


**SAN FRANCISCO PUBLIC UTILITIES COMMISSION
WATER SYSTEM IMPROVEMENT PROGRAM
CONSTRUCTION MANAGEMENT PROCEDURES**

SECTION: WSIP CONSTRUCTION MANAGEMENT	APPROVED: 
PROCEDURE NO.: 017 TITLE: CITY FURNISHED MATERIALS AND EQUIPMENT	DATE: 08/20/09 REVISION NO.: 1

1.0 Policy

This CM Procedure applies to all City Furnished Materials and Equipment for the transfer, handling, use and ownership transfer documentation by the Contractor for the contract project.

This CM Procedure applies to all personnel working on the Water System Improvement Program (WSIP) to the extent that their work is affected by this WSIP Construction Management (CM) Procedure and does not conflict with specific San Francisco Public Utility Commission (SFPUC) policies or the contract under which the Work is executed.

2.0 Description

This CM Procedure establishes the requirements for the Contract Administration, performance Quality Assurance Inspection, handling, and Project Controls services for City Furnished Materials and Equipment.

3.0 Definitions

3.1 City Furnished Materials and Equipment

Pre-purchased materials and equipment are long-lead time delivery items furnished by the City for incorporation into the work by the Contractor. Critical long-lead time delivery items such as large diameter pipes, specialty pipes and fittings, large diameter valves with motorized actuators and electrical specialty equipment and instruments may be ordered in advance to meet specific project construction schedule milestones.

This CM Procedure applies to City furnished pre-purchased items. However, the City may elect to provide select, approved items from surplus or salvaged City inventories to the Contractor.

3.1.1 Pre-purchased items are primarily new materials and equipment furnished by City for specific services.

3.1.2 Inventory items are surplus unused materials and equipment approved by the City for similar service uses.

3.1.3 Salvaged items are previously used materials and equipment inspected and approved by the City for similar service uses.

3.2 WSIP Construction Management Information System (CMIS)

The WSIP CMIS is an on-line management tool for the efficient transmittal, processing, review, storage and retrieval of various documents generated during construction phase.

3.3 Daily QA Inspection Report

The Daily QA Inspection Report is a construction field report prepared by the QA Inspector(s) at the end of each work day or shift. The report provides the daily record of observations of the Contractor's progress work activities, conformance to the Contract requirements and significant construction related events occurring at the work site.

3.4 Materials and Equipment Transfer Acceptance Form

The Contractor Materials and Equipment Transfer Acceptance Form is used by the CM Team and the Contractor to document the condition of the materials and equipment; and transfer the responsibility of these items for installation and operational testing by the Contractor, refer to Attachment 017-3.

3.4.1 This Form shall be used to document the condition and transfer of materials, equipment, spare parts and specific operations & maintenance manuals from Contractor to City.

3.5 Quality Assurance (QA)

Quality Assurance is the element of Quality Management that requires development and implementation of a system of processes and procedures that will enable the WSIP Team to provide confidence that the products and Work meet the quality requirements of the Contract Documents. QA Inspections are conducted to verify compliance to specific Contract or procedural requirements. Inspections can be performed on a schedule or unscheduled basis.

3.6 Supplier Quality Surveillance (SQS) Plan

The SQS Plan is a component of Quality Management which is performed at the supplier manufacture or fabrication facility for each specific item identified by the SFPUC. The SQS Plan is prepared by the SQS Manager and approved for implementation by the WSIP Deputy Director of Pre-Construction, refer to CM Procedure No. 026, SQS Plan and Surveillance Process for details.

3.6.1 The SQS Plan is developed prior to materials and equipment pre-purchase and furnished by the City. The SQS QA Inspectors will perform quality assurance at the Supplier fabrication shop.

- 3.6.2 The SQS Plan may include select quality assurance of Contractor provided materials and equipment for Contract Work. The SQS QA Inspectors will perform quality assurance at the Supplier fabrication shop. The CM Team is responsible to perform quality assurance at the work site.
- 3.6.3 All the SQS Plans prepared for City furnished or Contractor provided materials and equipment are approved by the WSIP DDPC.

4.0 Responsibilities

4.1 Project Construction Manager (Project CM)

The Project CM is the main point of contact for all construction management issues. The Project CM has overall responsibility for post-delivery materials and equipment inspections and acceptance transfer of City furnished items to the Contractor at the work site.

- 4.1.1 After each City Furnished Materials and Equipment fabrication and delivery schedules are established by the vendor, the critical milestone dates are added to the Construction Management Schedule for monitoring by the Project CM.

4.2 Project Engineer (PE)

The Project Engineer is responsible for technical specification development, selection and procurement activities of City furnished pre-purchased materials and equipment from the design specification through their release for shipment at the Supplier fabrication shop.

