
UNITED STATES DEPARTMENT OF LABOR

Frances Perkins, *Secretary*

BUREAU OF LABOR STATISTICS

Isador Lubin, *Commissioner (on leave)*

A. F. Hinrichs, *Acting Commissioner*

in cooperation with

WORK PROJECTS ADMINISTRATION



Salaries and Hours of Labor
in Municipal Fire Departments

July 1, 1938

VOLUME III

East North Central Cities



Prepared by

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HERMAN B. BYER, *Chief*



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Letter of Transmittal

UNITED STATES DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
Washington, D. C., October 16, 1940.

THE SECRETARY OF LABOR:

I have the honor to transmit herewith the third of a series of nine reports on Salaries and Hours of Labor in Municipal Fire Departments. This report covers 96 cities in the East North Central States. An explanation of the purposes of the survey was given in the preface to the first report, volume I, New England Cities.

A. F. HINRICHS, *Acting Commissioner.*

HON. FRANCES PERKINS,
Secretary of Labor.

*Bulletin No. 684 (Vol. III) of the
United States Bureau of Labor Statistics*

**Salaries and Hours of Labor in Municipal Fire
Departments, East North Central Cities,
July 1, 1938¹**

Summary²

Total employment in the fire departments of 96 East North Central cities having a population of 25,000 or more³ was 14,342 on July 1, 1938. This employment represented 11 fire-department employees per 10,000 inhabitants in these cities. Total annual salaries for all the cities combined were \$32,600,000, which amounted to about \$2.50 per capita.

About 94 percent of all employees were engaged in actual fire fighting. Over two-thirds of these were classified as privates; one-fifth were supervisory officers, of whom 2,338 were captains and lieutenants, and the remaining 448 were higher-ranking officers.

The salaries received by individual members of the fire departments varied, in general, with the size of the city. In the 4 cities with populations of 500,000 or more, the majority of the salaries were in the \$300 range between \$2,350 and \$2,650. In the smallest cities, having populations from 25,000 to 50,000, the bulk of the employees received considerably lower salaries, the \$300 range of greatest concentration being \$1,550 to \$1,850.

More than two-thirds of the members of the departments were on duty 84 hours per week, and worked under a form of the two-platoon system which required 24 hours on duty followed by 24 hours off duty. Approximately another quarter of the employees worked under similar systems, which differed only in that employees were

¹ Analysis and presentation by Gerald M. Whitright. Editing and tabulation of data by Mahlon B. Buckman. Technical adviser, Carol P. Brainerd.

² Relatively little general information is available on employment and salaries in city fire departments, in spite of the importance of their functions and the considerable number of their employees. A study on the "Salaries and Working Conditions of Fire Department Employees, 1934" was made by the Bureau of Labor Statistics and published in the *Monthly Labor Review* of November 1935. In the present study, the Bureau of Labor Statistics, in cooperation with the Work Projects Administration, has undertaken to compile this information, as of July 1, 1938, for cities in the United States having a population of 25,000 or more. This report for the cities in the East North Central States is one of a series which is being issued by geographic divisions.

³ The U. S. Census of Population for 1930 was used to determine the size of the cities. See appendix table A for list of the cities included in this report.

given additional time off which reduced the 84-hour workweek by either 10 or 12 hours.

About 98 percent of all employees received a paid vacation of 2 weeks or more.

Annual Salaries

General Level of Salaries

The level of salaries of fire department employees in 96 East North Central cities was influenced to a large extent by the size of the cities. In the 4 largest cities, Chicago, Detroit, Cleveland, and Milwaukee, there was a marked concentration of salaries between \$2,350 and \$2,650. Nearly two-thirds of all employees in these 4 cities had salaries within this \$300 range; this range was high as compared with the salary intervals containing most of the employees in the smaller cities.

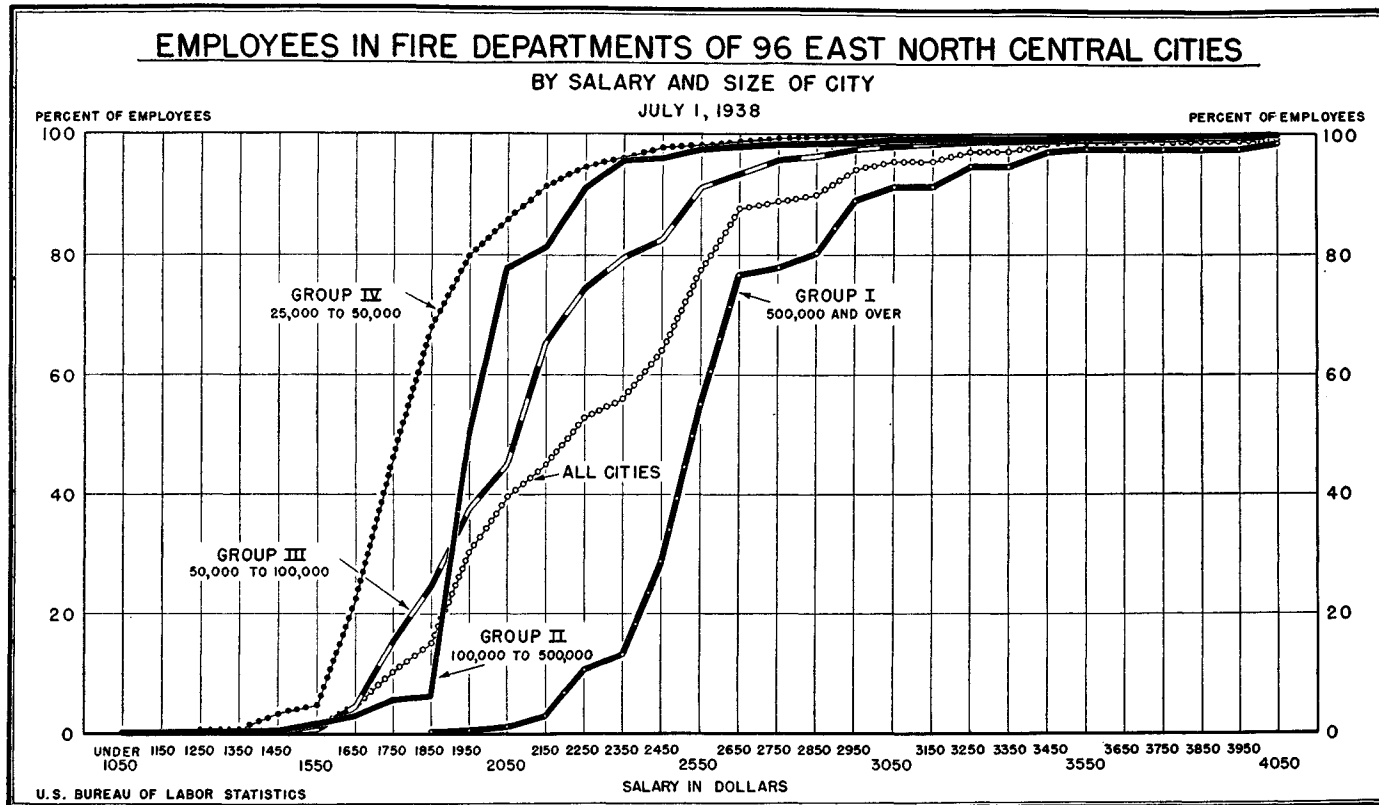
In this report the 96 cities are divided into 4 groups, on the basis of the 1930 Census of Population. The 4 cities above, with populations in excess of 500,000, are designated throughout the report as group I cities. Fifteen cities having populations of 100,000 and under 500,000 are classified as group II cities. The remaining 2 groups, III and IV, comprise 24 cities with populations of 50,000 and under 100,000, and 53 cities with populations of 25,000 and under 50,000, respectively.

Annual salary rates for the 15 cities in group II were considerably lower than those for the 4 largest cities, 44 percent of the employees in group II having salaries between \$1,850 and \$1,950 and 28 percent between \$1,950 and \$2,050. Thus 72 percent of all salaries in these cities were concentrated in the \$200 range, \$1,850 to \$2,050, as contrasted with less than 1 percent of the salaries in cities of group I.

The salaries in cities of group III were not concentrated within as small a range as was the case in other population groups. Eleven percent of the fire-department employees in group III had salaries between \$1,650 and \$1,750, and each succeeding \$100 interval up to \$2,250 contained an appreciable number of employees. Seventy percent of all employees in these cities were found in the \$600 range, \$1,650 to \$2,250.

In the 53 smallest cities, group IV, the bulk of the salaries was again concentrated within a relatively small range at a low level. Twenty-four percent of all employees were paid from \$1,650 to \$1,750. Over 63 percent of the total employees in cities of group IV were in the \$300 range, \$1,550 to \$1,850.

For all 96 cities combined there was no marked concentration of salaries in any part of the salary distribution. This was due to the sharp differences in salary levels in the 4 groups of cities.



The complete distribution of employees according to salaries, showing the number and percentage of employees in each \$100 range for the four population groups and for all cities combined, is shown in table 1. The accompanying chart shows these figures on a cumulative basis. A given point on a cumulative curve in the chart indicates the percentage of employees who received salaries less than the amount shown on the scale at the bottom of the chart. A rapidly rising line at the left of the chart, e.g., that for group IV, is indicative of relatively low salaries for the city group plotted. That for group I, on the other hand, is farthest to the right, which position indicates that firemen in these cities received the highest salaries.

TABLE 1.—*Distribution of employees in fire departments of 96 East North Central cities, by salary and size of city, July 1, 1933*¹

Salary class	Number of employees					Percentage of employees				
	All cities	City group ²				All cities	City group ²			
		I	II	III	IV		I	II	III	IV
All salaries.....	14,342	6,514	3,782	1,864	2,182	100.0	100.0	100.0	100.0	100.0
Under \$1,050.....	8	6			2	.1		.2		.1
\$1,050 and under \$1,150.....	1	1				(4)	(4)			
\$1,150 and under \$1,250.....	17		8		9	.1		.2		.4
\$1,250 and under \$1,350.....	2			2		(4)			.1	
\$1,350 and under \$1,450.....	73	1	2	9	61	.5	(4)	.1	.5	2.8
\$1,450 and under \$1,550.....	80	2	44	1	33	.5	(4)	1.2	.1	1.5
\$1,550 and under \$1,650.....	508	2	49	73	384	3.5	(4)	1.3	3.9	17.6
\$1,650 and under \$1,750.....	825	1	101	203	520	5.7	(4)	2.7	10.9	23.9
\$1,750 and under \$1,850.....	687	19	25	168	475	4.8	.3	.7	9.0	21.8
\$1,850 and under \$1,950.....	2,173	16	1,657	246	254	15.1	.3	43.8	13.2	11.7
\$1,950 and under \$2,050.....	1,348	33	1,049	135	131	9.4	.5	27.7	7.2	6.0
\$2,050 and under \$2,150.....	755	125	126	381	123	5.3	1.9	3.3	20.4	5.6
\$2,150 and under \$2,250.....	1,124	508	373	172	71	7.8	7.8	9.8	9.2	3.3
\$2,250 and under \$2,350.....	468	164	176	96	32	3.3	2.5	4.6	5.2	1.5
\$2,350 and under \$2,450.....	1,115	1,006	18	51	40	7.8	15.5	.5	2.7	1.8
\$2,450 and under \$2,550.....	1,956	1,721	60	167	8	13.6	26.4	1.6	9.0	.4
\$2,550 and under \$2,650.....	1,459	1,389	17	42	11	10.2	21.3	.4	2.3	.5
\$2,650 and under \$2,750.....	157	92	12	41	12	1.1	1.4	.3	2.2	.6
\$2,750 and under \$2,850.....	171	149	5	12	5	1.2	2.3	.1	.6	.2
\$2,850 and under \$2,950.....	597	570	5	21	1	4.2	8.8	.1	1.1	(4)
\$2,950 and under \$3,050.....	182	148	19	10	5	1.3	2.3	.5	.5	.2
\$3,050 and under \$3,150.....	13	6	2	5		.1	.1	.1	.3	
\$3,150 and under \$3,250.....	232	222		8	2	1.6	3.4		.4	.1
\$3,250 and under \$3,350.....	8	1	1	5	1	.1	(4)	(4)	.3	(4)
\$3,350 and under \$3,450.....	153	153				1.1	2.4			
\$3,450 and under \$3,550.....	47	34	11	2		.3	.5	.3	.1	
\$3,550 and under \$3,650.....	10		5	4	1	.1		.1	.2	(4)
\$3,650 and under \$3,750.....	3	1	2			(4)	(4)	.1		
\$3,750 and under \$3,850.....	8	2	2	3	1	.1	(4)	.1	.2	(4)
\$3,850 and under \$3,950.....	1		1			(4)				
\$3,950 and under \$4,050.....	65	59	4	2		.4	.9	.1	.1	
\$4,050 and over.....	96	89	2	5		.7	1.4	.1	.3	

¹ For a more detailed analysis of data, see appendix tables B, C, D, and E.

