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## Construction Cost Accounting from the Viewpoint of Both the Contractor and the Customer

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**NATIONAL ASSOCIATION**  
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**COST ACCOUNTANTS**

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**Official Publications**

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Vol. V      April 15, 1924      No. 15

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**Construction Cost  
Accounting**

**From the Viewpoint of Both the  
Contractor and the Customer**

**BUSH TERMINAL BUILDING**  
130 WEST 42nd STREET, NEW YORK

# NATIONAL ASSOCIATION OF COST ACCOUNTANTS

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**Official Publications**

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**Vol. V, No. 15**

**April 15, 1924**

## **Construction Cost Accounting** **From the Viewpoint of Both the** **Contractor and the Customer**

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**Philadelphia, Pa.**

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**BUSH TERMINAL BUILDING**  
**130 WEST 42nd STREET, NEW YORK CITY**

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APRIL 15, 1924

# National Association of Cost Accountants

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## CONSTRUCTION COST ACCOUNTING

### From the Viewpoint of Both the Contractor and the Customer

A well-defined Construction Cost System should function in such a manner as to produce the following results:

(a) To enable those in charge of the work to have revealed to them all the cost of the work as it progresses, so that the costs will assist in pointing out efficiencies and inefficiencies promptly and in time for remedial and productive action, thus helping to save time and money instead of simply accounting for and analyzing the outgo after it has been spent.

(b) To readily permit of a financial audit.

(c) To divide the various elements of cost so as to permit of an accurate detailed record of costs of all the many parts of the work.

(d) To be sound in theory and accurate in practice.

(e) Last but not least, to be not too expensive to operate, nor too difficult to keep accurate.

If a Cost System fails to produce these results, it is not a success.

The fundamental principles of cost keeping are as positive and exact as the fundamentals of mathematics and every variation from these principles results in error.

Accuracy of the results depends upon the degree to which these principles are skillfully applied.

### FUNDAMENTAL PRINCIPLES OF COST ACCOUNTING

The fundamental principles of cost accounting may be described as follows:

1. *The Principle of Cost Definition.* The cost of an item of product is the sum of the expenses involved in its production and distribution up to any predetermined point. Cost is the price at which an article may be sold without either loss or gain to the seller.

Confusion regarding cost and its component elements is due to the lack of clear understanding as to the fundamentals involved or to indifference as to the importance of accuracy in ascertaining cost.

2. *The Principle of Element Definition.* Each cost element (expense item) is definite in amount, purpose or object, and the expenditure for it anticipates a benefit in service or from a commodity. An element of cost is any expense incurred. It is definite in amount.

Expenses may be classified as normal or abnormal. Normal expenses are incurred directly as the result of planning with a view of obtaining some definite result.

Abnormal expenses are incurred as a result of unforeseen contingencies of business, such as accidents, fires, carelessness or other causes.

Normal expenses anticipate definite benefits or advantages or they would not be authorized, whereas abnormal expenses, while not planned, confer definite results and are as necessary in obtaining the final benefit as normal expenses. Expenses having a single beneficiary are direct expenses; those having two or more beneficiaries are indirect expenses and require distribution.

3. *The Principle of Expense Grouping.* Indirect expenses may be grouped for simultaneous distribution only when their benefits are measurable by a common unit and their beneficiaries participate in identical ratios. Whether or not such identical proportions exist cannot readily be determined, unless the items so combined have a common unit of measurement. We would not attempt the measurement of boilers by the quart, cement by the foot, or gas by the dozen; nor to combine the cost of these items by common units and charge the customers with portions of the total in the ratio of pounds. Such procedure, however, is comparable to the common practices in many cost systems, wherein are combined the charges for rent (measured in square feet), insurance (measured at a rate per dollar of protection), current (measured by kilowatt hours), salaries (measured by the month); and then the aggregate of these expenses is distributed over production upon the basis of the total of money paid to employees whose time is utilized at varying hourly rates of wages.

