

CITY OF PHILADELPHIA PENNSYLVANIA

OFFICE OF THE CONTROLLER

Promoting honest, efficient, and fully accountable government

DEPARTMENT OF PUBLIC PROPERTY

Change Order and Requirements Contract Review

August 2014



City Controller
ALAN BUTKOVITZ



CITY OF PHILADELPHIA

OFFICE OF THE CONTROLLER
Municipal Services Bldg., 12th Floor
1401 John F. Kennedy Boulevard
Philadelphia, PA 19102
(215) 686-6682
FAX (215) 686-3832
JOHN.H.THOMAS@PHILA.GOV

ALAN BUTKOVITZ
City Controller

JOHN H. THOMAS
Deputy City Controller

October 9, 2014

Bridget Collins-Greenwald, Commissioner
Department of Public Property
City Hall, Room 790
One Penn Square
Philadelphia, PA 19107

Pursuant to Section 6-400(d) of the Home Rule Charter, the Controller's Office conducted a review of the Department of Public Property's change order and requirements contract procedures to determine if controls are in place to ensure the accuracy and reasonableness of amounts billed. The results of this assessment are contained in the attached report, a synopsis of which is provided in the executive summary.

We discussed our findings and recommendations with you and your staff at an exit conference and included your department's written response to our comments as part of the report. We believe that our recommendations, if implemented by management, will improve the efficiency and effectiveness of the change order and requirements contract billing review process for the Department of Public Property.

We would like to express our thanks to you and your staff for the courtesy and cooperation displayed toward us during the conduct of our work.

Very truly yours,

ALAN BUTKOVITZ
City Controller

cc: Honorable Michael A. Nutter, Mayor
Honorable Darrell L. Clarke, President
and Honorable Members of City Council



Department of Public Property Change Order and Requirements Contract Review 2014

Executive Summary

Why The Controller's Office Conducted The Examination

The Controller's Office monitors change orders and requirements contract costs associated with the City of Philadelphia's capital projects as part of its pre-audit function. A comparative analysis of the initial bid price and final cost of projects completed from January 2011 to May 2014 among four departments¹ with major capital projects appeared to reveal that the Department of Public Property (DPP) spent a higher percentage of their contract value on change orders than other departments. (See Table 1 on Page 1) Accordingly, we decided to conduct a review of DPP's contract administration procedures for change orders and requirements contracts. The primary objective of this review was to assess DPP's internal control environment for ensuring that construction funds are expended in accordance with regulation, policy, and contract terms and conditions.

Subsequent to the initiation of our review and after discussing preliminary findings with DPP personnel, the department informed us that they have developed or are in the process of developing various initiatives to improve their review process. These initiatives are more fully explained in the departmental response included with this report on page 16.

What The Controller's Office Found

The Controller's Office found that there were inadequate controls to ensure that amounts billed for change orders and requirements contracts were fair and reasonable. Some of the more significant findings include the following:

- Labor, Material, Equipment, and Subcontractor markups were inconsistently applied resulting in \$163,084 in excess costs to the city.
- Supervision charges were added to invoices where the charges did not appear to be appropriate thereby costing the city \$219,939.
- Labor rates were not billed consistently with the labor rates that were actually paid to employees thereby costing the city \$73,742.
- Certain construction activities and related charges were billed at rates much higher than rates generated by comparable resources designed to evaluate the reasonableness of proposed construction charges. These higher rates cost the city an additional \$84,852.

¹ The four City of Philadelphia departments that administer major capital projects are the Department of Public Property, the Streets Department, the Water Department and the Division of Aviation (Commerce Department).

- Equipment was not consistently billed in accordance with the Rental Rate Blue Book for Construction Equipment as required by the city's standard contract requirements (SCR). These inconsistent billing practices cost the city an additional \$54,037.
- Approximately 25% of the change orders tested appeared as if they should have been included in the design phase of the project, where our experience indicates they would have resulted in less expensive costs.

What The Controller's Office Recommends

The Controller's Office has developed a number of recommendations designed to improve the Department of Public Property's internal controls and procedures to ensure that change order and requirement contract costs are reasonable and in accordance with required standards. These recommendations can be found in the body of the report.

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INTRODUCTION

BACKGROUND

The Controller's Office monitors the city's capital projects and related costs as part of its pre-audit functions. While the Controller's Office expects project designers to be diligent and exercise due care in developing the plans, many conditions can arise during construction that affect virtually every project requiring the issuance of change orders. Change orders are changes to the contract scope or duration which alter the time of project completion or the dollar value to be paid for the work. Change orders can occur for a number of reasons including:

- Changes requested by the owner/user
- Errors and omissions in the contract plans that need to be addressed
- Unforeseen conditions that could not have been anticipated by the designer or the owner/user at the time of design.

Requirements contracts are generally utilized by the City of Philadelphia for smaller to medium sized construction projects that are either emergency in nature, or where time is of the essence and minimal engineering or design input is necessary. Requirements contracts allow such projects to be completed more quickly than if they were required to go through the bidding process. The contractor completes a task assigned by the contracting department (e.g., the Department of Public Property) and bills the city based on the time worked and the materials and equipment used.

The Controller's Office reviews capital project expenditures to ensure that they are for the intended purpose and the appropriate dollar amount. The Controller's Office questions payments that do not appear to be billed in compliance with the approved contract or city standards. Increasingly, the Controller's Office has been questioning payments approved by the Department of Public Property (DPP) for recurring issues that had been previously questioned. Based on responses provided by DPP personnel, we believe that some project managers place a greater reliance on their professional judgment and experience than they do on established standards which contributes to the recurrence of these problematic issues.

As the table below illustrates, DPP spends a higher percentage of their contract value on change orders than other city departments.

Table 1 - Projects completed in Philadelphia from January 2011 to May 2014

Department	Projects	Bid Price	Final Cost	Percentage Increase
Public Property	57	\$53,150,413	\$59,654,826	12%
Airport	43	\$236,097,935	\$255,404,703	8%
Streets	21	\$34,897,267	\$36,047,896	3%
Water	58	\$211,110,157	\$210,209,527	0%

The Controller's Office challenged and/or rejected many of the billings associated with DPP change orders and requirements contracts during the above referenced period because we were not satisfied that DPP was sufficiently monitoring construction activities and reviewing expenditures.

INTRODUCTION

OBJECTIVE AND SCOPE

Our objective was to determine the adequacy of DPP's controls over the administrative review process related to change order and requirements contract billings, as well as to identify and quantify related questioned costs. To perform our review, we selected and tested a sample of change orders from 38 construction contracts initiated during fiscal years 2010 to 2012. We also selected and tested billings related to five requirements contracts initiated during fiscal years 2010 to 2013.

METHODOLOGY

To assess DPP's administrative control process we requested and were provided written policy documents issued in 2011 and 2013. In addition, we compared selected change order and requirement contract billings to prevailing wage rates, contract requirements, standardized pricing resources, and the pricing standards of departments with similar construction activities. We also determined if DPP personnel complied with the department's written policies and city standards as part of their review and approval process for change orders and requirements contracts.

In many cases we were unable to test the propriety of sampled costs because sufficient information, such as the breakdown of labor costs, the size and type of equipment, or the size and nature of the task completed, was not provided in the billing documents.

The results of our review are presented in the findings section of this report.

FINDINGS

CHANGE ORDER FINDINGS

Our review determined that there were internal control deficiencies over the administrative review process for change orders which led to several findings presented in this report. We also question the validity of certain costs noted during our review of selected sample items, totaling \$515,120, which are summarized in Table 2A, and are described in the subsequent paragraphs.