² Group I includes cities having a population of 500,000 or more; group II, cities having a population of 100,000 and under 500,000; group III, cities having a population of 50,000 and under 100,000; and group IV, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

³ Includes only regular, full-time employees; a commissioner in Cicero, Ill. (group III), has been excluded.

⁴ Less than 1/10 of 1 percent.

⁵ Includes 2 at \$4,140, 26 at \$4,188, 22 at \$4,320, 1 at \$4,416, 16 at \$4,500, 8 at \$4,740, 2 at \$4,800, 1 at \$5,000, 2 at \$5,240, 1 at \$5,280, 1 at \$5,820, 1 at \$6,000, 1 at \$6,440, 1 at \$6,500, 1 at \$6,800, 1 at \$7,500, 1 at \$7,920, and 1 at \$10,000.

⁶ Includes 1 at \$4,800 and 1 at \$6,000.

⁷ Includes 2 at \$4,200, 2 at \$4,500, and 1 at \$4,750.

Salaries in Selected Occupations

Salaries of fire chiefs covered a wide range, from \$1,680 in New Albany, Ind., to \$10,000 in Chicago, Ill. Eleven chiefs received more than \$4,050. The greatest concentration of salaries of the lower-paid chiefs was in the interval between \$2,950 and \$3,050, which included 12 chiefs. In general, the largest cities paid the highest salaries.

Similar variations existed in the salaries for the other high ranking officers—assistant chiefs, assistant deputy chiefs, and battalion chiefs—except, of course, at lower salary levels. The maximum salary for these officers was \$7,500. In the 96 cities there was a total of 352 such officers, two-thirds of whom were in the cities in groups I and II.

The pay of the 1,253 captains ranged between \$1,350 and \$3,450, and these rates of pay varied directly with the size of the city. The spread between the high and low salary for 1,085 lieutenants was somewhat smaller than for captains; all were included in the intervals from \$1,550 to \$3,050.

As can be seen from table 2, engineers were paid more than drivers or privates in many cities. The salary rates of privates, classified according to grade, are discussed in the following section.

TABLE 2.—Distribution of employees in fire departments of 96 East North Central cities, by occupation and salary, July 1, 1938 ¹

Salary class	All occupations					Chiefs					Assistant chiefs					Assistant deputy chiefs					Battalion chiefs				
	All cities	City group ²				All cities	City group ²				All cities	City group ²				All cities	City group ²				All cities	City group ²			
		I	II	III	IV		I	II	III	IV		I	II	III	IV		I	II	III	IV		I	II	III	IV
Number of cities reporting	96	4	15	24	53	96	4	15	24	53	81	4	14	21	42	17	3	1	5	8	15	4	8	2	1
All salaries	14,342	6,514	3,782	1,864	2,182	96	4	15	24	53	130	7	26	32	65	40	23	1	7	9	182	130	48	3	1
Under \$1,050	8		6		2																				
\$1,050 and under \$1,150	1	1																							
\$1,150 and under \$1,250	17		8		9																				
\$1,250 and under \$1,350	2			2																					
\$1,350 and under \$1,450	73	1	2	9	61																				
\$1,450 and under \$1,550	80	2	44	1	33																				
\$1,550 and under \$1,650	508	2	49	73	384						5				5										
\$1,650 and under \$1,750	825	1	101	203	520	1				1	3				3	3				3					
\$1,750 and under \$1,850	687	19	25	168	475						6				6	3				3					
\$1,850 and under \$1,950	2,173	16	1,657	246	254	1				1	8				8	1				1					
\$1,950 and under \$2,050	1,348	33	1,049	135	131	4				4	17			3	14	1				1					
\$2,050 and under \$2,150	755	125	126	381	123	3				3	12			3	9						1				1
\$2,150 and under \$2,250	1,124	508	373	172	71	4				4	10		2	1	7	3		1	2						
\$2,250 and under \$2,350	468	164	176	96	32	5				5	12			8	4						6		6		
\$2,350 and under \$2,450	1,115	1,006	18	51	40	7			1	6	8		4	3	1						5		5		
\$2,450 and under \$2,550	1,956	1,721	60	167	8	7			1	6	2				2										
\$2,550 and under \$2,650	1,459	1,389	17	42	11	3				3	8			3	2	3	1			1	9		9		
\$2,650 and under \$2,750	157	92	12	41	12	6				6	4			1	3						11		11		
\$2,750 and under \$2,850	171	149	5	12	5	3				3	3		3						1	2					
\$2,850 and under \$2,950	597	570	5	21	1	2		1		1	2		2			2			2						
\$2,950 and under \$3,050	182	148	19	10	5	12		2	5	5	12		8	4							9		9		
\$3,050 and under \$3,150	13	6	2	5							5			5											
\$3,150 and under \$3,250	232	222		8	2	3			1	2											19	18		1	
\$3,250 and under \$3,350	8	1	1	5	1	4			3	1	2			2							1		1		
\$3,350 and under \$3,450	153	153																							
\$3,450 and under \$3,550	47	34	11	2		3		1	2												37	30	7		
\$3,550 and under \$3,650	10		5	4	1	7		2	4	1	2			2											
\$3,650 and under \$3,750	3	1	2			2		2																	
\$3,750 and under \$3,850	8	2	2	3	1	3		2		1	2	2									2			2	
\$3,850 and under \$3,950	1		1			1		1																	
\$3,950 and under \$4,050	65	59	4	2		4		2	2		2		2			1	1				56	56			
\$4,050 and over	96	89	2	5		11	54	62	75		5	5				22	22				26	26			

Salary class	Captains					Lieutenants					Engineers					Drivers					Privates				
	All cities	City group ²				All cities	City group ²				All cities	City group ²				All cities	City group ²				All cities	City group ²			
		I	II	III	IV		I	II	III	IV		I	II	III	IV		I	II	III	IV		I	II	III	IV
Number of cities reporting.....	94	4	15	24	51	62	4	11	18	29	34	4	5	10	15	39	1	8	9	21	96	4	15	24	53
All salaries.....	1,253	402	359	214	278	1,085	537	297	130	121	855	494	148	136	77	590	22	261	101	206	9,201	4,453	2,404	1,086	1,258
Under \$1,050.....																									
\$1,050 and under \$1,150.....																					2				2
\$1,150 and under \$1,250.....																					2			2	
\$1,250 and under \$1,350.....																					60			9	51
\$1,350 and under \$1,450.....	10				10																				
\$1,450 and under \$1,550.....																					73		43	1	29
\$1,550 and under \$1,650.....	25				25	12				12	28			20	8	20				20	400		47	49	304
\$1,650 and under \$1,750.....	88				66	35				35	1					1	122			82	536		99	125	312
\$1,750 and under \$1,850.....	21			22	21	23			18	5	48			14	34	55			40	55	499	18	25	122	334
\$1,850 and under \$1,950.....	106				71	62		4	17	41	26			11	15	167			132	2	33	1,709	1,462	188	59
\$1,950 and under \$2,050.....	115		65	15	35	102		70	23	9	127		113		14	119			117		778	15	644	76	43
\$2,050 and under \$2,150.....	74		17	32	25	81		81			47			44	3	42			34	8	436	124		244	68
\$2,150 and under \$2,250.....	189		156	26	7	79		57	14	8	60			24	35	1	65	22	12	25	6	614	447	84	51
\$2,250 and under \$2,350.....	90		64	16	10	111		85	19	7	34	34									141	96		45	
\$2,350 and under \$2,450.....	11			5	6	58	53		5		35	34			1						943	884		35	24
\$2,450 and under \$2,550.....	119	46	57	16		3			3												1,806	1,667		139	
\$2,550 and under \$2,650.....	16			16		137	125		8	4	34	24			10						1,202	1,202			
\$2,650 and under \$2,750.....	72	64		8		17			17		37	24			13										
\$2,750 and under \$2,850.....	7			5	2						116	116													
\$2,850 and under \$2,950.....	12			12		265	259		6		262	262													
\$2,950 and under \$3,050.....						100	100																		
\$3,050 and under \$3,150.....																									
\$3,150 and under \$3,250.....	200	194		6																					
\$3,250 and under \$3,350.....																									
\$3,350 and under \$3,450.....	98	98																							
\$3,450 and under \$3,550.....																									
\$3,550 and under \$3,650.....																									
\$3,650 and under \$3,750.....																									
\$3,750 and under \$3,850.....																									
\$3,850 and under \$3,950.....																									
\$3,950 and under \$4,050.....																									
\$4,050 and over.....																									

See footnotes at end of table.

TABLE 2.—Distribution of employees in fire departments of 96 East North Central cities, by occupation and salary, July 1, 1938—Continued

Salary class	Automobile mechanics					Operators, fire alarm and telephone					Electricians					Linemen					Others				
	All cities	City group ²				All cities	City group ²				All cities	City group ²				All cities	City group ²				All cities	City group ²			
		I	II	III	IV		I	II	III	IV		I	II	III	IV		I	II	III	IV		I	II	III	IV
Number of cities reporting.....	37	2	9	12	14	36	4	11	13	8	21	1	6	6	8	24	2	8	8	6	65	4	14	20	27
All salaries.....	66	16	22	13	15	181	62	49	46	24	29	2	9	8	10	71	14	38	10	9	563	348	105	54	56
Under \$1,050.....																					8		6		2
\$1,050 and under \$1,150.....																					1		1		
\$1,150 and under \$1,250.....						11		4		7											4		4		
\$1,250 and under \$1,350.....																									
\$1,350 and under \$1,450.....																					3	1	2		
\$1,450 and under \$1,550.....						4				4											3	2	1		
\$1,550 and under \$1,650.....	1				1	5			2	3	2				2				1	1	8	2	2	1	3
\$1,650 and under \$1,750.....	4		1	2		13			8	5	4			1	3					1	12	1	1		6
\$1,750 and under \$1,850.....	2				2						1				5				3	2	24			11	12
\$1,850 and under \$1,950.....	22		13	1	8	21		16	2	3	1				1	9		5		4	40	16	14	1	9
\$1,950 and under \$2,050.....	7		5	1	1	23		16	7		4				1	11		10	1		40	18	6	9	7
\$2,050 and under \$2,150.....	4			4		25		6	17	2	5		3		5	9		9			16	1	8	3	4
\$2,150 and under \$2,250.....	2		2			19	10	2	7		3			1	2	6		5	1		70	29	28	9	4
\$2,250 and under \$2,350.....	15	13		1	1	8		5	3		2		1	1		11		9	2		33	21	6	1	5
\$2,350 and under \$2,450.....	4	3			1	1	1									1			1		42	31	9	1	1
\$2,450 and under \$2,550.....	2		1	1		5	5				4			4							8	3	2	3	
\$2,550 and under \$2,650.....	2			2		18	18				1			1		6	6				22	14	5	3	
\$2,650 and under \$2,750.....																					9	4	1	1	3
\$2,750 and under \$2,850.....	1			1		2	2														37	31	2	4	
\$2,850 and under \$2,950.....						4	4				1	1				8	8				39	36	2	1	
\$2,950 and under \$3,050.....																					49	48		1	
\$3,050 and under \$3,150.....																					8	6	2		
\$3,150 and under \$3,250.....																					10	10			
\$3,250 and under \$3,350.....											1	1									55	55			
\$3,350 and under \$3,450.....																					7	4	3		

SALARIES AND HOURS OF LABOR, FIRE DEPARTMENTS

Salaries of Privates

Forty-three percent of all privates received salaries between \$2,350 and \$2,650. Practically 90 percent of these were first-grade privates employed in cities of group I. Another large group of 1,709, or nearly 19 percent of all privates, were paid between \$1,850 and \$1,950, most of these being first-grade privates in group II cities.

