nonmanufacturing.....	26	37.5	235.50	Accounting clerks.....	449	39.5	187.00	Computer operators, class B.....	38	38.5	216.50
Secretaries, class C.....	78	39.0	243.50	Manufacturing.....	239	39.5	207.00	Computer operators, class C.....	33	38.0	201.00
Manufacturing.....	60	39.0	255.00	Nonmanufacturing.....	210	39.5	164.50	Nonmanufacturing.....	27	37.5	204.50
Secretaries, class D.....	131	38.5	210.00	Accounting clerks, class A.....	157	39.0	221.50	Computer operators, class C.....	33	38.0	201.00
Manufacturing.....	72	40.0	209.00	Manufacturing.....	110	39.5	230.00	Nonmanufacturing.....	27	37.5	204.50
Secretaries, class E.....	73	39.5	196.50	Nonmanufacturing.....	47	39.0	202.00	Drafters.....	173	39.5	260.00
Manufacturing.....	40	39.5	199.50	Accounting clerks, class B.....	292	39.5	168.50	Manufacturing.....	153	39.5	262.50
Nonmanufacturing.....	33	39.5	193.00	Manufacturing.....	129	40.0	187.50	Drafters, class B.....	46	39.5	279.50
Stenographers.....	97	38.0	219.00	Nonmanufacturing.....	163	39.5	154.00	Manufacturing.....	43	39.5	280.00
Manufacturing.....	34	39.5	227.00	Payroll clerks.....	98	39.5	206.50	Drafters, class C.....	71	39.5	215.50
Stenographers, senior.....	77	38.0	203.50	Manufacturing.....	60	39.5	216.50	Manufacturing.....	66	39.5	219.50
Manufacturing.....	30	39.5	229.00	Nonmanufacturing.....	38	39.5	190.50	Electronics technicians.....	56	40.0	334.00
Transcribing-machine typists.....	40	38.0	169.50	Key entry operators.....	412	39.0	174.50	Electronics technicians, class B.....	26	40.0	358.50
Typists.....	98	38.5	164.50	Manufacturing.....	142	40.0	196.00	Professional and technical occupations - women			
Typists, class A.....	30	38.5	177.50	Nonmanufacturing.....	270	39.0	163.00	Computer programmers (business).....	39	37.5	301.00
Typists, class B.....	68	38.5	159.00	Key entry operators, class A.....	93	38.5	186.50	Nonmanufacturing.....	33	37.0	310.50
File clerks.....	179	37.5	137.00	Nonmanufacturing.....	70	38.5	184.50	Computer operators.....	79	39.5	211.00
Nonmanufacturing.....	167	37.5	135.50	Key entry operators, class B.....	319	39.5	171.00	Manufacturing.....	32	39.5	223.50
File clerks, class C.....	45	39.5	148.00	Manufacturing.....	119	40.0	196.50	Nonmanufacturing.....	47	39.0	202.00
Nonmanufacturing.....	34	39.5	145.50	Nonmanufacturing.....	200	39.0	155.50	Computer operators, class B.....	39	39.5	212.00
Messengers.....	32	37.5	148.00	Professional and technical occupations - men				Registered industrial nurses.....	27	40.0	307.50
Switchboard operators.....	25	38.5	170.50	Computer systems analysts (business).....	70	38.5	443.00	Manufacturing.....	26	40.0	308.50
				Manufacturing.....	30	40.0	423.50				
				Computer systems analysts (business), class B.....	45	38.5	428.00				

See footnotes at end of tables.

