San Francisco Public Utilities Commission
Water System Improvement Program
Construction Management Business Processes

Section: WSIP Construction Management

Business Process No.: 003a
Title: Contract and Change Management

This process defines the Business Processes for Contract and Change Management, which involve the initiation of the Contract record in the WSIP Construction Management Information System (CMIS) and the management of the contractual changes to the Contract throughout the duration of the Project. Contract Management includes the setup of the Contract, the identification and documentation of forecasted, potential and proposed changes to the Contract, and the logging and tracking of the analysis, negotiation, processing and approval of the Change.

CMIS Contract and Change Management Modules

Contract Modules

The CMIS uses the Budgeted Contracts module to document the total value of the Contract, including contingency funding. It uses the Committed Contracts module to document the basic information of the Project Contract, including the Contractor and key City contacts, contract start and original completion dates and Contract Schedule of Bid Prices. The Schedule of Bid Prices is the agreed-upon billable lump sum or unit price line items, the value of which accrues to the total original contract value, not including contingency funding. Certified Change Orders and Contract Modifications modify the total value and duration of the Contract. Certified Applications for Payment draw against the total value of the Contract (see Business Process 004c, Applications for Payment).

Change Management Modules

The CMIS uses the Trends module to document forecasted potential changes prior to their initiation as documented changes; the CMIS uses the Change Management modules to enter documents related to changes and to track changes through the analysis and approval process. This Business Process describes the steps to document a forecasted change and to process a proposed change in the Proposals module to create and track Proposed Change Orders, Change Order Requests and Negotiations and the use of the Change Order module to create a Change Order and to
track the approval process for updating the CMIS Change Log and calculating the project contract value. Change Orders may be collected in Contract Modification documents in order to expedite processing and approval of multiple Change Orders. Changes to the Contract that do not impact the duration or cost of the Contract are processed in Field Orders.

**Project Cost Accounts Module**

The Project Contract value, value with contingency, forecasted, potential, pending and approved changes to the Contract value, actual costs and remaining contingency are recorded in the Project Cost Accounts module. If cost codes have been applied to the line items in the contract, change and Applications for Payment documents, the costs are listed by cost code; otherwise, they are grouped into a “Not Costed” line. The Project Cost Accounts module provides the means to review the fiscal records and documents of the Project.

**Issues Module**

The CMIS allows the Project CM Team to identify and document issues and conditions that might result in a change. An Issue may be an anticipated or current risk, potential change of scope or condition that affects the contract, or a “Lesson Learned” identified during the course of the Project which should be defined and documented. Every potential change should be defined in the CMIS Issues module to permit the collection of documentation pertaining to the change. If a Change Order ensues, SFPUC will have established a file on its origin and history to aid in the analysis as well as to provide easily accessible documentation. The Issues module facilitates the collection and organization of documentation within the Project CM Team; the Trends module enables the Project CM Team to document and forecast potential changes prior to their formal initiation; and the Request for Information module facilitates a formal coordination between the SFPUC and the Contractor. The Project CM must initiate an Issue when a potential change is first identified. The processing of an RFI may eventually lead to the initiation of a Change Order Request.

**Definitions**

- “Approved” Change - The status of a Change following its certification by the City Controller.

- Change Log – a log of all Changes maintained by the Field Contracts Administrator (FCA) that includes the type and category of change, summary description of the change, a change status code, summary cost and/or time impact, actual dates of key steps in the process required through issuance of the certified change, and an aging analysis of the dates of the key process steps.

- Change Order – A written instrument prepared by the City and issued after the effective date of the Agreement and executed in writing by the City and Contractor, stating their 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.

- **Change Order Request (COR)** – A document prepared by the Contractor requesting a change of cost or time for changes in the Work or any other Contract term or condition of the Contract.

- **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 or time.

- **Force Account** – Work to be paid for on the basis of direct costs plus markup on direct costs for overhead and profit.

- **Issue** – A condition, risk, lesson learned or potential contractual change that requires the collection of correspondence and other Project documentation to provide a history and context for the purposes of documentation, research and analysis.

- **“Potential” Change** – The status of a Change from initiation as a Proposed Change Order (PCO) by the SFPUC or as a Change Order Request (COR) by the Contractor through the completion of negotiations.

- **“Pending” Change** – The status of a Change from the conclusion of negotiations and the preparation of the Change Order or Unilateral Change Order by the FCA to its certification by the City Controller.

- **Proposed Change Order (PCO)** - A document prepared by the City requesting a quotation of cost or time from Contractor for additions, deletions or revisions in the Work initiated by the City.

- **“Rejected” Change** – The status of a Change that has been rejected at any point in the analysis or approval process.

- **Schedule of Bid Prices** – The itemized elements of the contract Work with their respective costs, as negotiated and agreed upon by the City and the Contractor during Bid, and documented in the Contract, Specification Section 00410; the basis for the Contractor’s estimate of progress payment and Application for Payment; subject to modification only through approved and certified Change Orders.

- **Schedule of Values** – The detailed definition of the Schedule of Bid Price line items as delineated in the cost-loaded Project Construction Schedule.

- **Trend** – An anticipated or forecasted cost to the Contract prior to its conversion to a Change.

- **Unilateral Change Order** - A written Change Order issued by the City to the Contractor after the effective date of the Agreement.
Business Process

The Business Process describes the process of:

- Documenting the Project Construction Contract in CMIS with its Schedule of Bid Prices and establishing a Budgeted Contract to record and track contingency;
- Documenting forecasted costs or changes to the Contract;
- Initiating, processing and approving Change Orders, Unilateral Change Orders, Contract Modifications;
- The abbreviated process for a Field Order; and
- Creating an Issue for the collection of documentation supporting a Change Management.

Contracts

The Contract and its Schedule of Bid Prices as documented in Technical Specification Section 00410, Schedule of Bid Prices are entered into the CMIS Committed Contracts module at the inception of the Project, and forms the basis of all contractual documents logged into the CMIS. All construction and design/build contracts are considered committed. The Budgeted Contract module is used to create a contract record that records the total value of the committed construction contract plus the contingency funding.

Contract Initiation

The terms and conditions and cost and duration of the Contract are defined in the Contract representing the agreed upon terms for the completion of the Scope of Work. Technical Specification Section 00410, Schedule of Bid Prices defines the Schedule of Bid Prices, which constitute the contractual elements of the Work against which progress and compensation are measured, the sum of which is the original Contract Value. Technical Specification Section 00520, Agreement, Article 2, “Contract Time” defines original Contract duration.

At the inception of the Project, the Field Contracts Administrator enters the basic information pertaining to the Contract into the Committed Contracts module of the CMIS. This data (referred to in this Business Process as “Committed Contract”) provides the foundation for all contractual actions and documents within the CMIS, e.g., Trends, Change Management and Applications for Payment, and is the basis for cost analysis within the CMIS. It is also to be referenced by all CMIS documents that pertain to the Work performed under the Contract. As a general rule, only the Construction Contract between the Prime Construction Contractor and the City will be referenced.

Following the entry of the Contract into the CMIS, the individual Specification Sections will be entered into the Drawings/Specifications module, where they will be managed for revisions. An electronic file (Adobe Acrobat) of each Specification Section will be attached to the pertinent record in the Drawings/Specifications module for reference.
The Budgeted Contract module is used to quantify the total Contract value, including contingency and is modified only when additional funding is provided in the event that the Contract Cost exceeds the contingency. To expedite data entry, the Committed Contract data may be exported to an Excel spreadsheet, modified to represent the line item values with contingency added, and imported into the Budgeted Contracts module.

**Change Management**

The Project Construction Manager (Project CM) is responsible to identify and oversee the analysis of forecasted changes and to direct their entry into the CMIS Trends module. All data maintenance of the Change Management Business Process is conducted by the Project CM Team and is the responsibility of the Field Contracts Administrator (FCA) or other individual designated by the Project CM to administer. Analysis of the change, from when it is first forecasted and through the potential and pending phases, is conducted, coordinated and communicated outside of CMIS, and the FCA is responsible to enter the results of the analysis, as forecasted changes, into the Trends module (cost and likelihood of implementation) and, as potential and pending changes, into the Change Management modules (cost, time, CEQA, Level of Service, Shutdowns and Operations) of CMIS. The FCA is responsible to coordinate the review.

