


**SAN FRANCISCO PUBLIC UTILITIES COMMISSION
INFRASTRUCTURE CONSTRUCTION
MANAGEMENT PROCEDURES**

SECTION: SFPUC INFRASTRUCTURE CONSTRUCTION MANAGEMENT	APPROVED:  Construction Management Bureau (CMB) Manager
PROCEDURE NO: 011 TITLE: CONSTRUCTION CHANGE MANAGEMENT	DATE: 11/15/2022 REVISION: 2

1.0 Policy

Change management is a process used to formalize the documentation, evaluation and approval or rejection of changes to the Contract. Proposed changes to the Contract shall be handled expeditiously in order to reduce the impact on the cost or time of the project and promote fairness to all parties.

This SFPUC Infrastructure Construction Management (CM) Procedure applies to all personnel working on SFPUC Infrastructure construction projects to the extent that their work is affected by this CM Procedure and does not conflict with specific SFPUC policies or the Contract under which the Work is executed.

2.0 Description

This SFPUC Infrastructure CM Procedure establishes the requirements for the process, control, coordination of review and response, and retention of requests for changes to the Contract from the City and Contractor. The procedure describes the processing of a Proposed Change Order (PCO) from its original submittal by the City, and of a Change Order Request (COR) from its original submittal by the Contractor through the review, response, and the subsequent negotiation of the Change, through to the submittal of the Change Order for approval by SFPUC Management and certification by the City Controller.

3.0 Definitions

3.1 Approved Change Order

The status of a Change following its certification by the City Controller.

3.2 Change Control Board (CCB)

For Capital Improvement Programs a SFPUC Infrastructure CM Change Control Board shall be established to review proposed construction project changes that exceed threshold limits of \$50,000. Changes due to additional work, not included in the scope of the Contract and required by the Owner or Client/Operations Representative that are greater than or equal to \$50,000 are considered major changes requiring review by the CCB. The CCB is required to review major scope changes during construction and provide recommendations to the Program Director on final approval/rejection.

3.3 Change Management Tracking Log

A log of all Changes maintained by the Field Contracts Administrator (FCA) or the Resident Engineer (RE) on small project in the Construction Management Information System (CMIS) that includes the type and category of change, a summary description of the change, a change status code, summary cost and/or time impact, actual dates of key steps in the process required for issuance of the certified change, and an aging analysis of the dates of the key process steps.

3.4 Change Order

A written instrument prepared by the City and issued after the effective date of the Contract Agreement and executed in writing by the City and Contractor and certified by the City Controller, stating agreement upon all of the following:

- (i) a change in the Work;
- (ii) the amount of the adjustment in the Contract Sum, if any;
- (iii) the extent of the adjustment in the Contract time, if any; and
- (iv) a modification to any other Contract term or condition.

3.5 Change Order Request (COR)

A document prepared by the Contractor requesting a change of cost or time in the Work or any other Contract term or condition.

3.6 Claim

A written demand by the Contractor for an adjustment in the Contract Sum or Contract Time, or both, which is submitted in accordance with the requirements of the Contract Documents. Claims must be certified in accordance with the Contract Documents. The Contractor shall comply with contract requirements during the whole claims process.

3.7 Construction Change Order Approval Authority

A project construction phase approval authority matrix that defines the approvals required for various types and levels of change orders to approved baseline scopes, budgets and schedules.

3.8 Construction Management Information System (CMIS)

The CMIS is an on-line management tool for the processing of contract documents based on established SFPUC CM Business Processes. It serves as a tool for effective storage and retrieval of various documents generated during a construction project. Processing of Changes will utilize the CMIS Change Management, Proposals and Change Orders modules, which are process-specific portions of the CMIS application designed to facilitate the processing of Change documents, the retention of data pertinent to Changes, and the reporting

of Changes and their status. The CMIS is designed for CM team data entry directly into the system.

3.9 Contract Modification

A modification of the Contract Documents resulting from one or more Change Orders.

3.10 Field Order

A written order issued by the City which requires minor changes in the Work, but which does not involve a change in the Contract cost, time or level of service.

3.11 Force Account Change Order

A change order paid on the basis of actual work itemized by costs for labor, equipment and materials, recorded and submitted by the Contractor and agreed upon on a daily basis by the City and the Contractor.

3.12 Notice of Potential Claim

A written notice, submitted in accordance with the Contract Documents, by the Contractor for a dispute on any directive, determination, Proposed Change Order, Unilateral Change Order, payment, or other act by the City impacting or potentially impacting the performance of the Work, known collectively as "potential claim events."

3.13 Pending Change Order

The status of a Change from completion of negotiations between the City and the Contractor to certification by the City Controller.

3.14 Potential Change Order

The status of a Change from initiation as a Proposed Change Order (PCO) by the City or as a Change Order Request (COR) by the Contractor through the completion of negotiations.

3.15 Proposed Change Order (PCO)

A document prepared by the City requesting a quotation of cost or time from the Contractor for additions, deletions or revisions in the Work or any other Contract term or condition initiated by the City.

3.16 Rejected Change Order

The status of a Change that has been rejected at any point in the analysis or approval process.

3.17 Unilateral Change Order

A written instrument issued by the City when time does not allow for a change order to be negotiated or when the City and the Contractor are not able to agree on the cost of a change order.

3.18 CM Cost/Time Impact Estimate

Estimated cost and/or time impact of the change order independently prepared by the Resident Engineer (RE), also known as an Engineer's estimate.

3.19 Record of Negotiation

All documents prepared during pre-negotiation and negotiation of the change order including a summary and index of all documentation. The Record of Negotiation shall be documented in a Change Order Summary, reference Attachment 011-10.

4.0 Responsibilities

4.1 Contractor

The Contractor generates a COR to request consideration of a potential change order. The Contractor provides supporting documentation pertinent to the understanding of the issue raised in the COR and a good faith estimate of the impact of the requested change on the project's cost and/or schedule. The COR submitted by the Contractor shall comply with all contract requirements regarding COR submittals.

- 4.1.1 The Contractor must submit a COR following the approval of a Value Engineering Change Proposal (VECP) and may submit a COR if the Contractor believes the response to a Request for Information (RFI), review to a Submittal, or any written direction given to the Contractor from the City creates a change to the cost, time or other Contract terms.
- 4.1.2 The Contractor responds to a Proposed Change Order (PCO) issued by the City to the Contractor requesting a quotation after approval of the PCO by the RE and Project Manager (PM). The Contractor's quotation represents a good faith estimate of the cost and time impact of the PCO.
- 4.1.3 The Contractor negotiates with the FCA to reach mutually satisfactory terms to execute the Work described in the PCO or the work proposed in the COR and, upon City certification of the Change Order, executes the work described in the Change Order.