Out of the total of 9,201 privates in this region, 8,374, or 91 percent, were classified as first-grade privates. Only 5 percent were second-grade. Except for 203 second-grade privates in Chicago who had an annual salary of \$2,440, the largest number in this grade in any hundred-dollar interval had salaries of \$1,650 to \$1,750. Privates in the lower grades constituted a very small proportion of the total and their distribution with respect to salaries is shown along with the complete distribution in table 3.

TABLE 3.—*Distribution of privates in fire departments of 96 East North Central cities, by salary and grade, July 1, 1938*

Salary class	All grades									
	Number					Percentage				
	All cities	City group ¹				All cities	City group ¹			
		I	II	III	IV		I	II	III	IV
All classes.....	9, 201	4, 453	2, 404	1, 086	1, 258	100. 0	100. 0	100. 0	100. 0	100. 0
\$1,150 and under \$1,250.....	2				2	(²)				. 2
\$1,250 and under \$1,350.....	2			2		(²)			2	
\$1,350 and under \$1,450.....	60			9	51	. 7			8	4. 1
\$1,450 and under \$1,550.....	73		43	1	29	. 8		1. 8	1	2. 3
\$1,550 and under \$1,650.....	400		47	49	304	4. 3		2. 0	4. 5	24. 2
\$1,650 and under \$1,750.....	536		99	125	312	5. 8		4. 1	11. 5	24. 8
\$1,750 and under \$1,850.....	499	18	25	122	334	5. 4	. 4	1. 0	11. 2	26. 5
\$1,850 and under \$1,950.....	1, 709		1, 462	188	59	18. 6		60. 8	17. 3	4. 7
\$1,950 and under \$2,050.....	778	15	644	76	43	8. 5	. 3	26. 8	7. 0	3. 4
\$2,050 and under \$2,150.....	436	124		244	68	4. 7	2. 8		22. 5	5. 4
\$2,150 and under \$2,250.....	614	447	84	51	32	6. 7	10. 0	3. 5	4. 7	2. 5
\$2,250 and under \$2,350.....	141	96		45		1. 5	2. 2		4. 2	
\$2,350 and under \$2,450.....	943	884		35	24	10. 3	19. 9		3. 2	1. 9
\$2,450 and under \$2,550.....	1, 806	1, 667		139		19. 6	37. 4		12. 8	
\$2,550 and under \$2,650.....	1, 202	1, 202				13. 1	27. 0			

Salary class	Number of privates by specified grade									
	First					Second				
	All cities	City group ¹				All cities	City group ¹			
		I	II	III	IV		I	II	III	IV
All classes.....	8, 374	3, 997	2, 181	988	1, 208	419	221	117	56	25
\$1,150 and under \$1,250.....										
\$1,250 and under \$1,350.....										
\$1,350 and under \$1,450.....	47				47					
\$1,450 and under \$1,550.....	23				23	1			1	
\$1,550 and under \$1,650.....	326			37	289	33		9	10	14
\$1,650 and under \$1,750.....	409			109	300	93		89		4
\$1,750 and under \$1,850.....	441			112	329	15		10	4	1
\$1,850 and under \$1,950.....	1, 672		1, 453	162	57	34		9	23	2
\$1,950 and under \$2,050.....	748		644	65	39	13			9	4
\$2,050 and under \$2,150.....	311			243	68	19	18		1	
\$2,150 and under \$2,250.....	604	447	84	41	32	8			8	
\$2,250 and under \$2,350.....	45			45						
\$2,350 and under \$2,450.....	740	681		35	24	203	203			
\$2,450 and under \$2,550.....	1, 806	1, 667		139						
\$2,550 and under \$2,650.....	1, 202	1, 202								

See footnotes at end of table.

TABLE 3.—*Distribution of privates in fire departments of 96 East North Central cities, by salary and grade, July 1, 1938—Continued*

Salary class	Number of privates by specified grade									
	Third					Fourth				
	All cities	City group ¹				All cities	City group ¹			
		I	II	III	IV		I	II	III	IV
All classes.....	276	152	82	30	12	104	65	22	5	12
\$1,150 and under \$1,250.....	1				1					
\$1,250 and under \$1,350.....	1			1						
\$1,350 and under \$1,450.....	7			7					2	4
\$1,450 and under \$1,550.....	31		29		2	16		12		4
\$1,550 and under \$1,650.....	39		38		1					4
\$1,650 and under \$1,750.....	15			11	4	17		10	3	4
\$1,750 and under \$1,850.....	25		15	6	4					
\$1,850 and under \$1,950.....	3			3						
\$1,950 and under \$2,050.....	17	15		2						
\$2,050 and under \$2,150.....	41	41				65	65			
\$2,150 and under \$2,250.....										
\$2,250 and under \$2,350.....	96	96								
\$2,350 and under \$2,450.....										
\$2,450 and under \$2,550.....										
\$2,550 and under \$2,650.....										

Salary class	Number of privates by specified grade									
	Fifth and below					Probationary				
	All cities	City group ¹				All cities	City group ¹			
		I	II	III	IV		I	II	III	IV
All classes.....	24	18		6		4		2	1	1
\$1,150 and under \$1,250.....						1				1
\$1,250 and under \$1,350.....						1			1	
\$1,350 and under \$1,450.....										
\$1,450 and under \$1,550.....						2		2		
\$1,550 and under \$1,650.....	2			2						
\$1,650 and under \$1,750.....	2			2						
\$1,750 and under \$1,850.....	18	18								
\$1,850 and under \$1,950.....										
\$1,950 and under \$2,050.....										
\$2,050 and under \$2,150.....										
\$2,150 and under \$2,250.....	2			2						
\$2,250 and under \$2,350.....										
\$2,350 and under \$2,450.....										
\$2,450 and under \$2,550.....										
\$2,550 and under \$2,650.....										

¹ Group I includes cities having a population of 500,000 or more; group II, cities having a population of 100,000 and under 500,000; group III, cities having a population of 50,000 and under 100,000; and group IV, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

² Includes 2 sixth-grade privates at \$1,620.

³ Less than $\frac{1}{10}$ of 1 percent.

Hours and Working Conditions

Average Hours and Days on Duty per Week

In the East North Central cities, the employees of the fire departments were grouped into six general classifications, depending upon the system of operation under which they worked.

Continuous duty is a term applied to the hours of duty of chiefs and other high-ranking officers who are required to be on call for all fires. Only 74 employees fell in this classification.

Single-platoon systems differ from continuous duty in that the fireman receives an occasional day off. In the East North Central division there were only 16 employees working on single platoons.

Ninety-two percent of all employees worked under some form of the two-platoon system. Of the 14,342 employees, 9,783 were on duty for 24 hours followed by 24 hours off, with no extra days off; and 3,363 worked under the same system, but were given additional time off. The hours of duty per week for the straight 24-hours-on and 24-hours-off group were 84.

The men receiving extra time off worked an average of either 72 or 74 hours. In Chicago, for example, the firemen were on duty 24 hours and off 24 hours, but after 7 days on duty each person received 2 extra days off. The accompanying diagram shows how under this system the firemen in Chicago are divided into 16 groups in such a way that there are seven-sixteenths of the force on duty at all times.

Assignment Pattern for Days of Duty for Firemen in Chicago, July 1, 1938

[Each X represents 24 hours on duty]

<i>Groups of firemen</i>	<i>Days</i>															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A-----			X		X		X		X		X		X		X	
B-----				X		X		X		X		X		X		X
C-----	X				X		X		X		X		X		X	
D-----		X				X		X		X		X		X		X
E-----	X		X				X		X		X		X		X	
F-----		X		X				X		X		X		X		X
G-----	X		X		X				X		X		X		X	
H-----		X		X		X				X		X		X		X
I-----	X		X		X		X				X		X		X	
J-----		X		X		X		X				X		X		X
K-----	X		X		X		X		X				X		X	
L-----		X		X		X		X		X				X		X
M-----	X		X		X		X		X		X				X	
N-----		X		X		X		X		X		X				X
O-----	X		X		X		X		X		X		X			
P-----		X		X		X		X		X		X		X		

TABLE 4.—Distribution of employees in fire departments of 96 East North Central cities, by average hours and days on duty per week, July 1, 1938

System of operation	Average hours on duty per week	Average days on duty per week	Number of cities reporting various systems					Number of employees ¹					Percentage of employees				
			All cities	City group ²				All cities	City group ²				All cities	City group ²			
				I	II	III	IV		I	II	III	IV		I	II	III	IV
All systems.....								³ 14,342	6,514	3,782	1,864	2,182	100.0	100.0	100.0	100.0	100.0
Continuous duty.....	168	7.0	66	3	12	16	35	74	8	14	18	34	.5	.1	.4	1.0	1.6
Single platoon ⁴								16	11	5			.1	.2	.1		
On 3 days, off 1 day.....	126	5.3	1	1				11	11				.1	.2			
On 4 days, off 1 day.....	134	5.6	1		1			5		5			(⁵)		.1		
Two-platoon:																	
Regular:																	
On 24 hours, off 24 hours.....	84	3.5	90	3	11	24	52	9,783	3,299	2,688	1,741	2,055	68.2	50.6	71.1	93.4	94.2
With additional time off duty ⁶								3,363	2,873	476		14	23.5	44.1	12.6		.6
On 24 hours, off 24 hours, off 0.5 day per week.....	72	3.0	1		1			299		299			2.1		7.9		
On 24 hours, off 24 hours, off 0.4 day per week.....	74	3.1	3	1	1		1	3,064	2,873	177		14	21.4	44.1	4.7		.6
Three-platoon: ⁷ On 1 day, off 2 days.....	56	2.3	1		1			383		383			2.7		10.1		
Other ⁸	45.4	5.5	70	4	19	21	26	723	323	216	105	79	5.0	5.0	5.7	5.6	3.6

¹ For a more detailed analysis of data, see appendix table F.² Group I includes cities having a population of 500,000 or more; group II, cities having a population of 100,000 and under 500,000; group III, cities having a population of 50,000 and under 100,000; and group IV, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.³ Includes only regular, full-time employees, with the exception of 1 commissioner for Cicero, Ill.⁴ The average number of hours on duty per week for employees in variations of the single-platoon system is arrived at by dividing the total number of hours on duty per year for each variation by 52.143. The average number of days per week for each variation is arrived at by dividing the total number of days on duty per year by 52.143.⁵ Less than $\frac{1}{10}$ of 1 percent.⁶ Under the 2-platoon system with additional time off duty, the employees are on duty less than an average of 84 hours per week. The average number of hours on duty per week under this system is arrived at by deducting the number of additional hours off duty per week from 84. The average number of days on duty is arrived at by dividing the number of days on duty per year by 52.143.⁷ The average number of hours and days on duty per week is arrived at by dividing the total number of hours and days on duty per year by 52.143.⁸ The average number of hours and days on duty per week is arrived at by dividing the total weekly man-hours and man-days by the total number of employees under "other."

Only 383, or about 3 percent of all employees, worked under a three-platoon system. These firemen were on duty 1 day and then were on leave for 2 days, which arrangement results in only one-third of the force being on duty each day. The average workweek under this system was 56 hours.

Those employees classified under the group "Other" were, for the most part, nonuniformed employees whose weekly hours of duty correspond more closely to those in private industry. They numbered 723 and constituted 5 percent of all employees in the fire departments of the 96 cities.