The combining of all indirect expense items in a single group and designating them as overhead, burden or general expense, not only obscures the purposes and benefits of these expenditures, but also renders their correct distribution impossible.

4. *The Principle of Expense Distribution.* In the distribution of indirect expenses, single or grouped, the proportions of benefits conferred indicate the proportions of the expense or expense group total chargeable to beneficiaries. There must be justice in the charges of a cost system or the distribution of the expense elements will not show true cost. If it is wrong for a merchant to charge to the account of one customer the cost of goods delivered to another, it is equally wrong for the manufacturer to charge against an item of product made for one customer any part of the expenses incurred in production of an item made for another.

A definite relation must always be maintained between the charge and the beneficiary. Rules may be established for the distribution of certain common indirect expenses, but exceptions to these rules will be found in every business, and whenever a rule and a principle are in conflict the principle must govern.

5. *The Principle of Contingent Expense.* Contingent expenses, such as repairs to equipment, shrinkages in values, losses by er-

rors in workmanship and design, sickness and absenteeism, and vacation expenses, constitute legitimate charges against production. Contingent expenses occur in such variety and are caused by such unusual conditions that special consideration must be given to each. The causes of such expenses and losses generally serve to indicate the character of the resulting benefits or losses for the purpose of applying the rule for their distribution. If these five fundamental principles be used as the basis of a system, it will be sound in theory and can be made accurate in practice.

#### NATURE AND REQUIREMENTS OF BUSINESS AFFECT COST SYSTEM

A construction cost system which is based upon these principles will now be described. This system is now in use by the company with which the writer is associated and has been developed by the necessity and the requirements of the business. These requirements are very severe in that most of the construction work done by the company is on some basis in which the price is determined by the cost, and that cost must be such as will justify itself in an audit by the customer. Moreover, the costs must be in the hands of the engineers in charge of the work promptly, or they are of no value for remedial or productive action. Furthermore, when the costs are completed and presented to the customer, they must be in such shape as to show the costs of all the various steps of the work, when desirable, as well as the exact detailed costs of each step.

This system has stood numerous audits and has successfully weathered all storms.

The construction work done by the company covers such work as erecting and repairing gas and electric plants, hydro-electric plants, dams, roads, buildings of various classes, and in fact a general construction business.

The company does a varied business and each branch of the business is carried on by a separate and distinct department, and it so happens that the work done by each department does not encroach on any other department.

The company maintains a chemical department for the purpose of purchasing and selling the various by-products of the manufacture of gas, such as creosote oils, naphthalene, benzol, toluol, dead oil, ammoniacal liquor, etc., as well as for selling road binders known as "Ugite." This department maintains a force and equipment for the application of "Ugite" on roads at various locations throughout several States.

The company is the sole selling agent of The United Oxygen Manufacturing Company of Philadelphia, and maintains an oxygen department to sell oxygen, hydrogen, nitrogen and various appliances relative to the sale of these materials, as well as owning and operating a plant for the manufacture of acetylene.

Furthermore, the company owns and operates the following: A chemical laboratory for testing the qualities of gas manufacturing materials and for the prosecution of chemical research in

the gas industry; a physical laboratory for testing out problems in the gas industry; an appliance laboratory for examining and testing the various gas appliances that come on the market, and an experimental plant for making tests on different processes of gas manufacture.

Another important branch of the work is the making of valuations of plants and the preparations of the defense of such valuations before State Commissions and other regulatory boards, as well as for bond and stock issues.

The company also maintains a department for auditing accounts of gas and electric companies and for the designing of systems of cost accounting and general management, both of the office end and manufacturing end of gas, electric and trolley plants and other various industries.

The company also maintains a department to make inspections periodically of gas, electric and other manufacturing plants, with a view of ascertaining whether the proper precautions are taken as regards the safety of employees and the reduction of fire risks.

