

## Transmittal

CS Transmittal No. 2238

To: Jeff Davis  
FTA  
201 Mission Street, Suite 1650  
San Francisco, CA 94105

From: John Funghi  
Project No./Contract No.: M544.1, CS-149  
Task No./Title: 1-6.01 Interagency Coordination  
Project Phase:

Date: May 21, 2013  
Subject: CMod Task Force Final Report

Reference:

<b>Sent via:</b>	<input type="checkbox"/> mail	<input type="checkbox"/> overnight	<input type="checkbox"/> messenger	<input type="checkbox"/> hand-delivered
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Item No.	Copies	Description	Rev. No.	Date
1	1	CMod Task Force Final Report		May 1 2013

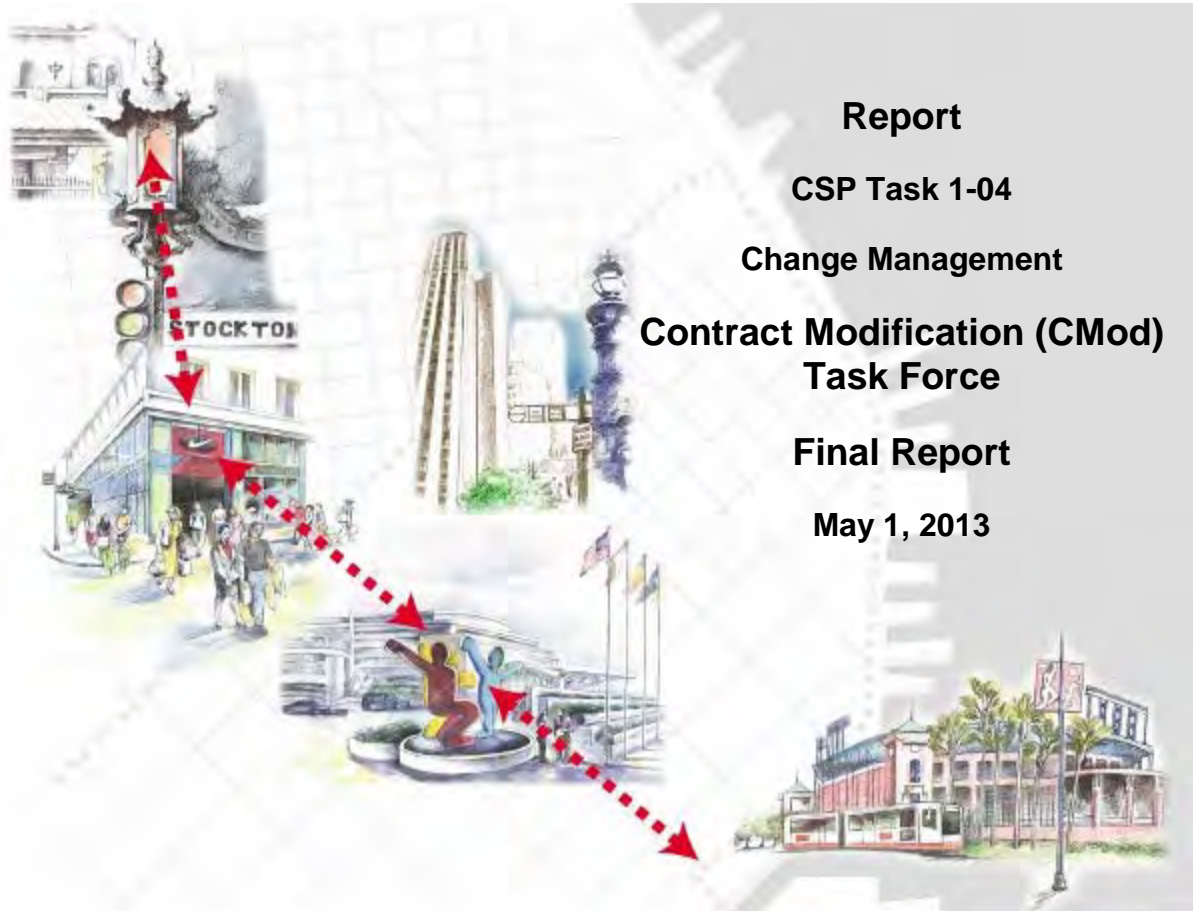
*If enclosures are not as noted, kindly notify us at once.*

Remarks: Attached please find CMod Task Force Final Report.

  
John Funghi  
Program Director

JF:smk

cc: David Kuehn, STV (w/attachments) [david.kuehn@stvinc.com](mailto:david.kuehn@stvinc.com)  
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CS File No. M544.1.5.4020.a



## Report

CSP Task 1-04

Change Management

**Contract Modification (CMod)  
Task Force**

**Final Report**

**May 1, 2013**

*Prepared for:*

**SFMTA**

CITY AND COUNTY OF SAN FRANCISCO  
MUNICIPAL TRANSPORTATION AGENCY  
821 Howard Street  
San Francisco, CA 94103

*Prepared by:*

**C S P** — Central Subway Partnership  
creativity stewardship performance



**Report**  
**Task 1.04**  
**Change Management**  
**CMod Task Force Final Report**  
**May 1, 2013**

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Prepared by:  \_\_\_\_\_ Date: 20 May 13  
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Program Manager Project Services

Approved by:  \_\_\_\_\_ Date: 20 May 13  
Ross Edwards  
Program Manager Project Development/Delivery

Accepted by:  \_\_\_\_\_ Date: 5-21-13  
John Funghi  
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## 1. PURPOSE

The Central Subway Program (CSP) established the Contract Modification (CMod) Task Force to investigate and report on the Contract Modification (CMod) process. Specifically, the CMod Task Force purpose is to examine the current procedures and practices related to processing changes during construction and look for areas of improvement, especially related to the time to develop and process a contract modification (CMod). A standing meeting was established for 10 weeks, with the members of the task force noted below; to identify areas of possible improvement, and develop recommendations for review by Sr. Management of the Program.

## 2. TASK FORCE MEMBERS

Member	Role on Project	Member	Role on Project
Joon Park	Contract Administrator	C J Dombrowski	Estimator
Mike Acosta	Resident Engineer	Ken Barnhart	Estimator
Mark Benson	Construction Manager	Sarah Wilson	Resident Engineer
Eric Stassevitch (Chair)	Program Manager	Ben Volberding	Office Engineer

## 3. DEFINITIONS

**CMod** – Change modification, or change order to the contract consistent with SFMTA general provisions and Any decision, activity, event, or lack thereof, which has the potential to jeopardize the success of the Project. A successful CSP will have met all of the following, as a minimum: 1) be deemed to have realized the opportunities (goals and objectives) identified for the Project; 2) completed within cost and schedule goals; 3) achieved the quality, safety and functional objectives set by Project Owner and the stakeholders; and, 4) engendered no adverse political or stakeholder reaction throughout its design, construction and startup.

**COR** – Change Order Request submitted by the Contractor in conformance with the contract General Provisions, Article 6.

**PCC** – Potential Contract Change developed by the Engineer and sent to Contractor with a request for a proposal.

**Merit Letter** – Letter provided to the Contractor acknowledging merit or entitlement for a COR.

**Scoping Meeting** – Meeting held between the Contractor and the Engineer after merit has been established for a COR to clearly identify the scope of work to be estimated for the change.

**Contractor's Proposal** – Detailed cost proposal, developed in accordance with the contract General Provisions, Article 6, submitted by the Contractor in support of the COR.

**COR Response** – See Merit Letter.

**Independent Engineer's Estimate** – Estimate of the change work identified in the scoping meeting or COR, prepared independent of the Contractor's proposal and in accordance with the cost of the work in Article 6 of the General Provisions.

**Cost Comparison Sheet** – Comparison of the Contractor's cost proposal and the Independent Engineer's Estimate in a side by side comparison of the elements of the work in order to illustrate differences and develop a negotiation position around those differences.

**Record of Negotiations** – Document signed by both parties, representing the negotiations conducted to settle on the cost and time impacts of a change, recorded in sufficient detail to clearly delineate the resolution of differences, and what are the final agreed to costs and time impacts.

**CMod package** – Collection of all of the required documents supporting the change management process, compiled in one binder/package for circulation of approval signature. .

**CMB** – Configuration Management Board responsible for approval of all changes .

**Executed Cmod** – Contract Modification signed and agreed to by both parties.

## 4. GENERAL

### 4.1 BACKGROUND

The Central Subway Program awarded and began work on two of seven construction packages in January of 2010, and 2011 respectively. The Program had in place Construction Management Procedures, several addressing change management, to administer the contract in accordance with SFMTA policies and procedures. In the spring of 2012, several reviews were conducted on the process of change management. The reviews were both informal and formal culminating in several workshops held with the FTA that specifically focused on costs. Borne out of these workshops was the CMod Task Force, organized specifically to address the change management process and to investigate why the process was taking a considerable amount of time to complete.

### 4.2 MEETINGS

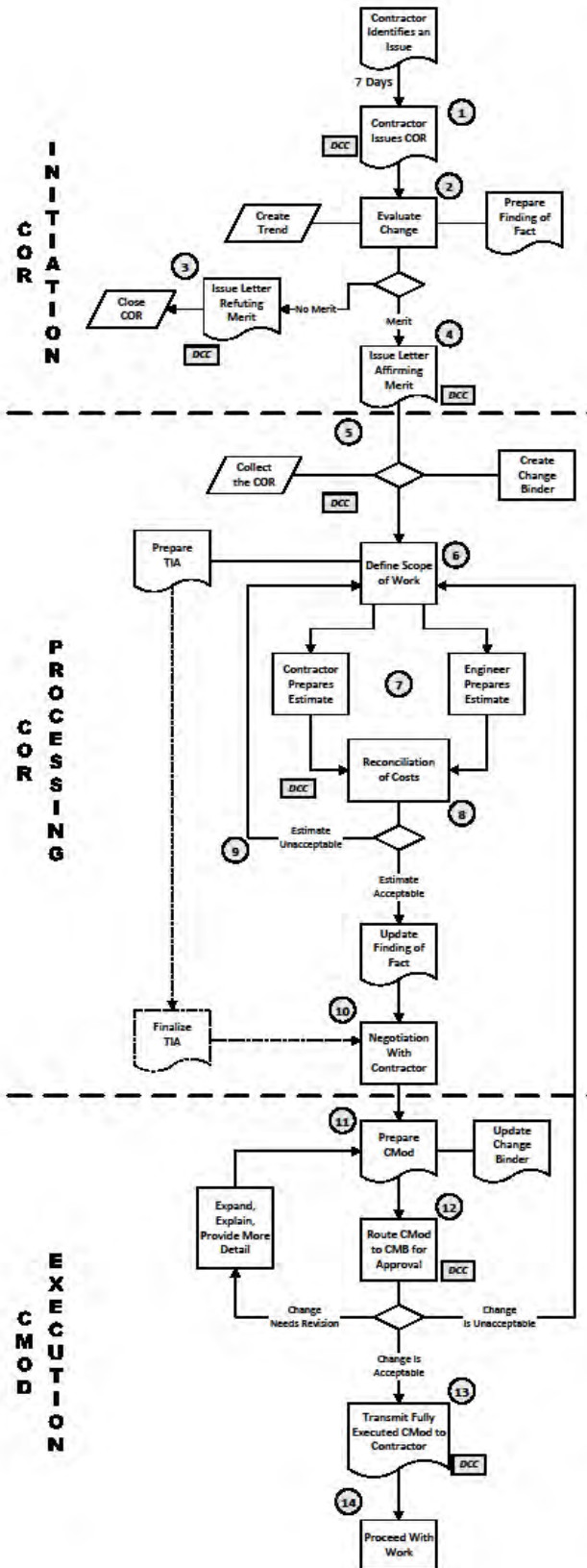
At the initial meeting of the task force, a time frame of 10 meetings was established to accomplish the task of examining the change management process, beginning with the initiation of a change through the execution of change modification to the contract. The initial meeting included a brainstorming session on the graphical depiction of the change process. The brainstorming session focused on identifying where in the process a problem or issue was causing delays, stating what the root cause of the problem or issue was and identifying areas of improvement. The Task Force then grouped the various issues into five (5) areas of improvement, assigned members to champion one or more of the areas and allocated one or two meetings per area of improvement to focus the Task Force efforts. A standing weekly meeting was established, however, coordinating around task force members' schedules and other project priorities, the ten meetings took place over the period beginning at the end of August 2012 and concluding at the end of January 2013.

## 5. CHANGE MANAGEMENT PROCESS

The Change Management process is shown in the flowchart below and the elements of the process are explained following.

## CONTRACT CHANGE PROCESS

### CONTRACTOR INITIATED CHANGE



- 1) Contractor submits a Change Order Request (COR) that conforms to the requirements in Article 6 of the General Provisions describing the change, the reason for the change, a cost estimate, and any time impact associated with the change.  
**DCC: The incoming document is appropriately catalogued and electronically distributed with high priority.**
- 2) The COR is evaluated by the Resident Engineer, a Finding of Fact is drafted, and a "trend" is created for the COR within the trend log.
- 3) If no merit is determined, the Contractor is issued a letter of refute, and the COR is "closed" within the trend log.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 4) If merit is determined, the Contractor is issued a letter that contains an affirmation of merit.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 5) A request is made for a cost/time estimate and a scoping meeting. In addition, a change binder is created to contain all change-related documents, and the COR is "collected" within the CM13 database.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 6) Prior to cost estimating, the scope of work is defined, if necessary by a scoping meeting between the Resident Engineer and the Contractor. In addition, a Time Impact Analysis (TIA) is drafted the contractor if applicable.
- 7) Both the Contractor and the Resident Engineer develop independent cost estimates. Upon completion, the Contractor's estimate is submitted to the Engineer.  
**DCC: The incoming document is appropriately catalogued and electronically distributed.**
- 8) Differences in costs are identified and reconciled.
- 9) If upon review, the estimates are found to be unacceptable, the Resident Engineer may consider changing the scope of work, which may entail additional meeting(s) with the Contractor, and additional cost estimating.
- 10) If upon review, the estimates are found to be acceptable, then the change is negotiated by the Contractor and the Engineer at the next scheduled negotiation meeting. Prior to negotiation, the Finding of Fact is updated with the available new information. In addition, the TIA must be finalized, if necessary. A formal Record of Negotiation is written by the Resident Engineer.
- 11) Upon successful negotiation of a contract change, a Contract Modification (CMod) is prepared by the Resident Engineer. In addition, the change binder is updated to include all required documents, and a Board Memo is submitted for the monetary amount of the contract change. Initiation of a CMod includes the following:
  - 11a. Send the Contract Administrator an email request to create the CMod within the CM13 database.
  - 11b. Check / verify specific wording.
  - 11c. Print two (2) copies of the CMod document.
  - 11d. The Construction Manager signs both CMod documents.
- 12) The CMod is routed for approval / execution as follows:
  - 12a. Transmit both CMod documents to the Contractor with a standard letter.
  - 12b. Receive both CMod documents with the Contractor's signature.
  - 12c. Transmit both CMod documents to the Configuration Management Board (CMB), along with the completed change binder.
  - 12d. Receive one CMod document with the CMB member's signatures.  
(If the CMod needs revision or the CMB deems the change as unacceptable, additional steps may be necessary to accomplish the contract change.)  
**DCC: Incoming / outgoing documents are appropriately catalogued and electronically distributed.**
- 13) The fully executed CMod is transmitted to the contractor with a standard letter.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 14) Field work commences.

### 5.1 COR INITIATION

The Contractor submits a COR within seven days of the identification of a change, having first notified the Engineer within twenty four hours. The Engineer reviews the COR and develops a finding of fact and issues a letter of merit or no merit depending on the evaluation and justification for change.

### 5.2 COR PROCESSING

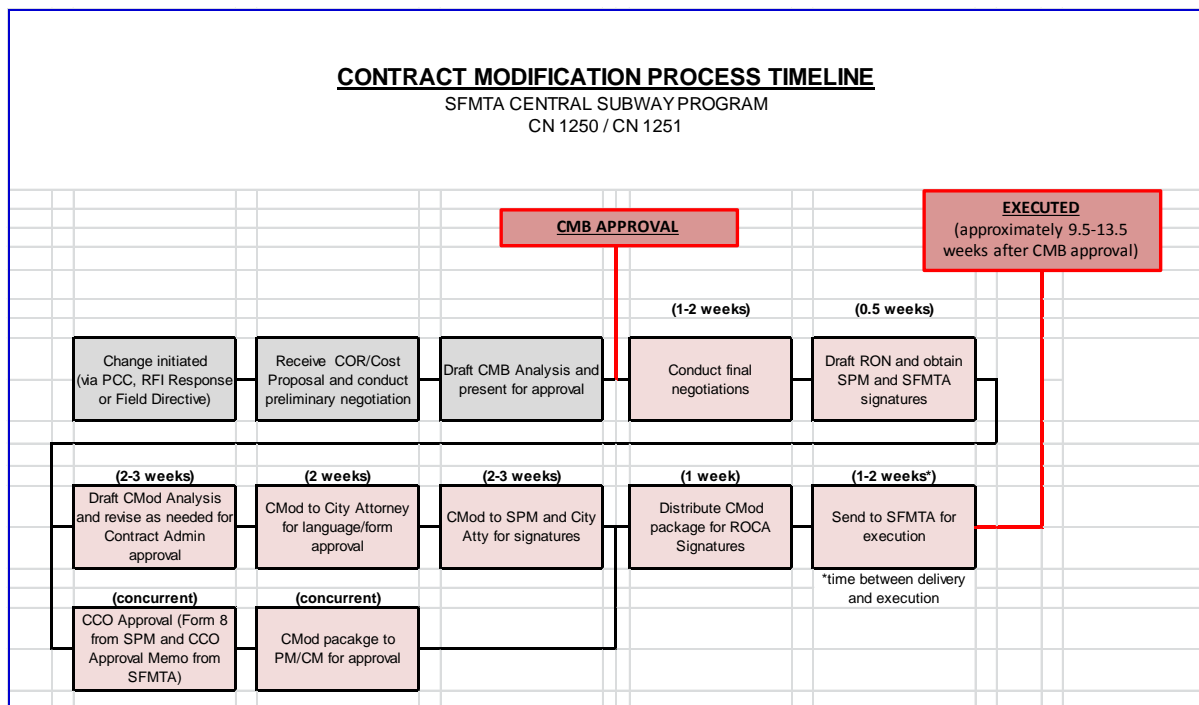
For CORs that have merit, a scope of the change is defined and the Contractor prepares an estimate in accordance with the contract general provisions, and the Engineer prepares an independent estimate. The Engineer then prepares a comparison of the Contractor’s cost and time proposal with the Engineer’s independent estimate and time analysis. The Engineer utilizes the comparison to develop a negotiation position. Negotiations are held with the Contractor, a record of negotiations is prepared and signed by both parties, and the Engineer prepares a Contract Modification package for approval.

### 5.3 CMOD EXECUTION

The CMOD package is a compilation of all the documents required to support the change process together with the actual contract modification document. The contract modification is prepared by the Engineer and signed by the Contractor, then placed in the package and routed for signatures by the appropriate authority level for the dollar and time value of the change. Once fully executed by SFMTA, one copy is provided to the Contractor for record purposes

## 6. IDENTIFYING THE ISSUES

The flowchart below provides the flow of change process based on the first two contracts..



The Task Force members reviewed the above process timeline, compared it with current experiences on Contract 1252 and the process outlined by the Program procedures and graphical depiction in Section 5 above.



Out of this the Task force identified five areas of improvement that if implemented would provide the best opportunity to improve the timeline for processing changes.

The five areas of improvement identified are:

1. Timely Submission of the COR
2. Developing Finding of the Fact
3. Conducting Scoping Meeting/Estimate Preparation
4. Prepare Reconciliation of Costs
5. Change Order Process – Contract Provisions and Program Procedures align properly

## 7. AREAS OF IMPROVEMENTS

The Task Force focused meetings resulted in the development of summary sheets containing the statement of the problem, identifying the root cause and developing recommendations for improvements that would ultimately be presented to the Configuration Management Board (CMB) for review and approval. The details of the meeting are contained in the meeting minutes together with any supporting documents utilized in the meetings, see Appendix B. The summary sheets for area of improvements can be found on Appendix C. Listed below are the actions taken by the Task Force.

### 7.1 AREA OF IMPROVEMENT # 1

#### Problem: Timely Submission of the COR

The task force reviewed the current initiation of a change, (being a differing site condition or clarification, i.e. response to RFI) with actual events occurring on contracts 1250, 1251, and 1252; identified several challenges that are contributing to prolonging the process; namely timely actions by both parties of providing written documentation for justification of the change. Also providing clarification of what is considered acceptable information to properly delineate the change. The task force agreed that the responsibility is the ultimately the Contractors'.

#### Root Cause:

The challenges of timely receipt of a COR from the contractor with complete information is part of a set of conflicting priorities of identifying the actual change, quantifying the change, developing the required documentation, while at the same time not impacting the progress of the work.

#### Recommendation for Improvements:

Program needs to develop measures to notify the contractor of the contractual obligations while at the same time preserving the rights of the Agency.

Reexamine how the RE organizations participated in the identification of a change and how it must keep in mind at all times the contractual relationship is with the prime contractor and not the subcontractor.

The task force also recognized the need to The RE does not have knowledge of the subcontractor scope of work and should only deal with the Prime in matters related to changes in the contract.

- Confirm actual time requirements in contract documents – review for consistency and cross reference with procedures.
- Provide form delineating the minimum amount of information required for a COR.
- Develop letter templates 1) Reminder of contract obligations, expected date of receipt of info  
2) Letter preserving Agency rights when untimely receipt
- Better tracking and follow-up on outstanding items

## 7.2 AREA OF IMPROVEMENT # 2

### Problem: Finding of the Fact

In the review of the initiation process and actual practices it was clear that during the review for merit, although the work was being done, the documentation was not being developed in a timely manner to support justification of merit/no merit. Both the actual write up, originally to come from the Contractor and a review of merit or Finding of Fact to be prepared by the RE were not being developed until much later in the process.

### Root Cause:

A review of procedure CM 1101 indicates these requirements and RE's are currently not performing the required documentation at the initiation stage of the COR as required by the procedures. Performing this action at the beginning rather than at the later stages of the process will allow the process to continue in a much more organized and structured approach.

### Recommendation for Improvements:

Suggested possible improvements to follow-up on:

- Clarify contract provisions for Contractor required justification of COR
- Clarify if Contractor was provided required form for submission with COR
- Review procedure for areas that may need clarification and improvement
- Developed merit evaluation form
- Standard letter response
- Educate CM/RE organization on procedure requirements, provide adequate resources, and follow thru

## 7.3 AREA OF IMPROVEMENT # 3

### Problem: Scoping Meeting/Estimate Preparation

Meetings and communications do occur in order to develop the appropriate scope of the change, but it is apparent that it has been done and is currently done in somewhat of a non-structured approach. It is the continual revision to the scope and estimate that happens multiple times and toward the latter stages of the process that is contributing to the length of time to process a change. It was reiterated that if the improvements identified in #1 and #2, namely the timely and proper submittal of the COR, together with the Finding of the Fact, that an agenda could be developed for a structured focused meeting on the actual scope to be estimated.

### Root Cause:

There is currently no formal Program document guiding the development of an estimate for changes, and one is currently being prepared by the Project Controls (estimators) for review and approval by the Program

### Recommendation for Improvements:

Suggested possible improvements to follow-up on:

- Regularly scheduled meeting that focus on the CORs with merit.
- Document with meeting minutes agreed to scope to be estimated.
- Templates to break down scope into meaningful elements for estimating
- Template for standardizing estimate
- Price Analysis guidelines to ensure appropriate backup for engineer's estimates
- Summarize Estimate

## 7.4 AREA OF IMPROVEMENT # 4

### Problem: Reconciliation of Costs

Questions were raised about the timing of when the CMB sees the change and what presentation materials are reviewed. It was clear that the CMB may either be currently in the process too early with not enough information to make an informed decision or too late when the work has already been performed.

### Root Cause:

Delegation of Authority to Resident Engineer has not occurred and all changes must go to CMB. Presentation of costs has not been formalized in procedures for established format, content, and timing.

### Recommendation for Improvements:

- Review procedures for when the CMB takes action on a change
- Summarize Estimate with comparison to Contractor's cost proposal
- Prepare reconciliation of costs with description of differences and suggested negotiation positions
- Prepare checklist for minimum package to be presented to CMB
- Develop rational for negotiation position for presentation to CMB

## 7.5 AREA OF IMPROVEMENT # 5

### Problem: Change Order Process

It was clear from the discussion among the task force that the process called out in the current contracts under construction, needs to be reviewed for completeness and compared to the Program procedures. Also the participation of Contract Administration must be better defined and much earlier in the process.

### Root Cause:

All project participants are not clear on the change process, contract requirements, Program Procedures. Clarity is required on the Agency process, and what is required content of acceptable change modification so that all are working off the same understanding and process is not subject to various interpretations on what is required.

### Recommendation for Improvements:

- Involve Contract Admin in the initiation stage, review for merit
- Involve Contract Admin in scoping meeting and cost estimating review
- Review GPs to ensure adequate information is provided by contractor

## 8. CONCLUSIONS AND RECOMMENDATIONS

The outcome of the Task Force finding was significant in that all the the Task Force members believe that with the implementation of the recommendations, the time to process changes for the Program could be improved. The conclusions and recommendations of the Task Force are summarized below.

## 8.1 CONCLUSIONS

- 1) Problems will occur when the contract documents and the Program procedures are not properly aligned.
- 2) Adherence to the time periods outlined in the contract documents for the change process is required for timely processing of changes
- 3) Timely evaluation of entitlement of a change by experienced contract administrators and construction managers is required early in the process.
- 4) Clear definition of the scope of the change is the most important aspect of timely development of estimates, once entitlement has been established.
- 5) Program Sr. Management need to be informed at key steps of the process to allow for timely approvals.

## 8.2 RECOMMENDATIONS

- 1) Clarify contract provisions for Contractor required justification of COR
- 2) Clarify if Contractor was provided required form for submission with COR
- 3) Review procedure for areas that may need clarification and improvement
- 4) Developed merit evaluation form
- 5) Standard letter response
- 6) Educate CM/RE organization on procedure requirements, provide adequate resources, and follow thru
- 7) Clarify contract provisions for Contractor required justification of COR
- 8) Clarify if Contractor was provided required form for submission with COR
- 9) Review procedure for areas that may need clarification and improvement
- 10) Developed merit evaluation form
- 11) Standard letter response
- 12) Educate CM/RE organization on procedure requirements, provide adequate resources, and follow thru
- 13) Regularly scheduled meeting that focus on the CORs with merit.
- 14) Document with meeting minutes agreed to scope to be estimated.
- 15) Templates to break down scope into meaningful elements for estimating
- 16) Template for standardizing estimate
- 17) Price Analysis guidelines to ensure appropriate backup for engineer's estimates
- 18) Summarize Estimate
- 19) Review procedures for when the CMB takes action on a change
- 20) Summarize Estimate with comparison to Contractor's cost proposal
- 21) Prepare reconciliation of costs with description of differences and suggested negotiation positions
- 22) Prepare checklist for minimum package to be presented to CMB
- 23) Develop rational for negotiation position for presentation to CMB
- 24) Involve Contract Admin in the initiation stage, review for merit
- 25) Involve Contract Admin in scoping meeting and cost estimating review
- 26) Review GPs to ensure adequate information is provided by contractor

## **APPENDIX A – PROPOSED CMOD PROCESS**

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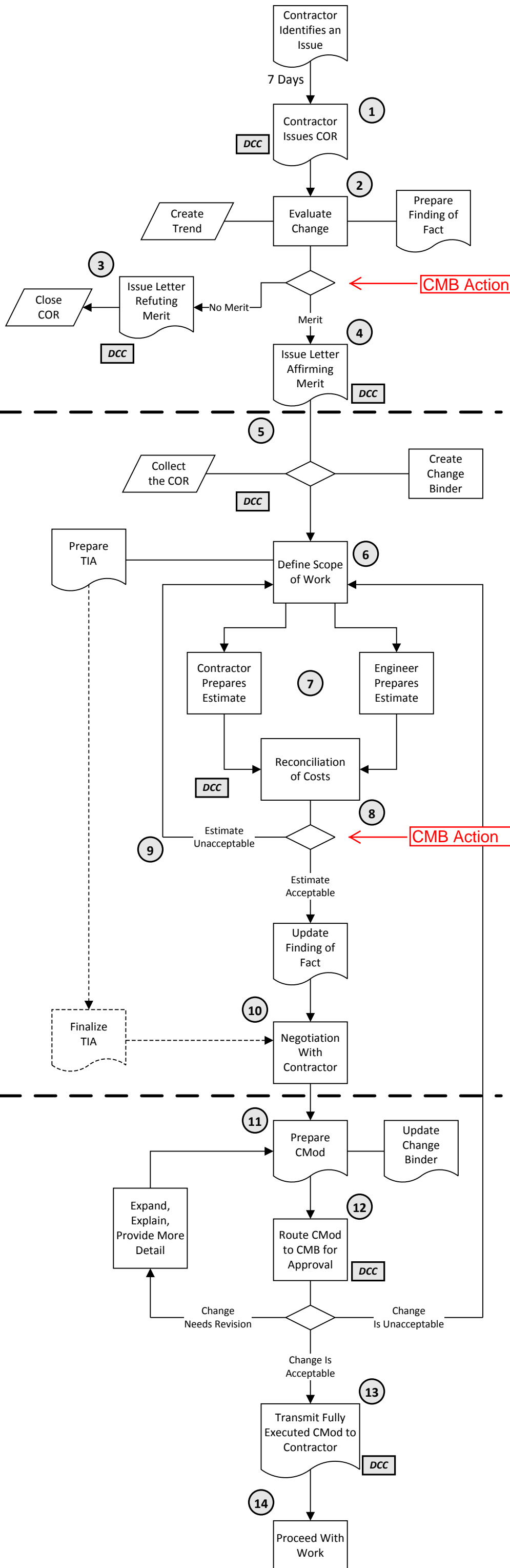
# CONTRACT CHANGE PROCESS

## CONTRACTOR INITIATED CHANGE

INITIATION

PROCESSING

EXECUTION



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- 5) A request is made for a cost/time estimate and a scoping meeting. In addition, a change binder is created to contain all change-related documents, and the COR is "collected" within the CM13 database.  
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- 7) Both the Contractor and the Resident Engineer develop independent cost estimates. Upon completion, the Contractor's estimate is submitted to the Engineer.  
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- 8) Differences in costs are identified and reconciled.
- 9) If upon review, the estimates are found to be unacceptable, the Resident Engineer may consider changing the scope of work, which may entail additional meeting(s) with the Contractor, and additional cost estimating.
- 10) If upon review, the estimates are found to be acceptable, then the change is negotiated by the Contractor and the Engineer at the next scheduled negotiation meeting. Prior to negotiation, the Finding of Fact is updated with the available new information. In addition, the TIA must be finalized, if necessary. A formal Record of Negotiation is written by the Resident Engineer.
- 11) Upon successful negotiation of a contract change, a Contract Modification (CMod) is prepared by the Resident Engineer. In addition, the change binder is updated to include all required documents, and a Board Memo is submitted for the monetary amount of the contract change. Initiation of a CMod includes the following:
  - 11a. Send the Contract Administrator an email request to create the CMod within the CM13 database.
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  - 12a. Transmit both CMod documents to the Contractor with a standard letter.
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  - 12c. Transmit both CMod documents to the Configuration Management Board (CMB), along with the completed change binder.
  - 12d. Receive one CMod document with the CMB member's signatures.  
(If the CMod needs revision or the CMB deems the change as unacceptable, additional steps may be necessary to accomplish the contract change.)**DCC: Incoming / outgoing documents are appropriately catalogued and electronically distributed.**
- 13) The fully executed CMod is transmitted to the contractor with a standard letter.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 14) Field work commences.

## **APPENDIX B – TASK FORCE MEETING MINUTES**

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## C Mod Task Force Meeting Minutes #01

DATE: August 14, 2012

MEETING DATE: **August 13, 2012**

LOCATION: 821 Howard St, Main Conference Room

TIME: 3:30 PM

ATTENDEES: J. Park (JP), M. Acosta (MA), M. Benson (MB), E. Stassevitch (ES), C. Dombrowski, (CD) , Ben Volberding (BV), Ken Barnhart (KB), Sarah Wilson (SW)

COPIES TO: Attendees: J Funghi (JF), S. Farhangi (SF), R. Nguyen (RN), B. Lebovitz (BL), D. Kuehn (DK), File No. M544.1.5.0910.e

REFERENCE Project No. M544.1, Contract No. 149 Task 1-1.08 Construction

SUBJECT: CMod Task Force Meeting # 01 – Rev. No. 0

**RECORD OF MEETING** *(Italicized text indicates status update of open items)*

ITEM #	DISCUSSION	ACTION BY DUE DATE
1-	The CMod Task Force purpose is to examine the current procedures and practices related to processing changes during construction and look for areas of improvement, especially related to the time to develop and process a contract modification (CMod). A standing meeting has been established at the time and place noted above, for the next 10 weeks, with the attendees shown above; to identify areas of possible improvement, and develop recommendations for review by Sr. Management of the Program.	
2-	ES reviewed the current CMod process and provided a graphic illustrating the basic steps involved with a Contractor initiated change from inception to execution. The generic graphic was broken down into basic steps : initiation, processing, execution for more in-depth discussion. The purpose of today's meeting was to review the process and brainstorm ideas for areas of improvement; assign members of the task force to further develop ideas and recommendations for review at future meetings. The Task Force would then take one or two of the ideas and hold focused discussions at future meetings with the intent of developing recommended improvements in the process.	
3-	<b>Area of Improvements #1 – Timely Submission of the COR</b> The task force reviewed the current initiation of a change, (being a differing site condition or clarification, i.e. response to RFI) with actual events occurring on 1250, 1251, and 1252; identified several challenges that are contributing to prolonging the process. The challenges of timely receipt of a COR from the contractor with complete information is part of a set of conflicting priorities of identifying the actual change, quantifying the change, developing the required documentation, while at the same time not impacting the progress of the work. The task force agreed that the responsibility is the Contractors' and the Program needs to develop measures to notify the contractor of the contractual obligations while at the same time preserving the rights of the	SW/MA/KB 08/21/12



ITEM #	DISCUSSION	ACTION BY DUE DATE
	<p>Agency. The task force also recognized the need to reexamine how the RE organizations participated in the identification of a change and how it must keep in mind at all times the contractual relationship is with the prime contractor and not the subcontractor. The RE does not have knowledge of the subcontractor scope of work and should only deal with the Prime in matters related to changes in the contract.</p> <p>Suggested possible improvements to follow-up on:</p> <ul style="list-style-type: none"> <li>• Confirm actual time requirements in contract documents – review for consistency and cross reference with procedures. (KB)</li> <li>• Develop letter templates 1) Reminder of contract obligations, expected date of receipt of info 2) Letter preserving Agency rights when untimely receipt</li> <li>• Better tracking and follow-up on outstanding items</li> </ul>	
4 –	<p><b>Area of Improvement # 2 – Finding of the Fact</b></p> <p>In the review of the initiation process and actual practices it was clear that during the review for merit, although the work was being done, the documentation was not being developed in a timely manner to support justification of merit/no merit. Both the actual write up, originally to come from the Contractor and a review of merit or Finding of Fact to be prepared by the RE were not being developed until much later in the process. A review of procedure CM 1101 indicates these requirements and RE's are currently not performing the required documentation at the initiation stage of the COR as required by the procedures. Performing this action at the beginning rather than at the later stages of the process will allow the process to continue in a much more organized and structured approach.</p> <p>Suggested possible improvements to follow-up on:</p> <ul style="list-style-type: none"> <li>• Clarify contract provisions for Contractor required justification of COR</li> <li>• Clarify if Contractor was provided required form for submission with COR</li> <li>• Review procedure for areas that may need clarification and improvement</li> <li>• Educate CM/RE organization on procedure requirements, provide adequate resources, and follow thru</li> </ul>	MB 08/21/12
5-	<p><b>Area of Improvement #3- Scoping Meeting/Estimate Preparation</b></p> <p>Meetings and communications do occur in order to develop the appropriate scope of the change, but it is apparent that it has been done and is currently done in somewhat of a non-structured approach. It is the continual revision to the scope and estimate that happens multiple times and toward the latter stages of the process that is contributing to the length of time to process a change. It was reiterated that if the improvements identified above, namely the timely and proper submittal of the COR, together with the Finding of the Fact, that an agenda could be developed for a structured focused meeting on the actual scope to be estimated. There is currently no formal Program document guiding the development of an estimate for changes, and one is currently being prepared by the Project Controls (estimators) for review and approval by the Program.</p> <p>Suggested possible improvements to follow-up on:</p> <ul style="list-style-type: none"> <li>• Regularly scheduled meeting that focus on the CORs with merit.</li> <li>• Document with meeting minutes on agreed to on scope to be estimated.</li> <li>• Templates to break down scope into meaningful elements for estimating</li> <li>• Price Analysis guidelines to ensure appropriate backup for engineer's estimates</li> <li>• Summarize Estimate with comparison to Contractor's cost proposal</li> <li>• Develop negotiation position for presentation to CMB</li> </ul>	SW/MB/CJ/ BV 08/21/12

ITEM #	DISCUSSION	ACTION BY DUE DATE
6-	<p><b>Area of Improvement #4- Reconciliation of Costs</b>                      Questions were raised about the timing of when the CMB sees the change and what presentation materials are reviewed. It was clear that the CMB may either be currently in the process too early with not enough information to make a informed decision or too late when the work has already been performed.                      Suggestions for areas of improvement:</p> <ul style="list-style-type: none"> <li>• Review procedures for when the CMB takes action on a change</li> <li>• Prepare reconciliation of costs with description of change and suggested negotiation positions</li> <li>• Prepare checklist for minimum package to be presented to CMB</li> </ul>	ES/SW/MA/ CJ 08/21/12
7-	<p><b>Area of Improvement #5- Change Order Process</b>                      It was clear from the discussion among the task force that the process called out in the current contracts under construction, needs to be reviewed for completeness and compared to the Program procedures. Also the participation of Contract Administration must be better defined and much earlier in the process.                      Suggested for areas of improvement:</p> <ul style="list-style-type: none"> <li>• Involve Contract Admin in the initiation stage, review for merit</li> <li>• Involve Contract Admin in scoping meeting and cost estimating review</li> <li>• Review GPs to ensure adequate information is provided contractor</li> </ul>	MB/JP/ES 08/21/12

**ACTION ITEMS**

ITEM #	MTG DATE	MTG ACTION DATE	DESCRIPTION	BIC	DUE DATE	STATUS
3	08/13/12	08/13/12	Timely Submission of the COR	SW	08/21/12	Open
4	08/13/12	08/13/12	Finding of the Fact	MB	08/21/12	Open
5	08/13/12	08/13/12	Scoping Meeting/Estimate Preparation	SW	08/21/12	Open
6	08/13/12	08/13/12	Reconciliation of Costs	ES	08/21/12	Open
7	08/13/12	08/13/12	Change Order Process	MB	08/21/12	Open

Meeting adjourned at 4:30pm

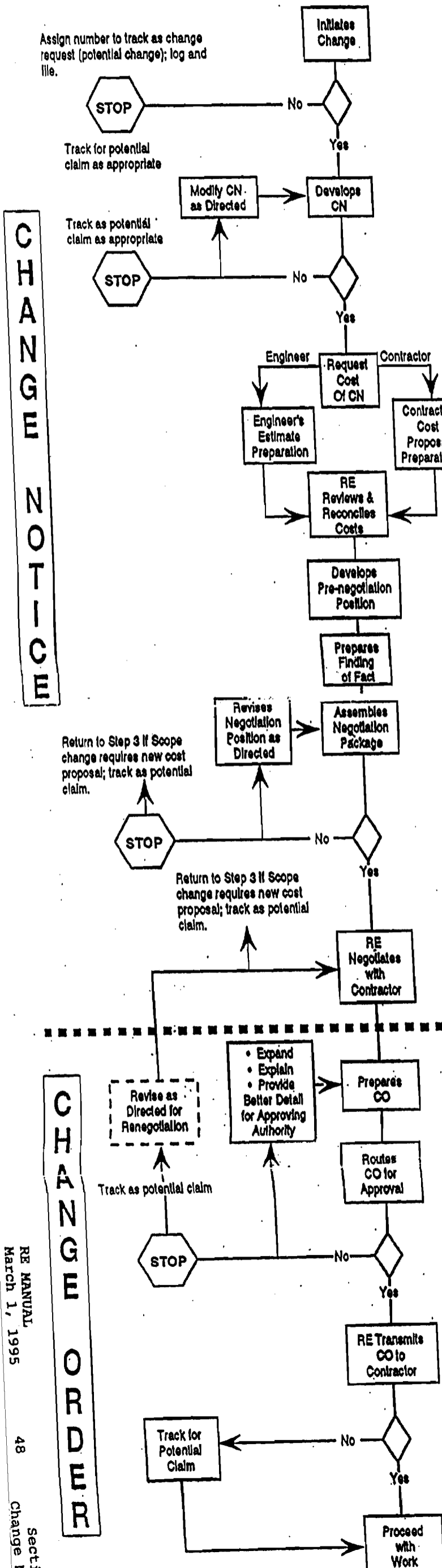
These meeting minutes have been prepared by E. Stassevitch and reviewed by M. Benson, and are the preparer's interpretation of discussions that took place. If the reader's interpretation differs, please contact the author in writing within four (4) days of receipt of these minutes.

**Signed:** \_\_\_\_\_ [initials of preparer & reviewer] **Date:** \_\_\_\_\_ [Date review completed]

Figure 4-1  
Flow Chart for Change Order Process

## CHANGE ORDER PROCESS

- 1) The Initiator prepares a Change Request that concisely describes the change, the reason for the change, and an order-of-magnitude cost estimate associated with the change. Important to include total costs associated with change (Change Notice (CN) preparation cost and construction cost). RE performs preliminary reviews of change with appropriate agencies, if applicable. RE forwards the Change Request to the BATC Project Manager who transmits it to the BART Project Manager.
- 2) BART Project Manager reviews document and directs the RE to proceed with CN preparation; or disapproves Change Request and returns to RE with direction to track as potential claim if appropriate.
- 3) RE informs Contractor of upcoming change. RE directs development of CN for Contractor's costs proposal and engineer's estimate. BATC Project Manager or RE sends CN to appropriate agencies for approval, if applicable. RE sends CN to BATC Project Manager for transmission to BART Project Manager. If required a Notice to Proceed Change Notice with a not-to-exceed dollar amount is issued.
- 4) BART Project Manager reviews and approves/disapproves CN before forwarding for Contractor's cost proposal. RE must identify areas of difference between the CN and the Initial Change Request.
- 5) RE sends formal letter requesting the Contractor's cost proposal within 10 days of receipt. RE requests formal engineer's estimate from estimators assigned to support the particular project.
- 6) RE reviews cost information to ensure that costs associated with scope of work are consistent.
- 7) RE prepares a monetary settlement range for each element in the scope of work which has an associated cost.
- 8) RE directs preparation of Finding of Fact. (See PF-24.)
- 9) RE assembles package containing Finding of Fact, pre-negotiation settlement range recommendations, and the CN for forwarding to the BATC Project Manager, who transmits it to the BART Project Manager for approval/disapproval.
- 10) BART Project Manager reviews and approves/disapproves negotiation package.
- 11) RE negotiates and prepares summary record of negotiations. (see PF-24.)
- 12) RE directs preparation of CO and CO package in accordance with PF-24.
- 13) RE obtains other agencies' concurrence with Change Order, if applicable. RE transmits complete CO/CO package to BATC designated Contract Administrator for BATC/BART for approval signatures routing. BATC Contract Administrator is responsible for conforming approved COs and properly distributing.
- 14) Monetary authority approves/disapproves CO.
- 15) RE receives CO from BATC Contract Administrator and formally transmits to Contractor for signatures and Notice to Proceed.
- 16) Contractor signs and returns two originals to RE for transmittal to BATC Contract Administrator or Contractor refuses to sign and must perform work under protest.



CHANGE NOTICE

CHANGE ORDER

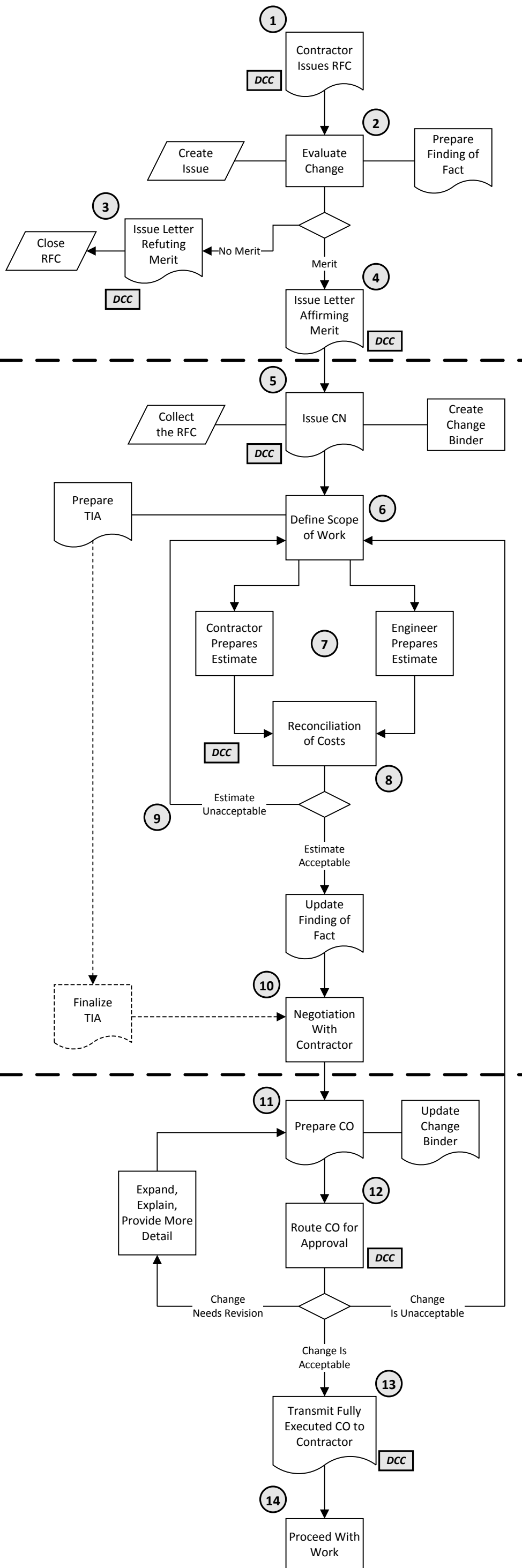
# CONTRACT CHANGE PROCESS

## CONTRACTOR INITIATED CHANGE

REQUEST FOR CHANGE

CHANGE NOTICE

CHANGE ORDER



- 1) Contractor submits a Request For Change (RFC) that conforms to the requirements in Section GC-42 of the General Conditions describing the change, the reason for the change, a cost estimate, and any time impact associated with the change.  
**DCC: The incoming document is appropriately catalogued and electronically distributed with high priority.**
- 2) The RFC is evaluated by the Engineer, a Finding of Fact is drafted, and an "issue" created for the change within the Expedition database.
- 3) If no merit is determined, the Contractor is issued a letter of refute, and the RFC is "closed" within the Expedition database.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 4) If merit is determined, the Contractor is issued a letter that contains an affirmation of merit and notification that a Change Notice (CN) will be forthcoming.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 5) A Change Notice (CN) is issued, along with a letter that contains reference to the RFC, a request for cost/time estimate, and language pertaining to a scoping meeting. In addition, a change binder is created to contain all change-related documents, and the RFC is "collected" within the Expedition database.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 6) Prior to cost estimating, the scope of work is defined, if necessary by a scoping meeting between the Engineer and the Contractor. In addition, a Time Impact Analysis (TIA) is drafted.
- 7) Both the Contractor and the Engineer develop independent cost estimates. Upon completion, the Contractor's estimate is submitted to the Engineer.  
**DCC: The incoming document is appropriately catalogued and electronically distributed.**
- 8) Differences in costs are identified and reconciled.
- 9) If upon review the estimates are found to be unacceptable, the Engineer may consider changing the scope of work, which may entail additional meeting(s) with the Contractor, and additional cost estimating.
- 10) If upon review the estimates are found to be acceptable, then the change is negotiated by the Contractor and the Engineer at the next scheduled negotiation meeting. Prior to negotiation, the Finding of Fact is updated with the available new information. In addition, the TIA must be finalized, if necessary. A formal Record of Negotiation is written by the Engineer.
- 11) Upon successful negotiation of a contract change, a contract Change Order (CO) is prepared by the Engineer. In addition, the change binder is updated to include all required documents, and a Board Memo is submitted for the monetary amount of the contract change. Initiation of a CO includes the following:
  - 11a. Send the Contract Administrator an email request to create the CO within the Expedition database.
  - 11b. Check / verify specific wording.
  - 11c. Print two (2) copies of the CO document.
  - 11d. The Construction Manager signs both CO documents.
- 12) The CO is routed for approval / execution as follows:
  - 12a. Transmit both CO documents to the Contractor with a standard letter.
  - 12b. Receive both CO documents with the Contractor's signature.
  - 12c. Transmit both CO documents to the Client, along with the completed change binder.
  - 12d. Receive one CO document with the Client's signatures. (If the CO needs revision or the client deems the change as unacceptable, additional steps may be necessary to accomplish the contract change.)**DCC: Incoming / outgoing documents are appropriately catalogued and electronically distributed.**
- 13) The fully executed CO is transmitted to the contractor with a standard letter.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 14) Field work commences.

- (c) Unusual construction techniques.
- (d) Accidents or damages.
- (e) Unsafe or hazardous working conditions.
- (f) Job visits by prominent personnel.
- (g) Areas or activities where claims and/or changes may be anticipated.

See Procedure PF-21.

#### **4.15 Change Processing**

Administration of a construction contract encompasses making necessary changes to the contract. Although changes may be initiated by BART, BATC, the ECM, other agencies, or the Contractor, the Resident Engineer begins the process shown in Figure 4-1 and follows it to completion. The Resident Engineer is responsible for administration and for the constructibility review of all changes. The Resident Engineer keeps a log of these changes, indicating their origins, their status, and their potential for leading to a claim.

A change to the contract may be initiated if it fulfills one or more of the following criteria:

- (a) It is essential for system safety.
- (b) It is an operational necessity.
- (c) It is a net credit to the contract.
- (d) It is required to comply with changed Owner requirements, changes in criteria, changes to meet

the requirements of other Agencies as determined necessary by BART.

- (e) It is necessary to fulfill the intent of the contract.

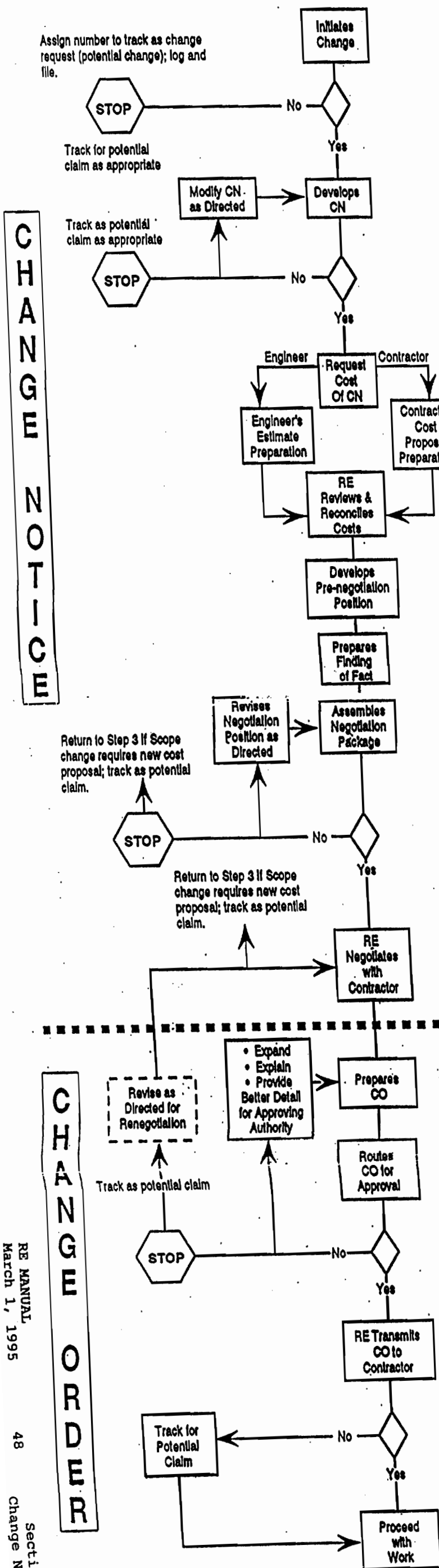
Changes are started when the initiator of the change prepares a Change Request, which is a brief, simple form directed to the BATC Project Manager, who will transmit it to the BART Project Manager. The Change Request includes a description of the change, reasons for the change, an order-of-magnitude preliminary estimate of costs, and anticipated impacts. Change Requests are used similarly, yet separately, to advise the appropriate monetary authority of expenditures against a contractor's allowance. The appropriate monetary approval authorities are given in Table 4-1, Monetary Approval Authorities. (See Procedure PF-24.) If the Change Request is approved, the Resident Engineer directs preparation of a Change Notice (CN). If the Change Request is disapproved and the change was requested by the Contractor, the Resident Engineer must exercise judgment in determining whether to send a letter advising the Contractor of the Notice of Potential Claim process. A sample letter appears as Figure 4-2. All CNs are tracked by a unique number assigned by the Resident Engineer. The Resident Engineer maintains a log of all CNs. A separate log is maintained to track potential claims. (See Procedure PF-38.)

Changes involving modification of the design or specifications (design changes) are normally prepared by BART or BATC Engineering. Field changes may be prepared

Figure 4-1  
Flow Chart for Change Order Process

## CHANGE ORDER PROCESS

- 1) The Initiator prepares a Change Request that concisely describes the change, the reason for the change, and an order-of-magnitude cost estimate associated with the change. Important to include total costs associated with change (Change Notice (CN) preparation cost and construction cost). RE performs preliminary reviews of change with appropriate agencies, if applicable. RE forwards the Change Request to the BATC Project Manager who transmits it to the BART Project Manager.
- 2) BART Project Manager reviews document and directs the RE to proceed with CN preparation; or disapproves Change Request and returns to RE with direction to track as potential claim if appropriate.
- 3) RE informs Contractor of upcoming change. RE directs development of CN for Contractor's costs proposal and engineer's estimate. BATC Project Manager or RE sends CN to appropriate agencies for approval, if applicable. RE sends CN to BATC Project Manager for transmission to BART Project Manager. If required a Notice to Proceed Change Notice with a not-to-exceed dollar amount is issued.
- 4) BART Project Manager reviews and approves/disapproves CN before forwarding for Contractor's cost proposal. RE must identify areas of difference between the CN and the Initial Change Request.
- 5) RE sends formal letter requesting the Contractor's cost proposal within 10 days of receipt. RE requests formal engineer's estimate from estimators assigned to support the particular project.
- 6) RE reviews cost information to ensure that costs associated with scope of work are consistent.
- 7) RE prepares a monetary settlement range for each element in the scope of work which has an associated cost.
- 8) RE directs preparation of Finding of Fact. (See PF-24.)
- 9) RE assembles package containing Finding of Fact, pre-negotiation settlement range recommendations, and the CN for forwarding to the BATC Project Manager, who transmits it to the BART Project Manager for approval/disapproval.
- 10) BART Project Manager reviews and approves/disapproves negotiation package.
- 11) RE negotiates and prepares summary record of negotiations. (see PF-24.)
- 12) RE directs preparation of CO and CO package in accordance with PF-24.
- 13) RE obtains other agencies' concurrence with Change Order, if applicable. RE transmits complete CO/CO package to BATC designated Contract Administrator for BATC/BART for approval signatures routing. BATC Contract Administrator is responsible for conforming approved COs and properly distributing.
- 14) Monetary authority approves/disapproves CO.
- 15) RE receives CO from BATC Contract Administrator and formally transmits to Contractor for signatures and Notice to Proceed.
- 16) Contractor signs and returns two originals to RE for transmittal to BATC Contract Administrator or Contractor refuses to sign and must perform work under protest.



CHANGE NOTICE

CHANGE ORDER

**Table 4-1**  
**Monetary Approval Authorities**

<u>Authority</u>	<u>Limits on Value</u>
Resident Engineer	up to \$10,000 (See Notes.)
Construction Manager	up to \$25,000 (See Notes.)
BART Project Manager	up to \$50,000 (See Notes.)
Assistant General Manager-Development	up to \$200,000 (See Notes.)
BART District Board of Directors	over \$200,000 <u>OR</u> more than 10% (cumulative) of contract's original price

**IMPORTANT NOTES**

- (1) The Assistant General Manager - Development must be notified in writing of any change that would cause cumulative change costs to exceed 3% of the original contract price. This includes costs committed by Notice-to-Proceed Change Notices. Written notification is also required on each allowance line item when committed costs consume 75% of the contractual allowance item.
- (2) The General Manager must be notified in writing of any change that would cause cumulative change costs to exceed 7% of the original contract amount. This includes costs committed by Notice-to-Proceed Change Notices. This notification will be done through the Assistant General Manager-Development.
- (3) Review by BART Legal and Procurement is required for any change (1) in excess of \$100,000, (2) altering General Conditions or Supplementary Conditions, or (3) altering any provision of the Contract that affects time of performance or liquidated damages.
- (4) Regardless of value, any change that substantially alters the obligations of the District or the Contractor must be submitted to the Board.
- (5) Monetary Approval Authorities shown above apply to positive values of dollar amounts only, not absolute or negative amounts.



Date

Reference: (Contractor's) Letter No., (Title)

Dear Mr. XXXXXX:

The change you requested was disapproved on \_\_\_\_\_ (date) \_\_\_\_\_ for the following reason(s): (insert reason or reasons itemized in clear paragraph form).

If you wish to file a Notice of Potential Claim, please follow the process described and the requirements given in Supplementary Conditions 9.\_\_\_\_.1 of your contract.

Please keep us informed as we want to work with you to achieve a successful project.

Yours sincerely,

Figure 4-2

Letter Apprising Contractor of Notice of Potential Claim Process

by the Resident Engineer with assistance from BATC Engineering. These may be at the request of the Contractor, and may involve a change in specified construction methods or changes to improve constructibility.

Changes to the contract that involve time extensions may affect the critical path work activities and thereby delay milestone or contract completion. The Resident Engineer is responsible for taking all of the actions necessary to minimize the impact of changed work on the schedule. The actual impact of changed work on the critical path must also be analyzed by the Construction Manager.

The Resident Engineer transmits the completed CN to the BATC Project Manager, who sends it to the appropriate monetary authority for approval; the Resident Engineer notes in the transmittal any significant differences from the Change Request and the rationale for them. The monetary approval authority is responsible for notifying the next level of authority if the CN is near his or her monetary authority limit.

When the Resident Engineer obtains the approval from the appropriate monetary authority, the CN is formally transmitted to the Contractor with direction to prepare time and cost proposals for the proposed change work. At the same time, the engineer's estimate is requested from estimators assigned to support the particular project.

### Contractor's Proposal

General Conditions GC 4.2.2, Contractor's Change Work Proposal, requires the Contractor to submit a proposal with a detailed breakdown of costs including separate estimates for labor, materials, equipment, and subcontract work, as well as for any extended time required. General Conditions GC 4.2.2 and GC 9.3 limit the mark-up for subcontractor's bond, overhead, and profit to set percentages that may not be exceeded.

See Table 4-2 for dollar thresholds and corresponding details of Contractor's proposal and cost support data required.

The Contractor will apply a percentage to direct labor costs to compensate for indirects such as health insurance and pension. This percentage may be by individual crafts or a composite for all crafts. Labor surcharge rates are stipulated either in the General Conditions or the Special Provisions of the contract. Fringe benefit statements should be obtained from the Prime and each subcontractor so that adequate records are available to reconcile labor rates charged to certified payrolls. The percentage used requires the approval of the Resident Engineer with the concurrence of the BATC Project Manager, but, once approved, it may be applied to all changes.

**Table 4-2 |**

**PRICE REASONABLENESS DOCUMENTATION**

**FOR CONSTRUCTION, SYSTEMWIDE, AND PROCUREMENT CONTRACT CHANGE ORDERS**

	Engineer's Estimate	Cost Proposal, Format and Support	Technical Evaluation Pricing	Pricing Support by Audit	Cost Analysis	Pre Negotiation Objectives	Price Negotiation
\$1,000,000 and Above	(4) Estimate with (i) three levels of detail or Work Breakdown Structure, (ii) a priced bill of materials and (iii) other costs as factors	Written Cost Proposal with three levels of Contractor cost detail. Support required for any line item over \$50,000.	Technical Evaluation Memorandum by Resident Engineer or other pricing specialist	Must request support from Audit	Cost Analysis Memo	Pre-Negotiation Objectives Memorandum	Price Negotiation Summary Memorandum with price recap
\$500,000 and below \$1,000,000				Must notify Audit of this pricing action			
\$100,000 and below \$500,000	(3) Estimate with (i) two levels of detail, (ii) a priced bill of materials and (iii) other costs as factors		Technical Evaluation Memorandum by Resident Engineer	May advise Audit at P.M.'s discretion	Combined Cost Analysis and Pre-Negotiation Objectives Short Form Memorandum		Price Negotiation Summary Memorandum
\$25,000 and below \$100,000				No notice to Audit required below \$100,000			
\$10,000 and below \$25,000	(2) Estimate with one level of detail and priced material	Written Cost proposal with one level of Contractor cost detail.	Short Form Technical Evaluation by Resident Engineer		Price Reasonableness Paragraphs in Summary of Negotiations Document		
Below \$10,000	(1) One Level Order of Magnitude Estimate on Change Notice form is sufficient	Statement in Summary of Negotiations Document that the recommended price is fair and reasonable.					

**Notes regarding Engineer's Estimate:**

- 1) One level Order of Magnitude Estimate can be a single amount.
- 2) Estimate with one level of detail; include prices for labor, material and equipment categories.
- 3) Two levels of detail; Example: Detail for all items of material which make up the price for the material category.
- 4) Full price analysis including all detailed back-up.

## Engineer's Estimates

All changes to the contract require an engineer's estimate of the value of the changed work. For changes within the Resident Engineer's authority, the Resident Engineer may analyze the Contractor's proposal. If the Resident Engineer uses the Contractor's proposal as the estimate, all cost elements must be adequately identified in the proposal, and the Resident Engineer is responsible for ascertaining their accuracy and reasonableness. Special emphasis should be given to assuring that the full scope of work has been addressed and that decreases or deletions of work have been included. The Contractor's proposal is marked up and signed by the Resident Engineer as "Resident Engineer's Estimate and Cost Analysis."

For changes beyond the Resident Engineer's authority, the Resident Engineer is responsible for requesting the formal estimates for cost and time from the estimators assigned to support the particular project. If particular expertise is required, estimating assistance may be requested through the BATC Project Manager. All estimate requests must provide a scope of work and sufficient pertinent information so that the estimate corresponds to the change work. The Resident Engineer is responsible for making sure that both the Contractor and the estimator assigned to prepare the engineer's estimate have the same understanding of the scope. The estimate must be requested as soon as the CN is issued to the Contractor. The engineer's estimate should be prepared independent of and ahead of the Contractor's proposal. In instances where the Contractor's proposal

pre-dates the engineer's estimate, a certification letter should be provided for the files by the Resident Engineer certifying that the engineer's estimate was prepared independent of the Contractor's proposal. See Table 4-2 for dollar thresholds and corresponding details of engineer's estimate required.

#### **District Change Order Pricing Policies**

The District's policy as stated in the BART Procurement Manual with respect to change order price negotiation is the following:

- (a) Price negotiation is a technique used in the absence of direct price competition to reach a sound decision on contract price.
- (b) Price negotiations shall be based upon adequate correlation between the technical aspect (scope of work) and the price aspect of the Contractor proposal.
- (c) Price negotiations shall be conducted in two steps, an evaluation and discussion of technical proposals (scope definition) first and then a separate evaluation and discussion of cost/price proposals consistent with the defined scope.
- (d) Price negotiations shall be supported by an independent cost or price estimate by the District, or District's Engineer, prepared in advance of receipt of the Contractor's cost or price proposal; or revised as appropriate in advance of any

associated revisions to the Contractor's cost or price proposal.

- (e) Price negotiations shall take place only at the appropriate times. That is, (i) only after the technical proposal has been evaluated and discussed completely; (ii) complete, fully documented and supported cost or price proposals have been received; (iii) the cost or price proposal has been compared against the technical proposal for consistency with the defined scope of work, necessity, and appropriateness of the individual elements of the proposed cost or price; (iv) the cost or price proposal has been analyzed using contractor furnished cost or price data if applicable and the District's cost or price estimate; (v) all issues of fact have been resolved and the assumptions and judgements made by the Contractor in developing the price or cost proposal have been clearly stated; and (vi) pre-negotiation objectives developed and reviewed as necessary.
  
- (f) The negotiated price shall be summarized in a price negotiation memorandum. This summarization shall be adequate to support a rapid reconstruction of all major considerations of the particular pricing effort. It must demonstrate how the pricing effort proceeded from engineers estimate and contractor price proposal, to pre-negotiation objectives, to

agreed upon price. It must also indicate the extent to which Contractor submitted price or cost data were not considered or, although considered, were not relied upon in reaching agreement on price.

The District's policy with respect to negotiated price is to:

- (a) contract for change orders from responsible Contractors at negotiated prices that BART determines to be fair and reasonable,
- (b) negotiate each price separately and independently and not
  - (1) use proposed price reductions under other unrelated actions as a factor or
  - (2) consider losses or profits realized or anticipated under other negotiations or actions; and
- (c) not include in the negotiated price any amount for a specified contingency to the extent that the contract provides for price adjustment based upon the occurrence of that contingency.

The determination that a negotiated price is fair and reasonable shall be based upon some form of written analysis, either on the basis of price, cost and profit, or some combination of both price and cost, made prior to making any agreement to revise or modify the contract



involving compensation.

Where the negotiated price cannot be supported with a determination that the negotiated price is 'fair and reasonable' then it shall be determined as 'best obtainable' and approval from the appropriate person one level above the Delegated Authority for Monetary Approval of the Change Order amount shall be obtained and included in the contract file.

The District's policy with respect to negotiated profit or fee for non job-site change order costs is as follows:

- (a) Where price analysis alone is insufficient to support a determination that the proposed price is fair and reasonable then cost and profit or fee must be separately analyzed and negotiated. The Contractor's proposed fee or profit shall be analyzed using structured approaches to provide a discipline for ensuring that all relevant factors are considered.

The District's policy with respect to subcontracted pricing is as follows:

- (a) Subcontract costs and pricing arrangements are significant elements to be considered during price negotiations with the prime, and in arriving at a determination that the negotiated price is fair and reasonable.
- (b) Basic responsibility for selecting subcontractors, managing subcontractor performance and determining

that consistent with District pricing policy and procedures, the proposed subcontractor pricing is 'fair and reasonable' is the responsibility of the Contractor. Such determinations shall reasonably conform to District requirements for prime contractor pricing determinations.

### **Technical Evaluation**

Technical evaluation is the examination and evaluation of functions that cause costs to occur and provide useful information such as definition of quantities and kinds of materials, labor classifications, quantity of hours, procedures, processes, etc. Technical evaluation is to be performed by personnel having specialized knowledge, skills and experience regarding the scope of the proposed contract change. A technical evaluation that does not address individual elements of cost (i.e. labor categories, labor hours, material, other direct costs, etc.) but merely states that the proposal is acceptable, is not considered adequate.

All change order documentation whereby the Resident Engineer makes a determination that the Contractor's proposed price or cost is fair and reasonable shall include a separate determination that 1) the Contractor cost proposal is responsive to the Change Notice for contract change proposal and 2) the individual elements of the cost proposal are, necessary and appropriate to satisfy the District's requirements. This determination shall be presented in the form of a memorandum - "Technical Evaluation Memorandum" and will form the basis for subsequently performing cost or price analysis as

necessary.

For all change orders with price reasonableness determinations \$10,000 and above, a technical evaluation memorandum shall be developed and made available to the individuals responsible for price or cost analysis. For change orders under \$100,000, a short form Technical Evaluation Memorandum may be used ( See PF-24, Exhibit 13 for a sample Form) Technical Evaluation Memorandum for change orders over \$100,000 will generally follow the same format as the Short Form and will contain at a minimum all the information required on the Short Form but in a more elaborate nature.

#### Audit Support

BART's Internal Audit Department can support the change order price negotiation effort by thoroughly exploring the support and accounting data and systems that backs up a Contractor's cost proposal. The role of BART Internal Audit in pricing actions is advisory only; that is, Internal Audit may advise but not direct the Resident Engineer. However, if the Resident Engineer does not accept the auditor's recommendations, the Resident Engineer must document in either the pre-negotiation objectives, or in the price negotiation memorandum, the rationale for not accepting the auditor's recommendations.

For all change orders with price reasonableness determinations of \$1,000,000 and above in absolute value, a request from the Resident Engineer for audit support shall be made to Internal Audit prior to conducting price

negotiations. The Resident Engineer shall determine what specific Audit support is required from BART Internal Audit prior to any negotiations with the Contractor. Audit support requests may be made at lower values if the reasonableness of a proposed price cannot be established due to the following:

- (1) Lack of knowledge or experience with a particular contractor;
- (2) Existence of sensitive conditions in the pricing action;
- (3) Inability to evaluate the price reasonableness through price or cost analyses of existing data.

For all pricing actions with price reasonableness determinations over \$500,000 and less than \$1,000,000 in absolute value, notification shall be given to Internal Audit by the Resident Engineer in advance of price negotiations.

#### **Requests for Audit Support**

Requests for Audit support must be made by the Resident Engineer to Internal Audit in writing and meet the following requirements:

- (1) Prescribe the extent of audit support needed such as the following examples:
  - complete detailed audit including technical analysis reports; or

- complete detailed audit of selected proposed cost elements; or
  - audit of labor and overhead rates only; or
  - desk audit to provide an audit opinion using available data without an in-depth review of proposed costs; or
  - desk audit supplemented by detailed audit opinion of selected cost elements.
- (2) State the specific areas of input desired.
- (3) Include information where necessary to perform the review, including but not limited to the following:
- Contractor cost proposal and revisions as appropriate; or
  - any related documentation submitted by contractor; or
  - any technical analysis already completed.
- (4) Assign a realistic deadline for receipt of the audit report. Deadlines for Audit support should be predicated upon complete price proposals and supporting documentation adequate for an audit.
- (5) Audits requested by the Resident Engineer shall be structured to support the pricing action to assist with negotiation of change orders. Such audits are

not intended to address performance issues.

- (6) A Kick-off meeting will be held between BART Internal Audit, the BART Project Manager, and the Resident Engineer prior to any contact with the Contractor. An exit meeting will also be conducted to review the draft report of Audit Findings prior to finalizing the audit report.

Lack of Audit resources should not be reason to delay any negotiations.

#### Reviewing the Audit Evaluation

The Resident Engineer is responsible for reviewing the audit report to make sure that it meets the requirements of the specific pricing action. The auditor is responsible for the scope and depth of the audit within the guidelines established by the Resident Engineer in the request for audit support. The explanation and rationale for an audit finding must be clearly stated and understandable. As a minimum, the audit report shall include the following:

- (1) The findings on specific areas listed in the request for audit support;
- (2) An explanation of the basis and method used by the Contractor in preparation of its cost proposal;
- (3) An identification of the original cost proposal and of all subsequent written formal and other identifiable submissions by which cost or pricing

data were either submitted or identified;

- (4) A description of cost or pricing data coming to the attention of the auditor that were not submitted but that may have a significant effect on the negotiation of the final price;
- (5) A list of any cost or pricing data submitted that were not accurate, complete and current and of any cost representations that are unsupported. When the result of deficiencies is so great that the auditor cannot perform an audit or considers the proposal unacceptable as a basis for price negotiations, the Resident Engineer shall be notified in writing so that corrective action may be taken. The auditor shall then confirm in a timely fashion, the notification in writing, explaining the deficiencies and the cost impact on the Contractor's cost proposal.
- (6) The originals of all technical analyses received by the auditor and a quantification of the monetary impact of the technical analysis findings;
- (7) An opinion by the auditor as to the adequacy of the Contractor's accounting system or estimating methods, to support the cost proposal or to permit satisfactory administration of the contract contemplated;
- (8) A statement as to the extent to which the auditor discussed discrepancies or mistakes in fact in the cost proposal with the Contractor.

The Resident Engineer, working with BART Internal Audit, is responsible for identifying all discrepancies between audit findings and other data. These discrepancies must be addressed in pre-negotiation positions and in the price negotiation memorandum.

If the Resident Engineer does not concur with the auditor's recommendation, he or she must document the basis for this determination subject to the concurrence of the AGM Development, and transmit a copy to BART Internal Audit.

#### **Notification to Internal Audit**

The Resident Engineer is responsible for giving notice to BART Internal Audit prior to the Resident Engineer commencing price negotiations below \$1,000,000 but over \$500,000. Such notice should ordinarily be at least 15 calendar days in advance of any discussions. BART Internal Audit should also be notified when requested price or cost data will not be available when audit support has been requested.

#### **Cost and Price Analysis**

The determination that a price is fair and reasonable shall be based upon some form of written analyses, (i) either on the basis of price, cost and profit, or some combination of both price and cost and (ii) the price is consistent with scope of work; made prior to execution of the change order.

Price analysis should be performed to support the



required cost analysis on all change orders above \$500,000. The depth of a price analysis will depend upon the type, size and complexity of the change order. For change orders less than \$500,000 the Resident Engineer shall perform either price or cost analysis.

Price analysis alone is sufficient in order to make the determination that the price is fair and reasonable only when one of the following conditions exists, i.e. the proposed price is either:

- (1) The direct result of adequate price competition;
- (2) Based upon the previous results of adequate price competition;
- (3) Established by market or catalog prices (for identical items);
- (4) Based upon market or catalog prices (for similar items); or
- (5) Set by Law or regulation.

Where none of these conditions set forth above exist, then price analysis alone is not sufficient to establish that the proposed price is fair and reasonable and a separate analysis of costs, will be required in addition to price analysis. In general, price analysis alone is insufficient to support a determination as to reasonableness of price in all non-competitive negotiations including modifications to contracts that were the result of sealed bids and cost analysis is required. In addition, where appropriate, a technical analysis of the price/cost proposal will be performed to determine that the individual elements of the proposed price are consistent with the District's requirements,

necessity and appropriateness.

### PRICE ANALYSIS

This is an evaluation of the contractor's proposal that does not involve an in-depth evaluation of all the separate cost elements and the profit factors that comprise the Contractor's proposal.

A price analysis shall be in writing and shall include whatever actions the Resident Engineer takes to reach a decision that a price is fair and reasonable. These actions should include not less than two of the following approaches:

- (1) A comparison of competitive price quotations if applicable;
- (2) A comparison of prior quotations and contract prices with current quotations for the same or similar end-items;
- (3) The use of known yardsticks such as dollar per cubic yard, per linear foot, or other units to point up apparent gross inconsistencies;
- (4) A comparison of prices or published price lists issued on a competitive basis, and published market prices of commodities, together with discount or rebate schedules;
- (5) A comparison of proposed prices with the independent engineer's estimate.

At a minimum, any comparisons made, shall be made using properly adjusted price data and shall be in a tabular format and differences if any, analyzed and explained.

### COST ANALYSIS

This is a detailed evaluation of cost data submitted by the Contractor and of the individual cost elements in the Contractor's proposal. A cost analysis is generally conducted to determine whether the Contractor is applying sound management in proposing the application of resources to the contracted effort and whether costs are proper, allowable, and allocable. Cost analysis is a more detailed review of the Contractor's proposal than a price analysis. It involves an in-depth look at the Contractor's cost and pricing data and of the judgmental factors applied in projecting from the data to the estimated costs. The objective of cost analysis is to form an opinion as to the degree to which the proposed costs represent what the performance of the change order should cost, assuming reasonable economy and efficiency. In conducting a cost analysis, it is not enough simply to examine a Contractor's proposed figures on the number of hours his staff will work, the amounts and cost of materials, and the rates of labor and overhead from accounting records. It involves:

- (1) The verification of cost data;
- (2) The review of cost or pricing data to determine whether any cost or pricing data necessary to make the Contractor's proposal accurate, complete, and current have not been either submitted or

identified in writing by the Contractor and if there are such data, attempt to obtain them and negotiate, using them or making satisfactory allowance for the incomplete data;

- (3) The verification that the cost submissions are in accordance with the specific change order requirements such as the cost principles and procedures consistent with current BART policy.
- (4) The evaluation of specific cost elements;
- (5) The evaluation of the effect of current practices on future costs to ensure that the effects of inefficient or uneconomical past practices are not projected into the future;
- (6) The projection of the cost data to determine its effect on prices; and
- (7) The evaluation of the basis and appropriateness for allocating overhead costs

Cost analysis shall address the cost and profit or fee objectives (where applicable) and any resulting issues to be negotiated. For all change orders with price reasonableness determinations over \$500,000, a separate cost analysis memorandum shall be developed and made available to the individuals responsible for establishing the pre-negotiation objectives. For change orders under \$500,000, a short form Cost Analysis and Pre-negotiation

Memorandum may be used (See PF-24, Exhibit 14, for a sample Form). Cost analysis memorandum for change orders over \$500,000 will generally follow the same format as the Short Form and will contain at a minimum all the information required on the Short Form but of a more elaborate nature.

The Resident Engineer shall perform and document adequate price, cost or profit analysis in all change orders before going into negotiations with the Contractor. The extent of analysis will depend on the complexity and size of the change order. Cost or price analysis should address (1) the pertinent issues to be negotiated, (2) the cost objective, and (3) a profit or fee objective.

#### Pre-Negotiation Objective

The process of determining pre-negotiation objectives helps the District to judge the overall reasonableness of proposed prices and to negotiate a fair and reasonable price or cost and fee. The Resident Engineer shall establish written pre-negotiation objectives and obtain the approval of the appropriate level of authority before negotiation of any pricing action. In setting the pre-negotiation objectives, the Resident Engineer shall analyze the Contractor's proposal, taking into account any audit reports; technical analysis; price or cost analysis; and other pertinent data such as price histories. This process may include fact-finding sessions with the Contractor when the Resident Engineer deems it appropriate. The scope and depth of the analysis supporting the objectives should be directly related to the dollar value, importance, and complexity

of the pricing action.

Pre-negotiation objective for all pricing actions should reflect three pricing positions: minimum, objective/target and maximum.

- (1) The minimum price position should be the starting point in price negotiations and should never represent a price that cannot be supported by reasoned analysis.
- (2) The objective or target price position should be the most reasonable and should represent the price the District would accept.
- (3) The maximum price position should be the highest price position that the District can reasonably be expected to accept, given the information available at the start of price negotiations. This maximum price position may change during price negotiations if additional information is presented by the Contractor that changes the District's price objective.

For all change orders with price reasonableness determinations over \$500,000, a separate pre-negotiation objectives memorandum shall be developed by the Resident Engineer and made available to the individuals responsible for conducting the negotiation with the Contractor. For change orders under \$500,000, a short form Cost Analysis and Pre-negotiation memorandum may be used (See PF-24, Exhibit 14 for a sample Form). Cost analysis memorandum for change orders over \$500,000 will

generally follow the same format as the Short Form and will contain at a minimum all the information required on the Short Form but of a more elaborate nature.

### **Pre-Negotiation Position**

The Resident Engineer then develops a monetary settlement range for each element in the scope of work, associating a cost with that element.

The Resident Engineer must establish a written pre-negotiation position before meeting with the Contractor to negotiate a change. The pre-negotiation position should be based on the Resident Engineer's evaluation of the amount of work required by the change, the impact on existing work, and the Contractor's ability or inability to perform the work with existing manpower and equipment. If the Resident Engineer uses a marked-up Contractor proposal for the analysis and estimate of the changed work, the marked-up copy is also annotated as "Resident Engineer's Pre-negotiation Position." If the Resident Engineer's analysis is based on a separate Engineer's estimate, a written pre-negotiation position is required. Approval of the pre-negotiation position from the appropriate level of authority must be secured before any negotiations start.

### **Finding of Fact**

Every CN must be accompanied by a Finding of Fact that clearly shows the scope of the change and the reasons the change must be made.

The Resident Engineer directs preparation of the Finding of Fact, which provides the approving authority with all pertinent information about the change since it was initiated. The Finding of Fact contains all data the Resident Engineer believes are relevant to the change including construction methods, the Contractor's planned use of manpower and equipment, actual site conditions, and status of the work. The Finding of Fact may include or draw on the description of change prepared by the originator of the Change Notice. It must be signed by the Construction Manager. (See Procedure PF-24.)

The Finding of Fact, together with the CN and the pre-negotiation position (settlement range recommendation), form the negotiation package, which must be given to the BATC Project Manager and then reviewed by the appropriate monetary authority before the Resident Engineer can enter negotiations with the Contractor.

### Negotiations

For all change orders regardless of size, price negotiation is always required unless one of the following conditions exist:

- (1) Prices are set by Law or regulation, or
- (2) It can be clearly demonstrated on the basis of full and open competition in the pricing action, or prior cost experience in a related pricing action, also based upon full and open competition, with the product or service that the acceptance of the Contractor's offer for modification without



discussions will result in the lowest overall cost to the District at a fair and reasonable price.

At the conclusion of each negotiation for change orders of \$100,000 and above, the Resident Engineer shall promptly prepare a Price Negotiation Memorandum (See PF-24, Exhibit 15 for a sample form) of the principal elements of the price negotiation. This memorandum shall be included in the contract file and shall contain the following minimum information:

- (1) The purpose of the negotiation.
- (2) A description of the Contract and contract change.
- (3) The name, position, and organization of each person representing the Contractor and the District in the negotiation.
- (4) The extent to which the negotiation team:
  - (a) Relied on the cost or pricing data submitted and used by them in negotiating the price; and
  - (b) Recognized as inaccurate, incomplete, or non-current any cost or pricing data submitted; the action taken by the negotiation team and the Contractor as a result; and the effect of the defective data on the price negotiated.

- (5) A summary of the Contractor's proposal. Based on the cost analysis, the summary shall address the amount of each major cost element:
  - (a) Proposed by the Contractor,
  - (b) Recommended by other pricing assistance reports (if any),
  - (c) Contained in the District's negotiation objective, and
  - (d) Considered negotiated as a part of the price.
- (6) The most significant facts or considerations controlling the establishment of the pre-negotiation price objective and the negotiated price including an explanation of any significant differences between the two positions.
- (7) The basis for determining the profit or fee pre-negotiation objective and the profit or fee negotiated.
- (8) Each negotiation memorandum shall be prepared and signed by the Resident Engineer.

For change orders under \$100,000, a short form Cost Analysis and Pre-negotiation memorandum may be used (See PF-24, Exhibit 14 for a sample Form).