4.2 Resident Engineer (RE)

The RE is the single point of contact with the Contractor as the "City Representative" as defined by the Contract. The FCA (the RE may assume the role of FCA on smaller projects) is responsible for timely and efficient management of all Contract changes, including the initiation of PCOs, processing of CORs, conducting negotiations with the Contractor and monitoring and, if necessary, expediting the approval of Change Orders.

- 4.2.1 Within 10 working days of issuing a PCO or receiving a COR, the RE shall consult with the Contractor to review and clarify the scope change and address any questions either party may have which may affect the cost or schedule impact of the change.
- 4.2.2 Prior to negotiating a PCO or a COR with the Contractor, the RE is responsible for ensuring that a detailed engineer's cost estimate is prepared by either the Project Engineer (PE) or the Estimator for change work that is not force account work and is anticipated to exceed \$200,000. The RE or the FCA may perform the estimate if qualified to do so. For change work that is not force account and is less than or equal to \$200,000, the criteria in the table below shall be followed for preparing an estimate. In all cases the estimate is to be reviewed by the Construction Manager and the Project Manager prior to reviewing the Contractor's cost proposal and prior to any negotiations.

Change Order Magnitude	Estimate Requirements
Change Order Requests Over \$200,000 except for Force Account Work	A detailed estimate shall be prepared including a detailed breakdown of labor, materials and equipment as well as documentation of all assumptions.
Change Orders valued at over \$50,000 up to \$200,000 except for Force Account Work	An order of magnitude estimate shall be prepared which includes the cost of labor, a materials takeoff and materials cost estimate, and an order of magnitude estimate of equipment costs. All assumptions are to be documented.
Change Orders up to \$50,000	A materials takeoff at a minimum shall be prepared. All assumptions are to be documented.
All Force Account Work	An order of magnitude estimate is to be prepared for all force account work before the change order allowance is issued. All assumptions are to be documented. The estimate should be reviewed with the Contractor at the consultation meeting as required above to determine reasonableness and any factors that may impact costs.

- 4.2.3 Prior to negotiating a PCO or a COR with the Contractor, the RE will analyze the Contractor's proposal/quote and document in a Record of Negotiations the developed pre-negotiation position pre-negotiation objectives, and the facts to be used in negotiating the Change Order.
- 4.2.4 For all Change Orders exceeding \$1 million, and prior to finalizing the Change Order Summary (internal document) and the Change Order, the RE shall forward the draft Change Order Summary and proposed Change Order (with all associated supporting documentation such as letters and/or proposals from the Contractor, RE cost estimates and records of scope changes or negotiations) to the Program Construction Manager for review.
- 4.2.5 For all Change Orders that include a time extension, and prior to finalizing the Change Order Summary and the Change Order, the RE shall forward the draft Change Order Summary and proposed Change Order (with all associated supporting documentation such as a Time Impact Analysis, letters and/or proposals from the Contractor, PE/RE/Estimator cost estimates and records of scope changes or negotiations) to the Program Construction Manager for review. The Program Construction Manager will review the documentations and certify that it meets the Contract requirements.
- 4.2.6 For all Change Orders exceeding \$1 million, or for all Change Orders that include a time extension, the Program Construction Manager will analyze and review the draft Change Order Summary and the proposed Change Order for merit, completeness, adequacy and general conformance to the Contract requirements in regards to prescribed format and content as defined in this procedure and attachments. The Program Construction

Manager will make every effort to complete the review within 10 calendar days of receipt of complete documentation and will provide, if required, an independent assessment and comments to the submitting RE, with copies to the PM and the CMB Manager.

- 4.2.7 All change orders initiated or requiring approval after Substantial Completion is awarded must be approved by the CMB Manager.
- 4.2.8 The RE is required to review the Contractor's proposal for completeness, accuracy and to make sure the proposal represents a reasonable cost for completing the work as outlined in the PCO or the COR.
- 4.2.9 The RE is responsible for ensuring the completion of the work described in the certified Change Order and the correct billing against the Change Order to accomplish the work.
- 4.2.10 During the construction phase, the CM team should obtain the Program Director's approval through the Change Control Board before implementing any Owner or Client/Operations Representative requested changes that are greater than or equal to \$50,000.

4.3 Field Contracts Administrator (FCA)

- Enters the Schedule of Bid Prices into the CMIS Contracts module at the project inception;
- Maintains the Schedule of Bid Prices during the project execution including all certified Change Orders and to reconcile the CMIS Schedule of Bid Prices with Contracts Administration Bureau data;
- Researches the Contract and assists the RE in determining whether PCOs and CORs are in compliance with the Contract Documents;
- Facilitates and administers the processing of potential changes from the initiation of a potential change through creation of the change order;
- Monitors the approval process of the pending Change Order through its certification by the City Controller; and
- Maintains and records the Record of Negotiation and prepares the Change Order Summary including a list of backup documentation, and prepares copies of the backup documentation to be attached to the executed Change Order. All attachments including a copy of the signed Change Order will also be attached to the electronic Change Order in CMIS.

For smaller projects, the Office Engineer (OE) or another CM team member designated by the RE can perform the role of the FCA.

4.4 Project Manager (PM)

The PM shall work with the RE to review and approve or reject all potential changes upon receipt of a Contractor's quote and, after negotiations are complete, at the initiation of a resulting pending Change Order.

- 4.4.1 The PM manages the processing of the Change Order or Unilateral Change Order, including the bundling of Change Orders into Change Modification packages and submitting the Change Orders for approval. Change Orders will be routed for signature in accordance with the Approval Authority Matrix in Attachment 011- 9. The SFPUC will approve any change orders that exceed 10% of the Contract budget or duration. All change orders will be sent to the City Controller for certification before they are applied to the Contract.

4.4.2 The PM is also responsible for monitoring the project contingency to ensure that change orders do not exceed the project's budget. The RE will forward to the PM and the Client/Operations Representative any Owner or Client/Operations Representative requested changes that are greater than or equal to \$50,000 so they can submit the Owner Representative/Operations Requested Changes During Construction Form (Attachment 011-11) to the CCB. The CCB will provide recommendations to the Program Director for final approval/rejection of the requested Change.

4.5 Construction Manager

The Construction Manager monitors the timely response to PCOs and CORs. The Construction Manager reviews and approves or recommends approval to the PM for Change Orders that are within the parameters of the Construction Change Order Approval Authority Matrix.

4.6 Administrative/Document Control Specialist (ADCS)

The ADCS is responsible for the verification of the file code, logging of all potential, pending and approved Change documentation into CMIS Correspondence Received and Sent modules, and for assisting the FCA, RE, Construction Manager and Senior PM in the management, logging, storage, and retrieval of Change documents as needed. For smaller projects, the OE or another CM team member designated by the RE can perform the role of the ADCS.