Fortunately, it is comparatively simple to divide the company's elements of cost into that of the different departments, owing to the fact that the employees of these departments are of entirely different training, that each of these departments have separate offices and that one of these departments is rarely, if ever, required to work in connection with any of the other departments.

Aside from the construction work, it is very easy to allocate the costs of the work of the various departments. All that is required is certain specified divisions to follow out from year to year. Therefore, as the method of accounting of these departments is not at all complicated, we will pass it over and take up the question of that of the construction work.

#### DEFINITION OF COST

It seems to the writer that logically the first step of a cost system is to define what cost is. There are many definitions of cost, some of which endeavor to state specifically what items constitute cost, but it has always appeared that the best way to define cost is not to state what it includes, but what it does not include.

In our system we define cost as follows: "All expenses incurred in carrying out the provisions of the agreement, except salaries of the officers of the contracting company, purchasing expenses of the contracting company, new business and selling expenses of the contracting company, interest expenses of the contracting company and legal expenses of the contracting company."

We exclude the above five elements of expense from our cost because we admit our inability to properly allocate them to the various departments and to the jobs, and also because the question of the amounts disbursed for certain of these expenses, particularly such as new business and selling expenses, in an audit might be readily criticised.



While these five elements are a part of cost, just as labor and material are, a system excluding the above five items and taking them up as a deduction from the profits, in our opinion, is a much more satisfactory one to the customer.

The exclusion of interest charges is modified under certain conditions, as, for instance, when work is taken requiring specific heavy loans, in which case the interest cost items might be a very large amount. In such a case interest might be included in the cost by special agreement with the customer, and we might use the same argument in regard to certain legal expenses which might be incurred on account of a specific contract.

### ESTIMATE OF THE WORK

Having determined the principles and definition of cost, the next step is to prepare an estimate for the work, because our system must necessarily be arranged to produce its figures upon the completion of the work in the same relative position as the figures are in the estimate. If this is not done, it is almost impossible to compare the original estimated cost and the actual cost. The desirability of being able to do this intelligently can readily be seen from both the contractor's and the customer's point of view.

An estimate, however, is nothing more than the combination of a number of guesses of the ultimate cost of various parts of the work, and its accuracy depends on the knowledge and accurate work of the guesser. Therefore, we build up our estimates by detailing these guesses and calling each little guess or division of the work a sub-account. These sub-accounts may be few or many, according to the class of the work to be done.

The actual expenditures in the field may be divided into the four general divisions of material, labor, freight and cartage, and miscellaneous.

We show freight and cartage as a distinct division owing to the fact that it is a cost which may be affected very materially by the location of the work both as regards its surroundings, distance from points of shipments, and of deliveries.

In some cost systems only the total labor and total material costs are shown, but the writer cannot see that this information is of much value. What we want to know is what the cost of the physical divisions of the work is. For instance, what is the cost of the foundations; what is the cost of excavations; what is the cost of clearing the site?

The reader will note that Exhibit A (see page 12) is a copy of an estimate for the erection of a power plant building. One of the sub-accounts covers form work for foundations. This is made up of material, freight and cartage, and labor respectively on form work, and all through this estimate the plan is followed of breaking up the cost of the work into labor material, and freight and cartage.

The miscellaneous division of the field costs are shown in the last portion of the estimate on the exhibit and consist of rental of tools and equipment; tools (small tools); work order equipment (equipment purchased for the particular use of this work order and only for this work order exclusive of small tools); time and expenses of erecting engineers in the field; time and expenses of clerical force in the field; miscellaneous construction office expenses in the field; insurance; fire and police protections; drawings; and inspecting and tracing material.

In the estimate there is no provision for what is generally known as overhead, burden, or general expenses of the contractor. The last sub-account is entitled "General" and to it is allocated all of what is generally known as overhead, burden, or general expenses. This account is intended to include all of the company's home office expenses exclusive of the cost of drawings. There are also charged to sub-account, "General," such expenditures as preliminary investigations, and also all other expenditures not applicable to any particular sub-account.