As part of our testing, we reviewed DPP's internal controls over change order processing. Our review determined that on December 16, 2011 a memo providing guiding principles and procedures to be followed when processing change orders for approval was distributed by the deputy commissioner to DPP's project managers. This memo was followed by an email on August 26, 2013 which reiterated how change orders should be used and related costs reviewed. However, there were inadequate controls established to ensure that the required principles were followed and procedures performed. In addition, the memo and email were neither detailed nor comprehensive enough to ensure that change orders and the related costs were kept to a minimum. As a result, there was an increased risk of unnecessary change orders or excess costs being approved. Those risks were evidenced by the following findings:

- 153 of the 551 change orders reviewed (28%) were the result of project specification changes that should have been addressed at the time of initial design. These change orders were not necessarily the designers' fault, but were additions that, if desired, should have been included during the design phase. Including these change orders during the initial design would reduce costs by ensuring that the maximum scope of the project was subjected to competitive bidding.
- DPP's project managers' duties include negotiating the proposed price of change orders to ensure that only valid and reasonable costs are included. We noted that change orders from only ten of the 38 projects reviewed displayed evidence of negotiations (e.g., such as certain costs being crossed out that were not allowed, and others being replaced with lower values).
- Estimated costs prepared by DPP personnel were found on only four of the 38 projects reviewed. Either the estimates are not consistently filed and maintained with the backup material as they should be, or DPP approves the majority of costs without first investigating and documenting what costs should be associated with the change order work. The contractor has the advantage in a negotiation when an independent cost estimate has not been prepared. Additionally, we noted that final approved costs for several of the change orders, for which independent estimates were prepared, were significantly higher than the estimated costs prepared by DPP.
- In order to properly evaluate the proposed costs of change orders, it is essential that sufficient information is included to support the costs charged by the contractor. However, we noted that such information was not always provided. In some cases, the unit value of materials was not provided. Therefore, for example, it could not be determined if the city was being charged by the ton or cubic yard. In other cases, the costs were not properly itemized by materials, labor, overhead, and profit as required by the city's Standard Contract Requirements (SCR) and DPP's policy memo. Finally, no backup documentation at all was provided for five of our sampled change orders.

FINDINGS

- 146 of the 551 change orders reviewed (26%) were a result of a design error or omission.
- Contingent prices are not currently used by DPP. Contingent prices are predetermined costs that are included in the contract if certain specific tasks that are typical of a construction project should arise. This process standardizes the billing of such tasks and treats all contractors fairly. Including contingent prices in construction contracts could significantly reduce the number of change orders and their related costs by ensuring that the costs associated with the maximum amount of work is defined at the time of the bid.

The following table and subsequent explanatory paragraphs depict the findings for which questioned costs were identified and quantified. Of the population of change orders processed during our audit period totaling \$17.8 million, we tested billed amounts totaling \$5.4 million and questioned \$515,120 or 9.5% of those costs. If this rate existed throughout the population, it would result in questioned costs exceeding \$1.7 million over the three year period.

Table 2A – Change Order Questioned Costs

Project	Total	Markups	Supervision	Labor Rates	Standardized Pricing Resources	Credits	Other (Bond, Tax, Fuel, Tools)
10 4026	\$ 138		\$ 138				
10 4070	\$ 3,368			\$ 3,340			\$ 28
10 4076	\$ 5,681	\$ 27	\$ 3,100	\$ 1,086		\$ 383	\$ 1,085
10 4090	\$ 3,700		\$ 2,674		\$ 620		\$ 406
10 4091	\$ 3,744	\$ 3,744					
10 4101	\$ 657	\$ 657					
10 4112	\$ 2,266	\$ 1,611		\$ 655			
11 4001	\$ 2,237	\$ 1,495		\$ 486			\$ 256
11 4003	\$ 251			\$ 251			
11 4014	\$ 1,018				\$ 1,018		
11 4015	\$ 6,806	\$ 517	\$ 1,363	\$ 4,926			
11 4019	\$ 4,522	\$ 993	\$ 1,936	\$ 1,593			
11 4038	\$ 29,561				\$ 29,561		
11 4045	\$ 5,778	\$ 214	\$ 1,765	\$ 2,167		\$ 255	\$ 1,377
11 4049	\$ 3,291	\$ 767		\$ 2,409			\$ 115
11 4055	\$ 8,290	\$ (1,257)	\$ 1,001	\$ 6,494			\$ 2,052
11 4061	\$ 288,392	\$ 148,541	\$ 126,191			\$ 13,660	
11 4063	\$ 3,480		\$ 3,480				
11 4073	\$ 17,483	\$ 53	\$ 1,791	\$ 14,404	\$ 1,235		
11 4089	\$ 350						\$ 350
11 4119	\$ 996	\$ 140	\$ 718		\$ 138		
11 4132	\$ 9,872	\$ 35	\$ 8,536			\$ 874	\$ 427
12 4001	\$ 2,514	\$ 61			\$ 2,293		\$ 160
12 4031	\$ 18,298	\$ 5,878	\$ 3,250	\$ 8,152			\$ 1,018
12 4033	\$ (2,923)	\$ (2,923)					
12 4072	\$ 87,661	\$ 2,531	\$ 3,662	\$ 24,751	\$ 55,867	\$ 850	
12 4075	\$ 4,396			\$ 647	\$ 3,749		
12 4096	\$ 2,381			\$ 2,381			
12 4119	\$ 911				\$ 911		
Total	\$ 515,120	\$ 163,084	\$ 159,605	\$ 73,742	\$ 95,392	\$ 16,022	\$ 7,275

FINDINGS

Table 2B Project Descriptions

Project	Description
10 4026	Detention Center Energy Improvements
10 4070	Site Improvements at Mt. Airy Playground and Evans Playground
10 4076	Replacement of Chillers at Criminal Justice Center
10 4090	Picariello Playground Renovations
10 4091	Rex Avenue Bridge Rehabilitation
10 4101	Roof Replacement at the Fleet Management Shop
10 4112	Site improvements on the Benjamin Franklin Parkway
11 4001	Roof replacement at the Police Forensic Center
11 4003	Upgrades at Clark Park
11 4014	Franklin D Roosevelt Park Play Area Renovations
11 4015	Catherwood Building Roof Replacement at the Philadelphia Zoo
11 4019	Roof Replacements at various city locations
11 4038	New paving and lighting on the Fairmount Bikeway Trail
11 4045	Interior Renovations to the Police Headquarters
11 4049	Police Tactical Headquarters Remodeling
11 4055	New Engine 38
11 4061	Philadelphia Youth Study Center
11 4063	Rehabilitation to the House of Corrections Laundry Building
11 4073	Heat, Ventilation and Air Conditioning Renovations to the 3 rd , 22 nd and 23 rd Police Districts
11 4089	Mechanical, Electrical and Plumbing Improvements to Engine 7, 28, 61, and 63
11 4119	Outdoor Lighting and Chalfont Playground
11 4132	Medical Records Upgrade at Health Centers 5, 6, and 9
12 4001	Site Improvements to Russo Park
12 4031	Gas Fired Boiler Installation at the Criminal Justice Center
12 4033	Recreation Lighting Efficiency at various Recreation Centers
12 4072	Construction of new Swat/ Bomb/ K9 Building – General Contractor
12 4075	Construction of new Swat/ Bomb/ K9 Building – Electrical Contractor
12 4096	Phipps Building Roof Replacement
12 4119	Daniel Boyle Playground Improvements

MARKUPS

Contractors typically add additional charges termed markups to the amount they bill for labor, material, and subcontractor costs to cover their overhead and profit. The Force Account² section of the Standard Contract Requirements states that markups should not exceed the following values:

Labor	20%
Materials	15%
Subcontractors	8%
Equipment - Markups are not allowed for equipment	

While these markup rates are not binding for standard negotiated change orders, DPP's policy directs that they are not to be exceeded. In addition, representatives of the Philadelphia Water Department (PWD), and the Philadelphia International Airport (Airport), stated that they restrict the amount of markups to the percentages listed above. Using consistent markups is the fairest way to ensure equality among contractors and for the city to receive a consistent and fair price. However, we noted that many of the DPP contractors used markups that exceeded the city standards totaling \$163,084.

² Force accounts relates to those situations in which a negotiated agreement cannot be reached for the cost of change order work.

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SUPERVISION

Supervision charges are not specifically addressed in the SCR or in the language for standard construction contracts. However, provisions included in construction requirements contracts specifically state that supervision costs are included as part of the labor markup. Further, representatives of the Airport and PWD stated that supervision is included as part of the markups for change order work and should not be charged as a separate line item. Our testing noted that 14 of the contracts sampled had charges totaling \$159,605 for activities related to supervision. We believe DPP should establish procedures consistent with other city departments that disallow charges for supervision.

