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Accountancy, Economy and Efficiency in a City Department

BY HAROLD D. FORCE, M.Sc.

The work herein described was undertaken as pioneer work so far as city departments had then progressed, with a keen appreciation of its significance to the city in general, and when comparatively few viewed it with favor. It has been conducted in accordance with the ideas so strongly advocated in 1909 and 1912 by the chamber of commerce, as inaugurated by ex-Comptroller Metz, and now being pushed to a conclusion by Comptroller Prendergast in conformity to section 149 of the city charter for uniform accounting. The policies of the Bureau of Municipal Research have also been kept in mind.

The importance of the work is well stated by the committee on finance and currency of the chamber of commerce, in the report of 1909 on the progress of the new accounting system in the city of New York and its departments: "No other issue has been presented to our citizenship in years so vital to the permanent welfare of greater New York. All other questions must take second place to this—for every measure of municipal advance depends upon honest, economical administration of the city's finances, and this cannot be secured without a proper system of accounting."

This work was taken up (for expenditures) in 1910, upon application to Acting Mayor Mitchel, for the appointment of an expert accountant for this department, the comptroller not having accountants available to devise and initiate, carry to a conclusion and finally supervise all the work required.

The description herein given is an outline of the work and some of its results, as briefly stated as it is possible to do and give justice to five years' labors. It must be always remembered, also, when results are measured, that conditions governing municipal employment and administration, with the complicated and technical regulations to be met, with prejudice to reforms, hostility to change and opposition to those who attempt it, together

with lack of authority, conflict of authority and, finally, lack of help, either available or experienced—all preclude the accomplishments obtainable by well organized business corporations.

The principle has always been kept in mind, however, as the reform was a radical one, to try and produce the maximum of good with a minimum of harm.

THE CONSTRUCTIVE PLAN FOLLOWED.

The plan formulated was the following:

1st. A central control over the transactions of all outlying bureaus and divisions, their offices and plants.

2nd. A scientific exhibit of these transactions, on modern forms and books of account, from which both cost and administrative information could be both currently and readily obtained, in the analytical form desired.

3rd. The regular periodical compilation of statistics and prompt rendering of classified reports, to form a basis for the action of executives.

INQUIRY LEADING TO REDUCTIONS IN COST OF CONDUCTING THE DEPARTMENT.

The expense and cost reports of 1913, followed by analytical reports of overhead expense, were the first data giving conditions on which action was taken, later, towards economy.

A few of the subjects concerning which indefensible unit costs were exhibited were cost per mile of automobiles and ferry-boats, cost per hour of tugs and launches and cost per day of pile drivers and derricks. The cost of conducting the administrative or bureau organizations, their offices and plants, indicated an unusually high overhead expense; for example, cost of the purchase, storage and handling of supplies, mechanical repairs at shops and yards, and engineering supervision and plant.

A special report of the comptroller, early in 1914, called attention to the unusually high costs of operation, as shown by the expense reports of the department. The department's executives also investigated, and proceeded to reduce costs to a basis nearer that of commercial standards.

The comptroller has again featured the department's detailed expense statements in a printed report, submitted in October, 1915.

Briefly summarized, the resulting economies, shown by ac-

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counts and reports, now indicate a decreased cost of conducting the department, for the year 1915 over the year 1913 (omitting any estimate for 1916) as follows:

	Rate of decrease
Administrative organization (including necessary offices and plant).....	45%
All other operation and maintenance.....	35½%
Construction and permanent improvements.....	67%

The great reduction in construction and improvements represents a largely decreased volume of work, on the ground of costly methods of municipally operated enterprises, or that construction forces retained at an annual rate cannot be kept continuously employed on a profitable basis.

REDUCTION IN COST OF ACCOUNTANCY BY CENTRALIZATION AND
ELIMINATION OF DUPLICATED WORK.

Prior to 1915 satisfactory results were difficult if not impossible to produce owing to the distribution of work and control among five different bureaus or administrative organizations, with the consequent and unavoidable duplication of work, conflict of authority and slowness of action. Through coöperation of commissioners and comptroller, the year 1914 brought a decision to centralize the work, employees and methods in a single bureau (accounts), with the auditor as chief accounting executive of the department.

The technical execution of this plan necessitated radical changes in organization, revision and installation of new and shorter forms, bringing all original documents evidencing transactions direct to the central office, and their immediate record upon books of final entry. The consolidation of records also necessitated the tedious and painstaking reconciliation of old with new accounts.