4.7 San Francisco Public Utilities Commission (SFPUC)

The SFPUC members must approve:

- Any change order request requiring funding beyond the designated 10% construction contract contingency, and
- Any change order requesting an extension of time that cumulatively extends the Contract Time in excess of 10% of the original contract duration as specified in the Contract Documents.

4.8 Construction Scheduler

- Reviews and recommends for approval the Contractor's baseline schedule and cost/resource loading of the baseline schedule.
- Reviews and recommends for approval the Contractor's monthly schedule updates.
- Develops the forecast at completion schedule to project a realistic forecast schedule and finish dates that include all Potential Change Orders and trends.
- Provides the FCA with percentage completion of work activities to help him negotiate with the Contractor the monthly payment application.
- Provides time impact analysis for Change Orders and claims analysis.
- Assists the RE and Estimator in evaluating PCOs and CORs including preparation of the pre-negotiation position and attending negotiations with the Contractor as required by the RE.

4.9 Estimator

- Prepares Engineer's estimates for change work.
- Assists the RE in evaluating PCOs and CORs including preparation of the pre-negotiation position and attending negotiations with the Contractor as required by the RE.
- Reviews and analyzes the cost of the claims submitted by the Contractor.
- Reviews the cost loaded schedule to verify the Contractor's schedule resource loaded activities.

5.0 Implementation

5.1 Throughout the processing of a Change, the CM team members shall forward the transmitted electronic or hardcopy documents to the ADCS for logging in the CMIS Correspondence modules. The ADCS shall scan and attach to the appropriate Change document records (PCO, COR, Negotiation, Change Order or Claim), all associated hardcopy documentation.

5.1.1 CM team members shall use the CMIS Inbox function to notify the ADCS of documents generated that require logging in the Correspondence modules and require hardcopy filing.

5.2 Proposed Change Order

5.2.1 The PE initiates a PCO for differing site conditions, design errors, design omissions or permit requirement related items along with the cost estimate for the proposed work and fills out the Proposed Change Order Form (Attachment 011-5). The RE receives the PCO request form from the PE and with the help of the FCA, the Construction Scheduler and the Estimator, prepares a Time Impact Analysis, confirms the estimate and brings all documents to the PM for approval.

5.2.2 If the PCO is rejected by the PM, the FCA shall notify the PE and the RE.

5.2.3 If approved by the PM, the FCA shall prepare the PCO and the RE will send the PCO to the Contractor and request a cost proposal. The PCO must contain a sufficient narrative description and detailed line items describing the requested work with enough information to allow the Contractor to prepare a comprehensive proposal with a detailed cost estimate and time impact analysis of the PCO. If a California Environmental Quality Act (CEQA) variance is required, the RE shall forward the PCO to the Environmental Construction Compliance Manager (ECCM) and obtain his/her approval before sending it to the Contractor. If the ECCM sees that a minor deviation or a variance is required, the PCO will be on hold until the minor deviation or variance is obtained.

- 5.2.4 The Contractor will submit a quotation with an itemized breakdown to the FCA providing sufficient details of the means and methods, time impact and cost impact in terms of unit quantities and prices and/or rationale for the quoted lump sum price to permit analysis by the CM team.
- 5.2.5 The FCA reviews the quotation for compliance with the Contract specifications and completeness.
- 5.2.6 If non-compliant, lacking sufficient details or incomplete, the FCA returns the quotation to the Contractor for correction and resubmittal.
- 5.2.7 If a quotation is determined to satisfy the contract requirements, the FCA prepares a validation of cost and/or time impacts and updates the narrative description and cost/schedule impact information in the Record of Negotiations document.
- 5.2.8 The RE reviews and accepts the potential change to continue in negotiations or rejects and cancels the potential change and returns it to the FCA.
- 5.2.9 If rejected, the FCA revises the Change status to "Rejected" and notifies the Contractor and the Originator. If accepted by the RE, the FCA updates the Change Log and the RE conducts negotiations with the Contractor.
- 5.2.10 The FCA shall monitor the negotiations and log all negotiation rounds in the CMIS module and notifies the ADCS of the receipt and transmittal of the Record of Negotiations documents for logging and filing in the CMIS as attachments.

5.3 Change Order Request (COR)

- 5.3.1 The Contractor submits a COR to the RE. The COR must contain a good faith estimate in sufficient detail of the means and methods, time impact and cost impact in terms of unit quantities and prices and/or rationale for the quoted lump sum price to allow for a thorough analysis by the CM team.
- 5.3.2 The FCA reviews the COR for completeness, investigates issues and provides a recommendation to the RE to approve, reject or approve with a cost modification.
- 5.3.3 The City shall, within 10 working days, provide a written response to the Contractor. In consultation with the FCA, the RE either accepts, rejects or negotiates with the Contractor and accepts with a cost modification. If accepted, the RE forwards the COR to the FCA with instructions to process the Change Order.

5.4 Change Order

- 5.4.1 If the amount or scope elevates the approval authority requirement above the PM, prior to preparing a Change Order, the RE and the PM shall notify the Construction Manager of the Potential Change Order and provide the background and impact information. The Change Request Summary may be used to summarize the information.
- 5.4.2 If negotiations are successful, FCA updates the status of the Change Management process in the Change Management module to "Pending," updates the Change Log and the cost/time impact information to reflect the Change Order at the completion of negotiations and prepares a Change Order.

- 5.4.3 The FCA transmits a hardcopy of the Change Order to the Contractor for signature and notifies the ADCS for logging in the CMIS Correspondence Sent module.
- 5.4.4 The Contractor signs the Change Order and returns it to the FCA. The FCA notifies the ADCS for logging in the CMIS Correspondence Received module.
- 5.4.5 The FCA forwards the Change Order to the RE for signature.
- 5.4.6 The FCA uses the automated function to forward the action to the Construction Manager and the PM for approval and then sends it to the CMB Manager and other SFPUC Management as required by the City approval process.
- 5.4.7 The PM may elect to bundle multiple Change Orders into a single Change Order or Contract Modification. If so, the RE instructs the FCA to use the CMIS Change Order module to group the pertinent Change Orders. Change Orders can be grouped into a single Change Order Contract Modification by creating a new Change Order or Contract Modification in the CMIS Change Order module and identifying other Change Orders to be grouped. Lump sum and Unit Price quantity based change orders should not be bundled with Force Account Change Orders.
- 5.4.8 The PM is responsible for obtaining approvals pursuant to the Construction Program Change Order Approval Authority Matrix (Attachment 011-9) including SFPUC approval.
- 5.4.9 When change orders are processed for any amount over the original 10% construction contingency for a specific contract, all said change orders, regardless of arithmetic value or percentage of the original contract value must be approved as follows (reference Attachment 016-9a):
 - 5.4.9.1 All change orders over the original 10% construction contingency and up to 75% of the increased construction contingency must be approved by the PM and CMB Manager.
 - 5.4.9.2 All change orders exceeding 75% of the increased construction contingency must be approved by the PM, CMB Manager and the Program Director or Assistant General Manager (AGM).
 - 5.4.9.3 All change orders exceeding the first additional contingency approved by the Commission must be approved by the PM, CMB Manager and the Program Director or AGM.
 - 5.4.9.4 Although Attachment 011-9a provides instructions that focus on cost change orders, the same requirements apply to schedule change orders, where the contract completion date is delayed by more than 10 percent of the original contract duration.
- 5.4.10 Upon submittal of the Contract Modification to Contracts Administration Bureau for processing, the PM shall coordinate with the FCA to monitor the progress of the Contract Modification.