LABOR RATES

The labor charge on a change order consists of four components: the wage rate, health and welfare, taxes and insurance, and a labor markup. For clarity and to facilitate a proper review, each of these components should be provided for each labor classification on the bill. The majority of change orders reviewed were not detailed in this manner, but often only included a final labor charge that was not explained in detail.

In addition, of the 38 contracts reviewed, 15 of them appeared to indicate higher labor charges than expected based on prevailing wage rates. For these 15 projects, we requested records from the City of Philadelphia's Office of Labor Standards indicating the rates the contractors paid their workers. The information we received assisted us in comparing eight of the 15 projects. The values that the contractors charged the city were higher than they actually paid their workers for all eight of the projects we compared.³

On one contract, a fair rate was used for labor on the first change order that included labor charges. However, the rate was escalated an average of 150% an hour for the remainder of the change orders. On other contracts, the taxes and insurances were applied to both the labor wage rate as well as the health and welfare rate, instead of only the wage rate as required. We also noted that two of the contracts with insufficient detail had billed total labor charges so high that the taxes and insurance rate would have had to be over 100% for the rate charged to be accurate. These findings associated with labor rates led to \$73,742 of questioned costs.

STANDARDIZED PRICING RESOURCES

DPP policies for processing change orders require that reviewers compare the costs charged to standardize pricing resources such as RS Means or the Rental Rate Blue Book for Construction Equipment (Blue Book), to determine the reasonableness of those costs. However, we could find no evidence that such comparisons were routinely performed and used to challenge the costs submitted when they exceeded the standardized pricing amounts. Testing the costs for all materials, equipment, or hours of labor required, included in our sampled change orders was beyond the scope of our review. However, our limited comparison of selected items from sampled contracts found that costs charged to the city exceeded pricing standards for nine of the projects we reviewed totaling \$95,392.

³ On all eight contracts reviewed the contractor paid at least the prevailing wage rates.

FINDINGS

CREDITS

Credit change orders are submitted by contractors when construction work that was included in the initial contract has been determined to be no longer required. Section 49 of the SCR indicates that the same markup amounts should be used on credit change order amounts prepared when construction work is deleted from a contract as are used when such work is added. Our testing disclosed that five of the contracts reviewed had credit change order amounts that were not properly marked up, leading to \$16,022 of questioned costs.

BONDS

Section 19 of the SCR requires the contractor to obtain a surety bond for the total contract limit (including the contingency amount used for change orders); to protect the city from loss should the contractor fail to meet his obligations. Occasionally, projects will exceed the initial contract amount. In such cases, bond charges are allowable for the portion of the work that exceeds the contract limit. However, for the majority of projects, bond charges are not allowed as these costs are included in the original contract amount and compensated for on the contractor's first invoice. Five of the projects reviewed had charges for bonds that should not have been allowed totaling \$4,857.

TAX MARKUPS

Of the 21 projects that were properly broken down into labor, materials, equipment, and subcontractor costs, five of these projects (33%) included material markups on the tax for the materials totaling \$406. According to the SCR, tax amounts should not be included in the material costs to be marked up.

SMALL TOOLS

Several change orders included charges for small tools totaling \$1,408. Such tools should not be billed separately as the SCR indicates they are included as part of the standard markups.

FUEL

The Blue Book indicates that fuel costs are one of the components included in the operating rate contractors charge for the time their equipment is in use. Accordingly, there should not be a separate charge for fuel. On two of the contracts reviewed, the contractor billed for equipment as well as fuel to operate the equipment totaling \$603.

REQUIREMENTS CONTRACT FINDINGS

In addition to guidance provided by the SCR, billing criteria for requirements contracts are included in the Payment Procedures section of each contract (Payment Procedures). As we found with DPP's change order processing, our testing disclosed a lack of adequate controls designed to ensure that requirements contract billings were made in accordance with required provisions.

Our findings are summarized in the table below and further described in the subsequent paragraphs.

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Table 3 – Requirements Contract Questioned Costs

Contract	Amount Reviewed	Questioned Costs	Supervision	Truck Charges	Equipment Costs	Fuel	Payroll Taxes
11 4025	\$535,965	\$25,147	\$16,381	\$696	\$1,130		\$6,940
11 4091	\$1,178,485	\$41,096	\$21,931		\$10,670	\$8,495	
12 4118	\$962,864	\$24,674	\$1,040		\$19,347	\$4,287	
13 4022	\$237,348	\$6,102	\$1,312	\$408	\$170		\$4,212
13 4082	\$868,664	\$37,017	\$19,670	\$1,907	\$12,180	\$3,260	
Total	\$3,783,326	\$134,036	\$60,334	\$3,011	\$43,497	\$16,042	\$11,152

SUPERVISION

Payment Procedures section 1.4 A. 3 provides the following requirements:

The markup percentage for labor shall pay the Contractor for the following types of items: a. Labor rates paid by the Contractor that exceeds the Base Rate as described above. b. All overhead expenses such as field visits, inspection, office supervision, preparation of estimates, billing and non-payroll taxes. c. Profit. d. Field supervision.

While these requirements appear to clearly state that supervision is included in the labor markup, every one of the contracts tested had charges that appeared to be for supervision. When we question such costs, DPP personnel respond that the services billed were allowable because of extraordinary circumstances. For example, in one case a project manager stated that the charges were allowable because the planned construction activities had to be altered due to unexpected conditions. We believe that the above noted requirements, which indicate that services, such as field visits and preparation of estimates are included in the labor markups, should preclude the allowance of these additional supervision charges.

EQUIPMENT

Our testing noted the following conditions relating to billings for equipment:

- Billing for Equipment at Rates Higher Than Allowed

Payment Procedures sections 1.4 C. 3 and 1.4 C. 6 provide the following requirements related to billings for equipment:

Payments for equipment will be made according to the rates listed in the Rental Rate Blue Book for Construction Equipment, latest edition. Should the equipment be rented for use on the job, the Contractor will be paid the Blue Book rate as stated above or the actual rental rate paid for the equipment used on the job, whichever is lower. Such actual rental price shall be documented by submission of a receipted invoice with the billing to determine the lower cost to the city.

The requirements cited above clearly indicate that the rates charged for equipment should never be higher than those listed in the Blue Book. We found that there were instances where

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equipment was billed at costs exceeding the Blue Book rate on each project we reviewed. However, in one case we noted that, consistent with our previous recommendation, DPP personnel compared the equipment rates charged on a recent requirements contract invoice to the required Blue Book rates. On this project the contractor had billed \$1,947 for equipment. However, after DPP compared the rates to the Blue Book, the approved cost was reduced to \$1,130. The original billed amount was more than 72% higher than the standard cost per the Blue Book. This comparison should be performed on every invoice including equipment charges.

- Equipment Billed at Operating Rate When Not Operating

Often equipment is required to be on the site but not operating the entire day. The SCR provides the following requirements for this circumstance:

For any equipment, including machinery and trucks, mutually deemed as necessary for the performance of the work, the Project Manager shall allow the Contractor reasonable rental rates, computed as follows: (i) for all equipment rented, the Contractor will be reimbursed the reasonable actual costs based upon the receipts provided, plus an allowance for operating cost as provided in subparagraph (ii) of this subparagraph 52.a.3.; (ii) for all equipment owned, including pumps and compressors, a reasonable hourly rate will be determined by using the reasonable monthly rental rates taken from the current edition (with updated supplements) of the Rental Rate Blue Book for Construction Equipment and dividing it by one hundred seventy-six (176); an allowance may be made for operating costs for each and every hour the machinery or equipment is actually operated in accordance with the rates listed in the aforesaid rental book; if the machinery or equipment is required to be at the work site, but is not operated, the Contractor may be compensated at the reasonable hourly rental rate, exclusive of operating costs.”