The Resident Engineer will negotiate all changes. The Engineer or his delegates may decide to participate in negotiations outside the Resident Engineer's authority. In unusual circumstances, the Resident Engineer may

request that the Engineer assist him in those within his authority.

Negotiation with the Contractor's representative should focus on areas of apparent disagreement based on the pre-negotiation position. As nearly all the negotiations within the Resident Engineer's authority involve only direct costs, agreement can generally be reached once both parties concur on the scope of the work and its effect on the existing work. Negotiations should be based on item-by-item discussions even if the total cost of the Contractor's proposal is less than the Engineer's Estimate. It is the Resident Engineer's responsibility to assure that an agreement equitable to both parties is reached.

The negotiations are to be documented in a Summary Record of Negotiations, which contains an accurate account of adjustments and agreements made. (See PF-24, Exhibit 15 for a sample form). The Summary Record of Negotiations, with the date and place of negotiations indicated, is signed by the Resident Engineer and the Contractor. If the Summary Record of Negotiations contains information which the Resident Engineer considers proprietary to BART's position, or contains details which the Contractor could use against BART once the C.O. is prepared, the BART Project Manager may decide it is in BART's best interest that the Contractor not sign the Summary Record of Negotiations. In such a case, a Change Order should be prepared immediately following the negotiations for the Contractor to sign.

## Change Orders

After the value of a change to the contract is established, the agreements are incorporated into the contract by issuing a Change Order. The Resident Engineer is responsible for preparing the Change Order and the Change Order Package. The Change Order must state how the contract is being changed.

The accompanying documentation, or Change Order Package consists of the following elements:

- (a) Sign-Off Sheet
- (b) Summary of DBE Participation
- (c) Change Order
- (d) Finding of Fact
- (e) Summary Record of Negotiations/  
Price Negotiation Memorandum
- (f) Pre-Negotiation Position
- (g) Contractor's Proposal
- (h) Engineer's Estimate
- (i) Change Notice
- (j) Pertinent Correspondence
- (k) Conformed signed/sealed Change Order Drawings  
as required

If the change to the work involves an additional subcontractor not already doing work for the prime, or includes providing or fabrication of material and equipment not previously covered under a current 'Buy America' certificate, then the Resident Engineer must obtain a 'Buy America' certificate and a 'Noncollusion' Declaration from the subcontractor(s) as appropriate prior to processing the Change Order.

The Resident Engineer transmits the completed Change Order and Change Order Package to the project-specific Contract Administrator for processing at the appropriate level of authority. Once the Change Order is executed, the Contract Administrator is responsible for distribution of conformed contract documents, and the change becomes part of the contract.

#### **Negotiations Without a Contractor's Proposal**

If the Contractor fails to submit a proposal for changed work in a timely manner, the Resident Engineer may initiate negotiations if certain criteria are met:

- (a) The Contractor consistently withholds proposals.
- (b) The value of changed work is estimated to be within the Resident Engineer's authority.
- (c) The full scope of the changed work can be identified.
- (d) An estimate is prepared.

If negotiations are planned without the Contractor's proposal, the Resident Engineer must formally notify the Contractor of the intent. Agreement reached during negotiations must be documented in a narrative Record of Negotiations. If agreement cannot be reached, either the Contractor signs the Change Order indicating "protested" by the signature and returns the Change Order with a written protest, or the Contractor is directed to proceed on the basis of force account. (See GC 4.2 of the General Conditions.) The General Conditions, in GC 4.2.4.1, urge cooperation to "reach agreement at the earliest practical date" following a protest over compensation. The intent is to prevent accumulation of protested Change Orders as claims at the end of the contract.

#### **4.15.1 Issuing a Notice to Proceed Change Notice**

If the Resident Engineer deems that the changed work must proceed to avoid irrecoverable delay or damage to the contract work, the Contractor must be directed to proceed with the work. If the preliminary estimate of the changed work indicates that it is within his assigned authority, the Resident Engineer obtains approval of the BART Project Manager on the CN and directs the Contractor to proceed using a Notice to Proceed Change Notice (NTP-CN).

If the preliminary estimate indicates that the value of the change work exceeds the Resident Engineer's authority, the Construction Manager is responsible for arranging for the appropriate approval authority to issue the NTP-CN. After the appropriate approval authority is

obtained, the Resident Engineer will issue a CN signed by the BART Project Manager to the Contractor, transmitting the instructions relative to submission of the Contractor's proposal for the change work. A NTP CN must contain a Not-to-Exceed amount. Part 1 of a multi-part CO should be issued concurrently with the issuance of the NTP CN to provide the means of payment for Force Account work prior to final resolution of the cost for the work.

#### **4.15.2 Multi-Part Change Orders**

Change Orders may be issued in several parts or increments when a change will ultimately involve a substantial sum or time extension, and the cost of the change cannot be negotiated within a reasonable time. The primary reason to issue a modification incrementally is to avoid having the Contractor finance a large change pending its final resolution.

The first parts (Part 1, 1A, 1B, etc.) of a Change Order provide a complete description of the work to be performed and a method for partial payment. The payment terms are normally preliminary and subject to adjustment unless portions of the change can be isolated and negotiated separately.

The second part (Part 2) of a Change Order finalizes the adjustment to the contract for the change. Multi-part changes cannot be executed by the Resident Engineer.

#### **4.15.3 Force Account Work**

The contract provides for force account or "time and

material" type work under certain circumstances. If changed work must be done before the scope of work is fully defined, or if the Contractor is directed to proceed with changed work before the value of the work can be agreed upon, the contract requires the Contractor to maintain accurate actual cost records of the extra work performed.

The Resident Engineer is responsible for the satisfactory control of the authorized force account work. Prior to the start of a Force Account item of work, the Resident Engineer shall agree with the Contractor as to the labor force, equipment, and material to be used. This becomes the basis for the Resident Engineer's and Inspector's control of Force Account costs. It is essential in force account work to maintain complete daily records of all labor, material, and equipment used on the job. It is mandatory that the Resident Engineer check the force account records daily and make certain that his and the Contractor's records agree and are complete in every detail. The extended force account sheets received must match the initial ones submitted each day, and be confirmed by the Inspector's Daily Reports. In addition, the Resident Engineer must keep a weekly tally of force account expenditures against the not-to-exceed amount, when the work is being done against a Notice-to-Proceed Change Notice, a contractual allowance, or other specified limit.

The force account basis of measurement and payment is used as a means of compensating a Contractor for changed work only when no other method of payment is mutually acceptable. (See Procedure PF-30 for details and



procedures.)

If changed work is completed with daily force account records, the basis for cost of the contract adjustment will be in accordance with Article GC9.3. If an agreement can be reached before work is completed, negotiations are conducted as for any change, with the negotiator using the accumulated actual cost data as part of the analysis.

#### **4.15.4 Change Orders for Variation in Quantities**

For unit price items, as soon as the forecast of actual quantity indicates an overrun or underrun of more than twenty-five percent of the estimated quantity, the Resident Engineer is required to obtain an estimate of the value of the under- or overrun. If the actual quantity can be firmly established, the estimate should be requested in the form of a lump sum increase or decrease for the under- or overrun portion beyond twenty-five percent. If the quantity cannot be finalized, the estimate should be in the form of an increase or decrease in the unit price.

After analysis and negotiation, an agreement is finalized through a Change Order using either a lump sum payment or new unit price for the under- or overrun beyond twenty-five percent depending on the status of the final quantity. If the difference is an overrun, the new price affects only the overage above one hundred twenty five percent. If the difference is an underrun, the new price affects the whole quantity. A "wrap-up" or Contract Closeout Change Order is prepared at the completion of a

contract to address final costs that differ from the contract total. These final bid item costs should not include unexpended amounts from a contractual allowance. The Closeout Change Order may also include final actual costs of Allowance items but any Allowance costs must be clearly identified as separate amounts from individual Bid Items or Change Order Work. The Contract Closeout Change Order is also required to set the final quantity and cost, even if the quantity has stayed within the 25 percent.

The Resident Engineer should provide a summary of actual quantities (see PF-37, Exhibit 4) and a certification that the final quantities are correct and agreed to by the Contractor. This certification may be done on form PF-37, Exhibit 4 or by separate letter with the Closeout Change Order. When completing the summary of actual quantities, the Resident Engineer should verify that individual items for quantities paid by unit prices are not duplicated in any lump sum amounts paid for by Change Orders.

#### **4.15.5 Differing Site Conditions**

When the Contractor notifies the Resident Engineer that a differing site condition has been encountered, the Resident Engineer must immediately notify the BATC Project Manager. This notice should include an indication as to the impact on the Contractor's schedule and the criticality and time frame of any required action. If required, the BATC Project Manager will set up a Review Team with BATC, ECM, and BART members to analyze the alleged differing site condition. The

Resident Engineer is a member of the Review Team.

The Review Team investigates the alleged differing site conditions, including if necessary, a presentation by the Contractor. Based on the Review Team's analysis, the Resident Engineer prepares a Finding of Fact and transmits it to the BATC Project Manager and the BART Project Manager for their review and decision on the existence of a differing site condition, which will lead to the Resident Engineer issuing a CN or a letter of denial.

#### **4.16      Disputes**

BART intends to foster the idea of claims avoidance by subscribing to the practice of "Partnering." Partnering is a concept by which the Owner and the Contractor approach the job from the very beginning with a team philosophy instead of an adversarial one, as discussed in Section 4.2.

Another integral part of BART's approach is Alternative Dispute Resolution (ADR).

For some construction contracts, a form of ADR involving a Dispute Review Board (DRB) will be stipulated. The DRB has three members, one selected by the District, the second selected by the Contractor, and the third selected by the first two. See the DRB contained in the Supplementary Conditions for a detailed description of board member selection and the role of the DRB. If the Contractor cannot obtain satisfaction through the DRB, it

can still file a claim against BART under the terms of the specific contract.

On contracts where there is not a DRB, provisions for mediation will be included, using the mediation version contained in the Supplementary Conditions. Either the Contractor or the District may serve a written notice of mediation on the other. A third disinterested party will be chosen to mediate, and mediation will proceed, to be concluded within 30 days. Just as with the DRB, mediation is not binding, and the Contractor can still file a claim under the terms of the specific contract.

### **Potential Claims**

Unsolicited proposals from the Contractor generally represent claims against the contract wherein the Contractor believes performed work has not been included in the contract and additional compensation is due. The Contractor must provide proper and timely notification of a potential claim as specified in the various articles of the contract, particularly GC9.4. The Resident Engineer handles such a potential claim according to Procedure PF-38. If the Contractor's initial notice of potential claim does not define the basis of the potential claim, the Resident Engineer must obtain such information as soon as possible.

The Resident Engineer, in consultation with the Construction Manager and the BATC Project Manager, is responsible for the initial review and analysis of the Contractor's potential claim. The Resident Engineer forwards the Contractor's potential claim with an

**Table 4-2 |**

**PRICE REASONABLENESS DOCUMENTATION**

**FOR CONSTRUCTION, SYSTEMWIDE, AND PROCUREMENT CONTRACT CHANGE ORDERS**

	Engineer's Estimate	Cost Proposal, Format and Support	Technical Evaluation Pricing	Pricing Support by Audit	Cost Analysis	Pre Negotiation Objectives	Price Negotiation
\$1,000,000 and Above	(4) Estimate with (i) three levels of detail or Work Breakdown Structure, (ii) a priced bill of materials and (iii) other costs as factors	Written Cost Proposal with three levels of Contractor cost detail. Support required for any line item over \$50,000.	Technical Evaluation Memorandum by Resident Engineer or other pricing specialist	Must request support from Audit	Cost Analysis Memo	Pre-Negotiation Objectives Memorandum	Price Negotiation Summary Memorandum with price recap
\$500,000 and below \$1,000,000				Must notify Audit of this pricing action			
\$100,000 and below \$500,000	(3) Estimate with (i) two levels of detail, (ii) a priced bill of materials and (iii) other costs as factors		Technical Evaluation Memorandum by Resident Engineer	May advise Audit at P.M.'s discretion	Combined Cost Analysis and Pre-Negotiation Objectives Short Form Memorandum		Price Negotiation Summary Memorandum
\$25,000 and below \$100,000			Short Form Technical Evaluation by Resident Engineer	No notice to Audit required below \$100,000	Combined Cost Analysis and Pre-Negotiation Objectives Short Form Memorandum		
\$10,000 and below \$25,000	(2) Estimate with one level of detail and priced material	Written Cost proposal with one level of Contractor cost detail.			Price Reasonableness Paragraphs in Summary of Negotiations Document		
Below \$10,000	(1) One Level Order of Magnitude Estimate on Change Notice form is sufficient	Statement in Summary of Negotiations Document that the recommended price is fair and reasonable.					

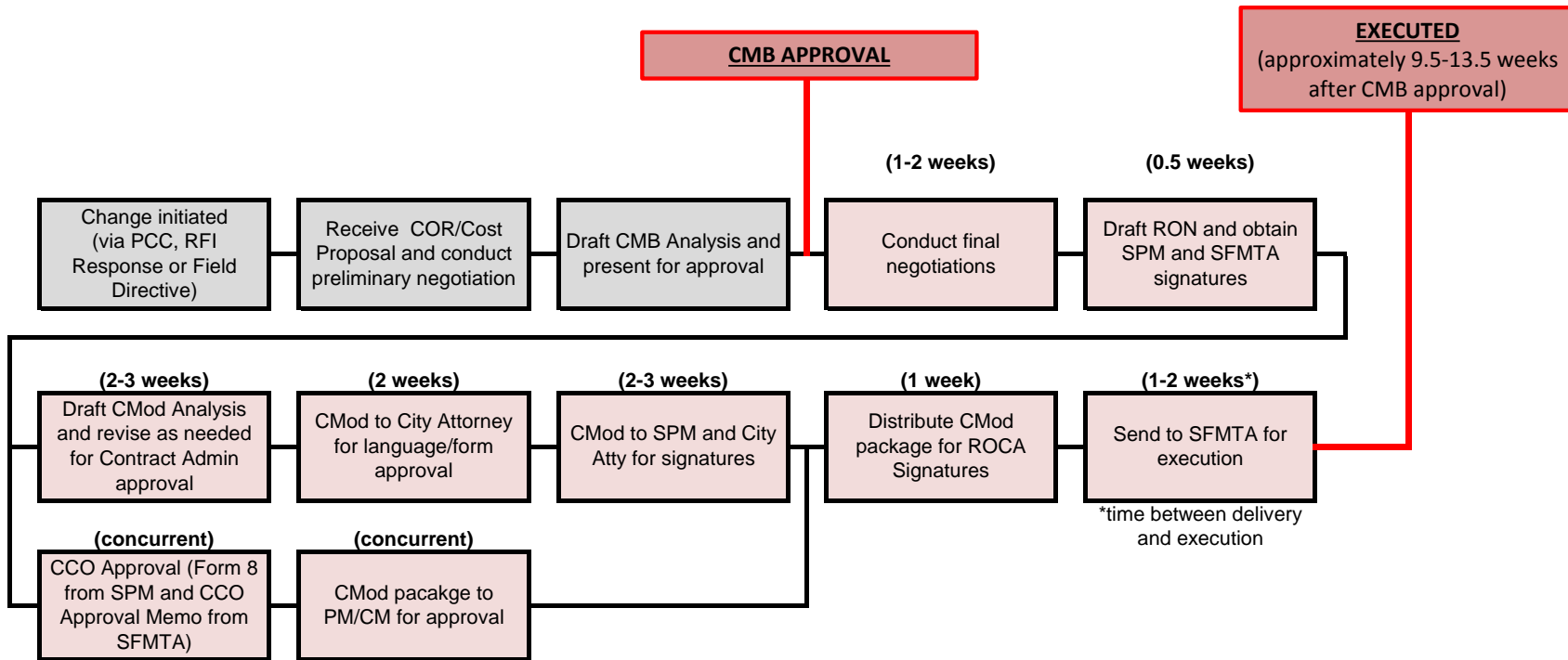
Notes regarding Engineer's Estimate:

- 1) One level Order of Magnitude Estimate can be a single amount.
- 2) Estimate with one level of detail; include prices for labor, material and equipment categories.
- 3) Two levels of detail; Example: Detail for all items of material which make up the price for the material category.
- 4) Full price analysis including all detailed back-up.

# CONTRACT MODIFICATION PROCESS TIMELINE

SFMTA CENTRAL SUBWAY PROGRAM

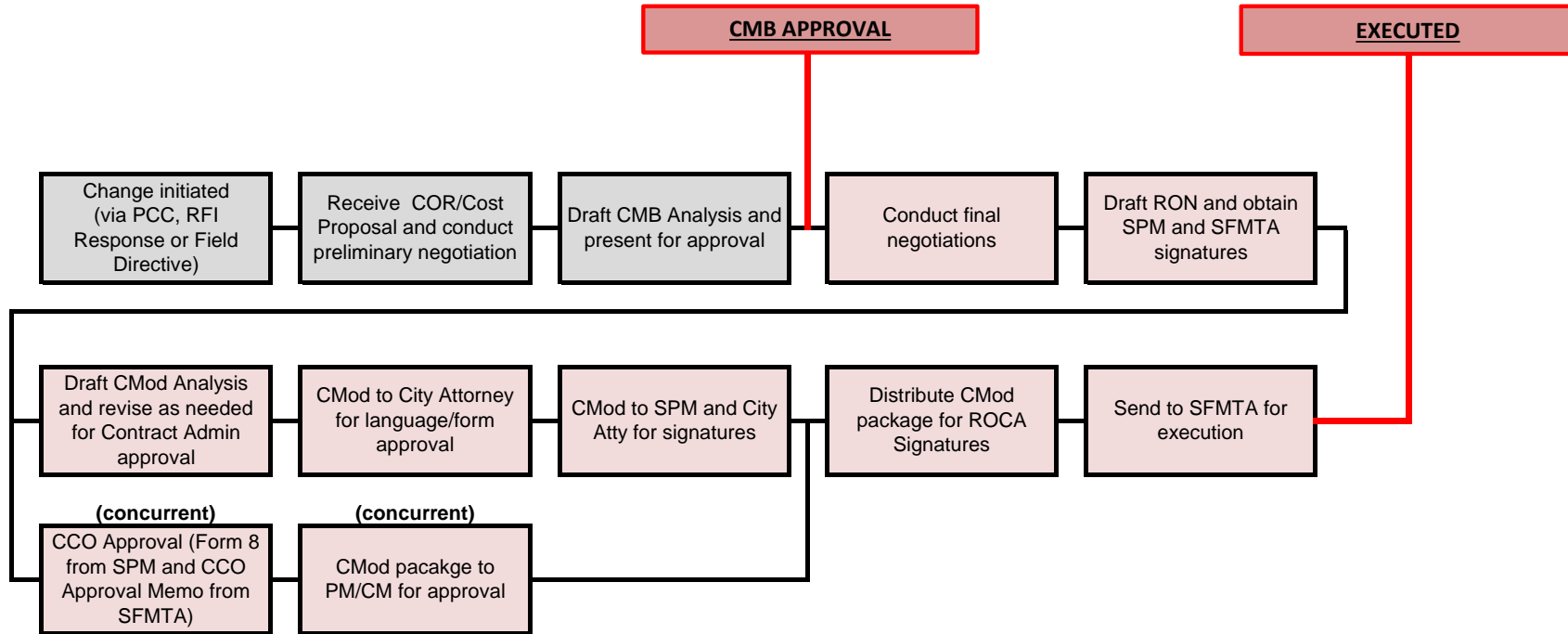
CN 1250 / CN 1251



# CONTRACT MODIFICATION PROCESS TIMELINE

SFMTA CENTRAL SUBWAY PROGRAM

CN 1250 / CN 1251



## C Mod Task Force Meeting Minutes #02

DATE: August 24, 2012

MEETING DATE: **August 20, 2012**

LOCATION: 821 Howard St, Main Conference Room

TIME: 3:30 PM

ATTENDEES: J. Park (JP), M. Acosta (MA), M. Benson (MB), E. Stassevitch (ES), C. Dombrowski, (CD) , Ben Volberding (BV), Ken Barnhart (KB),

COPIES TO: Attendees: J Funghi (JF), S. Farhangi (SF), R. Nguyen (RN), Sarah Wilson (SW), B. Lebovitz (BL), D. Kuehn (DK),  
File No. M544.1.5.0910.e

REFERENCE Project No. M544.1, Contract No. 149 Task 1-1.08  
Construction

SUBJECT: CMod Task Force Meeting # 02 – Rev. No. 0

### RECORD OF MEETING *(Italicized text indicates status update of open items)*

ITEM #	DISCUSSION	ACTION BY DUE DATE
1-	ES opened the meeting with reiterating the purpose of the Task Force. The CMod Task Force purpose is to examine the current procedures and practices related to processing changes during construction and look for areas of improvement, especially related to the time to develop and process a contract modification (CMod). A standing meeting has been established at the time and place noted above, for the next 9 weeks, with the attendees shown above; to identify areas of possible improvement, and develop recommendations for review by Sr. Management of the Program.	
2-	ES reviewed the five Areas of Improvement that were identified at the last meeting and it was agreed to work in a systematic way thru them consistent with the process; thus taking the ones related to the inception first, the process second and the execution third. Hence it was agreed to focus this meeting on Area of Improvement #1 & #2, with the intent of developing recommended improvements in the process.	
3-	<p><b>Area of Improvements #1 – Timely Submission of the COR</b></p> <p>From last meeting the task force reviewed the specifics that could be contributing to untimely submission of CORs and noted suggested ways to improve.</p> <ol style="list-style-type: none"> <li>1) First there was the need to have clarity among both parties as to initiation of the process. Notification, when and how; and then formal COR submittal, when and what are the actual contract requirements for time of notification and submission and what is to be submitted when.</li> <li>2) Confirm actual time requirements in contract documents – review for consistency and cross reference with procedures. Confirmed 24 hour notification, 7 days for COR and 30 days for review. Details of the format of the submission are contained in section 6 of contract 1252, and the COR specifically is in procedure 1101. It was recognized that the form was not part of the contract and there was no language in the contract that required specific</li> </ol>	SW/MA/KB 08/20/12



ITEM #	DISCUSSION	ACTION BY DUE DATE
	<p>format of submittal. The forms was presented at the preconstruction meeting and discussed. MB to verify that preconstruction minutes contain this discussion. Even if the minutes confirm the discussion, it was advisable to review the submission requirements with the Contractor.</p> <ol style="list-style-type: none"> <li>3) Complete information is part of a set of conflicting priorities of identifying the actual change, developing the required documentation, and performing the work. Improving direction to Contractor about timely submittal and completeness. <i>Develop letter templates 1) Reminder of contract obligations, expected date of receipt of info 2) Letter preserving Agency rights when untimely receipt</i></li> <li>4) Look for unique CORs, avoid and discourage delays associates with bundling of issues of like kind Differing site conditions need one for each case.</li> <li>5) It was also recognized that agreeing to what level of detailed the cost must be presented in the initial submittal. Combined with the issues of quantifying the change, it would appear reasonable to meet weekly on the status of information to be provided to adhere to the timeframes in the contract,</li> <li>6) Reexamine how the RE organizations participated in the identification of a change and how it must keep in mind at all times the contractual relationship is with the prime contractor and not the subcontractor. Only deal with the Prime in matters related to changes in the contract.</li> <li>7) Better tracking and follow-up on outstanding items on a weekly basis should provide adequate control. Current Change meeting needs to focus on the quantification of the process and items to follow-up on rather than conducting negotiations. Meeting should also ONLY use RE logs of status.</li> <li>8) Need to follow-up on the process after no merit – check the process for DRB/potential claims.</li> </ol>	
4 –	<p><b>Area of Improvement # 2 – Finding of the Fact</b>            In the review of the initiation process and actual practices it was clear that during the review for merit, although the work was being done, the documentation was not being developed in a timely manner to support justification of merit/no merit. Both the actual write up, originally to come from the Contractor and a review of merit or Finding of Fact to be prepared by the RE were not being developed until much later in the process. A review of procedure CM 1101 indicates these requirements and RE’s are currently not performing the required documentation at the initiation stage of the COR as required by the procedures. Performing this action at the beginning rather than at the later stages of the process will allow the process to continue in a much more organized and structured approach.</p> <p>Suggested possible improvements to follow-up on:</p> <ol style="list-style-type: none"> <li>1) Clarify contract provisions for Contractor required justification of COR, recognize that procedure does not call it Finding of the Fact.</li> <li>2) Clarify if Contractor was provided required form for submission with COR</li> <li>3) Review procedure for areas that may need clarification and improvement</li> <li>4) Educate CM/RE organization on procedure requirements, provide adequate resources, and follow thru</li> <li>5) Need to have CMB added to process for merit – the source documents will be COR and review for merit with Rough order of magnitude cost.</li> </ol>	MB 08/20/12


**ACTION ITEMS**

ITEM #	MTG DATE	MTG ACTION DATE	DESCRIPTION	BIC	DUE DATE	STATUS
3	08/13/12	08/13/12	Timely Submission of the COR	SW	08/20/12	Open
4	08/13/12	08/13/12	Finding of the Fact	MB	08/20/12	Open
5	08/13/12	08/13/12	Scoping Meeting/Estimate Preparation	SW	09/10/12	Open
6	08/13/12	08/13/12	Reconciliation of Costs	ES	09/17/12	Open
7	08/13/12	08/13/12	Change Order Process	MB	08/27/12	Open

Meeting adjourned at 4:30pm

These meeting minutes have been prepared by E. Stassevitch and reviewed by M. Benson, and are the preparer's interpretation of discussions that took place. If the reader's interpretation differs, please contact the author in writing within four (4) days of receipt of these minutes.

**Signed:** \_\_\_\_\_ [initials of preparer & reviewer] **Date:** \_\_\_\_\_ [Date review completed]

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	<b>Document Number:</b> CM.1101
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0


# CHANGE ORDER REQUEST AND CLAIMS PROCESSING

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APPROVED BY: John Funghi  
Senior Program Manager  
SFMTA Central Subway



DATE: 1-14-10

<b>Title:</b>  <div style="text-align: center;">             PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS            SECTION 1101 – CHANGE ORDER REQUEST AND CLAIMS PROCESSING         </div>	<b>Document Type:</b> Procedure
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## 1101.1 PURPOSE

This procedure describes how to analyze, approve, and process a Change Order Request (COR) submitted by a Contractor. It also defines the claims process that occurs upon SFMTA's denial of a COR.

## 1101.2 RESPONSIBILITY

When the Contractor believes that a change in the scope of the Contract will occur or has occurred, the Contractor may submit a COR to the Resident Engineer (RE). The COR must be timely, complete, and accurate. The RE reviews the COR and notifies the Contractor of the COR determination. If the RE determines the COR to be without merit and denies the COR, the Contractor may file a claim as specified in the General Provisions Section 98, Clarification and Claims. The Contractor submits the claim to SFMTA, following the protest procedure described in Section 1101.3.5 of this procedure.

## 1101.3 PROCEDURES

### 1101.3.1 General

The Contractor usually submits a COR when either of the following occurs:


- A. The Contractor encounters site conditions, which in the opinion of the Contractor, exceed the Contract requirements.
- B. SFMTA's clarification or other written directive, in the opinion of the Contractor, exceeds the Contract requirements.

#### 1101.3.1.1 Differing Site Conditions That Exceed Contract Requirements

When the Contractor encounters a site condition that the Contractor believes exceeds the Contract requirements, the Contractor must notify the RE of all anticipated or actual change work immediately by telephone and in writing within 1 working day of the time that the suspected work became known to the Contractor. The Contractor must not proceed with the suspected work until the RE gives direction. See Procedure CM 1105 for more information on Differing Site Conditions.

#### 1101.3.1.2 Additional Directives That Exceed Contract Requirements

When the Contractor feels that SFMTA's directive exceeds the requirement of the Contract, per General Provisions Section 98, Clarifications and Claims, the Contractor must submit a written COR to SFMTA within 7 calendar days of receipt of the

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clarification or directive, and before proceeding with the work. If the Contractor begins work before SFMTA receives the written COR, SFMTA is not responsible for any compensation claim. If the Contractor does not submit the COR to the SFMTA in the specified timeframe, the Contractor waives its rights to request or claim for additional compensation or time on the clarification or written directive.

### **1101.3.2 Change Order Request Documentation**

#### **1101.3.2.1 General**


If the Contractor determines additional time or compensation is necessary for the project, the Contractor prepares and submits to the RE a COR on the Change Order Request form (see Exhibit 1101-1). This document includes:

- A. A written narrative that justifies to SFMTA's satisfaction the reason for a time extension or additional compensation
- B. The revised schedule for the time extension or an estimate for additional compensation, the Contractor's Cost Proposal
- C. References to all related progress schedule activities, Contract Specification sections, and Drawings directly pertaining to the COR


#### **1101.3.2.2 Documentation Process**

Upon receipt of a COR, or correspondence which may contain proposal implications, the Office Engineer (OE), or RE for smaller projects, must:

- A. Rectify the numbering if the COR does not have a consecutive number. The COR number must:
  - 1. Be assigned to only one incident or change.
  - 2. Serve as a unique identifier of a particular incident or change through all subsequent operations involving estimates, quantity take-offs, etc.
  - 3. Be used in all correspondence concerning the proposal, throughout the life of the Contract.
- B. Log the Contractor COR in the COR Record Log (Exhibit 1101-2).
  - 1. The Contractor COR Record Log must:

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- a. Clearly identify and itemize in numerical order all Contractor CORs for all incidents regarding:
    - Time
    - Money
    - Any item of concern to the Contractor (see General Provisions for additional requirements)
  - b. Provide continuous control of the status of all special circumstances or changes to the Contract.
  - c. Ensure that no Contractor item, however small, is overlooked in processing changes to the contract.
  - d. Facilitate a status update at every progress meeting (see Procedure CM 0703).
2. The Office Engineer (OE) or RE must enter the following information into the Contractor COR Record:
- a. COR Number: The assigned Contractor COR number
  - b. Contractor Letter Number: The number on the initial letter and all following Contractor correspondence concerning the proposal
  - c. Contractor Letter Date: The respective date of each Contractor letter
  - d. RE Letter Date: The respective date of each RE letter
  - e. Description: A brief title and description of the request
  - f. Contractor Estimate: If the Contractor quantifies the request, the dollar amount and additional time indicated, if any
  - g. RE Estimate: The dollar figure documented within the Contract Modification (C/Mod) file (If none, enter N.A. for not applicable.)
  - h. Contractor COR Date Received: The letter number and date the RE received the COR (If there is no letter number, indicate so.)
  - i. Date of Negotiation: The date the RE reviews the details with the Contractor, if applicable


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- j. Force Account: An indication of whether the work or portions thereof are considered Force Account work under General Provisions Section 76
  - k. C/Mod Number/Date: The Contract Modification (C/Mod) number, if the Proposed Contract Change (PCC) is followed by issuance of a C/Mod
  - l. Agreed Amount/Time: The Contract amount or time change indicated on the C/Mod
  - m. Comments: An indication of the status, i.e., "Denied" and date, or "Modification Final" and date
- C. Establish a COR file for each individual COR.
- D. Collect information applicable to the proposal. This includes:
1. Copies of pertinent subcontractor documents
  2. Correspondence on the subject
  3. Cost estimates
  4. Photographs
  5. Charts
  6. Copies of plans and specifications
  7. Any other information of use in analyzing and evaluating the proposal

### **1101.3.3 Change Order Request Analysis**

Concurrent with the documentation effort, the RE must:

- A. Review the Contractor COR to determine if it is clear, complete, and submitted within the specified timeframe.
- B. Request the Contractor provide additional information and documentation as necessary to consider the COR for merit.
- C. Coordinate with other SFMTA staff as needed to determine if the COR has merit or not.
- D. Prepare an evaluation in accordance with the designated contractual authority.

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### 1101.3.4 Change Order Request Determination/Notification

SFMTA will review the validity of the Contractor's written COR and make a determination in writing as soon as possible, but not to exceed 30 days after receipt of the COR. The Contractor must proceed with the work in accordance with SFMTA's determination, which is final and binding on SFMTA and the Contractor unless the Contractor submits a written Notice of Potential Claim as specified under Contract General Provisions Section 98, Subsection B.2, Claims Procedure.

The RE will send one of the following responses to the Contractor:

- A. With Merit
- B. Without Merit
- C. Field Change (See 1101.3.4.3)
- D. Incomplete and Re-submittal Required

#### 1101.3.4.1 COR with Merit

If SFMTA determines the COR for additional compensation or time has merit under the current Contract, the RE initiates a Change Modification (C/Mod) under Procedure 1103 in conformance with General Provisions Section 75, Alteration, Modifications, and Extras.


#### 1101.3.4.2 COR without Merit

If SFMTA determines the COR for additional compensation or time does not have merit under the current Contract, the RE notifies the Contractor of the COR denial, substantiated by Contract Document references.

Upon receipt of denial, the Contractor may do either of the following:

- A. Withdraw the COR, through a formal process that includes written correspondence that documents the withdrawal, such as:
  - A letter
  - Meeting minutes
  - Marked-up Contractor proposal, etc.
- B. Resubmit for reconsideration, which initiates the protest procedure described in Procedure CM 1101.3.5.



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If SFMTA later determines the COR does have merit, the RE will initiate a Change Modification (see Procedure CM 1103 for specific instructions).

#### **1101.3.4.3 Field Change**

If SFMTA determines the change is a minor variation from the Contract Specifications or Plans and does not affect the design intent nor Contract scope, schedule, or cost, the RE will issue a "field change" response to the Contractor instead of a Change Modification. This shall be noted in the COR Record Log and documented on as-built drawings.

#### **1101.3.4.4 Incomplete and Re-submittal Required**

If SFMTA determines the COR is incomplete, the RE will specify the information required and return the COR to the Contractor for re-submittal. The Contractor must comply with the COR process in Procedure 1101 to resubmit the COR.

#### **1101.3.5 Claims Processing**

##### **1101.3.5.1 General**

If the Contractor receives notice that the COR is without merit, the Contractor may submit a claim to the RE. The Contractor must follow SFMTA's protest procedure, and the RE may call upon the Dispute Review Board if the Construction Manager and Contractor cannot come to an agreement.


##### **1101.3.5.2 Protest Procedure**

SFMTA's protest procedure is designed to keep all Contractor CORs within the Construction Management Department and to achieve claim resolution prior to using an alternative dispute resolution process by mutual agreement.

Each COR will receive due consideration by SFMTA. If the RE fails to reach agreement with the Contractor, the RE will initiate the protest procedure. At the preconstruction meeting, the RE will inform the Contractor of the protest procedure, which results in reviews of the COR at successively higher levels of management.

The protest cycle is as follows:

- A. The Contractor will, after the initial denial of the COR, do one of the following:
  - 1. Withdraw the COR.

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2. Resubmit the COR with or without additional documentation and request re-evaluation.
- B. SFMTA completes the review process for a resubmitted COR.
1. If after review of the resubmitted COR and additional information, the RE determines the COR has merit, the RE begins the Change Modification process in accordance with Procedure 1103.
  2. If the RE determines that the COR is without merit, the RE may review the issue in committee with Engineering Management, the Contract Administrator, and the Project Manager, for merit consideration. The RE will inform the Contractor of the outcome.
- C. If, after receiving SFMTA's written determination on a COR that a Contractor is not eligible for additional compensation or time, the Contractor still considers the work required to be outside of the Contract requirements, the Contractor may submit a written Notice of Potential Claim to the RE in accordance with General Provisions Section 98, Clarifications and Claims.
- D. SFMTA's field inspectors must carefully inspect and record work performed under "protest" to prepare for the possible resolution of claim, Disputes Review Board (DRB) activity, or litigation.

### 1101.3.5.3 Disputes Review Board


Depending on the Contract requirements, either party to a dispute may propose a Disputes Review Board (DRB) as an alternative dispute resolution process. If a DRB is mutually acceptable, the parties will work together to establish and agree on procedures for conducting the DRB's functions. Upon finalization, SFMTA will incorporate those procedures into this Procedures Manual.

### 1101.3.5.4 Monitoring Claims and CORs

On a monthly basis, the RE will hold a meeting to discuss each claim or COR and its status with the Contractor (see Procedure 703). For outstanding proposals, the two parties will determine and agree on the next required action for processing the claim or change necessary.

The parties will record and distribute meeting minutes to the following:

- A. RE files

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B. Contractor

C. Project Manager, Project Engineer, and Contract Administrator

On a quarterly basis, the RE must prepare a listing of all pending claims submitted by the Contractor with an estimated value of over \$100,000 as well as all claims settled during the preceding quarter, regardless of value.

### **1101.3.5.5 Work Interruptions/Delay Claims**

The RE must be familiar with and refer the Contractor to the General Provisions Section 78, Time Allowances for specific requirements. Two types of delays may occur on the project: avoidable and unavoidable.

For all alleged delays, the Contractor is required to file a "Notice of Delay" in writing within 7 days from the beginning of the said delay. This notice constitutes an application for extension of time only if the notice:

- A. Requests such extension
- B. Sets forth the Contractor's estimate of the additional time required along with full detail on the causes of the alleged delay, including Critical Path Method (CPM) schedule analysis documentation substantiating the alleged delay as required by the delay provisions of the Contract

#### **1101.3.5.5.1 Avoidable Delays**


Avoidable delays include:

- Delays that could have been avoided by the Contractor's exercise of care, prudence, foresight, and due diligence

#### **1101.3.5.5.2 Unavoidable Delays**

Unavoidable delays may include:

- Delays directly attributable to the actions of SFMTA that cannot be avoided by the Contractor's exercise of care, prudence, foresight, and diligence
- Delays from other such causes beyond the control of the Contractor as may be specifically stated in the Contract
- Delays due to RE-directed temporary suspension of work
- Delays due to the delay of another contractor's work

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SFMTA does not consider any delay or interruption of work due to material shortages or labor shortages an unavoidable delay, unless specifically approved by SFMTA.

### 1101.3.5.5.3 Notice of Delay


Upon receipt of a Notice of Delay, the RE will immediately record it and review it to determine the appropriate action, such as:

- A. Refer the matter to SFMTA, which may take steps to prevent the continued occurrence or mitigate the delay.
- B. Classify the alleged delay as avoidable or unavoidable, and direct the Contractor accordingly.
  - 1. Avoidable: If the RE determines the alleged delay had been avoidable in accordance with the Contract Specifications, the RE will deny the Contractor's request for additional time and/or money and demand a recovery schedule.
  - 2. Unavoidable – If the alleged delay is determined to be unavoidable, the Contractor must substantiate any allegation of delay to the overall work by submitting scheduling information in accordance with Construction Contract Specifications Section 01 32 13, Scheduling of Work. The Contractor shall follow up any initial Notice of Delay with a COR for the alleged delay.
  - 3. Unavoidable – No Time Extension Acceptable: If the project deadline cannot be extended, the RE may direct the Contractor to prepare a recovery schedule to overcome the delay and meet a completion date, in lieu of granting a time extension for an unavoidable delay. This recovery schedule may include strategies such as resequenced and/or concurrent activities, additional resources, acceleration, or other options as needed to recover the necessary time.
- C. Record the Notice of Delay information into the Notice of Delay Log.

### 1101.3.5.5.4 Delay Substantiation

The RE will not grant an extension of time for any cause unless the Contractor can demonstrate by means of CPM schedule analysis and other substantiation in the Contract that the delay meets the following criteria:

- A. It did occur.
- B. It was beyond the Contractor's control.

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C. It could not have been avoided by due diligence.

D. It delayed the project's critical path and final completion of the work and/or an interim contract milestone. In the case of delay to an interim milestone, the Contractor must meet the same standard of proof as if for an extension of time to the Contract duration. Delay to an interim milestone does not necessarily delay final completion and may not require an extension of time, only a new milestone date.

Upon rejection of a documented delay, the Contractor may choose to protest the denial, following the steps outlined in Procedure 1101.3.5.

#### **1101.4 DEFINITIONS**

None.

#### **1101.5 EXHIBITS**


1101-1 Sample Change Order Request Form

1101-2 Sample Contractor Change Order Request Record Form

#### **1101.6 REFERENCES**

Refer to the following:

- Contract Specifications General Provisions Sections 75- Contract Modification, 76- Force Account work, 78- Time allowance for completion of contract work, and 98- Clarification and Claims
- Procedure Manual Sections CM 0703- Project Current Schedule and Progress Review Meeting, CM 1103- Contract Modification

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### 1101.7 PROCEDURE HISTORY

<u>Revision Level</u>	<u>Revision Date</u>	<u>Summary of Revision</u>	<u>Approved By</u>

### 1101.8 APPROVALS



Prepared by	Reviewed by	Signature & Date
<b>Originator of Central Subway Procedures Manual</b> <b>Title and Unit:</b>  Dane Hudson Construction Manager Central Subway Partnership	Roger Nguyen Quality Assurance Manager Quality Assurance Office  Robert Rocco Configuration & Risk Manager Central Subway Partnership  Arthur Wong SFMTA Construction Manager Central Subway Project	 1/12/10   1/13/10   1/13/10   1/13/10

Exhibit 1101-1: Sample Change Order Request Form

**CHANGE ORDER REQUEST**

Contract No. & Name \_\_\_\_\_ Date \_\_\_\_\_  
COR No. & Title \_\_\_\_\_  
Requested Time & Cost \_\_\_\_\_

What (Description of COR)

Why (Reason for Requesting COR)

Where (Location/Station)

When (Occurrence date, action date)

How (Recommendation of Action)

Cost Proposal (Summary of Cost Proposal and attached)

Spec Ref  
Drawing Nos.  
Attach Time Impact Analysis(if applicable)

Prepared by: \_\_\_\_\_  
Contractor's Representative \_\_\_\_\_ Name, Title \_\_\_\_\_ Date \_\_\_\_\_

COR Record Log

EXHIBIT 1101.2

MR-1142 Third Street Light R16  
22nd Street to Jerrold Avenue

Exhibit 1101-2

COR No.	Description	Requested			Revised			Comments
		Date	Amount	Time	Date	Action	Amount	
1	Add Inertle Surfacing to Platform Ends	12/7/2004	\$1,890.00	0	12/14/2004	Approved	\$ 4,890.00	0
2	Add construction tolerances to top of platform concrete forms. Revised drawings	7/3/2005	\$3,685.00	0	7/8/2005	Denied	\$ -	0
3	Construct Sewer Between Arthur & Center Avenue	5/16/2005	\$244,722.00	0	5/25/2005	Approved	\$ 244,222.00	0
4	Install Duckbill between Arthur and Center	7/15/2005	\$80,664.00	0	7/27/2005	Approved	\$ 10,664.00	0
5	Additional Sewer Work Between Arthur and Center	6/29/2005	\$2,618.00	0	7/6/2005	Approved	\$ 32,618.00	0
6	Revise OV Drawings - Pole & Foundation Height Changes	9/16/2004	\$1,646.99	0	9/25/2004	Denied	\$ -	0
7	KMEL Radio Renote	2/3/2005	\$1,575.00	0	2/10/2005	Approved	\$ 1,575.00	0
8	Exploratory Drilling at Island Bridge	4/26/2005	\$3,000.00	0	5/3/2005	Denied	\$ -	0
9	Traffic Signal at Mann & Cargo	3/15/2005	\$9,801.00	5	3/22/2005	Approved	\$ 9,801.00	Deferred
10	Demo Curb and Place Diverters	2/3/2005	\$15,000.00	0	3/10/2005	Approved	\$ 2,557.91	0
11	Special Trackwork Spare Parts	3/18/2005	\$13,523.00	0	3/25/2005	Approved	\$ 13,033.00	Deferred
12	DPT Software & Training Request	4/1/2005	\$1,000.00	0	4/8/2005	Denied	\$ -	0
13	DPT VMS Foundation Request	6/20/2005	\$16,020.24	20	6/27/2005	Approved	\$ 13,256.00	Deferred
14	RR Crossing Signal Interlock Changes	6/27/2005	\$215,799.00	0	7/4/2005	Approved	\$ 215,799.00	0
15	Remove Sign Pole - MEOC Albert Court	7/1/2005	\$2,024.43	0	7/8/2005	Approved	\$ 2,024.43	0
16	Traffic Signal Hardware @ Arthur-Cargo	6/14/2005	\$9,577.00	0	6/21/2005	Approved	\$ 9,577.00	0
17	Differing Site Conditions SFWD Related	12/8/2005	\$20,000.00	0	12/15/2005	Approved	\$ 16,587.00	0
18	Revised LRV Medium CO #33	11/14/2005	\$3,249.00	0	11/21/2005	Approved	\$ 3,249.00	0
19	Revised Platform Drawings - Bolt Configuration & Marquee Base Height	11/21/2005	\$600.00	0	11/28/2005	Approved	\$ 600.00	0
20	VIS Conducts @ Center	8/1/2005	\$4,574.64	328	8/8/2005	Approved	\$4,574.64	Deferred
21	Revised Drawings - Misc. Changes to Platforms, Ramps, & Stairs	12/22/2005	\$7,613.00	0	12/29/2005	Approved	\$ 7,613.00	0
22	Typical UPRR Flangeway Notch (Dry)	10/7/2005	\$5,200.00	0	10/14/2005	Denied	\$ -	0
23	Rev. PL-23, Rev. 2 Draw - Pipe Sleeve Change at Innes Ave. Platform	10/21/2005	\$7,822.00	0	10/28/2005	Denied	\$ -	0
24	Rev. LA-03, Rev. 1, LA-05 Rev. 1, and LA-06 Rev. 1 Drawings - Truncated Dome Tile @ Crosswalks	12/16/2005	\$5,521.00	0	12/23/2005	Approved	\$ 5,521.00	0
25	Additional CSS Piling at ICB North Abutment	12/8/2005	\$180,000.00	0	12/15/2005	Approved	\$ 180,000.00	0
26	Perform Troubleshooting & Repair Existing Electrical Facilities	12/16/2005	\$5,000.00	0	12/23/2005	Denied	\$ -	0
27	Replace SFED AWSS Fittings	2/1/2006	\$24,747.00	0	2/8/2006	Approved	\$ 24,747.00	0
28	Environmental Supplies	2/22/2006	\$2,994.00	0	3/1/2006	Approved	\$ 2,994.00	0
29	Color Pavement Sealants RFI PH1 Changes to Color Pavement at Intersections	3/28/2006	\$21,555.00	0	4/7/2006	Approved	\$ 21,555.00	0
30	CES Environmental - Remove Underground Tanks	3/28/2006	\$16,023.52	0	4/4/2006	Approved	\$ 16,023.52	0
31	Revised OSMIT No 7 S-15 Structural Drawing	3/28/2006	\$16,081.00	0	4/4/2006	Approved	\$ 16,081.00	0
			\$974,063.87	191			\$930,082.88	0

Exhibit 1101-2: Sample Contractor Change Order Request Record Form



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# PROPOSED CONTRACT CHANGE ISSUANCE AND PROCESSING

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APPROVED BY: John Funghi  
Senior Program Manager  
SFMTA Central Subway



DATE: 1-14-10

<b>Title:</b>  <div style="text-align: center;">   <b>central T subway</b>  PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS  SECTION 1102 – PROPOSED CONTRACT CHANGE ISSUANCE  AND PROCESSING </div>	<b>Document Type:</b> Procedure <b>Document Number:</b> CM.1102
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## 1102.1 PURPOSE

This procedure defines the process for SFMTA to initiate, prepare, issue, and process a Proposed Contract Change (PCC).

## 1102.2 RESPONSIBILITY

Any member of SFMTA's Project Team involved under the Contract, or other agencies, may propose a Contract change to the Contract Administrator or Resident Engineer. The Resident Engineer in consultation with the Contract Administrator is responsible for reviewing the Proposed Contract Change to see if it has merit under the Contract. The RE is also responsible for reviewing the PCC, as well as documenting the PCC completely and accurately, and submitting the PCC to the Contractor with a request for a cost and time proposal.

## 1102.3 PROCEDURES


### 1102.3.1 General

Reasons to propose a Contract change are as follows:

- Changes in operational or functional requirements
- Errors and omissions in Contract Documents
- Revised criteria and/or codes
- Material substitutions
- Benefits or savings through Value Engineering

After a Project Team member proposes a Contract change, the following process occurs:

- A. The Resident Engineer in consultation with the Contract Administrator determines if the scope for the proposed change has merit under the requested Contract:
  1. If the change has merit under the Contract, the Resident Engineer (RE) prepares the required documentation.

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2. If the proposed change is without merit under the Contract, the Resident Engineer/Contract Administrator may deny the request or advise the change request initiator to revise or withdraw the change request.

B. The Project Controls Manager (PCM) determines if funding is available.

C. If the Contract Administrator and RE determine the proposed Contract change has merit, and the PCM determines funding is available, the RE issues to the Contractor a Proposed Contract Change (see Exhibit 1102-1).

### 1102.3.2 Proposed Contract Change Documentation

To properly document the PCC, the RE must:

- A. Assign a PCC number.
- B. Include a detailed description of the proposed additions, deletions, or revisions with supplementary or revised Drawings and Specifications.
- C. Complete the Finding of Facts form (see Exhibit 1102-2).
- D. Request assistance from the PCM or the PE if needed to generate the Engineer's Estimate required as part of the Finding of Facts form.
- E. Submit the PCC to the Contractor and request a cost and time proposal.

The PCC requests that the Contractor provide a quotation of cost and time for completing the proposed change. Within 14 days after receipt of a PCC, the Contractor must submit a PCC cost and time extension proposal (in accordance with General Provisions Section 79), if applicable, to SFMTA.


### 1102.3.3 Proposed Contract Change Approval

Upon SFMTA's (Contract Administrator and RE) approval of the PCC, the RE must follow the Contract Modification process under Procedure 1103. Refer to General Provisions Section 75, Alterations, Modifications, and Extras.

If SFMTA does not approve the PCC, the change request initiator may revise the request and begin the process again.

### 1102.3.4 Field Changes

The Contract Administrator typically classifies minor changes that do not impact the basic design or Contract as "field changes" rather than as "proposed changes." Once

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the Contract Administrator classifies a change as a field change, the RE must completely research the field change request to ensure the change would not impact the project's basic design, schedule, budget, and/or contractual content.

### 1102.4 DEFINITIONS

None.

### 1102.5 EXHIBITS

- 1102-1 Sample Proposed Contract Change Form
- 1102-2 Sample Finding of Facts Form

### 1102.6 REFERENCES

Refer to the following:

- Contract Specifications General Provisions Sections 75- Contract Modification and 79- Extension of Time
- Procedure Manual Section 1103- Contract Modification

### 1102.7 PROCEDURE HISTORY

<u>Revision Level</u>	<u>Revision Date</u>	<u>Summary of Revision</u>	<u>Approved By</u>

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### 1102.8 APPROVALS


Prepared by	Reviewed by	Signature & Date
<b>Originator of Central            Subway Procedures Manual            Title and Unit:</b>  Dane Hudson Construction Manager Central Subway Partnership	Roger Nguyen Quality Assurance Manager Quality Assurance Office  Robert Rocco Configuration & Risk Manager Central Subway Partnership  Arthur Wong SFMTA Construction Manager Central Subway Project	 1/12/10   1/13/10   1/13/10   1/13/10

Exhibit 1102-1: Sample Proposed Contract Change Form



**Municipal Transportation Agency**



PROPOSED CONTRACT CHANGE

Exhibit 1102-1

Contract No.

Date

PCC No.

PCC Title

Description of PCC

Spec Ref

Drawing Nos.

The Contractor's proposal in price and time is required on the following proposed contract change to the subject contract in accordance with the General Provisions Section 75.1.B within 14 days after receipt of a PCC.

Recommended by:

Name, RE/PE

Date

SFMTA Representative

Concur in Principle

Name, Contract Administrator

Date

SFMTA Representative

Exhibit 1102-2: Sample Finding of Facts Form

**FINDING OF FACTS**

Exhibit 1102-2

Contract No. & Name

Date

PCC No. & Title

Initiator (Name & Dept)

What (Description of PCC)

Why (Reason for Requesting PCC)

Where (Location/Station)

When (Occurrence date, action date, potential time impact)

How (Recommendation of Action)

Estimate (Summary of Engineer's Estimate w/EE attached)

Spec Ref

Drawing Nos.


The Contractor's proposal in price and time is required on the following proposed contract change to the subject contract in accordance with the General Provisions Section 75.1.B within 14 days after receipt of a PCC.

Prepared by:

Name, PM/RE

Date

SFMTA Representative

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# CONTRACT MODIFICATION


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APPROVED BY: John Funghi  
Senior Program Manager  
SFMTA Central Subway



DATE: 1-14-10



<p>Title:</p> <p style="text-align: center;"><b>central  subway</b></p> <p style="text-align: center;">PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1103 – CHANGE ORDER AND CONTRACT MODIFICATION</p>	<p>Document Type: Procedure</p> <p>Document Number: CM.1103</p>
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### 1103.1 PURPOSE

This procedure describes the Contract Modification (C/Mod) process. It defines how SFMTA prepares, approves, and distributes C/Mod documentation that meets SFMTA and funding-agency requirements. It also describes the Resident Engineer's (RE) role in this process.

### 1103.2 RESPONSIBILITY

SFMTA requires a Contract Modification to formalize all changes to Contract Documents, regardless of whether additional cost and/or time are involved. SFMTA requires a C/Mod to process and approve a Contract Change. The RE is responsible for the management, processing, and tracking of Contract Modifications with support from construction management staff as needed.

### 1103.3 PROCEDURES


#### 1103.3.1 General

SFMTA's approval of either a Change Order Request (COR) submitted by the Contractor or a Proposed Contract Change (PCC) submitted by a Project Team member initiates a Contract Modification. SFMTA's approval of a C/Mod is based on a cost analysis and contract negotiations. The RE completes the C/Mod documentation. Refer to Procedure 1101 for COR processing (Contractor initiated), and Procedure 1102 for PCC processing (SFMTA initiated).


**Allowances** – An allowance is a bid item for a defined element of work. The RE shall monitor and track all work performed against the allowance to verify that the scope of the work clearly falls within the contractual definition for that specific allowance. Documentation of work performed against the allowance will be prepared as if for a C/Mod. If the value of the work exceeds the value of the allowance included in the contract bid price, then a full C/Mod will have to be processed and executed in accordance with the procedures described herein. Allowances cannot be used to pay for work not described in the contractual definition for that allowance.

#### 1103.3.2 Cost Analysis

The cost analysis includes three components: Contractor's Cost Proposal, Engineer's Estimate, and a cost comparison between the proposal and the estimate.

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- A. Contractor's Cost Proposal: Per Procedures 1101 and 1102, the Contractor is required to submit a Cost Proposal as follows:
- COR: The Contractor must complete and submit a Change Order Request form (see Exhibit 1101-1 in Procedure 1101), including the required Contractor's Cost Proposal and request for time extension, within 7 days of receiving direction that exceeds Contract requirements.
  - PCC: The Contractor must submit a PCC cost proposal and PCC time extension proposal (in accordance with General Provisions Section 79), if applicable, to SFMTA within 14 days after receipt of a PCC.
- B. Engineer's Estimate: The RE must generate a cost estimate as follows with support from the Project Controls Manager (PCM) if necessary:
- COR: When the RE determines the COR has merit, the RE must generate an Engineer's Estimate.
  - PCC: The RE must generate an Engineer's Estimate for all PCCs that are sent to the Contractor.
- C. Cost Comparison: The RE, with support from the Central Subway Project Team when requested, must analyze the Contractor's Cost Proposal and compare it to the Engineer's Estimate. During this cost comparison, the RE must determine if the Contractor's Cost Proposal includes at a minimum the following:
1. Review the Contractor's Cost Proposal scope of work for correctness. If the scope of work is incorrect, the RE must return the Contractor's Cost Proposal with a comment to "revise and resubmit."
  2. Compare the Contractor's Cost Proposal to the Engineer's Estimate for completeness. The RE must compare the work category and detailed breakdown of each for omissions, such as phasing, traffic control, temporary work, transportation cost, etc.
  3. Compare the labor crew size, cost, and hours; equipment list, cost, and hours; and material cost for reasonability and compliance.
  4. Compare mark-ups and bonds to the Contract for compliance. Also, determine if the profit is a reasonable estimate.
  5. Write a detailed narrative that explains the reason for the difference in cost and make a reasonable recommendation for resolution.

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### 1103.3.3 Negotiations

Negotiations must be timely, fair, and precede actual work. The RE and Contractor must make every effort to reach an agreement on all the issues affecting scope, schedule, and cost.

#### 1103.3.3.1 Successful Negotiations

At the successful conclusion of negotiations, the RE must complete the Summary Record of Negotiations form (see Exhibit 1103-5). This form must include the negotiation details of the scope, schedule, and cost to be incorporated into the C/Mod. The RE and the Contractor must review and sign the form.

#### 1103.3.3.2 Failed Negotiations

If the negotiation efforts fail and the RE and Contractor do not reach an agreement, the RE must issue a Unilateral Change Order in accordance with General Provisions Section 75.2, Unilateral Change Orders. A Unilateral Change Order can be issued as a Lump Sum Change Order or be directed under a Force Account under General Provisions Section 76, Force Account Work. Even if the agreement is not reached, the RE must complete a Summary Record of Negotiations (see Exhibit 1103-5) that details the discussion and the key factor for disagreement. After failed negotiations, if the disagreement is irresolvable and/or impractical, the RE, in agreement with the Contract Administrator, may decide not to pursue the change and to reject the Change Order.

#### 1103.3.4 Approval


After successful negotiations, the RE initiates the Contract Modification in accordance with these procedures.

#### 1103.3.5 Contract Modification

##### 1103.3.5.1 Contract Modification Documentation Checklist

To ensure completeness of a Contract Modification package, the RE must complete a Contract Modification Documentation Checklist form (see Exhibit 1103-1). The RE must check off all items on the checklist before processing the package for approval. The checklist contains the following as applicable:

- A. Record of Concurrence and Approval
- B. Contract Modification - 4 originals
- C. Modification Change Analysis

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- D. Summary Record of Negotiations
- E. Funding Summary
- F. Independent Engineer's Estimate
- G. Contractor's Cost Proposal
- H. Modification supporting documents
- I. Sole-source justification

**1103.3.5.2 Record of Concurrence and Approval**


To ensure that the C/Mod receives the required approval, the RE must complete a Record of Concurrence and Approval (ROCA) form (see Exhibit 1103-2). The Executive Summary section of the form requires a clear and concise summary of the changes presented for approval. The required signatures follow this hierarchy:

- A. Construction Management
- B. Manager of Contract Administration
- C. Senior Program Manager, Central Subway (Signature also indicates CMB agreement if applicable)
- D. Senior Director of Capital Programs and Construction
- E. Director of Finance/CFO
- F. SFMTA Board of Directors Secretary (only if the C/Mod needs the Board of Directors' approval)
- G. Executive Director/CEO

**1103.3.5.3 Contract Modification**

The Contract Modification (C/Mod) form (see Exhibit 1103-3) includes the scope of work, payment method, compensation amount, schedule impact, and signatures. The RE must prepare 4 original C/Mod packages for signature.

- A. Scope of Work: The RE must clearly define the project's scope of work in concise detail. The scope of work must specify any project requirements, drawings/sketches, or any other pertinent information, and be attached to each C/Mod. Clearly state the following as applicable:

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1. The work activities
  2. Exclusions from this C/Mod
  3. Where the work will occur (from which location/station to which location/station)
  4. The schedule for the work
- B. Method of Payment/Amount of Compensation: SFMTA uses three payment methods: Adjustment of Contract Bid Item, Agreed Lump Sum, and Force Account.
1. Adjustment of Contract Bid Item: Whenever the extra work is of the same character as the Contract bid item work, the Contract Modification will increase or decrease the bid item quantity or quantities to pay for the extra work under the Contract bid item (see Special Provisions).
  2. Agreed Lump Sum: If the extra work cannot be paid under the Contract bid item, SFMTA recommends that the RE and Contractor negotiate and agree on the amount of compensation to be paid as an Agreed Lump Sum. If the RE and Contractor do not reach an agreement, and the RE processes the C/Mod unilaterally, the RE will allocate a Lump Sum amount and track the work as Force Account work.
  3. Force Account: The total costs for each item indicated on the Daily Force Account Work Report and Daily Force Account Work Summary reflect the total costs for labor, material, and equipment, along with the contractually-stipulated percentages. SFMTA uses the Force Account payment method when any of the following conditions exist.
    - a. The RE and Contractor fail to agree on an Agreed Lump Sum unit price.
    - b. The Contractor cannot estimate the work within reasonable limits of accuracy because of unforeseen conditions or lack of sufficient information.
    - c. The RE decides that Force Account will provide the most accurate and realistic method of payment.
    - d. The work affects the critical path, and the Contractor must perform it immediately.


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- e. The work requires any part of an allowance bid item that is not based on unit prices.
- C. Schedule Impact: If the Contractor can estimate an adjustment in Contract time within reasonable accuracy, the RE must attempt to reach an agreement with the Contractor. A time adjustment can be positive, negative, or zero depending on its effect on the critical path.
- 1. The RE must enter the amount of adjustment on the schedule even if it is a zero adjustment.
  - 2. If the RE cannot obtain an agreement with the Contractor, the RE must write “deferred” in the time adjustment line. Execution of a C/Mod with time deferred requires approval of the Construction or Program Manager.
- D. Signature: The Contractor, Executive Director/CEO of SFMTA, and Deputy City Attorney must sign and date the Contract Modification. If SFMTA requires the C/Mod to receive the Board of Directors' approval, SFMTA Board of Directors Secretary must sign the C/Mod and provide the resolution number. This is subject to the approved Delegation of Authority per CM 0201.

#### **1103.3.5.4 Modification Change Analysis**

The RE must complete a Modification Change Analysis form (see Exhibit 1103-4), which includes a scope of work, reason for change, Engineer’s Estimate, Contractor’s Cost Proposal, cost analysis, schedule analysis, and recommendation signature.

- A. Scope of Work: The RE may use the same content as in the Contract Modification scope of work.
- B. Reason for Change: Explain why the change is needed. Reasons may include:
  - 1. Changes in operational or functional requirements
  - 2. Unforeseen or differing site conditions
  - 3. Design errors or omissions
  - 4. Revised criteria
  - 5. Time extensions
  - 6. Material substitutions

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7. Benefits or savings through Value Engineering
  8. Incomplete right-of-way obligations
  9. Unresolved utility conflicts
  10. Lack of coordination with regulatory or other agencies
  11. Ambiguities in the Contract Documents
  12. Others
- C. **Engineer's Estimate:** The RE or designated representative must prepare an independent cost analysis as soon as the RE develops fully the scope of each change. The Engineer's Estimate is restricted information and must be independent from the Contractor's Cost Proposal and removed from any package sent to the Contractor.
- D. **Contractor's Cost Proposal:** Prior to negotiations, the RE must mark up a copy of the Contractor's Cost Proposal to reflect an equitable adjustment for the change.
- E. **Cost Analysis:** See Section 1103.3.2, Cost Analysis. This includes a cost comparison between the Engineer's Estimate and the Contractor's Cost Proposal.
- F. **Schedule Analysis:** The RE with the support and concurrence of the PCM must develop a descriptive narrative that defines the impact of the Contract change on Critical Path Method (CPM) activities and substantiates the overall time extension included. Attach a computer-generated analysis if performed.
- G. **Signature:** The RE and the CM must sign and date the Modification Change Analysis.

### **1103.3.5.5 Summary Record of Negotiations**

The RE must complete a Summary Record of Negotiations form (see Exhibit 1103-5) that documents the negotiations during the C/Mod process, including any agreements SFMTA and the Contractor reach. The RE and the Contractor both must review and sign this form.

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### 1103.3.5.6 Funding Summary

The RE with support from the PCM prepares the Funding Summary document, which must include the following:

- A. Original Contract amount
- B. List of previously approved C/Mod and amounts
- C. List of the funding sources with funding amounts
- D. Required insurance and expiration date
- E. Current amount by funding source

### 1103.3.5.7 Modification Supporting Documents

Within in C/Mod package, the RE must include the following supporting documents:

- A. Contract Compliance Approval: An approval letter from the Contract Compliance Department that documents Contract compliance.
- B. Form 8, Declaration – Modification of Construction Contracts: A Contract Document that declares the Contract has been modified.
- C. SFMTA Board of Directors Resolution: A document that states SFMTA Board of Directors (SFMTAB) has approved the resolution, if applicable.

If the total amount of the C/Mod exceeds 10 percent of the Contract amount or \$5,000,000, the C/Mod needs approval from SFMTAB. Therefore, the C/Mod package will include the resolution document only if the C/Mod requires SFMTAB approval.


### 1103.3.5.8 Sole-source Justification

If the Contractor is a sole-source provider, the C/Mod package must include sole-source justification. The RE is responsible for preparing a justification letter that explains why the Contractor is the sole source for this change.

### 1103.3.6 Supplemental Contract Modification

In the following cases, the RE must prepare a Supplemental C/Mod to adjust the final amount of a previously issued C/Mod. The supplemental C/Mod will have a new C/Mod number and is a stand alone document, but serves the purpose of adjusting the contract amount or time based on the final result of force account work.



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A. Force Account Change Order with Agreed Lump Sum (Bilateral Change Order):  
This is usually one of three types:

1. A Force Account Change Order with a not-to-exceed amount the RE had previously established in the C/Mod. At the completion of work, the RE and Contractor agree on a price based on the final force account records, which becomes the Agreed Lump Sum, and the RE prepares a Supplemental C/Mod to adjust and finalize an approved C/Mod utilizing a force account compensation method.
2. A Force Account Change Order with a not-to-exceed amount the RE had previously established in the C/Mod. Prior to completion of the changed work, the RE and Contractor agree on a price based on a negotiated lump sum, which becomes the Agreed Lump Sum, and the RE prepares a Supplemental C/Mod to adjust and finalize an approved C/Mod utilizing a lump sum compensation method and force account records are discontinued.
3. At the completion of work, if the Contractor requests additional compensation, the Contractor must file a claim per the General Provisions Section 75.2, Unilateral Change Order. Upon review, if the RE determines that the Contractor's claim has merit, the RE will prepare a Supplemental C/Mod with an Agreed Lump Sum price to adjust and finalize an approved C/Mod utilizing a force account or lump sum compensation method.


B. Force Account Change Order with a Lump Sum (Unilateral Change Order): If the SFMTA requires additional work and the RE and Contractor do not agree upon a price, but the RE directs the Contractor to complete the work, the RE prepares a Supplemental C/Mod with a Lump Sum price to adjust and finalize the previously issued unilateral C/Mod.

### **1103.3.7 Contract Modification Approval, Distribution, and Filing**

#### **1103.3.7.1 General**

After the RE prepares the C/Mod package, the RE must:

- A. Sign the Contract Analysis form and the Contract Modification Documentation Checklist form.
- B. Request and obtain the CM's signature on the Contract Analysis form.
- C. Forward the entire package to the Contract Administrator for compliance and completeness review.

<b>Title:</b>  <div style="text-align: center;">   <b>PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS</b>  <b>SECTION 1103 – CHANGE ORDER AND CONTRACT MODIFICATION</b> </div>	<b>Document Type:</b> Procedure <b>Document Number:</b> CM.1103
<b>Unit/Function:</b> Capital Programs and Construction Division Central Subway	<b>Revision Number:</b> 0

Throughout the C/Mod preparation process, the RE should consult with the Contract Administrator regarding any questions or for assistance.

**1103.3.7.2 Corrections**

After reviewing the C/Mod package, if the Contract Administrator requests corrections, the Contract Administrator and RE must coordinate the correction efforts.

**1103.3.7.3 Approval**

After the Contract Administrator determines the C/Mod package is complete, the RE must forward 4 originals of the C/Mod to SFMTA Attorney for approval and signature.

After SFMTA Attorney approves the C/Mod form and returns the 4 originals back to the Contract Administrator, the Contract Administrator will forward the 4 originals to the Contractor for review and signature.

**1103.3.7.4 Contractor Review**

The Contractor must review the C/Mod thoroughly. If the Contractor agrees with the C/Mod, the Contractor must sign and date all 4 originals, and return them to the Contract Administrator.

**1103.3.7.5 Contract Modification Approval**


After the Contract Administrator receives the 4 signed originals, the Contract Administrator routes the C/Mod package per Record of Concurrence and Approval guidelines (see Section 1103.3.5.2) and processes the package.

All C/Mod packages over \$50,000; and/or that include a time extension; and/or that impact third parties shall be submitted to the Configuration Management Board (CMB) (see PCP 01) for review prior to routing for approval signatures. The RE or Construction Manager may submit other C/Mod packages to the CMB at their discretion if considered needed.

PCCs, CORs, and C/Mods may be submitted to the CMB for a preliminary review if the RE or Construction Manager deems necessary.

After the C/Mod receives signatures from all of the parties listed in Section 1103.3.5.2, the C/Mod is considered approved.

If one party does not approve the C/Mod, the Contract Administrator leads the process to help SFMTA reach an agreement, and if the C/Mod needs revisions, the RE will arrange a renegotiation with the Contractor, and resubmit the revised C/Mod.

<b>Title:</b>  <div style="text-align: center;">   <b>PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS</b>  <b>SECTION 1103 – CHANGE ORDER AND CONTRACT MODIFICATION</b> </div>	<b>Document Type:</b> Procedure <b>Document Number:</b> CM.1103
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### 1103.3.7.6 Contract Modification Filing

Before forwarding the C/Mod package to the Contract Administrator, the RE must make 1 copy and file it in the field office with one copy to Document Control. Before routing the C/Mod package for approval, the Contract Administrator must make 1 copy and file it in the Contract Administration office.

### 1103.4 DEFINITIONS

None.


### 1103.5 EXHIBITS

- 1103-1 Sample Contract Modification Documentation Checklist
- 1103-2 Sample of Record of Concurrence and Approval
- 1103-3 Sample Contract Modification Form
- 1103-4 Sample Modification Change Analysis
- 1103-5 Sample Summary Record of Negotiations
- 1103-6 Flow Chart

### 1103.6 REFERENCES

Refer to the following:

- Contract Specifications General Provisions Sections 11- Estimate of the amount of work to be done, 75-79 (Contract Modification and Time Allowance), and 98- Clarification and Claims.
- Procedure Manual Sections 1105- Differing Site Condition and 1107- Force Account Work.

<b>Title:</b>  <div style="text-align: center;">             PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS            SECTION 1103 – CHANGE ORDER AND CONTRACT MODIFICATION         </div>	<b>Document Type:</b> Procedure
	<b>Document Number:</b> CM.1103
<b>Unit/Function:</b> Capital Programs and Construction Division Central Subway	<b>Revision Number:</b> 0

### 1103.7 PROCEDURE HISTORY

<u>Revision Level</u>	<u>Revision Date</u>	<u>Summary of Revision</u>	<u>Approved By</u>

### 1103.8 APPROVALS


Prepared by	Reviewed by	Signature & Date
<b>Originator of Central Subway Procedures Manual Title and Unit:</b>  Dane Hudson Construction Manager Central Subway Partnership	Roger Nguyen Quality Assurance Manager Quality Assurance Office  Robert Rocco Configuration & Risk Manager Central Subway Partnership  Arthur Wong SFMTA Construction Manager Central Subway Project	      

Exhibit 1103-1: Sample Contract Modification Documentation Checklist

**DOCUMENTATION CHECKLIST**

**CONTRACT MODIFICATION NO. 4**

Bid / RFP No.: MR-1210      Date: 1/30/07      Package Prepared By: Joon Park

Bid / RFP Title: MUNI Metro System Subway Overhead Reconstruction

Item	Document Included in Package	Yes	No	N/A	Prepared By	Date
1	Record of Concurrence and Approval	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Joon Park	1/29/07
	Executive Summary Memorandum					
2.	Contract Amendment Originals (4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Joon Park	
3.	Contract Change Analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Joon Park	12/20/06
4.	Summary Record of Negotiations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Joon Park	12/20/06
5.	Finding of Fact (time only)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.	Funding Summary Documents	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drew Howard	1/29/07
7.	Independent Engineer's Estimates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tee Phang	11/20/06
8.	Contractor's Cost Proposals	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stephen Wong	11/22/06
9.	Modification Supporting Documents					
	a. Contract Compliance Office Approval	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Andre P. Boursse	
10.	Sole Source Justification	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

General Notes:

Exhibit 1103-2: Sample of Record of Concurrence and Approval

**RECORD OF CONCURRENCE AND APPROVAL**

SUBJECT:	Contract Modification No. 4 to Contract No. MR-1210
PROJECT:	MUNI Metro System Subway Overhead Reconstruction

Modification Scope/Executive Summary:

This contract modification compensates the Contractor to replace 814 units of the installed Type B hangars, 100 mm and 175 mm in length, as shown on Impulse Drawing No. SKS-070069.

This contract modification No. 4 increases the cost of the contract by \$163,614. There is no time adjustment associated with this contract modification No. 4.

Final Routing	Approval Authority	Signature	Date	Comments
7	Nathaniel P. Ford, Sr. Executive Director/CEO, SFMTA			
6	Roberta Boomer Secretary, SFMTA			
5	Sonali Bose Director of Finance and Administration			
4	Carter R. Rohan, R.A. Senior Director of Capital Programs & Construction			
3	John Funghi Senior Program Manager, Central Subway			
2	Shahnam Farhangi Manager of Construction Contract Administration			
1	Arthur Wong Construction Management, Central Subway			

**Note:** *Please return fully executed contract modification and supporting documentations to Shahnam Farhangi.*

Exhibit 1103-3: Sample Contract Modification Form

**CONTRACT MODIFICATION NO. 4**

San Francisco Municipal Railway                      Contract No. MR-1210

**MUNI Metro System Subway Overhead Reconstruction**

Page: 1 of 2

Contractor:                      Shimmick Construction Co. Inc.  
    24200 Clawiter Road  
    Hayward, CA 94545

1.            Replace all the installed Type B hangars of between 100mm and 175mm (4 inches and 7 inches) in length and having a split bolt attachment. Remove and dispose the existing copper wire rope, split bolt, and thimble. Install in their place stainless steel wire rope suspension as shown on Impulse drawing No. SKS-070069. This work shall be done to an estimated quantity of 814 units at the agreed unit price of \$201.00 per unit.

Agreed Unit Cost,                      \$163,614.00

The Contract is hereby modified as follows:

2.            Add the following new Contract Pay Items:

CM 4	Replace 814 Units of Type B Hangar 100mm to 175mm in Length	Agreed Unit Cost,	\$163,614.00
------	---	-------------------	--------------

Total Amount of this Contract Modification:		Increase,	\$163,614.00
---	--	-----------	--------------

Previous Total of Contract:	\$8,029,464.00
-----------------------------	----------------

New Revised Total of Contract:	\$8,193,078.00
--------------------------------	----------------

Total Contract Time added by this Contract Modification:	None
--	------

Previous Contract Completion Date:	May 13, 2008
------------------------------------	--------------

New Revised Contract Completion Date:	May 13, 2008
---------------------------------------	--------------

3.            This Modification is made in accordance with Article 75 of the Contract General Provisions.
4.            Except as provided herein all previous terms and conditions of the Contract remain unchanged.

CONTRACT MODIFICATION NO. 4

Contract No. MR-1210

- 
5. Contractor acknowledges and agrees that the amounts agreed for the work described above shall be in full accord and satisfaction of all current and prospective costs incurred in connection with Contractor's performance of the work under this modification, without limitation. Contractor releases SFMTA from all claims for which full accord and satisfaction is hereby made, as set forth above.

If this modification involves the granting of an extension of time, with or without cost, Contractor releases SFMTA from all claims and costs associated with such extension of time. Such costs may include, but are not limited to, costs for labor, materials, equipment, disruption, lost productivity, escalation, delay, extended overhead, administration and extended performance time.

---

2 of 2

**SHIMMICK CONSTRUCTION CO. INC. CITY AND COUNTY OF SAN FRANCISCO**

By: \_\_\_\_\_

*Signature Date*

Charley McDonell

Project Manager

By: \_\_\_\_\_

*SignatureDate*

Nathaniel P. Ford, Sr.

Executive Director / CEO SFMTA

**APPROVED AS TO FORM:**

Dennis J. Herrera, City Attorney

By: \_\_\_\_\_

*SignatureDate*

Robin M. Reitzes

Deputy City Attorney



Exhibit 1103-4: Sample Modification Change Analysis

CONTRACT MODIFICATION NO. 4

**San Francisco Municipal Railway Contract No. MR-1210**

Contractor: Shimmick Construction Co. Inc.

Pier 96 Administration Bldg.  
San Francisco, California 94124

MINI METRO SYSTEM SUBWAY OVERHEAD

**MODIFICATION CHANGE ANALYSIS**

**SCOPE OF WORK:**

Replace all the installed Type B hangars (814 units) between 100 and 175mm (4 to 7 inches) in overall length: Remove and dispose the existing copper wire rope, split bolt, and thimble. Install in their place stainless steel wire rope suspension as shown on Impulse drawing No. SKS-070069.

**REASON FOR CHANGE:**

These hangars were installed as part of the original Contract but have proven to be prone to flexural failure and need to be replaced with a revised design that is better adapted for reduced clearance applications as found in certain portions of the MUNI Subway System.

**ENGINEER'S ESTIMATES:**

\$68,242      Cost breakdown dated 11/20/06      By: Tee Phang

**CONTRACTOR'S COST PROPOSALS:**

\$163,493      Cost breakdown dated 11/22/06      By: Stephen Wong

Exhibit 1103-5: Sample Summary Record of Negotiations

**CONTRACT MODIFICATION NO. 4**

**San Francisco Municipal Railway Contract No. MR-1210**

Contractor: Shimmick Construction Co. Inc.

Pier 96 Administration Bldg.  
San Francisco, California 94124

MIAMI METRO SYSTEM AIRWAY OVERHEAD

**SUMMARY RECORD OF NEGOTIATIONS**

The Contractor and SFMTA met on 11-28-06 to negotiate the final cost for modifying the hangars. Representing SFMTA were Romando Lucchesi, Resident Engineer; Lisa Chow, Project Manager; Tee Phang, Project Engineer; So Man-Leung, Design Engineer; and Shahnam Farhangi, Manager of the Construction Contract Administration Section. Representing the contractor, Shimmick Construction Co. Inc. were Charley McDonell, Project Manager and Stephen Won, Project Engineer.

During the meeting, an agreement was reached to establish the total cost for one shift of work at \$5,280.70 including mark-up. This cost is based on the actual crew size, equipment used, and mark-up in accordance with the Contract Specification as itemized below.

<u>Labor Class</u>	<u>Hourly Labor Rate</u>	<u>Total</u>
Lineman General Foreman	\$ 121.16	
Lineman Journeyman	\$ 100.11	
Lineman Journeyman	\$ 100.11	
Lineman Journeyman	\$ 100.11	
Groundman Journeyman	\$ 67.50	
High Rail Vehicle	\$ 75.00	
Pick-up Truck	\$ 10.00	
Sub-total Hourly Crew Rate		\$ 573.99
Sub-total 8 Hour Crew Rate		\$ 4,591.92
15% OH and Profit		\$ 688.79
<b>Total Crew Rate Per Work Shift</b>		<b>\$ 5,280.71</b>

Also, an agreement was reached to establish the production rates to perform replacement work at 27 units per shift. Considering that the material costs were confirmed to be \$5 per unit to replace system, the unit prices is derived as follows:

- Formula:  $\{((\text{quantity of units}/\text{production rate})\text{total cost for one shift})/\text{quantity of unit}\} + \text{material cost of unit}$
- Unit Cost:  $\{(814/27)5280.7/814\} + 5 = \$201$  per unit

An agreement was reach between MTA and the Contractor to replace 814 units of the installed Type B Hangars at an agreed unit cost of \$201 per unit not to exceed \$163,164. (814 units at \$201 per unit)

By: \_\_\_\_\_

By: \_\_\_\_\_

*Signature*                      *Date*

*Signature*                      *Date*

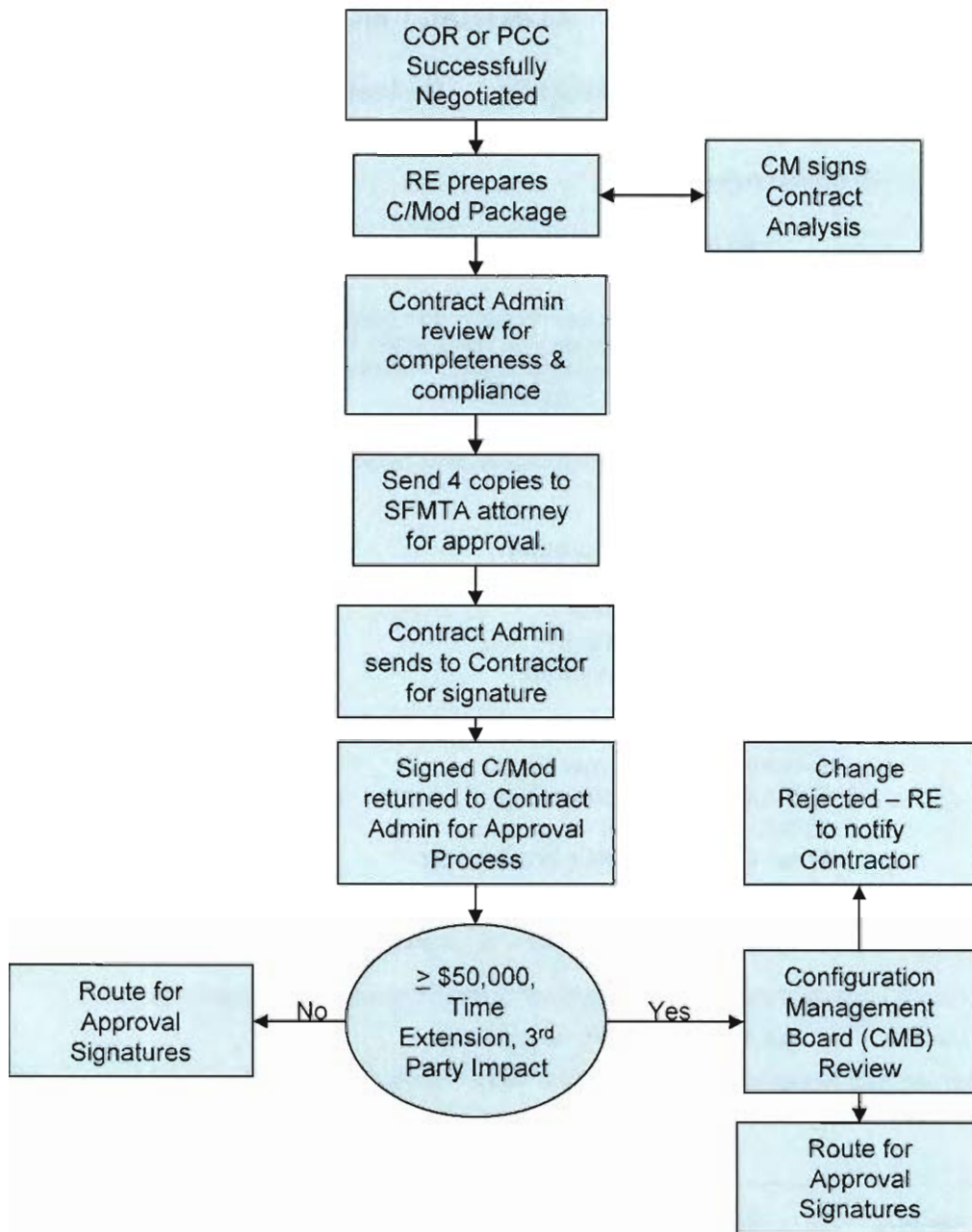
Charley McDonell, Project Manager


Romando Lucchesi, Resident Engineer

Shimmick Construction Co. Inc.