5.4.11 The FCA monitors the progress and coordinates with the PM to update actual milestone dates of key process steps in the Change Log:

- Construction Manager approval
- PM approval
- CMB Manager approval
- Program Director or AGM approval
- Accounting reviews and transmittal to the City Controller
- City Controller review and certification

5.4.12 If the Change Order is rejected at any time after entry into the City approval processes, the PM returns the Change Order to the RE for resolution with the Contractor.

5.5 Unilateral Change Order (UCO)

5.5.1 If negotiations fail, or if the urgency of the Work to be performed under the Change Order does not permit delay until Change Order certification, the RE may direct that a Unilateral Change Order be prepared and issued to the Contractor.

5.5.2 The FCA initiates a UCO in the CMIS, references the Change Order, and uses the Ball in Court function to forward the action to the RE for approval.

5.5.3 The RE signs the UCO and forwards a hardcopy to the Construction Manager and PM for approval and entry into the CMIS and City approval process.

5.5.4 The PM is responsible for obtaining approvals pursuant to the Construction Program Change Order Approval Authority Matrix including approval by the SFPUC if necessary (reference paragraph 5.4.8 and Attachment 011-9)

5.5.5 When UCOs are processed for any amount over the original 10% construction contingency for a specific contract, all said change orders, regardless of arithmetic value or percentage of the original contract value must be approved as follows (reference Attachment 016-9a):

5.5.5.1 All change orders over the original 10% construction contingency and up to 75% of the increased construction contingency must be approved by the PM and CMB Manager.

5.5.5.2 All change orders exceeding 75% of the increased construction contingency must be approved by the PM, CMB Manager and the Program Director or AGM.

5.5.5.3 All change orders exceeding the first additional contingency approved by the Commission must be approved by the PM, CMB Manager and the Program Director or AGM.

5.5.5.4 Although Attachment 011-9a provides instructions that focus on cost change orders, the same requirements apply to schedule change orders, where the contract completion date is delayed by more than 10 percent of the original contract duration.

5.5.6 The FCA monitors the progress of the UCO and coordinates with the PM to update actual milestone dates of key process steps in the Change Log (see paragraph 5.4.11). If the UCO is rejected at any time after entry into the City approval processes, the PM returns the UCO to the RE. The FCA closes the Change Management action.

5.6 “Approved” Change

5.6.1 Upon certification of a Change Order by the City Controller, the Contracts Administration Bureau amends the Contract to reflect the approved Change Order or UCO, modifies the Schedule of Bid Prices data stored in the electronic invoicing system and transmits copies to the Contractor and to the RE.

5.6.2 The FCA updates the Change Log and marks the Change Order as approved and saved. The ADCS files the certified copy in the project files.

5.6.3 If, upon receipt of a certified UCO, the Contractor submits a Notice of Potential Claim, it will be processed as described above for CORs (see Section 6.3, Claims Tracking) and will comply with the Contract requirements.

6.0 Other Procedural Requirements

6.1 Schedule of Bid Prices

6.1.1 At the start of the project, 60 calendar days after NTP (or as required by the contract), the Contractor will submit the Schedule of Values as it is reflected in the cost-loaded Project Baseline Schedule. The Construction Scheduler and the FCA validate the Schedule of Values to ensure it conforms to the Schedule of Bid Prices that was negotiated during Bidding.

6.1.2 The Contractor will submit his first payment application to match the Schedule of Bid Prices as provided in the Contract Document.

6.1.3 In coordination with the Construction Scheduler, the FCA enters in the CMIS Contracts module the Schedule of Bid Prices listed in Contract Technical Specification No. 00 41 10, Schedule of Bid Prices.

6.1.4 The FCA uses the Schedule of Bid Prices in the CMIS to develop and document potential Changes.

6.1.5 As Change Orders are certified, the FCA ensures the Schedule of Bid Prices in the CMIS is updated correctly to conform to the current Contract.

6.1.6 The Contractor shall not add into the payment application any Change Order unless it has been certified by the City Controller.

6.2 Field Order

6.2.1 The Construction Inspector or any other member of the CM team may recommend that the RE issue a Field Order if required.

6.2.2 Once the RE agrees, the FCA will prepare the Field Order, enters a new entry in the Field Order Log and forwards it to the ADCS.

6.2.3 The ADCS adds the project file code, files a hard copy in the project files and forwards it to the RE.

6.2.4 The RE reviews and approves the Field Order and transmits the signed Field Order to the Contractor for signature.

6.2.5 The FCA updates the Field Order Log.

6.3 Claims Tracking

6.3.1 In the event that a Unilateral Change Order results in a dispute, the FCA notes the change is disputed.

6.3.2 If the dispute results in a Notice of Potential Claim, the FCA uses the CMIS to log, document and track the Claim to resolution.

6.4 Unit Price Items and Allowances

6.4.1 Payment of a Bid Item shall not exceed the contract original total value of that bid item in the Application for Payment, whether it is a lump sum, Unit Price and/or Allowance Bid Item, without prior authorization through a certified Change Order.

6.4.2 When the Application for Payment line item value has reached 80% of the value of the Unit Price or Allowance Bid Item and the RE determines that the Work will exceed the value of the Bid Price line item, the RE shall issue a Change Order for the anticipated added cost of Work prior to that Work being performed.

6.4.3 No additional changes shall be made to the Schedule of Bid Price line items for which work is complete. The billed value shall not exceed the value of the completed work. The Percent Complete shall be a true representation of the percentage of the value of the Unit Price and Allowance Schedule of each Bid Price line item that has been expended and shall remain unchanged for the duration of the contract period.

6.4.4 A Bid Reconciliation Change Order shall be issued at the discretion of the RE to adjust the total Contract value to account for the unused funds associated with Unit Price and Allowance Schedule of Bid Price line items.