Items Supplied to Firemen

Firemen in most departments received certain items of equipment and clothing from the cities without cost. All cities provided sleeping quarters for employees on night duty, and nearly two-thirds of the cities provided bedding, linen, and laundry. Only six cities furnished uniforms or a clothing allowance, although most of the remaining departments supplied one or more of such items as helmets, rubber coats, boots, or caps.

TABLE 5.—*Distribution of 96 East North Central cities, according to items supplied to firemen, July 1, 1938*

City group ¹	Total number of cities	Number of cities supplying—							
		Sleeping quarters for men on night duty	Beds, bedding, linen, and laundry	Helmets	Rubber coats	Rubber boots	Clothing allowance	Uniforms	Minor items
All cities.....	96	96	62	43	26	13	3	3	54
Group I.....	4	4	3	—	—	—	—	—	3
Group II.....	15	15	11	6	3	1	1	1	10
Group III.....	24	24	17	11	4	2	—	—	17
Group IV.....	53	53	31	26	19	10	2	2	24

¹ Group I includes cities having a population of 500,000 or more; group II, cities having a population of 100,000 and under 500,000; group III, cities having a population of 50,000 and under 100,000; and group IV, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

Vacations With Pay

Slightly more than one-third of all employees in the 96 cities studied received 20 days vacation with pay per year. Most of the other two-thirds were given 14 or 15 days off each year, and vacations of the few remaining varied from 7 to 32 days. Only 23 persons received no vacation. As can be seen from table 6, the size of the city in which the departments were located did not appreciably affect the length of the vacation granted.

TABLE 6.—*Distribution of employees in fire departments of 96 East North Central cities, according to days of vacation with pay, July 1, 1938*

City group ¹	Number of cities	Total number of employees	Number of employees having—											
			No vacation	7 days	10 days	12 days	14 days	15 days	16 days	17 days	20 days	21 days	30 days	32 days
All cities -----	96	14,342	23	3	217	32	4,592	4,365	96	34	4,838	48	15	79
Group I -----	4	6,514	-----	-----	54	-----	1,207	792	-----	-----	4,461	-----	-----	-----
Group II -----	15	3,782	10	-----	-----	-----	1,345	2,425	-----	-----	-----	2	-----	-----
Group III -----	24	1,864	11	3	-----	-----	1,007	289	96	-----	377	1	1	79
Group IV -----	53	2,182	2	-----	163	32	1,033	859	-----	34	-----	45	14	-----

¹ Group I includes cities having a population of 500,000 or more; group II, cities having a population of 100,000 and under 500,000; group III, cities having a population of 50,000 and under 100,000; and group IV, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

² Includes only regular, full-time employees.

Promotion of Lower-Grade Privates

It was customary in more than half of the East North Central cities to promote privates from the lowest grade to the next higher grade after 1 year of service. Promotion systems employing civil service examinations were relatively numerous in this section of the country—17 of the 96 cities using this method of promotion.

TABLE 7.—*Distribution of 96 East North Central cities, according to method of promoting lower-grade privates, July 1, 1938*

City group ¹	Total number of privates	Number of cities					
		Total	With automatic promotion—		With promotion by—		With privates all 1 grade
			After 6 months	After 1 year	Civil service	Appointment	
All cities	9,201	96	13	51	17	7	8
Group I	4,453	4	—	3	—	1	—
Group II	2,404	15	2	7	4	1	1
Group III	1,086	24	2	19	2	—	1
Group IV	1,258	53	9	22	11	5	6

¹ Group I includes cities having a population of 500,000 or more; group II, cities having a population of 100,000 and under 500,000; group III, cities having a population of 50,000 and under 100,000; and group IV, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

Percentage Distribution of Employees and Salaries

All Employees

Ninety-four percent of all employees were in the fire-fighting division, which includes all members of the department normally reporting to the scene of a fire. The remainder were engaged in fire prevention, maintenance of apparatus, fire alarm, and clerical work. Sixty-eight percent of the employees in the fire-fighting division were privates.

The proportion of privates in relation to total employees tended to decrease as the cities decreased in size. This is primarily due to the

fact that the smaller cities had proportionately more supervisory officers than the larger cities.

It can be seen from table 8, which compares groups of employees in various occupations with the proportions of total salaries they receive, that there were no great differences between the proportion of personnel and the proportion of total salaries for each occupational group. The greatest differences in these proportions occurred in the case of the high-ranking officers, who had higher than average salaries.

TABLE 8.—*Percentage distributions¹ of employees and salaries in fire departments of 96 East North Central cities, by division, July 1, 1938*

Division ² and occupation	Percentage of all employees					Percentage of total salaries				
	All cities	City groups ³				All cities	City groups ³			
		I	II	III	IV		I	II	III	IV
All divisions.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fire fighting.....	94.2	94.3	94.1	93.0	94.9	93.8	93.8	93.9	92.9	94.9
Chiefs.....	.7	.1	.4	1.3	2.4	.9	.2	.8	2.1	3.4
Assistant or deputy chiefs.....	.9	.1	.7	1.7	3.0	1.0	.2	1.0	2.1	3.4
Assistant deputy chiefs.....	.3	.3	(4)	.4	.4	.4	.6	(4)	.5	.4
Battalion chiefs.....	1.3	2.0	1.3	.2	.1	2.0	2.9	1.8	.3	.1
Captains.....	8.7	6.2	9.5	11.5	12.7	9.3	7.3	10.5	12.3	13.1
Lieutenants.....	7.6	8.2	7.8	7.0	5.5	8.2	8.8	8.4	7.4	5.8
Pilots.....	.1	.3	—	—	—	.2	.3	—	—	—
Engineers, fire engine.....	6.0	7.6	3.9	7.3	3.5	6.4	8.0	3.9	7.3	3.6
Engineers, marine.....	.2	.5	—	—	—	.3	.5	—	—	—
Drivers.....	4.1	.3	6.9	5.4	9.4	3.5	.3	6.8	5.0	9.3
Privates, all grades.....	64.1	68.4	63.6	58.2	57.7	61.5	64.4	60.7	55.9	55.7
Miscellaneous.....	.2	.3	—	—	.2	.1	.3	—	—	.1
Fire prevention.....	1.1	1.5	.8	.6	.6	1.2	1.6	.8	.6	.7
Apparatus.....	1.5	1.6	1.7	1.1	1.5	1.7	1.7	1.8	1.1	1.6
Fire alarm.....	2.4	1.4	3.0	4.6	2.7	2.5	1.7	3.1	4.7	2.6
Clerical.....	.5	.6	.4	.6	.2	.5	.6	.4	.6	.2
Miscellaneous.....	.3	.6	—	.1	.1	.3	.6	—	.1	(4)

¹ Based on figures in appendix table G.

² All fire departments assign men from the fire-fighting division to the other divisions and carry these assigned men on the fire-fighting division list. This is done to provide the fire department with a reserve for cases of emergency. As a result of this method of assignment, the fire-fighting division is always shown to be larger than it actually is on a routine day. Some other factors are also responsible for the small size of the non-fire-fighting divisions. In some cities, the maintenance work is let to private contractors; part of the fire-prevention work is done by the building inspector's office; and the fire-alarm work is done by the local telephone company or by a separate city bureau.

³ Group I includes cities having a population of 500,000 or more; group II, cities having a population of 100,000 and under 500,000; group III, cities having a population of 50,000 and under 100,000; and group IV, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

⁴ Less than $\frac{1}{10}$ of 1 percent.

Supervisory Employees

Supervisory employees constituted 20 percent of total employees and received 23 percent of all salaries paid in fire departments in the East North Central region. It will be noted from table 9 that these percentages increase as the cities decrease in size. However, the ratios (item C in table 9) of the proportions of total salaries paid to supervisory personnel (item B) to the proportions of such employees to all employees (item A) decreased with the size of the city. The relatively higher salaries paid to the officers in large cities, where the

duties of administrative officers entail more responsibility than is the case in the smaller cities, explains in part this decrease in the ratios.

TABLE 9.—*Number and salaries of supervisory employees*¹ *as percentages of total fire-department employees and total salaries, in 96 East North Central cities, July 1, 1938*

Item	All cities	City group ²			
		I	II	III ³	IV
A. Percentage of all employees.....	20.2	17.3	20.7	23.4	25.5
B. Percentage of total salaries.....	22.8	20.5	23.7	26.2	27.7
C. Ratio of B to A.....	1.13	1.18	1.14	1.12	1.09

¹ Includes chiefs, assistant chiefs, assistant deputy chiefs, battalion chiefs, captains, lieutenants, marshals or wardens, assistant marshals or wardens, superintendents, assistant superintendents, chief inspectors, master mechanics, chief fire-alarm operators, and chief clerks.

² Group I includes cities with a population of 500,000 or more; group II cities having a population of 100,000 and under 500,000; group III cities with a population of 50,000 and under 100,000; and group IV cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

³ Excludes 1 commissioner in Cicero, Ill.

Appendix

The East North Central States include Illinois, Indiana, Michigan, Ohio, and Wisconsin.

Appendix table A shows the 1930 population of each of the cities covered by this report, along with the ratio of the number of fire-department employees to population and the per capita salary cost for each city. Tables B through E give the number of employees and the salary rate for occupations in each of the cities of groups I, II, III, and IV, respectively. Table F shows average hours and days on duty per week under various systems of operation, by division, for all cities and for each size group. Table G summarizes employment and salaries paid in each division and occupation for all cities and for each population group. All data in the tables, except population, are as of July 1, 1938.

TABLE A.—*Fire-department employees and salary costs in relation to population in East North Central cities with a population of 25,000 or more,¹ July 1, 1938*

City	Popula- tion ¹	Employees per 10,000	Per capita salary cost
All cities	12, 736, 511	11	\$2. 56
Group I —cities of 500,000 and over.....	6, 423, 778	10	2. 66
Chicago, Ill.....	3, 376, 438	9	2. 38
Cleveland, Ohio.....	900, 429	12	2. 94
Detroit, Mich.....	1, 568, 662	11	2. 94
Milwaukee, Wis.....	578, 249	14	3. 08
Group II —cities of 100,000 to 500,000.....	2, 979, 400	13	2. 55
Akron, Ohio.....	255, 040	8	1. 52
Canton, Ohio.....	104, 906	9	1. 69
Cincinnati, Ohio.....	451, 160	14	2. 81
Columbus, Ohio.....	290, 564	11	2. 20
Dayton, Ohio.....	200, 982	11	2. 20
Evansville, Ind.....	102, 249	15	3. 07
Flint, Mich.....	156, 492	10	1. 97
Fort Wayne, Ind.....	114, 946	14	2. 82
Gary, Ind.....	100, 426	13	2. 94
Grand Rapids, Mich.....	168, 592	14	2. 72
Indianapolis, Ind.....	364, 161	17	3. 51
Peoria, Ill.....	104, 969	12	2. 29
South Bend, Ind.....	104, 193	15	3. 20
Toledo, Ohio.....	290, 718	14	2. 79
Youngstown, Ohio.....	170, 002	9	1. 85
Group III —cities of 50,000 to 100,000.....	1, 502, 988	12	2. 61
Cicero, Ill.....	66, 602	11	2. 42
Cleveland Heights, Ohio.....	50, 945	9	2. 22
Dearborn, Mich.....	50, 358	19	4. 79
Decatur, Ill.....	57, 510	11	1. 85
East Chicago, Ind.....	54, 784	13	2. 97
Evanston, Ill.....	63, 338	12	2. 83
Hamilton, Ohio.....	52, 176	11	2. 10
Hammond, Ind.....	64, 560	13	2. 88
Hamtramck, Mich.....	56, 268	14	3. 71

See footnotes at end of table.