Careful selection of the most efficient and necessary men and transfers from the outlying bureaus, eliminating the unnecessary, brought a reduction in annual cost, as follows:

Rate of decrease in total salaries paid 55%	Decrease in number of men 30
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This reduction takes no account of the standardization or reductions of salaries for 1916; and, without it, the accounting organization shows a larger percentage of decrease than any other organization expense.

PROMPTNESS AND COMPLETENESS OF MONTHLY REPORTING AND IN PRODUCTION OF CURRENT STATISTICS.

In the report of the chamber of commerce (1912) appears this comment on reporting: "Success of the city's new system depends upon keeping up the records in the outside departments and their prompt and accurate transmission of reports."

Prior to 1912 there was no current reporting, either for commissioners or comptroller. Final results and statistics of operation were obtained months after the completion of transactions applying to a period or by means of special investigation.

There is at present in the bureau of accounts an accounting organization that has already proved itself at least not exceeded by any other city department for efficiency and promptness of results.

Records have this year been written up, reports completed, presented to commissioners and transmitted to the comptroller, in eight days from the close of the period reported upon. This was considered impossible as late as a year ago. Most commercial corporations are satisfied if results are complete at any time within the month following a period.

The reports themselves are considered by the accountants of the comptroller to meet requirements for their completeness and the analytical nature of their contents.

A "follow up" system, to insure promptness and individual clerical efficiency, has recently been installed.

THE INSTRUCTION AND DEVELOPMENT OF CLERKS FROM CLERICAL TO PROFESSIONAL SERVICE.

Inexperienced service is a chief difficulty to be met in systematizing a municipal department—a difficulty liable to be underestimated. It has been largely overcome in this department for the work herein described by personal and painstaking instruction and direction of each individual who became available for the work. With one or two exceptions none was experienced in any but routine clerical work.

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All now serving the expenditure accounting organization are trained to much of the work done by accountants' assistants, or junior accountants, in the offices of public accountants. The system used requires that class of service for its successful execution. Several can now analyze accounts, prepare statistical data and reports and formulate forms for rudimentary installation. One employee has advanced from the telephone receiver to be one of the most efficient assistants on accounts.

These methods give the city and department the benefit of accountancy service that is at least not overpaid, according to the commercial measure.

CHECK AND CONTROL OF EXPENDITURES THROUGH A SCIENTIFIC BUDGET SYSTEM.

It is impossible to prepare practical and scientific budgets, both tax and corporate stock, without their being based primarily upon the data or statistics furnished by the expense and cost accounting system, which is in turn directly built up from the certified original documents evidencing expenditures.

The accounting system of this department has (at this writing) been brought to such a position that the expenditures of a budget properly based thereon may come under current check and control during the operating year it represents. This applies to either a functionalized or "lump sum" budget. The system furnishes the data in accessible and permanent form on which future estimates may be based, wherever it is possible to make future estimates, and where it is useful to make comparisons with operations of current and preceding years.

Admitting the principle (quite well settled now) that budgets must accurately reflect and represent the expense and cost of conducting a municipal enterprise, the statistical data of the accounting system become the foundation point for prevention of overestimates and misapplication of moneys. With a functional segregation of the system, in agreement with charter duties, it compels an intelligent and definite destination for every dollar appropriated and expended.

PREVENTION OF THE MISAPPLICATION OF CORPORATE STOCK.

Until the proper plan and method of its detailed application is taken up and settled by all the authorities concerned, through the

budget system, or by credits allowed for depleted funds (for labor charges as well as for the consumption of supplies), there will always be a portion of the corporate stock allowance used contrary to section 169 of the city charter.

As a check against misapplication, to prevent obvious mischarges and to point out where corporate stock is or can be misused, every form, document, book of account and report concerning expense and cost of work is so constructed as to indicate how every charge and expenditure has been paid for, i.e., from what code or fund, as between tax budget or corporate stock. This includes labor, invoiced expense and consumption of supplies.

This system has been of considerable value, as testified by the comptroller's report, in pointing out to the financial authorities the existing conditions and difficulties and by preventing too great a misapplication.

The whole problem would be simplified and the wisest financing served, were the city to allow the use of corporate stock exclusively for the direct expenditures concerned in permanent improvements, and to exclude all expenses whatever that were purely incidental thereto, such as office forces and plant expense.

At present, if work done must currently correspond to funds from which payable, for salaried engineers on both improvements and repairs, their services could not be paid for until some time after the usual payroll periods (considered by them a great hardship).

MODERN MUNICIPAL ACCOUNTING AND REPORTING—A TECHNICAL DESCRIPTION.