7.0 References

7.1 Technical Specifications

Section 00 73 02 Contract Time and Liquidated Damages

Section 00 41 10 Schedule of Bid Prices

7.2 SFPUC Infrastructure CM Procedures

No. 003 Project Documents and Correspondence Control No.

No. 007 Request for Information

No. 009 Value Engineering Change Proposal

No. 010 Applications for Payment

No. 022 Construction Claims Management

7.3 Others

SFPUC Infrastructure Procedures Manual Volume 4, Program and Project Management,

PM 5.02: Project Change Management

8.0 Attachments

- 011 - 1 Change Request Summary - Form
- 011 - 2 Proposed Change Order Internal Analysis Report 011
- 011 - 3 Proposed Change Order – Form
- 011 - 4 Change Order Request – Form
- 011 - 5 Change Order - Form
- 011 - 6 Change Management Tracking Log
- 011 - 7a CM/GC Construction Project Change Order Authority Matrix (Table 1)
- 011 - 7b CM/GC Construction Project Change Order Authority Matrix (Table 2)
- 011 - 7c Construction Project Authority Matrix for Additional Change Order Exceeding Original 10% Commission Approved
- 011 - 8 Change Order Summary
- 011 - 9 Owner Representative/Operations Requested Changes During Construction
- 011 - 10 Revision Control Log

**Attachment 011 – 1
Change Request Summary Form**

Create Change Request Summary Form																									
<u>Change Request Summary</u>																									
Change Management No.:	<input style="width: 150px;" type="text"/>																								
Contract Name:	<input style="width: 150px;" type="text"/>																								
Contract No.:	<input style="width: 150px;" type="text"/>																								
Title:	<input style="width: 150px;" type="text"/>																								
Contractor:	<input style="width: 150px;" type="text"/>																								
Change Type:	<input style="width: 150px;" type="text"/>																								
Date:	<input style="width: 100px;" type="text"/>																								
RE:	<input style="width: 100px;" type="text"/>																								
Description:																									
Change Impact:																									
Cost Impact																									
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="3">Estimated</td> <td align="center" colspan="3">Quoted</td> <td align="center" colspan="3">Negotiated</td> <td align="center" colspan="3">Final</td> </tr> <tr> <td>Date</td><td>Cost</td><td>Time</td> <td>Date</td><td>Cost</td><td>Time</td> <td>Date</td><td>Cost</td><td>Time</td> <td>Date</td><td>Cost</td><td>Time</td> </tr> </table>		Estimated			Quoted			Negotiated			Final			Date	Cost	Time	Date	Cost	Time	Date	Cost	Time	Date	Cost	Time
Estimated			Quoted			Negotiated			Final																
Date	Cost	Time	Date	Cost	Time	Date	Cost	Time	Date	Cost	Time														
Change Narrative:																									
Change Order Request/Quotation:																									
Negotiated:																									
Impacts (Analysis of operational impacts of the change):																									
Operations:																									
Level of Service:																									
Shutdowns:																									
CEQA:																									
Related Documents:																									

**Attachment 011 – 2
Proposed Change Order Internal Analysis Report**

Create Proposed Change Order Internal Analysis Report								
<u>Proposed Change Order Internal Analysis Report</u>								
Contract No.:	<input type="text"/>	PCO No.:	<input type="text"/>					
Contract Name:	<input type="text"/>		Date:	<input type="text"/>				
To:	<input type="text"/>		Required Date:	<input type="text"/>				
From:	<input type="text"/>		Reason for PCO:	<input type="text"/>				
Subject:	<input type="text"/>							
SPEC Section:	<input type="text"/>							
Description of Proposal:								
Item	Description	Stock No.	Quantity	Units	Unit Price	Tax Rate	Tax Amount	Net Amount
Total:							\$0.00	
Grand Total:								
Level of Service:								
Shutdowns:								
CEQA:								
Approval:								
By: _____						Date: _____		

Attachment 011 – 3
Proposed Change Order - Form

Create Proposed Change Order Form				
<u>Proposed Change Order Form</u>				
Contract No.:	<input style="width: 90%;" type="text"/>	PCO No.:	<input style="width: 90%;" type="text"/>	
Contract Name:	<input style="width: 90%;" type="text"/>	Request Date:	<input style="width: 90%;" type="text"/>	
To:	<input style="width: 90%;" type="text"/>	Quotation Date:	<input style="width: 90%;" type="text"/>	
From:	<input style="width: 90%;" type="text"/>	Reason for PCO:	<input style="width: 90%;" type="text"/>	
Subject:	<input style="width: 90%;" type="text"/>			
SPEC Section:	<input style="width: 90%;" type="text"/>			
Description of Proposal:				
Item	Description	Stock No.	Quantity	Units
Approval:				
By: _____ Date: _____				

**Attachment 011 – 4
Change Order Request - Form**

Create Change Order Request Form								
<u>Change Order Request Form</u>								
Contract No.:		<input style="width: 100%;" type="text"/>	CO No.:		<input style="width: 100%;" type="text"/>			
Contract Name:		<input style="width: 100%;" type="text"/>			Date: <input style="width: 100%;" type="text"/>			
To:		<input style="width: 100%;" type="text"/>						
From:		<input style="width: 100%;" type="text"/>						
Subject:		<input style="width: 100%;" type="text"/>						
SPEC Section:		<input style="width: 100%;" type="text"/>						
Description of Request:								
Item	Description	Stock No.	Quantity	Units	Unit Price	Tax Rate	Tax Amount	Net Amount
Approval:								
By: _____					Date: _____			
By: _____					Date: _____			