The Construction Contract provides three means to achieve changes to the Contract; the Owner-initiated Proposed Change Order (PCO), the Contractor-initiated Change Order Request (COR), and an Owner-initiated Field Order (FO). A Change Order is the result of the successful negotiation of a change in the Work and of the impact of the change to the cost, time or any other Contract term or condition. A Unilateral Change Order allows the Work to proceed when the SFPUC and the Contractor do not agree upon the impact of the change on the cost or time or other terms or conditions of the Contract; a Unilateral Change Order usually results in the Contractor's use of Force Account processes to collect the cost of the Unilateral Change Order in time and materials (see WSIP CM Procedure No. 036, Administration of Force Accounts (Time & Materials)). A Field Order provides for minor changes in the Work or Contract Terms that require documentation of agreement but do not involve a change in the cost or time of the Contract.

The CMIS uses four modules to manage contract modification documents and processes. The Trends module documents forecasted changes. The Change Management module envelops the process of creating, processing and approving a Change Order, allowing the definition of the change, its origins and its impacts and the logging of the modification of the Terms of the Contract due to the change. All Change Management processes, with the exceptions of creating Trends, bundling Change Orders and collection of documentation into Issues, will be initiated from within the Change Management module. The Change Management module invokes the Proposals module to create, process and track the PCO, COR and Negotiations. The Change Management module invokes the Change Order module to create, process, track and log approval of the Change Order. (Note: in this Business Process document, the terminology creates a (PCO/COR/Negotiation/Change Order) record from within the
Change Management module indicates that the process is initiated and accessed from the Change Management module, even though the records of those documents reside in the Proposals or Change Order modules.) The Change Order module is used independently to bundle Change Orders into Contract Modifications.

The CMIS uses the Project Cost Accounts module to provide a central location for analyzing committed and actual project costs. Forecasted, potential, proposed and approved changes to the Contract value resulting from Trends and Change Orders, and actual costs resulting from Applications for Payment may be viewed, analyzed and reported from the Cost/Task Summary module.

The CMIS uses the Issues module to collect documentation regarding changes, and the Cost Worksheet module to calculate the current Contract Value.

There are four possible Change Management status descriptions that are entered in the CMIS Change Management module:

- Potential – from initiation through completion of negotiations.
- Pending – from completion of negotiations to certification by the City Controller.
- Approved – following certification by the City Controller.
- Rejected – any Change rejected at any point in the analysis and approval process and transmitted to the Contractor by the Project CM.

These terms are not to be interchangeable with the phases of the Change Management documents (PCO, COR, Negotiation, and Change Order or Unilateral Change Order), to which the phases “New Item”, “In Review”, “Approved” or “Rejected” apply.

There are four possible cost and/or time impact status codes that the CMIS records as the Change progresses:

- Estimated – A PCO initiated by the City.
- Quoted – A COR submitted by Contractor.
- Negotiated – Negotiation in process (allows for multiple rounds of negotiations).
- Final – Final negotiated amount of Change Order or amount of Unilateral Change Order.

The term “forecasted” is not considered a Change Management phase, and pertains to the potential changes logged into the Trends module before the initiation of a Change Management.

The CMIS allows the assignment of costs to Cost Codes. The Cost Code definition has been limited to the assignment of project costs to the phase. All costs will be associated with the appropriate phase of the Project which is, in general, Construction.
Change Initiation

Forecasted Changes

A Forecasted Change may be initiated at the discretion of the Project CM and may pertain to any condition or circumstance that may pertain to or impact the cost or duration of the Project. The Project CM must identify the Schedule of Bid Prices line item that is subject to forecasted modification, document the source or cause of the Trend and provide an estimate of the cost and likelihood of the Trend. Line items are added to the Trend to correspond to the line items in the Contract Schedule of Bid Prices that are to be modified by a Change Order that results from the Trend. The Trend will be identified as a “Committed Adjustment” in the Project Cost Accounts module and does not modify the Committed Contract value. When the Trend is resolved either as a Change Management or to be nullified, a line item must be added to return the Trend value to $0.00.

Potential Changes

Potential changes are initiated by the receipt of a Proposed Change Order (PCO) or a Change Order Request (COR). Potential changes are considered “Estimated” costs. PCOs or CORs that evolve from a Trend may be generated from the Trend module as a Change Management, and require that the Committed Adjustment values be nullified by entering a line item into the Trend of equal negative value to the Trend’s sum value.

Proposed Change Orders

A PCO Request (Attachment 003a - 4) may be submitted to the Project CM by any member of the Project CM Team (including the Project Engineer) or initiated by the Project CM. The originator must provide the data necessary to describe the proposed change, a preliminary assessment of impacts and a justification for the change. If the Project CM deems the PCO Request valid and if a Trend and associated Issue have not been previously initiated, the Project CM initiates an Issue in the Issues module defining the basis of the potential change and, at the direction of the Project CM, the FCA initiates a Change Management and reviews the PCO request for sufficiency to support its analysis and processing. If it is not sufficient, the FCA returns the PCO Request to the originator identifying deficient information. If sufficient, the FCA initiates a PCO from within the Change Management record, links the PCO to the Issue, and manages the analysis of the PCO by the Project CM Team. The analysis includes an estimate of any cost and/or schedule impacts, Level of Service Impacts, environmental impacts (CEQA variance), and system shutdown impacts. The Water System Engineer (WSE), Regional Environmental Compliance Manager (RECM), and the Shutdown Coordinator will be consulted as required. All correspondence and other documents must be linked to the Issue associated with the Change Management. All signature-bearing documents, graphic or other documents (e.g., schedule gantt charts) generated during the analysis and processing of the change must be scanned and attached to the appropriate document.
Upon completion of an impact analysis by the Project CM Team, the FCA updates the cost, schedule and other impact data in the PCO and uses the CMIS Ball in Court function to forward the action of its review to the Project CM. The Project CM reviews the PCO, adds recommendations and comments and uses the CMIS Ball in Court function to forward the action of its review to the City Regional Project Manager (RPM) for approval. To facilitate review of the PCO, the Project CM and City RPM may use the Change Management print preview feature generate a Change Request Summary (CRS) (Attachment 003a - 3), which includes the narrative and history of the scope, cost and schedule impacts, operational, CEQA, LOS and system shutdown impacts and the justification and merits of the change. The City RPM makes a determination on proceeding with the PCO and uses the CMIS Ball in Court function in the Proposals module to forward the action of the PCO to the FCA. If the City RPM rejects the PCO, the FCA notifies the originator and closes the PCO and Change Management. If the City RPM approves the PCO, the FCA prepares the PCO. The Project CM signs the PCO and transmits it by means external to CMIS to the Contractor to request an estimate of cost and/or schedule impacts. The PCO must contain sufficient information and documentation to permit the Contractor to prepare an accurate good faith estimate of the impact of the change on the Project’s cost and/or schedule. The FCA tracks the response from the Contractor, which must be submitted within ten working days of the transmittal of the PCO.

Upon receipt of the Contractor’s Quote, the FCA immediately creates a Negotiation record from within the Change Management module to record the Quote, manages the analysis of the Quote with the Project CM Team, updates the cost and schedule impacts in the Negotiation record and uses the CMIS Ball in Court function in the Proposals module to forward the action of the Quote to the Project CM for review. The Project CM assesses the Quote and uses the CMIS Ball in Court function to forward the action of the PCO with comments and recommendations to the City RPM for review and approval of the updated impacts. The City RPM makes a determination on proceeding with the change and uses the CMIS Ball in Court function to forward the action of the FCA. If the City RPM approves the Quote, the Project CM notifies the Contractor and conducts negotiations.

The RPM may delegate approval of proceeding with Change Management processing activities to the Project CM or City RCM on a project-by-project basis.

Change Order Requests

The Contractor may submit a COR to the Project CM as a result of a Clarification or other written directive issued by the Project CM. Upon receipt of a COR, the Project CM initiates an Issue in the CMIS Issues module, and forwards the COR to the FCA for processing. The FCA immediately initiates a Change Management and reviews the COR for sufficiency to support its analysis and processing and compliance with contract requirements. If it is insufficient or non-compliant, the FCA returns the COR to the Contractor, identifying the deficient information or documentation. If it is sufficient, the
FCA initiates the processing of the COR in the Change Management module, attaches the COR to the relevant Issue created by the Project CM and manages the Project CM Team’s analysis of the impacts of the COR. The analysis includes an estimate of any cost and/or schedule impacts, Level of Service Impacts, environmental impacts (CEQA variance), and system shutdown impacts. The Water System Engineer (WSE), Regional Environmental Compliance Manager (RECM), and the Shutdown Coordinator will be consulted as required. Upon completion of an impact analysis by the Project CM Team, the FCA updates the COR and uses the CMIS Ball in Court function in the Proposals module to forward the action of its review to the Project CM. The Project CM reviews the COR, adds recommendations and comments and uses the CMIS Ball in Court function to forward the action of its review to the City RPM for approval. To facilitate review of the PCO, the Project CM and City RPM may use the Change Management print preview feature generate a Change Request Summary (CRS) (Attachment 003a - 3), which includes the narrative and history of the scope, cost and schedule impacts, operational, CEQA, LOS and system shutdown impacts and the justification and merits of the change. The City RPM makes a determination on proceeding with the COR and uses the CMIS Ball in Court function to forward the action of the COR to the FCA. Based on the decision of the City RPM, the Project CM issues a determination to the Contractor to accept or reject the COR. If the COR is accepted, the Project CM conducts negotiations with the Contractor. The response must be issued to the Contractor within ten working days of receipt of the COR. If the Project CM requires additional time to issue a determination, the Project CM must notify the Contractor in writing within the initial ten-working (10) day period.