TABLE A.—*Fire-department employees and salary costs in relation to population in East North Central cities with a population of 25,000 or more, July 1, 1938—Continued*

City	Popula- tion	Employees per 10,000	Per capita salary cost
Group III—cities of 50,000 to 100,000—Continued,			
Highland Park, Mich.	52,959	16	\$4.13
Jackson, Mich.	55,187	14	2.25
Kalamazoo, Mich.	54,786	17	2.96
Kenosha, Wis.	50,262	12	2.91
Lakewood, Ohio.	70,509	9	2.26
Lansing, Mich.	78,397	14	2.91
Madison, Wis.	57,899	14	2.64
Oak Park, Ill.	63,982	8	1.85
Pontiac, Mich.	64,928	10	1.99
Racine, Wis.	67,542	9	1.86
Rockford, Ill.	85,864	11	2.32
Saginaw, Mich.	80,715	12	2.11
Springfield, Ill.	71,864	12	2.49
Springfield, Ohio.	68,743	10	1.86
Terre Haute, Ind.	62,810	18	3.42
Group IV—cities of 25,000 to 50,000			
Alton, Ill.	1,830,345	12	2.16
Anderson, Ind.	30,151	9	1.47
Ann Arbor, Mich.	39,804	18	3.35
Appleton, Wis.	26,944	12	2.16
Aurora, Ill.	25,267	13	2.19
Battle Creek, Mich.	46,589	8	1.84
Bay City, Mich.	43,573	14	2.54
Belleville, Ill.	47,355	18	2.98
Berwyn, Ill.	28,425	11	1.74
Bloomington, Ill.	47,027	6	1.31
Danville, Ill.	30,930	12	1.89
East Cleveland, Ohio.	36,765	12	1.94
Eau Claire, Wis.	39,667	8	2.06
Elgin, Ill.	26,287	13	2.02
Elkhart, Ind.	35,929	9	1.70
Elyria, Ohio.	32,949	12	2.17
Fond du Lac, Wis.	25,633	13	2.57
Galesburg, Ill.	26,449	16	2.76
Granite City, Ill.	28,830	10	1.69
Green Bay, Wis.	25,130	6	1.08
Joliet, Ill.	37,415	16	2.95
Kokomo, Ind.	42,993	11	2.10
La Crosse, Wis.	32,843	12	2.22
La Fayette, Ind.	39,614	18	3.36
Lima, Ohio.	26,240	18	2.92
Lorain, Ohio.	42,287	9	1.61
Mansfield, Ohio.	44,512	10	2.16
Marion, Ohio.	33,525	10	1.84
Massillon, Ohio.	31,084	10	1.94
Maywood, Ill.	26,400	8	1.40
Michigan City, Ind.	25,829	6	1.06
Middletown, Ohio.	26,735	11	2.00
Mishawaka, Ind.	29,992	12	2.11
Moline, Ill.	28,630	15	2.68
Muncie, Ind.	32,236	11	1.68
Muskegon, Mich.	46,548	12	2.33
New Albany, Ind.	41,390	16	2.83
Newark, Ohio.	25,819	15	2.45
Norwood, Ohio.	30,596	9	1.55
Oshkosh, Wis.	33,411	8	1.50
Port Huron, Mich.	40,108	15	2.55
Portsmouth, Ohio.	31,361	15	2.71
Quincy, Ill.	42,560	9	1.74
Richmond, Ind.	39,241	16	2.26
Rock Island, Ill.	32,493	14	2.42
Sheboygan, Wis.	37,953	9	1.46
Steubenville, Ohio.	39,251	16	2.76
Superior, Wis.	35,422	10	1.86
Warren, Ohio.	36,113	22	4.33
Waukegan, Ill.	41,062	8	1.72
West Allis, Wis.	33,499	8	1.70
Wyandotte, Mich.	34,671	10	2.19
Zanesville, Ohio.	28,368	11	2.37
	36,440	9	1.59

¹ Includes all East North Central cities with a population of 25,000 or more, except East St. Louis, Ill. (74,347), for which data were not available.

² Based on U. S. Census of Population for 1930.

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TABLE B.—Number of employees and annual salaries in fire departments of each of 4 East North Central cities of group I¹, by occupation, July 1, 1938

Division and occupation	Number of employees in all cities	Chicago, Ill.		Cleveland, Ohio		Detroit, Mich.		Milwaukee, Wis.	
		No.	Salary	No.	Salary	No.	Salary	No.	Salary
All occupations	6,514	2,999		1,050		1,673		792	
Fire fighting:									
Chiefs	4	1	\$10,000	1	\$6,440	1	\$7,920	1	\$6,500
Assistant or deputy chiefs	7	1	6,000	1	4,416	2	5,240	2	3,840
Assistant deputy chiefs	23	14	4,500	1	3,981	8	4,740		
Battalion chiefs	130	56	4,000	30	3,543	26	4,188	18	3,240
Captains	402	194	3,200	64	2,746	98	3,360	46	2,540
Lieutenants	537	259	2,900	125	2,614	100	3,000	53	2,400
Pilots	18	6	3,200			5	3,360	7	2,400
Engineers, fire engine	494	262	2,880	24	2,576	116	2,820	34	2,280
Engineers, marine	32	5	3,060	24	2,725	7	3,360	34	2,400
Drivers	22							9	2,400
Privates:								11	2,280
1st grade	3,997	1,667	2,500	681	2,420	1,202	2,640	22	2,160
2d grade	221	203	2,440					18	2,100
3d grade	152	96	2,320	41	2,070			15	2,040
4th grade	65	65	2,140						
5th grade	18							18	1,800
Miscellaneous:									
Messengers	11					11	1,860		
Stokers	8					8	2,640		
Fire prevention:									
Marshals or wardens	4	1	4,500	1	3,543	1	4,140	1	3,240
Assistant marshals or wardens	2			2	3,000				
Inspectors	93	35	2,900	30	2,812	7	3,000	18	2,160
Photographers	1			1	2,420	3	3,420		
Apparatus:									
Superintendents of machinery	4	1	4,800	1	3,543	1	5,820	1	3,240
Assistant superintendents of machinery	3					2	3,960	1	2,700
Machinists	34	28	3,389			2	2,340	3	2,400
Automobile mechanics	16					13	2,340	3	2,400
General mechanics:									
Blacksmiths	15	12	3,389			1	2,340	2	2,160
Painters	7	4	2,607			2	2,340	1	2,160
Tinsmiths	1							1	2,160
Upholsterers	1							1	2,160
Woodworkers	1							1	2,160
Painters' helpers	1							1	1,800
Miscellaneous:									
Emergency repairmen	3					3	3,000		
Instructors, fire engine	1					1	3,240		
Laborers	10	10	1,981						
Stock clerks	1							1	2,160
Storekeepers	1					1	2,640		
Storeroom clerks	2							1	1,140
Fire alarm:								1	2,040
Superintendents	3	1	4,800	1	3,543	1	5,280		
Assistant superintendents	4	1	4,500	2	3,000	1	4,140		
Chief fire alarm operators	1							1	2,280
Operators, fire-alarm	49	22	4,320	10	2,614	1	2,640	10	2,160
Operators, telephone	13	7	2,580			2	2,820		
Electricians	2					4	2,880		
Linemen	12			6	2,614	1	2,400		
Linemen's helpers	7					5	2,520		
Miscellaneous:						1	2,860		
Battery repairmen	1					1	3,340		
Signal cable splicers	2					6	2,912		

See footnotes at end of table.

TABLE B.—*Number of employees and annual salaries in fire departments of each of 4 East North Central cities of group I, by occupation, July 1, 1933—Continued*

Division and occupation	Number of employees in all cities	Chicago, Ill.		Cleveland, Ohio		Detroit, Mich.		Milwaukee, Wis.	
		No.	Salary	No.	Salary	No.	Salary	No.	Salary
Clerical:									
Secretaries.....	4	1	\$6,800	1	\$3,543	1	\$5,000	1	\$3,060
Assistant secretaries.....	3			{	1 2,746			1	2,640
Chief clerks.....	1			1	3,000			1	2,220
Bookkeepers.....	4	2	2,000			{	1 2,280		
						1	2,700		
Clerks.....	12	6	2,400			3	to 3,000		
Stenographers.....	16	4	2,400			4	to 1,560	1	1,440
Typists.....	2	2	1,500				2,460	1	1,920
								1	2,040
Miscellaneous:									
Building inspectors.....	32	32	3,000						
Medical officers.....	1			1	3,687				
Fire college:									
Assistant chief engineers.....	1							1	3,240
Captains, fire college.....	1							1	2,540
Chauffeurs.....	1							1	2,160

¹ Cities with a population of 500,000 or more; based on U. S. Census of Population for 1930.

² Includes only regular, full-time employees.

³ Includes 1 at \$2,100, 1 at \$2,220, 1 at \$2,460, 1 at \$2,700, 1 at \$2,820, and 1 at \$3,000.

⁴ Includes 2 at \$1,560, 1 at \$1,740, 1 at \$2,004, 1 at \$2,220, 3 at \$2,340, and 1 at \$2,460.

TABLE C.—Number of employees and annual salaries in fire departments of each of 15 East North Central cities of group II,¹ by occupation, July 1, 1938

Division and occupation	Number of employees; all cities	Illinois		Indiana								Michigan					
		Peoria		Evansville		Fort Wayne		Gary		Indianapolis		South Bend		Flint		Grand Rapids	
		Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
All occupations.....	2 3,782	127	-----	158	-----	165	-----	134	-----	605	-----	159	-----	161	-----	237	-----
Fire fighting:																	
Chiefs.....	15	1	\$2,860	1	\$3,650	1	\$3,012	1	\$3,600	1	\$4,800	1	\$3,500	1	\$3,800	1	\$3,610
Assistant or deputy chiefs.....	26	2	2,160	2	2,373	1	2,640	2	3,000	2	3,600	2	2,800	2	2,580	1	3,008
Assistant deputy chiefs.....	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Battalion chiefs.....	48	-----	-----	-----	-----	2	2,386	-----	-----	11	2,693	-----	-----	-----	-----	3	2,416
Captains.....	359	34	1,950	9	2,044	22	2,014	12	2,520	45	2,493	15	2,340	8	2,160	17	2,132
Lieutenants.....	297	-----	-----	26	1,987	4	1,948	14	2,280	71	2,293	15	2,160	10	1,980	17	2,004
Engineers, fire engine.....	123	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	11	2,040	-----	-----	11	2,004
Assistant engineers, fire engine.....	25	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	11	2,040	-----	-----	11	1,905
Drivers.....	261	-----	-----	-----	-----	40	1,920	12	2,220	115	2,026	2	2,040	38	1,920	4	1,905
Privates:																	
1st grade.....	2,181	85	1,860	107	1,960	78	1,920	84	2,160	356	2,026	99	2,040	85	1,860	149	1,905
2d grade.....	117	-----	-----	6	1,734	3	1,860	1	1,800	-----	-----	-----	-----	2	1,680	9	1,629
3d grade.....	82	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	3	1,560	5	1,484
4th grade.....	22	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Probationary.....	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fire prevention: ²																	
Marshals or wardens.....	4	-----	-----	-----	-----	1	2,155	-----	-----	1	3,063	-----	-----	-----	-----	-----	-----
Assistant marshals or wardens.....	3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chief inspectors.....	3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Inspectors.....	19	1	1,960	2	2,073	1	1,949	1	2,160	-----	-----	(4)	-----	1	1,920	-----	-----
Apparatus: ³																	
Superintendents of machinery.....	7	-----	-----	-----	-----	1	2,405	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Assistant superintendents of machinery.....	3	-----	-----	-----	-----	1	2,232	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Machinists.....	2	-----	-----	1	2,281	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Master mechanics.....	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Automobile mechanics.....	22	-----	-----	1	2,154	-----	-----	1	2,520	1	3,100	-----	-----	1	2,100	-----	-----
General mechanics:														2	1,980	-----	-----
Carpenters.....	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Painters.....	3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Plumbers.....	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Tinsmiths.....	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Electricians.....	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Miscellaneous:																			
Apparatus emergency repairmen	4																		
Hydrant supervisors	2																		
Hydrant men	8																		
Laborers	7																		
Storekeepers	1																		
Fire alarm:																			
Superintendents	9			1	2,373												1	2,131	
Assistant superintendents	6					1	2,232												
Chief fire alarm operators	1																		
Operators, fire alarm	41	3	1,950			3	1,920					3	2,040	4	1,860	{	2	2,131	
Operators, telephone	8							4	1,200								2	1,905	
Electricians	8			1	2,044	1	2,105	1	2,280					{	1	1,980			
Linemen	38					4	2,105								2,100	}	3	1,905	
Janitors	1																		
Clerical:																			
Secretaries	9	1	1,440	1	2,044	1	1,920	1	1,440									1	1,500
Bookkeepers	1																		
Clerks	4										2	1,200							
Stenographers	2													1	1,200				

See footnotes at end of table.