**Attachment 011 – 5
Change Order - Form**

Create Change Order Form															
<u>Change Order Form</u>															
Contract No.: <input style="width: 100%;" type="text"/> Contract Name: <input style="width: 100%;" type="text"/> To: <input style="width: 100%;" type="text"/> From: <input style="width: 100%;" type="text"/> Subject: <input style="width: 100%;" type="text"/>	CO No.: <input style="width: 100%;" type="text"/> Date: <input style="width: 100%;" type="text"/>														
Scope of Work: _____ Drawing Reference: _____ Reference Section: _____															
<div style="text-align: right;"> Unit Cost: _____ Unit Tax: _____ Total: _____ </div>															
<table style="width: 100%; border: none;"> <tr> <td style="border: none;">Original Contract Amount:</td> <td style="border: none; text-align: right;">\$ _____</td> </tr> <tr> <td style="border: none;">Total Value of Changes previously Certified:</td> <td style="border: none; text-align: right;">\$ _____</td> </tr> <tr> <td style="border: none;">Total Contract Amount Prior to Change Order:</td> <td style="border: none; text-align: right;">\$ _____</td> </tr> <tr> <td style="border: none;">Amount of this Change Order:</td> <td style="border: none; text-align: right;">\$ _____</td> </tr> <tr> <td style="border: none;">Total Contract Amount including this Change Order:</td> <td style="border: none; text-align: right;">\$ _____</td> </tr> <tr> <td style="border: none;">The Contract Time will /will not be changed:</td> <td style="border: none; text-align: right;">\$ _____</td> </tr> <tr> <td style="border: none;">The date of Substantial Completion as of this Change Order, therefore is:</td> <td style="border: none; text-align: right;">\$ _____</td> </tr> </table>		Original Contract Amount:	\$ _____	Total Value of Changes previously Certified:	\$ _____	Total Contract Amount Prior to Change Order:	\$ _____	Amount of this Change Order:	\$ _____	Total Contract Amount including this Change Order:	\$ _____	The Contract Time will /will not be changed:	\$ _____	The date of Substantial Completion as of this Change Order, therefore is:	\$ _____
Original Contract Amount:	\$ _____														
Total Value of Changes previously Certified:	\$ _____														
Total Contract Amount Prior to Change Order:	\$ _____														
Amount of this Change Order:	\$ _____														
Total Contract Amount including this Change Order:	\$ _____														
The Contract Time will /will not be changed:	\$ _____														
The date of Substantial Completion as of this Change Order, therefore is:	\$ _____														
<i>The Contractor and the City acknowledge that this Change Order constitutes full accord and satisfaction of all issues and claims relating to work added, deleted or modified by this Change Order, including disruption, productivity loss, delay, resequencing of the work, escalation, acceleration, extended overhead (including home office overhead), administrative cost, and/or claims submitted or not submitted by subcontractors and suppliers.</i>															
Signed By: _____ Date: _____															

Attachment 011 – 6 Change Management Tracking Log

Create Change Management Tracking Log																				
															<u>Change Management Tracking Log</u>					
Contract Name: _____										Date: _____										
Contract No.: _____																				
PROPOSED CHANGE ORDER								CHANGE ORDER REQUEST					NEGOTIATION			CHANGE ORDER				
Type	No.	Initiated	Rfd	PCM AppRnj	To Sr CM	Sr CM AppRnj	RFQ	Quote CDR Rec'd	Rfd	PCM AppRnj	To Sr CM	Sr CM AppRnj	PCM App Nig	Nig Complete	To Contractor	Sr CM AppRnj	Program Approval	To Controller	Certified	Closed
Change Management No: 00000		Change Management Name: _____																		
Change Management No: 00000		Change Management Name: _____																		

**Attachment 011 – 7a
CM/GC Construction Project Change Order Authority Matrix
(Table 1)**

Maximum Authority Limit for Changes to Project Construction Costs by Purchase Order						
Approval Level	Approving Authority ¹		< \$100M	\$100M - < \$250M	> \$250M	Extension of Approved Project Schedule ⁷
1	Project Manager (PM) ³		<= \$500K (per CO)	<= \$1M (per CO)	<= \$2M (per CO)	N/A
2	CMB Manager		<= \$1M (per CO)	<= \$3M (per CO)	<= \$6M (per CO)	< 5% (Cumulative)
3	Program Director ⁴		<= \$5M (per CO)	<= \$8M (per CO)	<= \$10M (per CO)	5% - 10% (Cumulative)
4	AGM Infrastructure ⁵		> \$5M (per CO)	> \$8M (Per CO)	> \$10M (per CO)	> 10% (Cumulative)
			And if >= 10M (cumulative) Go to Table 2	And if >= 15M (cumulative) Go to Table 2	And if >= 25M (cumulative) Go to Table 2	

Notes:

- (1) Changes in cost or schedule to construction contracts must be approved by the designated approval levels with recommendation for approval forwarded by each level below the designated approving authority. The approving authority is responsible to forward final approval to the Contract Administration Bureau (CAB).

- (2) The authority limits for approval levels 1,2,3 and 4 are applicable to each individual Change Order (CO). The authority limits apply up to the specific limits shown in the table under "Maximum Authority Limit for Changes to Project Construction Costs by Purchase Order".

- (3) The PM may delegate part or all of their approving authority to the Construction Manager (CM) or Resident Engineer (RE), only if the CM is a City employee, who will be responsible for negotiating changes with the contractor. The PM will be held responsible/accountable for the decisions made by the City CM or RE in regard to the approval of COs.

- (4) For a construction contract that is not part of a Program and therefore does not have a Program Director, the Manager of the Project Management Bureau (PMB) will have approval authority.

- (5) A CO requiring funding beyond the designated 10% construction contract contingency for the total contract amount will require AGM Infrastructure approval. A request to increase the initial 10% contingency shall be submitted by the CM team through their PM to the AGM for approval of an amount justified and backed up by the forecasted and anticipated future changes (Forecast At Completion). Once the cumulative total amount of all cost or time change orders to a given purchase order exceeds the designated cumulative maximum amount, all future change orders will have to be approved/signed following the authority matrix shown on Table 2 of the Revised CMGC Authority Matrix table.

- (6) In situations of imminent danger, where immediate action may be required to address risk to life or property, the RE, with concurrence from the CM, may authorize a CO independent of the cost of work to be performed.

- (7) On this Attachment, "CO" refers to changes initiated by either a Change Order Request (COR) or a Proposed Change Order (PCO).

**Attachment 011 – 7b
CM/GC Construction Project Change Order Authority Matrix
(Table 2)**

Maximum Authority Limit for Changes to Project Construction Costs by Purchase Order					
Approval Level	Approving Authority¹	< \$100M	\$100M - < \$250M	> \$250M	Extension of Approved Project Schedule⁷
1	Project Manager (PM) ³	<= \$200K (per CO)	<= \$500K (per CO)	<= \$1M (per CO)	N/A
2	CMB Manager	<= \$500K (per CO)	<= \$1M (per CO)	<=2M (per CO)	< 5% (Cumulative)
3	Program Director ⁴	<= \$1M (per CO)	<= \$2M (per CO)	<= \$4M (per CO)	5% - 10% (Cumulative)
4	AGM Infrastructure ⁵	> \$1M (per CO)	> \$2M (per CO)	> \$4M (per CO)	> 10% (Cumulative)

Notes:

(1) Changes in cost or schedule to construction contracts must be approved by the designated approval levels with recommendation for approval forwarded by each level below the designated approving authority. The approving authority is responsible to forward final approval to the Contract Administration Bureau (CAB).

(2) The authority limits for approval levels 1,2,3 and 4 are applicable to each individual Change Order (CO). The authority limits apply up to the specific limits shown in the table under "Maximum Authority Limit for Changes to Project Construction Costs by Purchase Order".