Negotiations

The Project CM leads the negotiations of a PCO or COR with support from other project team members. The FCA initiates a Negotiation record and documents the cost and schedule estimates of each round of negotiations as well as recording a narrative regarding each round of negotiations. The Contractor’s Quote in response to a PCO constitutes the first negotiation round in the processing of a PCO; similarly, the Project CM Team’s first response to the Contractor’s COR constitutes the first negotiation round in the processing of a COR. All negotiation documents are initiated from within the Change Management module, although the documents reside in the Proposals module. All communications between the Project CM Team and the Contractor take place outside of CMIS, and are recorded in the Correspondence Sent and Received modules as well as attached to the relevant Issue in CMIS.

Pending Changes

Upon successful completion of negotiations, the FCA uses the Change Management module to initiate a Change Order record incorporating the negotiated terms and cost and schedule impacts. From the Change Order module, the FCA prints the Change Order form, and obtains the signatures of the Project CM and Contractor. If negotiations are not successful and the City RPM desires to proceed with the change, the Project CM and Contractor can agree to proceed with the change on a Force Account basis or,
if the Contractor does not agree to proceed, the Project CM may direct the FCA to prepare a Unilateral Change Order. A Unilateral Change Order requires the Contractor to proceed on a Force Account basis.

Approved Changes

Following the approval by the Project CM, the Change Order or Unilateral Change Order is submitted for approval in turn to the City RCM and to the City RPM. The RPM may instruct the FCA to bundle the Change Order with other negotiated Change Orders for submission for approval, to submit the Change Order individually or, if the Change Order exceeds the contingency funding, which is 10% of the Contract value, to prepare the Change Order for City Commission approval. The City RPM initiates the WSIP approval process according to the WSIP Matrix of Authority.

With the assistance of the City RPM and the Contracts Administration Bureau, the FCA tracks the Change Order through the SFPUC Workflow approval process and logs the completion of the WSIP staff approval, the transmittal to and the certification by the City Controller, and the transmittal to the Contractor and Project CM of the approved Change Order.

If the Change Order exceeds the contingency funding, the City Commission must review the Change Order for approval of the increase of the Project’s budget. Upon notification of the approval of the increase of the Project’s budget, the FCA processes a Change Order document in the Budgeted Contract to document and quantify the added funding.

If the Contractor exceeds the Bid Price of a Unit Price line item, the amount in excess of the line item may be documented as a Change Order. In anticipation of the excess, the Contractor should initiate a COR and the amount of work executed should be documented as Force Account work. The COR may be processed as a Change Order at the time of execution of the work, or may be held for processing as a Bid Reconciliation Change Order at the discretion of the City. If the Unit Price line item is exceeded by up to twenty-five (25%) percent of the Bid Price, the Contractor may request payment at the time of work, and the City may initiate a PCO to capture the value of the work for a future Bid Reconciliation Change Order. A Change Management may be initiated to compile into a single Bid Reconciliation Change Order multiple instances of this circumstance.

Change Log

The FCA maintains a Change Log of all forecasted, potential, pending, approved, and rejected changes in the course of maintaining the Change Management information. The Change Log will be generated as often as needed by the FCA and the Project CM to track changes, but at least once a month as part of the Project Construction Progress Report submitted to the Regional CM and the RPM by the Project CM. The format of the Log enables a quick review by the RPM and WSIP Management of the magnitude of the impacts a change and the aging values that indicate changes that are not being processed in a timely manner. The aging values include:
• Current Aging Value – the number of calendar days (as of the date of the Log) from the last date of action entered for each change not rejected or approved;
• Total Aging value – the number of calendar days (as of the date of the Log) from the date of initiation of a PCO or COR.

**Field Orders**

A Field Order does not require approval beyond the Project CM. If a Field Order is required to provide a clarification to the Contract, the FCA prepares the Field Order and the Project CM transmits it to the Contractor. Field Orders are reported in a separate Field Order Log in the CMIS with a sequential number, description of the subject of the Field Order and the date it is transmitted to the Contractor.

**Business Process Steps**

**Contract Initiation**

1. At the inception of the Project, the Project CM directs the FCA to create a Committed Contract record in the Committed Contracts module of CMIS.
2. The FCA creates the Committed Contract record, dating the document as the date of the Agreement and entering the names of the signatories of the Agreement, Technical Specification Section 00520, of the Contract. The FCA enters the Schedule of Bid Prices into the “Schedule of Values” section of the Committed Contract; this forms the basis of all future Change Orders and Applications for Payment.
3. The FCA creates a Budgeted Contract record in the Budgeted Contracts module of CMIS. This may be accomplished by exporting the Committed Contract record, modifying the values of the Schedule of Bid Prices to reflect the contingency funding, and importing the new values to a new Budgeted Contract. The Budgeted Contract record forms the baseline of the construction contract and permits the analysis of variance and use of contingency funding.

**Change Management**

The Business Process steps for Change Management are organized as follows; definition of forecasted costs as Trends; definition of potential costs as Change Management document, grouped first into the into the Change Management status phases, “Potential”, “Pending” and “Approved”; and, within these status phase groupings, the steps are further grouped by Change documents.

**Forecasted Change (Trend)**

1. The Project CM identifies and documents a forecasted cost/time impact using the Issues module and directs the FCA to initiate a Trend.
2. The FCA initiates a Trend in the CMIS and oversees the analysis of the cost/time impact on the Contract.
3. The FCA documents the Trend and enters its cost and time impact on the Contract as line items associated with the line items of the Schedule of Bid
Prices. Line items may be entered that are not associated with the Schedule of Bid Prices if additional elements of work are deemed potentially necessary. The FCA enters an assessment of the probability that the overall trend will be converted to a Change Management for processing to a Change Order.

4. The FCA monitors the evolution of the Trend and updates its cost and time impact on the Contract and the probability of its conversion to a Change Management, and manages the documentation of the Trend in the relevant Issue.

5. At the receipt of a PCO or COR associated with the Trend, the FCA converts the Trend to a Change Management, closes the Trend, and initiates a “Potential” change, as outlined below.

**Potential Change**

**Proposed Change Order (PCO)**

1. The Originator prepares and submits a PCO Request to the Project CM (Attachment 003a - 1). The FCA initiates a Change Management in the CMIS.

2. The FCA reviews the PCO Request for sufficiency.

3. If not sufficient, the FCA returns the PCO Request to the Originator. If sufficient, the FCA creates an Issue in the Issues module, creates a PCO from within the Change Management in CMIS, sets the PCO status to “In Review”, manages the CM Team’s analysis of the impacts, updates the cost/schedule impacts, links the Change Management and PCO to the Issue, and uses the PCO Ball in Court function to forward the action pertaining to the processing of the PCO to the Project CM.

4. The Project CM reviews the PCO and either rejects it and returns it to the FCA with instructions to reject the PCO or to correct deficiencies, or adds recommendations and comments to the PCO record and uses the PCO Ball in Court function to forward the action pertaining to the processing of the PCO to the City RPM for review and approval.

5. The City RPM approves or rejects the PCO and uses the PCO Ball in Court function to forward the action pertaining to the processing of the PCO to the FCA.

6. If rejected, the FCA revises the status of both the PCO and the Change Management to “Rejected” and notifies the Originator. If approved, the FCA prepares and the Project CM issues the PCO to the Contractor to request a Quote. If a CEQA variance is required, the Project CM may elect to delay issuing the PCO to the Contractor until there is certainty a variance will be received. The FCA notifies the Administrative Document Control Specialist (ADCS) of the transmittal of the PCO. The ADCS logs the PCO in Correspondence Sent.