TABLE C.—Number of employees and annual salaries in fire departments of each of 15 East North Central cities of group II, by occupation, July 1, 1938—Continued

Division and occupations	Ohio													
	Akron		Canton		Cincinnati		Columbus		Dayton		Toledo		Youngstown	
	Num- ber	Salary	Num- ber	Salary	Num- ber	Salary	Num- ber	Salary	Num- ber	Salary	Num- ber	Salary	Num- ber	Salary
All occupations ¹	194		90		645		326		219		409		153	
Fire fighting:														
Chiefs.....	1	\$3, 977	1	\$2, 955	1	\$6, 000	1	\$3, 720	1	\$4, 001	1	\$3, 900	1	\$3, 771
Assistant or deputy chiefs.....	2	2, 960	2	2, 426	2	4, 000	2	2, 880			3	3, 000	1	2, 829
Assistant deputy chiefs.....													1	2, 169
Battalion chiefs.....					4	3, 000	4	2, 340	5	3, 000	9	2, 580	2	2, 331
Captains.....	29	2, 220	16	2, 262	1	3, 300								
Lieutenants.....					7	3, 500								
Engineers, fire engine.....					56	2, 200	38	2, 220	12	2, 280	21	2, 340	25	2, 169
Assistant engineers, fire engine.....	3	1, 981			53	2, 100	17	2, 040	28	2, 100	42	2, 160		
Drivers.....	6	1, 923			76	2, 000							24	2, 150
Privates:					44	1, 920								
1st grade.....	125	1, 923	66	1, 884	264	1, 860	215	1, 920	140	1, 920	246	1, 920	82	1, 980
2d grade.....					43	1, 740	6	1, 860			38	1, 740	9	1, 822
3d grade.....	1	1, 806			35	1, 620	14	1, 800			24	1, 500		
4th grade.....	10	1, 665			12	1, 500								
Probationary.....			2	1, 500										
Fire prevention:														
Marshals or wardens.....	1	2, 331									1	2, 580		
Assistant marshals or wardens.....	1	2, 272			2	2, 400								
Chief inspectors.....					1	2, 200			1	2, 100				
Inspectors.....	1	1, 923	(4)		4	2, 160	3	1, 920	3	2, 040	(4)		2	2, 169
Apparatus:														
Superintendents of machinery.....	1	2, 622			1	3, 540	1	2, 580	1	2, 400	1	2, 580	1	2, 357
Assistant superintendents of machinery.....							1	2, 220	1	2, 100			1	2, 150
Machinists.....														
Master mechanics.....														
Automobile mechanics.....	2	2, 045	1	1, 680	6	1, 920	7	1, 920	1	2, 040	1	2, 220		
General mechanics: ²														
Carpenters.....					1	2, 160					1	2, 400		
Painters.....					2	2, 160					1	2, 400		
Plumbers.....					1	2, 160								
Tinsmiths.....					1	2, 160								
Electricians.....													1	2, 037

TABLE D.—Number of employees and annual salaries in fire departments of each of 24 East North Central cities of Group III,¹ by occupation, July 1, 1938

Division and occupation	Number of employees in all cities	Illinois														Indiana			
		Cicero		Decatur		Evanston		Oak Park		Rockford		Springfield		East Chicago		Hammond		Terre Haute	
		No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
All occupations.....	² 1,864	75	-----	63	-----	78	-----	53	-----	96	-----	85	-----	73	-----	85	-----	116	-----
Fire fighting:																			
Chiefs.....	24	1	\$3,600	1	\$2,400	1	\$4,500	1	\$4,500	1	\$3,500	1	\$3,000	1	\$3,300	1	\$3,600	1	\$3,000
Assistant or deputy chiefs.....	32	1	2,700	2	2,040	1	3,000	-----	-----	1	3,000	3	2,100	1	3,000	2	2,640	2	2,250
Assistant deputy chiefs.....	7	-----	-----	-----	-----	2	2,880	-----	-----	1	2,750	-----	-----	-----	-----	-----	-----	-----	-----
Battalion chiefs.....	3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Captains.....	214	5	2,400	12	1,740	5	2,700	5	2,750	18	2,240	18	2,100	8	2,460	8	2,520	18	1,920
Lieutenants.....	130	7	2,300	-----	-----	7	2,700	5	2,350	-----	-----	-----	-----	2	2,340	8	2,220	8	1,860
Engineers, fire engine.....	102	5	2,230	-----	-----	4	2,160	6	2,100	-----	-----	16	2,100	14	2,220	-----	-----	-----	-----
Assistant engineers, fire engine.....	34	7	2,165	-----	-----	5	2,160	6	2,100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Drivers.....	101	-----	-----	12	1,650	6	2,160	6	2,100	-----	-----	6	2,100	-----	-----	19	2,160	-----	-----
Privates:																			
1st grade.....	988	32	2,100	29	1,650	41	2,160	22	2,100	65	1,980	40	2,100	41	2,144	40	2,100	73	1,800
2d grade.....	56	5	1,890	1	1,500	4	2,040	-----	-----	2	1,800	-----	-----	1	2,084	2	2,040	3	1,620
3d grade.....	30	6	1,680	1	1,320	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2	1,920	-----	-----
4th grade.....	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
5th grade.....	4	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
6th grade.....	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Probationary.....	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fire prevention:																			
Marshals or wardens.....	1	-----	-----	-----	-----	(4)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chief inspectors.....	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Inspectors.....	10	-----	-----	-----	-----	-----	-----	1	2,100	-----	-----	(5)	-----	1	2,160	-----	-----	3	1,800
Apparatus: ⁶																			
Superintendents of machinery.....	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Machinists.....	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Automobile mechanics.....	13	1	2,100	2	1,740	1	2,340	-----	-----	1	2,500	1	1,860	-----	-----	-----	-----	1	2,100

Fire alarm: 7																			
Superintendents	12	1	3,000						1	2,500							1	2,400	
Assistant superintendents	6	1	2,220														1	2,025	
Operators, fire-alarm	41	3	2,100			(*)			4	2,040						2	2,100	3	2,025
Operators, telephone	5			2	1,650						(*)		3	2,144					
Inspectors	2																		
Electricians	8								1	1,650									
Linemen	10															1	2,160	1	1,800
Helpers:																			
Electricians'	1																		
Linemen's	1																		
Miscellaneous: Utility men	1																		
Clerical: 10 Secretaries	11			1	1,650	1	2,160	1	2,220	1	2,160		1	2,144					
Miscellaneous:																			
Building inspectors		(*)				(*)		(*)					(*)						
Supply truck drivers	1																1	1,800	

See footnotes at end of table.

TABLE D.—Number of employees and annual salaries in fire departments of each of 24 East North Central cities of group III, by occupation, July 1, 1933—Continued

Division and occupation	Michigan															
	Dearborn		Hamtramck		Highland Park		Jackson		Kalamazoo		Lansing		Pontiac		Saginaw	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
All occupations.....	95		79		86		76		91		107		65		98	
Fire fighting:																
Chiefs.....	1	\$4,750	1	\$3,500	1	\$4,000	1	\$2,500	1	\$3,060	1	\$4,200	1	\$3,300	1	\$3,000
Assistant or deputy chiefs.....			2	3,300	2	3,100	1	1,963	1	2,300	1	3,000	2	2,408	1	2,280
Assistant deputy chiefs.....											1	2,800			1	2,160
Battalion chiefs.....	2	3,750													1	2,220
Captains.....	4	2,900	6	3,180	8	2,900	10	1,724	7	1,920	16	2,300	8	2,208	10	1,920
Lieutenants.....	10	2,700	6	2,880	8	2,600			9	1,830	6	2,150			9	1,800
Engineers, fire engine.....	10	2,600	13	2,700			20	1,636	14	1,770						
Assistant engineers, fire engine.....																
Drivers.....									6	1,740	22	2,100			22	1,740
Privates:																
1st grade.....	45	2,500	40	2,520	54	2,500	37	1,575	45	1,740	44	2,050	53	1,908	35	1,680
2d grade.....	8	2,200	2	1,800					2	1,560	3	1,850			1	1,560
3d grade.....											5	1,650			7	1,440
4th grade.....															2	1,380
5th grade.....					2	2,200										
6th grade.....																
Probationary.....									1	1,260						
Fire prevention: ³																
Marshals or wardens.....					1	2,500										
Chief inspectors.....																
Inspectors.....	(6)		1	2,880			1	1,724					(9)		1	1,800
Apparatus:																
Superintendents of machinery.....					1	2,800	1	1,806			1	2,800	1	2,208	1	1,980
Machinists.....											1	2,150				
Automobile mechanics.....	1	2,600	1	2,760					1	2,100						

Fire alarm: 7																
Superintendents.....	1	3,750	1	2,610	1	2,700	1	1,806	1	1,800	1	2,800			1	1,980
Assistant superintendents.....	1	2,800	1	2,610			1	1,636			1	2,150				
Operators, fire alarm.....	9	{ 1,900 to 2,150 }	(5)		6	2,157	2	1,575	3	1,740	3	2,050			3	1,680
Operators, telephone.....																
Inspectors.....																
Electricians.....			3	2,520	1	2,300										
Linemen.....	1	2,400	2	2,250			1	1,575							1	1,680
Helpers:																
Electricians'.....					1	1,800										
Linemen's.....	1	1,800														
Miscellaneous: Utility men.....	1	2,150														
Clerical: to Secretaries.....											1	2,050			1	1,680
Miscellaneous:																
Building inspectors.....	(5)				(5)				(5)							
Supply truck drivers.....																

See footnotes at end of table.

TABLE D.—Number of employees and annual salaries in fire departments of each of 24 East North Central cities of group III, by occupation, July 1, 1938—Continued

Division and occupation	Ohio								Wisconsin					
	Cleveland Heights		Hamilton		Lakewood		Springfield		Kenosha		Madison		Racine	
	Num- ber	Salary	Num- ber	Salary	Num- ber	Salary	Num- ber	Salary	Num- ber	Salary	Num- ber	Salary	Num- ber	Salary
All occupations.....	45		57		66		68		65		79		63	
Fire fighting:														
Chiefs.....	1	\$4,200	1	\$3,000	1	\$3,600	1	\$3,300	1	\$4,000	1	\$3,000	1	\$3,600
Assistant or deputy chiefs.....			1	2,160	2	3,148	1	2,400	1	3,150	2	2,320	2	2,280
Assistant deputy chiefs.....									1	2,700				
Battalion chiefs.....	1	3,200												
Captains.....	3	2,748	6	2,040	10	2,640	9	2,040	6	2,580	5	2,120	9	2,100
Lieutenants.....	3	2,548	8	1,980			9	1,920	10	2,331	5	2,040	10	2,040
Engineers, fire engine.....														
Assistant engineers, fire engine.....									16	2,140				
Drivers.....													2	1,920
Privates:														
1st grade.....	35	2,436	38	1,860	45	2,340	39	1,800	24	2,079	35	1,920	36	1,920
2d grade.....			1	1,620	2	1,980	3	1,560	1	2,016	14	1,860	1	1,860
3d grade.....	1	1,920							2	1,953	6	1,800		
4th grade.....											2	1,740	1	1,680
5th grade.....											2	1,680		
6th grade.....											2	1,620		
Probationary.....														
Fire prevention:														
Marshals or wardens.....														
Chief inspectors.....									1	2,640				
Inspectors.....	(9)		1	1,980			(9)				1	1,920		
Apparatus: ⁶														
Superintendents of machinery.....									1	2,331				
Machinists.....														
Automobile mechanics.....					1	2,640					1	2,100	1	1,980

Fire alarm: ⁷													
Superintendents						1	2,040		1	2,520			
Assistant superintendents													
Operators, fire alarm					3	2,340							
Operators, telephone													
Inspectors							2	2,040					
Electricians	1	2,548			1	2,640					1	2,160	
Linemen							2	1,800			1	2,040	
Helpers:													
Electricians'													
Linemen's													
Miscellaneous: Utility men													
Clerical: ¹⁰ Secretaries			1	1,980	1	1,740	1	1,800			1	2,040	
Miscellaneous:													
Building inspectors	(⁸)				(⁸)						(⁸)		
Supply truck drivers													

¹ Cities with a population of 50,000 and under 100,000; based on U. S. Census of Population for 1930.