- 4.2.1 The PE is responsible for resolution of any corrective action issues at the Supplier fabrication shop as the result of QA Inspection.
- 4.2.2 The PE or designated design engineer might accompany QA Inspector to witness specific equipment performance test at Supplier fabrication facility.

4.3 WSIP Deputy Director of Pre-Construction (DDPC)

The WSIP Deputy Director of Pre-Construction approves Service Order and assigns work to designated SQS Manager for City furnished and Contractor provided materials and equipment.

- 4.3.1 The WSIP DDPC approves all materials and equipment SQS Plans.

4.4 Regional Project Manager (RPM)

The Regional PM is responsible for identifying and scheduling resources for inspection and witness testing of City furnished pre-purchased materials and equipment.

4.4.1 RPM is designated by the WSIP Deputy Director of Pre-Construction as SQS Manager Contact for coordination of activities.

4.5 Supplier Quality Surveillance (SQS) Manager

The SQS Manager is responsible for preparing the draft SQS Plan and monitoring the activities and reports provided by the SQS QA Inspectors, refer to CM Procedure No. 026 for details.

4.5.1 The SQS Manager will also be responsible for planning, for dispatching and managing the SQS QA Inspectors provided by the PPPCM Consultant.

4.6 Quality Assurance (QA) Inspectors

The QA Inspectors assure that the construction or equipment fabrication work is performed and completed in accordance with the Contract Documents, conduct periodic observation and inspection work, monitor Contractor's quality progress, and coordinate field sampling and verification testing for quality.

4.7 Office Engineer (OE)

The Office Engineer supports the Project CM and performs the contract administrative tasks for the transfer of City Furnished Materials and Equipment to the Contractor. The OE enters the transfer information into CMIS.

4.8 Contractor

The Contractor is the recipient of City Furnished Materials and Equipment for their handling, storage, installation and testing at the work site.

4.9 Materials and Equipment Supplier(s)

The Materials and Equipment Supplier(s) fabricate or assemble the designated item based on the City awarded Purchase Order(s). Specific requirements to the Supplier include:

- Preparation, submittal and approved Quality Control Plan
- Fabrication to Contract Document Specifications
- Compliance to approved QA and QC Plans
- Performance Test in accordance with Contract Specifications
- Packaging and shipment to designated location.

5.0 Implementation

5.1 Materials and Equipment Pre-Delivery Activities

The City is responsible for City furnished pre-purchased materials and equipment from technical specification development, request for quote, contract award, inspection, test witnessing, delivery expediting through transfer to Contractor, refer to Attachments 017-1 and 017-2.

5.1.1 Contract Administration for City furnished pre-purchased materials and equipment are the responsibility of the RPM and technical staff.

5.1.1.1 The RPM with input from the PE is responsible for materials and equipment procurement, fabrication and delivery schedule requirements.

5.1.1.2 The RPM ensures the scheduling of these items into the master schedule.

5.1.1.3 The PE defines the materials and equipment in-factory inspection, witness testing, storage, delivery and transfer to Contractor requirements which are integrated into the contract construction specifications.

5.1.2 Quality Control Inspections activities for City furnished pre-purchased materials and equipment are the responsibility of RPM and technical staff.

5.1.2.1 The Project Engineer defines Quality Control requirements for Suppliers providing City Furnished Materials and Equipment in each Purchase Order (PO). The PE also defines site storage, acceptance inspection and verification acceptance process.

5.1.2.2 The RPM is responsible for developing requirements for the Quality Control Plan from each vendor for each Purchase Order.

5.1.2.3 The SQS Manager is responsible for the management and coordination of the SQS QA Inspectors at the Supplier fabrication facility.

5.1.3 Project Controls activities for City Furnished Materials and Equipment are the responsibility of the Regional PM.

5.1.3.1 Regional PM and scheduling support staff are responsible for developing schedules for pre-purchase of materials and equipment furnished by City. Work Breakdown Structure (WBS) shall be created for each vendor item for tracking and reporting.

- 5.1.3.2 The Project CM is responsible for adding City Furnished Materials and Equipment fabrications and deliveries schedules into the CM Schedule.
- 5.1.3.3 The SQS Manager monitors the activities of the QA Inspectors at the Supplier Fabrication Shop.

5.2 Materials and Equipment Post-Delivery Activities

5.2.1 Post-delivery Contract Administration activities for City furnished pre-purchased materials and equipment are the responsibility of the Construction Management staff at the work site, refer to Attachment 017-1.

5.2.1.1 The Project CM manages the overall materials and equipment delivery, acceptance inspection and Acceptance Transfer to the Contractor.