In the past, the Controller’s Office had questioned DPP personnel regarding billings for equipment at the operating rate for extensive amounts of time that did not seem appropriate. Though this issue had been brought to the attention of several project directors, it was not addressed. In one case, DPP inaccurately responded to our inquiry by stating that the equipment was being billed at the standby rate when it was actually billed as operating. In another case, DPP responded by simply sending guidance indicating what costs are covered by the operating rate.

As part of our current review, we noted that for one project tested, the contractor had billed for a dump truck for 104 out of the 146 days the contractor was at the job site. Additionally, the truck was billed as if it was being operated for the entire day for all days billed. Such extensive use of this equipment appeared extremely unusual. For example, we noted that only 17.5 days were charged for dump trucks relating to a similar project that had comparable total amounts billed. To determine the reasonableness of these charges we monitored the above noted job site and noted that the dump truck was operated for only 90 minutes over a four day span, to pick up stone for the construction work. This led to DPP paying 4.5 times over the amount that should have been paid for the dump truck for that task. As evidenced by our findings, the extent and nature of such billings for equipment must be more closely monitored and should be questioned when they appear unreasonable.

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- Double Billing for Fuel

As previously noted, the Blue Book indicates that fuel costs are one of the components included in the operating rate contractors charge for the time their equipment is in use. Accordingly, there should never be a separate charge for fuel.

We previously questioned DPP regarding separate billings for fuel on requirements contracts in addition to equipment billings. However, this issue has not been addressed. In one case, after the fuel charges were questioned, DPP's response resulted in additional costs to the city. The project director instructed the contractor to bill for the equipment at the operating rate for the entire time it was on site rather than charging separately for fuel.

As a result of our current review, we noted separate charges for fuel, in addition to equipment that was billed at the operating rate, for three of the five projects tested.

- Inappropriate Billing for Service Trucks

Payment Procedures section 1.4 C. 13 provides the following requirements relating to billing for construction vehicles:

No additional costs will be allowed for standard construction vehicles, including pickup trucks, storage vehicles, service trucks or vans; this will be considered part of overhead expenses.

Our testing found that utility trucks were billed for three of the requirements contracts we reviewed. When DPP was informed by our office that such charges should be disallowed in accordance with the above noted provisions, their response was that the charges were warranted, since utility trucks have always been allowed as a billable expense.

PAYROLL TAXES

On two of the contracts reviewed, the contractor submitted and was approved for Federal Unemployment Tax at a rate of 8% of the total labor charges. The Federal Unemployment Tax rate is 0.6%⁴ applied to only the first \$7,000 of payroll for each individual. This produces an effective tax rate of well below 0.6% for an employee's annual salary. In addition, state unemployment tax is similarly capped after a taxable base of approximately \$8,000⁵ of earnings per employee per year. Only two of the contracts reviewed appeared to remove these taxes once they had exceeded the taxable base. Under the remaining contracts, DPP approved the contractors' billings for federal and state unemployment taxes at times where it appeared that they were not warranted. Such inappropriate charges could result in significant excess billings to the city.

⁴ After applying credits for State Unemployment Tax Payments.

⁵ The taxable base for Pennsylvania Unemployment Tax was \$8,000 in 2012, \$8,500 in 2013, and \$8,750 in 2014.

FINDINGS

LABOR CHARGES

The Controller's Office monitored the work performed on one requirements contract project over a four day period and found that the contractor billed for 25% more hours than they actually worked. At another site where we also monitored work for 4 days, we noted that all of the employees worked less time than the contractor billed the city. The excess time differences ranged from 26 minutes to two hours and 36 minutes. Based on the results of our limited sample it again appears that DPP's monitoring procedures are inadequate to determine the extent of such overbillings of labor charges on requirements contracts.

RECOMMENDATIONS

RECOMMENDATIONS

To enhance controls over the change order and requirements contract billing review and approval process, we believe that a more detailed and comprehensive formal policy should be developed that addresses the issues discussed in this report. Further, we believe that procedures should be established to ensure compliance with DPP policies and city standards. Such procedures should include a checklist citing specific billing requirements that is signed by the project manager attesting that the requirements were reviewed for compliance. A supervisor should verify that the checklist has been signed prior to approving the payment. A sample checklist is provided at the end of this report.

Our recommendations to improve controls over the change order and requirements contract review and approval process include the following:

1. Require that the project manager knows and understands the costs associated with the revised contract requirements, prior to entering into negotiations for a change order. At a minimum, the contractor's cost proposal should be compared to RS Means, the Blue Book, or another standard pricing resource to verify that the labor hours, labor rates, equipment hours, equipment rates, and prices for materials charged are reasonable and appropriate.
2. Change the specifications for future construction contracts to define as many cost components as possible. For example, the contracts should state that the markups for labor, materials, and subcontractors are not to exceed twenty percent, fifteen percent, and eight percent respectively. Additionally, specific taxes and insurance costs that are allowable should be defined.
3. Ensure that only allowable tax and insurance costs are included and listed individually. Periodically request contractors to verify their taxes and insurance rates to ensure that they are reporting them correctly by submitting copies of their tax forms and/or insurance policies.
4. Ensure that charges for bonds are not present on change orders that do not exceed the contract limit.
5. Ensure that contractors are not including labor charges to supervise their subcontractors or other labor. If supervision charges are to be allowed for special circumstances, those circumstances should be defined and standardized.
6. Require that all charges for equipment be accompanied by the appropriate Blue Book valuation.
7. Ensure that equipment is only charged at the operating rate for time that the equipment is actually operating by requiring contractors to indicate the hours the equipment was operated and the task performed. For those billings that appear excessive, DPP personnel should visit and observe the work site to determine the accuracy and reasonableness of billings.
8. Ensure that unit values are included as part of all price estimates for materials.
9. Ensure that all material markups are based only on the material price and not the related sales tax.
10. Verify that billings do not include amounts for equipment fuel as that cost is included in the operating rate that is charged for the equipment.

RECOMMENDATIONS

11. Review labor rate charges to determine if they are consistent with prevailing wages. To facilitate such a review, the contractor should be required to provide the job classification associated with all labor rate charges. If the labor rate exceeds the prevailing wage, the contractor should be required to provide evidence that this higher rate was actually paid to their employees.
12. Increase monitoring procedures to determine the extent of overbilling for labor hours worked. In addition to recovering amounts overbilled, consider appropriate actions such as recommending to the Procurement Department that they sanction or disbar contractors who repeatedly overbill hours worked.
13. Verify that the end user and other critical stakeholders are involved in the design phase of each project and ensure they understand that the most efficient and effective time to provide input is in the design phase, rather than after the bidding process.
14. Track design errors and omissions by designer and consider recommending to the Procurement Department that they sanction or disbar those designers with excessive errors and omissions from further contracts with the city.
15. Ensure that backup is maintained for all change orders, and that the costs are clearly broken down into labor, materials, equipment, and subcontractors costs.
16. Determine what contingent construction activities may be appropriate and include the cost the city will pay in the original contract, should those activities be required.

**EXHIBIT A
SAMPLE CHECKLIST**

	YES	NO	N/A
General:			
The amounts billed separately list the costs associated with labor, materials, equipment, and subcontractors.			
Subcontractor charges separately list the costs associated with labor, materials and equipment.			
The proper markups are used (20, 15, 8, and 0 percent for labor, materials, subcontractors, and equipment, respectively).			
The invoice is free of charges for other items that should not be included (bond charges, small tools, fuel, etc.).			
Labor:			
The labor hours billed for construction tasks are consistent with those listed in RS Means, or hours used for similar projects.			
The labor rates and classifications are properly listed.			
The labor classifications are appropriate.			
The labor rates and benefits are consistent with the prevailing wages and benefits for the classification specified, or are backed up with supporting documents. (This assumes the current policy is revised to include this verification)			
The tax and insurance costs are listed individually.			
The tax and insurance costs are within acceptable ranges. (DPP has not, as yet, established ranges for comparison.)			
The tax and insurance costs are allowable and they are based on appropriate earned wages.			
The tax and insurance costs are applied only to wages and not to the related benefits.			
The bill is free of any charges for supervision or project managers.			