Table A-4. Hourly earnings of maintenance, toolroom, and powerplant workers in Chattanooga, Tenn.-Ga., September 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	Under 4.60	4.60 and under 4.80	4.80 - 5.00	5.00 - 5.20	5.20 - 5.40	5.40 - 5.60	5.60 - 5.80	5.80 - 6.00	6.00 - 6.20	6.20 - 6.40	6.40 - 6.60	6.60 - 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 and over
Maintenance electricians.....	360	8.27	7.97	7.24- 9.76	-	-	-	-	-	-	2	5	7	4	1	27	39	41	63	32	-	24	-	83	-	32	-
Manufacturing.....	359	8.27	7.97	7.24- 9.76	-	-	-	-	-	-	2	5	7	3	1	27	39	41	63	32	-	24	-	83	-	32	-
Maintenance machinists.....	141	8.45	8.97	7.51- 8.97	-	-	-	-	-	-	3	3	1	6	9	9	13	5	-	-	69	-	11	-	12	-	
Manufacturing.....	141	8.45	8.97	7.51- 8.97	-	-	-	-	-	-	3	3	1	6	9	9	13	5	-	-	69	-	11	-	12	-	
Maintenance mechanics (machinery).....	852	8.21	7.97	7.27- 9.76	-	-	-	-	6	-	12	-	6	16	19	14	89	192	76	95	9	94	-	132	92	-	-
Manufacturing.....	836	8.23	8.00	7.27- 9.76	-	-	-	-	6	-	12	-	6	16	19	14	73	192	76	95	9	94	-	132	92	-	-
Maintenance mechanics (motor vehicles).....	123	7.94	7.97	6.88- 8.06	-	-	-	-	-	4	2	5	2	6	8	10	4	21	41	-	-	-	2	8	6	4	
Manufacturing.....	100	7.54	7.78	6.79- 8.06	-	-	-	-	-	4	2	5	2	6	8	10	4	21	32	-	-	-	2	4	-	-	
Tool and die makers.....	51	7.90	7.66	7.61- 8.51	-	-	-	-	-	-	-	-	-	3	-	-	9	25	-	7	7	-	-	-	-	-	
Manufacturing.....	51	7.90	7.66	7.61- 8.51	-	-	-	-	-	-	-	-	-	3	-	-	9	25	-	7	7	-	-	-	-	-	
Stationary engineers.....	36	8.36	8.16	7.13- 9.76	-	-	-	-	3	-	-	-	-	-	-	9	-	6	-	1	-	-	17	-	-	-	
Manufacturing.....	36	8.36	8.16	7.13- 9.76	-	-	-	-	3	-	-	-	-	-	-	9	-	6	-	1	-	-	17	-	-	-	
Boiler tenders.....	54	5.26	5.09	3.75- 6.96	* 24	-	-	5	-	-	-	6	-	-	-	19	-	-	-	-	-	-	-	-	-	-	
Manufacturing.....	54	5.26	5.09	3.75- 6.96	24	-	-	5	-	-	-	6	-	-	-	19	-	-	-	-	-	-	-	-	-	-	

* Workers were distributed as follows: 16 under \$4.00; and 8 at \$4.00 to \$4.20.
See footnotes at end of tables.

Table A-5. Hourly earnings of material movement and custodial workers in Chattanooga, Tenn.-Ga., September 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	3.00 and under 3.20	3.20	3.40	3.60	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	8.40	8.80	9.20	9.60	10.00	10.40	10.80	11.20	
					3.40	3.60	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	8.40	8.80	9.20	9.60	10.00	10.40	10.80	11.20	11.60		
Truckdrivers	580	6.10	5.90	5.08- 6.40	3	35	-	11	5	41	98	62	36	107	83	5	14	5	17	1	-	4	16	-	-	-	-	37
Manufacturing	232	5.95	5.44	5.10- 6.66	-	-	-	-	4	23	62	59	16	4	23	5	-	-	16	-	-	4	16	-	-	-	-	
Nonmanufacturing	348	6.20	6.05	5.06- 6.40	3	35	-	11	1	18	36	3	20	103	60	-	14	5	1	1	-	-	-	-	-	-	37	
Truckdrivers, light truck	62	4.41	3.25	3.25- 4.53	3	35	-	-	2	7	-	1	-	-	9	-	-	-	1	-	-	4	-	-	-	-	-	
Truckdrivers, medium truck	264	5.66	5.70	5.06- 6.40	-	-	-	11	3	29	52	27	30	27	74	-	2	5	3	1	-	-	-	-	-	-	-	
Manufacturing	92	5.44	5.27	4.86- 5.70	-	-	-	-	2	18	16	27	10	3	14	-	-	-	2	-	-	-	-	-	-	-	-	
Nonmanufacturing	172	5.78	6.10	5.06- 6.40	-	-	-	11	1	11	36	-	20	24	60	-	2	5	1	1	-	-	-	-	-	-	-	
Truckdrivers, tractor-trailer	222	6.79	6.00	5.44- 6.68	-	-	-	-	-	1	45	34	6	80	-	1	12	-	6	-	-	-	-	-	-	-	37	
Manufacturing	92	5.48	5.21	5.10- 5.44	-	-	-	-	-	1	45	32	6	1	-	1	-	-	6	-	-	-	-	-	-	-	-	
Nonmanufacturing	130	7.72	6.10	6.01-11.50	-	-	-	-	-	-	-	2	-	79	-	-	12	-	-	-	-	-	-	-	-	-	37	
Shippers	35	5.58	5.58	5.02- 6.30	-	-	-	-	-	8	2	10	6	-	2	7	-	-	-	-	-	-	-	-	-	-	-	
Manufacturing	33	5.60	5.58	4.99- 6.66	-	-	-	-	-	8	1	9	6	-	2	7	-	-	-	-	-	-	-	-	-	-	-	
Receivers	48	4.65	4.34	3.98- 5.19	-	-	-	13	15	4	4	5	3	3	1	-	-	-	-	-	-	-	-	-	-	-	-	
Warehousemen	467	5.85	5.90	5.88- 6.10	11	-	12	18	21	17	20	6	180	119	3	4	1	-	45	2	-	8	-	-	-	-	-	
Manufacturing	129	6.41	6.13	5.89- 8.10	-	-	-	-	16	3	8	5	12	39	-	1	-	-	45	-	-	-	-	-	-	-	-	
Nonmanufacturing: Public utilities	31	6.65	5.60	5.15- 8.98	-	-	-	-	-	-	12	-	7	-	2	-	-	-	-	2	-	8	-	-	-	-	-	
Order fillers	177	4.85	5.06	4.19- 5.16	-	-	5	25	24	28	53	21	6	11	4	-	-	-	-	-	-	-	-	-	-	-	-	
Shipping packers	209	4.60	5.17	4.10- 5.17	-	20	15	10	39	-	121	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Material handling laborers	624	5.67	5.35	4.18- 7.40	4	-	-	30	140	24	92	74	-	59	8	18	168	-	7	-	-	-	-	-	-	-	-	
Manufacturing	459	5.89	6.36	4.18- 7.40	-	-	-	16	120	16	40	14	-	59	8	18	168	-	-	-	-	-	-	-	-	-	-	
Forklift operators	554	5.79	6.05	4.85- 6.66	-	-	-	24	25	55	109	11	25	107	128	62	-	1	3	-	-	4	-	-	-	-	-	
Manufacturing	481	5.99	6.13	5.12- 6.66	-	-	-	4	18	21	98	11	25	107	128	62	-	-	3	-	-	4	-	-	-	-	-	
Power-truck operators (other than forklift)	189	4.79	4.50	4.50- 5.05	-	-	-	-	8	132	11	23	-	-	15	-	-	-	-	-	-	-	-	-	-	-	-	
Guards	386	4.10	3.10	3.10- 4.93	220	6	4	11	37	5	13	10	8	47	15	1	-	-	-	5	-	4	-	-	-	-	-	
Manufacturing	142	5.60	6.32	4.20- 6.38	7	-	-	7	31	-	12	5	8	47	15	1	-	-	-	5	-	4	-	-	-	-	-	
Nonmanufacturing	244	3.23	3.10	3.10- 3.10	213	6	4	4	6	5	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Guards, class B	306	3.80	3.10	3.10- 4.15	205	6	4	11	19	5	13	10	8	-	15	1	-	-	-	5	-	4	-	-	-	-	-	
Manufacturing	77	5.47	5.19	4.16- 6.59	7	-	-	7	13	-	12	5	8	-	15	1	-	-	-	5	-	4	-	-	-	-	-	
Nonmanufacturing	229	3.24	3.10	3.10- 3.10	198	6	4	4	6	5	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Janitors, porters, and cleaners	778	4.21	3.37	3.10- 5.24	320	70	59	45	46	24	14	9	24	67	4	69	25	1	-	1	-	-	-	-	-	-	-	
Manufacturing	278	5.71	6.09	4.25- 6.97	-	10	17	26	18	16	5	7	18	63	4	69	25	-	-	-	-	-	-	-	-	-	-	

