

Hon. Elaine Phillips
Nassau County Comptroller



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**MEMORANDUM OF THE
OFFICE OF THE NASSAU COUNTY COMPTROLLER**
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To: Kenneth Arnold, Commissioner of the Department of Public Works
Cc: Arthur Walsh, Chief Deputy County Executive

From: Jeffrey Schoen, Deputy Comptroller

Date: September 19, 2023

Re: **Review of the Department of Public Works' Change Order Process**

The Office of the Nassau County Comptroller has concluded its review of the Department of Public Works' (DPW) change order process for the period of 2016–2022.

It is understood that change order modifications to DPW projects/contracts are sometimes inevitable for reasons including:

- Weather, labor, supply chain or other delays,
- Unforeseen conditions and other matters beyond the County's or contractors' control,
- Contractor omission or error, or
- For the benefit of the County.

Altering the project scope and/or the agreed upon fee, however, can in some cases be costly to the County. Change orders should be used only when appropriate, as the Countywide Procurement and Compliance Policy requires that work which materially changes the scope of a contract be obtained through a new procurement.

DPW proficiently uses a document management system. As a result, the department was able to provide most documents to auditors digitally. However, DPW was not tracking consolidated metrics relative to change orders on capital projects. The department was unable to provide auditors with summary reports, information or data. To produce the metrics, reports and charts necessary to conduct a substantive analysis (such as those in this memo), auditors had to review each of the 1,183 change orders executed from 2016–2022 to extract and enter information from each record into a spreadsheet. This revealed that:

- 876 change orders resulted in additional costs totaling \$102,610,269,
- 275 resulted in reductions to costs totaling \$50,288,337,
- 32 change orders had no impact on costs.

This resulted in a net impact of additional costs of \$52,321,932.

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As you indicated, since 2018 the department reduced the number of change orders and shifted to more sourcing of work via new procurement (competitive bids) instead of using change orders.

The following describes our analysis, findings and recommendations.

1. The review showed that from 2016 – 2022 the number of *cost addition* change orders decreased 56% from the 2017 peak of 223 to 99 in 2022.

As highlighted in yellow in the chart below, improvement has been made in offsetting change order costs through change order reductions, resulting in a significant net cost decline:

- a 90% reduction from a high of \$19.8 million in 2017 to \$1.9 million in 2022; which can be seen,
- in the reduction in ratio of the net cost of additions as compared to the cost of additions, from a high of 75% in 2017 to a low of 11% in 2022.

Change Orders 2016 to 2022							
Year	Number of Change Orders			Value of Change Orders			
	Additions	Reductions	Total*	Additions (Cost)	Reductions (Saving)	Net Cost	Ratio of Net Cost to Additions
2016	167	53	220	\$19,709,987	(\$7,396,324)	\$12,313,663	62%
2017	223	46	269	\$26,492,566	(\$6,658,554)	\$19,834,012	75%
2018	143	44	187	\$13,807,119	(\$5,442,075)	\$8,365,044	61%
2019	87	32	119	\$8,279,938	(\$3,427,226)	\$4,852,712	59%
2020	76	29	105	\$8,212,469	(\$6,352,094)	\$1,860,375	23%
2021	81	36	117	\$9,779,410	(\$6,549,718)	\$3,229,692	33%
2022	99	35	134	\$16,328,780	(\$14,462,346)	\$1,866,434	11%
Total	<u>876</u>	<u>275</u>	<u>1,151</u>	<u>\$102,610,269</u>	<u>(\$50,288,337)</u>	<u>\$52,321,932</u>	

*Note: 32 no value change orders from 2016 to 2022 are not included in the chart.

The review found higher numbers of change orders from 2016–2018, which we understand was because many major projects initiated after Superstorm Sandy continued through this period (for example, contracts for the multi-year project to repair, redesign and reconstruct the Bay Park Sewage Treatment Plant). As you informed our team, the urgency to get the projects going after Sandy resulted in some design risks, which resulted in a high number of change orders, explaining the trend at that time.