EXHIBIT A
SAMPLE CHECKLIST

	YES	NO	N/A
Material:			
The costs have been compared to standardized pricing resources and appear fair and reasonable.			
Taxes have not been included in the costs marked up.			
Quantities are listed for all material charges.			
Equipment:			
The specification of all equipment charged is clearly identified.			
The associated Blue Book value or the Equipment Watch Sheet has been provided and agrees with the amount billed.			
The billing is reasonably clear as to how each piece of equipment was used and that all equipment appears necessary.			
The operating time for equipment used or on standby appears reasonably billed.			
The amounts billed do not include charges for service trucks.			

AGENCY RESPONSE

**DEPARTMENT OF PUBLIC PROPERTY
RESPONSE TO THE AUDIT REPORT**

AGENCY RESPONSE

MEMORANDUM

CITY OF PHILADELPHIA

PUBLIC PROPERTY

DATE: October 6, 2014

TO: John H. Thomas, Deputy City Controller

FROM: Bridget Collins-Greenwald, Commissioner

SUBJECT: Audit of Change Order and Requirement Contract Practices

As I stated in our meeting on September 22, 2014, the Department of Public Property (DPP) appreciates the Controller's Office taking the time to assist us with a comprehensive review of the change order process. The assistance we have received from your office in the past few months has enabled us to work together to identify deficiencies with the change order process and work on meaningful solutions to permanently address them.

I think you will find from our responses that the DPP accepts most of the findings presented by the Controller's Office and has been in the process of correcting those issues that warrant action. Before the audit results were made available to us, the DPP has embarked on the following initiatives:

- Job Order Contracting
 - In late 2009, the DPP's Capital Projects Division began investigating a unique project delivery system which would provide competitively priced alternatives to time and material (T&M) based contracts and greatly reduce "negotiated" change orders. The Job Order Contracting (JOC) methodology uses competitive bidding to pre-establish unit pricing to accomplish various construction tasks on an "as required" basis. Pricing is fixed based on a comprehensive pre-established construction task catalogue; thereby, eliminating price negotiation and variables such as labor productivity and mark-ups.
 - During the course of this investigation, DPP worked extensively with Procurement, Law and the Budget Office to establish this methodology as viable within the public works bidding process. The initial contracts are in the conformance phase and we anticipate using the system early in 2015. JOC contractors will be available to provide alternate means for accomplishing T&M contract work as well as change orders on public works contracts. DPP is currently investigating incorporating the Job Order Contracting system into the City Standard Contract Requirements thus strengthening change order cost controls within all competitively bid public works contracts.

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- Construction Team
 - In July of 2014, the Department of Public Property reorganized the Capital Projects Division (CPD) team structure to include the formation of a construction team. Prior to this time, construction staff was decentralized within the various teams within the CPD, specifically Public Safety, Fairmount Park, Recreation, and Health and Human Services. The reorganization was specifically implemented to enhance accountability, work load distribution, workforce deployment, policy and procedural improvement, and training program development. Construction staff will thus be following specific procedures and guidelines associated with requirements contracts requisites and hold contractors more strictly to these standards and requirements. Inspections on job sites occur more frequently with the establishment of this team.

- QA/QC Team
 - In late 2010, the Department of Public Property Capital Projects Division initiated the formation of a Quality Control/Project Controls Unit. A Project Director was appointed at that time. The charter of this team was/is to enhance divisional efficiencies via consistent and improved cost estimating, process and project scheduling, budget analysis, requirements and job order contracting administration, and grant management. Budget restrictions prevented the necessary staffing of this unit until FY2015 when an additional four positions were approved. The Department is currently in process of hiring these staff positions. Using cost repositories and estimating software, the team will review change orders (as well as, developing other cost/budget project requirements) for justification by industry standard. The team will additionally monitor requirements invoices for compliance with contract requirements.

- Change Order Policy
 - In December 2011, the Deputy Commissioner issued a directive to all CPD staff on the procedures to follow when initiating a change order. That directive was put into a policy that outlines the process, differentiates between and emergency and critical change order and outlines the necessary documentation needed for a change order to be processed. The policy is attached to this document (Appendix B).

- Unified forms and checklists for inspectors

AGENCY RESPONSE

- Inspectors on job sites now utilize a uniform inspection report, which includes information that will be used to gather contractor performance information and utilize this information as necessary on future jobs. The reports track inspector time on job sites, which in turn track contractor time spent on various activities on job sites. The reports also give a consistent review of whether the project is on schedule and within scope; therefore, getting an early sense why a change in scope may occur.

- Letter to all Deputy Mayors and Departmental Commissioners
 - In December 2013, notification was sent to all Departmental Commissioners who participate in capital improvement projects that one point person must be designated from each department that would have responsibility to approve/disapprove all changes to scope of a project (Appendix A). This process takes the responsibility from the individual departmental manager on the job site and allows a Deputy Commissioner level staff member to make scope decisions based on their knowledge of other departmental projects, budget, etc. Each department has assigned a Deputy Commissioner level staff member to be the point person.

- Letter to contractors
 - A letter to each of DPP's requirements contractors from the Commissioner will be sent out to each contractor informing of the documentation necessary in order to conduct business with the City of Philadelphia. This letter will be sent to every awarded contractor at the beginning of every project going forward. The letter is attached to this document (Appendix C).

- Tax and insurance costs submitted to Controller at the beginning of the process
 - In order to mitigate issues after the fact, DPP will submit all contractor tax and insurance costs to the Controller's Office before the project begins to ensure the proper formulas are being followed.

- Training sessions for individuals in the Department on all policies
 - All departmental personnel are being scheduled for training on departmental procedures and policies. This training will include operations, fiscal, human resources and safety policies and procedures. A hard copy binder of all policies

AGENCY RESPONSE

and procedures will be distributed and the information will be included on the website. One of the policies will be the change order policy so we can reiterate the process.

As you can see, there are a number of initiatives that have been put in place or are in the works and have been for some time. We look forward to those initiatives contributing to better control of the change order process.

Also as stated in the meeting, there are a few issues where our interpretations of the change order process and the monetary values assigned to change orders differ. While the Department recognizes the general validity of the findings respective of change order management principles, we do not agree with the cost values identified in the audit. The Controller's Office employs mark ups and principles associated with paragraph 52 "Force Account" of the Standard Contract Requirements in computing cost values. The change orders in question were principally negotiated change orders that fall under the jurisdiction of paragraph 49 "Change Orders By Agreement" of the Standard Contract Requirements. This paragraph does not invoke the requirements of paragraph 52 "Force Account" which specifies labor, material, and subcontractor mark up values. "Force Account" requirements, are applicable to paragraphs 50 "Disputed Change Orders" and paragraph 51 "Disputed Work".

The specific areas where we are in disagreement are numbers 7, 8, 9, 10, 11, 12, 13, 14, and 15. We have included a response to each individual issue raised in the audit report below:

AGENCY RESPONSE

**Department of Public Property
Change Order & Requirements Contract Review
August 2014
Findings and Recommendations**

September 23, 2014

SUMMARY OF AUDIT FINDINGS

CHANGE ORDERS FINDINGS:

During the Controller's Office review of DPP's internal controls over change order and requirements contract processing we found what appears to be an increased risk of unnecessary change orders or excess costs being approved. These risks were evidenced by the following findings:

1. 153 of the 551 change orders reviewed (28%) were the result of project specification changes that should have been addressed at the time of initial design. These change orders were not necessarily the designers' fault, but were additions that if desired should have been included during the design phase. Including these change orders during the initial design would reduce costs by ensuring that the maximum scope of the project was subjected to competitive bidding.
 - *The Department of Public Property addressed this issue with a memo from Commissioner Collins-Greenwald to all Department Heads dated December 30, 2013 (Appendix A). This memo is referenced in the initiatives listed above and includes a directive to have one point person for each department to participate with scope definition so change orders for scope will be reduced.*
2. DPP's project managers' duties include negotiating the proposed price of change orders to ensure that only valid and reasonable costs are included. We noted that change orders from only ten of the 38 projects reviewed displayed evidence of negotiations (e.g., such as certain costs being crossed out that were not allowed, and others being replaced with lower values).
 - *In the past, not all change order negotiations were memorialized via mark ups or other documentation, but were verbal in nature. In many cases, even when written documentation of the negotiations existed, only the clean copy with the final cost figures was retained. DPP staff has been advised to keep a record of all negotiations and all negotiated costs are to be documented on the change order form. This process is also outlined in the Change Order Policy (Appendix B).*
3. Estimated costs prepared by DPP personnel were found on only four of the 38 projects reviewed. Either the estimates are not consistently filed and maintained with the backup material as they should be, or DPP approves the majority of costs without first investigating and documenting what costs should be associated with the change order

AGENCY RESPONSE

work. The contractor has the advantage in a negotiation when an independent cost estimate has not been prepared. Additionally, we noted that final approved costs for several of the change orders, for which independent estimates were prepared, were significantly higher than the estimated costs prepared by DPP.