7. The Contractor submits a Quote to the Project CM on Contractor’s letterhead outside of CMIS.
8. The FCA notifies the ADCS of the receipt of the Quote. The ADCS logs the Quote in Correspondence Received. The FCA reviews the Quotation for compliance and completeness. If non-compliant, the FCA returns the Quote to the Contractor with instructions regarding the deficient information or documentation.

9. If the Quote is compliant, the FCA logs the date of the Quote and, within the Change Management module of CMIS, initiates the first negotiation round to document the Contractor’s cost and/or time impacts.

Change Order Request

1. The Contractor submits a COR on Contractor’s letterhead outside of CMIS to the Project CM. The FCA initiates a Change Management in CMIS.

2. The FCA notifies the ADCS of the receipt of the COR and reviews the COR of compliance and completeness. The ADCS logs the COR in Correspondence Received.

3. If the COR is non-compliant, the FCA updates the Change status of the Change Management to “Rejected” in CMIS and instructs the ADCS to return the hardcopy COR to the Contractor. If the COR is compliant, the FCA initiates a COR from within the Change Management module, creates an Issue in the CMIS Issues module and links the Change Management and COR to the Issue, manages the analysis of impacts within the Project CM Team, updates the impact information and uses the COR Ball in Court function to forward the action pertaining to the processing of the COR to the Project CM.

4. The Project CM reviews and approves or rejects the COR, and uses the COR Ball in Court function to forward the action pertaining to the processing of the approved COR to the City RPM with comments and a recommendation or to return the rejected COR to the FCA.

5. The City RPM approves or rejects the COR and uses the COR Ball in Court function to forward the action pertaining to the processing of the COR to the FCA.

6. If rejected, the FCA revises the status of both the COR and the Change Management to “Rejected” and notifies the Contractor. If approved, Project CM conducts negotiations with the Contractor. If a CEQA variance is required, the Project CM may elect to delay negotiations with the Contractor until there is certainty a variance will be received. In this case, the Project CM will notify the Contractor of the delay.

Negotiations

1. If the Project CM and RPM decide to pursue negotiations in response to either the Contractor’s Quotation or COR, the FCA initiates the first negotiation round from within the Change Management module. In the former instance, the first negotiation round documents the Contractor’s cost and/or time impacts documented in the Quotation; in the latter instance, the first negotiation round documents the Project CM Team’s response to the COR. The FCA manages
the analysis of the change’s operational, cost and/or time impacts to validate and respond to the Contractor’s Quotation or COR, creates the negotiation document within the Change Management module, updates the cost/schedule impact information and uses the Ball in Court function to forward the action pertaining to the processing of the Quotation to the Project CM.

2. The Project CM conducts negotiations with the Contractor. The FCA manages the analysis of and documents each round of negotiations using the Add a New Negotiation Round function from within the Change Management module.

3. If negotiations are successful, FCA 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.

Pending Change

Change Order

1. The FCA initiates a Change Order record from within the Change Management module, prints the Change Order and obtains the signature of the Project CM. The ADCS scans and attaches the signed Change Order to the Change Order record at each signature step.

2. Project CM transmits the signed Change Order to the Contractor for signature.

3. Contractor returns the signed Change Order to the FCA.

4. The FCA transmits the Change Order with the Project CM and Contractor to the City RCM for signature.

5. The City RCM signs and transmits the Change Order to the City RPM for signature and entry into the WSIP approval process.

6. The City RPM is responsible to obtain approvals in accordance with the WSIP Matrix of Authority, and, if necessary, obtaining Commission approval and submitting the Change Order for processing by the Contract Administration Bureau and Finance and certification by the City Controller.

7. The FCA monitors the Change Order approval and certification process and updates actual dates of key process steps in the Change Log. If the Change Order is rejected at any time, the City RPM returns the Change Order to the Project CM for resolution with the Contractor.

Unilateral Change Order

1. If negotiations fail, RPM determines if a Unilateral Change Order will be prepared.

2. FCA prepares the Unilateral Change Order for Project CM approval and changes Change Order Type in CMIS to Unilateral Change Order.

3. The Project CM signs the Unilateral Change Order and forwards a hardcopy to the City RCM for signature.

4. The City RCM signs and transmits the Unilateral Change Order to the City RPM for signature and entry into the WSIP approval process.
5. The City RPM is responsible to obtain approvals in accordance with the WSIP Matrix of Authority, and, if necessary, obtaining Commission approval and submitting the Change Order for processing by the Contract Administration Bureau and Finance and certification by the City Controller.

6. The FCA monitors the Change Order approval and certification process and updates actual dates of key process steps in the Change Log. If the Change Order is rejected at any time, the City RPM returns the Change Order to the Project CM for resolution with the Contractor.

Contract Modification

1. The City RPM, in coordination with the Project CM and City RCM, may direct the bundling of multiple Change Orders that have been approved by the Project CM, Contractor, and Regional and WSIP Program Management into a single Contract Modification.

2. The FCA initiates a Contract Modification document from within the Change Order module and selects the approved Change Orders to be bundled. The FCA prepares a Contract Modification document which summarizes the bundled Change Orders and, at the direction of the City RPM transmits the Contract Modification and bundled Change Orders to the Contracts Administration Bureau for processing.

Approved Change

Contract Modification

1. Upon certification by the City Controller, the Contracts Administration Bureau amends the approved Change Order, or Unilateral Change Order, into the Contract and transmits copies to the Contractor and to the Project CM.

2. The FCA updates the Change Log and the Administrative/Document Control Specialist files the certified copy in the Project files.

Data Requirements

SFPUC uses the Change Management module in the CMIS to generate, process and track all documents associated with a Change Management action. The Change Management module invokes the Proposals module to create, log and process documents associated with the “potential” change status/phase, Proposed Change Orders (PCO), Change Order Requests (COR) and Negotiations. The Change Management module invokes the Change Orders module to create, log and process documents associated with the “pending” and “approved” change status/phase: Change Orders and Contract Modifications. The Correspondence Sent and Correspondence Received modules will be used to log all documents related to the processing of the Change that are sent to or received from entities outside the Project CM Team; e.g., issuing a PCO Request to the Contractor, receipt of a Quotation or a COR from the Contractor, correspondence generated during analysis of PCOs, Quotations, CORs and Negotiations, and transmittals of Change Orders to the Contractor. The Business Process requirements for Correspondence Received and Correspondence Sent must
be followed to capture change documents transmitted through the Document Control modules. Rejected PCOs and CORs are be submitted as new PCOs or CORs.

During the processing of a Change and as the Change progresses, the Field Contracts Administrator enters the cost and time impacts of the Change to update the impact data for each change document created in each of the two modules that are invoked from the Change Management module. The first of these modules, the Proposals module, creates three document types: the PCO (Estimated), the COR (Quoted), and the Contractor’s Quote or negotiation round (Negotiation). The second module, the Change Order module, creates three document types, the Change Order, the Contract Modification and the Claim (Final). The Data Requirements for these steps are repeated and identical, and are described separately under the “Cost/Time Impact” heading, below.

**Contract Initiation**

At the inception of the Project, the FCA is responsible to create the Construction Contract document in the Committed Contracts module in CMIS. The Contract is based on information in the Contract’s Technical Specification Sections 00410, Schedule of Bid Prices, and 00520, Agreement. The former contains the line items of the Contract’s scope of work with their associated unit price cost, quantities and total values or lump sum values; the latter contains the dates of the execution and the duration of the Contract.

**Field Contracts Administrator**

Data entry of the Contract requires access to the final and formal Contract documents, specifically Technical Specification Sections 00410, Schedule of Bid Prices and 00510, Agreement. These documents are available upon request from the Contracts Administration Bureau Construction Group, and will be sent by email as Adobe Acrobat documents, in addition to a Microsoft Excel file of the Schedule of Bid Prices.

**Summary Fields**

- **To** *(required field; Contractor key contact)*
- **From** *(required field; Project CM)*
- **Number/Index No** *(enter the Contract Number, eg., “WD-####”)*
- **Dated** *(enter the Agreement date, found on the first page of the Contract Specification Section 00520, Agreement)*
- **Technical Specification Division 1, General Requirements Section 01010, Summary of Work.**
- **Total Cost** *(automatically sums the line items of the Schedule of Bid Prices, entered below).*
Status Fields

- Ball in Court (do not use)
- Priority (Normal)
- Status ("New Item": upon Project CM review and approval, the FCA “approves” the Contract by clicking the “approve and save" button)
- Reviewed? (click “approve and save” after Project CM approval; this button is activated upon entry of the Reviewed Date fields, below)
- Reviewed by
  - Company/Contact #1 (defaults to Contractor key contact; do not change)
  - Reviewed Date #1 (enter the Agreement date, see “Dated”, above)
  - Company/Contact #2 (defaults to Project CM; do not change)
  - Reviewed Date #2 (enter the Agreement date, see “Dated”, above)

Contract Summary Section

This section is for information and reference, only. Do not use the functionality provided in this section in lieu of operations prescribed in this and other Business Process Reports.