5.2.1.3 The Office Engineer prepares and submits materials and equipment Acceptance Transfer Forms to the Contractor. Upon receipt of signed forms the information is entered into CMIS by the OE.

5.2.2 Post-delivery Quality Assurance Inspection activities for City furnished pre-purchased materials and equipment are the responsibility of the Construction Management staff.

5.2.2.1 The Project CM is responsible for City furnished pre-purchased materials and equipment receiving, inspection upon delivery, and acceptance of items by Contractor.

5.2.2.2 The CM Team supports the Project CM from inspection services through Acceptance Transfer Form approval.

5.2.2.2.1 The CM Team is responsible for receiving and inspecting City Furnished Materials and Equipment upon arrival at the work site. QC Inspectors are responsible for quality control process by authenticating all materials and equipment are undamaged and in accordance with approved submittals, design drawings and specifications. The Receiving Reports are forwarded by the OE to the Quality Assurance (QA) Manager.

5.2.2.2.2 If the materials or equipment cannot be installed immediately, the Contractor shall unload and protect these items as

required by the Manufacturer's instructions.

5.2.2.2.3 If major equipment is delivered early, then the Contractor shall provide long-term storage acceptable to the Project CM.

5.2.2.2.4 Transfer of Ownership occurs whenever an item is transferred from one responsible party to another; it must be documented and processed in accordance with Attachment 017-2.

5.2.2.2.5 The OE will enter the transfer process information into the CMIS and maintain all records of inspection and turnover.

5.2.3 Post-delivery Project Controls activities for City furnished pre-purchased materials and equipment are the responsibility of the Construction Management staff.

5.2.3.1 The Project CM monitors City Furnished Materials and Equipment schedule and incorporates the status into the Monthly Construction Progress Report as well as assisting the Regional PM with delivery, inspection, witness testing and acceptance transfer.

6.0 Other Procedural Requirements

CM Procedure No. 011 Construction Quality Management

CM Procedure No. 015 Construction Schedule Management

7.0 References

7.1 WSIP Technical Specifications

01300 Submittal Procedures

01400 Quality Control

01600 Materials and Equipment

01610 City Furnished Materials and Equipment

01720 Project Record Documents

01730 Operations and Maintenance Data

01740 Warranties

7.2 CM Procedures

No. 026 SQS Plan and Surveillance Process

8.0 CM Procedures

- 017-1 City Furnished Materials and Equipment Roles and Responsibilities Matrix
- 017-2 Materials and Equipment Ownership Transfer Form
- 017-3 Documents Distribution List for CMP No. 017
- 017-4 Revision Control Log

City Furnished Materials and Equipment Roles and Responsibilities Matrix Attachment 017 - 1

ACTIVITY	PMB and EMB			CMB and PMB	PPPCM CONSULTANT		SUPPLIER	CONTRACTOR	
	Project Manager / PMB	Regional Project Manager	Project Engineer / EMB	Project CM / PCM	SQS Manager	QS Inspector(s)	QC Inspector – SHOP	QC Inspector – FIELD	
NOTES	PMB and EMB are responsible for Materials & Equipment specification, selection, SQS Plan Implementation, Delivery and Acceptance from Supplier. PPPCM Consultant Services will be indicated on a project by project basis per Service Order			Responsible for or coordinates all site activities	* If PPPCM Consultant Services are not requested, SFPUC will provide SQS Plan Services for those projects. Deputy Director of Pre-Construction will assign the SQS Manager for each PO		Responsible for Equipment Performance and Acceptance	Installs Equipment and Assists Supplier	
1	Materials and Equipment Technical Specification Requirements development and implementation	Reviews Specifications	Reviews Specifications	Leads Specification Development for Purchase Order (PO)	Reviews Specifications; Reviews Contractor's Quality Plan		Acknowledges PO Milestone Schedule and Technical Requirements	QC Program Includes Items Handling, Inspection, and Protective Maintenance	
2	Materials and Equipment Schedules for Procurement, Fabrication and Delivery	Reviews and Approves Schedule Milestones	Incorporates Milestones into Project Master Schedule	Prepares Milestones Schedule	Reviews Schedules	Reviews Schedules to Schedule PPPCM Inspection Activities and Resources	Reviews Progress as Part of Source Inspections	Meets Supplier Milestone Schedule	Prepares to Assist with Unloading and Transfer at Job Site
3	Supplier Quality Surveillance Plan (SQS) development and implementation	Reviews SQS Plan (Approval by Deputy Director of Pre-Construction)	Reviews Supplier Quality Surveillance (SQS) Plan	Reviews SQS Plan		Prepares Draft SQS Plan; Manages SQS Activities Assigned to PPPCM	Performs SQS Activities; Prepares Reports	Provides Materials and Equipment for Surveillance and Testing	
4	Quality Control – Shop Implementation by Supplier		Arranges for SFPUC Resources for SQS Plan Inspections	Defines Supplier QC Requirements, Supports RPM				Performs Supplier Quality Control	
5	Materials and Equipment Loading, Transportation, and Delivery Uploading Field Inspection		Monitors and Reports Deliverables Status	Responsible for Coordination, Schedule and Execution of Deliverables	Assists PM and PE; Coordinates with Contractor for Uploading			Provides All Services Except Unloading at Site	Provides Unloading of Materials and Equipment at Site
6	Materials and Equipment Responsibility Transfer			Responsible for Equipment Transfer and Documentation	Leads CM Oversight; Assists PE			Transfers Materials and Equipment Ownership to City	Accepts Installation Responsibilities from PE
7	Materials and Equipment on-site handling, storage, protective maintenance and installation			Provides Support to Project CM	Coordinates Work with Contractor			Completes SQS Plan Documentation	Receives and Installs Materials and Equipment
8	Systems and Equipment Testing and Start-up; training, and Supplier support			Start-Up Support, as needed	Start-Up Participant; Coordinates with Contractor			Leads the Equipment Testing and Start-Up	Assists Supplier for Equipment Testing and Start-Up
9	Records Documentation, OM Manual, Spare Parts, Test Reports, Certification of Installation, and Warranties		Receives Information from PE for Project Close-Out	Responsible for all Supplier Deliverables	Assists project Engineer			Provides Information to PE through Project CM	Provides Information to PE through Project CM