- *The estimates are performed using tools such as the Means book, past projects or a prior work experience. Proposals are compared to these estimates and determined to be appropriate or are disapproved. This process is spelled out in a memo from Deputy Commissioner Knappick dated December 16, 2011. (Appendix C). In the future, DPP will use another tool in the form of Job Order Contracting (JOC) to determine estimates (Appendix D).*
4. In order to properly evaluate the proposed costs of change orders, it is essential that sufficient information is included to support the costs charged by the contractor. However, we noted that such information was not always provided. In some cases, the unit value of materials was not provided. Therefore, for example, it could not be determined if the city was being charged by the ton or cubic yard. In other cases, the costs were not properly itemized by materials, labor, overhead, and profit as required by the city's Standard Contract Requirements (SCR) and DPP's policy memo. Finally, no backup documentation at all was provided for five of our sampled change orders.
- *This documentation is required by DPP policy, the project spec, and past practice to be included in the project file. We also require the contractor to provide this information in the project spec. We have sent a letter to contractors reiterating their requirements and have advised DPP staff that this information must be included.*
5. 146 of the 551 change orders reviewed (26%) were a result of a design error or omission.
- *The RFP states that the design consultant is to certify that a QA review has been done prior to final construction document completion. In the future, DPP staff will ensure that this QA review has been properly completed prior to release of bid documents. This alone does not guarantee that errors and omissions will be eliminated but hopefully minimize the occurrence, but we believe it will decrease the number of errors.*
6. Contingent prices are not currently used by DPP. Contingent prices are predetermined costs that are included in the contract if certain specific tasks that are typical of a construction project should arise. This process standardizes the billing of such tasks and treats all contractors fairly. Including contingent prices in construction contracts could significantly reduce the number of change orders and their related costs by ensuring that the costs associated with the maximum amount of work is defined at the time of the bid.
- *We note that contingent pricing identified in the Standard Contract Requirements is primarily a tool used by Streets and Water for more common items. Each item requires a specific scope and applicability standard identified in the specifications produced for the project. Many DPP projects involve facility infrastructure with few common items. Job Order Contracting will help standardize the work and costs*

AGENCY RESPONSE

associated with that work, much the same way as contingency pricing, but on a larger scale.

7. Markups - we noted that many of the DPP contractors used markups that exceeded the city standards totaling \$163,084.
 - *This review will be a function of the QA/QC team. This is memorialized in the policy. (Appendix B). We would like to note that there are no standard markups respective of "Change Orders by Agreement" as identified in SCR paragraph 49. Standard markups are associated with paragraph 50 "Disputed Change Orders" which invokes the standard requirements of paragraph 52 "Force Account". The standard mark-ups do not apply for negotiated change orders. Mark-ups are clearly defined in disputed change orders.*
8. Supervision - 14 of the contracts sampled had questionable supervision charges totaling \$159,605. Supervision charges are not specifically addressed in the SCR or in the language for standard construction contracts. However, provisions included in construction requirements contracts specifically state that supervision costs are included as part of the labor markup. Further, representatives of the Airport and PWD stated that supervision is included as part of the markups for change order work and should not be charged as a separate line item.
 - *Circumstances sometimes exist where supervision becomes a productive element of the project. This is something that should be negotiated, taking into account the contract type and change order type. Also, larger projects have constant on site general conditions and supervision. Change order supervisory requirements thus have much less impact than on smaller projects where work crews need guidance on the required work and materials.*
9. Labor - The majority of change orders reviewed were not properly detailed in manner to provide for compliance review of each the four component elements (wage rate, health and welfare, taxes and insurance, and a labor markup). They often only included a final labor charge that was not explained in detail. In addition, 15 of the 38 contracts reviewed appeared to include higher labor charges than should have been allowed based on prevailing wage rates. For these 15 projects, we requested records from the City of Philadelphia's Office of Labor Standards indicating the rates the contractors paid their workers. The information we received assisted us in comparing eight of the 15 projects. While the values did exceed prevailing wage, the values that the contractors charged the city were higher than the wages they actually paid their workers for all eight of the projects we compared. These labor findings led to \$73,742 of questioned costs.
 - *We agree that all labor costs should be broken down as indicated above with the trade base rate and benefits in accordance with published prevailing wage rates. Any rate exceeding the prevailing wage should be specifically substantiated by the contractor. This has been reiterated to our contractors in the letter from the Commissioner (Appendix C)*

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10. Standardize Pricing Resources - DPP policies for processing change orders require that reviewers compare the costs charged to standardize pricing resources such as RS Means or the Rental Rate Blue Book for Construction Equipment (Blue Book), to determine the reasonableness of those costs. However, we could find no evidence that such comparisons were routinely performed and used to challenge the costs submitted when they exceeded the standardized pricing amounts. Our limited comparison of selected items from sampled contracts found that costs charged to the city exceeded pricing standards for nine of the projects we reviewed totaling \$95,392.

- *Costs should be reviewed and determined to be appropriate. We anticipate JOC will alleviate many of these issues. All documentation used to establish the DPP's estimate will be included in the project file going forward.*
- *Costs identified in item 10 (Standard Pricing Resources) cite "Means" as a standard pricing resource, however, estimates derived in this manner do not particularly take job conditions or contractor "means and methods" into account and do not always mimic the exact nature of the work. Again, although we agree that use of independent/alternative techniques for change order evaluation/negotiation are valuable; they are by no means authoritative in establishing the cost of the work. A review of the last 50 competitive public works bids indicates that the average variation of the low bid to the design professional's estimate is 23% and that the average variation between the low bid to the highest bid is 57% thus illustrating the wide disparity in estimating paradigms.*

11. Credits- Credit change orders are submitted by contractors when construction work that was included in the initial contract has been determined to be no longer required. Section 49 of the SCR indicates that the same markup amounts should be used on credit change order amounts prepared when construction work is deleted from a contract as are used when such work is added. Our testing disclosed that five of the contracts reviewed had credit change order amounts that were not properly marked up, leading to \$16,022 of questioned costs.

- *We agree that credit change orders should have mark-ups coincide with added change orders unless special circumstances warrant consideration of alternate pricing, and DPP staff will ensure that is the case going forward.*

12. Bonds - For the majority of projects, bond charges are not allowed, as these costs are included in the original contract amount, and compensated for on the contractor's first invoice. Five of the projects reviewed had charges for bonds that should not have been allowed totaling \$4,857.

- *We agree with these findings. There are circumstances under negotiated change orders where this shows as a line item cost. In the future, we will strike the item.*

13. Tax Markups - Of the 21 projects that were properly broken down into labor, materials, equipment, and subcontractor costs, five of these projects (33%) included unallowable markups on the tax for the materials totaling \$406.