Line Items

Use this section to enter the line items of the Schedule of Bid Prices, found in Specification Section 00410 of the Contract. Click Add Lump Sum or Add Unit Price to add the appropriate type of Line Item. These line items are not associated with the Contract, and must be added individually.

Lump Sum

- Type (automatically entered by selection of type of line item being added)
- Line Item No. (automatically increments; do not change)
- Description (identify the line item in the Schedule of Bid Prices, if appropriate; enter a description of item, scope of work, etc.)
- Line Item Total (enter total value of the line item)
- Activity ID (optional; enter the Construction Contract Activity ID)
- Costing (if Cost Codes have been set up for the Project, select the appropriate cost code)
- Issues (link to an existing Issue, if appropriate; generally, the Trend should be associated with the Issue created when the Trend is first identified)
- Attachments (do not use)
Unit Price

- Type (automatically entered by selection of type of line item being added)
- Line Item No. (automatically increments; do not change)
- Description (identify the line item in the Schedule of Bid Prices, if appropriate; enter a description of item, scope of work, etc.)
- Quantity (enter the number of units)
- Units of Measure (enter the unit: LF, EA, etc)
- Unit Price (enter the cost per unit)
- Line Item Total (calculates as multiplication of Quantity and Unit Price)
- Activity ID (optional; enter the Construction Contract Activity ID)
- Costing (if Cost Codes have been set up for the Project, select the appropriate cost code)
- Issues (link to an existing Issue, if appropriate; generally, the Trend should be associated with the Issue created when the Trend is first identified)
- Attachments (do not use)

Details Fields

- Description (enter the text of the Contract Description, found on Page i-1 of the Contract)
- Document For (enter the formal Project Title, found on Page i-1 of the Contract)
- Manager (enter the name of the Project CM)
- Category fields (default to Committed and Original; non-editable)
- DBE/MBE/WBE (disable, minority, woman-owned; optional)
- Reference Number (optional)
- Work at (address of site, site trailer; optional)
- Bill to (do not use)

Schedule Fields

- Start (enter the date of the Notice to Proceed)
- Finish (enter the date of Final Completion, calculated as the Start date plus the Contract Duration plus the duration of Final Completion; these durations are found in Article 2 of Specification Section 00520 of the Contract.)

Custom Fields

- File Code (select 00200.01, “General Contract Information”) Issues (may be used during the Project execution, not required for Contract setup)
Attachments (Attach, at a minimum, the Technical Specification Sections 00410, Schedule of Bid Prices and 00520, Agreement.)

**Trends Module**

When a forecasted change is identified, at the direction of the Project CM, the FCA initiates a Trend to quantify the forecasted cost/time impact on the Project. The Trend is given an “Open” status upon initiation. When the Trend evolves to a Potential Change, either as a PCO or COR, the FCA uses the “Initiate CM” function to initiate a Change Management, and ensures that the status of the Trend is “Closed”. This action eliminates the value of the Trend from the Project Cost Accounts tabulation.

The FCA, in coordination with the Project CM Team, should track the probability that the Trend will become a Change Management to mature to a Change Order. There are three possible probability qualifications for a Trend: “Possible”, “Likely” and “Very Likely”.

**Field Contracts Administrator**

Summary Fields

- Number/Index No (*automatically increments*)
- Subject – *(Enter a subject that briefly describes the subject of the forecasted change. Note: this subject line will transfer to a Change Management initiated from the Trend.)*
- Dated *(date of initiation of the Trend; defaults to the system date)*
- Value *(automatically sums from the Line Items)*
- Category *(always select “Committed”)*
- Cost Type *(always select “Adjustment”)*

Status Fields

- Ball in Court *(use only to direct the Trend for action; select Closed to terminate the Action)*
- Priority *(Normal or High)*
- Status *(Open; select Closed upon termination or initiation of a Change Management)*

Remarks *(Enter a complete description of the background and purpose for the creation of the Trend)*

Details Fields

- Initiated by *(select the originator of the Trend)*
- Entered by *(defaults to User)*
- Contract/Task *(select the Committed Contract)*
- Activity ID *(optional; enter the Construction Schedule Activity ID)*
• Date (enter the date by which a decision must be made regarding the disposition of the Trend)

• Time Change (enter the estimated time impact of the Trend on the end date of the Construction Schedule; critical path)

• Change Management Number (automatically entered when a Change Management is initiated from within the Trend)

Line Items

Click Add Lump Sum or Add Unit Price to add the appropriate type of Line Item. These line items are not associated with the Contract, and must be added individually.

Lump Sum

• Type (automatically entered by selection of type of line item being added)

• Line Item No. (automatically increments; do not change)

• Description (identify the line item in the Schedule of Bid Prices, if appropriate; enter a description of item, scope of work, etc.)

• Line Item Total (enter total value of the line item)

• Activity ID (optional; enter the Construction Contract Activity ID)

• Costing (if Cost Codes have been set up for the Project, select the appropriate cost code)

• Issues (link to an existing Issue, if appropriate; generally, the Trend should be associated with the Issue created when the Trend is first identified)

• Attachments (do not use)

Unit Price

• Type (automatically entered by selection of type of line item being added)

• Line Item No. (automatically increments; do not change)

• Description (identify the line item in the Schedule of Bid Prices, if appropriate; enter a description of item, scope of work, etc.)

• Quantity (enter the number of units)

• Units of Measure (enter the unit: LF, EA, etc)

• Unit Price (enter the cost per unit)

• Line Item Total (calculates as multiplication of Quantity and Unit Price)

• Activity ID (optional; enter the Construction Contract Activity ID)

• Costing (if Cost Codes have been set up for the Project, select the appropriate cost code)
• Issues (link to an existing Issue, if appropriate; generally, the Trend should be associated with the Issue created when the Trend is first identified)

• Attachments (do not use)

Custom Fields

• File Code (00700.19 - Trends)

• Date Approved/Rejected (enter the date the Trend is rejected/closed or the date the Trend initiates a Change Management)

Issues (attach to the existing Issue created when the Trend was first identified)

Attachments (attach all documentation associated with the analysis and tracking of the Trend; hard copy documents should be filed with the Trend)

**Change Log Fields**

Actual Process tracking date update fields made in the process of maintaining the Change data that are applicable to the Change Log are noted with a parenthetical note: “(Change Log)”. Some date input is required to be entered in custom fields, as noted in the “Change Log Fields” section, below. An asterisk (*) by an entry date in the Log indicates when the Change impacts will be updated and the impact status code entered. These dates are summarized in the table on the following page.
### Change Log Fields

<table>
<thead>
<tr>
<th>Date Field</th>
<th>Module</th>
<th>Pertains to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date PCO or COR received by CM Team</td>
<td>Doc. Date</td>
<td>Change Mgt</td>
</tr>
<tr>
<td>FCA/Project CM approves or rejects Change Management</td>
<td>FCA App/Rej Date</td>
<td>Change Mgt</td>
</tr>
<tr>
<td>Project CM approves or rejects</td>
<td>Ack Date 2</td>
<td>Proposals</td>
</tr>
<tr>
<td>PCO sent to RPM</td>
<td>Doc Date</td>
<td>Proposals</td>
</tr>
<tr>
<td>RPM approves or rejects</td>
<td>Ack Date 1</td>
<td>Proposals</td>
</tr>
<tr>
<td>RFQ sent to Contractor</td>
<td>Custom Field PCO Issued</td>
<td>Proposals</td>
</tr>
<tr>
<td>Quote required</td>
<td>Required Date</td>
<td>Proposals</td>
</tr>
<tr>
<td>Quote received</td>
<td>Acknowledged Date</td>
<td>Proposals</td>
</tr>
<tr>
<td>FCA approves or rejects</td>
<td>FCA App/Rej Date</td>
<td>Proposals</td>
</tr>
<tr>
<td>Project CM approves or rejects Quote</td>
<td>Reviewed Date 2</td>
<td>Proposals</td>
</tr>
<tr>
<td>RPM approves or rejects Quote</td>
<td>Reviewed Date 1</td>
<td>Proposals</td>
</tr>
<tr>
<td>Project CM App/Rej Negotiation</td>
<td>Reviewed Date 1</td>
<td>Proposals</td>
</tr>
<tr>
<td>Negotiations Complete</td>
<td>Acknowledged Date</td>
<td>Proposals</td>
</tr>
<tr>
<td>CO to Contractor</td>
<td>Doc. Date</td>
<td>Change Order</td>
</tr>
<tr>
<td>RCM approves</td>
<td>Reviewed Date 3</td>
<td>Change Order</td>
</tr>
<tr>
<td>RPM approves</td>
<td>Reviewed Date 2</td>
<td>Change Order</td>
</tr>
<tr>
<td>WSIP Approves</td>
<td>Reviewed Date 1</td>
<td>Change Order</td>
</tr>
<tr>
<td>To Controller</td>
<td>Custom Field To Controller</td>
<td>Change Order</td>
</tr>
<tr>
<td>Certified</td>
<td>Custom Field Certified</td>
<td>Change Order</td>
</tr>
<tr>
<td>Closed</td>
<td>Acknowledged Date</td>
<td>Change Order</td>
</tr>
</tbody>
</table>