(3) The PM may delegate part or all of their approving authority to the Construction Manager (CM) or Resident Engineer (RE), only if the CM is a City employee, who will be responsible for negotiating changes with the contractor. The PM will be held responsible/accountable for the decisions made by the City CM or RE in regards to the approval of COs.

(4) For a construction contract that is not part of a Program and therefore does not have a Program Director, the Manager of the Project Management Bureau (PMB) will have approval authority.

(5) A CO requiring funding beyond the designated 10% construction contract contingency for the total contract amount will require AGM Infrastructure approval. A request to increase the initial 10% contingency shall be submitted by the CM team through their PM to the AGM for approval of an amount justified and backed up by the forecasted and anticipated future changes (Forecast At Completion)

(6) In situations of imminent danger, where immediate action may be required to address risk to life or property, the RE, with concurrence from the CM, may authorize a CO independent of the cost of work to be performed.

(7) On this Attachment, "CO" refers to changes initiated by either a Change Order Request (COR) or a Proposed Change Order (PCO).

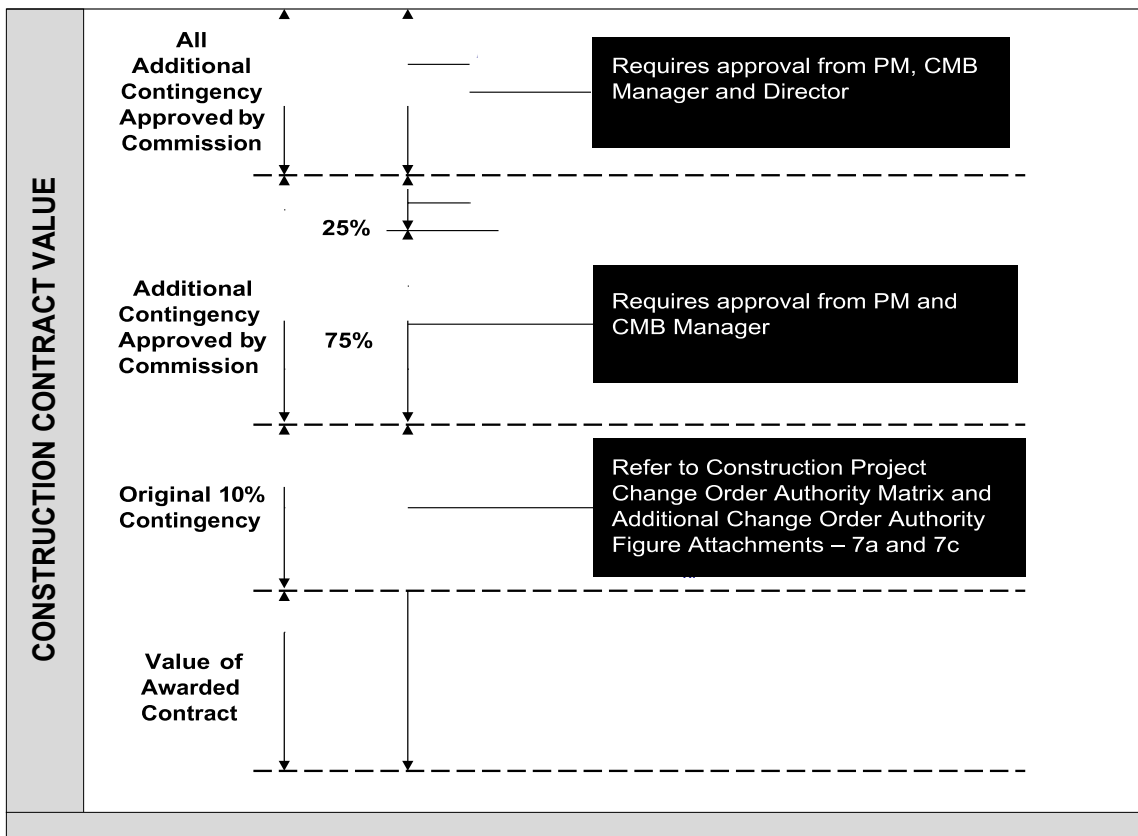
Attachment 011 – 7c
Page 1 of 2
Construction Project Authority Matrix for Additional Change Order
Exceeding Original 10% Commission Approved

When change orders are processed for any amount over the original 10% construction contingency after the Commission has approved additional contingency for a specific contract, all said change orders, regardless of arithmetic value or percentage of the original contract value, must be approved as follows:

For projects which are part of a Capital Improvement Program (CIP):

- All change orders over the original 10% construction contingency and up to 75% of the increased construction contingency must be approved by the PM and CMB Manager, and
- All change orders exceeding 75% of the increased construction contingency must be approved by the PM, CMB Manager and the Director, and
- All change orders exceeding the first additional contingency approved by the Commission must be approved by the PM, CMB Manager and the Director.

The following summarizes the required approvals for construction change orders:



Although the above figure and instructions provided herein focus on cost change orders, the same requirements apply to schedule change orders, where the contract completion date is delayed by more than 10 percent of the original contract duration.

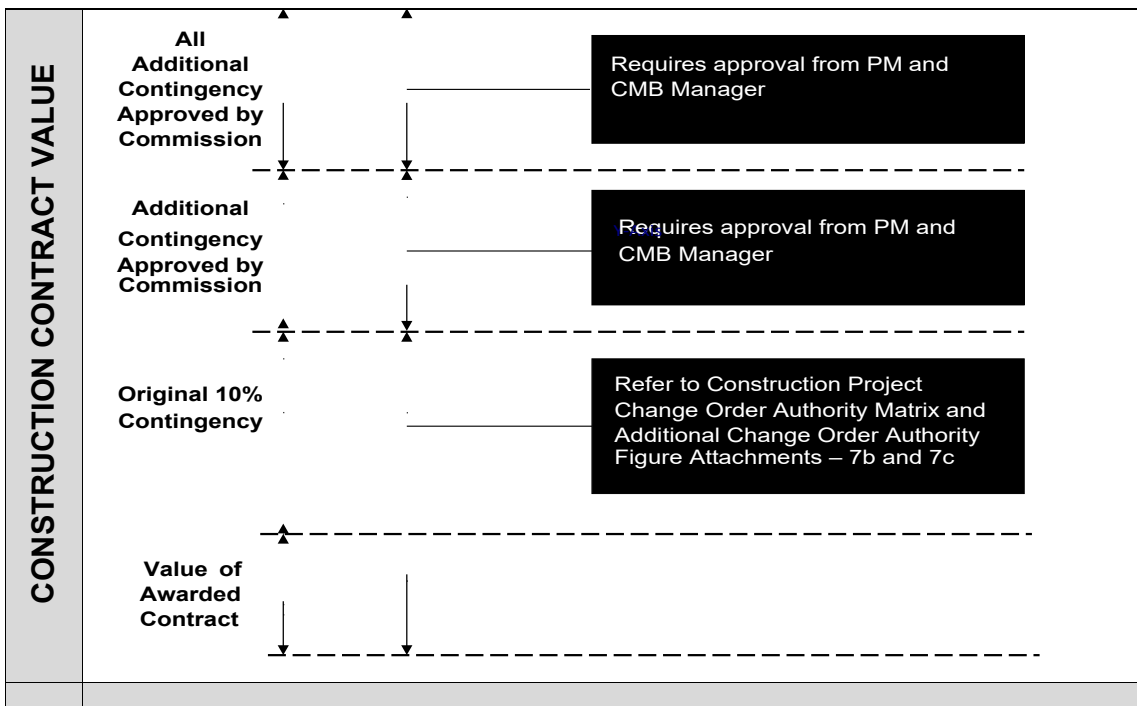
In the absence of the CMB Manager, all change orders in excess of the original 10 percent construction contingency must be approved by the Director. There are no exceptions to this requirement.