Owing to the demands of the estimators and the engineers, these sub-accounts or break-ups are quite numerous, but the more there are, the easier it is to compare the resultant cost with the original estimate, and also to ascertain more readily the reason for over-runs and under-runs of the estimated cost. It also assists those in charge to see at a glance during the progress of the work the likelihood of each division or sub-account of the work exceeding its budget which is the original estimated cost.

### MEMORANDUM SHEETS

The usual practice is to give each job a work order number and to open in the ledgers an account to represent the total cost of all jobs, keeping memorandum sheets showing detailed costs of each job or work order divided into sub-accounts. This simplifies bookkeeping very materially and the memorandum sheets may be kept in as much detail as desirable. If in these memorandum sheets an explanation of each item of cost is written and its budget is shown, a permanent record will exist for future information.

In the system being outlined this method is followed and at the end of each month a carbon copy of the memorandum sheet entries made during the month is sent to the customer so that he has complete detailed costs and hence is able to compare them with the original estimate.

### MONTHLY BILL

Page 20 shows this type of monthly bill. Each and every item, it will be noted, is numbered serially so that if any questions are asked regarding them they can be readily identified and located by this number.

If you refer to page 14, you will see that the bill is made out in such a manner as to permit the customer, when approving it, to have the actual cost to date, the contractor's profit to date, and the amounts previously billed, which saves the customer the trouble of looking up previous bills to obtain this information.

Care should be observed by the contractor to allocate to each job such expenditures as are caused by the job and to charge to it only such expenditures. This means that the contractor's home office and engineering force should require its employees to keep time vouchers so as to properly allocate their time.

Care should be taken also by the contractor to see that there is charged to the job the cost of only the work covered in the estimate.

If the customer desires any work done which is not included in the estimate, it should be done under a separate work number and its cost kept separate. If you do not follow this plan, it is very difficult to make comparisons of the resultant cost with the original estimate. This is a very important point to keep in mind.

Also, care should be exercised to see that each work order is charged with its proper cost for the use of the contractor's tools and equipment, for the use of the contractor's standard drawings, patterns and moulds, etc. These charges should be based upon some equitable plan, which considers the benefits in service or commodity to the job.

#### GENERAL EXPENSE

There are a few expenditures of the contractor which cannot be allocated direct to a work order, such as the time of clerks in the contractor's home office not chargeable to a particular job; rent of the contractor's home office; and the cost of vacations granted to employees. It is suggested that such expenses be combined under some general heading; and in the system being described, they are combined under a general account entitled "Construction General Expense" and distributed over the cost of all work orders upon the basis of the labor costs, and are allocated to sub-account "General."

This seems to be the fairest way to break up these few elements of cost having no factors upon which to distribute them over the work orders.

These elements, however, should be small in comparison with the total cost of the work and in our company are less than two and three-fourths per cent. of the total cost; and the total of sub-account, General, is less than five per cent. of the total cost. These percentages, however, will fluctuate with the volume of work done by the contractor.

#### RESERVE ACCOUNTS

Care should also be exercised by the contractor to see that those elements of expense which occur to a greater extent in one

month than another are distributed fairly over the whole year's work, by opening reserve accounts for this purpose.

To illustrate this point the cost of vacations will be considered. This cost is charged to an account entitled Vacation Expense and one-twelfth of the total cost for the year is charged into Construction General Expense account each month. In this way each month bears  $1/12$  of the total cost of vacations for the year. But inasmuch as the total cost of vacations is not known in advance, a reserve is maintained for this expense and the cost per year is estimated in advance, so that at the end of each month the costs are charged with what is estimated to be the proportion for the month, and as vacations occur they are charged to Vacation Expense account. Then at the end of the year, the total of Vacation Expense and the reserve are the same, one offsetting the other. Of course, these figures may be adjusted from time to time as required. In this manner the cost of vacations is proportioned over production cost during the year and not unfairly included in the month's cost in which they may happen to occur.