See footnotes at end of tables.

Table A-6. Average hourly earnings of maintenance, toolroom, powerplant, material movement, and custodial workers, by sex, in Chattanooga, Tenn.-Ga., September 1980

Sex, ¹ occupation, and industry division	Number of workers	Average (mean ²) hourly earnings (in dollars) ³	Sex, ¹ occupation, and industry division	Number of workers	Average (mean ²) hourly earnings (in dollars) ⁴	Sex, ¹ occupation, and industry division	Number of workers	Average (mean ²) hourly earnings (in dollars) ⁴
Maintenance, toolroom, and powerplant occupations - men			Truckdrivers, light truck	62	4.41	Guards.....	368	4.10
Maintenance electricians	360	8.27	Truckdrivers, medium truck.....	256	5.59	Manufacturing.....	137	5.56
Manufacturing.....	359	8.27	Manufacturing.....	92	5.44	Nonmanufacturing.....	231	3.24
Maintenance machinists.....	141	8.45	Nonmanufacturing.....	164	5.68			
Manufacturing.....	141	8.45	Truckdrivers, tractor-trailer.....	222	6.79	Guards, class B.....	293	3.81
Maintenance mechanics (machinery).....	852	8.21	Manufacturing.....	92	5.48	Manufacturing.....	76	5.43
Manufacturing.....	836	8.23	Nonmanufacturing.....	130	7.72	Nonmanufacturing.....	217	3.25
Maintenance mechanics (motor vehicles).....	123	7.94	Shippers.....	26	5.90			
Manufacturing.....	100	7.54	Manufacturing.....	26	5.90	Janitors, porters, and cleaners.....	517	4.50
Tool and die makers.....	51	7.90	Receivers.....	27	4.62	Manufacturing.....	211	6.04
Manufacturing.....	51	7.90	Warehousemen.....	438	5.87	Nonmanufacturing.....	306	3.44
Stationary engineers.....	36	8.36	Manufacturing.....	127	6.38			
Manufacturing.....	36	8.36	Order fillers.....	67	4.79	Material movement and custodial occupations - women		
Boiler tenders.....	54	5.26	Shipping packers.....	51	4.59			
Manufacturing.....	54	5.26	Manufacturing.....	39	4.46			
Material movement and custodial occupations - men			Material handling laborers.....	602	5.71			
Truckdrivers.....	572	6.08	Manufacturing.....	437	5.96	Shipping packers.....	158	4.60
Manufacturing.....	232	5.95	Forklift operators.....	530	5.80			
Nonmanufacturing.....	340	6.16	Manufacturing.....	457	6.01	Janitors, porters, and cleaners.....	258	3.62
			Power-truck operators (other than forklift).....	189	4.79	Manufacturing.....	67	4.66

See footnotes at end of tables.