MTA Construction Representative

Exhibit 1103-6: Flow Chart



<b>Title:</b>  central  subway PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1105 – DIFFERING SITE CONDITIONS	<b>Document Type:</b> Procedure
	<b>Document Number:</b> CM.1105
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0


# DIFFERING SITE CONDITIONS

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APPROVED BY: John Funghi  
Senior Program Manager  
SFMTA Central Subway



DATE: 1-14-10

<b>Title:</b>  <div style="text-align: center;">             PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS            SECTION 1105 – DIFFERING SITE CONDITIONS         </div>	<b>Document Type:</b> Procedure
	<b>Document Number:</b> CM.1105
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0

## 1105.1 PURPOSE

This procedure describes the immediate actions the Contractor and Resident Engineer (RE) must take upon notice of an apparent Differing Site Condition (DSC). It defines site investigation, Site Review Team activities, preparation of a DSC Finding of Facts package based on the Site Review Team's recommendations, and corrective action for a DSC.

## 1105.2 RESPONSIBILITY

If the Contractor discovers a site condition that differs from the condition described in the Contract Specifications, before disturbing the site, the Contractor must promptly notify the RE as specified in Contract Specifications General Provisions, Section 83, Notice of Delay. The RE's responsibilities are to investigate the site, lead a Site Review Team, and determine the appropriate corrective action.

## 1105.3 PROCEDURES

### 1105.3.1 General


If the Contractor encounters a DSC that involves the potential release of hazardous materials, the Contractor is solely responsible for taking immediate action to mitigate or abate such a release, including implementation of emergency response procedures.

When the RE receives notification of a DSC from the Contractor, the RE must act immediately. Refer to the Contract Specifications Division 1, Allowance for additional requirements.

The RE must take the following steps:

- A. Investigate and document the site condition.
- B. Lead a Site Review Team.
- C. Create a DSC Finding of Facts package based on the team's site analysis.
- D. Determine whether a Contract Modification (C/Mod) is necessary.

If a C/Mod is necessary, the RE reviews the COR and follows the COR process under Procedure 1101. If a C/Mod is unnecessary, the RE directs the Contractor to do the work under the Contract.

<b>Title:</b>  <div style="text-align: center;">   <b>PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS</b>  <b>SECTION 1105 – DIFFERING SITE CONDITIONS</b> </div>	<b>Document Type:</b> Procedure <b>Document Number:</b> CM.1105
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0

### 1105.3.2 Site Investigation

Before the site condition changes, the RE must investigate the DSC, document the alleged condition, and protect the surrounding environment as follows:

- A. Take field photographs of the DSC.
- B. Evaluate the site's impact on the Contractor's progress.
- C. Document these impacts in the RE's diary and/or in the Inspector's daily reports.
- D. Identify the work affected on the 3-week look-ahead schedule and determine if it is critical to project progress.
- E. Ensure that the Contractor complies with all contractual provisions related to the handling and disposal of pollutants or hazardous material that may be released into the environment. The Contractor must take immediate action to prevent harm to human, animal, or plant life.


### 1105.3.3 Site Review Team

The Site Review Team usually consists of the RE, Project Engineer (PE), and other SFMTA representatives. The team must investigate and review all pertinent data to prepare a briefing for the Project Manager (PM) and Contract Administrator. This analysis must occur within 3 days of the RE's receipt of DSC notice.

The RE leads the team as follows:

- A. Contact the appropriate responsible PE (e.g., tunneling engineer, cut and cover engineer, utility engineer, or archaeologist, etc.) for consultation on whether the Contractor should proceed with the work.
- B. Share the site investigation documentation with the team.
- C. Discuss the possible actions.
- D. Get the team's agreement on a recommendation.

To prevent any undue delay to the work, during the site investigation by the RE and the Site Review Team, the RE may direct the Contractor to proceed with the work. The Contractor must maintain sufficient detailed records of any extra work alleged to be attributable to the DSC. The RE will conduct an investigation and determine if the event qualifies as requiring additional work and compensation under the Contract terms.

<b>Title:</b>  <div style="text-align: center;">             PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS            SECTION 1105 – DIFFERING SITE CONDITIONS         </div>	<b>Document Type:</b> Procedure
	<b>Document Number:</b> CM.1105
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0

#### **1105.3.4 DSC Finding of Facts Package**

Based upon the analysis and commentary of the Site Review Team, the RE must prepare a Finding of Facts package and forward it to the PM within 5 days after receiving the DSC notice, regardless of circumstance. The package must include:


- A. Summary Action Sheet Form (see Exhibit 1105-1): The RE must include a brief synopsis of issues, factors, and the RE's opinion on any actions the Contract or SFMTA should take.
- B. DSC Finding of Fact Form (Exhibit see 1105-2): This abbreviated fact sheet gives a brief overview of the DSC and relevant details.
- C. Site Review Team Summary: This summary details and addresses the following:
  1. All pertinent facts and events including site occurrences and correspondence along with respective dates
  2. A narrative analysis of the facts and events based on the Site Review Team's discussion, analysis, and comments
  3. The Site Review Team's recommendation including proposed actions and comments based on the team's analysis
- D. Pertinent enclosures such as:
  1. Copies of Contract Documents
  2. Internal and external correspondence
  3. Photographs
  4. The Inspector's daily reports (as back-up data)

#### **1105.3.5 DSC Determination**

Within 15 days of the RE's original receipt of DSC notice, the Site Review Team will notify the Contractor in writing of SFMTA's determination.

#### **1105.3.6 Corrective Action**

If the Site Review Team agrees with the Contractor's notice of DSC, the RE will recommend that SFMTA review the COR for merit under Procedure 1101. If SFMTA approves the COR, the C/Mod process will begin under Procedure 1103.

<b>Title:</b>  <div style="text-align: center;">   <b>PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS</b>  <b>SECTION 1105 – DIFFERING SITE CONDITIONS</b> </div>	<b>Document Type:</b> Procedure
	<b>Document Number:</b> CM.1105
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0

If the Site Review Team denies the DSC, the RE will direct the Contractor to proceed with the work, but the Contractor may appeal the decision to the Disputes Review Board (see General Provisions Section 98, Clarification and Claims, and Section 108, Dispute Resolution).

### 1105.4 DEFINITIONS

None.

### 1105.5 EXHIBITS

- 1105-1 Sample Summary Action Sheet
- 1105-2 Sample DSC Finding of Fact Form

### 1105.6 REFERENCES

Refer to the following:

- Contract Specifications Division 1, Allowances
- Contract Specifications General Provisions Sections 83- Notice of Delay, 98- Clarification and Claims, and 108- Dispute Resolution
- Procedure Manual Sections 1101- Change Order Request and Claims Processing, and 1103- Contract Modification

### 1105.7 PROCEDURE HISTORY

<u>Revision Level</u>	<u>Revision Date</u>	<u>Summary of Revision</u>	<u>Approved By</u>



<b>Title:</b>  <b>central T subway</b> PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1105 – DIFFERING SITE CONDITIONS	<b>Document Type:</b> Procedure
	<b>Document Number:</b> CM.1105
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0

### 1105.8 APPROVALS




Prepared by	Reviewed by	Signature & Date
<b>Originator of Central Subway Procedures Manual Title and Unit:</b>  Dane Hudson Construction Manager Central Subway Partnership		
	Roger Nguyen Quality Assurance Manager Quality Assurance Office	 1/12/10
	Robert Rocco Configuration & Risk Manager Central Subway Partnership	 1/13/10
	Arthur Wong SFMTA Construction Manager Central Subway Project	 1/13/10

Exhibit 1105-1: Sample Summary Action Sheet

**SUMMARY ACTION SHEET  
FOR  
DETERMINATION/FINAL DECISION OF OWNER**

Date.

CONTRACT NO.: \_\_\_\_\_

Proposal/PCC No.

Resident Engineer Summary

Items at Issue

Factors Considered

Opinion and Conclusion

---

Resident Engineer

Signature

Exhibit 1105-2: Sample DSC Finding of Fact Form

CP/PCC \_\_\_\_\_

Contract No. \_\_\_\_\_

**DSC FINDING OF FACT**

DIFFERING SITE CONDITIONS – REFERENCE APPROPRIATE SPECIFICATIONS IN CONTRACT GENERAL PROVISIONS AND SPECIAL PROVISIONS

1. REPORTED DATE OF OCCURRENCE \_\_\_\_\_

2. DATE OF CONTRACTOR'S WRITTEN NOTICE \_\_\_\_\_

3. TYPE OF WORK CONTRACTOR WAS PERFORMING \_\_\_\_\_

4. NATURE OF OBSTRUCTION \_\_\_\_\_  
\_\_\_\_\_

5. LOCATION OF OBSTRUCTION \_\_\_\_\_

6. METHOD USED TO OVERCOME OBSTRUCTION \_\_\_\_\_

7. SIGNIFICANT IMPACT ON CONSTRUCTION PROGRESS, IF ANY. (SUPPLIED BY THE CONTRACTOR)

COST \_\_\_\_\_

TIME \_\_\_\_\_

8. CONCLUSION, WHETHER-OR-NOT OBSTRUCTION CAN BE CLASSIFIED AS A DIFFERING SITE CONDITION (BASED ON CONTRACT DOCUMENTS).

9. ATTACHMENTS: SPECIFICATION \_\_\_\_\_

DRAWINGS

PHOTOGRAPHS \_\_\_\_\_

INSPECTION RPT \_\_\_\_\_

OTHER \_\_\_\_\_

SIGNATURE \_\_\_\_\_ TITLE \_\_\_\_\_

<b>Title:</b>  <b>central T subway</b> PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1107 – FORCE ACCOUNT WORK	<b>Document Type:</b> Procedure
	<b>Document Number:</b> CM.1107
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0


# FORCE ACCOUNT WORK

---

APPROVED BY: John Funghi  
Senior Program Manager  
SFMTA Central Subway



DATE: 1-14-10

<b>Title:</b>  <div style="text-align: center;">   <b>PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS</b>  <b>SECTION 1107 – FORCE ACCOUNT WORK</b> </div>	<b>Document Type:</b> Procedure
	<b>Document Number:</b> CM.1107
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0

## 1107.1 PURPOSE

This procedure provides policy and guidance for the Resident Engineer (RE) on how to direct, monitor, and document Force Account work.

## 1107.2 RESPONSIBILITY

When the RE cannot determine the scope of a Change Order or agree with the Contractor in a timely manner on an equitable adjustment for a change, or both parties recognize unforeseen conditions that may require payment of time and materials, the work becomes Force Account work. The RE directs the Contractor to do Force Account work only with approval from SFMTA's Program or Construction Manager, and after issuance of a Proposed Contract Change (PCC). Refer to Procedure 1102 for PCC information and Procedure 1103 for Force Account work information in regard to Contract Modifications. Force Account work cannot be paid for without an executed C/Mod.

When SFMTA pays for additions, deletions, and/or revisions in the work on a Force Account basis, all direct costs specified in General Provisions Section 75.3.A, Cost of the Work, Direct Costs, are subject to SFMTA's approval. The compensation and work direction are subject to the terms specified in General Provisions Section 76, Force Account Work.

## 1107.3 PROCEDURES

### 1107.3.1 General

The Force Account process accomplishes four things:

- It authorizes the Contractor to perform extra work.
- It establishes the scope of the work.
- It reserves a portion of the contractual allowance to pay for the extra work, if applicable to work described by the allowance.
- It can also be used to track costs on disputed work claimed as extra by the Contractor if the RE chooses. The Force Account Change Order form is not used in this situation.

To document Force Account work, the RE is responsible for preparing the following forms:

- A. Force Account Change Order

<p>Title:</p> <p style="text-align: center;"><b>central T subway</b></p> <p style="text-align: center;">PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1107 – FORCE ACCOUNT WORK</p>	<p>Document Type: Procedure</p> <p>Document Number: CM.1107</p>
<p>Unit/Function: Capital Programs &amp; Construction Division Central Subway</p>	<p>Revision Number: 0</p>

- B. Daily Force Account Report
- C. Daily Force Account Summary
- D. Supplemental Force Account Change Order

### 1107.3.2 Force Account Change Order

The RE uses the Force Account Change Order (FACO) form (see Exhibit 1107-1) to direct the work. Each FACO must include:

- A. An accurate specification of the work the Contractor will perform
- B. An estimated price for the work. The RE must obtain approval by the Construction Manager and other management as determined by the Delegation of Authority.
- C. A statement that "Payment for the work under such order shall not exceed a specified and previously agreed upon estimated cost and requires an executed C/Mod."


As part of the FACO process, the following occurs:

- A. Before the Contractor performs any Force Account work, the RE must review the FACO form and reach an agreement with the Contractor on the general scope of the supervision, labor, materials, and equipment the Contractor will use to complete the work.
- B. The Contractor must notify SFMTA in writing at least 24 hours in advance of its schedule before proceeding with the work.
- C. During the Force account work, SFMTA must witness, document, and approve in writing all Force Account work on the day the Contractor performs the work.
- D. The Contractor must obtain SFMTA Inspector's signature on the daily construction diary record to demonstrate that SFMTA has witnessed the work.

### 1107.3.3 Daily Force Account Report

#### 1107.3.3.1 General

The Contractor must complete the Daily Force Account Report (DFAR) to record the Contractor activities to perform the work, including labor, materials, and equipment. The Contractor must fill out and submit the DFAR to the RE on a daily basis (see Exhibit 1107-

<b>Title:</b>  <div style="text-align: center;">   <b>PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS</b>  <b>SECTION 1107 – FORCE ACCOUNT WORK</b> </div>	<b>Document Type:</b> Procedure
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<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0

2). The RE adds a report number to each form, and ensures it has the appropriate corresponding Change Order Request (COR), Proposed Contract Change (PCC), Force Account Change Order (FACO), and/or Change Modification (C/Mod) numbers.

### 1107.3.3.2 DFAR Documentation


The DFAR form must include the following:

- A. Date of the report
- B. Contractor and/or subcontractor name
- C. Contract number and title
- D. Contractor proposal number
- E. Report number (The RE must number all reports consecutively for each Force Account change.)
- F. Page numbers
- G. COR, PCC, FACO, and/or C-Mod number and title
- H. Brief description of the activities the Contractor performed on every date in question during the Force Account work
- I. Signature of a designated Contractor's representative
- J. Labor: Each worker's name, craft, class (e.g., apprentice, journeymen, or foreman), respective journal hours, and actual verifiable hourly cost-of-labor rate, as defined in General Provisions 75.3.A.1, Cost of the Work, Direct Costs, Labor
- K. Equipment: For every piece of equipment, the rental rate as specified in General Provisions 75.3.A.3, Cost of the Work, Direct Costs, Equipment
- L. Materials: The actual cost of materials obtained from suppliers. (The vendor's invoice must substantiate all items on the DFAR.)

### 1107.3.3.3 DFAR Verification and Approval

Upon receipt, the RE or designated field staff member must:

- A. Check and verify the DFAR.

<p><b>Title:</b></p> <p style="text-align: center;"><b>central  subway</b></p> <p style="text-align: center;">PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1107 – FORCE ACCOUNT WORK</p>	<p><b>Document Type:</b> Procedure</p> <p><b>Document Number:</b> CM.1107</p>
<p><b>Unit/Function:</b></p> <p style="text-align: center;">Capital Programs &amp; Construction Division Central Subway</p>	<p><b>Revision Number:</b> 0</p>

- B. Discuss any inaccuracies or inapplicable items with the Contractor.
- C. Resolve any issues.
- D. Compare the RE's records with the complete reports furnished by the Contractor and indicate any adjustments to the items listed on the report.
- E. Date and sign the report.

When both parties agree on and sign these DFARs, the reports become the basis of payment for the work the Contractor performs.

If the RE and Contractor cannot reach an agreement, the RE notes an exception on the DFAR and the amount of the total changes indicated by the Contractor that the RE authorizes for payment.

#### **1107.3.3.4 Cost Records**

The Office Engineer (OE) will maintain a running record of the DFARs, including the following cost records:

- A. Force Account cost approved for payment for each PCC
- B. Balance of uncommitted Force Account funds remaining in the project budget
- C. Force Account payments made with progress payments to the Contractor


#### **1107.3.4 Daily Force Account Summary**

Although an FACO, derived from Force Account cost records, does not require an Engineer's Estimate in the Findings of Facts form, the FACO does require:

- A. A summary of all approved daily costs on the daily Force Account cost summary forms
- B. A substantiation of the percentages applied for "cost of labor" and mark-ups
- C. Profit and bond determination

These items become the Daily Force Account Summary (see Exhibit 1107-3).



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<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0

### 1107.3.5 Supplemental Force Account Change Order

If the RE determines the cost of the work the Contractor performs under a FACO will be greater than the allotted amount for that work, the RE must issue a Supplemental FACO to increase the reserved amount available to pay for the work.

During the project closeout, the RE does the following.

- A. If after the Contractor completes the work the actual total cost of all work the Contractor performs under an individual FACO equals the allotted amount for that work, the RE does not need to take further action to reconcile the Force Account costs. If not done previously, a C/Mod needs to be execute for the final value of the force account work.
- B. If the actual cost of the Force Account work is less than the allotted amount, the RE must reduce the allotted amount to equal the actual cost of the work in the executed C/Mod. The RE must return the excess to the allowance, to pay for the extra work or to adjust that Contract item.

### 1107.4 DEFINITIONS

### 1107.5 EXHIBITS

- 1107-1 Sample Force Account Change Order
- 1107-2 Sample Daily Force Account Report
- 1107-3 Sample Daily Force Account Summary

### 1107.6 REFERENCES

Refer to the following:





- Contract Specifications General Provisions Sections 75- Alterations & Modification and 76- Force Account
- Procedure Manual Sections 1102- Proposed Contract Change Issuance and Processing, and 1103- Contract Modification

<b>Title:</b>  <b>central T subway</b> PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1107 – FORCE ACCOUNT WORK	<b>Document Type:</b> Procedure
	<b>Document Number:</b> CM.1107
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0

### 1107.7 PROCEDURE HISTORY

<u>Revision Level</u>	<u>Revision Date</u>	<u>Summary of Revision</u>	<u>Approved By</u>

### 1107.8 APPROVALS

<b>Prepared by</b>	<b>Reviewed by</b>	<b>Signature &amp; Date</b>
<b>Originator of Central Subway Procedures Manual Title and Unit:</b>  Dane Hudson Construction Manager Central Subway Partnership	Roger Nguyen Quality Assurance Manager Quality Assurance Office  Robert Rocco Configuration & Risk Manager Central Subway Partnership  Arthur Wong SFMTA Construction Manager Central Subway Project	 1/12/10   1/13/10   1/13/10   1/13/10


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Exhibit 1107-1: Sample Force Account Change Order

**FORCE ACCOUNT CHANGE ORDER**

Title: \_\_\_\_\_

SFMTA Project: \_\_\_\_\_

Contract No. \_\_\_\_\_ FA Change Order No. \_\_\_\_\_

Report No. \_\_\_\_\_ Date \_\_\_\_\_

TO \_\_\_\_\_, Contractor

You are ordered to perform work under Bid Item No. \_\_\_\_\_ as follows:

The work specified above will be paid for on a force account basis as set forth in Section 76, Force Account Work, of the General Provisions. Payment for this work will not be allowed without an executed Contract Modification.

Allowance Amount for this PCC is: \_\_\_\_\_

Prepared by: \_\_\_\_\_

Date: \_\_\_\_\_

Approved:

Construction Manager \_\_\_\_\_

CM \_\_\_\_\_ Date: \_\_\_\_\_

Original: Contractor

Copies: Construction Manager

Contract File

Exhibit 1107-2: Sample Daily Force Account Report

Sample Daily Force Account Report

DAILY FORCE ACCOUNT REPORT

Contract No. \_\_\_\_\_ PCC/CPN No. \_\_\_\_\_ Date Performed: \_\_\_\_\_ Am. Authorized \$ \_\_\_\_\_  
 Report Nos. \_\_\_\_\_ Date of Report: \_\_\_\_\_ Prev. Expended \$ \_\_\_\_\_  
 Sheet of \_\_\_\_\_ Final Report Yes No \_\_\_\_\_ This Report \$ \_\_\_\_\_  
 Contr Job No. \_\_\_\_\_ To Date \$ \_\_\_\_\_  
 Contr Report No. \_\_\_\_\_ Remaining \$ \_\_\_\_\_

Work Performed By \_\_\_\_\_ Description  
 of Work:

Equip No	EQUIPMENT	Hours	Rate	Amount	
				Owned	Rented
TOTAL COST OF EQUIPMENT					

LABOR	Hours	Rate	Amount
Reg.			
O.T.			
Reg.			
O.T.			
Reg.			
O.T.			
Reg.			
O.T.			
Reg.			
O.T.			
Subtotal			
Labor Surcharge _____ Percent			
Substance			
Travel Expenses			
TOTAL COST OF LABOR			
+ 24% on Labor			
+ 15% on Owned Equipment and Material			
+ 15% on Rented Equipment and Work			
TOTAL THIS REPORT			

MATERIAL and/or Work by Special Forces	Quantity	Unit Cost	Amount	
			Material	Work
TOTAL COST OF MATERIAL AND WORK				
TOTAL OWNED EQUIPMENT AND MATERIAL				
TOTAL RENTED EQUIPMENT AND WORK				

Originated By: \_\_\_\_\_ Date: \_\_\_\_\_  
 (Hours Only) Contractor's Rep.  
 Cont Extensions By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Contractor's Rep.  
 Cont Extensions Checked \_\_\_\_\_ Date: \_\_\_\_\_  
 Const. Management Rep.  
 Accepted: \_\_\_\_\_ Date: \_\_\_\_\_  
 Construction Manager

## Exhibit 1107-3: Sample Daily Force Account Summary

### Sample Daily Force Account Summary

**Daily Force Account Summary**

Contract No..	PCC/CPN No. Report Nos	Date Work Began: Date Completed Contr. Job No.. Contr. Report No	Amt. Authorized     \$ Prev. Expended     \$ This Report           \$ To Date                \$ Remaining             \$
---------------	---------------------------	---	--

**Work Performed By**  
Description of Work:

Equip No.	EQUIPMENT	Hours	Rate	Amount	
				Owned	Rented
<b>TOTAL COST OF EQUIPMENT</b>					

MATERIAL and/or Work by Special Forces	Quantity	Unit Cost	Amount	
			Material	Work
<b>TOTAL COST OF MATERIAL AND WORK</b>				
<b>TOTAL, OWNED EQUIPMENT AND MATERIAL</b>				
<b>TOTAL, RENTED EQUIPMENT AND WORK</b>				
<b>SUBMITTED:</b>				
Contractor's Rep.				

LABOR	Hours	Rate	Amount
Subtotal			
Labor Surcharge @ ___ Percent			
Subsistence			
Travel Expenses			
<b>TOTAL COST OF LABOR:</b>			
+ 24% on Labor			
+ 15% on Owned Equipment and Material			
+ 15% on Rented Equipment and Work			
<b>TOTAL THIS REPORT</b>			

REVIEWED BY: \_\_\_\_\_  
ACCEPTED: \_\_\_\_\_  
Construction Manager

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### 3.04 UNFORESEEN OR DIFFERING CONDITIONS

- B. Contractor's written notice shall inform the City as to how such conditions affect its Work and recommend methods to overcome such conditions.
- D. The City will promptly investigate the conditions reported in Contractor's written notice and will issue a written report of findings to Contractor.
- F. Should Contractor disagree with the City's determination, Contractor shall submit a written Notice of Potential Claim to the City as provided in Section 13.01 of these General Provisions.

### 6.01 GENERALLY (CLARIFICATIONS AND CHANGES IN THE WORK)

- F. Should the City's Clarification or other written directive, in the opinion of Contractor, exceed the requirements of the Contract Documents, Contractor shall submit a written Change Order Request (COR) to the City within **seven (7) calendar days** of receipt of the Clarification, and before proceeding with the Work thereof, as provided in Section 88, below. The City shall be relieved of any claim for compensation if said written COR is not received prior to Contractor beginning the affected Work. The Contractor waives its rights to request or claim for additional compensation or time on the Clarification or written directive if the Contractor fails to submit the written COR to the Engineer within the above timeline. The City shall not be under any obligation to respond to any statement or attempt made by the Contractor to reserve or reactivate such rights in the future.
- G. Failure by the Contractor to comply with the procedures of this Article, including the failure to provide timely, sufficient information and/or documentation to the City at the time of any Clarification or Change Order Request, shall constitute a waiver of any subsequent claim by the Contractor arising out of such Clarification or Change Order.

### 6.02 CHANGE ORDER (CONTRACT MODIFICATIONS)

- C. **PCC and COR Cost Proposal Requirements.** Contractor shall furnish two (2) copies of its PCC or COR cost Proposal, which shall include a complete itemized breakdown of labor, material, equipment, taxes, insurance, bonds, and markup for overhead and profit for both addition and deletions on a form supplied by the City. The same shall be required for subcontractor and lower-tier subcontractor cost proposals, which shall be furnished on the same form as required for Contractor. A COR shall reference all related progress schedule activities, Specification sections and Drawings directly pertaining to COR. In addition, Contractor shall provide the following documentation to the City in support of Contractor and subcontractor cost proposals:
  - 1. Material quantities and type of products;
  - 2. Labor breakdown by trade classification, wage rates, and estimated hours;
  - 3. Equipment breakdown by make, type, size, rental rates, and equipment hours;
  - 4. Taxes, insurance and bonds.

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- D. **SFMTA Review of COR.** The City will review the validity of Contractor's written COR and within **30 days** after receipt of the COR will render its determination in writing. Contractor shall diligently proceed with the Work in accordance with the City's determination, which shall be final and binding on the City and Contractor unless Contractor submits a written Notice of Potential Claim as specified under Section 13.01.

#### 6.05 FORCE ACCOUNT WORK

- B. **Notification and Verification:** Contractor shall notify the City in writing at least **24 hours** in advance of its schedule before proceeding with the Force Account Work. All Force Account Work shall be witnessed, documented, and approved in writing by the City on the Day that the Work is performed. Contractor will not be compensated for Force Account Work if Contractor fails to provide timely notice to the City before commencing the Force Account Work. In addition, Contractor shall notify the City when the cumulative costs incurred by Contractor for the Force Account Work equal 80 percent of the budget pre-established by the City. Contractor will not be compensated for Force Account Work exceeding the "not to exceed" budget amount if Contractor fails to provide the required notice before exceeding 80 percent of the Force Account budget.
- E. **Records:** Contractor shall maintain detailed records of all Work done on a Force Account basis. Contractor shall provide a **weekly** Force Account summary indicating the status of each Force Account Work directive in terms of actual costs incurred as a percent of the budget for the respective Force Account Work directive and the estimated percentage completion of the Force Account Work.

#### 7.02 EXTENSIONS OF TIME, DELAYS ACCELERATION

- A.1. **PCC and COR Time Adjustment Proposal Requirements:** If Contractor asserts it is entitled to a time extension due to the Proposed Contract Change work, Contractor shall provide a separate Notice of Delay (in accordance with Section 7.02E) prior to submitting a PCC or COR time extension Proposal. At a minimum, Contractor shall provide the following documentation to the City in support of Contractor and Subcontractor time extension proposal:
- a. Contractor shall submit to the City a CPM time impact evaluation using sub-network or fragmentary network and including a written narrative and a schedule diagram or other written documentation acceptable to the City, showing the detailed work activities involved in a change that may affect the Contract Time and impact of the change on other Work and activities of the proposed schedule adjustment. This sub-network shall be tied to the complete progress schedule network with appropriate logic so that a true analysis of critical path can be made.
  - b. Failure to provide said Notice of Delay in accordance with Section 7.02E, or failure to provide the supporting documentation required under Section 7.02.A.1 above, within the **14-Day period provided in Section 6.02.B, or within 14 days after submission of a COR**, will result in Contractor waiving its right for additional time.

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**E. Notice of Delay:**

1. Pursuant to section 6.22H.2.d of San Francisco Administrative Code, Contractor shall notify the City in writing promptly of all anticipated delays in the prosecution of the Work and, in any event, promptly upon the occurrence of a delay.
2. Said notice shall constitute an application for an extension of time only if it requests such time extension, sets forth Contractor's estimate of the additional time required together with a full recital of the causes of Unavoidable Delays relied upon, and meets all requirements for a Notice of Potential Claim as set forth in Section 13.01, including the requirement that such Notice be submitted to the City within **one Day** of the event which the Contractor contends affected the performance of the Work.
4. If Contractor does not submit a notice as set forth in subsection 7.02.E.2, above, Contractor thereby admits the occurrence had no effect on the length of its duration of Work and no extension of time is necessary, and Contractor understands and agrees that no extension of time or adjustment of the Contract Sum will be granted by the City.

**13.01 NOTICE OF POTENTIAL CLAIM (CONTRACT AND GOVERNMENT CODE CLAIMS)**

- A. If, during the course of the Work, the Contractor disputes any directive, determination (including determination of delay), Proposed Change Order, Unilateral Change Order, payment, or other act by the City impacting or potentially impacting the performance of the Work (collectively, "Potential Claim Events"), the Contractor shall submit to the City a Notice of Potential Claim. The Contractor shall submit such Notice within **7 Days** of the Potential Claim Event. The Notice shall describe the Potential Claim Event, provide a good faith estimate of any impact, and reference any relevant provisions of the Contract Documents and any schedules with sufficient specificity for the City to review the matter.
- B. Failure to submit a timely, properly documented Notice of Potential Claim shall constitute a waiver of any claim arising out of such potential claim event.
- C. The notice requirements of this Section apply regardless of whether or not the disputed item underlying a potential claim event has been or will be submitted to a Dispute Review Board or Dispute Resolution Advisor for review.

**13.02 CONTRACT CLAIM**

- A. General Contract Claim Requirements
  1. No later than **45 Days** after submitting a timely Notice of Potential Claim to the City in accordance with Section 13.01, Contractor may submit a Contract Claim for additional compensation or time based on any disputed Item (a) respecting the true value of any Work performed or any changes in the Work which Contractor may be required to perform; and/or (b) regarding time extensions; and/or (c) respecting the amount of payment to Contractor during the performance of the Contract; and/or (d) regarding the performance of obligations by any party.
  2. A Contract Claim shall be the Contractor's sole and exclusive administrative remedy for additional compensation or time associated with its performance of the Work. Failure to submit a timely, certified, and documented Contract Claim in



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conformance with this Article shall constitute a waiver by the Contractor as to any claims relating to its performance of the Work under the Contract and a failure by Contractor to exhaust its administrative remedies.

3. Contractor shall be solely responsible for any and all costs it incurs in preparing, filing, presenting, appealing or otherwise pursuing a Contract claim, which costs shall not be reimbursed or otherwise recovered for the City.
- B. Contract Claim Certification Requirement:
- C. Format of a Contract Claim:
- D. Additional Requirements for Contract Claims Regarding Time Extensions:
- E. Procedure For Review of a Contract Claim:
  1. The City shall review only timely, certified, and properly documented Contract Claims.
  2. The City shall respond to a Contract Claim in writing, within **45 Days** of receipt of such Claim...
  3. Within **10 Days** of the date of the City's response or expiration of the 45-Day period, whichever is earlier, the Contractor may request review of the Contract Claim and the City's response by the Deputy Executive Director...
  4. ... The Deputy Executive Director, or his/her designee, shall issue such determination with **60 Days** of the request for review...
- F. Further Remedy: Should contractor's Claim be rejected by the City in whole or in part, Contractor's sole and exclusive remedies shall be either to (1) seek resolution of its dispute through the Dispute Review Board (if one is established for this Contract), or (2) file a formal claim in accordance with the provisions of the California Government Code.

#### 16.02 DISPUTE RESOLUTION:

\*\* Section 01 27 00.92 DISPUTE REVIEW BOARD: 1.03.B "The Contractor may submit a matter to the DRB only after it has presented the SFMTA a certified Contract Claim that meets the requirements of the Contract.

## C Mod Task Force Meeting Minutes #03

DATE: August 28, 2012

MEETING DATE: **August 27, 2012**

LOCATION: 821 Howard St, Main Conference Room

TIME: 3:30 PM

ATTENDEES: J. Park (JP), M. Acosta (MA), M. Benson (MB), E. Stassevitch (ES), Sarah Wilson (SW), Ben Volberding (BV),

COPIES TO: Attendees: J Funghi (JF), S. Farhangi (SF), R. Nguyen (RN), C. Dombrowski (CD), Ken Barnhart (KB), B. Lebovitz (BL), D. Kuehn (DK),  
File No. M544.1.5.0910.e

REFERENCE Project No. M544.1, Contract No. 149 Task 1-1.08  
Construction

SUBJECT: CMod Task Force Meeting # 03 – Rev. No. 0

**RECORD OF MEETING** (*Italicized text indicates status update of open items*)

ITEM #	DISCUSSION	ACTION BY DUE DATE
1-	ES opened the meeting by restating the purpose of the Task Force. The CMod Task Force purpose is to examine the current procedures and practices related to processing changes during construction and look for areas of improvement, especially related to the time to develop and process a contract modification (CMod). A standing meeting for 10 weeks has been established at the time and place noted above, for the remaining 8 weeks, with the attendees shown above; to identify areas of possible improvement, and develop recommendations for review by Sr. Management of the Program.	
2-	ES reviewed the minutes from meeting #2 to refresh the group on accomplishments for Areas of Improvement #1 and #2 that were identified at the last meeting and what the next steps would be to summarizing the discussions. It was recommended that a form be developed that would summarize the area of improvement; first stating causes of the problem, then possible ways to mitigate the various issues; then recommendations to improve the process; a signature area for CMB approval; and then a verification step to ensure that recommendations were in fact implemented. The form will be brought back at the next meeting for review. Continuing with the focused approach to discuss Areas of Improvements, it was agreed at last meeting to discuss #5 this week due to the absence of the estimator from the task force meeting. Area of Improvement # 5 The Change Process will be discussed this week.	
3-	<b>Area of Improvement #5- Change Order Process</b> It was clear from the discussion among the task force that the process called out in the current contracts under construction, needs to be reviewed for completeness and compared to the Program procedures. Also the participation of Contract Administration must be better defined and much earlier in the process. Program Procedure 1103 was reviewed in detail by the task force and appeared to be	MB/ES 10/01/12

ITEM #	DISCUSSION	ACTION BY DUE DATE
	<p>complete, the problem being that the RE organizations have not been following the process in the time frame called for in the procedure. Specifically the process of documenting the merit/no merit of a COR and the preparation of a cost analysis. These crucial steps have been thwarted to date by the untimely submission of the Contractor's COR; lack of definition of scope; incomplete preparation of Cost proposal and RE estimate for cost comparison purposes.</p> <p>There were points raised by the current REs indicating that meetings must be held with the Contractor to fully complete the cost comparison. Although not in complete agreement, the task force suggested that the scoping meetings be the forum to sort out what is to be estimated and how, and then after submission of cost information the cost comparison should be prepared and recommended negotiation positions developed to be presented to the CMB for approval.</p> <p>This raised the question of the level of authority of the RE organization, and per the procedures any item under \$50,000 and not involving time could be handled at the RE level without bringing it to the CMB. Again the task force was not in total agreement about the interpretation of this procedure and requires further clarification from the Program. It was reiterated that regardless of the level of Authority, the areas of improvement discussed above still need to be adhered to, i.e. document the merit/no merit evaluation, and produce a cost analysis/cost comparison, negotiation position prior to negotiations with the Contractor.</p> <p>Finally, a system needs to be developed and adhered to for the production of the CMod binders that will accumulate the documentation in one place for review, routing and approval. This binder should be created and used from the onset of a COR.</p> <p>A small committee at the program level should be established to regularly meet (weekly) to review progress on CMod development for all contracts. This body would review the binder content on a regular basis for consistency and accuracy prior to any routing for approval.</p> <p>There was additional discussion on the processing of a CMod, specifically the clauses in the contract that are indicating that the Contractor cannot proceed with work without an executed CMod. Again, the Task Force members were not in complete agreement as to the interpretation of section 6 in the GPs (1252) indicating that the only method of changing the contract is with a CMod, this did not imply to others that the Contractor needs a CMod to proceed with the work, however, the means in by which the work would be paid came into question. These are items that require followup action and perhaps clarification in the contract documents.</p> <p>Suggested for areas of improvement:</p> <ul style="list-style-type: none"> <li>• Involve Contract Admin in the initiation stage, review for merit</li> <li>• Involve Contract Admin in scoping meeting and cost estimating review</li> <li>• Develop meaningful Cost Comparison Sheet</li> <li>• Develop Recommended Negotiation Position</li> <li>• Clarify Delegation of Authority</li> <li>• Review GPs to ensure adequate information is provided contractor</li> </ul>	

**ACTION ITEMS**

ITEM #	MTG DATE	MTG ACTION DATE	DESCRIPTION	BIC	DUE DATE	STATUS
3	08/13/12	08/27/12	Finalize Area of Improvement #1 - Timely Submission of the COR	SW	09/24/12	Open
4	08/13/12	08/27/12	Finalize Area of Improvement #2 - Finding of the Fact	MB	09/24/12	Open
5	08/13/12	08/13/12	Scoping Meeting/Estimate Preparation	SW	09/10/12	Open
6	08/13/12	08/13/12	Reconciliation of Costs	ES	09/17/12	Open
7	08/13/12	08/27/12	Finalize Area of Improvement #5 - Change Order Process	MB	10/01/12	Open
8	08/27/12	08/27/12	Clarify Delegation of Authority	ES	10/01/12	Open
9	08/27/12	08/27/12	Review GPs to ensure adequate information	ES	10/01/12	Open

Meeting adjourned at 4:30pm

These meeting minutes have been prepared by E. Stassevitch and reviewed by M. Benson, and are the preparer's interpretation of discussions that took place. If the reader's interpretation differs, please contact the author in writing within four (4) days of receipt of these minutes.

**Signed:** \_\_\_\_\_ [initials of preparer & reviewer] **Date:** \_\_\_\_\_ [Date review completed]

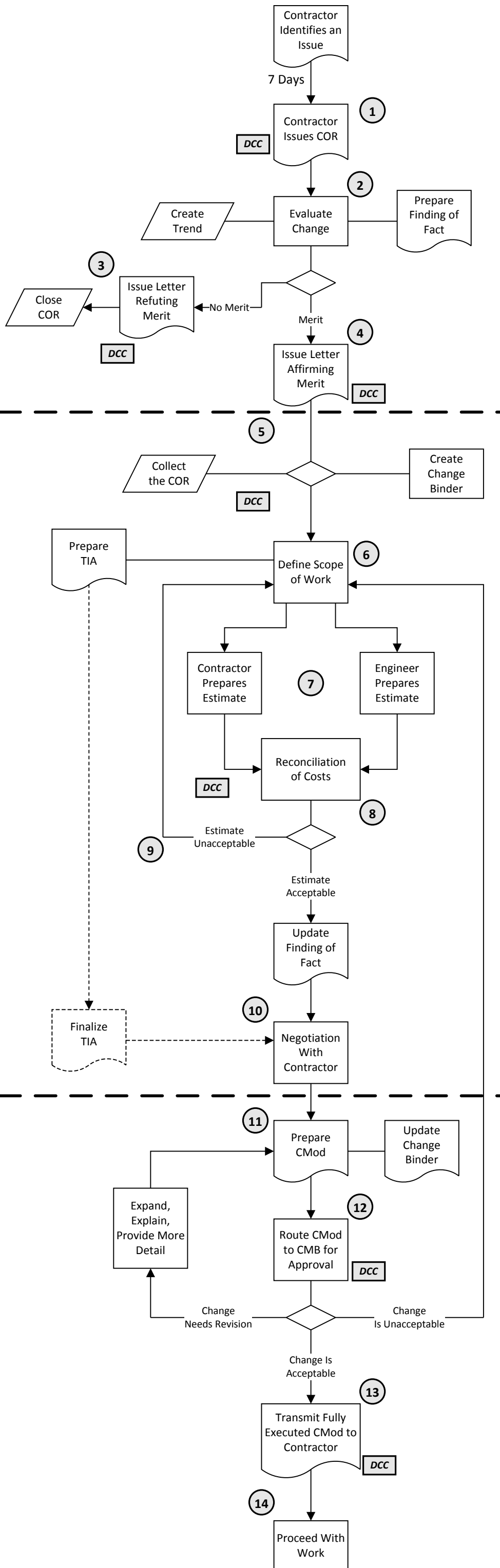
# CONTRACT CHANGE PROCESS

## CONTRACTOR INITIATED CHANGE

INITIATION

PROCESSING

EXECUTION



- 1) Contractor submits a Change Order Request (COR) that conforms to the requirements in Article 6 of the General Provisions describing the change, the reason for the change, a cost estimate, and any time impact associated with the change.  
**DCC: The incoming document is appropriately catalogued and electronically distributed with high priority.**
- 2) The COR is evaluated by the Resident Engineer, a Finding of Fact is drafted, and a "trend" is created for the COR within the trend log.
- 3) If no merit is determined, the Contractor is issued a letter of refute, and the COR is "closed" within the trend log.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 4) If merit is determined, the Contractor is issued a letter that contains an affirmation of merit.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 5) A request is made for a cost/time estimate and a scoping meeting. In addition, a change binder is created to contain all change-related documents, and the COR is "collected" within the CM13 database.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 6) Prior to cost estimating, the scope of work is defined, if necessary by a scoping meeting between the Resident Engineer and the Contractor. In addition, a Time Impact Analysis (TIA) is drafted the contractor if applicable.
- 7) Both the Contractor and the Resident Engineer develop independent cost estimates. Upon completion, the Contractor's estimate is submitted to the Engineer.  
**DCC: The incoming document is appropriately catalogued and electronically distributed.**
- 8) Differences in costs are identified and reconciled.
- 9) If upon review, the estimates are found to be unacceptable, the Resident Engineer may consider changing the scope of work, which may entail additional meeting(s) with the Contractor, and additional cost estimating.
- 10) If upon review, the estimates are found to be acceptable, then the change is negotiated by the Contractor and the Engineer at the next scheduled negotiation meeting. Prior to negotiation, the Finding of Fact is updated with the available new information. In addition, the TIA must be finalized, if necessary. A formal Record of Negotiation is written by the Resident Engineer.
- 11) Upon successful negotiation of a contract change, a Contract Modification (CMod) is prepared by the Resident Engineer. In addition, the change binder is updated to include all required documents, and a Board Memo is submitted for the monetary amount of the contract change. Initiation of a CMod includes the following:
  - 11a. Send the Contract Administrator an email request to create the CMod within the CM13 database.
  - 11b. Check / verify specific wording.
  - 11c. Print two (2) copies of the CMod document.
  - 11d. The Construction Manager signs both Cmod documents.
- 12) The CMod is routed for approval / execution as follows:
  - 12a. Transmit both CMod documents to the Contractor with a standard letter.
  - 12b. Receive both CMod documents with the Contractor's signature.
  - 12c. Transmit both CMod documents to the Configuration Management Board (CMB), along with the completed change binder.
  - 12d. Receive one CMod document with the CMB member's signatures.  
(If the CMod needs revision or the CMB deems the change as unacceptable, additional steps may be necessary to accomplish the contract change.)**DCC: Incoming / outgoing documents are appropriately catalogued and electronically distributed.**
- 13) The fully executed CMod is transmitted to the contractor with a standard letter.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 14) Field work commences.


<b>Title:</b>  <b>central T subway</b> PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 201 – DELEGATION OF AUTHORITY	<b>Document Type:</b> Procedure
	<b>Document Number:</b> CM.0201
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0

# DELEGATION OF AUTHORITY

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APPROVED BY: John Funghi  
 Senior Program Manager  
 SFMTA Central Subway

DATE: 1-14-10

<b>Title:</b>  <div style="text-align: center;">   <b>PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS</b>  <b>SECTION 201 – DELEGATION OF AUTHORITY</b> </div>	<b>Document Type:</b> Procedure
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## 201.1 PURPOSE

The purpose of this procedure is to identify the limits of the Manager of Construction Management's (Construction Manager's or CM's) authority and that of his/her delegate Resident Engineer, and to establish a method and format for implementation of San Francisco Municipal Transportation Agency (SFMTA)' Delegation of Authority to the Construction Manager and Resident Engineer (RE).

## 201.2 SCOPE

The RE, assigned by the CM, is the Authorized Representative of the SFMTA with authority to act for within the limits specified in the Contract, and those set forth in writing in SFMTA's Letter of Delegation. In practice, the RE is vested with authority to take all actions which can lawfully be taken by SFMTA, within the limits of the written Delegation of Authority, with the following exceptions:

- A. Issuance of Contract Notice to Proceed by the CM.
- B. Notification of Date of Contract Completion by the Contract Administrator with recommendation from the RE.
- C. Designation of Authorized Representative of SFMTA.
- D. Approval of Progress Payments by the Contract Administrator with recommendation from the RE.
- E. Execution of Contract Modifications by the Board with recommendation from the RE.
- F. Approval of Change Orders not exceeding 10% of awarded contract value rests with the Executive Director up to a maximum cumulative value of \$5,000,000 and time extensions up to 25% of the original contract term, with recommendation from the RE. For contracts less than \$10,000,000, the maximum cumulative value is 25% of the original contract value or \$2,500,000, whichever is greater.

The Executive Director may re-delegate in writing the authority to approve and execute any single contract change order, modification, or amendment to the Deputy Executive Director, Chief Construction Officer, or Directors of Divisions having a direct reporting relationship to the Executive Director/CEO, with the authority to re-delegate within their

<p>Title:</p> <p style="text-align: center;"><b>central T subway</b></p> <p style="text-align: center;">PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 201 – DELEGATION OF AUTHORITY</p>	<p>Document Type: Procedure</p> <p>Document Number: CM.0201</p>
<p>Unit/Function:</p> <p style="text-align: center;">Capital Programs &amp; Construction Division Central Subway</p>	<p>Revision Number: 0</p>

respective divisions, up to the limits set forth in the Limits of Delegated Authority below:

Limits of Delegated Authority (Change Orders, Modifications, Amendments):

\$500,000 Deputy Executive Director

\$200,000 Chief Construction Officer

\$100,000 Director (having direct reporting relationship to the Executive Director/CEO)

\$50,000 Deputy Director, Area Manager, and Senior Contracts Manager

\$25,000 Project Manager

\$15,000 Resident Engineer and Contract Administrator

- G. Preparation and rendering of final decision under the Disputes Article of the Contract are the responsibilities of the Contract Administrator with recommendation from the RE.
- H. Final determination as to the existence of a Differing Site Condition rests with the CM with recommendation from the RE.

### 201.3 RESPONSIBILITY

### 201.4 PROCEDURES

#### Delegation of Authority:

Upon designation of an RE for a contract, SFMTA will prepare the Delegation of Authority letter for signature by the CM. (A sample letter is included as Exhibit 201-1 with this procedure) Once executed, the letter will be forwarded to the RE or CM Designate with copies to the Contractor.

### 201.5 DEFINITIONS

None.



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## 201.6 EXHIBITS

201-1 Sample Delegation of Authority Letter.

## 201.7 REFERENCES

Refer to the following:




- Procedure CM 0502 – Correspondence/Correspondences & Interfaces
- Procedure CM 0601 – Contract File System.
- Procedure CM 0602 – Contract Correspondence

## 201.8 PROCEDURE HISTORY

<u>Revision Level</u>	<u>Revision Date</u>	<u>Summary of Revision</u>	<u>Approved By</u>

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## 201.9 APPROVALS

Prepared by	Reviewed by	Signature & Date
<b>Originator of Central Subway Procedures Manual</b> <b>Title and Unit:</b>  Dane Hudson Construction Manager Central Subway Partnership		
	Roger Nguyen Quality Assurance Manager Quality Assurance Office	 1/13/10
	Robert Rocco Configuration & Risk Manager Central Subway Partnership	 1/13/10
	Arthur Wong SFMTA Construction Manager Central Subway Project	 1/13/10

**EXHIBIT 201-1**  
**Sample Delegation of Authority Letter**

**TO BE TYPED ON SFMTA LETTERHEAD STATIONERY**

(FULL NAME)

Construction Manager

(Field Office Street Address)

(City, State, Zip Code)

Re: Contract No. (\_\_\_\_)

(Section Name)

Designation of Authorized

Representative of Muni

Dear (Name of RE or CM Designate):

In accordance with Article, Authority of the Engineer, of the General Provisions of Contract No (\_\_\_\_), you are hereby designated the Authorized Representative of MTA, commonly referred to as either the Engineer or the Resident Engineer (RE) with full authority as specified therein.

This designation and delegation of authority is effective as of this date, and shall remain in full force and effect until terminated in writing by MTA. Copies of this letter are being forwarded to the Contractor and (Full Name), and (Area Manager or Assistance Construction Manager).

Sincerely,

(Full Name)

Title

COPY TO: (Contractor)  
(Street Address)  
(City, State, zip Code)

- B. Notices to City. Except as specifically provided herein, all notices to the City concerning this Contract shall be sent to:

Central Subway Project  
Attention: John Funghi, Program Manager  
821 Howard Street, 2nd floor  
San Francisco, CA 94103

with a copy to:

SFMTA  
Attention: Shahn timer Farhangi, Contract Manager  
1 South Van Ness Avenue, 3rd floor  
San Francisco, CA 94102

## ARTICLE 2 - CITY'S RESPONSIBILITIES AND RIGHTS

### 2.01 ADMINISTRATION OF THE CONTRACT

- A. Administration. The City shall administer the Contract as described in the Contract Documents. (See this Article 2 and Division 1 for administrative requirements and procedures.)
- B. Engineer and Other City Representatives. The Department Head will designate in writing the Engineer, who will be the authorized representative of the Agency with limited authority to act on behalf of the Agency. The Agency may at any time during the performance of this Contract make changes in the authority of any representative or may designate additional representatives in accordance with SFMTA policies and City Charter and Codes. Any such changes will be communicated to Contractor in writing. Contractor assumes all risks and consequences of performing work pursuant to any order, including but not limited to instruction, direction, interpretation or determination, of anyone not authorized to issue such order.
- C. Review of Submittals. The review, approval, or other action taken by the City or the City's design consultants upon Contractor's Submittals such as shop drawings, product data, samples and other submittals, shall apply to general design concepts only, and shall in no way relieve Contractor of its responsibility to notify the City of errors or omissions therein in accordance with Section 3.02, nor from providing all labor, equipment, and materials in accordance with the requirements of the Contract Documents necessary for the proper execution of the Work. The City's action will be taken with such reasonable promptness provided that the City shall be provided a reasonable time, as set forth in Division 1, to permit adequate review. Approval of submittals shall not affect the Contract Sum, and additional costs that may result therefrom shall be solely Contractor's obligation. Contractor shall be responsible to provide engineering or other costs necessary to prepare the submittals and obtain approvals required by the Contract Documents from the City or other authorities having jurisdiction. The City is not precluded, by virtue of such approvals, from obtaining a credit for construction cost resulting from allowed concessions in the Work or materials that reduce the costs or quantities of the Work.

- F. Contractor Conference. At any time during the progress of the Work, the City may, by providing reasonable notice, require Contractor to attend any conference of any or all of contractors engaged in the Project or otherwise performing work at or adjacent to the Site.
- G. Non-cooperation. If the City determines that Contractor is failing to coordinate its Work with the work of other contractors as directed by the Engineer, the City may upon 72 hour written notice:
  - 1. withhold any payment otherwise owed under the Contract until Contractor complies with the City's directions; or
  - 2. direct others to perform portions of the Contract and charge the cost of Work against the Contract Sum; or
  - 3. terminate any and all portions of the Contract for Contractor's failure to perform in accordance with the Contract.

### 5.03 CLEAN UP RESPONSIBILITIES

- A. Contractor and other contractors shall each bear responsibility for maintaining their respective work areas on the Site and adjoining areas free of waste, rubbish, graffiti, debris, or excess materials and equipment at all times.
- C. In the event of conflicts between Contractor and other contractors concerning clean up, the City, after issuing 24 hour written notice to the contractors involved, will clean up the premises and deduct from the amount due Contractor under the Contract the cost of said clean up in such amount as the City determines equitable.

## ARTICLE 6 - CLARIFICATIONS AND CHANGES IN THE WORK

### 6.01 GENERALLY

- A. The City may, at any time between the Notice to Proceed and Final Acceptance, on its own initiative or in a RFI Response, and without notice to Contractor's surety, may issue Clarifications of Specifications and make other Clarifications to Contract requirements. Such Clarifications shall be binding on Contractor, and Contractor shall promptly comply with said Clarifications.
- B. The City may, at any time between the Notice to Proceed and Final Acceptance, on its own initiative or in a RFI Response, and without notice to Contractor's surety, may order additions, deletions, or revisions in the Work and materials by Change Order or Unilateral Change Order. Contractor shall promptly comply with such orders and proceed with the Work as directed by the Engineer and required by the Contract Documents.
- C. If changes ordered in design, workmanship or materials are of such a nature as to increase or decrease the cost of any part of the Work, the price fixed in the Contract shall be increased or decreased by such amount as the Contractor and the Agency

may agree upon as the reasonable and proper allowance for the increase or decrease in the cost of the Work.

- D. Contractor shall not be entitled to an increase in the Contract Sum or an extension of the Contract Time if Contractor performs work that is not required by the Contract Documents as amended, modified, or supplemented in writing.
- E. The procedures set forth in this Article 6 are intended to ensure that when Clarifications and Changes in the Work are proposed, the Contractor provides the City with its best estimate of the costs and impacts associated with each Clarification and/or Change, so that the City may evaluate each potential Change and proceed on an informed basis. The City also intends that the Clarification and Change Order procedures (including the use of Unilateral Change Orders and Force Account) facilitate payment to the Contractor of additional, undisputed amounts of compensation for changed Work, if such compensation is due Contractor.
- F. Should the City's Clarification or other written directive, in the opinion of Contractor, exceed the requirements of the Contract Documents, Contractor shall submit a written Change Order Request (COR) to the City within seven (7) Days of receipt of the Clarification, and before proceeding with the Work thereof, as provided in Section 88, below. The City shall be relieved of any claim for compensation if said written COR is not received prior to Contractor beginning the affected Work. The Contractor waives its rights to request or claim for additional compensation or time on the Clarification or written directive if the Contractor fails to submit the written COR to the Engineer within the above timeline. The City shall not be under any obligation to respond to any statement or attempt made by the Contractor to reserve or reactivate such rights in the future.
- G. Failure by the Contractor to comply with the procedures of this Article, including the failure to provide timely, sufficient information and/or documentation to the City at the time of any Clarification or Change Order Request, shall constitute a waiver of any subsequent claim by the Contractor arising out of such Clarification or Change Order.

## 6.02 CHANGE ORDERS (CONTRACT MODIFICATIONS)

- A. Initiation. Either the City or Contractor may initiate Change Orders. The City may initiate Change Orders by issuing a Proposed Contract Change (PCC), which will include a detailed description of the proposed additions, deletions or revisions with supplementary or revised Drawings and Specifications. A PCC from the City will request from Contractor a quotation of cost and time for completing the proposed modifications. Contractor may initiate Change Orders by submitting a Change Order Request (COR) in accordance with the requirements of this Article 6. After the City issues a PCC, Contractor shall not submit a COR for the same Work addressed in the City's PCC.
- B. PCC Quotation Time Period. Contractor shall submit a PCC cost proposal and PCC time extension proposal, in accordance with Section 6.04 (Cost of the Work) and Section 7.02 (Time Extension), if applicable, to the City within 14 days after receipt of a PCC. If Contractor fails to submit a PCC cost Proposal and/or PCC time extension Proposal within the 14-Day period, or if the price or time extension cannot be agreed upon, the City may either (1) direct Contractor to proceed with the Work by issuing a

Unilateral Change Order (in accordance with Section 6.03) instructing Contractor to proceed with the PCC Work based on the City's estimate of the cost and/or time extension or (2) direct Contractor to proceed on a Force Account basis (in accordance with Section 91).

- C. PCC and COR Cost Proposal Requirements. Contractor shall furnish two (2) copies of its PCC or COR cost Proposal, which shall include a complete itemized breakdown of labor, material, equipment, taxes, insurance, bonds, and markup for overhead and profit for both addition and deletions on a form supplied by the City. The same shall be required for subcontractor and lower-tier subcontractor cost proposals, which shall be furnished on the same form as required for Contractor. A COR shall reference all related progress schedule activities, Specification sections and Drawings directly pertaining to COR. In addition, Contractor shall provide the following documentation to the City in support of Contractor and subcontractor cost proposals:
1. Material quantities and type of products;
  2. Labor breakdown by trade classification, wage rates, and estimated hours;
  3. Equipment breakdown by make, type, size, rental rates, and equipment hours;
  4. Taxes, insurance and bonds.
- D. SFMTA Review of COR. The City will review the validity of Contractor's written COR and within 30 Days after receipt of the COR will render its determination in writing. Contractor shall diligently proceed with the Work in accordance with the City's determination, which shall be final and binding on the City and Contractor unless Contractor submits a written Notice of Potential Claim as specified under Section 13.01.
- E. Execution of Change Orders (Contract Modification): When the City and Contractor agree on the total cost and time of a COR or PCO, the City will prepare for signatures of Parties a Change Order to formally implement the changed Work. Only a properly approved Contract Modification or Unilateral Change Order may amend the Contract, No oral instructions of any person whomsoever or other written documents, including but not limited to emails, letters or meeting minutes, shall in any manner or degree modify or otherwise affect the terms of this Contract. Contractor assumes all risks and responsibility for acting on oral instructions or an any document other than a fully executed Contract Modification or Unilateral Change Order.
- F. Release of Claims: Contractor shall agree to the terms and conditions of Change Orders and to release the City from claims for additional compensation or time relating to the undisputed amount of the change in the Work as follows:
1. If Contractor fails to provide timely notice and documentation of delay to the City as required by Article 7, which shall be sufficient to establish that Contractor is entitled to a time extension pursuant to Section 7.02, Contractor shall execute the Change Order without being granted any extension of time.

2. It shall be a material breach of the Contract for Contractor to refuse to execute a Change Order and thereby delay the Project based on Contractor's failure to demonstrate that Contractor is entitled to a time extension for the change Work.
  3. Contractor shall not condition or qualify any Change Order with a reservation of rights to seek at a later time additional Contract Amount or Time for the changed Work addressed in the Change Order.
  4. All delays caused to the progress schedule as a result of Contractor's failure to execute timely a Change Order in accordance with this Article 6 shall be the responsibility of Contractor and shall subject Contractor to liability for liquidated damages as specified in the Special Provisions, Liquidated Damages.
  5. Contractor shall not be entitled to make a reservation of rights to seek at a later time additional Contract Time for the changed Work addressed in the Change Order.
- G. Change Orders issued under this Article or extensions of Contract Time made necessary by reason thereof shall not in any way release any guarantees or warranties given by Contractor under the provisions of the Contract Documents, nor shall they relieve or release Contractor's sureties of bonds executed under such provisions. The sureties, in executing such bonds, shall be deemed to have expressly agreed to any such Change Orders and to any extension of time made by reason thereof. Contractor shall be solely responsible for giving notice of any change affecting the Work, Contract Sum or Contract Times that is required to be given to its sureties by the provisions of any bond.

### 6.03 UNILATERAL CHANGE ORDERS

- A. General: When time does not allow for a Change Order to be negotiated through the PCO process described in Section 6.02, or when the City and Contractor are unable to agree on the cost or time required to complete the change in the Work described in a PCO, the City may issue a Unilateral Change Order instructing Contractor to proceed with a change in the Work based on the City's estimate of cost and time to perform the change in the Work. Upon receipt of a Unilateral Change Order, Contractor shall proceed with the ordered Work.
- B. Protest: Should Contractor disagree with any terms or conditions set forth in a Unilateral Change Order, Contractor shall submit, within 5 Working Days of receipt of the Unilateral Change Order, a Change Order Request (COR) in accordance with the requirements of Section 6.02. If a COR is not submitted as required, Contractor waives all rights to additional compensation for said Work, and payment, which shall constitute full compensation for Work included in the Unilateral Change Order, will be made as set forth in the Unilateral Change Order.
- C. Claim Notification: Contractor waives all costs exceeding the City's estimate for the Unilateral Change Order Work unless Contractor submits a written Notice of Potential Claim in accordance with the requirements of Section 13.01. Said Notice shall be submitted no later than 5 Working Days after occurrence of one of the following, whichever occurs first:
1. Contractor submits an invoice for completion of the Unilateral Change Order Work;  
or



Subcontractors prior to Bid, and such costs shall be included in Contractor's Total Bid Price.

- F. Records: Contractor shall maintain its records in such a manner as to provide a clear distinction between the direct costs of Change Orders and the cost of original Contract Work. This requirement pertains to all types of Change Orders, as well as the additions, deletions, revisions, CORs, and Claims initiated by Contractor.

#### 6.05 FORCE ACCOUNT WORK

- A. General: When additions, deletions, or revisions in the Work are to be paid for on a Force Account basis, all direct costs itemized in subsection 6.04.A shall be subject to the approval of the City and compensation will be determined as set forth herein.
1. The City will direct Contractor to proceed with the Work on a Force Account basis, and the City will establish a "not to exceed" budget.
  2. All requirements regarding direct costs and markup for overhead and profit provided in Section 6.06 shall apply to Force Account Work. However, the City will pay only the actual necessary costs verified in the field by the City on a daily basis.
  3. Contractor shall be responsible for all costs related to the documentation, data preparation, and administration of Force Account Work. Compensation for such costs shall be fully covered by the markup for overhead and profit markup as provided in subsection 6.04.C.
- B. Notification and Verification: Contractor shall notify the City in writing at least 24 hours in advance of its schedule before proceeding with the Force Account Work. All Force Account Work shall be witnessed, documented, and approved in writing by the City on the Day that the Work is performed. Contractor will not be compensated for Force Account Work if Contractor fails to provide timely notice to the City before commencing the Force Account Work. In addition, Contractor shall notify the City when the cumulative costs incurred by Contractor for the Force Account Work equal 80 percent of the budget pre-established by the City. Contractor will not be compensated for Force Account Work exceeding the "not to exceed" budget amount if Contractor fails to provide the required notice before exceeding 80 percent of the Force Account budget.
- C. Work Performed by Special Forces or Other Special Services:
1. For procurement of Special Track work, poles, fabricated assemblies, software and operating equipment and when the Engineer and the Contractor, by agreement, determine that a special service or an item of extra work cannot be performed by the forces of the Contractor or those of any of its Subcontractors, such service or extra work item may be performed by a specialist. Invoices for such service or item of extra work on the basis of the current market price thereof may be accepted without complete itemization of labor, material, and equipment costs when it is impracticable and not in accordance with the established practice of the special service industry to provide such complete itemization.
  2. In those instances wherein Contractor is required to perform extra work necessitating a fabrication or machining process in a fabrication or machine shop facility away from the jobsite, the charges for that portion of the extra work performed in such facility may, by agreement, be accepted as a specialist billing.

The Engineer must be notified in advance of all Work that will not be performed at the Site.

3. An amount not to exceed 5 percent will be added to the specialist invoice price, less a credit to the Agency for any cash or trade discount offered or available, whether or not such discount may have been taken. This 5 percent is in lieu of the percentages provided in Section 6.04.C for work performed by a Subcontractor.
- D. Reports: Contractor shall diligently proceed with the approved Force Account Work and shall submit to the City no later than 12:00 p.m. of the Day following performance of Force Account Work a daily Force Account Work report on a form obtained from the City. The report shall provide an itemized, detailed account of the daily Force Account labor, material, and equipment, including names of the individuals and the specific pieces of equipment identified by manufacturer's model type and serial number. Contractor's authorized representative shall complete and sign the report. Contractor will not be compensated for Force Account Work for which said timely report is not completed and submitted to the City.
- E. Records: Contractor shall maintain detailed records of all Work done on a Force Account basis. Contractor shall provide a weekly Force Account summary indicating the status of each Force Account Work directive in terms of actual costs incurred as a percent of the budget for the respective Force Account Work directive and the estimated percentage completion of the Force Account Work.
- F. Agreement: If Contractor and the City reach a negotiated, signed agreement on the cost of a Change Order while the Work is proceeding on a Force Account basis, Contractor's signed written reports shall be discontinued and all previously signed reports shall become invalid.

## 6.06 ORAL MODIFICATIONS

No oral statement of any person shall in any manner or degree modify or otherwise affect the terms of this Contract.

## ARTICLE 7 - TIME

### 7.01 PROGRESS AND COMPLETION

- A. Commencement of Work. When the Contract has been certified by the Controller, the Agency will designate the official date for commencement of the Work (NTP) and will notify the Contractor by a Notice to Proceed. The Contractor shall take no action that shall obligate the City to, and the City shall not be obligated for, the expenditure of funds before said official commencement date. The Contractor shall begin work within 10 calendar Days after said official commencement date, and shall prosecute the same diligently thereafter at a rate sufficient to enable it to complete the Work within the Contract Time. .
- B. Notice of Commencement of Work. The Contractor shall notify the Engineer in writing, not less than three (3) Working Days in advance, of the actual date the Contractor will begin the Work under the Contract. Said notice shall contain information as to the time

Contract documents to the project team until they have been properly justified and are in compliance with FTA Best Practices and City contracting requirements. The SFMTA Contract Administration Office consists of the SFMTA Contract Manager and Contract Administrators.

Contract Administrators are responsible for the review, approval and processing of all contract-related documents. The duties and responsibilities of Contract Administrators include:

- Solicit proposals for all contracts, obtains required documents including bonds, insurance, and contract compliance documentation, and checks all submitted documents for accuracy, completeness and responsiveness.
- Review cost & price analysis for all contracts and contract changes.
- Prepare, review, approve and/or process contracts, contract modifications, agreements, calendar items and other documents. Assure that the latest FTA, State, and City requirements are included in all appropriate documents. Work with Grants Unit to assure grant requirements are included in documents and/or carried out.
- Obtain certification of contracts and contract modifications.

**2.1.4 Authorization Levels**

Delegation of authority has been established by the SFMTA Board Resolution 10-008 to give the Executive Director/CEO broader discretion to approve contracts and contract modifications in order to reduce administrative paperwork and streamline processing of certain contract approvals. Provisions for re-delegation of authority are outlined in the resolution for both Contract approval and Change Orders or Amendments.

Current levels of authorization and re-delegation of authority are shown in table 2-1

Table 2-1 Authorization Level

Position	Original Contract	Authorization Level
Executive Director/CEO	\$500,000 to \$9,999,999	Greater of 25% or \$250,000 - Cumulative
Executive Director/CEO	\$10,000,000 to \$50,000,000	Greater of 10% or \$2,500,000 - Cumulative
Executive Director/CEO	Greater than \$50,000,000	\$5,000,000 - Cumulative
Executive Director/CEO may		

re-delegate:		
Deputy Executive Director		\$500,000
Chief Construction Officer		\$250,000
Director		\$150,000
Deputy Director		\$50,000
Project Manager		\$25,000
Resident Engineer, Contract Admin.		\$10,000

Note: Refer to Appendix E for Board Resolution details

Due to recent changes at the top of the organization, Authority levels are currently being reevaluated due to the position and person specific nature of the redelgation memos. Authority levels outlined above reside with the new Director of Transportation.

## 2.2 INTEGRATED DESIGN / CONSTRUCTION SUPPORT TEAM

The Project team is an integrated team composed of City staff and staff from the Project Management/Construction Management Consultant (PM/CM), Final Design Consultant (FDC), Project Controls Consultant (PCC), and other consultants available to the SFMTA.

The integrated Project Team will present opportunities for staff development. The team will include staff from multiple disciplines with varied experience. City staff and Consultants will have the opportunity to learn from each other for the benefit of the project.

## 2.3 KEY STAFF

Resumes of current key staff are included in Appendix C. SFMTA is fortunate to have obtained staff of high qualifications and experience. Staffs assigned to the project have many years of experience performing similar roles on other projects. As additional key staff are selected for the project team, their qualifications and experience will be required to match or exceed the qualifications and experience of existing staff. Their resumes will be provided to FTA.

This section refers to the roles and responsibilities of staff. A list of current staff in these positions and shown in organization charts in Appendix B can be found in Table 2-1 at the end of this section. For information about processes for controls, please refer to Section 3.

# **APPENDIX E: DELEGATION OF AUTHORITY**

SAN FRANCISCO  
MUNICIPAL TRANSPORTATION AGENCY  
BOARD OF DIRECTORS

RESOLUTION NO. 10-008

WHEREAS, In 2000, the San Francisco Municipal Transportation Agency Board of Directors (SFMTA Board) adopted Resolution No. 00-0125, and 2002, the SFMTA Board adopted Resolution No. 02-110, which resolutions established contracting policies for the SFMTA, including setting limits on contractual amounts subject to the approval of the Director, requiring all contracts to be in writing, and other related matters; and

WHEREAS, On November 6, 2007, the voters passed Proposition A, which, among other things, added subsection (g) to Section 8A.102 of the City's Charter; subsection (g) authorizes the SFMTA Board to adopt threshold amounts under which the Director and his or her designees may approve contracts, notwithstanding any provisions of Chapters 6 or 21 of the City's Administrative Code; and

WHEREAS, In order to reduce administrative paperwork and streamline processing of certain contract approvals, the SFMTA Board would like to modify the existing policy to give the Executive Director/CEO broader discretion to approve contracts and contract modifications; and

WHEREAS, The SFMTA Board of Directors intends that this resolution will supersede Resolutions Nos. 00-0125 and 02-110; now, therefore, be it

RESOLVED, That the SFMTA Board adopts the following regarding the approval of all contracts, leases, real property conveyance and acquisition agreements, memoranda of understanding, and amendments to such contracts, with the exception of collective bargaining agreements:

1. **Expenditure Contract Approval:** The Executive Director/CEO may approve and execute any contract, lease, real property acquisition agreement or memorandum of understanding (hereafter "Contract") having anticipated expenditures equal to or less than \$500,000.
  - a. The Executive Director/CEO may re-delegate in writing the authority to approve and execute Contracts subject to the limits set forth below:
    - i. **Deputy Executive Director** – The Executive Director/CEO may re-delegate contracting authority up to the full authority given to the Executive Director/CEO by the SFMTA Board of Directors.
    - ii. **Chief Construction Officer** - The Executive Director/CEO may re-delegate contracting authority to approve and execute Contracts up to \$250,000 per Contract.

- iii. **Division Directors** - The Executive Director/CEO may re-delegate contracting authority to approve and execute Contracts up to \$150,000 per Contract to any Director of a division having a direct reporting relationship to the Executive Director/CEO.
  - b. No manager or staff member receiving delegated contracting authority in accordance with this Resolution may re-delegate this authority to others.
  - c. The **Executive Director/CEO** shall present to the Secretary of the SFMTA Board of Directors a completed original delegation of authority letter for each staff member receiving a delegation of authority. The Secretary of the SFMTA Board of Directors shall review the delegation letter and certify its conformance with the terms and conditions of this resolution. The delegation of authority shall be in effect once certified by the Secretary of the SFMTA Board of Directors.
2. **Change Orders or Amendments:** The Executive Director/CEO may approve and execute any single change order or amendment (hereafter "Amendment") to any Contract having anticipated expenditures up to \$500,000 in accordance with subsections a, b and c below unless the change order or amendment is subject to approval by the Board of Supervisors under Charter Section 9.118:
  - a. **Original Contract Amounts up to \$500,000** - The authority given to the Executive Director/CEO will be limited to cumulative increases of 50% of the original contract amount, and time extensions up to 25% of the original contract term.
  - b. **Original Contract Amounts between \$500,000 and \$9,999,999** - The authority given to the Executive Director/CEO will be limited to cumulative increases approved by the Executive Director/CEO of 25% of the original contract amount, or \$250,000, whichever is greater, and time extensions up to 25% of the original contract term.
  - c. **Original Contract Amounts greater than or equal to \$10,000,000 and less than \$50,000,000** - The authority given to the Executive Director/CEO will be limited to cumulative increases of 10% of the original contract amount, or \$2,500,000, whichever is greater, and time extensions up to 25% of the original contract term.
  - d. **Original Contract Amounts greater than or equal to \$50,000,000** - The authority given to the Executive Director/CEO will be limited to \$5,000,000 and time extensions up to 25% of the original contract term.
  - e. **Re-delegations** - The Executive Director/CEO may authorize the Deputy Executive Director, Chief Construction Officer, or Directors of a division having a direct reporting relationship to the Executive Director/CEO, to

further delegate authority to approve Amendments within their respective divisions, up to the limits set forth below:

\$500,000	Deputy Executive Director
\$200,000	Chief Construction Officer
\$100,000	Director (having direct reporting relationship to the Executive Director/CEO)
\$50,000	Deputy Director, Area Manager, and Senior Contracts Manager
\$25,000	Project Manager
\$15,000	Resident Engineer; Contract Administrator

Amendments approved pursuant to any re-delegation under this subsection are subject to the cumulative limitations for Amendments set forth in subsections a, b and c above.

- f. The **Executive Director/CEO** shall present to the Secretary of the SFMTA Board of Directors a completed original delegation of authority letter for each staff member receiving a delegation of authority. The Secretary of the SFMTA Board of Directors shall review the delegation letter and certify its conformance with the terms and conditions of this resolution. The re-delegation of authority shall be in effect once certified by the Secretary of the SFMTA Board of Directors.
3. **Revenue Contracts:** The Executive Director/CEO is authorized to approve all revenue contracts and cumulative modifications of such revenue contracts up to 50 percent of their original value unless the revenue contract is subject to approval by the Board of Supervisors under Charter Section 9.118.
4. **Fare Media Contracts:** The Executive Director/CEO is authorized to delegate the authority to the **Chief Financial Officer or the Senior Manager of Revenue**, to approve and execute agreements for the sale or distribution of fare media and fare cards where the commissions to be paid under such agreements are not expected to exceed \$250,000 in any calendar year.
5. **Commodity and General Services Contracts:** The **Executive Director/CEO** or his or her designee is authorized to approve contracts for commodities and services formerly subject to the sole approval of the Purchaser prior to the formation of the SFMTA; and be it

FURTHER RESOLVED, That all contracts and contract amendments on behalf of the SFMTA shall be in writing, shall be approved as to form by the City Attorney's Office, and be it

FURTHER RESOLVED, That the Executive Director/CEO shall submit a written report to the San Francisco Municipal Transportation Agency Board of Directors on a quarterly basis which shall summarize and describe all contract instruments executed and competitive solicitations issued pursuant to the delegations of authority granted above; and be it



FURTHER RESOLVED, That the SFMTA authorizes the Executive Director/CEO to accept work that has been satisfactorily completed, approve release of retention, and approve contract closeouts.

I certify that the foregoing resolution was adopted by the Municipal Transportation Agency Board of Directors at its meeting of JAN 05 2010.

A handwritten signature in black ink that reads "R. Boomer". The signature is written in a cursive style with a horizontal line underneath it.

Secretary to the Board of Directors  
San Francisco Municipal Transportation Agency

SAN FRANCISCO  
MUNICIPAL TRANSPORTATION AGENCY  
BOARD OF DIRECTORS

RESOLUTION NO. 09-191

WHEREAS, The Policy and Governance Committee of the SFMTA Board of Directors has reviewed the calendar items that appear before the SFMTA Board of Directors and has recommended that certain types of calendar items need not appear before the SFMTA Board; and

WHEREAS, Delegating the authority to approve certain calendar items will reduce administrative paperwork and streamline processing of certain contract, grant or claim approvals; and

WHEREAS, The SFMTA Quarterly Contracting Report will be expanded to include information about contracts and the City' Attorney's Office will provide an annual report regarding claims; now, therefore, be it

RESOLVED, That the Executive Director/CEO or his designee is authorized to issue competitive solicitations for contracts not requiring Board of Supervisors' approval as set forth in Charter Section 9.118 without further action by the SFMTA Board; and be it

FURTHER RESOLVED, That the Executive Director/CEO or his designee is authorized to reject any or all bids, quotes, or proposals and authorize reissuance and re-advertisement of such requests for proposals, bid calls or other competitive solicitations; and be it

FURTHER RESOLVED, That unless the granting agency requires an authorizing resolution from this Board as to a particular grant, the Executive Director/CEO or his designee is authorized to approve and execute agreements to accept and expend grant funds or to transfer grant funds to a public agency that will be a sub-recipient of such funds; and be it

FURTHER RESOLVED, That the Executive Director/CEO or his designee is authorized to apply for, accept and expend grant funds, and is authorized to delegate such authority in writing in his or her sole discretion; and be it

FURTHER RESOLVED, That pursuant to Charter Section 6.102 and Article II of Chapter 10 of the San Francisco Administrative Code, the Chief of the Bureau of Claims Investigation and Administration of the City Attorney's Office is authorized to settle unlitigated claims against the SFMTA for an amount not to exceed \$25,000 with the concurrence of the Executive Director/CEO.

I certify that the foregoing resolution was adopted by the Municipal Transportation Agency Board of Directors at its meeting of NOV 03 2009.



Secretary to the Board of Directors  
San Francisco Municipal Transportation Agency

**GENERAL DELEGATION OF AUTHORITY TO  
THE DEPUTY EXECUTIVE DIRECTOR OF THE  
SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY**

During any of my absences, Carter R. Rohan, R.A., Deputy Executive Director, will serve as Acting Executive Director/CEO. Mr. Rohan can be reached at 415.701.4282 (office) or 650.863.5979 (cellular).

Further, and pursuant to the authority vested in me by Resolution No. 10-008 of the SFMTA Board of Directors, I hereby delegate to Mr. Rohan, the full contracting authority given to me by the SFMTA Board of Directors to approve and execute Contracts. All such transactions entered into pursuant to this Authority shall be compiled and reported to the SFMTA Board of Directors on a quarterly basis. This authority may be re-delegated up to the limits set forth hereafter:

- Director of Capital Programs & Construction, up to \$250,000 per Contract
- Direct Report Contracting Officer, up to \$150,000 per Contract


Further, and pursuant to the authority vested in me by above Resolution, I hereby delegate to Mr. Rohan the full authority given to me by the SFMTA Board of Directors to approve and execute Amendments to Contracts. This authority may be re-delegated up to the limits set forth hereafter, and within the cumulative limitations set forth in above Resolution:

- Director of Capital Programs & Construction, up to \$200,000 per Amendment
- Direct Report Contracting Officer, up to \$100,000 per Amendment
- Deputy, Area Manager, or Senior Contracts Manager, up to \$50,000 per Amendment
- Project Manager, up to \$25,000 per Amendment
- Resident Engineer or Contract Administrator, up to \$15,000 per Amendment

This delegation is effective FEB. 10, 2011 and shall remain in effect until further written notice or amendment.

Date:

FEBRUARY 10, 2011



Nathaniel P. Ford Sr.

Executive Director/CEO

Attest and Certify:



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Roberta Boomer

Secretary, SFMTA Board of Directors

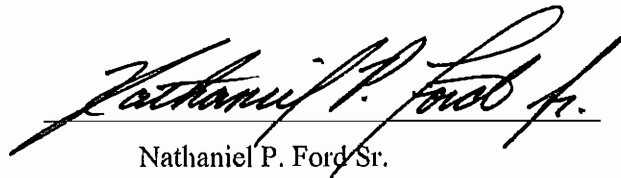
**DELEGATION OF AUTHORITY TO  
APPROVE AND EXECUTE CONTRACTS FOR AND ON BEHALF OF THE  
SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY**

Pursuant to the authority vested in me by Resolution No. 10-008 of the SFMTA Board of Directors, I hereby delegate to Carter R. Rohan, R.A., Chief Construction Officer, without the authority to re-delegate, the contracting authority to approve and execute Contracts pertaining to all Capital Programs and Construction, up to \$250,000 per Contract.

All such transactions entered into pursuant to this Authority shall be compiled and reported to the SFMTA Board of Directors on a quarterly basis.

This delegation is effective JANUARY 26, 2010 and shall remain in effect until further written notice or amendment.

Date: JANUARY 26, 2010



Nathaniel P. Ford Sr.

Executive Director/CEO

Attest and Certify:



Roberta Boomer,

Secretary, SFMTA Board of Directors

**DELEGATION OF AUTHORITY TO  
APPROVE AND EXECUTE AMENDMENTS FOR AND ON BEHALF OF THE  
SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY**

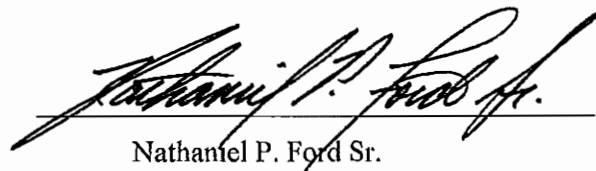
Pursuant to the authority vested in me by Resolution No. 10-008 of the SFMTA Board of Directors, I hereby delegate to Carter R. Rohan, R.A., Chief Construction Officer, the authority to approve and execute Amendments to any Capital Program or Construction Contract, up to \$200,000 per Amendment, and within the cumulative limitations set forth in above Resolution.

The authority delegated hereby to the Chief Construction Officer may be re-delegated within his Division up to the limits set forth hereafter, and within the cumulative limitations set forth in above Resolution:

- Deputy Director, Area Manager, or Senior Contracts Manager, up to \$50,000 per Amendment
- Project Manger, up to \$25,000 per Amendment
- Resident Engineer, Contract Administrator, up to \$15,000 per Amendment

This delegation is effective JANUARY 26, 2010 and shall remain in effect until further written notice or amendment.

Date: JANUARY 26, 2010



Nathaniel P. Ford Sr.

Executive Director/CEO

Attest and Certify:



Roberta Boomer,

Secretary, SFMTA Board of Directors

**DELEGATION OF AUTHORITY TO  
APPROVE AND EXECUTE CONTRACTS AND AMENDMENTS FOR AND ON  
BEHALF OF THE SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY**

Pursuant to the authority delegated to me by the Executive Director/CEO of the San Francisco Municipal Transportation Agency, I hereby delegate to Fariba Mahmoudi, Director of Capital Programs & Construction, without authority to re-delegate, the contracting authority to approve and execute Contracts pertaining to all Capital Programs and Construction, up to \$250,000 per Contract. All such transactions entered into pursuant to this Authority shall be compiled and reported to the SFMTA Board of Directors on a quarterly basis.

Further, I hereby delegate to Fariba Mahmoudi, the authority to approve and execute Amendments to any Capital Program or Construction Contract, up to \$200,000 per Amendment, and within the cumulative limitations as set forth in the Board of Directors' Resolution No. 10-008. This authority may be re-delegated within her Division up to the limits set forth hereafter, and within the cumulative limitations set forth in above Resolution:

- Deputy, Area Manager, or Senior Contracts Manager, up to \$50,000 per Amendment
- Project Manager, up to \$25,000 per Amendment
- Resident Engineer or Contract Administrator, up to \$15,000 per Amendment

This delegation of authority is effective March 1, 2011 and shall remain in effect until further written notice or amendment.