REFERENCES: Technical Specifications 01400 – Quality Control, Technical Specification 01610 – City Furnished Material and Equipment, Technical Specification 01730 – Operations and Maintenance Data, and Technical Specification 01740 - Warranties

**Attachment 017 - 2
Materials and Equipment Ownership Transfer Form**

ID	Item	Information
a	Date	
b	Project Name	
c	Project Location	
d	Contract Number	
e	Contract Organization	
f	Item Location	

ID	Item	Item Transfer To
g	Transfer To	
h	Contract Representative Name	
i	Contractor Representative Signature	
j	Contractor Representative Title	
k	Signature Date	

ID	Item	Item Transfer From
l	Transfer From	
m	City Representative name	
n	City Representative Signature	
o	City Representative Title	
p	Signature Date	

No.	Description – Manufacture, Model, Type, Dimensions, etc.	Qty	Serial No.	ID No.	Condition Code

Condition Code	Condition of Item
A	New Item acceptable for Project use
B	New with minor cosmetic damage, see remarks
C	Repair Required – Minor, see remarks
D	Repair Required – Moderate, see remarks
F	Unacceptable for Project use, see remarks

No.	Remarks for Above

Distribution Copies: Contractor Representative, City Representative, Project CM /Document Control
Notes:

- (1) This form is applicable for each type of equipment with multiple quantities and components.
- (2) Contractor and City Representatives will review condition of transfer item, provide item description, item condition and sign the form.
- (3) Contractor shall have sole responsibility of item condition upon documented transfer of acceptance.



**Attachment 017-3
Documents Distribution List for CMP No. 017**

The following personnel listed (by project position or responsibility) for Documents Distribution is a general for specific CM Procedure. It is the responsibility of the Administration / Document Control Specialist (ADCS) to confirm and as necessary revise this list as appropriate for specific project needs. The Office Engineer shall approve these distribution changes.

The guideline for hard copy document distribution is follows:

1. Individual, without CMIS access, who attended a specific meeting.
2. Individual, without CMIS access, who was mentioned or designated for action in a specific project meeting.
3. Individual, without CMIS access, who has management oversight responsibilities to ensure the implementation or completion of project action.

SPECIAL REPORTS:

- **Quality Assurance Reports**
- **Quality Control Reports**

DISTRIBUTION:

Project Field Personnel – Information Only, Not Distribution

- Project CM, Lead QA Inspector, ADCS

Construction Management Bureau

- Regional CM

Program CM Consultant

- Program CM Consultant Advisor
- Program QA Manager

Program Management Bureau

- Project Manager

Engineering Management Bureau

- Project Engineer

Bureau of Environmental Management

- None

Others

- None

**Attachment 017 - 4
Revision Control Log**

Revision No.	Revision Date	What changed?
Rev 1	August 20, 2009	<ul style="list-style-type: none">• Added Reference SQS CM Procedure No. 026• Added Attachment 3; Documents Distribution List• Added Attachment 4; Revision Control Log
Rev 0	May 4, 2009	Signed