Table A-7. Indexes of earnings and percent increases for selected occupational groups, Chattanooga, Tenn.-Ga., selected periods

Period ^a	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 (September 1977 = 100):														
September 1979.....	114.8	117.6	(*)	117.4	119.1	(*)	(*)	(*)	117.3	117.2	114.2	(*)	(*)	(*)
September 1980.....	125.4	129.0	(*)	128.7	129.5	(*)	(*)	(*)	128.6	127.6	(*)	(*)	(*)	(*)
Percent increases:														
September 1972 to September 1973.....	6.2	(*)	5.6	6.3	6.8	5.8	(*)	5.6	6.3	7.1	6.5	(*)	(*)	5.2
September 1973 to September 1974.....	9.3	9.5	9.5	8.3	10.3	8.9	(*)	9.5	8.4	9.2	9.7	(*)	(*)	15.3
September 1974 to September 1975.....	7.5	7.3	(*)	8.1	7.7	(*)	(*)	(*)	8.1	8.7	7.3	6.5	(*)	3.9
September 1975 to September 1976.....	6.3	6.8	(*)	9.1	10.8	7.4	(*)	(*)	9.1	10.5	5.4	8.9	(*)	(*)
September 1976 to September 1977.....	6.9	7.4	(*)	8.6	8.3	8.6	(*)	(*)	8.6	9.3	5.5	7.2	(*)	(*)
September 1977 to September 1978.....	6.5	10.7	(*)	6.7	9.1	7.5	(*)	(*)	6.7	7.8	5.9	(*)	(*)	(*)
September 1978 to September 1979.....	7.8	6.2	7.4	10.0	9.2	(*)	(*)	7.2	9.9	8.7	7.8	(*)	(*)	(*)
September 1979 to September 1980.....	9.2	9.7	9.4	9.6	8.7	(*)	(*)	9.4	9.6	8.9	(*)	(*)	(*)	(*)

See footnotes at end of tables.

Table A-8. Average pay relationships within establishments for office clerical occupations, Chattanooga, Tenn.-Ga., September 1980

Occupation which equals 100	Office clerical occupation being compared																		
	Secretaries					Stenographers	Transcribing machine typists	Typists		File clerks	Messengers	Switchboard operators	Switchboard operator-receptionists	Order clerks	Accounting clerks		Payroll clerks	Key entry operators	
	Class A	Class B	Class C	Class D	Class E			Class A	Class B						Class A	Class B		Class B	Class A
Secretaries, class A.....	100																		
Secretaries, class B.....	116	100																	
Secretaries, class C.....	108	114	100																
Secretaries, class D.....	131	125	117	100															
Secretaries, class E.....	134	122	121	110	100														
Stenographers, senior.....	(*)	(*)	125	(*)	(*)	100													
Transcribing-machine typists.....	(*)	164	(*)	(*)	(*)	(*)	100												
Typists, class A.....	(*)	(*)	(*)	(*)	125	(*)	(*)	100											
Typists, class B.....	(*)	(*)	127	(*)	(*)	(*)	(*)	100											
File clerks, class C.....	169	148	(*)	(*)	133	(*)	(*)	100											
Messengers.....	(*)	188	147	(*)	137	(*)	(*)	95	100										
Switchboard operators.....	145	158	130	(*)	93	(*)	89	(*)	(*)	100									
Switchboard operator-receptionists.....	145	130	116	114	102	97	97	110	88	81	81	(*)	100						
Order clerks, class B.....	(*)	125	(*)	112	93	(*)	(*)	(*)	(*)	(*)	(*)	89	88	100					
Accounting clerks, class A.....	125	119	105	105	96	90	79	(*)	(*)	74	72	87	88	103	100				
Accounting clerks, class B.....	131	128	126	111	112	(*)	93	90	87	90	90	101	102	104	121	100			
Payroll clerks.....	131	119	110	110	98	(*)	85	(*)	(*)	73	74	89	88	97	106	90	100		
Key entry operators, class A.....	130	132	114	(*)	108	(*)	(*)	(*)	(*)	84	(*)	(*)	101	(*)	116	90	104	100	
Key entry operators, class B.....	153	151	135	125	122	115	105	103	(*)	(*)	98	120	111	105	129	104	121	121	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, Chattanooga, Tenn.-Ga., September 1980