\_\_\_\_\_  
Carter R. Rohan, R.A.  
Deputy Executive Director

Date: 2.28.11

Attest and Certify:



\_\_\_\_\_  
Roberta Boomer  
Secretary, SFMTA Board of Directors

**DELEGATION OF AUTHORITY TO  
APPROVE AND EXECUTE CONTRACTS AND AMENDMENTS FOR AND ON  
BEHALF OF THE SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY**

Pursuant to the authority delegated to me by the Executive Director/CEO of the San Francisco Municipal Transportation Agency, I hereby delegate to Virginia Harmon, Direct Report Contracting Officer, without authority to re-delegate, the contracting authority to approve and execute Contracts assigned to her for management, up to \$150,000 per Contract. All such transactions entered into pursuant to this Authority shall be compiled and reported to the SFMTA Board of Directors on a quarterly basis.

Further, I hereby delegate to Virginia Harmon, without authority to re-delegate, the authority to approve and execute Amendments to any Contract assigned to her for administration, up to \$100,000 per Amendment, and within the cumulative limitations as set forth in the Board of Directors' Resolution No. 10-008.

This delegation of authority is effective March 1, 2011 and shall remain in effect until further written notice or amendment.



Carter R. Rohan, R.A.  
Deputy Executive Director

Date: 2.28.11

Attest and Certify:



Roberta Boomer  
Secretary, SFMTA Board of Directors

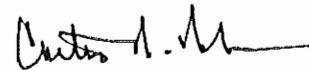


**DELEGATION OF AUTHORITY TO  
APPROVE AND EXECUTE AMENDMENTS FOR AND ON BEHALF OF THE  
SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY**

Pursuant to the authority delegated to me by the Executive Director/CEO of the San Francisco Municipal Transportation Agency, I hereby delegate to Shahnaz Farhangi, Deputy for Contract Administration and Quality Management, without authority to redelegate, the authority to approve and execute Amendments to contracts that have been or are from time to time assigned to him for administration, up to \$50,000 per Amendment, and within the cumulative limitations as set forth in the Board of Directors' Resolution No. 10-008. The amount of each Amendment for this purpose shall be the total of the value of all work added and the value of all work deleted thereby.

The authority granted hereby shall be exercised under my supervision and in accordance with applicable policies, procedures, and processes that have been or will from time to time be established, and all instructions that I may issue from time to time.

This delegation of authority is effective as of 2.23.10 and shall continue, unless sooner revoked, until issuance of subsequent delegation. It supersedes all prior delegations.



Carter R. Rohan, R.A.  
Chief Construction Officer

Date: 2.22.10

ATTEST:



Roberta Boomer  
Secretary,  
San Francisco Municipal Transportation Agency

## C Mod Task Force Meeting Minutes #04

DATE: September 12, 2012

MEETING DATE: **September 10, 2012**

LOCATION: 821 Howard St, Main Conference Room

TIME: 3:30 PM

ATTENDEES: J. Park (JP), M. Acosta (MA), M. Benson (MB), E. Stassevitch (ES), Sarah Wilson (SW), Ben Volberding (BV), C. Dombrowski (CD), Ken Barnhart (KB)

COPIES TO: Attendees: J Funghi (JF), S. Farhangi (SF), R. Nguyen (RN), B. Lebovitz (BL), D. Kuehn (DK), File No. M544.1.5.0910.e

REFERENCE Project No. M544.1, Contract No. 149 Task 1-1.08 Construction

SUBJECT: CMod Task Force Meeting # 04 – Rev. No. 0

### RECORD OF MEETING *(Italicized text indicates status update of open items)*

ITEM #	DISCUSSION	ACTION BY DUE DATE
1-	ES opened the meeting by restating the purpose of the Task Force. The CMod Task Force purpose is to examine the current procedures and practices related to processing changes during construction and look for areas of improvement, especially related to the time to develop and process a contract modification (CMod). A standing meeting for 10 weeks has been established at the time and place noted above, for the remaining 6 weeks, with the attendees shown above; to identify areas of possible improvement, and develop recommendations for review by Sr. Management of the Program.	
2-	ES reviewed the minutes from meeting #3 for any corrections or revisions and to refresh the group on accomplishments for Areas of Improvement #5. ES summarized the Change Process and indicated that RE organizations had previously and are currently having a difficult time implementing the review for merit and cost comparison preparation, in the time frame called for in the procedures, due to untimely submittal of information from the Contractor. ES also summarized follow on actions related to the Delegation of Authority, the threshold level of \$50K, and several sections in the GPs that related to the authorization to proceed and payment for change work. Specifically, discussions with the City Attorney's office regarding the status of Delegation of Authority, and the intent and contractual obligations in the GPs related to changes to the work. The Contractor is clearly at risk for performing work for which a fully executed CMod is not in place. More discussion on the details of this material, (attached to the minutes) will be conducted a future meetings.	
3-	<b>Area of Improvement #3- Scoping Meeting and Estimate Preparation</b> The discussion began with questions from SW as to what was the purpose of the scoping meeting and when should it take place. Using the CMod process flow chart as an aid, clarification was noted that scoping meetings should be held only after a COR has been determined to have merit. Additional clarification noted that there were two	SW/CD 09/17/12

ITEM #	DISCUSSION	ACTION BY DUE DATE
	<p>points in the process that required CMB action; 1) at the merit/no merit stage; 2) at the recommended negotiation position stage prior to conducting negotiations. In preparing a merit analysis the RE would in essence developing an agenda for the scoping meeting. The task force reviewed the procedures in search of the appropriate form to be utilized for the justification analysis and identified the need to develop one, to aid in the process, assist in presentation to the CMB and eventually set the agenda for the scoping meeting because the identification of what has changed would be the result of the merit analysis.</p> <p>The Task force agreed that the focus of the scoping meeting should only be on the scope of change, not \$\$\$\$. The REs are currently experiencing Contractors that bring many other factors to the meeting and do not stay focused on the scope; Contractors are indicating that the time to perform the work changed, the methods that originally were planned cannot be utilized and something different must be utilized. Again the task force recognized the need for the Contractor to make the case in the original COR documentation and additional information as required. If time impact analysis, descriptions of changing site conditions, need for different type of equipment or method are not identified and justified in the COR, then they should not be part of the scoping meeting. This again forces the Contractor to justify the change with supporting information.</p> <p>Another important point was raised regarding the scoping meeting was the need to break down the work into meaningful elements for the purpose of estimating. This may not be viewed by both parties exactly the same, but it is important that the scoping meeting conclude with a framework of how the work will be performed so that it can be properly estimated. It would be very important to document the meeting for use in the final CMod documentation.</p> <p>In breaking down the work into meaningful elements it is also very important that both parties understand how the work is going to be performed. Again there may not be total agreement on this, but it is important that both parties address it. In addition to how the work will be perform, it is also important to understand the current work site conditions, impacts, and equipment available to perform the work. These ideally would be part of the original justification and merit analysis.</p> <p>Meeting time constraints prevented continued discussion on the scope and estimate preparation. The following will be taken up and continued next meeting: Suggested for areas of improvement:</p> <ul style="list-style-type: none"> <li>• Involve Contract Admin in scoping meeting and cost estimating review</li> <li>• Develop meaningful Cost Comparison Sheet</li> <li>• Develop Recommended Negotiation Position</li> </ul>	

**ACTION ITEMS**

ITEM #	MTG DATE	MTG ACTION DATE	DESCRIPTION	BIC	DUE DATE	STATUS
3	08/13/12	08/27/12	Finalize Area of Improvement #1 - Timely Submission of the COR	SW	09/24/12	Open
4	08/13/12	08/27/12	Finalize Area of Improvement #2 - Finding of the Fact	MB	09/24/12	Open
5	08/13/12	08/13/12	Scoping Meeting/Estimate Preparation	SW	09/17/12	Open
6	08/13/12	08/13/12	Reconciliation of Costs	ES	09/17/12	Open
7	08/13/12	08/27/12	Finalize Area of Improvement #5 - Change Order Process	MB	10/01/12	Open
8	08/27/12	08/27/12	Clarify Delegation of Authority	ES	10/01/12	Open
9	08/27/12	08/27/12	Review GPs to ensure adequate information	ES	10/01/12	Open

Meeting adjourned at 4:30pm

These meeting minutes have been prepared by E. Stassevitch and reviewed by M. Benson, and are the preparer's interpretation of discussions that took place. If the reader's interpretation differs, please contact the author in writing within four (4) days of receipt of these minutes.

**Signed:** \_\_\_\_\_ [initials of preparer & reviewer] **Date:** \_\_\_\_\_ [Date review completed]

## C Mod Task Force Meeting Minutes #05

DATE: October 15, 2012

MEETING DATE: **October 08, 2012**

LOCATION: 821 Howard St, Main Conference Room

TIME: 3:30 PM

ATTENDEES: M. Benson (MB), E. Stassevitch (ES), Sarah Wilson (SW), C. Dombrowski (CD), Ken Barnhart (KB)

COPIES TO: Attendees: J Funghi (JF), S. Farhangi (SF), R. Nguyen (RN), J. Park (JP), M. Acosta (MA), Ben Volberding (BV), B. Lebovitz (BL), D. Kuehn (DK),  
File No. M544.1.5.0910.e

REFERENCE Project No. M544.1, Contract No. 149 Task 1-1.08  
Construction

SUBJECT: CMod Task Force Meeting # 05 – Rev. No. 0

**RECORD OF MEETING** (*Italicized text indicates status update of open items*)

ITEM #	DISCUSSION	ACTION BY DUE DATE
1-	ES opened the meeting by restating the purpose of the Task Force. The CMod Task Force purpose is to examine the current procedures and practices related to processing changes during construction and look for areas of improvement, especially related to the time to develop and process a contract modification (CMod). A standing meeting for 10 weeks has been established at the time and place noted above, for the remaining 5 weeks, with the attendees shown above; to identify areas of possible improvement, and develop recommendations for review by Sr. Management of the Program.	
2-	ES reviewed the minutes from meeting #4 for any corrections or revisions and to refresh the group on accomplishments for Areas of Improvement #3 – Scoping Meeting and Estimate Preparation. Although time at the last meeting ran out before completing the discussion, the task force will continue the discussion today to conclude Area of Improvement #3 and also address Area of Improvement #4. The focus of the group in the Change Process is immediately after the CMB action for merit on a COR and what the RE organizations needs to do to prepare a negotiation position for the COR.	
3-	<b>Area of Improvement #3 (Cont.)- Scoping Meeting and Estimate Preparation</b> The discussion recapped that task force needs to develop an appropriate form to be utilized for the justification analysis. The form will aid in the process, assist in presentation to the CMB and eventually set the agenda for the scoping meeting because the identification of what has changed would be the result of the merit analysis. Only CORs found to have merit need to have scoping meetings and estimate preparation.  Evaluation for merit have been developed for COR 1, 2, &3 for Contract 1252. The	SW/CD 10/22/12

ITEM #	DISCUSSION	ACTION BY DUE DATE
	<p>group reviewed the format and content and suggested that some edits could be made to both. ES to follow-up with the group and collect edits and refine format for presentation at this week's CMB. From the examples reviewed it was demonstrated that scoping items were identified and broken down in the merit analysis, sufficient to provide an agenda for discussion to confirm scope and breakdown of tasks needed to properly estimate the work.</p> <p>The group was then shown a draft estimating template that allows the scope to be estimated by the agreed to tasks for labor, material and equipment consistent with the requirements of Article 6 of the contract. The template is constructed to minimize errors in utilizing the correct approved rates, and to capture each work activity on a summarized form for comparison with the Contractors proposal side by side. This reconciliation of costs sheet needs additional edits to allow for a comment field adjacent to the comparison of costs in order to elaborate on the reason for the difference.</p> <p>The comparison sheet also needs an additional space for recommended negotiation position. The discussion led into estimates being prepare for force account work, and how this work is currently being "estimated". Questions arose regarding the rational used to support estimates of values where work was tracked on force account. Meeting time constraints prevented continued discussion on the scope and estimate preparation. The following will be taken up and continued next meeting:</p> <p>Suggested for areas of improvement:</p> <ul style="list-style-type: none"> <li>• Force Account "estimating"</li> <li>• Involve Contract Admin in scoping meeting and cost estimating review</li> <li>• Develop meaningful Cost Comparison Sheet</li> <li>• Develop Recommended Negotiation Position</li> </ul>	

**ACTION ITEMS**

ITEM #	MTG DATE	MTG ACTION DATE	DESCRIPTION	BIC	DUE DATE	STATUS
3	08/13/12	08/27/12	Finalize Area of Improvement #1 - Timely Submission of the COR	SW	10/29/12	Open
4	08/13/12	08/27/12	Finalize Area of Improvement #2 - Finding of the Fact	MB	10/29/12	Open
5	08/13/12	08/13/12	Scoping Meeting/Estimate Preparation	SW	10/22/12	Open
6	08/13/12	08/13/12	Reconciliation of Costs	ES	10/22/12	Open
7	08/13/12	08/27/12	Finalize Area of Improvement #5 - Change Order Process	MB	11/05/12	Open
8	08/27/12	08/27/12	Clarify Delegation of Authority	ES	11/05/12	Open
9	08/27/12	08/27/12	Review GPs to ensure adequate information	ES	11/05/12	Open

Meeting adjourned at 4:30pm

These meeting minutes have been prepared by E. Stassevitch and reviewed by M. Benson, and are the preparer's interpretation of discussions that took place. If the reader's interpretation differs, please contact the author in writing within four (4) days of receipt of these minutes.

**Signed:** \_\_\_\_\_ [initials of preparer & reviewer] **Date:** \_\_\_\_\_ [Date review completed]

Equipment	Caltrans Page No	CalTrans Category Sub-Category Rental Quote/ Code	Hourly Rate	Delay Factor	Standby Rate
Equipment			\$ -		
1 Work Truck	34	TRUCK	\$ 33.12	0.14	\$ 4.64
2 Dump truck - 3-axle	34	TRUON	\$ 66.43	0.16	\$ 10.63
3 Tow Behind Trailer	33	TRAIT	\$ 5.72	0.42	\$ 2.40
4 End Dump - 5-axle	34	TRUON	\$ 83.50	0.16	\$ 13.36
5 Generator	6	ELGEN	\$ 14.18	0.11	\$ 1.56
6 Air Compressor	1	AIRCP	\$ 34.31	0.12	\$ 4.12
60-90 Lb. Jack-hammer	1	AIRTOL	\$ 1.31	0.61	\$ 0.80
<b>Air compressor, hoses &amp; hammer total</b>			<b>\$ 35.62</b>		<b>\$ 4.92</b>
7 Arc Welder	34	WELD	\$ 11.87	0.18	\$ 2.14
Welding Rods	N/A	N/A	\$ 5.34		\$ -
F250	34	TRUCK	\$ 33.12	0.14	\$ 4.64
<b>Welder and Truck</b>			<b>\$ 50.33</b>		<b>\$ 6.77</b>
8 Torches and Tanks	34	WELD	\$ 0.24	0.18	\$ 0.04
Oxygen Tank and Acetylene Tank	N/A	N/A	\$ 38.70		\$ -
<b>Total Torches and Tanks</b>			<b>\$ 38.94</b>		<b>\$ 0.04</b>
9 Rotohammer	6	ELTOL	\$ 0.44	0.61	\$ 0.27
Generator	6	ELGEN	\$ 14.18	0.11	\$ 1.56
<b>Rotohammer and Generator</b>			<b>\$ 14.62</b>		<b>\$ 1.83</b>
10 Rivet Buster	1	AIRTOL	\$ 1.31	0.61	\$ 0.80
Air Compressor	1	AIRCP	\$ 34.31	0.12	\$ 4.12
<b>Rivet Buster and Air Compressor</b>			<b>\$ 35.62</b>		<b>\$ 4.92</b>
11 Compactor, Hand Guided	4	COMHG	\$ 8.82	0.18	\$ 1.59
12 Bobcat 763	31	TRACS	\$ 25.35	0.11	\$ 2.79
13 Backhoe (John Deere ID 310G)	18	LDDRT	\$ 62.87	0.12	\$ 7.54
Clam Shell Bucket	1	N/A	\$ 9.29	0.12	\$ 1.11
<b>Backhoe w/ Clam Shell total</b>			<b>\$ 72.16</b>		<b>\$ 8.66</b>



14 Breaker attachment for Backhoe	7 HAMMR	\$ 42.26	0.23	\$ 9.72
15 Mini Excavator (Kubota U45)	N/A N/A	\$ 63.79	0.18	\$ 11.48
16 Excavator (Hitachi 200)	N/A N/A	\$ 142.51	0.18	\$ 25.65
17 New Holland Excavator (E135)	N/A N/A	\$ 120.13	0.18	\$ 21.62
18 Ride-on Sweeper	4 BRMSW	\$ 145.11	0.14	\$ 20.32
19 Bituminous Distributor	4 BITDT	\$ 6.52	0.14	\$ 0.91
Work truck	33 TRUCK	\$ 33.12	0.14	\$ 4.64
<b>Bituminous Distributor with truck</b>		<b>\$ 39.64</b>		<b>\$ 5.55</b>
20 Fork Lift Truck	6 FKLFT	\$ 27.14	0.20	\$ 5.43
21 Concrete Saw	28 SAWCO	\$ 19.63	0.14	\$ 2.75
Saw blade 12" x \$18 per hour (100 LF)	28 SAWCO	\$ 216.00	0.14	\$ 30.24
Concrete Saw and Blade		\$ 235.63		\$ 32.99
22 Water Pump	22 PUMWA	\$ 22.61	0.35	\$ 7.91
<b>23 Confined Space Equipment</b>				
Gas Detector 4-Gas w/ Motorized Integral Pump		\$22.79		
Blower Portable w/ 8"x15' Hose		\$8.82		
Retrieval 65' Winch for Tripod		\$11.53		
SCBA-NFPA Approved 2216 PSI Complete alrpeck		\$9.03		
<b>Total Confined Space</b>		<b>\$52.15</b>		
24 Traffic Control (per street, intersection = x2 streets)				
Construction Signs	32 TR AFC	\$7.29		
Changeable Message Boards	32 TR AFA	\$9.92		
Arrow Board	32 TR AFA	\$3.20		
No Parking Signs (A-frames)	32 TR AFC	\$0.22		
Cones (per 100)	32 TR AFC	\$13.27		
25 Interlocking Water Filled Triton Barrier	N/A N/A	\$4.07		
\$30 per day /8 plus tax				
26 Traffic Plates Installed				
Total per Plate (small)	N/A N/A	\$9.48		
Total per Plate (large)	N/A N/A	\$12.15		
27 Trench Shoring (4' wide trends)		\$4.34		
Total per trench shore		\$2.17		

## Change Order Cost Analysis Guidelines

**Labor:** Cost for change order labor hours shall align with the prevailing wage rate for each applicable trade designation. These shall align with the approved submittal required in GP 6.04 Sect. A1. Prevailing labor wage rates may be found on the Department of Industrial Relations website (<http://www.dir.ca.gov/OPRL/PWD/>).

**Material:** Cost for materials applicable to proposed change orders shall be limited to direct cost including sales tax. Delivery costs may be applied if the delivery is strictly due to the proposed change order. See GP 6.04 Sect. A2.

**Equipment:** Rates used for equipment shall align with the approved submittal required in GP 6.04 Sect. A3. This submittal represents the approved equipment rates showing the lesser rate between the California Department of Transportation's Labor Surcharge & Equipment Rental Rate book and the Machinery Information Division of PRIMEDIA Information, Inc's Rental Rate Blue Book.

### Taxes and Labor Burdens:

Social Security ~ 6.2%\*

Medicare – 1.45%\*

Federal Unemployment Tax Act. – 0.6%\* (Net of 6.0% and 5.4% annual credit)

State Unemployment Insurance – 6.2%\*

City/County Payroll Expense Tax – 1.5%\* ([www.sftreasurer.org/index.aspx?page=23](http://www.sftreasurer.org/index.aspx?page=23))

Workers Compensation Insurance – 12% ± 4%\* (Backup needed with experience modifier)

\*Applied to direct labor plus vacation/holiday fringe

### Insurance and Bonding:

General Liability Insurance / Bonding: 2.25% ± 0.75% (Backup needed)

Bonding 0.75% ± 0.25%

Insurance 1.50% ± 0.50%

**Overhead and Profit:** Mark ups for overhead and profit shall be limited to 15% not to exceed overall markup of 25% of total change once all subcontracting tier mark ups have been applied. Contractors may receive a maximum 5% markup on subcontractors total cost. A detailed explanation of overhead and profit mark ups may be found in GP 6.04 Sect. C.

# COR ###

	No.	Activity Name	Contractor (C)	Engineer's Estimate (EE)	Delta (EE-C)
<b>Labor</b>	1	Activity Name	\$ -	\$ -	\$ -
	2	Activity Name	\$ -	\$ -	\$ -
	3	Activity Name	\$ -	\$ -	\$ -
	4	Activity Name	\$ -	\$ -	\$ -
	5	Activity Name	\$ -	\$ -	\$ -
	6	Activity Name	\$ -	\$ -	\$ -
	7	Activity Name	\$ -	\$ -	\$ -
	8	Activity Name	\$ -	\$ -	\$ -
	9	Activity Name	\$ -	\$ -	\$ -
	10	Activity Name	\$ -	\$ -	\$ -
	11	Activity Name	\$ -	\$ -	\$ -
	12	Activity Name	\$ -	\$ -	\$ -
<b>Equipment</b>	1	Activity Name	\$ -	\$ -	\$ -
	2	Activity Name	\$ -	\$ -	\$ -
	3	Activity Name	\$ -	\$ -	\$ -
	4	Activity Name	\$ -	\$ -	\$ -
	5	Activity Name	\$ -	\$ -	\$ -
	6	Activity Name	\$ -	\$ -	\$ -
	7	Activity Name	\$ -	\$ -	\$ -
	8	Activity Name	\$ -	\$ -	\$ -
	9	Activity Name	\$ -	\$ -	\$ -
	10	Activity Name	\$ -	\$ -	\$ -
	11	Activity Name	\$ -	\$ -	\$ -
	12	Activity Name	\$ -	\$ -	\$ -
		<b>Material</b>	\$ -	\$ -	
		<b>Markup LM&amp;E - 15%</b>	\$ -	\$ -	
		<b>2nd Tier Subs</b>	\$ -	\$ -	
		<b>Markup - 5%</b>	\$ -	\$ -	
		<b>Sub. Bond/Insurance 0.00%</b>	\$ -	\$ -	
		<b>Prime Markup - 5%</b>	\$ -	\$ -	
		<b>Prime Bond/Insurance 0.00%</b>	\$ -	\$ -	
		<b>Total</b>	\$ -	\$ -	\$ -

**Summary of Differences:**





Client: SFMTA  
Hill Project Number: PNN-01219.01  
CN ##### - Contract Name  
Change Order Request No. ###  
Engineer's Estimate



# Hill International

Change Order Request - ###  
5/26/2013

Prevailing Labor Rates - SF										
		Social Security	Medicare	FUTA	SUTA	SF Pay	WC	Vacation/Holiday	Other Fringes	
		6.20%	1.45%	0.60%	6.20%	1.50%	12.00%			Fully Burdened
Labor Resource										0
Carpenter	\$ 38.50	\$ 2.64	\$ 0.62	\$ 0.26	\$ 2.64	\$ 0.64	\$ 5.11	\$ 4.05	\$ 21.77	\$ 76.21
Cement Mason	\$ 28.65	\$ 2.09	\$ 0.49	\$ 0.20	\$ 2.09	\$ 0.51	\$ 4.05	\$ 5.14	\$ 16.82	\$ 60.05
Electrician (Inside Wireman)	\$ 54.87	\$ 3.72	\$ 0.87	\$ 0.36	\$ 3.72	\$ 0.90	\$ 7.20	\$ 1.64	\$ 23.95	\$ 97.23
Flag Person	\$ 26.89	\$ 1.82	\$ 0.43	\$ 0.18	\$ 1.82	\$ 0.44	\$ 3.52	\$ 2.48	\$ 14.62	\$ 52.20
Iron Worker	\$ 33.00	\$ 2.29	\$ 0.54	\$ 0.22	\$ 2.29	\$ 0.55	\$ 4.43	\$ 3.92	\$ 21.37	\$ 68.60
Laborer (G1)	\$ 26.89	\$ 1.82	\$ 0.43	\$ 0.18	\$ 1.82	\$ 0.44	\$ 3.52	\$ 2.48	\$ 15.96	\$ 53.54
Laborer (G2)	\$ 26.99	\$ 1.83	\$ 0.43	\$ 0.18	\$ 1.83	\$ 0.44	\$ 3.54	\$ 2.48	\$ 15.96	\$ 53.67
Operating Engineer (OE) (G2)	\$ 36.24	\$ 2.48	\$ 0.58	\$ 0.24	\$ 2.48	\$ 0.60	\$ 4.79	\$ 3.70	\$ 22.77	\$ 73.87
Operating Engineer (OE) (G3)	\$ 34.76	\$ 2.38	\$ 0.56	\$ 0.23	\$ 2.38	\$ 0.58	\$ 4.62	\$ 3.70	\$ 22.77	\$ 71.98
Pile Driver (PD) (G2)	\$ 37.17	\$ 2.53	\$ 0.59	\$ 0.25	\$ 2.53	\$ 0.61	\$ 4.90	\$ 3.70	\$ 22.77	\$ 75.06
Plumber Utility Pipe Fitter	\$ 51.00	\$ 3.18	\$ 0.74	\$ 0.31	\$ 3.18	\$ 0.77	\$ 6.16	\$ 0.30	\$ 29.65	\$ 95.29
Teamster	\$ 27.43	\$ 1.83	\$ 0.43	\$ 0.18	\$ 1.83	\$ 0.44	\$ 3.55	\$ 2.15	\$ 20.42	\$ 58.27
Traffic Control Person I	\$ 27.19	\$ 1.84	\$ 0.43	\$ 0.18	\$ 1.84	\$ 0.45	\$ 3.56	\$ 2.48	\$ 14.62	\$ 52.58
Traffic Control Person II	\$ 24.69	\$ 1.68	\$ 0.39	\$ 0.16	\$ 1.68	\$ 0.41	\$ 3.26	\$ 2.48	\$ 14.62	\$ 49.38
Scaffold / Shoring Erector	\$ 38.65	\$ 2.65	\$ 0.62	\$ 0.26	\$ 2.65	\$ 0.64	\$ 5.12	\$ 4.05	\$ 21.77	\$ 76.40
Elevator Mechanic/Constructor	\$ 57.29	\$ 3.77	\$ 0.88	\$ 0.36	\$ 3.77	\$ 0.91	\$ 7.29	\$ 3.44	\$ 23.84	\$ 101.54
Elevator Mechanic Helper	\$ 40.10	\$ 2.70	\$ 0.63	\$ 0.26	\$ 2.70	\$ 0.65	\$ 5.22	\$ 3.44	\$ 23.84	\$ 79.54
Asbestos Removal Specialist II	\$ 24.87	\$ 1.67	\$ 0.39	\$ 0.16	\$ 1.67	\$ 0.40	\$ 3.23	\$ 2.02	\$ 10.53	\$ 44.94
Lead Removal Worker	\$ 36.25	\$ 2.36	\$ 0.55	\$ 0.23	\$ 2.36	\$ 0.57	\$ 4.57	\$ 1.85	\$ 6.09	\$ 54.84

**CHANGE ORDER REQUEST NUMBER 001**

**SFMTA Contract No. 1252**  
Central Subway Tunneling

**Contractor:** Barnard Impregilo Healy JV  
PO Box 78270  
San Francisco, CA 94107

**SUMMARY Evaluation (COR #001)**

The existing low pressure 12" Water line which runs west to east at the intersection of Fourth St. and Harrison St. was originally shown in contract drawing UT-501, Rev. 0 to be approximately 3' north of the existing 12" AWSS "T" fitting at this location. During the excavation required for the contract AWSS removal and relocation work BIH's subcontractor, Synergy Project Management (Synergy or SPM), discovered that the existing water line was actually further south than was indicated in the drawings which positioned it almost directly above the AWSS "T" fitting or point of connection. Furthermore because the water line was farther south than was expected it was placed in close proximity to an existing electrical duct bank.

BIH claims in the COR that due to this change "Synergy's crew spent additional time excavating material surrounding the AWSS "T" fitting because their originally assumed means and methods couldn't be implemented. Synergy's crew also spent additional time removing existing AWSS fittings and installing and restraining new AWSS fittings."

SPM's original means and methods relied on excavating a tunnel from both sides of the existing duct bank to access the AWSS "T." Due to the close proximity of the existing water line to the duct bank, excavation could only be performed from one side thus increasing the amount of time spent on excavating around the AWSS fittings. Also because the water line was located closely above the existing AWSS point of connection additional time was spent removing the existing AWSS fittings and installing the new AWSS fittings required for the work.

Because of the fact that the water line was not located where it was shown in the contract drawings, additional effort was needed to accomplish the contract work; therefore I recommend that merit be established for COR 001.

Note: this COR also relates to a time impact analysis which has been received under cover of COR 008.

By: \_\_\_\_\_ Date \_\_\_\_\_  
Sarah Wilson  
Resident Engineer

## C Mod Task Force Meeting Minutes #06

DATE: October 19, 2012

MEETING DATE: **October 15, 2012**

LOCATION: 821 Howard St, Main Conference Room

TIME: 3:30 PM

ATTENDEES: M. Benson (MB), E. Stassevitch (ES), J. Park (JP), Sarah Wilson (SW), C. Dombrowski (CD), Ken Barnhart (KB)

COPIES TO: Attendees: J Funghi (JF), S. Farhangi (SF), R. Nguyen (RN), M. Acosta (MA), Ben Volberding (BV), B. Lebovitz (BL), D. Kuehn (DK),  
File No. M544.1.5.0910.e

REFERENCE Project No. M544.1, Contract No. 149 Task 1-1.08  
Construction

SUBJECT: CMod Task Force Meeting # 06 – Rev. No. 0

**RECORD OF MEETING** *(Italicized text indicates status update of open items)*

ITEM #	DISCUSSION	ACTION BY DUE DATE
1-	ES opened the meeting by restating the purpose of the Task Force. The CMod Task Force purpose is to examine the current procedures and practices related to processing changes during construction and look for areas of improvement, especially related to the time to develop and process a contract modification (CMod). A standing meeting for 10 weeks has been established at the time and place noted above, for the remaining 4 weeks, with the attendees shown above; to identify areas of possible improvement, and develop recommendations for review by Sr. Management of the Program.	
2-	ES reviewed the minutes from meeting #5 for any corrections or revisions and to refresh the group on accomplishments for Areas of Improvement #3 & 4 – Scoping Meeting, Estimate Preparation, and Reconciliation of Costs. Although time at the last meeting ran out before completing the discussion, the task force will continue the discussion today focused on Area of Improvement #3 and Area of Improvement #4. The focus of the group discussion today is on the details of the scoping meeting and estimate preparation and how these important items are compiled into a comparisons sheet with the Contractor’s proposal for development of a negotiation position. The group was reminded of the two hold points in the Change Process requiring CMB action; 1)CMB action for merit on a COR and 2) what the RE organizations needs to do to prepare a negotiation position for the COR.	
3-	<b>Area of Improvement #3 (Cont.)- Scoping Meeting and Estimate Preparation</b> The discussion recapped the justification analysis form, and draft estimating template that allows the scope to be estimated by the agreed to tasks for labor, material and equipment consistent with the requirements of Article 6 of the contract.  It was pointed out that there is an Independent Engineer’s Estimate and a form to	SW/CD 10/22/12



ITEM #	DISCUSSION	ACTION BY DUE DATE
	<p>compare with the Contractors proposal side by side. More discussion was held on the changes to each of the templates and additional efforts will be to edit each for presentation at the next meeting. The reconciliation of costs sheet will also be utilized for recommended negotiation position.</p> <p>Questions arose regarding an independent estimate, Meeting time constraints prevented continued discussion on the scope and estimate preparation. The following will be taken up and continued next meeting:</p> <p>Suggested for areas of improvement:</p> <ul style="list-style-type: none"> <li>• Force Account “estimating”</li> <li>• Involve Contract Admin in scoping meeting and cost estimating review</li> <li>• Develop meaningful Cost Comparison Sheet</li> <li>• Develop Recommended Negotiation Position</li> </ul>	

**ACTION ITEMS**

ITEM #	MTG DATE	MTG ACTION DATE	DESCRIPTION	BIC	DUE DATE	STATUS
3	08/13/12	08/27/12	Finalize Area of Improvement #1 - Timely Submission of the COR	SW	10/29/12	Open
4	08/13/12	08/27/12	Finalize Area of Improvement #2 - Finding of the Fact	MB	10/29/12	Open
5	08/13/12	08/13/12	Scoping Meeting/Estimate Preparation	SW	10/22/12	Open
6	08/13/12	08/13/12	Reconciliation of Costs	ES	10/22/12	Open
7	08/13/12	08/27/12	Finalize Area of Improvement #5 - Change Order Process	MB	11/05/12	Open
8	08/27/12	08/27/12	Clarify Delegation of Authority	ES	11/05/12	Open
9	08/27/12	08/27/12	Review GPs to ensure adequate information	ES	11/05/12	Open

Meeting adjourned at 4:30pm

These meeting minutes have been prepared by E. Stassevitch and reviewed by M. Benson, and are the preparer's interpretation of discussions that took place. If the reader's interpretation differs, please contact the author in writing within four (4) days of receipt of these minutes.

**Signed:** \_\_\_\_\_ [initials of preparer & reviewer] **Date:** \_\_\_\_\_ [Date review completed]

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## Estimate Summary

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Scope/Background:

Stakeholders:

Date of occurrence:

List of attached documents:

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Estimate Prepared By: ESTIMATORS NAME

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Estimate Checked By: CHECKERS NAME

## COR ###

No.	Activity Name	Days (C)	Days (EE)	Contractor (C)	Engineer's Estimate (EE)	Delta (EE-C)
Labor	1		0	\$ -	\$ -	\$ -
	2		0	\$ -	\$ -	\$ -
	3		0	\$ -	\$ -	\$ -
	4		0	\$ -	\$ -	\$ -
	5		0	\$ -	\$ -	\$ -
	6		0	\$ -	\$ -	\$ -
	7		0	\$ -	\$ -	\$ -
	8		0	\$ -	\$ -	\$ -
	9		0	\$ -	\$ -	\$ -
	10		0	\$ -	\$ -	\$ -
	11		0	\$ -	\$ -	\$ -
	12		0	\$ -	\$ -	\$ -
Equipment	1		0	\$ -	\$ -	\$ -
	2		0	\$ -	\$ -	\$ -
	3		0	\$ -	\$ -	\$ -
	4		0	\$ -	\$ -	\$ -
	5		0	\$ -	\$ -	\$ -
	6		0	\$ -	\$ -	\$ -
	7		0	\$ -	\$ -	\$ -
	8		0	\$ -	\$ -	\$ -
	9		0	\$ -	\$ -	\$ -
	10		0	\$ -	\$ -	\$ -
	11		0	\$ -	\$ -	\$ -
	12		0	\$ -	\$ -	\$ -
Material				\$ -	\$ -	\$ -
Markup LM&E - 15%				\$ -	\$ -	\$ -
2nd Tier Subs				\$ -	\$ -	\$ -
Markup - 5%				\$ -	\$ -	\$ -
Sub. Bond/Insurance 0.00%				\$ -	\$ -	\$ -
Prime Markup - 5%				\$ -	\$ -	\$ -
Prime Bond/Insurance 0.00%				\$ -	\$ -	\$ -
Total				\$ -	\$ -	\$ -

Summary of Differences:

No.	Activity	Hourly rates:								Labor totals											Equipment Totals	
		Days	Labor Resource \$ 0.00	Labor Resource \$ 0.00	Labor Resource \$ 0.00	Labor Resource \$ 0.00	Labor Resource \$ 0.00	Labor Resource \$ 0.00	Labor Resource \$ 0.00		Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00		
1		0							\$ -													\$ -
2		0							\$ -													\$ -
3		0							\$ -													\$ -
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13	<b>Total</b>								\$ -													\$ -

Labor	\$	-
Material	\$	-
Equipment	\$	-
2nd Tier Sub	\$	-
<hr/>		
Markup on 2nd Tier Sub - 5%	\$	-
1st Tier Sub OH&P - 15%	\$	-
1st Tier Sub Bond/Insurance - 0.00%	\$	\$0.00
<hr/>		
Prime - Markup - 5%	\$	-
Prime - Bond/Insurance - 0.00%	\$	\$0.00
<b>Total Amount</b>	<b>\$</b>	<b>-</b>

Assumptions:

Shift Duration: 8hrs

Estimated By: ESTIMATOR'S NAME 5/26/2013 Checked By: CHECKER'S NAME 5/26/2013

Material	Qty.	Unit	Unit Price	Extension
			\$ -	\$ -
				\$ -
				\$ -
				\$ -
Sales Tax 8.5%				\$ -
<b>Total</b>				<b>\$ -</b>

2nd Tier Sub Quote \$ -

## Prevailing Labor Rates - SF

<http://www.dir.ca.gov>

		Social Security	Medicare	FUTA	SUTA	SF Pay	WC	Vacation/Holiday	Other Fringes	
		6.20%	1.45%	0.60%	6.20%	1.50%	12.00%			Fully Burdened
Labor Resource										0
Carpenter	\$ 38.50	\$ 2.64	\$ 0.62	\$ 0.26	\$ 2.64	\$ 0.64	\$ 5.11	\$ 4.05	\$ 21.77	\$ 76.21
Cement Mason	\$ 28.65	\$ 2.09	\$ 0.49	\$ 0.20	\$ 2.09	\$ 0.51	\$ 4.05	\$ 5.14	\$ 16.82	\$ 60.05
Electrician (Inside Wireman)	\$ 54.87	\$ 3.72	\$ 0.87	\$ 0.36	\$ 3.72	\$ 0.90	\$ 7.20	\$ 1.64	\$ 23.95	\$ 97.23
Flag Person	\$ 26.89	\$ 1.82	\$ 0.43	\$ 0.18	\$ 1.82	\$ 0.44	\$ 3.52	\$ 2.48	\$ 14.62	\$ 52.20
Iron Worker	\$ 33.00	\$ 2.29	\$ 0.54	\$ 0.22	\$ 2.29	\$ 0.55	\$ 4.43	\$ 3.92	\$ 21.37	\$ 68.60
Laborer (G1)	\$ 26.89	\$ 1.82	\$ 0.43	\$ 0.18	\$ 1.82	\$ 0.44	\$ 3.52	\$ 2.48	\$ 15.96	\$ 53.54
Laborer (G2)	\$ 26.99	\$ 1.83	\$ 0.43	\$ 0.18	\$ 1.83	\$ 0.44	\$ 3.54	\$ 2.48	\$ 15.96	\$ 53.67
Operating Engineer (OE) (G2)	\$ 36.24	\$ 2.48	\$ 0.58	\$ 0.24	\$ 2.48	\$ 0.60	\$ 4.79	\$ 3.70	\$ 22.77	\$ 73.87
Operating Engineer (OE) (G3)	\$ 34.76	\$ 2.38	\$ 0.56	\$ 0.23	\$ 2.38	\$ 0.58	\$ 4.62	\$ 3.70	\$ 22.77	\$ 71.98
Pile Driver (PD) (G2)	\$ 37.17	\$ 2.53	\$ 0.59	\$ 0.25	\$ 2.53	\$ 0.61	\$ 4.90	\$ 3.70	\$ 22.77	\$ 75.06
Plumber Utility Pipe Fitter	\$ 51.00	\$ 3.18	\$ 0.74	\$ 0.31	\$ 3.18	\$ 0.77	\$ 6.16	\$ 0.30	\$ 29.65	\$ 95.29
Teamster	\$ 27.43	\$ 1.83	\$ 0.43	\$ 0.18	\$ 1.83	\$ 0.44	\$ 3.55	\$ 2.15	\$ 20.42	\$ 58.27
Traffic Control Person I	\$ 27.19	\$ 1.84	\$ 0.43	\$ 0.18	\$ 1.84	\$ 0.45	\$ 3.56	\$ 2.48	\$ 14.62	\$ 52.58
Traffic Control Person II	\$ 24.69	\$ 1.68	\$ 0.39	\$ 0.16	\$ 1.68	\$ 0.41	\$ 3.26	\$ 2.48	\$ 14.62	\$ 49.38
Scaffold / Shoring Erector	\$ 38.65	\$ 2.65	\$ 0.62	\$ 0.26	\$ 2.65	\$ 0.64	\$ 5.12	\$ 4.05	\$ 21.77	\$ 76.40
Elevator Mechanic/Constructor	\$ 57.29	\$ 3.77	\$ 0.88	\$ 0.36	\$ 3.77	\$ 0.91	\$ 7.29	\$ 3.44	\$ 23.84	\$ 101.54
Elevator Mechanic Helper	\$ 40.10	\$ 2.70	\$ 0.63	\$ 0.26	\$ 2.70	\$ 0.65	\$ 5.22	\$ 3.44	\$ 23.84	\$ 79.54
Asbestos Removal Specialist II	\$ 24.87	\$ 1.67	\$ 0.39	\$ 0.16	\$ 1.67	\$ 0.40	\$ 3.23	\$ 2.02	\$ 10.53	\$ 44.94
Lead Removal Worker	\$ 36.25	\$ 2.36	\$ 0.55	\$ 0.23	\$ 2.36	\$ 0.57	\$ 4.57	\$ 1.85	\$ 6.09	\$ 54.84

Equipment	Caltrans Page No	CalTrans Category Sub-Category Rental Quote/ Code	Hourly Rate	Delay Factor	Standby Rate
Equipment			\$ -		
1 Work Truck	34	TRUCK	\$ 33.12	0.14	\$ 4.64
2 Dump truck - 3-axle	34	TRUON	\$ 66.43	0.16	\$ 10.63
3 Tow Behind Trailer	33	TRAIT	\$ 5.72	0.42	\$ 2.40
4 End Dump - 5-axle	34	TRUON	\$ 83.50	0.16	\$ 13.36
5 Generator	6	ELGEN	\$ 14.18	0.11	\$ 1.56
6 Air Compressor	1	AIRCP	\$ 34.31	0.12	\$ 4.12
60-90 Lb. Jack-hammer	1	AIRTOL	\$ 1.31	0.61	\$ 0.80
<b>Air compressor, hoses &amp; hammer total</b>			<b>\$ 35.62</b>		<b>\$ 4.92</b>
7 Arc Welder	34	WELD	\$ 11.87	0.18	\$ 2.14
Welding Rods	N/A	N/A	\$ 5.34		\$ -
F250	34	TRUCK	\$ 33.12	0.14	\$ 4.64
<b>Welder and Truck</b>			<b>\$ 50.33</b>		<b>\$ 6.77</b>
8 Torches and Tanks	34	WELD	\$ 0.24	0.18	\$ 0.04
Oxygen Tank and Acetylene Tank	N/A	N/A	\$ 38.70		\$ -
<b>Total Torches and Tanks</b>			<b>\$ 38.94</b>		<b>\$ 0.04</b>
9 Rotohammer	6	ELTOL	\$ 0.44	0.61	\$ 0.27
Generator	6	ELGEN	\$ 14.18	0.11	\$ 1.56
<b>Rotohammer and Generator</b>			<b>\$ 14.62</b>		<b>\$ 1.83</b>
10 Rivet Buster	1	AIRTOL	\$ 1.31	0.61	\$ 0.80
Air Compressor	1	AIRCP	\$ 34.31	0.12	\$ 4.12
<b>Rivet Buster and Air Compressor</b>			<b>\$ 35.62</b>		<b>\$ 4.92</b>
11 Compactor, Hand Guided	4	COMHG	\$ 8.82	0.18	\$ 1.59
12 Bobcat 763	31	TRACS	\$ 25.35	0.11	\$ 2.79
13 Backhoe (John Deere ID 310G)	18	LDDRT	\$ 62.87	0.12	\$ 7.54
Clam Shell Bucket	1	N/A	\$ 9.29	0.12	\$ 1.11
<b>Backhoe w/ Clam Shell total</b>			<b>\$ 72.16</b>		<b>\$ 8.66</b>
14 Breaker attachment for Backhoe	7	HAMMR	\$ 42.26	0.23	\$ 9.72
15 Mini Excavator (Kubota U45)	N/A	N/A	\$ 63.79	0.18	\$ 11.48
16 Excavator (Hitachi 200)	N/A	N/A	\$ 142.51	0.18	\$ 25.65



17 New Holland Excavator (E135)	N/A	N/A	\$ 120.13	0.18	\$ 21.62
18 Ride-on Sweeper	4	BRMSW	\$ 145.11	0.14	\$ 20.32
19 Bituminous Distributor	4	BITDT	\$ 6.52	0.14	\$ 0.91
Work truck	33	TRUCK	\$ 33.12	0.14	\$ 4.64
<b>Bituminous Distributor with truck</b>			<b>\$ 39.64</b>		<b>\$ 5.55</b>
20 Fork Lift Truck	6	FKLFT	\$ 27.14	0.20	\$ 5.43
21 Concrete Saw	28	SAWCO	\$ 19.63	0.14	\$ 2.75
Saw blade 12" x \$18 per hour (100 LF)	28	SAWCO	\$ 216.00	0.14	\$ 30.24
Concrete Saw and Blade			\$ 235.63		\$ 32.99
22 Water Pump	22	PUMWA	\$ 22.61	0.35	\$ 7.91
<b>23 Confined Space Equipment</b>					
Gas Detector 4-Gas w/ Motorized Integral Pump			\$22.79		
Blower Portable w/ 8"x15' Hose			\$8.82		
Retrieval 65' Winch for Tripod			\$11.53		
SCBA-NFPA Approved 2216 PSI Complete alrpeck			\$9.03		
<b>Total Confined Space</b>			<b>\$52.15</b>		
Traffic Control (per street, intersection = x2					
24 streets)					
Construction Signs	32	TR AFC	\$7.29		
Changeable Message Boards	32	TR AFA	\$9.92		
Arrow Board	32	TR AFA	\$3.20		
No Parking Signs (A-frames)	32	TR AFC	\$0.22		
Cones (per 100)	32	TR AFC	\$13.27		
25 Interlocking Water Filled Triton Barrier	N/A	N/A	\$4.07		
\$30 per day /8 plus tax					
26 Traffic Plates Installed					
Total per Plate (small)	N/A	N/A	\$9.48		
Total per Plate (large)	N/A	N/A	\$12.15		
27 Trench Shoring (4' wide trends)			\$4.34		
Total per trench shore			\$2.17		

## C Mod Task Force Meeting Minutes #07

DATE: October 30, 2012

MEETING DATE: **October 24, 2012**

LOCATION: 821 Howard St, Main Conference Room

TIME: 10:00 PM

ATTENDEES: M. Benson (MB), E. Stassevitch (ES), M. Acosta (MA), Ben Volberding (BV), Sarah Wilson (SW), C. Dombrowski (CD), Ken Barnhart (KB), Richard Redman (RR), Matt Hembd (MH), Mun Leong (ML)

COPIES TO: Attendees: J Funghi (JF), S. Farhangi (SF), R. Nguyen (RN), J. Park (JP), B. Lebovitz (BL), D. Kuehn (DK),  
File No. M544.1.5.0910.e

REFERENCE Project No. M544.1, Contract No. 149 Task 1-1.08  
Construction

SUBJECT: CMod Task Force Meeting # 07 – Rev. No. 0

### RECORD OF MEETING *(Italicized text indicates status update of open items)*

ITEM #	DISCUSSION	ACTION BY DUE DATE
1-	ES opened the meeting by restating the purpose of the Task Force. The CMod Task Force purpose is to examine the current procedures and practices related to processing changes during construction and look for areas of improvement, especially related to the time to develop and process a contract modification (CMod). A standing meeting for 10 weeks has been established at the time and place noted above, for the remaining 3 weeks, with the attendees shown above; to identify areas of possible improvement, and develop recommendations for review by Sr. Management of the Program.	
2-	ES reviewed the minutes from meeting #6 for any corrections or revisions and to refresh the group on accomplishments for Areas of Improvement #3 & 4 – Scoping Meeting, Estimate Preparation, and Reconciliation of Costs. Although time at the last meeting ran out before completing the discussion, the task force will continue the discussion today focused on Area of Improvement #3 and Area of Improvement #4. The focus of the group discussion today is on the details of the estimate preparation and how to compile into a comparisons sheet with the Contractor’s proposal and develop a negotiation position. The group was reminded of the hold point in the Change Process requiring CMB action; 2) what the RE organizations needs to do to prepare a negotiation position for the COR.	
3-	<b>Area of Improvement #3 &amp; #4 (Cont.)- Estimate Preparation and Reconciliation</b> The discussion recapped the draft estimating template that allows the scope to be estimated by the agreed to tasks for labor, material and equipment consistent with the requirements of Article 6 of the contract. The discussion then focused on the development of an Engineer’s Estimate based on Force Account work.	SW/CD 10/29/12

ITEM #	DISCUSSION	ACTION BY DUE DATE
	<p>First there was a review of the Contract provisions for Force account and the CM Procedure for Force Account. It was readily apparent that some in the group were not thoroughly familiar with both and that there was not a common interpretation or understanding of the procedure or contract provisions. Also the forms attached to the procedure were not familiar to the current RE teams and were not being utilized.</p> <p>ES led the discussion on the intent of the contract provision, specifically when force account is utilized; either to track work that is recognized as a change but is difficult to quantify or to perform change work where an agreement cannot be reached with the Contractor for the scope and cost of the change.</p> <p>A spirited discussion ensued, and ES made it a point to speak on behalf of contract administration view point, even though they were not present and ES did not agree entirely with their interpretation of the contract provision, specifically that once the agency direct works to be performed on a Force Account basis, then the Agency is Directing the work and force account tags can be signed without the time only provision.</p> <p>There was general disagreement with this opinion and clarity is required at the next meeting that JP is present. All agreed that the key is to reach agreement on labor, material and equipment required, the night before work is to be performed as required by the contract. If this is actually occurring, there should be little to no dispute of information put on the daily tag.</p> <p>The work continues to be performed, tags submitted daily, and then the Contractor fills in the proper rates for labor and equipment and “extends” the tag including material costs, for submission to the RE. The tabulation of all of the approved tags constitutes an accounting of the force account work which makes up the Engineer’s estimate.</p> <p>Clarity on what forms to utilize and how they are to be properly handled in the field requires further discussion. The group reviewed the template that has been utilized on 1250 and 1251 and found it acceptable for use moving forward. The field tags will be reviewed against those shown in the procedure and adjustments will be made accordingly so that the Procedure and the actions being performed in the field are consistent with the Contract provisions.</p> <p>Overall it was agreed that RE should attempt to minimize work performed on Force account. When work is begun on a change, being tracked on force account, attempts should continue to arrive at a lump sum cost if at all possible. Consistent with the contract is a negotiated cost is arrived at the Force account tags no longer apply. It is however acceptable practice to utilize the existing tags to assist the estimator in developing an equitable cost for the work.</p> <p>Meeting time constraints prevented continued discussion on the estimate preparation, force account work and reconciliation of costs. The following will be taken up and continued next meeting:</p> <p>Suggested for areas of improvement:</p> <ul style="list-style-type: none"> <li>• Force Account “estimating”</li> <li>• Involve Contract Admin in scoping meeting and cost estimating review</li> <li>• Develop meaningful Cost Comparison Sheet</li> <li>• Develop Recommended Negotiation Position</li> </ul>	

**ACTION ITEMS**

ITEM #	MTG DATE	MTG ACTION DATE	DESCRIPTION	BIC	DUE DATE	STATUS
3	08/13/12	08/27/12	Finalize Area of Improvement #1 - Timely Submission of the COR	SW	11/05/12	Open
4	08/13/12	08/27/12	Finalize Area of Improvement #2 - Finding of the Fact	MB	11/05/12	Open
5	08/13/12	08/13/12	Scoping Meeting/Estimate Preparation	SW	10/29/12	Open
6	08/13/12	08/13/12	Reconciliation of Costs	ES	10/29/12	Open
7	08/13/12	08/27/12	Finalize Area of Improvement #5 - Change Order Process	MB	11/12/12	Open
8	08/27/12	08/27/12	Clarify Delegation of Authority	ES	11/12/12	Open
9	08/27/12	08/27/12	Review GPs to ensure adequate information	ES	11/12/12	Open

Meeting adjourned at 11:00pm

These meeting minutes have been prepared by E. Stassevitch and reviewed by M. Benson, and are the preparer’s interpretation of discussions that took place. If the reader’s interpretation differs, please contact the author in writing within four (4) days of receipt of these minutes.

**Signed:** \_\_\_\_\_ [initials of preparer & reviewer] **Date:** \_\_\_\_\_ [Date review completed]

Subcontractors prior to Bid, and such costs shall be included in Contractor's Total Bid Price.

- F. Records: Contractor shall maintain its records in such a manner as to provide a clear distinction between the direct costs of Change Orders and the cost of original Contract Work. This requirement pertains to all types of Change Orders, as well as the additions, deletions, revisions, CORs, and Claims initiated by Contractor.

#### 6.05 FORCE ACCOUNT WORK

- A. General: When additions, deletions, or revisions in the Work are to be paid for on a Force Account basis, all direct costs itemized in subsection 6.04.A shall be subject to the approval of the City and compensation will be determined as set forth herein.
1. The City will direct Contractor to proceed with the Work on a Force Account basis, and the City will establish a "not to exceed" budget.
  2. All requirements regarding direct costs and markup for overhead and profit provided in Section 6.06 shall apply to Force Account Work. However, the City will pay only the actual necessary costs verified in the field by the City on a daily basis.
  3. Contractor shall be responsible for all costs related to the documentation, data preparation, and administration of Force Account Work. Compensation for such costs shall be fully covered by the markup for overhead and profit markup as provided in subsection 6.04.C.
- B. Notification and Verification: Contractor shall notify the City in writing at least 24 hours in advance of its schedule before proceeding with the Force Account Work. All Force Account Work shall be witnessed, documented, and approved in writing by the City on the Day that the Work is performed. Contractor will not be compensated for Force Account Work if Contractor fails to provide timely notice to the City before commencing the Force Account Work. In addition, Contractor shall notify the City when the cumulative costs incurred by Contractor for the Force Account Work equal 80 percent of the budget pre-established by the City. Contractor will not be compensated for Force Account Work exceeding the "not to exceed" budget amount if Contractor fails to provide the required notice before exceeding 80 percent of the Force Account budget.
- C. Work Performed by Special Forces or Other Special Services:
1. For procurement of Special Track work, poles, fabricated assemblies, software and operating equipment and when the Engineer and the Contractor, by agreement, determine that a special service or an item of extra work cannot be performed by the forces of the Contractor or those of any of its Subcontractors, such service or extra work item may be performed by a specialist. Invoices for such service or item of extra work on the basis of the current market price thereof may be accepted without complete itemization of labor, material, and equipment costs when it is impracticable and not in accordance with the established practice of the special service industry to provide such complete itemization.
  2. In those instances wherein Contractor is required to perform extra work necessitating a fabrication or machining process in a fabrication or machine shop facility away from the jobsite, the charges for that portion of the extra work performed in such facility may, by agreement, be accepted as a specialist billing.

The Engineer must be notified in advance of all Work that will not be performed at the Site.

3. An amount not to exceed 5 percent will be added to the specialist invoice price, less a credit to the Agency for any cash or trade discount offered or available, whether or not such discount may have been taken. This 5 percent is in lieu of the percentages provided in Section 6.04.C for work performed by a Subcontractor.
- D. Reports: Contractor shall diligently proceed with the approved Force Account Work and shall submit to the City no later than 12:00 p.m. of the Day following performance of Force Account Work a daily Force Account Work report on a form obtained from the City. The report shall provide an itemized, detailed account of the daily Force Account labor, material, and equipment, including names of the individuals and the specific pieces of equipment identified by manufacturer's model type and serial number. Contractor's authorized representative shall complete and sign the report. Contractor will not be compensated for Force Account Work for which said timely report is not completed and submitted to the City.
- E. Records: Contractor shall maintain detailed records of all Work done on a Force Account basis. Contractor shall provide a weekly Force Account summary indicating the status of each Force Account Work directive in terms of actual costs incurred as a percent of the budget for the respective Force Account Work directive and the estimated percentage completion of the Force Account Work.
- F. Agreement: If Contractor and the City reach a negotiated, signed agreement on the cost of a Change Order while the Work is proceeding on a Force Account basis, Contractor's signed written reports shall be discontinued and all previously signed reports shall become invalid.

## 6.06 ORAL MODIFICATIONS

No oral statement of any person shall in any manner or degree modify or otherwise affect the terms of this Contract.

## ARTICLE 7 - TIME

### 7.01 PROGRESS AND COMPLETION

- A. Commencement of Work. When the Contract has been certified by the Controller, the Agency will designate the official date for commencement of the Work (NTP) and will notify the Contractor by a Notice to Proceed. The Contractor shall take no action that shall obligate the City to, and the City shall not be obligated for, the expenditure of funds before said official commencement date. The Contractor shall begin work within 10 calendar Days after said official commencement date, and shall prosecute the same diligently thereafter at a rate sufficient to enable it to complete the Work within the Contract Time. .
- B. Notice of Commencement of Work. The Contractor shall notify the Engineer in writing, not less than three (3) Working Days in advance, of the actual date the Contractor will begin the Work under the Contract. Said notice shall contain information as to the time

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	<b>Document Number:</b> CM.1107
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0


# FORCE ACCOUNT WORK

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APPROVED BY: John Funghi  
Senior Program Manager  
SFMTA Central Subway



DATE: 1-14-10

<b>Title:</b>  <div style="text-align: center;">   <b>PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS</b>  <b>SECTION 1107 – FORCE ACCOUNT WORK</b> </div>	<b>Document Type:</b> Procedure
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<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0

## 1107.1 PURPOSE

This procedure provides policy and guidance for the Resident Engineer (RE) on how to direct, monitor, and document Force Account work.

## 1107.2 RESPONSIBILITY

When the RE cannot determine the scope of a Change Order or agree with the Contractor in a timely manner on an equitable adjustment for a change, or both parties recognize unforeseen conditions that may require payment of time and materials, the work becomes Force Account work. The RE directs the Contractor to do Force Account work only with approval from SFMTA's Program or Construction Manager, and after issuance of a Proposed Contract Change (PCC). Refer to Procedure 1102 for PCC information and Procedure 1103 for Force Account work information in regard to Contract Modifications. Force Account work cannot be paid for without an executed C/Mod.

When SFMTA pays for additions, deletions, and/or revisions in the work on a Force Account basis, all direct costs specified in General Provisions Section 75.3.A, Cost of the Work, Direct Costs, are subject to SFMTA's approval. The compensation and work direction are subject to the terms specified in General Provisions Section 76, Force Account Work.

## 1107.3 PROCEDURES

### 1107.3.1 General

The Force Account process accomplishes four things:

- It authorizes the Contractor to perform extra work.
- It establishes the scope of the work.
- It reserves a portion of the contractual allowance to pay for the extra work, if applicable to work described by the allowance.
- It can also be used to track costs on disputed work claimed as extra by the Contractor if the RE chooses. The Force Account Change Order form is not used in this situation.

To document Force Account work, the RE is responsible for preparing the following forms:

- A. Force Account Change Order



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<p>Unit/Function: Capital Programs &amp; Construction Division Central Subway</p>	<p>Revision Number: 0</p>

- B. Daily Force Account Report
- C. Daily Force Account Summary
- D. Supplemental Force Account Change Order

### 1107.3.2 Force Account Change Order

The RE uses the Force Account Change Order (FACO) form (see Exhibit 1107-1) to direct the work. Each FACO must include:

- A. An accurate specification of the work the Contractor will perform
- B. An estimated price for the work. The RE must obtain approval by the Construction Manager and other management as determined by the Delegation of Authority.
- C. A statement that "Payment for the work under such order shall not exceed a specified and previously agreed upon estimated cost and requires an executed C/Mod."


As part of the FACO process, the following occurs:

- A. Before the Contractor performs any Force Account work, the RE must review the FACO form and reach an agreement with the Contractor on the general scope of the supervision, labor, materials, and equipment the Contractor will use to complete the work.
- B. The Contractor must notify SFMTA in writing at least 24 hours in advance of its schedule before proceeding with the work.
- C. During the Force account work, SFMTA must witness, document, and approve in writing all Force Account work on the day the Contractor performs the work.
- D. The Contractor must obtain SFMTA Inspector's signature on the daily construction diary record to demonstrate that SFMTA has witnessed the work.

### 1107.3.3 Daily Force Account Report

#### 1107.3.3.1 General

The Contractor must complete the Daily Force Account Report (DFAR) to record the Contractor activities to perform the work, including labor, materials, and equipment. The Contractor must fill out and submit the DFAR to the RE on a daily basis (see Exhibit 1107-

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2). The RE adds a report number to each form, and ensures it has the appropriate corresponding Change Order Request (COR), Proposed Contract Change (PCC), Force Account Change Order (FACO), and/or Change Modification (C/Mod) numbers.

### 1107.3.3.2 DFAR Documentation


The DFAR form must include the following:

- A. Date of the report
- B. Contractor and/or subcontractor name
- C. Contract number and title
- D. Contractor proposal number
- E. Report number (The RE must number all reports consecutively for each Force Account change.)
- F. Page numbers
- G. COR, PCC, FACO, and/or C-Mod number and title
- H. Brief description of the activities the Contractor performed on every date in question during the Force Account work
- I. Signature of a designated Contractor's representative
- J. Labor: Each worker's name, craft, class (e.g., apprentice, journeymen, or foreman), respective journal hours, and actual verifiable hourly cost-of-labor rate, as defined in General Provisions 75.3.A.1, Cost of the Work, Direct Costs, Labor
- K. Equipment: For every piece of equipment, the rental rate as specified in General Provisions 75.3.A.3, Cost of the Work, Direct Costs, Equipment
- L. Materials: The actual cost of materials obtained from suppliers. (The vendor's invoice must substantiate all items on the DFAR.)

### 1107.3.3.3 DFAR Verification and Approval

Upon receipt, the RE or designated field staff member must:

- A. Check and verify the DFAR.

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- B. Discuss any inaccuracies or inapplicable items with the Contractor.
- C. Resolve any issues.
- D. Compare the RE's records with the complete reports furnished by the Contractor and indicate any adjustments to the items listed on the report.
- E. Date and sign the report.

When both parties agree on and sign these DFARs, the reports become the basis of payment for the work the Contractor performs.

If the RE and Contractor cannot reach an agreement, the RE notes an exception on the DFAR and the amount of the total changes indicated by the Contractor that the RE authorizes for payment.

#### **1107.3.3.4 Cost Records**

The Office Engineer (OE) will maintain a running record of the DFARs, including the following cost records:


- A. Force Account cost approved for payment for each PCC
- B. Balance of uncommitted Force Account funds remaining in the project budget
- C. Force Account payments made with progress payments to the Contractor

#### **1107.3.4 Daily Force Account Summary**

Although an FACO, derived from Force Account cost records, does not require an Engineer's Estimate in the Findings of Facts form, the FACO does require:

- A. A summary of all approved daily costs on the daily Force Account cost summary forms
- B. A substantiation of the percentages applied for "cost of labor" and mark-ups
- C. Profit and bond determination

These items become the Daily Force Account Summary (see Exhibit 1107-3).

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### 1107.3.5 Supplemental Force Account Change Order

If the RE determines the cost of the work the Contractor performs under a FACO will be greater than the allotted amount for that work, the RE must issue a Supplemental FACO to increase the reserved amount available to pay for the work.

During the project closeout, the RE does the following.

- A. If after the Contractor completes the work the actual total cost of all work the Contractor performs under an individual FACO equals the allotted amount for that work, the RE does not need to take further action to reconcile the Force Account costs. If not done previously, a C/Mod needs to be execute for the final value of the force account work.
- B. If the actual cost of the Force Account work is less than the allotted amount, the RE must reduce the allotted amount to equal the actual cost of the work in the executed C/Mod. The RE must return the excess to the allowance, to pay for the extra work or to adjust that Contract item.

### 1107.4 DEFINITIONS

### 1107.5 EXHIBITS

- 1107-1 Sample Force Account Change Order
- 1107-2 Sample Daily Force Account Report
- 1107-3 Sample Daily Force Account Summary

### 1107.6 REFERENCES

Refer to the following:





- Contract Specifications General Provisions Sections 75- Alterations & Modification and 76- Force Account
- Procedure Manual Sections 1102- Proposed Contract Change Issuance and Processing, and 1103- Contract Modification

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### 1107.7 PROCEDURE HISTORY

<u>Revision Level</u>	<u>Revision Date</u>	<u>Summary of Revision</u>	<u>Approved By</u>

### 1107.8 APPROVALS

<b>Prepared by</b>	<b>Reviewed by</b>	<b>Signature &amp; Date</b>
<b>Originator of Central Subway Procedures Manual Title and Unit:</b>  Dane Hudson Construction Manager Central Subway Partnership	Roger Nguyen Quality Assurance Manager Quality Assurance Office  Robert Rocco Configuration & Risk Manager Central Subway Partnership  Arthur Wong SFMTA Construction Manager Central Subway Project	 1/12/10   1/13/10   1/13/10   1/13/10


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Exhibit 1107-1: Sample Force Account Change Order

**FORCE ACCOUNT CHANGE ORDER**

Title: \_\_\_\_\_

SFMTA Project: \_\_\_\_\_

Contract No. \_\_\_\_\_ FA Change Order No. \_\_\_\_\_

Report No. \_\_\_\_\_ Date \_\_\_\_\_

TO \_\_\_\_\_, Contractor

You are ordered to perform work under Bid Item No. \_\_\_\_\_ as follows:

The work specified above will be paid for on a force account basis as set forth in Section 76, Force Account Work, of the General Provisions. Payment for this work will not be allowed without an executed Contract Modification.

Allowance Amount for this PCC is: \_\_\_\_\_

Prepared by: \_\_\_\_\_

Date: \_\_\_\_\_

Approved:

Construction Manager \_\_\_\_\_

CM \_\_\_\_\_ Date: \_\_\_\_\_

Original: Contractor

Copies: Construction Manager

Contract File

Exhibit 1107-2: Sample Daily Force Account Report

Sample Daily Force Account Report

DAILY FORCE ACCOUNT REPORT

Contract No. \_\_\_\_\_ PCC/CPN No. \_\_\_\_\_ Date Performed: \_\_\_\_\_ Am. Authorized \$ \_\_\_\_\_  
 Report Nos. \_\_\_\_\_ Date of Report: \_\_\_\_\_ Prev. Expended \$ \_\_\_\_\_  
 Sheet of \_\_\_\_\_ Final Report: Yes No \_\_\_\_\_ This Report \$ \_\_\_\_\_  
 Contr Job No.: \_\_\_\_\_ To Date \$ \_\_\_\_\_  
 Contr Report No.: \_\_\_\_\_ Remaining \$ \_\_\_\_\_

Work Performed By \_\_\_\_\_ Description  
 of Work:

Equip No	EQUIPMENT	Hours	Rate	Amount	
				Owned	Rented
TOTAL COST OF EQUIPMENT					

MATERIAL and/or Work by Special Forces	Quantity	Unit Cost	Amount	
			Material	Work
TOTAL COST OF MATERIAL AND WORK				
TOTAL OWNED EQUIPMENT AND MATERIAL				
TOTAL RENTED EQUIPMENT AND WORK				

LABOR	Hours	Rate	Amount
Reg.			
O.T.			
Reg.			
O.T.			
Reg.			
O.T.			
Reg.			
O.T.			
Reg.			
O.T.			
Subtotal			
Labor Surcharge _____ Percent			
Substance			
Travel Expenses			
TOTAL COST OF LABOR			
+ 24% on Labor			
+ 15% on Owned Equipment and Material			
+ 15% on Rented Equipment and Work			
TOTAL THIS REPORT			

Originated By: \_\_\_\_\_ Date: \_\_\_\_\_  
 (Hours Only) Contractor's Rep.  
 Cont Extensions By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Contractor's Rep.  
 Cont Extensions Checked \_\_\_\_\_ Date: \_\_\_\_\_  
 Const. Management Rep.  
 Accepted: \_\_\_\_\_ Date: \_\_\_\_\_  
 Construction Manager

## Exhibit 1107-3: Sample Daily Force Account Summary

### Sample Daily Force Account Summary

Daily Force Account Summary				
Contract No.:	PCC/CPN No. Report Nos	Date Work Began: Date Completed Contr. Job No.. Contr. Report No	Amt. Authorized \$	
			Prev. Expended \$	
			This Report \$	
			To Date \$	
			Remaining \$	

Work Performed By					
Description of Work:					
Equip No.	EQUIPMENT	Hours	Rate	Amount	
				Owned	Rented
TOTAL COST OF EQUIPMENT					

MATERIAL and/or Work by Special Forces	Quantity	Unit Cost	Amount	
			Material	Work
TOTAL COST OF MATERIAL AND WORK				
TOTAL, OWNED EQUIPMENT AND MATERIAL				
TOTAL, RENTED EQUIPMENT AND WORK				
SUBMITTED: _____				
Contractor's Rep.				

LABOR	Hours	Rate	Amount
	Reg.		
	O.T.		
	Reg.		
	O.T.		
	Reg.		
	O.T.		
	Reg.		
	O.T.		
Subtotal			
Labor Surcharge @ _____ Percent			
Subsistence			
Travel & Expenses			
TOTAL COST OF LABOR:			
+ 24% on Labor			
+ 15% on Owned Equipment and Material			
+ 15% on Rented Equipment and Work			
TOTAL THIS REPORT			

REVIEWED BY: _____	
ACCEPTED: _____	Construction Manager



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## Estimate Summary

---

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Scope/Background:

Stakeholders:

Date of occurrence:

List of attached documents:

---

Estimate Prepared By: ESTIMATORS NAME

---

Estimate Checked By: CHECKERS NAME



No.	Activity	Hourly rates:								Labor totals											Equipment Totals	
		Days	Labor Resource \$ 0.00	Labor Resource \$ 0.00	Labor Resource \$ 0.00	Labor Resource \$ 0.00	Labor Resource \$ 0.00	Labor Resource \$ 0.00	Labor Resource \$ 0.00		Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00	Equipment \$ 0.00		
1		0							\$ -													\$ -
2		0							\$ -													\$ -
3		0							\$ -													\$ -
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13	<b>Total</b>								\$ -													\$ -

Labor	\$	-
Material	\$	-
Equipment	\$	-
2nd Tier Sub	\$	-
<hr/>		
Markup on 2nd Tier Sub - 5%	\$	-
1st Tier Sub OH&P - 15%	\$	-
1st Tier Sub Bond/Insurance - 0.00%	\$	\$0.00
<hr/>		
Prime - Markup - 5%	\$	-
Prime - Bond/Insurance - 0.00%	\$	\$0.00
<b>Total Amount</b>	<b>\$</b>	<b>-</b>

Assumptions:

Shift Duration: 8hrs

Estimated By: ESTIMATOR'S NAME

5/26/2013

Checked By: CHECKER'S NAME

5/26/2013



Municipal Transportation Agency



821 Howard Street  
 San Francisco, Ca 94103  
 415 701 5262 Phone  
 415 701 5222 Fax



## Prevailing Labor Rates - SF

<http://www.dir.ca.gov>

		Social Security	Medicare	FUTA	SUTA	SF Pay	WC	Vacation/Holiday	Other Fringes	
		6.20%	1.45%	0.60%	6.20%	1.50%	12.00%			Fully Burdened
Labor Resource										0
Carpenter	\$ 38.50	\$ 2.64	\$ 0.62	\$ 0.26	\$ 2.64	\$ 0.64	\$ 5.11	\$ 4.05	\$ 21.77	\$ 76.21
Cement Mason	\$ 28.65	\$ 2.09	\$ 0.49	\$ 0.20	\$ 2.09	\$ 0.51	\$ 4.05	\$ 5.14	\$ 16.82	\$ 60.05
Electrician (Inside Wireman)	\$ 54.87	\$ 3.72	\$ 0.87	\$ 0.36	\$ 3.72	\$ 0.90	\$ 7.20	\$ 1.64	\$ 23.95	\$ 97.23
Flag Person	\$ 26.89	\$ 1.82	\$ 0.43	\$ 0.18	\$ 1.82	\$ 0.44	\$ 3.52	\$ 2.48	\$ 14.62	\$ 52.20
Iron Worker	\$ 33.00	\$ 2.29	\$ 0.54	\$ 0.22	\$ 2.29	\$ 0.55	\$ 4.43	\$ 3.92	\$ 21.37	\$ 68.60
Laborer (G1)	\$ 26.89	\$ 1.82	\$ 0.43	\$ 0.18	\$ 1.82	\$ 0.44	\$ 3.52	\$ 2.48	\$ 15.96	\$ 53.54
Laborer (G2)	\$ 26.99	\$ 1.83	\$ 0.43	\$ 0.18	\$ 1.83	\$ 0.44	\$ 3.54	\$ 2.48	\$ 15.96	\$ 53.67
Operating Engineer (OE) (G2)	\$ 36.24	\$ 2.48	\$ 0.58	\$ 0.24	\$ 2.48	\$ 0.60	\$ 4.79	\$ 3.70	\$ 22.77	\$ 73.87
Operating Engineer (OE) (G3)	\$ 34.76	\$ 2.38	\$ 0.56	\$ 0.23	\$ 2.38	\$ 0.58	\$ 4.62	\$ 3.70	\$ 22.77	\$ 71.98
Pile Driver (PD) (G2)	\$ 37.17	\$ 2.53	\$ 0.59	\$ 0.25	\$ 2.53	\$ 0.61	\$ 4.90	\$ 3.70	\$ 22.77	\$ 75.06
Plumber Utility Pipe Fitter	\$ 51.00	\$ 3.18	\$ 0.74	\$ 0.31	\$ 3.18	\$ 0.77	\$ 6.16	\$ 0.30	\$ 29.65	\$ 95.29
Teamster	\$ 27.43	\$ 1.83	\$ 0.43	\$ 0.18	\$ 1.83	\$ 0.44	\$ 3.55	\$ 2.15	\$ 20.42	\$ 58.27
Traffic Control Person I	\$ 27.19	\$ 1.84	\$ 0.43	\$ 0.18	\$ 1.84	\$ 0.45	\$ 3.56	\$ 2.48	\$ 14.62	\$ 52.58
Traffic Control Person II	\$ 24.69	\$ 1.68	\$ 0.39	\$ 0.16	\$ 1.68	\$ 0.41	\$ 3.26	\$ 2.48	\$ 14.62	\$ 49.38
Scaffold / Shoring Erector	\$ 38.65	\$ 2.65	\$ 0.62	\$ 0.26	\$ 2.65	\$ 0.64	\$ 5.12	\$ 4.05	\$ 21.77	\$ 76.40
Elevator Mechanic/Constructor	\$ 57.29	\$ 3.77	\$ 0.88	\$ 0.36	\$ 3.77	\$ 0.91	\$ 7.29	\$ 3.44	\$ 23.84	\$ 101.54
Elevator Mechanic Helper	\$ 40.10	\$ 2.70	\$ 0.63	\$ 0.26	\$ 2.70	\$ 0.65	\$ 5.22	\$ 3.44	\$ 23.84	\$ 79.54
Asbestos Removal Specialist II	\$ 24.87	\$ 1.67	\$ 0.39	\$ 0.16	\$ 1.67	\$ 0.40	\$ 3.23	\$ 2.02	\$ 10.53	\$ 44.94
Lead Removal Worker	\$ 36.25	\$ 2.36	\$ 0.55	\$ 0.23	\$ 2.36	\$ 0.57	\$ 4.57	\$ 1.85	\$ 6.09	\$ 54.84

Equipment	Caltrans Page No	CalTrans Category Sub-Category Rental Quote/ Code	Hourly Rate	Delay Factor	Standby Rate
Equipment			\$ -		
1 Work Truck	34	TRUCK	\$ 33.12	0.14	\$ 4.64
2 Dump truck - 3-axle	34	TRUON	\$ 66.43	0.16	\$ 10.63
3 Tow Behind Trailer	33	TRAIT	\$ 5.72	0.42	\$ 2.40
4 End Dump - 5-axle	34	TRUON	\$ 83.50	0.16	\$ 13.36
5 Generator	6	ELGEN	\$ 14.18	0.11	\$ 1.56
6 Air Compressor	1	AIRCP	\$ 34.31	0.12	\$ 4.12
60-90 Lb. Jack-hammer	1	AIRTOL	\$ 1.31	0.61	\$ 0.80
<b>Air compressor, hoses &amp; hammer total</b>			<b>\$ 35.62</b>		<b>\$ 4.92</b>
7 Arc Welder	34	WELD	\$ 11.87	0.18	\$ 2.14
Welding Rods	N/A	N/A	\$ 5.34		\$ -
F250	34	TRUCK	\$ 33.12	0.14	\$ 4.64
<b>Welder and Truck</b>			<b>\$ 50.33</b>		<b>\$ 6.77</b>
8 Torches and Tanks	34	WELD	\$ 0.24	0.18	\$ 0.04
Oxygen Tank and Acetylene Tank	N/A	N/A	\$ 38.70		\$ -
<b>Total Torches and Tanks</b>			<b>\$ 38.94</b>		<b>\$ 0.04</b>
9 Rotohammer	6	ELTOL	\$ 0.44	0.61	\$ 0.27
Generator	6	ELGEN	\$ 14.18	0.11	\$ 1.56
<b>Rotohammer and Generator</b>			<b>\$ 14.62</b>		<b>\$ 1.83</b>
10 Rivet Buster	1	AIRTOL	\$ 1.31	0.61	\$ 0.80
Air Compressor	1	AIRCP	\$ 34.31	0.12	\$ 4.12
<b>Rivet Buster and Air Compressor</b>			<b>\$ 35.62</b>		<b>\$ 4.92</b>
11 Compactor, Hand Guided	4	COMHG	\$ 8.82	0.18	\$ 1.59
12 Bobcat 763	31	TRACS	\$ 25.35	0.11	\$ 2.79
13 Backhoe (John Deere ID 310G)	18	LDDRT	\$ 62.87	0.12	\$ 7.54
Clam Shell Bucket	1	N/A	\$ 9.29	0.12	\$ 1.11
<b>Backhoe w/ Clam Shell total</b>			<b>\$ 72.16</b>		<b>\$ 8.66</b>
14 Breaker attachment for Backhoe	7	HAMMR	\$ 42.26	0.23	\$ 9.72
15 Mini Excavator (Kubota U45)	N/A	N/A	\$ 63.79	0.18	\$ 11.48
16 Excavator (Hitachi 200)	N/A	N/A	\$ 142.51	0.18	\$ 25.65

17 New Holland Excavator (E135)	N/A	N/A	\$ 120.13	0.18	\$ 21.62
18 Ride-on Sweeper		4 BRMSW	\$ 145.11	0.14	\$ 20.32
19 Bituminous Distributor		4 BITDT	\$ 6.52	0.14	\$ 0.91
Work truck		33 TRUCK	\$ 33.12	0.14	\$ 4.64
<b>Bituminous Distributor with truck</b>			<b>\$ 39.64</b>		<b>\$ 5.55</b>
20 Fork Lift Truck		6 FKLFT	\$ 27.14	0.20	\$ 5.43
21 Concrete Saw		28 SAWCO	\$ 19.63	0.14	\$ 2.75
Saw blade 12" x \$18 per hour (100 LF)		28 SAWCO	\$ 216.00	0.14	\$ 30.24
Concrete Saw and Blade			\$ 235.63		\$ 32.99
22 Water Pump		22 PUMWA	\$ 22.61	0.35	\$ 7.91
<b>23 Confined Space Equipment</b>					
Gas Detector 4-Gas w/ Motorized Integral Pump			\$22.79		
Blower Portable w/ 8"x15' Hose			\$8.82		
Retrieval 65' Winch for Tripod			\$11.53		
SCBA-NFPA Approved 2216 PSI Complete alrpeck			\$9.03		
<b>Total Confined Space</b>			<b>\$52.15</b>		
Traffic Control (per street, intersection = x2					
24 streets)					
Construction Signs		32 TR AFC	\$7.29		
Changeable Message Boards		32 TR AFA	\$9.92		
Arrow Board		32 TR AFA	\$3.20		
No Parking Signs (A-frames)		32 TR AFC	\$0.22		
Cones (per 100)		32 TR AFC	\$13.27		
25 Interlocking Water Filled Triton Barrier		N/A N/A	\$4.07		
\$30 per day /8 plus tax					
26 Traffic Plates Installed					
Total per Plate (small)		N/A N/A	\$9.48		
Total per Plate (large)		N/A N/A	\$12.15		
27 Trench Shoring (4' wide trends)			\$4.34		
Total per trench shore			\$2.17		





## C Mod Task Force Meeting Minutes #08

DATE: October 30, 2012

MEETING DATE: **October 29, 2012**

LOCATION: 821 Howard St, Main Conference Room

TIME: 3:30 PM

ATTENDEES: M. Benson (MB), E. Stassevitch (ES), J. Park (JP), Sarah Wilson (SW), C. Dombrowski (CD), Ken Barnhart (KB), Richard Redman (RR), Matt Hembd (MH), Mun Leong (ML)

COPIES TO: Attendees: J Funghi (JF), S. Farhangi (SF), R. Nguyen (RN), M. Acosta (MA), Ben Volberding (BV), B. Lebovitz (BL), D. Kuehn (DK),  
File No. M544.1.5.0910.e

REFERENCE Project No. M544.1, Contract No. 149 Task 1-1.08  
Construction

SUBJECT: CMod Task Force Meeting # 08 – Rev. No. 0

**RECORD OF MEETING** (*Italicized text indicates status update of open items*)

ITEM #	DISCUSSION	ACTION BY DUE DATE
1-	ES opened the meeting by restating the purpose of the Task Force. The CMod Task Force purpose is to examine the current procedures and practices related to processing changes during construction and look for areas of improvement, especially related to the time to develop and process a contract modification (CMod). A standing meeting for 10 weeks has been established at the time and place noted above, for the remaining 2 weeks, with the attendees shown above; to identify areas of possible improvement, and develop recommendations for review by Sr. Management of the Program.	
2-	ES reviewed the minutes from meeting #7 for any corrections or revisions and to refresh the group on accomplishments for Areas of Improvement #3 & 4 – Scoping Meeting, Estimate Preparation, and Reconciliation of Costs. Although time at the last meeting ran out before completing the discussion, the task force completed the discussion of these important areas indicating that continual improvement can be made in this area. Today will focus on Area of Improvement #5. The focus of the group discussion today is on open issues with the General Conditions and Delegation of Authority.	
3-	<p><b>Area of Improvement #5- Change Order Process</b></p> <p>The discussion focused on the earlier presentation of material related to the General Provisions of the Contract and the Delegation of Authority. Contract 1252 General Provisions were utilized to review the interrelationship of Articles 2 and 6, specifically the assignment of the Engineer and how what authority that carries.</p> <p>Relevant sections of the PMP were then reviewed to show the authority levels that were in place several years ago but have not be reinstated since the change in the leadership in July 2011 to the title of Director of Transportation.</p>	

ITEM #	DISCUSSION	ACTION BY DUE DATE
	Suggestions were made to develop standard letter assigning the Engineer and level of Authority for a particular contract. Clarity was suggested on several sections of Article 6 specifically as it related to Differing Site Conditions (article 3.04) and time elements associated with the COR, initial notification, complete cost proposal and justification for change. See attached markup of 1252 document and notes from J Park.	