² Totals include only regular, full-time employees; a commissioner in Cicero, Ill., at \$1,200, has been excluded.

³ Work of this division performed by men assigned from fire-fighting division in Lansing.

⁴ Second assistant chief acts as fire marshal.

⁵ Men from fire-fighting division assigned to this work.

⁶ Work of this division performed by separate city bureau or private company in Oak Park, East Chicago, Cleveland Heights, and Springfield (Ohio).

⁷ Work of this division performed by men assigned from fire-fighting division in Pontiac and by separate city bureau or private company in Oak Park, Hamilton, and Racine.

⁸ Work performed by separate city bureau or private company.

⁹ Includes 5 fire-alarm operators at \$2,100 and 4 radio operators (2 at \$1,900, 1 at \$2,100 and 1 at \$2,150).

¹⁰ In cities showing no employees in this division, clerical work is usually assigned to men from fire-fighting division.

TABLE E.—Number of employees and annual salaries in fire departments of each

Division and occupation	Number of employees in all cities	Illinois									
		Alton		Aurora		Belleville		Berwyn		Bloomington	
		No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
All occupations	2,182	27	-----	39	-----	30	-----	28	-----	37	-----
Fire fighting:											
1 Chiefs	53	1	\$2,400	1	\$3,300	1	\$1,920	1	\$2,900	1	\$2,052
2 Assistant or deputy chiefs	65	1	1,980	1	2,640					2	1,710
3 Assistant deputy chiefs	9			1	2,640						
4 Battalion chiefs	1										
5 Captains	278	5	1,740	4	2,340	6	1,680	2	2,420	10	1,596
6 Lieutenants	121			5	2,220			2	2,300		
7 Engineers, fire engine	59	8	1,560								
8 Assistant engineers, fire engine	18										
9 Drivers	206					8	1,650	6	2,200		
Privates:											
10 1st grade	1,208	12	1,560	24	2,100	15	1,620	16	2,100	23	1,539
11 2d grade	25										
12 3d grade	12										
13 4th grade	12										
14 Probationary	1										
Miscellaneous:											
15 Drillmasters	1										
16 Housemen	1										
17 Watchmen	2										
Fire prevention:											
18 Marshals or wardens	1										
19 Inspectors	13			1	2,160			1	2,250	1	1,596
Apparatus:											
20 Superintendents of machinery	14										
21 Assistant superintendents of machinery	1										
22 Automobile mechanics	15										
23 General mechanics: Blacksmiths	1										
24 Miscellaneous: Inspectors	1										
Fire alarm:											
25 Superintendents	12										
26 Assistant superintendents	2										
27 Operators, fire alarm	15			2	2,100						
28 Operators, telephone	9										
29 Inspectors	1										
30 Electricians	10										
31 Linemen	9										
Clerical:											
32 Secretaries	4										
33 Clerks	1										
34 Stenographers											
35 Miscellaneous: Building inspectors	1										

See footnotes at end of table.

of 53 East North Central cities of group IV¹, by occupation, July 1, 1938

[illegible]

TABLE E.—Number of employees and annual salaries in fire departments of each of

Division and occupation	Illinois—Continued				Indiana							
	Rock Island		Waukegan		Anderson		Elkhart		Kokomo		LaFayette	
	No.	Sal-ary	No.	Sal-ary	No.	Sal-ary	No.	Sal-ary	No.	Sal-ary	No.	Sal-ary
All occupations.....	34		26		72		40		41		46	
Fire fighting:												
1 Chiefs.....	1	\$2,400	1	\$2,970	1	\$2,952	1	\$2,280	1	\$2,250	1	\$2,160
2 Assistant or deputy chiefs.....	1	1,920			2	2,100	1	2,100	2	1,920	2	1,800
3 Assistant deputy chiefs.....	1	1,740										
4 Battalion chiefs.....												
5 Captains.....	5	1,680	2	2,400	8	1,920	5	1,860	6	1,800	5	1,704
6 Lieutenants.....	6	1,620	2	2,340	7	1,890	5	1,800	2	1,740	5	1,680
7 Engineers, fire engine.....					10	1,800						
8 Assistant engineers, fire engine.....					10	1,800						
9 Drivers.....			8	2,100	8	1,800			12	1,740		
Privates:												
10 1st grade.....	20	1,560	11	2,100	21	1,800	28	1,740	14	1,740	30	1,620
11 2d grade.....												
12 3d grade.....												
13 4th grade.....												
14 Probationary.....												
Miscellaneous:												
15 Drillmasters.....												
16 Housemen.....												
17 Watchmen.....												
Fire prevention: ⁴												
18 Marshals or wardens.....												
19 Inspectors.....					1	1,800 ⁽⁵⁾			(⁵)		1	1,780
Apparatus: ⁶												
20 Superintendents of machinery.....			1	2,280								
21 Assistant superintendents of machinery.....												
22 Automobile mechanics.....					1	1,890			1	1,920	1	1,780
23 General mechanics: Blacksmiths.....												
24 Miscellaneous: Inspectors.....												
Fire alarm: ⁷												
25 Superintendents.....			1	2,280	1	1,980						
26 Assistant superintendents.....												
27 Operators, fire alarm.....									2	1,740		
28 Operators, telephone.....												
29 Inspectors.....												
30 Electricians.....									1	1,740	1	1,780
31 Linemen.....					1	1,800						
Clerical: ⁹												
32 Secretaries.....					1	1,920						
33 Clerks.....												
34 Stenographers.....												
35 Miscellaneous: Building inspectors.....												

See footnotes at end of table.

TABLE E.—Number of employees and annual salaries in fire departments of each of

Division and occupation		Michigan—Continued						Ohio			
		Muskegon		Port Huron		Wyandotte		East Cleveland		Elyria	
		No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
All occupations.....		67		46		32		33		33	
Fire fighting:											
1	Chiefs.....	1	\$2, 700	1	\$2, 460	1	\$2, 750	1	\$3, 800	1	\$2, 520
2	Assistant or deputy chiefs.....	1	2, 520	2	2, 160	1	2, 340			2	2, 280
3	Assistant deputy chiefs.....										
4	Battalion chiefs.....	1	2, 100								
5	Captains.....	7	1, 920	4	2, 040	3	2, 160	2	2, 766	4	2, 160
6	Lieutenants.....	7	1, 740	4	1, 920	3	2, 160	4	2, 582	4	2, 040
7	Engineers, fire engine.....					1	2, 160				
8	Assistant engineers, fire engine.....										
9	Drivers.....	14	1, 704								
Privates:											
10	1st grade.....	28	1, 704	34	1, 800	23	2, 040	24	2, 400	19	1, 920
11	2d grade.....									1	1, 770
12	3d grade.....	3	1, 620					1	1, 800	1	1, 720
13	4th grade.....										
14	Probationary.....			1	1, 200						
Miscellaneous:											
15	Drillmasters.....										
16	Housemen.....										
17	Watchmen.....										
Fire prevention: ⁴											
	Marshals or wardens.....										
19	Inspectors.....	(5)				(5)		(5)			
Apparatus: ⁵											
20	Superintendents of machinery.....	1	1, 920					1	2, 715	1	2, 040
21	Assistant superintendents of machinery.....										
22	Automobile mechanics.....										
23	General mechanics: Blacksmiths.....										
24	Miscellaneous: Inspectors.....										
Fire alarm: ⁷											
25	Superintendents.....										
26	Assistant superintendents.....										
27	Operators, fire alarm.....	4	1, 500								
28	Operators, telephone.....										
29	Inspectors.....										
30	Electricians.....										
31	Linemen.....										
Clerical: ⁸											
32	Secretaries.....										
33	Clerks.....										
34	Stenographers.....										
35	Miscellaneous: Building inspectors.....										

See footnotes at end of table.

[illegible]

TABLE E.—Number of employees and annual salaries in fire departments of each of

Division and occupation	Ohio—Continued								Wisconsin	
	Portsmouth		Steubenville		Warren		Zanesville		Appleton	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
All occupations.....	39		35		34		34		33	
Fire fighting:										
1 Chiefs.....	1	\$2,700	1	\$2,280	1	\$3,000	1	\$2,160	1	\$2,610
2 Assistant or deputy chiefs.....	2	2,100			1	2,520	1	1,980	1	2,000
3 Assistant deputy chiefs.....							1	1,740	1	1,824
4 Battalion chiefs.....										
5 Captains.....	4	1,980	8	2,006	4	2,340			4	1,710
6 Lieutenants.....	4	1,920								
7 Engineers, fire engine.....	10	1,860								
8 Assistant engineers, fire engine.....										
9 Drivers.....	4	1,800								
Privates:										
10 1st grade.....	9	1,800	26	1,848	17	2,100	31	1,680	21	1,596
11 2d grade.....					4	1,980				
12 3d grade.....					3	1,800			1	1,482
13 4th grade.....					4	1,650				
14 Probationary.....										
Miscellaneous:										
15 Drillmasters.....										
16 Housemen.....										
17 Watchmen.....										
Fire prevention: ¹							(²)			
18 Marshals or wardens.....										
19 Inspectors.....	1	1,920							1	1,656
Apparatus: ³										
20 Superintendents of machinery.....									1	1,824
21 Assistant superintendents of machinery.....									1	1,653
22 Automobile mechanics.....	{	1,860								
23 General mechanics: Blacksmiths.....	{	1,920								
24 Miscellaneous: Inspectors.....										
Fire alarm: ⁴										
25 Superintendents.....									1	1,881
26 Assistant superintendents.....										
27 Operators, fire alarm.....										
28 Operators, telephone.....										
29 Inspectors.....										
30 Electricians.....	1	2,160								
31 Linemen.....										
Clerical: ⁵										
32 Secretaries.....	1	1,800								
33 Clerks.....										
34 Stenographers.....										
35 Miscellaneous: Building inspectors.....										

¹ Cities with a population of 25,000 and under 50,000; based on U. S. Census of Population for 1930.² Includes only regular, full-time employees.³ Captain acts as drillmaster and first-aid instructor.⁴ Work of this division performed by men assigned from fire-fighting division in Belleville, Granite City, Port Huron, Elyria, Steubenville, and Oshkosh.⁵ Assigned from fire-fighting division.⁶ Work of this division performed by men assigned from fire-fighting division in Granite City, Moline, Elkhart, Wyandotte, Lima, Mansfield, Marion, Steubenville, Warren, and Fond du Lac, and by a separate city bureau or private company in Alton, Aurora, Belleville, Berwyn, and Port Huron.