Occupation which equals 100	Professional and technical occupation being compared											
	Computer systems analysts (business)		Computer programmers (business)			Computer operators			Drafters		Electronics technicians	Registered industrial nurses
	Class A	Class B	Class A	Class B	Class C	Class A	Class B	Class C	Class B	Class C	Class B	
Computer systems analysts (business), class A.....	100											
Computer systems analysts (business), class B.....	117	100										
Computer programmers (business), class A.....	149	(*)	100									
Computer programmers (business), class B.....	158	137	116	100								
Computer programmers (business), class C.....	(*)	153	138	119	100							
Computer operators, class A.....	186	169	154	130	109	100						
Computer operators, class B.....	228	196	181	146	128	121	100					
Computer operators, class C.....	273	242	191	171	148	140	118	100				
Drafters, class B.....	148	(*)	(*)	105	(*)	103	84	83	100			
Drafters, class C.....	(*)	(*)	(*)	130	(*)	(*)	92	(*)	124	100		
Electronics technicians, class B.....	(*)	(*)	(*)	(*)	(*)	(*)	77	(*)	(*)	(*)	100	
Registered industrial nurses.....	162	142	(*)	109	(*)	103	88	(*)	99	(*)	111	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, Chattanooga, Tenn.-Ga., September 1980

Occupation which equals 100	Maintenance, toolroom, and powerplant occupation being compared						
	Electricians	Machinists	Mechanics		Tool and die makers	Stationary engineers	Boiler tenders
			Machinery	Motor vehicles			
Maintenance electricians	100						
Maintenance machinists	100	100					
Maintenance mechanics (machinery)	102	101	100				
Maintenance mechanics (motor vehicles)	102	102	100	100			
Tool and die makers	98	(*)	97		100		
Stationary engineers	(*)	(*)	(*)	(*)	(*)	100	
Boiler tenders	110	(*)	(*)	(*)	(*)	(*)	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, Chattanooga, Tenn.-Ga., September 1980

Occupation which equals 100	Material movement and custodial occupation being compared												
	Truckdrivers			Shippers	Receivers	Warehousemen	Order fillers	Shipping packers	Material handling laborers	Forklift operators	Power-truck operators (other than forklift)	Guards	Janitors, porters, and cleaners
	Light truck	Medium truck	Tractor-trailer									Class B	
Truckdrivers, light truck	100												
Truckdrivers, medium truck	(*)	100											
Truckdrivers, tractor-trailer	(*)		100										
Shippers	(*)	125	(*)	100									
Receivers	(*)	(*)	(*)	102	100								
Warehousemen	89	(*)	(*)	(*)	107	100							
Order fillers	(*)	(*)	(*)	(*)	99	(*)	100						
Shipping packers	(*)	(*)	(*)	(*)	(*)	104	103	100					
Material handling laborers	(*)	108	116	(*)	100	(*)	100	98	100				
Forklift operators	(*)	102	109	(*)	102	108	103	(*)	93	100			
Power-truck operators (other than forklift)	(*)	106	(*)	(*)	(*)	(*)	(*)	(*)	90	96	100		
Guards, class B	(*)	115	(*)	112	111	(*)	(*)	(*)	107	103	107	100	
Janitors, porters, and cleaners	113	126	143	110	108	129	105	108	107	108	110	111	100

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

Footnotes

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.

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 effects 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, classes A and B
Typists, classes A and B	Payroll clerks
File clerks, classes A, B, and C	Key entry operators, classes A and B
Messengers	

Electronic data processing

Computer systems analysts, classes A, B, and C	Computer programmers, classes A, B, and C
	Computer operators, classes A, B, C

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
---------------------------------	----------------------------

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

Tabulations on selected establishment practices and supplementary wage provisions (B-series tables) are not presented in this bulletin. Information for these tabulations is collected at 3-year intervals. These tabulations on minimum entrance salaries for inexperienced office workers; shift differentials; scheduled weekly hours and days; paid holidays; paid vacations; and health, insurance, and pension plans are presented (in the B-series tables) in previous bulletins for this area.

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.

Appendix table 1. Establishments and workers within scope of survey and number studied in Chattanooga, Tenn.-Ga.,¹ September 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 ⁴		Studied
				Number	Percent	
All divisions.....	-	294	109	68,964	100	44,727
Manufacturing.....	50	171	56	44,062	64	26,628
Nonmanufacturing.....	-	123	53	24,902	36	18,099
Transportation, communication, and other public utilities ⁵	50	13	10	4,796	7	4,524
Wholesale trade ⁶	50	23	5	2,656	4	616
Retail trade ⁶	50	49	16	8,153	12	5,039
Finance, insurance, and real estate ⁶	50	12	8	5,787	8	5,399
Services ⁷	50	26	14	3,510	5	2,521

¹The Chattanooga Standard Metropolitan Statistical Area, as defined by the Office of Management and Budget through February 1974, consists of Hamilton, Marion, and Sequatchie Counties, Tenn.; and Catoosa, Dade, and Walker Counties, Ga. 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 all workers in all establishments with total employment (within the area) at or above the minimum limitation.

⁵Abbreviated to 'public utilities' in the A-series tables. Taxicabs and services incidental to water transportation are excluded. Chattanooga's electric utilities and local-transit are municipally operated, and are excluded by definition from the scope of the study.