### Change Management Module

Upon receipt of either a PCO or COR, the FCA immediately initiates a Change Management record to encompass all processing documentation. The status of the Change Management reflects the phase of the processing: Potential, Pending, Approved or Rejected. All change documents, PCO, COR, Negotiations and Change Order will initiated from within the Change Management module to allow and promote continuity of data and association of change documents.
Field Contracts Administrator

Summary fields

- Number/Index No (automatically increments)
- *Dated (date of receipt of change document or initiation of change process; Change Log for PCO and for COR)
- Subject (Title of Change)

Status fields

- Ball in Court (Do not use; all actions forwarded using Proposal/Change Order modules)
- Priority (Do not use; all actions forwarded using Proposal/Change Order modules)
- *Status (Rejected if not approved by FCA or if rejected at any point of the process by the Project CM, City RCM, City RPM or WSIP Management; Potential after FCA approval; Pending after Negotiations completed; Approved after City Controller certification)

Budgeted Section (Do not use; all contract fiscal information is in the Committed category)

Committed Section (Add all change documents from this section)

Remarks - (Description, background and justification of the change)

Details

- Reason for Change (Category of Change)
- Scope (select “out of scope” for a PCO/COR or “in scope” for a Field Order)
- Referenced Document (select one, optional)

Custom Fields

- Change Type (PCO, COR or Claim)
- Project File Code
- *FCA Approve/Reject Date
- Impacts Fields
- CEQA Impacts (description of any variances, including recommendation of the RECM, or “none”)
- Level of Service Impacts (description of any impacts, including recommendation of WSIP System Engineer, or “none”)
- Operational Impacts (description of any impacts, including recommendation of the Regional Client/Operations Representative, or “none”)

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• System Shutdown Impacts (description of any related impacts, including recommendation of the WSIP Shutdown Coordinator, or “none”)

Issues

At least one Issue must be created for each Change Management; link all documents associated with the Change Management to this Issue

Attachments

All attachments of Project change documents will be made to the appropriate change document, e.g., PCO, COR, negotiation or Change Order. Attachments to the Change Management are optional.

Proposals Module

After approving the proposed change document (PCO or COR) that initiates the Change Management, the FCA adds it by clicking the Add button at the Committed section of the Change Management document. By selecting Estimated (PCO), Quoted (COR) or Negotiated (accepted Quotation in response to a RFQ or Negotiation round), the FCA initiates the appropriate document in the Proposals Module. All documents are created editing the phase within the same “Committed” line. Data elements entered at the Change Management module will be replicated in subsequent documents. The Field Contracts Administrator is responsible to enter all information, to ensure that change documents and supporting correspondence and other Project documentation are attached to the appropriate change document record, and to ensure that all Project documentation associated with the change is linked to the central Issue for the change. The Administrative Document Control Specialist assists the FCA in performing the document control. The Project CM, City RCM and City RPM are responsible to review and approve or reject the change documents and to enter the date of their review.

Field Contracts Administrator

Proposed Change Order, Change Order Request, Quote and Negotiation

• Verify Type (Proposed Change Order, Change Order Request or Negotiation, based on selection in preceding dialog box)

• Contract (Select construction contract)

• To/From (Key Contacts of Contract parties defaulted by Contract entry; click Exchange To and From Entries to reflect PCO, COR, Quote or Negotiation round)

• Number/Index No (auto-incremented by document type; do not change)

• Subject (Defaults to Change Management subject for the initial change document (PCO or COR) and to the subject of the preceding change document for each subsequent change document (Quote or Negotiation); modify if necessary)

• *Date (PCO: delete date until the document is forwarded to RPM for review; COR: date of Contractor’s COR document; Quote: date of Contractor’s Quote; Negotiation; date of completion of the current negotiation round)
Status

- Ball in Court (Project CM only after analysis is complete and impact data is entered)
- *Status ("New Item" upon initiation, "In Review" upon FCA approval, "Approved" upon RPM approval.
- Acknowledged by
- Contact #2 (PCO, COR and Quote: Project CM; Negotiation rounds: null)
- *Reviewed Date #2 (Verify: Date Project CM reviews and approves or rejects)
- Contact #1 (PCO, COR and Quote: City RPM; Negotiation rounds: Project CM)
- *Reviewed Date #2 (Verify: Date Project CM reviews and approves or rejects)

Line Items (See Cost/Time Impact, below)

Details

- Description (Detailed description of the proposed change, initial change document (PCO or COR) inherits from the Change Management Remarks and subsequent documents (Quote or negotiation round) inherit from preceding change document; for PCOs, modify as appropriate for the PCO description text to be issued to the Contractor to request a Quote; for CORs, transcribe Contractor’s description of Work; for negotiations, document events or circumstances that impact the progress and conditions of the change.)
- Specification Section
- Required Date (Date response is due for current review/approval; PCO: Contractor must respond with a Quote within fourteen calendar days of issue; COR: Project CM Team must respond within fourteen calendar days of submittal; negotiations: optional for tracking purposes – recommended seven calendar days.)
- Acknowledged Date (PCO: date Contractor submits Quote; COR: date Project CM responds either with a formal letter to reject the COR or with the first round of negotiations; negotiations: date of response to negotiation round from either project CM Team or Contractor.)

Schedule (See Cost/Time Impact, below)

Custom Fields

- File Code
- *FCA Approve/Reject Date (use only for Accepting or Rejecting the Quotation)
- *PCO Sent to Contractor
- *Quotation Received from Contractor
Attachments (Attach PCO signed by Project CM issued to the Contractor or COR documentation submitted by the Contractor, according to the originating change document.)

**Project CM**

Status
- PCO Document Date (*Date transmitted to RPM*)
- Ball in Court (*City RPM upon approval/FCA upon rejection*)
- Priority (*Normal or High*)
- Status (*In Review or Rejected*)

Acknowledged by
- Company/Contact #2 (verify Project CM)
- *Reviewed Date #2 (*Enter date of completed review and forward to City RPM*)

**Regional Project Manager**

Status
- Ball in Court (*FCA upon completion of review*)
- Priority (*Normal or High*)
- Status (*Approved or Rejected*)

Acknowledged by
- Company/Contact #1 (verify City RPM)
- *Reviewed Date #1 (*Enter date of completed review and forward to FCA*)

**Change Order Module**

All information from the Negotiated phase will be automatically entered into the Change Order document, and the FCA should verify all data fields.