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- *The contractor should submit their markups before tax. This will be reviewed by the QA/QC Team.*
14. Small Tools - Several change orders included unallowable charges for small tools totaling \$1,408.
- *Most “non consumable” small tools are not permitted and we will reiterate this to staff in writing and policy and procedure training.*
15. Fuel - The Blue Book indicates that fuel costs are one of the components included in the operating rate contractors charge for the time their equipment is in use. On two of the contracts reviewed, the contractor billed for equipment as well as fuel to operate the equipment totaling \$603.
- *This has been communicated to DPP staff and at the September 22, 2014 meeting, the Controller’s Office noted that there was a decrease in this allowance.*

REQUIREMENTS CONTRACT FINDINGS:

We found inadequate monitoring procedures and administrative controls designed to ensure that requirements contract billings were made in accordance with required provisions. As is summarized below these resulted in questioned costs totaling \$134,036:

16. Supervision – we found unallowable supervision charges total \$60,334
- *The specs say a project must be supervised. If the supervisor is working and is a productive part of the job, they should be paid. The supervisor must be listed on the certified payroll and if they are not, we will not pay. This will be administered by the QA/QC team when formed.*
17. Truck Charges – we found unallowable truck charges totaling \$3,011.
- *Verifying truck charges will be a function of our Construction Compliance Team. This team will be trained on the particulars of the SCR as well to ensure these types of items are not being billed as part of a job.*
18. Equipment Costs- we found unallowable equipment costs totaling \$43,497.
- *Equipment will be verified through the Construction Compliance Team.*
19. Fuel – we found double billing of fuel charges, which are considered part of the operating rate charged for equipment, totaling \$16,042.
- *This should not happen and staff has been advised to look for this. This has been included on our Change Order checklist (Appendix D).*

AGENCY RESPONSE

20. Payroll Taxes – we found unallowable payroll taxes totaling \$4,212.

- *We are working with the Controller’s Office to address this issue and plan to submit this info to the Controller’s Office before the job begins.*

21. Labor Charges

- *Verifying Labor Charges will be a function of the QA/QC team.*

SUMMARY OF RECOMMENDATIONS

Our recommendations to improve controls over the change order and requirements contract review and approval process include the following:

1. Require that the project manager knows and understands the costs associated with the revised contract requirements, prior to entering into negotiations for a change order. At a minimum, the contractor’s cost proposal should be compared to RS Means, the Blue Book, or another standard pricing resource to verify that the labor hours, labor rates, equipment hours, equipment rates, and prices for materials charged are reasonable and appropriate.
 - *DPP’s Change Order Policy outlines this process. We will reinforce this with staff when they receive training on the SCR and new policies. (Appendix B).*
2. Change the specifications for future construction contracts to define as many cost components as possible. For example, the contracts should state that the markups for labor, materials, and subcontractors are not to exceed twenty percent, fifteen percent, and eight percent respectively. Additionally, specific taxes and insurance costs that are allowable should be defined.
 - *We are currently reviewing the contract specifications to address issues like this. We will define as many of the cost components as possible. The “Standard Contract Requirements” (SCR) are a Law Department document and all changes must be approved by that Department.*
3. Ensure that only allowable tax and insurance costs are included and listed individually. Periodically request contractors to verify their taxes and insurance rates to ensure that they are reporting them correctly by submitting copies of their tax forms and/or insurance policies.
 - *DPP staff will ask the contractor’s for this information at the beginning of the project and submit to the Controller’s Office for verification.*
4. Ensure that charges for bonds are not included on change orders that do not exceed the contract limit.

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- *We have included this information in the letter from the Commissioner to the contractors. (Appendix C)*
5. Ensure that contractors are not including labor charges to supervise their subcontractors or other labor. If supervision charges are to be allowed for special circumstances, those circumstances should be defined and standardized.
 - *This is applicable in a Force Account CO. We will use this as a guideline in a Negotiated change orders on a case by case basis. We will document all negotiations and reasons for allowing the costs. It is very difficult to standardize and identify special circumstances in construction.*
 6. Require that all charges for equipment be accompanied by the appropriate Blue Book valuation.
 - *We have included this information in the letter from the Commissioner to the contractors. (Appendix C)*
 7. Ensure that equipment is only charged at the operating rate for time that the equipment is actually operating by requiring contractors to indicate the hours the equipment was operated and the task performed. For those billings that appear excessive, DPP personnel should visit and observe the work site to determine the accuracy and reasonableness of billings.
 - *This is included in our document to the contractors (Appendix C). The Construction Compliance Team will visit projects that appear to be billing more than what would be considered reasonable as well as performing audits.*
 8. Ensure that unit values are included as part of all price estimates for materials.
 - *We have included this information in the letter from the Commissioner to the contractors. (Appendix C)*
 9. Ensure that all material markups are based only on the material price and not the related sales tax.
 - *We have included this information in the letter from the Commissioner to the contractors. (Appendix C)*
 10. Verify that billings do not include amounts for equipment fuel as that cost is included in the operating rate that is charged for the equipment.
 - *We have included this information in the letter from the Commissioner to the contractors. (Appendix C)*

AGENCY RESPONSE

11. Review labor rate charges to determine if they are consistent with prevailing wages. To facilitate such a review, the contractor should be required to provide the job classification associated with all labor rate charges. If the labor rate exceeds the prevailing wage, the contractor should be required to provide evidence that this higher rate was actually paid to their employees.
 - *We have included this information in the letter from the Commissioner to the contractors. (Appendix C)*
12. Increase monitoring procedures to determine the extent of overbilling for labor hours worked. In addition to recovering amounts overbilled, consider appropriate actions such as recommending to the Procurement Department that they sanction or disbar contractors who repeatedly overbill for hours worked.
 - *This monitoring will be accomplished by our Construction Compliance Team, who will be working closely with our QA/QC Team.*
13. Verify that the end user and other critical stakeholders are involved in the design phase of each project and ensure they understand that the most efficient and effective time to provide input is in the design phase, rather than after the bidding process.
 - *DPP has attempted to address this issue with a memo from Commissioner Greenwald to all Department Heads as referenced above (Appendix A). DPP Project Directors and Project Managers have made a concerted effort to stress stakeholder involvement at the Design Phase. We have noticed a substantial increase in participation these past few months.*
14. Track design errors and omissions by designer and consider recommending to the Procurement Department that they sanction or disbar those designers with excessive errors and omissions from further contracts with the city.
 - *We are tracking this now and will work with the QA/QC Team to report. This will be a consideration in the evaluation of future RFP submissions.*
15. Ensure that backup is maintained for all change orders, and that the costs are clearly broken down into labor, materials, equipment, and subcontractors costs.
 - *We have included this information in the letter from the Commissioner to the contractors. (Appendix C)*
16. Determine what contingent construction activities may be appropriate and include the cost the city will pay in the original contract, should those activities be required.
 - *Job Order Contracting (JOC) has developed a new program in which pricing for change orders is standardized at the time of the bid. DPP hopes to include this methodology in public works bidding. We agree that this approach will be beneficial and think JOC is the answer to accomplishing it.*

AGENCY RESPONSE

**DEPARTMENT OF PUBLIC PROPETY
LETTER TO ALL DEPUTY MAYORS AND DEPARTMENTAL
COMMISSIONERS**

APPENDIX A

AGENCY RESPONSE

MEMORANDUM

CITY OF PHILADELPHIA

PUBLIC PROPERTY

DATE: December 30, 2013
TO: Departmental Commissioners and Directors
FROM: Bridget Collins-Greenwald, Commissioner
SUBJECT: Process Improvements for Capital Projects

In an effort to improve the capital project process, we are implementing a new policy where any non essential change in scope to a project will require Commissioner level approval and sign-off. Generally, this will include changes that are categorized as User Requested and Public Property requested changes. Historically, the Project Manager of the Department of Public Property's (DPP) Capital Program's Division worked with the departmental liaison on the project site to determine any changes in scope and those decisions were made at the project level with varying degrees of approval.

There are changes that are made during the course of a project that are absolutely necessary as they are related to design errors and omissions. There are also changes that are requested that may not be absolutely necessary and are not documented in the original scope, but are requested as the project progresses. These changes in scope can add significant money and time to projects. In an effort to coordinate projects more efficiently, we are asking that one person from each department be designated as the person responsible to make those approvals on behalf of the Commissioner or Director.

Please submit the name of your designee to Jason Stevens, Project Director of the Quality Assurance Unit of the DPP by January 17, 2014. Jason can be reached at Jason.Stevens@phila.gov.