**ACTION ITEMS**

ITEM #	MTG DATE	MTG ACTION DATE	DESCRIPTION	BIC	DUE DATE	STATUS
3	08/13/12	08/27/12	Finalize Area of Improvement #1 - Timely Submission of the COR	SW	11/05/12	Open
4	08/13/12	08/27/12	Finalize Area of Improvement #2 - Finding of the Fact	MB	11/05/12	Open
5	08/13/12	08/13/12	Scoping Meeting/Estimate Preparation	SW	10/29/12	CLOSED
6	08/13/12	08/13/12	Reconciliation of Costs	ES	10/29/12	CLOSED
7	08/13/12	08/27/12	Finalize Area of Improvement #5 - Change Order Process	MB	11/05/12	Open
8	08/27/12	08/27/12	Clarify Delegation of Authority	ES	11/05/12	Open
9	08/27/12	08/27/12	Review GPs to ensure adequate information	ES	11/05/12	Open

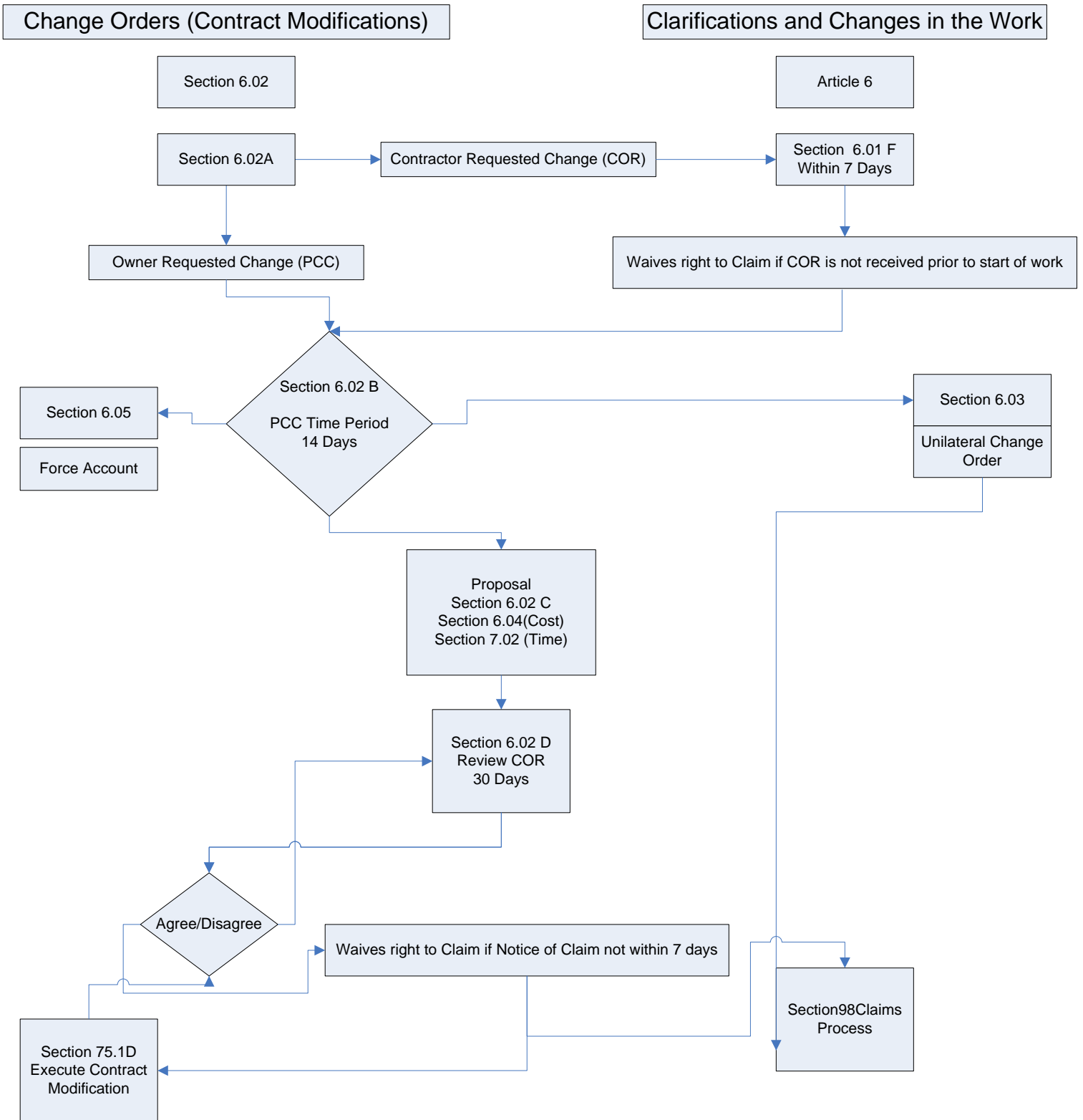
Meeting adjourned at 4:30pm

These meeting minutes have been prepared by E. Stassevitch and reviewed by M. Benson, and are the preparer's interpretation of discussions that took place. If the reader's interpretation differs, please contact the author in writing within four (4) days of receipt of these minutes.

**Signed:** \_\_\_\_\_ [initials of preparer & reviewer] **Date:** \_\_\_\_\_ [Date review completed]

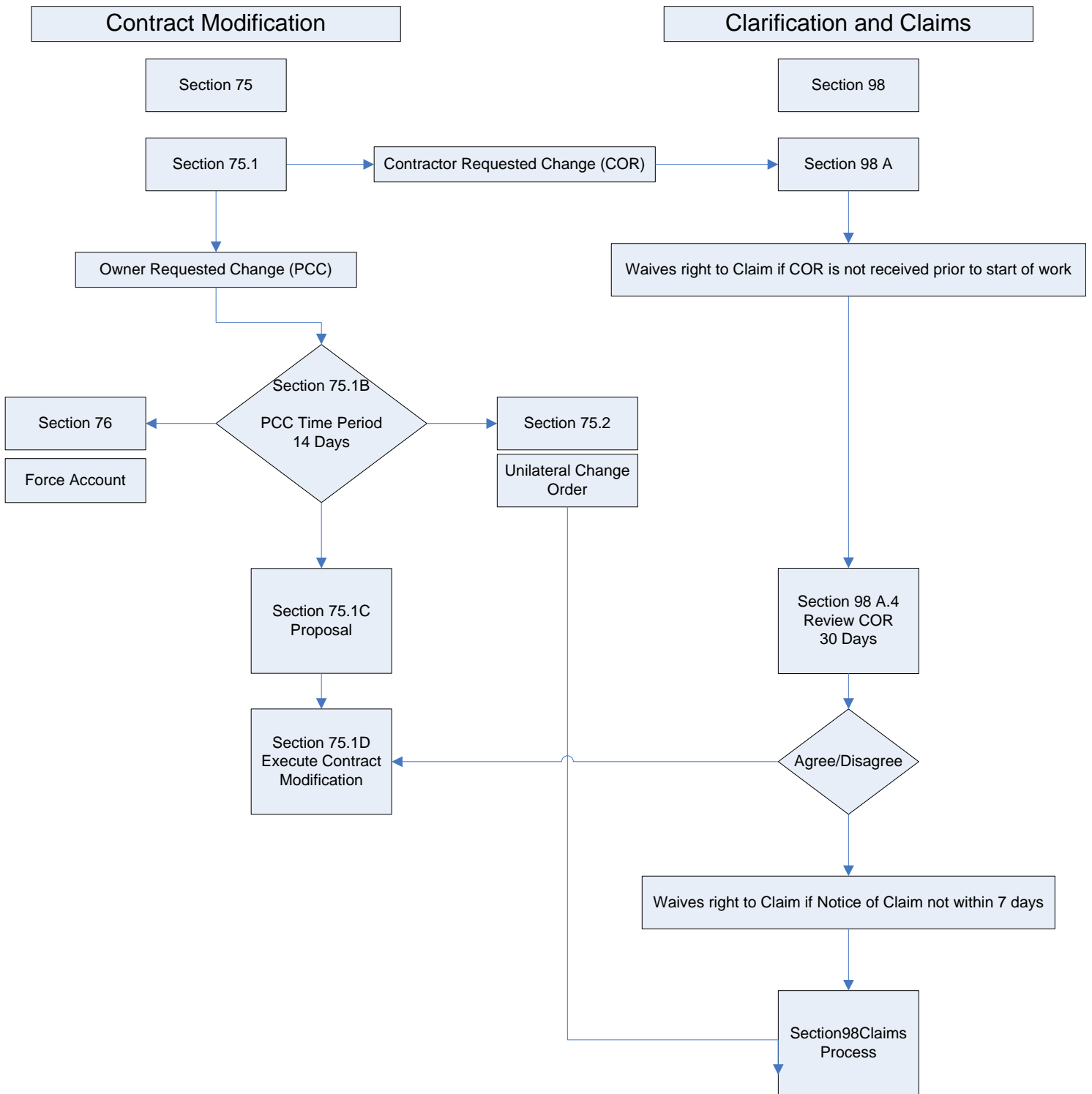
# Contract Modifications

Friday, August 03, 2012



# Contract Modifications

Thursday, January 19, 2012



- B. Notices to City. Except as specifically provided herein, all notices to the City concerning this Contract shall be sent to:

Central Subway Project  
Attention: John Funghi, Program Manager  
821 Howard Street, 2nd floor  
San Francisco, CA 94103

with a copy to:

SFMTA  
Attention: Shahn timer Farhangi, Contract Manager  
1 South Van Ness Avenue, 3rd floor  
San Francisco, CA 94102

## ARTICLE 2 - CITY'S RESPONSIBILITIES AND RIGHTS

### 2.01 ADMINISTRATION OF THE CONTRACT

- A. Administration. The City shall administer the Contract as described in the Contract Documents. (See this Article 2 and Division 1 for administrative requirements and procedures.)
- B. Engineer and Other City Representatives. The Department Head will designate in writing the Engineer, who will be the authorized representative of the Agency with limited authority to act on behalf of the Agency. The Agency may at any time during the performance of this Contract make changes in the authority of any representative or may designate additional representatives in accordance with SFMTA policies and City Charter and Codes. Any such changes will be communicated to Contractor in writing. Contractor assumes all risks and consequences of performing work pursuant to any order, including but not limited to instruction, direction, interpretation or determination, of anyone not authorized to issue such order.
- C. Review of Submittals. The review, approval, or other action taken by the City or the City's design consultants upon Contractor's Submittals such as shop drawings, product data, samples and other submittals, shall apply to general design concepts only, and shall in no way relieve Contractor of its responsibility to notify the City of errors or omissions therein in accordance with Section 3.02, nor from providing all labor, equipment, and materials in accordance with the requirements of the Contract Documents necessary for the proper execution of the Work. The City's action will be taken with such reasonable promptness provided that the City shall be provided a reasonable time, as set forth in Division 1, to permit adequate review. Approval of submittals shall not affect the Contract Sum, and additional costs that may result therefrom shall be solely Contractor's obligation. Contractor shall be responsible to provide engineering or other costs necessary to prepare the submittals and obtain approvals required by the Contract Documents from the City or other authorities having jurisdiction. The City is not precluded, by virtue of such approvals, from obtaining a credit for construction cost resulting from allowed concessions in the Work or materials that reduce the costs or quantities of the Work.

- F. Contractor Conference. At any time during the progress of the Work, the City may, by providing reasonable notice, require Contractor to attend any conference of any or all of contractors engaged in the Project or otherwise performing work at or adjacent to the Site.
- G. Non-cooperation. If the City determines that Contractor is failing to coordinate its Work with the work of other contractors as directed by the Engineer, the City may upon 72 hour written notice:
  - 1. withhold any payment otherwise owed under the Contract until Contractor complies with the City's directions; or
  - 2. direct others to perform portions of the Contract and charge the cost of Work against the Contract Sum; or
  - 3. terminate any and all portions of the Contract for Contractor's failure to perform in accordance with the Contract.

### 5.03 CLEAN UP RESPONSIBILITIES

- A. Contractor and other contractors shall each bear responsibility for maintaining their respective work areas on the Site and adjoining areas free of waste, rubbish, graffiti, debris, or excess materials and equipment at all times.
- C. In the event of conflicts between Contractor and other contractors concerning clean up, the City, after issuing 24 hour written notice to the contractors involved, will clean up the premises and deduct from the amount due Contractor under the Contract the cost of said clean up in such amount as the City determines equitable.

## ARTICLE 6 - CLARIFICATIONS AND CHANGES IN THE WORK

### 6.01 GENERALLY

- A. The City may, at any time between the Notice to Proceed and Final Acceptance, on its own initiative or in a RFI Response, and without notice to Contractor's surety, may issue Clarifications of Specifications and make other Clarifications to Contract requirements. Such Clarifications shall be binding on Contractor, and Contractor shall promptly comply with said Clarifications.
- B. The City may, at any time between the Notice to Proceed and Final Acceptance, on its own initiative or in a RFI Response, and without notice to Contractor's surety, may order additions, deletions, or revisions in the Work and materials by Change Order or Unilateral Change Order. Contractor shall promptly comply with such orders and proceed with the Work as directed by the Engineer and required by the Contract Documents.
- C. If changes ordered in design, workmanship or materials are of such a nature as to increase or decrease the cost of any part of the Work, the price fixed in the Contract shall be increased or decreased by such amount as the Contractor and the Agency

may agree upon as the reasonable and proper allowance for the increase or decrease in the cost of the Work.

- D. Contractor shall not be entitled to an increase in the Contract Sum or an extension of the Contract Time if Contractor performs work that is not required by the Contract Documents as amended, modified, or supplemented in writing.
- E. The procedures set forth in this Article 6 are intended to ensure that when Clarifications and Changes in the Work are proposed, the Contractor provides the City with its best estimate of the costs and impacts associated with each Clarification and/or Change, so that the City may evaluate each potential Change and proceed on an informed basis. The City also intends that the Clarification and Change Order procedures (including the use of Unilateral Change Orders and Force Account) facilitate payment to the Contractor of additional, undisputed amounts of compensation for changed Work, if such compensation is due Contractor.
- F. Should the City's Clarification or other written directive, in the opinion of Contractor, exceed the requirements of the Contract Documents, Contractor shall submit a written Change Order Request (COR) to the City within seven (7) Days of receipt of the Clarification, and before proceeding with the Work thereof, as provided in Section 88, below. The City shall be relieved of any claim for compensation if said written COR is not received prior to Contractor beginning the affected Work. The Contractor waives its rights to request or claim for additional compensation or time on the Clarification or written directive if the Contractor fails to submit the written COR to the Engineer within the above timeline. The City shall not be under any obligation to respond to any statement or attempt made by the Contractor to reserve or reactivate such rights in the future.
- G. Failure by the Contractor to comply with the procedures of this Article, including the failure to provide timely, sufficient information and/or documentation to the City at the time of any Clarification or Change Order Request, shall constitute a waiver of any subsequent claim by the Contractor arising out of such Clarification or Change Order.

## 6.02 CHANGE ORDERS (CONTRACT MODIFICATIONS)

- A. Initiation. Either the City or Contractor may initiate Change Orders. The City may initiate Change Orders by issuing a Proposed Contract Change (PCC), which will include a detailed description of the proposed additions, deletions or revisions with supplementary or revised Drawings and Specifications. A PCC from the City will request from Contractor a quotation of cost and time for completing the proposed modifications. Contractor may initiate Change Orders by submitting a Change Order Request (COR) in accordance with the requirements of this Article 6. After the City issues a PCC, Contractor shall not submit a COR for the same Work addressed in the City's PCC.
- B. PCC Quotation Time Period. Contractor shall submit a PCC cost proposal and PCC time extension proposal, in accordance with Section 6.04 (Cost of the Work) and Section 7.02 (Time Extension), if applicable, to the City within 14 days after receipt of a PCC. If Contractor fails to submit a PCC cost Proposal and/or PCC time extension Proposal within the 14-Day period, or if the price or time extension cannot be agreed upon, the City may either (1) direct Contractor to proceed with the Work by issuing a

Unilateral Change Order (in accordance with Section 6.03) instructing Contractor to proceed with the PCC Work based on the City's estimate of the cost and/or time extension or (2) direct Contractor to proceed on a Force Account basis (in accordance with Section 91).

- C. PCC and COR Cost Proposal Requirements. Contractor shall furnish two (2) copies of its PCC or COR cost Proposal, which shall include a complete itemized breakdown of labor, material, equipment, taxes, insurance, bonds, and markup for overhead and profit for both addition and deletions on a form supplied by the City. The same shall be required for subcontractor and lower-tier subcontractor cost proposals, which shall be furnished on the same form as required for Contractor. A COR shall reference all related progress schedule activities, Specification sections and Drawings directly pertaining to COR. In addition, Contractor shall provide the following documentation to the City in support of Contractor and subcontractor cost proposals:
1. Material quantities and type of products;
  2. Labor breakdown by trade classification, wage rates, and estimated hours;
  3. Equipment breakdown by make, type, size, rental rates, and equipment hours;
  4. Taxes, insurance and bonds.
- D. SFMTA Review of COR. The City will review the validity of Contractor's written COR and within 30 Days after receipt of the COR will render its determination in writing. Contractor shall diligently proceed with the Work in accordance with the City's determination, which shall be final and binding on the City and Contractor unless Contractor submits a written Notice of Potential Claim as specified under Section 13.01.
- E. Execution of Change Orders (Contract Modification): When the City and Contractor agree on the total cost and time of a COR or PCO, the City will prepare for signatures of Parties a Change Order to formally implement the changed Work. Only a properly approved Contract Modification or Unilateral Change Order may amend the Contract, No oral instructions of any person whomsoever or other written documents, including but not limited to emails, letters or meeting minutes, shall in any manner or degree modify or otherwise affect the terms of this Contract. Contractor assumes all risks and responsibility for acting on oral instructions or an any document other than a fully executed Contract Modification or Unilateral Change Order.
- F. Release of Claims: Contractor shall agree to the terms and conditions of Change Orders and to release the City from claims for additional compensation or time relating to the undisputed amount of the change in the Work as follows:
1. If Contractor fails to provide timely notice and documentation of delay to the City as required by Article 7, which shall be sufficient to establish that Contractor is entitled to a time extension pursuant to Section 7.02, Contractor shall execute the Change Order without being granted any extension of time.



2. It shall be a material breach of the Contract for Contractor to refuse to execute a Change Order and thereby delay the Project based on Contractor's failure to demonstrate that Contractor is entitled to a time extension for the change Work.
  3. Contractor shall not condition or qualify any Change Order with a reservation of rights to seek at a later time additional Contract Amount or Time for the changed Work addressed in the Change Order.
  4. All delays caused to the progress schedule as a result of Contractor's failure to execute timely a Change Order in accordance with this Article 6 shall be the responsibility of Contractor and shall subject Contractor to liability for liquidated damages as specified in the Special Provisions, Liquidated Damages.
  5. Contractor shall not be entitled to make a reservation of rights to seek at a later time additional Contract Time for the changed Work addressed in the Change Order.
- G. Change Orders issued under this Article or extensions of Contract Time made necessary by reason thereof shall not in any way release any guarantees or warranties given by Contractor under the provisions of the Contract Documents, nor shall they relieve or release Contractor's sureties of bonds executed under such provisions. The sureties, in executing such bonds, shall be deemed to have expressly agreed to any such Change Orders and to any extension of time made by reason thereof. Contractor shall be solely responsible for giving notice of any change affecting the Work, Contract Sum or Contract Times that is required to be given to its sureties by the provisions of any bond.

### 6.03 UNILATERAL CHANGE ORDERS

- A. General: When time does not allow for a Change Order to be negotiated through the PCO process described in Section 6.02, or when the City and Contractor are unable to agree on the cost or time required to complete the change in the Work described in a PCO, the City may issue a Unilateral Change Order instructing Contractor to proceed with a change in the Work based on the City's estimate of cost and time to perform the change in the Work. Upon receipt of a Unilateral Change Order, Contractor shall proceed with the ordered Work.
- B. Protest: Should Contractor disagree with any terms or conditions set forth in a Unilateral Change Order, Contractor shall submit, within 5 Working Days of receipt of the Unilateral Change Order, a Change Order Request (COR) in accordance with the requirements of Section 6.02. If a COR is not submitted as required, Contractor waives all rights to additional compensation for said Work, and payment, which shall constitute full compensation for Work included in the Unilateral Change Order, will be made as set forth in the Unilateral Change Order.
- C. Claim Notification: Contractor waives all costs exceeding the City's estimate for the Unilateral Change Order Work unless Contractor submits a written Notice of Potential Claim in accordance with the requirements of Section 13.01. Said Notice shall be submitted no later than 5 Working Days after occurrence of one of the following, whichever occurs first:
1. Contractor submits an invoice for completion of the Unilateral Change Order Work;  
or

Subcontractors prior to Bid, and such costs shall be included in Contractor's Total Bid Price.

- F. Records: Contractor shall maintain its records in such a manner as to provide a clear distinction between the direct costs of Change Orders and the cost of original Contract Work. This requirement pertains to all types of Change Orders, as well as the additions, deletions, revisions, CORs, and Claims initiated by Contractor.

#### 6.05 FORCE ACCOUNT WORK

- A. General: When additions, deletions, or revisions in the Work are to be paid for on a Force Account basis, all direct costs itemized in subsection 6.04.A shall be subject to the approval of the City and compensation will be determined as set forth herein.
1. The City will direct Contractor to proceed with the Work on a Force Account basis, and the City will establish a "not to exceed" budget.
  2. All requirements regarding direct costs and markup for overhead and profit provided in Section 6.06 shall apply to Force Account Work. However, the City will pay only the actual necessary costs verified in the field by the City on a daily basis.
  3. Contractor shall be responsible for all costs related to the documentation, data preparation, and administration of Force Account Work. Compensation for such costs shall be fully covered by the markup for overhead and profit markup as provided in subsection 6.04.C.
- B. Notification and Verification: Contractor shall notify the City in writing at least 24 hours in advance of its schedule before proceeding with the Force Account Work. All Force Account Work shall be witnessed, documented, and approved in writing by the City on the Day that the Work is performed. Contractor will not be compensated for Force Account Work if Contractor fails to provide timely notice to the City before commencing the Force Account Work. In addition, Contractor shall notify the City when the cumulative costs incurred by Contractor for the Force Account Work equal 80 percent of the budget pre-established by the City. Contractor will not be compensated for Force Account Work exceeding the "not to exceed" budget amount if Contractor fails to provide the required notice before exceeding 80 percent of the Force Account budget.
- C. Work Performed by Special Forces or Other Special Services:
1. For procurement of Special Track work, poles, fabricated assemblies, software and operating equipment and when the Engineer and the Contractor, by agreement, determine that a special service or an item of extra work cannot be performed by the forces of the Contractor or those of any of its Subcontractors, such service or extra work item may be performed by a specialist. Invoices for such service or item of extra work on the basis of the current market price thereof may be accepted without complete itemization of labor, material, and equipment costs when it is impracticable and not in accordance with the established practice of the special service industry to provide such complete itemization.
  2. In those instances wherein Contractor is required to perform extra work necessitating a fabrication or machining process in a fabrication or machine shop facility away from the jobsite, the charges for that portion of the extra work performed in such facility may, by agreement, be accepted as a specialist billing.

The Engineer must be notified in advance of all Work that will not be performed at the Site.

3. An amount not to exceed 5 percent will be added to the specialist invoice price, less a credit to the Agency for any cash or trade discount offered or available, whether or not such discount may have been taken. This 5 percent is in lieu of the percentages provided in Section 6.04.C for work performed by a Subcontractor.
- D. Reports: Contractor shall diligently proceed with the approved Force Account Work and shall submit to the City no later than 12:00 p.m. of the Day following performance of Force Account Work a daily Force Account Work report on a form obtained from the City. The report shall provide an itemized, detailed account of the daily Force Account labor, material, and equipment, including names of the individuals and the specific pieces of equipment identified by manufacturer's model type and serial number. Contractor's authorized representative shall complete and sign the report. Contractor will not be compensated for Force Account Work for which said timely report is not completed and submitted to the City.
- E. Records: Contractor shall maintain detailed records of all Work done on a Force Account basis. Contractor shall provide a weekly Force Account summary indicating the status of each Force Account Work directive in terms of actual costs incurred as a percent of the budget for the respective Force Account Work directive and the estimated percentage completion of the Force Account Work.
- F. Agreement: If Contractor and the City reach a negotiated, signed agreement on the cost of a Change Order while the Work is proceeding on a Force Account basis, Contractor's signed written reports shall be discontinued and all previously signed reports shall become invalid.

## 6.06 ORAL MODIFICATIONS

No oral statement of any person shall in any manner or degree modify or otherwise affect the terms of this Contract.

## ARTICLE 7 - TIME

### 7.01 PROGRESS AND COMPLETION

- A. Commencement of Work. When the Contract has been certified by the Controller, the Agency will designate the official date for commencement of the Work (NTP) and will notify the Contractor by a Notice to Proceed. The Contractor shall take no action that shall obligate the City to, and the City shall not be obligated for, the expenditure of funds before said official commencement date. The Contractor shall begin work within 10 calendar Days after said official commencement date, and shall prosecute the same diligently thereafter at a rate sufficient to enable it to complete the Work within the Contract Time. .
- B. Notice of Commencement of Work. The Contractor shall notify the Engineer in writing, not less than three (3) Working Days in advance, of the actual date the Contractor will begin the Work under the Contract. Said notice shall contain information as to the time

Contract documents to the project team until they have been properly justified and are in compliance with FTA Best Practices and City contracting requirements. The SFMTA Contract Administration Office consists of the SFMTA Contract Manager and Contract Administrators.

Contract Administrators are responsible for the review, approval and processing of all contract-related documents. The duties and responsibilities of Contract Administrators include:

- Solicit proposals for all contracts, obtains required documents including bonds, insurance, and contract compliance documentation, and checks all submitted documents for accuracy, completeness and responsiveness.
- Review cost & price analysis for all contracts and contract changes.
- Prepare, review, approve and/or process contracts, contract modifications, agreements, calendar items and other documents. Assure that the latest FTA, State, and City requirements are included in all appropriate documents. Work with Grants Unit to assure grant requirements are included in documents and/or carried out.
- Obtain certification of contracts and contract modifications.

#### 2.1.4 Authorization Levels

Delegation of authority has been established by the SFMTA Board Resolution 10-008 to give the Executive Director/CEO broader discretion to approve contracts and contract modifications in order to reduce administrative paperwork and streamline processing of certain contract approvals. Provisions for re-delegation of authority are outlined in the resolution for both Contract approval and Change Orders or Amendments.

Current levels of authorization and re-delegation of authority are shown in table 2-1

Table 2-1 Authorization Level

Position	Original Contract	Authorization Level
Executive Director/CEO	\$500,000 to \$9,999,999	Greater of 25% or \$250,000 - Cumulative
Executive Director/CEO	\$10,000,000 to \$50,000,000	Greater of 10% or \$2,500,000 - Cumulative
Executive Director/CEO	Greater than \$50,000,000	\$5,000,000 - Cumulative
Executive Director/CEO may		

re-delegate:		
Deputy Executive Director		\$500,000
Chief Construction Officer		\$250,000
Director		\$150,000
Deputy Director		\$50,000
Project Manager		\$25,000
Resident Engineer, Contract Admin.		\$10,000

Note: Refer to Appendix E for Board Resolution details

Due to recent changes at the top of the organization, Authority levels are currently being reevaluated due to the position and person specific nature of the redelgation memos. Authority levels outlined above reside with the new Director of Transportation.

## 2.2 INTEGRATED DESIGN / CONSTRUCTION SUPPORT TEAM

The Project team is an integrated team composed of City staff and staff from the Project Management/Construction Management Consultant (PM/CM), Final Design Consultant (FDC), Project Controls Consultant (PCC), and other consultants available to the SFMTA.

The integrated Project Team will present opportunities for staff development. The team will include staff from multiple disciplines with varied experience. City staff and Consultants will have the opportunity to learn from each other for the benefit of the project.

## 2.3 KEY STAFF

Resumes of current key staff are included in Appendix C. SFMTA is fortunate to have obtained staff of high qualifications and experience. Staffs assigned to the project have many years of experience performing similar roles on other projects. As additional key staff are selected for the project team, their qualifications and experience will be required to match or exceed the qualifications and experience of existing staff. Their resumes will be provided to FTA.

This section refers to the roles and responsibilities of staff. A list of current staff in these positions and shown in organization charts in Appendix B can be found in Table 2-1 at the end of this section. For information about processes for controls, please refer to Section 3.

# **APPENDIX E: DELEGATION OF AUTHORITY**

SAN FRANCISCO  
MUNICIPAL TRANSPORTATION AGENCY  
BOARD OF DIRECTORS

RESOLUTION NO. 10-008

WHEREAS, In 2000, the San Francisco Municipal Transportation Agency Board of Directors (SFMTA Board) adopted Resolution No. 00-0125, and 2002, the SFMTA Board adopted Resolution No. 02-110, which resolutions established contracting policies for the SFMTA, including setting limits on contractual amounts subject to the approval of the Director, requiring all contracts to be in writing, and other related matters; and

WHEREAS, On November 6, 2007, the voters passed Proposition A, which, among other things, added subsection (g) to Section 8A.102 of the City's Charter; subsection (g) authorizes the SFMTA Board to adopt threshold amounts under which the Director and his or her designees may approve contracts, notwithstanding any provisions of Chapters 6 or 21 of the City's Administrative Code; and

WHEREAS, In order to reduce administrative paperwork and streamline processing of certain contract approvals, the SFMTA Board would like to modify the existing policy to give the Executive Director/CEO broader discretion to approve contracts and contract modifications; and

WHEREAS, The SFMTA Board of Directors intends that this resolution will supersede Resolutions Nos. 00-0125 and 02-110; now, therefore, be it

RESOLVED, That the SFMTA Board adopts the following regarding the approval of all contracts, leases, real property conveyance and acquisition agreements, memoranda of understanding, and amendments to such contracts, with the exception of collective bargaining agreements:

1. **Expenditure Contract Approval:** The Executive Director/CEO may approve and execute any contract, lease, real property acquisition agreement or memorandum of understanding (hereafter "Contract") having anticipated expenditures equal to or less than \$500,000.
  - a. The Executive Director/CEO may re-delegate in writing the authority to approve and execute Contracts subject to the limits set forth below:
    - i. **Deputy Executive Director** – The Executive Director/CEO may re-delegate contracting authority up to the full authority given to the Executive Director/CEO by the SFMTA Board of Directors.
    - ii. **Chief Construction Officer** - The Executive Director/CEO may re-delegate contracting authority to approve and execute Contracts up to \$250,000 per Contract.

- iii. **Division Directors** - The Executive Director/CEO may re-delegate contracting authority to approve and execute Contracts up to \$150,000 per Contract to any Director of a division having a direct reporting relationship to the Executive Director/CEO.
  - b. No manager or staff member receiving delegated contracting authority in accordance with this Resolution may re-delegate this authority to others.
  - c. The **Executive Director/CEO** shall present to the Secretary of the SFMTA Board of Directors a completed original delegation of authority letter for each staff member receiving a delegation of authority. The Secretary of the SFMTA Board of Directors shall review the delegation letter and certify its conformance with the terms and conditions of this resolution. The delegation of authority shall be in effect once certified by the Secretary of the SFMTA Board of Directors.
- 2. **Change Orders or Amendments:** The Executive Director/CEO may approve and execute any single change order or amendment (hereafter "Amendment") to any Contract having anticipated expenditures up to \$500,000 in accordance with subsections a, b and c below unless the change order or amendment is subject to approval by the Board of Supervisors under Charter Section 9.118:
  - a. **Original Contract Amounts up to \$500,000** - The authority given to the Executive Director/CEO will be limited to cumulative increases of 50% of the original contract amount, and time extensions up to 25% of the original contract term.
  - b. **Original Contract Amounts between \$500,000 and \$9,999,999** - The authority given to the Executive Director/CEO will be limited to cumulative increases approved by the Executive Director/CEO of 25% of the original contract amount, or \$250,000, whichever is greater, and time extensions up to 25% of the original contract term.
  - c. **Original Contract Amounts greater than or equal to \$10,000,000 and less than \$50,000,000** - The authority given to the Executive Director/CEO will be limited to cumulative increases of 10% of the original contract amount, or \$2,500,000, whichever is greater, and time extensions up to 25% of the original contract term.
  - d. **Original Contract Amounts greater than or equal to \$50,000,000** - The authority given to the Executive Director/CEO will be limited to \$5,000,000 and time extensions up to 25% of the original contract term.
  - e. **Re-delegations** - The Executive Director/CEO may authorize the Deputy Executive Director, Chief Construction Officer, or Directors of a division having a direct reporting relationship to the Executive Director/CEO, to



further delegate authority to approve Amendments within their respective divisions, up to the limits set forth below:

\$500,000	Deputy Executive Director
\$200,000	Chief Construction Officer
\$100,000	Director (having direct reporting relationship to the Executive Director/CEO)
\$50,000	Deputy Director, Area Manager, and Senior Contracts Manager
\$25,000	Project Manager
\$15,000	Resident Engineer; Contract Administrator

Amendments approved pursuant to any re-delegation under this subsection are subject to the cumulative limitations for Amendments set forth in subsections a, b and c above.

- f. The **Executive Director/CEO** shall present to the Secretary of the SFMTA Board of Directors a completed original delegation of authority letter for each staff member receiving a delegation of authority. The Secretary of the SFMTA Board of Directors shall review the delegation letter and certify its conformance with the terms and conditions of this resolution. The re-delegation of authority shall be in effect once certified by the Secretary of the SFMTA Board of Directors.
3. **Revenue Contracts:** The Executive Director/CEO is authorized to approve all revenue contracts and cumulative modifications of such revenue contracts up to 50 percent of their original value unless the revenue contract is subject to approval by the Board of Supervisors under Charter Section 9.118.
4. **Fare Media Contracts:** The Executive Director/CEO is authorized to delegate the authority to the **Chief Financial Officer or the Senior Manager of Revenue**, to approve and execute agreements for the sale or distribution of fare media and fare cards where the commissions to be paid under such agreements are not expected to exceed \$250,000 in any calendar year.
5. **Commodity and General Services Contracts:** The **Executive Director/CEO** or his or her designee is authorized to approve contracts for commodities and services formerly subject to the sole approval of the Purchaser prior to the formation of the SFMTA; and be it

FURTHER RESOLVED, That all contracts and contract amendments on behalf of the SFMTA shall be in writing, shall be approved as to form by the City Attorney's Office, and be it

FURTHER RESOLVED, That the Executive Director/CEO shall submit a written report to the San Francisco Municipal Transportation Agency Board of Directors on a quarterly basis which shall summarize and describe all contract instruments executed and competitive solicitations issued pursuant to the delegations of authority granted above; and be it

FURTHER RESOLVED, That the SFMTA authorizes the Executive Director/CEO to accept work that has been satisfactorily completed, approve release of retention, and approve contract closeouts.

I certify that the foregoing resolution was adopted by the Municipal Transportation Agency Board of Directors at its meeting of JAN 05 2010.

A handwritten signature in black ink that reads "R. Boomer". The signature is written in a cursive style with a horizontal line underneath it.

Secretary to the Board of Directors  
San Francisco Municipal Transportation Agency

SAN FRANCISCO  
MUNICIPAL TRANSPORTATION AGENCY  
BOARD OF DIRECTORS

RESOLUTION NO. 09-191

WHEREAS, The Policy and Governance Committee of the SFMTA Board of Directors has reviewed the calendar items that appear before the SFMTA Board of Directors and has recommended that certain types of calendar items need not appear before the SFMTA Board; and

WHEREAS, Delegating the authority to approve certain calendar items will reduce administrative paperwork and streamline processing of certain contract, grant or claim approvals; and

WHEREAS, The SFMTA Quarterly Contracting Report will be expanded to include information about contracts and the City' Attorney's Office will provide an annual report regarding claims; now, therefore, be it

RESOLVED, That the Executive Director/CEO or his designee is authorized to issue competitive solicitations for contracts not requiring Board of Supervisors' approval as set forth in Charter Section 9.118 without further action by the SFMTA Board; and be it

FURTHER RESOLVED, That the Executive Director/CEO or his designee is authorized to reject any or all bids, quotes, or proposals and authorize reissuance and re-advertisement of such requests for proposals, bid calls or other competitive solicitations; and be it

FURTHER RESOLVED, That unless the granting agency requires an authorizing resolution from this Board as to a particular grant, the Executive Director/CEO or his designee is authorized to approve and execute agreements to accept and expend grant funds or to transfer grant funds to a public agency that will be a sub-recipient of such funds; and be it

FURTHER RESOLVED, That the Executive Director/CEO or his designee is authorized to apply for, accept and expend grant funds, and is authorized to delegate such authority in writing in his or her sole discretion; and be it

FURTHER RESOLVED, That pursuant to Charter Section 6.102 and Article II of Chapter 10 of the San Francisco Administrative Code, the Chief of the Bureau of Claims Investigation and Administration of the City Attorney's Office is authorized to settle unlitigated claims against the SFMTA for an amount not to exceed \$25,000 with the concurrence of the Executive Director/CEO.

I certify that the foregoing resolution was adopted by the Municipal Transportation Agency Board of Directors at its meeting of NOV 03 2009.



Secretary to the Board of Directors  
San Francisco Municipal Transportation Agency

**GENERAL DELEGATION OF AUTHORITY TO  
THE DEPUTY EXECUTIVE DIRECTOR OF THE  
SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY**

During any of my absences, Carter R. Rohan, R.A., Deputy Executive Director, will serve as Acting Executive Director/CEO. Mr. Rohan can be reached at 415.701.4282 (office) or 650.863.5979 (cellular).

Further, and pursuant to the authority vested in me by Resolution No. 10-008 of the SFMTA Board of Directors, I hereby delegate to Mr. Rohan, the full contracting authority given to me by the SFMTA Board of Directors to approve and execute Contracts. All such transactions entered into pursuant to this Authority shall be compiled and reported to the SFMTA Board of Directors on a quarterly basis. This authority may be re-delegated up to the limits set forth hereafter:

- Director of Capital Programs & Construction, up to \$250,000 per Contract
- Direct Report Contracting Officer, up to \$150,000 per Contract


Further, and pursuant to the authority vested in me by above Resolution, I hereby delegate to Mr. Rohan the full authority given to me by the SFMTA Board of Directors to approve and execute Amendments to Contracts. This authority may be re-delegated up to the limits set forth hereafter, and within the cumulative limitations set forth in above Resolution:

- Director of Capital Programs & Construction, up to \$200,000 per Amendment
- Direct Report Contracting Officer, up to \$100,000 per Amendment
- Deputy, Area Manager, or Senior Contracts Manager, up to \$50,000 per Amendment
- Project Manager, up to \$25,000 per Amendment
- Resident Engineer or Contract Administrator, up to \$15,000 per Amendment

This delegation is effective FEB. 10, 2011 and shall remain in effect until further written notice or amendment.

Date:

FEBRUARY 10, 2011



Nathaniel P. Ford Sr.

Executive Director/CEO

Attest and Certify:

A handwritten signature in cursive script that reads "R. Boomer". The signature is written in black ink and is positioned above a horizontal line.

Roberta Boomer

Secretary, SFMTA Board of Directors

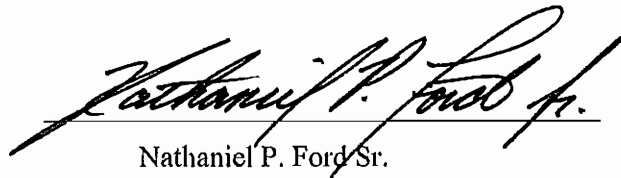
**DELEGATION OF AUTHORITY TO  
APPROVE AND EXECUTE CONTRACTS FOR AND ON BEHALF OF THE  
SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY**

Pursuant to the authority vested in me by Resolution No. 10-008 of the SFMTA Board of Directors, I hereby delegate to Carter R. Rohan, R.A., Chief Construction Officer, without the authority to re-delegate, the contracting authority to approve and execute Contracts pertaining to all Capital Programs and Construction, up to \$250,000 per Contract.

All such transactions entered into pursuant to this Authority shall be compiled and reported to the SFMTA Board of Directors on a quarterly basis.

This delegation is effective JANUARY 26, 2010 and shall remain in effect until further written notice or amendment.

Date: JANUARY 26, 2010



Nathaniel P. Ford Sr.

Executive Director/CEO

Attest and Certify:



Roberta Boomer,

Secretary, SFMTA Board of Directors

**DELEGATION OF AUTHORITY TO  
APPROVE AND EXECUTE AMENDMENTS FOR AND ON BEHALF OF THE  
SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY**

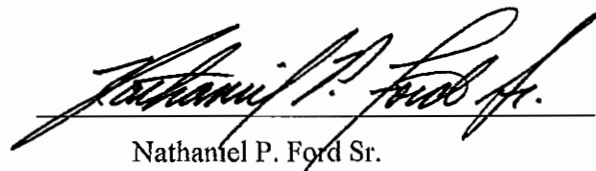
Pursuant to the authority vested in me by Resolution No. 10-008 of the SFMTA Board of Directors, I hereby delegate to Carter R. Rohan, R.A., Chief Construction Officer, the authority to approve and execute Amendments to any Capital Program or Construction Contract, up to \$200,000 per Amendment, and within the cumulative limitations set forth in above Resolution.

The authority delegated hereby to the Chief Construction Officer may be re-delegated within his Division up to the limits set forth hereafter, and within the cumulative limitations set forth in above Resolution:

- Deputy Director, Area Manager, or Senior Contracts Manager, up to \$50,000 per Amendment
- Project Manger, up to \$25,000 per Amendment
- Resident Engineer, Contract Administrator, up to \$15,000 per Amendment

This delegation is effective JANUARY 26, 2010 and shall remain in effect until further written notice or amendment.

Date: JANUARY 26, 2010



Nathaniel P. Ford Sr.

Executive Director/CEO

Attest and Certify:



Roberta Boomer,

Secretary, SFMTA Board of Directors

**DELEGATION OF AUTHORITY TO  
APPROVE AND EXECUTE CONTRACTS AND AMENDMENTS FOR AND ON  
BEHALF OF THE SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY**

Pursuant to the authority delegated to me by the Executive Director/CEO of the San Francisco Municipal Transportation Agency, I hereby delegate to Fariba Mahmoudi, Director of Capital Programs & Construction, without authority to re-delegate, the contracting authority to approve and execute Contracts pertaining to all Capital Programs and Construction, up to \$250,000 per Contract. All such transactions entered into pursuant to this Authority shall be compiled and reported to the SFMTA Board of Directors on a quarterly basis.

Further, I hereby delegate to Fariba Mahmoudi, the authority to approve and execute Amendments to any Capital Program or Construction Contract, up to \$200,000 per Amendment, and within the cumulative limitations as set forth in the Board of Directors' Resolution No. 10-008. This authority may be re-delegated within her Division up to the limits set forth hereafter, and within the cumulative limitations set forth in above Resolution:

- Deputy, Area Manager, or Senior Contracts Manager, up to \$50,000 per Amendment
- Project Manager, up to \$25,000 per Amendment
- Resident Engineer or Contract Administrator, up to \$15,000 per Amendment

This delegation of authority is effective March 1, 2011 and shall remain in effect until further written notice or amendment.



\_\_\_\_\_  
Carter R. Rohan, R.A.  
Deputy Executive Director

Date: 2.28.11

Attest and Certify:



\_\_\_\_\_  
Roberta Boomer  
Secretary, SFMTA Board of Directors



**DELEGATION OF AUTHORITY TO  
APPROVE AND EXECUTE CONTRACTS AND AMENDMENTS FOR AND ON  
BEHALF OF THE SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY**

Pursuant to the authority delegated to me by the Executive Director/CEO of the San Francisco Municipal Transportation Agency, I hereby delegate to Virginia Harmon, Direct Report Contracting Officer, without authority to re-delegate, the contracting authority to approve and execute Contracts assigned to her for management, up to \$150,000 per Contract. All such transactions entered into pursuant to this Authority shall be compiled and reported to the SFMTA Board of Directors on a quarterly basis.

Further, I hereby delegate to Virginia Harmon, without authority to re-delegate, the authority to approve and execute Amendments to any Contract assigned to her for administration, up to \$100,000 per Amendment, and within the cumulative limitations as set forth in the Board of Directors' Resolution No. 10-008.

This delegation of authority is effective March 1, 2011 and shall remain in effect until further written notice or amendment.



Carter R. Rohan, R.A.  
Deputy Executive Director

Date: 2.28.11

Attest and Certify:



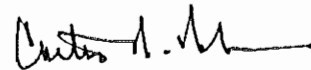
Roberta Boomer  
Secretary, SFMTA Board of Directors

**DELEGATION OF AUTHORITY TO  
APPROVE AND EXECUTE AMENDMENTS FOR AND ON BEHALF OF THE  
SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY**

Pursuant to the authority delegated to me by the Executive Director/CEO of the San Francisco Municipal Transportation Agency, I hereby delegate to Shahnaz Farhangi, Deputy for Contract Administration and Quality Management, without authority to redelegate, the authority to approve and execute Amendments to contracts that have been or are from time to time assigned to him for administration, up to \$50,000 per Amendment, and within the cumulative limitations as set forth in the Board of Directors' Resolution No. 10-008. The amount of each Amendment for this purpose shall be the total of the value of all work added and the value of all work deleted thereby.

The authority granted hereby shall be exercised under my supervision and in accordance with applicable policies, procedures, and processes that have been or will from time to time be established, and all instructions that I may issue from time to time.

This delegation of authority is effective as of 2.23.10 and shall continue, unless sooner revoked, until issuance of subsequent delegation. It supersedes all prior delegations.



Carter R. Rohan, R.A.  
Chief Construction Officer

Date: 2.22.10

ATTEST:



Roberta Boomer  
Secretary,  
San Francisco Municipal Transportation Agency

August 21, 2012

### 3.04 UNFORESEEN OR DIFFERING CONDITIONS

- B. Contractor's written notice shall inform the City as to how such conditions affect its Work and recommend methods to overcome such conditions.
- D. The City will promptly investigate the conditions reported in Contractor's written notice and will issue a written report of findings to Contractor.
- F. Should Contractor disagree with the City's determination, Contractor shall submit a written Notice of Potential Claim to the City as provided in Section 13.01 of these General Provisions.

### 6.01 GENERALLY (CLARIFICATIONS AND CHANGES IN THE WORK)

- F. Should the City's Clarification or other written directive, in the opinion of Contractor, exceed the requirements of the Contract Documents, Contractor shall submit a written Change Order Request (COR) to the City within **seven (7) calendar days** of receipt of the Clarification, and before proceeding with the Work thereof, as provided in Section 88, below. The City shall be relieved of any claim for compensation if said written COR is not received prior to Contractor beginning the affected Work. The Contractor waives its rights to request or claim for additional compensation or time on the Clarification or written directive if the Contractor fails to submit the written COR to the Engineer within the above timeline. The City shall not be under any obligation to respond to any statement or attempt made by the Contractor to reserve or reactivate such rights in the future.
- G. Failure by the Contractor to comply with the procedures of this Article, including the failure to provide timely, sufficient information and/or documentation to the City at the time of any Clarification or Change Order Request, shall constitute a waiver of any subsequent claim by the Contractor arising out of such Clarification or Change Order.

### 6.02 CHANGE ORDER (CONTRACT MODIFICATIONS)

- C. **PCC and COR Cost Proposal Requirements.** Contractor shall furnish two (2) copies of its PCC or COR cost Proposal, which shall include a complete itemized breakdown of labor, material, equipment, taxes, insurance, bonds, and markup for overhead and profit for both addition and deletions on a form supplied by the City. The same shall be required for subcontractor and lower-tier subcontractor cost proposals, which shall be furnished on the same form as required for Contractor. A COR shall reference all related progress schedule activities, Specification sections and Drawings directly pertaining to COR. In addition, Contractor shall provide the following documentation to the City in support of Contractor and subcontractor cost proposals:
  - 1. Material quantities and type of products;
  - 2. Labor breakdown by trade classification, wage rates, and estimated hours;
  - 3. Equipment breakdown by make, type, size, rental rates, and equipment hours;
  - 4. Taxes, insurance and bonds.

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- D. **SFMTA Review of COR.** The City will review the validity of Contractor's written COR and within **30 days** after receipt of the COR will render its determination in writing. Contractor shall diligently proceed with the Work in accordance with the City's determination, which shall be final and binding on the City and Contractor unless Contractor submits a written Notice of Potential Claim as specified under Section 13.01.

#### 6.05 FORCE ACCOUNT WORK

- B. **Notification and Verification:** Contractor shall notify the City in writing at least **24 hours** in advance of its schedule before proceeding with the Force Account Work. All Force Account Work shall be witnessed, documented, and approved in writing by the City on the Day that the Work is performed. Contractor will not be compensated for Force Account Work if Contractor fails to provide timely notice to the City before commencing the Force Account Work. In addition, Contractor shall notify the City when the cumulative costs incurred by Contractor for the Force Account Work equal 80 percent of the budget pre-established by the City. Contractor will not be compensated for Force Account Work exceeding the "not to exceed" budget amount if Contractor fails to provide the required notice before exceeding 80 percent of the Force Account budget.
- E. **Records:** Contractor shall maintain detailed records of all Work done on a Force Account basis. Contractor shall provide a **weekly** Force Account summary indicating the status of each Force Account Work directive in terms of actual costs incurred as a percent of the budget for the respective Force Account Work directive and the estimated percentage completion of the Force Account Work.

#### 7.02 EXTENSIONS OF TIME, DELAYS ACCELERATION

- A.1. **PCC and COR Time Adjustment Proposal Requirements:** If Contractor asserts it is entitled to a time extension due to the Proposed Contract Change work, Contractor shall provide a separate Notice of Delay (in accordance with Section 7.02E) prior to submitting a PCC or COR time extension Proposal. At a minimum, Contractor shall provide the following documentation to the City in support of Contractor and Subcontractor time extension proposal:
- a. Contractor shall submit to the City a CPM time impact evaluation using sub-network or fragmentary network and including a written narrative and a schedule diagram or other written documentation acceptable to the City, showing the detailed work activities involved in a change that may affect the Contract Time and impact of the change on other Work and activities of the proposed schedule adjustment. This sub-network shall be tied to the complete progress schedule network with appropriate logic so that a true analysis of critical path can be made.
  - b. Failure to provide said Notice of Delay in accordance with Section 7.02E, or failure to provide the supporting documentation required under Section 7.02.A.1 above, within the **14-Day period provided in Section 6.02.B, or within 14 days after submission of a COR**, will result in Contractor waiving its right for additional time.

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**E. Notice of Delay:**

1. Pursuant to section 6.22H.2.d of San Francisco Administrative Code, Contractor shall notify the City in writing promptly of all anticipated delays in the prosecution of the Work and, in any event, promptly upon the occurrence of a delay.
2. Said notice shall constitute an application for an extension of time only if it requests such time extension, sets forth Contractor's estimate of the additional time required together with a full recital of the causes of Unavoidable Delays relied upon, and meets all requirements for a Notice of Potential Claim as set forth in Section 13.01, including the requirement that such Notice be submitted to the City within **one Day** of the event which the Contractor contends affected the performance of the Work.
4. If Contractor does not submit a notice as set forth in subsection 7.02.E.2, above, Contractor thereby admits the occurrence had no effect on the length of its duration of Work and no extension of time is necessary, and Contractor understands and agrees that no extension of time or adjustment of the Contract Sum will be granted by the City.

**13.01 NOTICE OF POTENTIAL CLAIM (CONTRACT AND GOVERNMENT CODE CLAIMS)**

- A. If, during the course of the Work, the Contractor disputes any directive, determination (including determination of delay), Proposed Change Order, Unilateral Change Order, payment, or other act by the City impacting or potentially impacting the performance of the Work (collectively, "Potential Claim Events"), the Contractor shall submit to the City a Notice of Potential Claim. The Contractor shall submit such Notice within **7 Days** of the Potential Claim Event. The Notice shall describe the Potential Claim Event, provide a good faith estimate of any impact, and reference any relevant provisions of the Contract Documents and any schedules with sufficient specificity for the City to review the matter.
- B. Failure to submit a timely, properly documented Notice of Potential Claim shall constitute a waiver of any claim arising out of such potential claim event.
- C. The notice requirements of this Section apply regardless of whether or not the disputed item underlying a potential claim event has been or will be submitted to a Dispute Review Board or Dispute Resolution Advisor for review.

**13.02 CONTRACT CLAIM**

- A. General Contract Claim Requirements
  1. No later than **45 Days** after submitting a timely Notice of Potential Claim to the City in accordance with Section 13.01, Contractor may submit a Contract Claim for additional compensation or time based on any disputed Item (a) respecting the true value of any Work performed or any changes in the Work which Contractor may be required to perform; and/or (b) regarding time extensions; and/or (c) respecting the amount of payment to Contractor during the performance of the Contract; and/or (d) regarding the performance of obligations by any party.
  2. A Contract Claim shall be the Contractor's sole and exclusive administrative remedy for additional compensation or time associated with its performance of the Work. Failure to submit a timely, certified, and documented Contract Claim in

August 21, 2012

- conformance with this Article shall constitute a waiver by the Contractor as to any claims relating to its performance of the Work under the Contract and a failure by Contractor to exhaust its administrative remedies.
3. Contractor shall be solely responsible for any and all costs it incurs in preparing, filing, presenting, appealing or otherwise pursuing a Contract claim, which costs shall not be reimbursed or otherwise recovered for the City.
- B. Contract Claim Certification Requirement:
  - C. Format of a Contract Claim:
  - D. Additional Requirements for Contract Claims Regarding Time Extensions:
  - E. Procedure For Review of a Contract Claim:
    1. The City shall review only timely, certified, and properly documented Contract Claims.
    2. The City shall respond to a Contract Claim in writing, within **45 Days** of receipt of such Claim...
    3. Within **10 Days** of the date of the City's response or expiration of the 45-Day period, whichever is earlier, the Contractor may request review of the Contract Claim and the City's response by the Deputy Executive Director...
    4. ... The Deputy Executive Director, or his/her designee, shall issue such determination with **60 Days** of the request for review...
  - F. Further Remedy: Should contractor's Claim be rejected by the City in whole or in part, Contractor's sole and exclusive remedies shall be either to (1) seek resolution of its dispute through the Dispute Review Board (if one is established for this Contract), or (2) file a formal claim in accordance with the provisions of the California Government Code.

#### 16.02 DISPUTE RESOLUTION:

\*\* Section 01 27 00.92 DISPUTE REVIEW BOARD: 1.03.B "The Contractor may submit a matter to the DRB only after it has presented the SFMTA a certified Contract Claim that meets the requirements of the Contract.

## **APPENDIX C – AREA OF IMPROVEMENT SUMMARYS**

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## C Mod Task Force

# Area of Improvement # 1

### **Problem: Timely Submission of the COR**

The task force reviewed the current initiation of a change, (being a differing site condition or clarification, i.e. response to RFI) with actual events occurring on contracts 1250, 1251, and 1252; identified several challenges that are contributing to prolonging the process; namely timely actions by both parties of providing written documentation for justification of the change. Also providing clarification of what is considered acceptable information to properly delineate the change. The task force agreed that the responsibility is ultimately the Contractors'.

### **Root Cause:**

The challenges of timely receipt of a COR from the contractor with complete information is part of a set of conflicting priorities of identifying the actual change, quantifying the change, developing the required documentation, while at the same time not impacting the progress of the work.

### **Recommendation for Improvements:**


Program needs to develop measures to notify the contractor of the contractual obligations while at the same time preserving the rights of the Agency.

Reexamine how the RE organizations participated in the identification of a change and how it must keep in mind at all times the contractual relationship is with the prime contractor and not the subcontractor.

The task force also recognized the need to The RE does not have knowledge of the subcontractor scope of work and should only deal with the Prime in matters related to changes in the contract.

- Confirm actual time requirements in contract documents – review for consistency and cross reference with procedures.
- Provide form delineating the minimum amount of information required for a COR.
- Develop letter templates 1) Reminder of contract obligations, expected date of receipt of info 2) Letter preserving Agency rights when untimely receipt
- Better tracking and follow-up on outstanding items



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# CHANGE ORDER REQUEST AND CLAIMS PROCESSING

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APPROVED BY: John Funghi  
Senior Program Manager  
SFMTA Central Subway



DATE: 1-14-10

<b>Title:</b>  <div style="text-align: center;">             PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS            SECTION 1101 – CHANGE ORDER REQUEST AND CLAIMS PROCESSING         </div>	<b>Document Type:</b> Procedure
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## 1101.1 PURPOSE

This procedure describes how to analyze, approve, and process a Change Order Request (COR) submitted by a Contractor. It also defines the claims process that occurs upon SFMTA's denial of a COR.

## 1101.2 RESPONSIBILITY

When the Contractor believes that a change in the scope of the Contract will occur or has occurred, the Contractor may submit a COR to the Resident Engineer (RE). The COR must be timely, complete, and accurate. The RE reviews the COR and notifies the Contractor of the COR determination. If the RE determines the COR to be without merit and denies the COR, the Contractor may file a claim as specified in the General Provisions Section 98, Clarification and Claims. The Contractor submits the claim to SFMTA, following the protest procedure described in Section 1101.3.5 of this procedure.

## 1101.3 PROCEDURES

### 1101.3.1 General

The Contractor usually submits a COR when either of the following occurs:


- A. The Contractor encounters site conditions, which in the opinion of the Contractor, exceed the Contract requirements.
- B. SFMTA's clarification or other written directive, in the opinion of the Contractor, exceeds the Contract requirements.

#### 1101.3.1.1 Differing Site Conditions That Exceed Contract Requirements

When the Contractor encounters a site condition that the Contractor believes exceeds the Contract requirements, the Contractor must notify the RE of all anticipated or actual change work immediately by telephone and in writing within 1 working day of the time that the suspected work became known to the Contractor. The Contractor must not proceed with the suspected work until the RE gives direction. See Procedure CM 1105 for more information on Differing Site Conditions.

#### 1101.3.1.2 Additional Directives That Exceed Contract Requirements

When the Contractor feels that SFMTA's directive exceeds the requirement of the Contract, per General Provisions Section 98, Clarifications and Claims, the Contractor must submit a written COR to SFMTA within 7 calendar days of receipt of the

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clarification or directive, and before proceeding with the work. If the Contractor begins work before SFMTA receives the written COR, SFMTA is not responsible for any compensation claim. If the Contractor does not submit the COR to the SFMTA in the specified timeframe, the Contractor waives its rights to request or claim for additional compensation or time on the clarification or written directive.

### **1101.3.2 Change Order Request Documentation**

#### **1101.3.2.1 General**


If the Contractor determines additional time or compensation is necessary for the project, the Contractor prepares and submits to the RE a COR on the Change Order Request form (see Exhibit 1101-1). This document includes:

- A. A written narrative that justifies to SFMTA's satisfaction the reason for a time extension or additional compensation
- B. The revised schedule for the time extension or an estimate for additional compensation, the Contractor's Cost Proposal
- C. References to all related progress schedule activities, Contract Specification sections, and Drawings directly pertaining to the COR


#### **1101.3.2.2 Documentation Process**

Upon receipt of a COR, or correspondence which may contain proposal implications, the Office Engineer (OE), or RE for smaller projects, must:

- A. Rectify the numbering if the COR does not have a consecutive number. The COR number must:
  - 1. Be assigned to only one incident or change.
  - 2. Serve as a unique identifier of a particular incident or change through all subsequent operations involving estimates, quantity take-offs, etc.
  - 3. Be used in all correspondence concerning the proposal, throughout the life of the Contract.
- B. Log the Contractor COR in the COR Record Log (Exhibit 1101-2).
  - 1. The Contractor COR Record Log must:

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- a. Clearly identify and itemize in numerical order all Contractor CORs for all incidents regarding:
    - Time
    - Money
    - Any item of concern to the Contractor (see General Provisions for additional requirements)
  - b. Provide continuous control of the status of all special circumstances or changes to the Contract.
  - c. Ensure that no Contractor item, however small, is overlooked in processing changes to the contract.
  - d. Facilitate a status update at every progress meeting (see Procedure CM 0703).
2. The Office Engineer (OE) or RE must enter the following information into the Contractor COR Record:
- a. COR Number: The assigned Contractor COR number
  - b. Contractor Letter Number: The number on the initial letter and all following Contractor correspondence concerning the proposal
  - c. Contractor Letter Date: The respective date of each Contractor letter
  - d. RE Letter Date: The respective date of each RE letter
  - e. Description: A brief title and description of the request
  - f. Contractor Estimate: If the Contractor quantifies the request, the dollar amount and additional time indicated, if any
  - g. RE Estimate: The dollar figure documented within the Contract Modification (C/Mod) file (If none, enter N.A. for not applicable.)
  - h. Contractor COR Date Received: The letter number and date the RE received the COR (If there is no letter number, indicate so.)
  - i. Date of Negotiation: The date the RE reviews the details with the Contractor, if applicable


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- j. Force Account: An indication of whether the work or portions thereof are considered Force Account work under General Provisions Section 76
  - k. C/Mod Number/Date: The Contract Modification (C/Mod) number, if the Proposed Contract Change (PCC) is followed by issuance of a C/Mod
  - l. Agreed Amount/Time: The Contract amount or time change indicated on the C/Mod
  - m. Comments: An indication of the status, i.e., "Denied" and date, or "Modification Final" and date
- C. Establish a COR file for each individual COR.
- D. Collect information applicable to the proposal. This includes:
1. Copies of pertinent subcontractor documents
  2. Correspondence on the subject
  3. Cost estimates
  4. Photographs
  5. Charts
  6. Copies of plans and specifications
  7. Any other information of use in analyzing and evaluating the proposal

### **1101.3.3 Change Order Request Analysis**

Concurrent with the documentation effort, the RE must:

- A. Review the Contractor COR to determine if it is clear, complete, and submitted within the specified timeframe.
- B. Request the Contractor provide additional information and documentation as necessary to consider the COR for merit.
- C. Coordinate with other SFMTA staff as needed to determine if the COR has merit or not.
- D. Prepare an evaluation in accordance with the designated contractual authority.

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### 1101.3.4 Change Order Request Determination/Notification

SFMTA will review the validity of the Contractor's written COR and make a determination in writing as soon as possible, but not to exceed 30 days after receipt of the COR. The Contractor must proceed with the work in accordance with SFMTA's determination, which is final and binding on SFMTA and the Contractor unless the Contractor submits a written Notice of Potential Claim as specified under Contract General Provisions Section 98, Subsection B.2, Claims Procedure.

The RE will send one of the following responses to the Contractor:

- A. With Merit
- B. Without Merit
- C. Field Change (See 1101.3.4.3)
- D. Incomplete and Re-submittal Required

#### 1101.3.4.1 COR with Merit


If SFMTA determines the COR for additional compensation or time has merit under the current Contract, the RE initiates a Change Modification (C/Mod) under Procedure 1103 in conformance with General Provisions Section 75, Alteration, Modifications, and Extras.

#### 1101.3.4.2 COR without Merit

If SFMTA determines the COR for additional compensation or time does not have merit under the current Contract, the RE notifies the Contractor of the COR denial, substantiated by Contract Document references.

Upon receipt of denial, the Contractor may do either of the following:

- A. Withdraw the COR, through a formal process that includes written correspondence that documents the withdrawal, such as:
  - A letter
  - Meeting minutes
  - Marked-up Contractor proposal, etc.
- B. Resubmit for reconsideration, which initiates the protest procedure described in Procedure CM 1101.3.5.

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If SFMTA later determines the COR does have merit, the RE will initiate a Change Modification (see Procedure CM 1103 for specific instructions).

#### **1101.3.4.3 Field Change**

If SFMTA determines the change is a minor variation from the Contract Specifications or Plans and does not affect the design intent nor Contract scope, schedule, or cost, the RE will issue a "field change" response to the Contractor instead of a Change Modification. This shall be noted in the COR Record Log and documented on as-built drawings.

#### **1101.3.4.4 Incomplete and Re-submittal Required**

If SFMTA determines the COR is incomplete, the RE will specify the information required and return the COR to the Contractor for re-submittal. The Contractor must comply with the COR process in Procedure 1101 to resubmit the COR.

#### **1101.3.5 Claims Processing**

##### **1101.3.5.1 General**

If the Contractor receives notice that the COR is without merit, the Contractor may submit a claim to the RE. The Contractor must follow SFMTA's protest procedure, and the RE may call upon the Dispute Review Board if the Construction Manager and Contractor cannot come to an agreement.


##### **1101.3.5.2 Protest Procedure**

SFMTA's protest procedure is designed to keep all Contractor CORs within the Construction Management Department and to achieve claim resolution prior to using an alternative dispute resolution process by mutual agreement.

Each COR will receive due consideration by SFMTA. If the RE fails to reach agreement with the Contractor, the RE will initiate the protest procedure. At the preconstruction meeting, the RE will inform the Contractor of the protest procedure, which results in reviews of the COR at successively higher levels of management.

The protest cycle is as follows:

- A. The Contractor will, after the initial denial of the COR, do one of the following:
  - 1. Withdraw the COR.

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2. Resubmit the COR with or without additional documentation and request re-evaluation.
- B. SFMTA completes the review process for a resubmitted COR.
1. If after review of the resubmitted COR and additional information, the RE determines the COR has merit, the RE begins the Change Modification process in accordance with Procedure 1103.
  2. If the RE determines that the COR is without merit, the RE may review the issue in committee with Engineering Management, the Contract Administrator, and the Project Manager, for merit consideration. The RE will inform the Contractor of the outcome.
- C. If, after receiving SFMTA's written determination on a COR that a Contractor is not eligible for additional compensation or time, the Contractor still considers the work required to be outside of the Contract requirements, the Contractor may submit a written Notice of Potential Claim to the RE in accordance with General Provisions Section 98, Clarifications and Claims.
- D. SFMTA's field inspectors must carefully inspect and record work performed under "protest" to prepare for the possible resolution of claim, Disputes Review Board (DRB) activity, or litigation.

### 1101.3.5.3 Disputes Review Board

Depending on the Contract requirements, either party to a dispute may propose a Disputes Review Board (DRB) as an alternative dispute resolution process. If a DRB is mutually acceptable, the parties will work together to establish and agree on procedures for conducting the DRB's functions. Upon finalization, SFMTA will incorporate those procedures into this Procedures Manual.


### 1101.3.5.4 Monitoring Claims and CORs

On a monthly basis, the RE will hold a meeting to discuss each claim or COR and its status with the Contractor (see Procedure 703). For outstanding proposals, the two parties will determine and agree on the next required action for processing the claim or change necessary.

The parties will record and distribute meeting minutes to the following:

- A. RE files



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B. Contractor

C. Project Manager, Project Engineer, and Contract Administrator

On a quarterly basis, the RE must prepare a listing of all pending claims submitted by the Contractor with an estimated value of over \$100,000 as well as all claims settled during the preceding quarter, regardless of value.

### **1101.3.5.5 Work Interruptions/Delay Claims**

The RE must be familiar with and refer the Contractor to the General Provisions Section 78, Time Allowances for specific requirements. Two types of delays may occur on the project: avoidable and unavoidable.

For all alleged delays, the Contractor is required to file a "Notice of Delay" in writing within 7 days from the beginning of the said delay. This notice constitutes an application for extension of time only if the notice:

- A. Requests such extension
- B. Sets forth the Contractor's estimate of the additional time required along with full detail on the causes of the alleged delay, including Critical Path Method (CPM) schedule analysis documentation substantiating the alleged delay as required by the delay provisions of the Contract

#### **1101.3.5.5.1 Avoidable Delays**

Avoidable delays include:

- Delays that could have been avoided by the Contractor's exercise of care, prudence, foresight, and due diligence

#### **1101.3.5.5.2 Unavoidable Delays**

Unavoidable delays may include:

- Delays directly attributable to the actions of SFMTA that cannot be avoided by the Contractor's exercise of care, prudence, foresight, and diligence
- Delays from other such causes beyond the control of the Contractor as may be specifically stated in the Contract
- Delays due to RE-directed temporary suspension of work
- Delays due to the delay of another contractor's work

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SFMTA does not consider any delay or interruption of work due to material shortages or labor shortages an unavoidable delay, unless specifically approved by SFMTA.

### 1101.3.5.5.3 Notice of Delay


Upon receipt of a Notice of Delay, the RE will immediately record it and review it to determine the appropriate action, such as:

- A. Refer the matter to SFMTA, which may take steps to prevent the continued occurrence or mitigate the delay.
- B. Classify the alleged delay as avoidable or unavoidable, and direct the Contractor accordingly.
  - 1. Avoidable: If the RE determines the alleged delay had been avoidable in accordance with the Contract Specifications, the RE will deny the Contractor's request for additional time and/or money and demand a recovery schedule.
  - 2. Unavoidable – If the alleged delay is determined to be unavoidable, the Contractor must substantiate any allegation of delay to the overall work by submitting scheduling information in accordance with Construction Contract Specifications Section 01 32 13, Scheduling of Work. The Contractor shall follow up any initial Notice of Delay with a COR for the alleged delay.
  - 3. Unavoidable – No Time Extension Acceptable: If the project deadline cannot be extended, the RE may direct the Contractor to prepare a recovery schedule to overcome the delay and meet a completion date, in lieu of granting a time extension for an unavoidable delay. This recovery schedule may include strategies such as resequenced and/or concurrent activities, additional resources, acceleration, or other options as needed to recover the necessary time.
- C. Record the Notice of Delay information into the Notice of Delay Log.

### 1101.3.5.5.4 Delay Substantiation

The RE will not grant an extension of time for any cause unless the Contractor can demonstrate by means of CPM schedule analysis and other substantiation in the Contract that the delay meets the following criteria:

- A. It did occur.
- B. It was beyond the Contractor's control.

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C. It could not have been avoided by due diligence.

D. It delayed the project's critical path and final completion of the work and/or an interim contract milestone. In the case of delay to an interim milestone, the Contractor must meet the same standard of proof as if for an extension of time to the Contract duration. Delay to an interim milestone does not necessarily delay final completion and may not require an extension of time, only a new milestone date.

Upon rejection of a documented delay, the Contractor may choose to protest the denial, following the steps outlined in Procedure 1101.3.5.

#### **1101.4 DEFINITIONS**

None.

#### **1101.5 EXHIBITS**


1101-1 Sample Change Order Request Form

1101-2 Sample Contractor Change Order Request Record Form

#### **1101.6 REFERENCES**

Refer to the following:

- Contract Specifications General Provisions Sections 75- Contract Modification, 76- Force Account work, 78- Time allowance for completion of contract work, and 98- Clarification and Claims
- Procedure Manual Sections CM 0703- Project Current Schedule and Progress Review Meeting, CM 1103- Contract Modification

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### 1101.7 PROCEDURE HISTORY

<u>Revision Level</u>	<u>Revision Date</u>	<u>Summary of Revision</u>	<u>Approved By</u>

### 1101.8 APPROVALS

Prepared by	Reviewed by	Signature & Date
<b>Originator of Central Subway Procedures Manual</b> <b>Title and Unit:</b>  Dane Hudson Construction Manager Central Subway Partnership	Roger Nguyen Quality Assurance Manager Quality Assurance Office  Robert Rocco Configuration & Risk Manager Central Subway Partnership  Arthur Wong SFMTA Construction Manager Central Subway Project	 1/12/10   1/13/10   1/13/10   1/13/10

Exhibit 1101-1: Sample Change Order Request Form

**CHANGE ORDER REQUEST**

Contract No. & Name	Date
COR No. & Title	
Requested Time & Cost	

What (Description of COR)

Why (Reason for Requesting COR)

Where (Location/Station)

When (Occurrence date, action date)

How (Recommendation of Action)

Cost Proposal (Summary of Cost Proposal and attached)

Spec Ref  
Drawing Nos.  
Attach Time Impact Analysis(if applicable)

Prepared by:

Contractor's Representative	Name, Title	Date
-----------------------------	-------------	------

COR Record Log

EXHIBIT 1101-2

MR-1142 Third Street Light R16  
22nd Street to Jerrold Avenue

Exhibit 1101-2

COR No.	Description	Requested			Revised			Comments
		Date	Amount	Time	Date	Action	Amount	
1	Add Inertle Surfacing to Platform Ends	12/7/2004	\$1,890.00	0	12/14/2004	Approved	\$ 4,890.00	0
2	Add construction tolerances to top of platform concrete forms. Revised drawings	7/3/2005	\$3,685.00	0	7/8/2005	Denied	\$ -	0
3	Construct Sewer Between Arthur & Center Avenue	5/16/2005	\$244,722.00	0	5/25/2005	Approved	\$ 244,222.00	0
4	Install Duckbill between Arthur and Center	7/15/2005	\$80,664.00	0	7/27/2005	Approved	\$ 10,664.00	0
5	Additional Sewer Work Between Arthur and Center	6/29/2005	\$2,618.00	0	7/6/2005	Approved	\$ 32,618.00	0
6	Revise OV Drawings - Pole & Foundation Height Changes	9/16/2004	\$1,646.99	0	9/25/2004	Denied	\$ -	0
7	KMEL Radio Renote	2/3/2005	\$1,575.00	0	2/10/2005	Approved	\$ 1,575.00	0
8	Exploratory Drilling at Island Bridge	4/26/2005	\$3,000.00	0	5/3/2005	Denied	\$ -	0
9	Traffic Signal at Mann & Cargo	3/15/2005	\$2,801.00	5	3/22/2005	Approved	\$ 9,801.00	Deferred
10	Demo Curb and Place Diverters	2/3/2005	\$15,000.00	0	3/10/2005	Approved	\$ 2,557.91	0
11	Special Trackwork Spare Parts	3/18/2005	\$13,523.00	40	3/25/2005	Approved	\$ 13,033.00	Deferred
12	DPT Software & Training Request	4/1/2005	\$1,000.00	0	4/8/2005	Denied	\$ -	0
13	DPT VMS Foundation Request	6/20/2005	\$16,020.24	20	6/27/2005	Approved	\$ 13,256.00	Deferred
14	RR Crossing Signal Interlock Changes	6/27/2005	\$215,799.00	0	7/4/2005	Approved	\$ 215,799.00	0
15	Remove Sign Pole - MEOC Albert Court	7/1/2005	\$2,024.43	0	7/8/2005	Approved	\$ 2,024.43	0
16	Traffic Signal Hardware @ Arthur-Cargo	6/14/2005	\$4,577.00	0	6/21/2005	Approved	\$ 9,577.00	0
17	Differing Site Conditions SFWD Related	12/8/2005	\$20,000.00	0	12/15/2005	Approved	\$ 16,587.00	0
18	Revised LRV Medium CO #33	11/14/2005	\$3,249.00	0	11/21/2005	Approved	\$ 3,249.00	0
19	Revised Platform Drawings - Bolt Configuration & Marquee Base Height	11/21/2005	\$600.00	0	11/28/2005	Approved	\$ 600.00	0
20	VIS Conducts @ Center	8/1/2005	\$4,574.64	328	8/8/2005	Approved	\$4,574.64	Deferred
21	Revised Drawings - Misc. Changes to Platforms, Ramps, & Stairs	12/22/2005	\$7,613.00	0	12/29/2005	Approved	\$ 7,613.00	0
22	Typical UPRR Flangeway Notch (Dry)	10/7/2005	\$5,200.00	0	10/14/2005	Denied	\$ -	0
23	Rev. PL-23, Rev. 2 Draw - Pipe Sleeve Change at Irwin Ave. Platform	10/21/2005	\$7,822.00	0	10/28/2005	Denied	\$ -	0
24	Rev. LA-03, Rev. 1, LA-05 Rev. 1, and LA-06 Rev. 1 Drawings - Truncated Dome Tile @ Crosswalks	12/16/2005	\$5,521.00	0	12/23/2005	Approved	\$ 5,521.00	0
25	Additional CSS Piling at ICB North Abutment	12/8/2005	\$180,000.00	0	12/15/2005	Approved	\$ 180,000.00	0
26	Perform Troubleshooting & Repair Existing Electrical Facilities	12/16/2005	\$5,000.00	0	12/23/2005	Denied	\$ -	0
27	Replace SFED AWSS Fittings	2/1/2006	\$24,747.00	0	2/8/2006	Approved	\$ 24,747.00	0
28	Environmental Supplies	2/22/2006	\$2,994.00	0	3/1/2006	Approved	\$ 2,994.00	0
29	Color Pavement Sealants R1-F111 Changes to Color Pavement at Intersections	3/28/2006	\$21,555.00	0	4/7/2006	Approved	\$ 21,555.00	0
30	CES Environmental - Remove Underground Tanks	3/28/2006	\$16,023.52	0	4/4/2006	Approved	\$ 16,023.52	0
31	Revised OSMIT No 7 S-15 Structural Drawing	3/28/2006	\$16,081.00	0	4/4/2006	Approved	\$ 16,081.00	0
			\$974,063.87	191			\$930,082.88	0

Exhibit 1101-2: Sample Contractor Change Order Request Record Form



**BARNARD  
IMPREGILO  
HEALY** JOINT VENTURE

# BARNARD IMPREGILO HEALY JOINT VENTURE

420 Fourth Street San Francisco, CA 94107, PH (415) 546-0799, FX (415) 546-3822

## PRELIMINARY CHANGE ORDER REQUEST FORM

Third Street Lightrail Program Phase 2 - Central Subway Project  
CONTRACT 1252

9/5/2012

**COR 26: MOS - Asbestos Pipe @ south headwall**

**DIRECT COST IMPACTS:**

COR #026 submitted on 8/30/2012 had a total direct cost impact equal to \$33,668.65. See the COR package for details of all direct costs.

**TIME IMPACTS:**

There were no time impacts related to this differing site condition.

**WHAT (DESCRIPTION OF COR):**

Additional Cost due to added work on FA tags regarding transite pipe removal @ SW MOS Headwall.

**WHY (REASON FOR COR):**

This pipe was not shown on the contract documents and constitutes a differing unforeseen condition from what was shown at the time of bid. Carmen with MTA requested that SPM cut the pipe using wet methods and place materials in plastic bags.

**WHERE (LOCATION/STATION):**

SW MOS Headwall on 4th and Folsom

**WHEN (OCCURRENCE DATE, ACTION DATE):**

Parts of the pipe were removed from 8/8/12 to 8/15/12.

**HOW (RECOMMENDATION OF ACTION):**

SPM crews were directed on how to proceed by Carmen with SFMTA as described in the "Why" section above. An RFI was sent in regards to this issue memorializing Carmen's request and seeking direction on proceeding while tracking on Force Account..

SPEC REF: 02 41 00  
APPLICABLE DRAWINGS: UD-403, UD-404

PREPARED BY:

Jack Switky *Engineer* 9/5/12  
Contractor's Representative (Name, Title) Date

August 21, 2012

### 3.04 UNFORESEEN OR DIFFERING CONDITIONS

- B. Contractor's written notice shall inform the City as to how such conditions affect its Work and recommend methods to overcome such conditions.
- D. The City will promptly investigate the conditions reported in Contractor's written notice and will issue a written report of findings to Contractor.
- F. Should Contractor disagree with the City's determination, Contractor shall submit a written Notice of Potential Claim to the City as provided in Section 13.01 of these General Provisions.

### 6.01 GENERALLY (CLARIFICATIONS AND CHANGES IN THE WORK)

- F. Should the City's Clarification or other written directive, in the opinion of Contractor, exceed the requirements of the Contract Documents, Contractor shall submit a written Change Order Request (COR) to the City within **seven (7) calendar days** of receipt of the Clarification, and before proceeding with the Work thereof, as provided in Section 88, below. The City shall be relieved of any claim for compensation if said written COR is not received prior to Contractor beginning the affected Work. The Contractor waives its rights to request or claim for additional compensation or time on the Clarification or written directive if the Contractor fails to submit the written COR to the Engineer within the above timeline. The City shall not be under any obligation to respond to any statement or attempt made by the Contractor to reserve or reactivate such rights in the future.
- G. Failure by the Contractor to comply with the procedures of this Article, including the failure to provide timely, sufficient information and/or documentation to the City at the time of any Clarification or Change Order Request, shall constitute a waiver of any subsequent claim by the Contractor arising out of such Clarification or Change Order.

### 6.02 CHANGE ORDER (CONTRACT MODIFICATIONS)

- C. **PCC and COR Cost Proposal Requirements.** Contractor shall furnish two (2) copies of its PCC or COR cost Proposal, which shall include a complete itemized breakdown of labor, material, equipment, taxes, insurance, bonds, and markup for overhead and profit for both addition and deletions on a form supplied by the City. The same shall be required for subcontractor and lower-tier subcontractor cost proposals, which shall be furnished on the same form as required for Contractor. A COR shall reference all related progress schedule activities, Specification sections and Drawings directly pertaining to COR. In addition, Contractor shall provide the following documentation to the City in support of Contractor and subcontractor cost proposals:
  - 1. Material quantities and type of products;
  - 2. Labor breakdown by trade classification, wage rates, and estimated hours;
  - 3. Equipment breakdown by make, type, size, rental rates, and equipment hours;
  - 4. Taxes, insurance and bonds.



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- D. **SFMTA Review of COR.** The City will review the validity of Contractor's written COR and within **30 days** after receipt of the COR will render its determination in writing. Contractor shall diligently proceed with the Work in accordance with the City's determination, which shall be final and binding on the City and Contractor unless Contractor submits a written Notice of Potential Claim as specified under Section 13.01.

#### 6.05 FORCE ACCOUNT WORK

- B. **Notification and Verification:** Contractor shall notify the City in writing at least **24 hours** in advance of its schedule before proceeding with the Force Account Work. All Force Account Work shall be witnessed, documented, and approved in writing by the City on the Day that the Work is performed. Contractor will not be compensated for Force Account Work if Contractor fails to provide timely notice to the City before commencing the Force Account Work. In addition, Contractor shall notify the City when the cumulative costs incurred by Contractor for the Force Account Work equal 80 percent of the budget pre-established by the City. Contractor will not be compensated for Force Account Work exceeding the "not to exceed" budget amount if Contractor fails to provide the required notice before exceeding 80 percent of the Force Account budget.
- E. **Records:** Contractor shall maintain detailed records of all Work done on a Force Account basis. Contractor shall provide a **weekly** Force Account summary indicating the status of each Force Account Work directive in terms of actual costs incurred as a percent of the budget for the respective Force Account Work directive and the estimated percentage completion of the Force Account Work.