This method is followed in regard to sick and absent employees. Time of employees when sick and absent, is charged to Sickness and Absence Expense account, and a reserve is maintained and handled in the same manner as for the cost of vacations. The same is true of the cost of bad debts, training new employees, taxes, etc.

Another reserve maintained, and one which is very important, is the cost of errors in workmanship and design, made by the contractor or the contractor's sub-contractors. The reserve to carry this cost is based on three hundred seventy-five thousandths per cent. of the cost of production, and in establishing this reserve the contractor guarantees the customer against any loss or expense of this character.

Assuming for instance that a contract involves an expenditure of \$75,000.00, then there would be included in the contractor's cost \$281.25 for the cost of this reserve and the contractor would be obliged to assume the cost of all errors in workmanship and design either made by him or his sub-contractor. This also includes the cost of all replacements and repairs caused by defective work or material, even if made after completion of the work.

Contractors necessarily must make a certain number of such errors and this plan seems to be the most satisfactory, as the amount charged the customer is comparatively small and the protection is very desirable.

## INSURANCE

Much study has been given to the question of the cost of insurance of various classes and in states where it is deemed advisable, the company carries its own insurance and charges its customers with an amount which is somewhat less than that of the cost of insuring in outside companies.

When the company assumes these risks the rates charged the customer are as follows:

For fire insurance usually 2.92 cents per month for each \$100.00 of actual cost of the work up to the end of the preceding month.

For workmen's compensation, public liability and property damage insurance, seventy per cent. to seventy-five per cent. of the corresponding rates indicated by the Standard Manual published by the National Bureau of Casualty and Surety Underwriters, except in the State of Pennsylvania, when the rates are those indicated by the manual published by the Pennsylvania Compensation Rating and Inspection Bureau. These percentages are determined by the state in which the work is to be done and have the effect of making the cost approximately equal to what a mutual company would charge, assuming the mutual company made no assessment on the insurer in later years.

#### MONTHLY SUMMARY OF COST

On page 15 is Exhibit C, which shows a summary of cost which is prepared by the contractor monthly and furnished the customer. You will note by referring to this summary that it shows the expenditures to date; those contracted for; the present estimated amount to complete; the present estimated completed cost; the original estimated completed cost; and the estimated over-runs and under-runs.

There are many advantages in preparing such a summary. In the first place, the contractor is kept in touch with the costs of various parts of the work and how he is coming out with his budget which is the original estimated completed cost. Also, since the contractor's entire force has these costs, they are constantly trying to keep under them.

The summary also indicates to the customer far in advance of an actual over-run that if the specifications as originally designed are to be followed out, the over-run will appear. This gives him a chance to change his specifications during the progress of the work or to obtain more funds.

It also eliminates one of the objections of cost-plus work, namely, that a customer never knows what his work is going to cost him until the job is done. This point is a very important one and will bear close study.

These advantages in connection with cost-plus work are equally as advantageous for flat price work, but as most of the construction work of our company is done on a cost-plus basis, it is this class of work that has brought about the system just outlined.

There are many valuable features of our cost system which cannot be described in this publication on account of lack of space, but which will develop where such a system is used. But it should be emphasized that if the system is to be a success, it must be predicated on careful, accurate, and intelligent estimating on the part of the contractor; accurate allocating of costs by the contractor; and strict ethics and honesty in his charges.

There are many terms upon which cost-plus work may be done, but they are divided into two general classes:

1. Contractor's cost plus a percentage of such cost.
2. Contractor's cost plus a fixed fee.

If desirable, limits to the cost in both classes may be agreed upon, and also upon the fee in the first class.

Frequently, also, the amount of sub-account, "General," may be agreed upon in advance, thus obviating any discussion by the customer's auditors of the contractor's amount of or method of distributing these general charges.