**Field Contracts Administrator**

Change Order
- To/From (*Key Contacts of Contract parties defaulted by Contract entry; click Exchange To and From Entries to reflect PCO or COR*)
- Number/Index No (*auto-incremented by document type*)
- Subject (*inherited from last negotiation round subject; modify as appropriate to define the scope of work for the Change Order*)
- *Date (*delete date until the document is transmitted to the Contractor for signature*)
Status

- Ball in Court (*Project CM*)
- Status (*New Item*)
- Reviewed by (approval contacts and their respective dates of approval are in descending hierarchical order, in accordance with the current WSIP Approval Authority Matrix. The highest level entered in the Reviewed by section is the WSIP Deputy Director for Construction. The City RPM and City RCM will be entered in all cases. The first and second contacts will always be entered. In those cases where the Deputy Director's approval is not needed, the third Reviewed by contact and date will be left empty.)
- Contact #3 (*third WSIP approval authority*)
- *Reviewed Date #3 (*date of approval*)
- Contact #2 (*second WSIP approval authority*)
- *Reviewed Date #2 (*date of approval*)
- Contact #1 (*highest WSIP approval authority*)
- *Reviewed Date #1 (*date of approval*)

Line Items (See Cost/Time Impact, below)

Details

- Description (*inherited from last negotiation round; modify as appropriate to define the scope of work for the Change Order*)
- Spec Section (*inherited from last negotiation round; verify*)
- *Required Date (*date Change Order certification is required to comply with the Project construction schedule*)
- *Acknowledged Date (*date certified Change Order is closed*)
- Reason for Change Order (*inherited from last negotiation round; verify*)

Schedule (See Cost/Time Impact, below)

Custom Fields

- File Code
- Contract Modification No (*enter Contract Modification No. if bundled with other Change Orders*)
- Drawing Reference (*Drawings impacted by Change Order*)
- Location (*Project location impacted by Change Order*)
- OSHA Reference
- Proceed (*Yes if Contractor directed to proceed pending certification*)
Project CM

Status

- Ball in Court (FCA if rejected, next level of review if approved)
- Priority (Normal or High)
- Status (In Review or Rejected)

Regional/Program Reviewers

Status

- Ball in Court (FCA if rejected, next level of review if approved)
- Priority (Normal or High)
- Status (In Review or Rejected)
- *Reviewed by fields (verify reviewer)
- *Reviewed Date fields (Enter date of completed review)

On completion of review and signature by all WSIP reviewers, the City RPM is responsible to submit the Change Order or Contract Modification to the Contracts Administration Bureau for processing, and for notifying the FCA of the action. The FCA should verify that the Ball in Court is changed to the FCA for the duration of the SFPUC and City processing and certification process.

Cost/Time Impact

Each change document contains the definition of the cost and time impact of the change. The FCA enters these impacts, which are defined by the changes to the overall duration of the Project schedule and by the changes or additions to the line items of the Schedule of Bid Prices based on the analysis of the change. The time impact of changes is documented in the Schedule section of each change document. The cost impact of changes is documented in the Line Items section of each change document.

Field Contracts Administrator

Schedule fields

Enter Time Change (Days); inherited from previous change document, verify; positive for increase and negative for decrease of duration of overall Project. This analysis depends on critical path analysis by the Project Cost/Schedule Specialist of the impact of the potential change on the Project construction schedule.
Line Items fields

Add line items to the change document by clicking “Copy from Contract”, “Add Unit Price” or “Add Lump Sum”. Copy from Contract permits the modification of existing elements of the Work incrementally. The data entry is defined by whether the original line item is a unit price or a lump sum line item. Adding line items permits the creation of new unit price or lump sum line items in the Schedule of Bid Prices of the contract.

- Type *(defaults to the appropriate Line Item type by selection of an existing Line Item, or by clicking Add Lump Sum or Add Unit Price)*
- Line Item No. *(Auto-increments. Do not change)*
- Description *(If Copy from Contract was used to add the Line Item, the description is inherited from the Contract. Otherwise, enter a brief description of the new Line Item)*
- Quantity *(Unit Price Items – Enter the numerical quantity of units)*
- Units of Measure *(Unit Price Items – Enter the unit of measure, e.g., lf, cy, ea, etc.)*
- Unit Price *(Unit Price Items – Enter the cost per unit)*
- Net Amount *(Unit Price Items – Automatically calculates)*
- Lump Amount *(Lump Sum Items – Enter the Lump Sum amount)*
- Tax Rate *(Do not use)*
- Sales Tax *(Do not use)*
- Line Item Total *(Automatically calculates)*
- Material Name *(Do not use)*
- Material Title *(Do not use)*
- Activity ID *(Do not use)*
- Costing *(Do not use)*

Field Order Business Process Steps

1. Project CM determines if a Field Order is required.
2. FCA prepares the Field Order, enters a new entry in the Field Order Log and forwards to the Administrative/Document Control Specialist.
3. Administrative/Document Control Specialist adds the Project file code, files a hard copy in the Project files and forwards it to the Project CM.
4. The Project CM reviews the Field Order and transmits it to the Contractor.
5. The FCA updates the Field Order Log.
Data Requirements

Field Contracts Administrator
Change Management Description Fields
- Date initiated
- Field Order Description
Remarks – Description of the Field Order requirement, background and impact
Details Fields
- Reason for Change
- Scope – *(select “in scope”)*
- Referenced Document – *(previously logged RFI)*

Issues and Attachments Section
- Link Issues (if applicable)
- Attach electronic files (if applicable)

Administration/Document Control Specialist
- Project file code field

Issues Tracking
The Issues module in CMIS is a means for the Project CM to identify and collect information related to any issue that arises on a project that has the potential to develop into a change or require resolution by the management Team. Any member of the Project CM Team may identify and nominate to the Project CM an issue to be added to CMIS. The Project CM determines whether the issue should be added to CMIS and enters the issue into the CMIS Issues module. Once the issue is added, all members of the Project CM Team must be diligent to identify project documents that are pertinent to the issue and to assemble information as the issue evolves to resolution. A project team member can electronically link any related documents to an issue entered in the CMIS Issues module that contribute to its documentation and eventual solution. Additional documents and correspondence can be linked to this issue as further information to develop a complete history over time, eliminating the need to recreate the history at a later date.

If the issue results in a Change Order Request (COR) or Proposed Change Order (PCO), the early documentation trail will already be established, providing an accurate starting point for reviewing the merits of the change and expediting the approval process. The Project CM is responsible to add an issue to the CMIS Issues module for every potential change. An issue may relate to any aspect of the Project and emerge
from any Project document or activity; it must therefore be carefully identified for tracking. The CMIS provides a link from most modules to the Issues module, or the Issues module may be entered from the Project Information module directory. In the Issues module, the link to the Project will be automatic. The Project CM will identify:

- A description of the issue (an issue number is automatically assigned)
- Date opened (assigned by the CMIS)
- Links to other documents in the CMIS (must be done in the other documents maintenance forms)
- Name of the initiator
- Resolution and closure date when and if the issue is resolved.
- Attachments – attach any related documents

The Project CM may notify others of the issue and attached documents by using the notifying emails tool in the CMIS. This notification is optional. Similarly, if the Project CM wants to identify someone to be responsible for pursuing this issue to closure, rather than leaving it only as a binder item to collect information, he/she can assign a “ball-in-court” action item in the CMIS identifying the person, action desired and date to be accomplished. Reports can be generated by the Project CM that summarize the issues and indicate their status and “ball in court” assignments.

References

**Technical Specifications**

- 00410 Schedule of Bid Prices
- 00520 Agreement

**Division 1 General Requirements, Section 01010 Summary of Work**

**CM Procedures**

- No. 036 Applications for Payment

**Attachments**

- 003a – 1 Flow Chart – Forecasted Changes (Trends)
- 003a – 2 Flow Chart – Potential Change Orders (Proposed Change Order & Change Order Request Processing)
- 003a – 3 WSIP Construction Project Change Order Authority Matrix
- 003a – 4 Proposed Change Order Request Form
- 003a – 5 Proposed Change Order Internal Analysis Report
- 003a – 6 Proposed Change Order Form
<table>
<thead>
<tr>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>003a-7</td>
<td>Change Order Request Form</td>
</tr>
<tr>
<td>003a-8</td>
<td>Change Order Form</td>
</tr>
<tr>
<td>003a-9</td>
<td>Change Request Summary</td>
</tr>
<tr>
<td>003a-10</td>
<td>Revision Control Log</td>
</tr>
</tbody>
</table>
Project CM Identifies a Forecasted Change to the Contract Cost and/or Schedule

Project CM Initiates an Issue and Directs the FCA to initiate a Trend

FCA Identifies a Trend Record

FCA Maintains Cost /Schedule Impacts and Updates Probability Qualifier Field

Project CM Team Contributes to Analysis of Trend During its Maturation. Documents Generated are Attached to the Issue

Project CM Determines Disposition of Trend

Close Trend?

No

Initiate Change management?

