



Monitoring Review of Construction Change Orders

Project # 22-23

Prepared by
Office of the Inspector General

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SOUTH FLORIDA WATER MANAGEMENT DISTRICT

April 13, 2023

Governing Board Members

Re: Monitoring Review of Construction
Change Orders - *Project No. 22-23*

This review was performed pursuant to the Inspector General's authority set forth in Chapter 20.055, F.S. The review assessed whether change orders during the review period were negotiated in accordance with contract terms and conditions, calculated accurately, and whether the change order percentage is within industry averages. During this review, we also identified all construction contract change orders that the Governing Board authorized through resolutions during the three fiscal years 2020 through 2022, which covers the time period since the *Audit of Construction Change Orders*, (Project No. 21-07) issued November 10, 2021. Alyassia Taylor and I prepared this report.

Sincerely,

A handwritten signature in blue ink, reading "J. Timothy Beirnes".

J. Timothy Beirnes, CPA
Inspector General

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BACKGROUND

A contract change order is created when a project requires an adjustment for time, scope of work, or cost of the project. Without monitoring, change orders can significantly increase a project's budget or timeline. At the request of the Governing Board, a report was created that expresses construction change orders as a percentage of original contract amounts. The Engineering and Construction Bureau of the Ecosystem Restoration and Capital Projects Division provided a reporting of the progress of construction contracts as well as the amount and percentage of change orders for projects between 2015 and 2020 to the Division Director in November 2020. This report showed an average change order amount of 4% for District contracts. Although the types of construction projects at the District are not typical of industry construction, the industry standard for change order percentages is approximately 8-14%. Since the initial report in 2020, we have monitored the ongoing Change Order percentage as well as documentation that is maintained.

Each contract is led by a project manager, who is responsible for negotiating changes with contractors and moving necessary change orders through the approval process. Currently, all the District's change orders, along with approvals and supporting documentation, are maintained in a construction project management information system, eBuilder, which the District began using in 2018. eBuilder is a cloud-based Software as a Service (SaaS) product that tracks the project's performance through the project's entire life cycle. Users access eBuilder by logging into the software online. Each user is provided a dashboard detailing their projects, outstanding tasks, and communications with other project members. Construction project documentation was migrated to eBuilder in 2018. The entire life of the project can be monitored through the software, including:

- Site visits,
- Quotes,
- Negotiations of change order amounts (documented through correspondence)
- Change order documents
- Resource management,
- Invoices, and
- Project closeout.

Monitoring of the construction change order process and percentage will occur on a

biannual basis. The monitoring review consists of calculating the change order percentage and reviewing documentation and management authorization controls for the change orders which have been authorized since the previous review.

OBJECTIVES, SCOPE, AND METHODOLOGY

Our review assessed whether change orders during the review period were negotiated in accordance with contract terms and conditions, calculated accurately, and whether the change order percentage is within industry standards. The review scope covers the change orders which were approved between March 19, 2022, and September 30, 2022. This biannual review also included identifying all construction contract change orders that the Governing Board authorized through resolutions during the three Fiscal Years 2020 through 2022 to ensure that all authorized change orders were included in the eBuilder system. To accomplish our objectives, our audit methodology entailed performing the following procedures:

- Interviewing pertinent District staff;
- Reviewing any updates to Change Order policies and procedures;
- Reviewing reports and documentation of authorized change orders for accuracy;
- Reviewing Governing Board meeting agendas and minutes to identify all authorized change orders; and
- Other procedures as deemed necessary.

REVIEW RESULTS

During this biannual review, we identified all construction contract change orders the Governing Board authorized through resolutions during the three fiscal years 2020 through 2022, which covers the time period since the *Audit of Construction Change Orders*, (Project No. 21-07) issued November 10, 2021. During this period, the Governing Board approved seven change order resolutions. We noted that all seven of the resolutions were documented with corresponding change orders authorized by District management located in eBuilder. The total amount of change orders authorized by Governing Board resolution for this period was \$113,749,701; of which \$109,987,751 (97%) was for the following two larger change orders:

- \$25,000,000 for the C-43 Reservoir Project, and
- \$84,987,751 for the C-640 Canal Graded Filter (CEPP New Waters EAA A-2 Stormwater Treatment Area).

At the time of the reporting for this review, the total amount of change orders executed for these seven resolutions was \$105,628,798. A summary of the resolutions is shown in the following table.

Contract Changes Through Board Resolution				
Fiscal Years 2020, 2021 & 2022				
Project	Board Meeting Date	Resolution #	Board Approved Amount	Executed Change Order
Lakeside Ranch Stormwater Treatment Area S-191	11/12/2020	2020-1109	\$135,292	\$135,292
S-169W Relocation and C-20 Canal Armoring Project	11/12/2020	2020-1110	\$489,266	\$489,266
RS-G341 Conveyance Improvements	12/10/2020	2020-1210	\$2,500,000	\$2,051,430
Lakeside Ranch Stormwater Treatment Area S-191	6/10/2021	2021-0606	\$455,457	\$455,457
C-44 Reservoir/STA, S-401	10/14/2021	2021-1014	\$181,935	\$181,935
C-43 Reservoir Project	3/10/2022	2022-0306	\$25,000,000	\$17,327,667
C-640 Canal Graded Filter (CEPP New Waters EAA A-2 Stormwater Treatment Area)	7/14/2022	2022-0712	\$84,987,751	\$84,987,751
Total			\$113,749,701	\$105,628,798

We also completed a review of all change orders executed between March 19, 2022 and September 30, 2022. During this period, there were 20 contracts with 32 total change orders. The amount of these change orders totaled \$105,597,264. The documentation for 27 of the 32 change orders reviewed was accurately input into eBuilder, however, we were able to review provided documentation for all the change orders. All the change orders were accurately calculated. The current change order average percentage for this review period is calculated at 8% with all contracts considered, and 3% with outlying contracts removed. Both calculations (with and without outliers) were within or well below the industry average of 8-14%. There were two change orders which were considered as outliers by the Engineering and Construction Bureau Management and not indicative of a change order rate resulting from design and technical review errors or omissions. The nature of outlying change orders was discussed previously in the *Audit of Construction Change Orders* (Project No. 21-07), issued November 10, 2021.