While DPW has made progress toward reducing change orders costs, it is recommended the Department continue to look for opportunities to do more, such as shifting toward new procurements to address unforeseen needs and contractor omissions.

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2. DPW relies heavily on a change order category that attributes changes to “design errors or omissions that did not cost the County substantially more than if it were included in the base contract.”

To assess the rationale for use of change orders, our team strategically selected six major projects: a parking garage improvement, bridge painting, park development, road redesign, traffic signal installation and a new building construction.

Auditors reviewed every change order relative to each of these projects to see which category of justification from the chart below was selected. Among the 148 change orders reviewed, more than half were attributed to Category 3, Design Error or Omission that did not cost the County substantially more than if it had been included in the original contract.

Change Order Categories Used by Municipalities					Usage by Nassau
DPW Category Number	Category/Justification For Change Order	Nassau County	Suffolk County	New York City	Percent of 148 Sampled
#1	Initiated for the Benefit of the Municipality	✓	✓	✓	25%
#2	Field Condition Unforeseen/Not Reasonably Expected	✓	✓	✓	17%
#3	Design Error or Omission - did not cost the municipality substantially more than if it were included in the contract	✓			51%
#4	Design Error or Omission - with additional cost to the municipality; recoupment must be sought from/negotiated with the contractor	✓	✓	✓	3%
#5	Failure to Perform By Third Party - not the municipality or the contractor	✓			< 1%
#6	Necessary Due to a Change in a Code, Regulations or Construction Standard	✓		✓	3%
#7	Settlement by Negotiation and/or Litigation	✓		✓	0%
#8	Situation Not Covered by other Categories	✓		✓	0%

Auditors performed a comparison of Nassau DPW’s change order justification categories to those used by Suffolk County and New York City (see 4th and 5th columns above). Both Suffolk County and New York City do not have a justification similar to Nassau’s Category 3. New York City is specifically required to seek recoupment for any cost associated with errors or omissions. Nassau DPW’s Category 3 is highly subjective with no defined threshold for “costs substantially more” and it precludes the County from trying to recoup taxpayer dollars for associated cost overages.

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Change orders that are currently being assigned to Category 3 would be better placed in:

- Category 1 – if the work will not cost the County more than if the work was included in the initial contract,
- Category 2 – if the work is necessary due to an unforeseen condition of which the design consultant could not have reasonably been expected to have had knowledge,
- Category 4 – if the work is necessary due to a design error or omission by the consultant and will result in even minimal additional expenditures for the County.

It is recommended that DPW review its categories/justifications for change orders. Specifically, the Comptroller's Office recommends reducing or eliminating use of Category 3.

3. DPW does not currently maintain metrics concerning project manager performance or contractor performance and costs.

The information that was collected for this review and the resulting reports (described above) should serve as the basis for new, ongoing metric tracking by DPW. The Comptroller's Office will turn over all datasets and reports developed as part of this review.

It is recommended that the Department continue tracking these metrics and begin tracking project manager performance for both DPW employees and contractors, and contractor performance and cost. Periodic analysis of these datasets to look for patterns and trends could help DPW mitigate change order costs.

A good long-term goal would be to migrate the change order process onto the County's APEX system so that review and approvals could be done digitally, and metrics would be up-to-date and readily available at all times.

Conclusion

The County plans to invest \$1.7 billion in capital projects between 2023–2025, with \$539.8, \$688.1 and \$480.6 million allocated for 2023, 2024 and 2025, respectively. We understand that DPW's ability to bring the costs associated with capital projects down enables DPW to save the County money and do more with County funds.

The Office of the Comptroller appreciates the efforts of DPW leadership to bring change order costs under control in recent years and hopes that this memorandum is useful in furthering the notable progress made to date.

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Attachment 1

DPW Change Order Categories

Category 1 – The change order is County initiated for the County's benefit. The Consultant is not responsible for any additional costs associated with this change.

Category 2 – The change order is the result of a field condition of which the Consultant could not reasonably be expected to have had prior knowledge. The Consultant is not responsible for any additional costs associated with this change.