⁶Separate data for this division are not presented in the A-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 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 descriptions, are excluded.

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 an 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 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:

	<i>LR-1</i>	<i>LR-2</i>
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 salespeople. 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 for clerical accuracy various types of reports, lists, calculations, posting, etc.; or preparing simple or assisting in preparing more complicated journal vouchers. May work in either a manual or automated accounting system.

The work requires a knowledge of clerical methods and office practices and procedures which relates to the clerical processing and recording of transactions and accounting information. With experience, the worker typically becomes familiar with the bookkeeping and accounting terms and procedures used in the assigned work, but is not required to have a knowledge of the formal principles of bookkeeping and accounting.

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

Class A. Under general supervision, performs accounting clerical operations which require the application of experience and judgment, for example, clerically processing complicated or nonrepetitive accounting transactions, selecting among a substantial variety of prescribed accounting codes and classifications, or tracing transactions through previous accounting actions to determine source of discrepancies. May be assisted by one or more class B accounting clerks.

Class B. Under close supervision, following detailed instructions and standardized procedures, performs one or more routine accounting clerical operations, such as posting to ledgers, cards, or worksheets where identification of items and locations of postings are clearly indicated; checking accuracy and completeness of standardized and repetitive records or accounting documents; and coding documents using a few prescribed accounting codes.

BOOKKEEPING-MACHINE OPERATOR

Operates a bookkeeping machine (with or without a typewriter keyboard) to keep a record of business transactions.

Class A. Keeps a set of records requiring a knowledge of and experience in basic bookkeeping principles, and familiarity with the structure of the particular accounting system used. Determines proper records and distribution of debit and credit items to be used in each phase of the work. May prepare consolidated reports, balance sheets, and other records by hand.

Class B. Keeps a record of one or more phases or sections of a set of records usually requiring little knowledge of basic bookkeeping. Phases or sections include accounts payable, payroll, customers' accounts (not including a simple type of billing described under machine biller), cost distribution, expense distribution, inventory control, etc. May check or assist in preparation of trial balances and prepare control sheets for the accounting department.

MACHINE BILLER

Prepares statements, bills, and invoices on a machine other than an ordinary or electromatic typewriter. May also keep records as to billings or shipping charges or perform other clerical work incidental to billing operations. For wage study purposes, machine billers are classified by type of machine, as follows:

Billing-machine biller. Uses a special billing machine (combination typing and adding machine) to prepare bills and invoices from customers' purchase orders, internally prepared orders, shipping memoranda, etc. Usually involves application of predetermined discounts and shipping charges and entry of necessary extensions, which may or may not be computed on the billing machine, and totals which are automatically accumulated by machine. The operation usually involves a large number of carbon copies of the bill being prepared and is often done on a fanfold machine.

Bookkeeping-machine biller. Uses a bookkeeping machine (with or without a typewriter keyboard) to prepare customers' bills as part of the accounts receivable operation. Generally involves the simultaneous entry of figures on customers' ledger record. The machine automatically accumulates figures on a number of vertical columns and computes and usually prints automatically the debit or credit balances. Does not involve a knowledge of bookkeeping. Works from uniform and standard types of sales and credit slips.

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 operators, 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 media (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

Class A. Plans the graphic presentation of complex items having distinctive design features that differ significantly from established drafting precedents. Works in close support with the design originator, and may recommend minor design changes. Analyzes the effect of each change on the details of form, function, and positional relationships of components and parts. Works with a minimum of supervisory assistance. Completed work is reviewed by design originator for consistency with prior engineering determinations. May either prepare drawings or direct their preparation by lower level drafters.

Class B. Performs nonroutine and complex drafting assignments that require the application of most of the standardized drawing techniques regularly used. Duties typically involve such work as: Prepares working drawings of subassemblies with irregular shapes, multiple functions, and precise positional relationships between components; prepares architectural drawings for construction of a building including detail drawings of foundations, wall sections, floor plans, and roof. Uses accepted formulas and manuals in making necessary computations to determine quantities of materials to be used, load capacities, strengths, stresses, etc. Receives initial instructions, requirements, and advice from supervisor. Completed work is checked for technical adequacy.

Class C. Prepares detail drawings of single units or parts for engineering, construction, manufacturing, or repair purposes. Types of drawings prepared include isometric projections (depicting three dimensions in accurate scale) and sectional views to clarify positioning of components and convey needed information. Consolidates details from a number of sources and adjusts or transposes scale as required. Suggested methods of approach, applicable precedents, and advice on source materials are given with initial

assignments. Instructions are less complete when assignments recur. Work may be spot-checked during progress.

DRAFTER-TRACER

Copies plans and drawings prepared by others by placing tracing cloth or paper over drawings and tracing with pen or pencil. (Does not include tracing limited to plans primarily consisting of straight lines and a large scale not requiring close delineation.) *AND/OR*

Prepares simple or repetitive drawings of easily visualized items. Work is closely supervised during progress.

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 who 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 tasks; 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 sinkers).