#### 7.02 EXTENSIONS OF TIME, DELAYS ACCELERATION

- A.1. **PCC and COR Time Adjustment Proposal Requirements:** If Contractor asserts it is entitled to a time extension due to the Proposed Contract Change work, Contractor shall provide a separate Notice of Delay (in accordance with Section 7.02E) prior to submitting a PCC or COR time extension Proposal. At a minimum, Contractor shall provide the following documentation to the City in support of Contractor and Subcontractor time extension proposal:
- Contractor shall submit to the City a CPM time impact evaluation using sub-network or fragmentary network and including a written narrative and a schedule diagram or other written documentation acceptable to the City, showing the detailed work activities involved in a change that may affect the Contract Time and impact of the change on other Work and activities of the proposed schedule adjustment. This sub-network shall be tied to the complete progress schedule network with appropriate logic so that a true analysis of critical path can be made.
  - Failure to provide said Notice of Delay in accordance with Section 7.02E, or failure to provide the supporting documentation required under Section 7.02.A.1 above, within the **14-Day period provided in Section 6.02.B, or within 14 days after submission of a COR**, will result in Contractor waiving its right for additional time.

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**E. Notice of Delay:**

1. Pursuant to section 6.22H.2.d of San Francisco Administrative Code, Contractor shall notify the City in writing promptly of all anticipated delays in the prosecution of the Work and, in any event, promptly upon the occurrence of a delay.
2. Said notice shall constitute an application for an extension of time only if it requests such time extension, sets forth Contractor's estimate of the additional time required together with a full recital of the causes of Unavoidable Delays relied upon, and meets all requirements for a Notice of Potential Claim as set forth in Section 13.01, including the requirement that such Notice be submitted to the City within **one Day** of the event which the Contractor contends affected the performance of the Work.
4. If Contractor does not submit a notice as set forth in subsection 7.02.E.2, above, Contractor thereby admits the occurrence had no effect on the length of its duration of Work and no extension of time is necessary, and Contractor understands and agrees that no extension of time or adjustment of the Contract Sum will be granted by the City.

**13.01 NOTICE OF POTENTIAL CLAIM (CONTRACT AND GOVERNMENT CODE CLAIMS)**

- A. If, during the course of the Work, the Contractor disputes any directive, determination (including determination of delay), Proposed Change Order, Unilateral Change Order, payment, or other act by the City impacting or potentially impacting the performance of the Work (collectively, "Potential Claim Events"), the Contractor shall submit to the City a Notice of Potential Claim. The Contractor shall submit such Notice within **7 Days** of the Potential Claim Event. The Notice shall describe the Potential Claim Event, provide a good faith estimate of any impact, and reference any relevant provisions of the Contract Documents and any schedules with sufficient specificity for the City to review the matter.
- B. Failure to submit a timely, properly documented Notice of Potential Claim shall constitute a waiver of any claim arising out of such potential claim event.
- C. The notice requirements of this Section apply regardless of whether or not the disputed item underlying a potential claim event has been or will be submitted to a Dispute Review Board or Dispute Resolution Advisor for review.

**13.02 CONTRACT CLAIM**

- A. General Contract Claim Requirements
  1. No later than **45 Days** after submitting a timely Notice of Potential Claim to the City in accordance with Section 13.01, Contractor may submit a Contract Claim for additional compensation or time based on any disputed Item (a) respecting the true value of any Work performed or any changes in the Work which Contractor may be required to perform; and/or (b) regarding time extensions; and/or (c) respecting the amount of payment to Contractor during the performance of the Contract; and/or (d) regarding the performance of obligations by any party.
  2. A Contract Claim shall be the Contractor's sole and exclusive administrative remedy for additional compensation or time associated with its performance of the Work. Failure to submit a timely, certified, and documented Contract Claim in

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conformance with this Article shall constitute a waiver by the Contractor as to any claims relating to its performance of the Work under the Contract and a failure by Contractor to exhaust its administrative remedies.

3. Contractor shall be solely responsible for any and all costs it incurs in preparing, filing, presenting, appealing or otherwise pursuing a Contract claim, which costs shall not be reimbursed or otherwise recovered for the City.
- B. Contract Claim Certification Requirement:
- C. Format of a Contract Claim:
- D. Additional Requirements for Contract Claims Regarding Time Extensions:
- E. Procedure For Review of a Contract Claim:
  1. The City shall review only timely, certified, and properly documented Contract Claims.
  2. The City shall respond to a Contract Claim in writing, within **45 Days** of receipt of such Claim...
  3. Within **10 Days** of the date of the City's response or expiration of the 45-Day period, whichever is earlier, the Contractor may request review of the Contract Claim and the City's response by the Deputy Executive Director...
  4. ... The Deputy Executive Director, or his/her designee, shall issue such determination with **60 Days** of the request for review...
- F. Further Remedy: Should contractor's Claim be rejected by the City in whole or in part, Contractor's sole and exclusive remedies shall be either to (1) seek resolution of its dispute through the Dispute Review Board (if one is established for this Contract), or (2) file a formal claim in accordance with the provisions of the California Government Code.

#### 16.02 DISPUTE RESOLUTION:

\*\* Section 01 27 00.92 DISPUTE REVIEW BOARD: 1.03.B "The Contractor may submit a matter to the DRB only after it has presented the SFMTA a certified Contract Claim that meets the requirements of the Contract.

Table with columns: Trend No., COR No., C-Mod No., PCC No., CM 13 Issue No., Description, Notification Document, Date Received, Date COR Form Submitted, Date SFMTA Merit Response Due, Merit Evaluation Form Status, Merit Status, Merit Letter Status, Change Type, Engineer's Estimate (Date Prepared, Amount (\$)), Contractor's Proposal (Date Sent, Amount (\$), Time (CD)), SFMTA/BH Negotiated (Amount (\$), Time (CD)), Record of Negotiation Form Status, CMB Approval (Amount (\$), Time (CD), Approval Date), Contract Modification (Amount (\$), Time (CD), Execution Date), Potential Cost Exposure, Status (Expected/Pending/Expired/Potential/Closed), Ball in Court, Person to Act, Notes, Comments.

(53,040,713.00)

## C Mod Task Force

# Area of Improvement # 2

### Problem: Finding of the Fact

In the review of the initiation process and actual practices it was clear that during the review for merit, although the work was being done, the documentation was not being developed in a timely manner to support justification of merit/no merit. Both the actual write up, originally to come from the Contractor and a review of merit or Finding of Fact to be prepared by the RE were not being developed until much later in the process.

### Root Cause:

A review of procedure CM 1101 indicates these requirements and RE's are currently not performing the required documentation at the initiation stage of the COR as required by the procedures. Performing this action at the beginning rather than at the later stages of the process will allow the process to continue in a much more organized and structured approach.

### Recommendation for Improvements:

Suggested possible improvements to follow-up on:

- Clarify contract provisions for Contractor required justification of COR
- Clarify if Contractor was provided required form for submission with COR
- Review procedure for areas that may need clarification and improvement
- Developed merit evaluation form
- Standard letter response
- Educate CM/RE organization on procedure requirements, provide adequate resources, and follow thru

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	<b>Document Number:</b> CM.1101
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0


# CHANGE ORDER REQUEST AND CLAIMS PROCESSING

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APPROVED BY: John Funghi  
Senior Program Manager  
SFMTA Central Subway



DATE: 1-14-10

<b>Title:</b>  <div style="text-align: center;"><b>central  subway</b></div> PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1101 – CHANGE ORDER REQUEST AND CLAIMS PROCESSING	<b>Document Type:</b> Procedure
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## 1101.1 PURPOSE

This procedure describes how to analyze, approve, and process a Change Order Request (COR) submitted by a Contractor. It also defines the claims process that occurs upon SFMTA's denial of a COR.

## 1101.2 RESPONSIBILITY

When the Contractor believes that a change in the scope of the Contract will occur or has occurred, the Contractor may submit a COR to the Resident Engineer (RE). The COR must be timely, complete, and accurate. The RE reviews the COR and notifies the Contractor of the COR determination. If the RE determines the COR to be without merit and denies the COR, the Contractor may file a claim as specified in the General Provisions Section 98, Clarification and Claims. The Contractor submits the claim to SFMTA, following the protest procedure described in Section 1101.3.5 of this procedure.

## 1101.3 PROCEDURES

### 1101.3.1 General

The Contractor usually submits a COR when either of the following occurs:


- A. The Contractor encounters site conditions, which in the opinion of the Contractor, exceed the Contract requirements.
- B. SFMTA's clarification or other written directive, in the opinion of the Contractor, exceeds the Contract requirements.

#### 1101.3.1.1 Differing Site Conditions That Exceed Contract Requirements

When the Contractor encounters a site condition that the Contractor believes exceeds the Contract requirements, the Contractor must notify the RE of all anticipated or actual change work immediately by telephone and in writing within 1 working day of the time that the suspected work became known to the Contractor. The Contractor must not proceed with the suspected work until the RE gives direction. See Procedure CM 1105 for more information on Differing Site Conditions.

#### 1101.3.1.2 Additional Directives That Exceed Contract Requirements

When the Contractor feels that SFMTA's directive exceeds the requirement of the Contract, per General Provisions Section 98, Clarifications and Claims, the Contractor must submit a written COR to SFMTA within 7 calendar days of receipt of the

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clarification or directive, and before proceeding with the work. If the Contractor begins work before SFMTA receives the written COR, SFMTA is not responsible for any compensation claim. If the Contractor does not submit the COR to the SFMTA in the specified timeframe, the Contractor waives its rights to request or claim for additional compensation or time on the clarification or written directive.

### **1101.3.2 Change Order Request Documentation**

#### **1101.3.2.1 General**

If the Contractor determines additional time or compensation is necessary for the project, the Contractor prepares and submits to the RE a COR on the Change Order Request form (see Exhibit 1101-1). This document includes:


- A. A written narrative that justifies to SFMTA's satisfaction the reason for a time extension or additional compensation
- B. The revised schedule for the time extension or an estimate for additional compensation, the Contractor's Cost Proposal
- C. References to all related progress schedule activities, Contract Specification sections, and Drawings directly pertaining to the COR

#### **1101.3.2.2 Documentation Process**


Upon receipt of a COR, or correspondence which may contain proposal implications, the Office Engineer (OE), or RE for smaller projects, must:

- A. Rectify the numbering if the COR does not have a consecutive number. The COR number must:
  - 1. Be assigned to only one incident or change.
  - 2. Serve as a unique identifier of a particular incident or change through all subsequent operations involving estimates, quantity take-offs, etc.
  - 3. Be used in all correspondence concerning the proposal, throughout the life of the Contract.
- B. Log the Contractor COR in the COR Record Log (Exhibit 1101-2).
  - 1. The Contractor COR Record Log must:



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- a. Clearly identify and itemize in numerical order all Contractor CORs for all incidents regarding:
    - Time
    - Money
    - Any item of concern to the Contractor (see General Provisions for additional requirements)
  - b. Provide continuous control of the status of all special circumstances or changes to the Contract.
  - c. Ensure that no Contractor item, however small, is overlooked in processing changes to the contract.
  - d. Facilitate a status update at every progress meeting (see Procedure CM 0703).
2. The Office Engineer (OE) or RE must enter the following information into the Contractor COR Record:
- a. COR Number: The assigned Contractor COR number
  - b. Contractor Letter Number: The number on the initial letter and all following Contractor correspondence concerning the proposal
  - c. Contractor Letter Date: The respective date of each Contractor letter
  - d. RE Letter Date: The respective date of each RE letter
  - e. Description: A brief title and description of the request
  - f. Contractor Estimate: If the Contractor quantifies the request, the dollar amount and additional time indicated, if any
  - g. RE Estimate: The dollar figure documented within the Contract Modification (C/Mod) file (If none, enter N.A. for not applicable.)
  - h. Contractor COR Date Received: The letter number and date the RE received the COR (If there is no letter number, indicate so.)
  - i. Date of Negotiation: The date the RE reviews the details with the Contractor, if applicable


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- j. Force Account: An indication of whether the work or portions thereof are considered Force Account work under General Provisions Section 76
  - k. C/Mod Number/Date: The Contract Modification (C/Mod) number, if the Proposed Contract Change (PCC) is followed by issuance of a C/Mod
  - l. Agreed Amount/Time: The Contract amount or time change indicated on the C/Mod
  - m. Comments: An indication of the status, i.e., "Denied" and date, or "Modification Final" and date
- C. Establish a COR file for each individual COR.
- D. Collect information applicable to the proposal. This includes:
1. Copies of pertinent subcontractor documents
  2. Correspondence on the subject
  3. Cost estimates
  4. Photographs
  5. Charts
  6. Copies of plans and specifications
  7. Any other information of use in analyzing and evaluating the proposal

### **1101.3.3 Change Order Request Analysis**

Concurrent with the documentation effort, the RE must:

- A. Review the Contractor COR to determine if it is clear, complete, and submitted within the specified timeframe.
- B. Request the Contractor provide additional information and documentation as necessary to consider the COR for merit.
- C. Coordinate with other SFMTA staff as needed to determine if the COR has merit or not.
- D. Prepare an evaluation in accordance with the designated contractual authority.

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### 1101.3.4 Change Order Request Determination/Notification

SFMTA will review the validity of the Contractor's written COR and make a determination in writing as soon as possible, but not to exceed 30 days after receipt of the COR. The Contractor must proceed with the work in accordance with SFMTA's determination, which is final and binding on SFMTA and the Contractor unless the Contractor submits a written Notice of Potential Claim as specified under Contract General Provisions Section 98, Subsection B.2, Claims Procedure.

The RE will send one of the following responses to the Contractor:

- A. With Merit
- B. Without Merit
- C. Field Change (See 1101.3.4.3)
- D. Incomplete and Re-submittal Required

#### 1101.3.4.1 COR with Merit


If SFMTA determines the COR for additional compensation or time has merit under the current Contract, the RE initiates a Change Modification (C/Mod) under Procedure 1103 in conformance with General Provisions Section 75, Alteration, Modifications, and Extras.

#### 1101.3.4.2 COR without Merit

If SFMTA determines the COR for additional compensation or time does not have merit under the current Contract, the RE notifies the Contractor of the COR denial, substantiated by Contract Document references.

Upon receipt of denial, the Contractor may do either of the following:

- A. Withdraw the COR, through a formal process that includes written correspondence that documents the withdrawal, such as:
  - A letter
  - Meeting minutes
  - Marked-up Contractor proposal, etc.
- B. Resubmit for reconsideration, which initiates the protest procedure described in Procedure CM 1101.3.5.

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If SFMTA later determines the COR does have merit, the RE will initiate a Change Modification (see Procedure CM 1103 for specific instructions).

#### **1101.3.4.3 Field Change**

If SFMTA determines the change is a minor variation from the Contract Specifications or Plans and does not affect the design intent nor Contract scope, schedule, or cost, the RE will issue a "field change" response to the Contractor instead of a Change Modification. This shall be noted in the COR Record Log and documented on as-built drawings.

#### **1101.3.4.4 Incomplete and Re-submittal Required**

If SFMTA determines the COR is incomplete, the RE will specify the information required and return the COR to the Contractor for re-submittal. The Contractor must comply with the COR process in Procedure 1101 to resubmit the COR.

#### **1101.3.5 Claims Processing**

##### **1101.3.5.1 General**

If the Contractor receives notice that the COR is without merit, the Contractor may submit a claim to the RE. The Contractor must follow SFMTA's protest procedure, and the RE may call upon the Dispute Review Board if the Construction Manager and Contractor cannot come to an agreement.


##### **1101.3.5.2 Protest Procedure**

SFMTA's protest procedure is designed to keep all Contractor CORs within the Construction Management Department and to achieve claim resolution prior to using an alternative dispute resolution process by mutual agreement.

Each COR will receive due consideration by SFMTA. If the RE fails to reach agreement with the Contractor, the RE will initiate the protest procedure. At the preconstruction meeting, the RE will inform the Contractor of the protest procedure, which results in reviews of the COR at successively higher levels of management.

The protest cycle is as follows:

- A. The Contractor will, after the initial denial of the COR, do one of the following:
  - 1. Withdraw the COR.

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2. Resubmit the COR with or without additional documentation and request re-evaluation.
- B. SFMTA completes the review process for a resubmitted COR.
1. If after review of the resubmitted COR and additional information, the RE determines the COR has merit, the RE begins the Change Modification process in accordance with Procedure 1103.
  2. If the RE determines that the COR is without merit, the RE may review the issue in committee with Engineering Management, the Contract Administrator, and the Project Manager, for merit consideration. The RE will inform the Contractor of the outcome.
- C. If, after receiving SFMTA's written determination on a COR that a Contractor is not eligible for additional compensation or time, the Contractor still considers the work required to be outside of the Contract requirements, the Contractor may submit a written Notice of Potential Claim to the RE in accordance with General Provisions Section 98, Clarifications and Claims.
- D. SFMTA's field inspectors must carefully inspect and record work performed under "protest" to prepare for the possible resolution of claim, Disputes Review Board (DRB) activity, or litigation.

### 1101.3.5.3 Disputes Review Board


Depending on the Contract requirements, either party to a dispute may propose a Disputes Review Board (DRB) as an alternative dispute resolution process. If a DRB is mutually acceptable, the parties will work together to establish and agree on procedures for conducting the DRB's functions. Upon finalization, SFMTA will incorporate those procedures into this Procedures Manual.

### 1101.3.5.4 Monitoring Claims and CORs

On a monthly basis, the RE will hold a meeting to discuss each claim or COR and its status with the Contractor (see Procedure 703). For outstanding proposals, the two parties will determine and agree on the next required action for processing the claim or change necessary.

The parties will record and distribute meeting minutes to the following:

- A. RE files

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B. Contractor

C. Project Manager, Project Engineer, and Contract Administrator

On a quarterly basis, the RE must prepare a listing of all pending claims submitted by the Contractor with an estimated value of over \$100,000 as well as all claims settled during the preceding quarter, regardless of value.

### **1101.3.5.5 Work Interruptions/Delay Claims**

The RE must be familiar with and refer the Contractor to the General Provisions Section 78, Time Allowances for specific requirements. Two types of delays may occur on the project: avoidable and unavoidable.

For all alleged delays, the Contractor is required to file a "Notice of Delay" in writing within 7 days from the beginning of the said delay. This notice constitutes an application for extension of time only if the notice:

- A. Requests such extension
- B. Sets forth the Contractor's estimate of the additional time required along with full detail on the causes of the alleged delay, including Critical Path Method (CPM) schedule analysis documentation substantiating the alleged delay as required by the delay provisions of the Contract

#### **1101.3.5.5.1 Avoidable Delays**

Avoidable delays include:

- Delays that could have been avoided by the Contractor's exercise of care, prudence, foresight, and due diligence

#### **1101.3.5.5.2 Unavoidable Delays**

Unavoidable delays may include:

- Delays directly attributable to the actions of SFMTA that cannot be avoided by the Contractor's exercise of care, prudence, foresight, and diligence
- Delays from other such causes beyond the control of the Contractor as may be specifically stated in the Contract
- Delays due to RE-directed temporary suspension of work
- Delays due to the delay of another contractor's work

<p>Title</p> <p style="text-align: center;"><b>central T subway</b></p> <p>PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1101 – CHANGE ORDER REQUEST AND CLAIMS PROCESSING</p>	<p>Document Type: Procedure</p> <p>Document Number: CM.1101</p>
<p>Unit/Function:</p> <p style="text-align: center;">Capital Programs &amp; Construction Division Central Subway</p>	<p>Revision Number: 0</p>

SFMTA does not consider any delay or interruption of work due to material shortages or labor shortages an unavoidable delay, unless specifically approved by SFMTA.

### 1101.3.5.5.3 Notice of Delay


Upon receipt of a Notice of Delay, the RE will immediately record it and review it to determine the appropriate action, such as:

- A. Refer the matter to SFMTA, which may take steps to prevent the continued occurrence or mitigate the delay.
- B. Classify the alleged delay as avoidable or unavoidable, and direct the Contractor accordingly.
  - 1. Avoidable: If the RE determines the alleged delay had been avoidable in accordance with the Contract Specifications, the RE will deny the Contractor's request for additional time and/or money and demand a recovery schedule.
  - 2. Unavoidable – If the alleged delay is determined to be unavoidable, the Contractor must substantiate any allegation of delay to the overall work by submitting scheduling information in accordance with Construction Contract Specifications Section 01 32 13, Scheduling of Work. The Contractor shall follow up any initial Notice of Delay with a COR for the alleged delay.
  - 3. Unavoidable – No Time Extension Acceptable: If the project deadline cannot be extended, the RE may direct the Contractor to prepare a recovery schedule to overcome the delay and meet a completion date, in lieu of granting a time extension for an unavoidable delay. This recovery schedule may include strategies such as resequenced and/or concurrent activities, additional resources, acceleration, or other options as needed to recover the necessary time.
- C. Record the Notice of Delay information into the Notice of Delay Log.

### 1101.3.5.5.4 Delay Substantiation

The RE will not grant an extension of time for any cause unless the Contractor can demonstrate by means of CPM schedule analysis and other substantiation in the Contract that the delay meets the following criteria:

- A. It did occur.
- B. It was beyond the Contractor's control.

<p><b>Title:</b></p> <p style="text-align: center;"><b>central  subway</b></p> <p>PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1101 – CHANGE ORDER REQUEST AND CLAIMS PROCESSING</p>	<p><b>Document Type:</b> Procedure</p> <p><b>Document Number:</b> CM.1101</p>
<p><b>Unit/Function:</b></p> <p style="text-align: center;">Capital Programs &amp; Construction Division Central Subway</p>	<p><b>Revision Number:</b> 0</p>

C. It could not have been avoided by due diligence.

D. It delayed the project's critical path and final completion of the work and/or an interim contract milestone. In the case of delay to an interim milestone, the Contractor must meet the same standard of proof as if for an extension of time to the Contract duration. Delay to an interim milestone does not necessarily delay final completion and may not require an extension of time, only a new milestone date.

Upon rejection of a documented delay, the Contractor may choose to protest the denial, following the steps outlined in Procedure 1101.3.5.

#### **1101.4 DEFINITIONS**

None.

#### **1101.5 EXHIBITS**

1101-1 Sample Change Order Request Form


1101-2 Sample Contractor Change Order Request Record Form

#### **1101.6 REFERENCES**

Refer to the following:

- Contract Specifications General Provisions Sections 75- Contract Modification, 76- Force Account work, 78- Time allowance for completion of contract work, and 98- Clarification and Claims
- Procedure Manual Sections CM 0703- Project Current Schedule and Progress Review Meeting, CM 1103- Contract Modification



<b>Title:</b>  <div style="text-align: center;"><b>central  subway</b></div> PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1101 – CHANGE ORDER REQUEST AND CLAIMS PROCESSING	<b>Document Type:</b> Procedure
	<b>Document Number:</b> CM.1101
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0

### 1101.7 PROCEDURE HISTORY

<u>Revision Level</u>	<u>Revision Date</u>	<u>Summary of Revision</u>	<u>Approved By</u>

### 1101.8 APPROVALS

Prepared by	Reviewed by	Signature & Date
<b>Originator of Central Subway Procedures Manual</b> <b>Title and Unit:</b>  Dane Hudson Construction Manager Central Subway Partnership	Roger Nguyen Quality Assurance Manager Quality Assurance Office  Robert Rocco Configuration & Risk Manager Central Subway Partnership  Arthur Wong SFMTA Construction Manager Central Subway Project	 1/12/10   1/13/10   1/13/10   1/13/10

Exhibit 1101-1: Sample Change Order Request Form

**CHANGE ORDER REQUEST**

Contract No. & Name \_\_\_\_\_ Date \_\_\_\_\_  
COR No. & Title \_\_\_\_\_  
Requested Time & Cost \_\_\_\_\_

What (Description of COR)

Why (Reason for Requesting COR)

Where (Location/Station)

When (Occurrence date, action date)

How (Recommendation of Action)

Cost Proposal (Summary of Cost Proposal and attached)

Spec Ref  
Drawing Nos.  
Attach Time Impact Analysis(if applicable)

Prepared by: \_\_\_\_\_  
Contractor's Representative \_\_\_\_\_ Name, Title \_\_\_\_\_ Date \_\_\_\_\_

COR Record Log

EXHIBIT 1101.2

MR-1142 Third Street Light R16  
22nd Street to Jerrold Avenue

Exhibit 1101-2

COR No.	Description	Requested			Replied			Comments
		Date	Amount	Time	Date	Action	Amount	
1	Add Inertle Surfacing to Platform Ends	12/7/2004	\$1,890.00	0	12/14/2004	Approved	\$ 4,890.00	0
2	Add construction tolerances to top of platform concrete forms. Revised drawings	7/3/2005	\$3,685.00	0	7/8/2005	Denied	\$ -	0
3	Construct Sewer Between Arthur & Center Avenue	5/16/2005	\$244,722.00	0	5/25/2005	Approved	\$ 244,222.00	0
4	Install Duckbill between Arthur and Center	7/15/2005	\$80,664.00	0	7/27/2005	Approved	\$ 10,664.00	0
5	Additional Sewer Work Between Arthur and Center	6/29/2005	\$2,618.00	0	7/6/2005	Approved	\$ 32,618.00	0
6	Revise OV Drawings - Pole & Foundation Height Changes	9/16/2004	\$1,646.99	0	9/25/2004	Denied	\$ -	0
7	KMEL Radio Renote	2/3/2005	\$1,575.00	0	2/10/2005	Approved	\$ 1,575.00	0
8	Exploratory Drilling at Island Bridge	4/26/2005	\$3,000.00	0	5/3/2005	Denied	\$ -	0
9	Traffic Signal at Mann & Cargo	3/15/2005	\$2,801.00	5	3/22/2005	Approved	\$ 9,801.00	Deferred
10	Demo Curb and Place Diverters	2/3/2005	\$15,000.00	0	3/10/2005	Approved	\$ 2,557.91	0
11	Special Trackwork Spare Parts	3/18/2005	\$13,523.00	0	3/25/2005	Approved	\$ 13,033.00	Deferred
12	DPT Software & Training Request	4/1/2005	\$1,000.00	0	4/8/2005	Denied	\$ -	0
13	DPT VMS Foundation Request	6/20/2005	\$16,020.24	20	6/27/2005	Approved	\$ 13,256.00	Deferred
14	RR Crossing Signal Interlock Changes	6/27/2005	\$215,799.00	0	7/4/2005	Approved	\$ 215,799.00	0
15	Remove Sign Pole - MEOC Albert Court	7/1/2005	\$2,024.43	0	7/8/2005	Approved	\$ 2,024.43	0
16	Traffic Signal Hardware @ Arthur-Cargo	6/14/2005	\$4,577.00	0	6/21/2005	Approved	\$ 9,577.00	0
17	Differing Site Conditions SFWD Related	12/8/2005	\$20,000.00	0	12/15/2005	Approved	\$ 16,587.00	0
18	Revised LRV Medium CO #33	11/14/2005	\$3,249.00	0	11/21/2005	Approved	\$ 3,249.00	0
19	Revised Platform Drawings - Bolt Configuration & Marquee Base Height	11/21/2005	\$600.00	0	11/28/2005	Approved	\$ 600.00	0
20	VIS Conducts @ Center	8/1/2005	\$4,574.64	328	8/8/2005	Approved	\$4,574.64	Deferred
21	Revised Drawings - Misc. Changes to Platforms, Ramps, & Stairs	12/22/2005	\$7,613.00	0	12/29/2005	Approved	\$ 7,613.00	0
22	Typical UPRR Flangeway Notch (Dry)	10/7/2005	\$5,200.00	0	10/14/2005	Denied	\$ -	0
23	Rev. PL-23, Rev. 2 Draw - Pipe Sleeve Change at Innes Ave. Platform	10/21/2005	\$7,822.00	0	10/28/2005	Denied	\$ -	0
24	Rev. LA-03, Rev. 1, LA-05 Rev. 1, and LA-06 Rev. 1 Drawings - Truncated Dome Tile @ Crosswalks	12/16/2005	\$5,521.00	0	12/23/2005	Approved	\$ 5,521.00	0
25	Additional CSS Piling at ICB North Abutment	12/8/2005	\$180,000.00	0	12/15/2005	Approved	\$ 180,000.00	0
26	Perform Troubleshooting & Repair Existing Electrical Facilities	12/16/2005	\$5,000.00	0	12/23/2005	Denied	\$ -	0
27	Replace SFED AWSS Fittings	2/1/2006	\$24,747.00	0	2/8/2006	Approved	\$ 24,747.00	0
28	Environmental Supplies	2/22/2006	\$2,994.00	0	3/1/2006	Approved	\$ 2,994.00	0
29	Color Pavement Sealants R1-F111 Changes to Color Pavement at Intersections	3/28/2006	\$21,555.00	0	4/7/2006	Approved	\$ 21,555.00	0
30	CES Environmental - Remove Underground Tanks	3/28/2006	\$16,023.52	0	4/4/2006	Approved	\$ 16,023.52	0
31	Revised OSMIT No 7 S-15 Structural Drawing	3/28/2006	\$16,081.00	0	4/4/2006	Approved	\$ 16,081.00	0
			\$974,063.87	191			\$930,047.88	0

Exhibit 1101-2: Sample Contractor Change Order Request Record Form

SFMTA Contract No. 1252

Contractor: Barnard Impregilo Healy JV (BIH)

**EVALUATION OF MERIT**

**COR 026**

**Recommendation:** Accept justification of partial Merit for additional costs associated with COR 026 – Moscone Asbestos Pipe Abatement at South Headwall. Costs for removal, abatement and disposal of asbestos laden transite pipe shall be considered for compensation under and in accordance with Bid Item GE-8 - Environmental Mitigation Allowance. Cost for standby or loss of production shall not be considered for compensation.

**Facts:** The Contractor discovered an asbestos laden transite pipe on 08/06/12 during utility demolition activities at the Moscone South Headwall location on Fourth St. between Howard Avenue and Folsom Street. The AT&T conduit was shown on the contract drawings but was not shown to contain asbestos material. Removal and disposal of the asbestos pipe was completed by 08/15/12. The Contractor did not submit a request for time extension.

**Contractor Rationale for COR:** The Contractor incurred costs during the removal, abatement and disposal of the asbestos pipe. The Contractor is seeking reimbursement for these environmental mitigation costs. The Contractors is also claiming additional costs as their utility demolition crew were unable to continue productive demolition work after the discovery of the asbestos pipe.

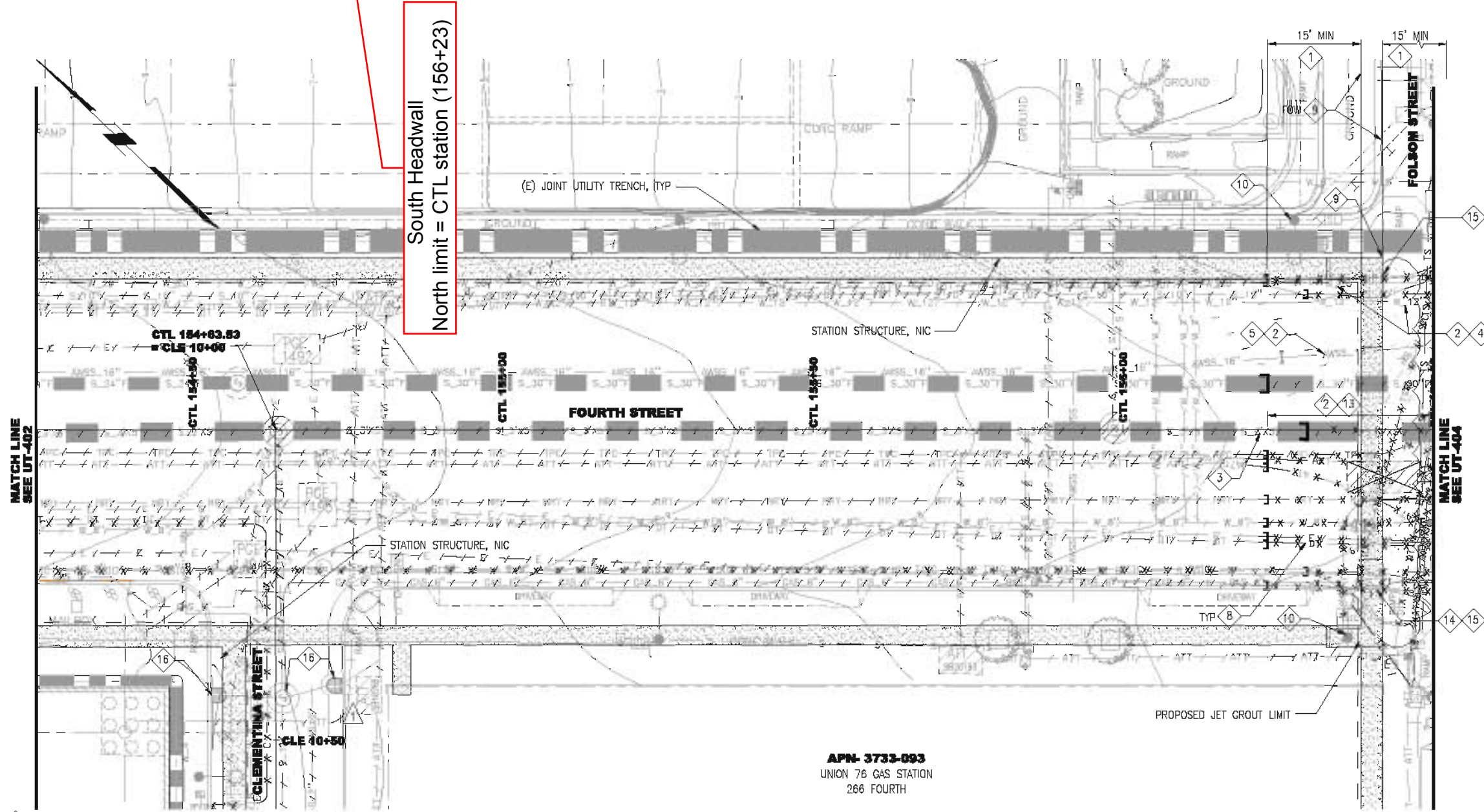
**Justification:** Additional work and costs were incurred by the Contractor to handle and dispose of the asbestos laden pipe. In accordance with technical specifications section 01-20-00 an allowance has been established to pay for Environmental Mitigation as needed and directed by the City. Standby or loss of production time is not justified because the Contractor was required to locate and identify the underground utilities in advance of the utility removal work.

**Change Type:** (2) Unforeseen Condition

By: \_\_\_\_\_ Date \_\_\_\_\_  
Sarah Wilson  
Resident Engineer

\_\_\_\_\_ Date \_\_\_\_\_  
Configuration Management Board  
Approval

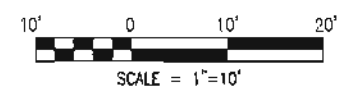
\\sv6n0s003\m544.1\FinalDesign\Drawing-821\2-Civil\Utility Demolition\Sheet Files CP03\M54423UD403\_R1C.dwg fbayani Thu Aug 25, 2011 - 9:21 am UD-403\_R1C



APN- 3733-093  
UNION 76 GAS STATION  
266 FOURTH

**NOTES:**

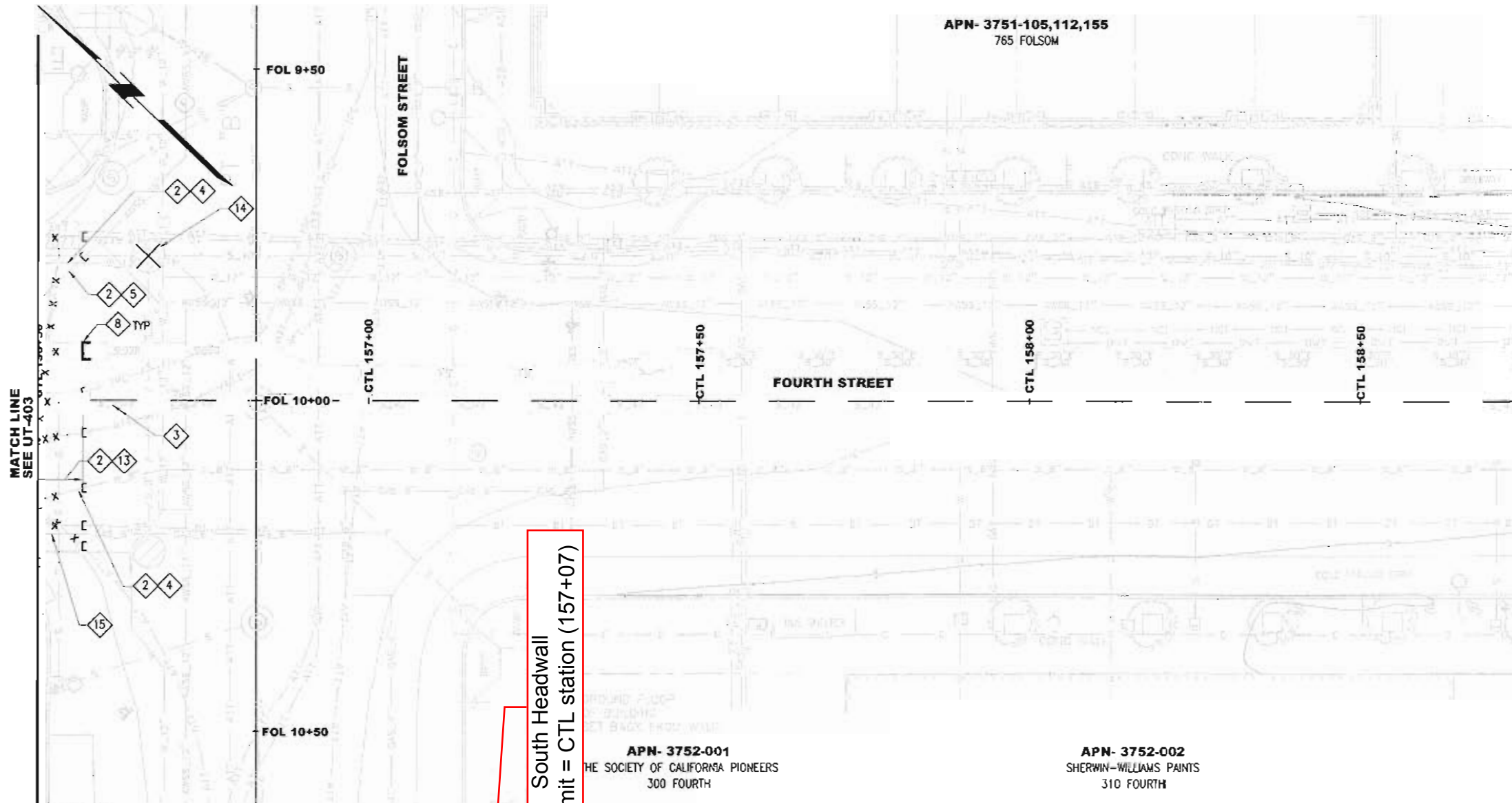
1. DEMOLISH AND REMOVE ALL ABANDONED UTILITY FACILITIES, INCLUDING PREVIOUSLY ABANDONED FACILITIES NOT SHOWN ON PLANS, AT JET GROUT OR HEADWALL LIMIT
2. ACTIVE UTILITIES SHALL BE MAINTAINED UNTIL RELOCATION OR CUT OVER, UNLESS OTHERWISE NOTED. COORDINATE DEMOLITION WITH HEADWALL CONSTRUCTION PHASING.
3. PROTECT (E) SEWER.
4. SEE (WD) DRAWINGS FOR ABANDONMENT AND REMOVAL OF WATER FACILITIES.
5. SEE (AW) DRAWINGS FOR ABANDONMENT AND REMOVAL OF AWSS FACILITIES.
6. PROTECT (E) AT&T FACILITIES.
7. PROTECT (E) JOINT TRENCH.
8. CAP OR PLUG ALL ABANDONED FACILITIES INCLUDING PREVIOUSLY ABANDONED FACILITIES NOT SHOWN ON PLANS AT JET GROUT LIMIT.
9. PROPOSED STATION HEADWALL. SEE (ES) DRAWINGS FOR LOCATION AND DETAILS. CONTRACTOR SHALL VERIFY THE HEADWALL LOCATION PRIOR TO COMMENCEMENT OF DEMOLITION.
10. TEMPORARILY REMOVE (E) STREET LIGHT AND REINSTALL AFTER HEADWALL CONSTRUCTION.
11. (E) PARKING METERS. CONTACT DPT IF DEMOLITION IS REQUIRED. SEE CONTRACT SPECIFICATIONS FOR MORE INFORMATION. IF REMOVED, REINSTALL IN SAME LOCATION AFTER HEADWALL CONSTRUCTION.
12. REMOVE (E) TREE AS CONTRACTOR'S PROPERTY. PRIOR TO REMOVAL CONFIRM STREET TREE REMOVAL PERMIT WAS OBTAINED.
13. SEE (UT) DRAWINGS FOR TEMPORARY REMOVAL OF SEWER.
14. REMOVE (E) CURB AND GUTTER AS NECESSARY AND REINSTALL AFTER HEADWALL CONSTRUCTION
15. SEE (PD) & (RP) FOR PAVEMENT REMOVAL AND RESTORATION.
16. (E) CATCH BASINS WILL REMAIN ACTIVE AND RE-DIRECT SEWER FLOW AWAY FROM STATION JET GROUT WALL.



**CONFORMED**

	 <b>TELAMON ENGINEERING CONSULTANTS INC.</b>	REV. 0 SEALED BY M. CHAN	 <b>CITY AND COUNTY OF SAN FRANCISCO</b> <b>MUNICIPAL TRANSPORTATION AGENCY</b>	APPROVED CARTER R. ROHAN EXECUTIVE DIRECTOR/CEO	THIRD STREET LIGHT RAIL PROGRAM <b>PHASE 2 - CENTRAL SUBWAY TUNNELS</b> UTILITY DEMOLITION <b>MOSCONE STATION</b> CTL 154+25 TO 156+50	SHEET NO. 1252 PROJECT NO. CL-18030 DRAWING NO. UD-403 SHEET NO. 1
05/04/2011 ISSUED FOR ADDENDUM 5 01/21/2011 ISSUED FOR BID	DATE DESCRIPTION 0 - BY - CHECKED - APPROVED -	FOR ORIGINAL SIGNATURES, SEE CL-18030, REV. 0.	DESIGNED: M. DEFORGE DRAWN: E. MATIAS CHECKED: D. ZUJURING REVIEWED: M. CHAN RECOMMENDED: M. FOWLER APPROVED: R. EDWARDS DATE: JAN 21, 2011			

\\sfnos003\m544.1\FinalDesign\Drawing-B21\2-Civil\Utility Demolition\Sheet Files CP03\MS4423UD404.dwg FBoyoni Wed Jan 26, 2011 - 2:26 pm UD-404

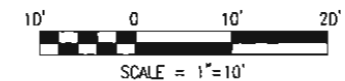


**NOTES:**

1. DEMOLISH AND REMOVE ALL ABANDONED UTILITY FACILITIES, INCLUDING PREVIOUSLY ABANDONED FACILITIES NOT SHOWN ON PLANS, AT JET CROUT OR HEADWALL LIMIT.
2. ACTIVE UTILITIES SHALL BE MAINTAINED UNTIL RELOCATION OR CUT OVER, UNLESS OTHERWISE NOTED. COORDINATE DEMOLITION WITH HEADWALL CONSTRUCTION PHASING.
3. PROTECT (E) SEWER.
4. SEE (WD) DRAWINGS FOR ABANDONMENT AND REMOVAL OF WATER FACILITIES.
5. SEE (AW) DRAWINGS FOR ABANDONMENT AND REMOVAL OF AWSS FACILITIES.
6. PROTECT (E) AT&T FACILITIES.
7. PROTECT (E) JOINT TRENCH.
8. CAP OR PLUG ALL ABANDONED FACILITIES INCLUDING PREVIOUSLY ABANDONED FACILITIES NOT SHOWN ON PLANS.
9. PROPOSED STATION HEADWALL. SEE (ES) DRAWINGS FOR LOCATION AND DETAILS. CONTRACTOR SHALL VERIFY LOCATION OF HEADWALL PRIOR TO COMMENCEMENT OF DEMOLITION.
10. TEMPORARILY REMOVE (E) STREET LIGHT AND REINSTALL AFTER HEADWALL CONSTRUCTION.
11. (E) PARKING METERS. CONTACT DPT IF DEMOLITION IS REQUIRED. SEE CONTRACT SPECIFICATIONS FOR MORE INFORMATION. PARKING METERS SHALL BE REINSTALLED IN SAME LOCATION AFTER HEADWALL CONSTRUCTION.
12. REMOVE (E) TREE AS CONTRACTOR'S PROPERTY. PRIOR TO REMOVAL CONFIRM STREET TREE REMOVAL PERMIT WITH DPT.
13. SEE (UT) DRAWINGS FOR TEMPORARY REMOVAL OF SEWER.
14. REMOVE ABANDONED SEWER MANHOLE AS CONTRACTOR'S PROPERTY.
15. PROTECT (E) GAS LINE.

South Headwall  
South limit = CTL station (157+07)

COR 026 - Limit of  
Asbestos pipe at South  
Headwall has been  
demo'ed.



**CONFORMED**

DATE	ISSUED FOR	BY	APP'D
01/21/2011	ISSUED FOR BID		

**PB TELAMON**

TELAMON  
ENGINEERING  
CONSULTANTS INC.



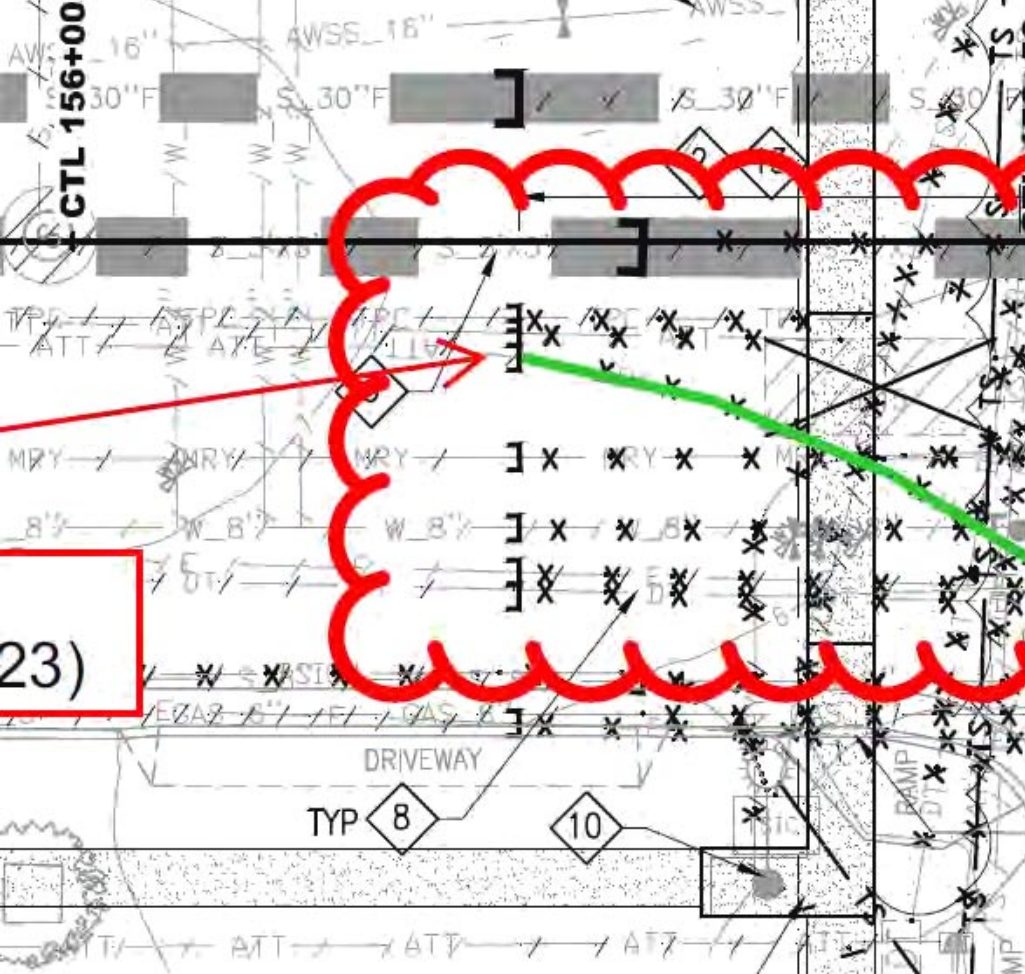
CITY AND COUNTY OF SAN FRANCISCO  
**MUNICIPAL TRANSPORTATION AGENCY**

APPROVED  
*[Signature]*  
EXECUTIVE DIRECTOR/CEO

THIRD STREET LIGHT RAIL PROGRAM  
PHASE 2 - CENTRAL SUBWAY  
TUNNELS

UTILITY DEMOLITION  
MOSCONE STATION  
CTL 156+50 TO 158+75

1252	0
CL=18031	
UD-404	0
84	



**MATCH LINE  
SEE UT-404**

S  
h



76

IR

2012/08/10 09:24:24





2012/08/10 09:35:01AM





SYNERGY



SLIP  
SPEED

ONE WAY

08/14/2012 14:15



08/14/2012 14:14

**CS CN 1252 Letter No. 052**

December 13, 2012

Barnard Impregilo Healy JV  
420 Fourth Street  
San Francisco, CA 94107

**Attn:** Ben Campbell

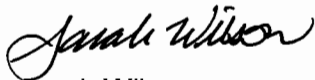
**Reference:** Contract 1252 Central Subway  
Tunnels

**Subject:** Change Order Request No. 026: Moscone - Asbestos Pipe at South Headwall

Dear Mr. Campbell:

SFMTA has determined Change Order Request (COR) No.026 for asbestos pipe abatement represents a change to the contract work. The scope and cost must be confirmed and agreed to pursuant to Article 6 of the General Provisions prior to executing a Contract Modification.

Sincerely,



Sarah Wilson  
CN 1252 Resident Engineer  
SFMTA Central Subway Project

**Cc:** Alessandro Tricamo, BIHJV  
John Funghi, SFMTA  
Arthur Wong, SFMTA  
Joon Park, SFMTA  
Shahnam Farhangi, SFMTA  
Mark Benson, SFMTA  
Richard Redmond, SFMTA

M544.1.3.1252.0030

**CS CN 1252 Letter No. 021**

December 03, 2012

Barnard Impregilo Healy JV  
420 Fourth Street  
San Francisco, CA 94107

**Attn:** Ben Campbell

**Reference:** Contract 1252 Central Subway  
Tunnels

**Subject:** Change Order Request No. 017: Moscone – Standby Time Due to Live Traffic  
Signal Lines

Dear Mr. Campbell:

SFMTA has received BIH's notice of a change related to "Moscone - Standby Time @ South Headwall Due to Live TS lines." The notice was initially transmitted to SFMTA in BIH RFI No.110 on July 2<sup>nd</sup>, 2012 and a Change Order Request Form provided on September 5<sup>th</sup>, 2012. SFMTA has also received BIH's initial cost proposal and subsequent revisions. SFMTA has officially designated this issue as Change Order Request (COR) No.017.

The RE also believes there was other work was available to perform prior to rerouting the traffic signal lines and standby costs are not compensable. In addition, the excavation performed to locate the traffic signals was contract work as Specification Section 02.30.00 requires the contractor to perform potholing activities 14 working days prior to performing any excavation activities; therefore, no additional compensation for potholing shall be granted.

Sincerely,



Sarah Wilson  
CN 1252 Resident Engineer  
SFMTA Central Subway Project

Cc: Alessandro Tricamo, BIHJV  
John Funghi, SFMTA  
Arthur Wong, SFMTA  
Joon Park, SFMTA  
Shahnam Farhangi, SFMTA  
Mark Benson, SFMTA  
Richard Redmond, SFMTA

M544.1.3.1252.0030

## C Mod Task Force

# Area of Improvement # 3

### Problem: Scoping Meeting/Estimate Preparation

Meetings and communications do occur in order to develop the appropriate scope of the change, but it is apparent that it has been done and is currently done in somewhat of a non-structured approach. It is the continual revision to the scope and estimate that happens multiple times and toward the latter stages of the process that is contributing to the length of time to process a change. It was reiterated that if the improvements identified in #1 and #2, namely the timely and proper submittal of the COR, together with the Finding of the Fact, that an agenda could be developed for a structured focused meeting on the actual scope to be estimated.

### Root Cause:

There is currently no formal Program document guiding the development of an estimate for changes, and one is currently being prepared by the Project Controls (estimators) for review and approval by the Program

### Recommendation for Improvements:

Suggested possible improvements to follow-up on:

- Regularly scheduled meeting that focus on the CORs with merit.
- Document with meeting minutes agreed to scope to be estimated.
- Templates to break down scope into meaningful elements for estimating
- Template for standardizing estimate
- Price Analysis guidelines to ensure appropriate backup for engineer's estimates
- Summarize Estimate

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## Estimate Summary

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**Scope/Background:**

A differing site condition was encountered while performing slurry wall construction along the west side of the Launch Box. A concrete encased 8" sewer main was discovered to be in the direct path of the slurry wall panel excavation which impacted production.

Stakeholders: SFMTA, BIH, CJA-NCC

Date of occurrence: 8/29/12

**List of attached documents:**

CJA-NCC Equipment rate submittal with edits  
Prevailing Wage rate for O.E. apprentice

  
\_\_\_\_\_  
Estimate Prepared By: Charles Dombrowski

  
\_\_\_\_\_  
Estimate Checked By: Ken Barnhart



COR015

No.	Activity Name	Days (C)	Days (EE)	Contractor (C)	Engineer's Estimate (EE)	Delta (EE-C)	Negotiation Position
1	Pre-excavation for Slurry Wall	1.25	1	\$ 3,328.91	\$ 2,546.50	\$ (782.41)	Contractor used 1.25 hours per panel. Engineer's estimate used 1 hour per panel.
2	Pre-excavation on Critical Path	5	4	\$ 22,491.07	\$ 14,267.29	\$ (8,223.78)	Contractor used 1.25 hours per panel. Engineer's estimate used 1 hour per panel.
3	Slurry Plant	2.5	2	\$ 5,800.38	\$ 3,941.33	\$ (1,859.05)	Contractor used 1.25 hours per panel. Engineer's estimate used 1 hour per panel.
4	Credit for Excavated Materials	-0.75	-1.25	\$ (1,108.02)	\$ (3,183.13)	\$ (2,077.11)	Contractor credited 0.15 hours per panel. Engineer's estimate used 0.25 hours per panel.
1	Pre-excavation for Slurry Wall	1.25	1	\$ 2,477.90	\$ 1,448.00	\$ (1,029.90)	
2	Pre-excavation on Critical Path	5	4	\$ 28,766.40	\$ 20,875.84	\$ (7,890.56)	
3	Slurry Plant	2.5	2	\$ 11,012.40	\$ 6,444.80	\$ (4,567.60)	
4	Credit for Excavated Materials	-0.75	-1.25	\$ (2,828.22)	\$ (4,713.70)	\$ (1,885.48)	
	Material			\$ 32,700.00	\$ 30,453.24	\$ (2,246.76)	Contractor uses \$150/cy. of concrete. Engineer's estimate uses \$128.75/cy. plus sales tax.
	Markup LM&E - 15%			\$ 25,660.71	\$ 10,812.03		Contractor used 25% markup.
	2nd Tier Subs			\$ -	\$ -		
	Markup - 5%			\$ -	\$ -		
	Sub. Bond/Insurance 0.5%			\$ 667.18	\$ 431.04		
	Prime Markup - 3%			\$ 6,448.54	\$ 4,166.16		
	Prime Bond/Insurance 1.68%			\$ 2,275.04	\$ 1,469.82		
	Total			\$ 137,694.28	\$ 88,959.23	\$ (48,735.05)	

No.	Activity	Days	Laborer (G2)	Operating Engineer (OE) (G2)	Operating Engineer (OE) (G3)	Pile Driver (PD) (G2)	Op. Engineer Apprentice	Labor Resource	Labor Resource	Hourly rates:
1	Pre-excavation for Slurry Wall	1	1	1	1	1	1	1	1	\$ 58.67
2	Pre-excavation on Critical Path	4	2	2	1	1	1	1	1	\$ 72.87
3	Slurry Plant	2	1	1	1	1	1	1	1	\$ 71.88
4	Credit for Excavated Materials	-1.25	1	1	1	1	1	1	1	\$ 54.73
5										\$ 38.06
6										\$ 43.73
7										\$ 60.00
8										\$ 60.00
9										\$ 60.00
10										\$ 60.00
11										\$ 60.00
12										\$ 60.00
13	<b>Total</b>									\$ 17,572.00

Equipment	Qty	Rate	Total
Cat M32D Excavator Wheeled	1	\$ 108.21	\$ 108.21
Cat 936 Loader	1	\$ 72.79	\$ 72.79
Skytrak 1004Z Forklift	1	\$ 56.63	\$ 56.63
500 KW Generator	1	\$ 152.34	\$ 152.34
185CFM Air Compressor	1	\$ 20.01	\$ 20.01
18,000 Gal Slurry Tank	7	\$ 3.13	\$ 21.91
Auto Bentonite Mixer	1	\$ 15.67	\$ 15.67
Derrick Desander 300M3	1	\$ 44.58	\$ 44.58
Electric 20' Container	1	\$ 11.36	\$ 11.36
100HP VFD Pump Control Panel	1	\$ 5.11	\$ 5.11
Mission Pump 3x4 R 40 HP	4	\$ 5.11	\$ 20.44
Mission Pump 5x4 50HP	1	\$ 5.68	\$ 5.68
Mission Pump 6x8 R 150HP	2	\$ 5.88	\$ 11.76
Screwdrucker Pump	1	\$ 19.89	\$ 19.89
Water Pump Gould 40 HP	1	\$ 3.41	\$ 3.41
Liebherr 855 Crane	1	\$ 21.16	\$ 21.16
CAT 950H w/ bucket	1	\$ 120.35	\$ 120.35
BAYA Extension Guide 800	1	\$ 5.88	\$ 5.88
H9D 914X2700 Jaws	1	\$ 7.39	\$ 7.39
BAYA Hydraulic Grab	1	\$ 102.59	\$ 102.59
TD 800 Square Chisel	1	\$ 2.84	\$ 2.84
Taralog with Cobalt Ins	1	\$ 11.36	\$ 11.36
<b>Equipment Totals</b>			<b>\$ 24,054.94</b>

Assumptions:  
 40 Panels  
 Engineer's estimate uses 1 hour per panel to remove obstructions uncovered during excavation  
 Credit for original scope uses .25 hrs/panel

Labor \$ 17,572.00  
 Material \$ 30,453.24  
 Equipment \$ 24,054.94  
 2nd Tier Sub \$ -  
 Markup on 2nd Tier Sub - 5% \$ -  
 1st Tier Sub OH&P - 15% \$ 10,612.03  
 1st Tier Sub Bond/Insurance - 0.52% \$ 5431.04  
 Prime - Markup - 5% \$ 4,166.16  
 Prime - Bond/Insurance - 1.68% \$ 51,469.82  
**Total Amount \$ 88,959.23**

Shift Duration: 8hrs  
 Checked By: Ken Barnhart

Estimated By: Cj Doganbrowaki  
 12/16/2012

12/16/2012



Municipal Transportation Agency

SFMTA

821 Howard Street  
 San Francisco, Ca 94103  
 415.701.5262 Phone  
 415.701.5222 Fax

Material	Qty.	Unit	Unit Price	Extension
Concrete	218	C.Y.	\$ 128.75	\$ 28,067.50
				\$ -
				\$ -
				\$ -
			Sales Tax 8.5%	\$ 2,385.74
<b>Total</b>				<b>\$ 30,453.24</b>

2nd Tier Sub Quote \$ -

## Prevailing Labor Rates - SF

<http://www.dir.ca.gov>

Labor Resource	Social Security 6.20%	Medicare 1.45%	FUTA 0.60%	SUTA 6.20%	SF Pay 1.50%	WC 12.00%	Vacation/Holiday	Other Fringes	Fully Burdened
Carpenter	\$ 38.50	\$ 2.64	\$ 0.26	\$ 2.64	\$ 0.64	\$ 5.11	\$ 4.05	\$ 21.77	\$ 76.21
Cement Mason	\$ 28.65	\$ 2.09	\$ 0.20	\$ 2.09	\$ 0.51	\$ 4.05	\$ 5.14	\$ 16.82	\$ 60.05
Electrician (Inside Wireman)	\$ 54.87	\$ 3.72	\$ 0.36	\$ 3.72	\$ 0.90	\$ 7.20	\$ 1.64	\$ 23.95	\$ 97.23
Flag Person	\$ 26.89	\$ 1.82	\$ 0.18	\$ 1.82	\$ 0.44	\$ 3.52	\$ 2.48	\$ 14.62	\$ 52.20
Iron Worker	\$ 33.00	\$ 2.29	\$ 0.22	\$ 2.29	\$ 0.55	\$ 4.43	\$ 3.92	\$ 21.37	\$ 68.60
Laborer (G1)	\$ 26.89	\$ 1.82	\$ 0.18	\$ 1.82	\$ 0.44	\$ 3.52	\$ 2.48	\$ 15.96	\$ 53.54
Laborer (G2)	\$ 26.99	\$ 1.83	\$ 0.18	\$ 1.83	\$ 0.44	\$ 3.54	\$ 2.48	\$ 15.96	\$ 53.67
Operating Engineer (OE) (G2)	\$ 36.24	\$ 2.68	\$ 0.24	\$ 2.48	\$ 0.60	\$ 4.79	\$ 3.70	\$ 22.77	\$ 73.87
Operating Engineer (OE) (G3)	\$ 34.76	\$ 2.38	\$ 0.23	\$ 2.38	\$ 0.58	\$ 4.62	\$ 3.70	\$ 22.77	\$ 71.98
Pile Driver (PD) (G2)	\$ 37.17	\$ 2.53	\$ 0.25	\$ 2.53	\$ 0.61	\$ 4.90	\$ 3.70	\$ 22.77	\$ 75.06
Plumber Utility Pipe Fitter	\$ 51.00	\$ 3.18	\$ 0.31	\$ 3.18	\$ 0.77	\$ 6.16	\$ 0.30	\$ 29.65	\$ 95.29
Teamster	\$ 27.43	\$ 1.83	\$ 0.18	\$ 1.83	\$ 0.44	\$ 3.55	\$ 2.15	\$ 20.42	\$ 58.27
Traffic Control Person I	\$ 27.19	\$ 1.84	\$ 0.18	\$ 1.84	\$ 0.45	\$ 3.56	\$ 2.48	\$ 14.62	\$ 52.58
Traffic Control Person II	\$ 24.69	\$ 1.68	\$ 0.16	\$ 1.68	\$ 0.41	\$ 3.26	\$ 2.48	\$ 14.62	\$ 49.38
Scaffold / Shoring Erector	\$ 38.65	\$ 2.65	\$ 0.26	\$ 2.65	\$ 0.64	\$ 5.12	\$ 4.05	\$ 21.77	\$ 76.40
Elevator Mechanic/Constructor	\$ 57.29	\$ 3.77	\$ 0.36	\$ 3.77	\$ 0.91	\$ 7.29	\$ 3.44	\$ 23.84	\$ 101.54
Elevator Mechanic Helper	\$ 40.10	\$ 2.70	\$ 0.26	\$ 2.70	\$ 0.65	\$ 5.22	\$ 3.44	\$ 23.84	\$ 79.54
Asbestos Removal Specialist II	\$ 24.87	\$ 1.67	\$ 0.16	\$ 1.67	\$ 0.40	\$ 3.23	\$ 2.02	\$ 10.53	\$ 44.94
Lead Removal Worker	\$ 36.25	\$ 2.36	\$ 0.23	\$ 2.36	\$ 0.57	\$ 4.57	\$ 1.85	\$ 6.09	\$ 54.84

Equipment	Caltrans Page No	CalTrans Category Sub-Category Rental Quote/ Code	Hourly Rate	Delay Factor	Standby Rate
Equipment			\$ -		
1 Work Truck	34	TRUCK	\$ 33.12	0.14	\$ 4.64
2 Dump truck - 3-axle	34	TRUON	\$ 66.43	0.16	\$ 10.63
3 Tow Behind Trailer	33	TRAIT	\$ 5.72	0.42	\$ 2.40
4 End Dump - 5-axle	34	TRUON	\$ 83.50	0.16	\$ 13.36
5 Generator	6	ELGEN	\$ 14.18	0.11	\$ 1.56
6 Air Compressor	1	AIRCP	\$ 34.31	0.12	\$ 4.12
60-90 Lb. Jack-hammer	1	AIRTOL	\$ 1.31	0.61	\$ 0.80
<b>Air compressor, hoses &amp; hammer total</b>			<b>\$ 35.62</b>		<b>\$ 4.92</b>
7 Arc Welder	34	WELD	\$ 11.87	0.18	\$ 2.14
Welding Rods	N/A	N/A	\$ 5.34		\$ -
F250	34	TRUCK	\$ 33.12	0.14	\$ 4.64
<b>Welder and Truck</b>			<b>\$ 50.33</b>		<b>\$ 6.77</b>
8 Torches and Tanks	34	WELD	\$ 0.24	0.18	\$ 0.04
Oxygen Tank and Acetylene Tank	N/A	N/A	\$ 38.70		\$ -
<b>Total Torches and Tanks</b>			<b>\$ 38.94</b>		<b>\$ 0.04</b>
9 Rotohammer	6	ELTOL	\$ 0.44	0.61	\$ 0.27
Generator	6	ELGEN	\$ 14.18	0.11	\$ 1.56
<b>Rotohammer and Generator</b>			<b>\$ 14.62</b>		<b>\$ 1.83</b>
10 Rivet Buster	1	AIRTOL	\$ 1.31	0.61	\$ 0.80
Air Compressor	1	AIRCP	\$ 34.31	0.12	\$ 4.12
<b>Rivet Buster and Air Compressor</b>			<b>\$ 35.62</b>		<b>\$ 4.92</b>

11 Compactor, Hand Guided	4 COMHG	\$ 8.82	0.18	\$ 1.59
12 Bobcat 763	31 TRACS	\$ 25.35	0.11	\$ 2.79
13 Backhoe (John Deere ID 310G)	18 LDDRT	\$ 62.87	0.12	\$ 7.54
Clam Shell Bucket	1 N/A	\$ 9.29	0.12	\$ 1.11
<b>Backhoe w/ Clam Shell total</b>		<b>\$ 72.16</b>		<b>\$ 8.66</b>
14 Breaker attachment for Backhoe	7 HAMMR	\$ 42.26	0.23	\$ 9.72
15 Mini Excavator (Kubota U45)	N/A N/A	\$ 63.79	0.18	\$ 11.48
16 Excavator (Hitachi 200)	N/A N/A	\$ 142.51	0.18	\$ 25.65
17 New Holland Excavator (E135)	N/A N/A	\$ 120.13	0.18	\$ 21.62
18 Ride-on Sweeper	4 BRMSW	\$ 145.11	0.14	\$ 20.32
19 Bituminous Distributor	4 BITDT	\$ 6.52	0.14	\$ 0.91
Work truck	33 TRUCK	\$ 33.12	0.14	\$ 4.64
<b>Bituminous Distributor with truck</b>		<b>\$ 39.64</b>		<b>\$ 5.55</b>
20 Fork Lift Truck	6 FKLFT	\$ 27.14	0.20	\$ 5.43
21 Concrete Saw	28 SAWCO	\$ 19.63	0.14	\$ 2.75
Saw blade 12" x \$18 per hour (100 LF)	28 SAWCO	\$ 216.00	0.14	\$ 30.24
Concrete Saw and Blade		\$ 235.63		\$ 32.99
22 Water Pump	22 PUMWA	\$ 22.61	0.35	\$ 7.91
<b>23 Confined Space Equipment</b>				
Gas Detector 4-Gas w/ Motorized Integral Pump		\$22.79		
Blower Portable w/ 8"x15' Hose		\$8.82		
Retrieval 65' Winch for Tripod		\$11.53		
SCBA-NFPA Approved 2216 PSI Complete alrpeck		\$9.03		
<b>Total Confined Space</b>		<b>\$52.15</b>		
Traffic Control (per street, intersection = x2 24 streets)				
Construction Signs	32 TRAFC	\$2.43		

Changeable Message Boards	32 TRAF A	\$9.92		
Arrow Board	32 TRAF A	\$3.20		
No Parking Signs (A-frames)	32 TRAF C	\$0.22		
Cones (per 100)	32 TRAF C	\$13.27		
25 Interlocking Water Filled Triton Barrier	N/A N/A	\$1.61		
\$270 per month /168 hours per month				
26 Traffic Plates Installed				
Total per Plate (small)	N/A N/A	\$4.61		
Total per Plate (large)	N/A N/A	\$7.19		
27 Trench Shoring (4' wide trends)		\$2.17		
Total per trench shore		\$0.48		



UPDATED 10/2/2012

EQUIPMENT COST

CALTRANS TAG	CJA/NCC TAG	Description	Outside Rent Rate (hour)	Inside Rent Rate (hour)	Caltrans Rate (hour)	Blue Book Rate (hour)
ATTACHMENT C	A29250T	18,000 GAL SLURRY TANK	ST \$ / 3.13			
ATTACHMENT C	A32350T	18,000 GAL SLURRY TANK	ST \$ / 3.13			
ATTACHMENT C	A35250T	18,000 GAL SLURRY TANK	ST \$ / 3.13			
ATTACHMENT C	A60310T	18,000 GAL SLURRY TANK	ST \$ / 3.13			
ATTACHMENT C	A60320T	18,000 GAL SLURRY TANK	ST \$ / 3.13			
ATTACHMENT A	ABM30001	AUTO BENTONITE MIXER	ST	\$ -15.34		
ATTACHMENT A	BEG4001	BAYA EXTENSION GUIDE 800	ST	\$ 5.68		
ATTACHMENT A	BHG60	BAYA HYDRAULIC GRAB	ST	\$ 148.86		
ATTACHMENT A	BHJ9141	H90 914 X 2700 JAWS	ST	\$ 7.39		
ATTACHMENT A	BHJ9142	H90 914 X 2700 JAWS	ST	\$ -7.39		
ATTACHMENT C	BVP01	BAUER VACUUM PUMP	ST \$ -27.24			
ATTACHMENT A	CGP0001	SINNUS 3E	ST	\$ 42.61		
ATTACHMENT A	24K124	CSQ4008 TD 800 SQUARE CHISEL (914)	ST		\$ / 8.31	\$2.84
ATTACHMENT A	CVC01	BAYA CABLETTE	ST	\$ 2.84		
ATTACHMENT A	CWS800	CWS 800 SECTION END STOP	ST	\$ 84.09		
ATTACHMENT A	DAN1801	INTEROC NR160	ST	\$ 144.62		
ATTACHMENT A	DBD3002	DERRICK DESANDER 300M3	ST	\$ 218.75	OK	\$44.58
ATTACHMENT A	DDS01	DERRICK DESILTING UNIT	ST	\$ 60.00	OK	
ATTACHMENT A	ECB2001	ELECTRIC 20' CONTAINER	ST	\$ 11.36		
ATTACHMENT C	ECF1007	100HP VFD PUMP CONTROL PANEL	ST \$ 8.16		\$ 5.11	
ATTACHMENT A	GSG9141	STEIN EXT FOR SK 280-800	ST	\$ 5.11		
ATTACHMENT A	GSK8001	STEIN DIAPHRAGM WALL GRAB BOD	ST	\$ 28.41		
ATTACHMENT C	HSP01	HYDRA-TECH PUMP	ST \$ / 27.72			
ATTACHMENT C	HSP02	HYDRA-TECH PUMP	ST \$ / 27.72			
ATTACHMENT A	JSK9141	STEIN DIAPHRAGM GRAB JAW	ST	\$ 10.23		
ATTACHMENT A	KDM01	KODEN DRILLING MONITOR	ST	\$ 17.05		
ATTACHMENT A	KDM02	KODEN DRILLING MONITOR	ST	\$ 17.05		
ATTACHMENT C	MP4313	MISSION PUMP 3X4 R 40HP	ST \$ / 22.50			\$5.11
ATTACHMENT C	MP4316	MISSION PUMP 3X4 R 40HP	ST \$ / 22.50			
ATTACHMENT C	MP4317	MISSION PUMP 3X4 R 40HP	ST \$ / 22.50			
ATTACHMENT C	MP543	MISSION PUMP 5X4 R 50HP	ST \$ / 22.50			\$5.68
ATTACHMENT C	MP6805	MISSION PUMP 6X8 R 150HP	ST \$ / 22.50			\$5.68
ATTACHMENT C	MP861	MISSION PUMP 3X4 R 40HP	ST \$ / 22.50		\$ 5.11	
ATTACHMENT C	MWP09	MOYNO WATER PUMP	ST \$ / 22.50			
ATTACHMENT C	PDM3002	PDM 3 DIESEL PUMP	ST \$ / 4.13			
ATTACHMENT A	QC3.5	TARALOG WITH COBAT INS	ST	\$ 31.25	\$11.36	
ATTACHMENT A	QCD45004	DIALOG LUTZ WITH NEMO	ST	\$ 23.75		
ATTACHMENT A	SBA8551	KS 3000 INCLD GRAB+GUIDE	ST	\$ 85.98		
ATTACHMENT A	SKE91401	STEIN EXTENSION 36"	ST	\$ 2.84		
ATTACHMENT A	SKG70104	STEIN DIAPHRAGM WALL GRAB BOD	ST	\$ 36.93		
ATTACHMENT A	SKJ91401	STEIN JAWS 36"	ST	\$ 6.25		
ATTACHMENT C	SSP20204	SCREWSUCKER PUMP	ST \$ 19.89			
ATTACHMENT C	SSP20205	SCREWSUCKER PUMP	ST \$ 19.89			
ATTACHMENT A	TPR0006	TREMIE PIPE Length?	ST	\$ -5.68		
ATTACHMENT A	TPR0007	TREMIE PIPE	ST	\$ -5.68		
ATTACHMENT C	WFG0001	WATER PUMP HP GOULD 40HP	ST \$ 22.50		\$ 5.11	





CONDON-JOHNSON  
& ASSOCIATES, INC.  
CONTRACTORS AND ENGINEERS



NICHOLSON

Condon-Johnson & Associates, Inc. - Nicholson Construction Company Joint Venture

Third Street Light Rail Program, Phase 2- Central Subway Tunneling  
JOB # 21134

(CJA-NCC JV)

UPDATED 10/2/2012

EQUIPMENT COST

CALTRANS TAG	CJA/NCC TAG	Description	Outside Rent Rate (hour)	Inside Rent Rate (hour)	Calltrans Rate (hour)	Blue Book Rate (hour)
00-06	2108	00 Ford F350 Diesel	ST		\$ / 19.98	
00-06	2118	96 Ford Louisville	ST		\$ / 19.98	
00-06	2212	11-Ford F460 XL	ST		\$ / 19.98	
806-3	3023	Klemm 806-3	ST		\$ / 134.37	
KR2510B	3028	Klemm/Bauer 3012	ST		\$ / 187.64	
312-2	3030	Sollmec R312-200	ST		\$ / 196.61	
SR60	3037	Sollmec SR-70	ST		\$ / 393.79	
SM405	3042	Sollmec SM-14	ST		\$ / 87.08	
075-120	4014	IR 900 CFM Air Comp 350 psi	ST		\$ / 82.64	
075-120	4015	IR 900 CFM Air Comp	ST		\$ / 82.64	
075-120	4018	IR 900 CFM Air Comp	ST		\$ / 82.64	
075-120	4019	IR 900 CFM Air Comp	ST		\$ / 82.64	
025-045	4023	IR 250 CFM Air Comp	ST	016-025	\$ -34.31	20.01
025-045	4024	IR 250 CFM Air Comp	ST		\$ 34.31	20.01
075-120	4029	IR 900 CFM Air Comp	ST		\$ / 82.64	
025-045	4030	IR 260 CFM Air Comp	ST		\$ 34.31	20.01
016-025	4034	IR 185 CFM Air Comp	ST		\$ / 20.01	
016-025	4038	IR 185 CFM Air Comp	ST		\$ / 20.01	
1150XHD	4046	Sullair 1150XH Air Comp	ST		\$ / 101.60	
025-050	5025	Multiquip 25kw GENER	ST	015-025	\$ 14.24	14.18
500	5026	Lincoln Comander 500 We	ST	250-300	\$ 12.02	11.87
025-050	6027	Multiquip 25kw GENER	ST		\$ -14.24	14.18
015-025	6030	20kw GENER	ST		\$ / 14.18	
100-200	6031	Coleman 110kw Gen	ST		\$ / 52.37	
025-050	6032	Multiquip 25kw GENER	ST		\$ 14.24	14.18
060-100	6033	Multiquip 60kw Gen w/lr	ST		\$ / 25.81	
025-050	6034	Multiquip 36kw GENER	ST		\$ / 14.24	
100-200	6035	Multiquip 125kw GENER	ST		\$ / 52.37	
200-300	6045	Cat 225kw GENER	ST		\$ / 89.61	
200-300	6047	Multiquip DCA300SSK Gener	ST		\$ / 89.61	
TS9070	6020	Pul TS9070 Crawler	ST		\$ / 44.85	
TS9070	6021	Pulzmeister S9070 2-axl	ST		\$ / 44.85	
1057	6039	Schwing 32M Boom Pump	ST		\$ / 95.81	
1057	6040	Schwing 32M Boom Pump	ST		\$ / 95.81	
AD10	6057	Highshear 7/14 GRPLANT	ST	714W160	\$ -32.98	22.87
7T450	6064	Sollmec 7T600 HP Pump	ST		\$ / 106.88	
7T450	6077	Sollmec 7T600 HP Jet Pump	ST		\$ / 106.88	
W3170	6094	Sollmec SGA-45 Agitatio	ST		\$ / 5.71	
1C	6095	Sollmec SGT-45 Turbonix	ST		\$ -58.00	
400-500	7002	Pettibone S-20 Forklift 20k lbs	ST	160-200	\$ -114.44	69.39
400-500	7012	Pettibone S-20 Forklift	ST		\$ -114.44	69.39
300-400	7014	Pettibone S-15 Forklift 15k lbs	ST	120-160	\$ 95.06	69.27
SIL02	7017	Belgrade Silo 200B LP	ST		\$ / 0.15	
2AX-550	7019	Water Buffalo 500 Gal	ST		\$ / 2.52	
5538Q	7028	Linkbelt HSP 8030	ST		\$ / 81.77	
2AX-550	7029	Water Buffalo 500 Gal	ST		\$ / 2.52	
6060	7030	Linkbelt 218H Crane	ST		\$ / 110.62	
400-500	7038	Pettibone S-20 Forklift 20k lbs	ST		\$ 114.44	69.39
400-500	7039	Pettibone S-20 Forklift 20k lbs	ST		\$ 114.44	69.39



CONDON-JOHNSON  
& ASSOCIATES, INC.  
CONTRACTORS AND ENGINEERS



NICHOLSON

Condon-Johnson & Associates, Inc. - Nicholson Construction Company Joint Venture

(CJA-NCC JV)

Third Street Light Rail Program, Phase 2-Central Subway Tunneling  
JOB # 21134

UPDATED 10/2/2012

EQUIPMENT COST

CALTRANS TAG	CJA/NCC TAG	Description	Outside Rent Rate (hour)	Inside Rent Rate (hour)	Calltrans Rate (hour)	Blue Book Rate (hour)
400-500	7040	Pettibone S-20 Forklift <i>20K lbs</i>	ST		\$ 114.44	<i>69.59</i>
2100	7044	Cat 936 Loader	ST		\$ 72.79	
8012	7058	Mantis 8012 Crane	ST		\$ 183.13	
6610	7059	Mantis 6610 Crane	ST		\$ 95.79	
<del>TB18/22</del>	7062	ABI 22M Sheeldriver	ST		\$ 628.86	
0335	7063	Cat 325BL Excavator	ST		\$ 114.01	
ATTACHMENT B	7068	ABI TM14/17 Sheeldriver	ST			\$ 383.42
SILO2	7074	Belgrade Silo 200B LP	ST		\$ 9.15	
2362	7084	CAT 966G Loader	ST		\$ 151.76	
080-120	7085	Skytrak 10042 Forklift	ST		\$ 66.63	
080-120	7088	Skytrak 10042 Forklift	ST		\$ 56.63	
2AX-550	7093	Water Buffalo 500 Gal	ST		\$ 2.52	
2AX-550	7096	Water Buffalo 500 Gal	ST		\$ 2.52	
SILO2	7099	Cementech 300B LP Silo	ST		\$ 9.15	
SILO2	7106	Lo-Pro 200 Brrl Silo L	ST		\$ 9.15	
3815	7127	Cat D6KXL Track Dozer	ST		\$ 102.97	
ATTACHMENT A	7155	Linkbelt TCC750 76T Hydro	ST	\$ 115.62		
855HD	7156	Liebherr 855 Crane	ST		\$ 211.16	
SS1500	7542	Supersax 1500 Silo LO	ST		\$ 3.69	
SS1500	7545	350BBL Vertical Silo	ST		\$ 3.59	
SS1600	7547	CJA Supersacker Silo	ST		\$ 3.59	
2088	9002	Cat 930 Loader	ST		\$ 67.33	
807D	9017	Klemm 806D Drill	ST		\$ 105.20	
807D	9019	Klemm 806D Drill	ST		\$ 105.20	
312-2	9025	Sollmec R312-200 Drill	ST		\$ 196.61	
400-500	21134-AA	500 KW GENERATOR	ST		\$ 152.54	
2310H	21134-AB	CAT 950H W/ BUCKET & FORKS	ST		\$ 130.35	
855HD	21134-AC	LIEBHERR 855	ST		\$ 211.16	
YB4415	21134-AD	15 TON CARRY DECK CRANE	ST		\$ 32.36	
M322D	21134-AE	CAT M322D EXCAVATOR WHEELED	ST		\$ 108.21	
4 LIGHT	21134-AF	DIESEL LIGHT TOWER	ST		\$ 7.48	
4 LIGHT	21134-AG	DIESEL LIGHT TOWER	ST		\$ 7.48	
4 LIGHT	21134-AH	DIESEL LIGHT TOWER	ST		\$ 7.48	
4 LIGHT	21134-AJ	DIESEL LIGHT TOWER	ST		\$ 7.48	
4 LIGHT	21134-AK	DIESEL LIGHT TOWER	ST		\$ 7.48	
4 LIGHT	21134-AL	DIESEL LIGHT TOWER	ST		\$ 7.48	
ATTACHMENT C	21134-AM	PUMP BOOSTER 2x4x9.5 60HP 480V	ST	\$ 46.31	<i>15.44</i>	
ATTACHMENT C	21134-AN	VFD 100HP 460V 3P	ST	\$ 8.16	<i>7.22</i>	
025-045	21134-AO	185CFM AIR COMPRESSOR	ST	<i>016-025</i>	\$ 34.31	<i>20.01</i>
ATTACHMENT C	21134-AP	TRASH/VACUUM PUMP	ST	\$ 27.24	<i>19.38</i>	
ATTACHMENT C	21134-AQ	4" SLURRY PUMP+DISCHARGE HOSE	ST	\$ 40.80	<i>29.70</i>	
200/500	21134-AR	APE VIBRO HAMMER	ST		\$ 145.26	
305CR	21134-AS	CAT 305 EXCAVATOR W/HYD BRKR	ST		\$ 34.37	
500	21134-AT	STUD WELDING EQUIPMENT	ST		\$ 12.02	
D100	21134-AU	ABI HVR 60 EXCAVATOR MOUNTED	ST		\$ 37.43	
ATTACHMENT C	21134-AV	SWING STAGE & SCAFFOLDING	ST	\$ 2.50		
ATTACHMENT B	8GEN650	GENERATOR-660KW	ST			\$ 286.79
100-200	8K40	25-125 kw Diesel Generator	ST	<i>050-</i>	\$ 52.37	<i>OK</i>
ATTACHMENT C	A29160T	18,000 GAL SLURRY TANK	ST	\$ 3.13		
ATTACHMENT C	A29220T	18,000 GAL SLURRY TANK	ST	\$ 3.13		

**GENERAL PREVAILING WAGE APPRENTICE RATES**

**APPRENTICE INFORMATION**

*Determination:* 2012-2      *Issue Date:* 09-17-2012      *Expire Date:* 06-30-2013      \*

*Page:* 1

*Craft/Classification:* Operating Engineer

*Shift:* 1

Area 1

Counties: Alameda, Butte, Contra Costa, Kings, Marin, Merced, Napa, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Solano, Stanislaus, Sutter, Yolo, Yuba

Period	Duration Months	OJT Hours	Hourly Basic Rate	Health & Welfare	Pension	Vacation /Holiday	Training	Other	Hourly Total Rate
1		1,000	\$18.360	\$12.530	\$7.290	\$3.200	\$1.620	\$0.730	\$43.730
2		1,300	\$20.030	\$12.530	\$7.290	\$3.200	\$1.620	\$0.730	\$45.400
3		1,300	\$21.700	\$12.530	\$7.290	\$3.200	\$1.620	\$0.730	\$47.070
4		1,300	\$23.370	\$12.530	\$7.290	\$3.200	\$1.620	\$0.730	\$48.740
5		1,300	\$28.370	\$12.530	\$7.290	\$3.200	\$1.620	\$0.730	\$53.740

Footnote(s):

Apprentice rates based on Operating Engineer (Heavy and Highway Work): Group 4

In addition to counties listed above, Area 1 includes portions of Alpine, Amador, Calaveras, Colusa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Lake, Lassen, Madera, Mariposa, Mendocino, Monterey, Nevada, Placer, Plumas, Shasta, Sierra, Siskiyou, Sonoma, Tehama, Tulare, Tuolumne, and Trinity counties.