The general object to be accomplished by such a system is to show everything the city spends its money for, through the operating department.

To do this so that results could be produced in the analytical form required of modern accounting, it was necessary, first, gradually, not suddenly, to abolish methods which were slow, obscure, cumbersome and antiquated. It also required the overcoming of persistent opposition (sometimes almost disastrous) by means of tact and perseverance.

The Controlling Accounts:

In place of the former condition of no relation whatever between the apportionment of expenditures (accounts showing

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expense and cost of work) and the expenditure accounting of the general ledger (based on payments only), there has been installed a current and direct relation and current reconciliation of all branches of accounting, both revenue and expenditures—all focusing in the controlling accounts of the new general ledger of the department.

The chief subjects currently controlled by this are revenue earned, received, deposited, uncollected and outstanding or receivable; authorizations, vouchered payments thereof, and unexpended balances of appropriations and corporate stock; stores purchased, issued and on hand, from both appropriations and corporate stock; plant and equipment acquired and on hand; expense of administration, operation and maintenance; expenditures incurred in construction-in-progress, job orders-in-process, permanent improvements and acquisition of property.

No plan of controlling accounts, however, will prevent fraud and theft, which is a matter largely of administration and of fixing personal responsibility. Accounting systems help only to reduce dishonesty to a minimum.

Functional Plan of Accounts and Statistics:

As a basis for practical budgets, a general control and summarizing of transactions and the adequate reporting of results, descriptive of the department's activities as called for by the city charter, the functional system has been installed. Briefly stated, the subjects of expense comprise the cost of each separate administrative organization, their offices and plant, operation and maintenance of movable plant and equipment (each automobile, piece of floating plant and ferryboat), the patrol of, cleaning, care and maintenance of the waterfront, the construction and permanent improvement of properties.

Job Costs (including Permanent Improvements):

The accounting for each job or specific piece of work begins with the authorizations of work under mechanical job orders and engineering bureau orders. All repairs done in the various shops and yards to movable plant and equipment or by the laboring forces under engineers to waterfront piers, bulkheads, marginal streets and other properties is separately accounted for in classified form by objects of expenditure, i.e., class of labor, supply or expense.

A distribution of overhead expense and use of plant is annually made.

This accounting is similarly kept for each construction work or permanent improvement in progress from year to year or completed, whether departmental or by contract. Upon these costs are fixed the annual rentals of waterfront properties.

Statistical records of administrative and budgetary value are those of the amount and cost of time of individuals, showing the part played by each employee, by jobs, functions and budgetary codes.

Distribution of Overhead and Plant Expense:

The basis of the departmental overhead is, primarily, the rate per cent. that the administrative, supervisory and organization expense bears to the direct or principal cost of the activity or function to which it applies or to the job supervised.

The cost of supplies used in each departmental activity, or job, is not complete without a percentage being added to each \$1.00 of value for the function of purchase, storage and handling of the supplies consumed. The cost of mechanical repairs at the shops and yards requires a percentage added for the offices, plant and mechanical supervision of each piece of work. The engineering work of repairs, construction and improvement is similarly treated for office, plant and supervisory expense applicable thereto.

Unit Costs of Operation:

The ascertainment of unit costs is possible after the complete charges of operation and maintenance are recorded and the distribution of the overhead applicable to each subject has been made. With the use of mileage statistics, the unit costs per mile of automobiles and ferryboats, individually and as a class, are produced; and similarly, with the work reports of boats are produced the unit costs per hour of tugs and launches individually and as a class, and per day of pile drivers and derricks individually and as a class.

With the area of marginal streets cleaned reported and the cost of labor and expense currently recorded, the cost per square yard is readily accessible.

A practicable system for the unit cost of construction and improvement has been awaiting the coöperation of engineers and the department of finance.

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Subjects and Plan of Reports:

The subjects required of a monthly reporting system must be on a summary plan, to show results concretely and briefly, yet analytically enough to be a guide to action. They must also satisfy, as far as possible, departmental officers and all other city authorities rightfully requiring operative information.

The present reports are prepared only after a careful reconciliation of all transactions of the entire accounting system.

The first report is upon the functional system, described above, and is an exhibit of total transactions of the current and preceding months, to show the effect of economies by comparison with the preceding year, with decreases (or increases) and rate per cent. thereof.

Reports of the distribution of overhead expense are rendered periodically, as desired, showing rates per cent., percentages distributed to each function and total costs, upon the method above indicated.

Supplementary to the overhead report the unit costs of operation by classes are given. Individual subjects, as each machine, boat, etc., are currently accessible, to be given when required, in schedule form.