I appreciate your cooperation in this matter. Please feel free to contact me at 215-686-4430 or at Bridget.Greenwald@phila.gov with any questions or concerns you may have.

cc: Richard Negrin, MDO
David Wilson, First Managing Director

**DEPARTMENT OF PUBLIC PROPETY
CHANGE ORDER POLICY**

APPENDIX B

AGENCY RESPONSE



POLICY

DEPARTMENT OF PUBLIC PROPERTY

SUBJECT: Change Orders
DATE ISSUED: May 1, 2014
ISSUED BY: Bridget Collins-Greenwald, Commissioner
SIGNATURE: _____

Policy:

It is the policy of the Department of Public Property (DPP) that no additional work under any contract may be authorized beyond the contract limit without an executed contract amendment. The only "out of scope" work that may be executed without a contract is a change order (force account). In general, no other "out of scope" work, under any contract, shall be authorized without an executed change order, which will consist of negotiations between DPP staff and the contractor of record. Exceptions will include emergency situations and critical work as described below. All negotiations will take place with the intention of having the project completed in the most expedient manner and cost efficient manner. Change orders shall be implemented in compliance with paragraphs 48, 49, 50, and 52 of the "Standard Contract Requirements".

It is also the policy of DPP to define and act accordingly on different situations that require additional work.

Procedure:

Emergency Work

Emergency work is defined as action that is required to mitigate the health and welfare of any person or a situation that needs an immediate remedy or it could cause a catastrophic condition (e.g. main break, gas leak, structural failure)

1. The authorized project representative will go to the site and if warranted, will take immediate action to mitigate an emergency situation. The authorized project representative should direct that the work be performed in accordance with the Force Account provisions of paragraph 52 of the Standard Contract Requirements.
2. The project representative will notify the team project director and/or the construction team project director of the action taken as soon as the mitigation action has been initiated. Change order preparation procedures will be initiated as soon as practicable.

AGENCY RESPONSE

Critical Work

Critical work is defined as additional work that is immediately necessary to maintain base contract work flow. Failure to act on the part of DPP staff to authorize additional work of a critical nature will bring about claim situations or work stoppages.

1. The authorized project representative will go to the site and determine if the additional work requested is critical in nature to the project. An authorized project representative is a DPP employee assigned to the project as designated by the Project Director or Construction Team Project Director. This usually includes inspection staff and project coordinators.
 2. Once it is determined the additional work is critical in nature, the authorized project representative will contact the team project director and/or the construction team project director to obtain authorization to proceed. No work shall be initiated without this authorization.
 3. Upon authorization to proceed, the authorized project representative will request that the contractor prepare an estimate of the additional work. The proposal from the contractor must identify labor material and equipment costs in conformance with the provisions of paragraph 49 of the "Standard Contract Requirements." A detailed breakdown of labor rates must be included which identifies base rate, taxes, insurances, benefits, etc. The contractor is to use the change order proposal form (see attached) unless a more credible estimating method is provided.
 4. Upon authorization to proceed, the authorized project representative will negotiate the scope, cost and schedule of the work with the contractor. Note that schedule impact must be noted on all change orders.
 5. To the extent practical, the authorized project representative from DPP will prepare an independent estimate of the cost of the change order prior to meeting with the contractor. This estimate may include a material and labor breakdowns (along with an estimate of allowable mark-ups) or unit prices. Tools for estimating include using Means, the Blue Book, Job Order Contracting and other acceptable methods of estimating.
 6. This negotiation will be documented in writing and will be placed in the project file. Note that change orders should not be bundled together, but should stand alone. All negotiations should proceed with the understanding that a fair and reasonable determination must be established. If agreement cannot be reached, the contractor may be directed to proceed under the provisions of paragraph 50 of the "Standard Contract Requirements' for Disputed Change Orders". The Project Director should be consulted in all dispute resolutions and will issue this direction as appropriate.
 7. If the proposal is acceptable to the authorized project manager and the contractor, the authorized project representative will prepare the change order using the attached change order form.
 8. The authorized project representative (project manager and/or inspector) will sign the change order form and submit it to the project director for approval.
 9. The project director will forward the change order to DPP's Administration and Contracts Team (ACT) for financial evaluation.
 10. ACT will prepare the Contract Financial Status Sheet and indicate the appropriate Financial Disposition. The contract financial status sheet is attached to the change order and forwarded to
-

AGENCY RESPONSE

the Deputy Commissioner for further review. The financial status sheet will include a determination on whether there is available funding, an available purchase order or whether there is an amendment required.

11. The Deputy Commissioner will review and evaluate the technical, cost, and financial status associated with the change order. Based on the availability of funding, etc., the Deputy Commissioner will take appropriate action in approving the change order.

Non Critical Work

1. The above procedures are applicable to all non critical work with the exception that the contractor may not proceed with the work until the change order has been approved. An approved change order is defined as having been signed by the Deputy Commissioner.

**DEPARTMENT OF PUBLIC PROPERTY
LETTER TO CONTRACTORS**

APPENDIX C

AGENCY RESPONSE



CITY OF PHILADELPHIA

DEPARTMENT OF PUBLIC PROPERTY
City Hall, Room 790
Philadelphia, PA 19107
Telephone: 215-686-4430
Facsimile: 215-686-4498
Bridget.Greenwald@phila.gov

Bridget Collins-Greenwald
Commissioner

October 1, 2014

General Asphalt Paving Company
9301 Krewstown Avenue
Philadelphia, Pa. 19115

Re: Change Orders

Dear Contractor,

The Department of Public Property has conducted an audit of recently submitted change order proposals from all of our contractors. The findings of the audit indicate that some of these submissions do not have one or several of the items listed below. In the future please be mindful that the rules for change orders as listed below must be followed:

- Only allowable tax and insurance costs should be included and listed individually
- Charges for bonds should not be included on change orders that do not exceed the contract limit
- Equipment should only be charged at the operating rate for time that the equipment is actually in operation. Indicate the hours the equipment will be in operation and the task performed
- Unit values should be included as part of all price estimates for materials
- All material markups should be based only on the material price and not the related sales tax
- Labor rate charges should be associated with all job classifications
- Certified payroll sheets must be submitted for any employee being paid over the prevailing wage

The Department of Public Property values the work that your company performs for the City of Philadelphia. Thank you for your consideration and for providing the information requested for each job you are awarded with the City Of Philadelphia.

Sincerely,

A handwritten signature in black ink that reads "Bridget Collins-Greenwald".

Bridget Collins-Greenwald
Commissioner

**DEPARTMENT OF PUBLIC PROPERTY
CHANGE ORDER CHECKLIST**

APPENDIX D

AGENCY RESPONSE

Department of Public Property

Change Order Checklist

Appendix D

Ensure that the proposal has been broken down into labor, materials, subcontractor, and equipment.

Ensure that the subcontractor's charges have been broken down into labor, materials and equipment.

Ensure that proper markups are used (20, 15, 8, and 0 for labor, materials, subcontractors, and equipment respectively.)

Ensure that the invoice is free of charges for items that should not be included? (bond charge, fuel, etc.)

Ensure that the labor hours have been reviewed (RS Means, similar projects, etc.)

Ensure that the labor rates and labor classifications are listed.

Ensure that the labor classifications are appropriate.

Ensure that the labor rates and benefits match the prevailing wages and benefits for the classification specified, or are backed up.

Ensure that the taxes and insurances are within the acceptable range.

Ensure that the taxes and insurance are applied properly to the wages (and not to the benefits).

Ensure that the bill is free of any charges for supervision or project managers (where not approved).

Ensure that the costs have all been checked and found to be fair and reasonable.

Ensure that the tax has not been marked up.

Ensure that the quantities are listed for all material.

Ensure that the specification of the equipment used is clear.

Ensure that the associated blue book value or equipment watch sheet has been provided and check it for accuracy.

Ensure that it is reasonably clear how each piece of equipment is being used and that all equipment is necessary.

Ensure that the equipment was operated and necessary for the entire duration that it is being billed for.

Ensure that if any of the equipment should have been on standby that it is billed accordingly.