No

Yes

FCA Initiates Change Management

FCA Closes Trend
Flow Chart – Potential Change Orders
(Proposed Change Order and Change Order Request Processing)
<table>
<thead>
<tr>
<th>Approval Level</th>
<th>Approval Authority</th>
<th>Authority Limit$</th>
<th>Maximum Authority Limit for Ranges of Project Construction Costs</th>
<th>Project Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regional Project Manager (RPM)$</td>
<td>2% (per CO request)</td>
<td>$&lt;10M</td>
<td>$10M - &lt;$25M</td>
</tr>
<tr>
<td>2</td>
<td>WSIP Deputy Director – Construction</td>
<td>4% (per CO request)</td>
<td>$200K</td>
<td>$350K</td>
</tr>
<tr>
<td>3</td>
<td>WSIP Director$</td>
<td>6% (per CO request)</td>
<td>$400K</td>
<td>$700K</td>
</tr>
<tr>
<td>4</td>
<td>AGM – Infrastructure$</td>
<td>&gt;6% (per CO request)</td>
<td>$600K</td>
<td>$1.0M</td>
</tr>
<tr>
<td>5</td>
<td>SFPUC Commission$</td>
<td>&gt;10% (cumulative)</td>
<td>$&gt;1M</td>
<td>$1M - $2.5M</td>
</tr>
</tbody>
</table>

**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 Contract Administration Bureau (CAB).

2. The Authority Limit for Approval levels 1, 2, 3 and 4 is applicable to each individual Change Order Request, whereas the Authority Limit for Approval Level 5 is applicable to the total value of all Change Order Requests. The Authority Limit percentages apply up to the specific limits shown in the table under "Maximum Authority Limit Changes of Project Construction Costs."

3. The RPM may delegate part or all of his/her Approving Authority to the City Regional Construction Manager (RCM) or Project Construction Manager (PCM). Who will be responsible for negotiating changes with the Contractor. However, the RPM will be held responsible/accountable for the decisions made by the City RCM or PCM in regards to the approval of Change Order Requests.

4. A report summarizing the Change Orders to be approved by the WSIP Director will be submitted to the Assistant General Manager (AGM) – Infrastructure. The report will be submitted at least one (1) week prior to approval of these changes to give the AGM – Infrastructure an opportunity to provide direction.

5. A report summarizing the Change Orders to be approved by the AGM – Infrastructure will be submitted to the Deputy General Manager (DGM) and General Manager (GM). The report will be submitted at least two (2) weeks prior to approval of these changes to give the DGM and GM an opportunity to provide direction.

6. Any change order request requiring funding beyond the designated 10% construction contract contingency will require Commission approval.

7. In situations of imminent danger, where immediate action may be required to address risk to life or property. The Project CM, with the City Regional Construction Manager (City RCM) approval, may authorize a change order independent of the cost of work to be performed.
1. THIS PROPOSED CHANGE ORDER CONSISTS OF THE FOLLOWING ELEMENTS (WORK SCOPE):

2. THIS WORK SHOULD BE DONE BY CHANGE ORDER BECAUSE (Define why work was not foreseen during the preparation of the contract documents):

3. WHY IS THIS CHANGE NECESSARY FOR COMPLETION OF THE WORK AS ORIGINALLY CONTRACTED:

4. ARE THERE ANY ALTERNATIVES TO THE ISSUNCE OF THE CHANGE?

5. WHAT EFFECT WILL THE CHANGE HAVE ON THE SCHEDULE AND OPERATIONS?

6. IS THIS THE MOST ECONOMICAL ALTERNATIVE? (If not, justify the use of the more costly alternatives.)

7. PROVIDE A BREAKDOWN OF THE PRELIMINARY ESTIMATE.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>Material</th>
<th>Equipment</th>
<th>Labor</th>
<th>Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. ADJUSTMENTS IN CONTRACT WILL BE DONE BY (Lump Sum or FACO)

9. EXTENSION OF TIME NEEDED WILL BE (Calendar Days):

10. THIS PROPOSED CHANGE ORDER AND COST HAS BEEN DISCUSSED WITH

    (Project Manager) OF Date

    AND TENATIVE APPROVAL HAS BEEN GRANTED.

    (Signature of Originator)

    (Project Manager) PHONE NUMBER: ____________________

    WSIP Construction Management Business Process No. 003a, Rev. 1, Page 37 of 43
**Attachment 003a - 5**  
**Proposed Change Order Internal Analysis Report**

**SAN FRANCISCO PUBLIC UTILITIES COMMISSION**  
**WATER SYSTEM IMPROVEMENT PROGRAM**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Stock#</th>
<th>Qty</th>
<th>Units</th>
<th>Unit Price</th>
<th>Tax Rate</th>
<th>Tax Amount</th>
<th>Net Amount</th>
</tr>
</thead>
</table>

**Total:**  
**Grand Total:**

**DESCRIPTION OF PROPOSAL**  
Contractor to furnish the following equipment:

See attached for detail

**APPROVAL:**

By: ______________________________

Date: ______________________________

---

WSIP Construction Management Business Process No. 003a, Rev. 1, Page 38 of 43
CONTRACT NAME: PCO NO:
TO: REQUIRED DATE:
FROM: CONTRACT NO:
SUBJECT: QUOTATION DATE:
SPEC SECTION: REASON FOR RFQ:

DESCRIPTION OF PROPOSAL
Contractor to furnish the following equipment:

See attached for detail

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Stock #</th>
<th>Qty</th>
<th>Units</th>
</tr>
</thead>
</table>

APPROVAL:

By: ______________________________

Date: ____________________________
Change Order Request Form

SAN FRANCISCO PUBLIC UTILITIES COMMISSION
WATER SYSTEM IMPROVEMENT PROGRAM

CONTRACT NAME: 
CONTRACT NO: 
TO: 
FROM: 
SUBJECT: 

DESCRIPTION OF REQUEST
Substitute contractor provided venture meter with BIF venture meter.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Stock #</th>
<th>Quantity</th>
<th>Units</th>
<th>Unit Price</th>
<th>Tax Rate</th>
<th>Tax Amount</th>
<th>Net Amount</th>
</tr>
</thead>
</table>

APPROVAL:

By: _____________________________  By: _______________________
Date: ____________________________  Date: ______________________
## Change Order Form

**SAN FRANCISCO PUBLIC UTILITIES COMMISSION**

**WATER SYSTEM IMPROVEMENT PROGRAM**

### Contract Details

- **Contract Name:** [Blank]
- **Contract No.:** [Blank]
- **Date:** [Blank]
- **To:** [Blank]
- **From:** [Blank]
- **Reference:** [Blank]
- **Specification:** [Blank]

### Unit Costs

- **Unit Cost:** [Blank]
- **Unit Tax:** [Blank]

### Total

**Total:**

The Original Contract Amount: [Blank]

Original Contract Duration: [Blank]

Previous Total Change Order Amount: [Blank]

Previous Total Time Change (Days): [Blank]

Current Contract Amount: [Blank]

Current Contract Duration: [Blank]

This Change Order Amount: [Blank]

Time Change this Change Order (Days): [Blank]

Revised Contract Amount: [Blank]

Revised Contract Duration (Days): [Blank]

Percent Total Change to Date: [Blank]

Percent Total Time Change to Date: [Blank]

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.

**Recommended By:** [Blank]  **Date:** [Blank]

**Accepted By:** [Blank]  **Date:** [Blank]

**Reviewed/Approved By:** [Blank]  **Date:** [Blank]

**Approved By:** [Blank]  **Date:** [Blank]
Attachment 003a - 9
Change Request Summary

SAN FRANCISCO PUBLIC UTILITIES COMMISSION
WATER SYSTEM IMPROVEMENT PROGRAM

| Description: | |
| Change Impact: | |

<table>
<thead>
<tr>
<th>Cost Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Estimated</strong></td>
</tr>
<tr>
<td>Date</td>
</tr>
</tbody>
</table>

| Total Contract Modification: | |
| Change Narrative: | |

| Proposed Change Order: | |
| Negotiated: | |
| Final: | |

| Impacts (Analysis of operational impacts of the Change): | |
| Operations: | |
| Level of Service: | |
| Shutdowns: | |
| CEQA: | |

| Related Documents: | |

WSIP Construction Management Business Process No. 003a, Rev. 1, Page 42 of 43
# Attachment 003a - 10
## Revision Control Log

<table>
<thead>
<tr>
<th>Revision No.</th>
<th>Revision Date</th>
<th>What Changed?</th>
</tr>
</thead>
</table>
| Rev 1        | September 1, 2009 | • Revised Title of 003a Process to “Contract and Change Management” (to incorporate the processes for initiation of Contract records in CMIS).  
• Revised process to incorporate Trends (forecasted costs), Contingency Costs and the use of Issues to document Changes from start to finish.  
• Change the word “Exhibit” to “Attachment”  
• Field experience is clarified.  
• Added “Reference” section  
• Added Attachment 003a - 1; Flow Chart Forecasted Changes (Trends)  
• Added/Revised/Changed the Order of Attachments |
| Rev 0        | February 9, 2009  |                                                                            |