Vacation/Holiday-- Includes amount for supplemental dues.

Apprentice Prevailing Wage Rates are paid only to apprentices registered with the State of California, Division of Apprenticeship Standards, for work the registered apprentice performs in his/her specific craft or trade. You may check whether an Apprentices is registered at <http://www.dir.ca.gov/DAS/appcertpw/AppCertSearch.asp>


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<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0

# CHANGE ORDER REQUEST AND CLAIMS PROCESSING

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APPROVED BY: John Funghi  
 Senior Program Manager  
 SFMTA Central Subway

DATE: 1-14-10

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## 1101.1 PURPOSE

This procedure describes how to analyze, approve, and process a Change Order Request (COR) submitted by a Contractor. It also defines the claims process that occurs upon SFMTA's denial of a COR.

## 1101.2 RESPONSIBILITY

When the Contractor believes that a change in the scope of the Contract will occur or has occurred, the Contractor may submit a COR to the Resident Engineer (RE). The COR must be timely, complete, and accurate. The RE reviews the COR and notifies the Contractor of the COR determination. If the RE determines the COR to be without merit and denies the COR, the Contractor may file a claim as specified in the General Provisions Section 98, Clarification and Claims. The Contractor submits the claim to SFMTA, following the protest procedure described in Section 1101.3.5 of this procedure.

## 1101.3 PROCEDURES

### 1101.3.1 General

The Contractor usually submits a COR when either of the following occurs:


- A. The Contractor encounters site conditions, which in the opinion of the Contractor, exceed the Contract requirements.
- B. SFMTA's clarification or other written directive, in the opinion of the Contractor, exceeds the Contract requirements.

#### 1101.3.1.1 Differing Site Conditions That Exceed Contract Requirements

When the Contractor encounters a site condition that the Contractor believes exceeds the Contract requirements, the Contractor must notify the RE of all anticipated or actual change work immediately by telephone and in writing within 1 working day of the time that the suspected work became known to the Contractor. The Contractor must not proceed with the suspected work until the RE gives direction. See Procedure CM 1105 for more information on Differing Site Conditions.

#### 1101.3.1.2 Additional Directives That Exceed Contract Requirements

When the Contractor feels that SFMTA's directive exceeds the requirement of the Contract, per General Provisions Section 98, Clarifications and Claims, the Contractor must submit a written COR to SFMTA within 7 calendar days of receipt of the

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clarification or directive, and before proceeding with the work. If the Contractor begins work before SFMTA receives the written COR, SFMTA is not responsible for any compensation claim. If the Contractor does not submit the COR to the SFMTA in the specified timeframe, the Contractor waives its rights to request or claim for additional compensation or time on the clarification or written directive.

### **1101.3.2 Change Order Request Documentation**

#### **1101.3.2.1 General**


If the Contractor determines additional time or compensation is necessary for the project, the Contractor prepares and submits to the RE a COR on the Change Order Request form (see Exhibit 1101-1). This document includes:

- A. A written narrative that justifies to SFMTA's satisfaction the reason for a time extension or additional compensation
- B. The revised schedule for the time extension or an estimate for additional compensation, the Contractor's Cost Proposal
- C. References to all related progress schedule activities, Contract Specification sections, and Drawings directly pertaining to the COR


#### **1101.3.2.2 Documentation Process**

Upon receipt of a COR, or correspondence which may contain proposal implications, the Office Engineer (OE), or RE for smaller projects, must:

- A. Rectify the numbering if the COR does not have a consecutive number. The COR number must:
  - 1. Be assigned to only one incident or change.
  - 2. Serve as a unique identifier of a particular incident or change through all subsequent operations involving estimates, quantity take-offs, etc.
  - 3. Be used in all correspondence concerning the proposal, throughout the life of the Contract.
- B. Log the Contractor COR in the COR Record Log (Exhibit 1101-2).
  - 1. The Contractor COR Record Log must:

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- a. Clearly identify and itemize in numerical order all Contractor CORs for all incidents regarding:
    - Time
    - Money
    - Any item of concern to the Contractor (see General Provisions for additional requirements)
  - b. Provide continuous control of the status of all special circumstances or changes to the Contract.
  - c. Ensure that no Contractor item, however small, is overlooked in processing changes to the contract.
  - d. Facilitate a status update at every progress meeting (see Procedure CM 0703).
2. The Office Engineer (OE) or RE must enter the following information into the Contractor COR Record:
- a. COR Number: The assigned Contractor COR number
  - b. Contractor Letter Number: The number on the initial letter and all following Contractor correspondence concerning the proposal
  - c. Contractor Letter Date: The respective date of each Contractor letter
  - d. RE Letter Date: The respective date of each RE letter
  - e. Description: A brief title and description of the request
  - f. Contractor Estimate: If the Contractor quantifies the request, the dollar amount and additional time indicated, if any
  - g. RE Estimate: The dollar figure documented within the Contract Modification (C/Mod) file (If none, enter N.A. for not applicable.)
  - h. Contractor COR Date Received: The letter number and date the RE received the COR (If there is no letter number, indicate so.)
  - i. Date of Negotiation: The date the RE reviews the details with the Contractor, if applicable

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- j. Force Account: An indication of whether the work or portions thereof are considered Force Account work under General Provisions Section 76
  - k. C/Mod Number/Date: The Contract Modification (C/Mod) number, if the Proposed Contract Change (PCC) is followed by issuance of a C/Mod
  - l. Agreed Amount/Time: The Contract amount or time change indicated on the C/Mod
  - m. Comments: An indication of the status, i.e., "Denied" and date, or "Modification Final" and date
- C. Establish a COR file for each individual COR.
- D. Collect information applicable to the proposal. This includes:
1. Copies of pertinent subcontractor documents
  2. Correspondence on the subject
  3. Cost estimates
  4. Photographs
  5. Charts
  6. Copies of plans and specifications
  7. Any other information of use in analyzing and evaluating the proposal

### **1101.3.3 Change Order Request Analysis**

Concurrent with the documentation effort, the RE must:

- A. Review the Contractor COR to determine if it is clear, complete, and submitted within the specified timeframe.
- B. Request the Contractor provide additional information and documentation as necessary to consider the COR for merit.
- C. Coordinate with other SFMTA staff as needed to determine if the COR has merit or not.
- D. Prepare an evaluation in accordance with the designated contractual authority.



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### 1101.3.4 Change Order Request Determination/Notification

SFMTA will review the validity of the Contractor's written COR and make a determination in writing as soon as possible, but not to exceed 30 days after receipt of the COR. The Contractor must proceed with the work in accordance with SFMTA's determination, which is final and binding on SFMTA and the Contractor unless the Contractor submits a written Notice of Potential Claim as specified under Contract General Provisions Section 98, Subsection B.2, Claims Procedure.

The RE will send one of the following responses to the Contractor:

- A. With Merit
- B. Without Merit
- C. Field Change (See 1101.3.4.3)
- D. Incomplete and Re-submittal Required

#### 1101.3.4.1 COR with Merit


If SFMTA determines the COR for additional compensation or time has merit under the current Contract, the RE initiates a Change Modification (C/Mod) under Procedure 1103 in conformance with General Provisions Section 75, Alteration, Modifications, and Extras.

#### 1101.3.4.2 COR without Merit

If SFMTA determines the COR for additional compensation or time does not have merit under the current Contract, the RE notifies the Contractor of the COR denial, substantiated by Contract Document references.

Upon receipt of denial, the Contractor may do either of the following:

- A. Withdraw the COR, through a formal process that includes written correspondence that documents the withdrawal, such as:
  - A letter
  - Meeting minutes
  - Marked-up Contractor proposal, etc.
- B. Resubmit for reconsideration, which initiates the protest procedure described in Procedure CM 1101.3.5.

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If SFMTA later determines the COR does have merit, the RE will initiate a Change Modification (see Procedure CM 1103 for specific instructions).

#### **1101.3.4.3 Field Change**

If SFMTA determines the change is a minor variation from the Contract Specifications or Plans and does not affect the design intent nor Contract scope, schedule, or cost, the RE will issue a "field change" response to the Contractor instead of a Change Modification. This shall be noted in the COR Record Log and documented on as-built drawings.

#### **1101.3.4.4 Incomplete and Re-submittal Required**

If SFMTA determines the COR is incomplete, the RE will specify the information required and return the COR to the Contractor for re-submittal. The Contractor must comply with the COR process in Procedure 1101 to resubmit the COR.

#### **1101.3.5 Claims Processing**

##### **1101.3.5.1 General**

If the Contractor receives notice that the COR is without merit, the Contractor may submit a claim to the RE. The Contractor must follow SFMTA's protest procedure, and the RE may call upon the Dispute Review Board if the Construction Manager and Contractor cannot come to an agreement.


##### **1101.3.5.2 Protest Procedure**

SFMTA's protest procedure is designed to keep all Contractor CORs within the Construction Management Department and to achieve claim resolution prior to using an alternative dispute resolution process by mutual agreement.

Each COR will receive due consideration by SFMTA. If the RE fails to reach agreement with the Contractor, the RE will initiate the protest procedure. At the preconstruction meeting, the RE will inform the Contractor of the protest procedure, which results in reviews of the COR at successively higher levels of management.

The protest cycle is as follows:

- A. The Contractor will, after the initial denial of the COR, do one of the following:
  - 1. Withdraw the COR.

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2. Resubmit the COR with or without additional documentation and request re-evaluation.
- B. SFMTA completes the review process for a resubmitted COR.
1. If after review of the resubmitted COR and additional information, the RE determines the COR has merit, the RE begins the Change Modification process in accordance with Procedure 1103.
  2. If the RE determines that the COR is without merit, the RE may review the issue in committee with Engineering Management, the Contract Administrator, and the Project Manager, for merit consideration. The RE will inform the Contractor of the outcome.
- C. If, after receiving SFMTA's written determination on a COR that a Contractor is not eligible for additional compensation or time, the Contractor still considers the work required to be outside of the Contract requirements, the Contractor may submit a written Notice of Potential Claim to the RE in accordance with General Provisions Section 98, Clarifications and Claims.
- D. SFMTA's field inspectors must carefully inspect and record work performed under "protest" to prepare for the possible resolution of claim, Disputes Review Board (DRB) activity, or litigation.

### 1101.3.5.3 Disputes Review Board


Depending on the Contract requirements, either party to a dispute may propose a Disputes Review Board (DRB) as an alternative dispute resolution process. If a DRB is mutually acceptable, the parties will work together to establish and agree on procedures for conducting the DRB's functions. Upon finalization, SFMTA will incorporate those procedures into this Procedures Manual.

### 1101.3.5.4 Monitoring Claims and CORs

On a monthly basis, the RE will hold a meeting to discuss each claim or COR and its status with the Contractor (see Procedure 703). For outstanding proposals, the two parties will determine and agree on the next required action for processing the claim or change necessary.

The parties will record and distribute meeting minutes to the following:

- A. RE files

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B. Contractor

C. Project Manager, Project Engineer, and Contract Administrator

On a quarterly basis, the RE must prepare a listing of all pending claims submitted by the Contractor with an estimated value of over \$100,000 as well as all claims settled during the preceding quarter, regardless of value.

### **1101.3.5.5 Work Interruptions/Delay Claims**

The RE must be familiar with and refer the Contractor to the General Provisions Section 78, Time Allowances for specific requirements. Two types of delays may occur on the project: avoidable and unavoidable.

For all alleged delays, the Contractor is required to file a "Notice of Delay" in writing within 7 days from the beginning of the said delay. This notice constitutes an application for extension of time only if the notice:

- A. Requests such extension
- B. Sets forth the Contractor's estimate of the additional time required along with full detail on the causes of the alleged delay, including Critical Path Method (CPM) schedule analysis documentation substantiating the alleged delay as required by the delay provisions of the Contract

#### **1101.3.5.5.1 Avoidable Delays**


Avoidable delays include:

- Delays that could have been avoided by the Contractor's exercise of care, prudence, foresight, and due diligence

#### **1101.3.5.5.2 Unavoidable Delays**

Unavoidable delays may include:

- Delays directly attributable to the actions of SFMTA that cannot be avoided by the Contractor's exercise of care, prudence, foresight, and diligence
- Delays from other such causes beyond the control of the Contractor as may be specifically stated in the Contract
- Delays due to RE-directed temporary suspension of work
- Delays due to the delay of another contractor's work

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SFMTA does not consider any delay or interruption of work due to material shortages or labor shortages an unavoidable delay, unless specifically approved by SFMTA.

### 1101.3.5.5.3 Notice of Delay


Upon receipt of a Notice of Delay, the RE will immediately record it and review it to determine the appropriate action, such as:

- A. Refer the matter to SFMTA, which may take steps to prevent the continued occurrence or mitigate the delay.
- B. Classify the alleged delay as avoidable or unavoidable, and direct the Contractor accordingly.
  - 1. Avoidable: If the RE determines the alleged delay had been avoidable in accordance with the Contract Specifications, the RE will deny the Contractor's request for additional time and/or money and demand a recovery schedule.
  - 2. Unavoidable – If the alleged delay is determined to be unavoidable, the Contractor must substantiate any allegation of delay to the overall work by submitting scheduling information in accordance with Construction Contract Specifications Section 01 32 13, Scheduling of Work. The Contractor shall follow up any initial Notice of Delay with a COR for the alleged delay.
  - 3. Unavoidable – No Time Extension Acceptable: If the project deadline cannot be extended, the RE may direct the Contractor to prepare a recovery schedule to overcome the delay and meet a completion date, in lieu of granting a time extension for an unavoidable delay. This recovery schedule may include strategies such as resequenced and/or concurrent activities, additional resources, acceleration, or other options as needed to recover the necessary time.
- C. Record the Notice of Delay information into the Notice of Delay Log.

### 1101.3.5.5.4 Delay Substantiation

The RE will not grant an extension of time for any cause unless the Contractor can demonstrate by means of CPM schedule analysis and other substantiation in the Contract that the delay meets the following criteria:

- A. It did occur.
- B. It was beyond the Contractor's control.

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C. It could not have been avoided by due diligence.

D. It delayed the project's critical path and final completion of the work and/or an interim contract milestone. In the case of delay to an interim milestone, the Contractor must meet the same standard of proof as if for an extension of time to the Contract duration. Delay to an interim milestone does not necessarily delay final completion and may not require an extension of time, only a new milestone date.

Upon rejection of a documented delay, the Contractor may choose to protest the denial, following the steps outlined in Procedure 1101.3.5.

#### **1101.4 DEFINITIONS**

None.

#### **1101.5 EXHIBITS**


1101-1 Sample Change Order Request Form

1101-2 Sample Contractor Change Order Request Record Form

#### **1101.6 REFERENCES**

Refer to the following:

- Contract Specifications General Provisions Sections 75- Contract Modification, 76- Force Account work, 78- Time allowance for completion of contract work, and 98- Clarification and Claims
- Procedure Manual Sections CM 0703- Project Current Schedule and Progress Review Meeting, CM 1103- Contract Modification

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### 1101.7 PROCEDURE HISTORY

<u>Revision Level</u>	<u>Revision Date</u>	<u>Summary of Revision</u>	<u>Approved By</u>

### 1101.8 APPROVALS

Prepared by	Reviewed by	Signature & Date
<b>Originator of Central Subway Procedures Manual</b> <b>Title and Unit:</b>  Dane Hudson Construction Manager Central Subway Partnership	Roger Nguyen Quality Assurance Manager Quality Assurance Office  Robert Rocco Configuration & Risk Manager Central Subway Partnership  Arthur Wong SFMTA Construction Manager Central Subway Project	 1/12/10   1/13/10   1/13/10   1/13/10

Exhibit 1101-1: Sample Change Order Request Form

**CHANGE ORDER REQUEST**

Contract No. & Name \_\_\_\_\_ Date \_\_\_\_\_  
COR No. & Title \_\_\_\_\_  
Requested Time & Cost \_\_\_\_\_

What (Description of COR)

Why (Reason for Requesting COR)

Where (Location/Station)

When (Occurrence date, action date)

How (Recommendation of Action)

Cost Proposal (Summary of Cost Proposal and attached)

Spec Ref  
Drawing Nos.  
Attach Time Impact Analysis(if applicable)

Prepared by: \_\_\_\_\_  
Contractor's Representative \_\_\_\_\_ Name, Title \_\_\_\_\_ Date \_\_\_\_\_



COR Record Log


EXHIBIT 1101-2

MR-1142 Third Street Light R16  
22nd Street to Jerrold Avenue

Exhibit 1101-2

COR No.	Description	Requested			Revised			Comments
		Date	Amount	Time	Date	Action	Amount	
1	Add Inertle Surfacing to Platform Ends	12/7/2004	\$1,890.00	0	12/14/2004	Approved	\$ 4,890.00	0
2	Add construction tolerances to top of platform concrete forms. Revised drawings	7/3/2005	\$3,685.00	0	7/8/2005	Denied	\$ -	0
3	Construct Sewer Between Arthur & Center Avenue	5/16/2005	\$244,722.00	0	5/25/2005	Approved	\$ 244,222.00	0
4	Install Duckbill between Arthur and Center	7/15/2005	\$80,664.00	0	7/27/2005	Approved	\$ 10,664.00	0
5	Additional Sewer Work Between Arthur and Center	6/29/2005	\$2,618.00	0	7/6/2005	Approved	\$ 32,618.00	0
6	Revise OV Drawings - Pole & Foundation Height Changes	9/16/2004	\$1,646.99	0	9/25/2004	Denied	\$ -	0
7	KMEL Radio Renote	2/3/2005	\$1,575.00	0	2/10/2005	Approved	\$ 1,575.00	0
8	Exploratory Drilling at Island Bridge	4/26/2005	\$3,000.00	0	5/3/2005	Denied	\$ -	0
9	Traffic Signal at Mann & Cargo	3/15/2005	\$2,801.00	5	3/22/2005	Approved	\$ 9,801.00	Deferred
10	Demo Curb and Place Diverters	2/3/2005	\$15,000.00	0	3/10/2005	Approved	\$ 2,557.91	0
11	Special Trackwork Spare Parts	3/18/2005	\$15,523.00	40	3/25/2005	Approved	\$ 13,035.00	Deferred
12	DPT Software & Training Request	4/1/2005	\$1,000.00	0	4/8/2005	Denied	\$ -	0
13	DPT VMS Foundation Request	6/20/2005	\$16,020.24	20	6/27/2005	Approved	\$ 13,256.00	Deferred
14	RR Crossing Signal Interlock Changes	6/27/2005	\$215,799.00	0	7/4/2005	Approved	\$ 215,799.00	0
15	Remove Sign Pole - MEOC Albert Court	7/1/2005	\$2,024.43	0	7/8/2005	Approved	\$ 2,024.43	0
16	Traffic Signal Hardware @ Arthur-Cargo	6/14/2005	\$4,577.00	0	6/21/2005	Approved	\$ 9,577.00	0
17	Differing Site Conditions SFWD Related	12/8/2005	\$20,000.00	0	12/15/2005	Approved	\$ 16,587.00	0
18	Revised LRV Medium CO #33	11/14/2005	\$3,249.00	0	11/21/2005	Approved	\$ 3,249.00	0
19	Revised Platform Drawings - Bolt Configuration & Marquee Base Height	11/21/2005	\$600.00	0	11/28/2005	Approved	\$ 600.00	0
20	VIS Conducts @ Center	8/1/2005	\$4,574.64	328	8/8/2005	Approved	\$4,574.64	Deferred
21	Revised Drawings - Misc. Changes to Platforms, Ramps, & Stairs	12/22/2005	\$7,613.00	0	12/29/2005	Approved	\$ 7,613.00	0
22	Typical UPRR Flangeway Notch (Dry)	10/7/2005	\$5,200.00	0	10/14/2005	Denied	\$ -	0
23	Rev. PL-23, Rev. 2 Draw - Pipe Sleeve Change at Innes Ave. Platform	10/21/2005	\$7,822.00	0	10/28/2005	Denied	\$ -	0
24	Rev. LA-03, Rev. 1, LA-05 Rev. 1, and LA-06 Rev. 1 Drawings - Truncated Dome Tile @ Crosswalks	12/16/2005	\$5,521.00	0	12/23/2005	Approved	\$ 5,521.00	0
25	Additional CSS Piling at ICB North Abutment	12/8/2005	\$180,000.00	0	12/15/2005	Approved	\$ 180,000.00	0
26	Perform Troubleshooting & Repair Existing Electrical Facilities	12/16/2005	\$5,000.00	0	12/23/2005	Denied	\$ -	0
27	Replace SFED AWSS Fittings	2/1/2006	\$24,747.00	0	2/8/2006	Approved	\$ 24,747.00	0
28	Environmental Supplies	2/22/2006	\$2,994.00	0	3/1/2006	Approved	\$ 2,994.00	0
29	Color Pavement Sealants RFI PH1 Changes to Color Pavement at Intersections	3/28/2006	\$21,555.00	0	4/7/2006	Approved	\$ 21,555.00	0
30	CES Environmental - Remove Underground Tanks	3/28/2006	\$16,023.52	0	4/4/2006	Approved	\$ 16,023.52	0
31	Revised OSMIT No 7 S-15 Structural Drawing	3/28/2006	\$16,081.00	0	4/4/2006	Approved	\$ 16,081.00	0
			\$974,063.87	191			\$930,082.88	0

Exhibit 1101-2: Sample Contractor Change Order Request Record Form

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	<b>Document Number:</b> CM.1103
<b>Unit/Function:</b> Capital Programs and Construction Division Central Subway	<b>Revision Number:</b> 0


# CONTRACT MODIFICATION

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APPROVED BY: John Funghi  
Senior Program Manager  
SFMTA Central Subway



DATE: 1-14-10

<p>Title:</p> <p style="text-align: center;"><b>central  subway</b></p> <p>PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1103 – CHANGE ORDER AND CONTRACT MODIFICATION</p>	<p>Document Type: Procedure</p> <p>Document Number: CM.1103</p>
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### 1103.1 PURPOSE

This procedure describes the Contract Modification (C/Mod) process. It defines how SFMTA prepares, approves, and distributes C/Mod documentation that meets SFMTA and funding-agency requirements. It also describes the Resident Engineer's (RE) role in this process.

### 1103.2 RESPONSIBILITY

SFMTA requires a Contract Modification to formalize all changes to Contract Documents, regardless of whether additional cost and/or time are involved. SFMTA requires a C/Mod to process and approve a Contract Change. The RE is responsible for the management, processing, and tracking of Contract Modifications with support from construction management staff as needed.

### 1103.3 PROCEDURES


#### 1103.3.1 General

SFMTA's approval of either a Change Order Request (COR) submitted by the Contractor or a Proposed Contract Change (PCC) submitted by a Project Team member initiates a Contract Modification. SFMTA's approval of a C/Mod is based on a cost analysis and contract negotiations. The RE completes the C/Mod documentation. Refer to Procedure 1101 for COR processing (Contractor initiated), and Procedure 1102 for PCC processing (SFMTA initiated).


**Allowances** – An allowance is a bid item for a defined element of work. The RE shall monitor and track all work performed against the allowance to verify that the scope of the work clearly falls within the contractual definition for that specific allowance. Documentation of work performed against the allowance will be prepared as if for a C/Mod. If the value of the work exceeds the value of the allowance included in the contract bid price, then a full C/Mod will have to be processed and executed in accordance with the procedures described herein. Allowances cannot be used to pay for work not described in the contractual definition for that allowance.

#### 1103.3.2 Cost Analysis

The cost analysis includes three components: Contractor's Cost Proposal, Engineer's Estimate, and a cost comparison between the proposal and the estimate.

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- A. Contractor's Cost Proposal: Per Procedures 1101 and 1102, the Contractor is required to submit a Cost Proposal as follows:
- COR: The Contractor must complete and submit a Change Order Request form (see Exhibit 1101-1 in Procedure 1101), including the required Contractor's Cost Proposal and request for time extension, within 7 days of receiving direction that exceeds Contract requirements.
  - PCC: The Contractor must submit a PCC cost proposal and PCC time extension proposal (in accordance with General Provisions Section 79), if applicable, to SFMTA within 14 days after receipt of a PCC.
- B. Engineer's Estimate: The RE must generate a cost estimate as follows with support from the Project Controls Manager (PCM) if necessary:
- COR: When the RE determines the COR has merit, the RE must generate an Engineer's Estimate.
  - PCC: The RE must generate an Engineer's Estimate for all PCCs that are sent to the Contractor.
- C. Cost Comparison: The RE, with support from the Central Subway Project Team when requested, must analyze the Contractor's Cost Proposal and compare it to the Engineer's Estimate. During this cost comparison, the RE must determine if the Contractor's Cost Proposal includes at a minimum the following:
1. Review the Contractor's Cost Proposal scope of work for correctness. If the scope of work is incorrect, the RE must return the Contractor's Cost Proposal with a comment to "revise and resubmit."
  2. Compare the Contractor's Cost Proposal to the Engineer's Estimate for completeness. The RE must compare the work category and detailed breakdown of each for omissions, such as phasing, traffic control, temporary work, transportation cost, etc.
  3. Compare the labor crew size, cost, and hours; equipment list, cost, and hours; and material cost for reasonability and compliance.
  4. Compare mark-ups and bonds to the Contract for compliance. Also, determine if the profit is a reasonable estimate.
  5. Write a detailed narrative that explains the reason for the difference in cost and make a reasonable recommendation for resolution.

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### **1103.3.3 Negotiations**

Negotiations must be timely, fair, and precede actual work. The RE and Contractor must make every effort to reach an agreement on all the issues affecting scope, schedule, and cost.

#### **1103.3.3.1 Successful Negotiations**

At the successful conclusion of negotiations, the RE must complete the Summary Record of Negotiations form (see Exhibit 1103-5). This form must include the negotiation details of the scope, schedule, and cost to be incorporated into the C/Mod. The RE and the Contractor must review and sign the form.

#### **1103.3.3.2 Failed Negotiations**

If the negotiation efforts fail and the RE and Contractor do not reach an agreement, the RE must issue a Unilateral Change Order in accordance with General Provisions Section 75.2, Unilateral Change Orders. A Unilateral Change Order can be issued as a Lump Sum Change Order or be directed under a Force Account under General Provisions Section 76, Force Account Work. Even if the agreement is not reached, the RE must complete a Summary Record of Negotiations (see Exhibit 1103-5) that details the discussion and the key factor for disagreement. After failed negotiations, if the disagreement is irresolvable and/or impractical, the RE, in agreement with the Contract Administrator, may decide not to pursue the change and to reject the Change Order.

#### **1103.3.4 Approval**


After successful negotiations, the RE initiates the Contract Modification in accordance with these procedures.

#### **1103.3.5 Contract Modification**

##### **1103.3.5.1 Contract Modification Documentation Checklist**

To ensure completeness of a Contract Modification package, the RE must complete a Contract Modification Documentation Checklist form (see Exhibit 1103-1). The RE must check off all items on the checklist before processing the package for approval. The checklist contains the following as applicable:

- A. Record of Concurrence and Approval
- B. Contract Modification - 4 originals
- C. Modification Change Analysis

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- D. Summary Record of Negotiations
- E. Funding Summary
- F. Independent Engineer's Estimate
- G. Contractor's Cost Proposal
- H. Modification supporting documents
- I. Sole-source justification

#### **1103.3.5.2 Record of Concurrence and Approval**


To ensure that the C/Mod receives the required approval, the RE must complete a Record of Concurrence and Approval (ROCA) form (see Exhibit 1103-2). The Executive Summary section of the form requires a clear and concise summary of the changes presented for approval. The required signatures follow this hierarchy:

- A. Construction Management
- B. Manager of Contract Administration
- C. Senior Program Manager, Central Subway (Signature also indicates CMB agreement if applicable)
- D. Senior Director of Capital Programs and Construction
- E. Director of Finance/CFO
- F. SFMTA Board of Directors Secretary (only if the C/Mod needs the Board of Directors' approval)
- G. Executive Director/CEO

#### **1103.3.5.3 Contract Modification**

The Contract Modification (C/Mod) form (see Exhibit 1103-3) includes the scope of work, payment method, compensation amount, schedule impact, and signatures. The RE must prepare 4 original C/Mod packages for signature.

- A. Scope of Work: The RE must clearly define the project's scope of work in concise detail. The scope of work must specify any project requirements, drawings/sketches, or any other pertinent information, and be attached to each C/Mod. Clearly state the following as applicable:

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1. The work activities
  2. Exclusions from this C/Mod
  3. Where the work will occur (from which location/station to which location/station)
  4. The schedule for the work
- B. Method of Payment/Amount of Compensation: SFMTA uses three payment methods: Adjustment of Contract Bid Item, Agreed Lump Sum, and Force Account.
1. Adjustment of Contract Bid Item: Whenever the extra work is of the same character as the Contract bid item work, the Contract Modification will increase or decrease the bid item quantity or quantities to pay for the extra work under the Contract bid item (see Special Provisions).
  2. Agreed Lump Sum: If the extra work cannot be paid under the Contract bid item, SFMTA recommends that the RE and Contractor negotiate and agree on the amount of compensation to be paid as an Agreed Lump Sum. If the RE and Contractor do not reach an agreement, and the RE processes the C/Mod unilaterally, the RE will allocate a Lump Sum amount and track the work as Force Account work.
  3. Force Account: The total costs for each item indicated on the Daily Force Account Work Report and Daily Force Account Work Summary reflect the total costs for labor, material, and equipment, along with the contractually-stipulated percentages. SFMTA uses the Force Account payment method when any of the following conditions exist.
    - a. The RE and Contractor fail to agree on an Agreed Lump Sum unit price.
    - b. The Contractor cannot estimate the work within reasonable limits of accuracy because of unforeseen conditions or lack of sufficient information.
    - c. The RE decides that Force Account will provide the most accurate and realistic method of payment.
    - d. The work affects the critical path, and the Contractor must perform it immediately.

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- e. The work requires any part of an allowance bid item that is not based on unit prices.
- C. **Schedule Impact:** If the Contractor can estimate an adjustment in Contract time within reasonable accuracy, the RE must attempt to reach an agreement with the Contractor. A time adjustment can be positive, negative, or zero depending on its effect on the critical path.
- 1. The RE must enter the amount of adjustment on the schedule even if it is a zero adjustment.
  - 2. If the RE cannot obtain an agreement with the Contractor, the RE must write “deferred” in the time adjustment line. Execution of a C/Mod with time deferred requires approval of the Construction or Program Manager.
- D. **Signature:** The Contractor, Executive Director/CEO of SFMTA, and Deputy City Attorney must sign and date the Contract Modification. If SFMTA requires the C/Mod to receive the Board of Directors' approval, SFMTA Board of Directors Secretary must sign the C/Mod and provide the resolution number. This is subject to the approved Delegation of Authority per CM 0201.

#### **1103.3.5.4 Modification Change Analysis**

The RE must complete a Modification Change Analysis form (see Exhibit 1103-4), which includes a scope of work, reason for change, Engineer’s Estimate, Contractor’s Cost Proposal, cost analysis, schedule analysis, and recommendation signature.

- A. **Scope of Work:** The RE may use the same content as in the Contract Modification scope of work.
- B. **Reason for Change:** Explain why the change is needed. Reasons may include:
  - 1. Changes in operational or functional requirements
  - 2. Unforeseen or differing site conditions
  - 3. Design errors or omissions
  - 4. Revised criteria
  - 5. Time extensions
  - 6. Material substitutions




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7. Benefits or savings through Value Engineering
  8. Incomplete right-of-way obligations
  9. Unresolved utility conflicts
  10. Lack of coordination with regulatory or other agencies
  11. Ambiguities in the Contract Documents
  12. Others
- C. **Engineer's Estimate:** The RE or designated representative must prepare an independent cost analysis as soon as the RE develops fully the scope of each change. The Engineer's Estimate is restricted information and must be independent from the Contractor's Cost Proposal and removed from any package sent to the Contractor.
- D. **Contractor's Cost Proposal:** Prior to negotiations, the RE must mark up a copy of the Contractor's Cost Proposal to reflect an equitable adjustment for the change.
- E. **Cost Analysis:** See Section 1103.3.2, Cost Analysis. This includes a cost comparison between the Engineer's Estimate and the Contractor's Cost Proposal.
- F. **Schedule Analysis:** The RE with the support and concurrence of the PCM must develop a descriptive narrative that defines the impact of the Contract change on Critical Path Method (CPM) activities and substantiates the overall time extension included. Attach a computer-generated analysis if performed.
- G. **Signature:** The RE and the CM must sign and date the Modification Change Analysis.

#### **1103.3.5.5 Summary Record of Negotiations**

The RE must complete a Summary Record of Negotiations form (see Exhibit 1103-5) that documents the negotiations during the C/Mod process, including any agreements SFMTA and the Contractor reach. The RE and the Contractor both must review and sign this form.

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### 1103.3.5.6 Funding Summary

The RE with support from the PCM prepares the Funding Summary document, which must include the following:

- A. Original Contract amount
- B. List of previously approved C/Mod and amounts
- C. List of the funding sources with funding amounts
- D. Required insurance and expiration date
- E. Current amount by funding source

### 1103.3.5.7 Modification Supporting Documents

Within in C/Mod package, the RE must include the following supporting documents:

- A. Contract Compliance Approval: An approval letter from the Contract Compliance Department that documents Contract compliance.
- B. Form 8, Declaration – Modification of Construction Contracts: A Contract Document that declares the Contract has been modified.
- C. SFMTA Board of Directors Resolution: A document that states SFMTA Board of Directors (SFMTAB) has approved the resolution, if applicable.


If the total amount of the C/Mod exceeds 10 percent of the Contract amount or \$5,000,000, the C/Mod needs approval from SFMTAB. Therefore, the C/Mod package will include the resolution document only if the C/Mod requires SFMTAB approval.

### 1103.3.5.8 Sole-source Justification

If the Contractor is a sole-source provider, the C/Mod package must include sole-source justification. The RE is responsible for preparing a justification letter that explains why the Contractor is the sole source for this change.

### 1103.3.6 Supplemental Contract Modification

In the following cases, the RE must prepare a Supplemental C/Mod to adjust the final amount of a previously issued C/Mod. The supplemental C/Mod will have a new C/Mod number and is a stand alone document, but serves the purpose of adjusting the contract amount or time based on the final result of force account work.

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A. Force Account Change Order with Agreed Lump Sum (Bilateral Change Order):  
 This is usually one of three types:

1. A Force Account Change Order with a not-to-exceed amount the RE had previously established in the C/Mod. At the completion of work, the RE and Contractor agree on a price based on the final force account records, which becomes the Agreed Lump Sum, and the RE prepares a Supplemental C/Mod to adjust and finalize an approved C/Mod utilizing a force account compensation method.
2. A Force Account Change Order with a not-to-exceed amount the RE had previously established in the C/Mod. Prior to completion of the changed work, the RE and Contractor agree on a price based on a negotiated lump sum, which becomes the Agreed Lump Sum, and the RE prepares a Supplemental C/Mod to adjust and finalize an approved C/Mod utilizing a lump sum compensation method and force account records are discontinued.
3. At the completion of work, if the Contractor requests additional compensation, the Contractor must file a claim per the General Provisions Section 75.2, Unilateral Change Order. Upon review, if the RE determines that the Contractor's claim has merit, the RE will prepare a Supplemental C/Mod with an Agreed Lump Sum price to adjust and finalize an approved C/Mod utilizing a force account or lump sum compensation method.


B. Force Account Change Order with a Lump Sum (Unilateral Change Order): If the SFMTA requires additional work and the RE and Contractor do not agree upon a price, but the RE directs the Contractor to complete the work, the RE prepares a Supplemental C/Mod with a Lump Sum price to adjust and finalize the previously issued unilateral C/Mod.

### **1103.3.7 Contract Modification Approval, Distribution, and Filing**

#### **1103.3.7.1 General**

After the RE prepares the C/Mod package, the RE must:

- A. Sign the Contract Analysis form and the Contract Modification Documentation Checklist form.
- B. Request and obtain the CM's signature on the Contract Analysis form.
- C. Forward the entire package to the Contract Administrator for compliance and completeness review.

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Throughout the C/Mod preparation process, the RE should consult with the Contract Administrator regarding any questions or for assistance.

#### **1103.3.7.2 Corrections**

After reviewing the C/Mod package, if the Contract Administrator requests corrections, the Contract Administrator and RE must coordinate the correction efforts.

#### **1103.3.7.3 Approval**

After the Contract Administrator determines the C/Mod package is complete, the RE must forward 4 originals of the C/Mod to SFMTA Attorney for approval and signature.

After SFMTA Attorney approves the C/Mod form and returns the 4 originals back to the Contract Administrator, the Contract Administrator will forward the 4 originals to the Contractor for review and signature.

#### **1103.3.7.4 Contractor Review**

The Contractor must review the C/Mod thoroughly. If the Contractor agrees with the C/Mod, the Contractor must sign and date all 4 originals, and return them to the Contract Administrator.

#### **1103.3.7.5 Contract Modification Approval**


After the Contract Administrator receives the 4 signed originals, the Contract Administrator routes the C/Mod package per Record of Concurrence and Approval guidelines (see Section 1103.3.5.2) and processes the package.

All C/Mod packages over \$50,000; and/or that include a time extension; and/or that impact third parties shall be submitted to the Configuration Management Board (CMB) (see PCP 01) for review prior to routing for approval signatures. The RE or Construction Manager may submit other C/Mod packages to the CMB at their discretion if considered needed.

PCCs, CORs, and C/Mods may be submitted to the CMB for a preliminary review if the RE or Construction Manager deems necessary.

After the C/Mod receives signatures from all of the parties listed in Section 1103.3.5.2, the C/Mod is considered approved.

If one party does not approve the C/Mod, the Contract Administrator leads the process to help SFMTA reach an agreement, and if the C/Mod needs revisions, the RE will arrange a renegotiation with the Contractor, and resubmit the revised C/Mod.

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### 1103.3.7.6 Contract Modification Filing

Before forwarding the C/Mod package to the Contract Administrator, the RE must make 1 copy and file it in the field office with one copy to Document Control. Before routing the C/Mod package for approval, the Contract Administrator must make 1 copy and file it in the Contract Administration office.

### 1103.4 DEFINITIONS

None.


### 1103.5 EXHIBITS

- 1103-1 Sample Contract Modification Documentation Checklist
- 1103-2 Sample of Record of Concurrence and Approval
- 1103-3 Sample Contract Modification Form
- 1103-4 Sample Modification Change Analysis
- 1103-5 Sample Summary Record of Negotiations
- 1103-6 Flow Chart

### 1103.6 REFERENCES

Refer to the following:

- Contract Specifications General Provisions Sections 11- Estimate of the amount of work to be done, 75-79 (Contract Modification and Time Allowance), and 98- Clarification and Claims.
- Procedure Manual Sections 1105- Differing Site Condition and 1107- Force Account Work.

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### 1103.7 PROCEDURE HISTORY

<u>Revision Level</u>	<u>Revision Date</u>	<u>Summary of Revision</u>	<u>Approved By</u>

### 1103.8 APPROVALS




Prepared by	Reviewed by	Signature & Date
<b>Originator of Central Subway Procedures Manual Title and Unit:</b>  Dane Hudson Construction Manager Central Subway Partnership	Roger Nguyen Quality Assurance Manager Quality Assurance Office  Robert Rocco Configuration & Risk Manager Central Subway Partnership  Arthur Wong SFMTA Construction Manager Central Subway Project	      

Exhibit 1103-1: Sample Contract Modification Documentation Checklist

**DOCUMENTATION CHECKLIST**

**CONTRACT MODIFICATION NO. 4**

Bid / RFP No.: MR-1210      Date: 1/30/07      Package Prepared By: Joon Park

Bid / RFP Title: MUNI Metro System Subway Overhead Reconstruction

Item	Document Included in Package	Yes	No	N/A	Prepared By	Date
1	Record of Concurrence and Approval	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Joon Park	1/29/07
	Executive Summary Memorandum					
2.	Contract Amendment Originals (4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Joon Park	
3.	Contract Change Analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Joon Park	12/20/06
4.	Summary Record of Negotiations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Joon Park	12/20/06
5.	Finding of Fact (time only)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.	Funding Summary Documents	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drew Howard	1/29/07
7.	Independent Engineer's Estimates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tee Phang	11/20/06
8.	Contractor's Cost Proposals	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stephen Wong	11/22/06
9.	Modification Supporting Documents					
	a. Contract Compliance Office Approval	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Andre P. Boursse	
10.	Sole Source Justification	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

General Notes:

Exhibit 1103-2: Sample of Record of Concurrence and Approval

**RECORD OF CONCURRENCE AND APPROVAL**

SUBJECT:	Contract Modification No. 4 to Contract No. MR-1210
PROJECT:	MUNI Metro System Subway Overhead Reconstruction

Modification Scope/Executive Summary:

This contract modification compensates the Contractor to replace 814 units of the installed Type B hangars, 100 mm and 175 mm in length, as shown on Impulse Drawing No. SKS-070069.

This contract modification No. 4 increases the cost of the contract by \$163,614. There is no time adjustment associated with this contract modification No. 4.

Final Routing	Approval Authority	Signature	Date	Comments
7	Nathaniel P. Ford, Sr. Executive Director/CEO, SFMTA			
6	Roberta Boomer Secretary, SFMTA			
5	Sonali Bose Director of Finance and Administration			
4	Carter R. Rohan, R.A. Senior Director of Capital Programs & Construction			
3	John Funghi Senior Program Manager, Central Subway			
2	Shahnam Farhangi Manager of Construction Contract Administration			
1	Arthur Wong Construction Management, Central Subway			

**Note:** Please return fully executed contract modification and supporting documentations to Shahnam Farhangi.



Exhibit 1103-3: Sample Contract Modification Form

**CONTRACT MODIFICATION NO. 4**

San Francisco Municipal Railway                      Contract No. MR-1210

**MUNI Metro System Subway Overhead Reconstruction**

Page: 1 of 2

Contractor:                      Shimmick Construction Co. Inc.  
    24200 Clawiter Road  
    Hayward, CA 94545

1.            Replace all the installed Type B hangars of between 100mm and 175mm (4 inches and 7 inches) in length and having a split bolt attachment. Remove and dispose the existing copper wire rope, split bolt, and thimble. Install in their place stainless steel wire rope suspension as shown on Impulse drawing No. SKS-070069. This work shall be done to an estimated quantity of 814 units at the agreed unit price of \$201.00 per unit.

Agreed Unit Cost,                      \$163,614.00

The Contract is hereby modified as follows:

2.            Add the following new Contract Pay Items:

CM 4	Replace 814 Units of Type B Hangar 100mm to 175mm in Length	Agreed Unit Cost,	\$163,614.00
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Total Amount of this Contract Modification:	Increase,	\$163,614.00
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Previous Total of Contract:	\$8,029,464.00
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New Revised Total of Contract:	\$8,193,078.00
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Total Contract Time added by this Contract Modification:	None
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Previous Contract Completion Date:	May 13, 2008
------------------------------------	--------------

New Revised Contract Completion Date:	May 13, 2008
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3.            This Modification is made in accordance with Article 75 of the Contract General Provisions.
4.            Except as provided herein all previous terms and conditions of the Contract remain unchanged.

CONTRACT MODIFICATION NO. 4

Contract No. MR-1210

- 
5. Contractor acknowledges and agrees that the amounts agreed for the work described above shall be in full accord and satisfaction of all current and prospective costs incurred in connection with Contractor's performance of the work under this modification, without limitation. Contractor releases SFMTA from all claims for which full accord and satisfaction is hereby made, as set forth above.

If this modification involves the granting of an extension of time, with or without cost, Contractor releases SFMTA from all claims and costs associated with such extension of time. Such costs may include, but are not limited to, costs for labor, materials, equipment, disruption, lost productivity, escalation, delay, extended overhead, administration and extended performance time.

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2 of 2

**SHIMMICK CONSTRUCTION CO. INC. CITY AND COUNTY OF SAN FRANCISCO**

By: \_\_\_\_\_

*Signature Date*

Charley McDonell

Project Manager

By: \_\_\_\_\_

*SignatureDate*

Nathaniel P. Ford, Sr.

Executive Director / CEO SFMTA

**APPROVED AS TO FORM:**

Dennis J. Herrera, City Attorney

By: \_\_\_\_\_

*SignatureDate*

Robin M. Reitzes

Deputy City Attorney

Exhibit 1103-4: Sample Modification Change Analysis

CONTRACT MODIFICATION NO. 4

San Francisco Municipal Railway Contract No. MR-1210 Contractor: Shimmick Construction Co. Inc.

MINI METRO SYSTEM SUBWAY OVERHEAD

Pier 96 Administration Bldg.  
San Francisco, California 94124

**MODIFICATION CHANGE ANALYSIS**

**SCOPE OF WORK:**

Replace all the installed Type B hangars (814 units) between 100 and 175mm (4 to 7 inches) in overall length: Remove and dispose the existing copper wire rope, split bolt, and thimble. Install in their place stainless steel wire rope suspension as shown on Impulse drawing No. SKS-070069.

**REASON FOR CHANGE:**

These hangars were installed as part of the original Contract but have proven to be prone to flexural failure and need to be replaced with a revised design that is better adapted for reduced clearance applications as found in certain portions of the MUNI Subway System.

**ENGINEER'S ESTIMATES:**

\$68,242 Cost breakdown dated 11/20/06 By: Tee Phang

**CONTRACTOR'S COST PROPOSALS:**

\$163,493 Cost breakdown dated 11/22/06 By: Stephen Wong

Exhibit 1103-5: Sample Summary Record of Negotiations

**CONTRACT MODIFICATION NO. 4**

**San Francisco Municipal Railway Contract No. MR-1210**

Contractor: Shimmick Construction Co. Inc.

Pier 96 Administration Bldg.  
San Francisco, California 94124

MIAMI METRO SYSTEM AIRWAY OVERHEAD

**SUMMARY RECORD OF NEGOTIATIONS**

The Contractor and SFMTA met on 11-28-06 to negotiate the final cost for modifying the hangars. Representing SFMTA were Romando Lucchesi, Resident Engineer; Lisa Chow, Project Manager; Tee Phang, Project Engineer; So Man-Leung, Design Engineer; and Shahnam Farhangi, Manager of the Construction Contract Administration Section. Representing the contractor, Shimmick Construction Co. Inc. were Charley McDonell, Project Manager and Stephen Won, Project Engineer.

During the meeting, an agreement was reached to establish the total cost for one shift of work at \$5,280.70 including mark-up. This cost is based on the actual crew size, equipment used, and mark-up in accordance with the Contract Specification as itemized below.

<u>Labor Class</u>	<u>Hourly Labor Rate</u>	<u>Total</u>
Lineman General Foreman	\$ 121.16	
Lineman Journeyman	\$ 100.11	
Lineman Journeyman	\$ 100.11	
Lineman Journeyman	\$ 100.11	
Groundman Journeyman	\$ 67.50	
High Rail Vehicle	\$ 75.00	
Pick-up Truck	\$ 10.00	
Sub-total Hourly Crew Rate		\$ 573.99
Sub-total 8 Hour Crew Rate		\$ 4,591.92
15% OH and Profit		\$ 688.79
<b>Total Crew Rate Per Work Shift</b>		<b>\$ 5,280.71</b>

Also, an agreement was reached to establish the production rates to perform replacement work at 27 units per shift. Considering that the material costs were confirmed to be \$5 per unit to replace system, the unit prices is derived as follows:

- Formula:  $\{((\text{quantity of units}/\text{production rate})\text{total cost for one shift})/\text{quantity of unit}\} + \text{material cost of unit}$
- Unit Cost:  $\{(814/27)5280.7/814\} + 5 = \$201$  per unit

An agreement was reach between MTA and the Contractor to replace 814 units of the installed Type B Hangars at an agreed unit cost of \$201 per unit not to exceed \$163,164. (814 units at \$201 per unit)

By: \_\_\_\_\_

By: \_\_\_\_\_

*Signature*                      *Date*

*Signature*                      *Date*

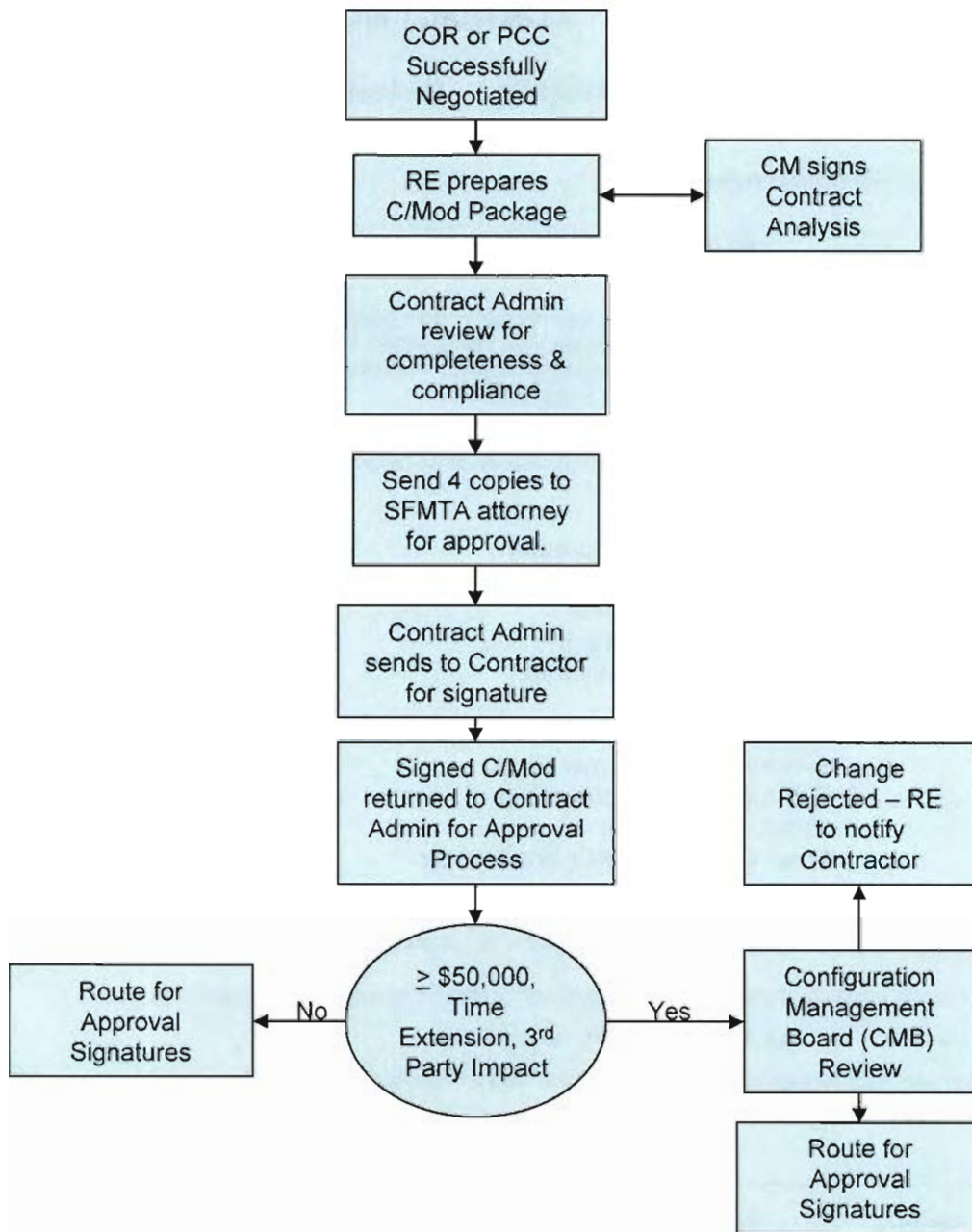
Charley McDonell, Project Manager

Romando Lucchesi, Resident Engineer

Shimmick Construction Co. Inc.

MTA Construction Representative

Exhibit 1103-6: Flow Chart



## CMod 003

**Scope:** This cost analysis provides a summary of the various costs and credits to the contractor due to the acceleration of the UMS headwall construction. This estimate is limited to work beyond the scope shown in the contract documents. The primary benefit to the contractor from this accelerated work relates to the increase in laydown area for staged materials and material stocking as well as the avoidance of sharing work space with CN 1300, assuming that the scope of work gets completed in accordance with the proposed timeline.

**Summary:**

Scope	Credit/Cost	
Final Street Restoration	\$ (34,963.80)	Cred.
Utility Protection	\$ 66,182.99	Cost
Stockton Closure	\$ (35,047.20)	Cred.
Jet Grout Spoils Trenches	\$ 20,776.27	Cost
<b>Total</b>	<b>\$ 16,948.26</b>	

**Summary:**

Credits to BIH	\$ (70,011.00)
Costs to BIH	\$ 86,959.26
<b>Net Cost</b>	<b>\$ 16,948.26</b>
Mark Up - 15%	\$ 2,542.24
Bond & Insurance - 1.68%	\$ 327.44
<b>Total</b>	<b>\$ 19,817.94</b>

  
 Kenneth Barnhart

### Final Street Restoration

**Scope:** The pavement restoration estimate captures the credit to the contractor due to the deletion of the pavement renovation shown on sheets RP-112 and RP-113 from CN 1252 contract documents. Fully burdened prevailing wages were used accordingly.

**Assumptions:** -6 day duration to complete this scope of work.  
 -1 Truck for Foreman  
 -1 Truck for Laborers / Operator Engineer

<b>Pavement Restoration</b>					6 Days
<b>Material</b>		<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Material Ext.</b>
	Tactile Warning Strips	60 SF		-19.82	-1189.2
	10" PCC Base W/ 2" Wearing	1862 SF		-6.58	-12251.96
	3.5" PCC Sidwalk	1334 SF		-1.81	-2414.54
	6" Curb	44 LF		-4.60	-202.4
	Curb & Gutter	77 LF		-12.90	-993.3
	<b>Subtotal</b>				<b>\$ (17,051.40)</b>
<b>Labor</b>			<b>Hourly</b>		
			<b>Labor Cost</b>	<b>Mhrs</b>	<b>Labor Ext.</b>
	Foreman		-58.97	48	-2830.56
	Laborer		-57.72	48	-2770.56
	Laborer		-57.72	48	-2770.56
	Operator Engineer		-78.33	48	-3759.84
	<b>Subtotal</b>				<b>\$ (12,131.52)</b>
<b>Equipment</b>			<b>Hourly</b>		
			<b>Equipment</b>	<b>Hours</b>	<b>Equipment Ext.</b>
			<b>Cost</b>		
	Mini Exc		-63.79	36	-2296.44
	Foreman Truck		-33.12	48	-1589.76
	Remaining Crew Truck		-33.12	48	-1589.76
	Roller 2 Drum 20HP Compactor		-25.41	12	-304.92
	<b>Subtotal</b>				<b>\$ (5,780.88)</b>
					<b>\$ (34,963.80)</b>

### Utility Protection

**Scope:** The headwall utility protection estimate quantifies the cost to the contractor to work around utility duct banks that would have otherwise been abandoned if not for this acceleration of work. The work incorporates the monitoring of one vault near the north headwall as well as the demo of approximately 10-15' of each ductbank and bundling of the cables that reside in those duct banks.

- Assumptions:**
- 3 Days per location of duct bank demo/bundling.
  - Vault monitoring point includes installation/monitoring.
  - Vault monitoring unit cost is arrived at by adding \$808.79 material costs with 36hrs at (1hr/week) of foreman time.
  - The duct banks on the East and West side of Stockton Street installed under CN 1251 will not interfere with jet grout or headwall work therefor have no cost impact

	North Headwall	South Headwall	QTY	Unit Price	Subtotal
Vault Monitoring Point	1	0	1	\$ 2,931.71	\$ 2,931.71
Duct bank demo/bundle	4	4	8	\$ 6,065.76	\$ 48,526.08
Potholing	4	4	8	\$ 1,810.96	\$ 14,487.68
Coring / Sleeve in vaults	4		4	\$ 59.38	\$ 237.52
				<b>Total</b>	<b>\$ 66,182.99</b>

CCR

Foreman	58.97
Laborer	57.72
Laborer	57.72
OE	78.33
CCR/HR	252.74
CCR/DAY	<b>2021.92</b>
1.5 DAYS	3032.88
3 DAYS	<b>6065.76</b>



Prepared By: Ken Barnhart

Checked By: Matt Hembd

**Scope:** The Stockton full closure cost estimate captures the credits and costs of changing from a half street closure with two different configurations to a full street closure. The contractor (BIH) will benefit from this configuration from the added laydown space for equipment and material staging, as well as the deletion of the planned K-Rail reinforced barrier down the middle of Stockton Street. The contractor will incur additional costs from this configuration due to the additional water filled barriers needed at cross walk locations, steel plates needed to provide a 14' wide emergency vehicle lane and additional temporary fencing and striping.

**Assumptions:** -Laydown area cost \$1.15/sf/month x (36weeks/(4weeks/month))=10.35\$/sf.  
 -Labor is included in unit costs

Stockton Closure					
	Quantity	Unit	Unit Cost	Extended Total	
Temporary Fence	840	lf	3.50	\$ 2,940.00	
Reduced Moving of temp. Fence	1	ls	-800.00	\$ (800.00)	
Steel Plates (for emergency vehicle access)	4	ea	2455	\$ 9,820.00	purchase
Triton Barriers for Cross Walks	54	ea	300	\$ 16,200.00	Water Filled Barriers
K-Rail	-552	lf	50.75	\$ (28,014.00)	No longer needed.
Laydown Area	3456	sf	-10.35	\$ (35,769.60)	
New Striping	160	lf	1.54	\$ 576.40	incl mobilization/removal
<b>Total</b>				<b>\$ (35,047.20)</b>	Contractor Saves

## Jet Grout Spoils Trenches

**Scope:** The Jet Grout Spoils estimate encompasses the work to be performed in preparation of displacing the jet grouting spoils. There are two jet grout spoils pits that will be needed for the North and South headwall jet grouting activities.

**Assumptions:**

- Jet Grout Spoils pit dimensions 80'x 10' x 4'
- A 20% fluff factor has been applied to convert from bank cubic yards to loose cubic yards
- Saw cutting production will be 150 lf/hr
- 6 man crew
- Hauling and dump fees are included only for the spoils created from digging the

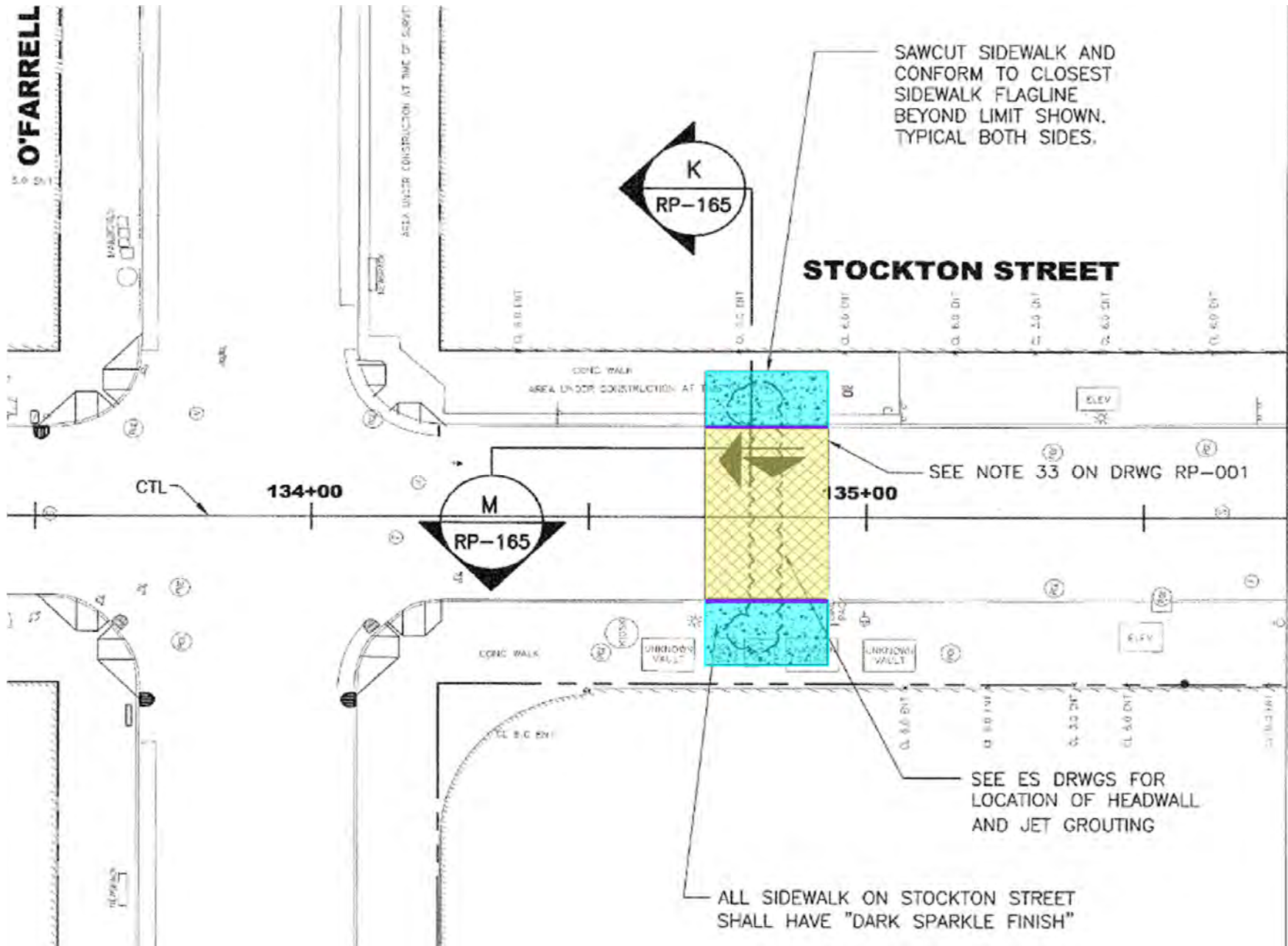
80'x10'x4'	2 ea
Exc. Dispose	237.04 BCY
Sawcut	360 LF

Jet Grout Spoils Trenches			
Sawcutting	2.4 HR	156 \$/HR	\$ 374.40
Haul Pit Exc	284.44 LCY	7.95 \$/CY	\$ 2,261.33
Dump Fees	14.22 Loads	240 \$/Load	\$ 3,413.33
Labor (6 man crew)	5 Days	2945.44 \$/Day	\$ 14,727.20
<b>Total</b>			<b>\$ 20,776.27</b>
*No Material costs due to the nature of the work			

### CCR

Foreman	58.97
4 - Laborer	230.88
OE	78.33
CCR/HR	368.18
CCR/DAY	<b>2945.44</b>
1.5 DAYS	4418.16
3 DAYS	<b>8836.32</b>





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## Estimate Summary

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### Scope/Background:

This estimate contains the cost for the removal and replacement of scaffolding equipment that was in conflict with the Northwest Moscone Headwall construction. The scope of work is for the removal and eventual replacement of a pedestrian canopy from the Northwest Moscone sidewalk in order to allow heawall construction to commence.

**Stakeholders:** BIH, Fine Line Construction, SFMTA

**Date of occurrence:** 6/14/12

### List of attached documents:

- Estimate Comparison
- Detailed Estimate

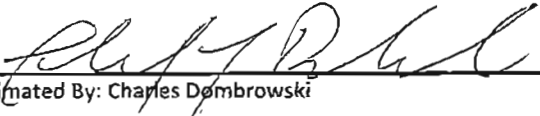
  
\_\_\_\_\_  
Estimate Prepared By: Charles Dombrowski

  
\_\_\_\_\_  
Estimate Checked By: Ken Barnhart

No.	Activity	Days	Hourly rates:								Labor totals	Work T	Hourly rates:								Equipment Totals
			Labor	Labor	Labor	Labor	Labor	Labor	Labor	Labor			Equipment	Equipment	Equipment	Equipment	Equipment	Equipment	Equipment	Equipment	
			\$ 50.14	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00			\$ 33.12	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00		
Engineer's estimate prepared using information reviewed on 09/10/2012. See attachment																					
1	Removal of Scaffolding	0.75	2									\$ 601.70	0.5							\$ 99.36	
2	Reinstallation 20' of pedestrian canopy	0.75	2									\$ 601.70	0.5							\$ 99.36	
3																					
4	<b>Total</b>											<b>\$ 1,203.40</b>								<b>\$ 198.72</b>	

Labor	\$	1,203.40
Material	\$	-
Equipment	\$	198.72
2nd Tier Sub	\$	-
Markup on 2nd Tier Sub - 5%	\$	-
1st Tier Sub OH&P - 15%	\$	210.32
1st Tier Sub Bond/Insurance - 2.86%	\$	46.12
Prime - Markup - 5%	\$	82.93
Prime - Bond/Insurance - 1.68%	\$	29.26
<b>Total Amount</b>	<b>\$</b>	<b>1,770.74</b>

Assumptions:

  
Estimated By: Charles Dombrowski 1/10/2013

Shift Duration: 8hrs  
  
Checked By: Ken Barnhart 1/10/2013



# Barnard Impregilo Healy JV

TRANSMITTAL

No. 00586

PO BOX 78270  
San Francisco, CA 94107

Phone: 415-546-0799  
Fax: 415-546-3822

**PROJECT:** Contract 1252 - Tunnels

**DATE:** 8/28/2012

**TO:** SF Municipal Transportation Agency  
821 Howard Street  
San Francisco, CA 94103

**REF:** COR #029  
MOS - Todco Scaffolding  
Reimbursement

**ATTN:** Sarah H. Wilson

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
<input type="checkbox"/> Shop Drawings	<input checked="" type="checkbox"/> Approval	<input type="checkbox"/> Approved as Submitted
<input type="checkbox"/> Letter	<input type="checkbox"/> Your Use	<input type="checkbox"/> Approved as Noted
<input type="checkbox"/> Prints	<input checked="" type="checkbox"/> As Requested	<input type="checkbox"/> Returned After Loan
<input type="checkbox"/> Change Order	<input type="checkbox"/> Review and Comment	<input type="checkbox"/> Resubmit
<input type="checkbox"/> Plans		<input checked="" type="checkbox"/> Submit
<input type="checkbox"/> Samples	<b>SENT VIA:</b>	<input type="checkbox"/> Returned
<input type="checkbox"/> Specifications	<input checked="" type="checkbox"/> Attached	<input type="checkbox"/> Returned for Corrections
<input type="checkbox"/> Other:	<input type="checkbox"/> Separate Cover Via:	<input type="checkbox"/> Due Date:

ITEM NO.	COPIES	DATE	ITEM NUMBER	REV. NO.	DESCRIPTION	STATUS
1	1	8/28/2012			COR #029	NEW

Remarks: Attached is one (1) hard copy of change order request (COR) #029 - (MOS - Todco Scaffolding Reimbursement).

*EE review included*

CC:

Signed:

  
Jack William Sucilsky

*Handwritten initials*





**BARNARD  
IMPREGILO  
HEALY JOINT VENTURE**

## BARNARD IMPREGILO HEALY JOINT VENTURE

420 Fourth Street San Francisco, CA 94107, PH (415) 546-0799, FX (415) 546-3822

Third Street Lightrail Program Phase 2 - Central Subway Project  
CONTRACT 1252

8/28/2012

COR 029: MOS - Todco Scaffolding Reimbursement

### Conflict - T&M Mark-up Summary

Direct Costs	Total
Labor	\$0.00
Labor Markup at Specified 15%	\$0.00
Equipment	\$0.00
Equipment Markup at Specified 15%	\$0.00
Materials	\$0.00
Materials Markup at Specified 15%	\$0.00
Other Items And Expenditures	\$0.00
Other Items And Expenditures Markup at Specified 15%	\$0.00
Subcontractors	\$1,609.00
Contractors Markup at Specified 5%	\$80.45
Total Project Costs	\$1,689.45
BIHJV Payment & Performance Bonds & Builder's Risk Insurance (1.68%)	\$28.38
Contractors Markup at Specified 5%	\$1.42
Total Bonds & Insurance costs	\$29.80
Total Amount	\$1,719.25

*[Signature]* 9/10/12  
Ken Barnhart

*[Signature]* 9/10/12  
Charles F. Dombrowski

Title:  <b>central T subway</b> PROGRAM CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Preparation of Current Cost Estimates	Document Type: Plan and Procedures
	Document Number: PCP 03
Unit/Function: Capital Programs & Construction Division Central Subway	Revision Number: 0

# PREPARATION OF QUANTITIES AND CURRENT COST ESTIMATES (CCE)

---

APPROVED BY: John Funghi  
Senior Program Manager  
SFMTA Central Subway



DATE: 5-6-10

Title:  <b>central T subway</b> PROGRAM CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Preparation of Current Cost Estimates	Document Type: Plan and Procedures
	Document Number: PCP 03
Unit/Function: Capital Programs & Construction Division Central Subway	Revision Number: 0

## 1.0 PURPOSE

This document provides the procedure for updating and reporting of the Current Cost Estimate.

The Central Subway Project's Baseline Cost Estimate (BCE) was established at the FTA/PMOC directed Risk Assessment Workshops that culminated in February, 2009. All Cost Estimates that are developed subsequent to that date are termed Current Cost Estimates (CCE) and so noted with the date of issue. The BCE and CCE are composed of the following:

- Construction (includes pre-award through post-award completion of the work)
  - Construction Contracts (including their associated Allocated Contingencies and escalation)
  - Fare Collection systems and equipment
  - Job Order Contract (JOC) task orders
  - Utility Connection Fees
  - Communication Connection Costs
  - Owner Controlled Insurance Program (OCIP) allowance
  - Public Art Program
- Real Estate (Costs of acquisition, easements, relocation and associated agency labor)
- Light Rail Vehicles
- Professional Services
  - Agency and Consultant Labor for Project/Construction Management, Preliminary Engineering and Final Design
  - Owner's Protective Professional Insurance (OPPI)
  - Legal, Permits and Review Fees by others
  - Surveys, Testing, Investigations, Inspection
  - Start-Up
- Unallocated Contingency

The CCE reflects current updates to the above categories and is coded in accordance with a work breakdown structure (WBS) that can sort the cost elements by SCC or by work package.

## 2.0 RESPONSIBILITY

<p>Title:</p> <p style="text-align: center;"><b>central T subway</b></p> <p style="text-align: center;">PROGRAM CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION &amp; REVIEW Preparation of Current Cost Estimates</p>	<p>Document Type: Plan and Procedures</p> <p>Document Number: PCP 03</p>
<p>Unit/Function:</p> <p style="text-align: center;">Capital Programs &amp; Construction Division Central Subway</p>	<p>Revision Number: 0</p>

There are various project participants responsible for the cost elements of the project. The Project Controls Manager (PCM) is responsible for the operations of the Project Controls Group and reports directly to the Program Manager Project Services (PMPS) who reviews all changes to the Current Cost Estimate, subject to final approval by the Senior Program Manager (SPM) as noted herein.

The PCM has the responsibility for developing the Quantity Worksheets for use in Pre-Award Construction Cost Estimates (Exhibit A, Example of Quantity Worksheet). The Quantity Worksheets refer to the format of the worksheets that will be utilized by the Final Design Consultants for their input of the quantity take-offs at the designated design development milestones, i.e., 65%, 90% and 100%. (In this procedure, the “Quantity Worksheets” will refer to the listed quantity elements with the appropriate extended WBS designation; “completed Quantity Worksheets” refers to the entry of the Final Design Consultant’s quantity take-offs into the format.) The PCM assigns a Quantity Worksheet Originator and a Quantity Worksheet Checker for the estimates of each of the seven major construction contracts. The Quantity Worksheet Originator and Checker shall be two different persons. The Quantity Worksheet Originator is responsible for the assembling of the Quantity Worksheets per the project WBS breakdown structure. The Quantity Worksheet Checker shall be an individual who did not prepare the Quantity Worksheets and is responsible for the checking for completeness, clarity, legibility, proper documentation, and accuracy.

The Design Package Project Manager (DPPM) of each construction contract package is responsible for preparation of the quantity take-offs (utilizing the Quantity Worksheets) and preparation of Specialty Estimates for pre-award construction contracts. The DPPM is responsible for designating Quantity Originators and Quantity Checkers for their designated construction contract package. The DPPM is responsible for assigning Specialty Estimate Originators and Specialty Estimate Checkers as appropriate. The Originator and Checker for a task shall be two different persons. The Quantity Originator is responsible for assembling quantity data into the appropriate format. The Specialty Estimator Originator is responsible for assembling quantity and cost data into the appropriate format. The Quantity Checker or Specialty Estimate Checker shall be an individual who did not perform the quantity take-off or Specialty Estimate and is responsible for checking for completeness, clarity, legibility, proper documentation, and accuracy.

The PCM has the responsibility for developing construction cost estimates for the seven major construction contract packages. The PCM assigns a Cost Estimate Originator and a Cost Estimate Checker for each element of the cost estimate.

<p>Title:</p> <p style="text-align: center;"><b>central T subway</b></p> <p style="text-align: center;">PROGRAM CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION &amp; REVIEW Preparation of Current Cost Estimates</p>	<p>Document Type: Plan and Procedures</p> <p>Document Number: PCP 03</p>
<p>Unit/Function:</p> <p style="text-align: center;">Capital Programs &amp; Construction Division Central Subway</p>	<p>Revision Number: 0</p>

The Cost Estimate Originator and Cost Estimate Checker shall be two different persons. The Cost Estimate Originator is responsible for an order-of-magnitude review of the completed Quantity Worksheets transmitted by the DPPM and coordinating any quantity issues with the DPPM. The Cost Estimate Originator is then responsible for generating a professional-quality cost estimate, utilizing current pricing data, acceptable labor rates and crewing, feasible construction durations, to complete the prescribed scope of work. The Cost Estimate Checker shall be an individual who did not prepare the estimate and is responsible for checking for completeness, clarity, legibility, proper documentation, and accuracy.

The Design Oversight Manager (DOM) is responsible for the coordination of the cost estimate approval process, assessing the reasonableness of estimate products, and verification that the cost estimate is within the "Construction Budget" as per Section 6 of the Final Design Consultant contracts.

The PCM is responsible for developing, updating and monthly reporting of the CCE and reconciling it with the BCE as appropriate.

The qualifications of the above positions are provided in DCP 1.0.

### 3.0 PROCEDURES


#### 3.1 CONSTRUCTION CONTRACTS

##### 3.1.1 Pre Award Construction Contract Cost Estimates

##### 3.1.1.1 Quantity Worksheet

**Step 1.** The PCM-assigned Quantity Worksheet Originator prepares the Quantity Worksheets which shall include full documentation of the information sources. After the Quantity Worksheets are prepared, the Quantity Worksheet Originator prepares a hardcopy (review copy), applies the Check Print Stamp, signs/initials and dates, and forwards the review copy to the assigned Quantity Worksheet Checker. Refer to DCP 2.12, Versions and Revisions, for numbering schemes. The check print stamp is included in DCP 2.7, Drawings.

**Step 2.** The Quantity Worksheet Checker performs a formal check in accordance with the Quality Control process for the Checker, Backchecker, and Verifier Review Cycles described in DCP 2.5, Calculations. Once the check cycle is completed, the Quantity Worksheet Checker forwards the Quantity Worksheets to the PCM and DOM.

<b>Title:</b>  <div style="text-align: center;">   <b>central T subway</b>  PROGRAM CONTROL PROCEDURES  SECTION 2 – DOCUMENT PREPARATION &amp; REVIEW  Preparation of Current Cost Estimates </div>	<b>Document Type:</b> Plan and Procedures <b>Document Number:</b> PCP 03
<b>Unit/Function:</b> Capital Programs & Construction Division Central Subway	<b>Revision Number:</b> 0

**Step 3.** If the DOM has concerns or comments, the DOM will notify the PCM, who will reconcile the comments and then the PCM will forward the final Quantity Worksheets back to the DOM.

### 3.1.1.2 Quantity Take-Offs

**Step 4.** The DOM transmits the “Quantity Worksheet” through Document Control to the DPPM

**Step 5.** The DPPM-assigned Quantity Take-Off Originator performs quantity take-offs and any subsequent modifications to the Quantity Worksheets as appropriate thereto for the construction contract packages for which they are responsible. The quantity take-offs will be incorporated into the Quantity Worksheets and shall include full documentation of the information sources and the dates the reference drawings were issued. After the Quantity Worksheets are completed, the Quantity Take-Off Originator prepares a hardcopy (review copy), applies the Check Print Stamp, signs/initials and dates, and forwards the review copy to the assigned Quantity Take-Off Checker. Refer to DCP 2.12, Versions and Revisions, for numbering schemes. The check print stamp is included in DCP 2.7, Drawings.

**Step 6.** The Quantity Take-Off Checker performs a formal check in accordance with the Quality Control process for the Checker, Backchecker, and Verifier Review Cycles described in DCP 2.5, Calculations. Once the check cycle is completed, the Quantity Checker forwards the completed Quantity Worksheets and Check Prints to the DPPM. If the DPPM has concerns or comments, the DPPM will notify the Quantity Checker, who will reconcile the comments and then return the completed Quantity Worksheets to the DPPM.

### 3.1.1.3 Cost Estimate Assembly and Pricing

**Step 7.** The DPPM transmits the completed Quantity Worksheets and Check Prints through Document Control to the DOM and PCM along with explanations of the changes (if any) from the original Quantity Worksheets.

**Step 8.** The Cost Estimate Originator performs an order-of-magnitude review and assesses the reasonableness of the quantity take-offs. If the Cost Estimate Originator has concerns or comments on the Quantity Take-Offs, the PCM will notify the DOM and DPPM, who will work jointly to resolve the comments and if necessary, the DPPM will re-transmit revised Quantity Worksheets.

<p>Title:</p> <p style="text-align: center;"><b>central T subway</b></p> <p style="text-align: center;">PROGRAM CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION &amp; REVIEW Preparation of Current Cost Estimates</p>	<p>Document Type: Plan and Procedures</p> <p>Document Number: PCP 03</p>
<p>Unit/Function:</p> <p style="text-align: center;">Capital Programs &amp; Construction Division Central Subway</p>	<p>Revision Number: 0</p>

**Step 9.** The Cost Estimate Originator utilizes the completed Quantity Worksheets provided and generates the cost estimate for the construction contract package.

**Step 10.** After the cost estimate is developed, the Cost Estimate Originator prepares a hardcopy (review copy), applies the Check Print Stamp, signs/initials and dates, and forwards the review copy to the assigned Cost Estimate Checker. Refer to DCP 2.12, Versions and Revisions, for numbering schemes. The check print stamp is included in DCP 2.7, Drawings.

**Step 11.** The Cost Estimate Checker performs a formal check in accordance with the Quality Control process for the Checker, Backchecker, and Verifier Review Cycles described in DCP 2.5, Calculations. Once the check cycle is completed, the Cost Estimate Checker forwards the cost estimate to the PCM.

#### 3.1.1.4 Cost Estimate Review Cycle


**Step 12.** The PCM coordinates the transmittal of the cost estimate through Document Control along with a Review Comment Form (RCF) and No Review Comment Form (NRCF), to the DPPM, DOM, PMPS, and PCM for review.

**Step 13.** After discussion among the Reviewers (DPPM, DOM, PMPS, and PCM) and the Cost Estimate Originator, the Reviewers' comments shall be written on the RCF and returned to Document Control. If no review comments are made, the signed/initialed and dated NRCF shall be returned with Check Prints to Document Control, and Steps 14 and 15 shall be ignored.

**Step 14.** The Cost Estimate Originator incorporates and/or addresses the comments, signs/initials and dates, and resubmits the cost estimate to Reviewers, through Document Control, for verification of incorporation of the comments.

**Step 15.** Each Reviewer (DPPM, DOM, PMPS, and PCM) shall verify that their comments were addressed, sign/initial their review copy, and return the review copy, through Document Control. The preceding steps are repeated until the Reviewer and Cost Estimate Originator are satisfied with the cost estimate (concurrence with answers to comments and verification of incorporation of comments on the RCF).

In general, if there is disagreement concerning review comments, the conflict shall be escalated and resolved as described in DCP 2.0, General, Section 2.0,

<p>Title:</p> <p style="text-align: center;"><b>central  subway</b></p> <p style="text-align: center;">PROGRAM CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION &amp; REVIEW Preparation of Current Cost Estimates</p>	<p>Document Type: Plan and Procedures</p> <p>Document Number: PCP 03</p>
<p>Unit/Function:</p> <p style="text-align: center;">Capital Programs &amp; Construction Division Central Subway</p>	<p>Revision Number: 0</p>

Responsibility and the terms and conditions of the Design Package contract, as appropriate.

**Step 16.** As part of the review process, the DOM assesses the cost estimate in accordance with DCP 2.0, General, Section 6.0, Program Budget and Cost Controls, of the Final Design Contract. The estimate must meet the “Construction Budget” criteria established in Subsection 6.1. If not, the DOM will advise the DPPM of the need to re-design in order to achieve the acceptable cost threshold. (See DCP 2.14 Configuration Management and Change Control for the Design Process.)