Attachment 011 – 7c
Page 2 of 2
Construction Project Authority Matrix for Additional Change Order
Exceeding Original 10% Commission Approved

For projects which are not part of a Capital Improvement Program (CIP):

- All change orders over the original 10% contingency must be approved by the PM and CMB Manager, and
- All change orders exceeding the first additional contingency approved by the Commission must be approved by the PM and CMB Manager.

The following summarizes the required approvals for construction change orders:



Although the above figure and instructions provided herein focus on cost change orders, the same requirements apply to schedule change orders, where the contract completion date is delayed by more than 10 percent of the original contract duration.

**Attachment 011 –8
Change Order Summary**

CHANGE ORDER SUMMARY						
DATE:						
BY: Project Construction Manager/Field Contracts Administrator						
PROJECT NO. and TITLE:						
<p>(1) SCOPE OF CHANGE Describe what was in the base design and what was changed. If scope is relatively simple and self explanatory, could just write "Refer to Change Order No. 4". This is already included in the PCO or COR and clarified during the scoping meeting. The final scope is included in the executed Change Order. Reference the CO and attach a copy.</p>						
<p>(2) REASON FOR CHANGE Explain why the change is necessary. Go into more detail as needed if a simple classification as error and omission, different site condition, client request and etc. explanation is insufficient depending on the content of the change. Explain the original design and its problem, and what was done in the CO to correct it.</p>						
<p>(3) WHAT EFFECT WILL CHANGE HAVE ON OPERATIONS?</p>						
<p>(4) CONTRACTOR'S INITIAL PROPOSAL PRELIMINARY OR ENGINEER'S AND FINAL CHANGE ORDER AMOUNT Indicate cost and time from the Contractor's initial proposal, the Engineer's estimate (if any), and the final change order amount for the proposed change. The section summarizes the Contractor's cost and the requirements.</p>						
ITEM	CONTRACTOR INITIAL PROPOSAL		ENGINEER ESTIMATE		FINAL CO AMOUNT	
	TIME	COST	TIME	COST	TIME	COST
PCO #4						
PCO #5a						
PCO #5b						
PCO #6						
PCO #7						
TOTAL						
<p>(5) RECORD OF NEGOTIATION The intent of this section is not to document the chronology of the negotiations as the PCM, COR or CO files should contain documents that reflect the chronology, however, a summary of the chronology is to be attached. This section shall document discussions between the Project CM team and the Contractor, and summarizes special assumptions, revisions, conditions or agreements made between the Contractor and the City during the negotiation process, which may not be evident from the documents contained in the files.</p> <p>This section should indicate personnel present at the negotiations. Describe details of the settlement or negotiations such as assumptions and conditions made by the Contractor and accepted by the City, supplements or revisions to the proposed design change, swaps or "horse trades", assumptions for the negotiated profit, overhead, escalation, bonding and insurance, or reasons why the PCO or COR took unusually long to resolve.</p> <p>Field Contracts Administrator should formalize any important assumptions, revisions, conditions or agreements in the change order itself or in a letter to the Contractor which shall be referenced in the CO.</p>						
<p><i>The Project Construction Manager, Field Contracts Administrator or anyone else preparing the documentation should be cognizant of sensitive content when drafting the Change Order Summary.</i></p>						

**Attachment 011 – 9
Owner Representative/Operations Requested Changes During Construction**

Project No. and Name: _____					
Change Description: <i>Describe change(s) in scope, and justify/explain the cost and schedule impacts recorded below:</i>					
Estimated Cost Impact:					
	Increase	Decrease		Increase	Decrease
Project Mgmt.	_____	_____	Construction	_____	_____
Design	_____	_____	Subtotal	\$0	\$0
CM	_____	_____	Project Total	<div style="border: 1px solid black; padding: 2px; display: inline-block;">\$0</div>	
Estimated Schedule Impact:					
Project Completion Delayed by: _____ months					
Approved and Submitted by:					
Responsible Operations Manager					
_____	_____	_____	_____	_____	<div style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></div> Approved
Name	Signature	Date			
CMB Manager – Construction Review and Forward Request to the CCB::					
CMB Manager - Construction					
_____	_____	_____	_____	_____	
Name	Signature	Date			
Comments:					

**Attachment 011 - 10
Revision Control Log**

Revision No.	Revision Date	What changed?
Rev 2	11/15/22	<ul style="list-style-type: none"> • Attachment 7a; CM/GC Construction Project Change Order Authority Matrix (Table 1) revised Matrix added, page 23; • Attachment 7b; CM/GC Construction Project Change Order Authority Matrix (Table 2) revised Matrix added, page 24; • Section 8; Attachment 7a (Table 1) title revised; • Section 8; Attachment 7b (Table 2) title revised; • Attachment 10; Revision Control Log revised.
Rev 1	6/7/19	<ul style="list-style-type: none"> • Minor format changes; • Section 3.0; 3.1, 3.3, and 3.13 changes to text • Section 4.0; 4.1; 4.1.2, 4.2.2, 4.2.5, 4.2.6; 4.4; 4.4.1, 4.4.2, 4.4.3, 4.5 Senior added to Project Manager changes to text; and, 4.2.4 removed Program from Construction Manager changes to text • Section 5.0; 5.2; 5.2.3; 5.4; 5.4.7, 5.4.8, 5.4.9, 5.4.9.1, 5.4.9.2 and 5.4.9.3; 5.4.10, 5.4.11 and 5.4.12; 5.5; 5.5.5, 5.5.5.1, 5.5.5.2, 5.5.5.3 and 5.5.6 changes to text • Section 6.0; 6.1.1 changes to text • Attachments – new added and revised • Revision Control Log - updated
Rev 0	11/14/16	Signed