A careful study of our cost system will show that the principles as outlined in the first part of this publication are carefully and ethically followed out; that all the various elements of cost of the construction department are distributed up to the point of cost determination as defined in our contracts; that these distributions are made upon the basis of benefits in service or commodity to the work order, and that, therefore, the charges made the customer represent the actual cost of the work.

### EXHIBIT A—ESTIMATE SHEET\*

THE U. G. I. CONTRACTING COMPANY'S ESTIMATE NO. 2448  
FOR WORK ORDER NO. 2102

(Date of preparation of Estimate)

Total Estimated Actual Cost: \$.....

This Estimate covers the erection of a Power Plant Building at ..... and includes the following:

Boiler Room (3 sections)....	125' long
1st section.....	20' x 96'
2nd section.....	23.75' x 84'
3rd section.....	16.25' x 91'
Boiler Room Monitor.....	80' x 10' x 4'
Turbine Room .....	100' x 48' x 77'
Turbine Room Monitor.....	78' x 12' x 7'
Switch House.....	100' x 30' x 28'
Coal Tower .....	23' x 23' x 120'

The Estimate for this Building covers all expenditures on account of building foundations, structural steel, walls, floors, gutters, doors, plumbing and drains, heating, painting, miscellaneous equipment, such as lockers, paving, clearing of grounds and installation of construction tools in machine shop of building after they have served their construction purposes.

Estimator: .....

Typed by: .....

Checked by: .....

Checked by: .....

Date: .....

---

\*Not all of the Estimate Sheet is shown, but enough to illustrate the points made in the article.

SUB-ACCOUNTS AND DETAILS OF ESTIMATE NO. 2448  
FOR WORK ORDER NO. 2102

Description	Quantity	Unit	Cost		Total
			Labor	Material	
SUB-ACCOUNT No. 1.31					
(Clearing Site)					
Local Erection Material.....				\$ 500	
Freight and Cartage.....				500	
Erection Labor .....			\$4,000		
					\$ 5,000
SUB-ACCOUNT No. 3.11					
(Excavation Foundations)					
Excavation—Cu. Yds.....	11,000	.40		4,400	
Freight and Cartage.....	11,000	.25		2,750	
Erection Labor—Cu. Yds.....	11,000	.68	7,480		
					14,630
SUB-ACCOUNT No. 3.21					
(Backfill for Foundations)					
Backfill—Cu. Yds.....	4,500	.28		1,260	
Freight and Cartage—Cu. Yds.....	4,500	.25		1,125	
Erection Labor—Cu. Yds.....	4,500	.47	2,115		
					4,500
SUB-ACCOUNT No. 3.31					
(Formwork for Foundations)					
Forms—Sq. Ft.....	47,000				
Lumber M. F. B. M.....	141	45.00		6,345	
Wire, Nails, etc.—Lbs.....	5,640	.06		339	
Misc. Matl.—Sq. Ft.....	47,000	.0125		588	
Freight and Cartage (Delivered Price on Material)					
Cartage—Sq. Ft.....	47,000	.015		705	
Erection Labor—Sq. Ft.....	47,000	.15	7,050		
					15,027
NOTE—CONCRETE					
1-2-2 Mix.—Cu. Yds.....	4,000				
Carried Forward					\$39,157

## EXHIBIT B—FINAL BILL\*

For Cost of Furnishing, Delivering and Erecting Power Plant Building,  
 ....., for the month of August, 1922, as per Con-  
 tract between Customer and The U. G. I. Contracting Company,  
 dated ..... \$1,697.17

\*Only part of the copy of the Final Bill is shown in this Exhibit, but enough  
 for illustrative purposes.