### 3.1.2 Pre Award Construction Contract Cost Estimates – Specialty Estimates (Design Package 3)

#### 3.1.2.1 Specialty Cost Estimate Assembly and Pricing

**Step 1.** The DPPM assigns the Specialty Cost Estimate Originators and Checkers.

**Step 2.** The Specialty Cost Estimate Originator develops the quantity take-offs required and develops and incorporates pricing information to prepare the Specialty Cost Estimate, in the appropriate cost estimate format.

**Step 3.** After the Specialty Cost Estimate is completed, the Specialty Cost Estimate Originator prepares a hardcopy (review copy), applies the Check Print Stamp, signs/initials and dates, and forwards the review copy to the assigned Specialty Cost estimate Checker. Refer to DCP 2.12, Versions and Revisions, for numbering schemes. The check print stamp is included in DCP 2.7, Drawings.

**Step 4.** The Specialty Cost Estimate Checker performs a formal check in accordance with the Quality Control process for the Checker, Backchecker, and Verifier Review Cycles described in DCP 2.5, Calculations. Once the check cycle is completed, the Specialty Cost estimate Checker forwards the Cost Estimate and Check Prints to the DPPM.

#### 3.1.2.2 Specialty Cost Estimate Review Cycle

**Step 5.** The DPPM coordinates the transmittal of the Specialty Cost Estimate including Check Prints through Document Control along with a Review Comment Form (RCF) and No Review Comment Form (NRCF) to the DPPM, DOM, PMPS, and PCM for review.



Title:  <b>central T subway</b> PROGRAM CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION & REVIEW Preparation of Current Cost Estimates	Document Type: Plan and Procedures
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**Step 6.** After discussion among the Reviewers (DPPM, DOM, PMPS, and PCM) and the Specialty Cost Estimate Originator, the Reviewers' comments shall be written on the RCF and returned to Document Control. If no review comments are made, the signed/initialed and dated NRCF shall be returned to Document Control, and Steps 7 and 8 shall be ignored.

**Step 7.** The Specialty Cost Estimate Originator incorporates and/or addresses the comments, signs/initials and dates, and resubmits the cost estimate to Reviewers, through Document Control, for verification of incorporation of the comments.

**Step 8.** Each Reviewer (DPPM, DOM, PMPS, and PCM) shall verify that their comments were addressed, sign/initial their review copy, and return the review copy, through Document Control. The preceding steps are repeated until the Reviewers and Specialty Cost Estimate Originator are satisfied with the cost estimate (concurrence with answers to comments and verification of incorporation of comments on the RCF).

In general, if there is disagreement concerning review comments, the conflict shall be escalated and resolved as described in DCP 2.0, General, Section 2.0, Responsibility and the terms and conditions of the Design Package contract, as appropriate.

**Step 9.** As part of the review process, the DOM assesses the impact of the Specialty Cost Estimate to see if the resulting overall cost figure for the subject construction package is still in accordance with DCP 2.0, General, Section 6.0, Program Budget and Cost Controls, of the Final Design Contract. The estimate must meet the "Construction Budget" criteria established in Subsection 6.1. If not, the DOM will advise the DPPM of the next appropriate action, if any, to be taken in order to maintain the acceptable cost threshold. (See DCP 2.14 Configuration Management and Change Control for the Design Process.)

### 3.1.3 Post Award Construction Contract Cost Estimates

The Program Manager Project Delivery notifies the PCM of the award of each construction contract. See CM 1103 for change order estimates after contract award.

### 3.1.4 Allocated Contingency

<p>Title:</p> <p style="text-align: center;"><b>central T subway</b></p> <p style="text-align: center;">PROGRAM CONTROL PROCEDURES SECTION 2 – DOCUMENT PREPARATION &amp; REVIEW Preparation of Current Cost Estimates</p>	<p>Document Type: Plan and Procedures</p> <p>Document Number: PCP 03</p>
<p>Unit/Function:</p> <p style="text-align: center;">Capital Programs &amp; Construction Division Central Subway</p>	<p>Revision Number: 0</p>

See PCP 06 Contingency Management for changes to Allocated Contingency.

### 3.1.5 Escalation

The PCM in conjunction with the PMPS prepares updates to the projected Project escalation including documentation of basis of change.

### 3.1.6 Job Order Contract (JOC) Task Order

The JOC Coordinator notifies the PCM of pending and approved JOC task orders.

## 3.2 OTHER COSTS

The PCM identifies the responsible parties for providing all the other cost elements associated with the project (see 1.0 Purpose) and establishes the process for collecting this information, with justification and support thereof, including progress monitoring, current forecasts, and proposed/approved changes.

## 3.3 UNALLOCATED CONTINGENCY

See PCP 06 Contingency Management for changes to Unallocated Contingency

## 3.4 PREPARATION OF CCE AND CCE REVIEW CYCLE

**Step 1.** As warranted, utilization of Unallocated or Allocated Contingency, as identified in the CCE, must be approved in accordance with PCP 06, Contingency Management. (See Section 6.0 below.)

**Step 2.** The PCM incorporates the various cost estimate updates into the CCE. The PCM transmits the CCE to the PMPS as part of the monthly Project Cost Report, including justification and support. The PMPS will work directly with the PCM to resolve any issues, comments or concerns and, as appropriate, modify the CCE.

**Step 3.** If the CCE has changes from the previous CCE, the PMPS forwards the CCE to the SPM for approval. The SPM will work directly with the PMPS and PCM to resolve any issues, comments or concerns and, as appropriate, to enable him to approve the CCE.

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**Step 4.** Once the CCE has been approved, the PCM will incorporate the CCE into the Project Cost Report.

### 3.5 REPORTING AND DOCUMENTING

The Project Controls Group will provide appropriate backup documentation to support CCE updates.

### 3.6 RECORDS

The following records shall be maintained in the Document Control Files and available for quality audits/surveillances for each CCE:

1. Original quantity take-off calculations, signed/initialed and dated by the Originators and Checkers. The backup data shall also be stored in the Document Control Files with the quantity take-off calculations and pricing information.
2. For the seven construction contract packages' cost estimates, the review copy with all comments and Review Comments Forms or No Review Comment Forms provided by all reviewers.
3. A signed and dated record copy, with original signatures, of the accepted cost estimate.
4. A narrative describing the changes from previous CCE with justification and backup.

### 4.0 DEFINITIONS


None

### 5.0 ATTACHMENTS

None

### 6.0 REFERENCES

1. DCP 1.0, Introduction
2. DCP 2.0, General
3. PCP 01, Configuration Management Procedure
4. PCP 06, Contingency Management (To be developed 2nd quarter of 2010)
5. PCP 04, Schedules


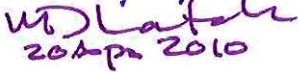
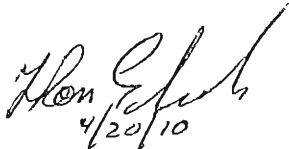



Title:  <div style="text-align: center;">             PROGRAM CONTROL PROCEDURES            SECTION 2 – DOCUMENT PREPARATION &amp; REVIEW            Preparation of Current Cost Estimates         </div>	Document Type: Plan and Procedures
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- 6. Design Control Procedure
- 7. Project Execution Plan

## 7.0 PROCEDURE HISTORY

<u>Revision Level</u>	<u>Revision Date</u>	<u>Summary of Revision</u>	<u>Approved By</u>
0	April 19, 2010	First version	John Funghi

## 8.0 APPROVALS

<u>Prepared by</u>	<u>Reviewed by</u>	<u>Signature &amp; Date</u>
Originator of SOP, Title & Unit:  John Burns Project Controls Manager Central Subway Partnership	Mark Latch Project Quality Manager Central Subway Partnership  Ross Edwards Program Manager Project Delivery Central Subway Partnership  Bill Neilson Program Manager Project Services SFMTA Central Subway  Albert Hoe Deputy Program Manager SFMTA Central Subway  Roger Nguyen Manager Quality Assurance Office	 04/20/10  20 Apr 2010   4/20/10   4/20/10   4/22/10   5/2/2010

**Table 4-2 |**

**PRICE REASONABLENESS DOCUMENTATION**

**FOR CONSTRUCTION, SYSTEMWIDE, AND PROCUREMENT CONTRACT CHANGE ORDERS**

	Engineer's Estimate	Cost Proposal, Format and Support	Technical Evaluation Pricing	Pricing Support by Audit	Cost Analysis	Pre Negotiation Objectives	Price Negotiation
\$1,000,000 and Above	(4) Estimate with (i) three levels of detail or Work Breakdown Structure, (ii) a priced bill of materials and (iii) other costs as factors	Written Cost Proposal with three levels of Contractor cost detail. Support required for any line item over \$50,000.	Technical Evaluation Memorandum by Resident Engineer or other pricing specialist	Must request support from Audit	Cost Analysis Memo	Pre-Negotiation Objectives Memorandum	Price Negotiation Summary Memorandum with price recap
\$500,000 and below \$1,000,000				Must notify Audit of this pricing action			
\$100,000 and below \$500,000	(3) Estimate with (i) two levels of detail, (ii) a priced bill of materials and (iii) other costs as factors		Technical Evaluation Memorandum by Resident Engineer	May advise Audit at P.M.'s discretion	Combined Cost Analysis and Pre-Negotiation Objectives Short Form Memorandum		Price Negotiation Summary Memorandum
\$25,000 and below \$100,000			Short Form Technical Evaluation by Resident Engineer	No notice to Audit required below \$100,000	Combined Cost Analysis and Pre-Negotiation Objectives Short Form Memorandum		
\$10,000 and below \$25,000	(2) Estimate with one level of detail and priced material	Written Cost proposal with one level of Contractor cost detail.			Price Reasonableness Paragraphs in Summary of Negotiations Document		
Below \$10,000	(1) One Level Order of Magnitude Estimate on Change Notice form is sufficient	Statement in Summary of Negotiations Document that the recommended price is fair and reasonable.					

Notes regarding Engineer's Estimate:

- 1) One level Order of Magnitude Estimate can be a single amount.
- 2) Estimate with one level of detail; include prices for labor, material and equipment categories.
- 3) Two levels of detail; Example: Detail for all items of material which make up the price for the material category.
- 4) Full price analysis including all detailed back-up.

## C Mod Task Force

# Area of Improvement # 4

### Problem: Reconciliation of Costs

Questions were raised about the timing of when the CMB sees the change and what presentation materials are reviewed. It was clear that the CMB may either be currently in the process too early with not enough information to make an informed decision or too late when the work has already been performed.

### Root Cause:

Delegation of Authority to Resident Engineer has not occurred and all changes must go to CMB. Presentation of costs has not been formalized in procedures for established format, content, and timing.

### Recommendation for Improvements:

- Review procedures for when the CMB takes action on a change
- Summarize Estimate with comparison to Contractor's cost proposal
- Prepare reconciliation of costs with description of differences and suggested negotiation positions
- Prepare checklist for minimum package to be presented to CMB
- Develop rationale for negotiation position for presentation to CMB

---

## Estimate Summary

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**Scope/Background:**

A differing site condition was encountered while performing slurry wall construction along the west side of the Launch Box. A concrete encased 8" sewer main was discovered to be in the direct path of the slurry wall panel excavation which impacted production.

Stakeholders: SFMTA, BIH, CJA-NCC

Date of occurrence: 8/29/12

**List of attached documents:**

CJA-NCC Equipment rate submittal with edits  
Prevailing Wage rate for O.E. apprentice

  
\_\_\_\_\_  
Estimate Prepared By: Charles Dombrowski

  
\_\_\_\_\_  
Estimate Checked By: Ken Barnhart

COR 015									
No.	Activity Name	Days (C)	Days (EE)	Contractor (C)	Engineer's Estimate (EE)	Delta (EE-C)	Summary of Delta	Negotiation Position	
Labor	1	Pre-excavation for Slurry Wall	1.25	1	\$ 3,328.91	\$ 2,546.50	\$ (782.41)	Contractor used 1.25 hours per panel. Engineer's estimate used 1 hour per panel.	
	2	Pre-excavation on Critical Path	5	4	\$ 22,491.07	\$ 14,267.29	\$ (8,223.78)	Contractor used 1.25 hours per panel. Engineer's estimate used 1 hour per panel.	
	3	Slurry Plant	2.5	2	\$ 5,800.38	\$ 3,941.33	\$ (1,859.05)	Contractor used 1.25 hours per panel. Engineer's estimate used 1 hour per panel.	
	4	Credit for Excavated Materials	-0.75	-1.25	\$ (1,106.02)	\$ (3,183.13)	\$ (2,077.11)	Contractor credited 0.15 hours per panel. Engineer's estimate used 0.25 hours per panel.	
Equipment	1	Pre-excavation for Slurry Wall	1.25	1	\$ 2,477.90	\$ 1,448.00	\$ (1,029.90)		
	2	Pre-excavation on Critical Path	5	4	\$ 28,766.40	\$ 20,875.84	\$ (7,890.56)		
	3	Slurry Plant	2.5	2	\$ 11,012.40	\$ 6,444.80	\$ (4,567.60)		
	4	Credit for Excavated Materials	-0.75	-1.25	\$ (2,828.22)	\$ (4,713.70)	\$ (1,885.48)		
	Material			\$ 32,700.00	\$ 30,453.24	\$ (2,246.76)	Contractor uses \$150/c.y. of concrete. Engineer's estimate uses \$128.75/c.y. plus sales tax.		
	Markup LM&E - 15%			\$ 25,660.71	\$ 10,812.03		Contractor used 25% markup.		
	2nd Tier Subs			\$ -	\$ -				
	Markup - 5%			\$ -	\$ -				
	Sub. Bond/Insurance 0.52%			\$ 667.18	\$ 431.04				
	Prime Markup - 5%			\$ 6,448.54	\$ 4,166.16				
	Prime Bond/Insurance 1.68%			\$ 2,275.04	\$ 1,469.82				
	<b>Total</b>			\$ 137,694.28	\$ 88,959.23	\$ (48,735.05)			



No.	Activity	Days	Laborer (G2)	Operating Engineer (OE) (G2)	Operating Engineer (OE) (G3)	File Driver (FD) (G2)	Op. Engineer Apprentice	Labor Resource	Labor Resource	Hourly rates:	Equipment	Material	Labor	Equipment	Material	Labor
1	Pre-excavation for Slurry Wall	1	1	1	1	1	1	1	1	\$ 58.67	Cat M32D Excavator Wheeled		1	1	1	1
2	Pre-excavation on Critical Path	4	2	2	1	1	1	1	1	\$ 60.00			2	2	1	1
3	Slurry Plant	2	1	1	1	1	1	1	1	\$ 43.73			1	1	1	1
4	Credit for Excavated Materials	-1.25	1	1	1	1	1	1	1	\$ 38.06			1	1	1	1
5										\$ 71.88						
6										\$ 72.87						
7										\$ 54.71						
8										\$ 58.67						
9										\$ 71.79						
10										\$ 58.63						
11										\$ 152.34						
12										\$ 120.01						
13	<b>Total</b>									\$ 108.21						

Equipment	Qty	Rate	Total
Cat M32D Excavator Wheeled	1	\$ 108.21	\$ 108.21
Cat 936 Loader	1	\$ 71.79	\$ 71.79
Skytrak 1004Z Forklift	1	\$ 58.63	\$ 58.63
500 KW Generator	1	\$ 152.34	\$ 152.34
185CFM Air Compressor	1	\$ 120.01	\$ 120.01
18,000 Gal Slurry Tank	7	\$ 3.13	\$ 21.91
Auto Bentonite Mixer	1	\$ 15.67	\$ 15.67
Derrick Desander 300M3	1	\$ 44.58	\$ 44.58
Electric 20' Container	1	\$ 11.36	\$ 11.36
100HP VFD Pump Control Panel	1	\$ 5.11	\$ 5.11
Mission Pump 3x4 R 40 HP	4	\$ 5.11	\$ 20.44
Mission Pump 5x4 50HP	1	\$ 5.68	\$ 5.68
Mission Pump 6x8 R 150HP	2	\$ 5.88	\$ 11.76
Screwdrucker Pump	1	\$ 19.89	\$ 19.89
Water Pump Gould 40 HP	1	\$ 3.41	\$ 3.41
Liebherr 855 Crane	1	\$ 21.16	\$ 21.16
CAT 950H w/ bucket	1	\$ 120.35	\$ 120.35
BAYA Extension Guide 800	1	\$ 5.68	\$ 5.68
H9D 914X2700 Jaws	1	\$ 7.39	\$ 7.39
BAYA Hydraulic Grab	1	\$ 102.59	\$ 102.59
TD 800 Square Chisel	1	\$ 2.84	\$ 2.84
Taralog with Cobalt Ins	1	\$ 11.36	\$ 11.36
<b>Equipment Totals</b>			<b>\$ 24,054.94</b>

Assumptions:  
 40 Panels  
 Engineer's estimate uses 1 hour per panel to remove obstructions uncovered during excavation  
 Credit for original scope uses .25 hrs/panel

Labor \$ 17,572.00  
 Material \$ 30,453.24  
 Equipment \$ 24,054.94  
 2nd Tier Sub \$ -  
 Markup on 2nd Tier Sub - 5% \$ -  
 1st Tier Sub OH&P - 15% \$ 10,612.03  
 1st Tier Sub Bond/Insurance - 0.52% \$ 5431.04  
 Prime - Markup - 5% \$ 4,166.16  
 Prime - Bond/Insurance - 1.68% \$ 51,469.82  
**Total Amount \$ 88,959.23**

Shift Duration: 8hrs  
 Checked By: Ken Barnhart

Estimated By: Cj Dwyer/rowaki  
 12/16/2012

12/16/2012



Material	Qty.	Unit	Unit Price	Extension
Concrete	218	C.Y.	\$ 128.75	\$ 28,067.50
				\$ -
				\$ -
				\$ -
			Sales Tax 8.5%	\$ 2,385.74
<b>Total</b>				<b>\$ 30,453.24</b>

2nd Tier Sub Quote \$ -

## Prevailing Labor Rates - SF

<http://www.dir.ca.gov>

Labor Resource	Social Security 6.20%	Medicare 1.45%	FUTA 0.60%	SUTA 6.20%	SF Pay 1.50%	WC 12.00%	Vacation/Holiday	Other Fringes	Fully Burdened
Carpenter	\$ 38.50	\$ 2.64	\$ 0.26	\$ 2.64	\$ 0.64	\$ 5.11	\$ 4.05	\$ 21.77	\$ 76.21
Cement Mason	\$ 28.65	\$ 2.09	\$ 0.20	\$ 2.09	\$ 0.51	\$ 4.05	\$ 5.14	\$ 16.82	\$ 60.05
Electrician (Inside Wireman)	\$ 54.87	\$ 3.72	\$ 0.36	\$ 3.72	\$ 0.90	\$ 7.20	\$ 1.64	\$ 23.95	\$ 97.23
Flag Person	\$ 26.89	\$ 1.82	\$ 0.18	\$ 1.82	\$ 0.44	\$ 3.52	\$ 2.48	\$ 14.62	\$ 52.20
Iron Worker	\$ 33.00	\$ 2.29	\$ 0.22	\$ 2.29	\$ 0.55	\$ 4.43	\$ 3.92	\$ 21.37	\$ 68.60
Laborer (G1)	\$ 26.89	\$ 1.82	\$ 0.18	\$ 1.82	\$ 0.44	\$ 3.52	\$ 2.48	\$ 15.96	\$ 53.54
Laborer (G2)	\$ 26.99	\$ 1.83	\$ 0.18	\$ 1.83	\$ 0.44	\$ 3.54	\$ 2.48	\$ 15.96	\$ 53.67
Operating Engineer (OE) (G2)	\$ 36.24	\$ 2.68	\$ 0.24	\$ 2.48	\$ 0.60	\$ 4.79	\$ 3.70	\$ 22.77	\$ 73.87
Operating Engineer (OE) (G3)	\$ 34.76	\$ 2.38	\$ 0.23	\$ 2.38	\$ 0.58	\$ 4.62	\$ 3.70	\$ 22.77	\$ 71.98
Pile Driver (PD) (G2)	\$ 37.17	\$ 2.53	\$ 0.25	\$ 2.53	\$ 0.61	\$ 4.90	\$ 3.70	\$ 22.77	\$ 75.06
Plumber Utility Pipe Fitter	\$ 51.00	\$ 3.18	\$ 0.31	\$ 3.18	\$ 0.77	\$ 6.16	\$ 0.30	\$ 29.65	\$ 95.29
Teamster	\$ 27.43	\$ 1.83	\$ 0.18	\$ 1.83	\$ 0.44	\$ 3.55	\$ 2.15	\$ 20.42	\$ 58.27
Traffic Control Person I	\$ 27.19	\$ 1.84	\$ 0.18	\$ 1.84	\$ 0.45	\$ 3.56	\$ 2.48	\$ 14.62	\$ 52.58
Traffic Control Person II	\$ 24.69	\$ 1.68	\$ 0.16	\$ 1.68	\$ 0.41	\$ 3.26	\$ 2.48	\$ 14.62	\$ 49.38
Scaffold / Shoring Erector	\$ 38.65	\$ 2.65	\$ 0.26	\$ 2.65	\$ 0.64	\$ 5.12	\$ 4.05	\$ 21.77	\$ 76.40
Elevator Mechanic/Constructor	\$ 57.29	\$ 3.77	\$ 0.36	\$ 3.77	\$ 0.91	\$ 7.29	\$ 3.44	\$ 23.84	\$ 101.54
Elevator Mechanic Helper	\$ 40.10	\$ 2.70	\$ 0.26	\$ 2.70	\$ 0.65	\$ 5.22	\$ 3.44	\$ 23.84	\$ 79.54
Asbestos Removal Specialist II	\$ 24.87	\$ 1.67	\$ 0.16	\$ 1.67	\$ 0.40	\$ 3.23	\$ 2.02	\$ 10.53	\$ 44.94
Lead Removal Worker	\$ 36.25	\$ 2.36	\$ 0.23	\$ 2.36	\$ 0.57	\$ 4.57	\$ 1.85	\$ 6.09	\$ 54.84

Equipment	Caltrans Page No	CalTrans Category Sub-Category Rental Quote/ Code	Hourly Rate	Delay Factor	Standby Rate
Equipment			\$ -		
1 Work Truck	34	TRUCK	\$ 33.12	0.14	\$ 4.64
2 Dump truck - 3-axle	34	TRUON	\$ 66.43	0.16	\$ 10.63
3 Tow Behind Trailer	33	TRAIT	\$ 5.72	0.42	\$ 2.40
4 End Dump - 5-axle	34	TRUON	\$ 83.50	0.16	\$ 13.36
5 Generator	6	ELGEN	\$ 14.18	0.11	\$ 1.56
6 Air Compressor	1	AIRCP	\$ 34.31	0.12	\$ 4.12
60-90 Lb. Jack-hammer	1	AIRTOL	\$ 1.31	0.61	\$ 0.80
<b>Air compressor, hoses &amp; hammer total</b>			<b>\$ 35.62</b>		<b>\$ 4.92</b>
7 Arc Welder	34	WELD	\$ 11.87	0.18	\$ 2.14
Welding Rods	N/A	N/A	\$ 5.34		\$ -
F250	34	TRUCK	\$ 33.12	0.14	\$ 4.64
<b>Welder and Truck</b>			<b>\$ 50.33</b>		<b>\$ 6.77</b>
8 Torches and Tanks	34	WELD	\$ 0.24	0.18	\$ 0.04
Oxygen Tank and Acetylene Tank	N/A	N/A	\$ 38.70		\$ -
<b>Total Torches and Tanks</b>			<b>\$ 38.94</b>		<b>\$ 0.04</b>
9 Rotohammer	6	ELTOL	\$ 0.44	0.61	\$ 0.27
Generator	6	ELGEN	\$ 14.18	0.11	\$ 1.56
<b>Rotohammer and Generator</b>			<b>\$ 14.62</b>		<b>\$ 1.83</b>
10 Rivet Buster	1	AIRTOL	\$ 1.31	0.61	\$ 0.80
Air Compressor	1	AIRCP	\$ 34.31	0.12	\$ 4.12
<b>Rivet Buster and Air Compressor</b>			<b>\$ 35.62</b>		<b>\$ 4.92</b>

11 Compactor, Hand Guided	4 COMHG	\$ 8.82	0.18	\$ 1.59
12 Bobcat 763	31 TRACS	\$ 25.35	0.11	\$ 2.79
13 Backhoe (John Deere ID 310G)	18 LDDRT	\$ 62.87	0.12	\$ 7.54
Clam Shell Bucket	1 N/A	\$ 9.29	0.12	\$ 1.11
<b>Backhoe w/ Clam Shell total</b>		<b>\$ 72.16</b>		<b>\$ 8.66</b>
14 Breaker attachment for Backhoe	7 HAMMR	\$ 42.26	0.23	\$ 9.72
15 Mini Excavator (Kubota U45)	N/A N/A	\$ 63.79	0.18	\$ 11.48
16 Excavator (Hitachi 200)	N/A N/A	\$ 142.51	0.18	\$ 25.65
17 New Holland Excavator (E135)	N/A N/A	\$ 120.13	0.18	\$ 21.62
18 Ride-on Sweeper	4 BRMSW	\$ 145.11	0.14	\$ 20.32
19 Bituminous Distributor	4 BITDT	\$ 6.52	0.14	\$ 0.91
Work truck	33 TRUCK	\$ 33.12	0.14	\$ 4.64
<b>Bituminous Distributor with truck</b>		<b>\$ 39.64</b>		<b>\$ 5.55</b>
20 Fork Lift Truck	6 FKLFT	\$ 27.14	0.20	\$ 5.43
21 Concrete Saw	28 SAWCO	\$ 19.63	0.14	\$ 2.75
Saw blade 12" x \$18 per hour (100 LF)	28 SAWCO	\$ 216.00	0.14	\$ 30.24
Concrete Saw and Blade		\$ 235.63		\$ 32.99
22 Water Pump	22 PUMWA	\$ 22.61	0.35	\$ 7.91
<b>23 Confined Space Equipment</b>				
Gas Detector 4-Gas w/ Motorized Integral Pump		\$22.79		
Blower Portable w/ 8"x15' Hose		\$8.82		
Retrieval 65' Winch for Tripod		\$11.53		
SCBA-NFPA Approved 2216 PSI Complete alrpeck		\$9.03		
<b>Total Confined Space</b>		<b>\$52.15</b>		
Traffic Control (per street, intersection = x2 24 streets)				
Construction Signs	32 TRAFC	\$2.43		

Changeable Message Boards	32 TRAF A	\$9.92		
Arrow Board	32 TRAF A	\$3.20		
No Parking Signs (A-frames)	32 TRAF C	\$0.22		
Cones (per 100)	32 TRAF C	\$13.27		
25 Interlocking Water Filled Triton Barrier	N/A N/A	\$1.61		
\$270 per month /168 hours per month				
26 Traffic Plates Installed				
Total per Plate (small)	N/A N/A	\$4.61		
Total per Plate (large)	N/A N/A	\$7.19		
27 Trench Shoring (4' wide trends)		\$2.17		
Total per trench shore		\$0.48		



UPDATED 10/2/2012

EQUIPMENT COST

CALTRANS TAG	CJA/NCC TAG	Description	Outside Rent Rate (hour)	Inside Rent Rate (hour)	Caltrans Rate (hour)	Blue Book Rate (hour)
ATTACHMENT C	A29250T	18,000 GAL SLURRY TANK	ST \$ / 3.13			
ATTACHMENT C	A32350T	18,000 GAL SLURRY TANK	ST \$ / 3.13			
ATTACHMENT C	A35250T	18,000 GAL SLURRY TANK	ST \$ / 3.13			
ATTACHMENT C	A60310T	18,000 GAL SLURRY TANK	ST \$ / 3.13			
ATTACHMENT C	A60320T	18,000 GAL SLURRY TANK	ST \$ / 3.13			
ATTACHMENT A	ABM30001	AUTO BENTONITE MIXER	ST	\$ -15.34		
ATTACHMENT A	BEG4001	BAYA EXTENSION GUIDE 800	ST	\$ 5.68		
ATTACHMENT A	BHG60	BAYA HYDRAULIC GRAB	ST	\$ 148.86		
ATTACHMENT A	BHJ9141	H90 914 X 2700 JAWS	ST	\$ 7.39		
ATTACHMENT A	BHJ9142	H90 914 X 2700 JAWS	ST	\$ -7.39		
ATTACHMENT C	BVP01	BAUER VACUUM PUMP	ST \$ -27.24			
ATTACHMENT A	CGP0001	SINNUS 3E	ST	\$ 42.61		
ATTACHMENT A	24K124	CSQ4008 TD 800 SQUARE CHISEL (914)	ST		\$ / 8.31	\$2.84
ATTACHMENT A	CVC01	BAYA CABLETTE	ST	\$ 2.84		
ATTACHMENT A	CWS800	CWS 800 SECTION END STOP	ST	\$ 84.09		
ATTACHMENT A	DAN1801	INTEROC NR160	ST	\$ 144.62		
ATTACHMENT A	DBD3002	DERRICK DESANDER 300M3	ST	\$ 218.75	OK	\$44.58
ATTACHMENT A	DDS01	DERRICK DESILTING UNIT	ST	\$ 60.00	OK	
ATTACHMENT A	ECB2001	ELECTRIC 20' CONTAINER	ST	\$ 11.36		
ATTACHMENT C	ECP1007	100HP VFD PUMP CONTROL PANEL	ST \$ 8.16		\$ 5.11	
ATTACHMENT A	GSG9141	STEIN EXT FOR SK 280-800	ST	\$ 5.11		
ATTACHMENT A	GSK8001	STEIN DIAPHRAGM WALL GRAB BOD	ST	\$ 28.41		
ATTACHMENT C	HSP01	HYDRA-TECH PUMP	ST \$ / 27.72			
ATTACHMENT C	HSP02	HYDRA-TECH PUMP	ST \$ / 27.72			
ATTACHMENT A	JSK9141	STEIN DIAPHRAGM GRAB JAW	ST	\$ 10.23		
ATTACHMENT A	KDM01	KODEN DRILLING MONITOR	ST	\$ 17.05		
ATTACHMENT A	KDM02	KODEN DRILLING MONITOR	ST	\$ 17.05		
ATTACHMENT C	MP4313	MISSION PUMP 3X4 R 40HP	ST \$ / 22.50			\$5.11
ATTACHMENT C	MP4316	MISSION PUMP 3X4 R 40HP	ST \$ / 22.50			
ATTACHMENT C	MP4317	MISSION PUMP 3X4 R 40HP	ST \$ / 22.50			
ATTACHMENT C	MP543	MISSION PUMP 5X4 R 50HP	ST \$ / 22.50			\$5.68
ATTACHMENT C	MP6805	MISSION PUMP 6X8 R 150HP	ST \$ / 22.50			\$5.68
ATTACHMENT C	MP861	MISSION PUMP 3X4 R 40HP	ST \$ / 22.50		\$ 5.11	
ATTACHMENT C	MWP09	MOYNO WATER PUMP	ST \$ / 22.50			
ATTACHMENT C	PDM3002	PDM 3 DIESEL PUMP	ST \$ / 4.13			
ATTACHMENT A	QC3.5	TARALOG WITH COBAT INS	ST	\$ 31.25	\$11.36	
ATTACHMENT A	QCD45004	DIALOG LUTZ WITH NEMO	ST	\$ 23.75		
ATTACHMENT A	SBA8551	KS 3000 INCLD GRAB+GUIDE	ST	\$ 85.98		
ATTACHMENT A	SKE91401	STEIN EXTENSION 36"	ST	\$ 2.84		
ATTACHMENT A	SKG70104	STEIN DIAPHRAGM WALL GRAB BOD	ST	\$ 36.93		
ATTACHMENT A	SKJ91401	STEIN JAWS 36"	ST	\$ 6.25		
ATTACHMENT C	SSP20204	SCREWSUCKER PUMP	ST \$ 19.89			
ATTACHMENT C	SSP20205	SCREWSUCKER PUMP	ST \$ 19.89			
ATTACHMENT A	TPR0006	TREMIE PIPE Length?	ST	\$ -5.68		
ATTACHMENT A	TPR0007	TREMIE PIPE	ST	\$ -5.68		
ATTACHMENT C	WFG0001	WATER PUMP HP GOULD 40HP	ST \$ 22.50		\$ 5.11	



CONDON-JOHNSON  
& ASSOCIATES, INC.  
CONTRACTORS AND ENGINEERS



NICHOLSON

Condon-Johnson & Associates, Inc. - Nicholson Construction Company Joint Venture

Third Street Light Rail Program, Phase 2- Central Subway Tunneling  
JOB # 21134

(CJA-NCC JV)

UPDATED 10/2/2012

EQUIPMENT COST

CALTRANS TAG	CJA/NCC TAG	Description	Outside Rent Rate (hour)	Inside Rent Rate (hour)	Calltrans Rate (hour)	Blue Book Rate (hour)
00-06	2108	00 Ford F350 Diesel	ST		\$ / 19.98	
00-06	2118	96 Ford Louisville	ST		\$ / 19.98	
00-06	2212	11-Ford F460 XL	ST		\$ / 19.98	
806-3	3023	Klemm 806-3	ST		\$ / 134.37	
KR2510B	3028	Klemm/Bauer 3012	ST		\$ / 187.64	
312-2	3030	Sollmec R312-200	ST		\$ / 196.61	
SR60	3037	Sollmec SR-70	ST		\$ / 393.79	
SM405	3042	Sollmec SM-14	ST		\$ / 87.08	
075-120	4014	IR 900 CFM Air Comp 350 psi	ST		\$ / 82.64	
075-120	4015	IR 900 CFM Air Comp	ST		\$ / 82.64	
075-120	4018	IR 900 CFM Air Comp	ST		\$ / 82.64	
075-120	4019	IR 900 CFM Air Comp	ST		\$ / 82.64	
025-045	4023	IR 250 CFM Air Comp	ST	016-025	\$ -34.31	20.01
025-045	4024	IR 250 CFM Air Comp	ST		\$ 34.31	20.01
075-120	4029	IR 900 CFM Air Comp	ST		\$ / 82.64	
025-045	4030	IR 260 CFM Air Comp	ST		\$ 34.31	20.01
016-025	4034	IR 185 CFM Air Comp	ST		\$ / 20.01	
016-025	4038	IR 185 CFM Air Comp	ST		\$ / 20.01	
1150XHD	4046	Sullair 1150XH Air Comp	ST		\$ / 101.60	
025-050	5025	Multiquip 25kw GENER	ST	015-025	\$ 14.24	14.18
500	5026	Lincoln Comander 500 We	ST	250-300	\$ 12.02	11.87
025-050	6027	Multiquip 25kw GENER	ST		\$ -14.24	14.18
015-025	6030	20kw GENER	ST		\$ / 14.18	
100-200	6031	Coleman 110kw Gen	ST		\$ / 52.37	
025-050	6032	Multiquip 25kw GENER	ST		\$ 14.24	14.18
060-100	6033	Multiquip 60kw Gen w/lr	ST		\$ / 25.81	
025-050	6034	Multiquip 36kw GENER	ST		\$ / 14.24	
100-200	6035	Multiquip 125kw GENER	ST		\$ / 52.37	
200-300	6045	Cat 225kw GENER	ST		\$ / 89.61	
200-300	6047	Multiquip DCA300SSK Gener	ST		\$ / 89.61	
TS9070	6020	Pul TS9070 Crawler	ST		\$ / 44.85	
TS9070	6021	Pulzmeister S9070 2-axl	ST		\$ / 44.85	
1057	6039	Schwing 32M Boom Pump	ST		\$ / 95.81	
1057	6040	Schwing 32M Boom Pump	ST		\$ / 95.81	
AD10	6057	Highshear 7/14 GRPLANT	ST	714W160	\$ -32.98	22.87
7T450	6064	Sollmec 7T600 HP Pump	ST		\$ / 106.88	
7T450	6077	Sollmec 7T600 HP Jet Pump	ST		\$ / 106.88	
W3170	6094	Sollmec SGA-45 Agitatio	ST		\$ / 5.71	
1C	6095	Sollmec SGT-45 Turbonix	ST		\$ -58.00	
400-500	7002	Pettibone S-20 Forklift 20k lbs	ST	160-200	\$ -114.44	69.39
400-500	7012	Pettibone S-20 Forklift	ST		\$ -114.44	69.39
300-400	7014	Pettibone S-15 Forklift 15k lbs	ST	120-160	\$ 95.06	69.27
SIL02	7017	Belgrade Silo 200B LP	ST		\$ / 0.15	
2AX-550	7019	Water Buffalo 500 Gal	ST		\$ / 2.52	
5538Q	7028	Linkbelt HSP 8030	ST		\$ / 01.77	
2AX-550	7029	Water Buffalo 500 Gal	ST		\$ / 2.52	
6060	7030	Linkbelt 218H Crane	ST		\$ / 110.62	
400-500	7038	Pettibone S-20 Forklift 20k lbs	ST		\$ 114.44	69.39
400-500	7039	Pettibone S-20 Forklift 20k lbs	ST		\$ 114.44	69.39





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Third Street Light Rail Program, Phase 2-Central Subway Tunneling  
JOB # 21134

UPDATED 10/2/2012

EQUIPMENT COST

CALTRANS TAG	CJA/NCC TAG	Description	Outside Rent Rate (hour)	Inside Rent Rate (hour)	Calltrans Rate (hour)	Blue Book Rate (hour)
400-500	7040	Pettibone S-20 Forklift <i>20K lbs</i>	ST		\$ 114.44	<i>69.59</i>
2100	7044	Cat 936 Loader	ST		\$ 72.79	
8012	7058	Mantis 8012 Crane	ST		\$ 183.13	
6610	7059	Mantis 6610 Crane	ST		\$ 95.79	
<del>TB18/22</del>	7062	ABI 22M Sheeldriver	ST		\$ 628.86	
0335	7063	Cat 325BL Excavator	ST		\$ 114.01	
ATTACHMENT B	7068	ABI TM14/17 Sheeldriver	ST			\$ 383.42
SILO2	7074	Belgrade Silo 200B LP	ST		\$ 9.15	
2362	7084	CAT 966G Loader	ST		\$ 151.76	
080-120	7085	Skytrak 10042 Forklift	ST		\$ 66.63	
080-120	7088	Skytrak 10042 Forklift	ST		\$ 56.63	
2AX-550	7093	Water Buffalo 500 Gal	ST		\$ 2.52	
2AX-550	7096	Water Buffalo 500 Gal	ST		\$ 2.52	
SILO2	7099	Cementech 300B LP Silo	ST		\$ 9.15	
SILO2	7106	Lo-Pro 200 Brrl Silo L	ST		\$ 9.15	
3815	7127	Cat D6KXL Track Dozer	ST		\$ 102.97	
ATTACHMENT A	7155	Linkbelt TCC750 76T Hydro	ST	\$ 115.62		
855HD	7156	Liebherr 855 Crane	ST		\$ 211.16	
SS1500	7542	Supersax 1500 Silo LO	ST		\$ 3.69	
SS1500	7545	350BBL Vertical Silo	ST		\$ 3.59	
SS1600	7547	CJA Supersacker Silo	ST		\$ 3.59	
2088	9002	Cat 930 Loader	ST		\$ 67.33	
807D	9017	Klemm 806D Drill	ST		\$ 105.20	
807D	9019	Klemm 806D Drill	ST		\$ 105.20	
312-2	9025	Sollmec R312-200 Drill	ST		\$ 196.61	
400-500	21134-AA	500 KW GENERATOR	ST		\$ 152.54	
2310H	21134-AB	CAT 950H W/ BUCKET & FORKS	ST		\$ 130.35	
855HD	21134-AC	LIEBHERR 855	ST		\$ 211.16	
YB4415	21134-AD	15 TON CARRY DECK CRANE	ST		\$ 32.36	
M322D	21134-AE	CAT M322D EXCAVATOR WHEELED	ST		\$ 108.21	
4 LIGHT	21134-AF	DIESEL LIGHT TOWER	ST		\$ 7.48	
4 LIGHT	21134-AG	DIESEL LIGHT TOWER	ST		\$ 7.48	
4 LIGHT	21134-AH	DIESEL LIGHT TOWER	ST		\$ 7.48	
4 LIGHT	21134-AJ	DIESEL LIGHT TOWER	ST		\$ 7.48	
4 LIGHT	21134-AK	DIESEL LIGHT TOWER	ST		\$ 7.48	
4 LIGHT	21134-AL	DIESEL LIGHT TOWER	ST		\$ 7.48	
ATTACHMENT C	21134-AM	PUMP BOOSTER 2x4x9.5 60HP 480V	ST	\$ 46.31	<i>15.44</i>	
ATTACHMENT C	21134-AN	VFD 100HP 460V 3P	ST	\$ 8.16	<i>7.22</i>	
025-045	21134-AO	185CFM AIR COMPRESSOR	ST	<i>016-025</i>	\$ 34.31	<i>20.01</i>
ATTACHMENT C	21134-AP	TRASH/VACUUM PUMP	ST	\$ 27.24	<i>19.38</i>	
ATTACHMENT C	21134-AQ	4" SLURRY PUMP+DISCHARGE HOSE	ST	\$ 40.80	<i>29.70</i>	
200/500	21134-AR	APE VIBRO HAMMER	ST		\$ 145.26	
305CR	21134-AS	CAT 305 EXCAVATOR W/HYD BRKR	ST		\$ 34.37	
500	21134-AT	STUD WELDING EQUIPMENT	ST		\$ 12.02	
D100	21134-AU	ABI HVR 60 EXCAVATOR MOUNTED	ST		\$ 37.43	
ATTACHMENT C	21134-AV	SWING STAGE & SCAFFOLDING	ST	\$ 2.50		
ATTACHMENT B	8GEN650	GENERATOR-660KW	ST			\$ 286.79
100-200	8K40	25-125 kw Diesel Generator	ST	<i>050-</i>	\$ 52.37	<i>OK</i>
ATTACHMENT C	A29160T	18,000 GAL SLURRY TANK	ST	\$ 3.13		
ATTACHMENT C	A29220T	18,000 GAL SLURRY TANK	ST	\$ 3.13		

# GENERAL PREVAILING WAGE APPRENTICE RATES

## APPRENTICE INFORMATION

Determination: 2012-2      Issue Date: 09-17-2012      Expire Date: 06-30-2013      \*

Page: 1

Craft/Classification: Operating Engineer

Shift: 1

Area 1

Counties: Alameda, Butte, Contra Costa, Kings, Marin, Merced, Napa, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Solano, Stanislaus, Sutter, Yolo, Yuba

Period	Duration Months	OJT Hours	Hourly Basic Rate	Health & Welfare	Pension	Vacation /Holiday	Training	Other	Hourly Total Rate
1		1,000	\$18.360	\$12.530	\$7.290	\$3.200	\$1.620	\$0.730	\$43.730
2		1,300	\$20.030	\$12.530	\$7.290	\$3.200	\$1.620	\$0.730	\$45.400
3		1,300	\$21.700	\$12.530	\$7.290	\$3.200	\$1.620	\$0.730	\$47.070
4		1,300	\$23.370	\$12.530	\$7.290	\$3.200	\$1.620	\$0.730	\$48.740
5		1,300	\$28.370	\$12.530	\$7.290	\$3.200	\$1.620	\$0.730	\$53.740


### Footnote(s):

Apprentice rates based on Operating Engineer (Heavy and Highway Work): Group 4

In addition to counties listed above, Area 1 includes portions of Alpine, Amador, Calaveras, Colusa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Lake, Lassen, Madera, Mariposa, Mendocino, Monterey, Nevada, Placer, Plumas, Shasta, Sierra, Siskiyou, Sonoma, Tehama, Tulare, Tuolumne, and Trinity counties.

Vacation/Holiday-- Includes amount for supplemental dues.

Apprentice Prevailing Wage Rates are paid only to apprentices registered with the State of California, Division of Apprenticeship Standards, for work the registered apprentice performs in his/her specific craft or trade. You may check whether an Apprentices is registered at <http://www.dir.ca.gov/DAS/appcertpw/AppCertSearch.asp>

<b>Title:</b>  <b>central  subway</b> PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1103 – CHANGE ORDER AND CONTRACT MODIFICATION	<b>Document Type:</b> Procedure
	<b>Document Number:</b> CM.1103
<b>Unit/Function:</b> Capital Programs and Construction Division Central Subway	<b>Revision Number:</b> 0


# CONTRACT MODIFICATION

---

APPROVED BY: John Funghi  
Senior Program Manager  
SFMTA Central Subway



DATE: 1-14-10

<p>Title:</p> <p style="text-align: center;"><b>central  subway</b></p> <p>PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1103 – CHANGE ORDER AND CONTRACT MODIFICATION</p>	<p>Document Type: Procedure</p> <p>Document Number: CM.1103</p>
<p>Unit/Function: Capital Programs and Construction Division Central Subway</p>	<p>Revision Number: 0</p>

### 1103.1 PURPOSE

This procedure describes the Contract Modification (C/Mod) process. It defines how SFMTA prepares, approves, and distributes C/Mod documentation that meets SFMTA and funding-agency requirements. It also describes the Resident Engineer's (RE) role in this process.

### 1103.2 RESPONSIBILITY

SFMTA requires a Contract Modification to formalize all changes to Contract Documents, regardless of whether additional cost and/or time are involved. SFMTA requires a C/Mod to process and approve a Contract Change. The RE is responsible for the management, processing, and tracking of Contract Modifications with support from construction management staff as needed.

### 1103.3 PROCEDURES


#### 1103.3.1 General

SFMTA's approval of either a Change Order Request (COR) submitted by the Contractor or a Proposed Contract Change (PCC) submitted by a Project Team member initiates a Contract Modification. SFMTA's approval of a C/Mod is based on a cost analysis and contract negotiations. The RE completes the C/Mod documentation. Refer to Procedure 1101 for COR processing (Contractor initiated), and Procedure 1102 for PCC processing (SFMTA initiated).


**Allowances** – An allowance is a bid item for a defined element of work. The RE shall monitor and track all work performed against the allowance to verify that the scope of the work clearly falls within the contractual definition for that specific allowance. Documentation of work performed against the allowance will be prepared as if for a C/Mod. If the value of the work exceeds the value of the allowance included in the contract bid price, then a full C/Mod will have to be processed and executed in accordance with the procedures described herein. Allowances cannot be used to pay for work not described in the contractual definition for that allowance.

#### 1103.3.2 Cost Analysis

The cost analysis includes three components: Contractor's Cost Proposal, Engineer's Estimate, and a cost comparison between the proposal and the estimate.

<b>Title:</b>  <div style="text-align: center;">   <b>central T subway</b>            PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS            SECTION 1103 – CHANGE ORDER AND CONTRACT MODIFICATION         </div>	<b>Document Type:</b> Procedure
	<b>Document Number:</b> CM.1103
<b>Unit/Function:</b> Capital Programs and Construction Division Central Subway	<b>Revision Number:</b> 0

- A. Contractor's Cost Proposal: Per Procedures 1101 and 1102, the Contractor is required to submit a Cost Proposal as follows:
- COR: The Contractor must complete and submit a Change Order Request form (see Exhibit 1101-1 in Procedure 1101), including the required Contractor's Cost Proposal and request for time extension, within 7 days of receiving direction that exceeds Contract requirements.
  - PCC: The Contractor must submit a PCC cost proposal and PCC time extension proposal (in accordance with General Provisions Section 79), if applicable, to SFMTA within 14 days after receipt of a PCC.
- B. Engineer's Estimate: The RE must generate a cost estimate as follows with support from the Project Controls Manager (PCM) if necessary:
- COR: When the RE determines the COR has merit, the RE must generate an Engineer's Estimate.
  - PCC: The RE must generate an Engineer's Estimate for all PCCs that are sent to the Contractor.
- C. Cost Comparison: The RE, with support from the Central Subway Project Team when requested, must analyze the Contractor's Cost Proposal and compare it to the Engineer's Estimate. During this cost comparison, the RE must determine if the Contractor's Cost Proposal includes at a minimum the following:
1. Review the Contractor's Cost Proposal scope of work for correctness. If the scope of work is incorrect, the RE must return the Contractor's Cost Proposal with a comment to "revise and resubmit."
  2. Compare the Contractor's Cost Proposal to the Engineer's Estimate for completeness. The RE must compare the work category and detailed breakdown of each for omissions, such as phasing, traffic control, temporary work, transportation cost, etc.
  3. Compare the labor crew size, cost, and hours; equipment list, cost, and hours; and material cost for reasonability and compliance.
  4. Compare mark-ups and bonds to the Contract for compliance. Also, determine if the profit is a reasonable estimate.
  5. Write a detailed narrative that explains the reason for the difference in cost and make a reasonable recommendation for resolution.

<b>Title:</b>  <div style="text-align: center;"><b>central</b><b>subway</b></div> PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1103 – CHANGE ORDER AND CONTRACT MODIFICATION	<b>Document Type:</b> Procedure <b>Document Number:</b> CM.1103
<b>Unit/Function:</b> Capital Programs and Construction Division Central Subway	<b>Revision Number:</b> 0

### **1103.3.3 Negotiations**

Negotiations must be timely, fair, and precede actual work. The RE and Contractor must make every effort to reach an agreement on all the issues affecting scope, schedule, and cost.

#### **1103.3.3.1 Successful Negotiations**

At the successful conclusion of negotiations, the RE must complete the Summary Record of Negotiations form (see Exhibit 1103-5). This form must include the negotiation details of the scope, schedule, and cost to be incorporated into the C/Mod. The RE and the Contractor must review and sign the form.

#### **1103.3.3.2 Failed Negotiations**

If the negotiation efforts fail and the RE and Contractor do not reach an agreement, the RE must issue a Unilateral Change Order in accordance with General Provisions Section 75.2, Unilateral Change Orders. A Unilateral Change Order can be issued as a Lump Sum Change Order or be directed under a Force Account under General Provisions Section 76, Force Account Work. Even if the agreement is not reached, the RE must complete a Summary Record of Negotiations (see Exhibit 1103-5) that details the discussion and the key factor for disagreement. After failed negotiations, if the disagreement is irresolvable and/or impractical, the RE, in agreement with the Contract Administrator, may decide not to pursue the change and to reject the Change Order.

#### **1103.3.4 Approval**

After successful negotiations, the RE initiates the Contract Modification in accordance with these procedures.

#### **1103.3.5 Contract Modification**

##### **1103.3.5.1 Contract Modification Documentation Checklist**

To ensure completeness of a Contract Modification package, the RE must complete a Contract Modification Documentation Checklist form (see Exhibit 1103-1). The RE must check off all items on the checklist before processing the package for approval. The checklist contains the following as applicable:

- A. Record of Concurrence and Approval
- B. Contract Modification - 4 originals
- C. Modification Change Analysis

<p><b>Title:</b></p> <p style="text-align: center;"><b>central T subway</b></p> <p>PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1103 – CHANGE ORDER AND CONTRACT MODIFICATION</p>	<p><b>Document Type:</b> Procedure</p> <p><b>Document Number:</b> CM.1103</p>
<p><b>Unit/Function:</b></p> <p style="text-align: center;">Capital Programs and Construction Division Central Subway</p>	<p><b>Revision Number:</b> 0</p>

- D. Summary Record of Negotiations
- E. Funding Summary
- F. Independent Engineer's Estimate
- G. Contractor's Cost Proposal
- H. Modification supporting documents
- I. Sole-source justification

#### **1103.3.5.2 Record of Concurrence and Approval**


To ensure that the C/Mod receives the required approval, the RE must complete a Record of Concurrence and Approval (ROCA) form (see Exhibit 1103-2). The Executive Summary section of the form requires a clear and concise summary of the changes presented for approval. The required signatures follow this hierarchy:

- A. Construction Management
- B. Manager of Contract Administration
- C. Senior Program Manager, Central Subway (Signature also indicates CMB agreement if applicable)
- D. Senior Director of Capital Programs and Construction
- E. Director of Finance/CFO
- F. SFMTA Board of Directors Secretary (only if the C/Mod needs the Board of Directors' approval)
- G. Executive Director/CEO

#### **1103.3.5.3 Contract Modification**


The Contract Modification (C/Mod) form (see Exhibit 1103-3) includes the scope of work, payment method, compensation amount, schedule impact, and signatures. The RE must prepare 4 original C/Mod packages for signature.

- A. Scope of Work: The RE must clearly define the project's scope of work in concise detail. The scope of work must specify any project requirements, drawings/sketches, or any other pertinent information, and be attached to each C/Mod. Clearly state the following as applicable:

<b>Title:</b>  <div style="text-align: center;">   <b>central T subway</b>          PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS          SECTION 1103 – CHANGE ORDER AND CONTRACT MODIFICATION       </div>	<b>Document Type:</b> Procedure <b>Document Number:</b> CM.1103
<b>Unit/Function:</b> Capital Programs and Construction Division Central Subway	<b>Revision Number:</b> 0

1. The work activities
  2. Exclusions from this C/Mod
  3. Where the work will occur (from which location/station to which location/station)
  4. The schedule for the work
- B. Method of Payment/Amount of Compensation: SFMTA uses three payment methods: Adjustment of Contract Bid Item, Agreed Lump Sum, and Force Account.
1. Adjustment of Contract Bid Item: Whenever the extra work is of the same character as the Contract bid item work, the Contract Modification will increase or decrease the bid item quantity or quantities to pay for the extra work under the Contract bid item (see Special Provisions).
  2. Agreed Lump Sum: If the extra work cannot be paid under the Contract bid item, SFMTA recommends that the RE and Contractor negotiate and agree on the amount of compensation to be paid as an Agreed Lump Sum. If the RE and Contractor do not reach an agreement, and the RE processes the C/Mod unilaterally, the RE will allocate a Lump Sum amount and track the work as Force Account work.
  3. Force Account: The total costs for each item indicated on the Daily Force Account Work Report and Daily Force Account Work Summary reflect the total costs for labor, material, and equipment, along with the contractually-stipulated percentages. SFMTA uses the Force Account payment method when any of the following conditions exist.
    - a. The RE and Contractor fail to agree on an Agreed Lump Sum unit price.
    - b. The Contractor cannot estimate the work within reasonable limits of accuracy because of unforeseen conditions or lack of sufficient information.
    - c. The RE decides that Force Account will provide the most accurate and realistic method of payment.
    - d. The work affects the critical path, and the Contractor must perform it immediately.




<p><b>Title:</b></p> <p style="text-align: center;"><b>central  subway</b></p> <p style="text-align: center;">PROCEDURES MANUAL FOR RESIDENT ENGINEERS AND INSPECTORS SECTION 1103 – CHANGE ORDER AND CONTRACT MODIFICATION</p>	<p><b>Document Type:</b> Procedure</p> <p><b>Document Number:</b> CM.1103</p>
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- e. The work requires any part of an allowance bid item that is not based on unit prices.
- C. **Schedule Impact:** If the Contractor can estimate an adjustment in Contract time within reasonable accuracy, the RE must attempt to reach an agreement with the Contractor. A time adjustment can be positive, negative, or zero depending on its effect on the critical path.
- 1. The RE must enter the amount of adjustment on the schedule even if it is a zero adjustment.
  - 2. If the RE cannot obtain an agreement with the Contractor, the RE must write “deferred” in the time adjustment line. Execution of a C/Mod with time deferred requires approval of the Construction or Program Manager.
- D. **Signature:** The Contractor, Executive Director/CEO of SFMTA, and Deputy City Attorney must sign and date the Contract Modification. If SFMTA requires the C/Mod to receive the Board of Directors' approval, SFMTA Board of Directors Secretary must sign the C/Mod and provide the resolution number. This is subject to the approved Delegation of Authority per CM 0201.

#### **1103.3.5.4 Modification Change Analysis**

The RE must complete a Modification Change Analysis form (see Exhibit 1103-4), which includes a scope of work, reason for change, Engineer’s Estimate, Contractor’s Cost Proposal, cost analysis, schedule analysis, and recommendation signature.

- A. **Scope of Work:** The RE may use the same content as in the Contract Modification scope of work.
- B. **Reason for Change:** Explain why the change is needed. Reasons may include:
  - 1. Changes in operational or functional requirements
  - 2. Unforeseen or differing site conditions
  - 3. Design errors or omissions
  - 4. Revised criteria
  - 5. Time extensions
  - 6. Material substitutions

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7. Benefits or savings through Value Engineering
  8. Incomplete right-of-way obligations
  9. Unresolved utility conflicts
  10. Lack of coordination with regulatory or other agencies
  11. Ambiguities in the Contract Documents
  12. Others
- C. Engineer's Estimate: The RE or designated representative must prepare an independent cost analysis as soon as the RE develops fully the scope of each change. The Engineer's Estimate is restricted information and must be independent from the Contractor's Cost Proposal and removed from any package sent to the Contractor.
- D. Contractor's Cost Proposal: Prior to negotiations, the RE must mark up a copy of the Contractor's Cost Proposal to reflect an equitable adjustment for the change.
- E. Cost Analysis: See Section 1103.3.2, Cost Analysis. This includes a cost comparison between the Engineer's Estimate and the Contractor's Cost Proposal.
- F. Schedule Analysis: The RE with the support and concurrence of the PCM must develop a descriptive narrative that defines the impact of the Contract change on Critical Path Method (CPM) activities and substantiates the overall time extension included. Attach a computer-generated analysis if performed.
- G. Signature: The RE and the CM must sign and date the Modification Change Analysis.

#### **1103.3.5.5 Summary Record of Negotiations**

The RE must complete a Summary Record of Negotiations form (see Exhibit 1103-5) that documents the negotiations during the C/Mod process, including any agreements SFMTA and the Contractor reach. The RE and the Contractor both must review and sign this form.

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### 1103.3.5.6 Funding Summary

The RE with support from the PCM prepares the Funding Summary document, which must include the following:

- A. Original Contract amount
- B. List of previously approved C/Mod and amounts
- C. List of the funding sources with funding amounts
- D. Required insurance and expiration date
- E. Current amount by funding source

### 1103.3.5.7 Modification Supporting Documents

Within in C/Mod package, the RE must include the following supporting documents:

- A. Contract Compliance Approval: An approval letter from the Contract Compliance Department that documents Contract compliance.
- B. Form 8, Declaration – Modification of Construction Contracts: A Contract Document that declares the Contract has been modified.
- C. SFMTA Board of Directors Resolution: A document that states SFMTA Board of Directors (SFMTAB) has approved the resolution, if applicable.


If the total amount of the C/Mod exceeds 10 percent of the Contract amount or \$5,000,000, the C/Mod needs approval from SFMTAB. Therefore, the C/Mod package will include the resolution document only if the C/Mod requires SFMTAB approval.

### 1103.3.5.8 Sole-source Justification

If the Contractor is a sole-source provider, the C/Mod package must include sole-source justification. The RE is responsible for preparing a justification letter that explains why the Contractor is the sole source for this change.

### 1103.3.6 Supplemental Contract Modification

In the following cases, the RE must prepare a Supplemental C/Mod to adjust the final amount of a previously issued C/Mod. The supplemental C/Mod will have a new C/Mod number and is a stand alone document, but serves the purpose of adjusting the contract amount or time based on the final result of force account work.

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A. Force Account Change Order with Agreed Lump Sum (Bilateral Change Order):  
 This is usually one of three types:

1. A Force Account Change Order with a not-to-exceed amount the RE had previously established in the C/Mod. At the completion of work, the RE and Contractor agree on a price based on the final force account records, which becomes the Agreed Lump Sum, and the RE prepares a Supplemental C/Mod to adjust and finalize an approved C/Mod utilizing a force account compensation method.
2. A Force Account Change Order with a not-to-exceed amount the RE had previously established in the C/Mod. Prior to completion of the changed work, the RE and Contractor agree on a price based on a negotiated lump sum, which becomes the Agreed Lump Sum, and the RE prepares a Supplemental C/Mod to adjust and finalize an approved C/Mod utilizing a lump sum compensation method and force account records are discontinued.
3. At the completion of work, if the Contractor requests additional compensation, the Contractor must file a claim per the General Provisions Section 75.2, Unilateral Change Order. Upon review, if the RE determines that the Contractor's claim has merit, the RE will prepare a Supplemental C/Mod with an Agreed Lump Sum price to adjust and finalize an approved C/Mod utilizing a force account or lump sum compensation method.


B. Force Account Change Order with a Lump Sum (Unilateral Change Order): If the SFMTA requires additional work and the RE and Contractor do not agree upon a price, but the RE directs the Contractor to complete the work, the RE prepares a Supplemental C/Mod with a Lump Sum price to adjust and finalize the previously issued unilateral C/Mod.

**1103.3.7 Contract Modification Approval, Distribution, and Filing**

**1103.3.7.1 General**

After the RE prepares the C/Mod package, the RE must:

- A. Sign the Contract Analysis form and the Contract Modification Documentation Checklist form.
- B. Request and obtain the CM's signature on the Contract Analysis form.
- C. Forward the entire package to the Contract Administrator for compliance and completeness review.

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Throughout the C/Mod preparation process, the RE should consult with the Contract Administrator regarding any questions or for assistance.

#### **1103.3.7.2 Corrections**

After reviewing the C/Mod package, if the Contract Administrator requests corrections, the Contract Administrator and RE must coordinate the correction efforts.

#### **1103.3.7.3 Approval**

After the Contract Administrator determines the C/Mod package is complete, the RE must forward 4 originals of the C/Mod to SFMTA Attorney for approval and signature.

After SFMTA Attorney approves the C/Mod form and returns the 4 originals back to the Contract Administrator, the Contract Administrator will forward the 4 originals to the Contractor for review and signature.

#### **1103.3.7.4 Contractor Review**

The Contractor must review the C/Mod thoroughly. If the Contractor agrees with the C/Mod, the Contractor must sign and date all 4 originals, and return them to the Contract Administrator.

#### **1103.3.7.5 Contract Modification Approval**


After the Contract Administrator receives the 4 signed originals, the Contract Administrator routes the C/Mod package per Record of Concurrence and Approval guidelines (see Section 1103.3.5.2) and processes the package.

All C/Mod packages over \$50,000; and/or that include a time extension; and/or that impact third parties shall be submitted to the Configuration Management Board (CMB) (see PCP 01) for review prior to routing for approval signatures. The RE or Construction Manager may submit other C/Mod packages to the CMB at their discretion if considered needed.

PCCs, CORs, and C/Mods may be submitted to the CMB for a preliminary review if the RE or Construction Manager deems necessary.

After the C/Mod receives signatures from all of the parties listed in Section 1103.3.5.2, the C/Mod is considered approved.

If one party does not approve the C/Mod, the Contract Administrator leads the process to help SFMTA reach an agreement, and if the C/Mod needs revisions, the RE will arrange a renegotiation with the Contractor, and resubmit the revised C/Mod.

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### 1103.3.7.6 Contract Modification Filing

Before forwarding the C/Mod package to the Contract Administrator, the RE must make 1 copy and file it in the field office with one copy to Document Control. Before routing the C/Mod package for approval, the Contract Administrator must make 1 copy and file it in the Contract Administration office.

### 1103.4 DEFINITIONS

None.

### 1103.5 EXHIBITS

- 1103-1 Sample Contract Modification Documentation Checklist
- 1103-2 Sample of Record of Concurrence and Approval
- 1103-3 Sample Contract Modification Form
- 1103-4 Sample Modification Change Analysis
- 1103-5 Sample Summary Record of Negotiations
- 1103-6 Flow Chart

### 1103.6 REFERENCES

Refer to the following:

- Contract Specifications General Provisions Sections 11- Estimate of the amount of work to be done, 75-79 (Contract Modification and Time Allowance), and 98- Clarification and Claims.
- Procedure Manual Sections 1105- Differing Site Condition and 1107- Force Account Work.

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### 1103.7 PROCEDURE HISTORY

<u>Revision Level</u>	<u>Revision Date</u>	<u>Summary of Revision</u>	<u>Approved By</u>

### 1103.8 APPROVALS



<b>Prepared by</b>	<b>Reviewed by</b>	<b>Signature &amp; Date</b>
<b>Originator of Central Subway Procedures Manual Title and Unit:</b>  Dane Hudson Construction Manager Central Subway Partnership	Roger Nguyen Quality Assurance Manager Quality Assurance Office  Robert Rocco Configuration & Risk Manager Central Subway Partnership  Arthur Wong SFMTA Construction Manager Central Subway Project	 1/12/10   1/13/10   1/13/10   1/13/10

Exhibit 1103-1: Sample Contract Modification Documentation Checklist

**DOCUMENTATION CHECKLIST**

**CONTRACT MODIFICATION NO. 4**

Bid / RFP No.: MR-1210      Date: 1/30/07      Package Prepared By: Joon Park

Bid / RFP Title: MUNI Metro System Subway Overhead Reconstruction

Item	Document Included in Package	Yes	No	N/A	Prepared By	Date
1	Record of Concurrence and Approval	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Joon Park	1/29/07
	Executive Summary Memorandum					
2.	Contract Amendment Originals (4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Joon Park	
3.	Contract Change Analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Joon Park	12/20/06
4.	Summary Record of Negotiations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Joon Park	12/20/06
5.	Finding of Fact (time only)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6.	Funding Summary Documents	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drew Howard	1/29/07
7.	Independent Engineer's Estimates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tee Phang	11/20/06
8.	Contractor's Cost Proposals	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stephen Wong	11/22/06
9.	Modification Supporting Documents					
	a. Contract Compliance Office Approval	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Andre P. Boursse	
10.	Sole Source Justification	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

General Notes:



Exhibit 1103-2: Sample of Record of Concurrence and Approval

**RECORD OF CONCURRENCE AND APPROVAL**

SUBJECT:	Contract Modification No. 4 to Contract No. MR-1210
PROJECT:	MUNI Metro System Subway Overhead Reconstruction

Modification Scope/Executive Summary:

This contract modification compensates the Contractor to replace 814 units of the installed Type B hangars, 100 mm and 175 mm in length, as shown on Impulse Drawing No. SKS-070069.

This contract modification No. 4 increases the cost of the contract by \$163,614. There is no time adjustment associated with this contract modification No. 4.

Final Routing	Approval Authority	Signature	Date	Comments
7	Nathaniel P. Ford, Sr. Executive Director/CEO, SFMTA			
6	Roberta Boomer Secretary, SFMTA			
5	Sonali Bose Director of Finance and Administration			
4	Carter R. Rohan, R.A. Senior Director of Capital Programs & Construction			
3	John Funghi Senior Program Manager, Central Subway			
2	Shahnam Farhangi Manager of Construction Contract Administration			
1	Arthur Wong Construction Management, Central Subway			

**Note:** *Please return fully executed contract modification and supporting documentations to Shahnam Farhangi.*

Exhibit 1103-3: Sample Contract Modification Form

**CONTRACT MODIFICATION NO. 4**

San Francisco Municipal Railway      Contract No. MR-1210

**MUNI Metro System Subway Overhead Reconstruction**

Page: 1 of 2

Contractor:      Shimmick Construction Co. Inc.  
24200 Clawiter Road  
Hayward, CA 94545

1.      Replace all the installed Type B hangars of between 100mm and 175mm (4 inches and 7 inches) in length and having a split bolt attachment. Remove and dispose the existing copper wire rope, split bolt, and thimble. Install in their place stainless steel wire rope suspension as shown on Impulse drawing No. SKS-070069. This work shall be done to an estimated quantity of 814 units at the agreed unit price of \$201.00 per unit.

Agreed Unit Cost,      \$163,614.00

The Contract is hereby modified as follows:

2.      Add the following new Contract Pay Items:

CM 4      Replace 814 Units of Type B Hangar 100mm to 175mm in Length      Agreed Unit Cost,      \$163,614.00

Total Amount of this Contract Modification:      Increase,      \$163,614.00

Previous Total of Contract:      \$8,029,464.00

New Revised Total of Contract:      \$8,193,078.00

Total Contract Time added by this Contract Modification:	None
--	------

Previous Contract Completion Date:      May 13, 2008

New Revised Contract Completion Date:      May 13, 2008

3.      This Modification is made in accordance with Article 75 of the Contract General Provisions.  
4.      Except as provided herein all previous terms and conditions of the Contract remain unchanged.

CONTRACT MODIFICATION NO. 4

Contract No. MR-1210

- 
5. Contractor acknowledges and agrees that the amounts agreed for the work described above shall be in full accord and satisfaction of all current and prospective costs incurred in connection with Contractor's performance of the work under this modification, without limitation. Contractor releases SFMTA from all claims for which full accord and satisfaction is hereby made, as set forth above.

If this modification involves the granting of an extension of time, with or without cost, Contractor releases SFMTA from all claims and costs associated with such extension of time. Such costs may include, but are not limited to, costs for labor, materials, equipment, disruption, lost productivity, escalation, delay, extended overhead, administration and extended performance time.

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2 of 2

**SHIMMICK CONSTRUCTION CO. INC. CITY AND COUNTY OF SAN FRANCISCO**

By: \_\_\_\_\_

*Signature Date*

Charley McDonell

Project Manager

By: \_\_\_\_\_

*SignatureDate*

Nathaniel P. Ford, Sr.

Executive Director / CEO SFMTA

**APPROVED AS TO FORM:**

Dennis J. Herrera, City Attorney

By: \_\_\_\_\_

*SignatureDate*

Robin M. Reitzes

Deputy City Attorney

Exhibit 1103-4: Sample Modification Change Analysis

CONTRACT MODIFICATION NO. 4

San Francisco Municipal Railway Contract No. MR-1210 Contractor: Shimmick Construction Co. Inc.

MINI METRO SYSTEM SUBWAY OVERHEAD

Pier 96 Administration Bldg.  
San Francisco, California 94124

**MODIFICATION CHANGE ANALYSIS**

**SCOPE OF WORK:**

Replace all the installed Type B hangars (814 units) between 100 and 175mm (4 to 7 inches) in overall length: Remove and dispose the existing copper wire rope, split bolt, and thimble. Install in their place stainless steel wire rope suspension as shown on Impulse drawing No. SKS-070069.

**REASON FOR CHANGE:**

These hangars were installed as part of the original Contract but have proven to be prone to flexural failure and need to be replaced with a revised design that is better adapted for reduced clearance applications as found in certain portions of the MUNI Subway System.

**ENGINEER'S ESTIMATES:**

\$68,242 Cost breakdown dated 11/20/06 By: Tee Phang

**CONTRACTOR'S COST PROPOSALS:**

\$163,493 Cost breakdown dated 11/22/06 By: Stephen Wong

Exhibit 1103-5: Sample Summary Record of Negotiations

**CONTRACT MODIFICATION NO. 4**

**San Francisco Municipal Railway Contract No. MR-1210**

Contractor: Shimmick Construction Co. Inc.

Pier 96 Administration Bldg.  
San Francisco, California 94124

MIAMI METRO SYSTEM AIRWAY OVERHEAD

**SUMMARY RECORD OF NEGOTIATIONS**

The Contractor and SFMTA met on 11-28-06 to negotiate the final cost for modifying the hangars. Representing SFMTA were Romando Lucchesi, Resident Engineer; Lisa Chow, Project Manager; Tee Phang, Project Engineer; So Man-Leung, Design Engineer; and Shahnam Farhangi, Manager of the Construction Contract Administration Section. Representing the contractor, Shimmick Construction Co. Inc. were Charley McDonell, Project Manager and Stephen Won, Project Engineer.

During the meeting, an agreement was reached to establish the total cost for one shift of work at \$5,280.70 including mark-up. This cost is based on the actual crew size, equipment used, and mark-up in accordance with the Contract Specification as itemized below.

<u>Labor Class</u>	<u>Hourly Labor Rate</u>	<u>Total</u>
Lineman General Foreman	\$ 121.16	
Lineman Journeyman	\$ 100.11	
Lineman Journeyman	\$ 100.11	
Lineman Journeyman	\$ 100.11	
Groundman Journeyman	\$ 67.50	
High Rail Vehicle	\$ 75.00	
Pick-up Truck	\$ 10.00	
Sub-total Hourly Crew Rate		\$ 573.99
Sub-total 8 Hour Crew Rate		\$ 4,591.92
15% OH and Profit		\$ 688.79
<b>Total Crew Rate Per Work Shift</b>		<b>\$ 5,280.71</b>

Also, an agreement was reached to establish the production rates to perform replacement work at 27 units per shift. Considering that the material costs were confirmed to be \$5 per unit to replace system, the unit prices is derived as follows:

- Formula:  $\{((\text{quantity of units}/\text{production rate})\text{total cost for one shift})/\text{quantity of unit}\} + \text{material cost of unit}$
- Unit Cost:  $\{(814/27)5280.7/814\} + 5 = \$201$  per unit

An agreement was reach between MTA and the Contractor to replace 814 units of the installed Type B Hangars at an agreed unit cost of \$201 per unit not to exceed \$163,164. (814 units at \$201 per unit)

By: \_\_\_\_\_

By: \_\_\_\_\_

*Signature*                      *Date*

*Signature*                      *Date*

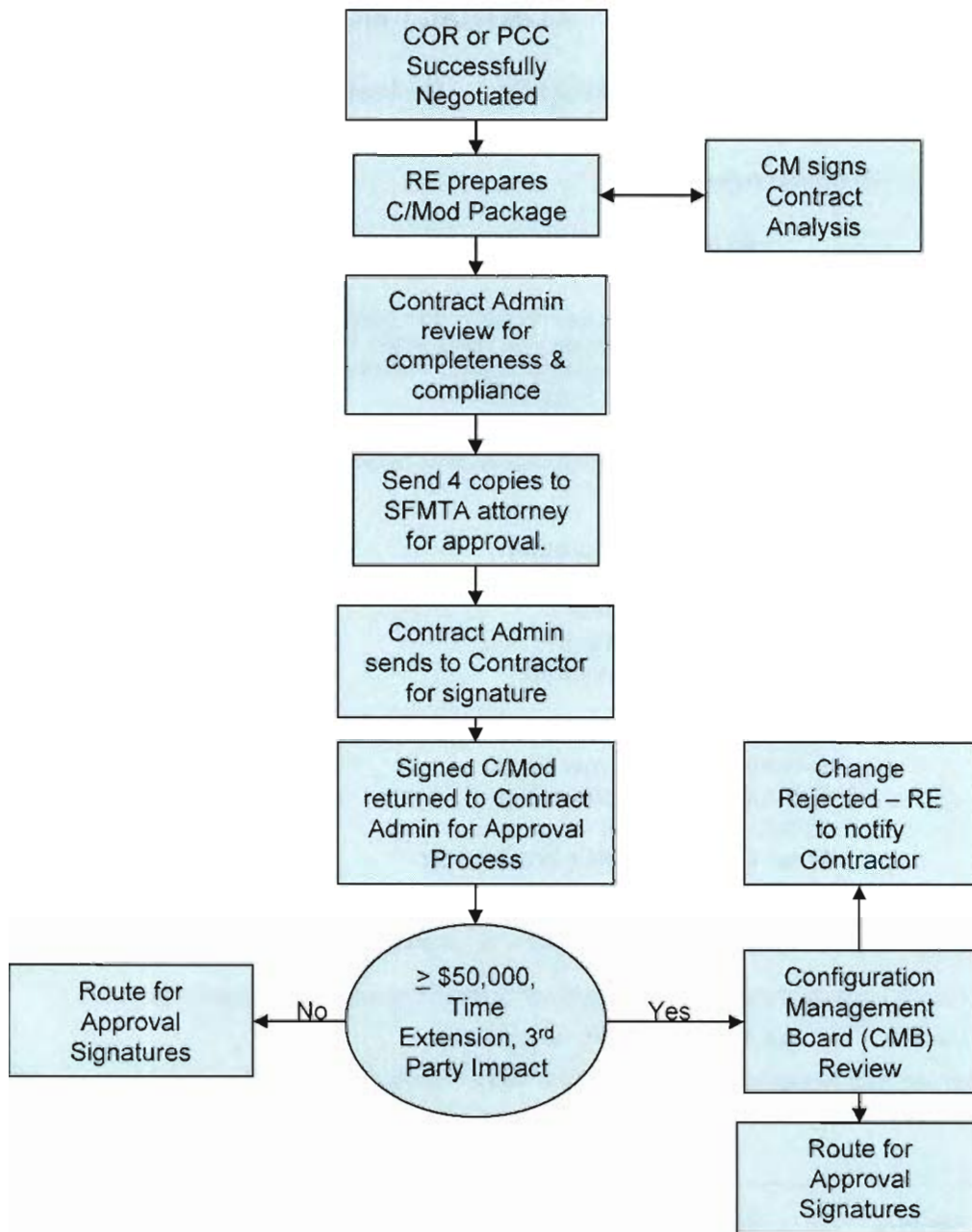
Charley McDonell, Project Manager

Romando Lucchesi, Resident Engineer

Shimmick Construction Co. Inc.

MTA Construction Representative

Exhibit 1103-6: Flow Chart



## C Mod Task Force

# Area of Improvement # 5

### Problem: Change Order Process

It was clear from the discussion among the task force that the process called out in the current contracts under construction, needs to be reviewed for completeness and compared to the Program procedures. Also the participation of Contract Administration must be better defined and much earlier in the process.

### Root Cause:

All project participants are not clear on the change process, contract requirements, Program Procedures. Clarity is required on the Agency process, and what is required content of acceptable change modification so that all are working off the same understanding and process is not subject to various interpretations on what is required.

### Recommendation for Improvements:

- Involve Contract Admin in the initiation stage, review for merit
- Involve Contract Admin in scoping meeting and cost estimating review
- Review GPs to ensure adequate information is provided by contractor

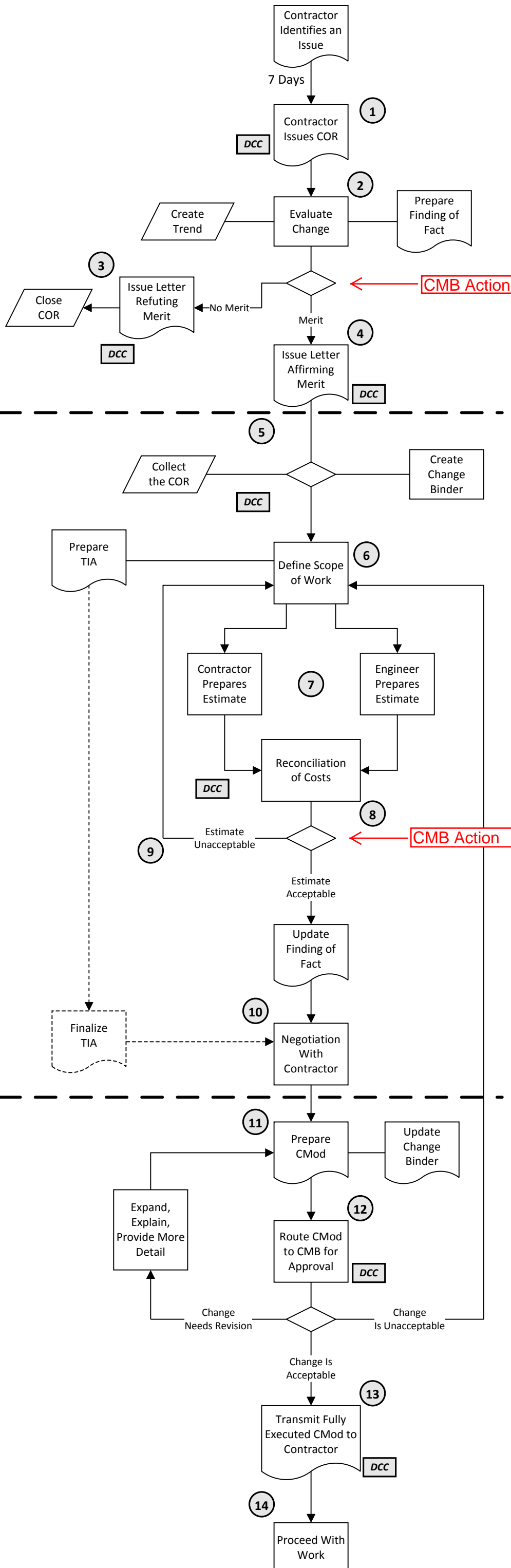
# CONTRACT CHANGE PROCESS

## CONTRACTOR INITIATED CHANGE

INITIATION

PROCESSING

EXECUTION



- 1) Contractor submits a Change Order Request (COR) that conforms to the requirements in Article 6 of the General Provisions describing the change, the reason for the change, a cost estimate, and any time impact associated with the change.  
**DCC: The incoming document is appropriately catalogued and electronically distributed with high priority.**
- 2) The COR is evaluated by the Resident Engineer, a Finding of Fact is drafted, and a "trend" is created for the COR within the trend log.
- 3) If no merit is determined, the Contractor is issued a letter of refute, and the COR is "closed" within the trend log.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 4) If merit is determined, the Contractor is issued a letter that contains an affirmation of merit.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 5) A request is made for a cost/time estimate and a scoping meeting. In addition, a change binder is created to contain all change-related documents, and the COR is "collected" within the CM13 database.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 6) Prior to cost estimating, the scope of work is defined, if necessary by a scoping meeting between the Resident Engineer and the Contractor. In addition, a Time Impact Analysis (TIA) is drafted the contractor if applicable.
- 7) Both the Contractor and the Resident Engineer develop independent cost estimates. Upon completion, the Contractor's estimate is submitted to the Engineer.  
**DCC: The incoming document is appropriately catalogued and electronically distributed.**
- 8) Differences in costs are identified and reconciled.
- 9) If upon review, the estimates are found to be unacceptable, the Resident Engineer may consider changing the scope of work, which may entail additional meeting(s) with the Contractor, and additional cost estimating.
- 10) If upon review, the estimates are found to be acceptable, then the change is negotiated by the Contractor and the Engineer at the next scheduled negotiation meeting. Prior to negotiation, the Finding of Fact is updated with the available new information. In addition, the TIA must be finalized, if necessary. A formal Record of Negotiation is written by the Resident Engineer.
- 11) Upon successful negotiation of a contract change, a Contract Modification (CMod) is prepared by the Resident Engineer. In addition, the change binder is updated to include all required documents, and a Board Memo is submitted for the monetary amount of the contract change. Initiation of a CMod includes the following:
  - 11a. Send the Contract Administrator an email request to create the CMod within the CM13 database.
  - 11b. Check / verify specific wording.
  - 11c. Print two (2) copies of the CMod document.
  - 11d. The Construction Manager signs both Cmod documents.
- 12) The CMod is routed for approval / execution as follows:
  - 12a. Transmit both CMod documents to the Contractor with a standard letter.
  - 12b. Receive both CMod documents with the Contractor's signature.
  - 12c. Transmit both CMod documents to the Configuration Management Board (CMB), along with the completed change binder.
  - 12d. Receive one CMod document with the CMB member's signatures.  
(If the CMod needs revision or the CMB deems the change as unacceptable, additional steps may be necessary to accomplish the contract change.)  
**DCC: Incoming / outgoing documents are appropriately catalogued and electronically distributed.**
- 13) The fully executed CMod is transmitted to the contractor with a standard letter.  
**DCC: The outgoing document is appropriately catalogued and electronically distributed.**
- 14) Field work commences.