Category 3 – The change order is the result of the Consultant's error of omission or commission that did not cost the County substantially more than if it were included in the base contract. A meeting is scheduled with the Consultant at the conclusion of the project to finalize the Consultant's responsibility for this change order.

Category 4 – The change order is the result of the Consultant's error of omission or commission that did cost the County substantially more than if it were included in the base contract. A meeting is scheduled with the Consultant at the conclusion of the project to finalize the Consultant's responsibility for this change order.

Category 5 – A change order due to a failure to perform by a third party. The Consultant is not responsible for any additional costs associated with this change.

Category 6 – The change order is the result of a revision to a mandated code, standard or permit that occurred after construction contract bids were received. The Consultant is not responsible for any additional costs associated with this change.

Category 7 – A change that is the result of a settlement of disputed work or construction claim by negotiation and/or litigation. The Consultant is not responsible for any additional costs associated with this change.

Category 8 – Any unique situation not covered by Categories 1 through 7 above. Provide background and recommendation.

Attachment 2

Excerpts from Countywide Procurement & Compliance Policy

Appendix B: Definitions

Change Order – A change order is an order directing the contractor to make changes that the contract between the County and the contractor authorizes the County to order without consent of the contractor. The work or terms and conditions altered by the change order must be nonmaterial scope changes or other changes reasonably contemplated by the contract in order to complete the scope of work. Change orders are not subject to competitive bidding requirements because they are not viewed as new procurements unless the change order “so varies from the original plan or is of such importance as to constitute a new undertaking.” DPW change orders are subject to review and approval of the Change Order Committee, comprised of representatives of the Comptroller, County Attorney, and DPW.

Section V. Contract Administration

B. Contract Changes and Amendments

Policy. All changes to existing contracts shall be approved by the DCCO [Department Chief Contracting Office] of the department that issued the contract and shall be reflected in a change order or amendment, which, once authorized, shall become a part of the original contract. A copy of the change order or amendment shall be sent to the vendor within ten days after authorization of the change. Vendors who deviate from the requirements of the original contract without a duly authorized change order or amendment do so at their own risk. Change orders must reflect work or adjustments to the terms and conditions contemplated in the original contract either implicitly or explicitly. Change orders are processed primarily by the Department of Public Works to reflect nonmaterial changes in construction and construction-related contracts. All other nonmaterial scope contract changes and any other authorized changes are processed as change orders or amendments depending upon whether the revision is contemplated in the contract. Material scope changes are prohibited.

- 1) The DCCO may include in any solicitation a provision for determining the cost of expected changes, so that these costs can be competitively determined before award.
- 2) DPW change orders are subject to review and approval by the Change Order Committee per policies issued by the Comptroller’s Office and the County Attorney.
- 3) Types of Changes Permitted (may include one or more of the following):
 - a. specification changes to account for design errors or omissions;
 - b. changes in contract amount due to authorized additional or omitted work. Any such changes require appropriate price and cost analysis to determine reasonableness. In addition, except for non-construction requirements contracts (e.g., blanket purchase order contracts), all changes that cumulatively exceed the greatest of ten percent of the original contract amount or \$50,000 shall be approved by the CPO;

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- c. changes in delivery location;
 - d. changes in shipment method; and
 - e. any other change not inconsistent with this section.
- 4) Changes Not Permissible for Material Alterations of Scope: Changes are permitted only for work necessary to complete the work included in the original scope of the contract, and for nonmaterial changes to the scope of the contract. Changes are not permitted for material alterations in the scope of the work or for the insertion of a renewal clause to the contract. Material alterations to the scope of the work may be made only by a new procurement.
- 5) Small Purchases: Changes to small purchases shall not bring the total value of the procurement to an amount greater than the small purchase limits.
- 6) Subcontracts: Changes to construction subcontracts shall be made in accordance with the Subcontracting terms of this Policy.
- 7) Adjustments of Price or Time for Performance. The vendor may be entitled to a price adjustment for extra work performed or to be performed pursuant to a written change order. If any part of the contract work is necessarily delayed by a change order, the vendor may be entitled to an extension of time for performance. Adjustments to price shall be validated for reasonableness by using appropriate price and cost analysis.