STATIONARY ENGINEER

Operates and maintains and may also supervise the operation of stationary engines and equipment (mechanical or electrical) to supply the establishment in which employed with power, heat, refrigeration, or air conditioning. Work involves: Operating and maintaining equipment such as steam engines, air compressors, generators, motors, turbines, ventilating and refrigerating equipment, steam boilers and boiler-fed water pumps; making equipment repairs; and keeping a record of operation of machinery, temperature, and fuel consumption. May also supervise these operations. *Head or chief engineers in establishments employing more than one engineer are excluded.*

BOILER TENDER

Fires stationary boilers to furnish the establishment in which employed with heat, power, or steam. Feeds fuels to fire by hand or operates a mechanical stoker, gas, or oil burner; and checks water and safety valves. May clean, oil, or assist in repairing boilerroom equipment.

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.*

Service Contract Act Surveys

The following areas are surveyed periodically for use in administering the Service Contract Act of 1965. Survey results are published in releases which are available, at no cost, while supplies last from any of the BLS regional offices shown on the back cover.

Alaska (statewide)
Albany, Ga.
Albuquerque, N. Mex.
Alexandria-Leesville, La.
Alpena-Standish-Tawas City, Mich.
Ann Arbor, Mich.
Asheville, N.C.
Atlantic City, N.J.
Augusta, Ga.-S.C.
Austin, Tex.
Bakersfield, Calif.
Baton Rouge, La.
Beaumont-Port Arthur-Orange and Lake Charles, Tex.-La.
Biloxi-Gulfport and Pascagoula-Moss Point, Miss.
Binghamton, N.Y.
Birmingham, Ala.
Bremerton-Shelton, Wash.
Brunswick, Ga.
Cedar Rapids, Iowa
Champaign-Urbana-Rantoul, Ill.
Charleston-North Charleston-Walterboro, S.C.
Cheyenne, Wyo.
Clarksville-Hopkinsville, Tenn.-Ky.

Colorado Springs, Colo.
Columbia-Sumter, S.C.
Columbus, Ga.-Ala.
Columbus, Miss.
Connecticut (statewide)
Dothan, Ala.
Duluth-Superior, Minn.-Wis.
El Paso-Alamogordo-Las Cruces, Tex.-N. Mex.
Eugene-Springfield-Medford, Oreg.
Fayetteville, N.C.
Fort Smith, Ark.-Okla.
Fort Wayne, Ind.
Frederick-Hagerstown-Chambersburg, Md.-Pa.
Gadsden and Anniston, Ala.
Goldsboro, N.C.
Guam, Territory of
Knoxville, Tenn.
La Crosse-Sparta, Wis.
Laredo, Tex.
Lexington-Fayette, Ky.
Lima, Ohio
Little Rock-North Little Rock, Ark.
Logansport-Peru, Ind.
Lower Eastern Shore, Md.-Va.-Del.
Macon, Ga.
Madison, Wis.
Maine (statewide)
Mansfield, Ohio
McAllen-Pharr-Edinburg and Brownsville-Harlingen- San Benito, Tex.
Meridian, Miss.

Middlesex, Monmouth, and Ocean Counties, N.J.
Mobile-Pensacola-Panama City, Ala.-Fla.
Montana (statewide)
Montgomery, Ala.
Nashville-Davidson, Tenn.
New Bern-Jacksonville, N.C.
New Hampshire (statewide)
North Dakota (statewide)
Northern New York
Northwest Texas
Orlando, Fla.
Oxnard-Simi Valley-Ventura, Calif.
Peoria, Ill.
Pine Bluff, Ark.
Pueblo, Colo.
Puerto Rico
Raleigh-Durham, N.C.
Reno, Nev.
Riverside-San Bernardino-Ontario, Calif.
Salina, Kans.
Santa Barbara-Santa Maria-Lompoc, Calif.
Savannah, Ga.
Selma, Ala.
Sherman-Denison, Tex.
Shreveport, La.
South Dakota (statewide)
Southeastern Massachusetts
Southern Idaho
Southwest Virginia
Spokane, Wash.

Springfield, Ill.
Stockton, Calif.
Tacoma, Wash.
Topeka, Kans.
Tucson-Douglas, Ariz.
Tulsa, Okla.
Upper Peninsula, Mich.
Vallejo-Fairfield-Napa, Calif.
Vermont (statewide)
Virgin Islands of the U.S.
Waco and Killeen-Temple, Tex.
Waterloo-Cedar Falls, Iowa
West Virginia (statewide)
Western and Northern Massachusetts
Wichita Falls-Lawton-Altus, Tex.-Okla.
Yakima-Richland-Kennewick-Pendleton, Wash.-Oreg.