53 East North Central cities of Group IV, by occupation, July 1, 1938—Continued

Wisconsin—Continued															
Eau Claire		Fond du Lac		Green Bay		La Crosse		Oshkosh		Sheboygan		Superior		West Allis	
No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
33		42		60		73		61		61		78		36	
1	\$2,700	1	\$2,640	1	\$3,600	1	\$2,700	1	\$2,520	1	\$2,820	1	\$3,180	1	\$3,000
1	1,800	1	1,975	2	2,040	2	1,980	2	1,920	2	2,160	2	2,664	1	2,400
3	1,680	4	1,859	5	1,950	5	1,915	7	1,740	5	1,980	12	2,064	2	2,280
		4	1,743	5	1,920	5	1,880	7	1,680	5	1,920			5	1,860
				4	1,950							2	1,980	4	2,040
				4	1,920									4	2,040
				8	1,830	22	1,810			10	1,740	15	1,944	2	2,040
19	1,620	30	1,684	21	1,800	32	1,780	40	1,620	25	1,740	38	1,920	16	2,040
1	1,500	1	1,568			2	1,680							2	1,920
4	1,440	1	1,452	3	1,500					3	1,650				
				1	1,920										
2	1,020														
		(⁸)		1	2,040					1	1,740	2	2,064	(⁸)	
						1	1,900			1	2,040	1	2,400	1	2,340
1	1,680			1	1,950			1	1,800						
												1	2,160		
1	1,800					1	1,840	1	2,100			1	2,304	1	2,690
														1	2,030
				3	1,200					4	1,200				
						1	1,810	1	1,620	2	1,860	2	1,944		
												1	2,160		
						1	1,810								
								1	1,840					(¹⁰)	

⁷ Work of this division performed by men assigned from fire-fighting division in Elkhart, Michigan City, Lima, Marion, Warren, and Fond du Lac, and by separate city bureau or private company in Alton, Belleville, Bloomington, Granite City, Joliet, Moline, Quincy, Rock Island, Mishawaka, Port Huron, Wyandotte, East Cleveland, Elyria, Middletown, and Steubenville.

⁸ First-grade private performs duties of fire-alarm superintendent with \$240 additional salary per year.

⁹ In cities which report no employees in this division, clerical work is usually assigned to men from fire-fighting division.

¹⁰ 2 employees assigned and paid by National Youth Administration.

TABLE F.—*Distribution of employees in specified divisions of fire departments of 96 East North Central cities, according to average hours and days on duty per week, July 1, 1938*

System of operation	Average hours on duty per week	Average days on duty per week	Number of employees				
			All divisions				
			All cities	City group ¹			
				I	II	III	IV
All systems			2 14,342	6,514	299	1,864	2,182
Continuous duty	168	7.0	74	8	14	18	34
Single platoon ²			16	11	5		
On 3 days, off 1 day	126	5.3	11	11			
On 4 days, off 1 day	134	5.6	5		5		
Two-platoon, regular:							
On 24 hours, off 24 hours	84	3.5	9,783	3,299	2,688	1,741	2,055
Two-platoon, with additional time off ⁴			3,363	2,873	476		14
On 24 hours, off 24 hours, off 0.5 day per week	72	3.0	299		299		
On 24 hours, off 24 hours, off 0.4 day per week	74	3.1	3,064	2,873	177		14
Three-platoon: ⁵							
On 1 day, off 2 days	56	2.3	383		383		
Other ⁶	45.4	5.5	723	323	216	105	79

System of operation	Number of employees—Continued									
	Fire-fighting					Fire prevention				
	All cities	City group ¹				All cities	City group ¹			
		I	II	III	IV		I	II	III	IV
All systems	13, 505	6, 141	3, 559	1, 733	2, 072	155	100	29	12	14
Continuous duty	69	3	14	18	34	2	2			
Single platoon ²	16	11	5							
On 3 days, off 1 day	11	11								
On 4 days, off 1 day	5		5							
Two-platoon, regular:										
On 24 hours, off 24 hours	9, 696	3, 290	2, 682	1, 709	2, 615	7		2	2	3
Two-platoon, with additional time off ⁴	3, 324	2, 837	473		14	39	36	3		
On 24 hours, off 24 hours, off 0.5 day per week	296		296			3		3		
On 24 hours, off 24 hours, off 0.4 day per week	3, 028	2, 837	177		14	36	36			
Three-platoon: ⁵										
On 1 day, off 2 days	383		383							
Other ⁶	17		2	6	9	107	62	24	10	11

See footnotes at end of table.

TABLE F.—Distribution of employees in specified divisions of fire departments of 96 East North Central cities, according to average hours and days on duty per week, July 1, 1938—Continued

System of operation	Number of employees—Continued									
	Apparatus					Fire alarm				
	All cities	City group ¹				All cities	City group ¹			
I		II	III	IV	I		II	III	IV	
All systems	219	101	66	20	32	351	94	112	87	58
Continuous duty	1	1				1	1			
Single platoon ²										
On 3 days, off 1 day										
On 4 days, off 1 day										
Two-platoon, regular:										
On 24 hours, off 24 hours	37	3	3	10	21	43	6	1	20	16
Two-platoon, with additional time off ⁴										
On 24 hours, off 24 hours, off 0.5 day per week										
On 24 hours, off 24 hours, off 0.4 day per week										
Three-platoon: ⁵										
On 1 day, off 2 days										
Other ⁶	181	97	63	10	11	307	87	111	67	42

System of operation	Number of employees—Continued									
	Clerical					Miscellaneous				
	All cities	City group ¹				All cities	City group ¹			
I		II	III	IV	I		II	III	IV	
All systems	74	42	16	11	5	38	36		1	1
Continuous duty						1	1			
Single platoon ²										
On 3 days, off 1 day										
On 4 days, off 1 day										
Two-platoon, regular:										
On 24 hours, off 24 hours										
Two-platoon, with additional time off ⁴										
On 24 hours, off 24 hours, off 0.5 day per week										
On 24 hours, off 24 hours, off 0.4 day per week										
Three-platoon: ⁵										
On 1 day, off 2 days										
Other ⁶	74	42	16	11	5	37	35		1	1

¹ Group I includes cities having a population of 500,000 or more; group II, cities having a population of 100,000 and under 500,000; group III, cities having a population of 50,000 and under 100,000; and group IV, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

² Includes only regular, full-time employees, with the exception of 1 commissioner for Cicero, Ill.

³ The average number of hours on duty per week for employees in variations of the single platoon system is arrived at by dividing the total number of hours on duty per year for each variation by 52.143. The average number of days per week for each variation is arrived at by dividing the total number of days on duty per year by 52.143.

⁴ Under the 2-platoon system with additional time off duty, the employees are on duty less than an average of 84 hours per week. The average number of hours on duty per week under this system is arrived at by deducting the number of additional hours off duty per week from 84. The average number of days on duty is arrived at by dividing the number of days on duty per year by 52.143.

⁵ The average number of hours and days on duty per week is arrived at by dividing the total number of hours and days on duty per year by 52.143.

⁶ The average number of hours and days on duty per week is arrived at by dividing the total weekly man-hours and man-days by the total number of employees under "other."

TABLE G.—Distribution of employees and total salaries in fire departments of 96 East North Central cities, by occupation, July 1, 1938

Division and occupation	Number of employees					Total salaries				
	All cities	City group ¹				All cities	City group ¹			
		I	II	III	IV		I	II	III	IV
All occupations	² 14,342	6,514	3,782	1,864	2,182	\$32,555,838	\$17,076,878	\$7,592,337	\$3,924,119	\$3,962,504
Fire fighting	13,505	6,141	3,559	1,733	2,072	30,543,919	16,009,703	7,129,418	3,646,627	3,758,171
Chiefs	96	4	15	24	53	307,102	30,860	57,156	84,410	134,676
Assistant or deputy chiefs	130	7	26	32	65	327,175	36,076	75,035	82,225	133,839
Assistant deputy chiefs	40	23	1	7	9	142,544	104,901	2,169	18,390	17,084
Battalion chiefs	182	130	48	3	1	643,947	497,498	133,649	10,700	2,100
Captains	1,253	402	359	214	278	3,041,820	1,242,664	798,910	481,098	519,148
Lieutenants	1,085	537	297	130	121	2,658,702	1,505,050	635,945	289,394	228,313
Pilots	18	18				52,800	52,800			
Engineers, fire engine	855	494	148	136	77	2,098,474	1,368,024	299,467	288,465	142,518
Engineers, marine	32	32				85,600	85,600			
Drivers	590	22	261	101	206	1,130,096	47,520	517,108	197,760	367,708
Privates:										
1st grade	8,374	3,997	2,181	988	1,208	18,334,242	9,954,320	4,236,220	2,018,469	2,125,233
2d grade	419	221	117	56	25	885,641	533,120	204,303	105,340	42,878
3d grade	276	152	82	30	12	539,844	338,190	131,806	50,196	19,652
4th grade	104	65	22	5	12	199,982	139,100	34,650	7,920	18,312
5th grade and below	24	18		6		43,400	32,400		11,000	
Probationary	4		2	1	1	5,460		3,000	1,260	1,200
Miscellaneous	23	19			4	47,090	41,580			5,510
Fire prevention	155	100	29	12	14	393,934	279,843	62,277	25,104	26,710
Marshals or wardens	10	4		1	1	29,912	15,423	10,129	2,500	1,860
Assistant marshals or wardens	5	2	3			13,072	6,090			
Chief inspectors	4		3	1		8,860	6,220		2,640	
Inspectors	135	93	19	10	13	339,670	256,000	38,856	19,964	24,850
Miscellaneous	1	1				2,420	2,420			
Apparatus	219	101	66	20	32	531,677	288,261	136,086	44,635	62,695
Superintendents of machinery	31	4	7	6	14	78,565	17,403	18,484	13,925	28,753
Assistant superintendents of machinery	7				1	18,825	10,620	6,552		1,653
Mechanists	37	34	2	1		116,293	109,712	4,431	2,150	
Master mechanics	2		2			5,200		5,200		
Auto mechanics	66	16	22	13	15	138,353	37,620	43,624	28,560	28,549
General mechanics	33	25	7		1	88,836	71,076	15,600		2,160
Electricians	1		1			2,037		2,037		
Mechanic's helpers	1	1				1,800	1,800			
Miscellaneous	41	18	22		1	81,768	40,030	40,158		1,580

Fire alarm	351	94	112	87	58	810,469	287,191	235,272	184,329	103,677
Superintendents	36	3	9	12	12	94,359	13,623	25,587	29,906	25,243
Assistant superintendents	18	4	6	6	2	45,230	14,640	13,398	13,441	3,751
Chief fire-alarm operators	2	1	1			4,730	2,280	2,450		
Fire-alarm operators	146	49	41	41	15	351,484	162,580	82,454	82,807	23,643
Telephone operators	35	13	8	5	9	70,032	33,060	13,200	9,732	14,040
Inspectors	3			2	1	6,240			4,080	2,180
Electricians	28	2	8	8	10	60,427	6,200	16,809	18,858	18,560
Linemen ¹	71	14	38	10	9	155,189	38,980	80,174	19,755	16,280
Linemen's helpers	8	7		1		15,228	13,428		1,800	
Miscellaneous	4	1	1	2		7,550	2,400	1,200	3,950	
Clerical	74	42	16	11	5	164,572	104,253	29,284	21,624	9,411
Secretaries	28	4	9	11	4	65,272	18,403	17,644	21,624	7,601
Assistant secretaries	3	3				8,386	8,386			
Chief clerks	1	1				2,220	2,220			
Clerks and bookkeepers	22	16	5		1	49,250	38,680	8,760		1,810
Stenographers and typists	20	18	2			39,444	36,564	2,880		
Miscellaneous	38	36		1	1	111,267	107,627		1,800	1,840
Inspection division	33	32			1	97,840	96,000			1,840
Medical division	1	1				3,687	3,687			
Instruction division	3	3				7,940	7,940			
Other miscellaneous employees	1			1		1,800			1,800	

¹ Group I includes cities having a population of 500,000 or more; group II, cities having a population of 100,000 and under 500,000; group III, cities having a population of 50,000 and under 100,000; and group IV, cities having a population of 25,000 and under 50,000, based on U. S. Census of Population for 1930.

² Includes only regular, full-time employees, with the exception of 1 commissioner in Cicero, Ill.

³ Group I includes 2 cable splicers at \$2,912 each.