

duced until during the last three months the labor cost per lineal foot was about 35 per cent. less than it was during the first three months, and the foremen themselves were surprised at the reduction in cost they were able to make, and at the low cost of work towards the close.

On account of the exposed location of the outfall it was first thought advisable to do this particular work by contract. However, it was carried out with city forces

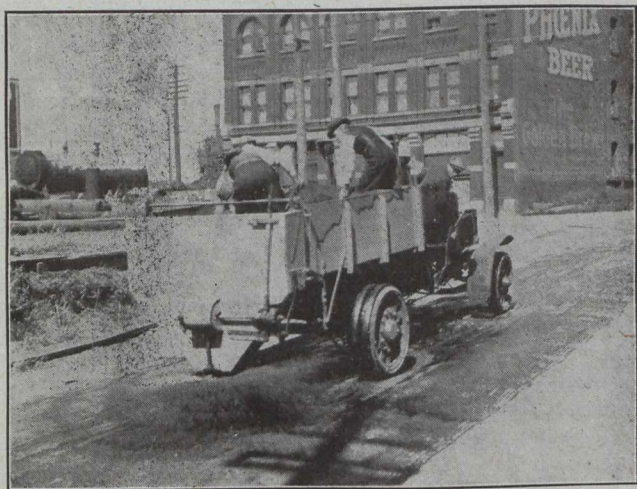


Fig. 5.

and completed for less than half the price submitted by tender, and the entire work of constructing the sewer was completed for over \$75,000 less than the estimate.

Concrete sidewalks are being constructed for about 30 per cent. less than they were costing in 1911 and 1912.

Sheet asphalt was laid in 1915 with the corporation plant for 20 per cent. less than the price paid the contractor in 1914, due allowance being made for overhead expenses, plant maintenance and depreciation, and maintenance of pavement.

The curves in Fig. No. 4 show the steady reduction that has been made in the cost of collection and disposal of garbage.

For the month of September, 1916, this amounted to 35 per cent. less than for the same month in 1913, a difference of over \$1,000 for September alone.

Foreman's Daily Segregation of Wages Expenditure.

Foreman, J. McInnes. Date, 12th September, 1916

Sewer Loan, 1913. N.E. Branch.
Finlayson Street, Douglas—Quadra.

Location and Description of Work				Amount
Rock Excavating.....	0	Men @ —	per 8 hour day	—
Dirt Excavating.....	4	„ @ 2.75	„	\$11.00
Hardpan Excavating.....	0	„ @ —	„	—
Pipelaying.....	1½	„ @ 2.75	„	4.10
Backfill.....	2½	„ @ 2.75	„	6.90
Building Manholes.....	0½	„ @ 2.75	„	1.35
B. Smithing.....	0	„ @ —	„	—
Concreting Base for Pipe	0½	„ @ 2.75	„	5.40
Concreting.....	1	„ @ 4.00	„	
Total	10	Men		\$28.75

The writer, in closing, does not wish to leave the impression that the above results are *entirely* attributable to the keeping of detail cost data. Other factors are responsible, probably the most important of which is the engineer's ability to select good assistants, and his capacity for managing men. But a large share of the success is due to the interest created by the keeping of cost data, and to the valuable information it has furnished to all connected with the work; and it is only necessary to refer again to the amount of money spent annually, and to the percentage that the cost has been reduced, to realize what has been accomplished.

THE RELATION BETWEEN PERPETUAL-INVENTORY VALUE AND APPRAISAL VALUE.*

By Charles Piez, Chicago, Ill.

MOST plants grow from small beginnings, and during their early life expand as the needs dictate. The organization is necessarily small because the most rigid economy must be practiced, and original costs and the costs of additions are frequently so completely submerged in the total assets that no safe records of these costs can be established. Many plants never outgrow this lump-sum treatment of assets. In these cases depreciation of plant and equipment is either wholly disregarded, or else an arbitrary amount is charged against profits, the amount of depreciation varying inversely as the size of the profit it is desired to show.

Industries so managed need the assistance of a competent appraisal company to inform them of the value of their assets, as a basis for embarking on a sounder and safer system of accounting methods. Practically all successful industries so maintain their inventories that additions to the plant are accurately recorded, and depreciation is based on judgment and experience. But even such industries will find it to their advantage to ask the aid of appraisal companies for the purpose of determining authoritative records of the cost of reproducing plant and equipment, so that underinsurance or overinsurance may be avoided, and the basis for the requirements of co-insurance complied with.

Appraisals are also valuable in establishing comparative values of plants that are about to merge, or in serving as a basis of a scheme of financing. But the claims that an appraisal is necessary for figuring overhead costs and the selling price and profit of manufactured articles are, to say the least, sadly overdrawn.

It has been my experience that in well-managed industries appraisal values are usually considerably above sound inventory values established by the management. With the steady advance in prices that has been going on almost continually for the last twenty-five years, it is but reasonable to suppose that replacement values are substantially higher than initial costs, and it is well to establish the amount of such excess if a proper insurance coverage be desired; but such advance is wholly speculative and has absolutely no bearing on the value of the plant from the standpoint of the operating and sales management.

The establishment of true costs is an essential element in the success of a business, and true costs can only be

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