ALSO AVAILABLE—

An annual report on salaries for accountants, auditors, chief accountants, attorneys, job analysts, directors of personnel, buyers, chemists, engineers, engineering technicians, drafters, and clerical employees is available. Order as BLS Bulletin 2045, *National Survey of Professional, Administrative, Technical and Clerical Pay, March 1979*, \$3.00 a copy, from any of the BLS regional sales offices shown on the back cover, or from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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 1980	3000-21	\$2.25
Baltimore, Md., Aug. 1980	3000-38	\$2.25
Billings, Mont., July 1980 ¹	3000-31	\$2.00
Birmingham, Ala., Mar. 1978	2025-15	\$0.80
Boston, Mass., Aug. 1980	3000-40	\$2.25
Buffalo, N.Y., Oct. 1979	2050-65	\$2.25
Canton, Ohio, May 1978	2025-22	\$0.70
Chattanooga, Tenn.—Ga., Sept. 1980	3000-44	\$1.75
Chicago, Ill., May 1980 ¹	3000-26	\$3.25
Cincinnati, Ohio—Ky.—Ind., July 1980	3000-32	\$2.25
Cleveland, Ohio, Sept. 1979	2050-47	\$1.75
Columbus, Ohio, Oct. 1979	2050-61	\$2.25
Corpus Christi, Tex., July 1980	3000-28	\$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. 1980 ¹	3000-33	\$1.75
Denver—Boulder, Colo., Dec. 1979	2050-72	\$2.25
Detroit, Mich., Mar. 1980	3000- 7	\$2.25
Fresno, Calif., June 1980 ¹	3000-30	\$2.00
Gainesville, Fla., Sept. 1979	2050-45	\$1.50
Gary—Hammond—East Chicago, Ind., Oct. 1979 ¹	2050-60	\$2.25
Green Bay, Wis., July 1980	3000-22	\$1.75
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. 1980 ¹	3000-19	\$2.25
Houston, Tex., Apr. 1980 ¹	3000-18	\$3.25
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. 1980	3000-42	\$2.25
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 1980	3000-29	\$2.00
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 1980	3000-24	\$2.25
Norfolk—Virginia Beach—Portsmouth, Va.—N.C., May 1980	3000-20	\$1.75
Norfolk—Virginia Beach—Portsmouth and Newport News—Hampton, Va.—N.C., May 1978	2025-21	\$0.80
Northeast Pennsylvania, Aug. 1980	3000-37	\$1.75
Oklahoma City, Okla., Aug. 1980 ¹	3000-41	\$2.25
Omaha, Nebr.—Iowa, Oct. 1979	2050-51	\$1.50
Paterson—Clifton—Passaic, N.J., June 1980 ¹	3000-34	\$2.25
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 1980 ¹	3000-35	\$2.00
Poughkeepsie—Kingston—Newburgh, N.Y., June 1980 ¹	3000-39	\$2.00
Providence—Warwick—Pawtucket, R.I.—Mass., June 1980	3000-27	\$2.00
Richmond, Va., June 1980 ¹	3000-23	\$2.25
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. 1980	3000-36	\$1.75
Toledo, Ohio—Mich., May 1980	3000-13	\$1.75
Trenton, N.J., Sept. 1980	3000-43	\$1.75
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. 1980 ¹	3000-25	\$2.00
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.

U.S. Department of Labor
Bureau of Labor Statistics
Washington, D.C. 20212

Official Business
Penalty for private use, \$300

Postage and Fees Paid
U.S. Department of Labor

Third Class Mail

Lab-441



Bureau of Labor Statistics Regional Offices

Region I

1603 JFK Federal Building
Government Center
Boston, Mass. 02203
Phone: 223-6761 (Area Code 617)

Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

Region II

Suite 3400
1515 Broadway
New York, N.Y. 10036
Phone: 944-3121 (Area Code 212)

New Jersey
New York
Puerto Rico
Virgin Islands

Region III

3535 Market Street.
P.O. Box 13309
Philadelphia, Pa. 19101
Phone: 596-1154 (Area Code 215)

Delaware
District of Columbia
Maryland
Pennsylvania
Virginia
West Virginia

Region IV

Suite 540
1371 Peachtree St., N.E.
Atlanta, Ga. 30367
Phone: 881-4418 (Area Code 404)

Alabama
Florida
Georgia
Kentucky
Mississippi
North Carolina
South Carolina
Tennessee

Region V

9th Floor, 230 S. Dearborn St.
Chicago, Ill. 60604
Phone: 353-1880 (Area Code 312)

Illinois
Indiana
Michigan
Minnesota
Ohio
Wisconsin

Region VI

Second Floor
555 Griffin Square Building
Dallas, Tex. 75202
Phone: 767-6971 (Area Code 214)

Arkansas
Louisiana
New Mexico
Oklahoma
Texas

Regions VII and VIII

Federal Office Building
911 Walnut St., 15th Floor
Kansas City, Mo. 64106
Phone: 374-2481 (Area Code 816)

VII
Iowa
Kansas
Missouri
Nebraska

VIII
Colorado
Montana
North Dakota
South Dakota
Utah
Wyoming

Regions IX and X

450 Golden Gate Ave.
Box 36017
San Francisco, Calif. 94102
Phone: 556-4678 (Area Code 415)

IX
Arizona
California
Hawaii
Nevada

X
Alaska
Idaho
Oregon
Washington