	Total
Brought Forward.....	\$ 1,504.94
SUB-ACCOUNT—59.1— <i>General</i> Proportion of Home Office, General and Home Office Engineering Charges. (Details of this amount will be sent upon request) .....	37.94
Total actual cost—August, 1922.....	\$ 1,542.88
Total actual cost to July 31, 1922.....	438,686.15
Total actual cost to August 31, 1922.....	\$440,229.03
Engineering Fee 10%.....	44,022.90
Total Customer's Cost to Aug. 31, 1922.....	\$484,251.93*
Less Amounts Previously Billed as Follows:	
Bill No. 4827-C dated Feb. 28, 1922.....	\$ 38,998.43
Bill No. 4926-C dated Mar. 31, 1922.....	58,521.84
Bill No. 5243-C dated Apr. 30, 1922.....	87,594.24
Bill No. 5474-C dated May 31, 1922.....	120,446.37
Bill No. 5621-C dated June 30, 1922.....	168,336.09
Bill No. 5940-C dated July 31, 1922.....	8,657.79
Amount due on account of August, 1922, Cost.....	\$ 1,697.17

\*NOTE—This Total Customer's Cost to August 31, 1922, is the addition of the  
 Total Customer's Cost to July 31, 1922, and of the month of August, 1922.



EXHIBIT C\*

SUMMARY OF COSTS DIVIDED INTO SUB-ACCOUNTS OF WORK ORDER NO. 2102 AS OF APRIL 30, 1922

S/A	Description	Expenditures to Date	Estimated Expenditures Contracted for	Total Expenditures made to Date and those Contracted for	Present Estimated Amount to Complete	Percent Estimated Completed Cost	Original Estimated Completed Cost	Comparisons of Total Estimated Cost of Sub-Accounts Over-run Under-run
1.31	Clearing Site.....	\$ 4,702.83	.....	\$ 4,702.83	.....	\$ 4,702.83	\$ 5,000.00	..... \$ 297.17
3.11	Excavating for Foundations.....	16,181.49	.....	16,181.49	200.00	16,381.49	14,630.00	\$ 1,751.49
3.21	Backfill for Foundations.....	4,216.10	.....	4,216.10	300.00	4,516.10	4,500.00	16.10
3.31	Formwork for Foundations.....	10,599.51	.....	10,599.51	5,620.93	16,220.44	15,027.00	1,193.44
3.411	Concrete for Foundations.....	23,207.81	.....	23,207.81	16,030.22	39,238.03	38,131.00	1,107.03
3.441	Reinforcing Steel for Foundations.....	3,841.77	.....	3,841.77	2,405.00	6,246.77	5,600.00	646.77
3.471	Structural Steel for Foundations.....	9,837.46	.....	9,837.46	19,040.00	28,877.46	29,020.00	..... 142.54
4.11	Structural Steel—Material.....	71,072.35	\$21,633.66	92,706.01	34,019.52	126,725.53	130,572.00	..... 3,846.47
4.2111	Tile Walls.....	1,920.54	7,764.50	9,685.04	7,559.46	17,244.50	15,918.00	1,326.50
52.31	Miscellaneous Construction Office Expense.....	467.41	.....	467.41	530.00	997.41	930.00	67.41
53.1	Insurance.....	630.93	.....	630.93	5,297.07	5,928.00	5,928.00	.....
55.1	Fire and Police Protection.....	431.50	.....	431.50	500.00	931.50	900.00	31.50
56.1	Drawings.....	3,805.75	.....	3,805.75	4,400.00	8,205.75	8,000.00	205.75
57.1	Inspecting and Trading.....	885.95	.....	885.95	1,850.00	2,735.95	1,900.00	835.95
59.1	General.....	16,815.72	.....	16,815.72	3,945.28	20,761.00	20,295.00	466.00
		\$180,536.92	\$59,485.97	\$240,022.89	\$203,028.17	\$443,051.06	\$438,756.00	\$11,507.68
								\$7,212.62
								\$443,051.06
								438,756.00
								\$ 4,295.06

\*Only a part of this Summary is shown, but enough for illustrative purposes.

## Vol II

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